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Interface Elements for Windows

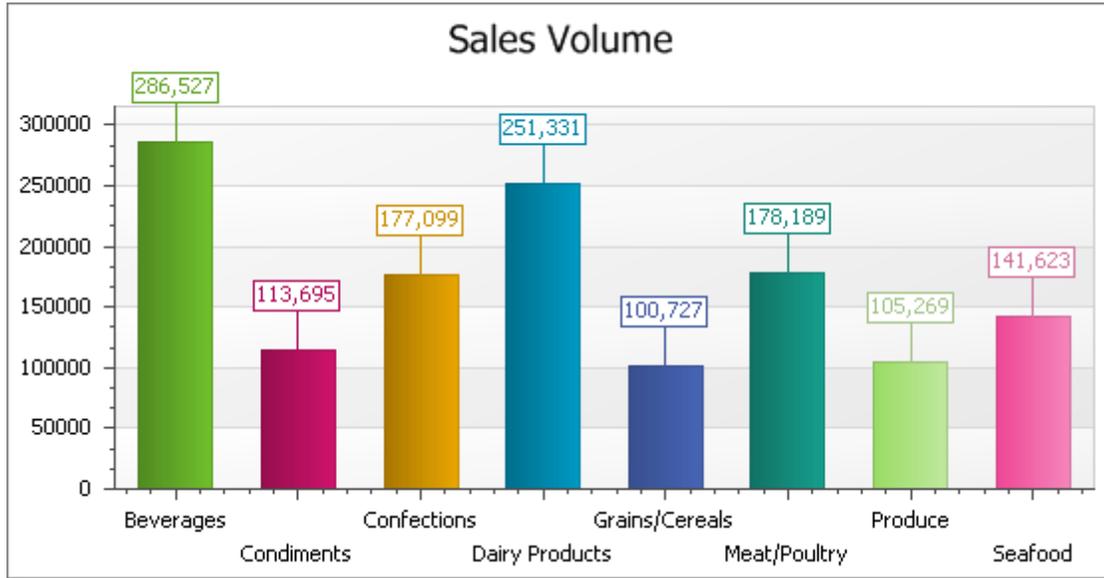
This documentation provides information on individual User Interface Elements such as grids, navigation panes, data editors, etc. Each element can provide context menus, allow numerous mouse operations and support a number of keyboard shortcuts.

To obtain information about these features, browse through the table of contents to locate the element you are interested in.

- [Charting](#)
- [Docking](#)
- [Editors](#)
- [Expression Editor](#)
- [Filter Editor](#)
- [Grid](#)
- [Layout Manager](#)
- [Map](#)
- [Navigation Bars](#)
- [PDF Viewer](#)
- [Pivot Table](#)
- [Print Preview](#)
- [Report Designer](#)
- [Ribbon](#)
- [Rich Text Editor](#)
- [Scheduler](#)
- [Snap Reporting Engine](#)
- [Spreadsheet](#)
- [Toolbars and Menus](#)
- [Tree List](#)
- [Vertical Grid](#)

Charting

This section describes the capabilities provided by Charts.

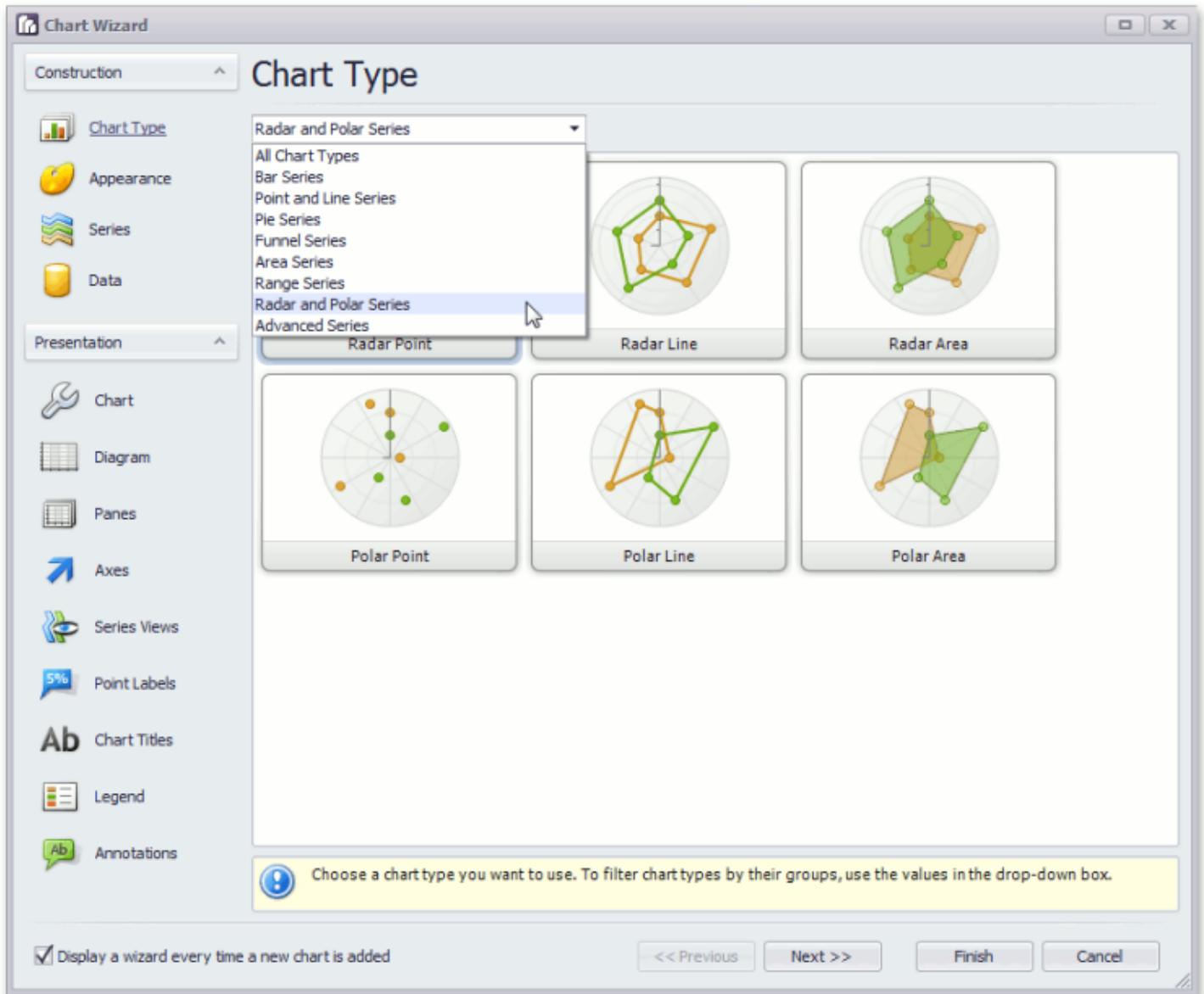


Topics in this section:

- [Chart Wizard](#)
- [Highlighting and Selection Chart Elements](#)
- [Zoom a Chart](#)
- [Scroll a Chart](#)
- [Rotate a Chart](#)

Chart Wizard

Use the chart wizard dialog to quickly and easily create a new chart, or modify an existing one.



The Chart Wizard contains the following pages.

Construction group

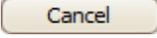
- [Chart Type Page](#)
- [Appearance Page](#)
- [Series Page](#)
- [Data Page](#)

Presentation group

- [Chart Page](#)
- [Diagram Page](#)
- [Panels Page](#)
- [Axes Page](#)

- [Series Views Page](#)
- [Point Labels Page](#)
- [Chart Titles Page](#)
- [Legend Page](#)
- [Annotations Page](#)

To navigate through the Chart Wizard's pages, use the navigation bar or the  and  buttons.

To complete the chart, use the  button, or the  button, to cancel all changes.

Use the "Display a wizard every time a new chart is added" option to specify whether or not a chart wizard should appear when you add a new chart to the windows form.

Chart Type Page

Tasks

- Choose a chart type.

Page Elements

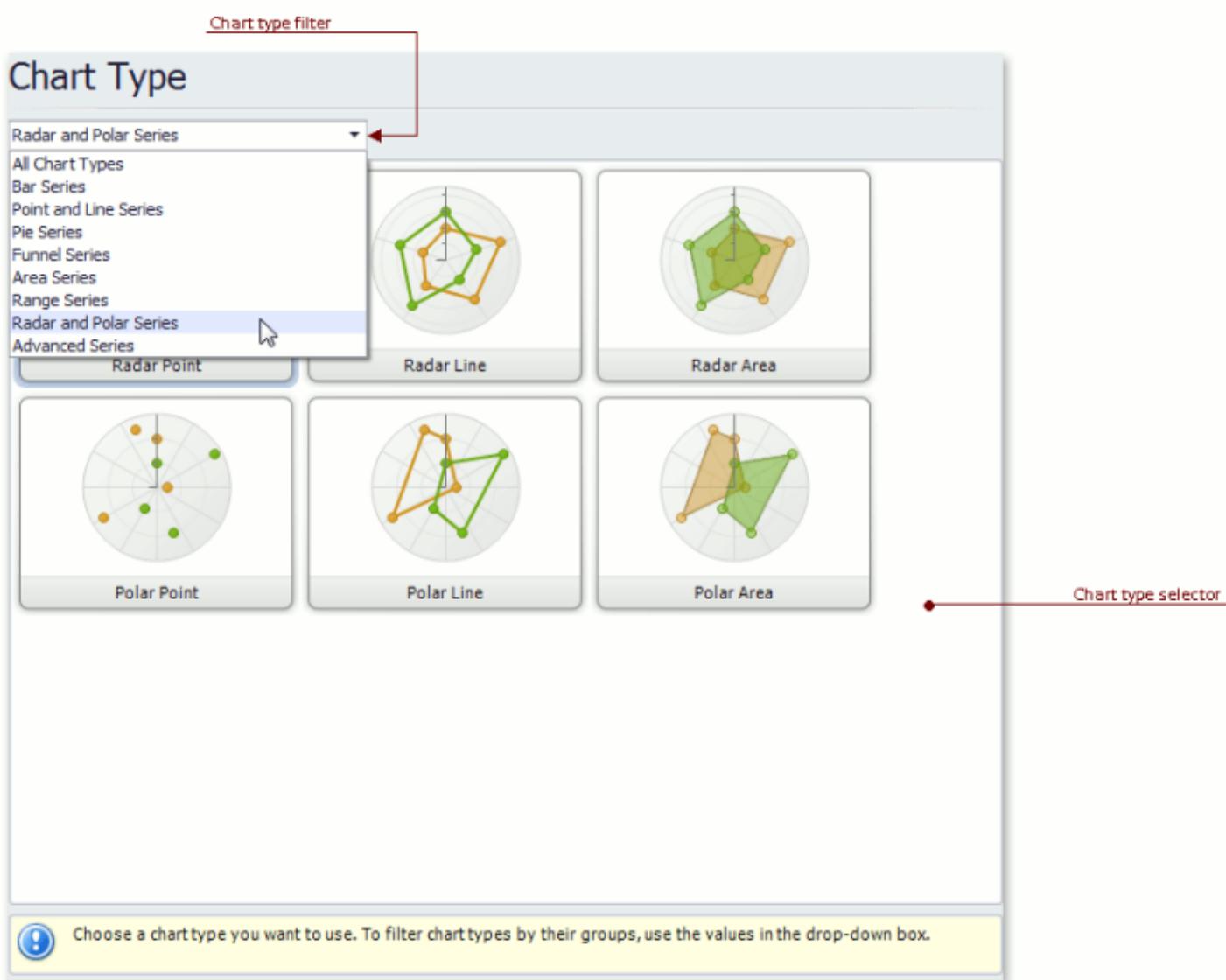


Chart type selector

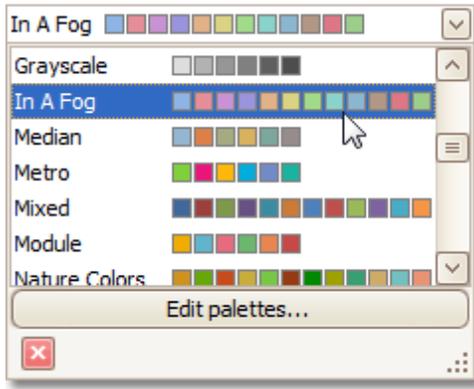
Contains icons representing chart types. Click an icon to choose the appropriate chart type.

Chart type filter

Filters chart types available in the **Chart type selector**. The following chart filters are available:

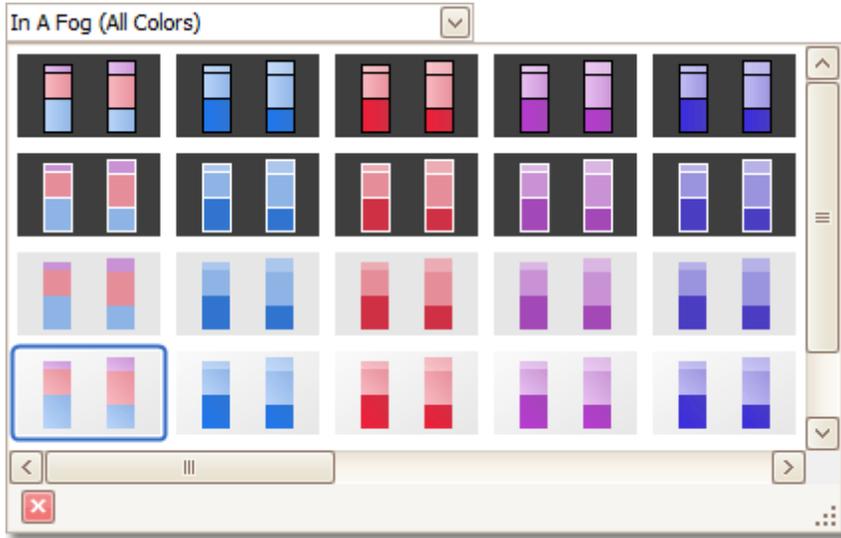
- **All Chart Types.**
- **Bar Series** (Bar, Stacked Bar, 100% Stacked Bar, Side-By-Side Stacked Bar, 100% Side-By-Side Stacked Bar, 3D Bar, 3D Stacked Bar, 3D 100% Stacked Bar, 3D Side-By-Side Stacked Bar, 3D 100% Side-By-Side Stacked Bar and Manhattan Bar).
- **Point and Line Series** (Point, Bubble, Line, Stacked Line, 100% Stacked Line, Step Line, Spline, Scatter Line, Swift Plot, 3D Line, 3D Stacked Line, 3D 100% Stacked Line, 3D Step Line and 3D Spline).
- **Pie Series** (Pie, Doughnut, 3D Pie and 3D Doughnut).
- **Funnel Series** (Funnel and 3D Funnel).

- **Area Series** (Area, Stacked Area, 100% Stacked Area, Step Area, Spline Area, Spline Area Stacked, 100% Stacked Spline Area, 3D Area, 3D Stacked Area, 3D 100% Stacked Area, 3D Step Area, 3D Spline Area, 3D Spline Stacked Area and 3D 100% Stacked Spline Area).
- **Range Series** (Range Bar, Side-By-Side Range Bar, Range Area, 3D Range Area).
- **Radar and Polar Series** (Radar Point, Radar Line, Radar Area, Polar Point, Polar Line and Polar Area).
- **Advanced Series** (Stock, Candle Stick, Gantt, Side-By-Side Gantt).



Style Editor

Specifies the style determining the chart's appearance, depending on the selected palette.



Series Page

Tasks

- Create or remove a series of points.
- Define the series name, visibility and view type.
- Customize additional series options and legend point options.
- Enable and customize the Top N Values feature.

Page Elements

The screenshot shows the 'Series' configuration page. On the left, a 'Series List' contains four entries: Series 1, Series 2 (selected), Series 3, and Series 4. Below the list are 'Add', 'Copy', and 'Remove' buttons. The main area displays properties for the selected series: 'Visible' (checked), 'Series name' (Series 2), and 'Series view type' (Area). On the right, a vertical stack of tabs includes 'General', 'Series Options', 'Top N Options', and 'Legend Text Pattern'. A yellow information box at the bottom states: 'Create series, and adjust their general properties. Note that the view type of the first visible series determines the diagram type and its set of specific options.' Red arrows point from labels to the Series List, Series management buttons, and Options tabs.

Series List

Series management buttons

Options tabs

Series List

This list displays all available series. You can click list entries to access properties of the corresponding series. To switch between series, use the and buttons.

Series management buttons

Use the **Add**, **Copy** and **Remove** buttons to manage the series collection.

Options tabs

The following tabs are available on this page:

- **General**
Choose whether the selected series should be visible, define its name, and select a view type.
- **Series Options**
Specifies argument and value scale types, the point sort order, visibility in the legend, whether the legend is checked, and legend text.
- **Top N Options**
Specifies whether the Top N Values feature is enabled, and allows you to control this feature's options.
- **Legend Text Pattern**
Specifies the format of values displayed in the chart legend.

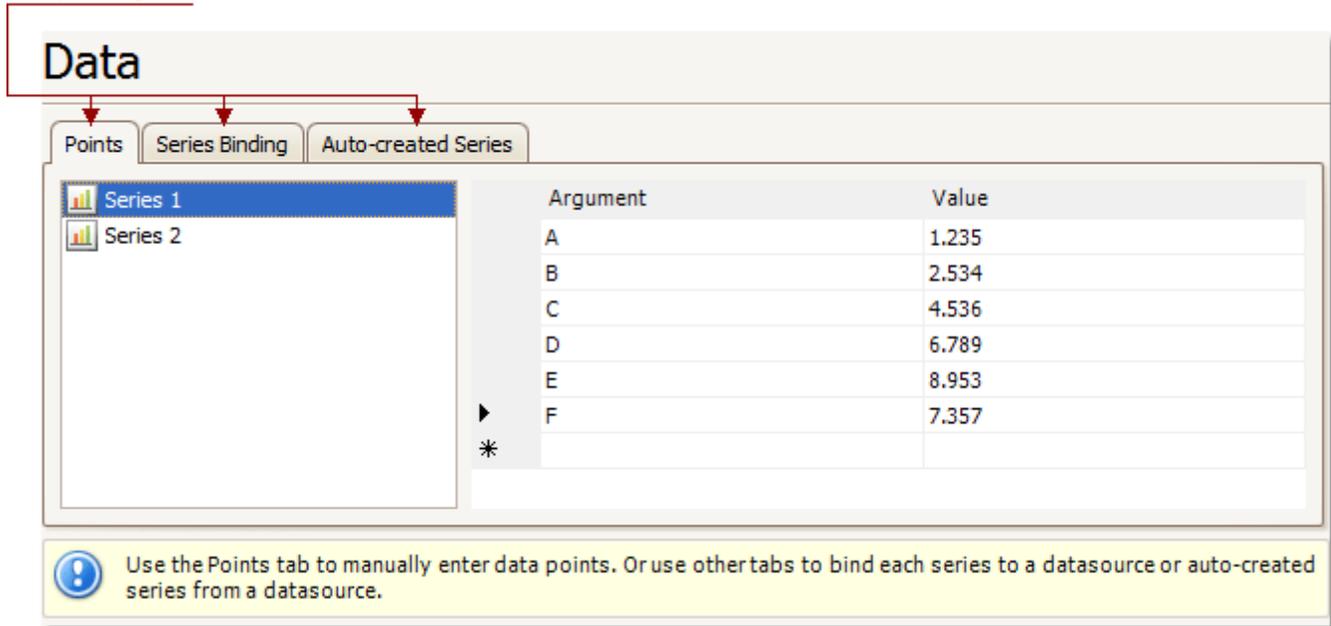
Data Page

Tasks

- Provide data for a chart;
- Bind a chart or individual series to a data source;
- Customize an argument and a value scale type;
- Customize the view type of auto-generated series;
- Apply data filtering and sorting;
- Adjust the Pivot Chart settings.

Page Elements

Data providing tabs



Data

Points Series Binding Auto-created Series

Argument	Value
A	1.235
B	2.534
C	4.536
D	6.789
E	8.953
F	7.357
*	

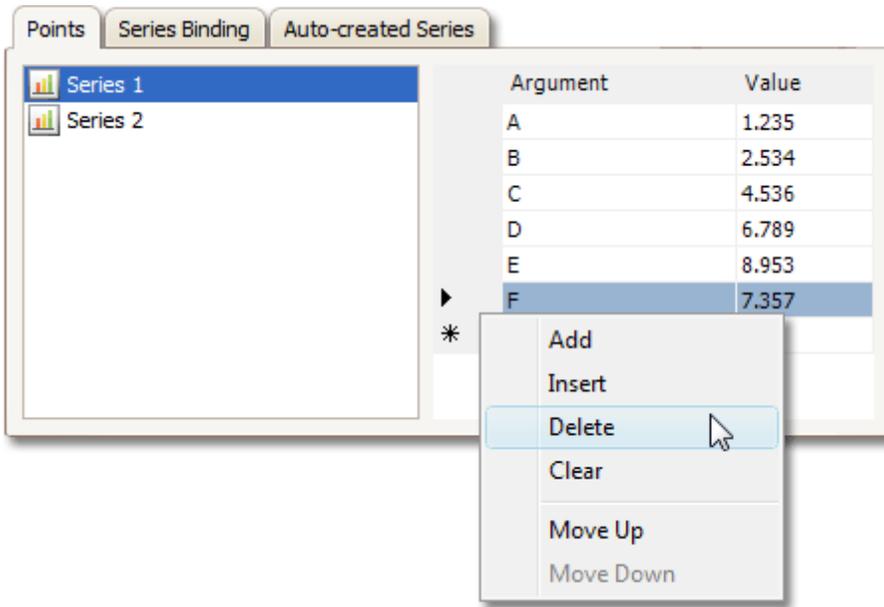
Use the Points tab to manually enter data points. Or use other tabs to bind each series to a datasource or auto-created series from a datasource.

You can provide data for a chart using the following tabs.

- [Points tab](#)
- [Series Binding tab](#)
- [Auto-created Series tab](#)

Points Tab

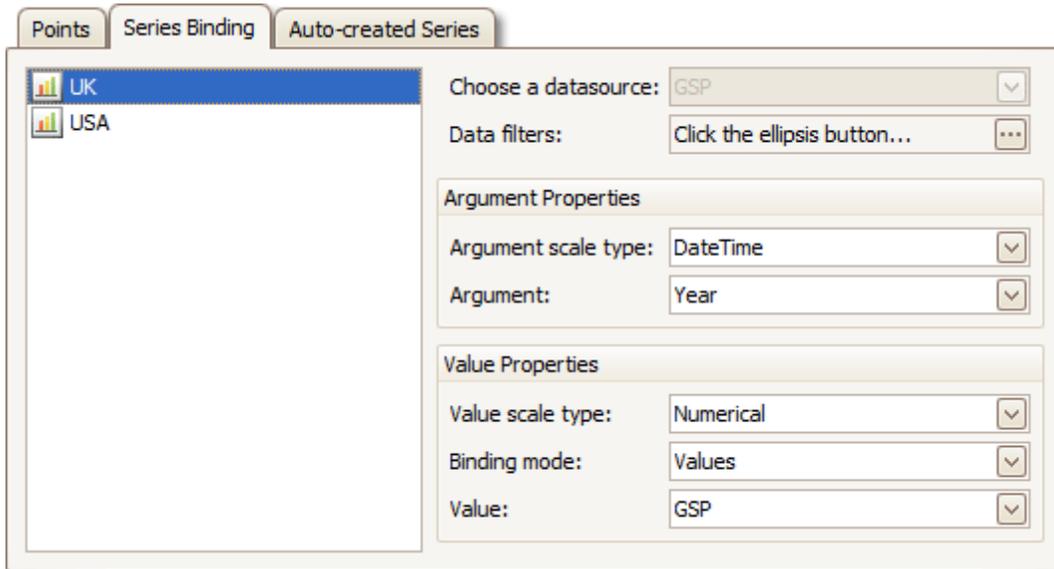
Use it to manually enter data points for series.



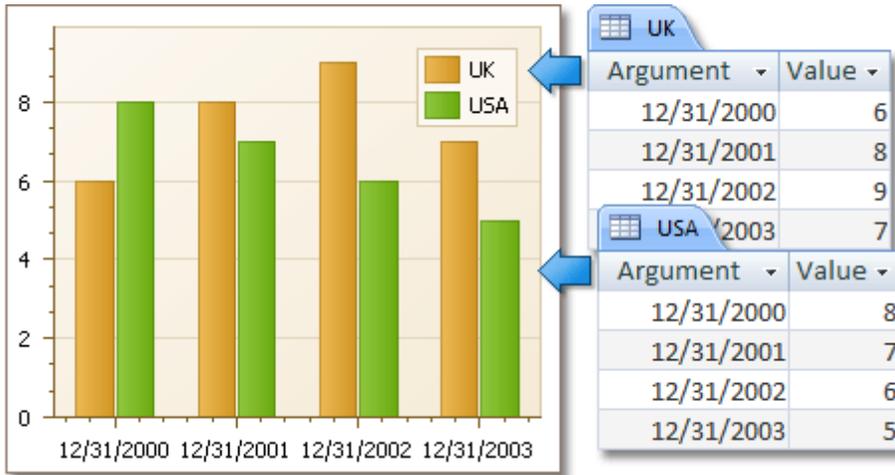
Note that valid **Argument** and **Value** entries must correspond to the **Argument scale type** and the **Value scale type** selected for the appropriate series on the [Series Page](#). Otherwise, an error message will be invoked.

Series Binding Tab

Use it to provide specific data binding options for each series.



The following illustration demonstrates how it works.



Auto-created Series Tab

Use it to specify data columns used to generate series, as well as the series view type and other options like sorting, filtering and name template.

Points
Series Binding
Auto-created Series

Series Properties

Choose a datasource: GSP

Data Member: GSP

View type: Bar

Series: Year

Name prefix:

Name suffix:

Argument Properties

Argument scale type: Qualitative

Argument: Region

Sorting & Filtering

Series sort order: None

Point sort order: None

Sort points by: Argument

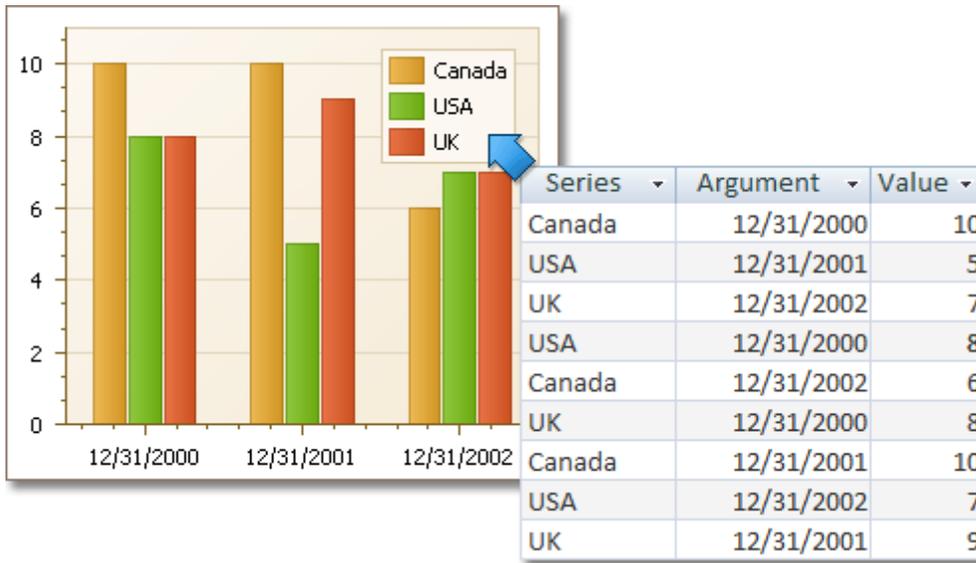
Data filters: Click the ellipsis button...

Familiar Data Source Options

Automatic Binding Settings

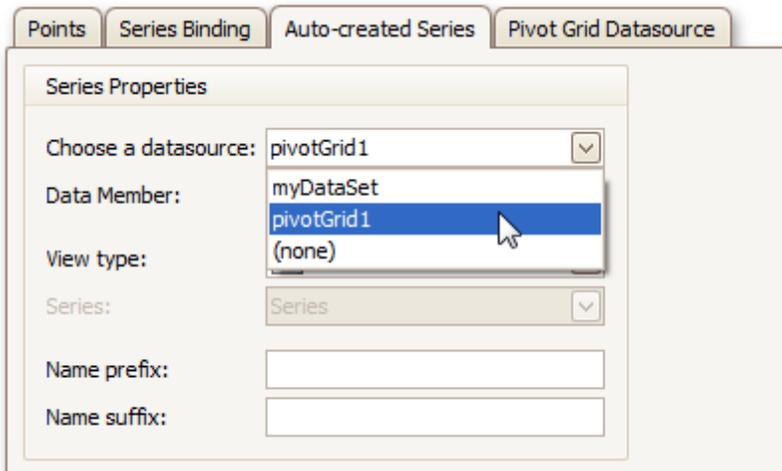
Automatic Layout Settings

The following illustration demonstrates how it works.



For familiar data sources (such as Pivot Grid), you can choose to automatically adjust the binding and layout settings of your Chart.

And when you set a Pivot Grid as a Chart's data source, the **Pivot Grid Data Source** tab becomes available.



On this tab you can adjust various Pivot Chart options.

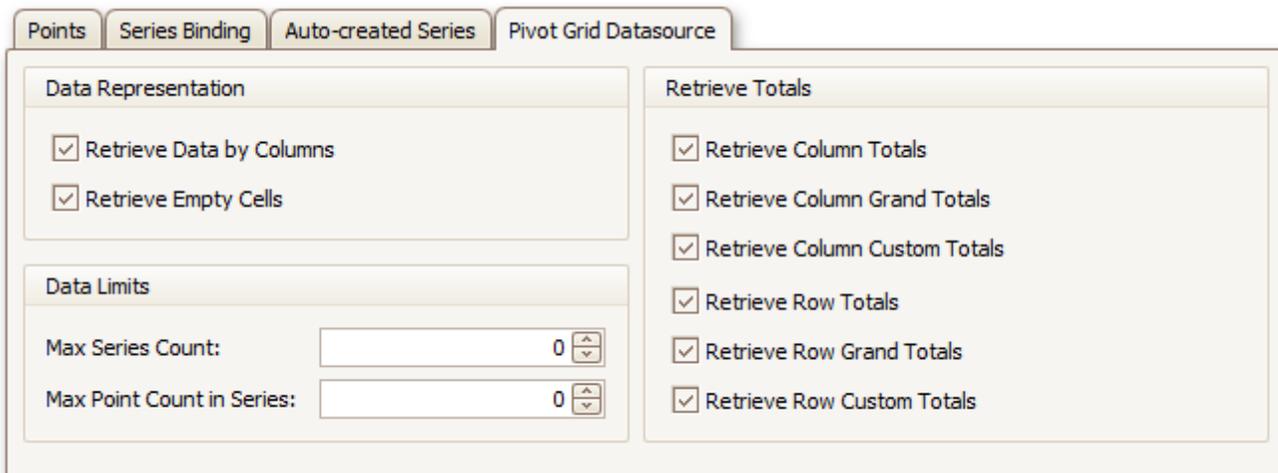


Chart Page

Tasks

- Define a chart's background color and background image.

Page Elements

The screenshot shows a 'Chart' configuration window. On the left is a bar chart with four categories (A, B, C, D) on the x-axis and values from 0 to 4.8 on the y-axis. Each category has four bars representing Series 1 (blue), Series 2 (red), Series 3 (green), and Series 4 (purple). Data labels are shown above each bar: Series 1 is 3.0, Series 2 is 3.5, Series 3 is 4.0, and Series 4 is 4.5. On the right is a configuration panel with three sections: 'Background Color' (Color: [dropdown]), 'Fill Style' (Fill mode: Solid, Second color: [dropdown], Gradient mode: [dropdown], Hatch style: [dropdown]), and 'Background Image' ((None) [dropdown], [Stretch checkbox], [Clear button]). A vertical 'Options tabs' bar on the far right contains tabs for 'Appearance', 'Border', 'Padding', 'Empty Chart Text', and 'Small Chart Text', with red arrows pointing to the corresponding sections in the configuration panel. At the bottom, a yellow banner contains an information icon and the text 'Customize the chart's properties.'

Chart preview area

Previews a chart's layout.

Options tabs

The following tabs are available on this page.

- **Appearance**
Specifies a chart's background color, fill style and background image.

- **Border**
Specifies a border's color, thickness and visibility.
- **Padding**
Specifies the diagram's inner indents.
- **Empty Chart Text**
Specifies the message displayed in the chart when there's no data to display.
- **Small Chart Text**
Specifies the message displayed in the chart, when the chart size is too small to fit the diagram.

Diagram Page

Tasks

- Rotate a diagram;
- Define a diagram's padding;
- Add or remove secondary axes;
- Add or remove panes;
- Define panes' layout direction;
- Enable or disable a diagram's scrolling and zooming.

Page Elements

Chart preview area

Diagram

Rotated

Margins

Bottom: ▲▼

Left: ▲▼

Right: ▲▼

Top: ▲▼

Pane Layout

Distance: ▲▼

Direction: Vertical ▼

General

Elements

Scroll & Zoom

Customize the diagram's properties.

Options tabs

Chart preview area
 Previews a chart's layout.

Options tabs

The following tabs are available on this page.

- **General**
Choose whether a diagram should be rotated, set its padding values, and (if it contains several panes) define the panes' layout direction.
- **Elements**
Add or remove secondary axes and panes.
- **Scroll & Zoom**
Enable or disable a diagram's scrolling and zooming, and specify the scrolling and zooming options.

Panes Page

Tasks

- Customize panes properties.

Page Elements

Chart preview area

Pane selector

Panes

Population: Age Structure
Data estimate for mid-2000

Population, millions

Country	Population (millions)
United States	~280
Brazil	~175
Russia	~145
Japan	~125
Mexico	~105
Germany	~85
United Kingdom	~65

From www.geohive.com

Default Pane

Visible

Name: Default Pane

Size

Size mode: UseWeight

Weight: 1.0

General

Appearance

Border

Shadow

Scroll & Zoom

Scroll Bars

Customize the diagram's panes.
Note that you may select a pane by clicking it in the chart preview.

Options tabs

Chart preview area

Previews a chart's layout.

Pane selector

Specifies a pane to be customized.

Options tabs

The following tabs are available on this page.

- **General**

Determines whether the selected pane should be visible, specifies its name, size mode and size value.

- **Appearance**
Specifies a pane's background color and fill style, and its background image.
- **Border**
Determines whether a pane's border should be visible, and defines its color.
- **Shadow**
Determines whether a pane's shadow should be visible, and defines its color and size.
- **Scroll & Zoom**
Enable or disable a pane's scrolling and zooming for specific axes.
- **Scroll Bars**
If scrolling and/or zooming is enabled for an axis, adjust the scroll bars visibility, position and appearance.

Axes Page

Tasks

- Customize axes properties;
- Customize the appearance of axis labels;
- Add a constant line and a strip to an axis;
- Enable automatic and manual scale breaks.

Page Elements

Chart preview area

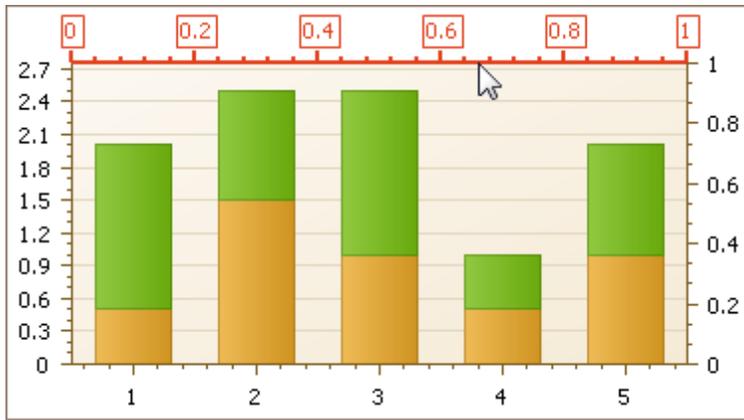
Axis selector

Options tabs

Customize the X and Y axes of the diagram.
Note that you may select an axis by clicking it in the chart preview.

Chart preview area
Previews a chart's layout.

Note that you can select an axis to be modified on the chart preview area directly.



Axis selector

Specifies an axis to be customized.

Options tabs

The following tabs are available on this page.

- **General**
Specifies visibility, position, range and format properties.
- **Appearance**
Defines color, thickness and interlacing options.
- **Elements**
Customizes title, tickmarks and grid line properties.
- **Labels**
Specifies position and text for automatically created labels, or allows custom labels to be defined.
- **Strips**
Allows you to create strips, define their visibility, name, limits, appearance, etc.
- **Constant Lines**
Allows you to create constant lines, define their visibility, name, value, legend text, appearance, title, etc.
- **Scale Breaks**
Allows you to enable automatic and / or create custom scale breaks, and define their appearance.

Series Views Page

Tasks

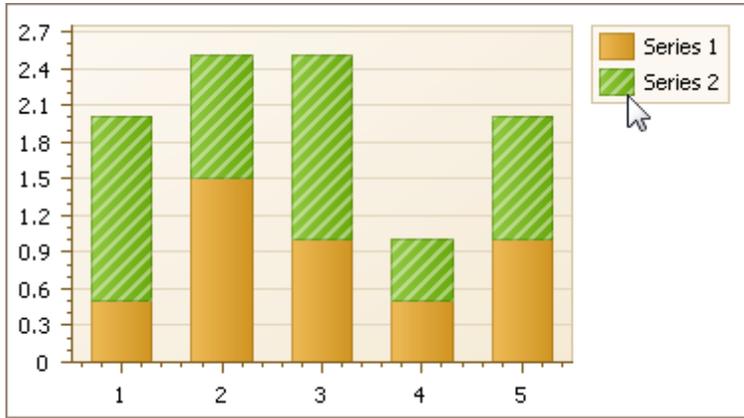
- Customize the view-type-specific properties of series;
- Customize the appearance and border settings of series;
- Add or remove financial indicators (Fibonacci indicators, trendlines and regression lines).

Page Elements

The screenshot displays the 'Series Views' interface. On the left is the 'Chart preview area' showing a grouped horizontal bar chart with three series: Series 1 (blue), Series 2 (red), and Series 3 (green). The y-axis is labeled with categories A, B, C, and D. The x-axis ranges from 0 to 5. A legend identifies the series. A mouse cursor is hovering over the blue bar in category D. On the right is the 'Series selector' panel, currently showing 'Series 1'. It contains several sections: 'Bar Options' with a checkbox for 'Equal bar width' and input fields for 'Width' (0.6), 'Distance' (0), and 'Distance (px)' (1); 'Linked Elements' with dropdowns for 'Axis X' (Primary AxisX), 'Axis Y' (Primary AxisY), and 'Pane' (Default Pane). A vertical sidebar on the far right contains 'Options tabs' for 'General', 'Appearance', 'Border', 'Shadow', and 'Indicators'. A yellow banner at the bottom contains a blue information icon and the text: 'Customize the view-type-specific options of a series. Note that you may select a series by clicking it in the chart preview.'

Chart preview area
 Previews a chart's layout.

Note that you can select a series to be modified directly in the chart preview area.



Series selector

Specifies a series to be customized.

Options tabs

The following tabs are available on this page.

- **General**
Specifies a series bar's width, distance, color, transparency, etc.
- **Appearance**
Specifies a series color, transparency and fill style. Additionally, determines whether series points should be painted individually.
- **Border**
Determines whether a series border should be visible, and defines its color and thickness.
- **Shadow**
Specifies whether a series' shadow should be visible, determines its color and size.
- **Indicators**
Allows you to add or remove indicators of a required kind (Regression Line, Trend Line, Fibonacci Arcs, Fibonacci Fans, Fibonacci Retracement and many others).

Point Labels Page

Tasks

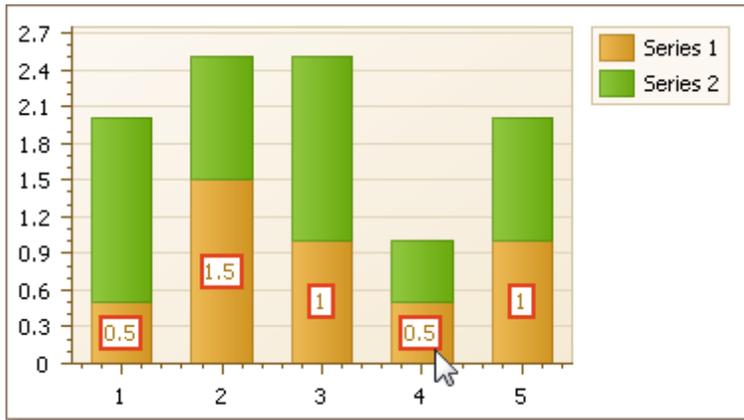
- Resolve overlapping of point labels;
- Customize the appearance of point labels.

Page Elements

Chart preview area

Previews a chart's layout.

Note that you can select point labels to be modified directly in the chart preview area.

**Series selector**

Specifies a series to be customized.

Options tabs

The following tabs are available on this page.

- **General**
Specifies whether labels should be visible and shown for zero values, determines their text and resolves overlapping settings.
- **Point Options**
Specifies point view, pattern and value format.
- **Line**
Determines whether label lines should be visible, and specifies their appearance.
- **Appearance**
Specifies the background color and fill style of labels.
- **Border**
Determines whether label borders should be visible, and defines their color and thickness.
- **Shadow**
Specifies whether a label's shadow should be visible, and defines its color and size.

Chart Titles Page

Tasks

- Create chart titles;
- Enable the word-wrapping for lengthy chart titles;
- Customize the appearance and position of chart titles.

Page Elements

Chart preview area

Titles management section

Chart Titles

Titles list: A very lengthy chart title which demonstr... [v]

Add Remove

Visible

Position

Dock: Bottom [v]

Alignment: Center [v]

Indent: 0 [v]

Appearance

Color: 128, 128, 128 [v]

Font: Tahoma, 14pt, Regular [v]

Antialiasing

Word Wrap

Max Lines Count: 0 [v]

Text

General

A chart title docked to the left

A chart title docked to the right

A very lengthy chart title which demonstrates the word-wrap feature

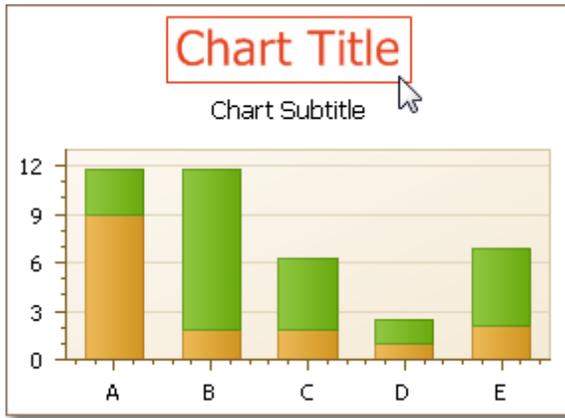
Add chart titles to be displayed within a chart.

Options tabs

Chart preview area

Previews a chart's layout.

Note that you can select chart titles to be modified in the chart preview area directly.

**Titles management section**

Allows you to add or remove titles from the titles list, and choose a title to be customized.

Options tabs

The following tabs are available on this page.

- **Text**
Sets a text for the selected chart title. Note that the basic HTML formatting is supported for chart titles.
- **General**
Specifies a title's visibility, alignment and font options, and determines whether the word-wrapping is enabled for a title.

Legend Page

Tasks

- Customize chart legend's properties.

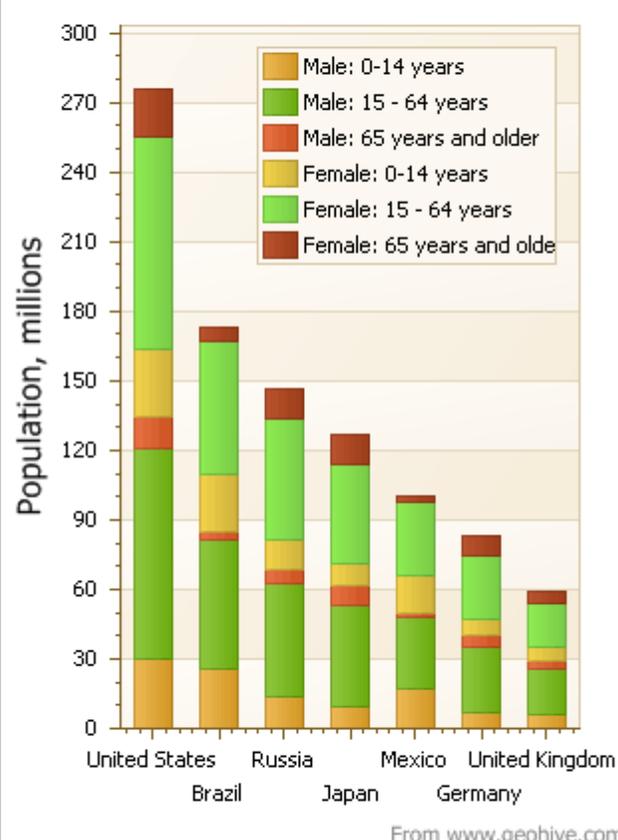
Page Elements

Chart preview area

Legend

Population: Age Structure

Data estimate for mid-2000



From www.geohive.com

Visible

Direction: TopToBottom ▼

Equally spaces items

Alignment

Vertical: Top ▼

Horizontal: Right ▼

Limits

Vertical (%): 100 ▲▼

Horizontal (%): 75 ▲▼

Margins

All: 10 ▲▼

Bottom: 10 ▲▼

Left: 10 ▲▼

Right: 10 ▲▼

Top: 10 ▲▼

General

Appearance

Interior

Marker

Text

Border

Shadow

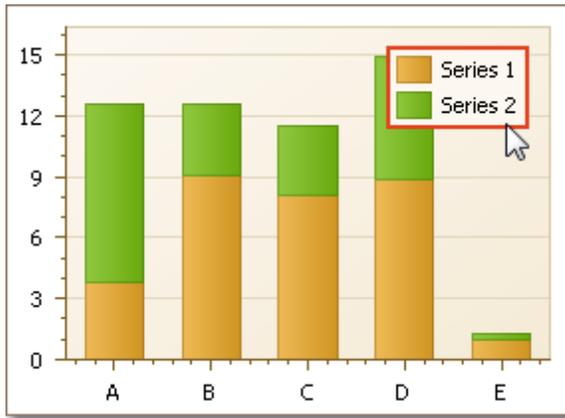
Customize the legend's properties.

Options tabs

Chart preview area

Previews a chart's layout.

Note that you can select the legend directly on the chart preview area.



Options tabs

The following tabs are available on this page.

- **General**
Specifies legend visibility, direction, alignment, spacing, limits and margins.
- **Appearance**
Specifies legend background color and background image.
- **Marker**
Specifies visibility and dimensions of legend markers.
- **Text**
Specifies legend text antialiasing, color and font.
- **Border**
Specifies visibility, color and thickness of legend borders.
- **Shadow**
Specifies visibility, color and size of the legend shadow.

Annotations Page

Tasks

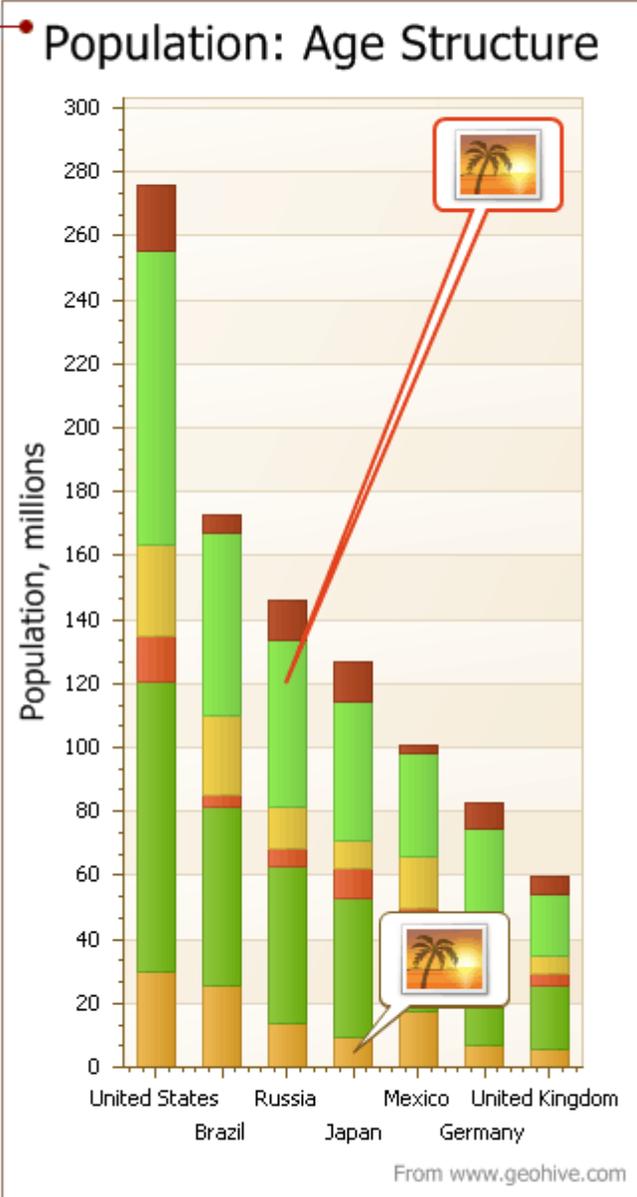
- Create and customize image and text annotations.

Page Elements

Chart preview area

Annotation selector

Annotations



From www.geohive.com

Annotations list: Image Annotation 1 ▼

Add
Remove

Visible
 General

Name: Image Annotation 1

Z-order: 0 ▲ ▼

Layout

Auto-size

Width: 66 ▲ ▼

Height: 48 ▲ ▼

Angle: 0 ▲ ▼

Anchor Point
Shape Position
Content
Padding
Appearance
Border
Shadow

Create and customize annotations anchored to a chart, pane or series point. Note that you may select an annotation by clicking it in the chart preview.

Options tabs

Chart preview area

Previews a chart's layout.

Annotation selector

Specifies an annotation to be created and/or customized.

Note that you can select an annotation directly on the chart preview area.

Options tabs

The following tabs are available on this page.

- **General**
Specify an annotation's name, adjust its visibility, z-order and layout.
- **Anchor Point**
Choose an element to anchor to (chart, pane, or series point), and adjust the corresponding options.
- **Shape Position**
Choose an annotation's shape position type (free or relative), and adjust the corresponding options.
- **Content**
Depending on an annotation's type (text or image), specify its content.
- **Padding**
Specify an annotation's inner indents.
- **Appearance**
Adjust an annotation's background color, fill style, shape and connector options.
- **Border**
Specify visibility, color and thickness of an annotation's borders.
- **Shadow**
Specifies visibility, color and size of an annotation's shadow.

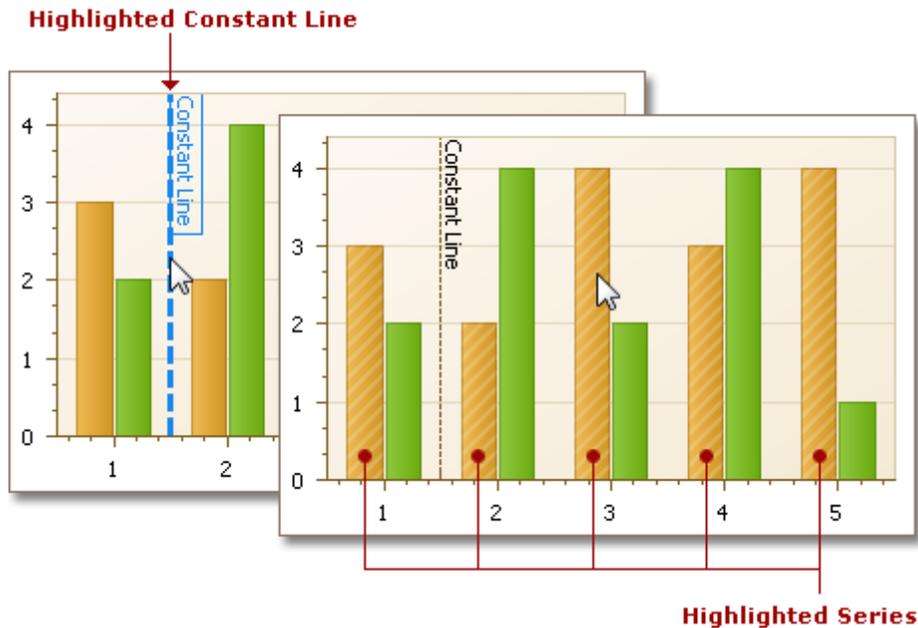
Highlighting and Selection Chart Elements

If you are working with 2D charts, you can highlight and select different chart elements via the mouse or using different gestures on your touchscreen device.

Highlighting

Any chart element that can be selected supports highlighting.

An end user can highlight a chart's area using either the drag gesture on your touchscreen device or via the mouse pointer by hovering over a particular chart element, as shown in the image below.



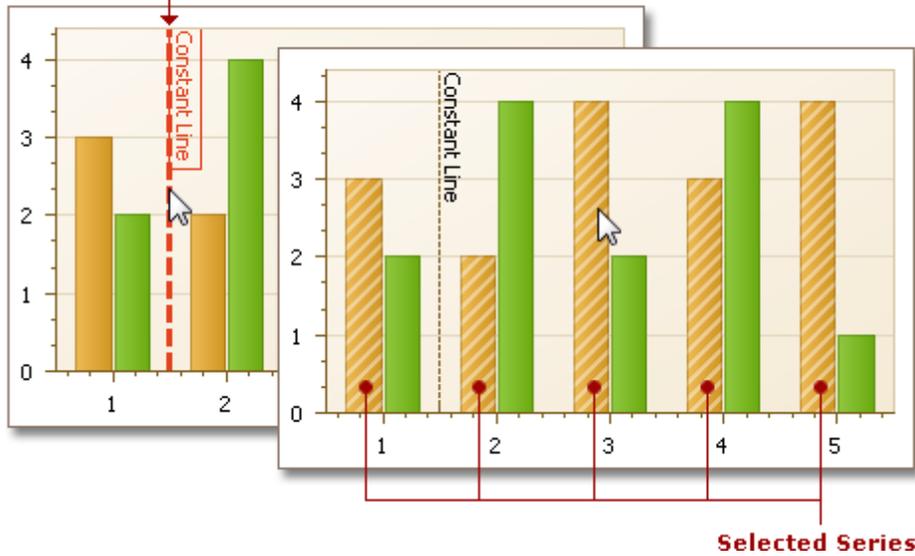
Note

Chart element highlighting and selection is available only for 2D Chart Types.

Selection

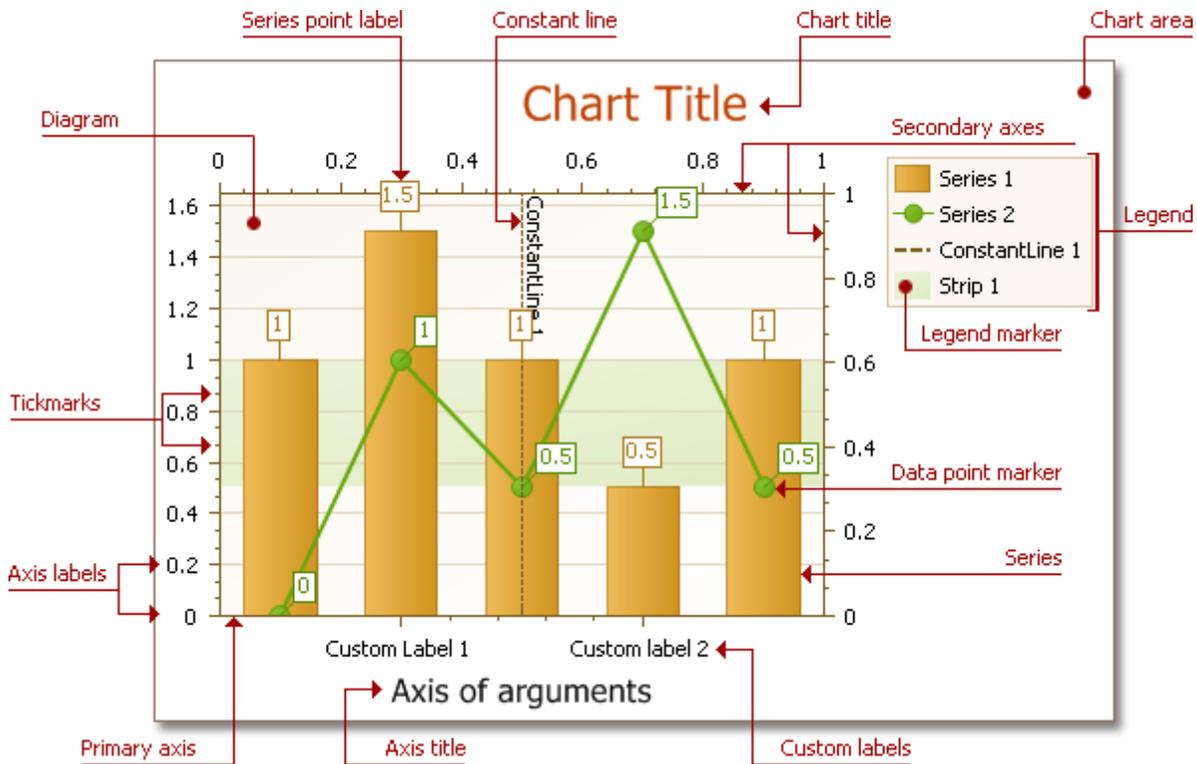
To select a particular chart element, an end user should tap it on a device supporting touchscreen or click this element using the left mouse button. The following image demonstrates how a constant line and a single series are painted if selected by an end user with the mouse pointer.

Selected Constant Line



Selectable Elements

Chart elements which can be highlighted or selected are shown in the following illustration.



Zoom a Chart

If you are working with 2D XY-charts (Bar, Line, Point, etc.) or 3D charts, you can zoom in or out of a chart. This allows you to see some of the chart's data in greater detail, or get a more general picture of your data.

Note that zooming is unavailable for 2D Pie, 2D Doughnut, Radar, and Polar charts.

Zoom In a Chart

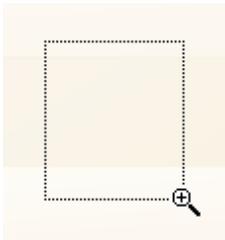
To zoom in a chart, do one of the following.

- **Hold down SHIFT and click.**

After you press SHIFT, the mouse pointer is changed to . Then, move the mouse pointer to the chart region to be zoomed into, and click (while holding SHIFT). The magnification factor is 300%.

- **Press SHIFT and select a region on a diagram.**

After you press SHIFT, the mouse pointer is changed to . Then, select a zoomed region by dragging the mouse pointer.



After releasing the left mouse button, a chart is zoomed into the bounds of the selected region on a diagram.

Note

This feature is available for 2D charts only.

if you press SHIFT and can't zoom in anymore (the mouse pointer is changed to ) , then a chart is already zoomed in by **100** times (10000%). This is the maximum possible zoom factor allowed.

- **Use CTRL+PLUS SIGN.**

In this case, the magnification factor is 120%.

- **Use the spread gestures on a touchscreen device.**

An end-user can zoom in a chart's diagram performing spread gestures on any device supporting touchscreen.



- **Use the mouse wheel.**

In this case, the magnification factor is 120%.

Zoom Out of a Chart

To zoom out of a chart, do one of the following.

- **Hold down ALT and click.**

After you press ALT, the mouse pointer is changed to . Then, move the mouse pointer to the region to be zoomed out, and click (while holding ALT). The magnification factor is 300%.

- **Use CTRL+MINUS SIGN.**

In this case, the magnification factor is 120%.

- **Use the pinch gestures on a touchscreen device.**

A chart's diagram can be zoomed out by performing pinch gestures on any device supporting touchscreen.



- **Use the mouse wheel.**

In this case, the magnification factor is 120%.

Undo Zooming

Press CTRL+Z to return to the state before the first zoom operation in a series.

Scroll a Chart

You can scroll a chart if either the axis visible range is reduced or a chart is already [zoomed in](#) (its zoom factor is more than 100%). Since the entire chart is not visible at one time, it's possible to scroll a chart.

Scroll a 2D Chart

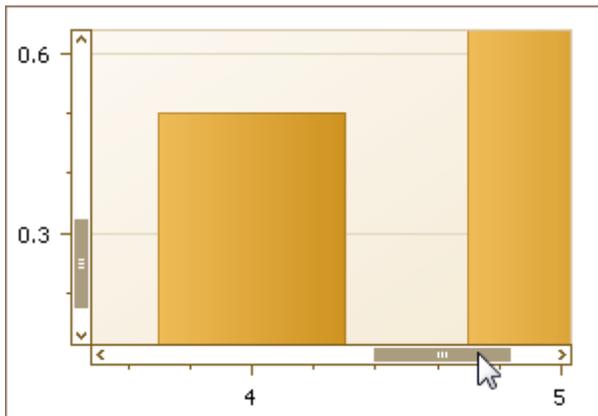
To scroll a 2D chart, do one of the following:

- **Hold down the left mouse button, and drag it.**

After you hold down the left mouse button, the mouse pointer is changed from  to . Then drag the mouse pointer to scroll the diagram.

- **Use scrollbars.**

An end-user is able to click a scrollbar arrow, click the scrollbar near the thumb, or drag the thumb and move it.



In this instance, a chart's diagram is scrolled in the same way as controls in used Windows applications.

- **Use flick gestures on a touchscreen device.**

An end-user can scroll a diagram using flick gestures on a touchscreen device.



- **Use CTRL+ARROW combinations.**

When an end-user presses CTRL + LEFT, a chart's diagram is moved to the left.

When an end-user presses CTRL + UP, a chart's diagram is moved to the top.

When an end-user presses CTRL + RIGHT, a chart's diagram is moved to the right.

When an end-user presses CTRL + DOWN, a chart's diagram is moved to the bottom.

Scroll a 3D Chart

An end-user can perform chart scrolling doing one of the following:

- **Hold down the mouse wheel button on a chart and drag it.**

After you hold down the mouse wheel, the mouse pointer is changed from  to . Then drag the mouse pointer to scroll a chart's diagram.

- **Use CTRL+ARROW combinations.**
- **Use flick gestures on a touchscreen device.**

An end-user can scroll a diagram using flick gestures.

Rotate a Chart

If you are working with 3D charts, you can rotate a chart's diagram. This may be required if a chart displays multiple series or data points, and it's required to change the current rotation angle to view the chart data in detail.

To rotate a chart control, do one of the following:

- **Hold down the left mouse button on the diagram and drag the mouse pointer.**

After holding down the left mouse button, the mouse pointer is changed from  to . Then, drag the mouse pointer to rotate the chart.

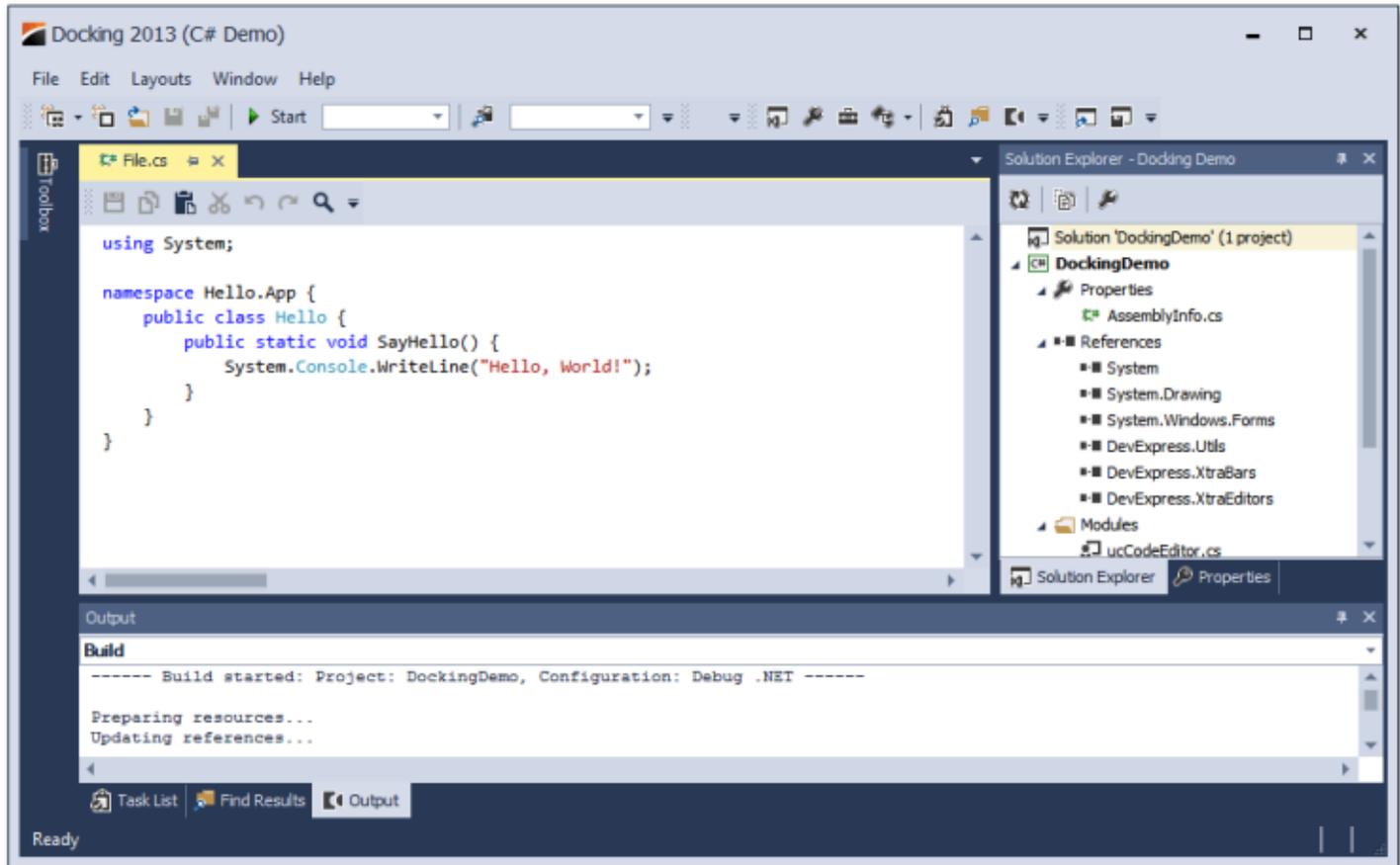
- **Use rotation gestures on a touchscreen device.**

Touch a 3D chart's area with two fingers and move them in a clockwise or counterclockwise direction.



Docking

In the **Docking** section, you will learn about the main runtime capabilities of the DocumentManager and DockManager, which can be combined to create traditional docking UI applications (see the image below).



The main elements of the DocumentManager and DockManager components are Documents and Dock panels, respectively. These objects are containers that display content and provide docking functionality you can drag Documents and Dock Panels into a tab group, dock them to different application dock zones, make them floating or auto-hidden, etc.

This section consists of the following topics.

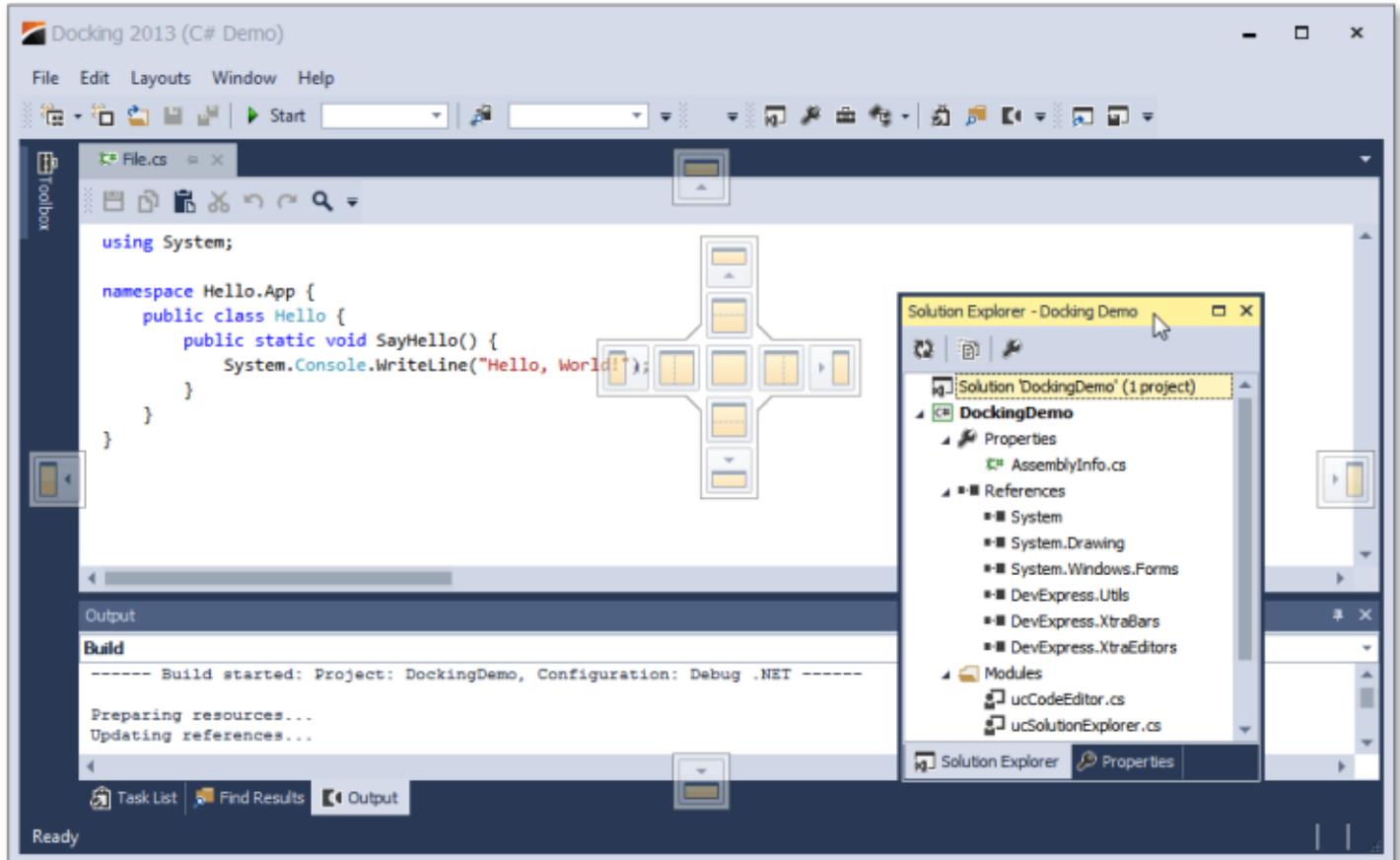
- [Dock Panels](#)
- [Documents](#)

Dock Panels

This topic describes the most common runtime operations for dock panels.

Docking Hints

Dock panels can be docked, floating or auto-hidden. To dock or undock a panel, simply click its header and drag the panel. As you drag the panel over an application form, docking hints appear (see the figure below). Use these hints to dock the panel to the desired position.



Docking hints are semi-transparent square elements that allow you to dock a panel to a form's edges, or to an existing container as a tab, or between other docking elements. These hints are displayed separately or grouped in a docking guide (e.g., in the form's central area). Finally, a docking zone is a semi-transparent preview of exactly where your panel will be docked. This zone is displayed when you drag a panel into a docking hint, but before you drop it.

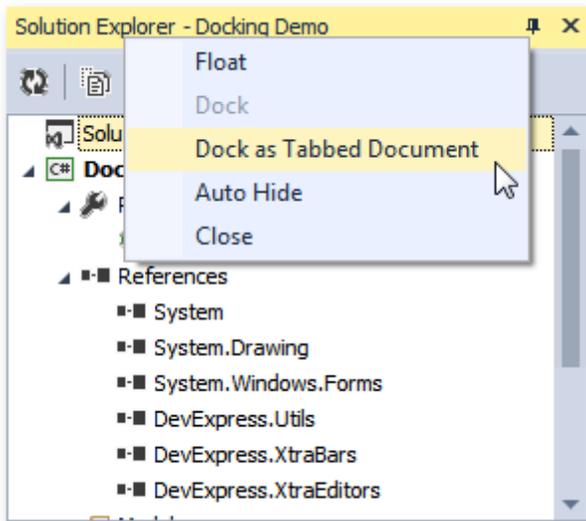
Buttons

Dock panels have multiple state change buttons in their top right corner.

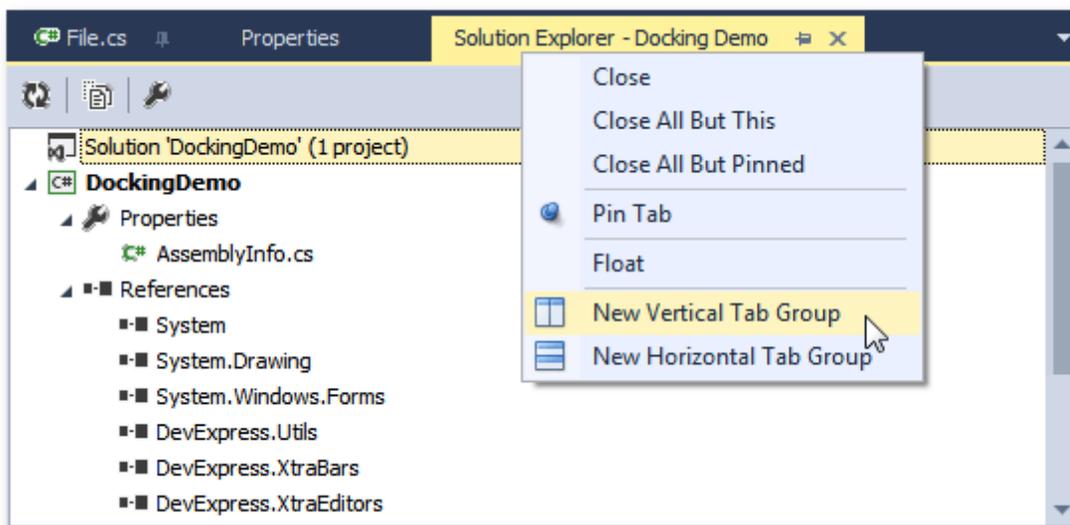
- **Close** - closes the current panel.
- **Maximize/Restore** - maximizes the panel to full-screen size, or restores it back to its original size. Available only for floating panels.
- **Auto-hide/Dock** - hides the panel, leaving only its header visible, or restores an auto-hidden panel back to the docked state. Depending on the application settings, hidden panels are displayed either on mouse hover or on click only. Available only for docked panels.
- **Pin** - places the panel in the first tab position. Available only for panels docked as tabbed documents.

Context Menu

Most docking operations are available from the panel's context menu, displayed on right-click. The figure below illustrates the context menu for a docked panel.

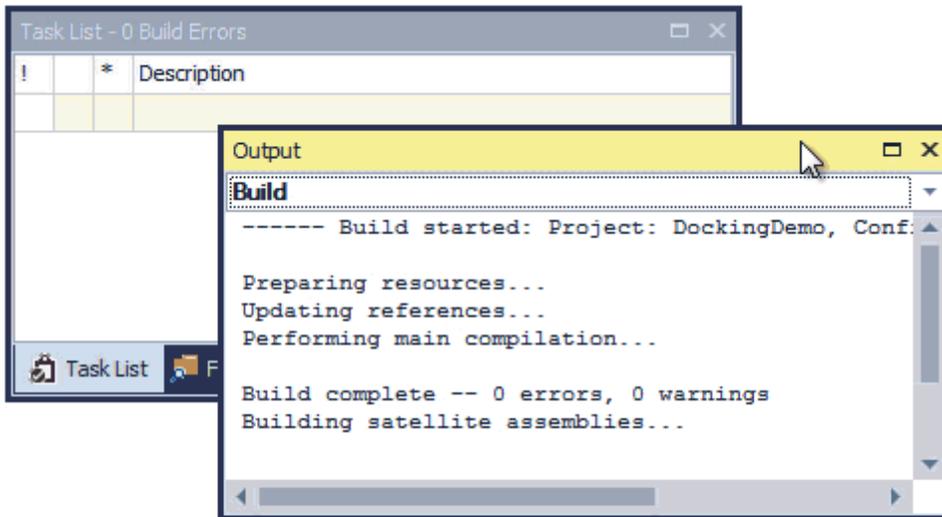


For dock panels docked as tabbed documents, the context menu displays multiple additional items, which allow you to pin the panel or start a new horizontal or vertical group within the docked area (see the image below).



Interoperability with Documents and Other Dock Panels

When dragging a dock panel, you can dock it to other dock panels. This will create a dock panel container that presents both panels as tabs. Note that in addition to docking panels via docking hints, you can also drag them to the tab header area. This allows you to instantly rearrange panels within the container (see the animation below).



Dock panels can be docked to both the dock panel docking areas (the form's edges) as well as to the tabbed View. Documents, however, can only be docked within the tabbed View, and not to the docking areas.

Mouse Operations and Hotkeys

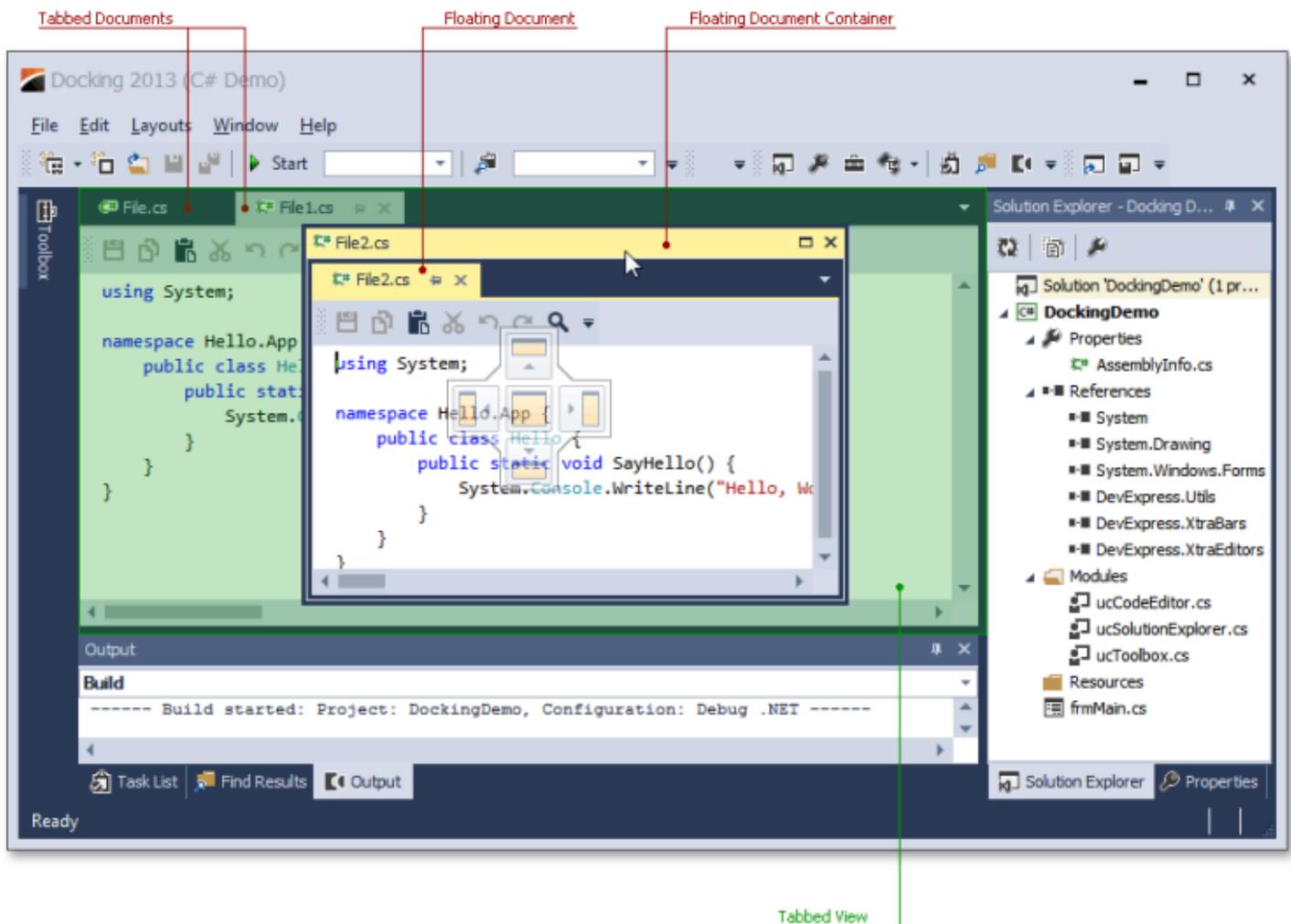
- **Double-click** a docked panel's caption - undocks the panel and makes it floating. This does not work with auto-hide panels.
- **Ctrl+Double-click** a floating panel's caption - docks the floating panel to its previous docking position.
- **Esc** while dragging a panel - cancels the dock operation and drops the panel at the current position.
- **Ctrl+Tab** or **Ctrl+Shift+Tab** - shows the Document Selector. See the [Dock Panels](#) topic to learn more about the Document Selector.

Documents

Document objects resemble dock panels and serve the very same goal - to host content within floating or tabbed MDI windows. You can click a documents caption, and drag this document to dock or undock it in the same manner as dock panels. However, there are certain differences between documents and dock panels.

View

While dock panels can be docked to any forms edge, documents can only be docked in a special area called a tabbed View. When you drag a document, docking hints will tell you where this area is. The image below illustrates a tabbed View within a tabbed MDI application.



Dock panels can also be docked into this area, but documents cannot be docked to auto-hide containers and form edges.

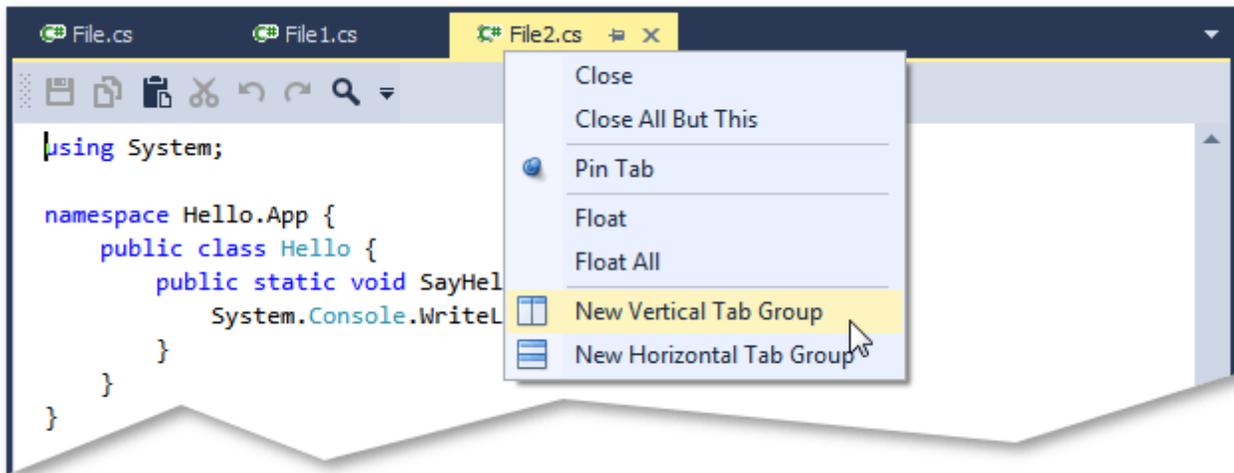
Floating Document Container

As you can see from the image above, documents can be nested into a floating document container. If this feature is enabled, it allows you to organize all of your floating documents in a single floating container (and avoid a cluttered UI with multiple floating windows). If you want to dock your floating documents once again, simply drag this container in the same manner in which you drag documents. Docking a floating container into a tabbed View will dock all of the container's documents into this View. You can also rearrange within or drag individual documents out of this container.

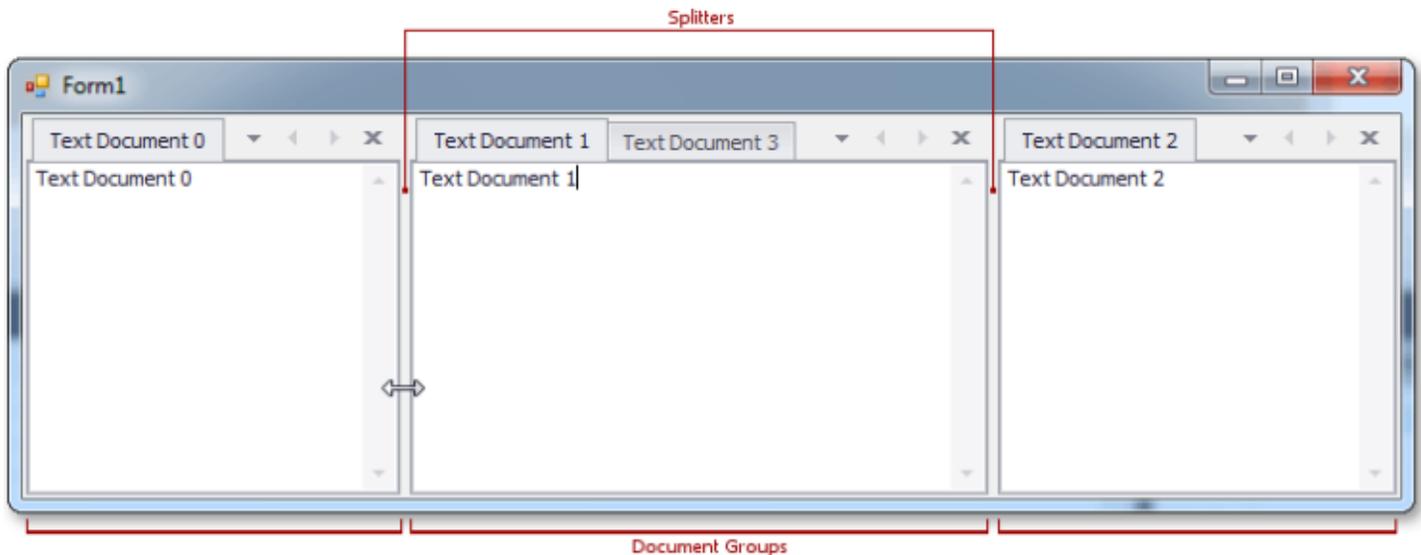
Tabbed Groups

Documents within a tabbed View can be docked to vertical or horizontal document groups. To do so, use the side

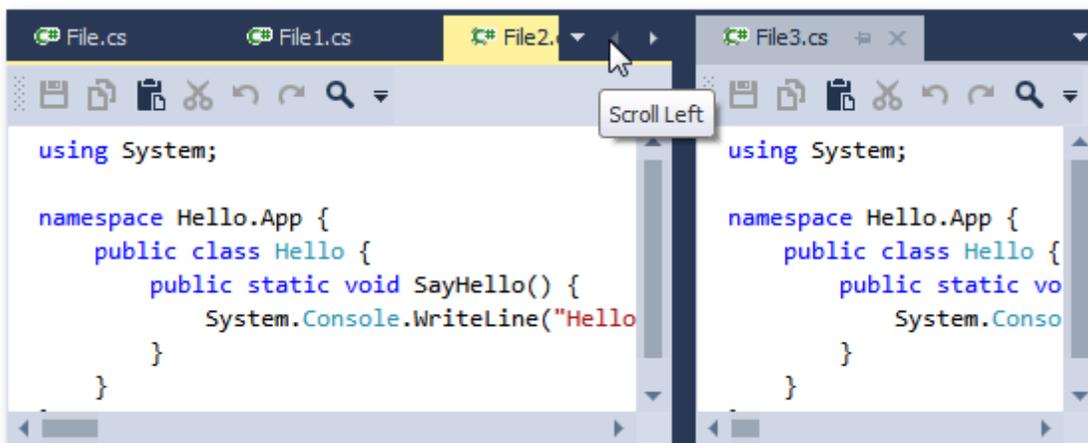
docking hint when dragging a document, or right-click the document header and select the **New Tab Group** item in the invoked context menu (see the figure below).



Document groups are divided by splitters. You can drag the splitter to resize the groups, as shown in the figure below.



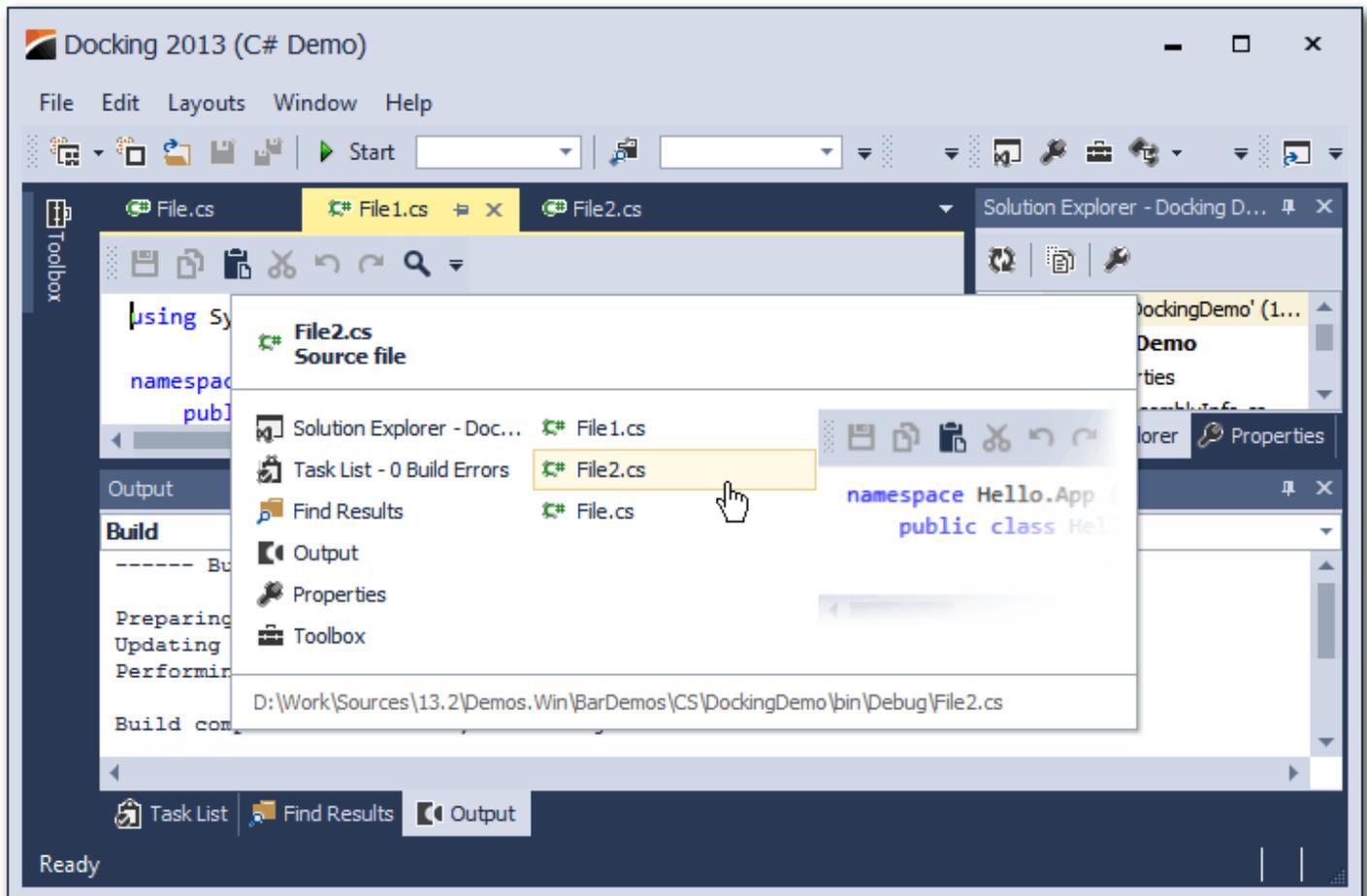
Document groups can display **Next** and **Previous** buttons, which allow you to scroll through tab headers when there is not enough free space within the group to display all of the headers.



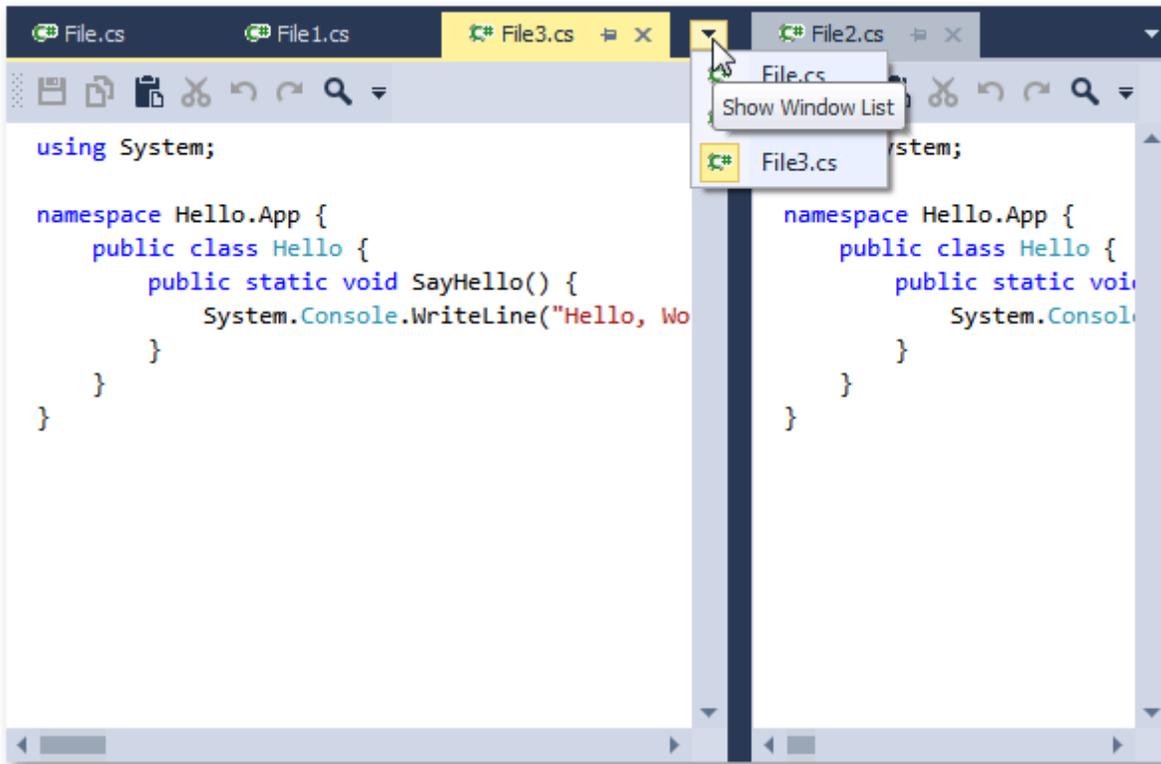
Document groups within a View can either be arranged horizontally (side-by-side), or vertically (one above another), but not in both directions simultaneously. If only one tabbed group exists, the View does not yet have an orientation setting. After you start a new horizontal tab group, for example, the View becomes vertically oriented, which means that all subsequent tab groups can only be arranged vertically. You can reverse the current View orientation by right-clicking any tab group header and selecting the **Arrange Tab Groups Vertically (Horizontally)** context menu item.

Navigation

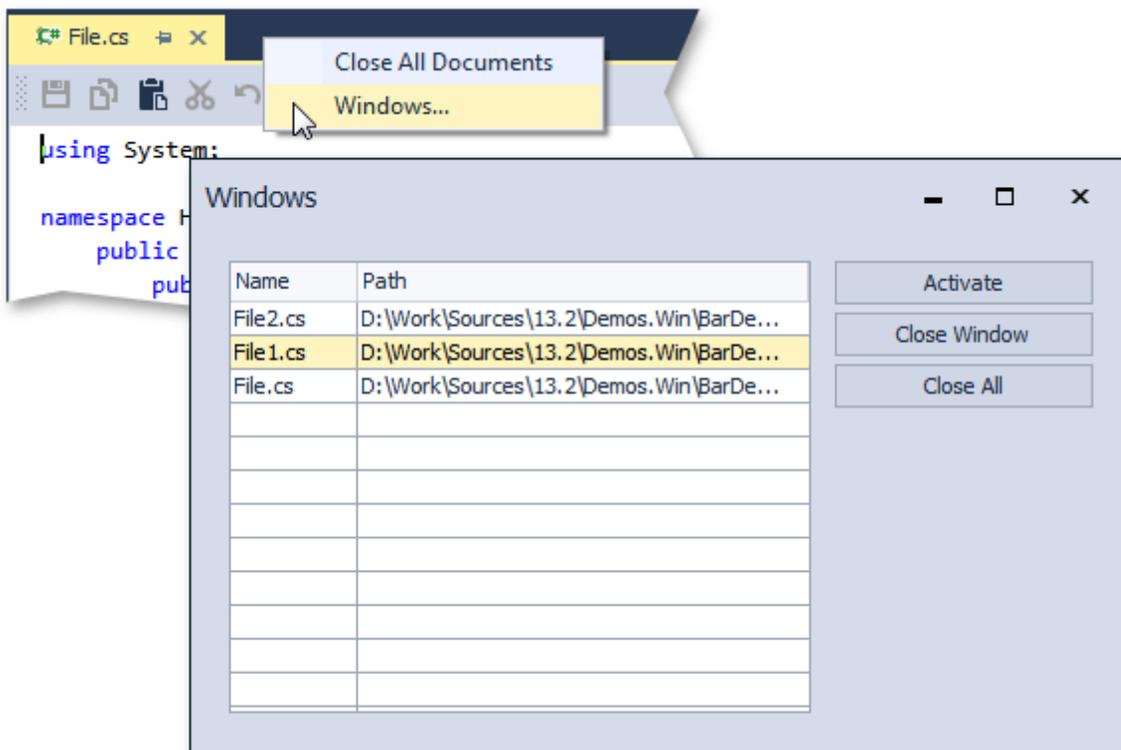
To navigate through documents (and dock panels, if any exist), you can use the Document Selector, invoked via the **CTRL+Tab** keyboard hotkey. This tool displays a small preview of each focused document (dock panel) and its short description. You can see the Document Selector in the next image.



To quickly navigate through documents, you can also use the button in the group's top right corner.



Finally, you can right-click a document group's header and select the **Windows...** item to display the Windows dialog, which lists all currently opened documents and their paths (see the image below).



Mouse Operations and Keyboard Shortcuts

- **Double-click** a docked document's caption - undock the document and make it floating.

- **Ctrl+Double-click** a floating document's caption - docks the floating document to its previous docking position.
- **Ctrl+Tab** or **Ctrl+Shift+Tab** - shows the Document Selector.

Editors

This section describes the capabilities provided by the editor controls:

The screenshot displays a user profile editor for Nancy Davolio. It includes a photo of the user, a form for personal and professional details, an address section, and a calendar widget. The calendar is currently showing December 1948, with the 23rd selected.

Employee Information:

- Employee ID: 1
- Title: Ms.
- First Name: Nancy
- Last Name: Davolio
- Job Title: Sales Representative
- Report To: Andrew Fuller
- Birth Date: 12/8/1948
- Hire Date: 5/1/1992

Address Info:

- Country: USA
- City: Seattle
- Address: 507 - 20th Ave. E. Apt. 2A
- Home Phone: (206) 555-9857

Calendar:

3 February 2009
December 1948

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Clear

Record 1 of 9

Topics in this section:

- [Working with Dropdown Editors](#)
- [Editing Values, Selecting Text and Using the Clipboard](#)
- [Editor Context Menu](#)

Working with Dropdown Editors

Open Editor's Dropdown

Do one of the following:

- Focus the editor and press ALT+DOWN ARROW or F4.
- Click the editor's dropdown button:



Close Editor's Dropdown

For all editors providing a dropdown, you can close the dropdown by pressing ALT+DOWN ARROW, ESC or F4.

If the calculator is displayed in the dropdown, it can be closed via CTRL+ENTER.

Dropdowns displaying lists of items can be closed by clicking an item with the mouse, or by selecting an item with the keyboard and pressing ENTER.

Editing Values, Selecting Text and Using the Clipboard

Select and Deselect Editor's Contents

To select all text within an editor, you can invoke the [Editor Context Menu](#) and choose **Select All**. To select a part of the edit value, click on a position where the selection should start, drag the pointer to the end position and then release the mouse button.

Additionally, the following keyboard shortcuts allow you to manage selections.

Shortcut	Description
CTRL+A or F2	Select all within an editor.
SHIFT+ARROW	Extends or shrinks the selection by one character.
CTRL+SHIFT+ARROW	Extends or shrinks the selection by one word.

Clipboard Operations

Clipboard operations are supported for editors that support caret moving.

To copy selected text into the clipboard, do the following.

- Press CTRL+C or CTRL+INSERT.
- Open the [Editor Context Menu](#) and select **Copy**.

To paste text from the clipboard, do the following.

- Press CTRL+V or SHIFT+INSERT.
- Open the [Editor Context Menu](#) and select **Paste**.

To cut some text from an editor into the clipboard, do the following.

- Press CTRL+X or SHIFT+DELETE.
- Open the [Editor Context Menu](#) and select **Cut**.

Delete Selected Text

To delete the selected text within an editor, do one of the following:

- Press DELETE or BACKSPACE.
- Open the [Editor Context Menu](#) and select **Delete**.

Undo

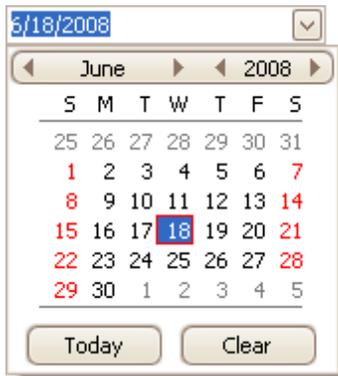
To undo the last text editing operation, do one of the following:

- Press CTRL+Z.
- Open the [Editor Context Menu](#) and select **Undo**.

Note

After you've undone an operation, you can return to the previous edit value by executing the Undo command once again.

Change Date/Time Values



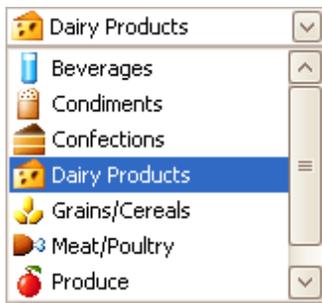
You can edit these values without opening the dropdown calendar. Position the caret at the portion of a date/time value that needs to be changed. To increment the value, press UP ARROW. To decrement the value, press DOWN ARROW. Or, use the mouse wheel.

Change Numeric Values



To increment a value, press UP ARROW. To decrement the value, press DOWN ARROW. Or, use the mouse wheel.

Change Values of Editors That Display Items in the Dropdown



To select the previous value, press UP ARROW. To select the next value, press DOWN ARROW. Or use the mouse wheel.

To learn how to open and close dropdown windows, see [Working with Dropdown Editors](#).

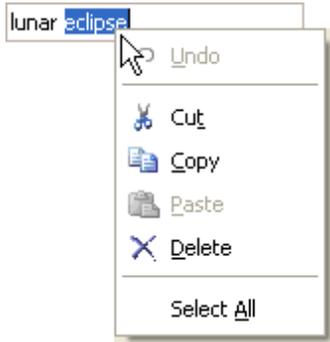
Edit Images

To copy, cut, paste, load and save images in image editors, right click the image and select the required command via the context menu:



Editor Context Menu

Text editors support a context menu providing common commands. To open the menu, right-click an editor.



Expression Editor

Expression Editor

The Expression Editor allows you to edit various Boolean or regular expressions in controls:

Current expression

You can edit the expression manually using the keyboard or by selecting available fields, functions, operators and constants via the controls below

Categories
Select a category to access available functions, operators, fields or constants

Available functions, operators, fields or constants
Double-click an item to insert it into the expression

Item's description

In this editor, you can type an expression manually, or select functions, operators and operands using the editor's controls.

An expression is a string that, when parsed and processed, evaluates some value. Expressions consist of column/field names, constants, operators and functions. Column/field names must be wrapped with brackets. The following are examples of regular expressions:

```
"[Quantity] * [UnitPrice] * (1 - [BonusAmount])"  
"[FirstName] + ' ' + [LastName]"
```

Boolean expressions:

```
"[Country] == 'USA'  
"[OrderDate] > #8/16/1994# AND [Quantity] > 20"
```

The Expression Editor supports numerous standard functions, allowing you to easily perform different string, date-time, logical and math operations over data. You can access the available functions by selecting the **Functions** category.

See Also

[Expression Operators, Functions and Constants](#)

Expression Operators, Functions and Constants

WinForms Controls > [Expression Editor](#) > [Expression Operators, Functions and Constants](#)

This topic lists operators and functions supported by the [Expression Editor](#). It also provides information on how constants can be specified in expressions.

Operators

Operator	Description	Example
+	Adds the value of one numeric expression to another, or concatenates two strings.	[FirstName] + ' ' + [LastName] [UnitPrice] + 4
-	Finds the difference between two numbers.	[Price1] - [Price2]
*	Multiplies the value of two expressions.	[Quantity] * [UnitPrice] * (1 - [BonusAmount])
/	Divides the first operand by the second.	[Quantity] / 2
%	Returns the remainder (modulus) obtained by dividing one numeric expression into another.	[Quantity] % 3
	Compares each bit of its first operand to the corresponding bit of its second operand. If either bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.	[Flag1] [Flag2]
&	Performs a bitwise logical AND operation between two integer values.	[Flag] & 10
^	Performs a logical exclusion on two Boolean expressions, or a bitwise exclusion on two numeric expressions.	[Flag1] ^ [Flag2]
==	Returns true if both operands have the same value; otherwise, it returns false.	[Quantity] == 10
!=	Returns true if the operands do not have the same value; otherwise, it returns false.	[Country] != 'France'
<	Less than operator. Used to compare expressions.	[UnitPrice] < 20
<=	Less than or equal to operator. Used to compare expressions.	[UnitPrice] <= 20
>=	Greater than or equal to operator. Used to compare expressions.	[UnitPrice] >= 30
>	Greater than operator. Used to compare expressions.	[UnitPrice] > 30
In (,,)	Tests for the existence of a	[Country] In ('USA', 'UK', 'Italy')

	property in an object.	
Like	Compares a string against a pattern. If the value of the string matches the pattern, result is true. If the string does not match the pattern, result is false. If both string and pattern are empty strings, the result is true.	[Name] Like 'An%'
Between (,)	Specifies a range to test. Returns true if a value is greater than or equal to the first operand and less than or equal to the second operand.	[Quantity] Between (10, 20)
And	Performs a logical conjunction on two expressions.	[InStock] And ([ExtendedPrice]>100)
Or	Performs a logical disjunction on two Boolean expressions.	[Country]=='USA' Or [Country]=='UK'
Not	Performs logical negation on an expression.	Not [InStock]

Functions

Date-time Functions

Function	Description	Example
AddDays(DateTime, DaysCount)	Returns a date-time value that is the specified number of days away from the specified DateTime.	AddDays([OrderDate], 30)
AddHours(DateTime, HoursCount)	Returns a date-time value that is the specified number of hours away from the specified DateTime.	AddHours([StartTime], 2)
AddMilliseconds(DateTime, MilliSecondsCount)	Returns a date-time value that is the specified number of milliseconds away from the specified DateTime.	AddMilliseconds([StartTime], 5000)
AddMinutes(DateTime, MinutesCount)	Returns a date-time value that is the specified number of minutes away from the specified DateTime.	AddMinutes([StartTime], 30)
AddMonths(DateTime, MonthsCount)	Returns a date-time value that is the specified number of months away from the specified DateTime.	AddMonths([OrderDate], 1)
AddSeconds(DateTime, SecondsCount)	Returns a date-time value that is the specified number of seconds away from the specified DateTime.	AddSeconds([StartTime], 60)
AddTicks(DateTime, TicksCount)	Returns a date-time value that is the specified number of ticks away from the specified DateTime.	AddTicks([StartTime], 5000)
AddTimeSpan(DateTime, TimeSpan)	Returns a date-time value that is away from the specified DateTime for the given TimeSpan.	AddTimeSpan([StartTime], [Duration])

AddYears(DateTime, YearsCount)	Returns a date-time value that is the specified number of years away from the specified DateTime.	AddYears([EndDate], -1)
GetDate(DateTime)	Extracts a date from the defined DateTime.	GetDate([OrderDateTime])
GetDay(DateTime)	Extracts a day from the defined DateTime.	GetDay([OrderDate])
GetDayOfWeek(DateTime)	Extracts a day of the week from the defined DateTime.	GetDayOfWeek([OrderDate])
GetDayOfYear(DateTime)	Extracts a day of the year from the defined DateTime.	GetDayOfYear([OrderDate])
GetHour(DateTime)	Extracts an hour from the defined DateTime.	GetHour([StartTime])
GetMillisecond(DateTime)	Extracts milliseconds from the defined DateTime.	GetMillisecond([StartTime])
GetMinute(DateTime)	Extracts minutes from the defined DateTime.	GetMinute([StartTime])
GetMonth(DateTime)	Extracts a month from the defined DateTime.	GetMonth([StartTime])
GetSecond(DateTime)	Extracts seconds from the defined DateTime.	GetSecond([StartTime])
GetTimeOfDay(DateTime)	Extracts the time of the day from the defined DateTime, in ticks.	GetTimeOfDay([StartTime])
GetYear(DateTime)	Extracts a year from the defined DateTime.	GetYear([StartTime])
Now()	Returns the current system date and time.	AddDays(Now(), 5)
Today()	Returns the current date. Regardless of the actual time, this function returns midnight of the current date.	AddMonths(Today(), 1)
UtcNow()	Returns the current system date and time, expressed as Coordinated Universal Time (UTC).	AddDays(UtcNow(), 7)

Logical Functions

Function	Description	Example
Iif(Expression, TruePart, FalsePart)	Returns either TruePart or FalsePart, depending on the evaluation of the Boolean Expression.	Iif([Quantity]>=10, 10, 0)
IsNull(Value)	Returns True if the specified Value is NULL.	IsNull([OrderDate])
IsNull(Value1, Value2)	Returns Value1 if it is not set to NULL; otherwise, Value2 is returned.	IsNull([ShipDate], [RequiredDate])

IsNullOrEmpty(String)	Returns True if the specified String object is NULL or an empty string; otherwise, False is returned.	IsNullOrEmpty([ProductName])
-----------------------	---	------------------------------

Math Functions

Function	Description	Example
Abs(Value)	Returns the absolute, positive value of the given numeric expression.	Abs(1 - [Discount])
Acos(Value)	Returns the arccosine of a number (the angle, in radians, whose cosine is the given float expression).	Acos([Value])
Asin(Value)	Returns the arcsine of a number (the angle, in radians, whose sine is the given float expression).	Asin([Value])
Atn(Value)	Returns the arctangent of a number (the angle, in radians, whose tangent is the given float expression).	Atn([Value])
Atn2(Value1, Value2)	Returns the angle whose tangent is the quotient of two specified numbers, in radians.	Atn2([Value1], [Value2])
BigMul(Value1, Value2)	Returns an Int64 containing the full product of two specified 32-bit numbers.	BigMul([Amount], [Quantity])
Ceiling(Value)	Returns the smallest integer that is greater than or equal to the given numeric expression.	Ceiling([Value])
Cos(Value)	Returns the cosine of the angle defined in radians.	Cos([Value])
Cosh(Value)	Returns the hyperbolic cosine of the angle defined in radians.	Cosh([Value])
Exp(Value)	Returns the exponential value of the given float expression.	Exp([Value])
Floor(Value)	Returns the largest integer less than or equal to the given numeric expression.	Floor([Value])
Log(Value)	Returns the natural logarithm of a specified number.	Log([Value])
Log(Value, Base)	Returns the logarithm of a specified number in a specified Base.	Log([Value], 2)
Log10(Value)	Returns the base 10 logarithm of a specified number.	Log10([Value])
Power(Value, Power)	Returns a specified number raised to a specified power.	Power([Value], 3)
Rnd()	Returns a random number that is less than 1, but greater than or	Rnd()*100

	equal to zero.	
Round(Value)	Rounds the given value to the nearest integer.	Round([Value])
Sign(Value)	Returns the positive (+1), zero (0), or negative (-1) sign of the given expression.	Sign([Value])
Sin(Value)	Returns the sine of the angle, defined in radians.	Sin([Value])
Sinh(Value)	Returns the hyperbolic sine of the angle defined in radians.	Sinh([Value])
Sqr(Value)	Returns the square root of a given number.	Sqr([Value])
Tan(Value)	Returns the tangent of the angle defined in radians.	Tan([Value])
Tanh(Value)	Returns the hyperbolic tangent of the angle defined in radians.	Tanh([Value])

String Functions

Function	Description	Example
Ascii(String)	Returns the ASCII code value of the leftmost character in a character expression.	Ascii('a')
Char(Number)	Converts an integerASCIIcode to a character.	Char(65) + Char(51)
CharIndex(String1, String2)	Returns the starting position of String1 within String2, beginning from the zero character position to the end of a string.	CharIndex('e', 'devexpress')
CharIndex(String1, String2, StartLocation)	Returns the starting position of String1 within String2, beginning from the StartLocation character position to the end of a string.	CharIndex('e', 'devexpress', 2)
Concat(String1, ... , StringN)	Returns a string value containing the concatenation of the current string with any additional strings.	Concat('A', '), [ProductName])
Insert(String1, StartPosition, String2)	Inserts String2 into String1 at the position specified by StartPositon	Insert([Name], 0, 'ABC-')
Len(Value)	Returns an integer containing either the number of characters in a string or the nominal number of bytes required to store a variable.	Len([Description])
Lower(String)	Returns String in lowercase.	Lower([ProductName])
PadLeft(String, Length)	Left-aligns characters in the defined string, padding its left side with white space characters up to a specified total length.	
PadLeft(String, Length, Char)	Left-aligns characters in the	PadLeft([Name], 30, '<')

	defined string, padding its left side with the specified Char up to a specified total length.	
PadRight(String, Length)	Right-aligns characters in the defined string, padding its left side with white space characters up to a specified total length.	PadRight([Name], 30)
PadRight(String, Length, Char)	Right-aligns characters in the defined string, padding its left side with the specified Char up to a specified total length.	PadRight([Name], 30, '>')
Remove(String, StartPosition, Length)	Deletes a specified number of characters from this instance, beginning at a specified position.	Remove([Name], 0, 3)
Replace(String, SubString2, String3)	Returns a copy of String1, in which SubString2 has been replaced with String3.	Replace([Name], 'The ', "
Reverse(String)	Reverses the order of elements within String.	Reverse([Name])
Substring(String, StartPosition, Length)	Retrieves a substring from String. The substring starts at StartPosition and has the specified Length..	Substring([Description], 2, 3)
Substring(String, StartPosition)	Retrieves a substring from String. The substring starts at StartPosition.	Substring([Description], 2)
ToStr(Value)	Returns a string representation of an object.	ToStr([ID])
Trim(String)	Removes all leading and trailing SPACE characters from String.	Trim([ProductName])
Upper(String)	Returns String in uppercase.	Upper([ProductName])

Constants

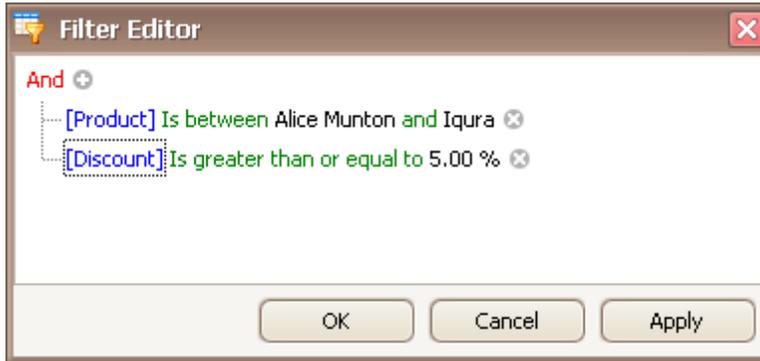
Constant	Description	Description
String constants	String constants must be wrapped in apostrophes. If a string contains an apostrophe, the apostrophe must be doubled.	[Country] == 'France' [Name] == 'O"Neil'
Date-time constants	Date-time constants must be wrapped in '#'.	[OrderDate] >= #1/1/2009#
True	Represents the Boolean True value.	[InStock] == True
False	Represents the Boolean False value.	[InStock] == False
?	Represents a null reference, one that does not refer to any object.	[Region] != ?

See Also

[Expression Editor](#)

Filter Editor

This section describes the capabilities provided by the Filter Editor, which allows users to visually build filters:



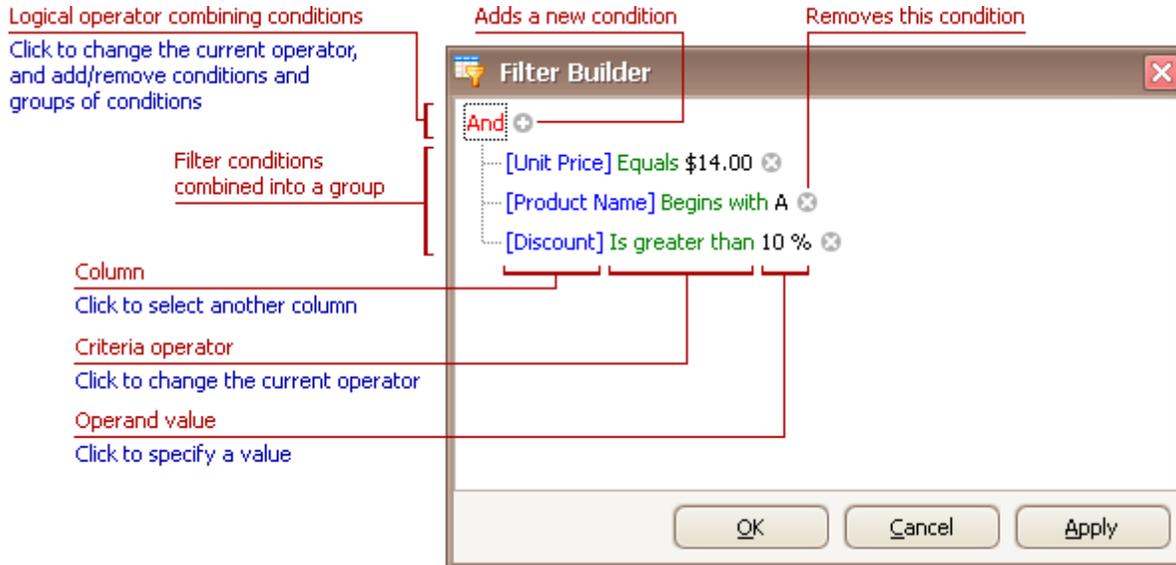
Topics in this section:

- [Filter Data via the Filter Editor](#)
- [Examples of Using the Filter Editor](#)

Filter Data via the Filter Editor

Filter Editor

The **Filter Editor** is used to edit filter criteria. To create and customize filter criteria, use the \oplus and \otimes buttons embedded into the control and context menus supported by the editor's elements:



Remarks

A filter condition **group** is a set of conditions combined by the same logical operator. The following filter expression contains two groups combined by the logical OR operator: "([Product] = 'Chang' And [Quantity] > 20) Or ([Product] In ('Tofu', 'Konbu') And [Quantity] < 100)". In the Filter Editor it's represented as follows:



For step-by-step examples of creating filter criteria, see [Examples of Using the Filter Editor](#).

Add Conditions

To add a condition to a logical group, do one of the following:

- Focus any condition within the group or the group's logical operator and then press INSERT or ADD on the keyboard.
- Click the \oplus button for the group.
- Click the group's logical operator and select **Add Condition**.

To add a condition or a group of conditions that have been copied to the clipboard, press CTRL+V or SHIFT+INSERT. The new condition will be added to the focused group.

Delete Conditions

To delete a condition, do one of the following:

- Focus the condition and press DELETE or SUBTRACT.
- Click the  button.

To delete a group of conditions, do one of the following:

- Focus the group's logical operator and press DELETE or SUBTRACT
- Click the group's logical operator and select **Remove Group**.

To delete all conditions, do one of the following:

- Focus the topmost logical operator and press DELETE or SUBTRACT.
- Click the topmost logical operator and select **Clear All**.

To cut a condition/group of conditions to the clipboard, focus this condition or the group's logical operator and press CTRL+X or SHIFT+DELETE.

Clipboard Operations

To copy a condition or a group of conditions to the clipboard, focus this condition or the group's logical operator and press CTRL+C or CTRL+INSERT.

To cut a condition or a group of conditions to the clipboard, focus this condition or the group's logical operator and press CTRL+X or SHIFT+DELETE.

To paste a condition or a group of conditions from the clipboard to the focused group, press CTRL+V or SHIFT+INSERT.

Change a Column in a Filter Condition

To change a condition's column, invoke the column list by doing one of the following:

- Click the current column.
- Focus the current column via the keyboard and press SPACE or ALT+DOWN ARROW.

Then, choose the required column from the list that will be invoked

Change an Operator in a Filter Condition

To change a condition's operator, invoke the operator list by doing one of the following:

- Click the condition's current operator.
- Focus the current operator via the keyboard and press SPACE or ALT+DOWN ARROW

Then, choose the required operator from the list that will be invoked

Edit a Condition's Value

To edit a condition's value, click the operand value and type text.

To activate the operand value's edit box without changing the value, click the value or focus the operand value via the keyboard and press F2, SPACE, ENTER or ALT+DOWN

To close the active edit box, press ENTER.

To discard changes to the value and close the active edit box, press ESC.

Navigation

To focus a specific filter condition or a group's operator within the Filter Editor, do one of the following:

- Click the target element.

- Use arrow keys to move focus via the keyboard.

See Also

[Examples of Using the Filter Editor](#)

Examples of Using the Filter Editor

The [Filter Editor](#) allows you to filter data (display those records that meet specific requirements), by visually constructing filter criteria in a straightforward graphical form.

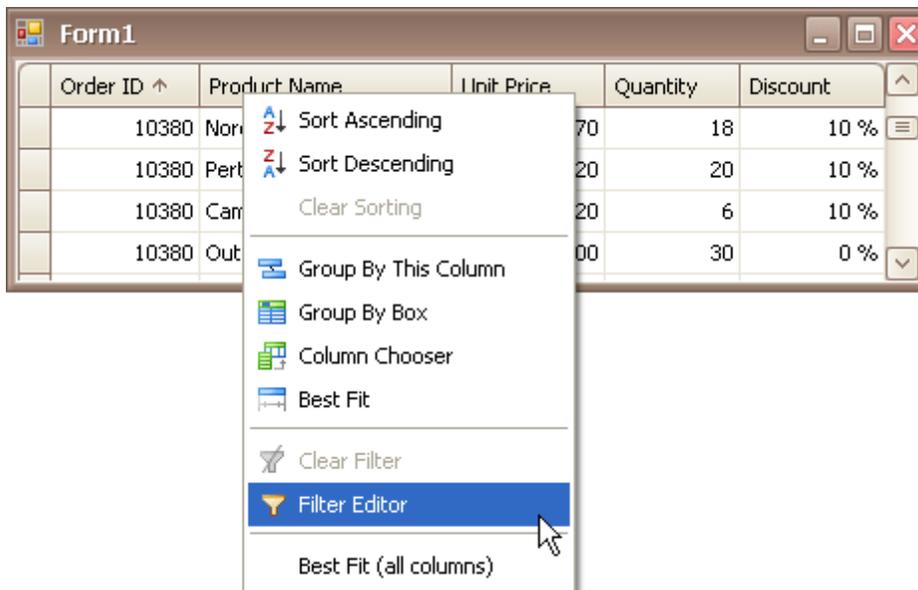
The following sections demonstrate how to construct filter criteria using the Filter Editor.

How to Construct a Simple Filter Condition

Basically, filter conditions specify what data to select from a data source and display in a data-bound control. A typical simple filter condition consists of three parts: the column/field name, operator and a value(s). For instance, '[Discount] >= 0.05' is a simple filter condition, where '[Discount]' is a field name, '>=' is an operator and '0.05' is a value. This condition when applied to a data-aware control will display records that have values in the Discount column greater than or equal to 0.05. Here is how to create this condition via the Filter Editor (it's assumed that the underlying data source contains the Discount column, otherwise, this column will not be accessible in the Filter Editor's column list):

1. Invoke the Filter Editor.

To invoke the Filter Editor in a grid control, right-click any grid column's header and select the Filter Editor option.



To learn how to invoke the Filter Editor for other controls, see corresponding sections in this documentation.

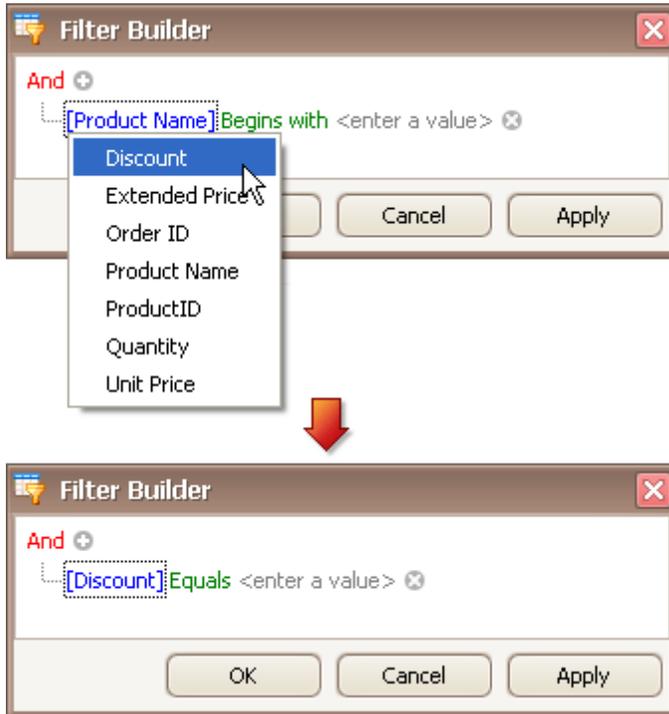
2. The Filter Editor will pop up.

When invoking the Filter Editor for a grid control, if no filtering has yet been applied, the Filter Editor will contain a new filter condition referring to the clicked column. If, for example, the Filter Editor has been opened by right-clicking a Product Name column, it will look like the image below:



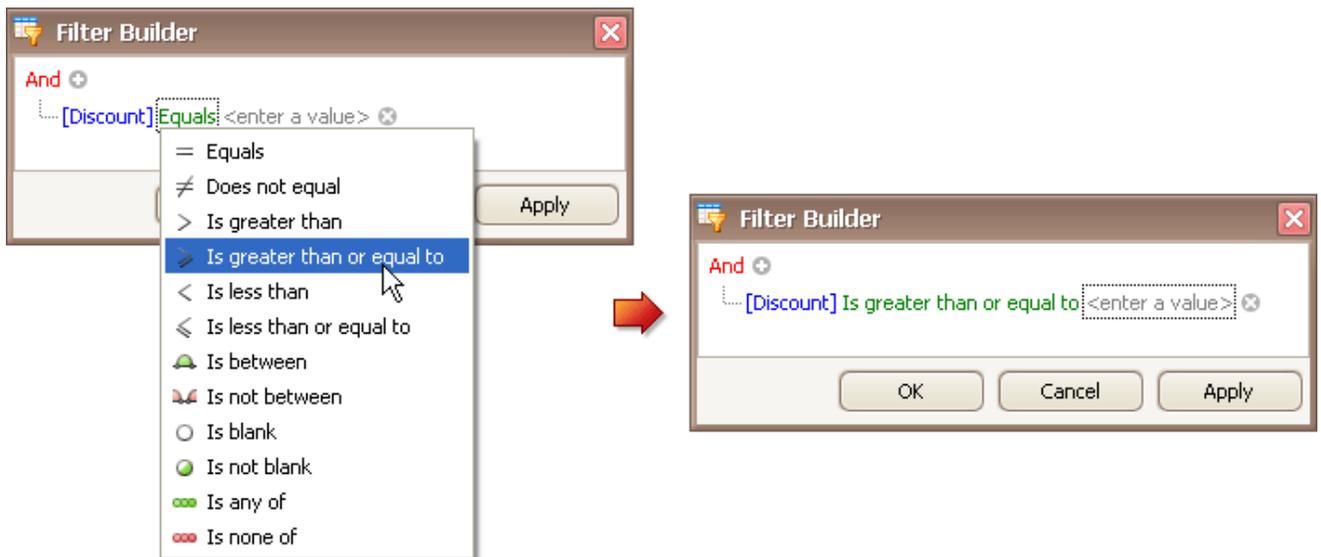
3. Select a column.

Now, to filter against the Discount column, click the condition's link displaying a column name ('Product Name'). This will display the list of available columns. Select the Discount column in this list:



4. Select a comparison operator.

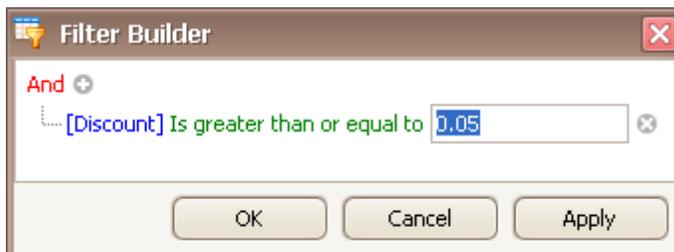
To select the '>=' comparison operator, click the condition's operator link ('Equals') to display the list of supported comparison operators and select the required operator:



The comparison operator list displays only those operators that are supported by the current column's data type. For instance, the Discount column is of the numeric type, and the operator list doesn't display the 'Begins with' operator and other operators that are related to strings.

5. Enter a value.

Now, click the value box and enter a comparison value ('0.05'):



6. Save changes.

Click OK or Apply, to filter data using the created filter condition. The grid will show the filter panel displaying the current filter criteria:



The filter panel will contain the 'Edit Filter' button, which also allows you to invoke the Filter Editor.

How to Construct Filter Criteria with Multiple Conditions Joined by One Logical Operator

Filter criteria typically consist of two or more simple filter conditions combined by logical operators (AND, OR, NOT AND, NOT OR). The following example shows how to construct filter criteria in the Filter Editor that consist of multiple conditions combined by one logical operator. The "[ProductName] = 'Tofu' AND [Discount] >= 0.1 AND [Quantity] > 99" filter expression contains three simple filter conditions combined by the AND operator. To construct it, do the following:

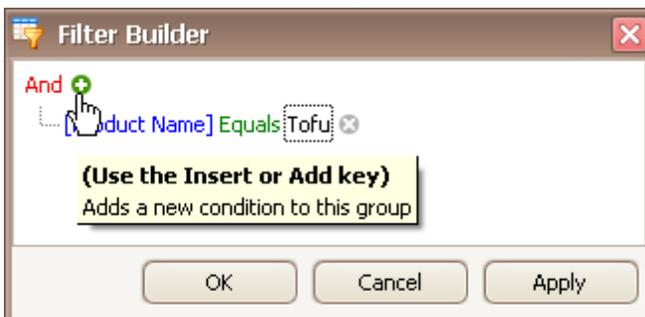
1. Invoke the Filter Editor. When the Filter Editor is invoked for a grid control, the Filter Editor may display an unfinished new filter condition:



2. Set the condition's operator to Equals and operand value to 'Tofu' (as described in the previous section):



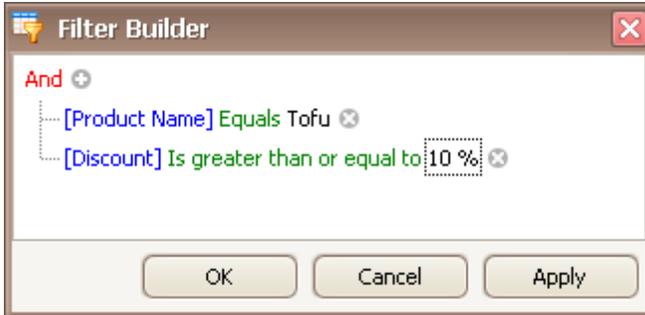
3. To add one more condition, press the + button next to the group's AND operator:



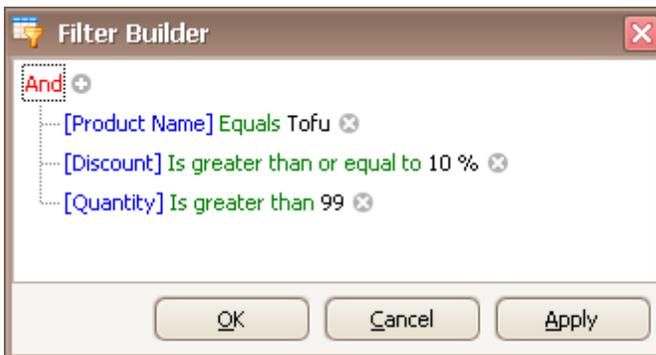
This will create a new condition under the current one:



4. For the second condition, set the column to 'Discount', operator to '>=' and operand value to '0.1':



5. To add a third condition to the same group, click the **+** button again. Set the condition's column to 'Quantity', operator to '>' and operand value to '99'. Below is the result:



6. Click OK or Apply, to apply the created filter criteria.

How to Construct Filter Criteria Involving Different Logical Operators

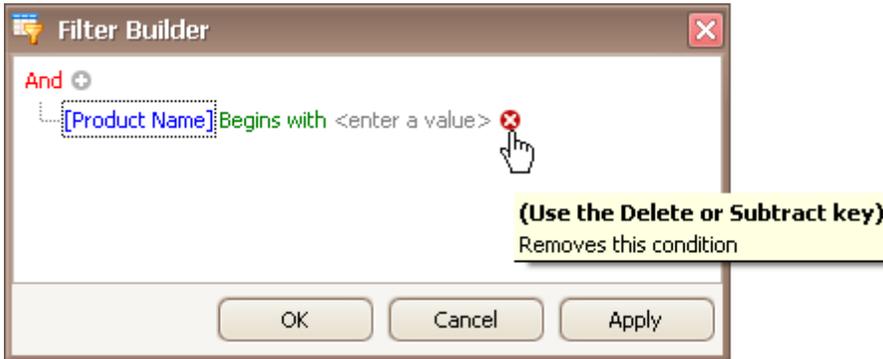
Some filter criteria contain multiple logical (Boolean) operators combining simple filter conditions. For instance, you want to see items whose price is under 10, and at the same time, the available quantity is also less than 10. At the same time, you may also want to see those items whose price is over 10, while the available quantity is also greater than 10.

The resulting condition will look like this:

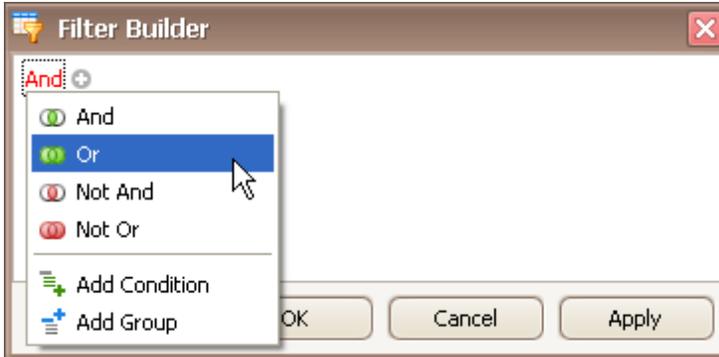
```
(Price is less than 10 AND Quantity is less than 10) OR (Price is greater than 10 AND Quantity is greater than 10)
```

This is how you can do this:

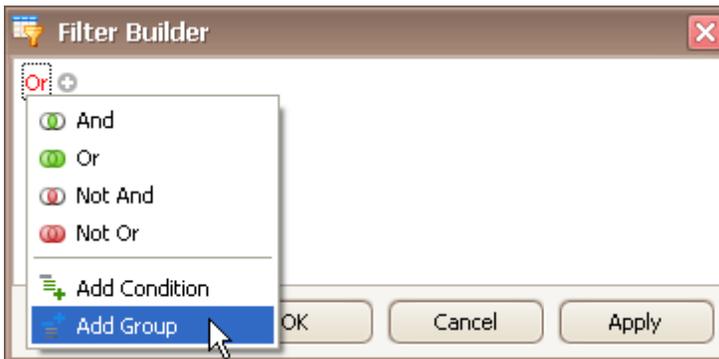
1. Invoke the Filter Editor.
2. Clear existing filter conditions (if any) by clicking the **✕** button:



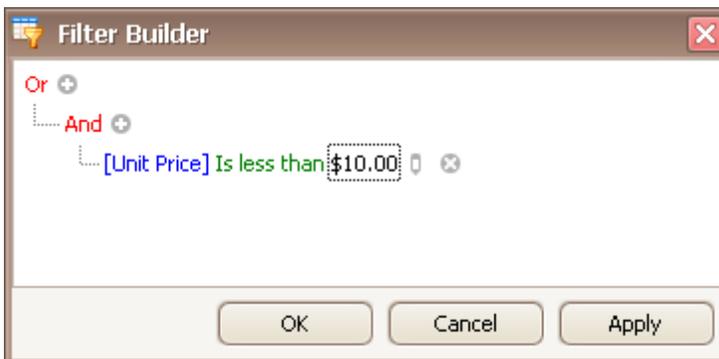
3. Change the root logical operator to OR. To do this, click the current AND operator and select OR:



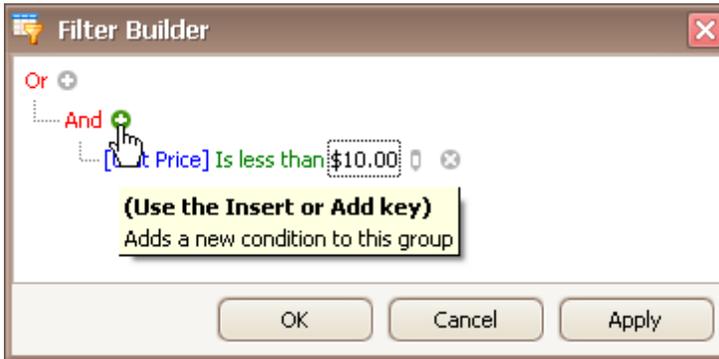
4. Add a new filter condition group by clicking the OR operator and selecting Add Group.



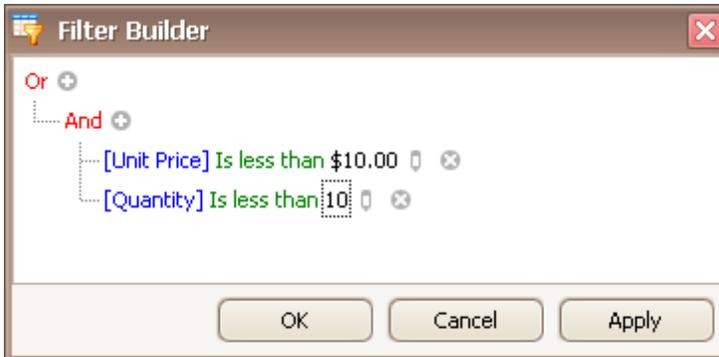
5. For the created condition, set the column to 'UnitPrice', operator to '<' and operand value to '10':



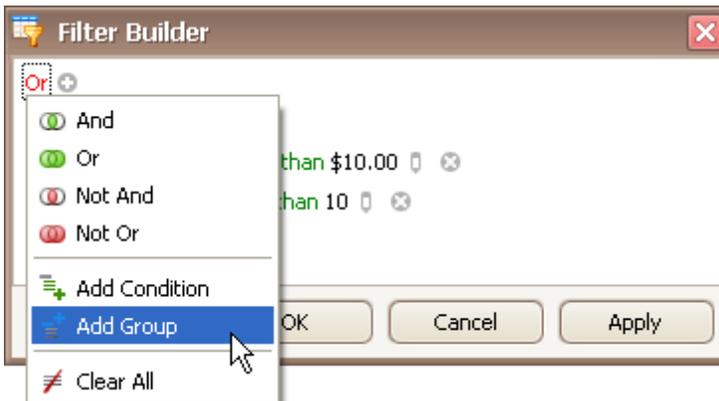
6. Click the + button to add a new condition to the current group:



7. For the new condition, set the column to 'Quantity', operator to '<' and operand value to '10':



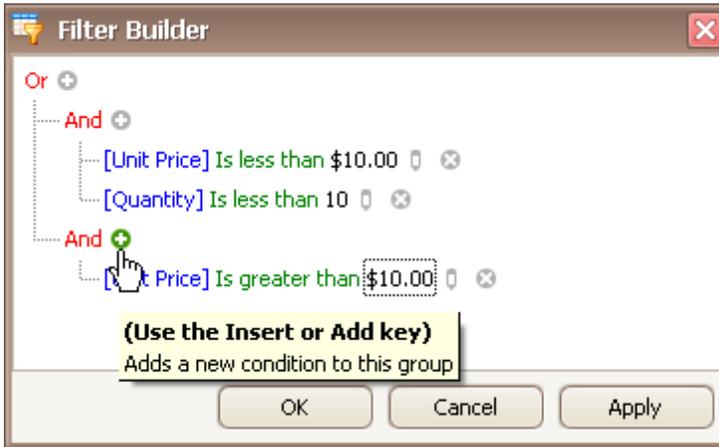
8. Add a new filter condition group. To do this, click the root OR operator and select Add Group.



9. For the condition within the created group, set the column to 'UnitPrice', operator to '>' and operand value to '10':



10. Click the + button to add a new condition to the new group:



11. For the new condition, set the column to 'Quantity', operator to '>' and operand value to '10':



12. Click OK or Apply, to apply the created filter criteria.

See Also

[Filter Data via the Filter Editor](#)

Grid

This section describes the capabilities provided by the Grid control, which represents data in a tabular or card form, supports data editing, sorting, grouping, filtering, summary calculation and many other features:

	!		Subject	From	Received	
☰ Today (14 items)						
		✉	Currency Mask. The current currency mask in com...	Paul Bailey	1/23/2009 5:31 PM	
		✉	Data Import. What database types will we support?	Jimmy Lewis	1/23/2009 5:31 PM	🚩
		✉	Drag & Drop operations are not available in the scheduler ...	Jimmy Lewis	1/23/2009 5:30 PM	🚩
		✉	Email Attachments. Is it possible to add multiple attachme...	Ray Shipman	1/23/2009 12:54 PM	

Data Editing

- [Edit Grid Cells](#)
- [Add and Delete Grid Records](#)

Data Presentation

- [Sort Grid Rows](#)
- [Group Grid Rows](#)
- [Filter Grid Data](#)
- [Show Summaries \(Totals\) in Grids](#)

Layout Customization

- [Expand and Collapse Rows and Cards in Grids](#)
- [Hide and Display Grid Columns, Bands and Card Fields](#)
- [Rearrange Grid Columns, Bands and Card Fields](#)
- [Resize Cards in Grids](#)
- [Resize Grid Columns, Bands and Card Fields](#)

Selection and Navigation

- [Locate Grid Records](#)
- [Navigate Through Grid Records](#)
- [Select Grid Rows and Cards](#)

Data Editing

Add and Delete Grid Records

Add Records

Click the Append button within the Navigator control:



Delete Records

Click the Delete button within the Navigator control:



Edit Grid Cells

Activate Cell Editor

Do one of the following:

- Click a cell.
- Focus a cell (for instance, via the keyboard), and press ENTER or F2.
- Focus a cell and press any alpha-numeric key. The editor will be invoked and its contents will be replaced with the pressed character.
- Focus a cell and click the Navigator control's Edit button:



If a cell editor provides a dropdown, you can activate the editor and open its dropdown by pressing ALT+DOWN ARROW or F4.

Select and Deselect Cell Text

Press F2 or CTRL+A.

Close Cell Editor and Accept Changes Made

Do one of the following:

- Press ENTER.
- Click the End Edit button within the Navigator control:



- Click any other grid cell.
- Focus any other control.

Discard Changes

To discard changes made in a cell press ESC.

To discard changes made in all cells in a row/card, do one of the following:.

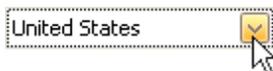
- Press ESC twice.
- Click the Cancel Edit button within the Navigator control:



Open Cell Editor's Dropdown

Do one of the following:

- Press ALT+DOWN ARROW or F4.
- Click the editor's dropdown button:



Close Cell Editor's Dropdown

For all editors providing a dropdown, you can close the dropdown by pressing ALT+DOWN ARROW.

If the calculator is displayed in the dropdown, it can be closed via CTRL+ENTER.

Dropdowns displaying lists of items can be closed by clicking an item with the mouse, or by selecting an item with the keyboard and pressing ENTER.

Change Values

Change Date/Time Values

You can edit these cell values without opening the dropdown calendar. Position the caret at the portion of a date/time value that needs to be changed. To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

Change Numeric Values

To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

Change Values of Cells That Provide Dropdown Items

To select the previous value, press CTRL+UP ARROW. To select the next value, press CTRL+DOWN ARROW.

Note: this feature is not applicable to all editors.

Edit Images

To copy, cut, paste, load and save images in image editors, right click the image and select the required command via the context menu:



Data Presentation

Sort Grid Rows

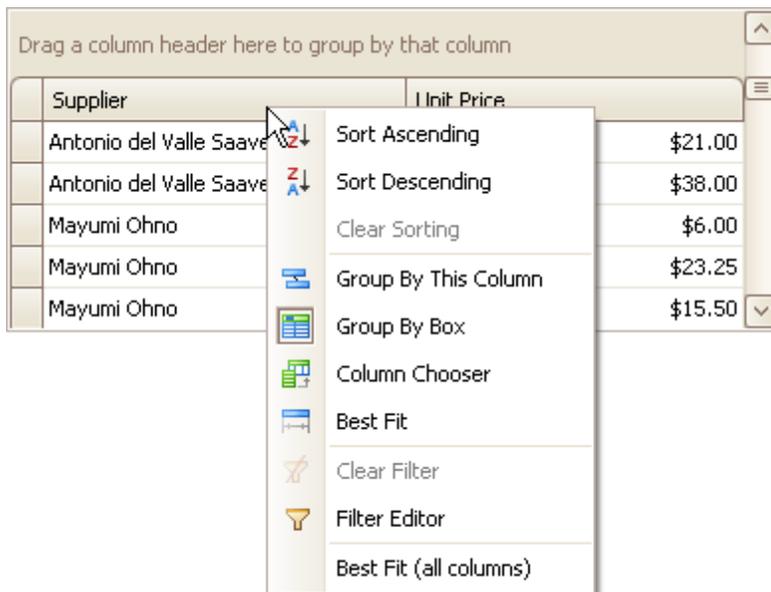
Sort Data in Grid Views

To sort records by a column's values and replace existing sort conditions that are applied to the current or other columns, click the target column's header, until an Up or Down Arrow icon is displayed within the header. The Up and Down Arrows indicate ascending and descending sort orders respectively.

Order ID ↑
10421
10422
10423
10423

To sort records by a column's values while preserving existing sort conditions, do one of the following:

- Click a column header while holding the SHIFT key down, until an Up or Down Arrow icon is displayed within the header.
- Right-click a column header and select **Sort Ascending** or **Sort Descending** from the context menu that appears:



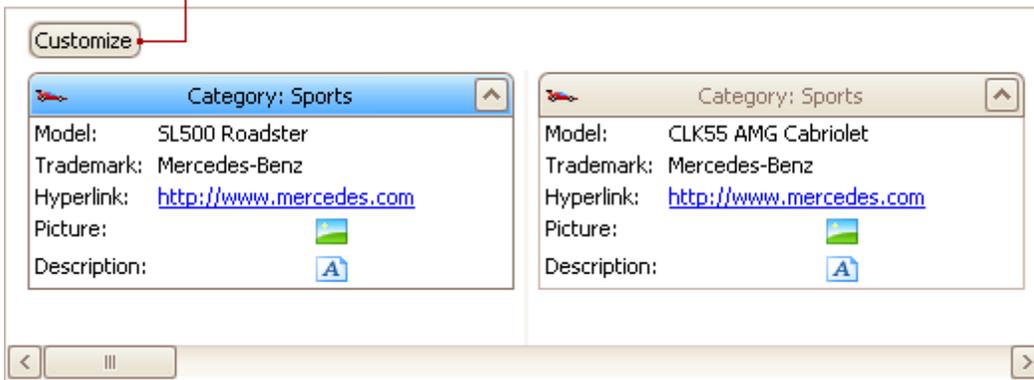
To remove sorting by a column, click a column header while holding the CTRL key down. You can also select Clear Sorting from the column header context menu.

Sort Data in Card Views

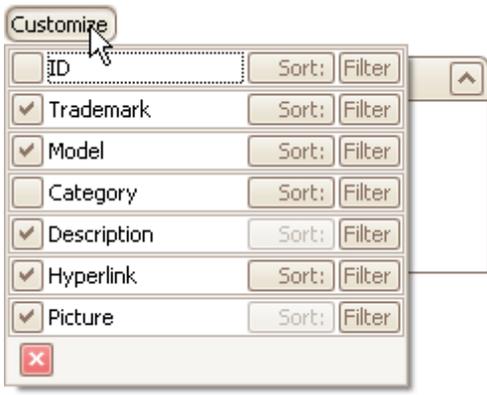
To sort records by a card field's values and replace existing sort conditions that are applied to the current or other fields:

1. Click the Customize button:

Customize Button



2. In the Customization window that opens, click the Sort button that corresponds to the target card field:



To sort records by a card field's values while preserving existing sort conditions:

1. Click the Customize button.
2. In the Customization window that opens, click the Sort button that corresponds to the target card field, while holding the SHIFT key down.

To remove sorting by a card field:

1. Click the Customize button.
2. In the Customization window that opens, click the Sort button that corresponds to the target card field, while holding the CTRL key down.

Sort Data in Layout Views

To sort records by a card field's values and replace existing sort conditions that are applied to the current or other fields, do the following:

1. Hover over the target card field within any card. The sort (▲) and filter buttons will appear.



2. Click the sort button until its image changes to a black arrow (▲ or ▼). These images indicate ascending and descending sort orders respectively.

To sort records by a card field's values while preserving existing sort conditions:

1. Hover over the target card field within any card. The sort and filter buttons will appear.
2. Hold the SHIFT key down and click the sort button until its image changes to a black arrow ( or .

To remove sorting by a card field:

1. Hover over the target card field within any card. The sort and filter buttons will appear.
2. Hold the CTRL key down and click the sort button until its image changes to a gray arrow (.

Group Grid Rows

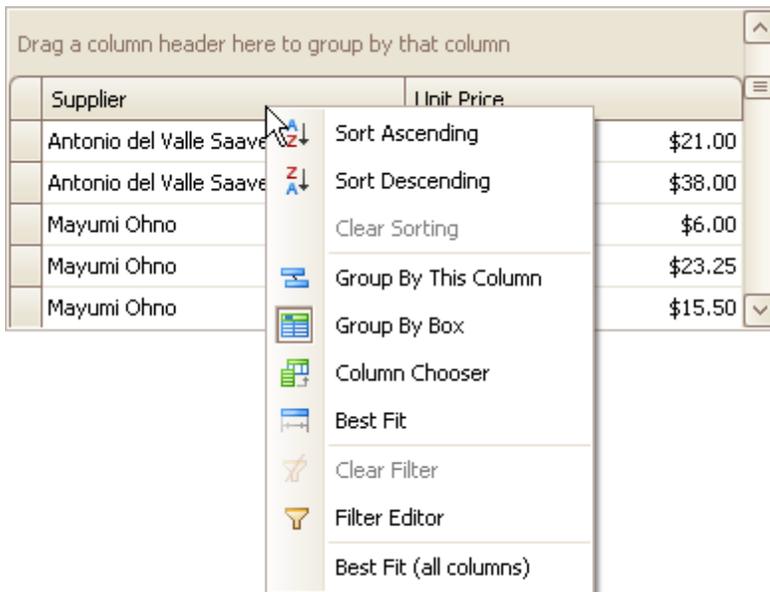
Group Data

To group by a specific column, do one of the following:

- Drag a column header from the column header panel to the group panel:



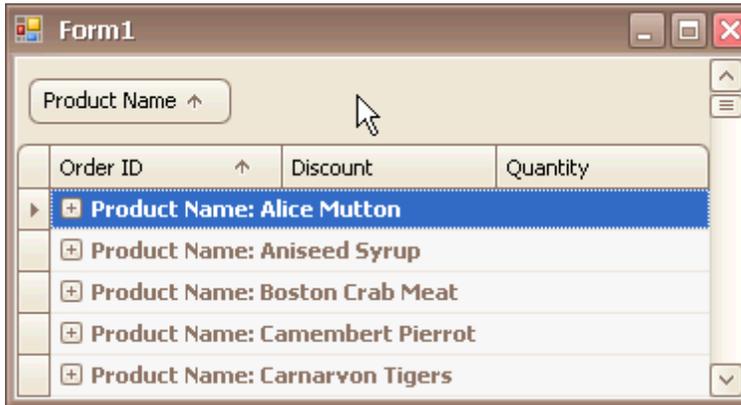
- Right-click a column header and select **Group By This Column** from the context menu:



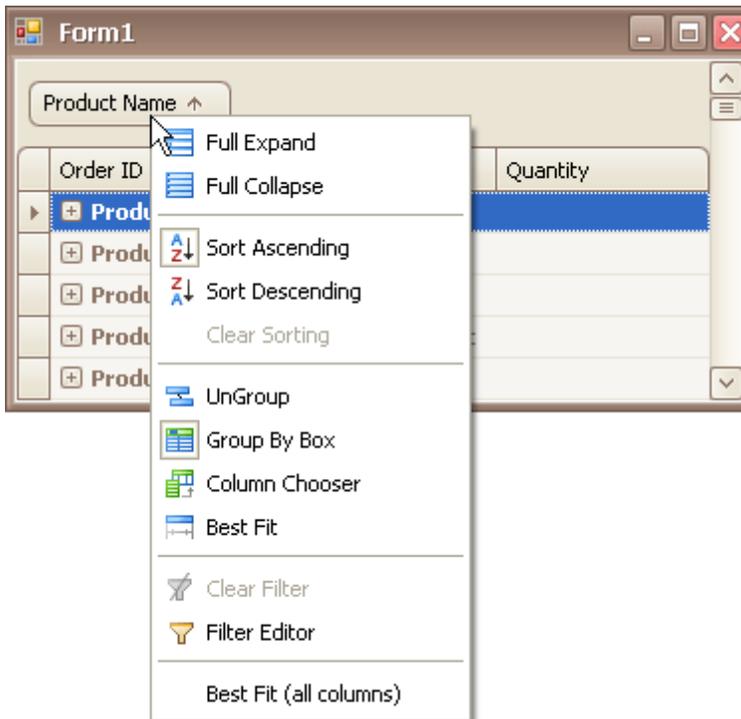
Ungroup Data

To ungroup data by a grouping column, do one of the following:

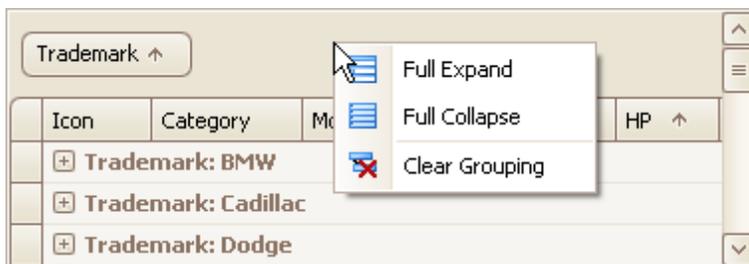
- Drag a column header from the group panel to the column header panel:



- Right-click a grouping column's header and select **UnGroup** from the context menu:



To remove grouping by all columns, right click the group panel and select **Clear Grouping** from the context menu:



Change Group Order

To change group order, move a grouping column header to another position within the group panel:

**See Also**

[Expand and Collapse Rows and Cards in Grids](#)

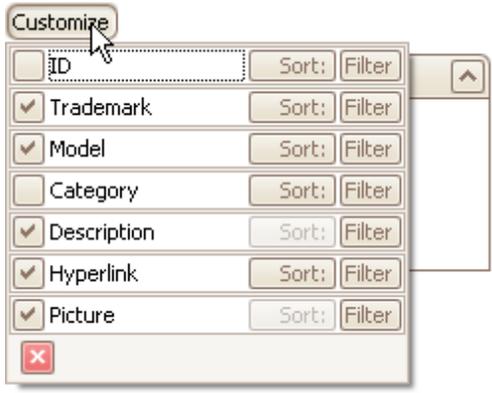
Filter Grid Data

Invoke the Filter Dropdown List

- In Grid Views, hover over the column header. Click the filter button (☑) within the column header that appears.

Order ID	Product	Unit Price	Quantity
10302	Alice Mutton	\$31.20	40
10302	Rössle Sauerkraut	\$36.40	28
10302	Ipoh Coffee	\$36.80	12
10303	Boston Crab Meat	\$14.70	40

- In Card Views, click the Customize button and then click the Filter button corresponding to the target column.



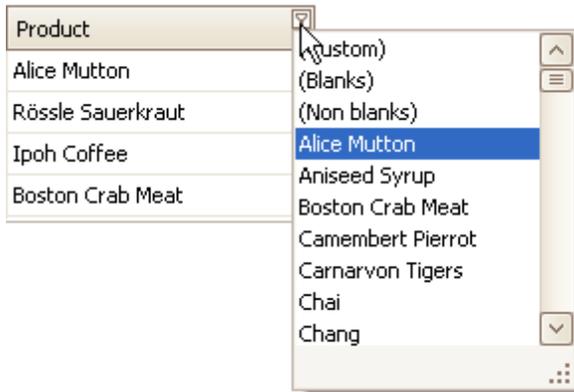
- In Layout Views, hover over the target card field within any card. Click the filter button (☑) that appears.



Create a Simple Filter Condition

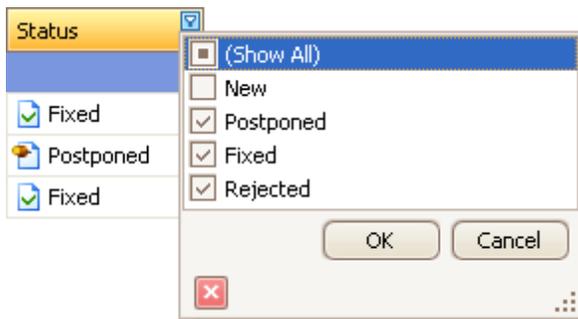
To select records that contain a specific value in a specific column/card field, do the following:

- Invoke the filter dropdown list containing available filter values.
By default, if filtering is applied, the filter dropdown will only display the values which match the current filter criteria. If the SHIFT key is pressed while opening the filter dropdown, all values will be listed (not only those that match the current filter criteria).
- Select the required filter value in the filter dropdown list:



The filter dropdown list will be immediately closed, and the control will display the records which contain the specified value in the specified column/card field.

If the filter dropdown list provides check boxes to the left of filter values, multiple values can be selected (checked) simultaneously:



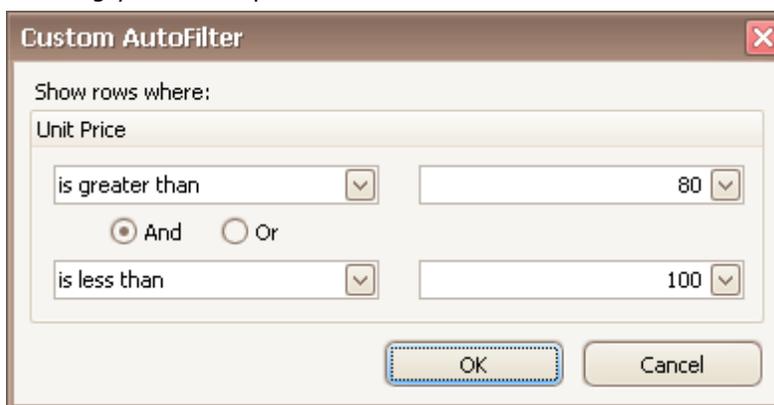
In this mode, click OK to close the filter dropdown list and apply the filter.

You can sequentially filter data against multiple columns using the method described above.

Use Microsoft Excel Style Custom Filter Dialog

To construct filter criteria involving up to two conditions, do the following:

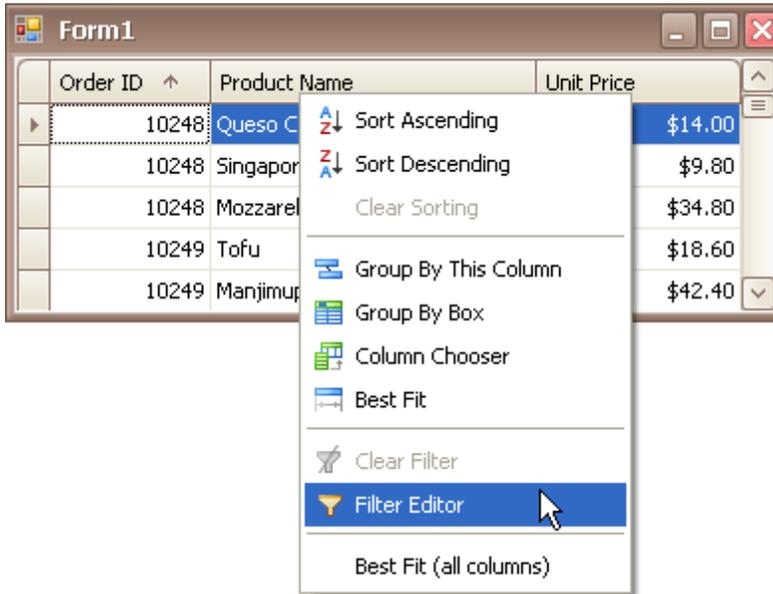
- Invoke the filter dropdown list (see above) and click **Custom**. This will invoke the Custom Filter Dialog, allowing you to compare a column with one or two values:



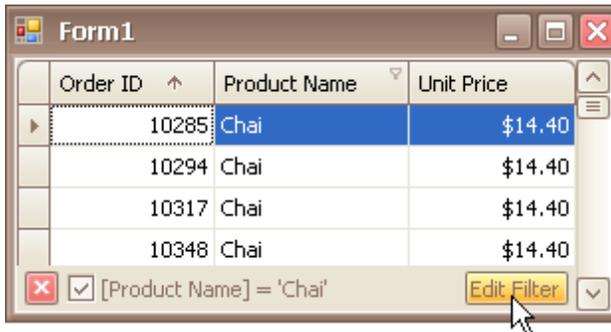
Use Advanced Filter Editor Dialog

To invoke an advanced Filter Editor dialog, do one of the following:

- Right-click any column's header and select **Filter Editor**:



- If the filter panel at the bottom of the grid control is visible, click the **Edit Filter** button:



The Filter Editor is also invoked when choosing the **(Custom)** item in a column's filter dropdown list, if the current filter criteria applied to the column consists of three or more simple filter conditions, or if the filter criteria contain advanced comparison operators such as "Is between" and "Is any of".



To learn how to work with the Filter Editor, refer to [Filter Data via the Filter Editor](#).

Clear the Filter

To clear the filter applied to a specific column, do one of the following:

- Invoke the filter dropdown list (see below) and click (All).
- In Grid Views, right-click the column header and select Clear Filter:

To clear all filter criteria, click the Close Filter button within the Filter Panel:

Order ID	Product	Unit Price	Quantity
10514	Sir Rodney's Marmalade	\$81.00	39
10523	Sir Rodney's Marmalade	\$81.00	15
10593	Sir Rodney's Marmalade	\$81.00	21

[Unit Price] > '\$80.00' And [Unit Price] < '\$100.00'

Close Filter Button

Disable/Enable the Filter

Click the Enable Filter button within the Filter Panel:

Order ID	Product	Unit Price	Quantity
10514	Sir Rodney's Marmalade	\$81.00	39
10523	Sir Rodney's Marmalade	\$81.00	15
10593	Sir Rodney's Marmalade	\$81.00	21

[Unit Price] > '\$80.00' And [Unit Price] < '\$100.00'

Enable Filter Button

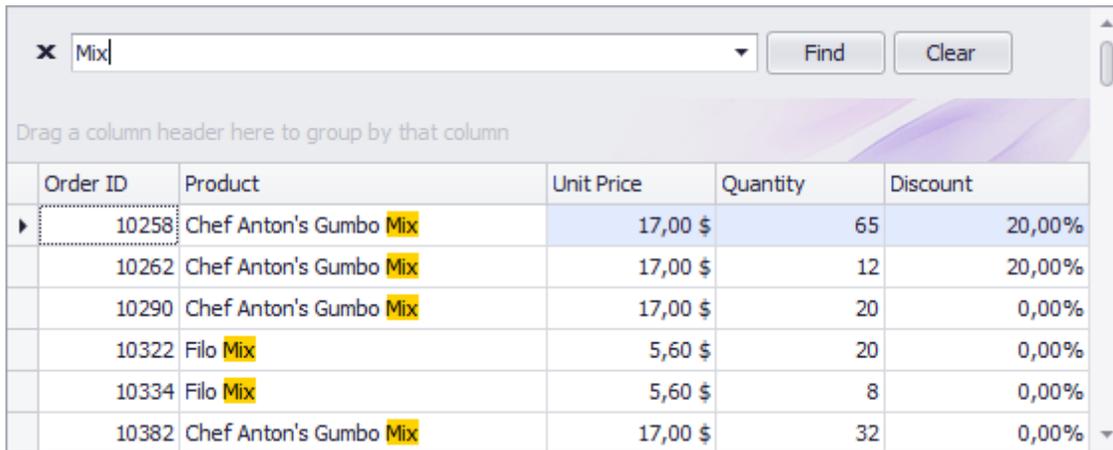
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See Also

[Filter Data via the Filter Editor](#)
[Examples of Using the Filter Editor](#)

Filter Grid Data via Find Panel

The Find Panel provides an easy way of searching against visible columns/card fields. Displayed above the grid, the panel contains a search box where you can type a search string.



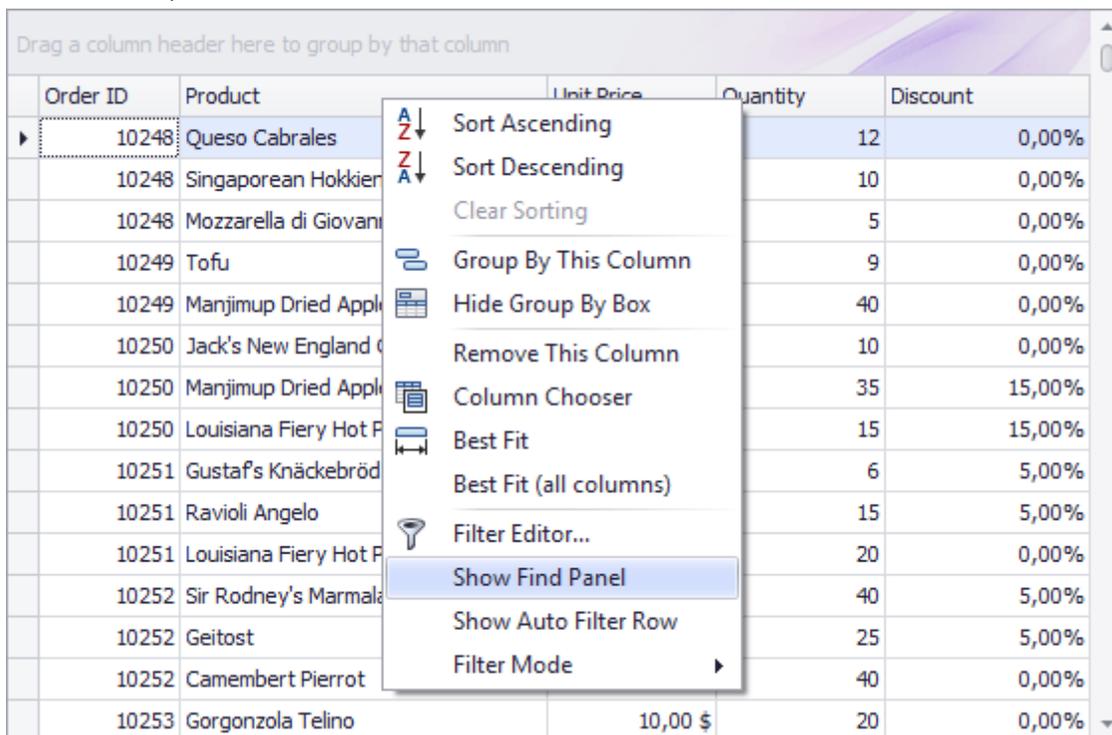
Order ID	Product	Unit Price	Quantity	Discount
10258	Chef Anton's Gumbo Mix	17,00 \$	65	20,00%
10262	Chef Anton's Gumbo Mix	17,00 \$	12	20,00%
10290	Chef Anton's Gumbo Mix	17,00 \$	20	0,00%
10322	Filo Mix	5,60 \$	20	0,00%
10334	Filo Mix	5,60 \$	8	0,00%
10382	Chef Anton's Gumbo Mix	17,00 \$	32	0,00%

Invoke the Find Panel

- Ensure that no cell editor is active and press Ctrl+F.

or

- In Grid Views, choose the Show Find Panel command from a column menu.



Order ID	Product	Unit Price	Quantity	Discount
10248	Queso Cabrales		12	0,00%
10248	Singaporean Hokkien		10	0,00%
10248	Mozzarella di Giovani		5	0,00%
10249	Tofu		9	0,00%
10249	Manjimup Dried Appl		40	0,00%
10250	Jack's New England C		10	0,00%
10250	Manjimup Dried Appl		35	15,00%
10250	Louisiana Fiery Hot P		15	15,00%
10251	Gustaf's Knäckebröd		6	5,00%
10251	Ravioli Angelo		15	5,00%
10251	Louisiana Fiery Hot P		20	0,00%
10252	Sir Rodney's Marmala		40	5,00%
10252	Geitost		25	5,00%
10252	Camembert Pierrot		40	0,00%
10253	Gorgonzola Telino	10,00 \$	20	0,00%

Search

- Enter a search string in the search box. In most cases, rows are filtered automatically after a short while.
- In some cases (mostly when the grid is bound to a large amount of data), you need to press the Find button to manually start the search.

The search syntax is described below.

Clear the Search Box

Press ESC or click the Clear button.

Close the Find Panel

Click the 'x' button to the left of the search box or:

- If the search box is empty, press ESC (the shortcut is in effect if the search box has focus);
- If the search box is not empty, press ESC twice (the shortcut is in effect if the search box has focus).

Search Syntax

In its simplest form, a search criterion consists of a single word. If you want to search for a string containing a space character, specify this string in quotation marks. Without quotation marks, words separated by the space character are treated as individual conditions.

You can search against a specific column by preceding a search string with the column's display name plus a colon character.

ColumnDisplayName:SearchString

Instead of the complete name, it is possible to partially specify the display name, using the initial characters of a column's display name. A search will be performed against the first column whose display name starts with the specified substring. If you want to search against a column whose display caption contains space characters, specify the column's display caption in quotation marks.

If the search string contains multiple conditions separated by space characters, and at least one condition defines a search against a specific column, only records that match all of these conditions are shown (i.e., the conditions are combined by the **AND** logical operator). If there is no column specification, records that match at least one of these conditions are shown (i.e., the conditions are combined by the **OR** logical operator).

Precede a condition with "+" to display only records that match this condition. The "+" specifier allows you to implement the logical **AND** operator. There should be no space character between the "+" sign and the condition.

Precede a condition with "-" to exclude records that match this condition from the result set. There should be no space between the "-" sign and the condition.

Examples

Search Criteria	Description
<code>register</code>	Selects records that contain the "register" string in any search column.
<code>check register Dave</code>	Selects records that contain either "check" OR "register" OR "Dave" strings in any search column.
<code>"check register"</code>	Selects records that contain "check register" in any search column.
<code>screen +"Richard Fisher"</code>	Selects records that contain both "screen" AND "Richard Fisher" in search columns.
<code>Product:Tofu Seattle</code>	Selects records that contain "Tofu" in the column that starts with "Product", AND also contain "Seattle" in any search column.
<code>data +entry -mark</code>	Selects records that contain both "data" AND "entry" in search columns, excluding records that contain "mark".
<code>menu mask -file</code>	Selects records that contain "menu" OR "mask", excluding records that contain "file".
<code>From:Roller Subj:"currency mask"</code>	Selects records that contain "Roller" in the column

	that starts with "From", AND also contain "currency mask" in the column that starts with "Subj".
<pre>import -From:Steve</pre>	Selects records that contain "import" in any search column, excluding records that contain "Steve" in the column that starts with "From".

Note

Searches performed using a Find Panel are case insensitive.

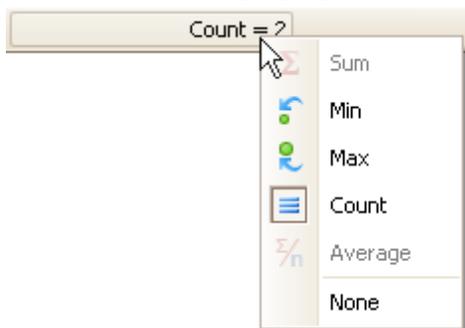
Show Summaries (Totals) in Grids

To change the type of summary for a specific column or apply a summary, do the following:

1. Right-click a region within a group footer or grid footer under a specific column:



A context menu displaying a list of supported summary types will be displayed:



2. Select the required option from the context menu.

Layout Customization

Expand and Collapse Rows and Cards in Grids

Expand/Collapse Group Rows in Grid Views

To expand/collapse a group row, do one of the following:

- Click the row's expand button:

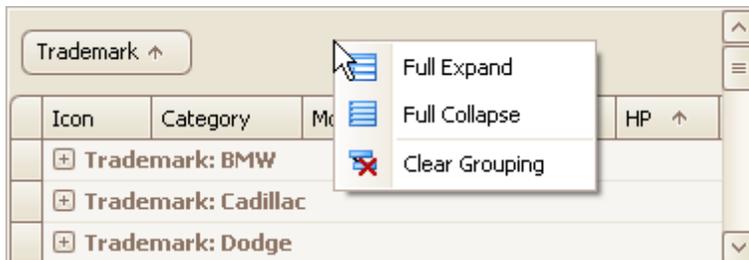


- Double-click the group row.
- Double-click the indicator cell corresponding to the group row:



- Focus the group row and press PLUS (to expand the row) or MINUS (to collapse the row).
- Focus the group row and press RIGHT ARROW (to expand the row) or LEFT ARROW (to collapse the row).

To expand or collapse all group rows, right-click the group panel at the top of the control. This opens the group panel context menu. Then select Full Expand or Full Collapse respectively:



Expand/Collapse Master Rows in Grid Views

To expand/collapse a master row, do one of the following:

- Click the master row's expand button:

Expand Button

Company Name	Contact Title	Contact Name	
Specialty Biscuits, Ltd.	Sales Representative	Peter Wilson	⊕
PB Knäckebröd AB	Sales Agent	Lars Peterson	⊕
Refrescos Americanas LTDA	Marketing Manager	Carlos Diaz	⊕
Heli Süßwaren GmbH & Co. KG	Sales Manager	Petra Winkler	⊕

Record 1 of 29

- Double-click the indicator cell corresponding to the master row :

Company Name	Contact Title	Contact Name	
Specialty Biscuits, Ltd.	Sales Representative	Peter Wilson	⊕
PB Knäckebröd AB	Sales Agent	Lars Peterson	⊕
Refrescos Americanas LTDA	Marketing Manager	Carlos Diaz	⊕
Heli Süßwaren GmbH & Co. KG	Sales Manager	Petra Winkler	⊕

Indicator Cells

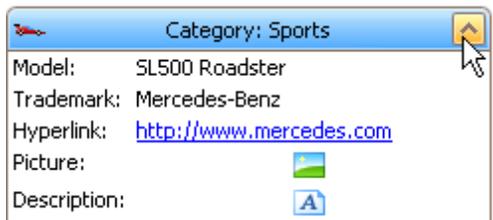
Record 1 of 29

- Focus the master row and press CTRL+PLUS (to expand the row) or CTRL+MINUS (to collapse the row).

Expand/Collapse Cards in Card and Layout Views

Do one of the following:

- Click a card's Expand button:



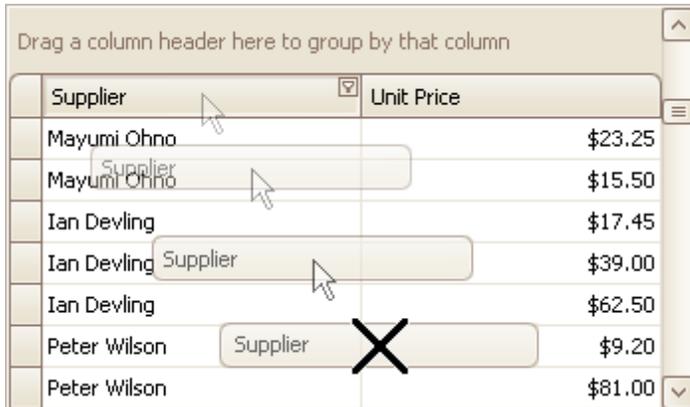
- Click a card's caption and press PLUS (to expand the card) or MINUS (to collapse the card).

Hide and Display Grid Columns, Bands and Card Fields

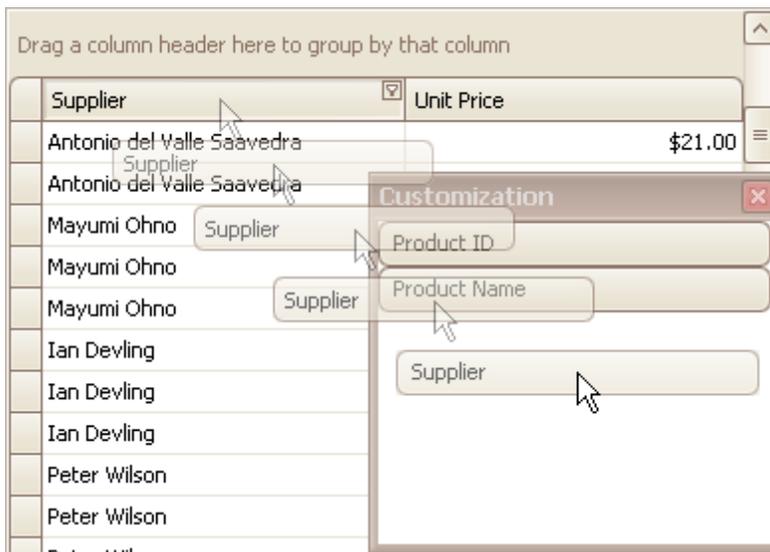
Hide Columns/Bands in Grid Views

Do one of the following:

- Click a column header/band header and drag it onto the grid control's cell area, until the cursor changes its image to a big 'X'. Then drop the header.

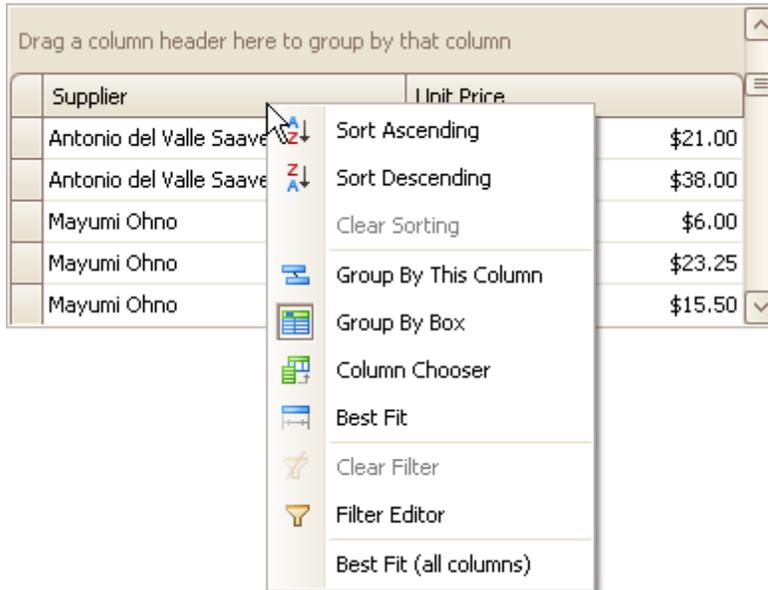


- Drag and drop a column/band header onto the Customization Form if it's open:



Display Hidden Columns/Bands in Grid Views

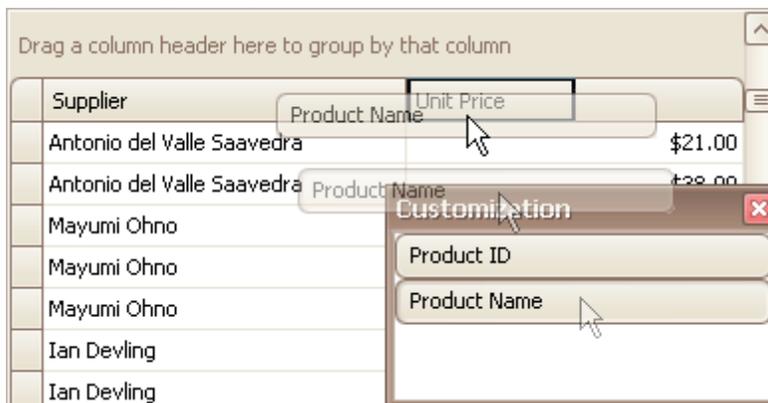
- Open the Customization Form by right-clicking a column header and selecting Column Chooser:



The Customization Form will be displayed listing hidden columns and bands (if any):



2. Drag the required column/band from the Customization Form onto the column/band header panel and drop it at a specific position.



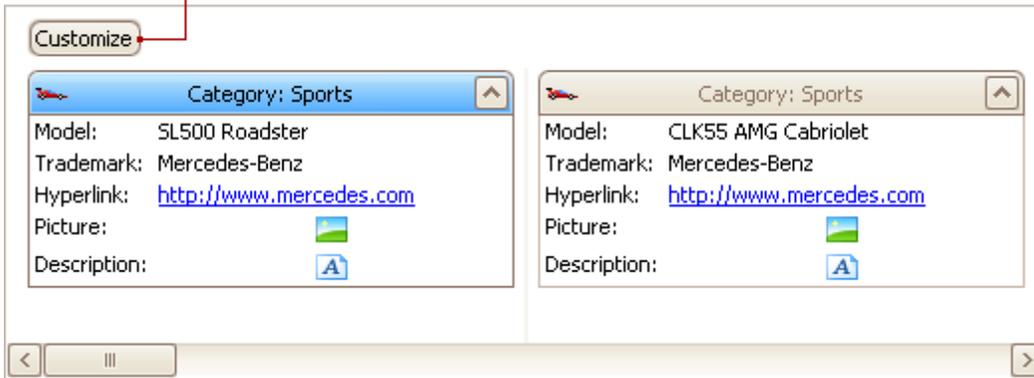
Note

When a band is hidden together with its child bands and columns, headers of hidden children are not displayed within the Customization Form.

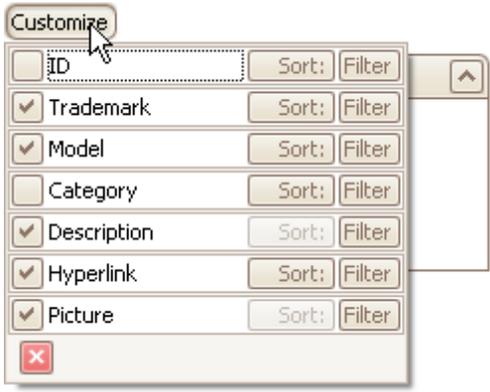
Change the Visibility of Fields in Card Views

1. Click the Customize button:

Customize Button

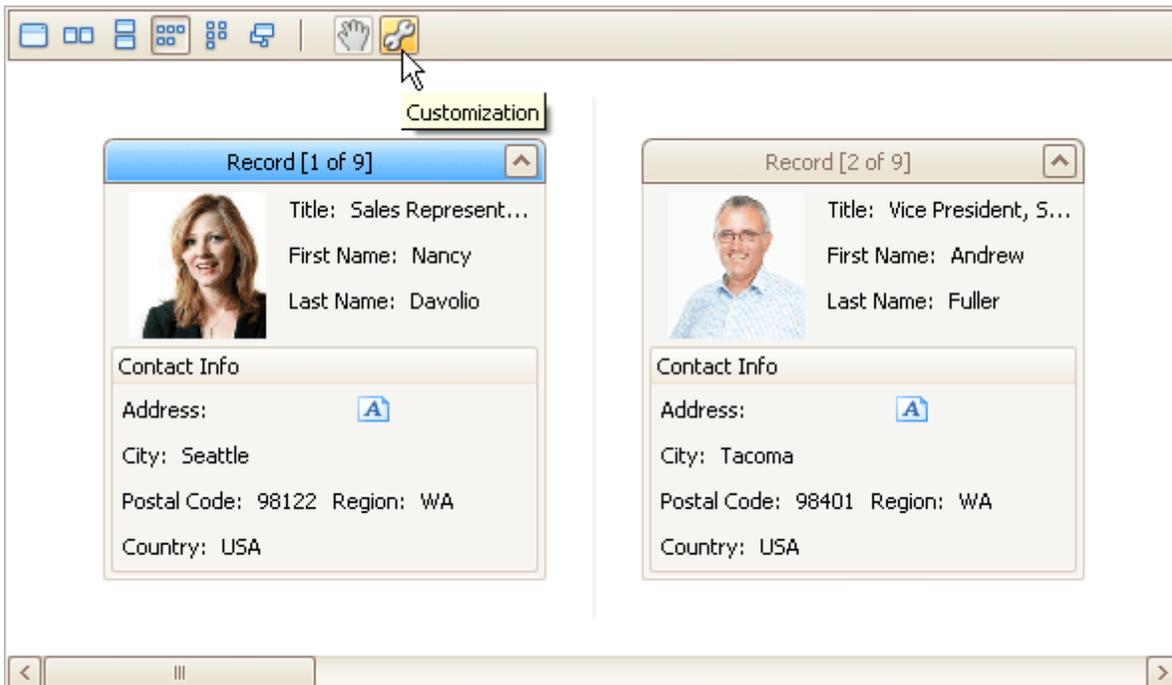


- To hide specific fields, clear corresponding check boxes in the opened window. To display hidden items, enable corresponding check boxes:

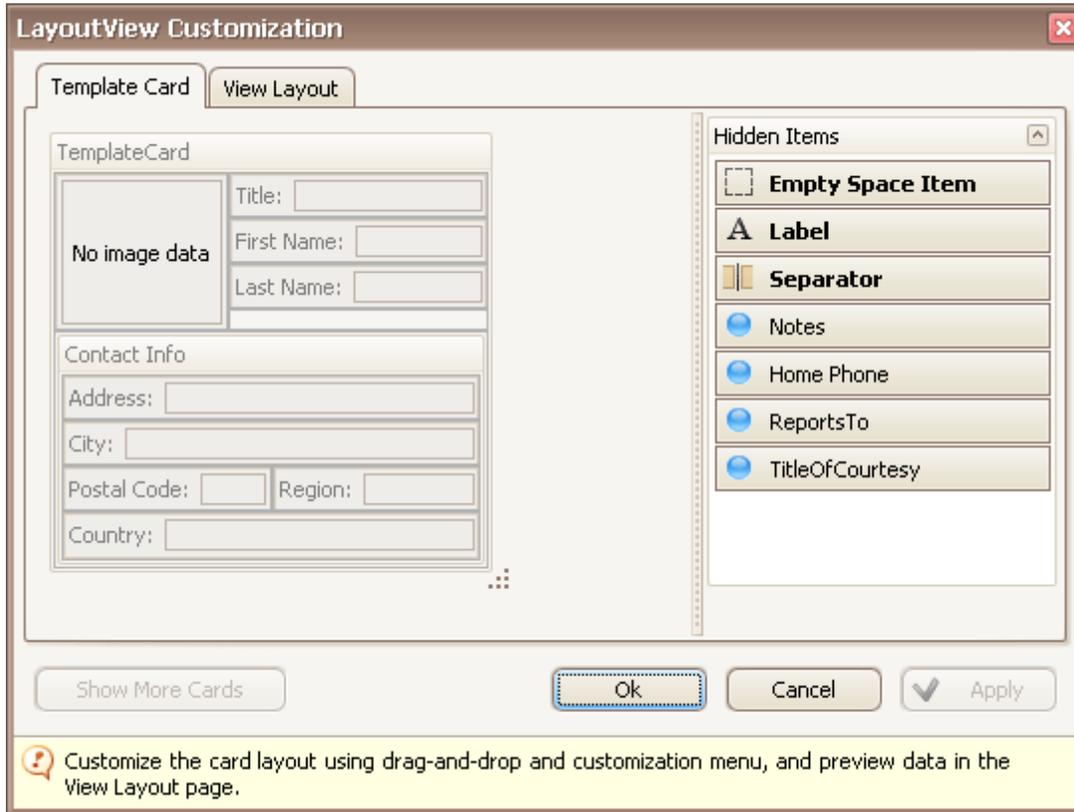


Change the Visibility of Fields in Layout Views

- Click the Customization button within the header panel:



- To hide a field, in the Layout View Customization Window, drag and drop the field from the Template Card onto the Hidden Items list. To display a hidden field, drag it from the Hidden Items list onto the Template Card at the required position:

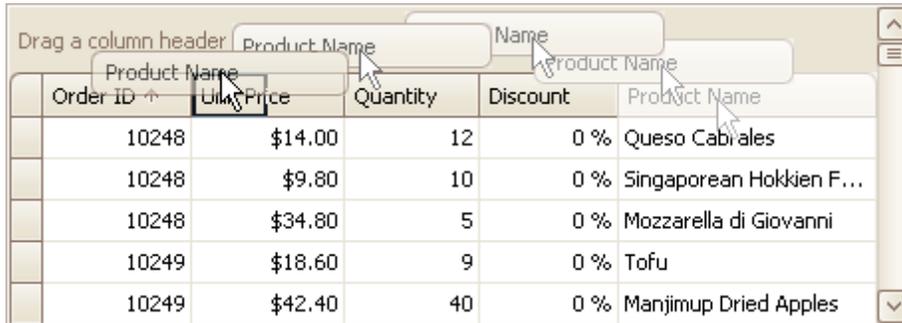


3. Click OK or Apply.

Rearrange Grid Columns, Bands and Card Fields

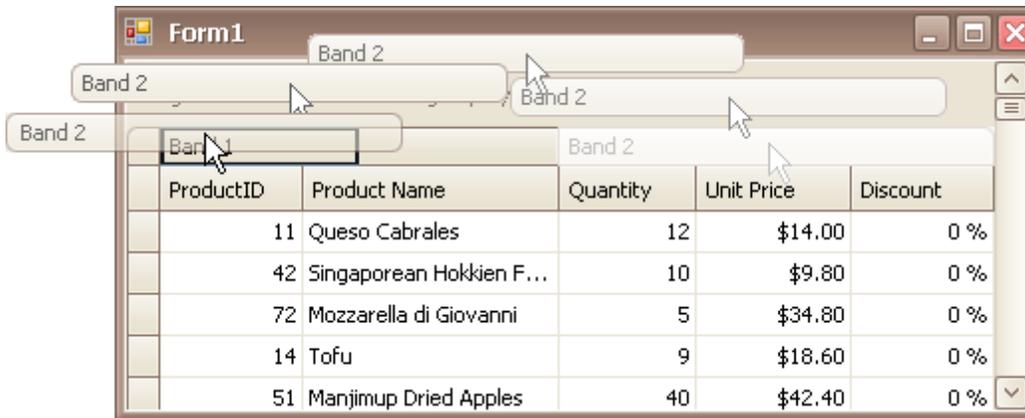
Reorder Columns and Bands in Grid Views

To reorder columns, drag and drop a column header to a new position:



Order ID	Unit Price	Quantity	Discount	Product Name
10248	\$14.00	12	0 %	Queso Cabrales
10248	\$9.80	10	0 %	Singaporean Hokkien F...
10248	\$34.80	5	0 %	Mozzarella di Giovanni
10249	\$18.60	9	0 %	Tofu
10249	\$42.40	40	0 %	Manjimup Dried Apples

To reorder bands, drag and drop a band header to a new position:

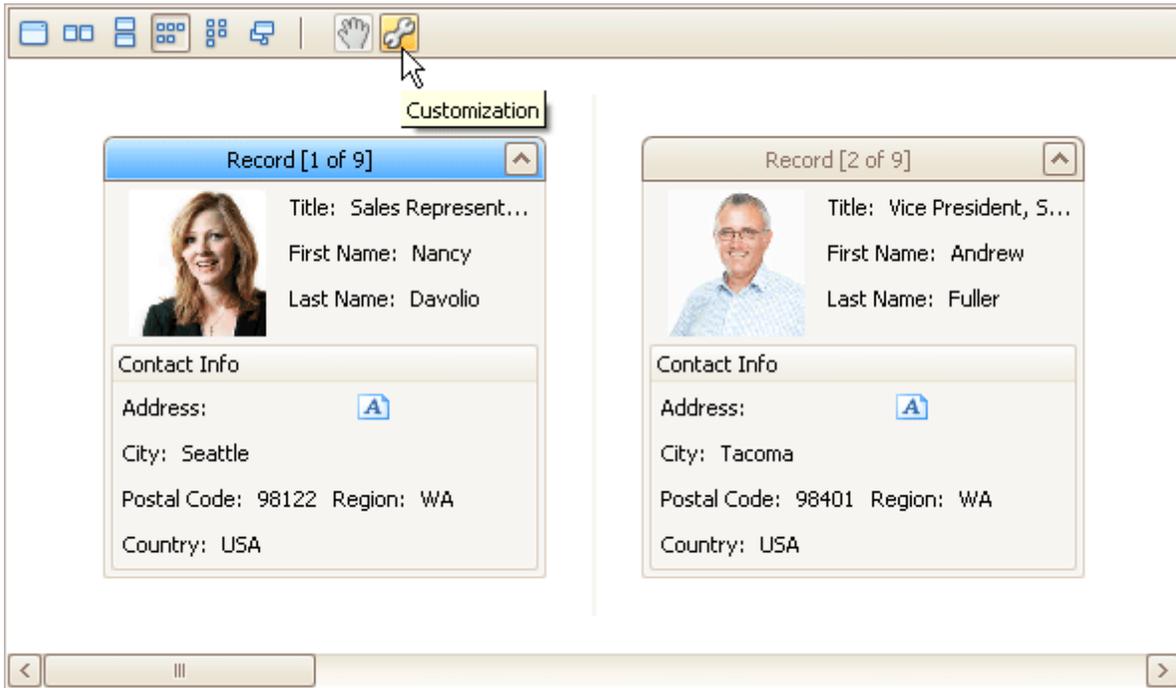


ProductID	Product Name	Quantity	Unit Price	Discount
11	Queso Cabrales	12	\$14.00	0 %
42	Singaporean Hokkien F...	10	\$9.80	0 %
72	Mozzarella di Giovanni	5	\$34.80	0 %
14	Tofu	9	\$18.60	0 %
51	Manjimup Dried Apples	40	\$42.40	0 %

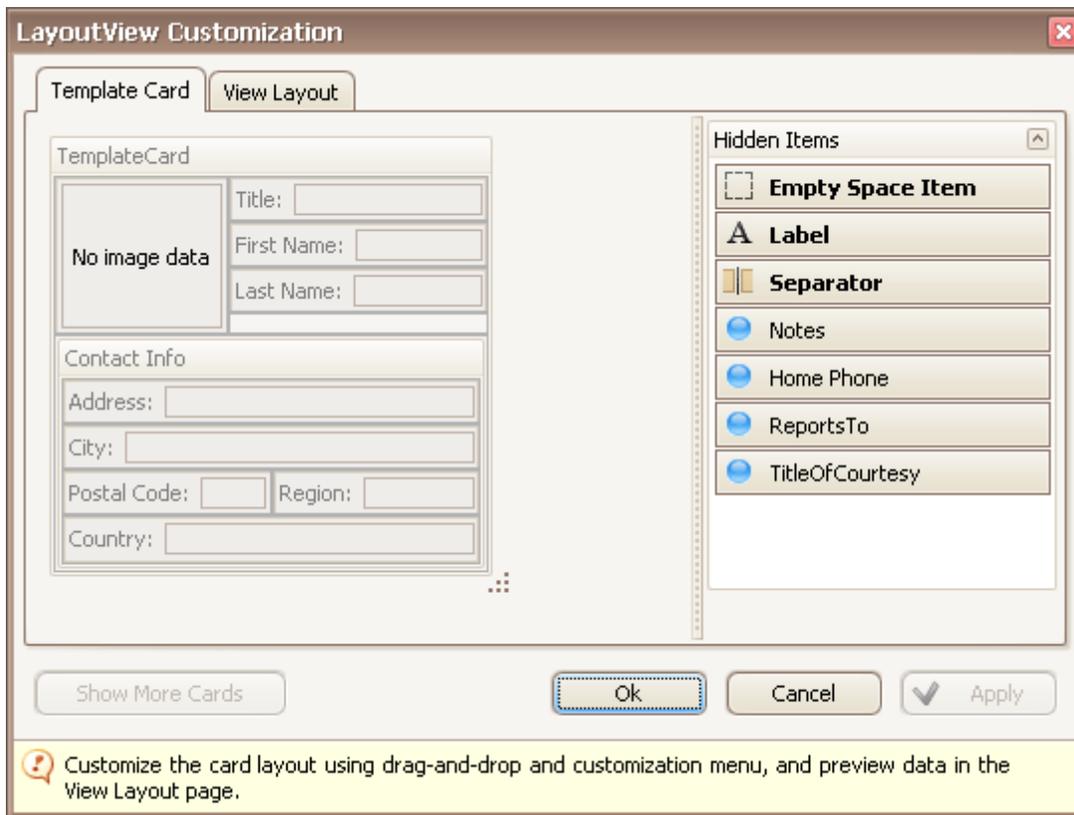
Rearrange Card Fields in Layout Views

Do the following:

1. Click the Customization button displayed within the header panel:



The LayoutView Customization window will open:



2. Rearrange fields using drag and drop, as required.
3. Close the Customization window to apply the changes.

Resize Cards in Grids

Resize Cards in Card Views

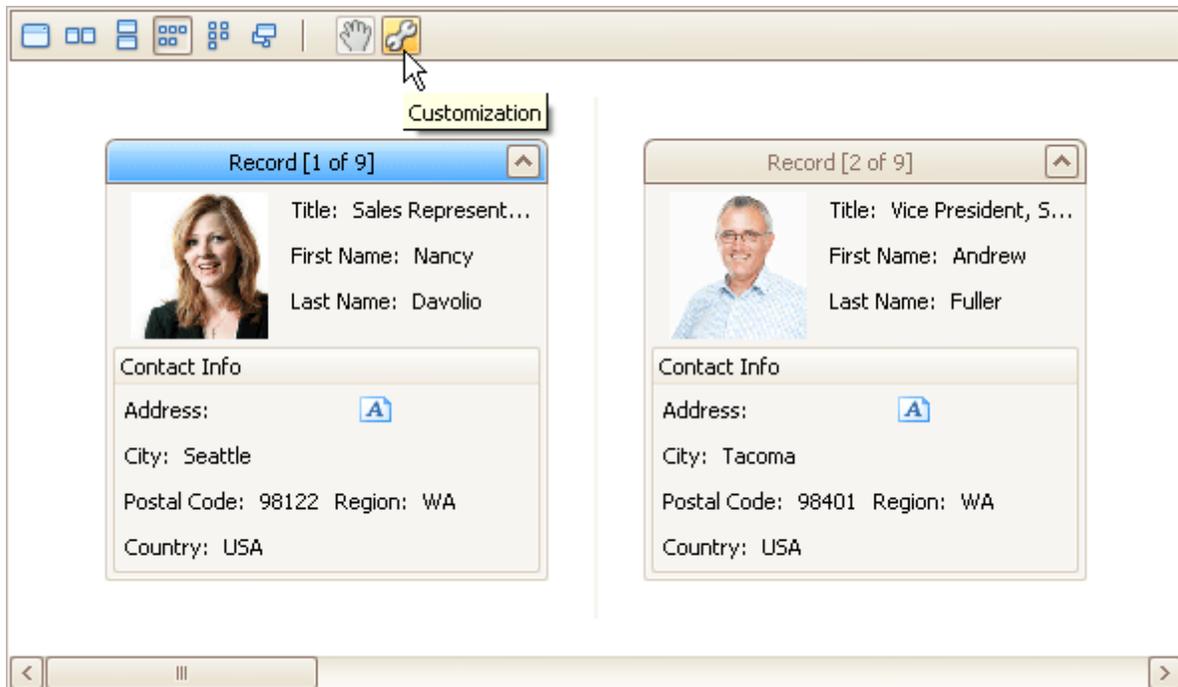
In Card Views, to resize cards horizontally, drag card separators (if they are visible):



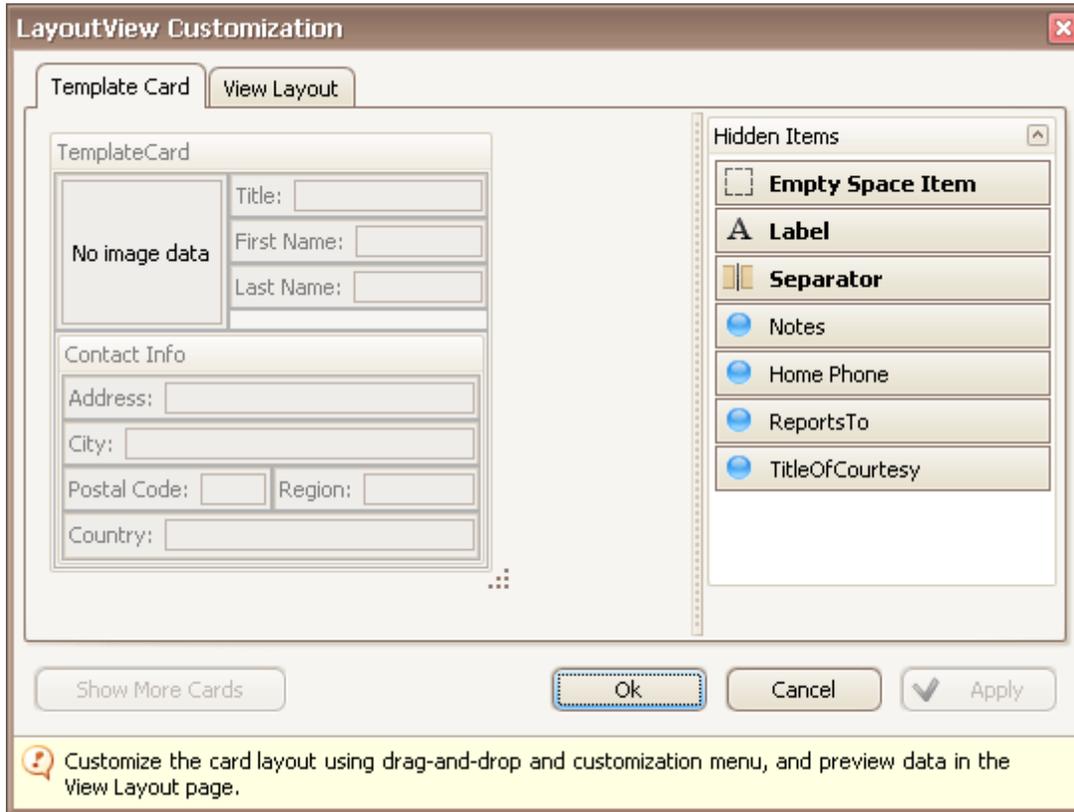
Resize Cards in Layout Views

In Layout Views, to resize cards do the following:

1. Click the Customization button displayed within the header panel:



The LayoutView Customization window will open:



2. Resize the template card as required.
3. Close the Customization window to apply the changes.

Resize Grid Columns, Bands and Card Fields

Resize Columns and Bands in Grid Views

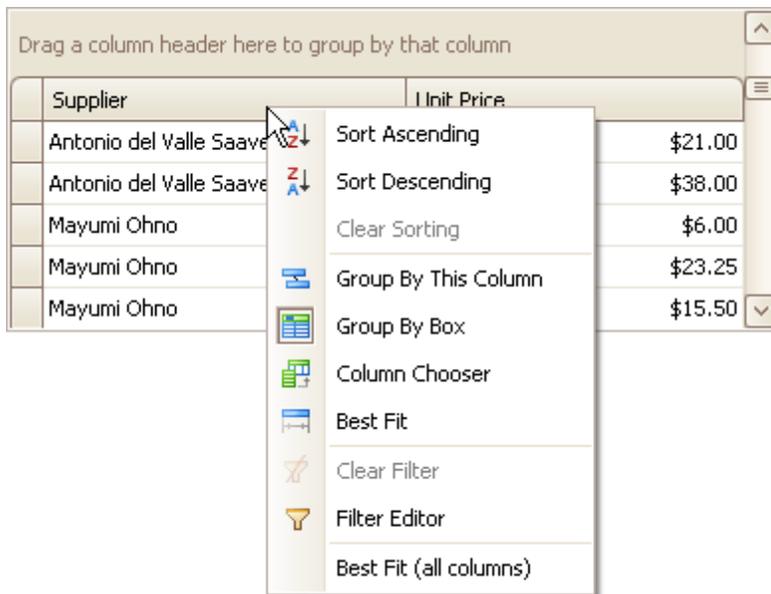
To resize columns and bands, drag the right edge of the target column/band header:

Drag a column header here to group by that column

Order ID	Product
10248	Queso Cabrales
10248	Singaporean Hokkien Fried Mee
10248	Mozzarella di Giovanni

To change a column's width so that it displays its contents compactly in their entirety, do one of the following:

- Double-click the right edge of the column header.
- Right-click the column's header and select **Best Fit**:



To change the widths of all columns so that they display their contents in the best possible way, right-click the header of any column and select **Best Fit (all columns)**.

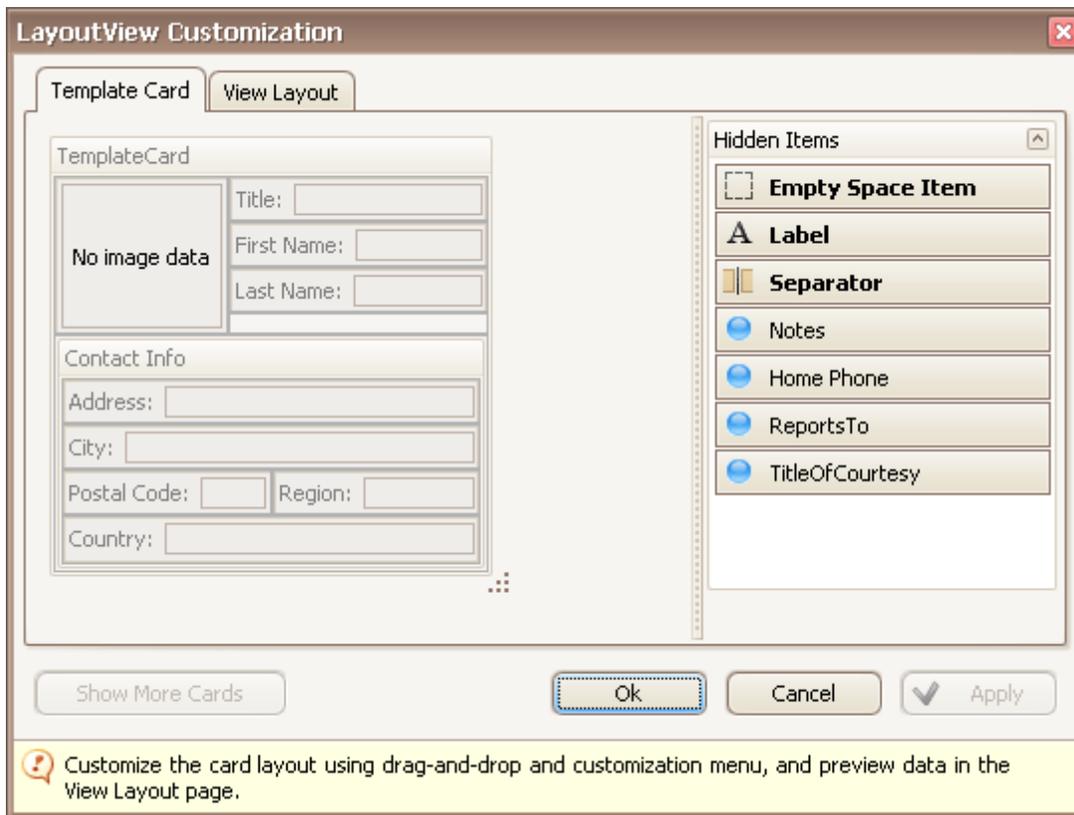
Resize Card Fields in Layout Views

To resize cards or card fields do the following:

1. Click the Customization button displayed within the header panel:



The LayoutView Customization window will open:



2. Resize the template card and/or fields within the template card as required.
3. Close the Customization window to apply the changes.

Selection and Navigation

Locate Grid Records

In Grid Views, you can locate a data row by typing the initial characters of the values contained in this row.

To locate the nearest row that contains a specific value in a specific column, do the following:

- Focus any cell in the column, against which a search will be performed.
- Type the initial character(s) of the value to be located. The nearest row that contains the specified value in the clicked column will be located.

To proceed with the search in the forward direction, press CTRL+DOWN ARROW.

To proceed with the search in the backward direction, press CTRL+UP ARROW.

To erase the previously typed characters in the search string, press BACKSPACE.

Main			⚙ Performance Attributes	
Trademark			HP	Cyl
Category	Model		Capacity	
Price	Delivery Date	In Stock?	# of Gears	Automatic Transmission
Rolls-Royce			325	8
Saloon	Corniche		6.75 Liters	
\$370,485.00	9/1/2001	<input type="checkbox"/>	4	✓ Yes
Jaguar			235	6
Saloon	S-Type 3.0		3 Liters	
\$44,320.00	10/25/2002	<input checked="" type="checkbox"/>	5	⊗ No
Cadillac			275	8
Saloon	Seville		4.6 Liters	
\$49,600.00	12/17/2001	<input checked="" type="checkbox"/>	4	✓ Yes



Navigate Through Grid Records

Move Focus Between Rows and Cards

To move focus between cells and rows use the ARROW, TAB, HOME, END, PAGE UP and PAGE DOWN keys. Note that the ARROW, HOME and END keys are used for navigation between rows/cards only when the focused cell is not being edited. Otherwise, these keys affect focus movement within the currently edited cell.

To focus the next cell, do one of the following:

- Press TAB.
- In Grid Views, press RIGHT ARROW. In Card Views and Layout Views, press DOWN ARROW. If a cell editor is active, pressing RIGHT ARROW moves focus to the next cell if the caret is positioned at the end of the current cell's text, or if the cell's text is selected in its entirety.

To focus the previous cell, do one of the following:

- Press SHIFT+TAB.
- In Grid Views, press LEFT ARROW. In Card Views and Layout Views, press UP ARROW. If a cell editor is active, pressing LEFT ARROW moves focus to the previous cell if the caret is positioned at the beginning of the current cell's text, or if the cell's text is selected in its entirety.

To focus the first cell within the current row in Grid Views, press HOME.

To focus the last cell within the current row in Grid Views, press END.

To focus the first row/card:

- press CTRL+HOME in Grid Views.
- press HOME or CTRL+HOME in Card Views and Layout Views.

To focus the last row/card:

- press CTRL+END in Grid Views.
- press END or CTRL+END in Card Views and Layout Views.

To move focus to the Auto Filter Row displayed at the top of a Grid View, do one of the following:

- Click this row.
- If a top data row is focused, press CTRL+UP ARROW.

Move Focus Away From the Grid Control

Press CTRL+TAB or CTRL+SHIFT+TAB.

Select Grid Rows and Cards

Select Individual Rows/Cards

To select a row/card and clear the existing selection, do one of the following:

- In Grid Views, click the row's indicator cell or any of its data cells:



- In Card and Layout Views, click the card's caption or any of its data cells.
- Select the row/card using the ARROW keys.

Select Multiple Rows or Cards

To select a row/card while preserving the current selection, do one of the following:

- In Grid Views, click the row's indicator cell or any of its data cells, while holding the CTRL key down.
- In Card and Layout Views, click the card's caption or any of its data cells, while holding the CTRL key down.

To toggle the focused row's/card's selected state, do one of the following:

- Press CTRL+SPACE.
- Click the row/card while holding the CTRL key down.

To move focus between rows and cards while preserving the current selection, use CTRL+ARROW keyboard shortcut (supported by Grid and Card Views).

Select a Range of Rows/Cards

To select all rows/cards, press CTRL+A (supported by Grid and Layout Views). Before pressing this shortcut, ensure that the focused cell is not being edited

To select a continuous range or rows/cards, you can do the following

- Use ARROW, PAGE UP, PAGE DOWN keys while holding the SHIFT key down.
- To select all rows/cards between the currently focused row/card and another one, click the target row/card while holding the SHIFT key down.

Note

If the SHIFT key is combined with CTRL, the previously selected rows/cards, if there are any, are not unselected. If you use the SHIFT key alone, the previously selected rows/cards are unselected.

- To select a continuous range of cards in Layout Views, drag with the mouse around cards that are to be selected (marquee selection).

Copy Selected Records to the Clipboard

Press CTRL+C or SHIFT+INS.

Layout Manager

This section describes the capabilities provided by the Layout Manager. It maintains a consistent layout of controls within a form for you, so whenever you resize the form, the controls do not overlap. You can invoke customization mode to temporarily hide specific editors, and then show them again, resize the controls, save and then restore the layout, etc.

Details		Performance Attributes	
Manufacturer:	Mercedes-Benz		
Model:	SL500 Roadster		
Category:	Sports <input type="button" value="v"/>		http://www.mercedes.com
Price:	\$83,800.00 <input type="button" value="v"/>		Delivery Date: 7/24/2002 <input type="button" value="v"/>
		<input checked="" type="checkbox"/> In stock?	
Record 1 of 15 <input type="button" value="v"/>			

Layout Customization

- [Start Layout Customization](#)
- [Finish Layout Customization](#)
- [Hide and Display Elements using a Layout Manager](#)
- [Change Element Layout](#)
- [Resize Interface Elements](#)
- [Add Empty Regions, Separators, Splitters and Labels](#)
- [Change Text Label Options](#)
- [Work with Interface Element Groups](#)
- [Create and Delete Tabbed Groups](#)

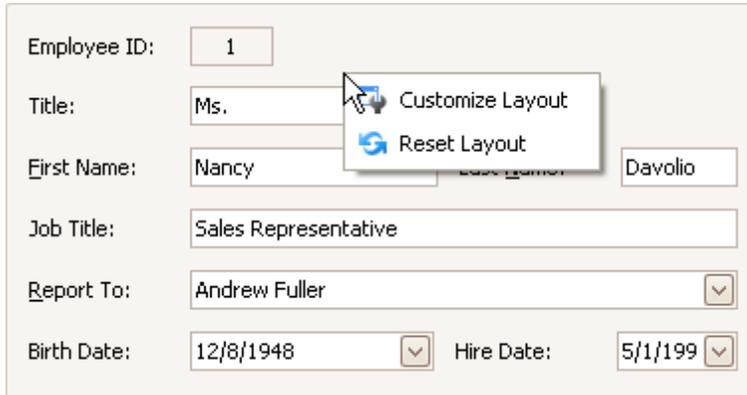
Save and Restore Layout

- [Save and Restore Interface Layout](#)

Layout Customization

Start Layout Customization

The layout of controls can be modified in customization mode. To invoke customization mode, right-click an empty space within the Layout Manager and select **Customize Layout**:



Employee ID:

Title: **Customize Layout**
Reset Layout

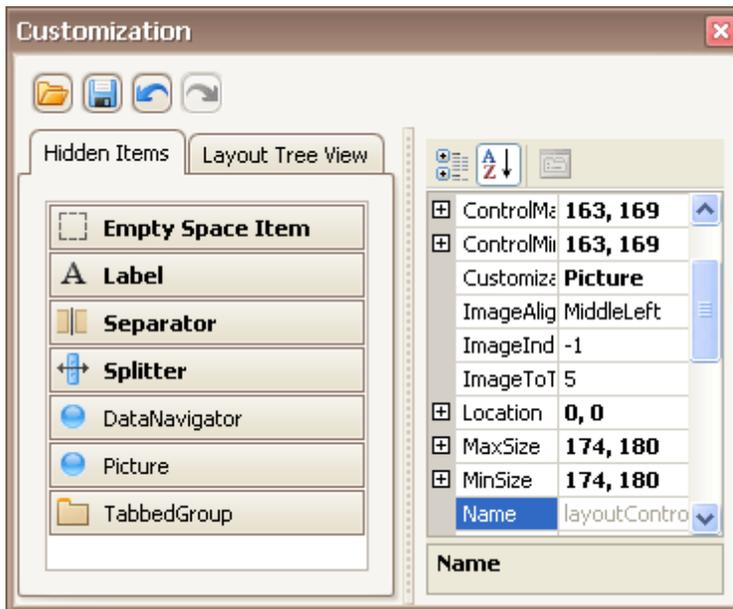
First Name:

Job Title:

Report To:

Birth Date: Hire Date:

As a result, the Customization Form opens a list of service items and currently hidden elements:



Customization

Hidden Items | Layout Tree View

Empty Space Item

Label

Separator

Splitter

DataNavigator

Picture

TabbedGroup

ControlMe	163, 169
ControlMi	163, 169
Customize	Picture
ImageAlig	MiddleLeft
ImageInd	-1
ImageToI	5
Location	0, 0
MaxSize	174, 180
MinSize	174, 180
Name	layoutContro

Name

Now, you can modify the current layout using drag-and-drop and resizing operations and commands provided by context menus. Context menus that can be invoked by right-clicking within the Layout Manager provide various customization commands. Different commands are available depending upon the type of a layout item which has been right-clicked (a regular control, a group or tabbed group).

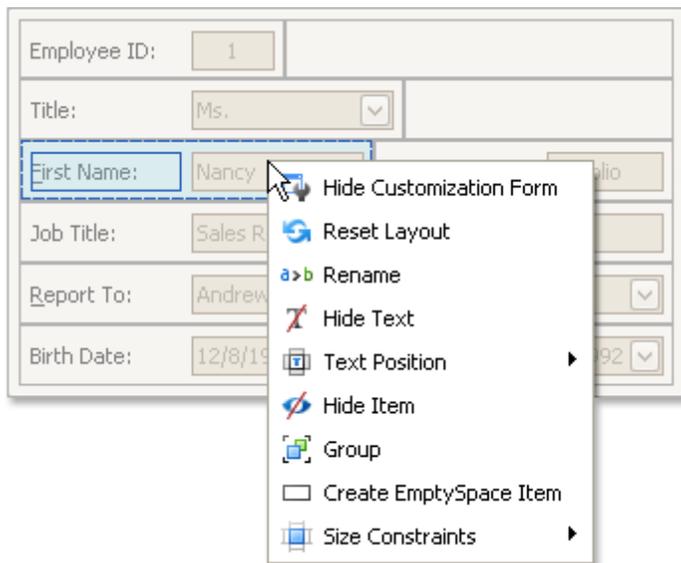
Finish Layout Customization

To finish [customization](#), do one of the following:

- Close the Customization form by clicking on its close button.



- Right-click the form and select **Hide Customization Form**.



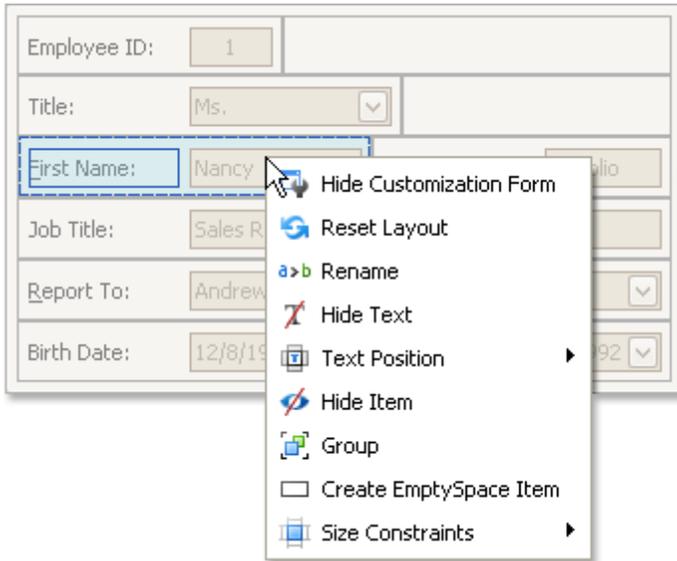
Hide and Display Elements using a Layout Manager

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

Hide an Element

Do one of the following:

- Right-click on the layout item and select **Hide Item** from the context menu:



- Drag the layout item onto the **Hidden Items** list of the Customization Form.

Display a Hidden Element

Drag the required item from the Customization form's Hidden Items list onto the main form.

Change Element Layout

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

Change Element Layout

To rearrange items within the form, use drag-and-drop operations.

Resize Interface Elements

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

Resize Layout Items

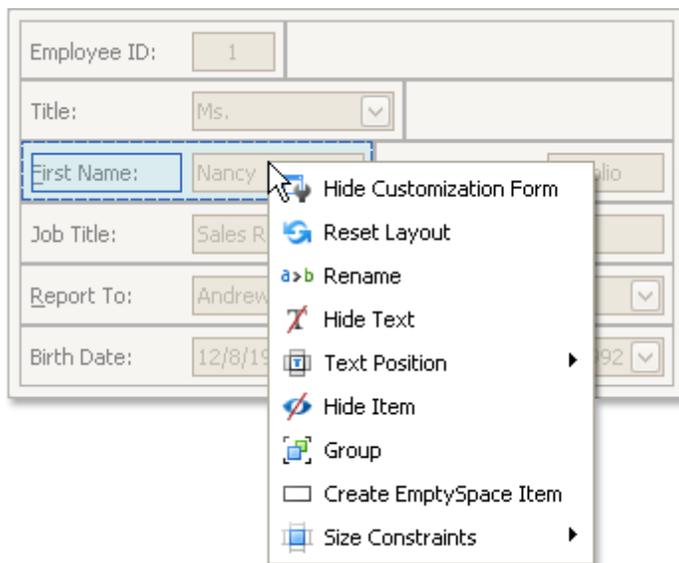
To resize a layout item, drag the layout item's edge:



A screenshot of an employee form with the following fields: Employee ID (1), Title (Ms.), First Name (Nancy), Last Name (Davolio), Birth Date (12/8/1948), and Hire Date (5/1/1992). A double-headed arrow is positioned over the right edge of the Title dropdown menu, indicating it is being resized.

Lock Size

To lock a layout item's size, and prevent it from being resized (for instance, when the size of the container changes), right-click on a layout item and select the **Size Constraints | Lock Size** menu command:



A screenshot of the same employee form, but with a context menu open over the First Name field. The menu items are: Hide Customization Form, Reset Layout, Rename, Hide Text, Text Position, Hide Item, Group, Create EmptySpace Item, and Size Constraints. The 'Size Constraints' item has a right-pointing arrow next to it, indicating a sub-menu.

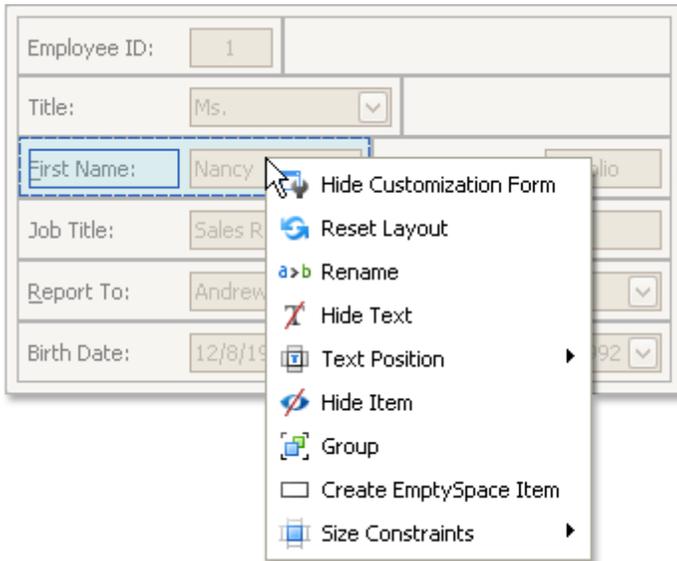
Add Empty Regions, Separators, Splitters and Labels

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

Add Empty Regions

Empty regions enable greater control over element layout. They can be used, for example, if you want elements to be aligned to the right or bottom edge of a resizable container. To add an empty region, do one of the following:

- Drag the **Empty Space Item** from the Customization form and drop at the required position on the form.
- Right-click the Layout Control and select **Create EmptySpace Item** from the context menu:



A new empty region will be added at the bottom of the Layout Control. Then, drag this item to the required position.

Add Splitters

To allow controls to be resized even when no customization is being performed, you can add a splitter between these controls. To add a splitter, drag the **Splitter** item from the Customization form onto the main form.

Add Separators

A separator is just a line that allows you visually separate the Layout Control's areas. To add a separator, drag the **Separator** item from the Customization form onto the main form.

Add Labels

To add a static text label to the Layout Control, do the following:

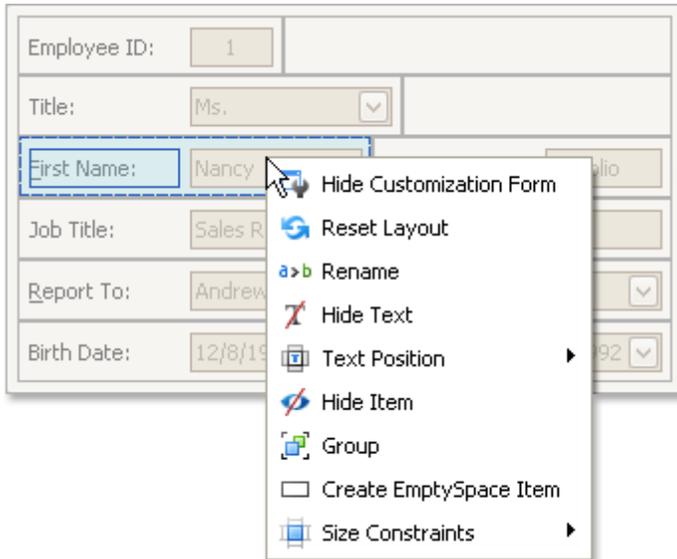
1. Drag the **Label** item from the Customization form onto the main form.
2. To rename the label, right-click the created label and select **Rename** from the context menu.

Change Text Label Options

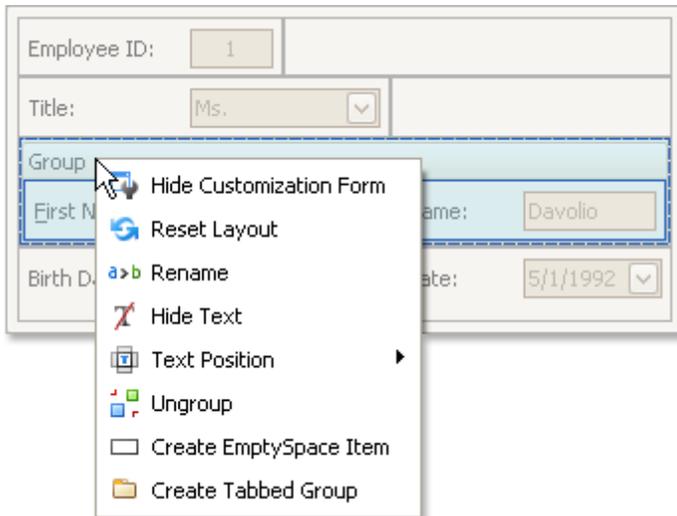
To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

Rename Labels

To rename a layout item's text label, right-click the item and select **Rename** from the context menu.



To rename a group, right-click the group's caption and select **Rename**.



Change a Label's Visibility

To hide a layout item's text label or a group's caption, right-click the item/group and select **Hide Text** from the context menu.

To display a layout item's hidden text label or a group's hidden caption, right-click the item/group and select **Show Text**.

Change a Label's Position

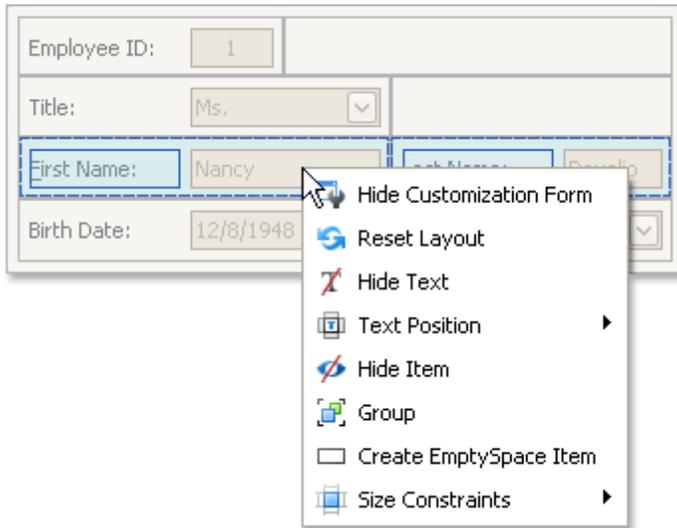
To change the position of an item's label or a group's caption, right-click the item/group to open the context menu. Then, select **Text Position** and the required command from this submenu.

Work with Interface Element Groups

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

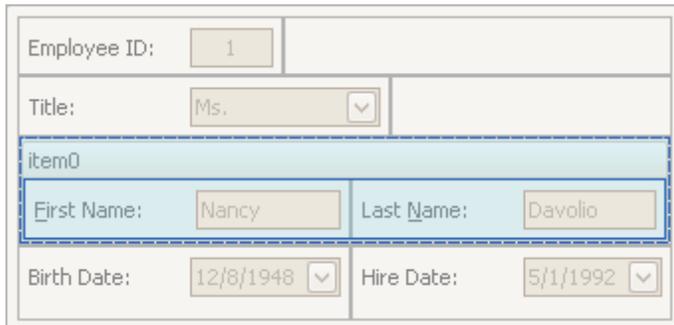
Combine Layout Items into Groups

1. Select a layout item that is to be added to a new group by clicking it.
You can select multiple items simultaneously by clicking them while holding the SHIFT key down.
2. Right-click any of the selected layout items and select **Group** from the context menu:



Note that only adjacent selected layout items can be combined into a group, and only if the region occupied by them forms a rectangle. Otherwise, the **Group** command is not available when right-clicking the selection.

As a result, a new group is created:

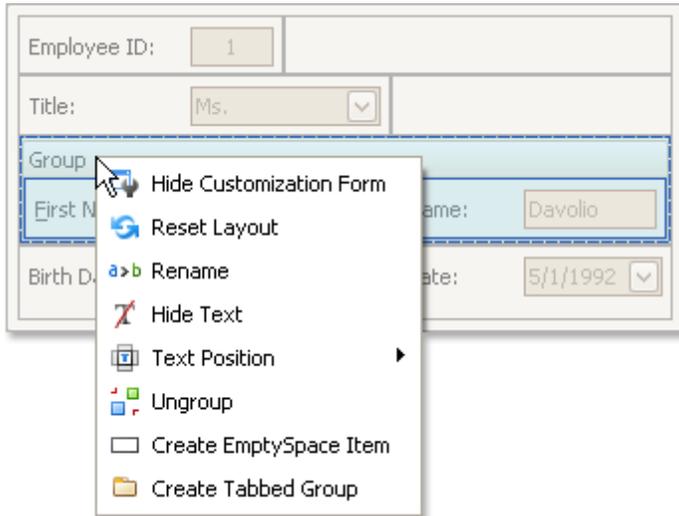


You can subsequently rename the group and customize its contents using drag-and-drop and context menus if required.

Rename Groups

Do the following:

1. Right-click the group's caption and select **Rename**:



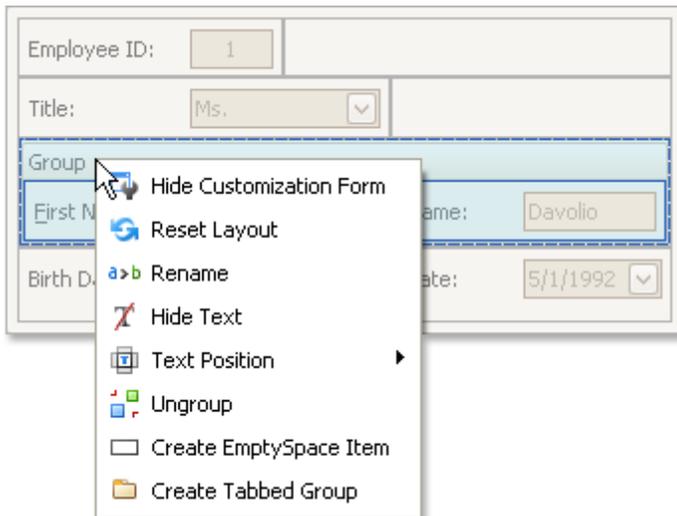
2. Type a new name and press ENTER.

Change Group Content

To customize the layout of controls within a group, use drag-and-drop.

Ungroup Elements

To ungroup elements, right-click the group's caption and select **Ungroup**:

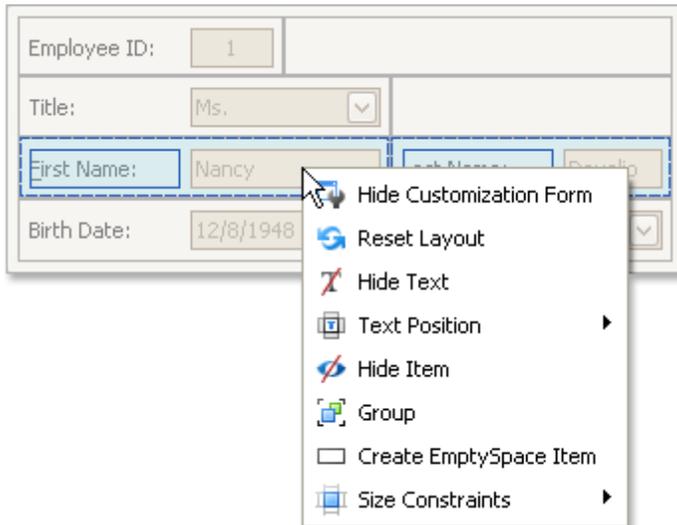


Create and Delete Tabbed Groups

To perform layout customization, first invoke [Customization Mode](#). After customization has been completed, [exit](#) customization mode.

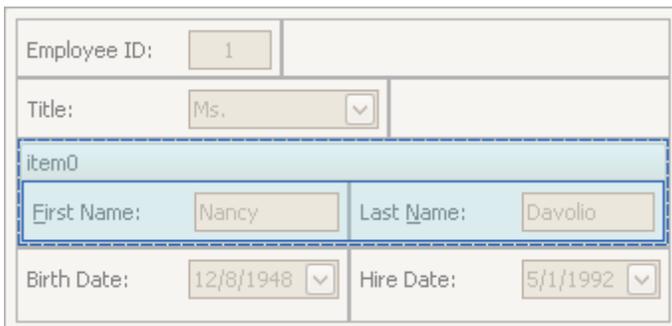
Combine Layout Items into a Tab Control

1. Select a layout item that is to be added to a tab control by clicking it.
You can select multiple items simultaneously by clicking them while holding the SHIFT key down.
2. Right-click any of the selected layout items and select **Group** from the context menu:

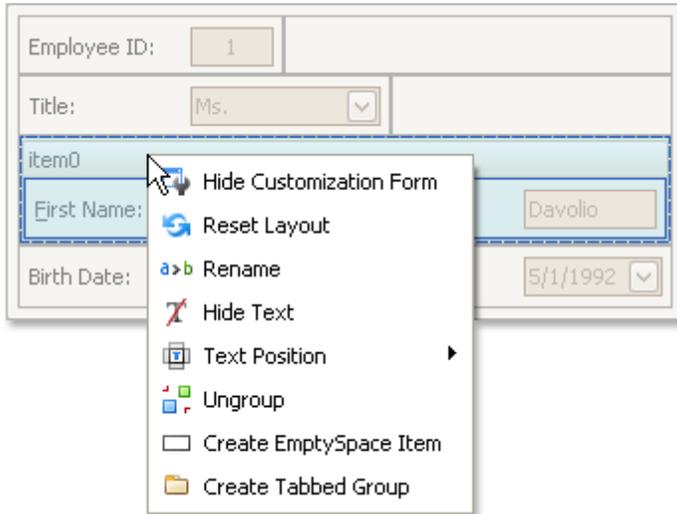


Note that only adjacent selected layout items can be combined into a group, and only if the region occupied by them forms a rectangle. Otherwise, the **Group** command is not available when right-clicking the selection.

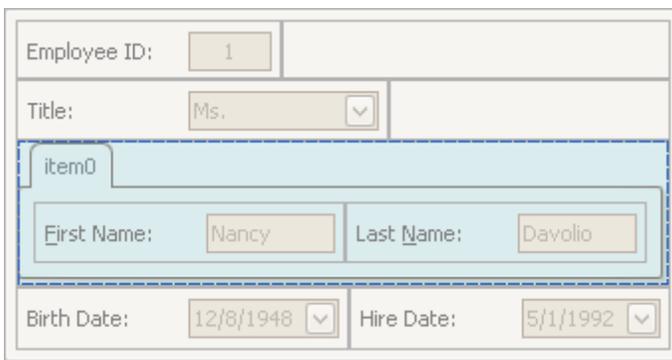
As a result, a new group is created:



3. Right-click the group's caption and select **Create Tabbed Group**.



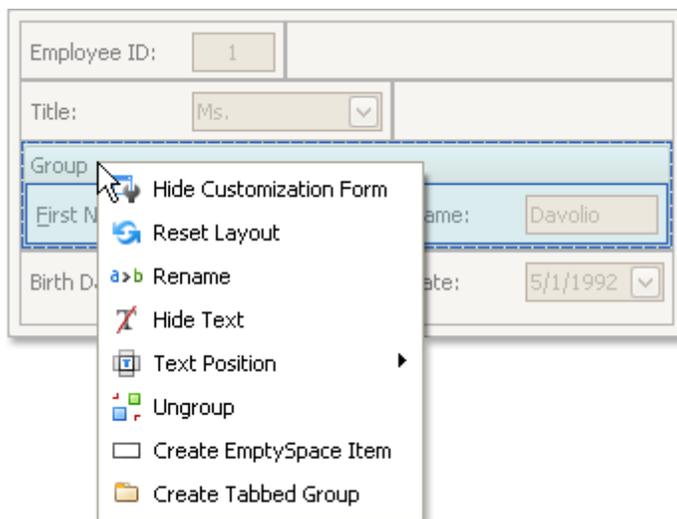
This creates a tab control with one tab displaying the contents of the original group.



You can subsequently rename the created tab and customize the contents of tab pages using drag-and-drop and context menus, if required.

Combine Groups into a Tab Control

To transform a group into a tab control, right-click the group's caption and select **Create Tabbed Group**.

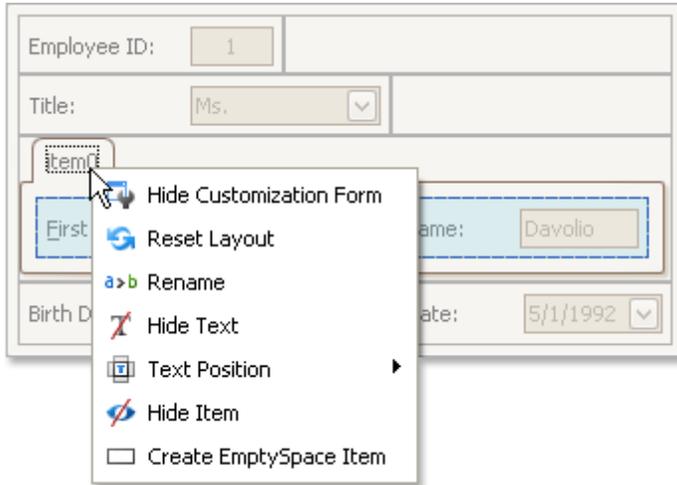


To add a group as a tab page to an existing tab control, drag the group's caption onto the tab control's header area.

Rename Tab Pages

Do the following:

1. Right-click a tab header and select **Rename**:



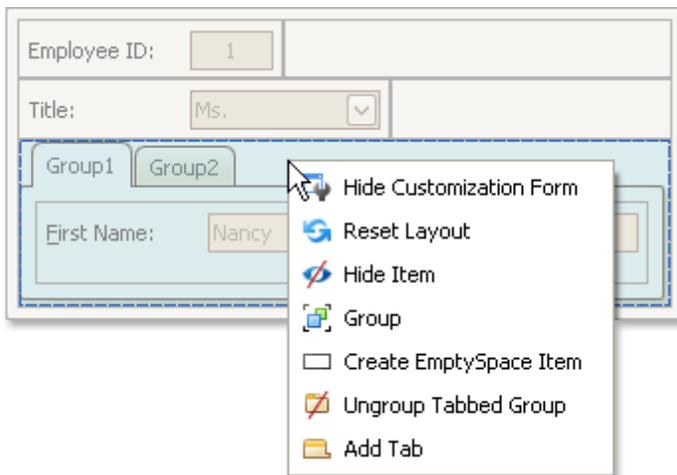
2. Type a new name and press ENTER.

Customize Tabbed Groups

To customize the layout of controls and the order of tab pages within a tab control, use drag-and-drop.

Ungroup Tabbed Groups

To disassemble a tab control into regular groups, right-click the tab control's header area and select **Ungroup Tabbed Group**.



As a result, the tab control will be destroyed and all its tab pages will be displayed as regular groups, one below another.

Employee ID:	<input type="text" value="1"/>	
Title:	<input type="text" value="Ms."/> <input type="button" value="v"/>	
Group1		
First Name:	<input type="text" value="Nancy"/>	Last Name: <input type="text" value="Davolio"/>
Group2		
Birth Date:	<input type="text" value="12/8/1948"/> <input type="button" value="v"/>	Hire Date: <input type="text" value="5/1/1992"/> <input type="button" value="v"/>

Save and Restore Layout

Save and Restore Interface Layout

You can save the current layout of controls to an XML file, and subsequently, restore it.

Save the Layout of Controls

1. Invoke [Customization mode](#).
2. In the Customization form that opens, click the **Save Layout** button ().
3. The Save As dialog will appear. It allows you to specify the XML file to which the layout is to be saved.

Load a Layout of Controls

1. Invoke [Customization mode](#).
2. In the Customization form that opens, click the **Load Layout** button ().
3. The Open File dialog will appear. It allows you to specify the XML file from which the layout is to be loaded.

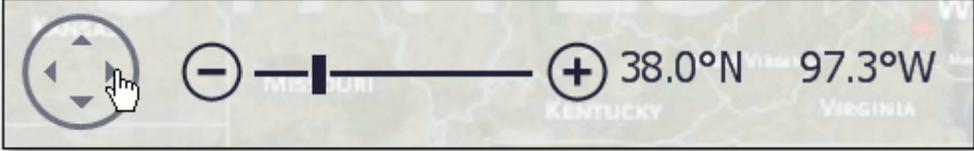
Map

The section describes capabilities provided by the **Map** control. The following topics are available.

- [Scrolling](#)
- [Zooming](#)
- [Selection](#)
- [Using the Search Panel](#)

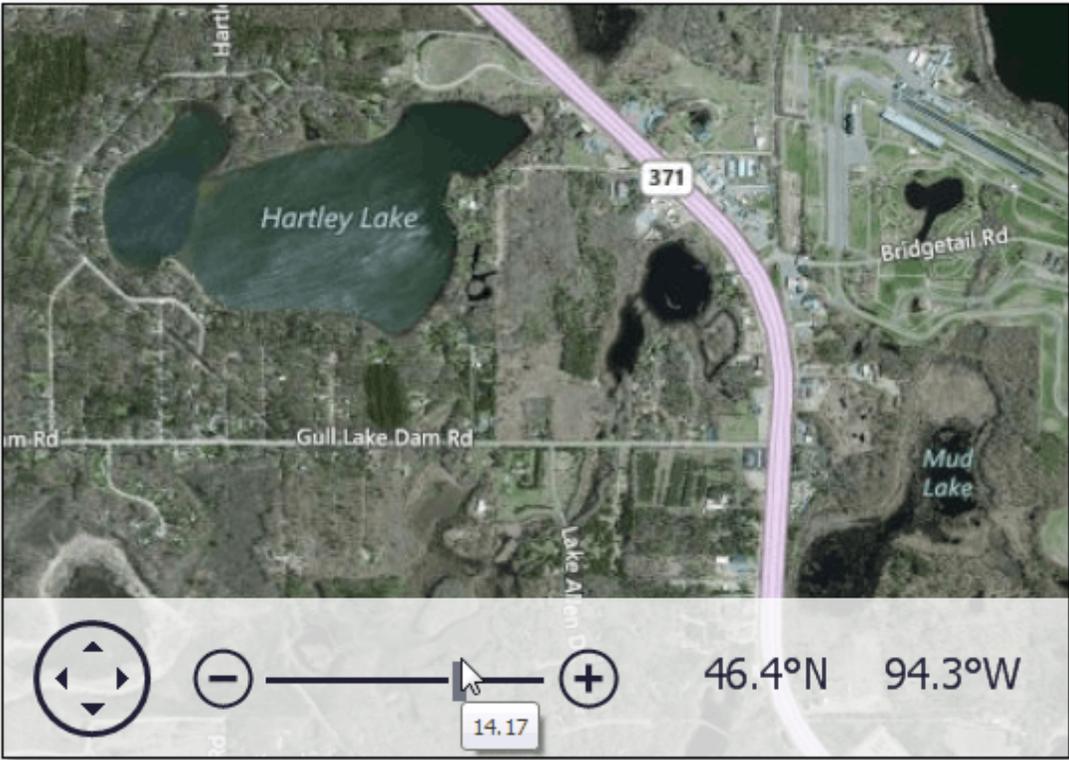
Scrolling

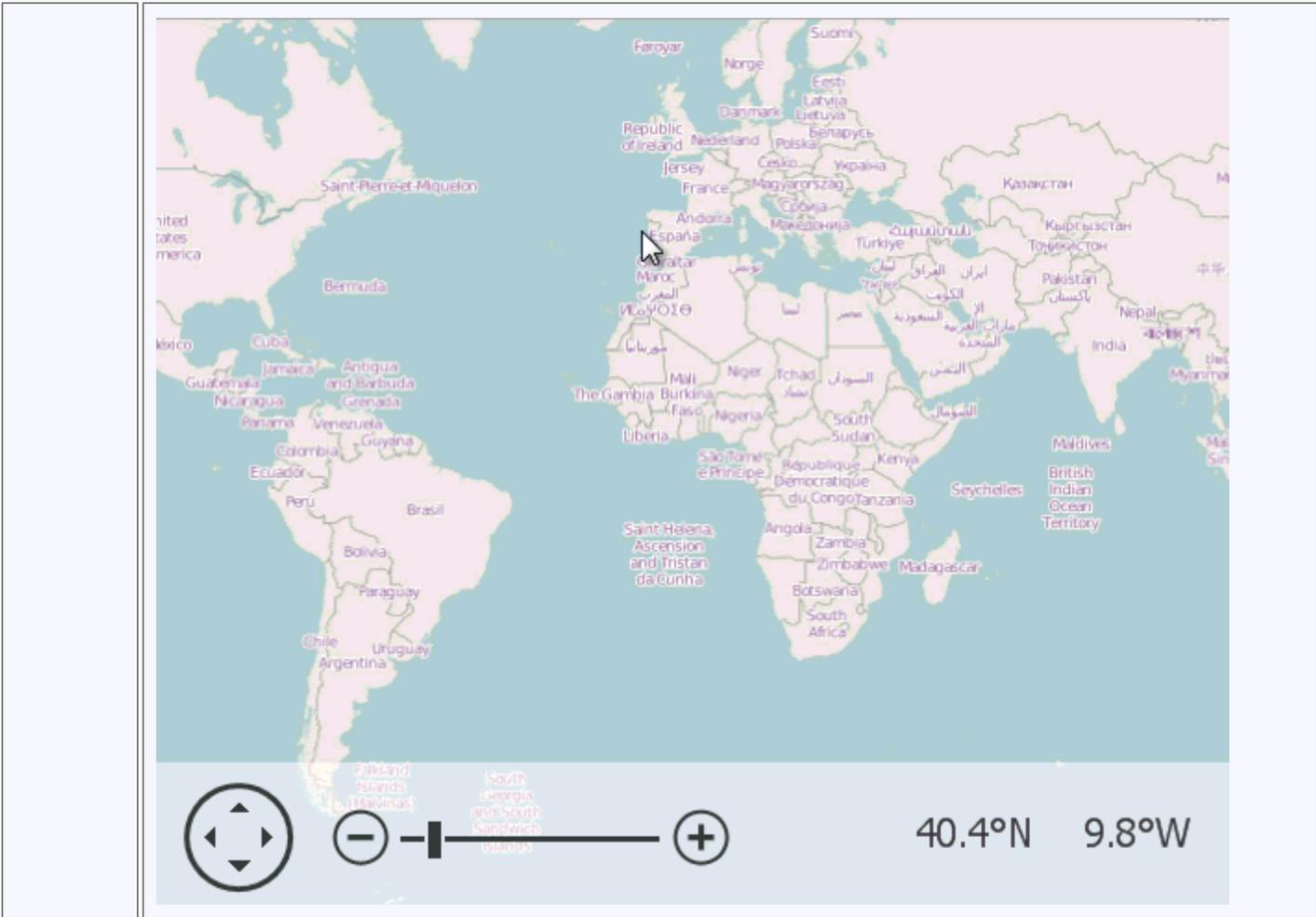
The following operations can be performed by end-users to scroll a map.

Action	Effect
Hold down the left mouse button and drag it.	When an end-user holds down the left mouse button, the mouse pointer changes from  to  . Move the mouse pointer by holding down the left mouse button. The map is scrolled in the same direction as the mouse pointer is moved.
Use the arrows in the map navigation panel.	An end-user can scroll a map in four directions by clicking the arrows in the map navigation panel. For example, to move east, use the right arrow in the navigation panel. 
Use the "Arrow" keys (LEFT, UP, RIGHT or DOWN).	If an end-user presses the LEFT arrow key, the map is moved west. If an end-user presses the UP arrow key, the map is moved north. If an end-user presses the RIGHT arrow key, the map is moved east. If an end-user presses the DOWN arrow key, the map is moved south.
Use flick gestures on a touchscreen device.	An end-user can scroll a map using flick gestures on a touchscreen device. 

Zooming

The following operations can be performed by end-users to zoom in to or out of a map.

Action	Effect
<p>Use the Plus or Minus symbols in the map navigation panel</p>	<p>Click the Plus or Minus symbols in the map navigation panel.</p> 
<p>Use the track bar slider in the map navigation panel</p>	<p>Select the track bar slider in the map navigation panel by hovering the mouse cursor over the slider. Drag the track bar slider to the right (zoom in) or to the left (zoom out) in the map navigation panel. To stop zooming, release the left mouse button. Note that a tooltip that displays the current zoom level appears below the track bar slider.</p> 
<p>Drag an area on the map while holding the Shift and Ctrl keys</p>	<p>Hold the Shift and Ctrl keys, and the left mouse button. Then, drag the mouse pointer. This draws a rectangle on the map that corresponds to the map zoom region. To zoom into the specified rectangular area, release the left mouse button.</p>



Use the "+" or "-" keys

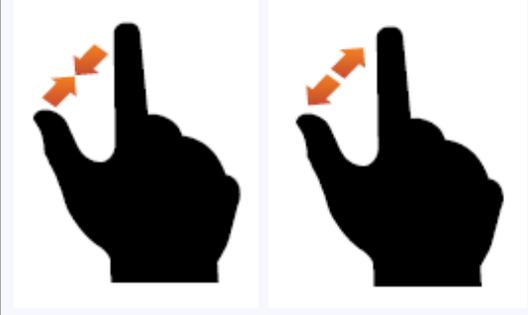
If the "+" key is pressed, the map is zoomed in.
If the "-" key is pressed, the map is zoomed out.

Use the mouse wheel

Scroll the mouse wheel to zoom in to and out of a map.

Use the spread or pinch gesture on a touchscreen device

Zoom in to or out of a map by performing a spread or pinch gesture on any touchscreen device.



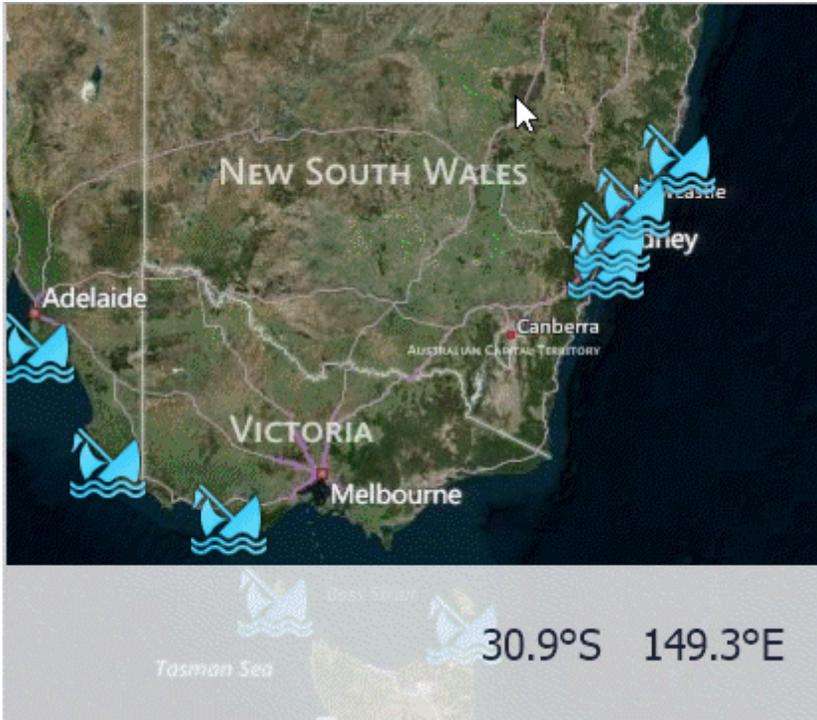
Selection

To select a map item, do one of the following:

- Tap a map item on a touchscreen device;
- Hover over a map item with the mouse pointer and click it.

To select multiple map items, do the following:

- Hold the **Shift** key and the left mouse button;
- Drag the mouse pointer, to mark an area that includes the desired map items;
- Release the left mouse button. All map items within the area will be selected.



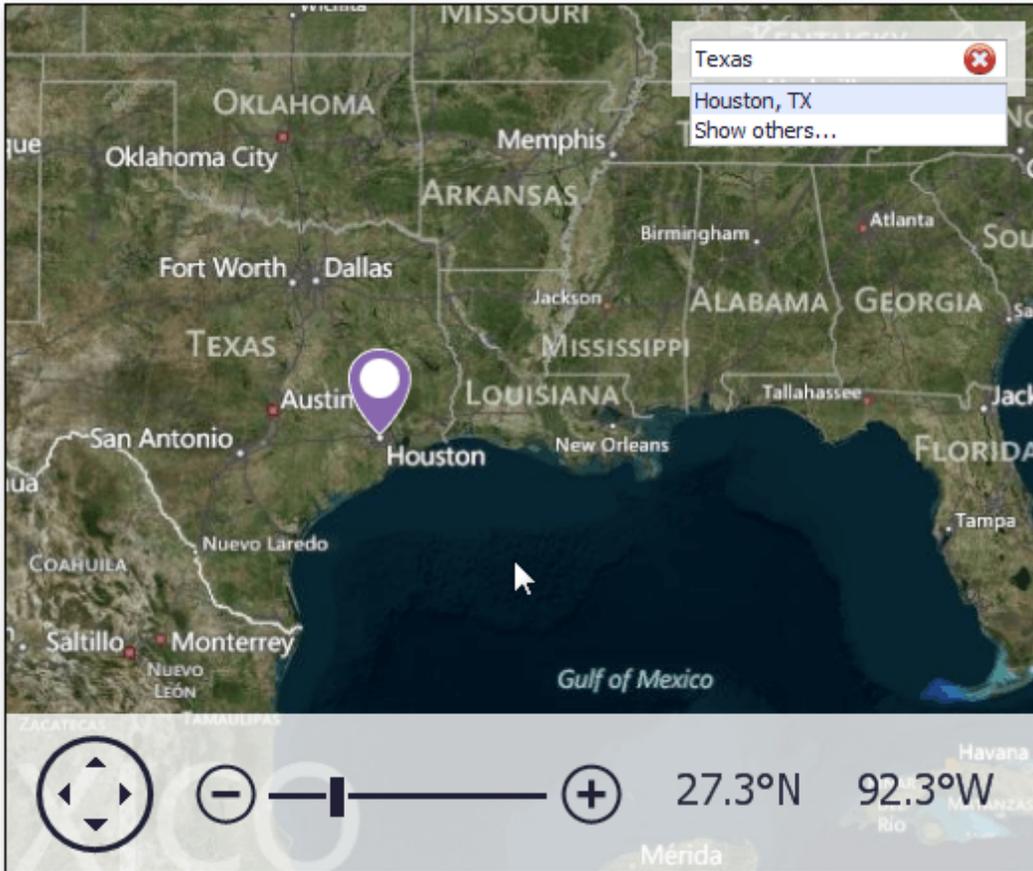
Using the Search Panel

This document explains how to use a search panel in the **Map** control.

The **Search Panel** is a UI element that accepts text input and displays the results of a search request returned by the search service.

The Search Panel allows you to find a location on the map and see the search results for a request in the panel. To learn how to enable search in the map control, see the Search topic.

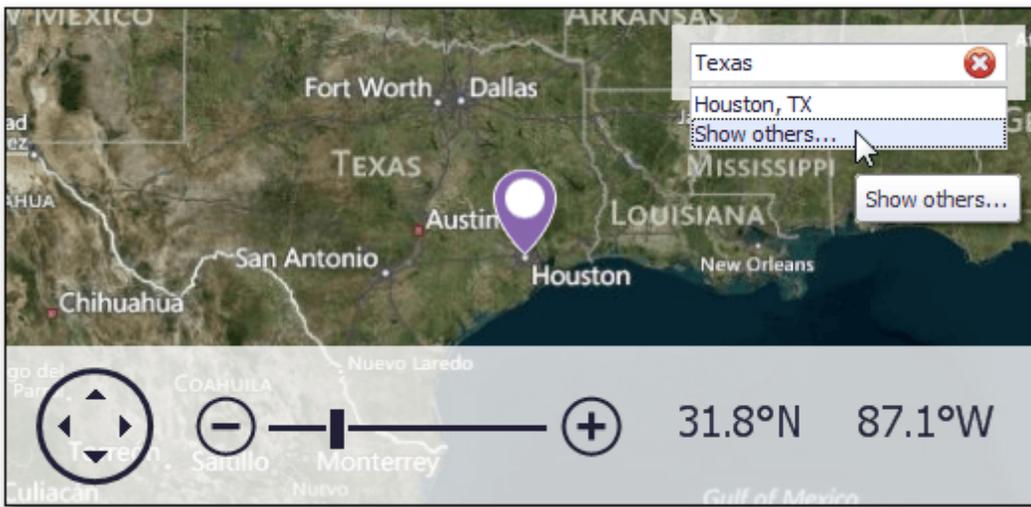
To start a search, type a place name ("Texas", for example) in the panel. The result is shown in the image below.



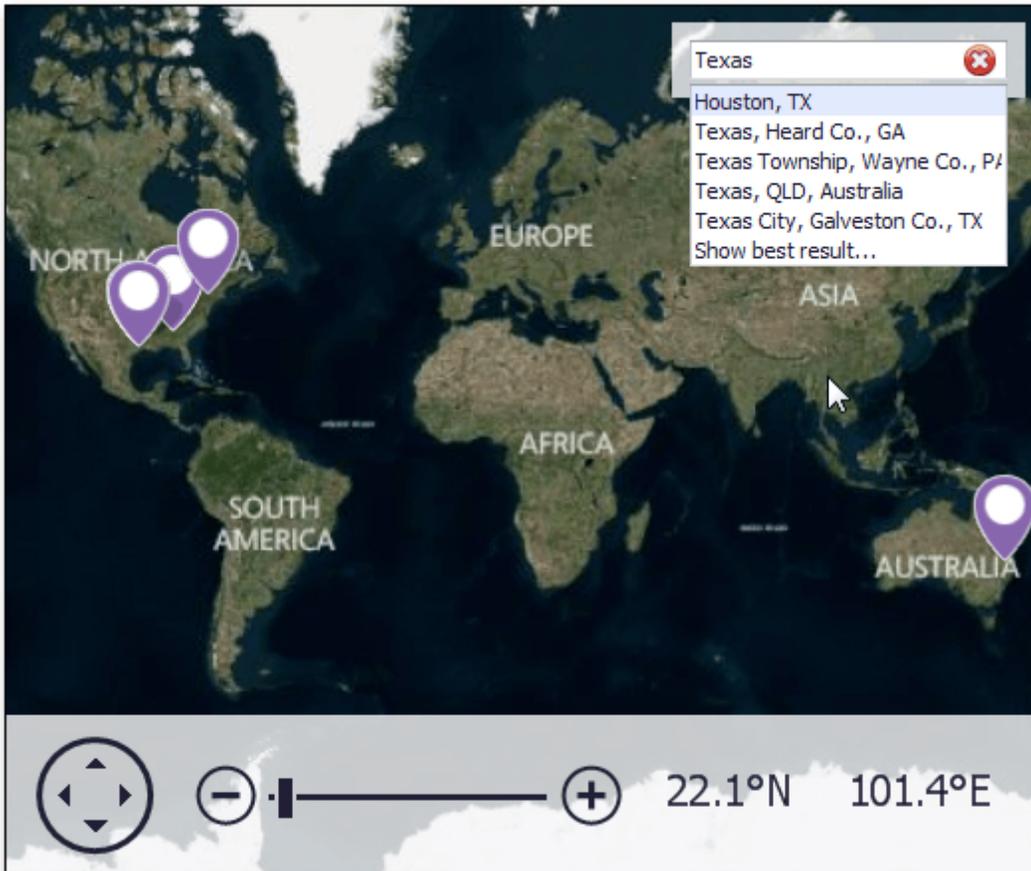
To cancel a request, click the delete (✖) icon on the right side of the panel.

Notice that the map pushpin only shows the "Houston, TX" location on the map. Note, however, that the search result also displays the **Show others** item, which means that the **Microsoft Bing Search** service found alternative results for this request.

Click the **Show others...** option to see the other search results.



Other search results ("Texas, Heard Co., GA", "Texas, QLD, Australia", etc.) will be displayed along with the **Show best result** option.



To see only "Houston, TX", click **Show best result** in the Search panel.

Mini Map

The Mini Map provides a complete overview of the map, as well as additional information about the current map viewport, and allows you to navigate to different map regions.

The mini map supports the following behavior modes.

Fixed

When a mini map operates in fixed behavior mode, its center point and zoom level are fixed. The following image demonstrates fixed behavior mode.

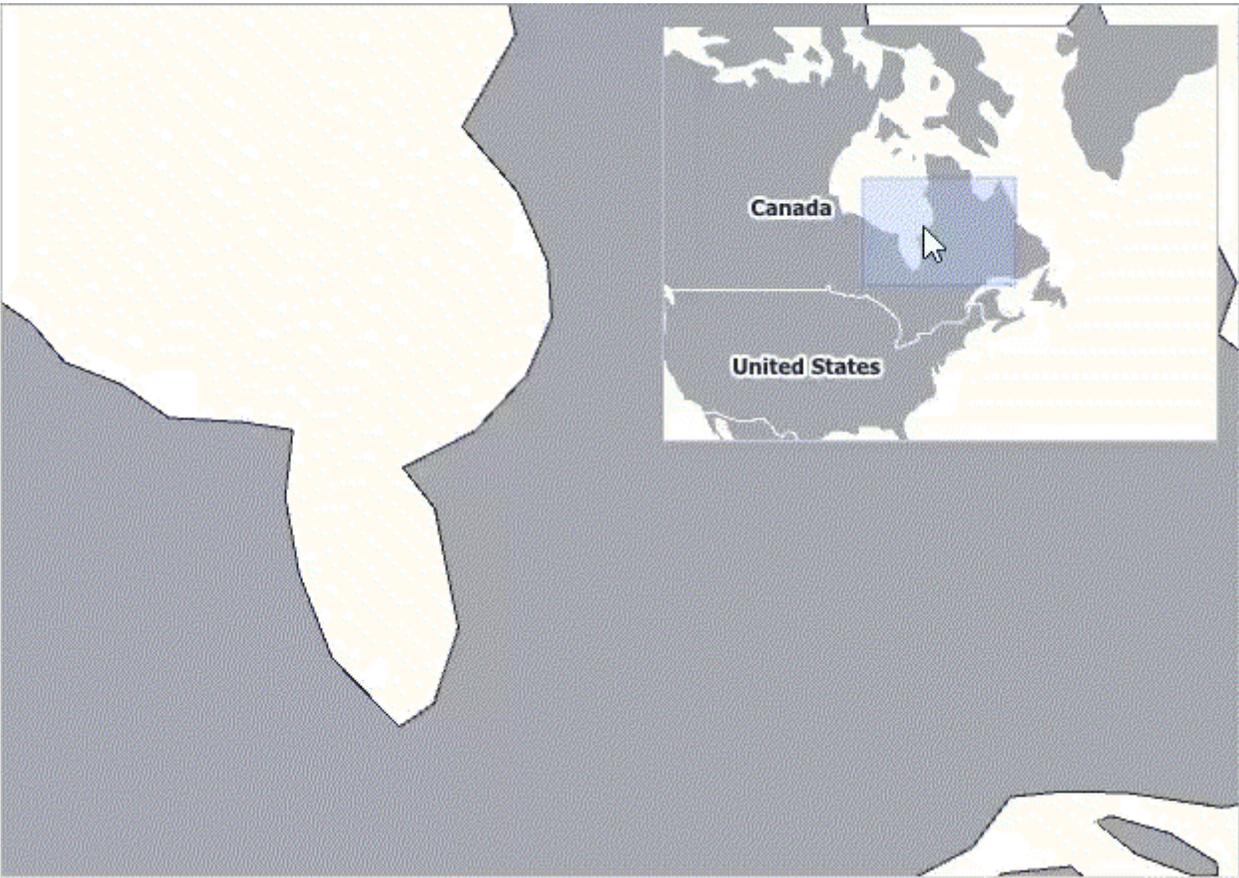
Note that center point of the mini map stays the same when the map's center point changes, as well as the zoom level.



Dynamic

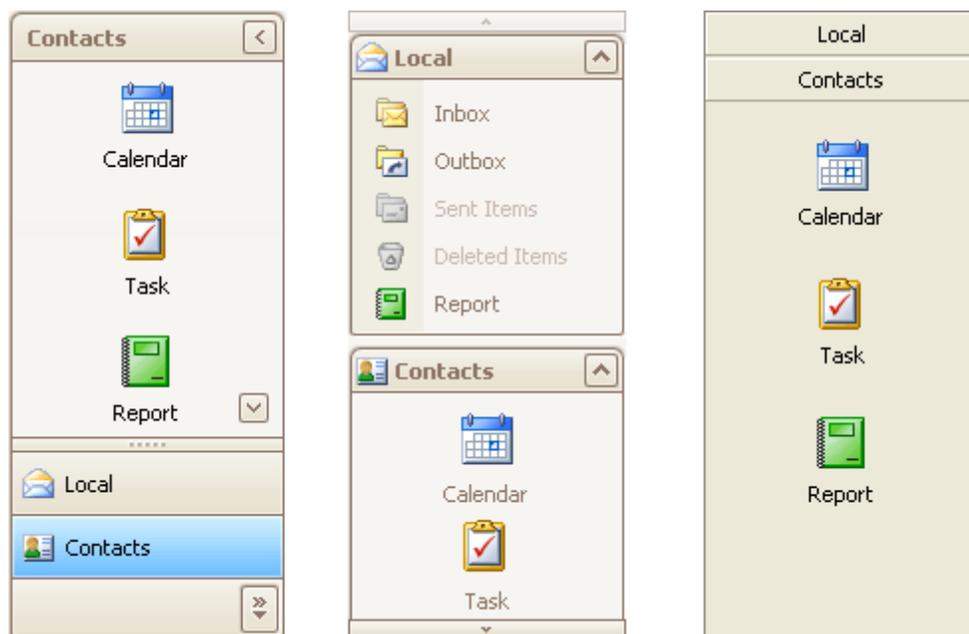
In a dynamic behavior mode, mini map settings are changed according to the zoom level and center point of the owner map. The following image demonstrates dynamic behavior mode.

Note that center point of the mini map is changing depending on the map's center point, as well as the zoom level.



Navigation Bars

This section describes the capabilities provided by the Navigation Bars.



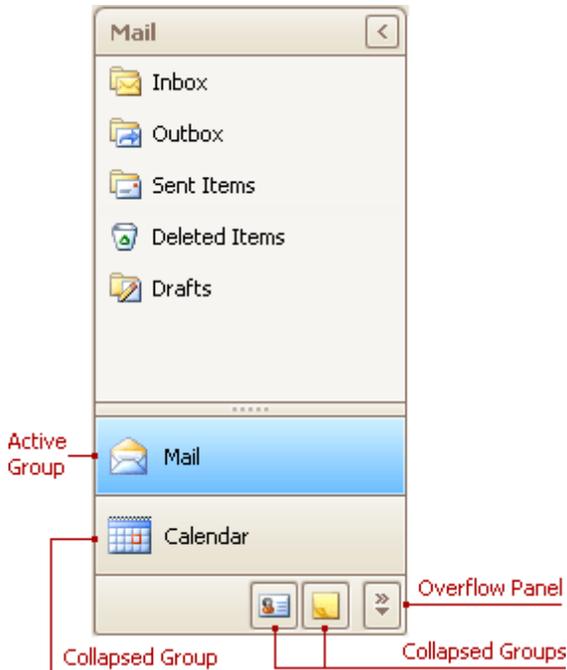
Topics in this section:

- [Navigation Pane](#)
- [Navigation Bar](#)

Navigation Pane

Expand Groups

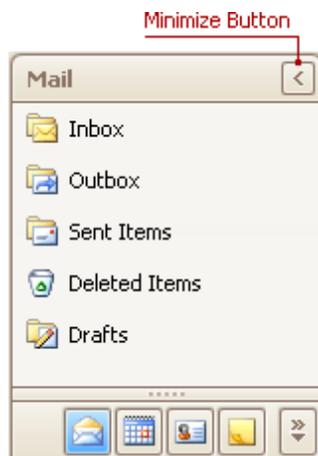
A Navigation Pane displays only one group at a time. Other groups are collapsed and their buttons are displayed at the bottom or in the Overflow panel. You can use the horizontal splitter to control the number of group buttons shown outside of the Overflow panel.



To activate a group, click its caption button.

Minimize the Navigation Pane

To minimize the Navigation Pane, click the Minimize button:



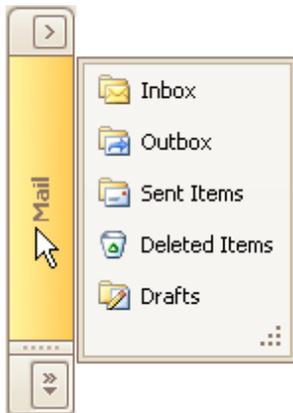
Display the Contents of the Minimized Navigation Pane

To display the contents of a minimized Navigation Pane, you can restore it to its normal state, or display its contents while it's in the minimized state.

To restore the minimized Navigation Pane to its normal size, click the Maximize button:

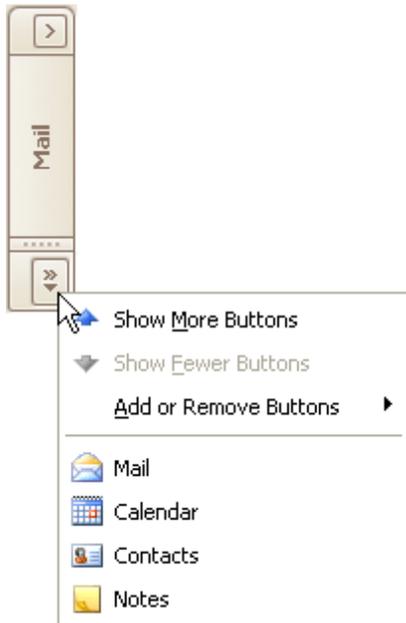


To display the contents of the Navigation Pane when it's in the minimized state, click the current group's button:

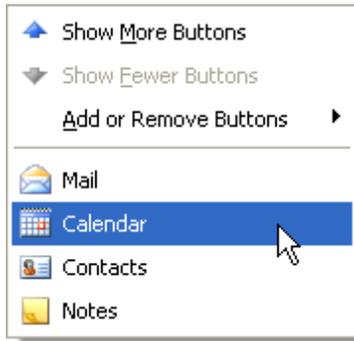


To display the contents of the group that is currently hidden, do the following:

1. Click the dropdown button at the bottom of the Navigation Pane:



2. Select the required group in the menu that opens:



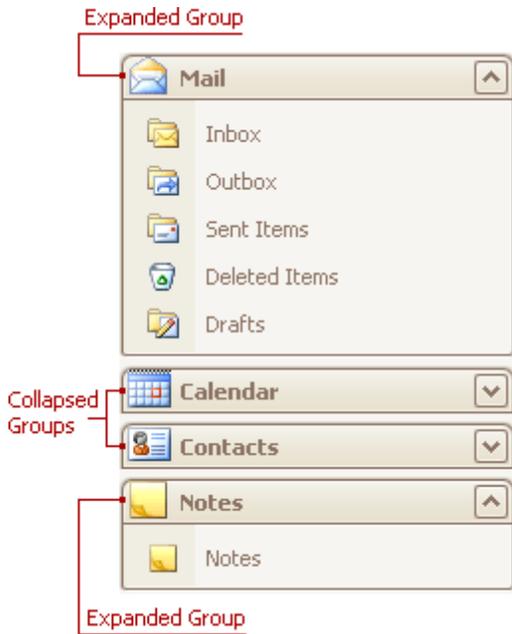
3. Click the current group's button:



Navigation Bar

Expand Groups in the Navigation Bar That Can Display Multiple Groups at One Time

Windows Explorer Bar style navigation bars can display multiple groups at one time, as in the image below:



To collapse a specific expanded group, click the expand button within the group's header:

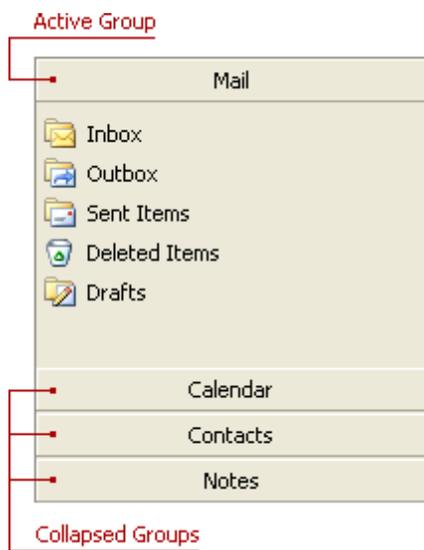


To expand a specific collapsed group, click the collapse button:



Expand Groups in the Navigation Bar That Displays One Group at a Time

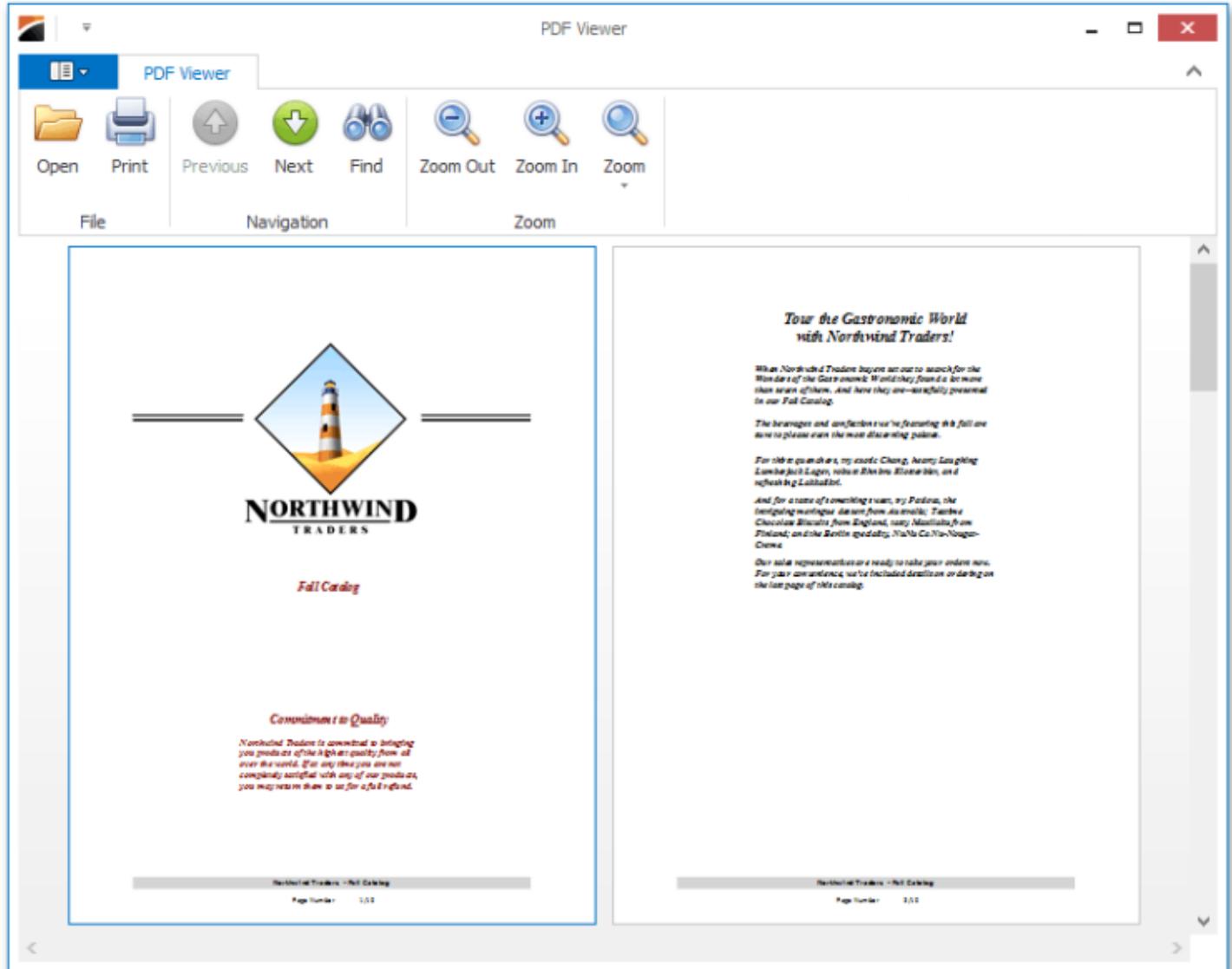
To expand a specific collapsed group, click the group's button. The previously opened group will be collapsed.



PDF Viewer

This section describes the capabilities of the **PDF Viewer**.

The PDF Viewer used to displaying PDF files and supports various document content such as text, images, vector graphics, etc.



The following sections are available in this guide.

- [Manage Documents and Files](#)
- [Print Documents](#)
- [Navigate through the Document Content](#)
- [Adjust the Document View](#)
- [Select and Copy the Document Content](#)

Manage Documents and Files

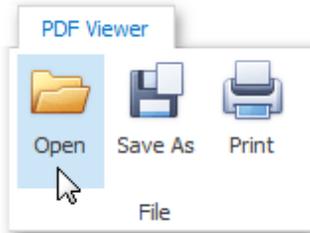
This document describes how to open and save PDF files using the PDF Viewer.

This topic consists of the following sections.

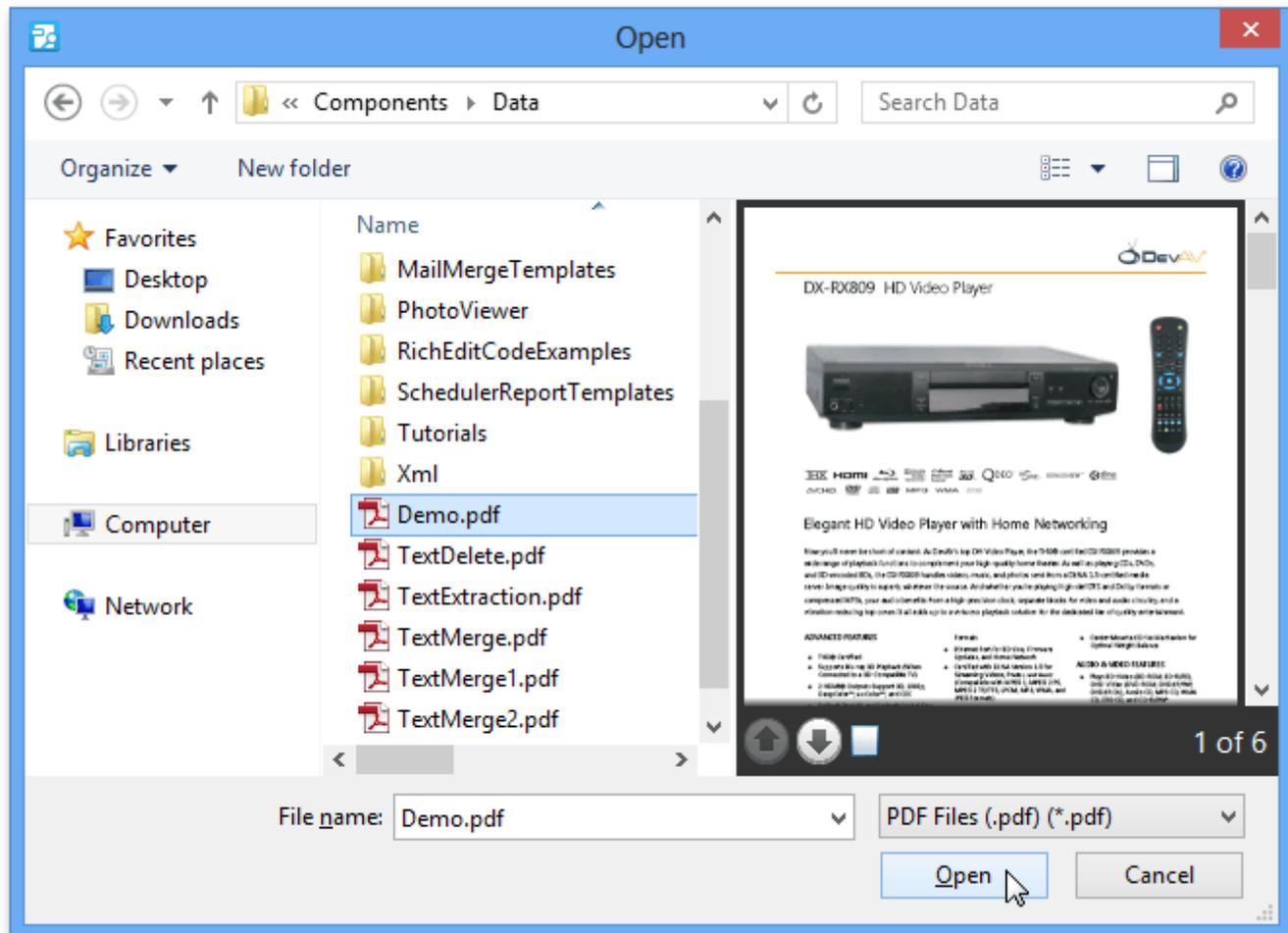
- [Open a PDF File](#)
- [Save a PDF File](#)

Open a PDF File

To open a document for viewing, click the **Open** button, or press **Ctrl+O**.

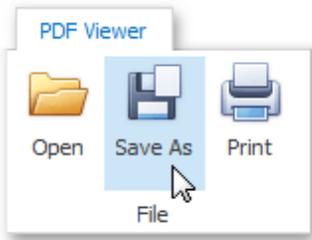


In the invoked dialog, choose a PDF file and click **Open**.

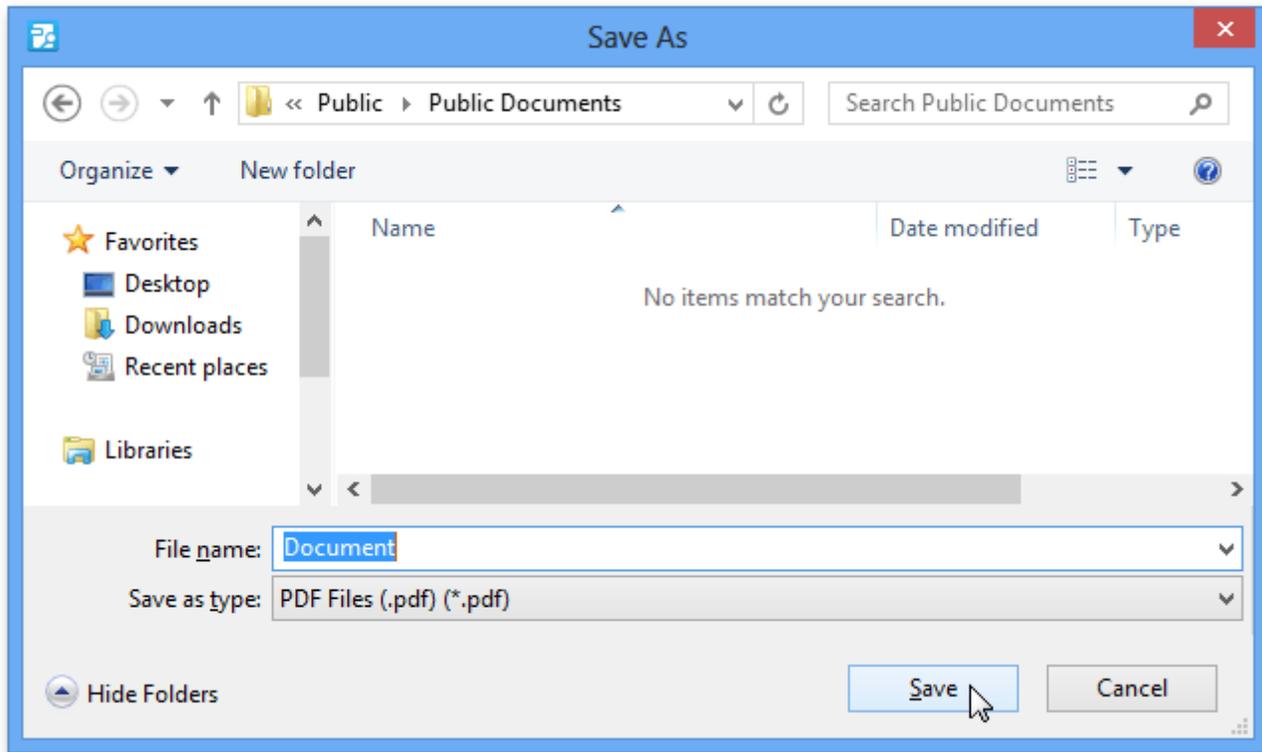


Save a PDF File

If you need to save your PDF file to disk, click the **Save As** button, or press **Ctrl+S**.



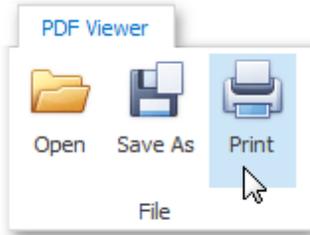
In the invoked **Save As** dialog, locate the folder where you want to store your file, enter the document's name and click **Save**.



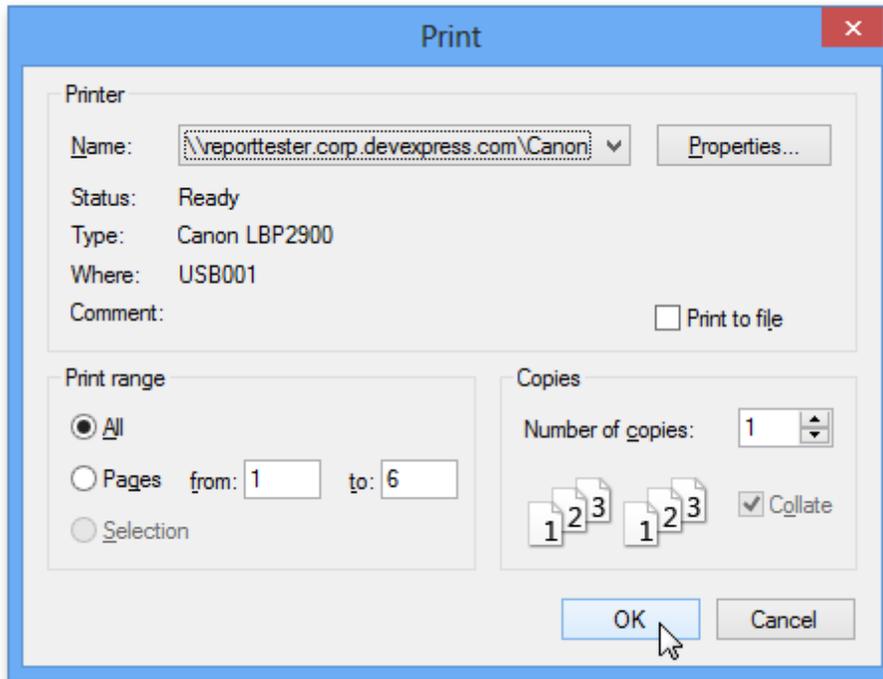
Your document will be saved with the **.pdf** file extension.

Print Documents

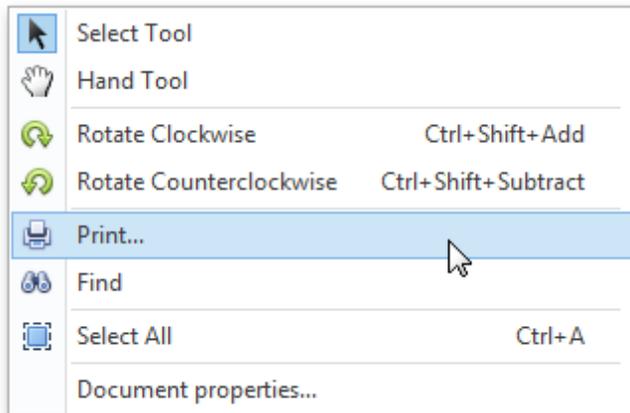
To print the current document, click the **Print** command located on the **File** toolbar button group, or press **CTRL+P**.



In the invoked standard **Print** dialog, choose the printer, specify the printing parameters and click **OK**.



Alternatively, to invoke the **Print** dialog, right-click the document area and select the **Print...**  item in the context menu.



Navigate through the Document Content

This document provides information on using the PDF Viewer user interface to navigate through the document content.

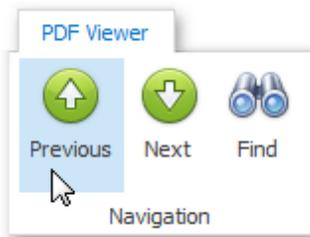
The topic consists of the following sections.

- [Navigate Between Pages](#)
- [Use the Hand Tool](#)
- [Navigate Between Views](#)
- [Search for a Specific Text](#)

Navigate Between Pages

To navigate between pages, use the scrollbars or navigation buttons **Previous** and **Next** on the toolbar. These buttons allow you to switch to the previous or next page of a document.

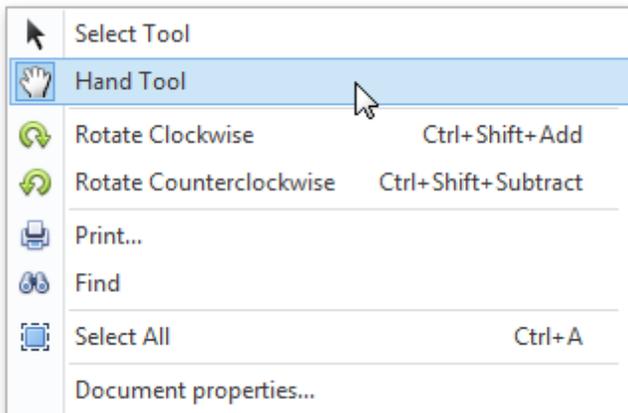
The main navigation buttons are in the **Navigation** button group of the PDF Viewer tab.



Use the Hand Tool

The **Hand Tool** enables you to scroll content by dragging the document instead of using scrollbars.

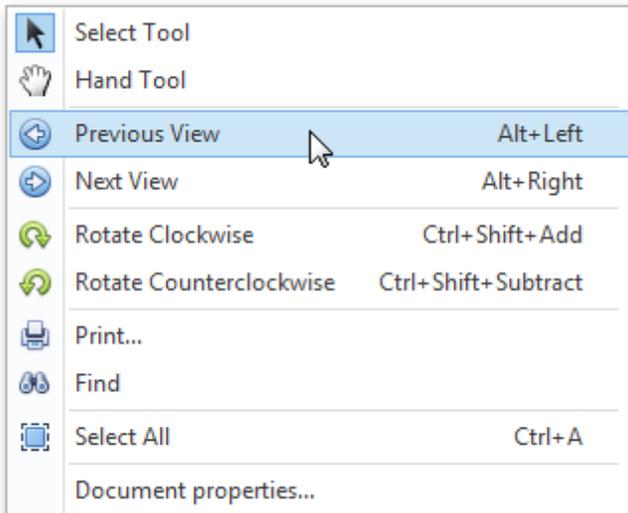
To activate the **Hand Tool**, right-click the viewing document and select the **Hand Tool**  item in the context menu.



Then, after you click a document's page, the mouse pointer is changed from  to . Drag the mouse pointer to scroll the document.

Navigate Between Views

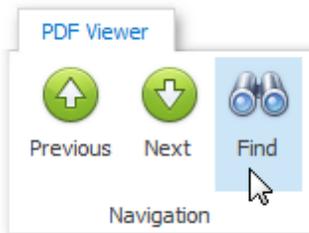
To switch between viewed pages in the document quickly, right-click this document and select the **Previous View**  or **Next View**  item in the invoked context menu. The pages you viewed are shown in the reverse order in which you viewed them.



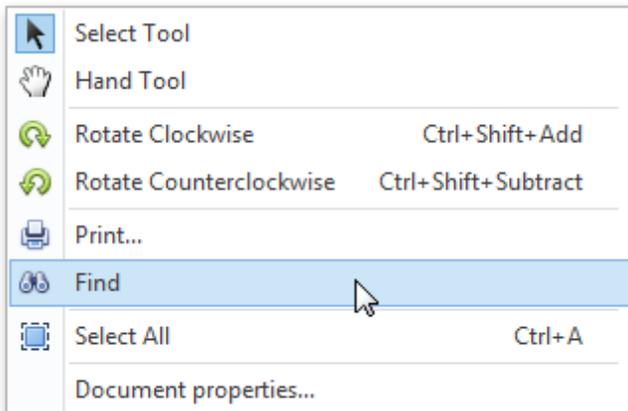
Alternatively, press **Alt+Left** or **Alt+Right**.

Search for a Specific Text

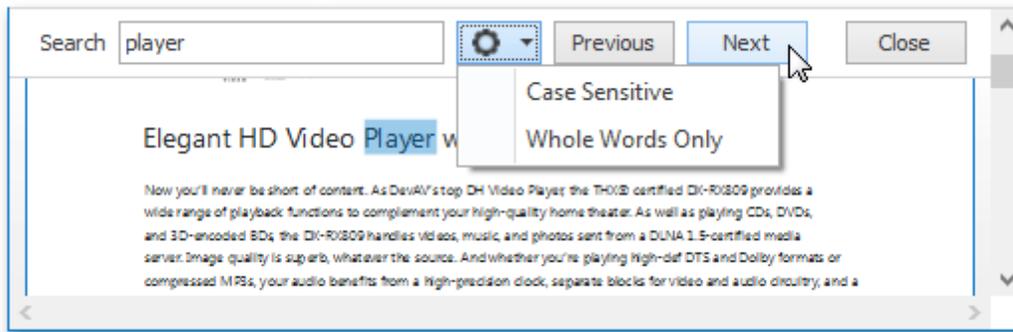
To search for a specific text within a document, click the **Find** button on the toolbar.



Otherwise, to invoke the **Find** dialog, right-click the document and select the **Find**  item in the context menu, or press **Ctrl+F**.



In this dialog, you can input the text to find, and specify whether to match case or the whole word during the search. Click the **Previous** and **Next** buttons to set the search direction.



To start searching or search again, click the **Previous** or **Next** button, or press **ENTER**.

Adjust the Document View

This topic describes the features that adjust the view in the PDF Viewer.

The document consists of the following sections.

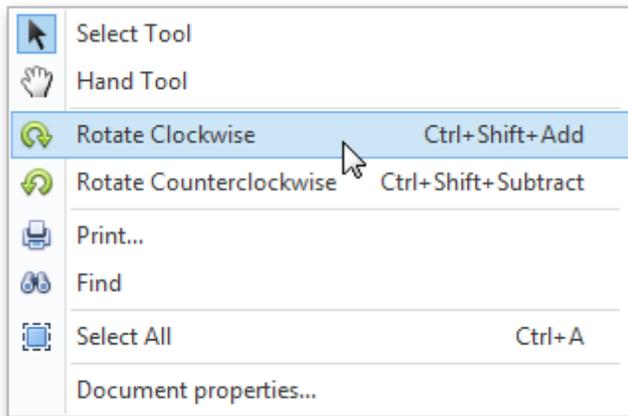
- [Rotate a Document](#)
- [Zoom In and Out of a Document](#)
- [Use a Specific Zoom Factor](#)

Rotate a Document

To rotate a document, use the following commands.

- **Rotate Clockwise**

Rotates the document clockwise through **90** degrees. To perform this command, right-click the viewed document and choose the **Rotate Clockwise**  item.

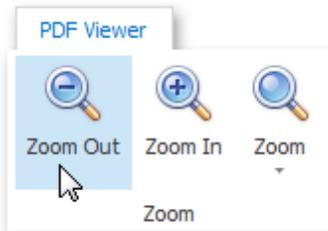


- **Rotate Counterclockwise**

Rotates the document counterclockwise through **90** degrees. To do this, invoke the context menu by right-clicking the document and choose the **Rotate Counterclockwise**  item.

Zoom In and Out of a Document

Use buttons from the **Zoom** button group of the PDF Viewer tab.



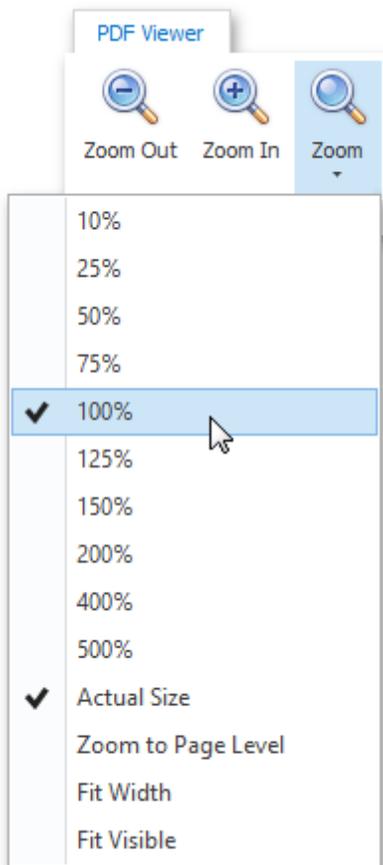
To zoom in a document, click the **Zoom In** button on the toolbar, or press **CTRL+PLUS SIGN**.

To zoom out of a document, click the **Zoom Out** button on the toolbar, or press **CTRL+MINUS SIGN**.

To zoom in or out of a document, you can also hold down **CTRL** and rotate the mouse wheel.

Use a Specific Zoom Factor

To zoom to a specific zoom factor, click the **Zoom** dropdown list button. The following list will be invoked.



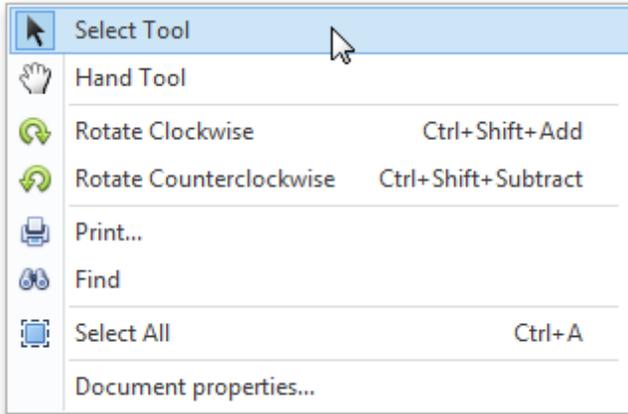
Choose the percentage value of the zoom factor or one of the following zoom factor presets.

- **Actual Size**
Sets the document zoom factor value to **100%**.
- **Zoom to Page Level**
Sets the document zoom factor value to fit the entire page height.
- **Fit to Width**
Sets the document zoom factor value to fit the entire page width.
- **Fit to Visible**
The document zoom factor is calculated to fit the actual content of a page (if possible).

Select and Copy the Document Content

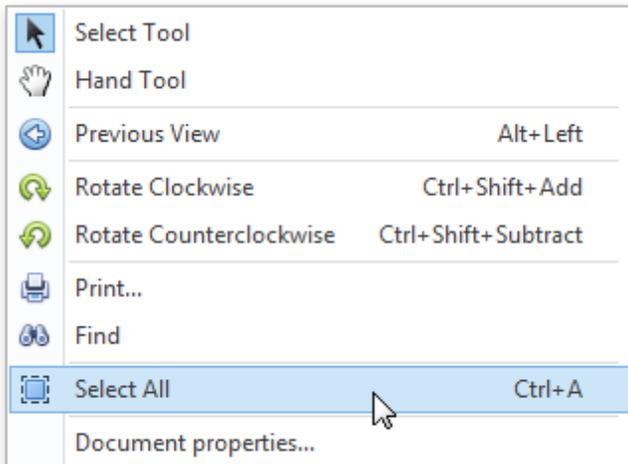
The PDF Viewer provides for selecting and copying text from the selectable document to the clipboard. Note that only plain text copying is supported.

To enable the selection mode, invoke the context menu and choose the **Select Tool** item. This mode is active by default.



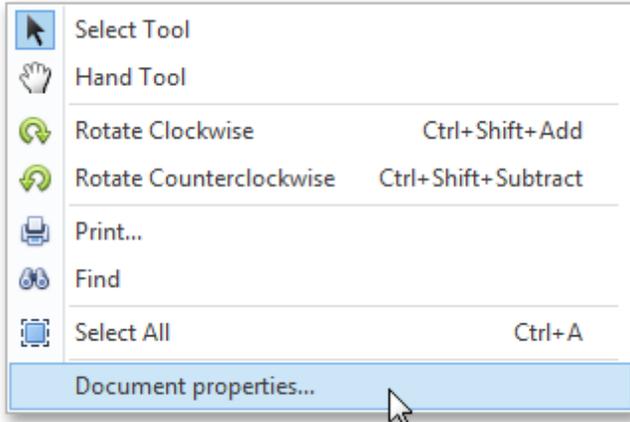
To copy the viewing document content, select the required text, right-click the selected text and select the **Copy** command in the context menu, or press **Ctrl+C**.

To select all the text in a document for copying, invoke the context menu and choose the **Select All**  command, or press **Ctrl+A**.



View Document Properties

To view information related to the currently opened document, invoke the context menu by right-clicking this document and selecting **Document properties...** item.



The dialog displaying the standard set of the PDF file properties is invoked.

Document Properties

Description

File:

Title: PDF Viewer Demo

Author: DevExpress Inc.

Subject: PDF Viewer

Keywords: PDF, document, viewer

Revision

Created: 28-May-14 10:08:55 AM

Modified: 28-May-14 10:08:55 AM

Application:

Advanced

Producer:

Version: 1.7

Location:

File Size: 520.19 KB (532,677 Bytes)

Number of Pages: 6

Page Size: 8.63 x 11.13 in

OK 

Pivot Table

This section describes the capabilities provided by the Pivot Table, which represents data in a cross-tabulated form.

Quantity		Year	Quarter	
Sales Person	Category Name	1994	1995	1996
Andrew Fuller	Beverages	121	274	674
	Condiments	110	327	272
	Confections	158	385	320
	Dairy Products	50	534	326
Andrew Fuller Total		439	1520	1592
Anne Dodsworth	Beverages	118	198	203
	Condiments	80	209	204
	Confections	116	18	231
	Dairy Products	70	223	346
Anne Dodsworth Total		384	648	984

Data Editing

- [Edit Data in Pivot Tables](#)

Describes how to edit cell values and regular expressions used to calculate these values.

Data Presentation

- [Sort Data in Pivot Tables](#)

Describes how you can sort field values alphabetically or by summary values displayed in a particular column or row.

- [Filter Data in Pivot Tables](#)

Provides information on how to filter data by hiding specific rows or columns via filter drop-down lists, and how to provide a more advanced filtering by building a complex filter condition.

- [Change Summary Type in Pivot Tables](#)

Describes how to specify which calculations Pivot Table should perform against its data.

Layout Customization

- [Expand and Collapse Groups in Pivot Tables](#)

Provides information on how to expand and collapse field values and field headers.

- [Hide Pivot Table Fields](#)

Guides you through the process of hiding Pivot Table fields.

- [Display Hidden Pivot Table Fields](#)

Describes how to display fields that have previously been hidden.

- [Reorder Pivot Table Fields](#)

Provides information on how to reorder Pivot Table fields.

Selection and Navigation

- [Select Cells in Pivot Tables](#)

Describes how to select a single or multiple cells and copy their contents to the clipboard.

Field List

- [Field List Overview](#)

Provides basic information about Field Lists.

- [Invoke a Field List](#)

Describes how to invoke a Field List.

- [Defer Pivot Table Updates](#)

Describes how to prevent automatic Pivot Table updates and force it to update manually.

- [Change Field List Layout](#)

Provides information on how to change the layout of an advanced Field List.

Data Editing

Edit Cell Values

To edit a cell value, click the cell and specify a new value:

Extended Price		Percent Of Column		CategoryName ▲	
Sales Person ▲		Beverages		Condiments	
	Extended Price	Percent Of Column	Extended Price	Percent Of Column	
Andrew Fuller	\$40,248.25	15%	\$14,850.67	14%	
Anne Dodsworth	\$19,642.55	7%	\$10,125.54	10%	
Janet Leverling	\$44,757.40	17%	13381.63	13%	
Laura Callahan	\$17,897.85	7%			
Margaret Peacock	\$50,308.21	19%			
Michael Suyama	\$9,450.20	4%			
Nancy Davolio	\$46,599.35	17%			
Robert King	\$27,963.83	10%			
Steven Buchanan	\$11,000.52	4%			
Grand Total	\$267,868.16	100%	\$106,047.05	100%	

Cell values are specified via editors of different types (e.g. text editor, calculator, etc.), depending on the cell data type and pivot table settings.

Edit Expressions

Specific columns allow you to set a regular or Boolean expression which will be used to calculate their values. Clicking the column header invokes the Expression Editor used to specify the expression:

Sales Person ▲	Quarter ▲	Order Count	Quantity	Extended Price	New Year Bonus	Order Count Bonus	Bonus Amount
Andrew Fuller	Qtr 1	55	1302	\$45,700.46	\$0.00	\$526.50	\$526.50
	Qtr 2	104	2664	\$67,194.76	\$0.00	\$378.35	\$378.35
Anne Dodsworth							

f Expression editor

```
Iif([Quarter] == 4, Iif([Extended Price] > 40000, 600, 400), 0)
```

+ - × ÷ % (...)= ≠ < ≤ ≥ > ○ ● ◐

Functions	[Bonus Amount]
Operators	[Extended Price]
Fields	[FirstName]
Constants	[LastName]
	[Order Count Bonus]
	[Order Count]
	[Quantity]
	[Quarter]
	[Sales Person]

OK Cancel

To learn more about using the Expression Editor, see [Expression Editor](#).

Data Presentation

This section describes how you can customize data presentation in Pivot Tables.

The following sections are available.

- [Sort Data in Pivot Tables](#)
Describes how you can sort field values alphabetically or by summary values displayed in a particular column or row.
- [Filter Data in Pivot Tables](#)
Provides information on how to filter data by hiding specific rows or columns via filter drop-down lists, and how to provide a more advanced filtering by building a complex filter condition.
- [Change Summary Type in Pivot Tables](#)
Describes how to specify which calculations Pivot Table should perform against its data.

Sort Data

This section describes the Pivot Table capabilities used to sort its data by field and summary values.

Topics in this section:

- [Simple Sorting](#)
Provides information on how to sort data by field values.
- [Sort Data Using the Context Menu](#)
Describes how to use the context menu to sort data.
- [Sort Data Using a Field List](#)
Describes how to use a Field List to sort data.
- [Sort Data by Summaries](#)
Describes how to sort data by column or row values.

Simple Sorting

Values of dimension fields are always arranged in ascending or descending order. The sort order is indicated by an Up or Down arrow displayed within a corresponding dimension field's header.

Quantity		Year		Quarter		
Sales Person		1996		1996 Total	1995	1994
Category Name		Qtr 1	Qtr 2			
Andrew Fuller	Confections	27	293	320	385	158
	Condiments	52	220	272	327	110
	Beverages	326	348	674	274	121
Andrew Fuller Total		405	861	1266	986	389
Robert King		221	679	900	1033	243
Grand Total		626	1540	2166	2019	632

To toggle the sort order for a dimension field, click this field's header.

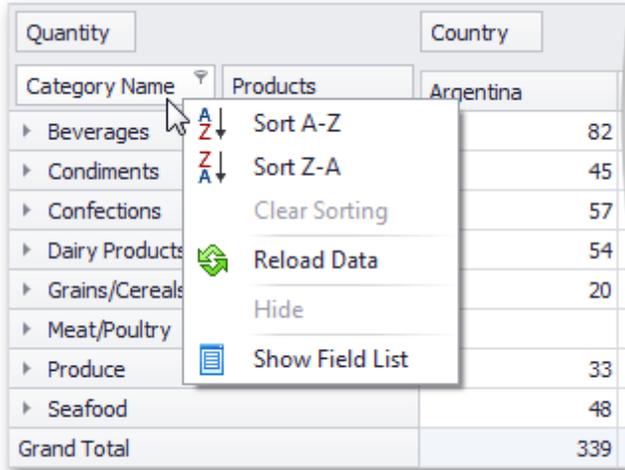


You can also sort field values using a Field List or context menu. To learn more, see [Sort Data Using a Field List](#) and [Sort Data Using the Context Menu](#).

Sort Data Using the Context Menu

Depending on the Pivot Table settings made by your application vendor, you may be able to sort data using the context menu.

If the corresponding functionality is enabled, the context menu invoked when you right-click a field header contains the **Sort A-Z**, **Sort Z-A** and **Clear Sorting** items.



Quantity	Country
Category Name	Argentina
▶ Beverages	82
▶ Condiments	45
▶ Confections	57
▶ Dairy Products	54
▶ Grains/Cereals	20
▶ Meat/Poultry	
▶ Produce	33
▶ Seafood	48
Grand Total	339

Select **Sort A-Z** to set ascending sort order, and **Sort Z-A** to set descending order.

To reset sort order to the default one, select **Clear Sorting**.

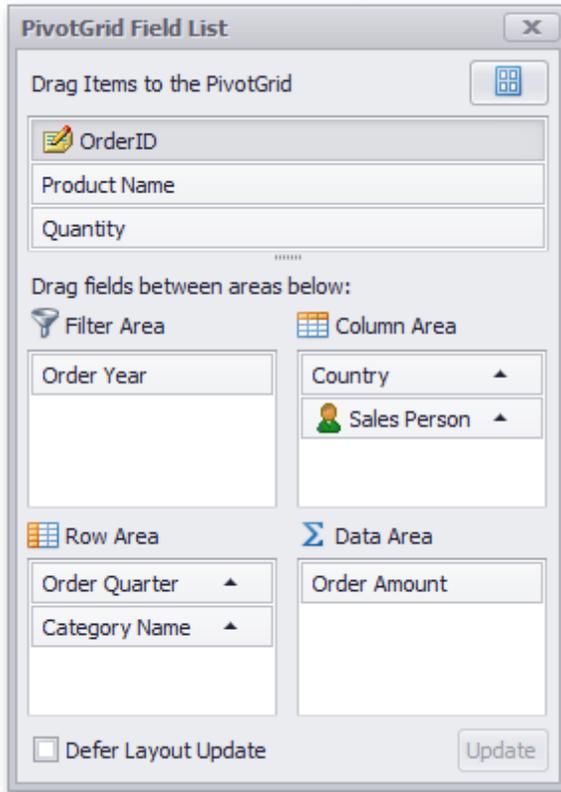
See Also

[Simple Sorting](#)

[Sort Data Using a Field List](#)

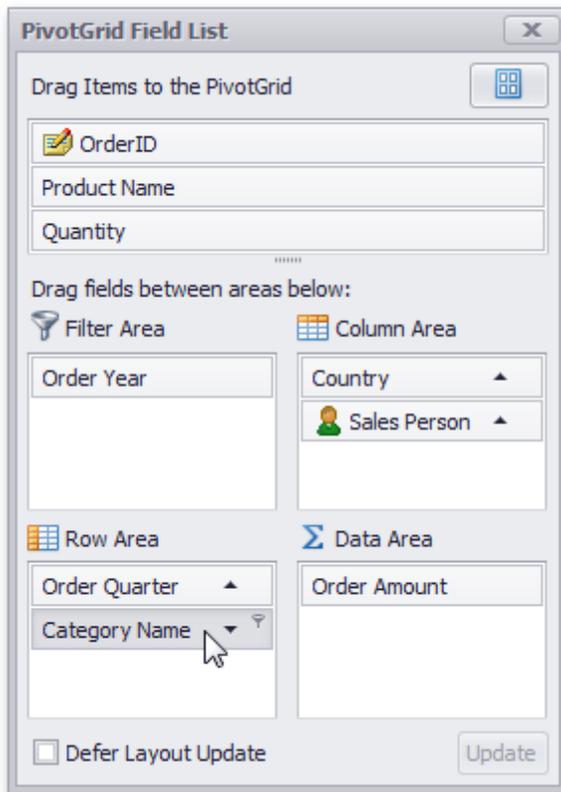
Sort Data Using a Field List

You can use an advanced Field List to sort field values (to learn more about Field Lists, see [Field List Overview](#)).



First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

To toggle the sort order of a field, click its header.



You can sort data without using a Field List. To learn more, see [Simple Sorting](#) and [Sort Data Using the Context Menu](#).

Sort Data by Summaries

You can sort values of a particular dimension field by summary values calculated against a specific data field. To do this, right-click a column or row header, and choose a dimension field whose values should be sorted by column/row summary values. A specific indicator marks the column/row whose summary values are used to define the sort order.

Sorting Indicator

Shipped Quarter					
Product Sales		Shipped Year ▲			
Category Name ▲	Product Name ▲	1994	1995	1996	Grand Total
Meat/Poultry	Mishi Kobe Niku				226.50
	Tournière	\$554.60			616.48
	Pâté chinois	\$1,571.52			378.40
	Perth Pasties	\$1,933.56	\$13,832.13	\$4,546.08	\$20,311.77
	Thüringer Rostbratwurst	\$5,098.50	\$33,503.43	\$41,766.76	\$80,368.69
	Alice Mutton	\$6,962.28	\$13,382.85	\$11,885.25	\$32,230.38
Meat/Poultry Total		\$16,120.46	\$80,160.15	\$65,851.61	\$162,132.22
Produce		\$9,177.08	\$47,491.56	\$36,962.15	\$93,630.79
Seafood		\$15,652.56	\$62,435.02	\$51,982.55	\$130,070.13
Grand Total		\$40,950.10	\$190,086.73	\$154,796.31	\$385,833.14

You can sort values of multiple dimension fields against a single column/row. To cancel this sorting, click the same item again, or 'Remove All Sorting' to cancel sorting for all dimension fields.

Filter Data

By default, the Pivot Table processes all records when calculating its values. Data filtering allows you to process only those records that meet your requirements.

Topics in this section describe three ways of filtering data in Pivot Tables - filtering by field values, filtering by cell values and building complex filter criteria.

The following sections and topics are available.

- [Filter Data by Field Values](#)
Contains topics that describe how to specify simple filter conditions via Filter Windows.
- [Filter Data by Cell Values](#)
Contains topics that describe how to specify which cell values to display and which to hide.
- [Build Complex Filter Criteria](#)
Describes the Prefilter feature that allows you to build complex filter criteria.

Filter Data by Field Values

Filter Popup Windows allow you to configure and apply simple filtering conditions by selecting which values you wish to view, and which you do not.

Topics in this section describe how to invoke, use and customize Filter Windows.

The following topics are available:

- [Invoke a Filter Popup Window](#)
Shows how to invoke Filter Windows from the Pivot Table and a Field List.
- [Using Filter Popup Windows](#)
Describes how to build filter conditions in Filter Popup Windows.
- [Filtering Options](#)
Acquaints you with filtering options provided by the Pivot Table and describes how you can access these options via a specially designed toolbar.

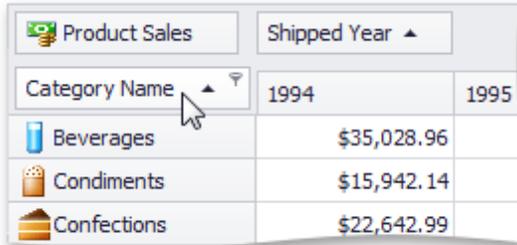
Invoke a Filter Popup Window

You can invoke a Filter Window from the Pivot Table or from a Field List (to learn about Field Lists, see [Field List Overview](#)).

Invoke a Filter Window from the Pivot Table

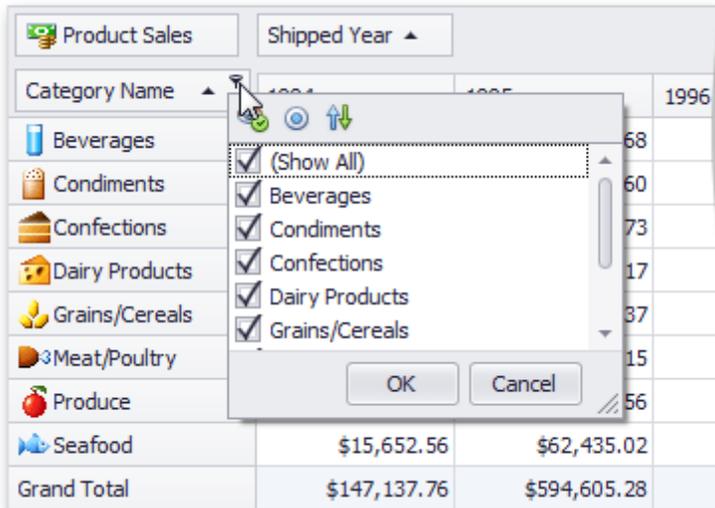
Field headers display special buttons used to invoke a Filter Window. Follow the steps below:

1. Hover over the header of a field whose data you need to filter. A filter button (the ▼ icon) will be highlighted.



Product Sales		Shipped Year ▲	
Category Name	1994	1995	
Beverages	\$35,028.96		
Condiments	\$15,942.14		
Confections	\$22,642.99		

2. Click this filter button to display a Filter Window.



Product Sales		Shipped Year ▲	
Category Name	1994	1995	1996
Beverages			68
Condiments			60
Confections			73
Dairy Products			17
Grains/Cereals			37
Meat/Poultry			15
Produce			56
Seafood	\$15,652.56	\$62,435.02	
Grand Total	\$147,137.76	\$594,605.28	

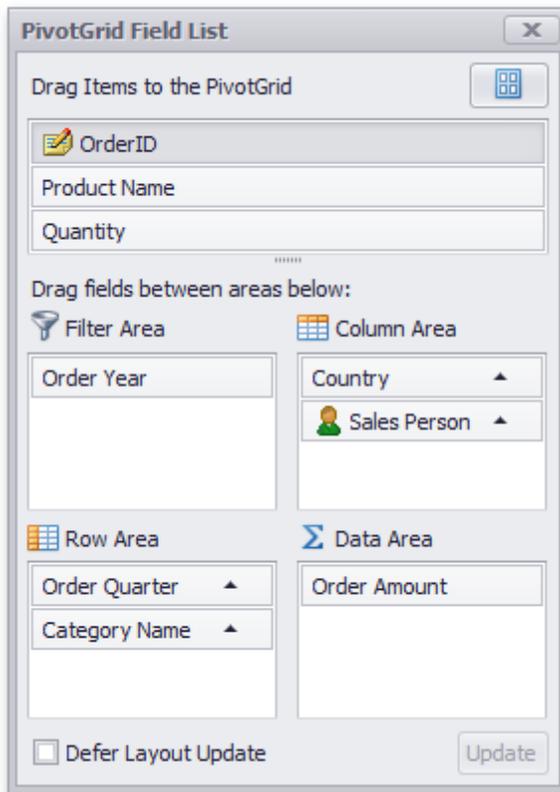
Filter Window:

- (Show All)
- Beverages
- Condiments
- Confections
- Dairy Products
- Grains/Cereals

OK Cancel

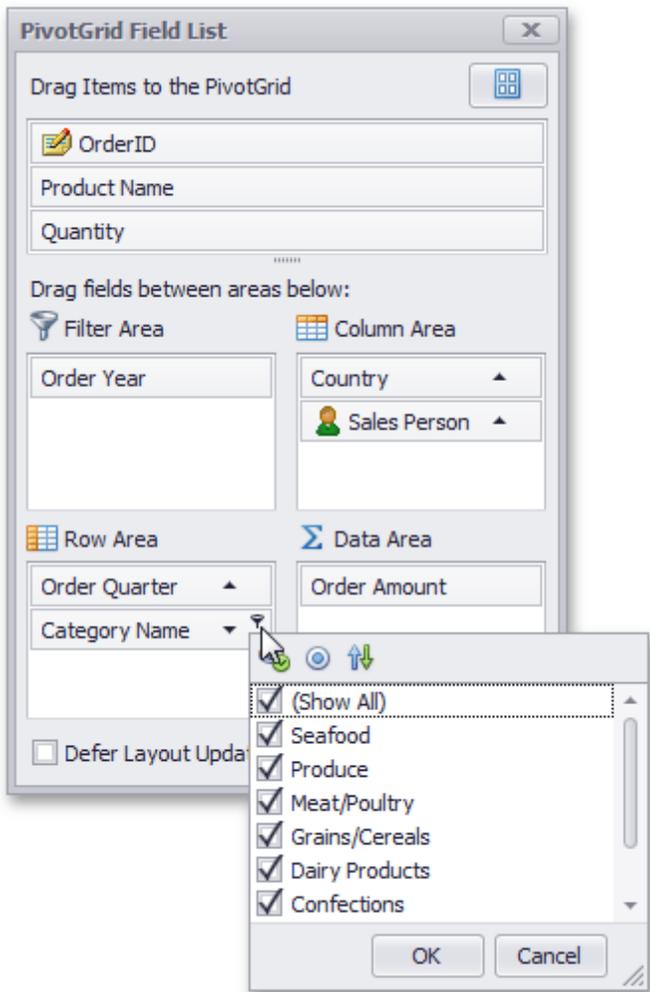
Invoke a Filter Window from a Field List

You can use an advanced Field List to filter field values.



First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

To open a Filter Window, click the filter button displayed in the field header.



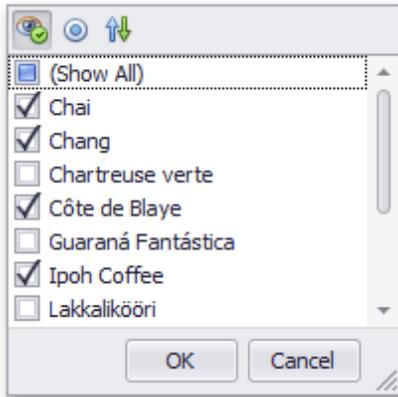
Using Filter Popup Windows

Depending on the settings made by your application vendor, the Pivot Table can display an individual Filter Window for each field, or an integrated Filter Window for a group of fields.

This topic describes how to filter data using both types of Filter Windows.

Simple Filter Window

A simple Filter Window allows you to hide visible and show previously hidden values of a particular field.

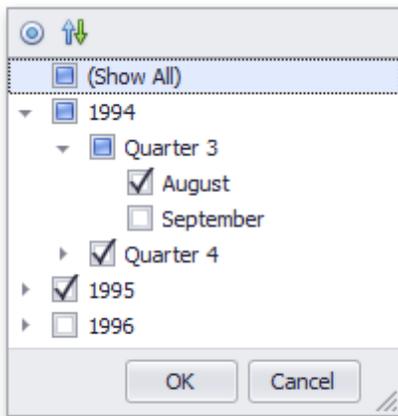


In the Filter Window, uncheck field values that should be hidden and check values that should be visible. Then, click **OK** to close the window and apply the filtering.

Note that you can customize Filter Window settings using the toolbar displayed at the top of the window. To learn how to do this, see [Filtering Options](#).

Hierarchical Filter Window

A hierarchical Filter Window displays values of several fields, arranged in a tree-like manner.

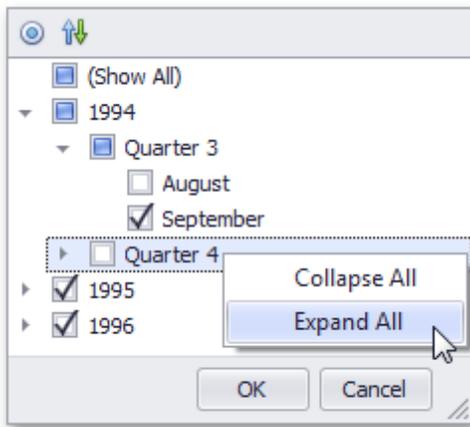


In the Filter Window, uncheck field values that should be hidden and check values that should be visible.

Use the  buttons to expand field values and access their child values. To collapse an expanded field value and hide its child values, use the  button.

You can also expand and collapse all values on a particular level. To do this, right-click any field value and select **Collapse All** or **Expand All** from the context menu.

For instance, to expand all quarters and display months, right-click any quarter value and select **Expand All** from the context menu as shown on the image below.



Click **OK** to close the window and apply the filtering.

Note that you can customize Filter Window settings using the toolbar displayed at the top of the window. To learn how to do this, see [Filtering Options](#).

Filtering Indication

You can determine whether a field is filtered by looking at its header. Filter buttons for these fields are visible even when you are not hovering over their headers.

Filtered Field

Unit Price (Max)	Year ▲	Quarter ▲		
	▼ 1994			1994 Total
Category Name ▲		Quarter 3	Quarter 4	
Beverages		\$36.80	\$210.80	\$210.80
Condiments		\$35.10	\$35.10	\$35.10
Grand Total		\$36.80	\$210.80	\$210.80

Removing Filtering

To remove filtering against a specific field, invoke its Filter Window and select **(Show All)**.

Filtering Options

The Pivot Table allows you to customize its filtering mechanism according to your needs.

If the corresponding functionality is enabled by your application vendor, Filter Windows display toolbars where you can access various filtering options.



Use the toolbar buttons to enable or disable particular options.

The following table describes the available toolbar buttons.

	Show Only Available Items	If this button is pressed, values that cannot be displayed because of filtering applied to other fields are hidden from Filter Windows. This button is not available for Hierarchical Filter Windows .
	Show New Field Values	If this button is pressed, field values that have appeared in the database after the field's filtering was configured are shown by default. If this button is released, new field values are hidden by default. To view these values, check them manually in the corresponding Filter Window.
	Incremental Search	If this button is pressed, the Incremental Search feature is enabled. This feature allows you to locate a value in the Filter Window by typing its initial characters.
	Multi-Selection	If this button is pressed, you can select multiple values by sequentially clicking them with the CTRL key held down (or the SHIFT key to select a continuous range of values). In this instance, a field value is selected when you click its name, and checked (or unchecked) when you click a corresponding check box. When you click a check box with multiple values selected, this changes the checked state of all selected values. If this button is released, you cannot select multiple values. In this instance, a field value is selected and checked (or unchecked) when you click either its name or a corresponding check box.
	Radio Mode	If this button is pressed, Filter

		Windows hide check boxes and display field values in a simple list. In this instance, you can select and view only one value from each field in the Pivot Table.
	Invert Filter	Inverts the checked state for all values.

Filter Data by Cell Values

The Pivot Table allows you to filter data by specifying a range of cell values that should be displayed. Values that do not fall into this range will be hidden.

Topics in this section describe how to configure filtering by cell values (or **summary filtering**).

The following topics are available.

- [Invoke a Summary Filter Window](#)
Describes how to invoke a Summary Filter Window used to enable and configure filtering by cell values.
- [Select a Range of Values](#)
Shows how to specify a range of cell values that should be displayed.
- [Move the Selected Range](#)
Demonstrates how to select another range with the same length by moving the selection.
- [Zoom and Move the Viewport](#)
Describes how to zoom and scroll the range selector.
- [Specify Target Cells](#)
Shows how to enable filtering by Total and Grand Total cells.
- [Remove Filtering](#)
Describes how to disable filtering.

Invoke a Summary Filter Window

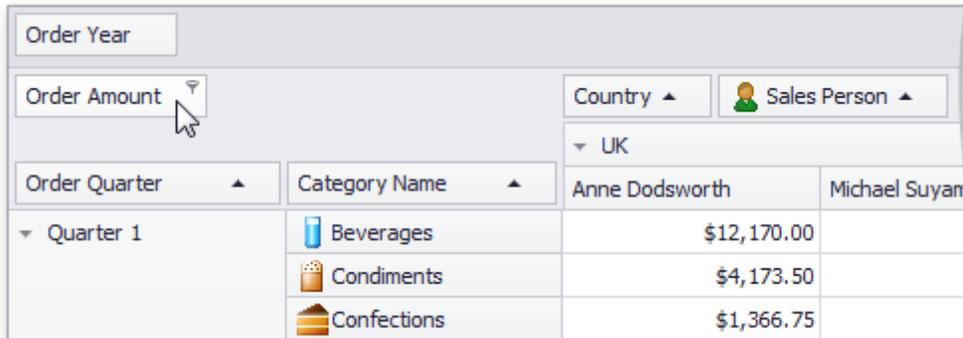
To enable and configure filtering by cell values, use the Summary Filter Window.

You can invoke a Summary Filter Window from the Pivot Table or from a Field List (to learn about Field Lists, see [Field List Overview](#)).

Invoke a Summary Filter Window from the Pivot Table

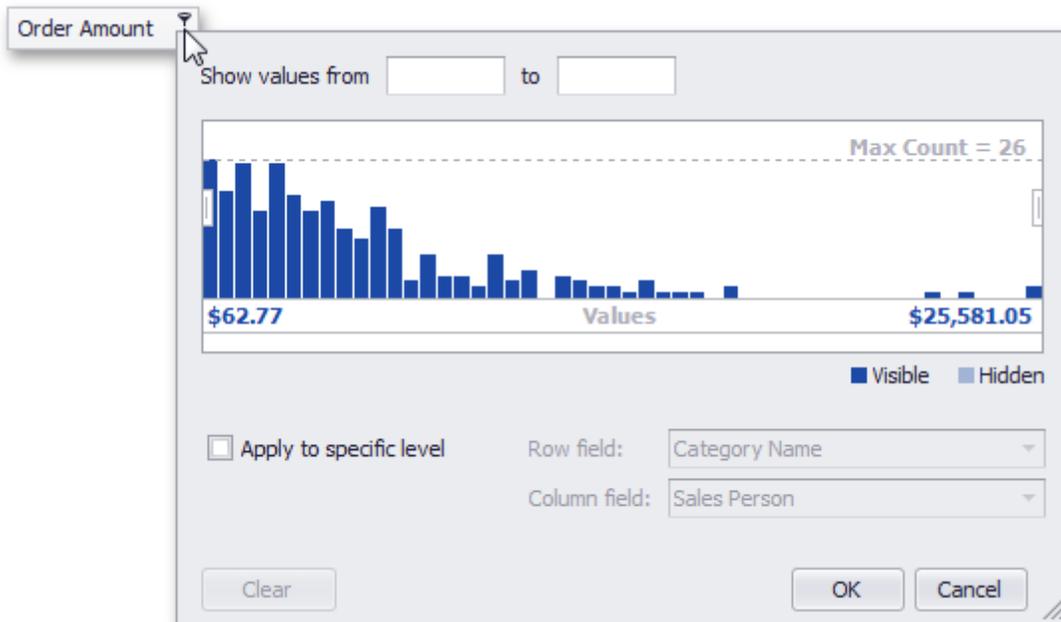
Field headers located in the Data Area display special buttons used to invoke a Summary Filter Window. Follow the steps below.

1. Hover over the header of a field whose data you need to filter. A filter button (▼) will be highlighted.



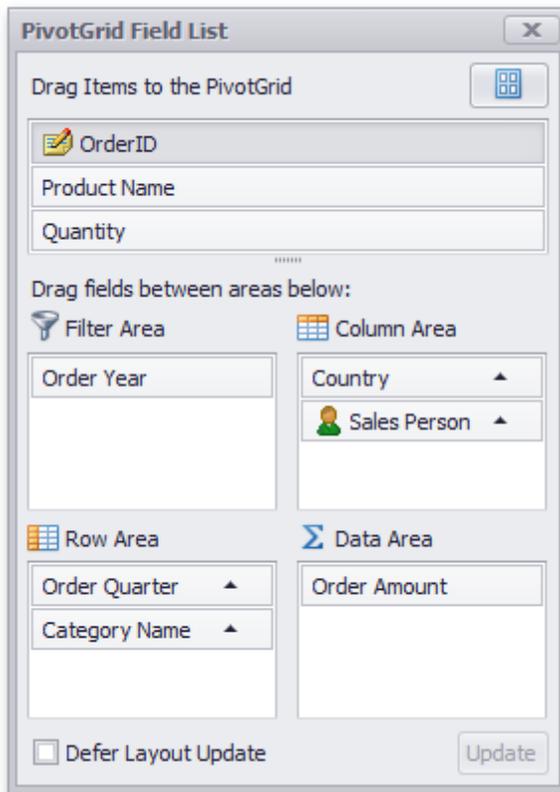
Order Year	Order Amount ▼	Country ▲	Sales Person ▲
		UK	
Order Quarter ▲	Category Name ▲	Anne Dodsworth	Michael Suyam
Quarter 1	Beverages	\$12,170.00	
	Condiments	\$4,173.50	
	Confections	\$1,366.75	

2. Click this filter button to display a Summary Filter Window.



Invoke a Summary Filter Window from a Field List

You can use an advanced Field List to filter field values.



First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

To open a Summary Filter Window, click the filter button displayed in the field header.

PivotGrid Field List

Drag Items to the PivotGrid

- OrderID
- Product Name
- Quantity

.....

Drag fields between areas below:

Filter Area

- Order Year

Column Area

- Country
- Sales Person

Row Area

- Order Quarter
- Category Name

Data Area

- Order Amount

Defer Layout Update

Update

Show values from [] to []

Max Count = 26

\$62.77 Values \$25,581.05

Apply to specific level

Row field: Category Name

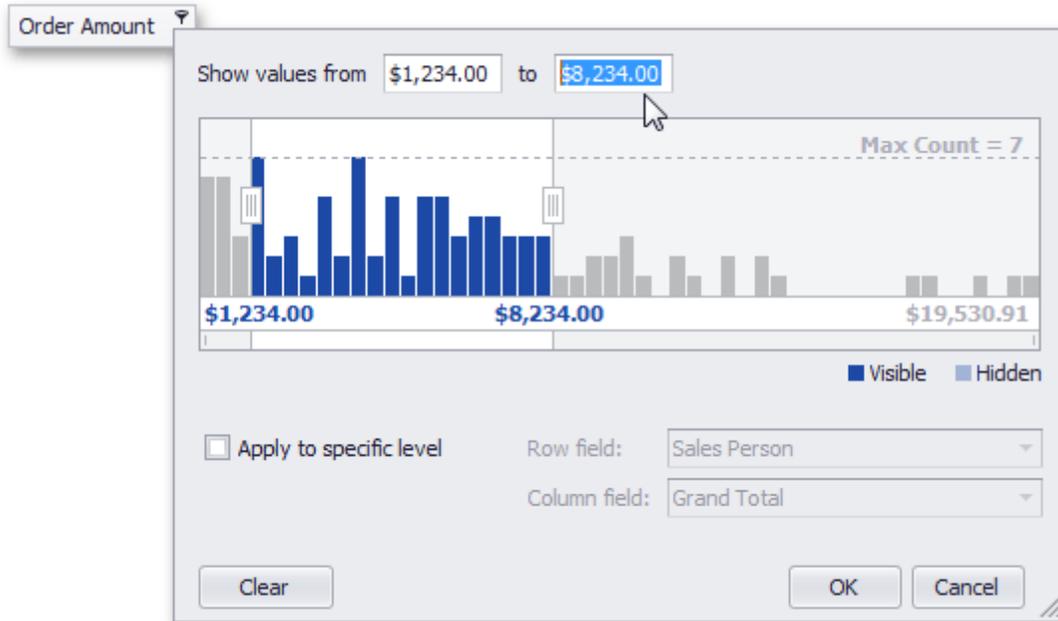
Column field: Sales Person

Clear OK Cancel

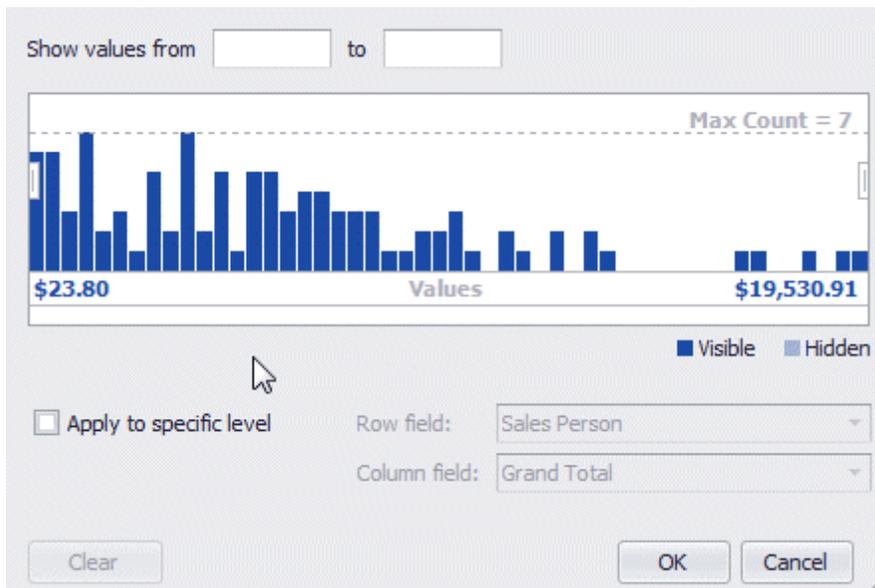
Select a Range of Values

You can select a range of cell values to be displayed in any of the following ways.

- Enter the bounds of the range into the appropriate text editors.



- Drag selection thumbs in the range selector.



- If a range is already selected, you can select a different range with the mouse.

Show values from to

Max Count = 7

\$2,560.19 \$5,649.96 Values \$19,530.91

Visible Hidden

Apply to specific level

Row field:

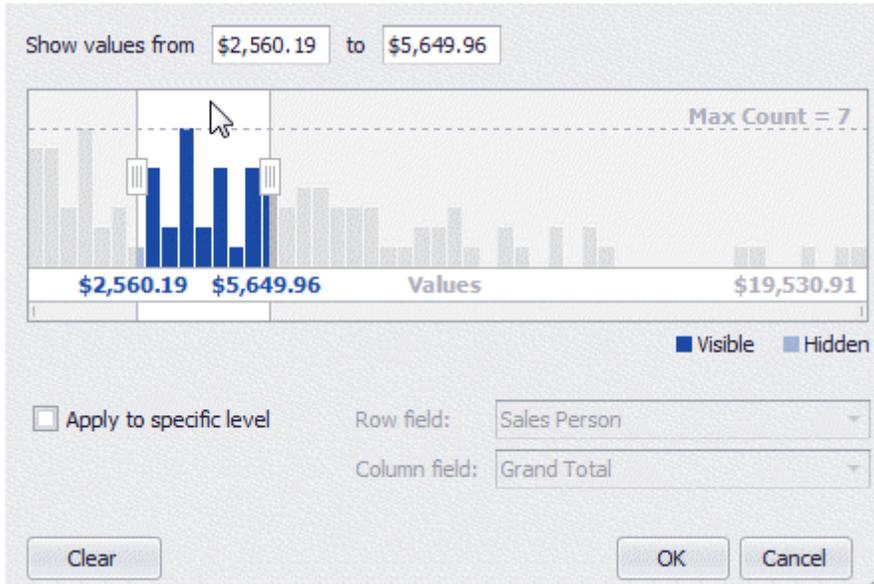
Column field:

Clear OK Cancel

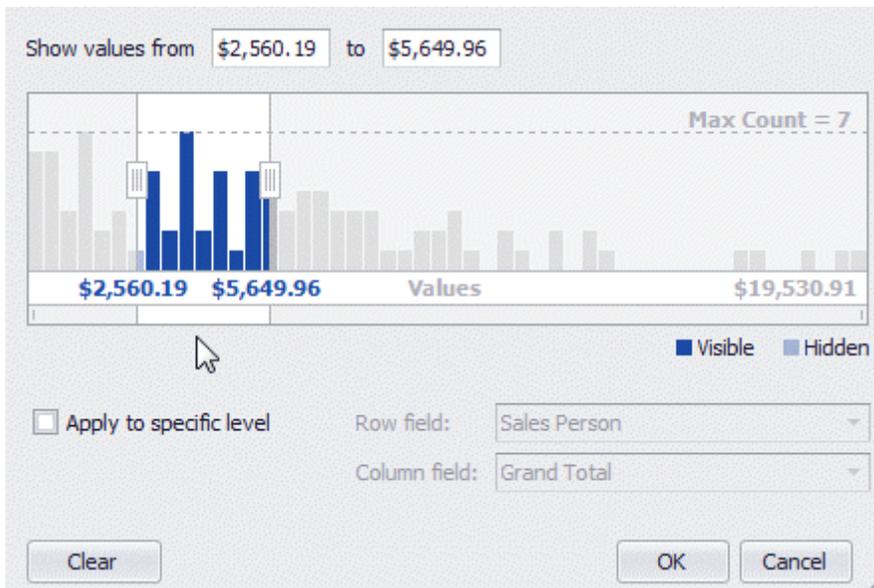
Move the Selected Range

To move a selection, do one of the following.

- Drag the selection by any point within it.



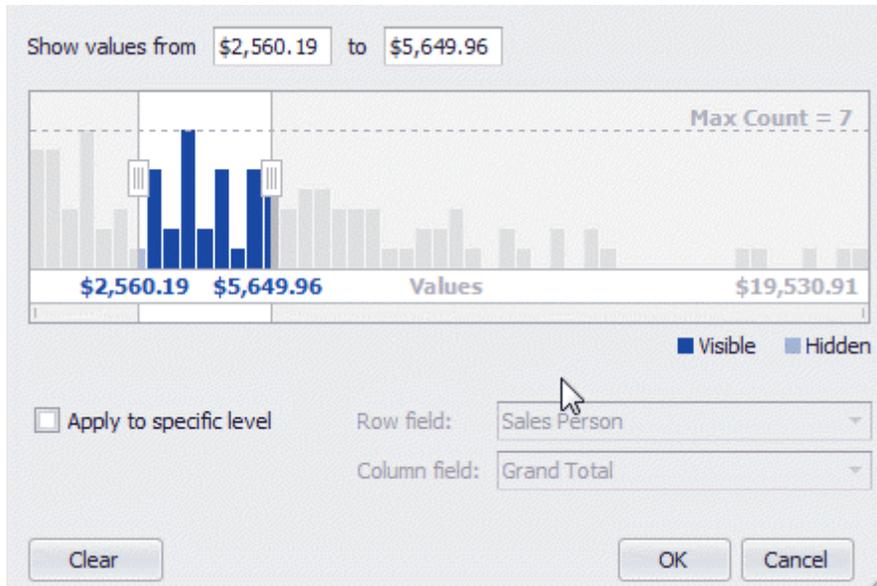
- Drag a selection scroll thumb displayed within the Zoom & Scroll Bar.



Zoom and Move the Viewport

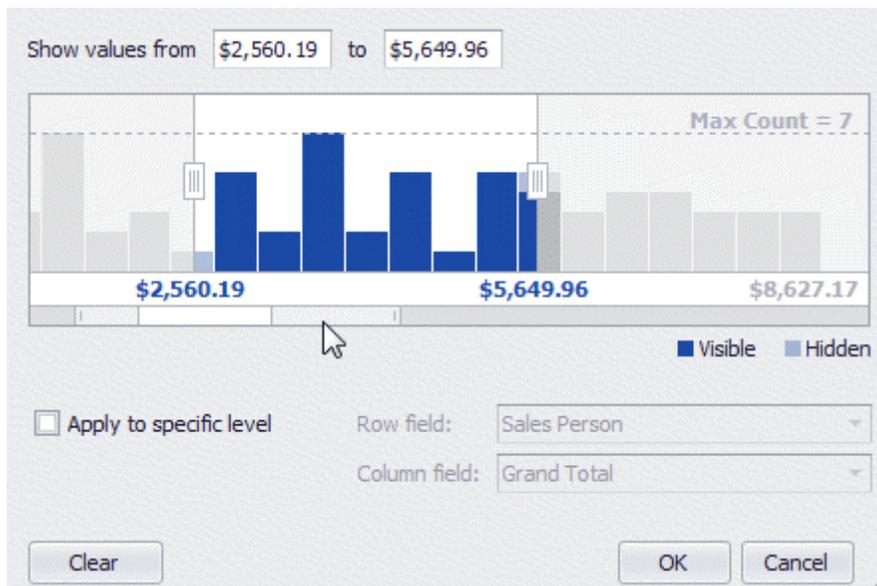
Zoom

You can zoom in or out by shrinking or enlarging a viewport scroll thumb displayed within the Zoom & Scroll Bar. To zoom in, drag a zoom grip inwards. To zoom out, drag a zoom grip outwards.



Move Viewport

To move the viewport, drag a viewport scroll thumb.



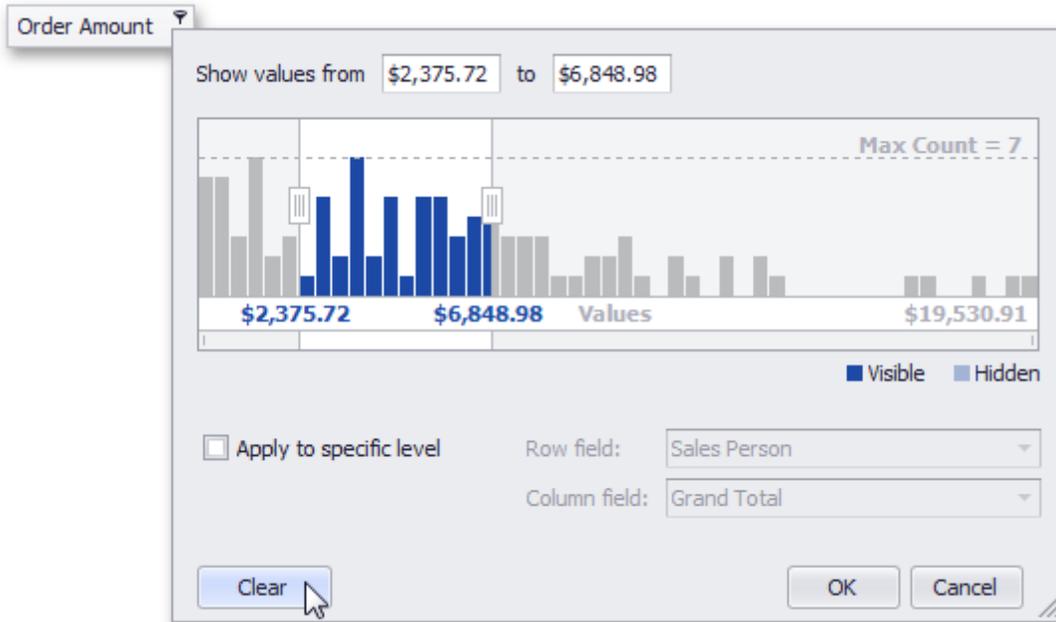
Specify Target Cells

Filtering by cell values is applied only to regular cells by default. You can change this behavior and apply it to Total or Grand Total cells. To do this, check the **Apply to specific level** check box, and select column and row fields that identify the desired Total or Grand Total cells.

The screenshot shows the 'Filter by Values' task pane in Excel. At the top, it displays 'Show values from \$2,560.19 to \$5,649.96'. Below this is a histogram of the data distribution. The x-axis of the histogram is labeled 'Values' and has a total value of '\$19,530.91'. The y-axis is labeled 'Max Count = 7'. The histogram shows a distribution of bars, with a subset of bars highlighted in blue. Below the histogram, there are two checkboxes: 'Apply to specific level' (which is checked) and 'Apply to all levels'. To the right of these checkboxes are two dropdown menus: 'Row field:' set to 'Sales Person' and 'Column field:' set to 'Grand Total'. At the bottom of the dialog, there are three buttons: 'Clear', 'OK', and 'Cancel'.

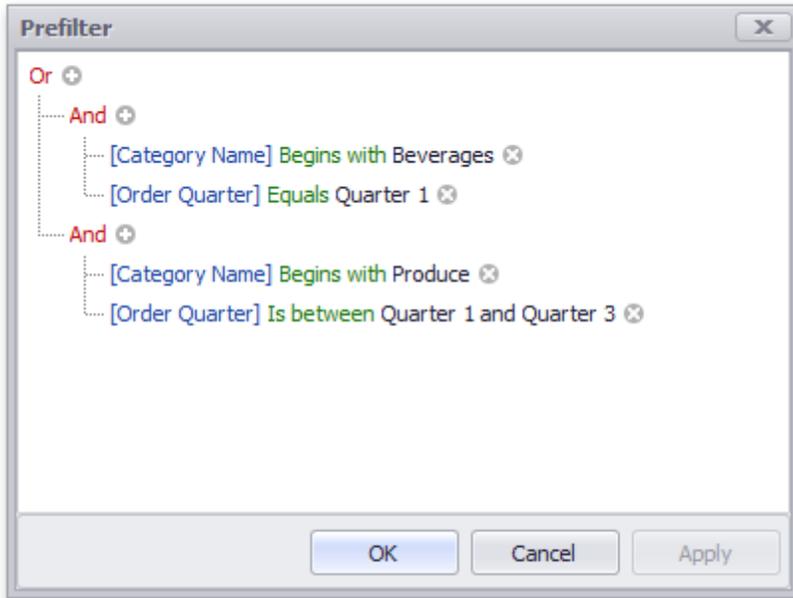
Remove Filtering

To remove filtering, click the **Clear** button.



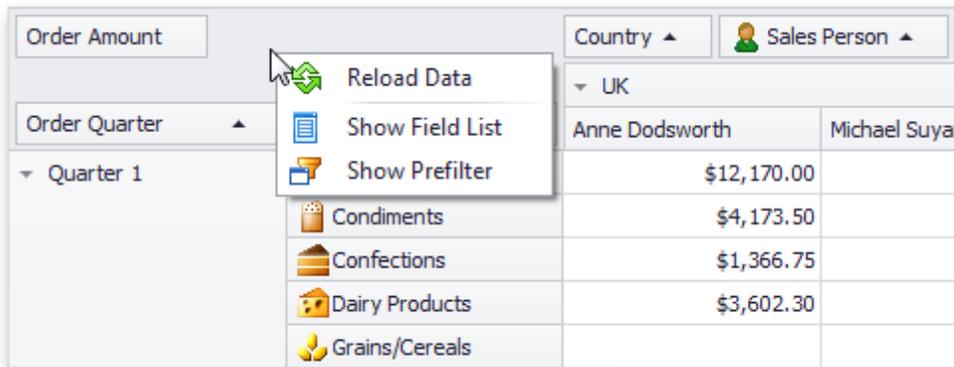
Build Complex Filter Criteria

To build complex filter criteria consisting of multiple filter clauses using various filter operators, you can use a Prefilter (Filter Editor):



The Prefilter does not affect filtering via Filter Pop-up Windows.

To invoke a Prefilter, click an empty space within the Pivot Table header region and select **Show Prefilter** from the context menu.



After you have built and applied a filter condition, a prefilter panel appears at the Pivot Table bottom. This panel displays the filter condition.



To modify a filter condition, open a Prefilter. You can now do it by clicking the **Edit Prefilter** button.

To temporarily disable filtering, uncheck the button.

To remove filtering, click the **x** button.

For information on the Prefilter filtering capabilities, see [Filter Data via the Filter Editor](#). To learn how to create filter criteria using a Prefilter, please see [Examples of Using the Filter Editor](#).

See Also

[Filter Data via the Filter Editor](#)

[Examples of Using the Filter Editor](#)

Change Summary Type

Pivot Tables can perform different calculations against data (for instance, calculating sums, averages, maximum and minimum values, etc.).

To specify which calculations Pivot Table should do against its data, left-click a data header and choose the appropriate function type.

Discount (Sum)	Order Year	Sales Person			
	1994	1995	1996	Grand Total	
Count					
✓ Sum					
Min	0.4	1.25	0.65	2.3	
Max	0	0.1	0.1	0.2	
Average	0.35	1.3	0.45	2.1	
StdDev	0.6	1.55	1.11	3.26	
StdDevp	0.35	1	0.8	2.15	
Var	0.35	1.2	1.4	2.95	
Varp	0.8	1.15	2.55	4.5	
Custom	0.35	0.95	0.7	2	
Seasoning	0.1	0.9	0.5	1.5	
Chef Anton's Gumbo Mix	0.4	0.1	0.25	0.75	

Layout Customization

This section describes how to customize the Pivot Table layout by expanding and collapsing field values, as well as hiding, displaying and reordering fields.

The following sections are available.

- [Resizing Columns](#)
Describes how to resize columns displayed within the Pivot Table.
- [Expand and Collapse Groups in Pivot Tables](#)
Provides information on how to expand and collapse field values and field headers.
- [Hide Pivot Table Fields](#)
Guides you through the process of hiding Pivot Table fields.
- [Display Hidden Pivot Table Fields](#)
Describes how to display fields that have previously been hidden.
- [Reorder Pivot Table Fields](#)
Provides information on how to reorder Pivot Table fields.

Resizing Columns

You can resize columns within the Pivot Table by dragging their borders.

Customer			
Product Amount	Order Year	Order Quarter	
Product Name	1996		1996 Total
	Qtr 1	Qtr 2	
Alice Mutton	\$7,388.55	\$4,223.70	\$11,612.25
Aniseed Syrup	\$970.00	\$290.00	\$1,260.00
Boston Crab Meat	\$3,864.00	\$1,472.00	\$5,336.00
Camembert Pierrot	\$8,908.00	\$8,897.12	\$17,805.12
Carnarvon Tigers	\$6,484.38	\$3,887.50	\$10,371.88
Chai	\$2,754.00	\$3,541.50	\$6,295.50
Chang	\$3,692.65	\$4,112.55	\$7,805.20
Grand Total	\$34,061.58	\$26,424.37	\$60,485.95

Note

Regular, Total and Grand Total columns are resized independently. This means that resizing a regular column changes the width of all regular columns but does not affect Total and Grand Total columns, and vice versa.

Double-click a column border to automatically resize the column to the minimum width required to completely display its content.

Customer			
Product Amount	Order Year	Order Quarter	
Product Name	1996		1996 Total
	Qtr 1	Qtr 2	
Alice Mutton	\$7,388.55	\$4,223.70	\$11,612.25
Aniseed Syrup	\$970.00	\$290.00	\$1,260.00
Boston Crab Meat	\$3,864.00	\$1,472.00	\$5,336.00
Camembert Pierrot	\$8,908.00	\$8,897.12	\$17,805.12
Carnarvon Tigers	\$6,484.38	\$3,887.50	\$10,371.88
Chai	\$2,754.00	\$3,541.50	\$6,295.50
Chang	\$3,692.65	\$4,112.55	\$7,805.20
Grand Total	\$34,061.58	\$26,424.37	\$60,485.95

Expand and Collapse Groups

Expand/Collapse Groups of Values

To expand/collapse groups of values, do one of the following:

- Click a corresponding expand button:

Expand Buttons

Product Sales		Shipped Year ▲	Shipped Quarter ▲	
Category Name ▲	Product Name ▲	▶ 1994	▶ 1995	▶ 1996
▼ Produce	Longlife Tofu	\$384.00	\$1,186.00	\$862.50
	Manjimup Dried Apples	\$5,509.88	\$16,024.02	\$19,013.75
	Rössle Sauerkraut	\$2,402.40	\$15,209.36	\$3,830.40
	Tofu	\$520.80	\$6,820.38	\$279.00
	Unde Bob's Organic Dried Pears	\$360.00	\$8,251.80	\$12,976.50
Produce Total		\$9,177.08	\$47,491.56	\$36,962.15

- Right-click a value that has nested values, and select the required Expand or Collapse command from the menu that opens:

Product Sales		Shipped Year ▲	Shipped Quarter ▲	
Category Name ▲	Product Name ▲	▶ 1994	▶ 1995	▶ 1996
▼ Produce	Longlife Tofu	\$384.00	\$1,186.00	\$862.50
	Manjimup Dried Apples	\$5,509.88	\$16,024.02	\$19,013.75
	Rössle Sauerkraut	\$2,402.40	\$15,209.36	\$3,830.40
	Tofu	\$520.80	\$6,820.38	\$279.00
	Unde Bob's Organic Dried Pears	\$360.00	\$8,251.80	\$12,976.50
Produce Total		\$9,177.08	\$47,491.56	\$36,962.15

Expand/Collapse Fields

To expand/collapse a group of fields, click a corresponding field expand button:

Field Expand Buttons

Order Amount		▼ Year ▲	▶ Quarter ▲	
▼ Category Name ▲	Product Name ▲	▼ 1994	1994 Total	
		Quarter 3	Quarter 4	
▼ Produce	Longlife Tofu	\$384.00		\$384.00
	Manjimup Dried Apples	\$3,033.72	\$2,476.16	\$5,509.88
	Rössle Sauerkraut	\$728.00	\$3,192.28	\$3,920.28
	Tofu	\$167.40	\$353.40	\$520.80
	Unde Bob's Organic Dried Pears	\$360.00		\$360.00
Produce Total		\$4,673.12	\$6,021.84	\$10,694.96

Hide Fields

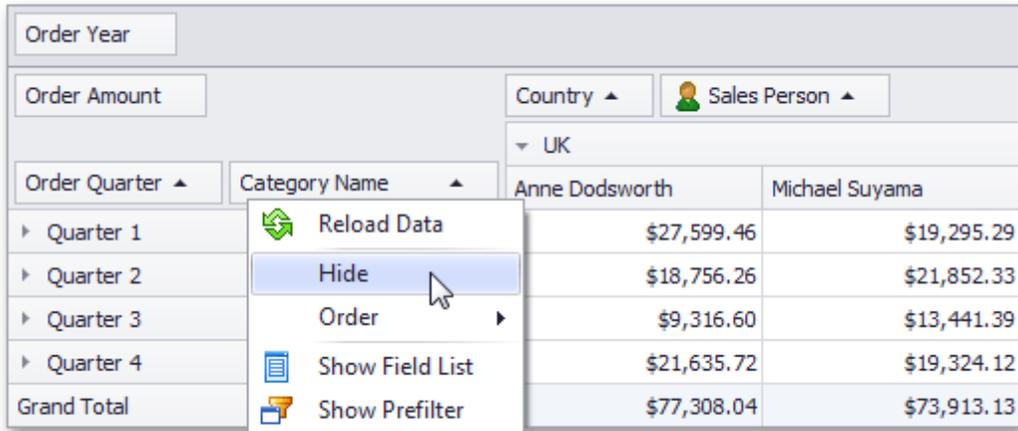
This section describes the Pivot Table capabilities to hide fields.

Topics in this section:

- [Hide Fields Using the Context Menu](#)
Provides information on how to use context menus to hide fields.
- [Hide Fields Using a Field List](#)
Describes how to hide fields using a Field List.

Hide Fields Using the Context Menu

To hide a field, right-click its header and choose **Hide** from the context menu.



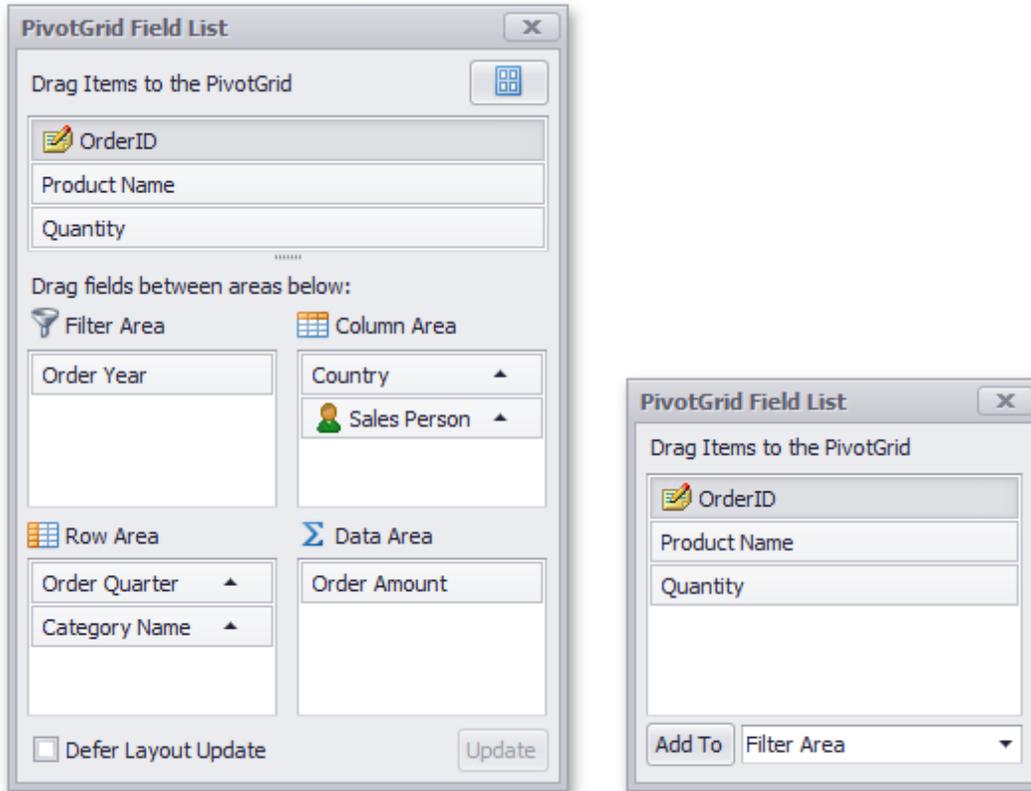
The image shows a PivotTable with a context menu open over the 'Category Name' header. The menu options are: Reload Data, Hide (highlighted), Order, Show Field List, and Show Prefilter. The PivotTable data is as follows:

Order Year	Order Amount	Country	Sales Person
Order Quarter	Category Name	UK	Anne Dodsworth
Quarter 1			Michael Suyama
Quarter 2			
Quarter 3			
Quarter 4			
Grand Total			

You can also use a Field List to hide fields. To learn more, see [Hide Fields Using a Field List](#).

Hide Fields Using a Field List

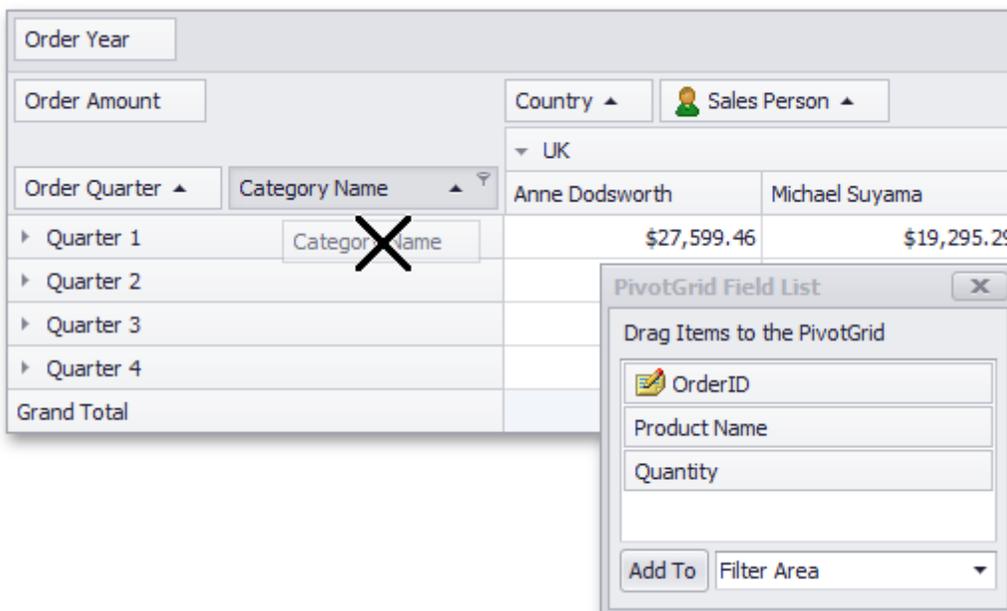
You can use a simple or an advanced Field List to hide fields (to learn more about Field Lists, see [Field List Overview](#)).



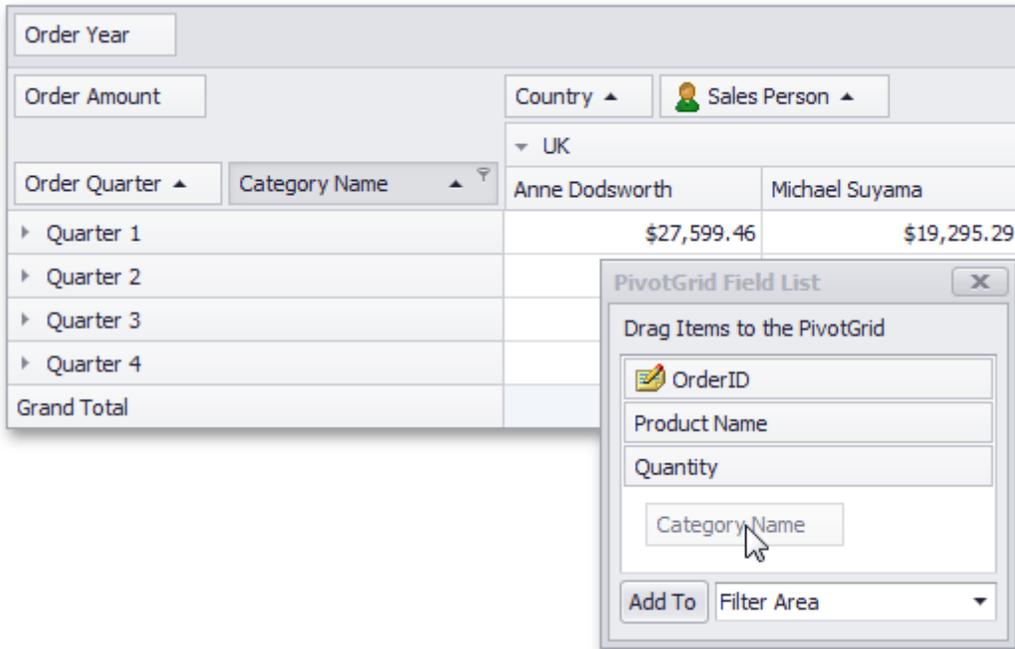
First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

Then do one of the following:

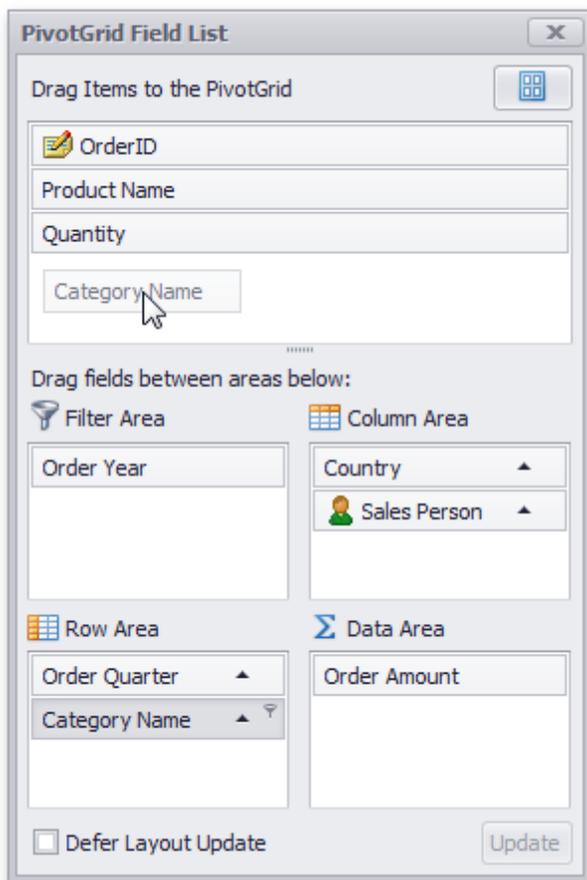
- Drag a field away from the header panel, until the cursor changes its image to the big 'X'. Then drop the header.



- Drag and drop a field onto the Field List form.



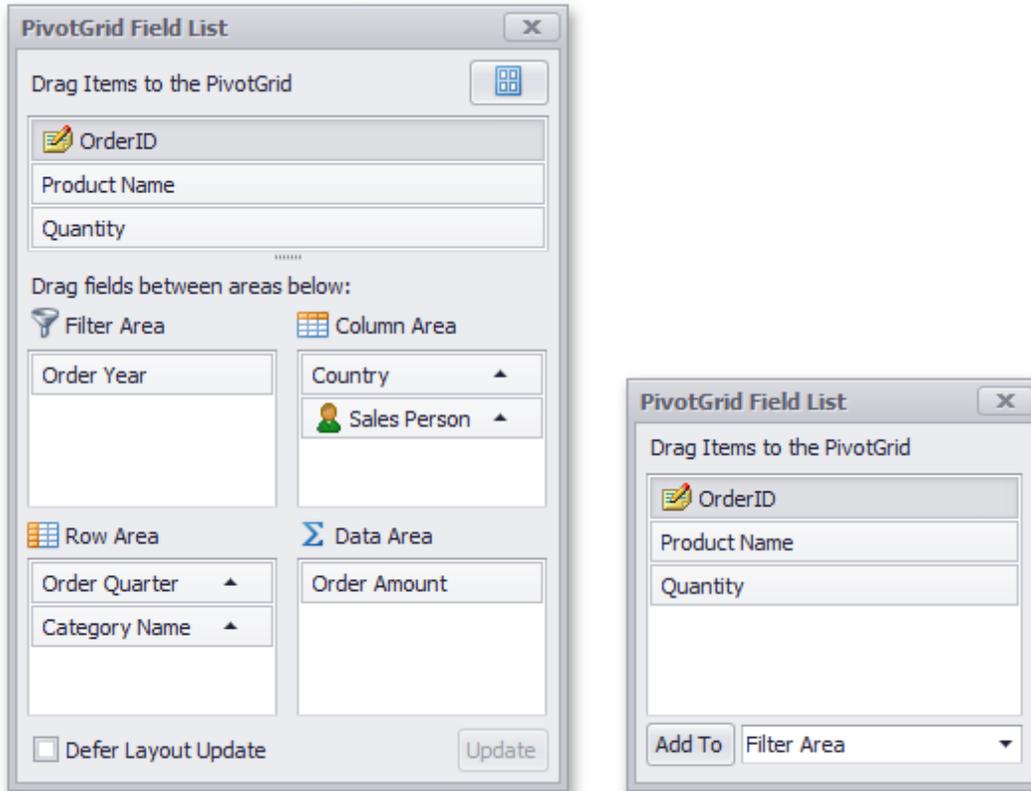
If you are using an advanced Field List, you can hide a field by dragging its header to the hidden fields area displayed on the Field List top.



You can also hide fields using the context menu. To learn more, see [Hide Fields Using the Context Menu](#).

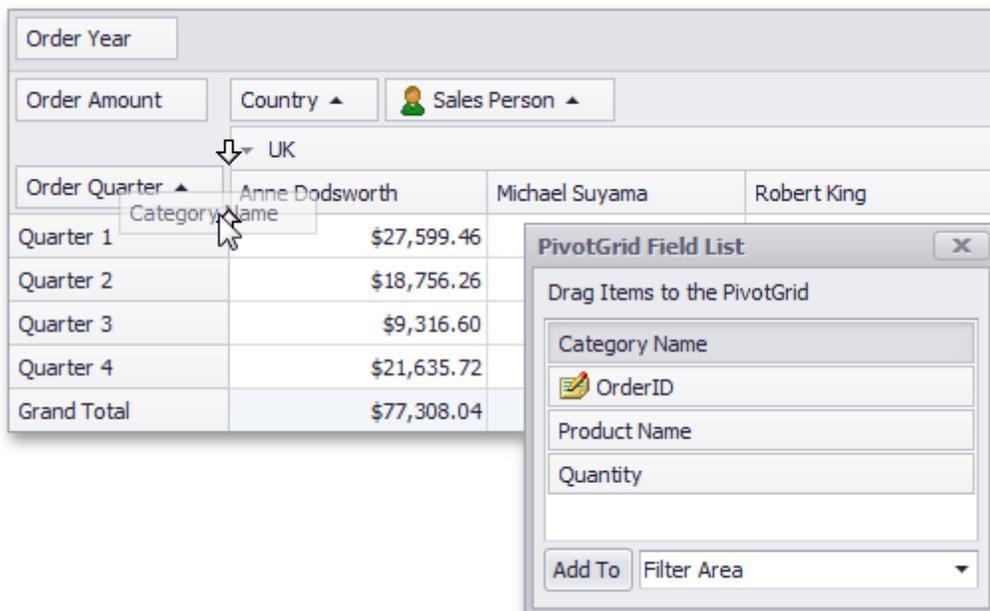
Display Hidden Fields

To display hidden fields, use a simple or advanced Field List (to learn more about Field Lists, see [Field List Overview](#)).



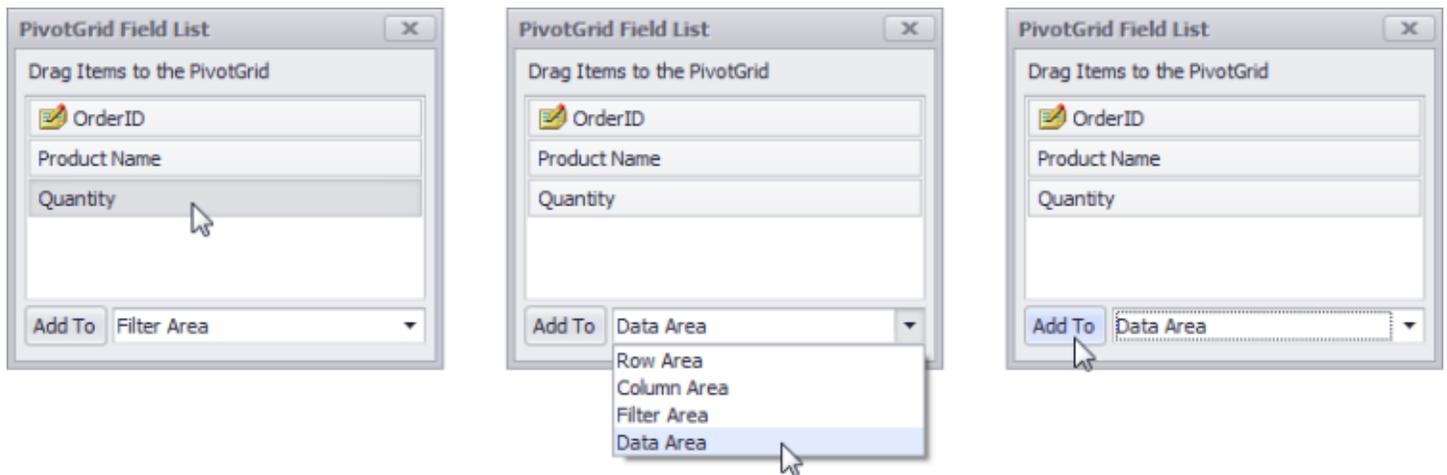
First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

To display a hidden field, drag-and-drop the field from the Field List onto the required area of Pivot Table. This works for both simple and advanced Field Lists.

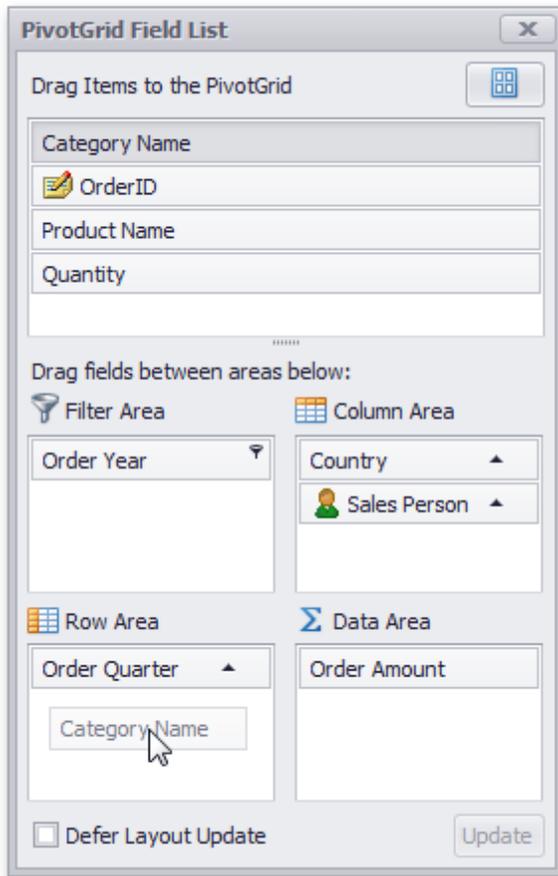


If you are using a simple Field List, you can display the required field as follows.

1. Click the required field in the Field List.
2. In the drop-down combo box, select a Pivot Table area within which this field should be displayed.
3. Click the **Add To** button.



If you are using an advanced Field List, you can display a hidden field by dragging its header from the hidden fields section to the section corresponding to the required Pivot Table area.



Reorder Fields

This section describes the Pivot Table capabilities to reorder fields.

The following topics are available:

- [Simple Fields Reordering](#)
Describes how to reorder fields via drag-and-drop and context menus.
- [Reorder Fields Using a Field List](#)
Provides information on how to use a Field List to reorder fields.

Simple Fields Reordering

To move a field to another position, use drag-and-drop operations.

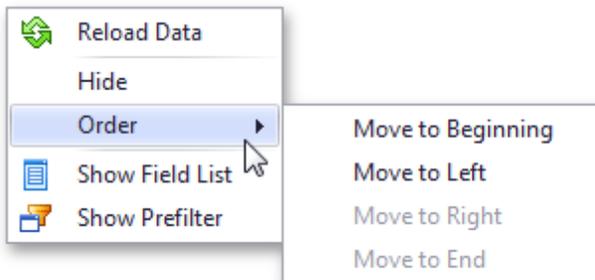
Order Year		Country ▲ Sales Person ▲		
Order Amount		▼ UK		
Order Quarter ▲	Category Name ▲	Anne Dodsworth	Michael Suyama	Robert King
▼ Quarter 1	Beverages	\$12,170.00	\$4,171.30	\$11,264.56
	Condiments	\$4,173.50	\$505.00	\$1,324.50
	Confections	\$1,366.75	\$517.14	\$2,583.60
	Dairy Products	\$3,602.30	\$3,950.13	\$3,960.00
	Grains/Cereals		\$1,971.70	\$4,866.50
	Meat/Poultry	\$3,563.76	\$3,840.85	\$876.00
	Produce		\$2,365.90	\$2,467.92
	Seafood	\$2,723.15	\$1,973.27	\$1,564.39

To move a field to a different position within the same area, you can also use a field context menu.

- Right-click the field header to activate the context menu.

Order Amount		Order Year ▲	Order Quarter ▲
Sales Person ▲		► 1994	► 1995
▼ Andrew Fuller	Beverages		\$5,870.35
	Condiments		\$6,649.61
	Confections		\$11,607.53
	Dairy Products		\$13,532.05
	Grains/Cereals		\$6,320.40
	Meat/Poultry	\$3,918.80	\$12,730.30

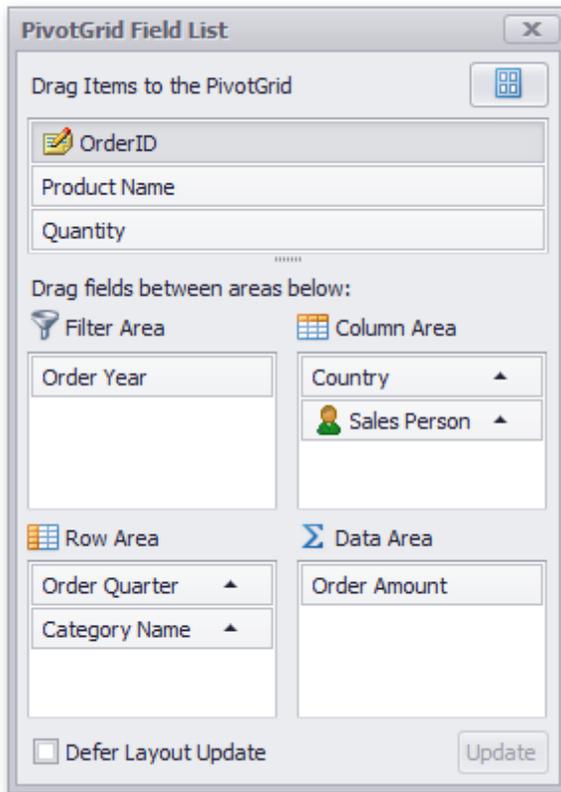
- Select the required command from the **Order** menu.



You can also use a Field List to reorder fields. For more information, see [Reorder Fields Using a Field List](#).

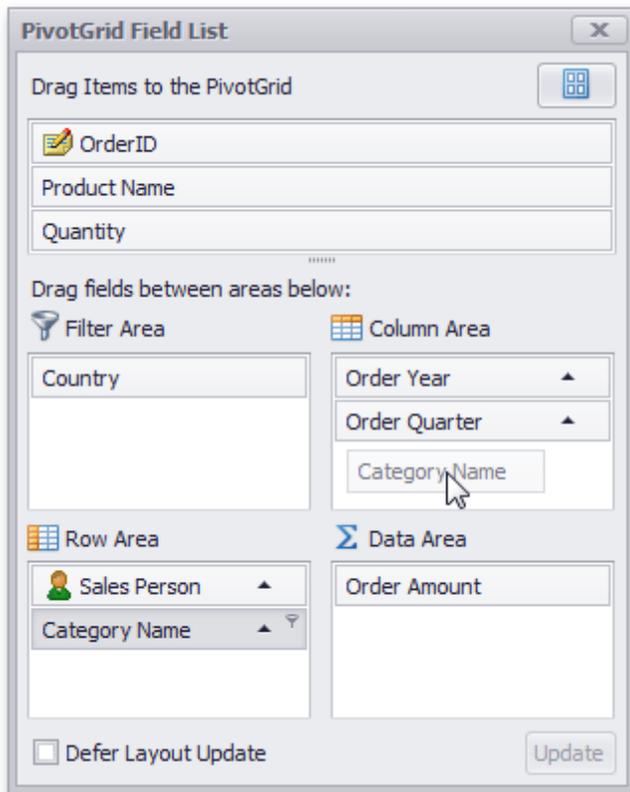
Reorder Fields Using a Field List

You can use an advanced Field List to reorder fields (to learn more about Field Lists, see [Field List Overview](#)).



First, invoke a Field List. For information on how to do this, see [Invoke a Field List](#).

To reorder fields, drag their headers within or between Field List sections that correspond to different Pivot Table areas.



You can also reorder fields via simple drag-and-drop operations (without invoking a Field List), or using a context menu. To learn more, see [Simple Fields Reordering](#).

Selection and Navigation

Multiple cells can be selected simultaneously, and their contents can then be copied to the clipboard. This topic shows how.

Select Cells and Clear the Current Selection

To select a single cell, do one of the following:

- Click the cell.

Order Amount		Order Year ▲	Order Quarter ▲
Sales Person ▲		► 1994	► 1995
Category Name ▲			
▼ Andrew Fuller	Beverages	\$1,718.40	\$5,870.35
	Condiments	\$2,824.00	\$6,649.61
	Confections	\$2,820.00	\$11,607.53
	Dairy Products	\$672.00	\$13,532.05

- Focus the cell using the ARROW keys.

To select a row or column of cells, click the appropriate header:

Country		Order Year ▲	Order Quarter ▲		
Order Amount		► 1994	► 1995	► 1996	Grand Total
Sales Person ▲					
Category Name ▲					
▼ Andrew Fuller	Beverages	\$1,718.40	\$5,870.35	\$32,659.50	\$40,248.25
	Condiments	\$2,824.00	\$6,649.61	\$5,377.06	\$14,850.67
	Confections	\$2,820.00	\$11,607.53	\$7,028.15	\$21,455.68
	Dairy Products	\$672.00	\$13,532.05	\$9,608.50	\$23,812.55
	Grains/Cereals	\$1,450.30	\$6,320.40	\$3,402.25	\$11,172.95

To select a continuous range of cells, do one of the following:

- Use ARROW, PAGE UP, PAGE DOWN keys while holding the SHIFT key down.
- Press the mouse button over the starting cell and drag the mouse cursor towards the ending cell. Then release the mouse button.

Country				
Order Amount		Order Year ▲	Order Quarter ▲	
		▶ 1994	▶ 1995	▶ 1996
👤 Sales Person ▲	📂 Category Name ▲			
▼ Andrew Fuller	🥤 Beverages	\$1,718.40	\$5,870.35	\$32,659.50
	🍷 Condiments	\$2,824.00	\$6,649.61	\$5,377.06
	🍪 Confections	\$2,820.00	\$11,607.53	\$7,028.15
	🥛 Dairy Products	\$672.00	\$13,532.05	\$9,608.50
	🌾 Grains/Cereals	\$1,450.30	\$6,320.40	\$3,402.25

- Click the starting cell. Then click the ending cell while holding the SHIFT key down.

To select a continuous range of columns or rows, do one of the following:

- Press the mouse button over the starting column/row header and drag the mouse cursor towards to the ending column or row header. Then release the mouse button.

Country				
Order Amount		Order Year ▲	Order Quarter ▲	
		▶ 1994	▶ 1995	▶ 1996
👤 Sales Person ▲	📂 Category Name ▲			
▼ Andrew Fuller	🥤 Beverages	\$1,718.40	\$5,870.35	\$32,659.50
	🍷 Condiments	\$2,824.00	\$6,649.61	\$5,377.06
	🍪 Confections	\$2,820.00	\$11,607.53	\$7,028.15
	🥛 Dairy Products	\$672.00	\$13,532.05	\$9,608.50
	🌾 Grains/Cereals	\$1,450.30	\$6,320.40	\$3,402.25

- Click the starting column or row header. Then click the ending column/row header while holding the SHIFT key down.

To select all the cells, press CTRL+A.

Select Cells While Preserving the Current Selection

Hold the CTRL key down while selecting cells.

Copy Selected Cells to the Clipboard

Press CTRL+C or SHIFT+INS.

Field List

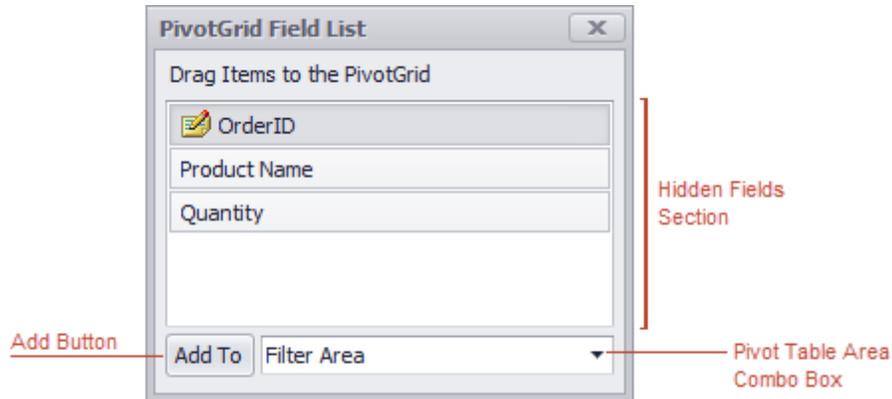
Pivot Table provides a Field List form used to reorder and hide fields, sort and filter data, etc. For more information on how to invoke a Field List, see [Invoke a Field List](#).

This topic describes Field List visual elements and layout.

Depending on Pivot Table settings made by your application vendor, Pivot Table can display either a simple or advanced Field List.

Simple Field List

The following picture shows a simple Field List.



A simple Field List contains the following visual elements:

- **Hidden Fields Section** - contains headers of fields hidden from Pivot Table. Use it to display hidden fields.
- **Add Button** - used to display a selected field in a specified Pivot Table area.
- **Pivot Table Area Combo Box** - used to choose a Pivot Table area where the selected field will be displayed after you click the **Add** button.

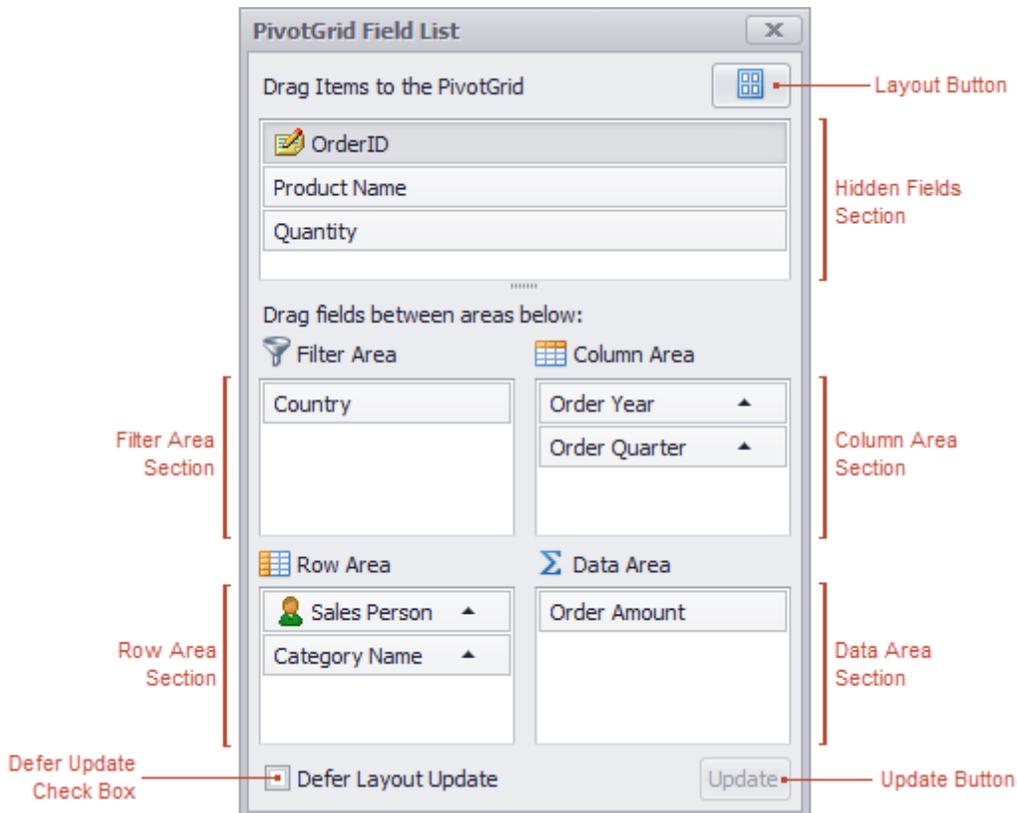
Use a simple Field List to hide fields from Pivot Table and display hidden fields again.

For more information on operations available in a simple Field List, refer to the following topics:

- [Hide Fields Using a Field List](#)
- [Display Hidden Pivot Table Fields](#)

Advanced Field List

The following picture shows an advanced Field List.



An advanced Field List contains the following visual elements:

- **Hidden Fields Section** - contains headers of fields hidden from Pivot Table. Use it to display hidden fields.
- **Filter, Column, Row and Data Area Sections** - contains headers located in respective Pivot Table areas.
- **Defer Updates Check Box** - used to enable/disable automatic Pivot Table updates (see [Defer Pivot Table Updates](#)).
- **Update Button** - used to force Pivot Table to update (see [Defer Pivot Table Updates](#)).
- **Layout Button** - used to invoke the *Layout* menu and change the Field List layout (see [Change Field List Layout](#)).

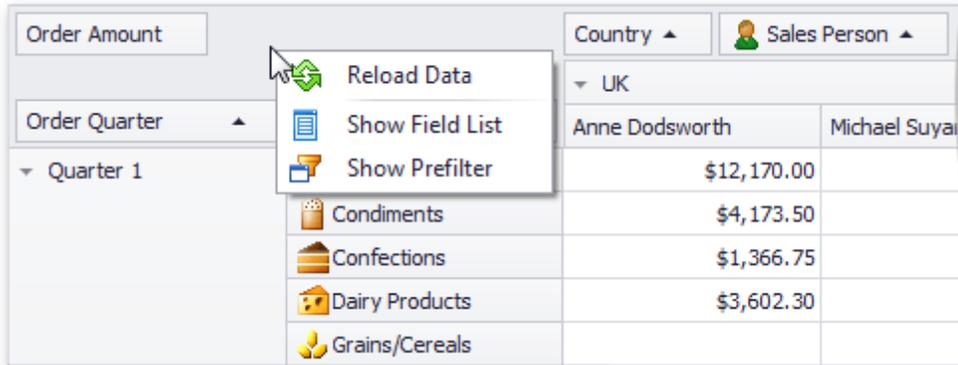
Use an advanced Field List to sort and filter data, reorder and hide visible fields, and show fields that have been hidden.

For more information on operations available in an advanced Field List, refer to the following topics:

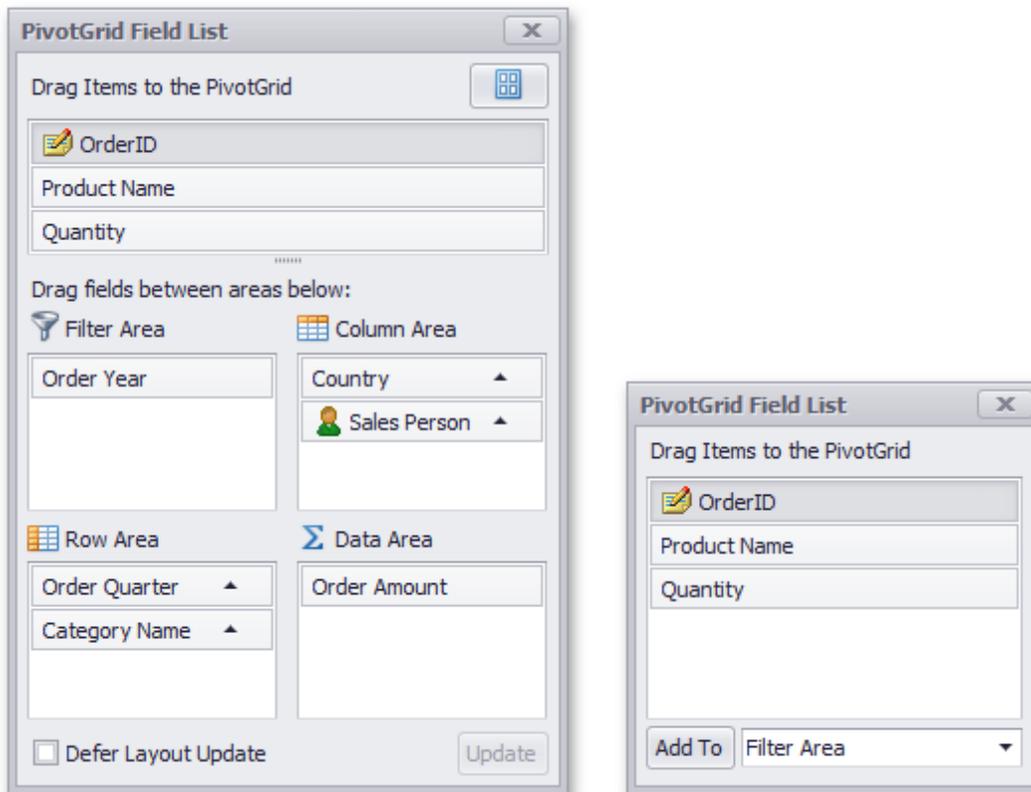
- [Sort Data Using a Field List](#)
- [Invoke a Filter Popup Window](#)
- [Hide Fields Using a Field List](#)
- [Display Hidden Pivot Table Fields](#)
- [Reorder Fields Using a Field List](#)

Invoke a Field List

To invoke a Field List, right-click on an empty space within the Pivot Table header region, and select **Show Field List** from the context menu.



A simple or advanced Field List (similar to one of those shown below) will be displayed.

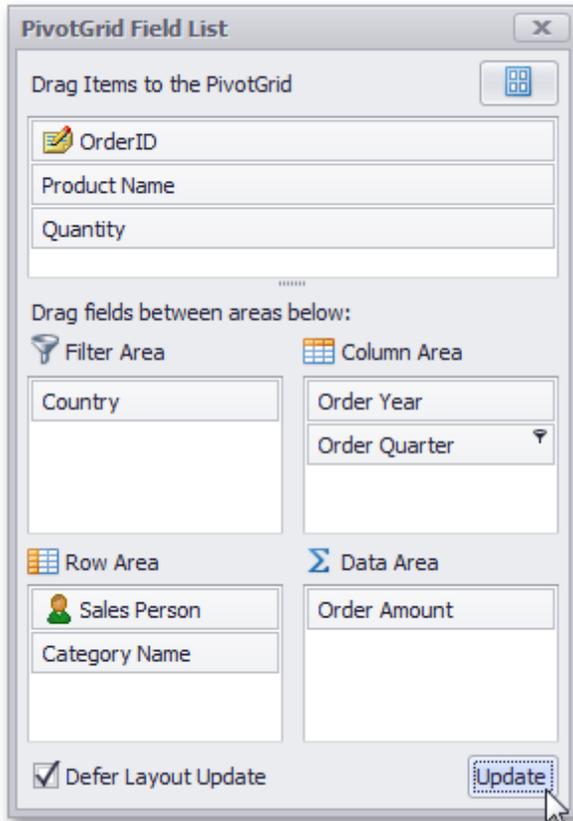


To learn more about Field Lists, see [Field List Overview](#).

Defer Pivot Table Updates

When you perform several sequential operations like hiding, displaying or reordering fields using an advanced Field List, Pivot Table is updated after each operation.

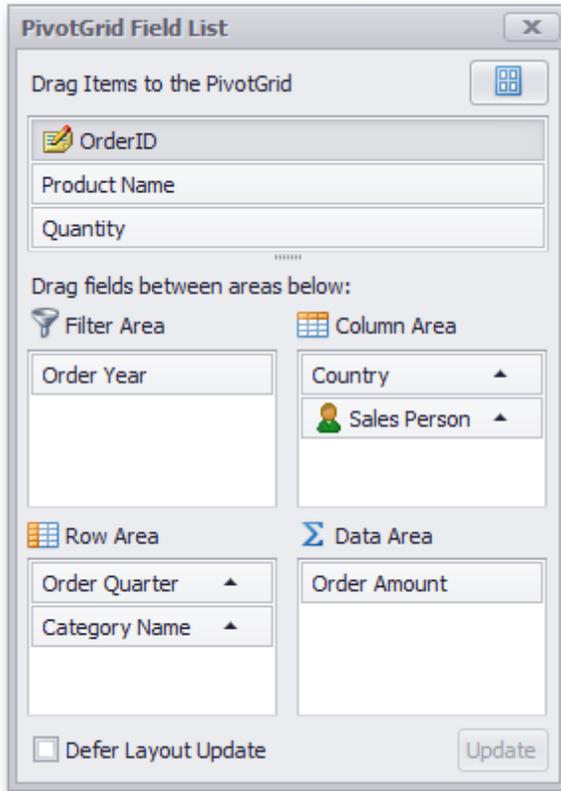
You can disable automatic Pivot Table updates by checking the **Defer Layout Update** check box. In this instance, use the **Update** button to force Pivot Table to update.



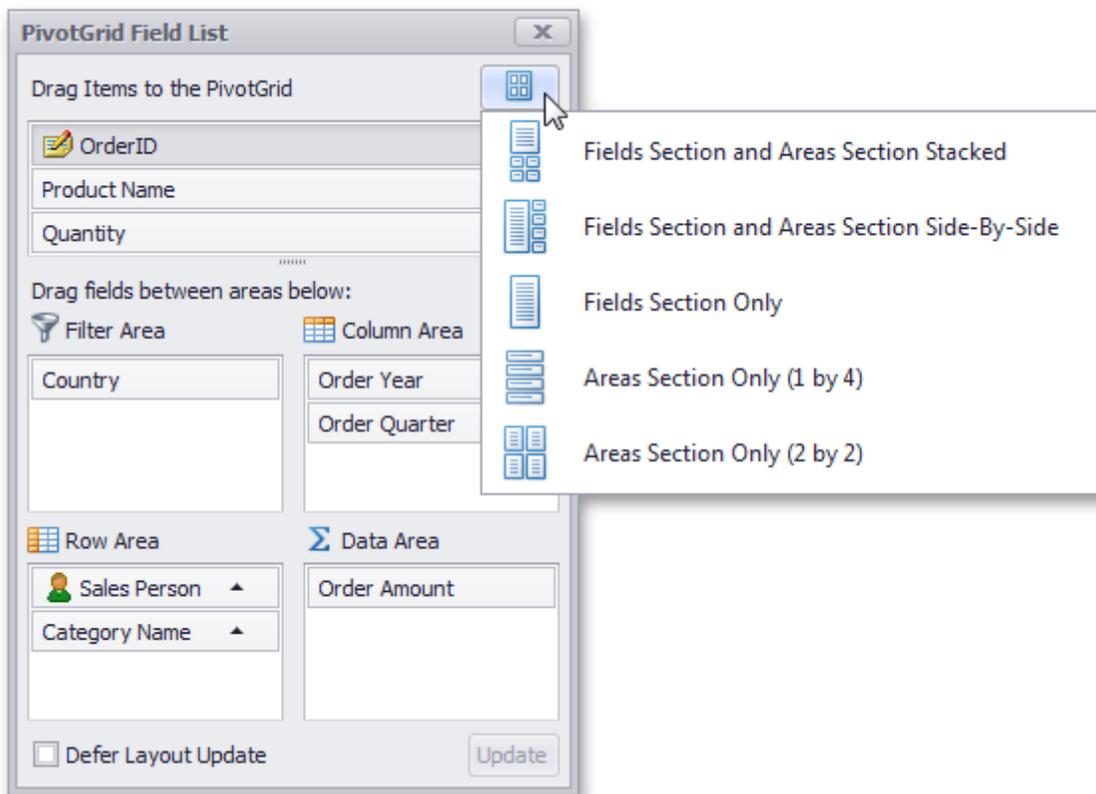
Note that if the **Defer Layout Update** check box is checked, you cannot sort or filter data in the Field List. To learn more about Field Lists, see [Field List Overview](#).

Change Field List Layout

By default, an advanced Field List displays a hidden fields section on the top, and four sections that correspond to Pivot Table areas at the bottom (see [Field List Overview](#) for details).



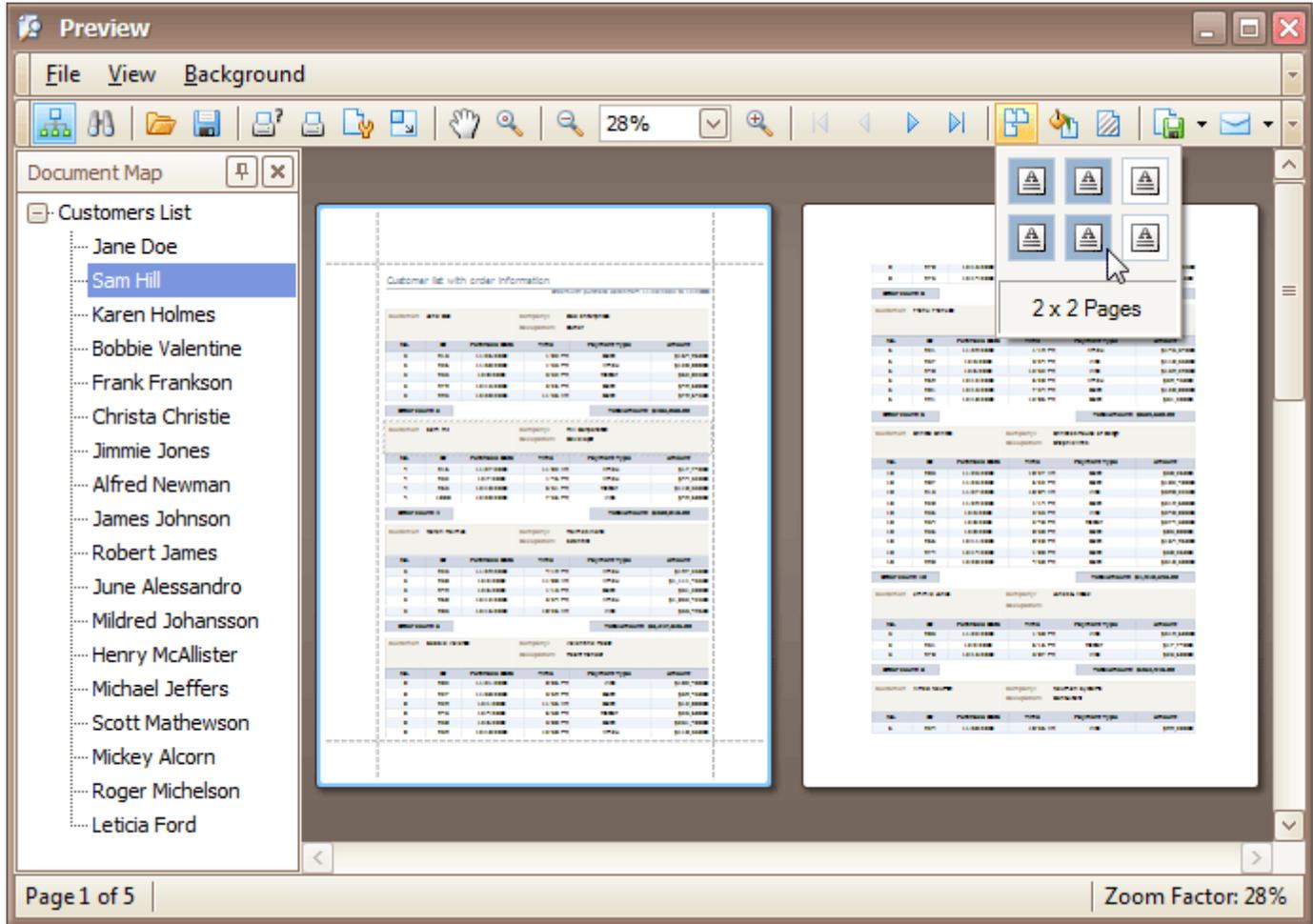
You can use the *Layout* menu to control which sections are displayed and where they are displayed. To do this, click the  button and select the required layout from the drop-down menu.



To learn more about Field Lists, see [Field List Overview](#).

Print Preview

This section describes the capabilities provided by the Print Preview form:



File Management

- [Save a Print Preview to a File](#)
- [Load a Print Preview from a File](#)

Printing and Page Setup

- [Print a Document via the Print Dialog](#)
- [Print a Document Using Default Settings](#)
- [Change Printing Settings via the Page Setup Dialog](#)
- [Specify Page Margins in Print Preview](#)

Headers and Footers

- [Insert Page Header and Page Footer into Printed Documents](#)
- [Insert Page Numbers into Printed Documents](#)
- [Insert Date and Time into Printed Documents](#)
- [Insert the User Name into Printed Documents](#)

- [Insert a Logo into Printed Documents](#)

Scaling

- [Scale Print Preview by Entering a Zoom Factor](#)
- [Scale Print Preview by Specifying Width in Pages](#)

Zooming

- [Zoom Print Preview In or Out](#)
- [Zoom Print Preview by Entering a Zoom Factor](#)
- [Zoom Print Preview to Show Whole Pages or Fit Content](#)
- [Show Two or More Pages in Print Preview](#)

Viewing and Navigating

- [Navigate Between Pages in Print Preview](#)
- [Use the Hand Tool in Print Preview](#)
- [Navigate in Print Preview Using Bookmarks](#)
- [Search for a Specific Text in Print Preview](#)
- [Switch Print Preview Display Mode](#)

Watermark and Background

- [Change Watermark and Background Settings in Print Preview](#)
- [Remove a Watermark in Print Preview](#)

Exporting

- [Exporting from Print Preview](#)
- [PDF-Specific Export Options](#)
- [HTML-Specific Export Options](#)
- [MHT-Specific Export Options](#)
- [RTF-Specific Export Options](#)
- [XLS-Specific Export Options](#)
- [XLSX-Specific Export Options](#)
- [CSV-Specific Export Options](#)
- [TXT-Specific Export Options](#)
- [Image-Specific Export Options](#)

Passing Parameters

- [Passing Parameters in Print Preview](#)

Miscellaneous

- [Customize Printing Settings of Charts](#)
- [Customize Printing Settings of Grids](#)
- [Customize Printing Settings of Pivot Tables](#)
- [Customize Printing Settings of Tree Views](#)

Warnings and Error Messages

- [Warnings and Error Messages in Print Preview](#)

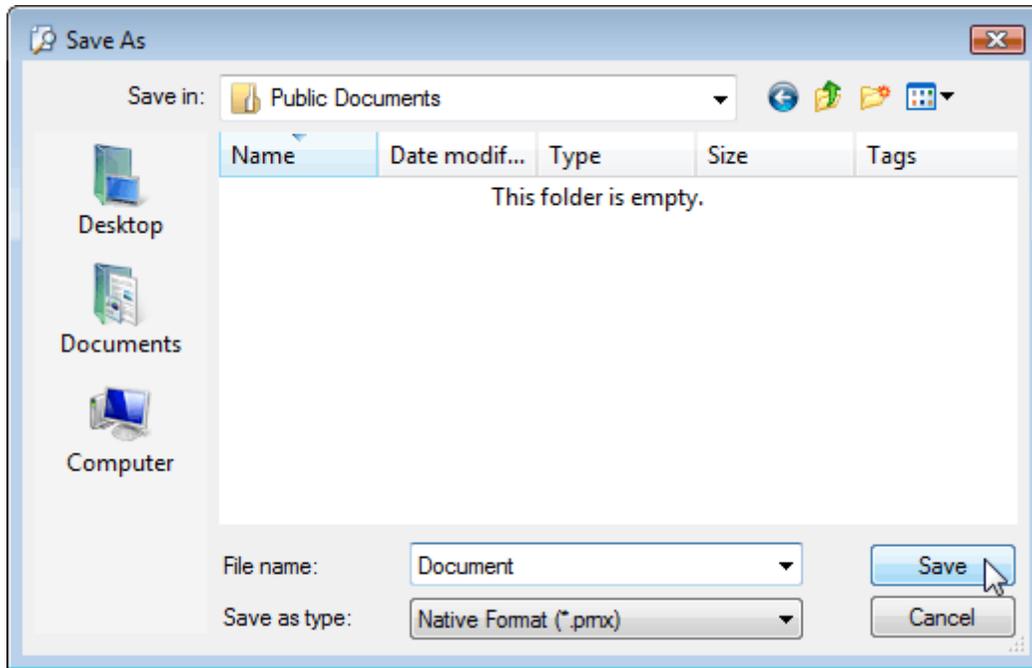
File Management

Save a Print Preview to a File

If you've modified your document, and there's a chance you'll need to print out this document version more than once, you can save the document to a file on disk. After that, you can simply load your document and print it out, without having to apply the same changes again.

To save a document to the file, click the **Save**  button on the toolbar, or press CTRL+S.

On the invoked **Save As** dialog, locate a folder where you want to store your file, enter the document's name and click **Save**.



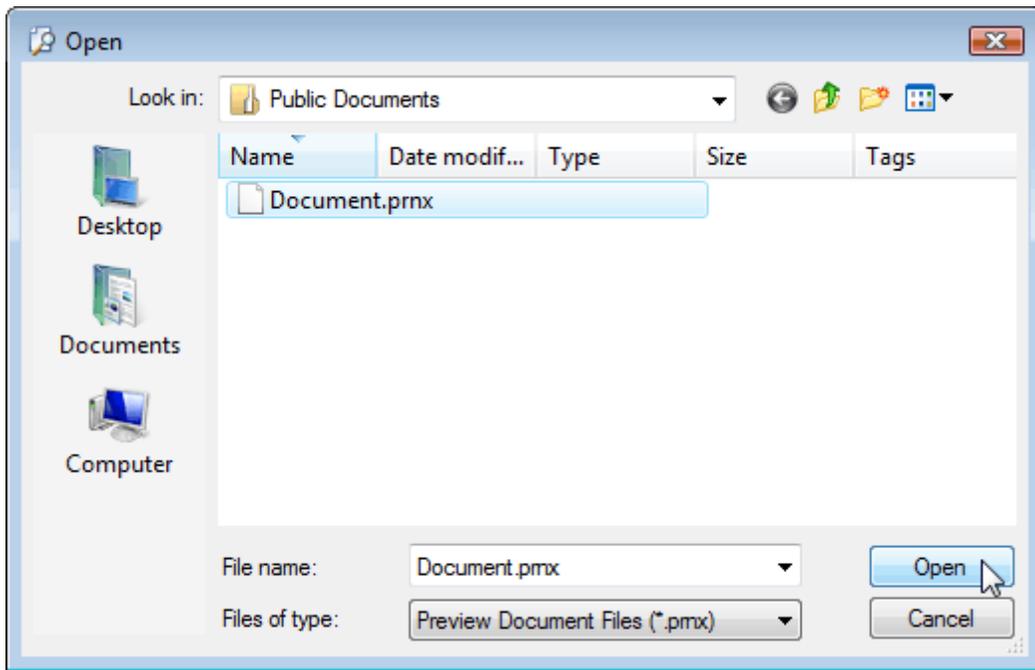
Your document will be saved with the **.prnx** file extension. Note that this extension will be added to the file name even if you enter another one.

Note

If you [open a document](#) which was previously saved to the hard drive, it is impossible to change its page settings (e.g. page size, orientation, margins, etc.). So, the **Page Setup** and the **Scale** buttons will be disabled.

Load a Print Preview from a File

To open a previously saved document, click the **Open**  button on the toolbar, or press CTRL+O. On the invoked **Open** dialog, define the file and click **Open**.



Note

If you open a document previously saved to the hard drive, it is impossible to change its page settings (e.g. page size, orientation, margins, etc.). So, the **Page Setup** and **Scale** buttons will be disabled.

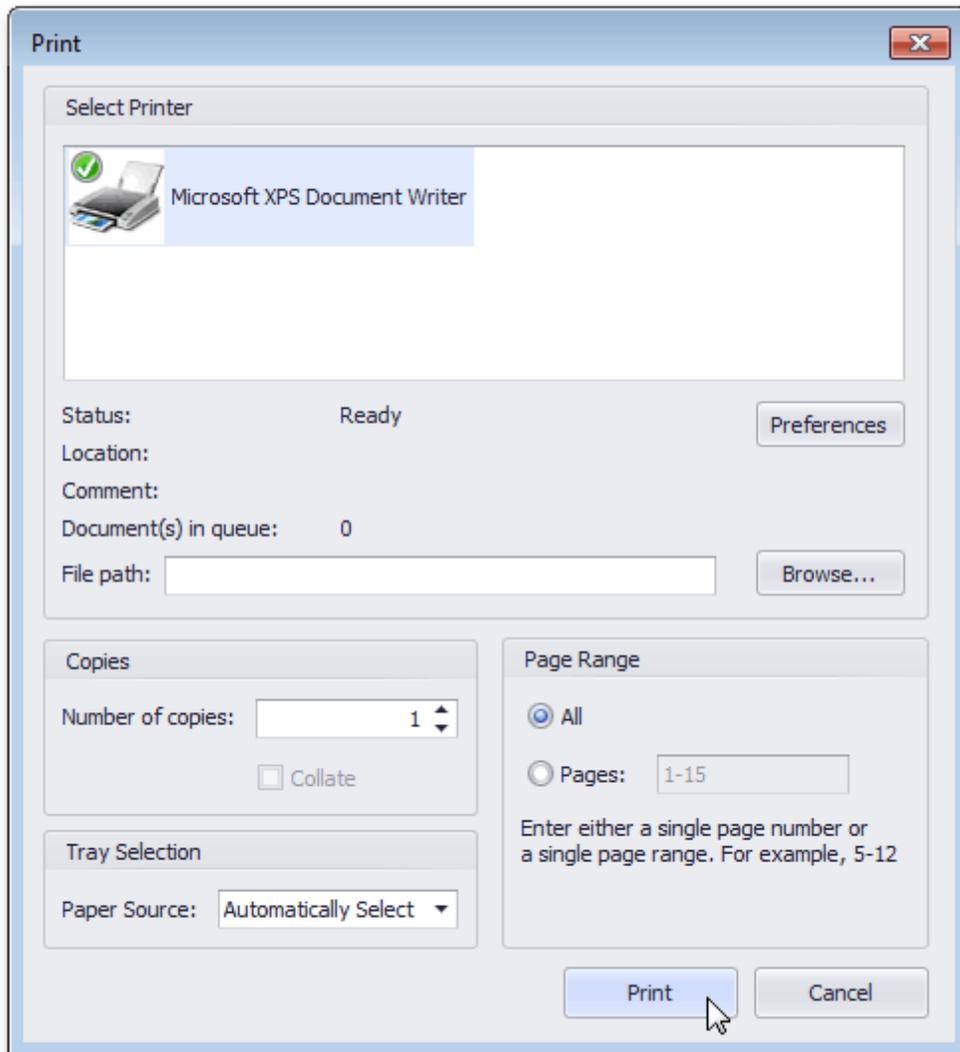
Printing and Page Setup

Print a Document via the Print Dialog

To print a document, do one of the following.

- Click the **Print**  button on the toolbar, or press CTRL+P.
- On the **File** menu, click **Print...**

The **Print** dialog will be invoked.



Specify the necessary settings and click **Print**.

To print a document without invoking the **Print** dialog, see the [Print a Document Using Default Settings](#) topic.

Note

If you try to print a document whose margins are outside of the printable area, you'll see a [warning message](#). Click **Yes** to print the document anyway, if you are sure that your printer supports the specified page margins.

Print a Document Using Default Settings

To send a document directly to the default printer without customizing print settings, do one of the following.

- Click the **Quick Print**  button on the toolbar.
- On the **File** menu, click **Print**.

To learn how to select a printer, number of copies, and other printing options, refer to the [Print a Document via the Print Dialog](#) topic.

Note

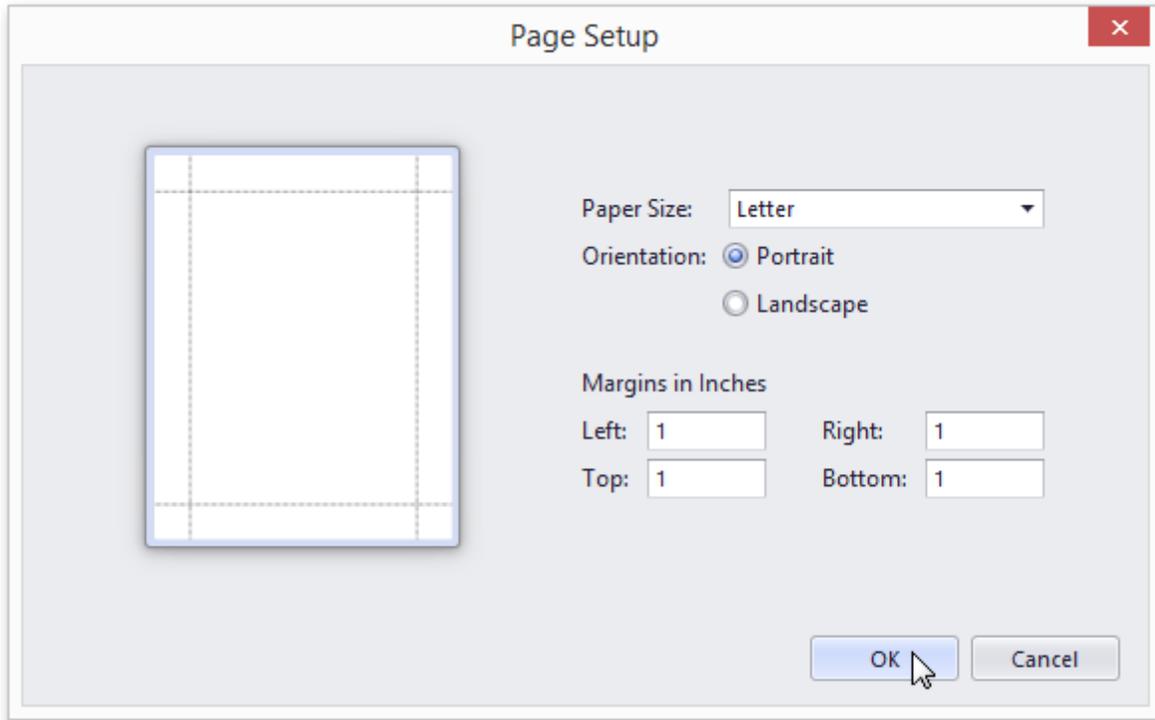
If you try to print a document whose margins are outside of the printable area, you'll see a [warning message](#). Click **Yes** to print the document anyway, if you're sure that your printer supports the specified page margins.

Change Printing Settings via the Page Setup Dialog

To start the page setup dialog box, do one of the following.

- Click the **Page Setup**  button on the toolbar.
- On the **File** menu, click **Page Setup...**

The following dialog will be invoked.



This dialog allows you to do the following:

- Change page orientation (choose Portrait or Landscape).
- Select paper size.
- Change page margins. (This can also be done [in the Print Preview dialog](#))

Note

If you're working with a document that was [loaded from file](#), the **Page Setup** commands on the toolbar and main menu will be disabled.

Specify Page Margins in Print Preview

To set document page margins, do one of the following.

- **Use the Page Setup dialog**

In the [Page Setup dialog](#), enter the required top, left, bottom and right page margins' values into the appropriate editors.



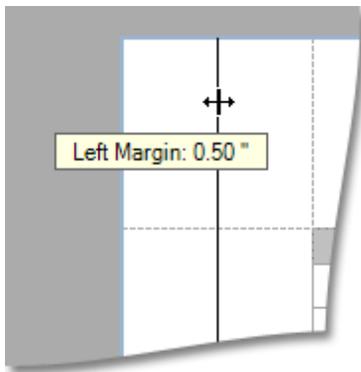
Margins (inches)

Left:	<input type="text" value="2"/>	Right:	<input type="text" value="1.5"/>
Top:	<input type="text" value="1.5"/>	Bottom:	<input type="text" value="1.5"/>

Then, click OK to save changes.

- **Use drag-and-drop in the Print Preview window**

To use this approach, point to the dotted line indicating the margin's border. When the pointer changes to \leftrightarrow , drag the pointer to move the margin.



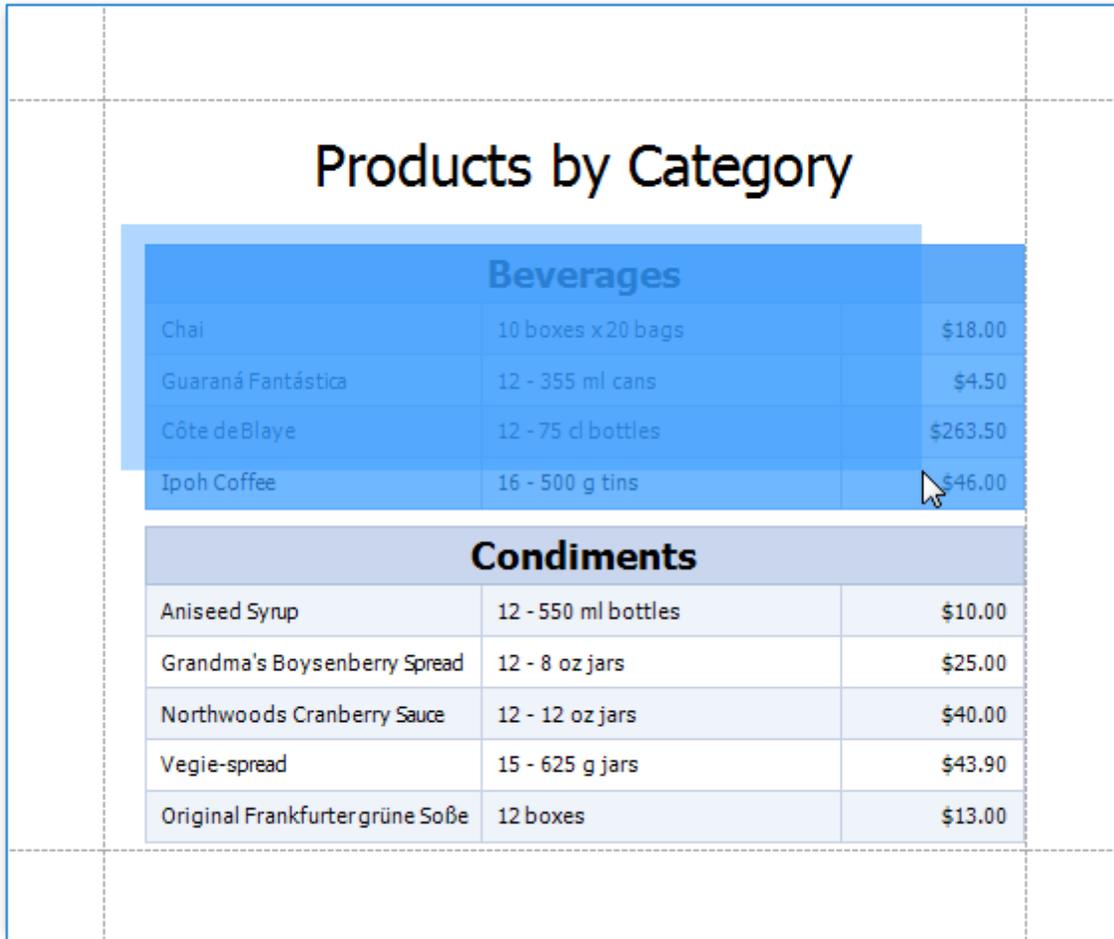
Note

If you're working with a document that was [loaded from file](#), it is impossible to change its page settings (e.g. page size, orientation, margins, etc.).

Print Selection

To print only the selected content of the previewed document, do the following.

1. Select the content of the previewed document by holding the left mouse button and dragging the mouse pointer to create a selection box. Expand the selection box to fit all of the content you wish to print. The selected document elements are highlighted.



Products by Category		
Beverages		
Chai	10 boxes x20 bags	\$18.00
Guaraná Fantástica	12 - 355 ml cans	\$4.50
Côte deBlaye	12 - 75 cl bottles	\$263.50
Ipoh Coffee	16 - 500 g tins	\$46.00
Condiments		
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Vegie-spread	15 - 625 g jars	\$43.90
Original Frankfurter grüne Soße	12 boxes	\$13.00

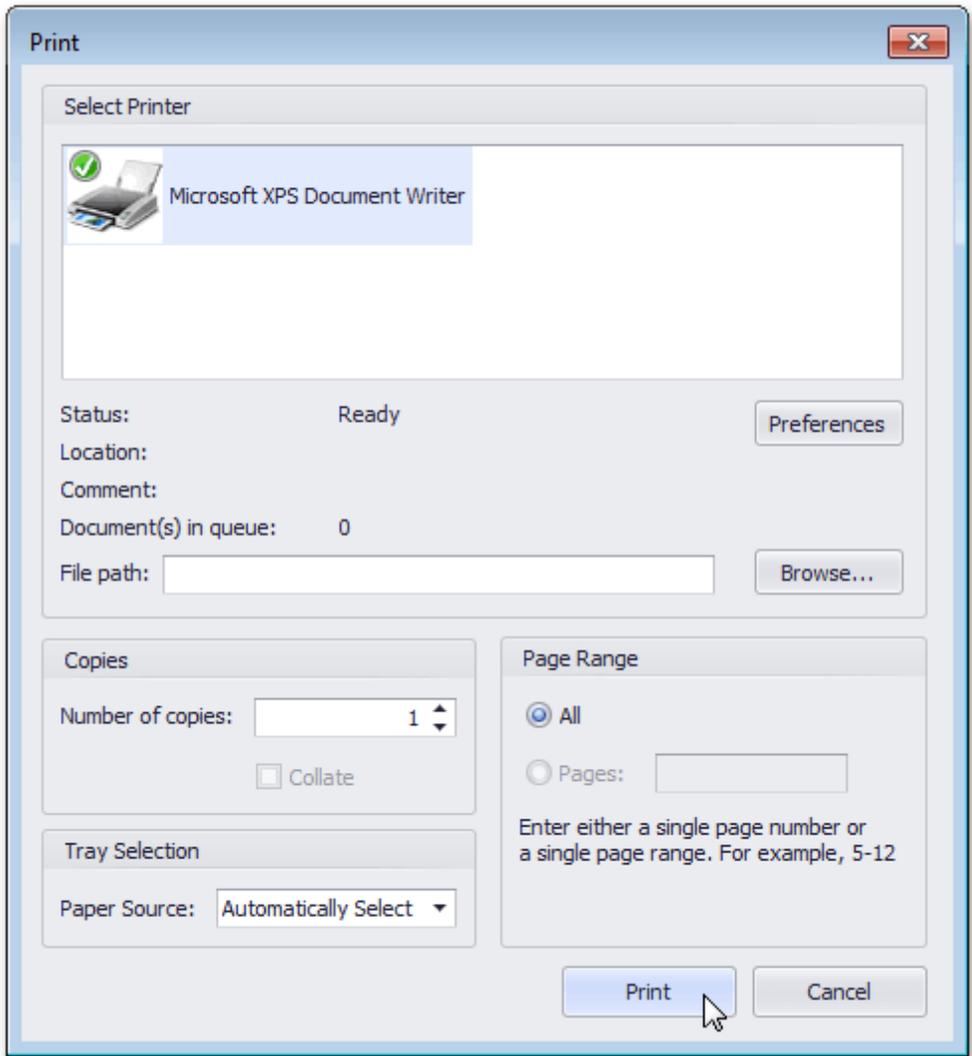
2. Right-click anywhere within the highlighted area of the document and select **Print...** in the context menu.

Products by Category

Beverages		
Chai	10 boxes x20 bags	\$18.00
Guaraná Fantástica	12 - 355 ml cans	\$4.50
Côte deBlaye	12 - 75 cl bottles	 Copy  Print ...
Ipoh Coffee	16 - 500 g tins	

Condiments		
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Vegie-spread	15 - 625 g jars	\$43.90
Original Frankfurter grüne Soße	12 boxes	\$13.00

3. In the invoked **Print** dialog, specify the required settings and click **Print**.

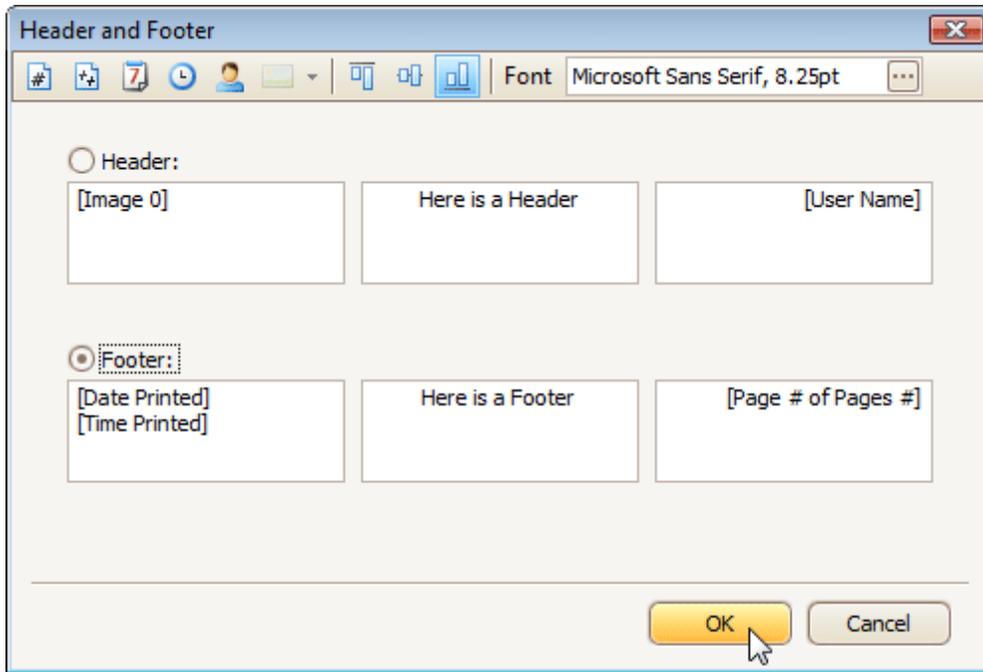


See Also
[Copy to the Clipboard](#)

Headers and Footers

Insert Page Header and Page Footer into Printed Documents

To insert a page header and page footer into a document, click the **Header and Footer**  button on the toolbar. This will invoke the **Header and Footer** dialog.



Specify header and footer content using the appropriate text boxes, depending on the required alignment. If needed, you can also adjust vertical alignment and font settings. Click OK to save changes and close the dialog.

Insert Page Numbers into Printed Documents

To insert or remove page numbers from a document, first [invoke the Header and Footer dialog](#).

Focus a text box, depending on the required alignment, and do one of the following:

- If you need to simply display the current page number, click the **Page Number**  button.
- If you need to display the page number out of the total number of pages, click the **Page # of Pages #**  button.

When you click one of these buttons, the dialog adds an alias within square brackets at the current cursor position. You can surround this alias with any text you like. If you no longer need page numbers in your document, delete this alias.

Click OK to save changes and close the dialog.

Insert Date and Time into Printed Documents

If you need to display the date and time when a document is printed, first [invoke the Header and Footer dialog](#).

Then, click on the appropriate text box, depending on the required alignment, and do the following:

- To add a date stamp, click the **Date Printed**  button.
- To add a time stamp, click the **Time Printed**  button.

When you click one of these buttons, the dialog adds an alias within square brackets at the current cursor position. You can surround this alias with any text you like. If you no longer need to display date and time in your document, delete this alias.

Click OK to save changes and close the dialog.

Insert the User Name into Printed Documents

To insert user name into a document's header or footer, first [invoke the Header and Footer dialog](#).

Then, focus an appropriate text box, depending on the required alignment, and click the **User Name**  button.

When you click this button, the dialog adds an alias within square brackets at the current cursor position. You can surround this alias with any text you like. If you no longer need to display user name in your document, delete this alias.

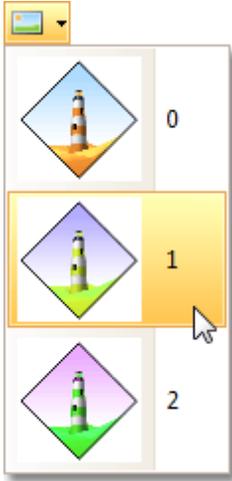
Click OK to save changes and close the dialog.

Insert a Logo into Printed Documents

To insert a logo into a document's header or footer, first [invoke the Header and Footer dialog](#).

Then, focus an appropriate text box, depending on the required alignment, and click the **Image**  button.

Select the image from the dropdown list.



Click OK to save changes and close the dialog.

Note

If the **Image** button is disabled, then logo insertion is not supported by your software vendor.

Scaling

Scale Print Preview by Entering a Zoom Factor

To scale a document, click the **Scale**  button on the toolbar. The **Scaling** dialog will be invoked.

Set the required percentage value in the editor.



Click **OK** to save changes and close the dialog.

Note

If you're working with a document [loaded from file](#), you cannot use scaling.

Scale Print Preview by Specifying Width in Pages

To scale a document to fit into X pages, click the **Scale**  button on the toolbar. The **Scaling** dialog will be invoked.

Set the required number of pages in the editor.



Click **OK** to save changes and close the dialog.

Note

If you're working with a document [loaded from file](#), you cannot use scaling.

Zooming

Zoom Print Preview In or Out

Zoom In and Out of a Document

- To zoom in a document, click the **Zoom In**  button on the toolbar, or press CTRL+PLUS SIGN.
- To zoom out of a document, click the **Zoom Out**  button on the toolbar, or press CTRL+MINUS SIGN.

To zoom in or out of a document, you can also hold down CTRL and rotate the mouse wheel.

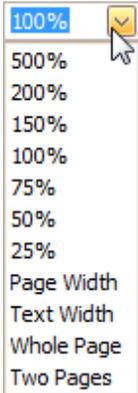
Use the Magnifier Tool

Use the **Magnifier Tool**  to switch between 100% and "fit whole page" views. Simply click anywhere in the document, to toggle views.

Zoom Print Preview by Entering a Zoom Factor

To zoom to a specific zoom factor, do one of the following.

- Click the **Zooming** dropdown list button. The following list will be invoked.



Choose one of the zoom factor presets.

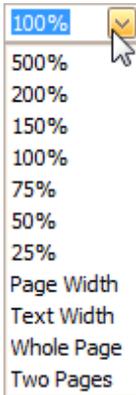
- You can manually enter any value into the **Zooming** box.



Zoom Print Preview to Show Whole Pages or Fit Content

Zoom Documents to Fit Page Content

To zoom to the page or text width, click the **Zooming** box. The following list will be invoked.



- To zoom to the page width, click **Page Width**.
- To zoom to the text width, click **Text Width**.

Note

If the preview window will be resized later, the current zoom factor will also be changed, to fit the current page or text width.

Zoom Documents to Display Whole Pages

First, invoke the zooming dropdown (see above).

- To display one whole page at a time, click **Whole Page**.
- To fit two pages into the current view, click **Two Pages**.

Note

If the preview window will be resized later, the current zoom factor will be also changed in order to fit one or two pages.

If you want to preview more pages simultaneously, refer to the [Show Two or More Pages in Print Preview](#) topic.

Show Two or More Pages in Print Preview

To preview two or more pages at one time, click the **Multiple Pages**  button on the toolbar.

Then, in the invoked dialog, hover over the page icons, depending on the required number of pages to preview.



When the required number of pages has been selected, click the popup window to close it and apply changes to the document view.

Viewing and Navigating

Navigate Between Pages in Print Preview

To navigate between pages, use the scrollbars or navigation buttons     on the toolbar. These buttons allow you to switch to the first, previous, next, or last page of a document.

Use the Hand Tool in Print Preview

The **Hand Tool** enables you to scroll content by dragging the document instead of using scrollbars.

To activate the **Hand Tool**, click the **Hand Tool**  button on the toolbar.

Then, after you click a document's page, the mouse pointer is changed from  to . Drag the mouse pointer to scroll the document.

Navigate in Print Preview Using Bookmarks

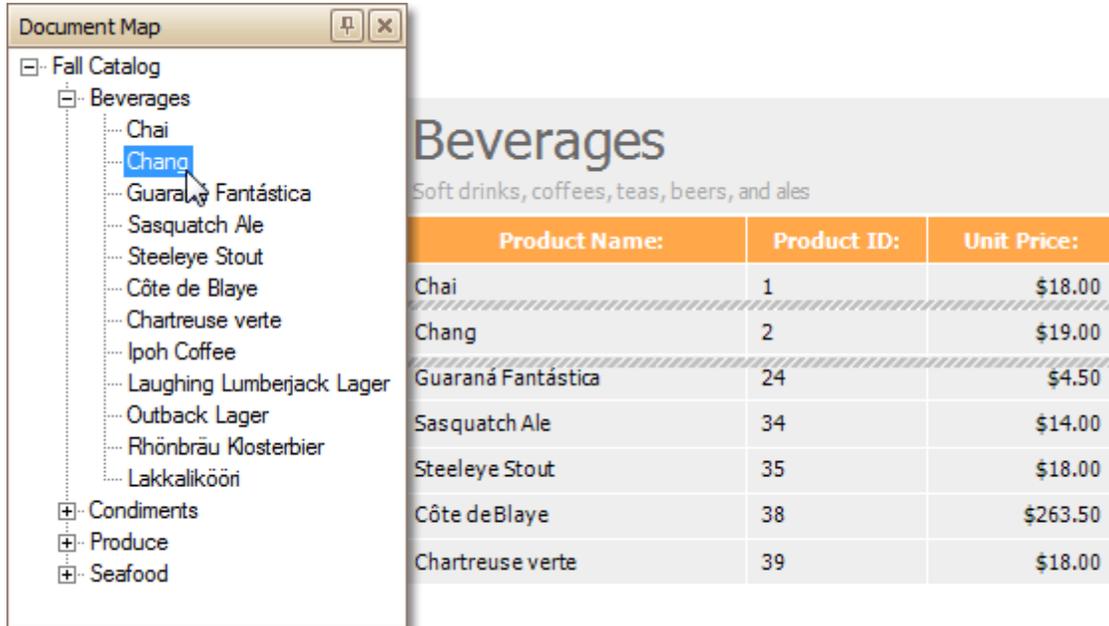
If a document contains bookmarks, you can use the **Document Map** feature to quickly navigate to a required section.

Show or Hide the Document Map

To show or hide the document map, click the **Document Map**  button on the toolbar.

Go to a Specific Bookmark

To go to the specific bookmark, click it in the Document Map, and the appropriate text will be highlighted in the document.

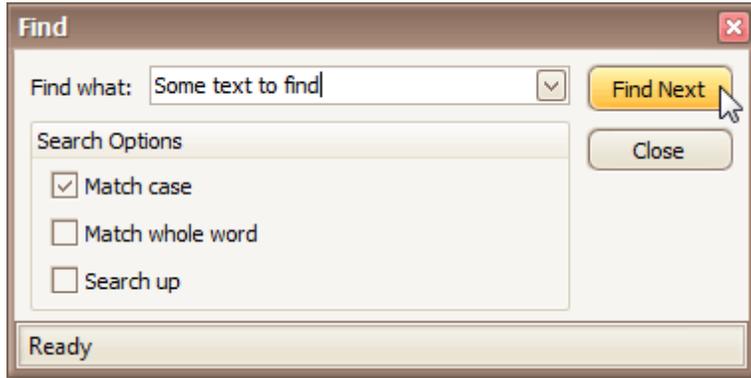


The Document Map window displays a tree view of the document's structure. The 'Beverages' section is expanded, and 'Chang' is selected. The main document area shows the 'Beverages' section header and a table of products. The 'Chang' row in the table is highlighted, corresponding to the selection in the Document Map.

Product Name:	Product ID:	Unit Price:
Chai	1	\$18.00
Chang	2	\$19.00
Guaraná Fantástica	24	\$4.50
Sasquatch Ale	34	\$14.00
Steeleye Stout	35	\$18.00
Côte de Blaye	38	\$263.50
Chartreuse verte	39	\$18.00

Search for a Specific Text in Print Preview

To search for a specific text within a document, click the **Search**  button on the toolbar, or press CTRL+F. The **Find** dialog will be invoked.



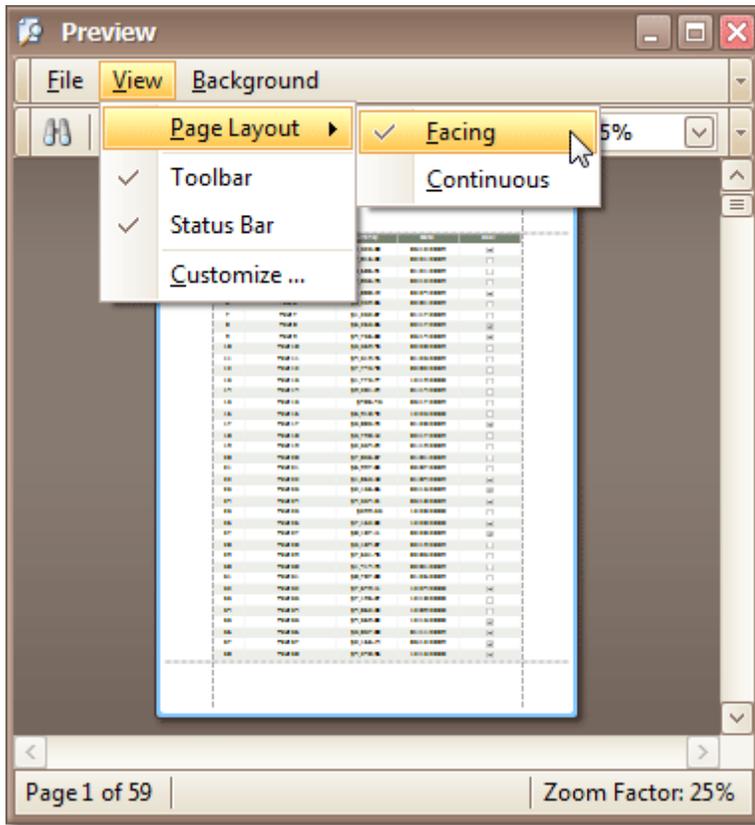
In this dialog, you can input the text to find, and specify whether to match case or the whole word during the search, or set the search direction.

To start searching, or search again, click **Find Next** or press ENTER.

Switch Print Preview Display Mode

Enable the Facing Layout View

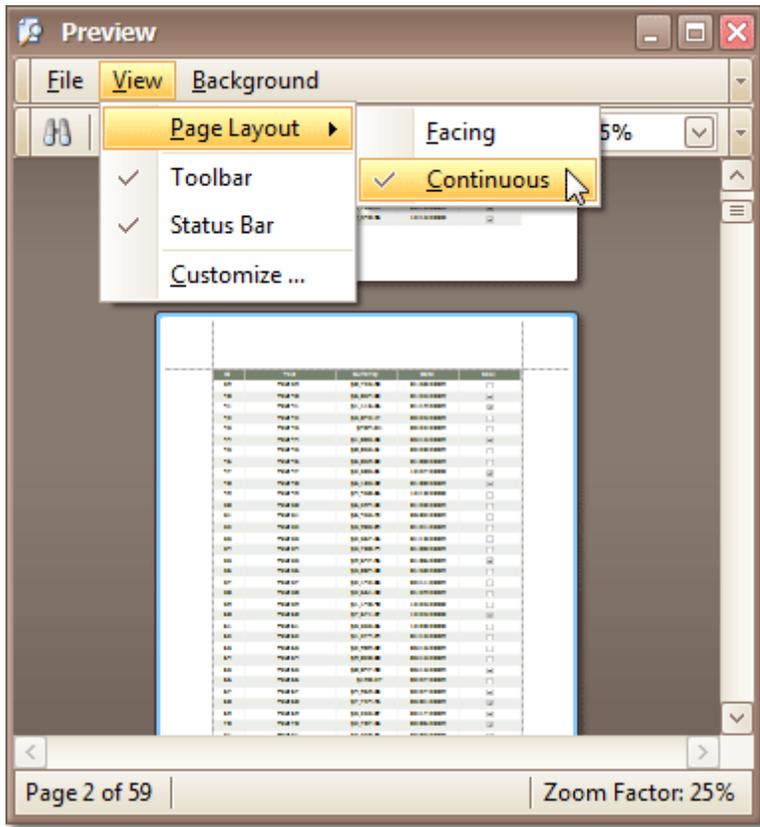
To enable the facing layout view, on the **View** menu, point to **Page Layout**, and then click **Facing**.



This allows you to preserve an entire page view, whether you resize the preview window, scroll a document or choose a multiple page view mode.

Enable the Continuous Layout View

To enable the continuous layout view, on the **View** menu, point to **Page Layout**, and then click **Continuous**.



This allows you to continuously scroll a page layout view.

Watermark and Background

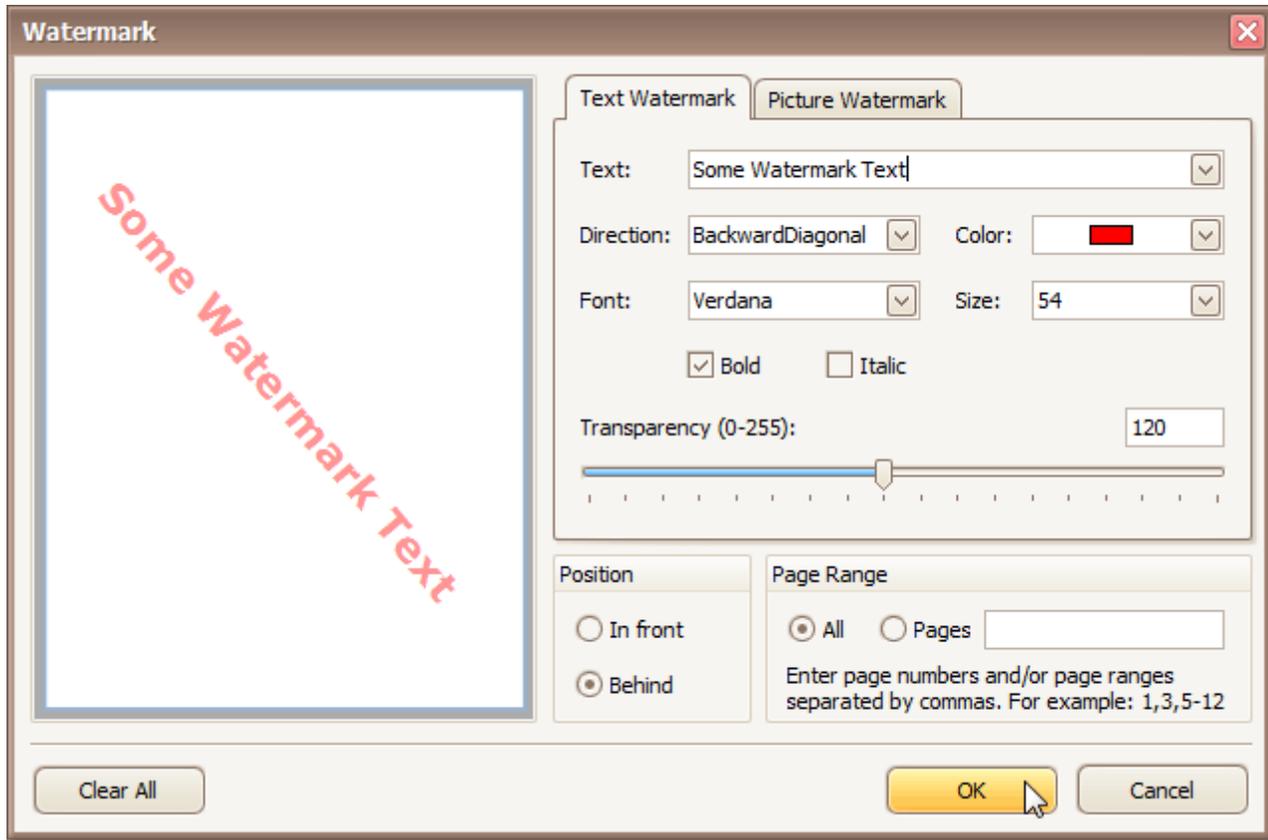
Change Watermark and Background Settings in Print Preview

Invoke the Watermark Dialog

To add a watermark to a document, click the **Watermark** button on the toolbar, or click **Watermark...** on the **Background** menu. The **Watermark** dialog will be invoked.

Add a Text Watermark

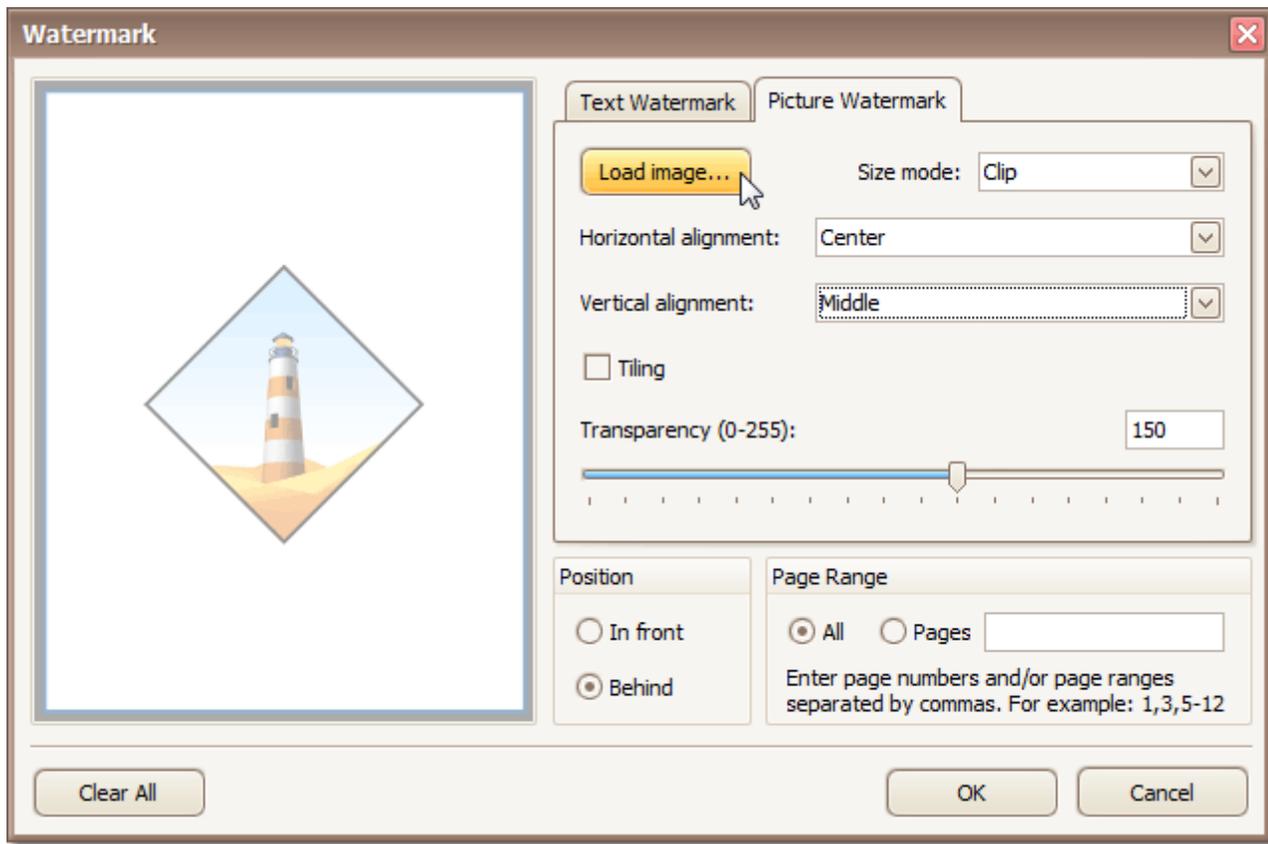
To add a text watermark, open the **Text Watermark** tab.



Input the required text, or choose one from the provided options. If required, define other text properties, such as direction, color, font, size, transparency, etc.

Add an Image Watermark

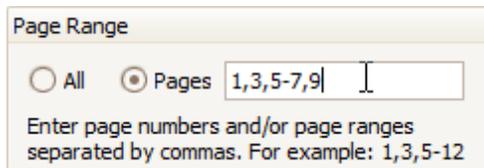
To add a picture watermark, open the **Picture Watermark** tab.



Load the image and customize its properties, such as size mode, horizontal and vertical alignment, tiling, transparency, etc.

Specify the Pages Where you will Display Your Watermark

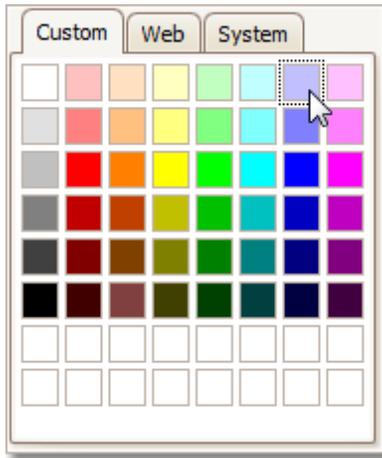
Specify the required pages to apply a watermark in the **Page Range** section of the dialog.



Separate page numbers with commas, or specify page ranges using a dash.

Add a Background Color to a Document

To add a background color to a document, click the **Background Color**  button on the toolbar, or click **Color...** on the **Background** menu. The **Background Color** dialog will be invoked.



Then, choose a color from the **Custom**, **Web** or **System** palettes.

See Also

[Remove a Watermark in Print Preview](#)

Remove a Watermark in Print Preview

To remove a watermark from a document, invoke the [Watermark dialog](#). Click **Clear All**, then click OK to save changes and close the dialog.

See Also

[Change Watermark and Background Settings in Print Preview](#)

Exporting

Exporting from Print Preview

There are two options available for a document being exported to.

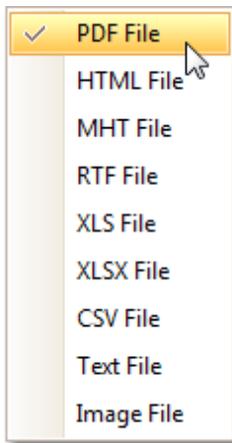
- [Export Document to a File on Disk](#)
- [Send Exported File via E-Mail](#)

Export Document to a File on Disk

To export a document and save the resulting file on your hard drive, do one of the following.

- On the toolbar, click the arrow near the **Export Document...** button .
- On the **File** menu, choose the **Export Document...** item.

Choose the required format from the invoked list.



Then, you may be prompted to define format-specific options. See corresponding help topics in this documentation for details, e.g. PDF-Specific Export Options.

Once you've specified exporting options, the **Save As** dialog appears, allowing you to enter the file name. Then, the following message will be invoked.



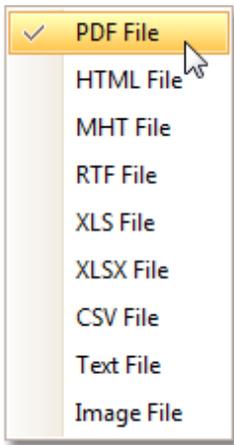
Click **Yes**, if you want to preview the exported file.

Send Exported File via E-Mail

To send the resulting PDF file via e-mail, do one of the following.

- On the toolbar, click the arrow near the **Send via E-Mail...** button .
- On the **File** menu, choose the **Send via E-Mail...** item.

Choose the required format in the invoked list.



Then, you may be prompted to define format-specific options. See corresponding help topics in this documentation for details, e.g. PDF-Specific Export Options.

Once you've specified exporting options, the **Save As** dialog appears, allowing you to enter the file name.

Finally, the created document will be attached to a new empty message, created in your default mail program.

Copy to the Clipboard

Aside from exporting a document to a third-party formatted file, you can copy a portion of the document content to the clipboard, and paste it into an editor compatible with one of the supported third-party formats.

To copy document content to the clipboard, do the following.

1. Select the content of the previewed document by holding down the left mouse button and dragging the mouse pointer, to create a selection box. Expand the selection box to fit all of the content you wish to print. The selected document elements are highlighted.



Products by Category

Beverages		
Chai	10 boxes x20 bags	\$18.00
Guaraná Fantástica	12 - 355 ml cans	\$4.50
Côte deBlaye	12 - 75 cl bottles	\$263.50
Ipoh Coffee	16 - 500 g tins	\$46.00

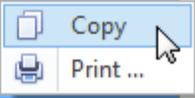
Condiments		
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Vegie-spread	15 - 625 g jars	\$43.90
Original Frankfurter grüne Soße	12 boxes	\$13.00

2. To copy the selected content, press **CTRL + C** or right-click anywhere within the highlighted area of the document, and select **Copy** in the context menu.

Products by Category

Beverages		
Chai	10 boxes x20 bags	\$18.00
Guaraná Fantástica	12 - 355 ml cans	\$4.50
Côte deBlaye	12 - 75 cl bottles	
Ipoh Coffee	16 - 500 g tins	

Condiments		
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Vegie-spread	15 - 625 g jars	\$43.90
Original Frankfurtergrüne Soße	12 boxes	\$13.00



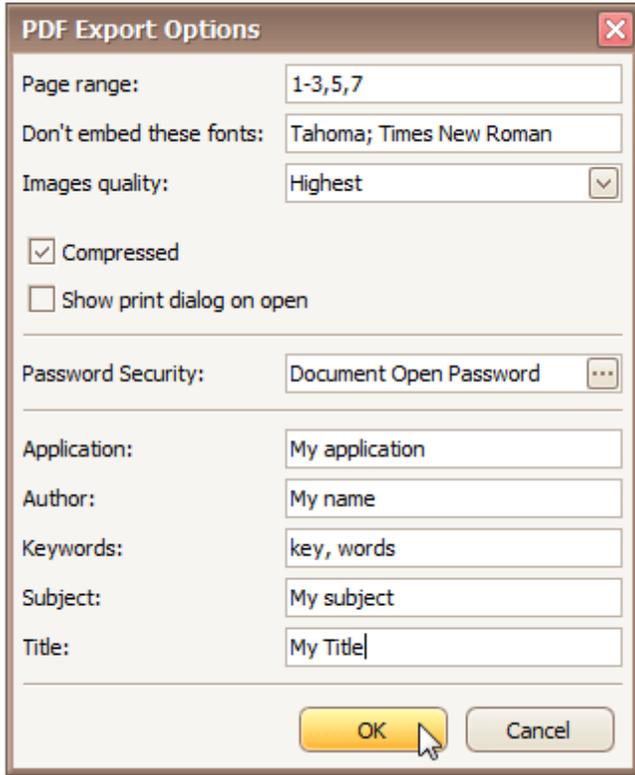
When pasted to a third-party editor from the clipboard, the report content will automatically be converted to the target format.

See Also

[Print Selection](#)

PDF-Specific Export Options

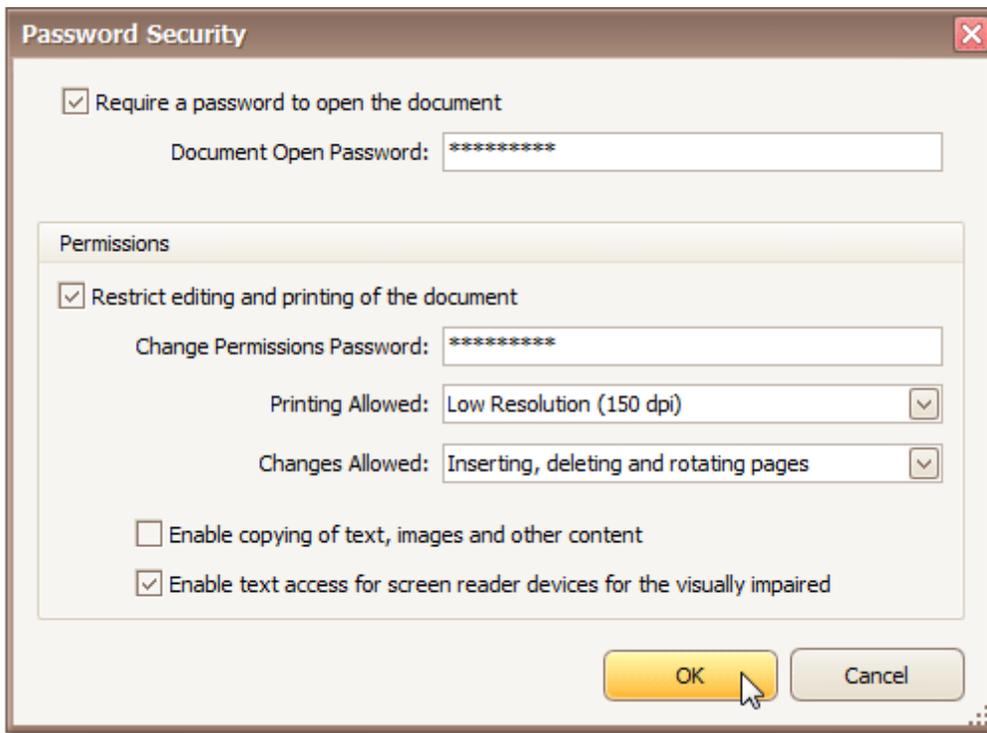
When [exporting a document](#), you can define PDF-specific exporting options using the following dialog.



General Options

- **Page range**
Define the pages which will be included in the complete file. Separate the pages with a comma, set a range of pages with a dash.
- **Don't embed these fonts**
Define the fonts that will not be embedded in the complete file, to reduce the file size. Separate the fonts with a semicolon.
- **Images quality**
Choose the required document's image quality level. The higher the quality, the bigger the file, and vice versa.
- **Compressed**
Check this to enable compression.
- **Show print dialog on open**
Check this, if desired.

Password Security Options



These options allow you to adjust the security options of the resulting PDF file (e.g. enable open document, editing, printing and copying protection, and specify which changes are allowed).

Signature Options

If an X.509 certificate is applied to your report, you can maintain its options via the **Signature Options** property of the report **PDF Export Options**.

Additional Options

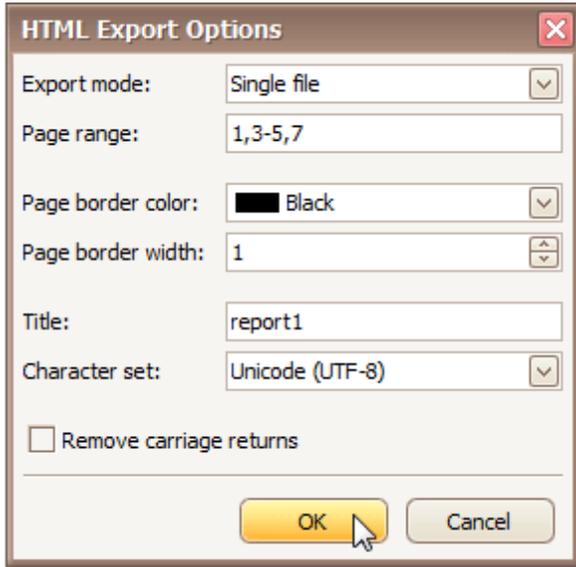
You can also fill the **Application**, **Author**, **Keywords**, **Subject**, and **Title** fields.

See Also

[Exporting from Print Preview](#)

HTML-Specific Export Options

When [exporting a document](#), you can define HTML-specific exporting options using the following dialog.



- **Export mode**

The following modes are available.

- The **Single file** mode allows export of a document to a single file, without preserving the page-by-page breakdown.
- The **Single file page-by-page** mode allows export of a document to a single file, while preserving page-by-page breakdown. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.
- The **Different files** mode allows export of a document to multiple files, one for each document page. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.

- **Page range**

Specify the pages which will be included in the resulting file. Separate page numbers with commas; set page ranges using hyphens.

- **Page border color**

Choose the color for the page border from the available palettes.

- **Page border width**

Define the page border width.

- **Title**

Enter the required document title.

- **Character set**

Define the character set for your HTML document.

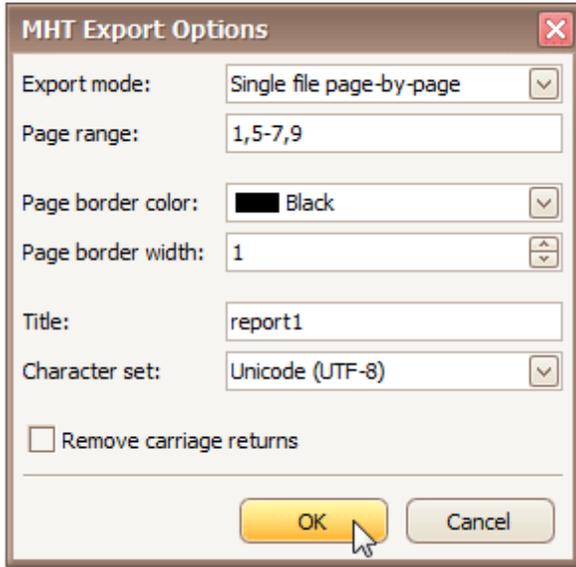
- Also, using the appropriate check box, you can choose whether to remove carriage returns.

See Also

[MHT-Specific Export Options](#)

MHT-Specific Export Options

When [exporting a document](#), you can define MHT-specific exporting options using the following dialog.



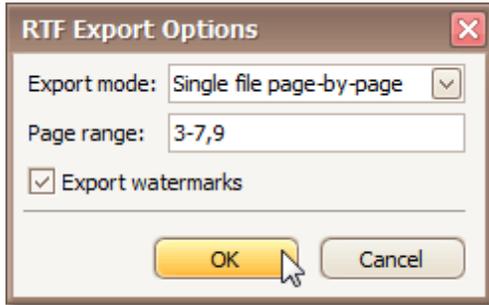
- **Export mode**
Choose one from the available modes to export a document.
 - The **Single file** mode allows export of a document to a single file, without dividing it into pages.
 - The **Single file page-by-page** mode allows export of a document to a single file, divided into pages. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.
 - The **Different files** mode allows export of a document to multiple files, one for each document page. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.
- **Page range**
Define the pages which will be included in the result. Separate page numbers with commas; set page ranges using hyphens.
- **Page border color**
Choose the color for the page borders from the available palettes.
- **Page border width**
Define the width of page borders.
- **Title**
Enter the required document title.
- **Character set**
Define the character set, which will be used in the exported document.
- Also, using the appropriate check box, you can choose whether to remove carriage returns.

See Also

[HTML-Specific Export Options](#)

RTF-Specific Export Options

When [exporting a document](#), you can define RTF-specific export options using the following dialog.



- **Export mode**

Choose one from the available modes to export a document.

- The **Single file** mode allows export of a document to a single file, without dividing it into pages.

- The **Single file page-by-page** mode allows export of a document to a single file, divided into pages. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.

- The **Different files** mode allows export of a document to multiple files, one for each document page. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.

- **Page range**

Define the pages which will be included in the result. Separate page numbers with commas, set page ranges using hyphens.

- Also, using the appropriate check box, you can choose whether the exported document should include watermarks (if they exist).

XLS-Specific Export Options

When [exporting a document](#), you can define XLS-specific export options using the following dialog.



- **Export mode**
Choose one of the available modes to export a document.
 - The **Single file** mode allows export of a document to a single file, without dividing it into pages.
 - The **Different files** mode allows export of a document to multiple files, one for each document page.
- **Page range**
Define the pages which will be included in the result. Separate page numbers with commas; set page ranges using hyphens.
- **Sheet name**
Define the sheet name.
- **Text export mode**
Choose whether value formatting should be converted to the native XLS format string (if it is possible), or embedded into cell values as plain text.
- **Show grid lines**
Check if it's required to show grid lines in the resulting XLS file.
- **Export hyperlinks**
Check if it's required to export hyperlinks.

See Also

[XLSX-Specific Export Options](#)

XLSX-Specific Export Options

When [exporting a document](#), you can define XLSX-specific export options using the following dialog.



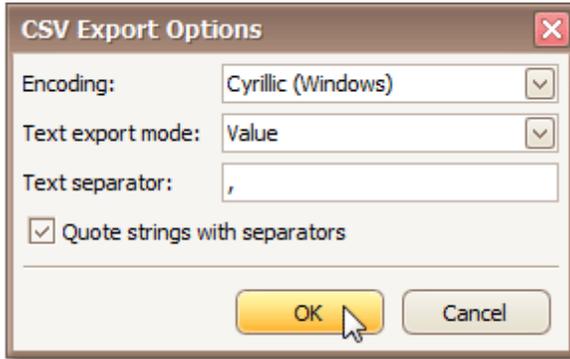
- **Export mode**
Choose one of the available modes to export a document.
 - The **Single file** mode allows export of a document to a single file, without dividing it into pages.
 - The **Single file page-by-page** mode allows export of a document to a single file, with each shown in a separate sheet.
 - The **Different files** mode allows export of a document to multiple files, one for each document page.
- **Page range**
Define the pages which will be included in the result. Separate page numbers with commas; set page ranges using hyphens.
- **Sheet name**
Define the sheet name.
- **Text export mode**
Choose whether value formatting should be converted to the native XLSX format string (if it is possible), or embedded into cell values as plain text.
- **Show grid lines**
Check if it's required to show grid lines in the resulting XLSX file.
- **Export hyperlinks**
Check if it's required to export hyperlinks.

See Also

[XLS-Specific Export Options](#)

CSV-Specific Export Options

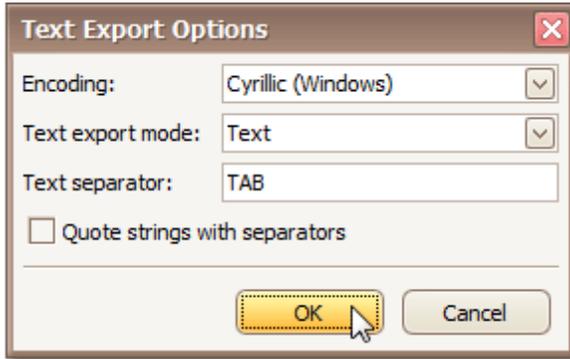
When [exporting a document](#), you can define CSV-specific exporting options using the following dialog.



- **Encoding**
Define the encoding used in the exported document.
- **Text export mode**
Choose whether to use the formatting of the data fields in the bound dataset for the cells in the exported document. Note that if this property is set to Text, all data fields are exported to the CSV file as strings, with the corresponding formatting embedded into those strings.
- **Text separator**
Define a text separator (comma by default).
- You can also specify whether to quote strings with separators.

TXT-Specific Export Options

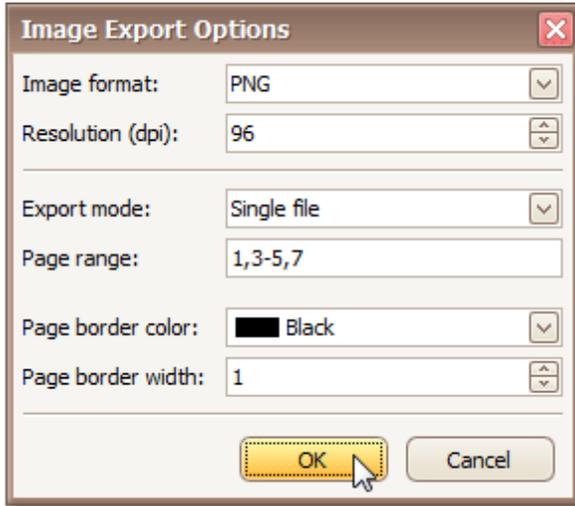
When [exporting a document](#), you can define TXT-specific exporting options using the following dialog.



- **Encoding**
Define the encoding used in the exported document.
- **Text export mode**
Choose whether to use the formatting of the data fields in the bound dataset for the cells in the exported document. Note that if this property is set to Text, all data fields are exported to the Text file as strings, with the corresponding formatting embedded into those strings.
- **Text separator**
Define a text separator (TAB by default).
- You can also specify whether to quote strings with separators.

Image-Specific Export Options

When [exporting a document](#), you can define image-specific exporting options using the following dialog.



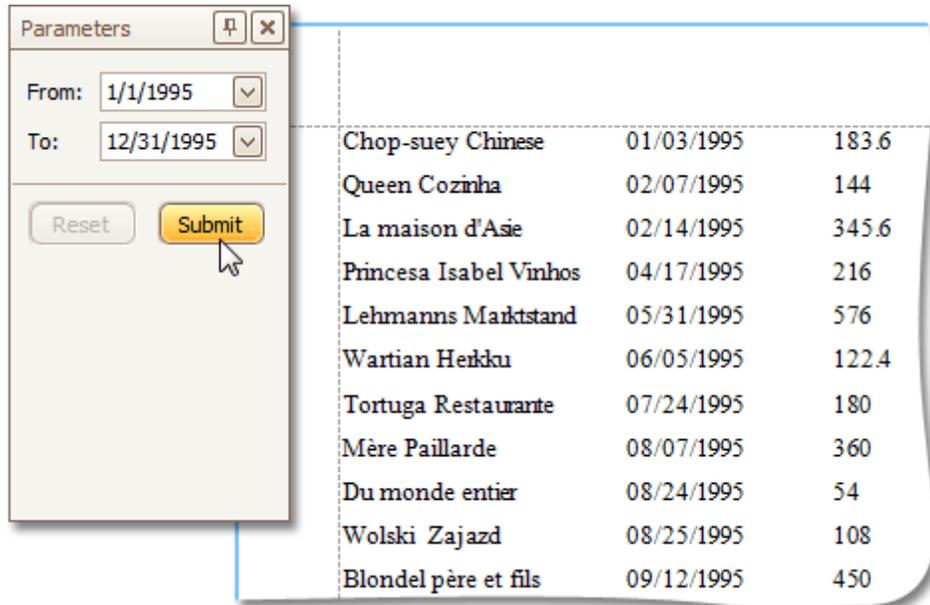
- **Image format**
Choose one from the available image formats to export a document: BMP, EMF, WMF, GIF, JPEG, PNG or TIFF.
- **Resolution (dpi)**
Define the required image resolution.
- **Export mode**
Choose one from the available modes to export a document.
 - The **Single file** mode allows export of a document to a single file, without dividing the output into pages.
 - The **Single file page-by-page** mode allows export of a document to a single file, divided into pages. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.
 - The **Different files** mode allows export of a document to multiple files, one for each document page. In this mode, the **Page range**, **Page border color** and **Page border width** options are available.
- **Page range**
Defines the pages which will be included in the result. Separate page numbers with commas; set page ranges using hyphens.
- **Page border color**
Specifies page border color.
- **Page border width**
Sets page border width.

Passing Parameters

Some documents or reports allow you to control data display, and what data is to be displayed by specifying parameter values.

To show the Parameters window, click the **Parameters**  button on the main toolbar. A window allowing you to change parameter values will be invoked.

Enter the required values and click **Submit**. To reset settings, click **Reset**.



The screenshot shows a 'Parameters' dialog box on the left and a data table on the right. The dialog box has a title bar with a maximize and close button. It contains two date pickers: 'From: 1/1/1995' and 'To: 12/31/1995'. Below these are two buttons: 'Reset' and 'Submit'. A mouse cursor is pointing at the 'Submit' button. The data table on the right has three columns: restaurant name, date, and a numerical value.

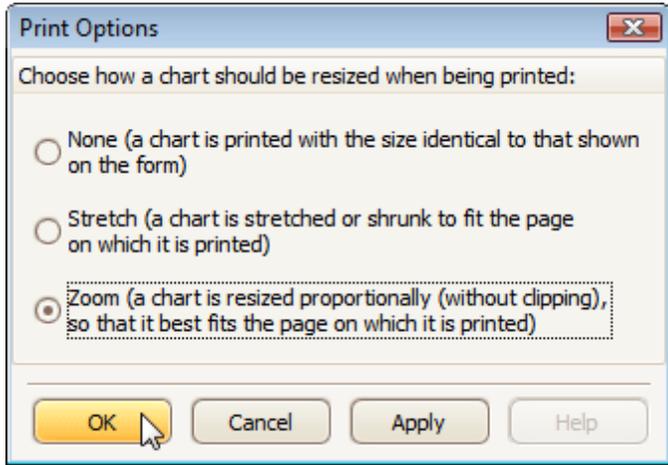
Chop-suey Chinese	01/03/1995	183.6
Queen Cozinha	02/07/1995	144
La maison d'Asie	02/14/1995	345.6
Princesa Isabel Vinhos	04/17/1995	216
Lehmans Marktstand	05/31/1995	576
Wartian Herku	06/05/1995	122.4
Tortuga Restaurante	07/24/1995	180
Mère Pailarde	08/07/1995	360
Du monde entier	08/24/1995	54
Wolski Zajazd	08/25/1995	108
Blondel père et fils	09/12/1995	450

Miscellaneous

Customize Printing Settings of Charts

If allowed by your application vendor, you can customize additional print settings of a document. For example, if you are about to print out a chart, you may be able to customize the chart's printing options.

To do this, click the **Customize**  button on the toolbar. The **Print Options** dialog will be invoked.

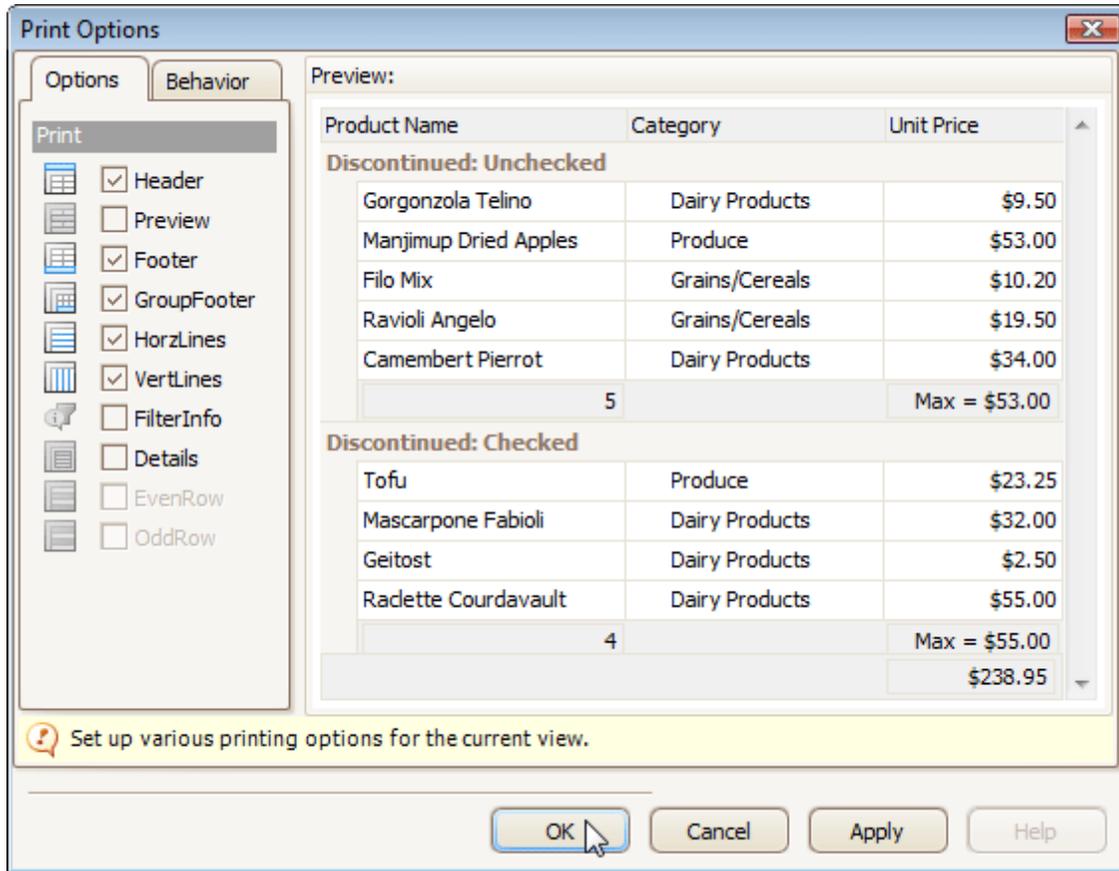


- **None**
A chart is printed in the identical size shown on the form.
- **Stretch**
A chart is stretched or shrunk to fit the page on which it is printed.
- **Zoom**
A chart is resized proportionally (without clipping), so that it best fits the page on which it is printed.

Customize Printing Settings of Grids

If allowed by your application vendor, you can customize additional print settings of a document. For example, if you are about to print out a grid, you may be able to customize grid printing options.

To do this, click the **Customize**  button on the toolbar. The **Print Options** dialog will be invoked.

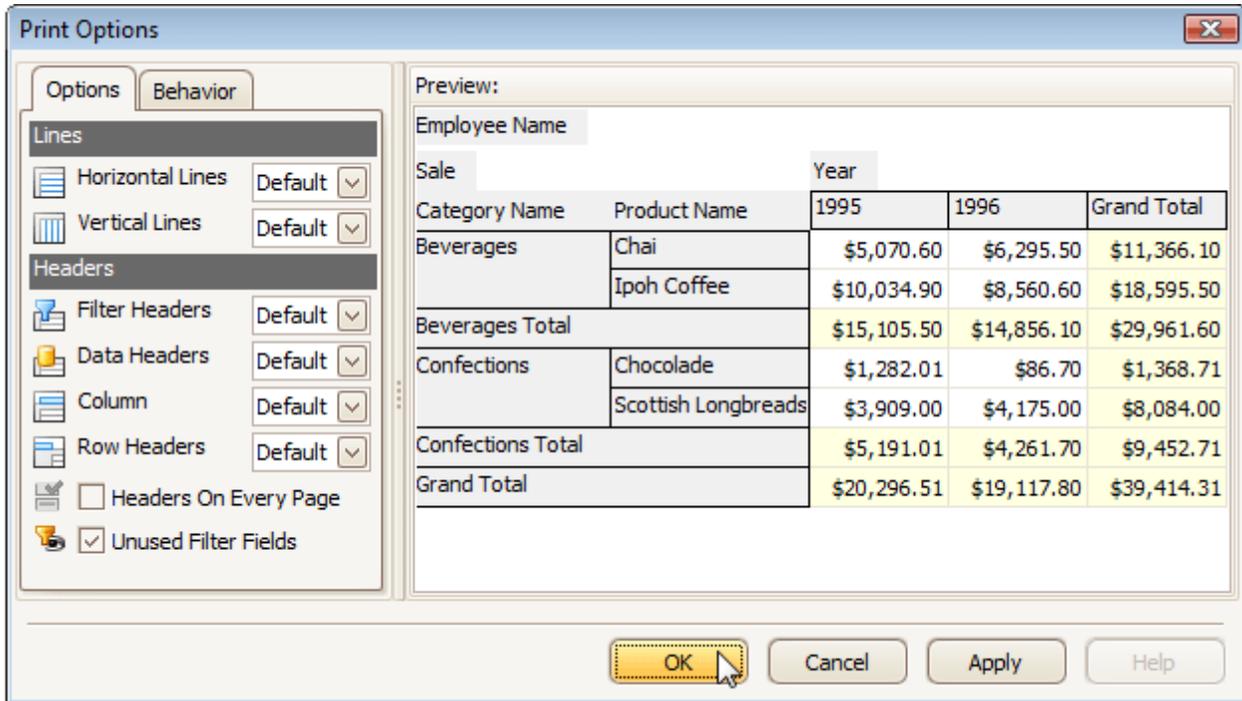


- **Options tab**
Allows you to uncheck elements that you don't want to print.
- **Behavior tab**
Allows you to pre-process a grid before printing it. For instance, you can enable automatic column width calculation, or automatic group row expansion.

Customize Printing Settings of Pivot Tables

If allowed by your application vendor, you can customize additional print settings of a document. For example, if you are about to print out a Pivot Table, you may be able to customize its printing options.

To do this, click the **Customize**  button on the toolbar. The **Print Options** dialog will be invoked.



- **Options tab**

Allows you to specify which elements are to be printed.

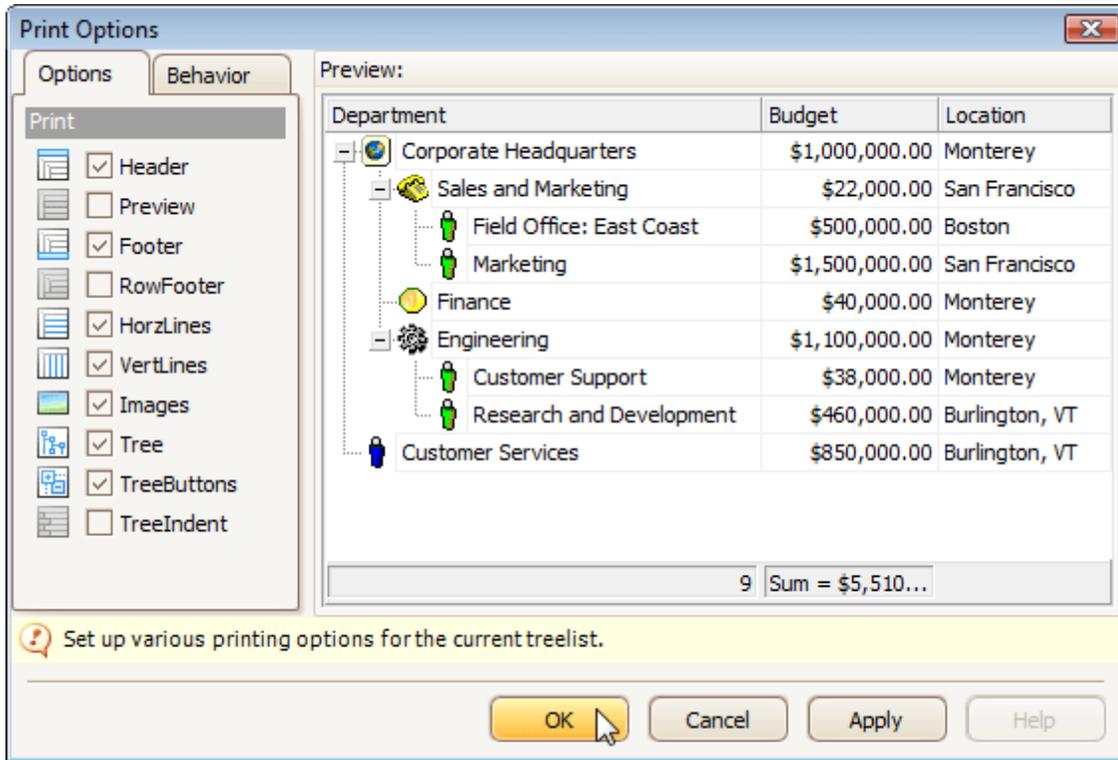
- **Behavior tab**

Allows you to pre-process a Pivot Table before printing it. For instance, you can enable field value merging.

Customize Printing Settings of Tree Views

If allowed by your application vendor, you can customize additional print settings of a document. For example, if you are about to print out a tree view, you may be able to customize its printing options.

To do this, click the **Customize**  button on the toolbar. The **Print Options** dialog will be invoked.



- **Options tab**

Allows you to specify which elements are to be printed.

- **Behavior tab**

Allows you to pre-process a tree view before printing it. For instance, you can enable automatic column width or row height calculation.

Warnings and Error Messages

Warnings

Warning Text	Description
The specified file doesn't have a PRNX extension.	This message is invoked if you try to open a file with an extension different from PRNX. Click Yes if you are sure that the file contains the compatible markup. Otherwise, click No .
One or more margins are set outside the printable area of the page.	This message is invoked when you try to print a document , whose margins are outside of the printable area of the page. Click Yes if you are sure that your printer supports the specified page margins. Otherwise, click No .

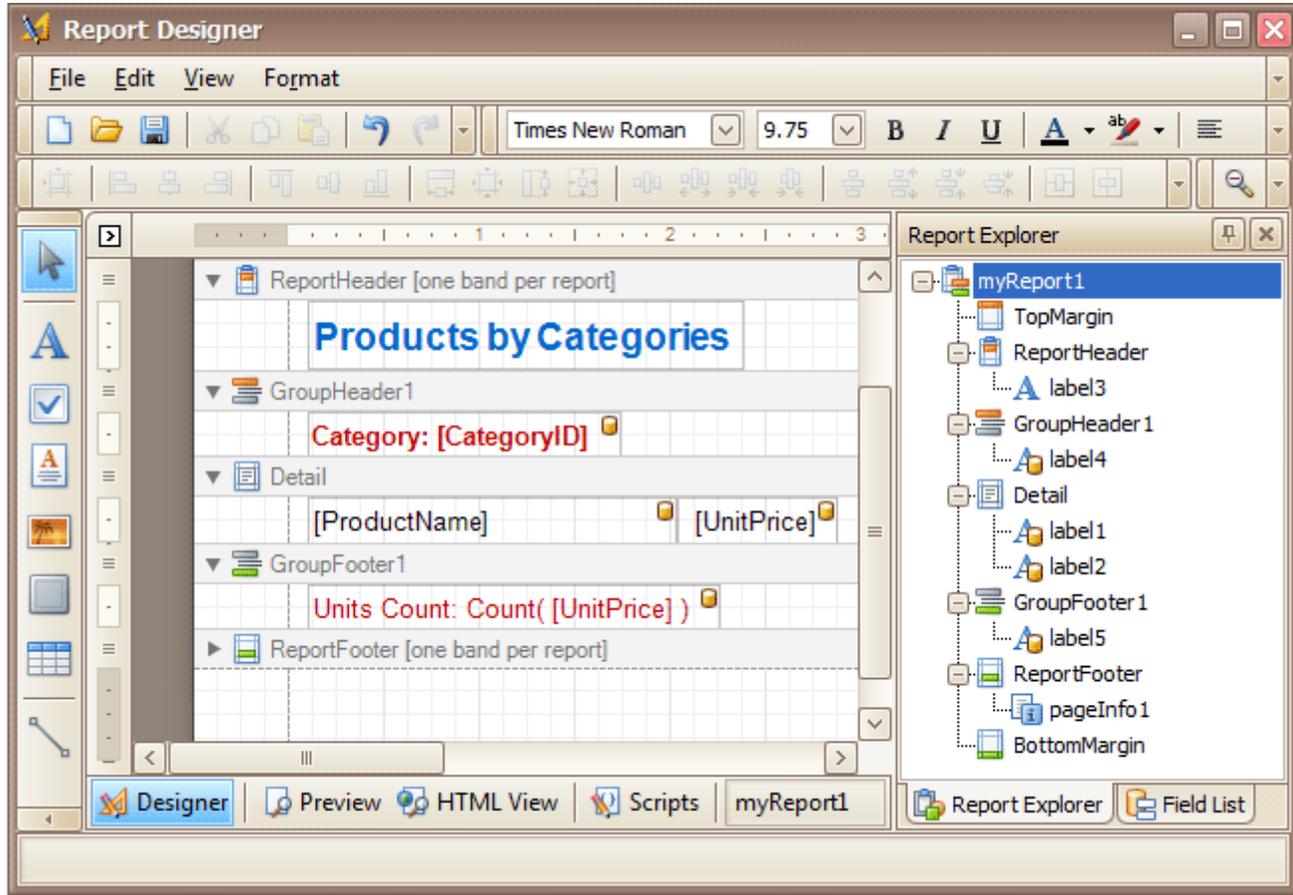
Errors

Error Text	Description
The specified file doesn't contain valid XML data in the PRNX format. Loading is stopped.	This message is invoked if you try to open a file with an incompatible markup. This file cannot be loaded in the Print Preview. Try to open a file with a compatible markup.

Report Designer

This guide contains information about the basic principles of creating reports with Report Designer.

The Report Designer allows you to create new reports from scratch, bind them to data, and even pass them to another workstation and load them into another instance of the report designer. In addition to report editing capabilities, it allows you to display its Print Preview and send its output to a printer or export it to a file on disk.



The following sections are available in this guide.

- [Report Editing Basics](#)
- [Create Reports](#)
- [Report Designer Reference](#)
- [Report Wizard](#)
- [Preview, Print and Export Reports](#)

Note

Some features described in this guide may differ from what you see in your application. This depends on your application vendor.

Report Editing Basics

This section describes the most basic tasks you may encounter when initiating a report edit in the Report Designer.

The following documents are available in this section.

Report Editing Basics

- [Back Up the Current Layout Before Modifying It](#)
- [Manually Update Report Output](#)
- [Change the Layout of Report Elements](#)
- [Change Fonts and Colors of Report Elements](#)
- [Delete Report Elements](#)

Providing Data

- [Add or Modify Static Information in Your Report](#)
- [Displaying Values from a Database \(Binding Report Elements to Data\)](#)
- [Use Mail Merge in Report Elements](#)
- [Add Calculated Fields to a Report](#)
- [Add Parameters to a Report](#)

Data Representation

- [Change Value Formatting of Report Elements](#)
- [Change or Apply Data Sorting to a Report](#)
- [Change or Apply Data Filtering to a Report](#)
- [Change or Apply Data Grouping to a Report](#)

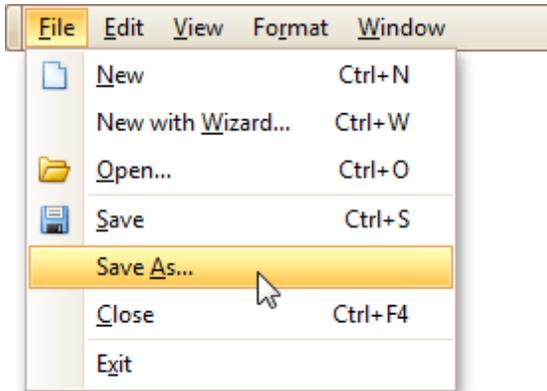
Additional Features

- [Add Totals to a Report](#)
- [Add Page Numbers and System Information to a Report](#)
- [Create or Modify Watermarks of a Report](#)

Back Up the Current Layout Before Modifying It

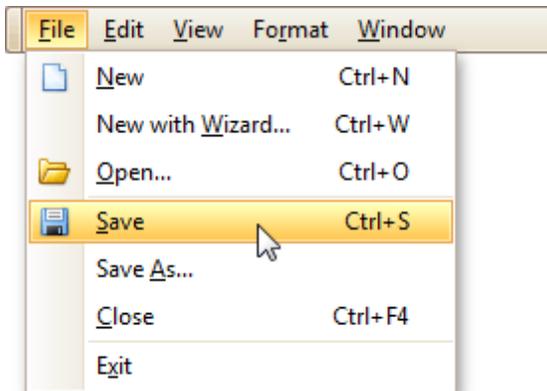
To guarantee that you will be able to revert your report to its original state, you need to create a *backup copy*. Then, you can apply changes without worrying that it will be hard to restore your report, in case something breaks.

- To save a copy of your report, in the [Main Menu](#), select **File | Save As**.



Then, in the invoked standard **Save File** dialog, specify the folder and file name.

- To save the current layout of your report, in the Main Menu select **File | Save**, or press CTRL+S. In this case, the report will be saved in the application's current folder.



After your report is saved, its path is displayed in the Report Designer's title bar.



- To load a previously saved report, in the Main Menu, click **File | Open**, or press CTRL+O. The standard **Open File** dialog will allow you to locate and open report files.

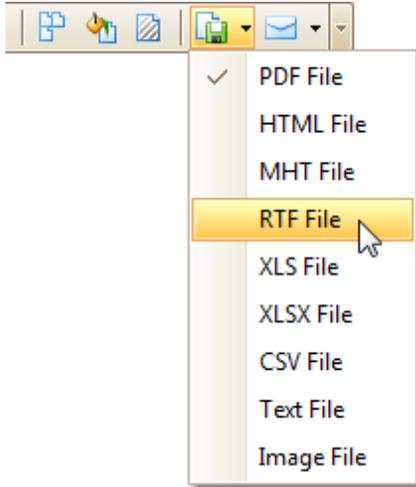
See Also

[Change the Layout of Report Elements](#)
[Delete Report Elements](#)

Manually Update Report Output

Sometimes you may need to simply update a couple of values in your report before printing it. In these cases, the simplest way to correct your report is to export it to an editable file (e.g. RTF), then use an appropriate editor tool to edit values and print your report.

To export a report, switch to the [Preview Tab](#) and click the arrow near the **Export Document...** button .

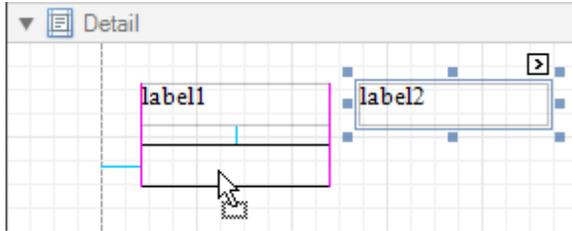


To learn more about report exporting, see [Exporting from Print Preview](#).

Change the Layout of Report Elements

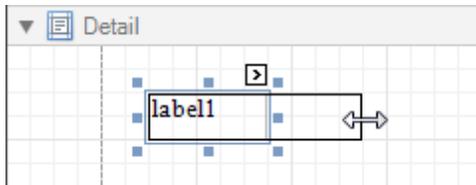
To select a [control](#), click it. To select the next control in tab order, press TAB. To select the previous control in tab order, click SHIFT + TAB.

Individual controls can be moved, using either mouse or keyboard.

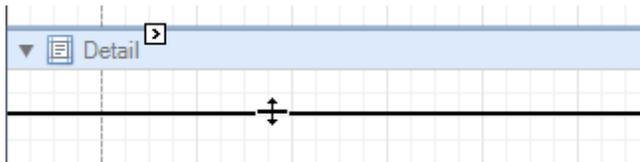


They can be precisely aligned to each other using either *Snap Grid* or *Snap Lines*. For details on this, refer to [Controls Positioning](#).

To resize a control using the mouse, select it, and then drag a rectangle drawn on its edge or corner.



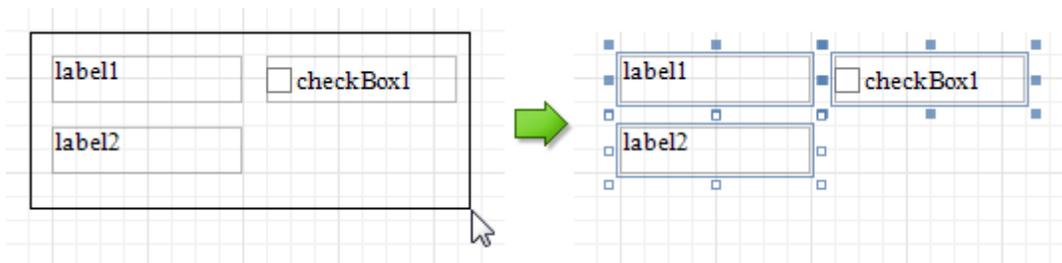
To resize a [band](#), drag its header strip.



To resize an element using the keyboard, press SHIFT+ARROW or CTRL+SHIFT+ARROW.

To select multiple elements, do one of the following.

- Click elements while holding CTRL or SHIFT.
- Click on a blank space and drag the mouse to create a selection frame. When the mouse button is released, all controls within the selection frame's boundaries will be selected. In this case, the previous selection is cleared.



You can also easily align multiple controls or make them the same size, by utilizing the [Layout Toolbar](#).

In addition, to copy, paste and delete controls simultaneously, you can place them within the [Panel](#).

For more information, refer to [Controls Positioning](#).

See Also

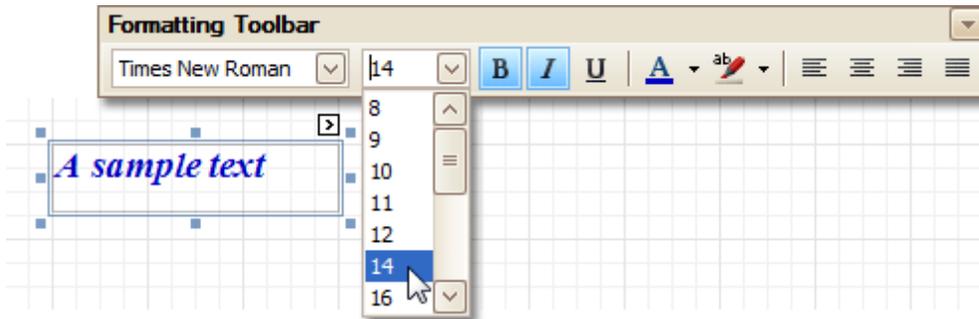
[Change Fonts and Colors of Report Elements](#)

[Delete Report Elements](#)

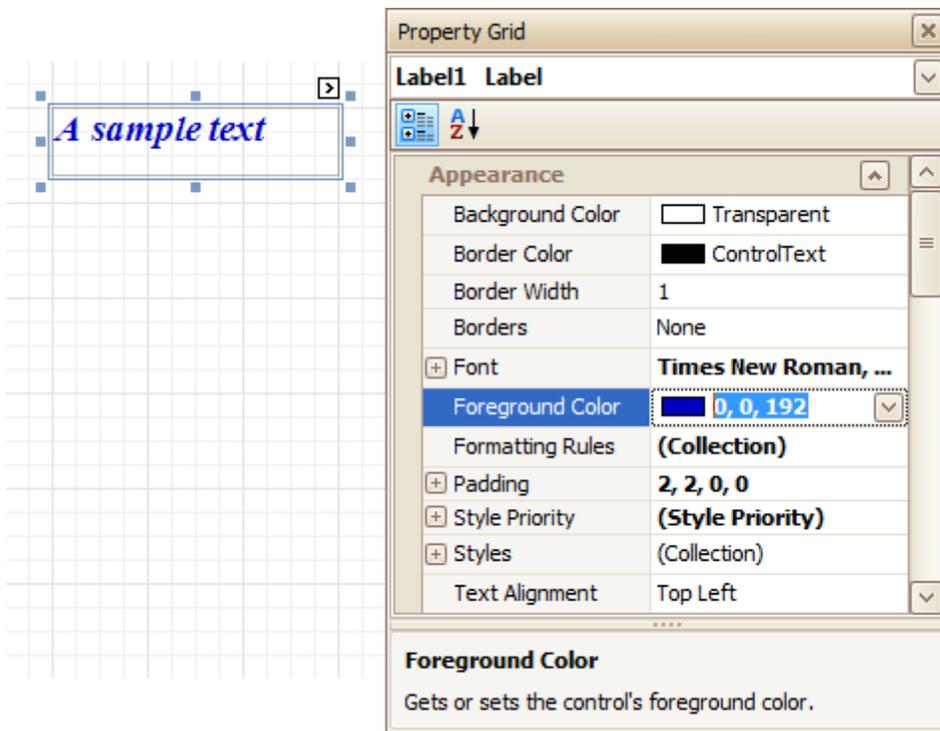
Change Fonts and Colors of Report Elements

To change fonts and colors (as well as paddings, text alignment and other appearance properties) of a report [control](#) or [band](#), select this element and do one of the following.

- Use the [Formatting Toolbar](#).



- Use the [Property Grid](#), where all appearance-related properties are located under the **Appearance** category.



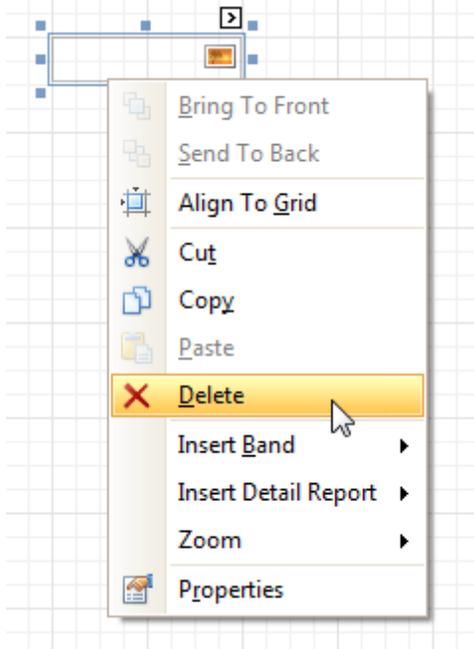
Note that the appearance settings of a band are applied to all controls contained within it.

When it's required to apply styles in bulk, we recommend using common *style templates*, which also can be stored in an external style sheet file, and applied to multiple reports. In addition, this allows you specify separate *odd/even styles*, to improve your reports' readability. Another noteworthy option, is the capability to *conditionally* change the appearance of report elements based on a certain logical expression (e.g. if a control's value satisfies some rule). For more information, refer to [Styles and Conditional Formatting in Reports](#).

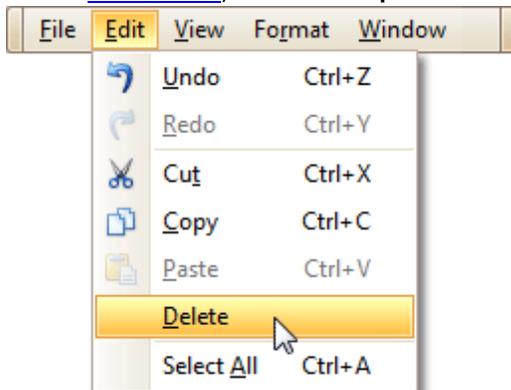
Delete Report Elements

To delete a report element ([band](#) or [control](#)), select it in the [Design Panel](#) or [Report Explorer](#) (to select multiple elements, hold down SHIFT while selecting), and then do one of the following.

- Press DELETE.
- Right-click the report element, and in the invoked [Context Menu](#), choose **Delete**.



- In the [Main Menu](#), select **Edit | Delete**.



Note

You can cancel the operation by pressing CTRL+Z.

Note that certain elements cannot be deleted (such as the [Detail band](#)).

See Also

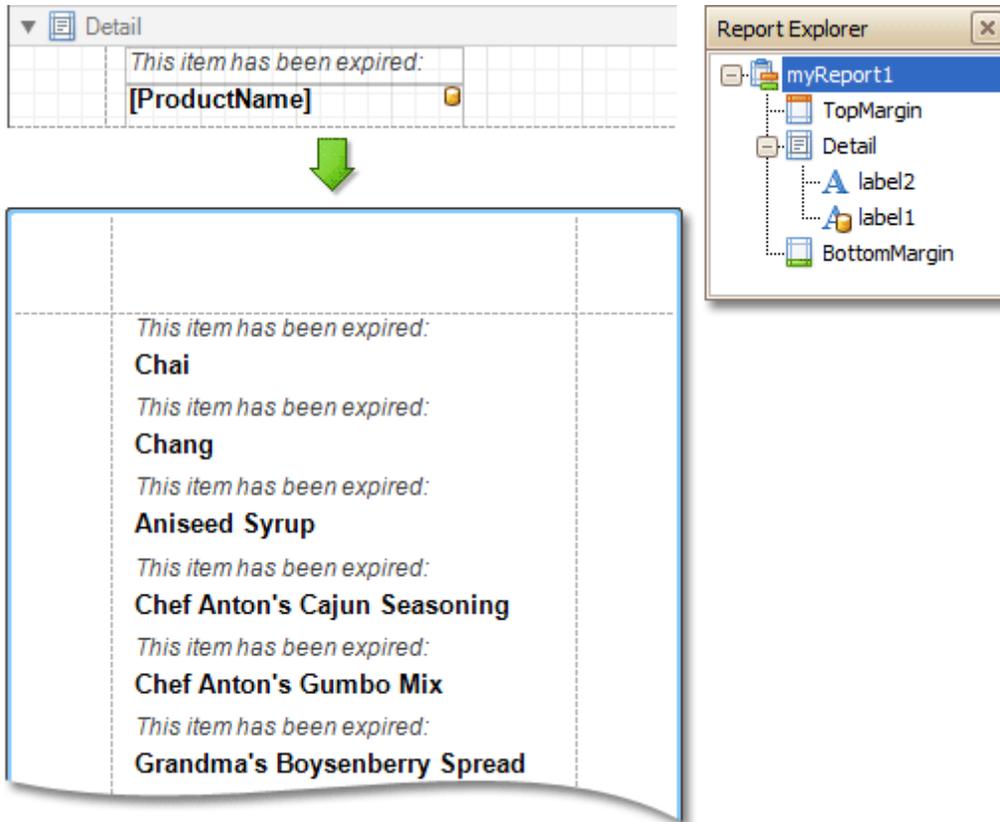
[Change the Layout of Report Elements](#)

Add or Modify Static Information in Your Report

In a report, *static* and *dynamic* information is displayed using appropriate [controls](#).

Dynamic information changes through a report, such as [values from a database](#) (which comprise the main report data) or [service information](#) (such as [current user name or page numbers](#)). Approaches to embed dynamic information to your report are detailed in the following document: [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

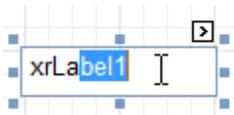
Static information is text or images that aren't obtained from a data source, and therefore don't change through the report, and don't depend on the current computer. Static information can be printed only once (e.g. in a [Report Header](#)), can repeat on each page (e.g. in a [Page Header](#)) or can repeat with every entry in your report's data source (a data-bound label, which is placed onto the [Detail band](#)).



Static information can be either [edited in-place](#), or [loaded from an external file](#).

Change Static Information

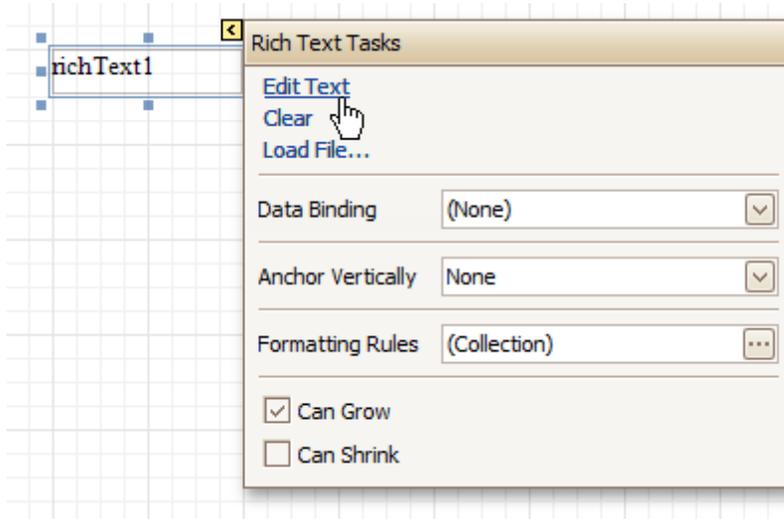
Text elements (e.g. [Labels](#) and [Rich Text Boxes](#)) allow in-place editing of their content. Simply double-click an element and activate the editor.



Note

For in-place editing, you also can utilize the [Formatting Toolbar](#).

Another way to change a control's static information, is by clicking its [Smart Tag](#). Then, the invoked actions list will contain a link (or, a button) allowing you to edit this control's content.

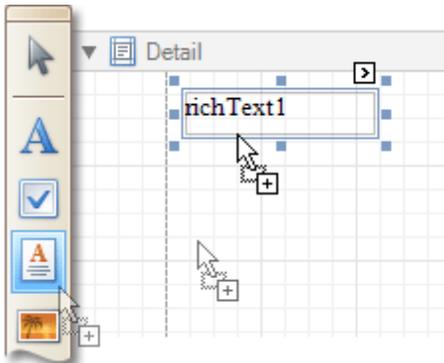


Load Static Information to Your Report

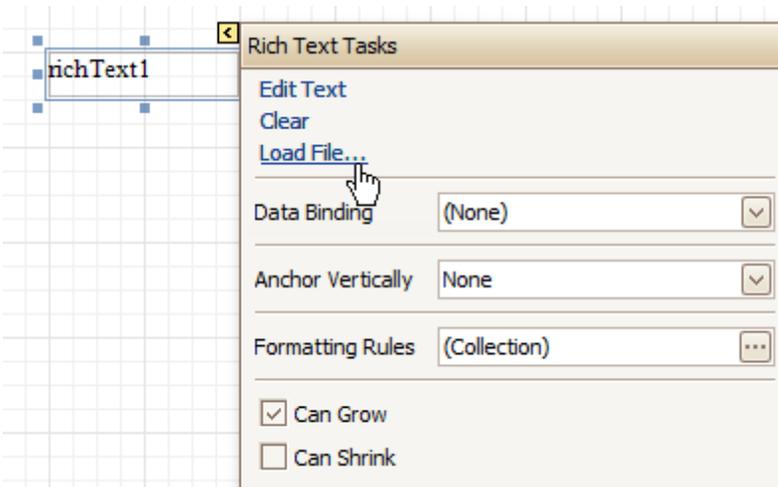
To load static information to your report from an external file, drop an appropriate control from the [Control Toolbox](#) (e.g. [Label](#), [Rich Text Box](#) or [Picture Box](#)). After it is properly [positioned](#), edit its content using the [Smart Tag](#).

For instance, the following instructions describe how to display a rich text (a formatted text with embedded images) into your report.

1. Drop the [Rich Text](#) control from the [Toolbox](#) onto the [Detail band](#).



2. To load content from an external RTF or TXT file, select the created control and click its Smart Tag. In the invoked actions list, click the **Load File...** link.



Then, in the invoked dialog, locate the required file, and click **Open**.

See Also

[Change Fonts and Colors of Report Elements](#)

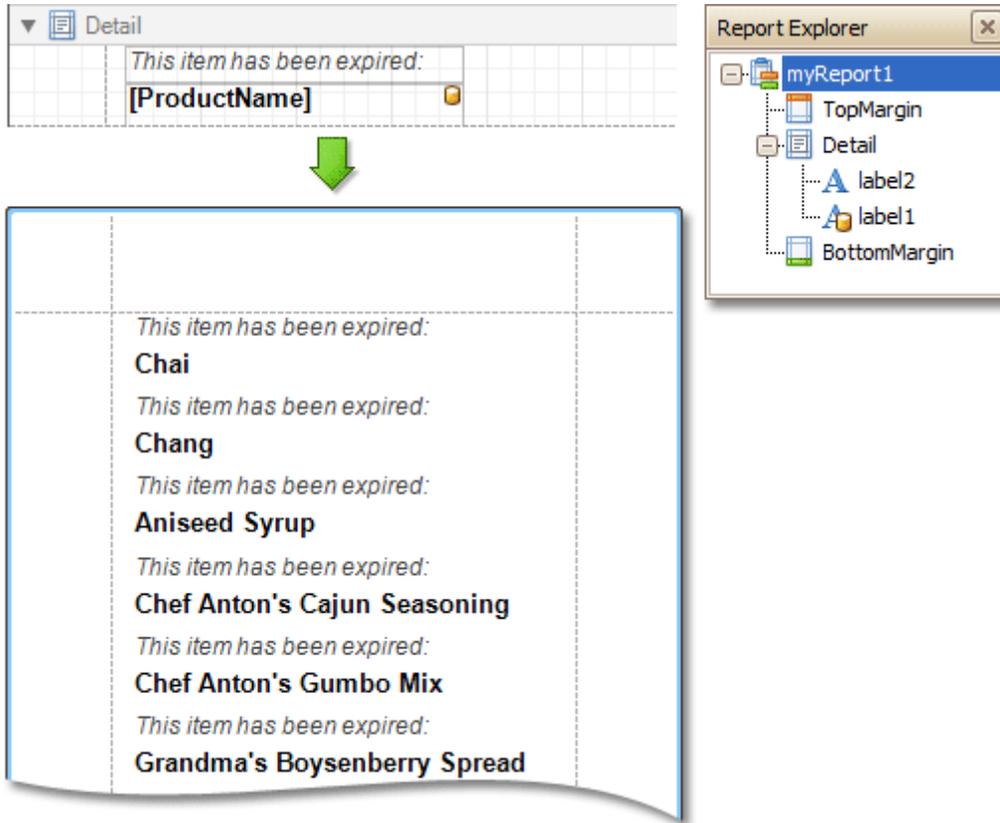
[Displaying Values from a Database \(Binding Report Elements to Data\)](#)

[Use Mail Merge in Report Elements](#)

Displaying Values from a Database (Binding Report Elements to Data)

Report [controls](#) can either display [static](#) information or *dynamic* data fetched from the [bound database](#).

Data-bound controls are indicated by a yellow database icon in their top-right corner, both in the [Design Panel](#) and [Report Explorer](#).



To embed dynamic information to a report, if this information is contained in the report's data source, this can easily be done using one of the following approaches.

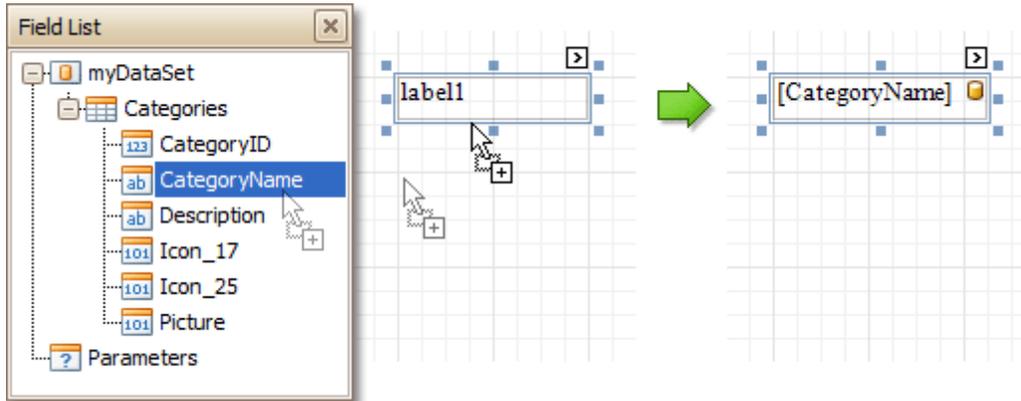
- [Using the Field List](#)
- [Using the Smart Tag](#)
- [Using the Property Grid](#)

After a control is bound to data, you may wish to employ additional features, which are listed in the final section of this document.

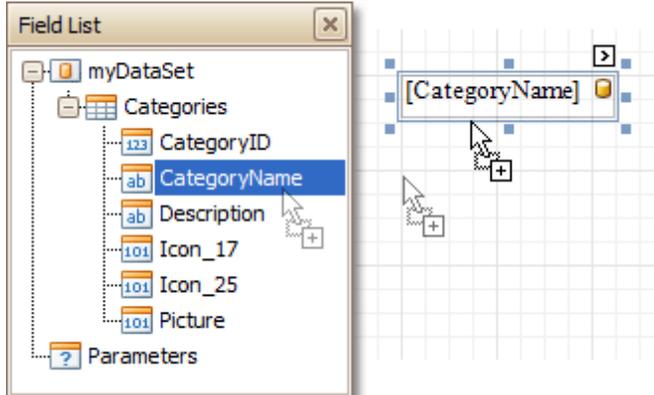
- [Special Capabilities](#)

Using the Field List

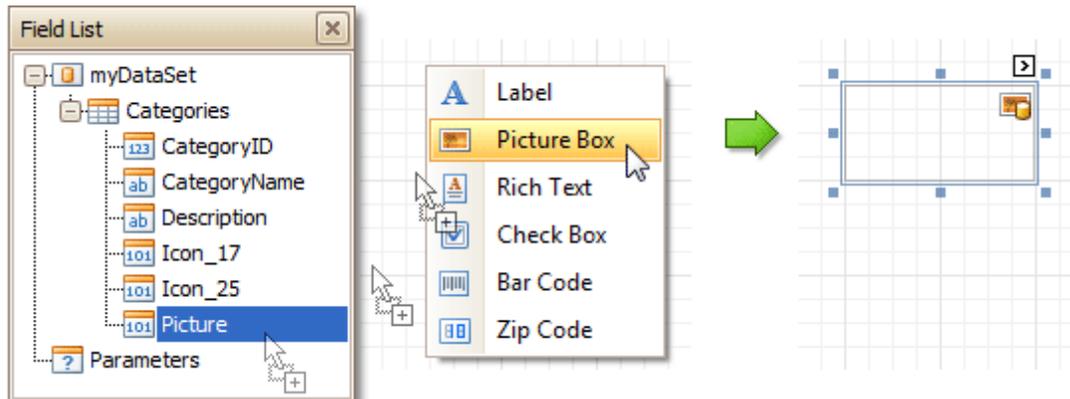
- To bind an existing report control to a data field, click the required field item in the [Field List](#), and then drag and drop it onto the control. The yellow database icon inside it will indicate that it's been successfully bound.



- To add a new data-bound control, simply drag the required data field from the Field List onto a report band. This will create a [Label](#) bound to this data field.

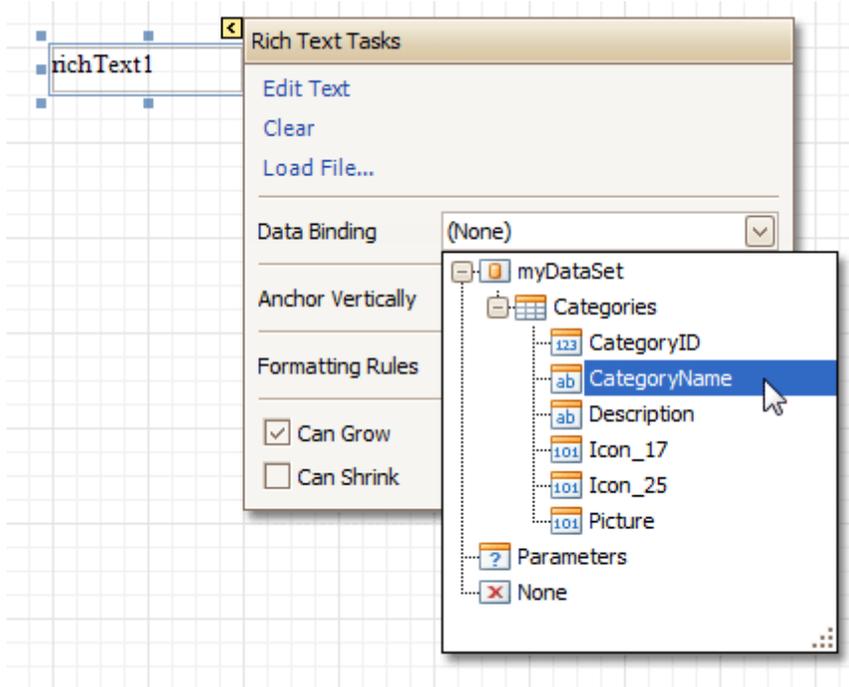


- A more flexible way to create data-bound elements is to right-click a Field List item, and then drag and drop it onto a report. This will invoke the [Context Menu](#), where you can choose which control should represent your data, and it will be automatically created and bound to the selected data field.



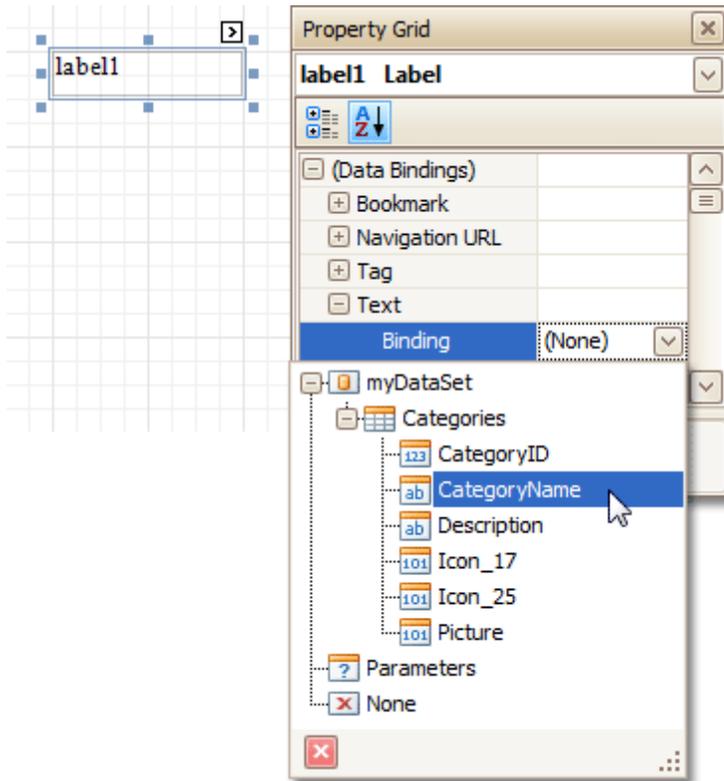
Using the Smart Tag

Click a control's [Smart Tag](#), and in the invoked actions list, expand the **Data Binding** drop-down list, and select the required data field.



Using the Property Grid

Click a control to select it, and in the [Property Grid](#), expand the **(Data Bindings)** branch that holds the bindable options. Specify a data field for the required attribute (e.g. **Text**).



Special Capabilities

After a control is bound, you can apply formatting to its dynamic content (e.g. for it to be treated as currency, or date-time content). For details on this, refer to [Change Value Formatting of Report Elements](#).

It is possible to make a control display a result of a summary function calculated across the data field to which it is bound. For details on this, refer to [Add Totals to a Report](#).

Another noteworthy option is to combine both static and dynamic content within the same control (e.g. to append some text prefix or postfix to a value obtained from a database), or even bind a control to multiple data fields at one time. This is detailed in [Use Mail Merge in Report Elements](#).

If it's required to perform some pre-calculations over the data field to which a control is bound, this can be done by creating a *calculated field*, and binding the control to it. This is detailed at [Add Calculated Fields to a Report](#).

In turn, a calculated field may contain both dynamic and static *parameters*, which can be requested each time a report is being previewed. For more information, refer to [Add Parameters to a Report](#).

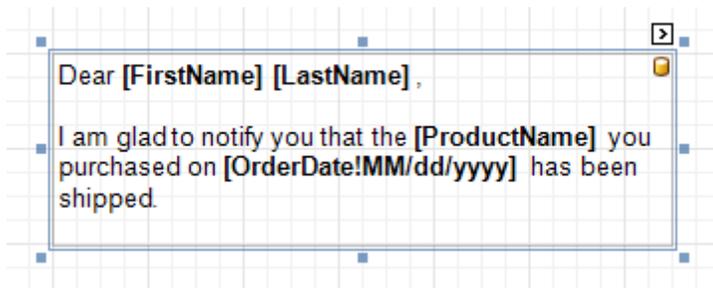
Use Mail Merge in Report Elements

The *mail merge* feature allows you to combine both [static](#) and [dynamic](#) content within the same [control](#) (e.g. to append some text prefix or postfix to a value obtained from a database), or even bind a control to multiple data fields at one time.

Mail merge is available for the following controls.

- [Bar Code](#)
- [Check Box](#)
- [Label](#)
- [Rich Text](#)
- [Table Cell](#)
- [Zip Code](#)

To embed dynamic data into a control's static content, type in data field names surrounded by [square brackets].



Dear **Nancy Davolio**,

I am glad to notify you that the **Chai** you purchased on **09/20/2008** has been shipped.

To learn how *values formatting* can be applied to the embedded data fields (e.g. for them to be treated as *currency*, or *date-time* content), refer to [Change Value Formatting of Report Elements](#).

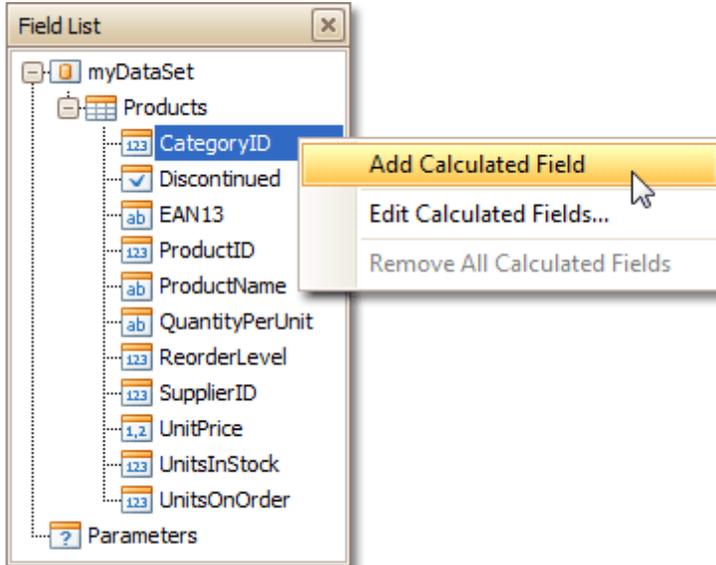
Add Calculated Fields to a Report

This document demonstrates how to add a *calculated field* to a report. The main purpose of calculated fields is to perform pre-calculations (of virtually any level of complexity) over [data fields](#). To learn how to easily perform simple calculations within a single data field, refer to [Add Totals to a Report](#).

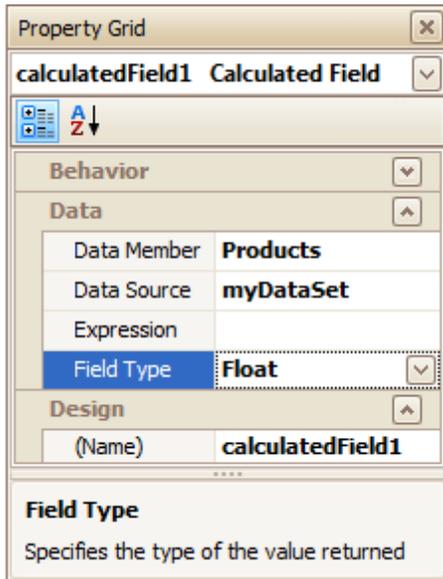
In the Report Designer, a calculated field is similar to an ordinary data field (e.g. you can bind controls to it, and [group](#), [sort](#) and [filter](#) your report against it).

To add a calculated field to your report, follow the instructions below.

1. To create a calculated field, in the [Field List](#), right-click any data member, and on the invoked menu, choose **Add Calculated Field**.

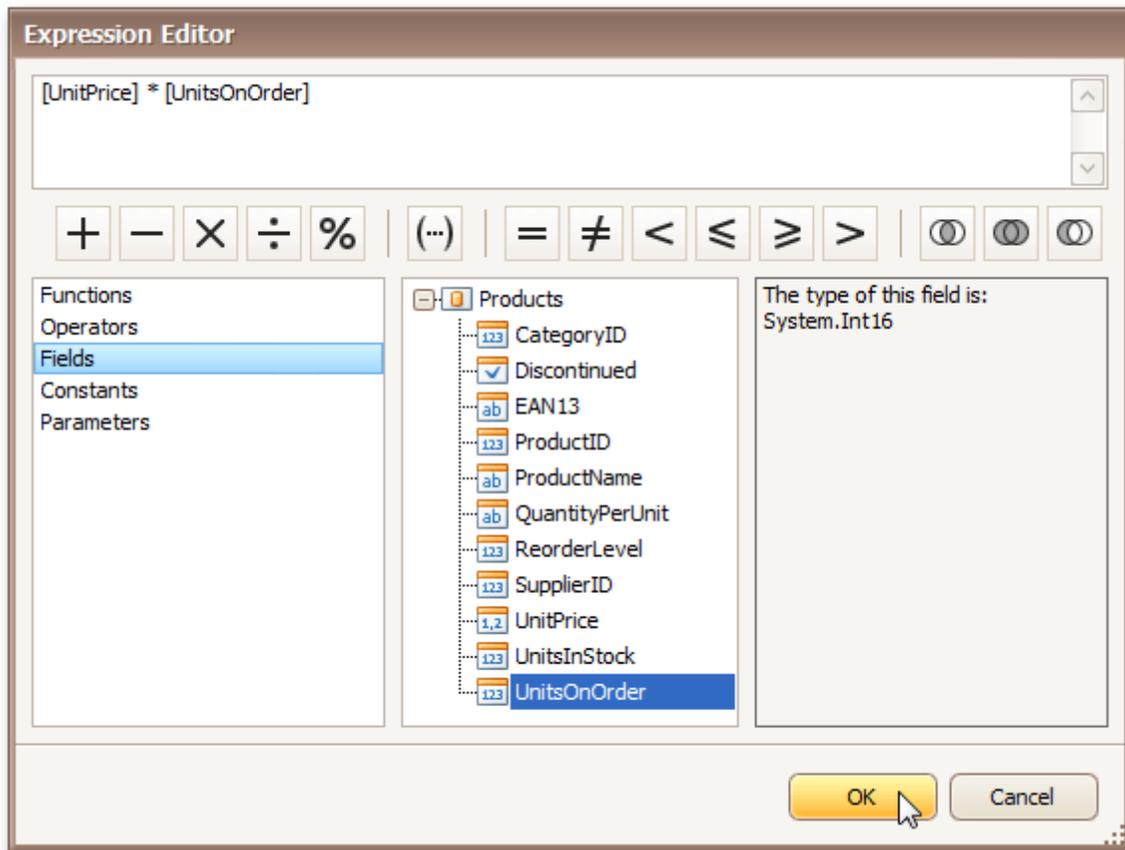


2. In the Field List, select the created field to show its properties in the [Property Grid](#). Among these options, make sure to change the **Field Type** property to an appropriate value.



3. Now, let's create an expression for the calculated field.

Click the ellipsis button in the **Expression** section, to invoke the **Expression Editor**. You can also invoke this dialog by right-clicking your calculated field within the Field List and selecting **Edit Expression...**



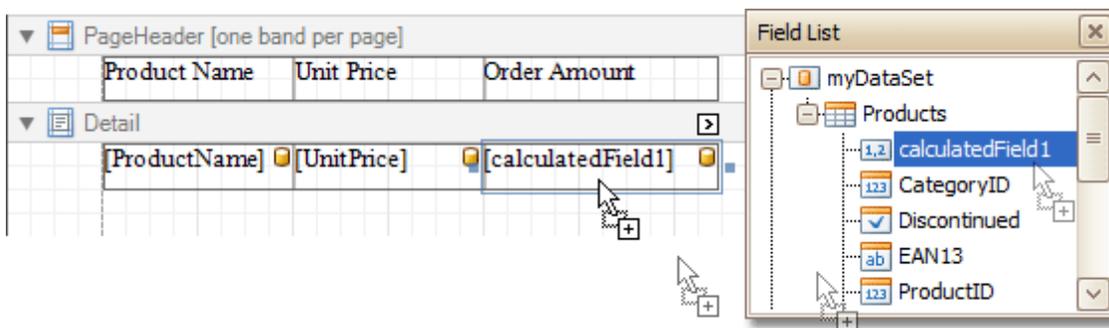
Click **Fields** to see the field list. Double-click field names to add them to the expression string. Use the toolbar to add operators between field names.

Note

Note that it's also possible to employ [parameters](#) in a calculated field's expression.

To close the dialog and save the expression, click **OK**.

4. Finally, drag the calculated field from the Field List onto the required [band](#), just like an ordinary data field.



The report with a calculated field is now ready. Switch to the [Preview Tab](#), and view the result.

Product Name	Unit Price	Order Amount
Chang	\$19.00	\$760.00
Aniseed Syrup	\$10.00	\$700.00
Queso Cabrales	\$21.00	\$630.00
Sir Rodney's Scones	\$10.00	\$400.00
Gorgonzola Telino	\$12.50	\$875.00
Mascarpone Fabioli	\$32.00	\$1280.00
Gravad lax	\$26.00	\$1300.00
Ipoh Coffee	\$46.00	\$460.00
Røgede sild	\$9.50	\$665.00
Chocolade	\$12.75	\$892.50
Maxilaku	\$20.00	\$1200.00
Gnocchi di nonna Alice	\$38.00	\$380.00

See Also[Add Parameters to a Report](#)[Change or Apply Data Filtering to a Report](#)[Change or Apply Data Grouping to a Report](#)[Change or Apply Data Sorting to a Report](#)

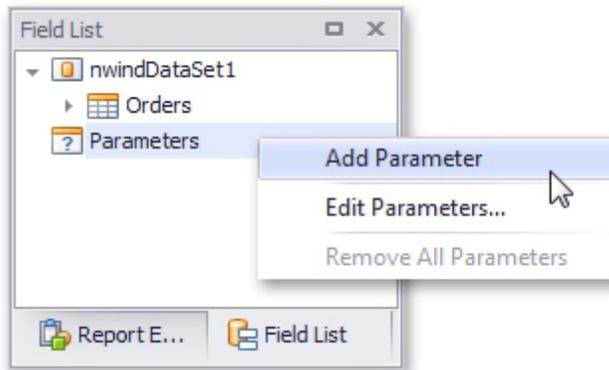
Add Parameters to a Report

For your report, you can employ *parameters*, which can be requested each time the report is being previewed. And, based on specified values, the report will then being [filtered](#). It is also possible to employ parameters in expressions of [calculated fields](#).

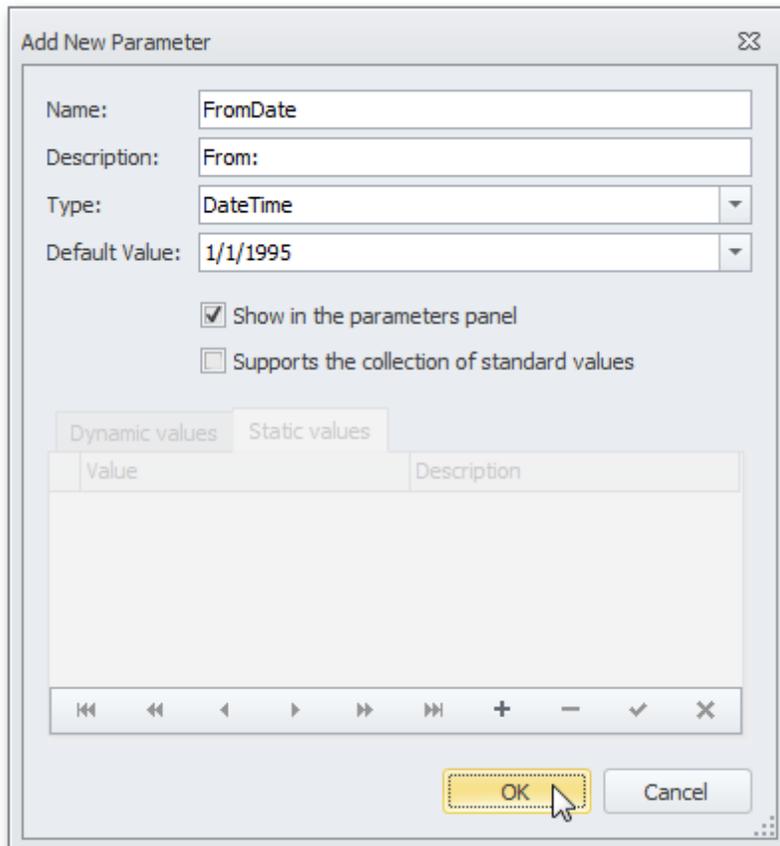
In this example, we'll create two date-time parameters, to filter out orders which don't fall in the specified range, from the report.

To add parameters and filter your report based on their values, follow the steps below.

1. In the [Field List](#) window, right-click over the **Parameters** section and in the invoked menu, click **Add Parameter**.



2. In the invoked window for the created parameter, set its **Name** and **Description**. And, make sure to set its **Type** to an appropriate value.



Note

In Print Preview, the report's document is not generated until you have submitted values of all the

parameters that have the **Show in the parameters panel** option switched on via the **Parameters** UI.

- Enabling the **Supports the collection of standard values** option of the parameter allows end-users to modify its value and also activates the **Dynamic values** and the **Static values** tabs of the window:
 - On the **Dynamic values** tab, you can specify a parameter's data source, data adapter and data member. The value member defines a data field that provides values to the parameter. The display member defines a data field that provides display names for parameter values (how these values appear in the user interface available in a Print Preview).
 - On the **Static values** tab, you can manually fill the list of parameter values, with each value having an individual description (specifying how this value appears in the **Parameters** panel).

Add New Parameter

Name:

Description:

Type:

Default Value:

Show in the parameters panel

Supports the collection of standard values

Dynamic values | Static values

Value	Description
1/1/1995	January 1, 1995
4/1/1995	April 1, 1995
▶ 8/1/1995 ▼	August 1, 1995

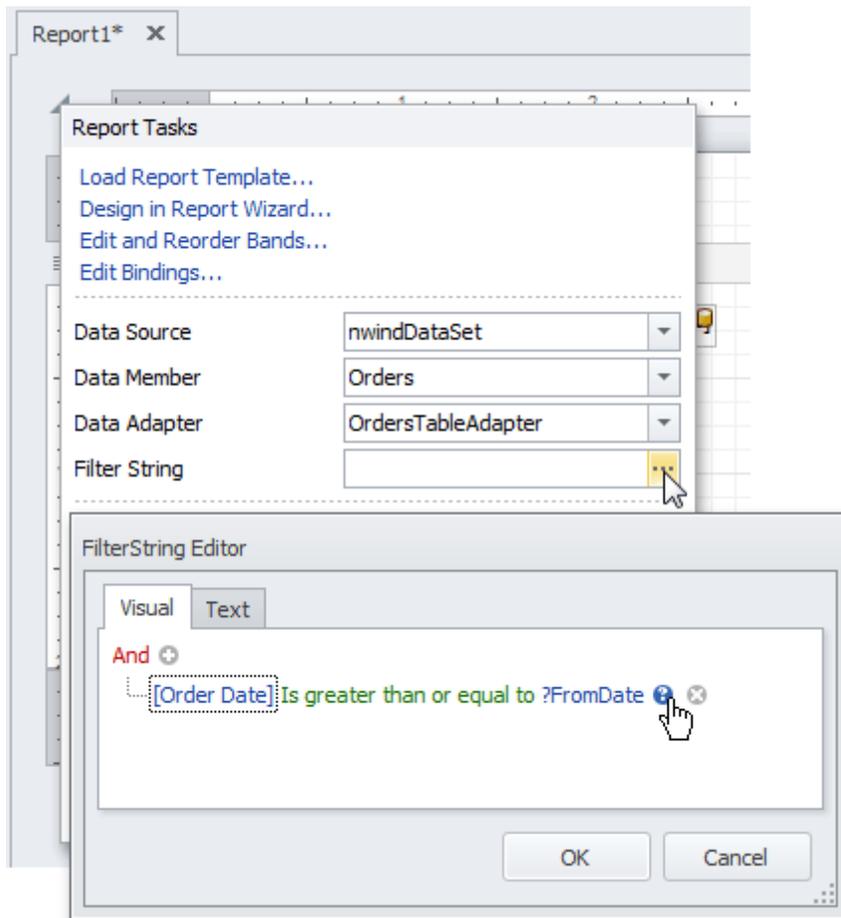
Navigation: ⏪ ⏩ ⏴ ⏵ ⏶ ⏷ ⏸ + - ✓ ✕

OK Cancel

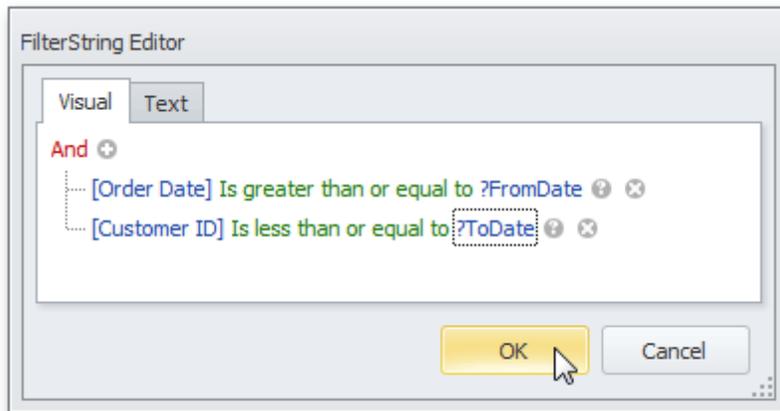
Then, repeat the previous steps to create the second parameter, so that every time your report is previewed, you will be asked to specify two dates.

The following instructions explain how to use parameters to filter your report's data.

- Click your report's [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Filter String** entry. Then, in the invoked **Filter String Editor**, construct an expression where a data field is compared with the created parameters. To access parameters, click the icon on the right until it turns into a question mark.



The complete filtering expression will then look like this.



The parameterized report is now ready. Switch to the [Preview Tab](#), and in the **Parameters** section, define the required values and click **Submit**.

The screenshot shows the Report Designer interface for 'Report1*'. The 'Parameters' pane on the left has 'From: April 1, 1995' and 'To: 12/31/1995'. A date picker calendar is open, showing 'Monday, July 16, 2012' and 'December, 1995'. The calendar grid shows the month of December 1995, with the 31st selected. The main report area displays a table with the following data:

3/1995	10462	UK	\$6.17
4/1995	10463	Belgium	\$14.78
4/1995	10464	Portugal	\$89.00
5/1995	10465	Denmark	\$145.04
6/1995	10466	Brazil	\$11.93
6/1995	10467	Italy	\$4.93
4/7/1995	10468	Germany	\$44.12
4/10/1995	10469	USA	\$60.18

The bottom status bar shows 'Designer', 'Preview', 'HTML View', 'Scripts', 'Page 1 of 10', and a zoom level of '100%'.

See Also

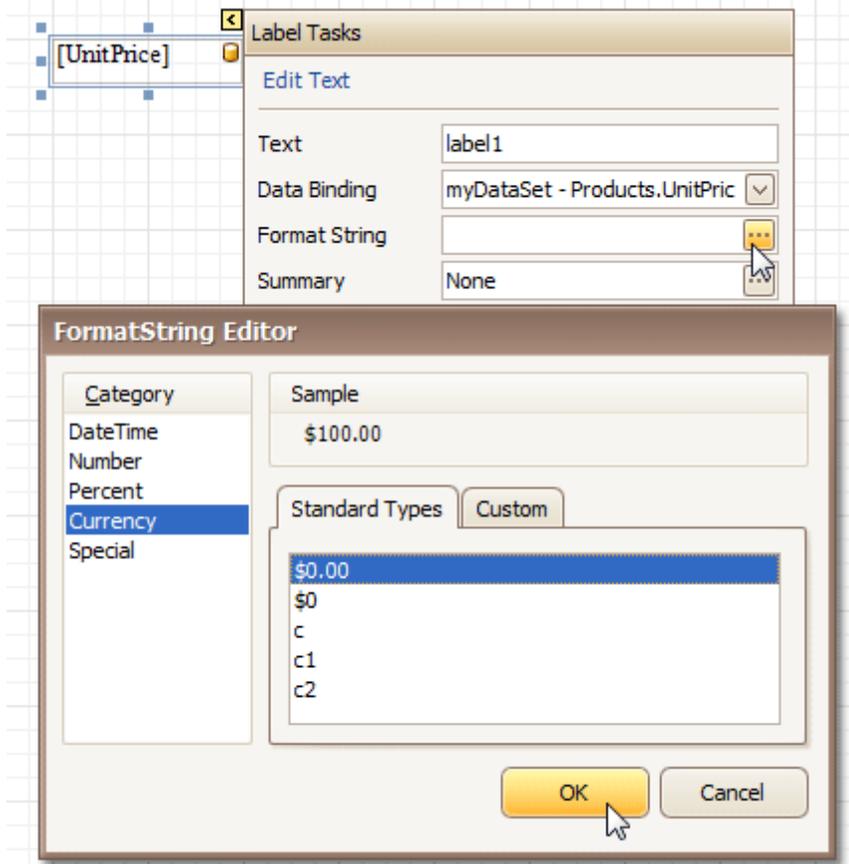
[Add Calculated Fields to a Report](#)

[Change or Apply Data Filtering to a Report](#)

Change Value Formatting of Report Elements

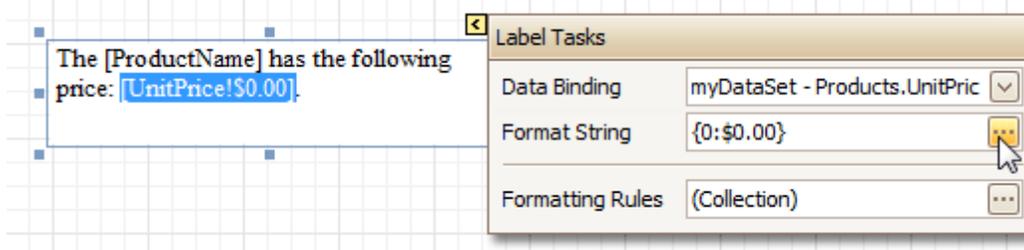
To apply value formatting for a [data-bound control](#)'s content (e.g. for it to be treated as currency, or date-time content), locate this control, click its [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Format String** entry.

Then, in the invoked format string editor, choose one of the predefined formatting styles, or specify a custom one.



To quit the dialog and apply the changes, click **OK**.

Similarly, when the [mail-merge](#) is employed for a control's dynamic content, to apply a value formatting to an embedded data field, select it in the in-place editor, and click the control's smart tag. Then, in the invoked actions list, specify the required format.



Note that when a *summary function* is being applied to a control's dynamic content, value formatting is applied separately, via the **Summary Editor**, as described at [Add Totals to a Report](#).

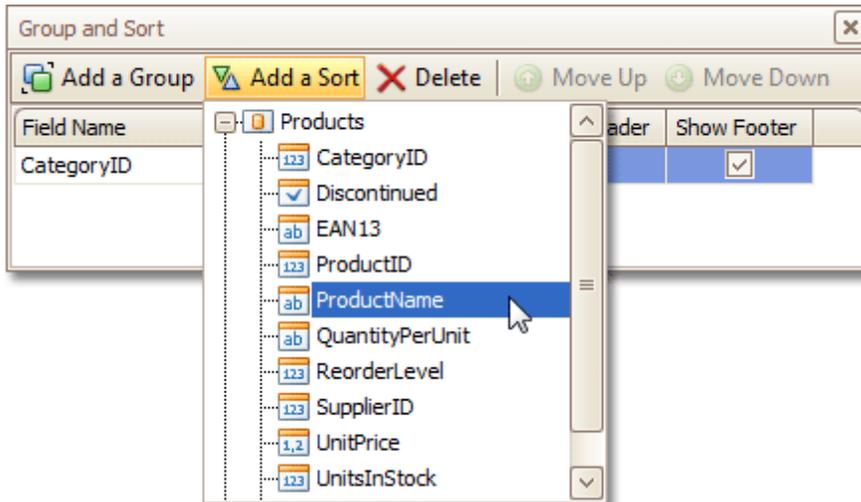
Independently from the general (or, summary) value formatting, you can specify a native XLSX format string, which is to be preserved when the report is being [exported](#) to XLSX. This can be done via a control's **Xlsx Format String** property.

Change or Apply Data Sorting to a Report

This document demonstrates how to sort a report's data. Note that as with data grouping, sorting can be performed only if a report is [bound to a data source](#). In this example, we'll use the report created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To sort records in a data-aware report, do the following.

1. Switch to the [Group and Sort Panel](#), and click **Add a Sort**. In the invoked list, choose a data member across which the report is to be sorted.



Note that sorting across [calculated fields](#) is supported, as well.

2. To manage the sorting order (ascending or descending), use the **Sort Order** drop-down list. And, if multiple sorting criteria are specified, you can define the priority for each one, by selecting it in the Group and Sort Panel, and using the **Move Up** and **Move Down** buttons.

The sorting is now applied. Switch to the [Preview Tab](#), and view the result.

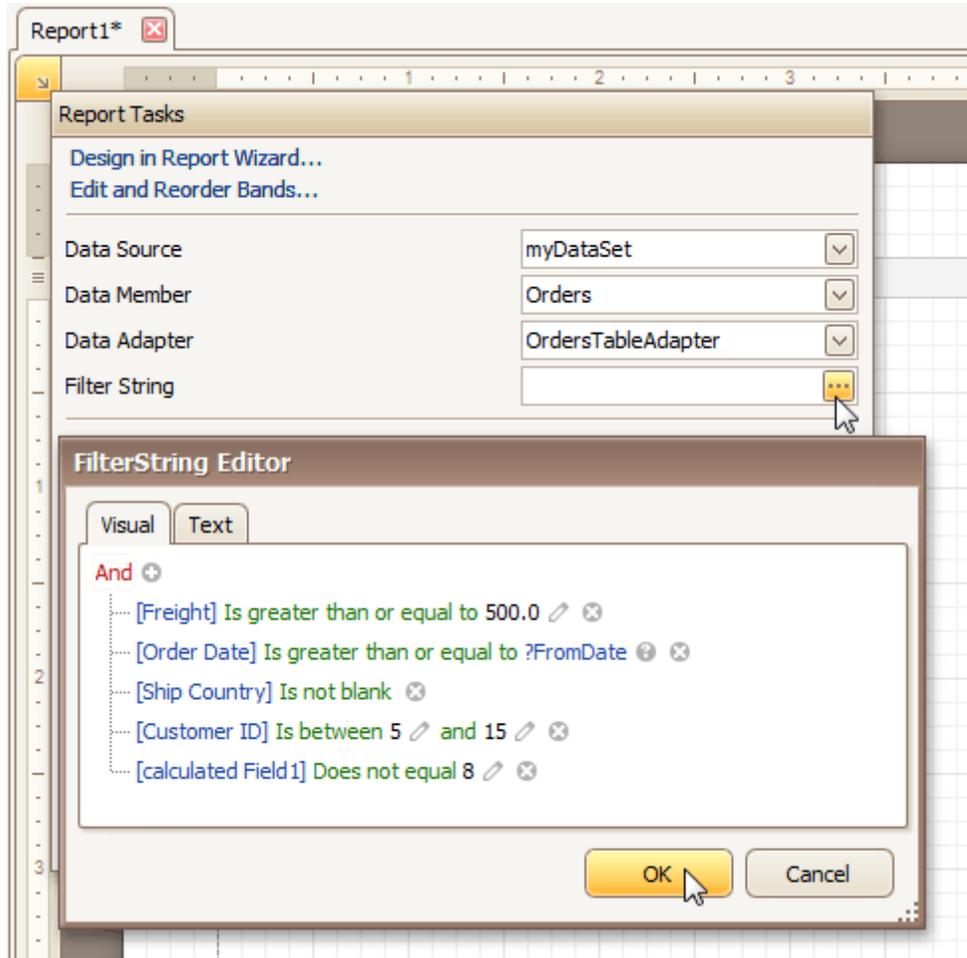
Products by Categories	
Category: 1	
Chai	\$18.00
Chang	\$19.00
Chartreuse verte	\$18.00
Côte de Blaye	\$263.50
Guaraná Fantástica	\$4.50
Ipoh Coffee	\$46.00
Lakkalikööri	\$18.00
Laughing Lumberjack Lager	\$14.00
Outback Lager	\$15.00
Rhönbräu Klosterbier	\$7.75
Sasquatch Ale	\$14.00
Steeleye Stout	\$18.00
	\$455.75
Category: 2	
Aniseed Syrup	\$10.00
Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35

See Also[Change or Apply Data Grouping to a Report](#)[Change or Apply Data Filtering to a Report](#)[Add Calculated Fields to a Report](#)[Sort Groups by a Summary Function Result](#)

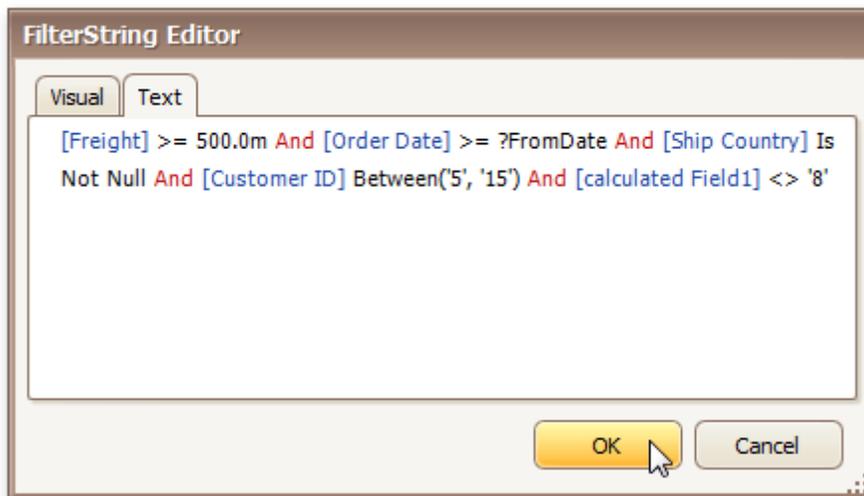
Change or Apply Data Filtering to a Report

For your report, you can specify a filtering expression (of virtually any level of complexity), to exclude excessive or undesired data.

To filter a report's data, click its [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Filter String** entry. Then, in the invoked **Filter String Editor**, construct an expression.



In the **Filter String Editor**, you can either use the **Visual** expression builder, or specify the expression in **Text**.



Note that it is possible to embed [parameters](#) into the expression, and also request them each time a report is

previewed.

To quit the dialog and save the changes, click **OK**.

See Also

[Change or Apply Data Grouping to a Report](#)

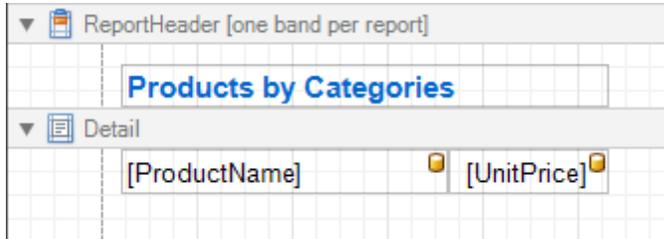
[Change or Apply Data Sorting to a Report](#)

Change or Apply Data Grouping to a Report

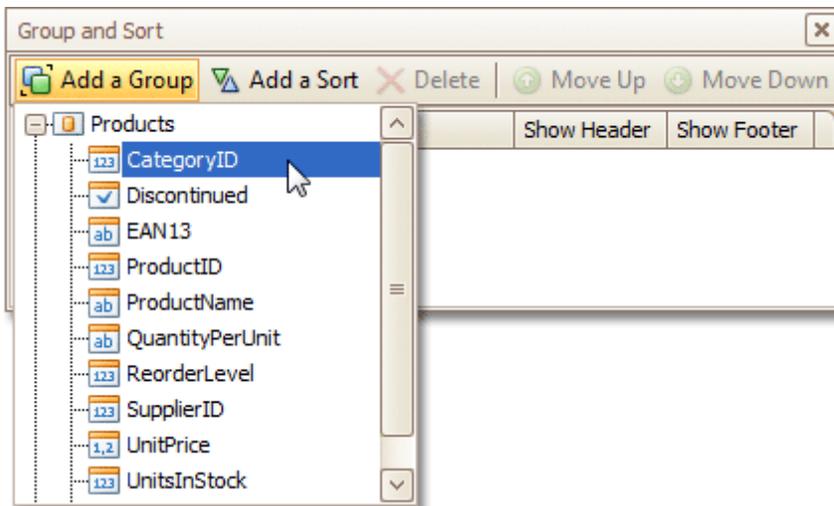
This document demonstrates how to group a report's data. Note that data grouping can be performed only if a report is [bound to a data source](#).

To group records in a report, do the following.

1. [Create a new report](#) and [bind it to a data source](#). In this tutorial, we'll start with the following report.



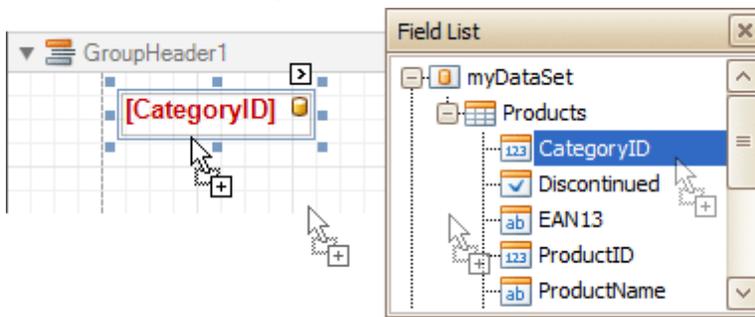
2. Now, switch to the [Group and Sort Panel](#), and click **Add a Group**. In the invoked list, choose a data member across which the report is to be grouped. Note that grouping across [calculated fields](#) is supported, as well.



If multiple groups are created, you can specify the priority for each group, by selecting it in the Group and Sort Panel, and using the **Move Up** and **Move Down** buttons.

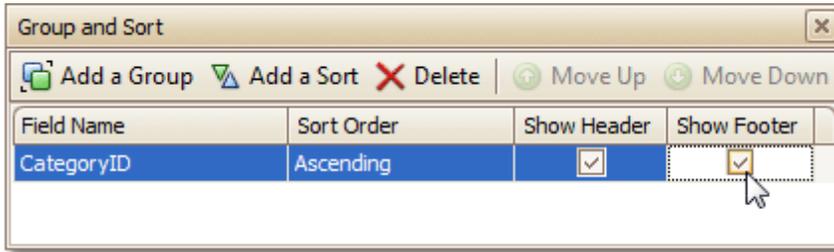
3. After this, a [Group Header](#) band is added to the report, with the specified data member being set as its grouping criterion.

Now, it's only left to drop the corresponding item from the [Field List](#) onto this band, so that it's displayed as a header for each group.



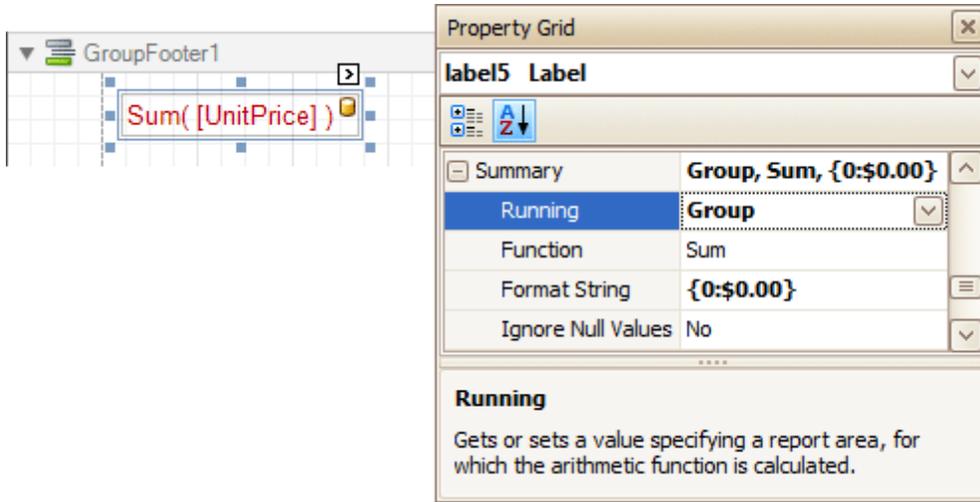
If required, you also can apply [mail merge](#) to this label.

4. In addition, you can enable the corresponding Group Footer band, by checking the **Show Footer** option in the Group and Sort Panel.



To manage the sorting order of the group's items (ascending or descending), use the **Sort Order** drop-down list.

5. Then, you can [calculate a total](#) across the group, by placing a [Label](#) onto this band, and specifying its **Summary** properties in the following way.



Note also that *value formatting* is applied to a summary independently of the [general formatting](#), and has a greater priority.

The report is now ready. Switch to the [Preview Tab](#), and view the result.

Products by Categories	
Category: 1	
Guaraná Fantástica	\$4.50
Ipoh Coffee	\$46.00
Rhönbräu Klosterbier	\$7.75
	\$58.25
Category: 2	
Northwoods Cranberry Sauce	\$40.00
Vegie-spread	\$43.90
	\$83.90
Category: 3	
Teatime Chocolate Biscuits	\$9.20
Sir Rodney's Marmalade	\$81.00
Gumbär Gummibärchen	\$31.23
Schoggi Schokolade	\$43.90
Zaanse koeken	\$9.50
Tarte au sucre	\$49.30
	\$224.13

To learn how groups can be sorted against a summary function result, see [Sort Groups by a Summary Function Result](#).

To learn how page numbers can be added to groups independently from the report's page numbers, refer to [Add Page Numbers for Groups](#).

See Also

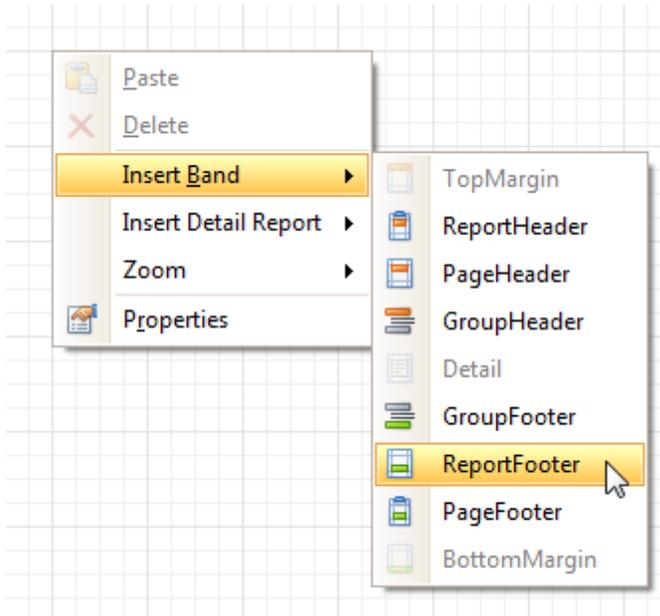
[Sort Groups by a Summary Function Result](#)
[Count the Number of Records in a Report or a Group](#)
[Change or Apply Data Sorting to a Report](#)
[Change or Apply Data Filtering to a Report](#)
[Add Calculated Fields to a Report](#)

Add Totals to a Report

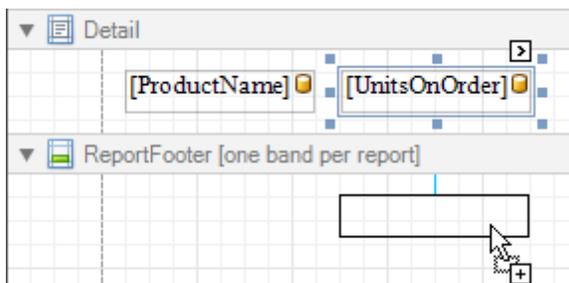
With Report Designer, you can force a [data-bound control](#) to calculate one of the standard summary functions (**Average, Summary, Count, Running Summary, Percentage, Max** or **Min**).

To calculate summaries (totals) within a report, follow the instructions below.

1. To display the result at the bottom of a report, the [Report Footer](#) band should be present. To add it, right-click anywhere over the report's area and in the invoked [Context Menu](#), select **Insert Band | ReportFooter**.



2. Click the field for which a summary will be calculated, to select it. Then, hold down CTRL and drag the field onto the Report Footer area, to create an exact copy of the [Label](#) that will display the summary.

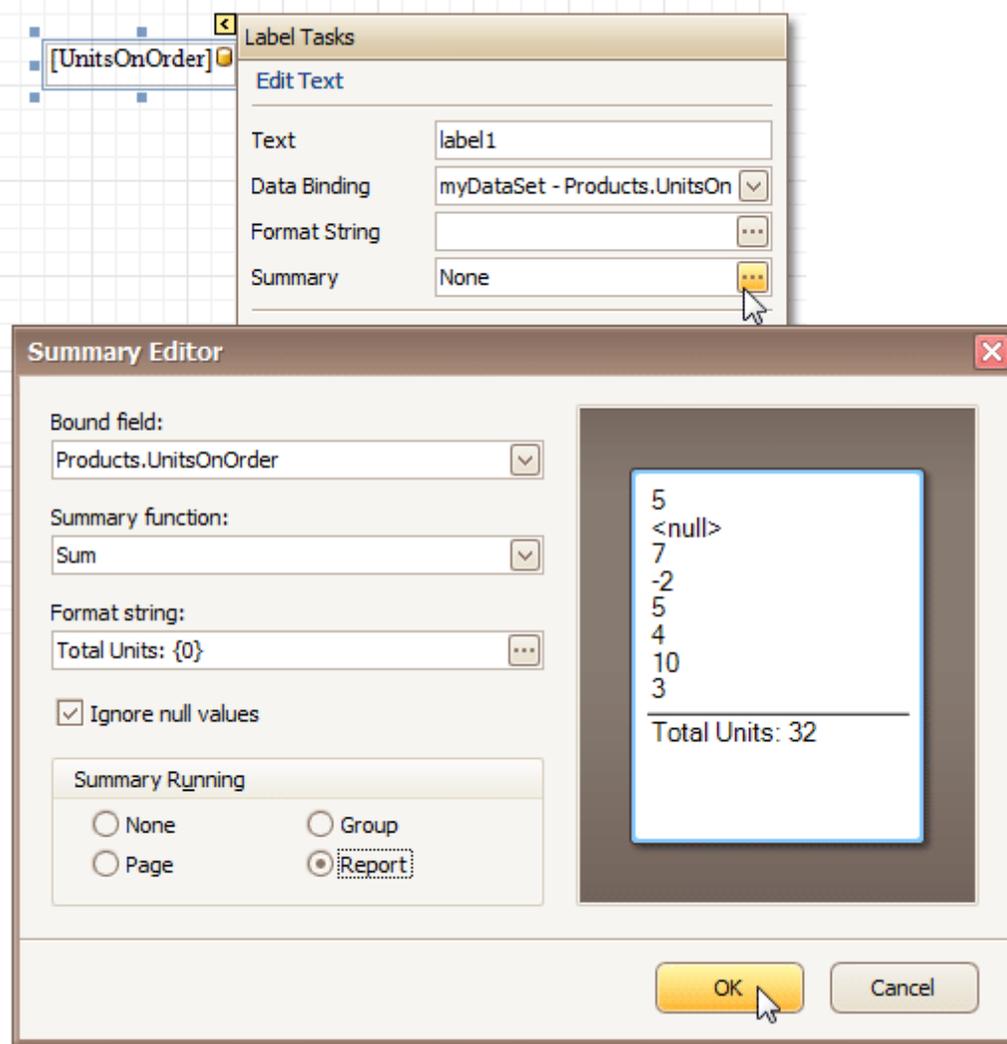


Note

You can also create a new label for your total by simply dragging it from the [Control Toolbox](#).

3. Now, select the newly created Label, click its [Smart Tag](#), and in its actions list, click the ellipsis button for the **Summary** item. And, in the invoked **Summary Editor**, specify the summary options.

The following image shows an example of how you can set up your total. Note that the **Summary Running** option is set to **Report**, to ensure that all values from the specified data field are taken into account.



Note

The **Ignore NULL values** option won't affect the result in this example, since NULL values are treated like zeros, by default. So, Sum won't change whether these values are taken into account or not. This option makes sense for functions like **Count** or **Average**, because the number of elements counted will depend on it.

Note also that *value formatting* is applied to a summary independently of the [general formatting](#), and has a greater priority.

When calculating totals for [groups](#), you can [sort the groups against a summary function result](#).

To save the settings and close the dialog, click **OK**.

Switch to the [Preview Tab](#), and view the result.

Chang	40
Aniseed Syrup	70
Queso Cabrales	30
Sir Rodney's Scones	40
Gorgonzola Telino	70
Mascarpone Fabioli	40
Gravad lax	50
Ipoh Coffee	10
Røgede sild	70
Chocolade	70
Maxilaku	60
Gnocchi di nonna Alice	10
Wimmers gute Semmelknödel	80
Louisiana Hot Spiced Okra	100
Scottish Longbreads	10
Outback Lager	10
Longlife Tofu	20
Total Units: 780	

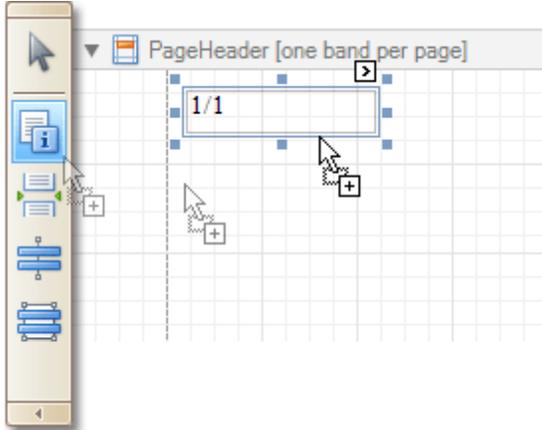
See Also

- [Sort Groups by a Summary Function Result](#)
- [Calculate an Aggregate Function](#)
- [Add Calculated Fields to a Report](#)

Add Page Numbers and System Information to a Report

This document describes how to insert *page numbers* or other system information (e.g. *current date and time*, *user name*, etc.) into a report.

Generally, this information is displayed within the [Page Header and Footer](#) or [Page Margin](#) bands. To add page numbers or system information to a report, locate the [Control Toolbox](#) and drag and drop the [Page Info](#) control.

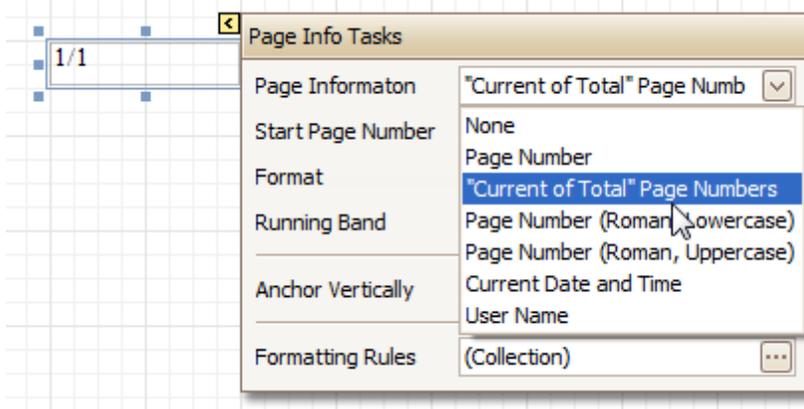


Then, follow the instructions below for your specific task.

- [Add Page Numbers](#)
- [Add System Date and Time](#)
- [Add the User Name](#)

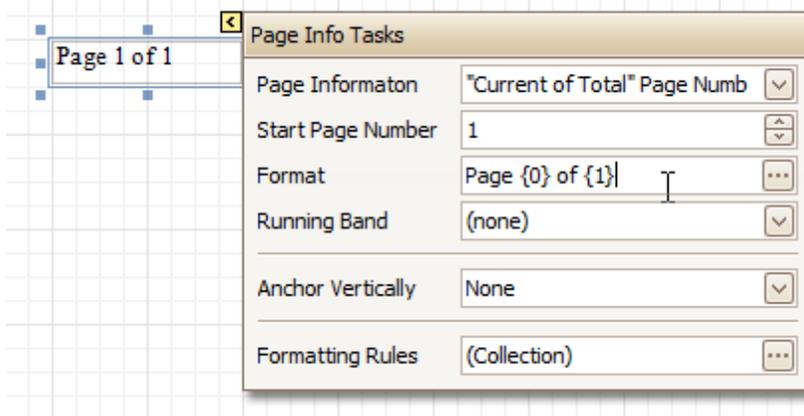
Add Page Numbers

1. Select the **Page Info** control, click its [Smart Tag](#), and in the invoked actions list, expand the drop-down list for the **Page Information** entry.



Select whether to display only the page number (Latin or Roman - uppercase or lowercase), or the current page number with total pages.

2. To [format](#) the control's text, via its Smart Tag, invoked its actions list, and specify the required format (e.g. **Page {0} of {1}**).



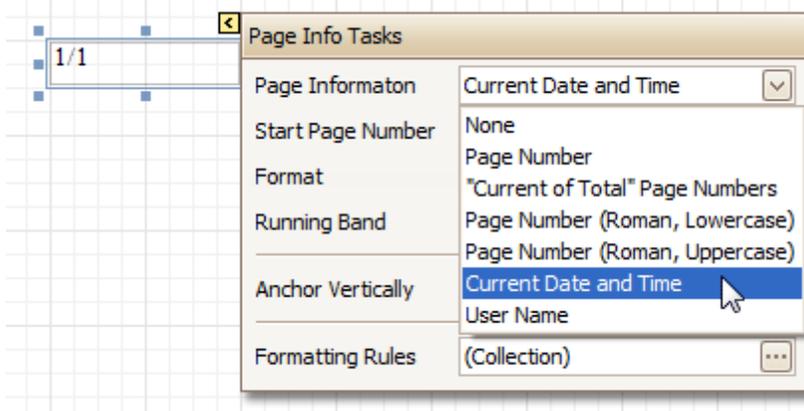
3. Using the control's actions list, you also can specify the *starting page number*, and the *running band* (e.g. this option is available when there are [groups](#) in a report, and it's required to apply independent page numbering for them). For details on this, refer to [Add Page Numbers for Groups](#).

The result is shown below.

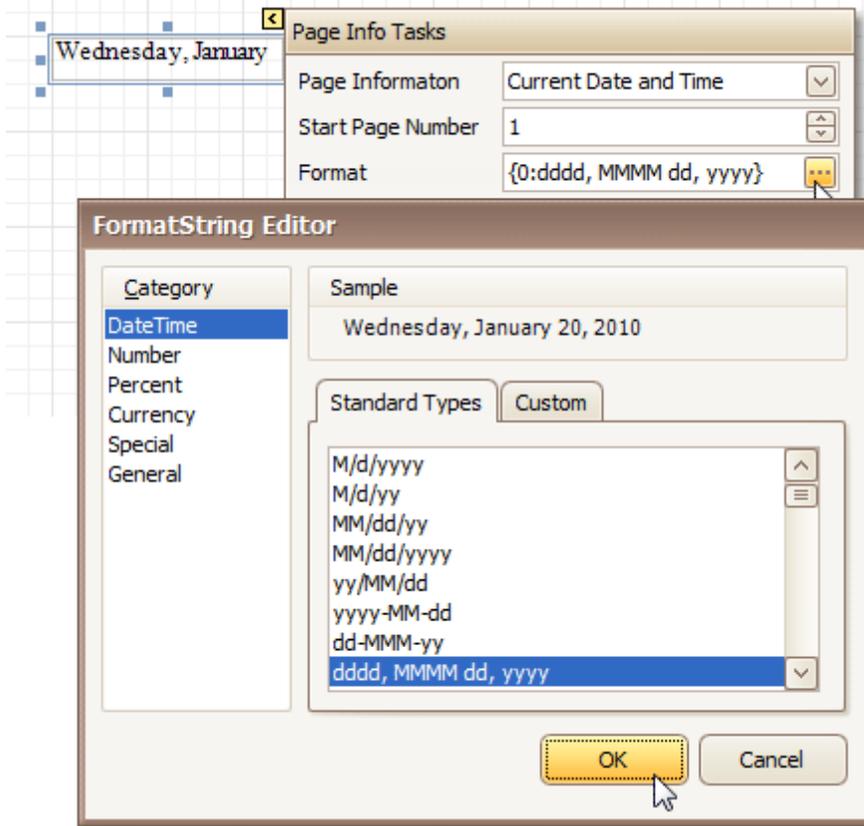
Page 1 of 2	
Chai	\$18.00
Chang	\$19.00
Aniseed Syrup	\$10.00
Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35
Grandma's Boysenberry Spread	\$25.00
Uncle Bob's Organic Dried Pears	\$30.00
Northwoods Cranberry Sauce	\$40.00
Mishi Kobe Niku	\$97.00

Add System Date and Time

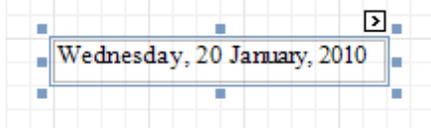
1. Select the **Page Info** control, click its [Smart Tag](#), and in the invoked actions list, expand the drop-down list for the **Page Information** entry, and select **Current Date and Time**.



- To [format](#) the control's text, via its Smart Tag, invoked its actions list, and specify the required format. You can either type it in the **Format** field, or, click its ellipsis button and use the **Format String Editor**.

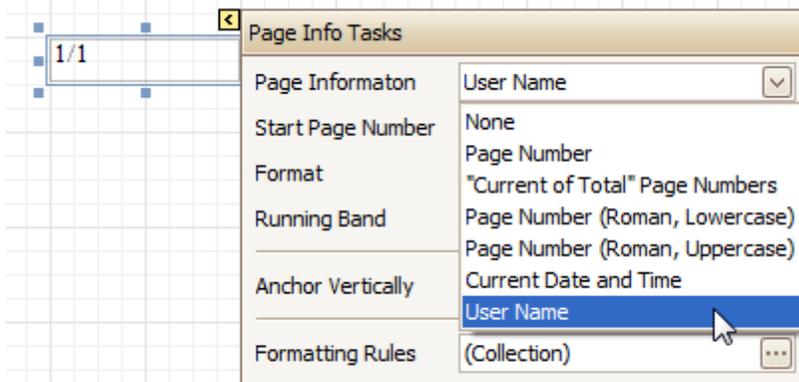


The result is shown below.

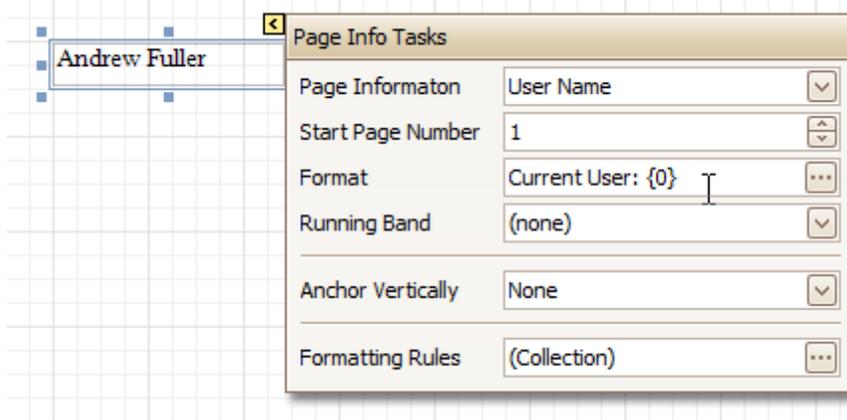


Add the User Name

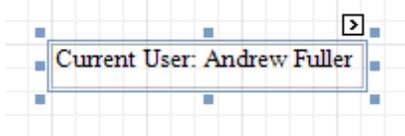
- Select the **Page Info** control, click its [Smart Tag](#), and in the invoked actions list, expand the drop-down list for the **Page Information** entry, and select **User Name**.



- To [format](#) the control's text, via its Smart Tag, invoke its actions list, and specify the required format (e.g. **Current User: {0}**).



The result is shown below.



See Also

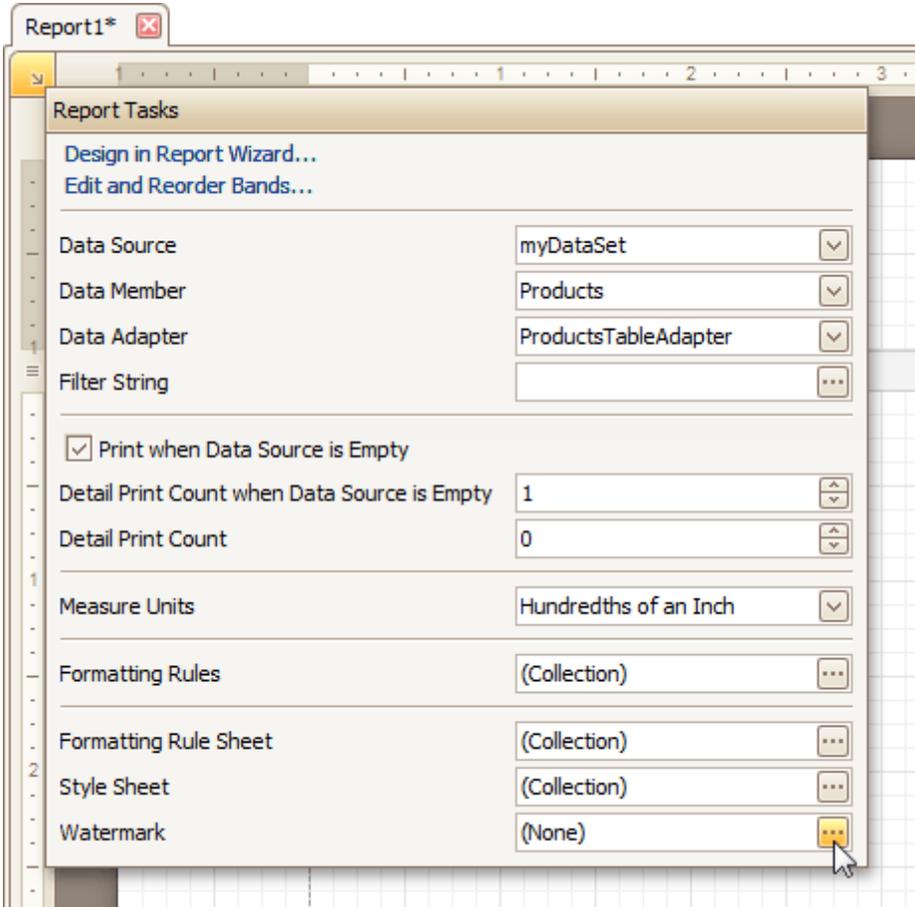
[Create or Modify Watermarks of a Report](#)
[Add Page Numbers for Groups](#)

Create or Modify Watermarks of a Report

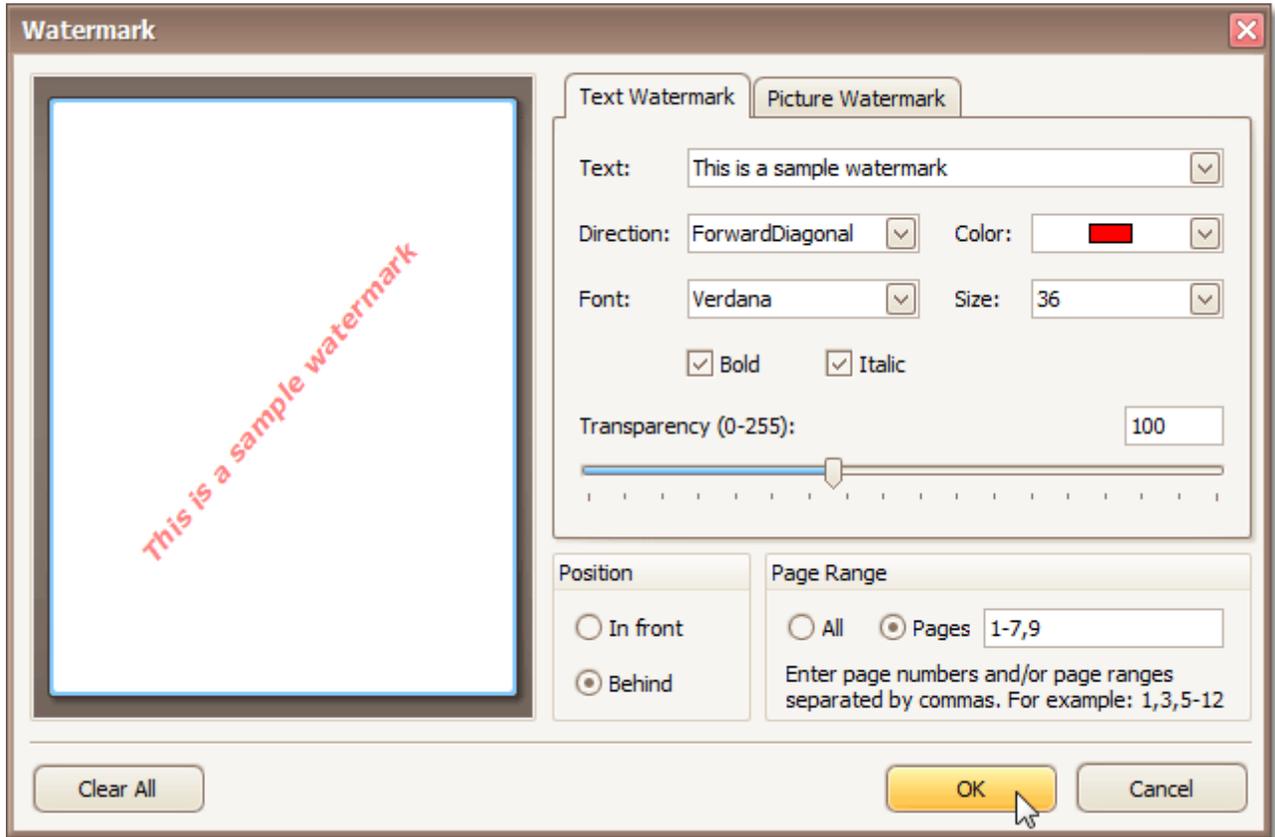
This document describes how to add a text *watermark* in a report, or turn a picture into a report's *background*. Note that watermarks are visible only in [Preview](#) and [HTML View](#) modes.

To create a new watermark in a report (or to modify the existing one), do the following.

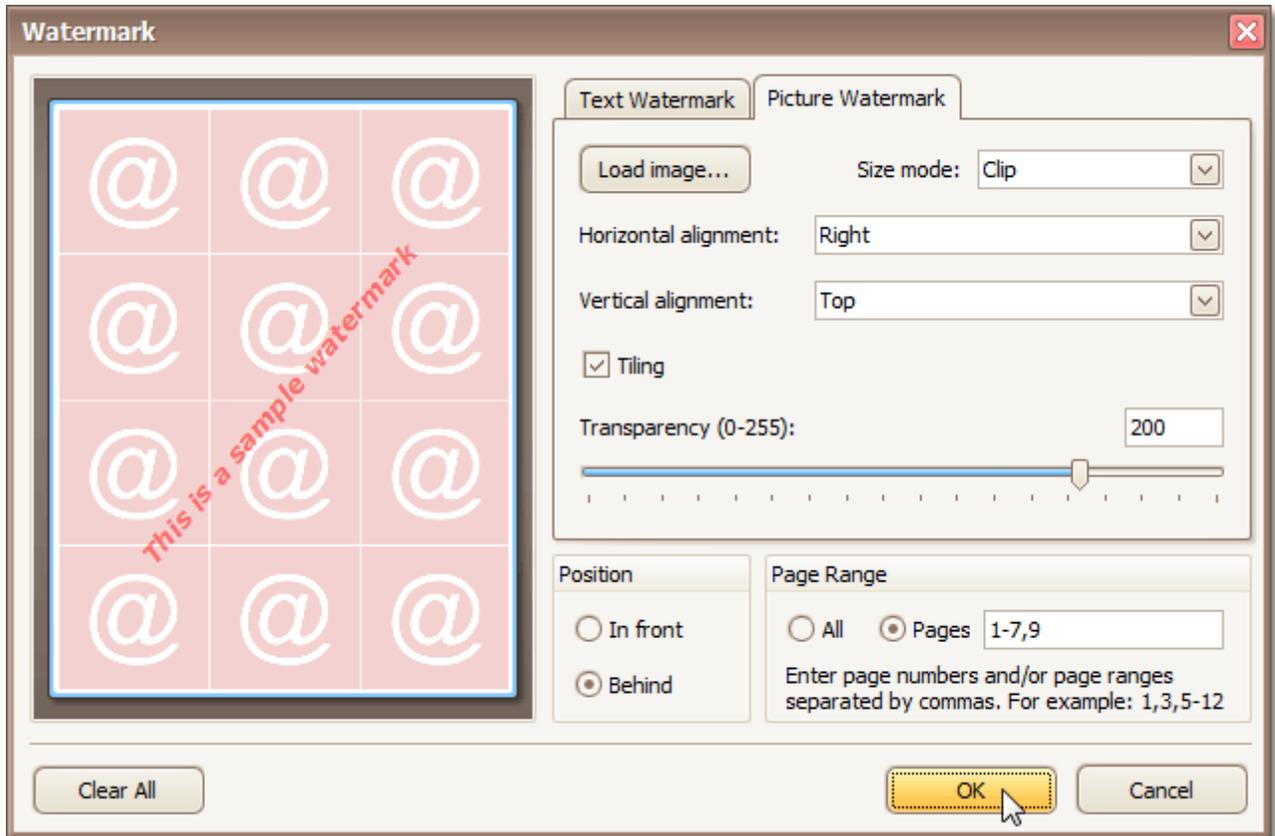
1. Click the report's [Smart Tag](#), and in its actions list, click the ellipsis button for the **Watermark** entry.



2. In the **Text** tab of the invoked **Watermark** dialog, define the required properties for the text watermark.



3. Then, switch to the **Picture Watermark** tab, to load the image to be used as a watermark, and define its properties, such as Size mode, Alignment (vertical and horizontal), Tiling, Transparency, Page Range, etc.



As you can see, it is possible to use both textual and image watermarks simultaneously.

The report with watermark is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

[Add Page Numbers and System Information to a Report](#)

Create Reports

With the help of the Report Designer, you can edit existing reports, as well as create your own reports from scratch. The following sections contain tutorials providing step-by-step instructions on both basic and advanced report customization.

- [Basic Operations](#)

The topics in this section cover the basics of working with reports in the Report Designer.

- [Report Types](#)

The tutorials in this section provide you detailed instructions on how to create reports of different types with the Report Designer.

- [Styles and Conditional Formatting in Reports](#)

The topics of this section cover appearance-related information about the Report Designer.

- [Report Navigation](#)

The tutorials of this section cover the navigation-related features of the Report Designer.

- [Miscellaneous Report Management Capabilities](#)

The topics of this section cover the Report Designer features that don't fall into other categories.

Basic Operations

The topics in this section cover the basics of working with reports in the Report Designer.

This section consists of the following topics.

- [Create a New Report](#)
- [Bind a Report to Data](#)
- [Controls Positioning](#)
- [Change Measurement Units of a Report](#)
- [Change Page Settings of a Report](#)

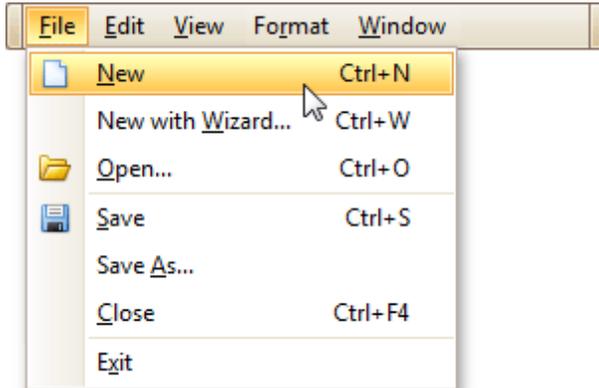
Create a New Report

This topic explains how to create a new blank report in the Report Designer. Before you start, make sure to [back up the current report](#).

To create a new report, do one of the following.

Create a New Blank Report

In the [Main Menu](#), click **File** and then **New** (or press CTRL+N).



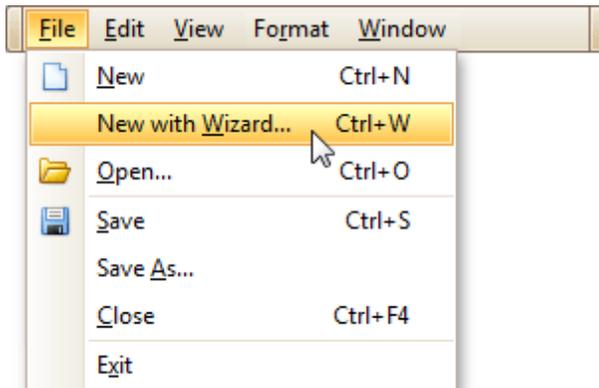
The [Main Toolbar](#) contains a button () with the same function.

If there is another report already loaded in the designer, you may be prompted whether it should be saved before it is replaced with a newly created report.

By default, the created report contains three [bands](#) - [Page Header and Footer](#), and the [Detail band](#).

Create a New Report Using the Report Wizard

In the [Main Menu](#), click **File** and then **New with Wizard...** (or press CTRL+W).



For more information about this option, refer to [Report Wizard](#).

See Also

[Controls Positioning](#)
[Change Measurement Units of a Report](#)
[Change Page Settings of a Report](#)
[Bind a Report to Data](#)

Bind a Report to Data

The Report Designer is primarily designed to work with *data-aware reports*, meaning that a report obtains its general (*dynamic*) data from an external *data source* (most types of which are supported). This document describes how a newly created report can be *bound* to a data source.

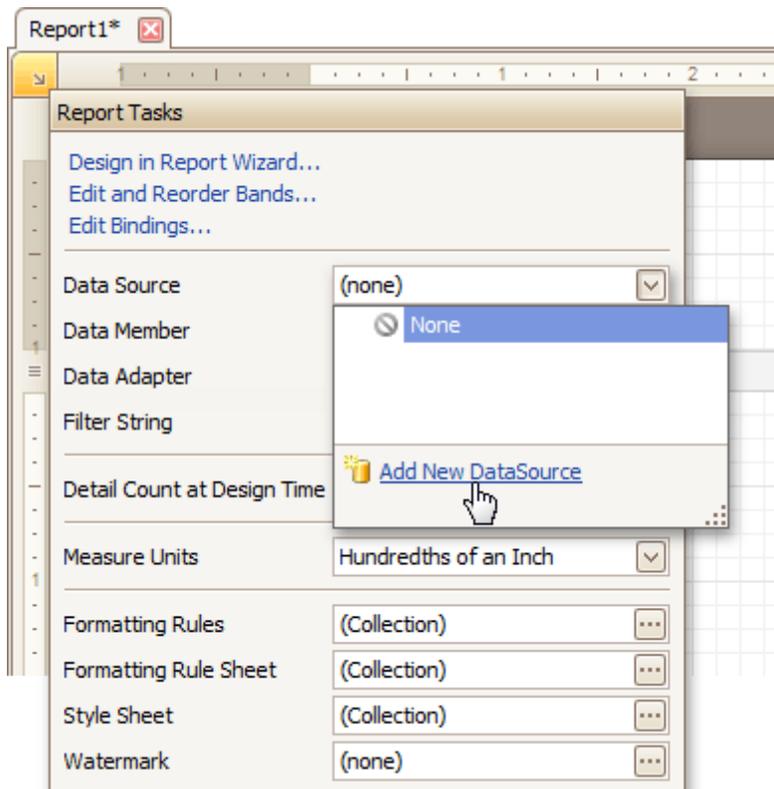
The document consists of the following sections.

- [Bind a Report to a Database](#)
- [Bind a Report to an Entity Framework Data Source](#)

Bind a Report to a Database

To bind a report to a database, do the following.

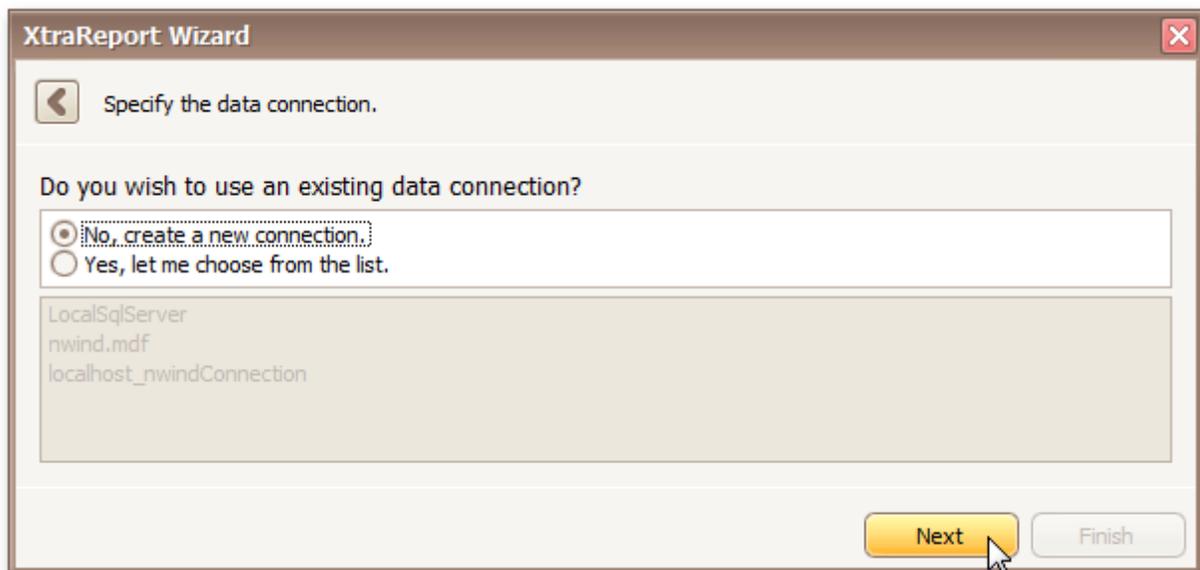
1. [Create a new report](#).
2. Click its [Smart Tag](#), and in the invoked actions list, expand the **Data Source** drop-down list and click **Add New DataSource**.



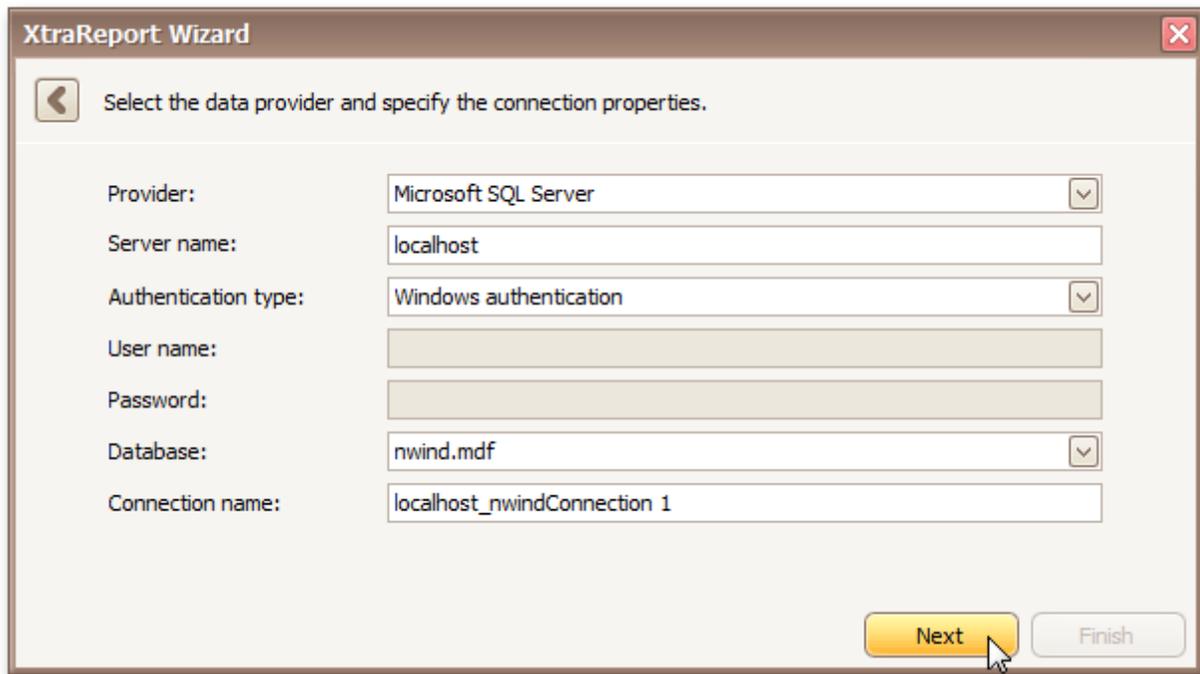
3. The first wizard page of the invoked **Data Source Wizard** allows you to specify what type of a data source you want to use. Select **Database** and click **Next** to proceed.



4. On the next page, specify the database to be used. If it is absent in the drop-down selector containing existing connections, select **No, create a new connection** and click **Next**.



Define a custom connection string, or select from the supported data source types. Depending on the data provider selected, it may be necessary to specify additional connection options (such as authentication type and database name) on this page.

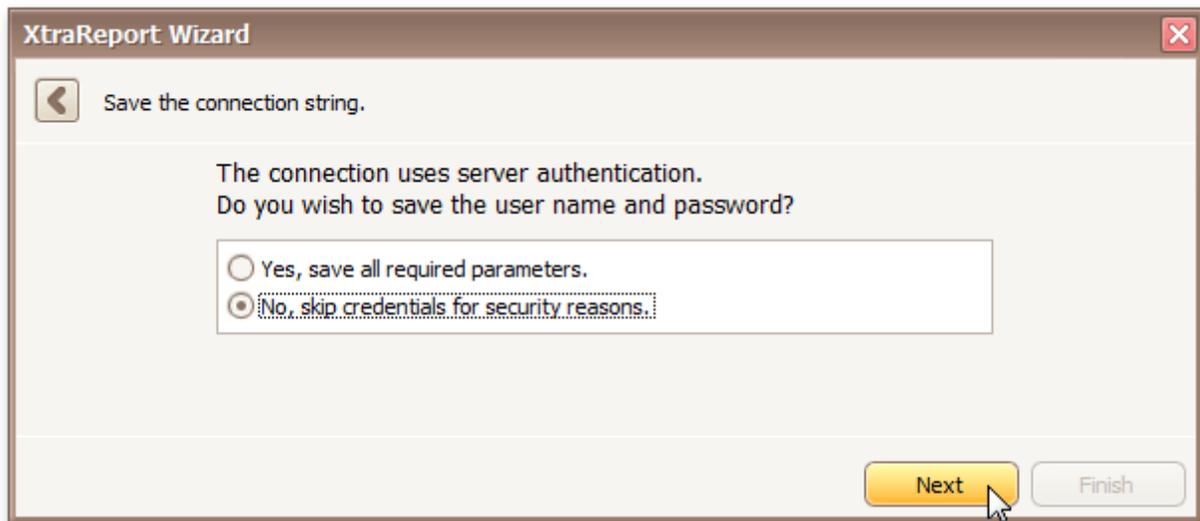


The screenshot shows the 'XtraReport Wizard' dialog box with the following fields and values:

- Provider: Microsoft SQL Server
- Server name: localhost
- Authentication type: Windows authentication
- User name: (empty)
- Password: (empty)
- Database: nwind.mdf
- Connection name: localhost_nwindConnection 1

Buttons: Next (highlighted), Finish

5. If server authentication is required for the selected database type, the next page will prompt you to specify whether or not you want to save the user credentials along with the connection string. Select the required option and click **Next**.



The screenshot shows the 'XtraReport Wizard' dialog box with the following text and options:

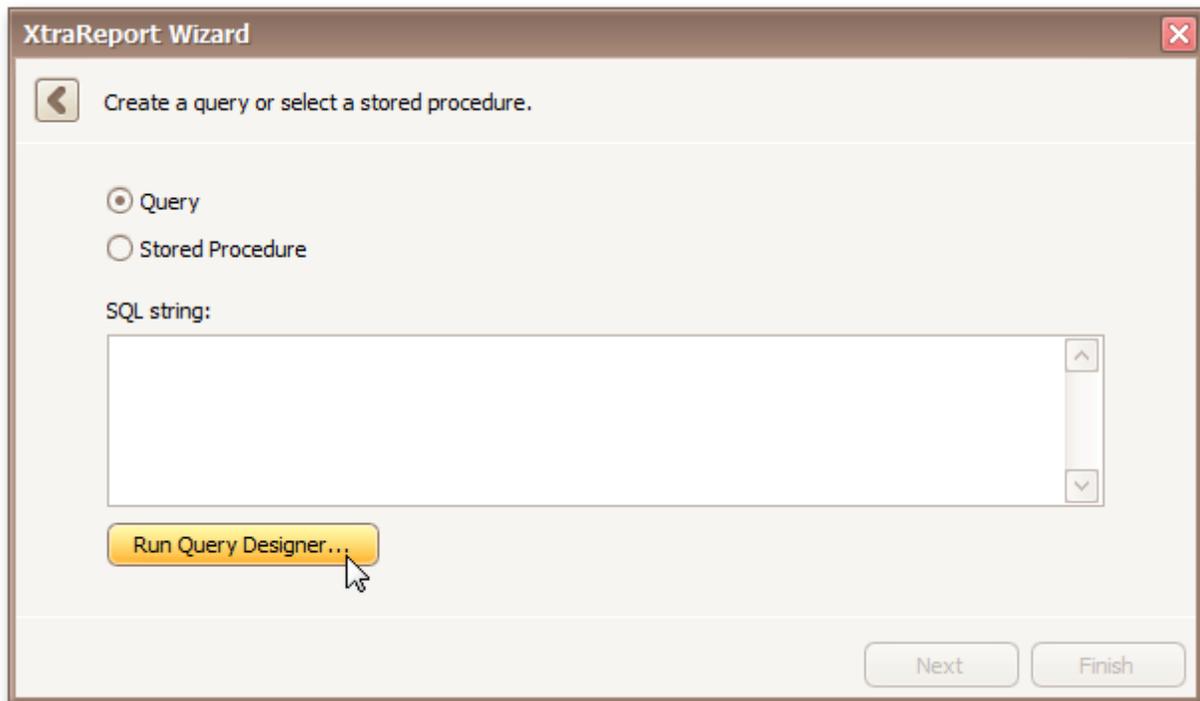
Save the connection string.

The connection uses server authentication.
Do you wish to save the user name and password?

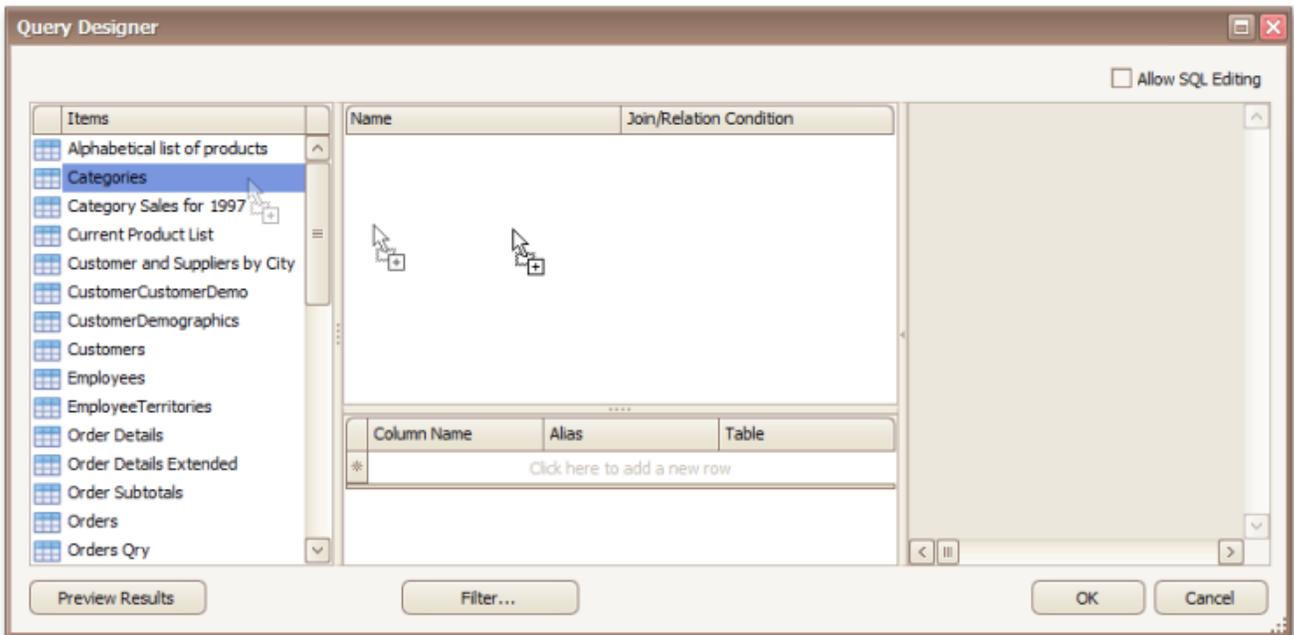
- Yes, save all required parameters.
- No, skip credentials for security reasons.

Buttons: Next (highlighted), Finish

6. On the next page, you can construct an SQL query to obtain data from the database, or select a stored procedure. To construct an SQL query, click **Run Query Designer...**

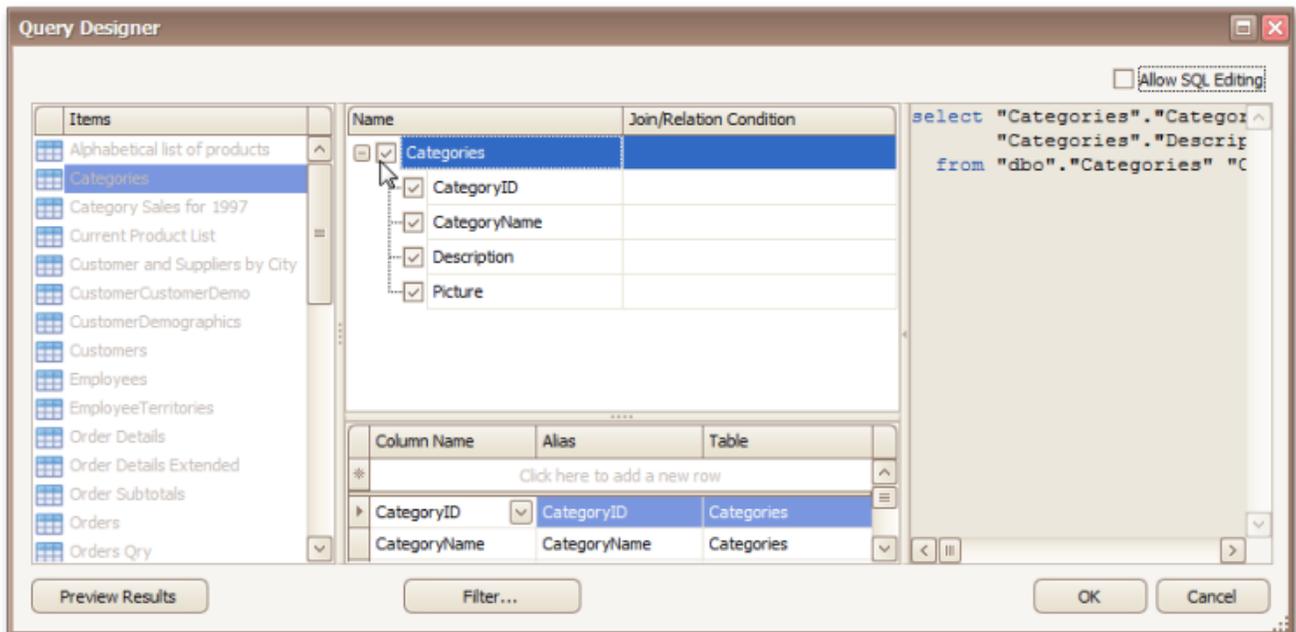


7. In the invoked **Query Designer** window, select an item from the list of available tables on the left and drop it onto the list of data tables to be used.



It is only possible to select a single table using the **Query Designer**. When creating a [master-detail report](#), add the master table first.

8. Enable the check box near the added table to include all of its fields in the data view, and click **OK** to exit the **Query Designer**.



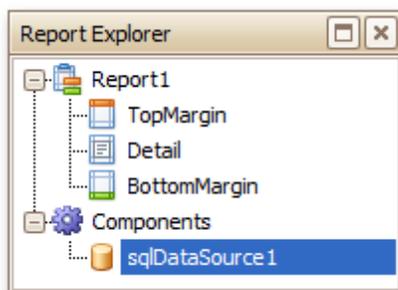
To assign a custom name to a data field, specify its **Alias** in the field list displayed below.

To manually customize an SQL string, enable the **Allow SQL Editing** option. Switching to this mode disables the visual features of the **Query Designer**, allowing you to directly edit the text of the SQL query.

Click **OK** to exit the **Query Designer**

Click **Finish** to exit the **Data Source Wizard**.

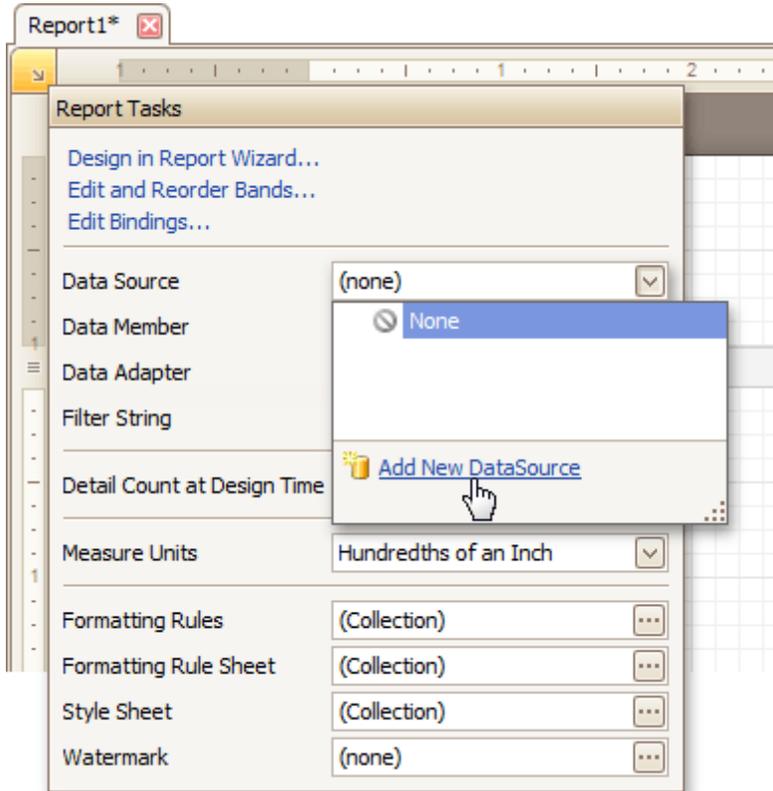
The newly created SQL data source will be displayed in the **Components** node of the [Report Explorer](#).



Bind a Report to an Entity Framework Data Source

To bind a report to an Entity Framework data source, do the following.

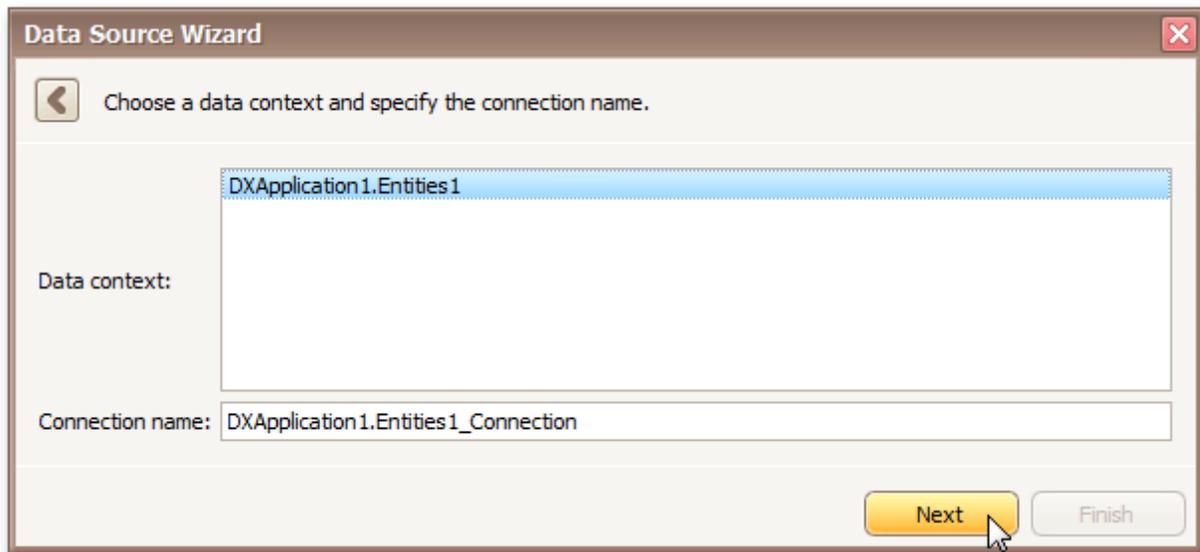
1. [Create a new report](#).
2. Click its [Smart Tag](#), and in the invoked actions list, expand the **Data Source** drop-down list and click **Add New DataSource**.



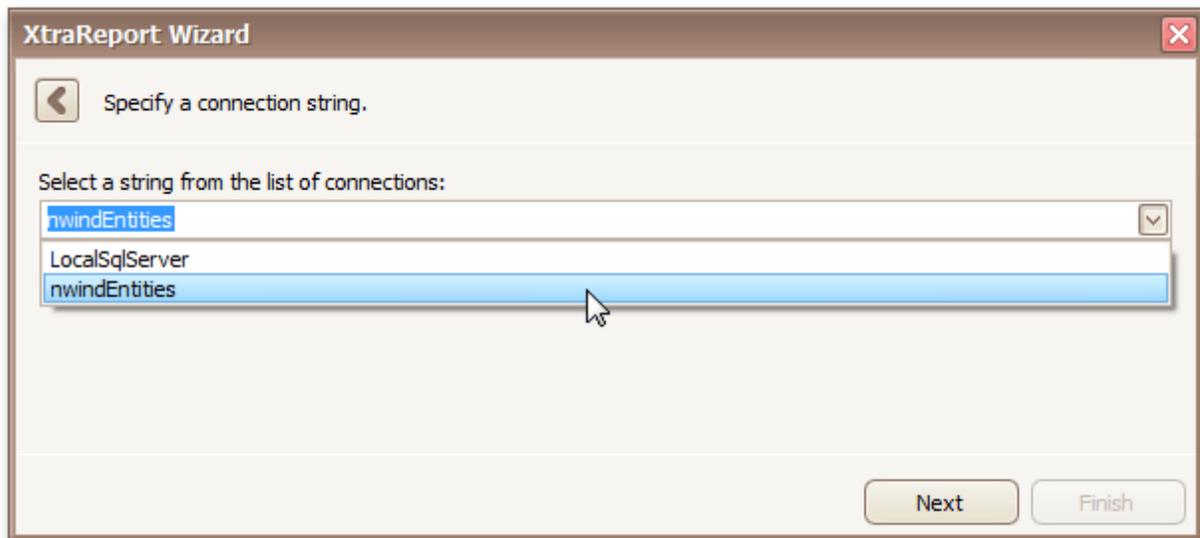
3. The first wizard page of the invoked **Data Source Wizard** allows you to specify what type of a data source you want to use. Select **Entity Framework** and click **Next** to proceed.



4. On the next page, select the required data context from the list of available data contexts and click **Next**



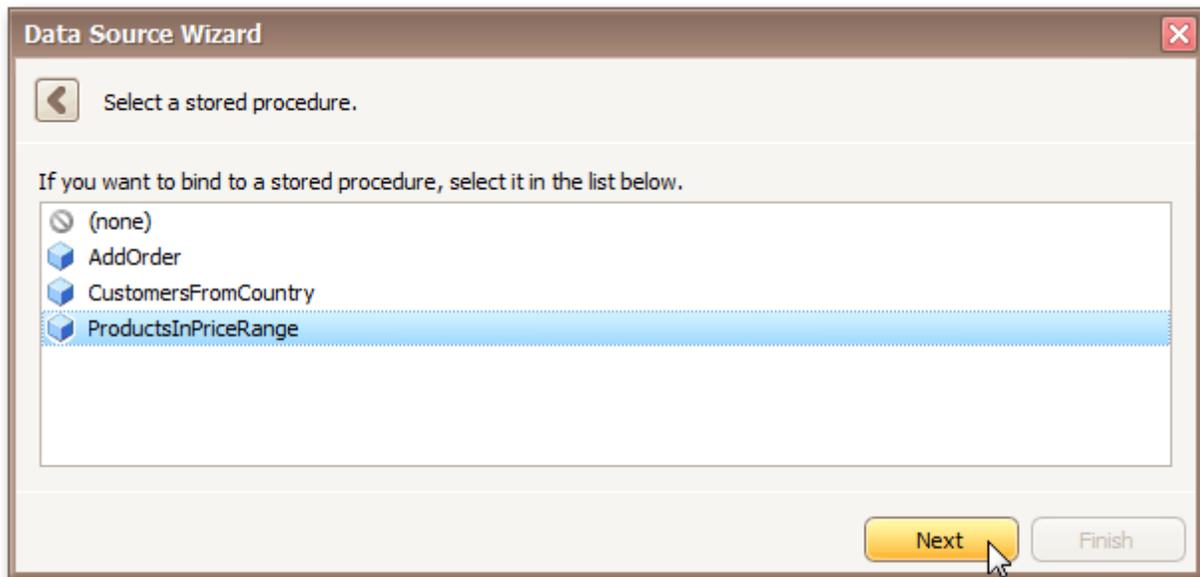
5. Select a connection string to be used to establish data connection.



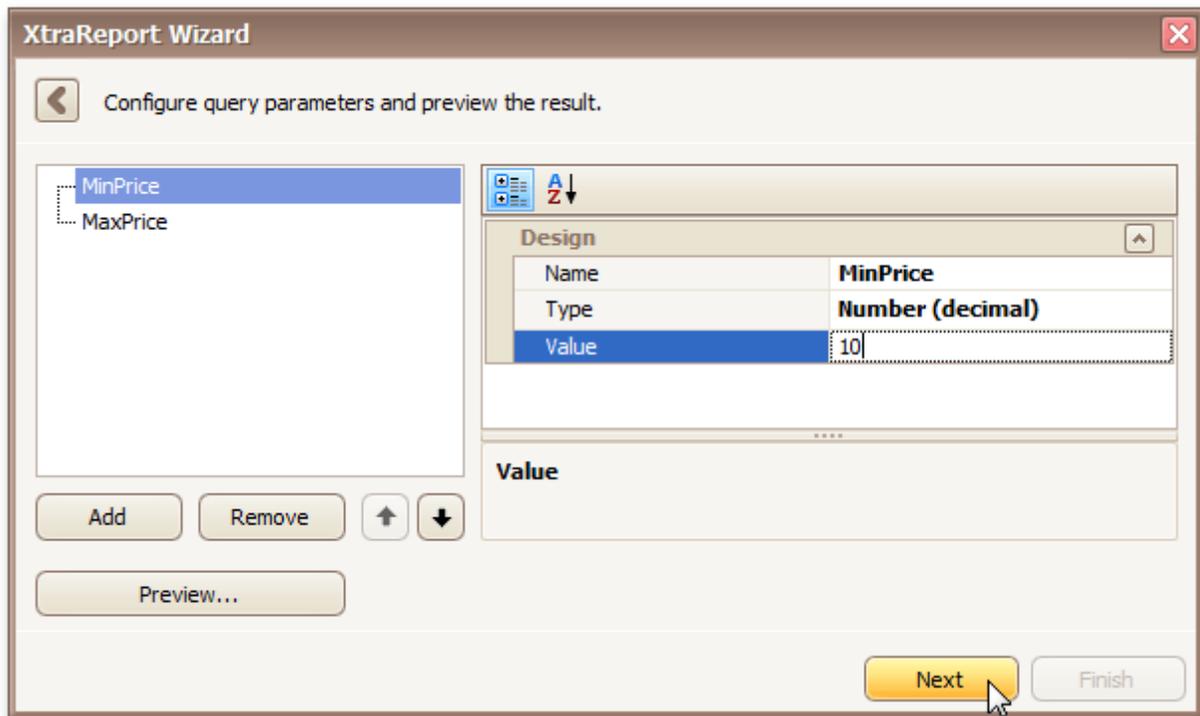
Click **Next** to proceed to the next page.

6. The next page prompts you to specify if you want to bind to a stored procedure.

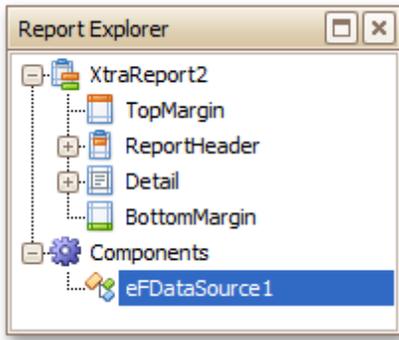
To bind to a stored procedure, select it in the list of the available stored procedures and click **Next**



On the next page, configure the parameters to be passed to the selected stored procedure. Be sure to specify the correct parameter **Type**.



The newly created Entity Framework data source will be displayed in the **Components** node of the [Report Explorer](#).

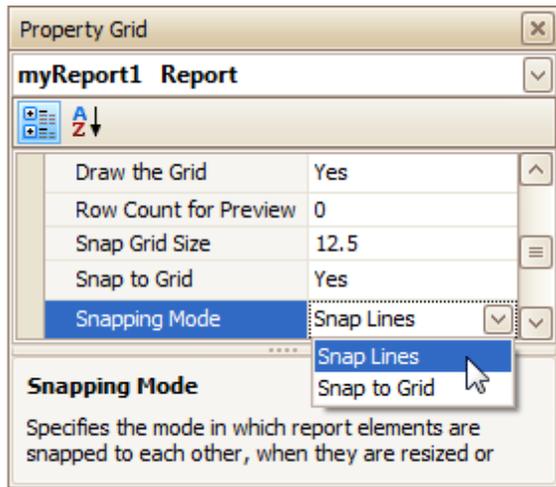


Controls Positioning

This document describes how to easily construct professional looking reports, by precisely aligning their elements to each other. For this, the two following facilities are introduced in the Report Designer.

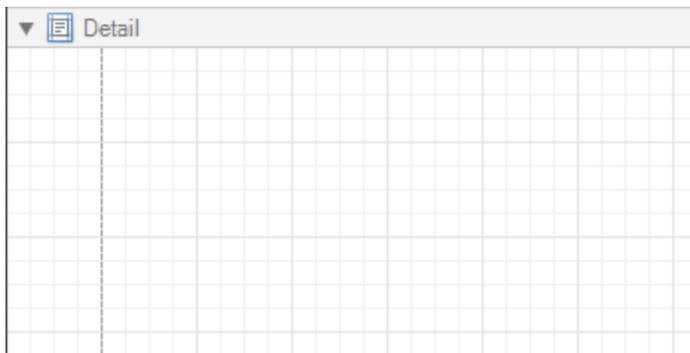
- [Snap Grid](#)
- [Snap Lines](#)

You can choose which mode to use for controls alignment within your report, by setting its **Snapping Mode**.

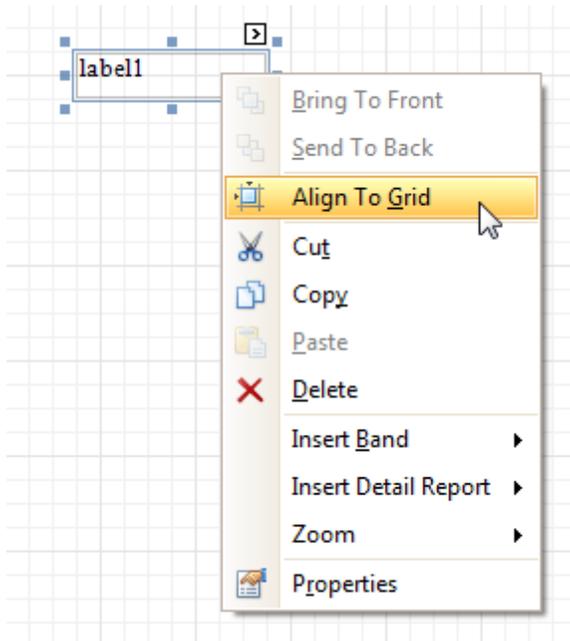


Snap Grid

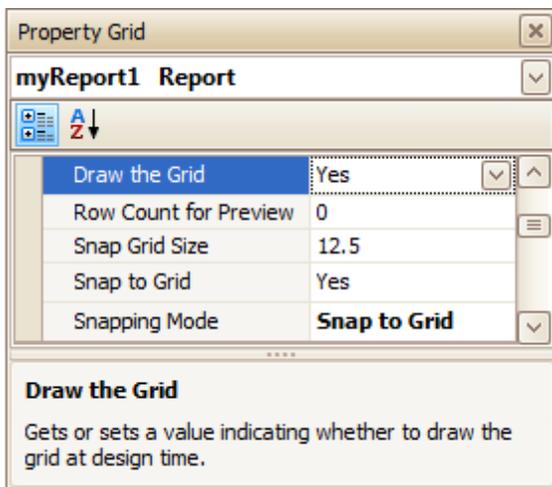
When a report is being designed in the [Design Panel](#), it is lined up by the **Snap Grid**. This helps to establish the distance between report elements, and to precisely align them to each other.



To quickly align a control to the report's Snap Grid, right click the control, and in the invoked [Context Menu](#), click **Align To Grid**.



You can choose whether the Snap Grid should be visible, by selecting your report, and setting the **Draw the Grid** option in the [Property Grid](#).



You also can adjust the **Snap Grid Size**, which is measured in the [measurement units](#) set for your report.

The **Snap to Grid** option specifies whether controls are snapped to the Grid when they are moved as usual (with no additional keys being hold down). When the **Snap to Grid** option is enabled, the default move behavior works in the following way.

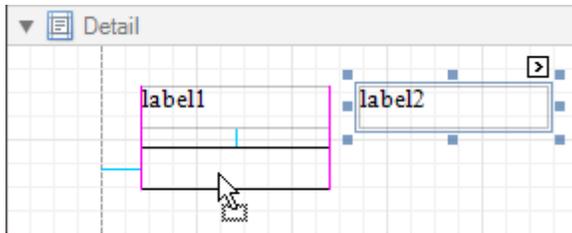
- For controls to be aligned to the Snap Grid while being moved:
 - Using the keyboard: move them using the ARROW keys.
 - Using the mouse: move them as usual.
- For controls to ignore the Snap Grid while being moved:
 - Using the keyboard: move them using ARROW keys while hold down CTRL.
 - Using the mouse: move them while hold down ALT.

Disabling the **Snap to Grid** option swaps the default manipulation to its opposite (you should press CTRL or ALT, to enable the Grid snapping).

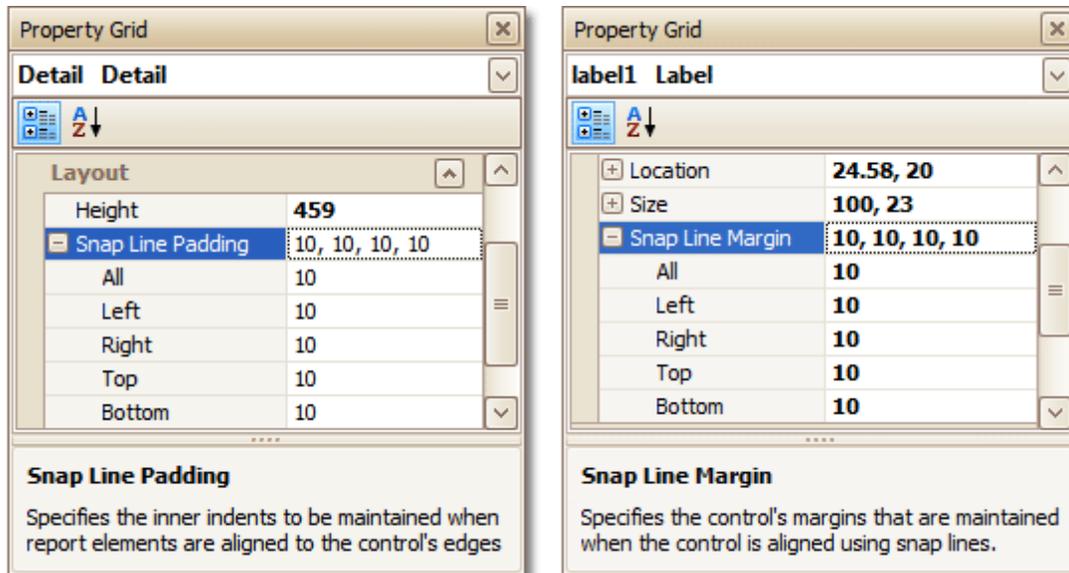
Snap Lines

Instead of the Snap Grid for control positioning and alignment, you can utilize the **Snap Lines**. These are guide

lines appearing when a control is being moved, and indicating the distance to other report elements (bands and controls).



For each report element, you can modify its default Snap Line spacing (*padding*s for bands and [Panel](#), and *margin*s for other controls) using the Property Grid.



To learn how to manage the position of multiple controls at one time, refer to [Change the Layout of Report Elements](#).

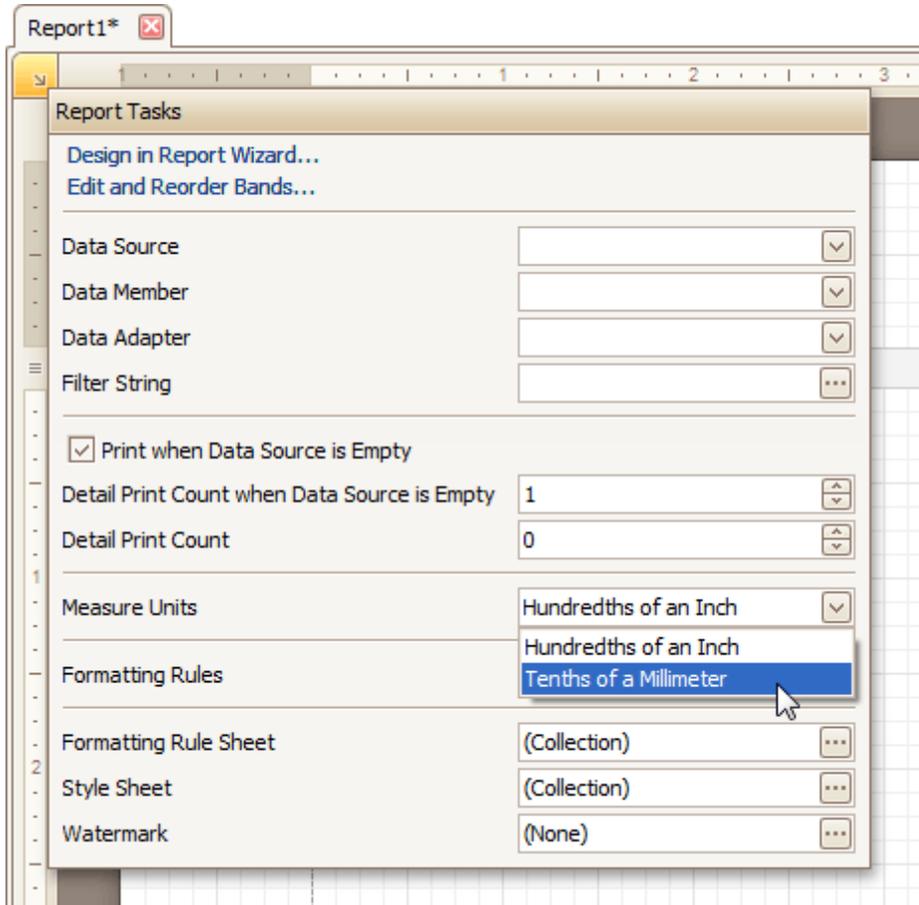
See Also

[Change Measurement Units of a Report](#)
[Change Page Settings of a Report](#)

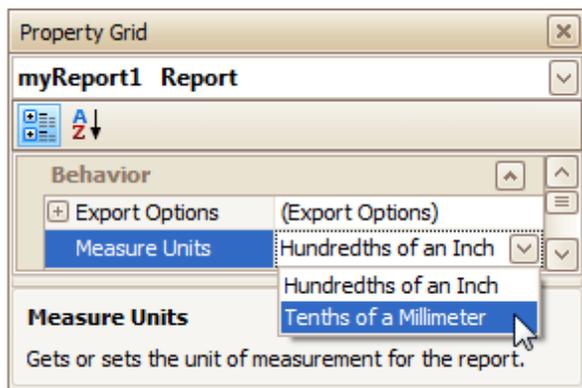
Change Measurement Units of a Report

For your report, you can choose its global **Measure Units**, which can be either **Hundredths of an Inch**, or **Tenths of a Millimeter**.

This can be specified either using the report's [Smart Tag](#) ...



... or via the [Property Grid](#).



This defines the basic measurement unit for all the unit-related options of a report and its [bands](#) and [controls](#) (such as *location*, *size*, *border width*, etc.). And, this determines the measurement unit of the report's [Snap Grid](#).

See Also

[Controls Positioning](#)

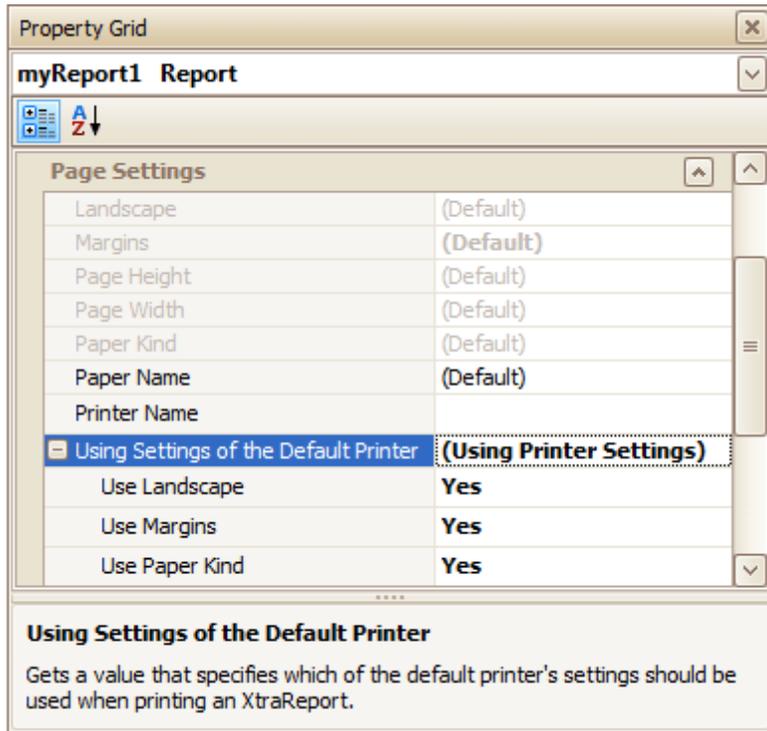
[Change Page Settings of a Report](#)

Change Page Settings of a Report

In the Report Designer, page settings of a report can be specified in one of two ways. The first approach forces the default printer settings to be used when the report is printed, while the other one enables you to alter page settings independently.

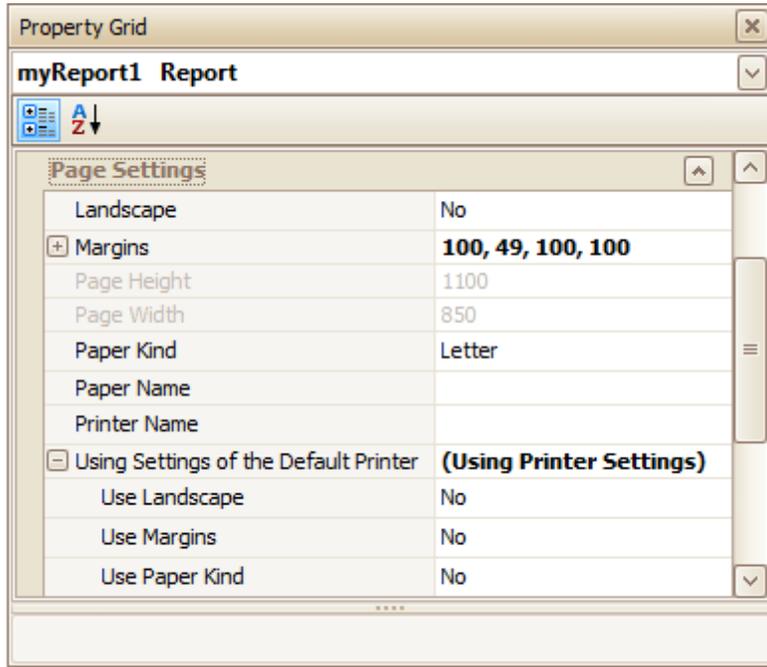
- **Using settings of the default printer**

For the orientation, margins and paper size, you can specify a requirement that applies the corresponding printer settings instead of the report's. In this instance, the page properties in the [Property Grid](#) are disabled and displayed as grayed out. This may be useful when the report is printed in several places with different printers and printer settings.



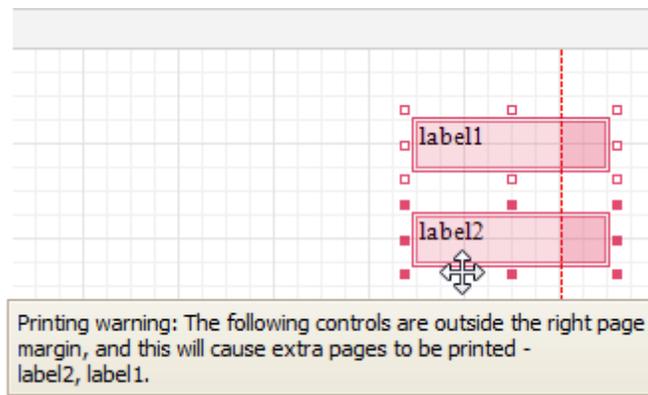
- **Specify the report's page settings**

While designing the report, you can specify the page settings via the Property Grid:



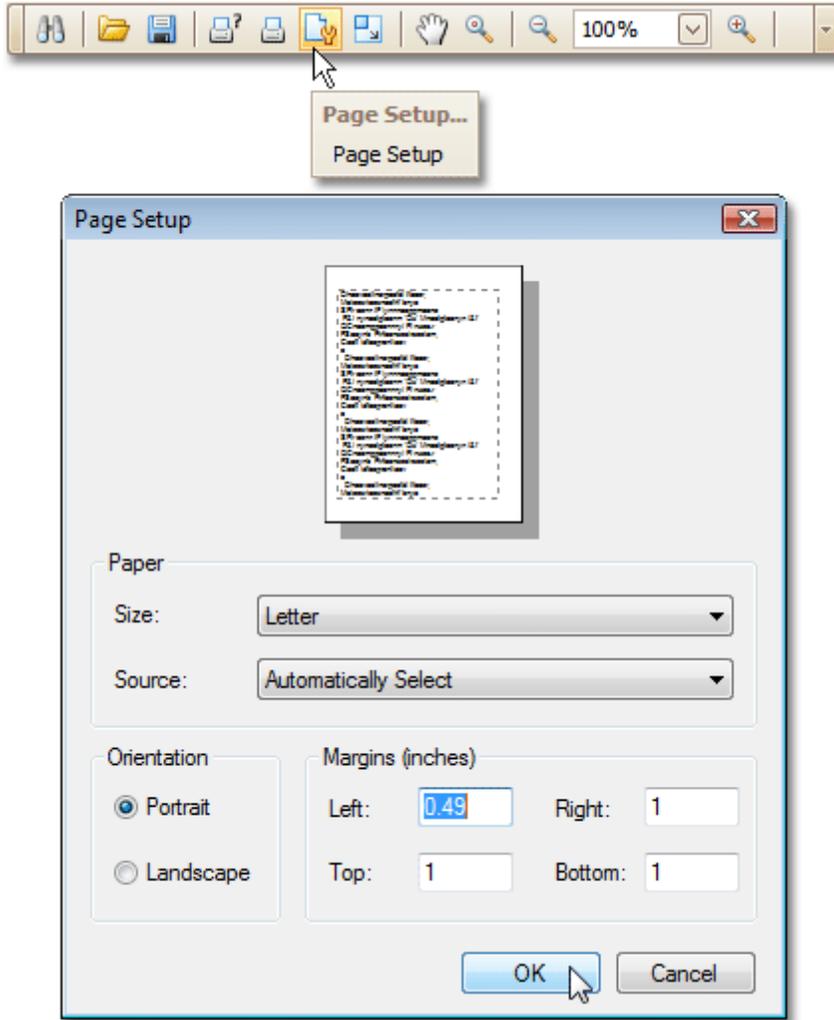
You can set the page orientation and modify the margins. The margin values are expressed in the report's [measurement units](#). You can select from the predefined paper sizes (**Paper Kind** property), choose **Custom** and create your own paper size, or select one which is already defined for this printer (**Paper Name** property).

These settings affect the layout of the report's design surface. After their modification, you may notice red warning marks, indicating that the controls go beyond the page width. These warnings can be switched off by setting the **Show Printing Warnings** property of the report to **No**.



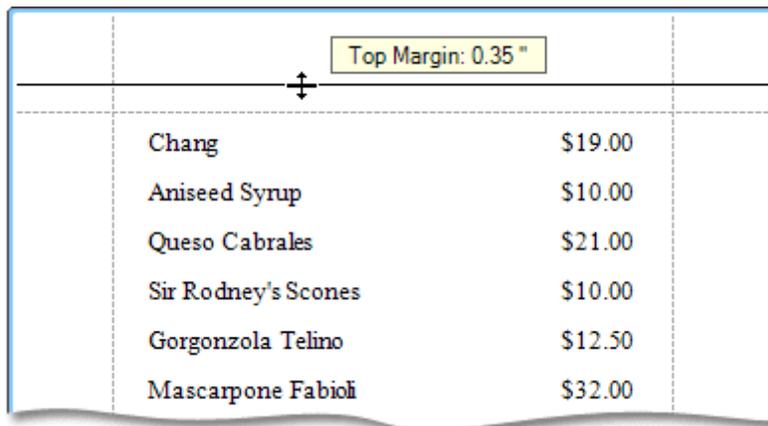
- **Modify the settings in Preview Tab**

The report's [Preview Tab](#) toolbar has a corresponding button that enables you to modify the page settings. Clicking this button invokes the **Page Setup** dialog, which allows you to adjust the page layout before printing or exporting, and select the printer.

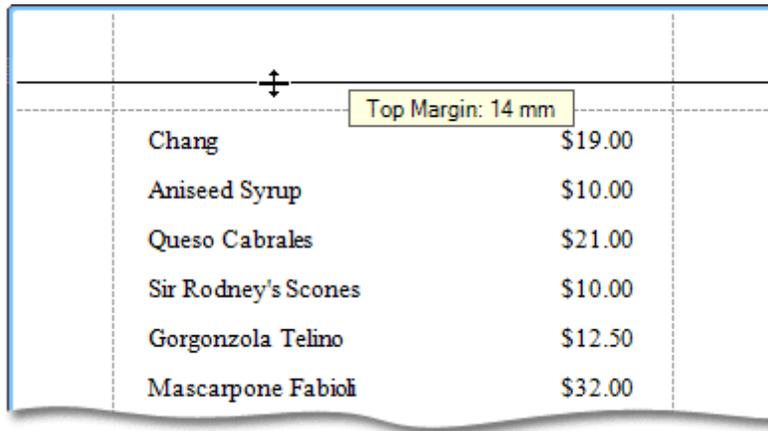


The margins can also be set visually by dragging the dashed lines in the Preview Tab as needed. To change the measurement units shown in the margins tooltips, customize the report's **Measure Units** property.

Measure Units = Hundredths of an Inch



Measure Units = Tenths of a Millimeter



The image shows a screenshot of a report table. The table has a light blue border and a white background. It contains six rows of data. Above the table, there is a horizontal line with a double-headed vertical arrow pointing to it, and a yellow callout box containing the text "Top Margin: 14 mm".

Chang	\$19.00
Aniseed Syrup	\$10.00
Queso Cabrales	\$21.00
Sir Rodney's Scones	\$10.00
Gorgonzola Telino	\$12.50
Mascarpone Fabioli	\$32.00

To learn about other options available for a report, refer to [Report Settings](#).

See Also

[Controls Positioning](#)

[Change Measurement Units of a Report](#)

Report Types

The tutorials in this section provide you detailed instructions on how to create reports of different types with the Report Designer.

Choose a report type from the following table.

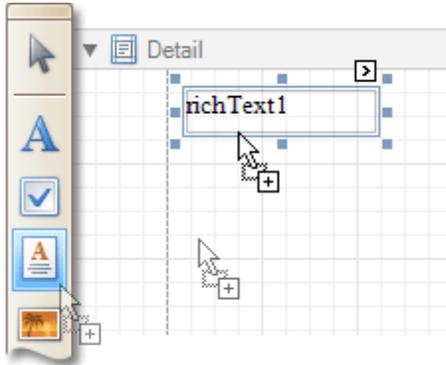
 Static Report	 Table Report	 Label Report
 Master-Detail Report (Detail Bands)	 Multi-Column Report	 Cross-Tab Report
 Parameterized Report	 Chart with Static Series	 Chart with Dynamic Series

Static Report

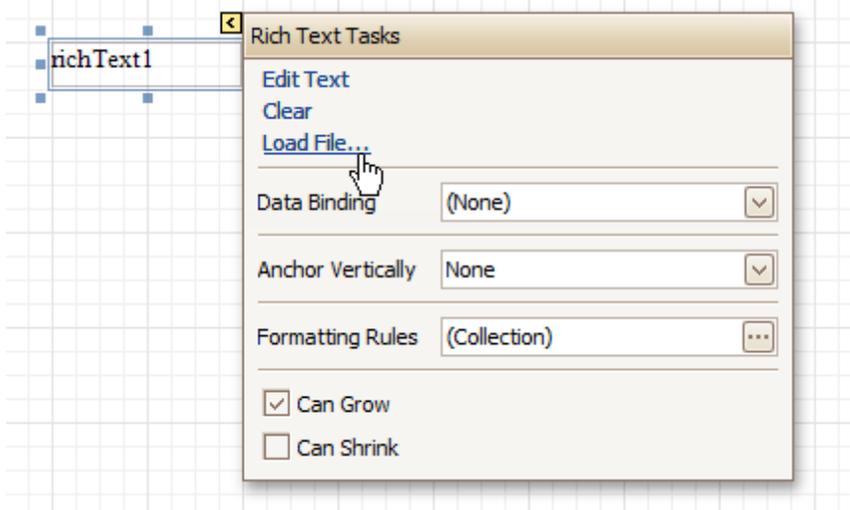
This tutorial describes the steps to create a *static report*, which means that the report will not be bound to a data source. In this example, we will create a simple one-page announcement to be repeated 20 times in a report.

To create a static report, do the following.

1. [Create a new report](#).
2. From the [Control Toolbox](#), drop the [Rich Text](#) control onto the [Detail band](#).



3. Select the created control and click its [Smart Tag](#). In the invoked actions list, click the **Load File...** context link.

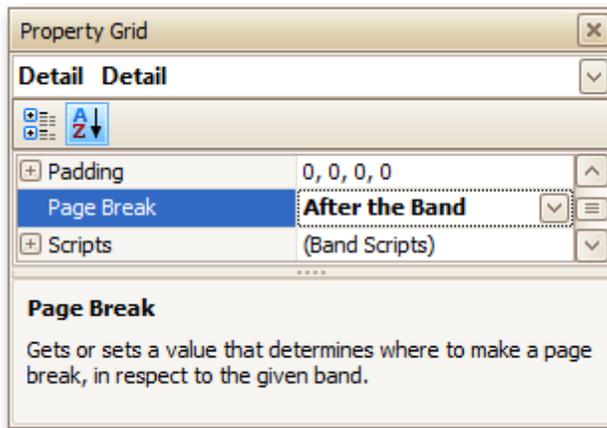


In the invoked dialog, define the path to an RTF or TXT file containing a text of the announcement, and click **Open**.

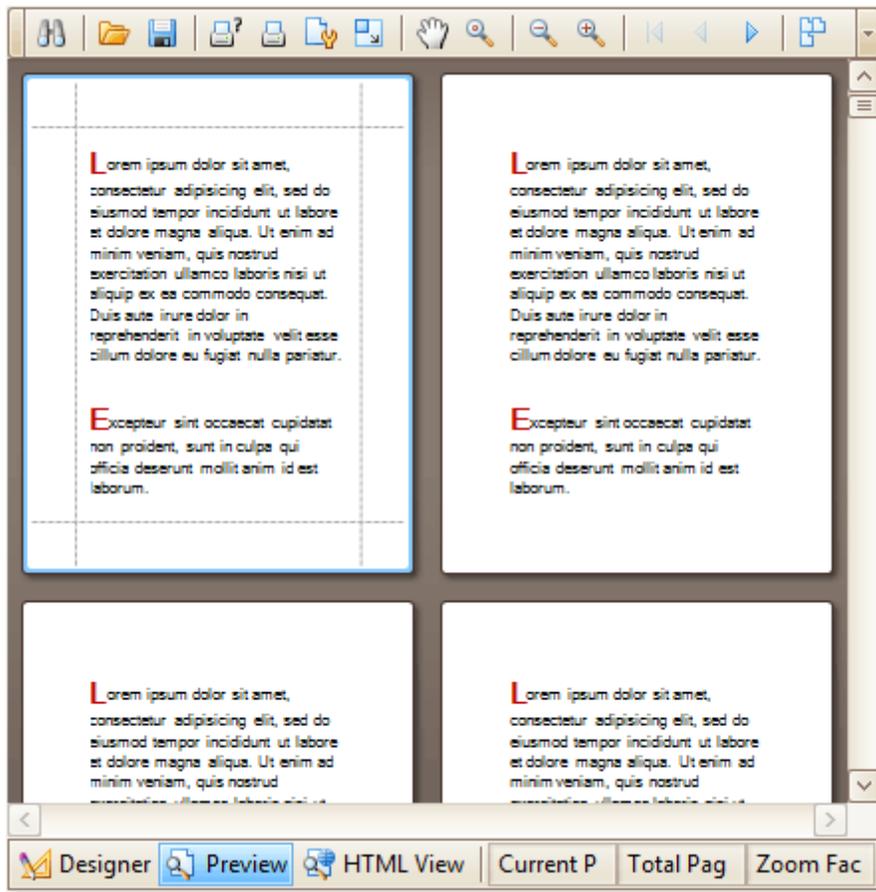
Note

Note that you can perform additional text formatting using the [Formatting Toolbar](#).

4. To repeat the created report 20 times, select the Detail band and in the [Property Grid](#) set its **Repeat Count when Data Source is Empty** property to **20**.
And, to make the announcement print on separate pages, set the band's **Page Break** property to **After the Band**.



The static report is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

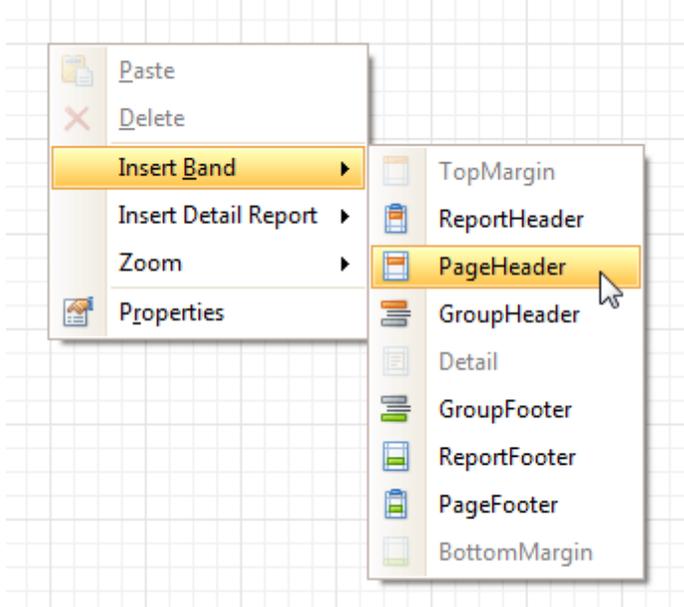
- [Table Report](#)
- [Label Report](#)
- [Multi-Column Report](#)

Table Report

This tutorial describes the steps to create a *table report*, which means that the report's data is arranged into a table-like layout. This feature should not be confused with the [master-detail report](#) or [cross-tab report](#).

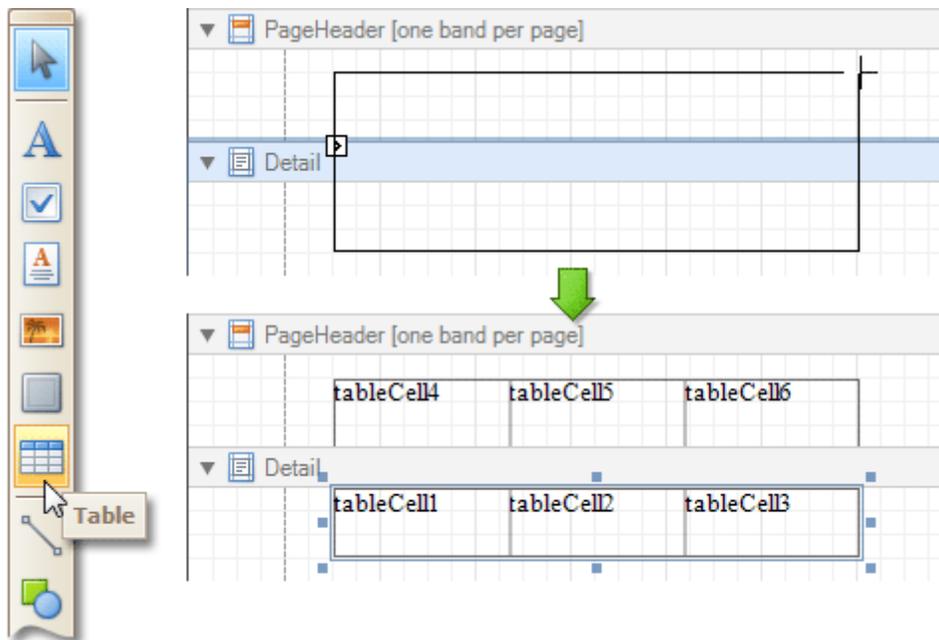
To create a table report, follow the steps below.

1. [Create a new report](#).
2. [Bind the report to a data source](#).
3. To add a [Page Header](#) to the report, right-click anywhere on the report's surface, and in the invoked [Context Menu](#), choose **Insert Band | Page Header**.



4. Now, add two [Table](#) controls to the report's Page Header and [Detail band](#).

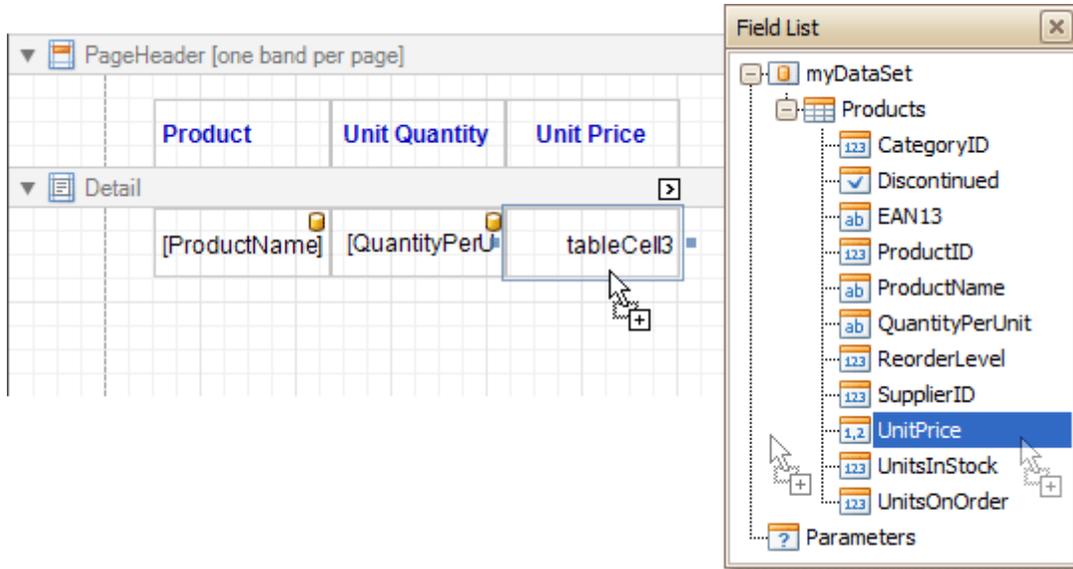
To do this, in the [Toolbox](#), click the **Table** icon. Then, in the Page Header's content area, click and hold down the left mouse button while dragging the mouse cursor across the Detail band.



As a result, two tables are created. One will be used as a header, and the other one - for the report's detail information.

5. Type the headers into the upper table's cells, and bind the corresponding cells in the detail section to

the appropriate data fields. This can be done by simply dropping these fields from the [Field List](#) onto the cells.



6. Finally, you can customize various properties of the tables, to improve their appearance. For example, using the [Property Grid](#) you can define their **Borders**, as well as **Background Color**. To customize the cells' text options, use the [Formatting Toolbar](#).

A noteworthy feature is the capability to specify [odd-even styles](#) for the detail table.

The table report is now ready. Switch to the [Preview Tab](#), and view the result.

Product	Unit Quantity	Unit Price
Chai	10 boxes x 20 bags	\$18.00
Chang	24 - 12 oz bottles	\$19.00
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Chef Anton's Cajun Seasoning	48 - 6 oz jars	\$22.00
Chef Anton's Gumbo Mix	36 boxes	\$21.35
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	\$30.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Mishi Kobe Niku	18 - 500 g pkgs.	\$97.00
Ikura	12 - 200 ml jars	\$31.00
Queso Cabrales	1 kg pkg.	\$21.00
Queso Manchego La Pastora	10 - 500 g pkgs.	\$38.00
Konbu	2 kg box	\$6.00
Tofu	40 - 100 g pkgs.	\$23.25

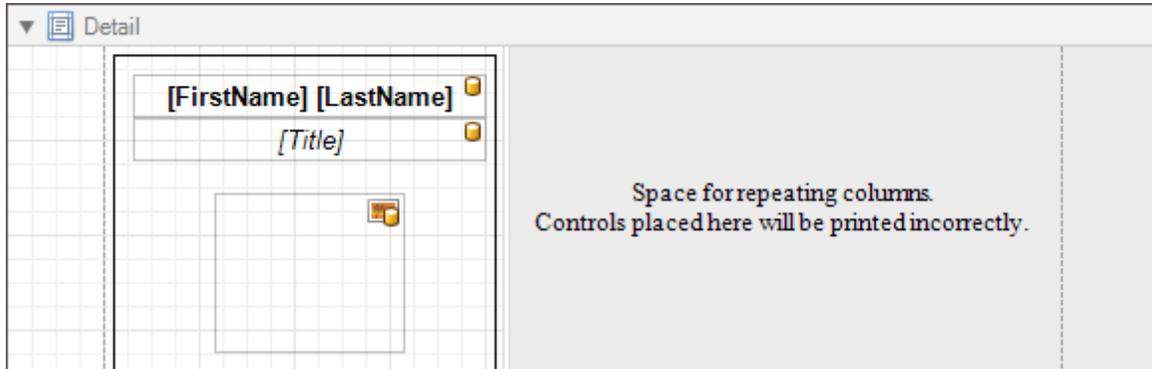
See Also[Multi-Column Report](#)

Label Report

This tutorial describes the steps to create a *label report* containing employee badges, using the [Report Wizard](#).

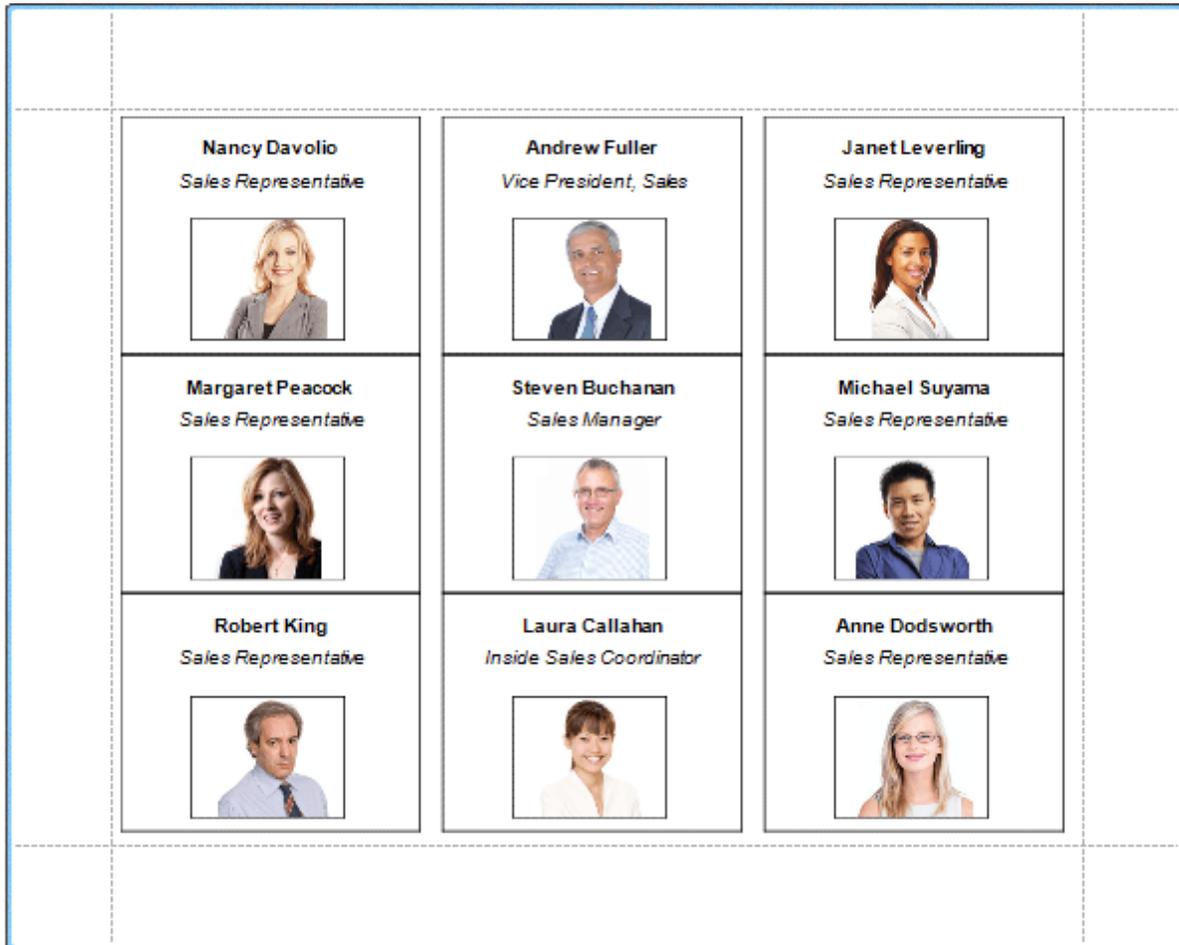
To create a label report, do the following.

1. In the [Main Menu](#), select **File** and click **New with Wizard...** (or press CTRL+W).
2. Next, the Wizard will guide you through the process of creating a label report. For detailed instructions on the wizard's steps, refer to [Label Report Wizard](#).
3. [Bind the report to a data source](#) containing information about employees.
4. Finally, drop the required fields from the [Field List](#) onto the available Detail band's area, and customize their layout.



Note that you can employ the [mail merge](#), to combine multiple data fields within the same control.

The label report is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

[Static Report](#)

[Table Report](#)

[Multi-Column Report](#)

Master-Detail Report (Detail Report Bands)

This tutorial describes the steps to create a *master-detail report* (or, *invoice report*) with hierarchically linked data, using the [Detail Report band](#).

To start with this tutorial, [Create a new report](#) and [bind the report to a data source](#). It is only possible to select a single table when binding to data via **Data Source Wizard**. For this tutorial, select the table that will be used as the principal table in the master-detail relation.

The topic consists of the following sections.

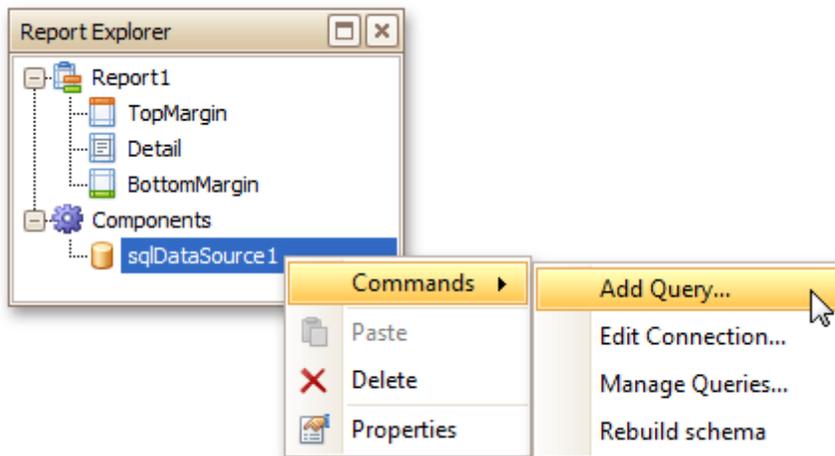
- [Provide an Report Data Source with a Master-Detail Relation](#)
- [Design a Master-Detail Report](#)
- [View the Result](#)

Provide a Report Data Source with a Master-Detail Relation

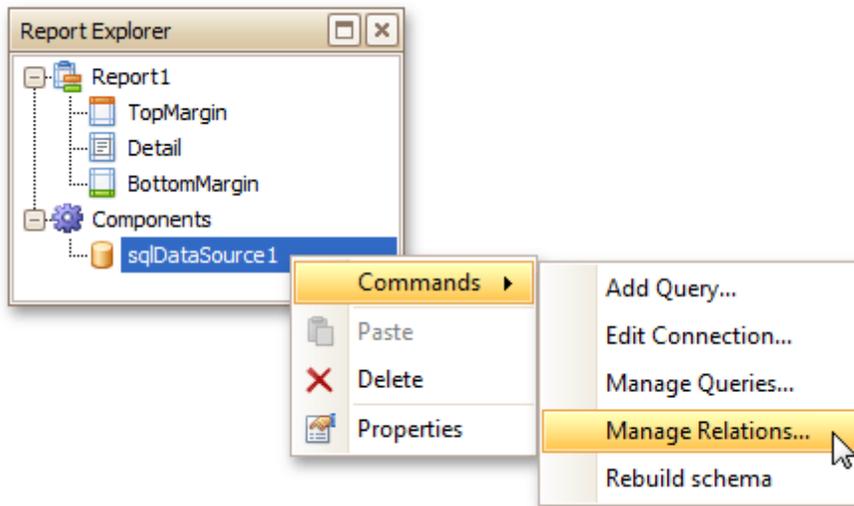
This section of the tutorial describes how to provide an SQL data source with a master-detail relation. If you are using an Entity Framework data source that contains data members with master-detail relations between them, the existing relations will be used automatically. In this case, you can skip this section of the tutorial and proceed to the next section: [Design a Master-Detail Report](#).

To add a master-detail relation to an SQL data source, do the following.

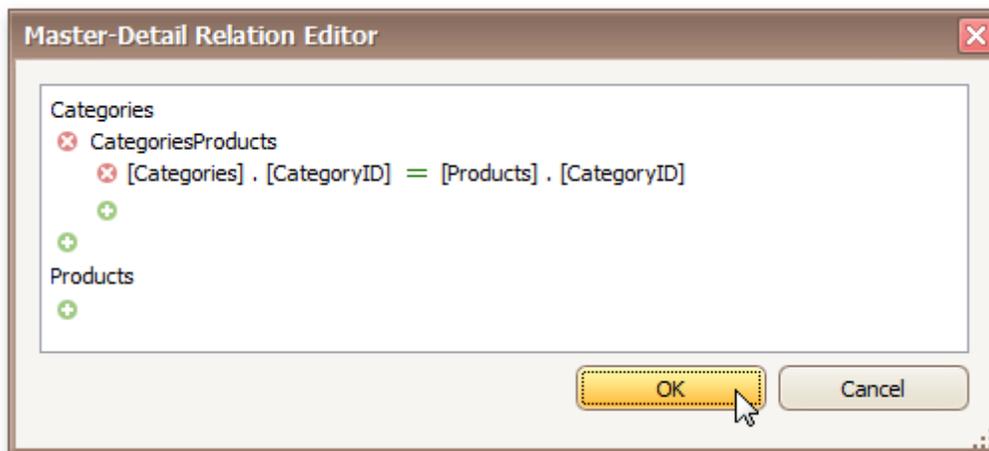
1. First you need to add a detail table to the report data source. To do this, right-click the data source in the **Report Explorer**, and select **Commands | Add Query...** in the invoked context menu.



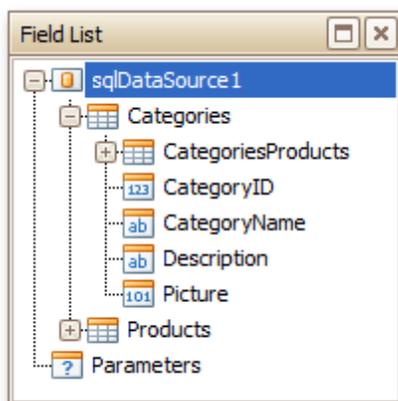
2. In the invoked **Query Editor**, click **Run Query Designer....**
3. Add the detail table to the query and click **OK**. Next, click **Finish** to exit the **Query Editor**.
4. Next, specify the relation between the data source tables. To do this, right-click the data source in the **Report Explorer**, and select **Commands | Manage Relations...** in the invoked context menu.



5. In the invoked **Master-Detail Relation Editor**, click the + button next to the master query to add a new relation. Specify a relation condition as shown in the following image and click **OK** to exit the dialog.



6. The **Field List** will be updated to reflect the added relation.



Design a Master-Detail Report

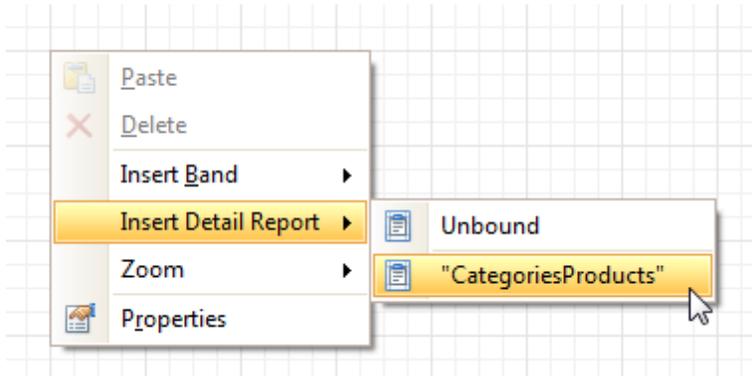
To create the layout of a master-detail report, do the following.

1. Allocate parts of a master report on the report's [Detail Band](#).

For the master report to be generated properly, the report's **Data Member** should be set to the master query. If you added the master query first, this property is set to the required value automatically. To manually specify the data member, click the report's smart tag and in the invoked actions list, expand

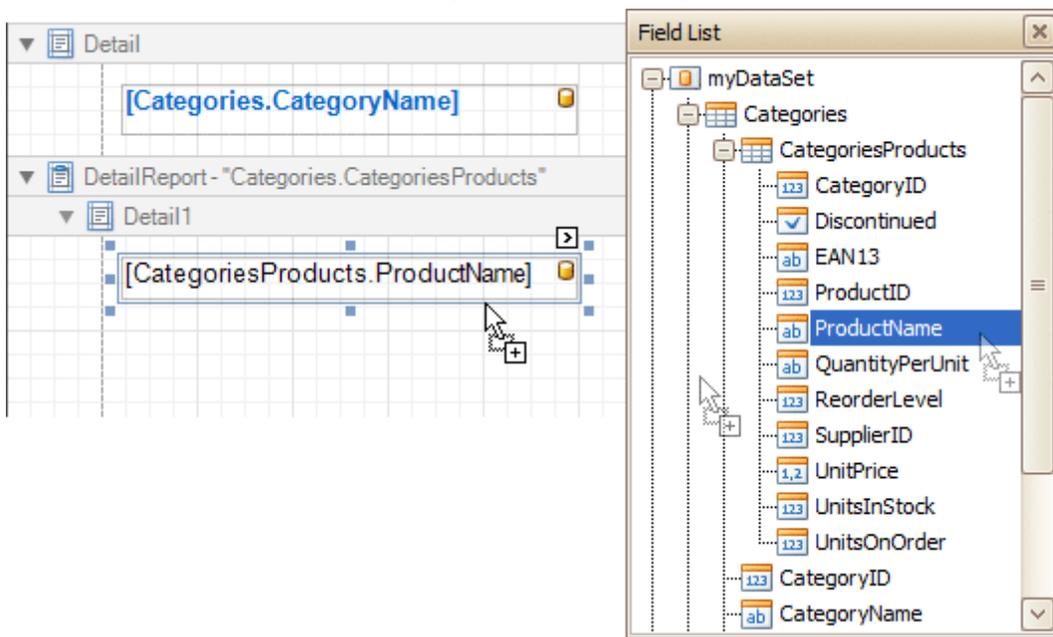
the drop-down list for the **Data Member** property and select the master query.

2. Now, to add a detail report band, right-click anywhere on the report's surface, and in the invoked [Context Menu](#), point to **Insert Detail Report**. When the report's data source contains a data relationship, it is displayed in the Context Menu.



3. Then, drop the required data fields from the Field List onto the detail report band.

Note that you should drop items from the *relation node* (in this example it is the **CategoriesProducts** section), for the detail report to be generated correctly.



View the Result

The master-detail report is now ready. Switch to the [Preview Tab](#), and view the result.

	<p>Beverages</p> <p>Côte de Blaye Ipoh Coffee</p> <p>Condiments</p> <p>Northwoods Cranberry Sauce Vegie-spread</p> <p>Confections</p> <p>Sir Rodney's Marmalade Gumbär Gummibärchen Schoggi Schokolade Tarte au sucre</p> <p>Dairy Products</p> <p>Queso Manchego La Pastora Mascarpone Fabioli Raclette Courdavault Camembert Pierrot Gudbrandsdalsost Mozzarella di Giovanni</p>	

See Also

[Parameterized Report](#)

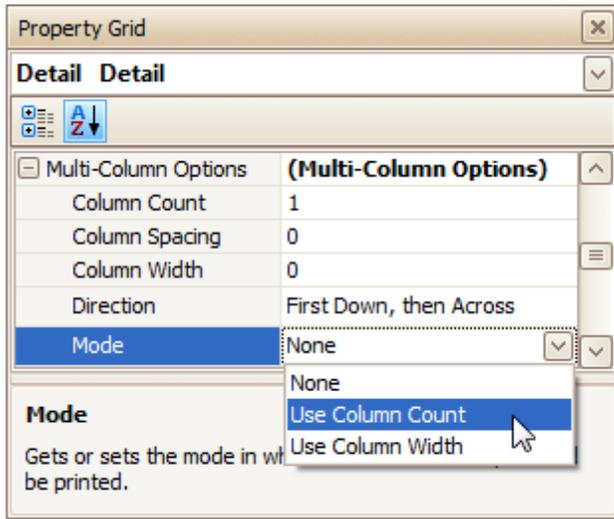
Multi-Column Report

This tutorial describes the steps to create a *multi-column report*, meaning that each page of the report document is laid out in a specified number of columns.

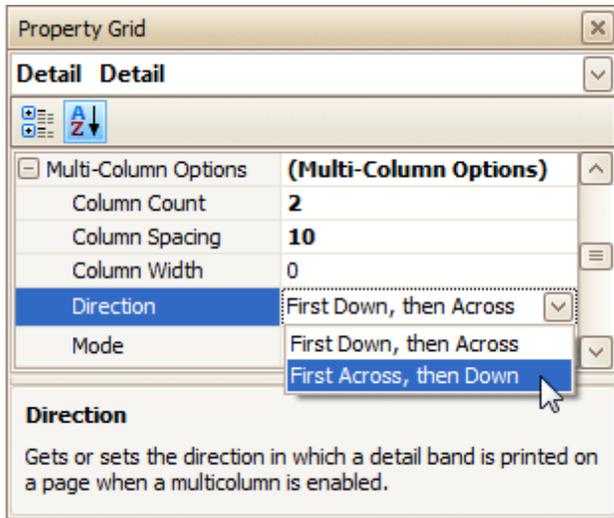
To demonstrate the multi-column feature, we'll use a report with grouping, similar the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

1. Select the [Detail band](#), and in the [Property Grid](#), expand the **Multi-Column Options** section.

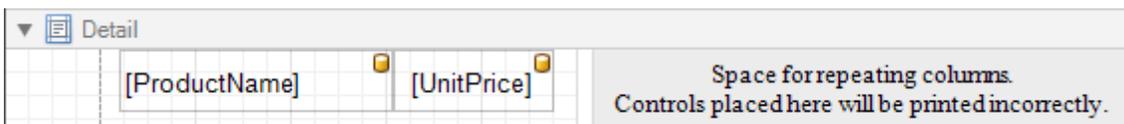
First, set the required **Mode**. It determines whether the number of columns is manually specified, or it depends on the fixed column width.



2. Then, if you've chosen to **Use Column Count**, set the **Column Count** to **2**, and **Column Spacing** to **10**. The **Direction** determines the order in which records of the same group are processed.



3. Now, on the Detail band's surface a grey area appears, delimiting the available column's width. Adjust the controls width, so that they fit within the effective borders.



The multi-column report is now ready. Switch to the [Preview Tab](#), and view the result.

Category: 1			
Chai	\$18.00	Chang	\$19.00
Sasquatch Ale	\$14.00	Steeleye Stout	\$18.00
Côte de Blaye	\$263.50	Chartreuse verte	\$18.00
Ipoh Coffee	\$46.00	Laughing Lumberjack Lager	\$14.00
Outback Lager	\$15.00	Lakkalikööri	\$18.00
Category: 2			
Aniseed Syrup	\$10.00	Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35	Northwoods Cranberry Sauce	\$40.00
Genen Shoyu	\$15.50	Gula Malacca	\$19.45
Sirop d'érable	\$28.50	Vegie-spread	\$43.90
Category: 3			
Pavlova	\$17.45	Sir Rodney's Marmalade	\$81.00
Sir Rodney's Scones	\$10.00	NuNuCa Nuß-Nougat-Creme	\$14.00
Gumbär Gummibärchen	\$31.23	Schoggi Schokolade	\$43.90
Chocolate	\$12.75	Maxilaku	\$20.00
Valkoinen sukkaa	\$16.25	Tarte au sucre	\$49.30
Scottish Longbreads	\$12.50		

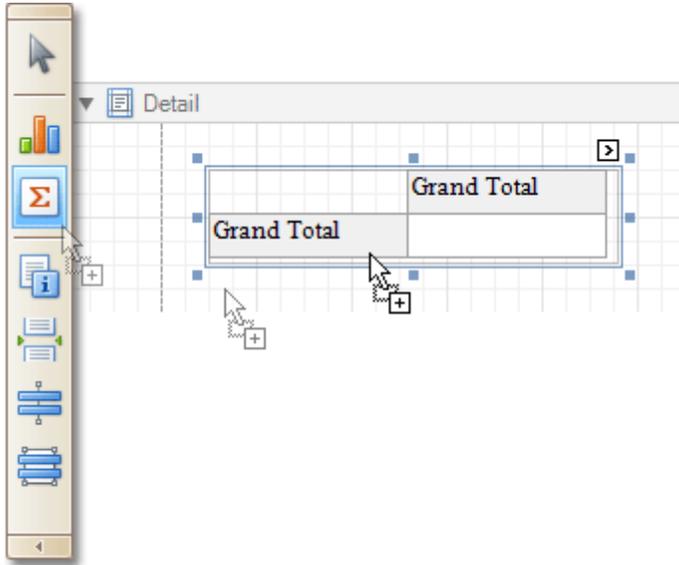
See Also[Label Report](#)

Cross-Tab Report

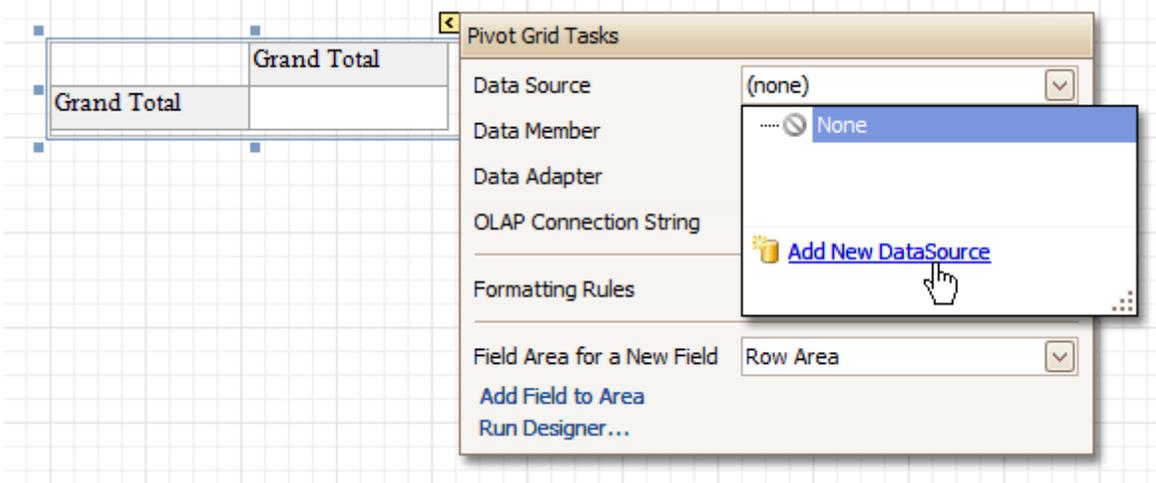
This tutorial describes the steps to create a *cross-tab report* using a [Pivot Grid](#) control. This feature should not be confused with the [master-detail report](#) or [table report](#).

To create a cross-tab report, do the following.

1. [Create a new report](#).
2. Drop the [Pivot Grid](#) control from the [Toolbox](#) onto the report's [Detail band](#).



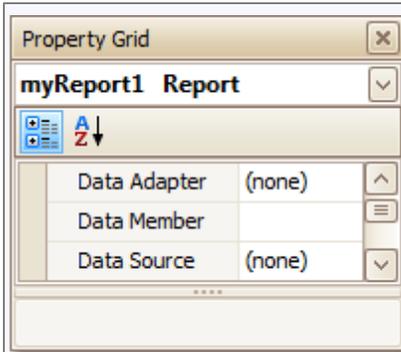
3. To bind the pivot grid to a data source, click its [Smart Tag](#), and in the invoked actions list, expand the **Data Source** drop-down selector and click **Add New DataSource**.



The invoked **Report Wizard** will guide you through the process of assigning a data source to the grid. For detailed instructions on the Wizard's steps, refer to [Bind a Report to Data](#), as this process is similar.

Note

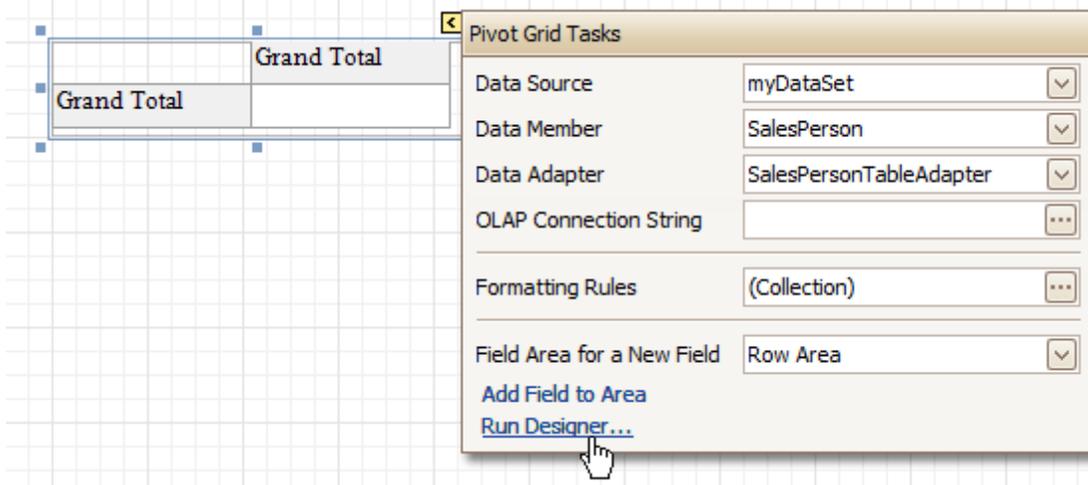
Note that after these steps, the [report's](#) **Data Source** property must be set to **None**.



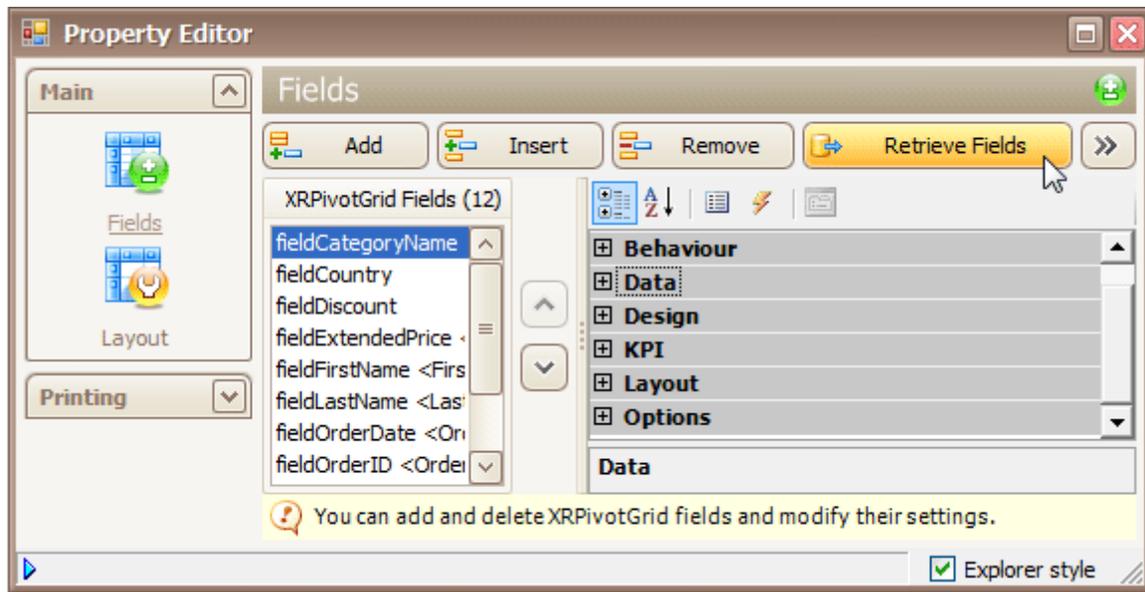
Otherwise, the grid will be blank at the preview and repeated as many times as there are records in the data source.

4. After the dataset is created, it is assigned to the grid's **Data Source** property. Its **Data Member** property defines from which table or view of your dataset the grid obtains its data. And, the **Data Adapter** property is auto-defined, as well.

So once again, click the grid's Smart Tag, and in the invoked actions list, click the **Run Designer...** link.

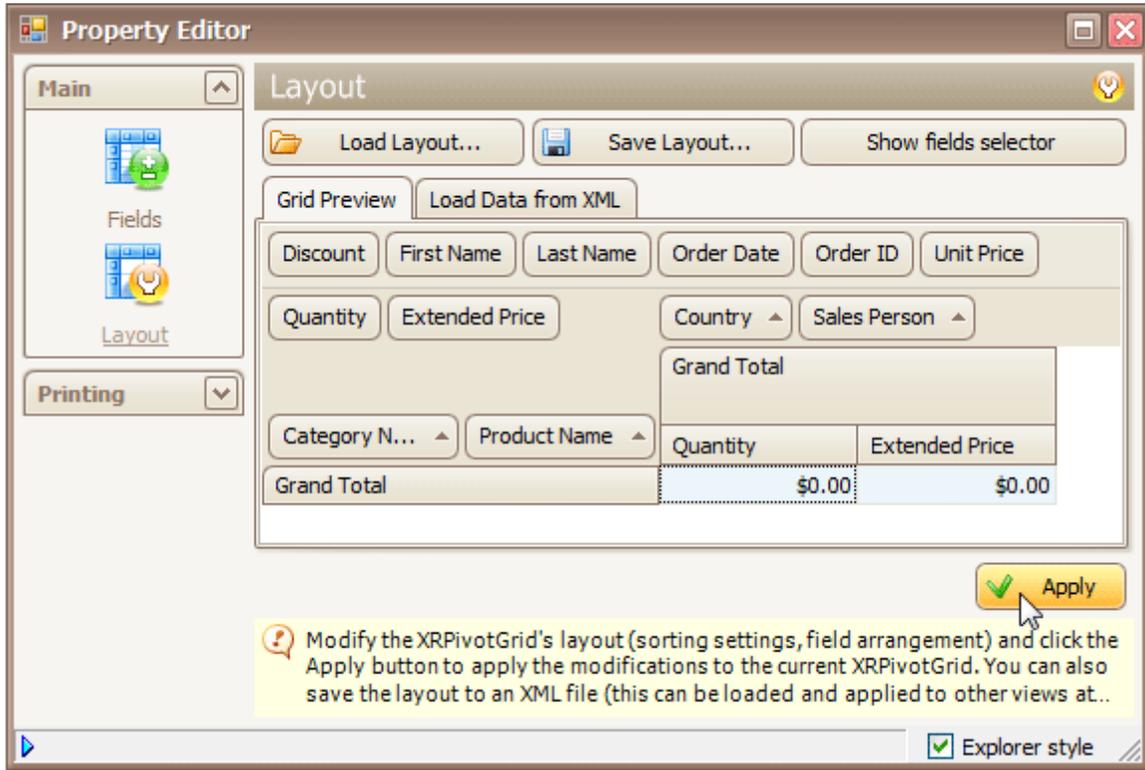


5. In the invoked **Property Editor**, click **Retrieve Fields**.



6. Then, switch to the **Layout** section in the navigation bar on the left.

Drag and drop the required fields to the **Row Fields**, **Column Fields** and **Data Items** areas.



Click **Apply** and close the editor.

- In the last step, you can set your report's **Vertical Content Splitting** option to **Smart**. This will split the grid's columns precisely by their borders in the Print Preview.



The cross-tab report is now ready. Switch to the [Preview Tab](#), and view the result.

Discount	First Name	Last Name	Order Date	Order ID	Unit Price
Quantity	Extended Price		Country	Sales Person	
			UK		
			Anne Dodsworth	Michael Suyama	
Category Name	Product Name	Quantity	Extended Price	Quantity	Extended Price
Beverages	Chai	35	\$544.50	96	\$1,551.60
	Chang	30	\$494.00	110	\$1,805.00
	Chartreuse verte	10	\$180.00	151	\$2,389.50
	Côte de Blaye	57	\$14,624.25		
	Guaraná Fantástica	73	\$276.30	131	\$525.60
	Ipoh Coffee				
	Lakkaikööri	73	\$977.58	55	\$751.50
	Laughing Lumberjack				
	Outback Lager	51	\$744.00	36	\$540.00
	Röhnbräu Klosterbräu	110	\$833.12	129	\$948.60
	Sasquatch Ale	10	\$112.00	30	\$420.00
	Steeleye Stout	70	\$856.80	40	\$518.40
	Beverages Total		519	\$19,642.55	778
Condiments	Aniseed Syrup	74	\$740.00	20	\$180.00
	Chef Anton's Cajun			6	\$132.00
	Chef Anton's Gumbo			4	\$85.40
	Genen Shouyu			12	\$176.70
	Grandma's Boysenb	50	\$1,187.50		
	Gula Malacca	62	\$906.39	70	\$1,087.52
	Louisiana Fiery Ho	40	\$842.00	20	\$421.00
	Louisiana Hot Spic	60	\$693.60		
	Northwoods Cranb	70	\$2,680.00		
	Original Frankfurte	53	\$575.25	63	\$802.75
	Sirop d'érable	4	\$114.00	50	\$1,368.00
	Vegie-spread	80	\$2,386.80	9	\$395.10
	Condiments Total		493	\$10,125.54	254

See Also

[Master-Detail Report \(Detail Report Bands\)](#)

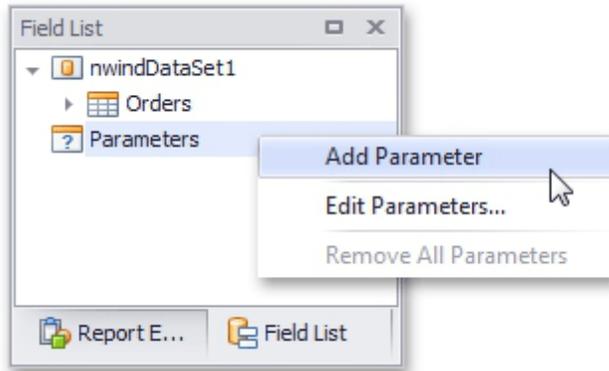
Parameterized Report

This tutorial describes the steps to create a report with parameters. In this example, we will create two date-time parameters, to filter out orders which don't fall in the specified range, from the report.

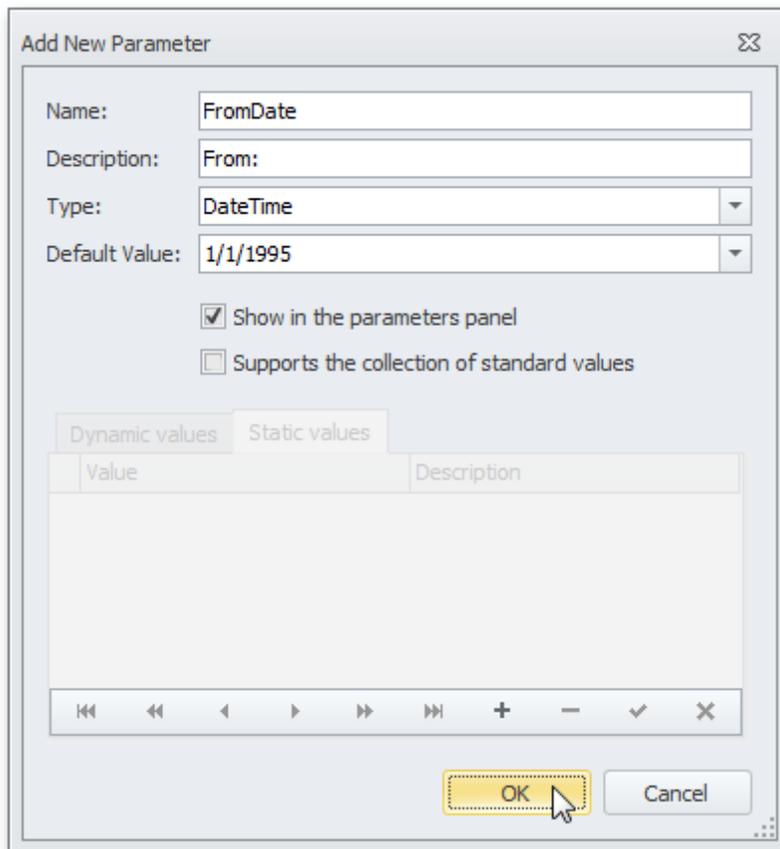
First, [create a report](#) and [bind it to a data source](#).

To add parameters and filter your report based on their values, follow the steps below.

1. In the [Field List](#) window, right-click over the **Parameters** section and in the invoked menu, click **Add Parameter**.



2. In the invoked window for the created parameter, set its **Name** and **Description**. And, make sure to set its **Type** to an appropriate value.



Note

In Print Preview, the report's document is not generated until you have submitted values of all the parameters that have the **Show in the parameters panel** option switched on via the **Parameters** UI.

3. Enabling the **Supports the collection of standard values** option of the parameter allows end-users to

modify its value and also activates the **Dynamic values** and the **Static values** tabs of the window :

- On the **Dynamic values** tab, you can specify a parameter's data source, data adapter and data member. The value member defines a data field that provides values to the parameter. The display member defines a data field that provides display names for parameter values (how these values appear in the user interface available in a Print Preview).
- On the **Static values** tab, you can manually fill the list of parameter values, with each value having an individual description (specifying how this value appears in the **Parameters** panel).

Add New Parameter

Name:

Description:

Type:

Default Value:

Show in the parameters panel

Supports the collection of standard values

Dynamic values | **Static values**

Value	Description
1/1/1995	January 1, 1995
4/1/1995	April 1, 1995
▶ 8/1/1995 ▼	August 1, 1995

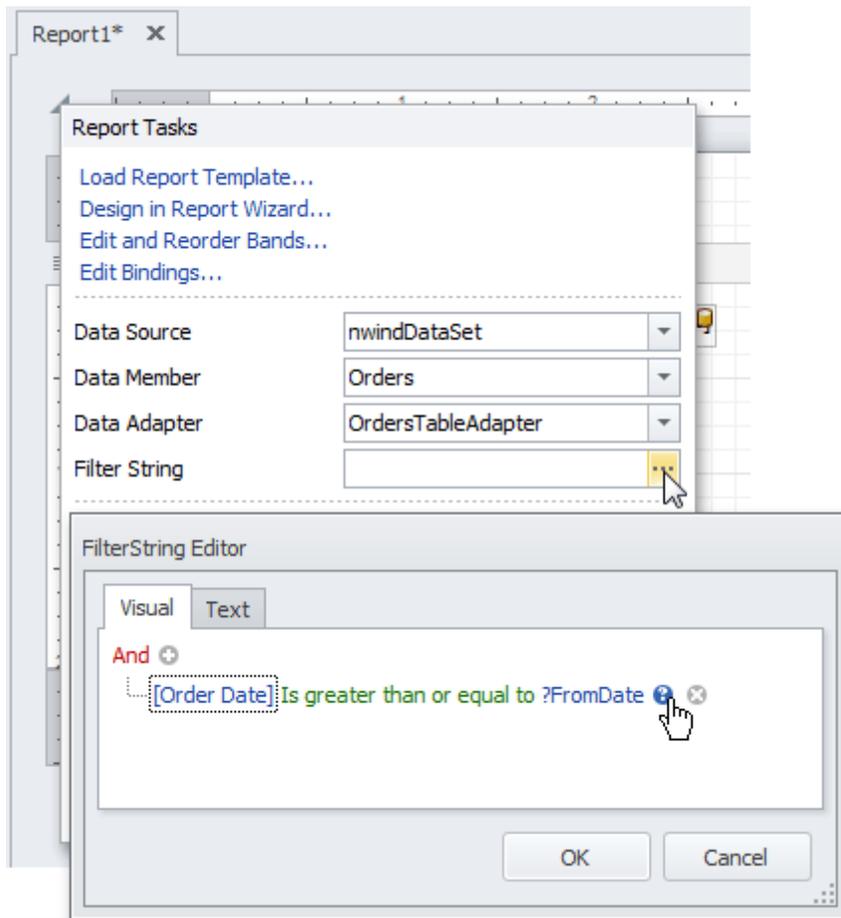
Navigation icons: ⏪ ⏩ ⏴ ⏵ ⏶ ⏷ ⏸ + - ✓ ✕

OK Cancel

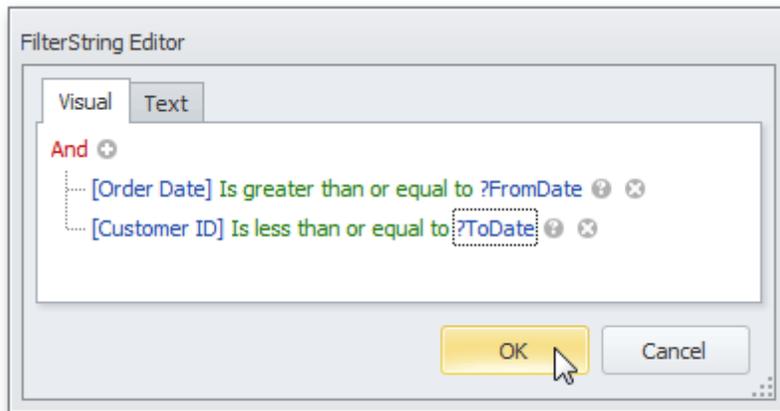
Then, repeat the previous steps to create the second parameter, so that every time your report is previewed, you will be asked to specify two dates.

The following instructions explain how to use parameters to filter your report's data.

4. Click your report's [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Filter String** entry. Then, in the invoked **Filter String Editor**, construct an expression where a data field is compared with the created parameters. To access parameters, click the icon on the right until it turns into a question mark.



The complete filtering expression will then look like this.



The parameterized report is now ready. Switch to the [Preview Tab](#), and in the **Parameters** section, define the required values and click **Submit**.

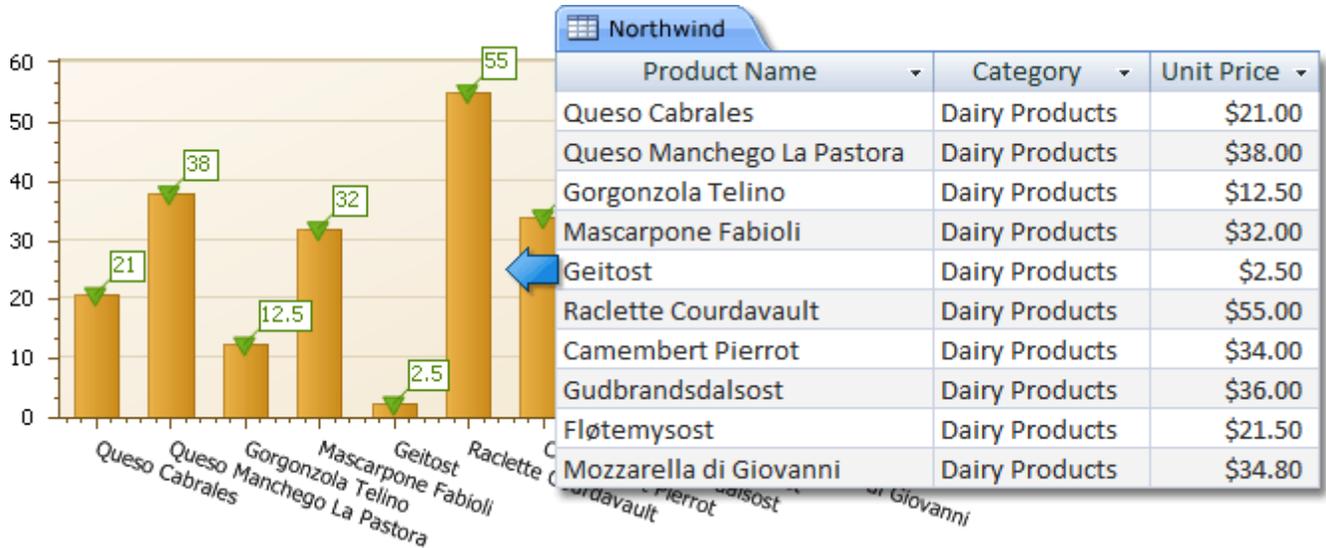
The screenshot shows the Report Designer interface for a report named 'Report1*'. The 'Parameters' pane on the left shows a date range from 'April 1, 1995' to '12/31/1995'. A calendar dropdown is open, showing 'December, 1995' with the 31st selected. The main report area displays a table with columns for date, ID, country, and price.

Date	ID	Country	Price
3/1995	10462	UK	\$6.17
4/1995	10463	Belgium	\$14.78
4/1995	10464	Portugal	\$89.00
5/1995	10465	Denmark	\$145.04
6/1995	10466	Brazil	\$11.93
6/1995	10467	Italy	\$4.93
4/7/1995	10468	Germany	\$44.12
4/10/1995	10469	USA	\$60.18

Chart with Static Series

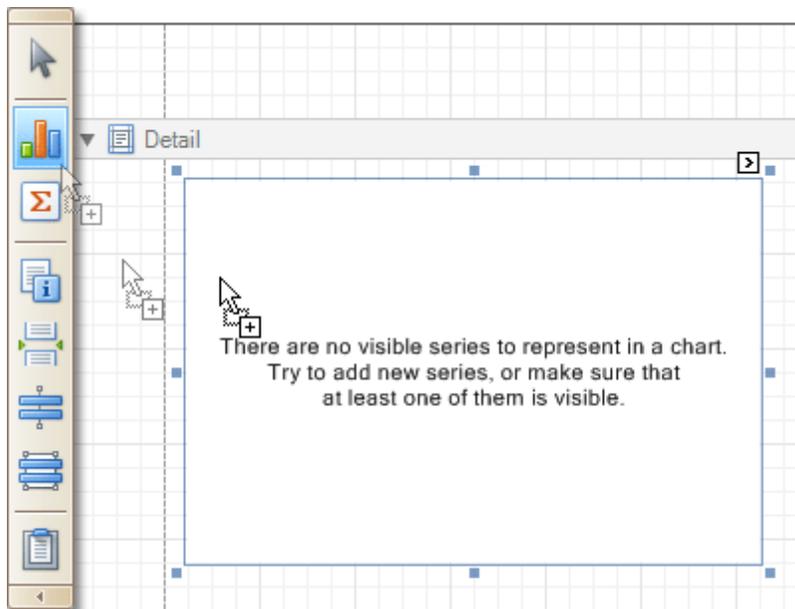
This document describes how to create a report with a [Chart](#) control bound to data, so that a particular *series* has its own *data source*, and other settings. To simplify the example, both series obtain their data from the same data source. However, different data sources can be used for different series, if necessary.

This example describes how to construct a chart of products and their prices for a chosen category.



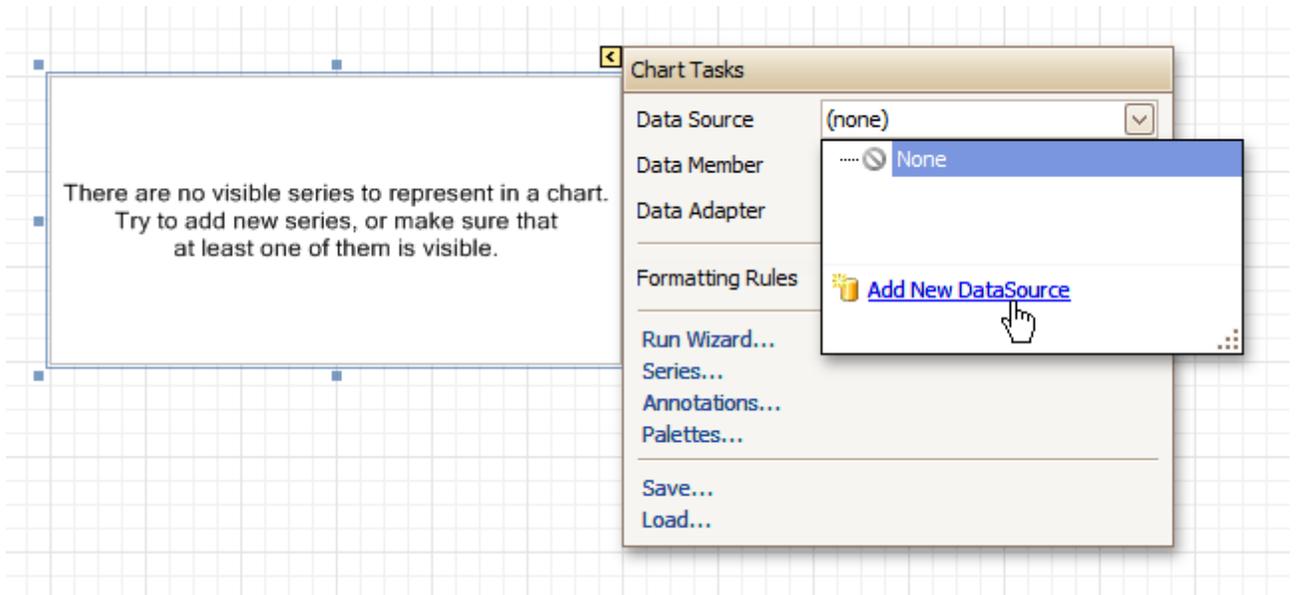
To adjust a Chart by manually creating its series, do the following.

1. [Create a new report](#).
2. Drop the [Chart](#) control from the [Toolbox](#) onto the report's [Detail band](#).



Note that after you drop the Chart, the [Chart Wizard](#) may be invoked (if its "Show wizard every time a new chart is added" option is enabled). In this example, we don't need to use the Wizard, so click **Cancel** to close its window.

3. To bind the Chart to a data source, click its [Smart Tag](#). In the invoked actions list, expand the **Data Source** drop-down selector, and click **Add New DataSource**.



The invoked connection Wizard will guide you through the process of assigning a data source to the Chart. For detailed instructions on the Wizard's steps, refer to [Bind a Report to Data](#), as this process is similar.

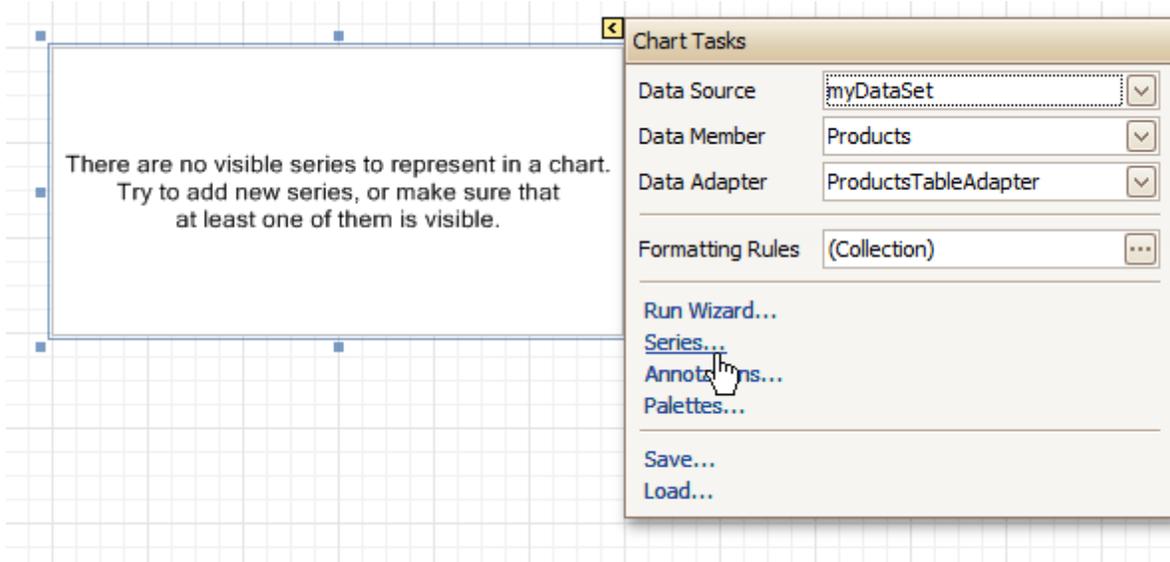
Note

Note that after these steps, the [report's](#) **Data Source** property must be set to **None**.

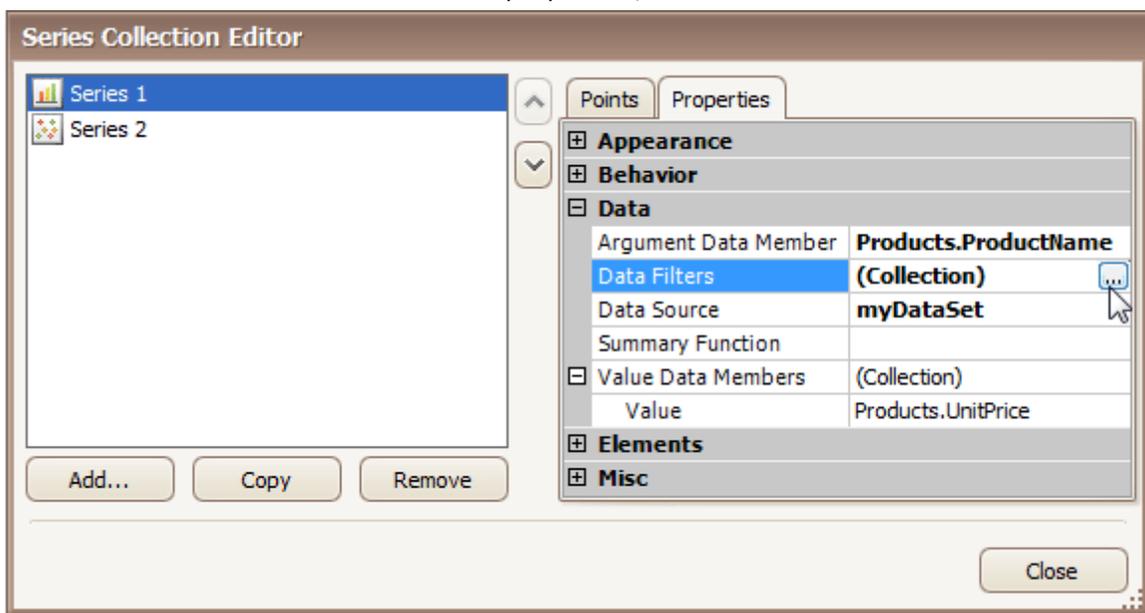
Otherwise, the Chart will be blank when previewed, and repeated as many times as there are records in the data source.

4. After the dataset is created, it is assigned to the Chart's **Data Source** property. Its **Data Member** property defines from which table or view of your dataset the Chart obtains its data. And, the **Data Adapter** property is auto-defined, as well.

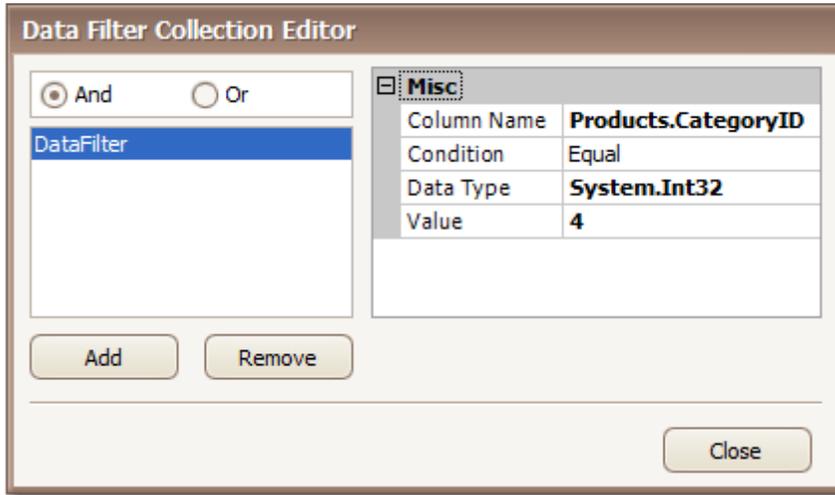
So once again, click the Chart's Smart Tag, and in the invoked actions list, click the **Series...** link.



5. Now, in the invoked **Series Collection Editor**, create a *series* of the required *view type* (e.g. Bar). Then, switch to the **Properties** tab at the right of the editor's window, and assign the existing data set object to the **Data Source** property of the series. And, assign the required data fields to the **Argument Data Member** and **Value Data Member** properties, which determine the coordinates for series points.



In addition, you can filter the series data. To do this, click the ellipsis button for its **Data Filters** property, and in the invoked dialog, create and adjust the filtering criteria.



To save the changes and quit the dialog, click **Close**.

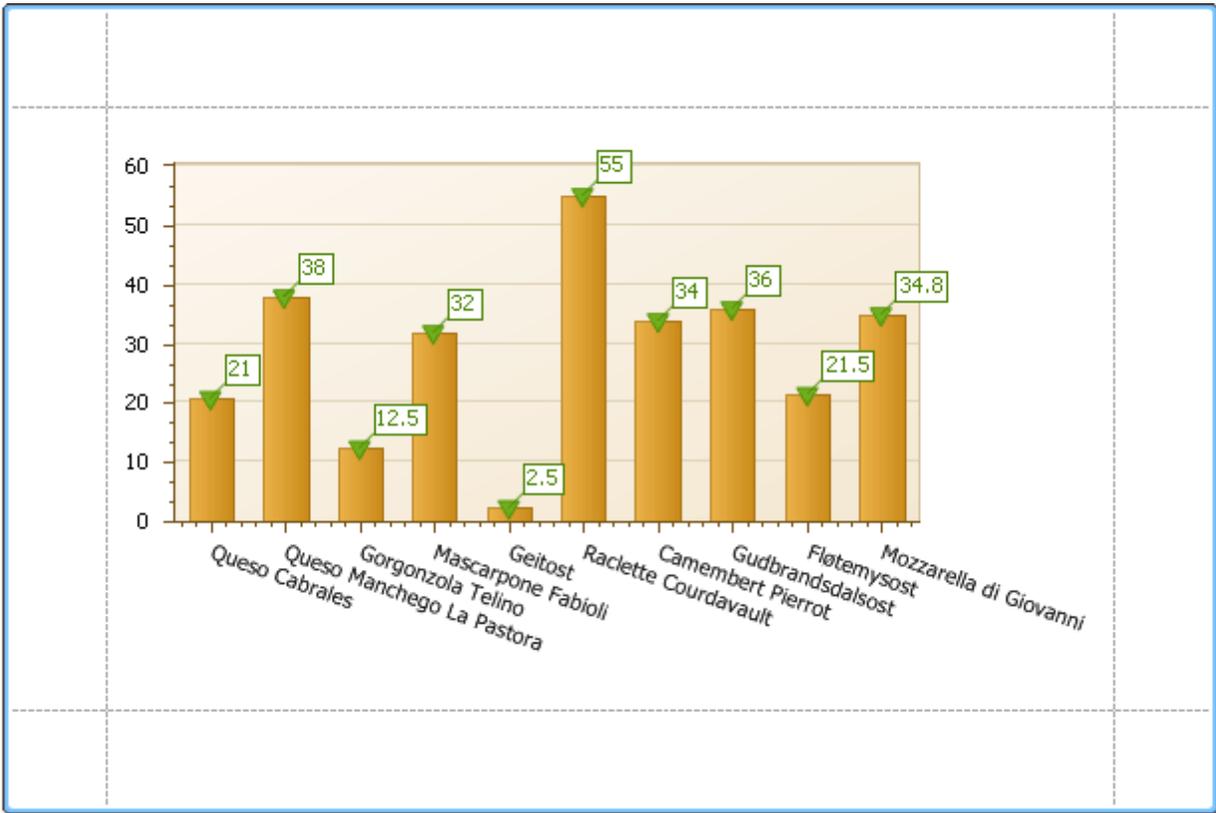
Then, back in the **Series Collection Editor**, click **Copy**, to create a similar series, but change its **View** to **Point**.

6. Finally, to improve your Chart's appearance, you can make the following adjustments.

- Remove the Chart's legend, as it shows the same data for both series. To do this, click the Legend, and in the [Property Grid](#), set its **Visible** property to **No**.
- The point labels for Series1 are unnecessary, so select the label and set its **Visible** property to **No**.
- Customize the appearance of the Series2 markers (e.g. replace the default circle with the upside-down triangle by the **View.Point Marker Options.Kind** property and set its **Size** to **12**).
- Rotate the X-axis labels for better readability. To do this, select the **AxisX** item in the chart by mouse click, and adjust properties for its labels (via the **Label** property). For instance, if the **Angle** property is **20** and the **Antialiasing** property is set to **Yes**, the labels look neat.

If required, it is possible to customize many other properties for the Chart, which are not described here.

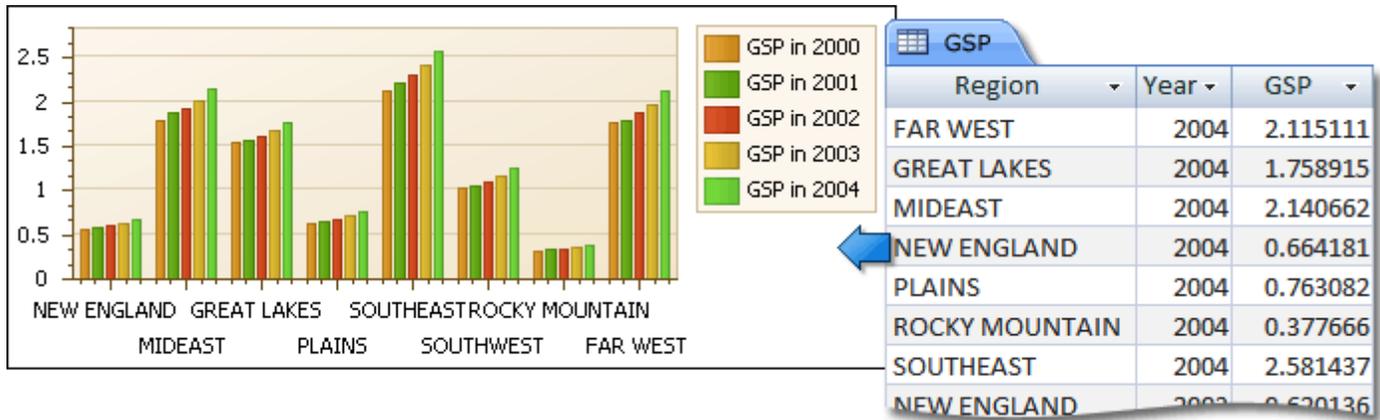
The chart is now ready. Switch to the [Preview Tab](#), and view the result.



See Also
[Chart with Dynamic Series](#)

Chart with Dynamic Series

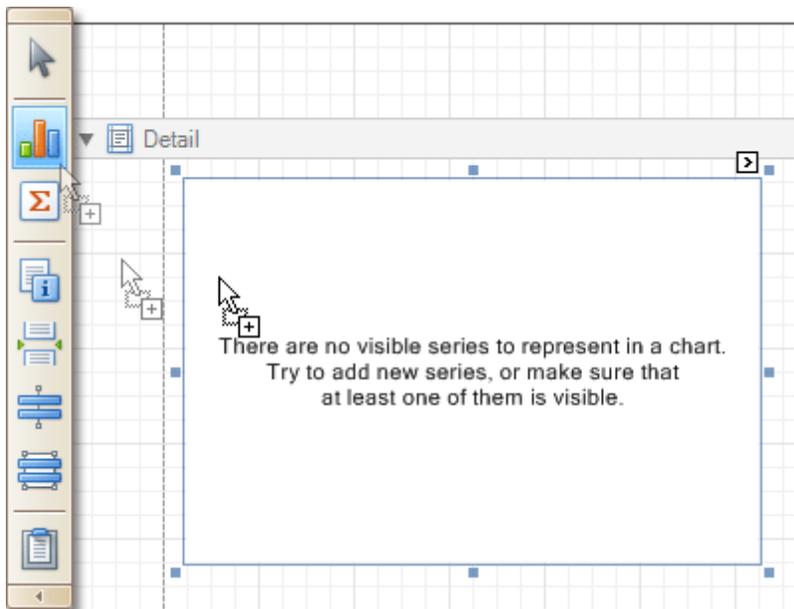
This document describes how to create a report with a [Chart](#) control bound to data, so that all series are auto-created based on a common *template*, which specifies universal options for all series. This is possible when the data for all series (their names, along with points' arguments and values) are stored in the same *data table*.



Note that in this scenario, the *view type*, and certain other settings, will be the same for all series.

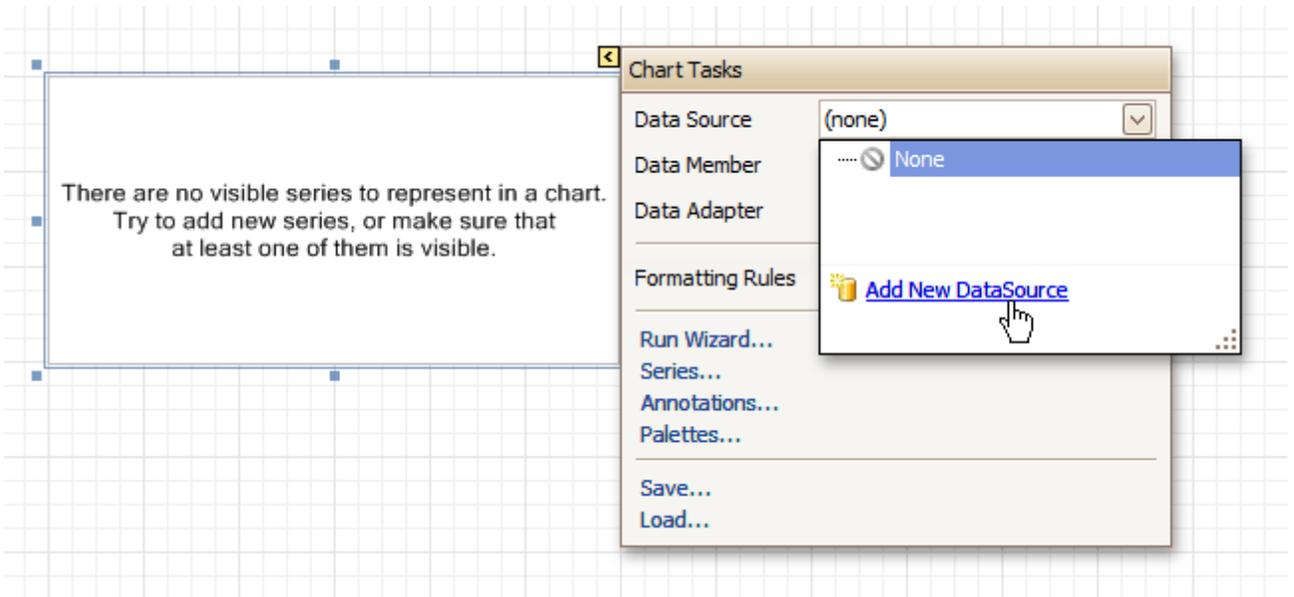
To adjust a Chart with automatically created series, do the following.

1. [Create a new report](#).
2. Drop the [Chart](#) control from the [Toolbox](#) onto the report's [Detail band](#).



Note that after you drop the Chart, the [Chart Wizard](#) may be invoked (if its "Show wizard every time a new chart is added" option is enabled). In this example, we don't need to use the Wizard, so click **Cancel** to close its window.

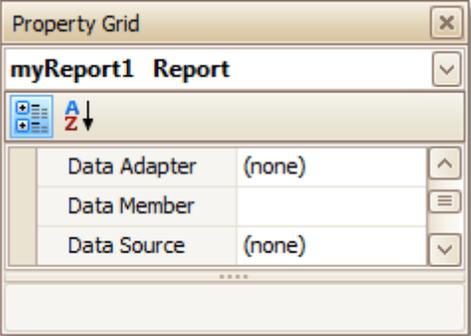
3. To bind the Chart to a data source, click its [Smart Tag](#). In the invoked actions list, expand the **Data Source** drop-down selector, and click **Add New DataSource**.



The invoked connection Wizard will guide you through the process of assigning a data source to the Chart. For detailed instructions on the Wizard's steps, refer to [Bind a Report to Data](#), as this process is similar.

Note

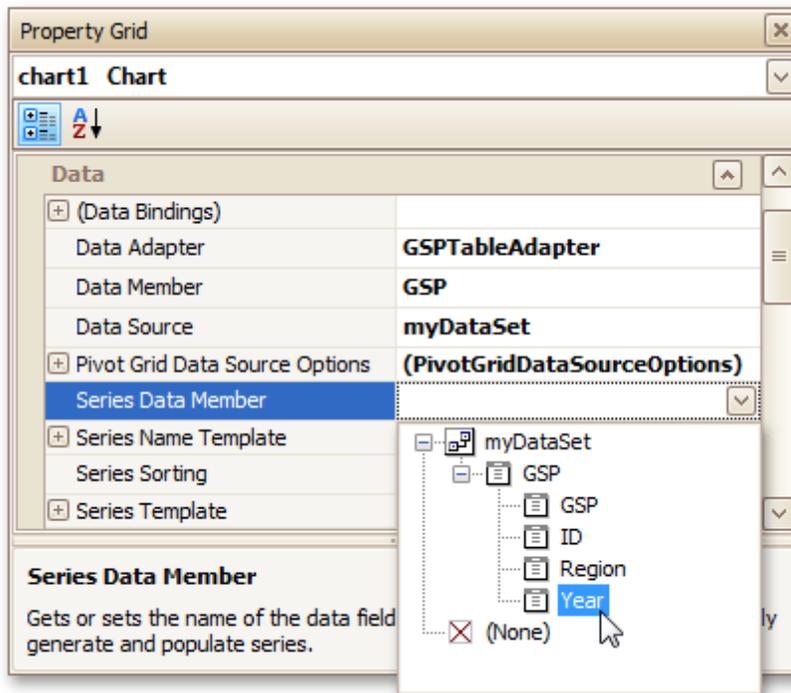
Note that after these steps, the [report's](#) **Data Source** property must be set to **None**.



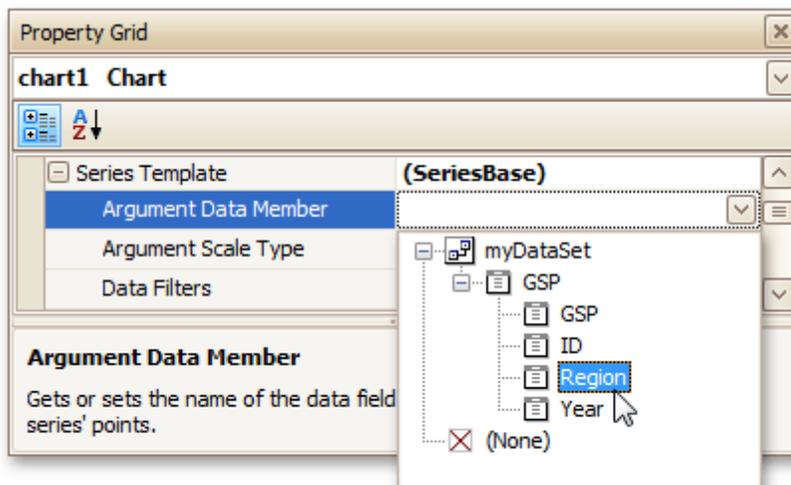
Otherwise, the Chart will be blank when previewed, and repeated as many times as there are records in the data source.

4. After the dataset is created, it is assigned to the Chart's **Data Source** property. Its **Data Member** property defines from which table or view of your dataset the Chart obtains its data. And, the **Data Adapter** property is auto-defined, as well.

Now, to specify the data field which should provide data for the series names (so that a new series is created for each record in that data field), set the **Series Data Member** property value.

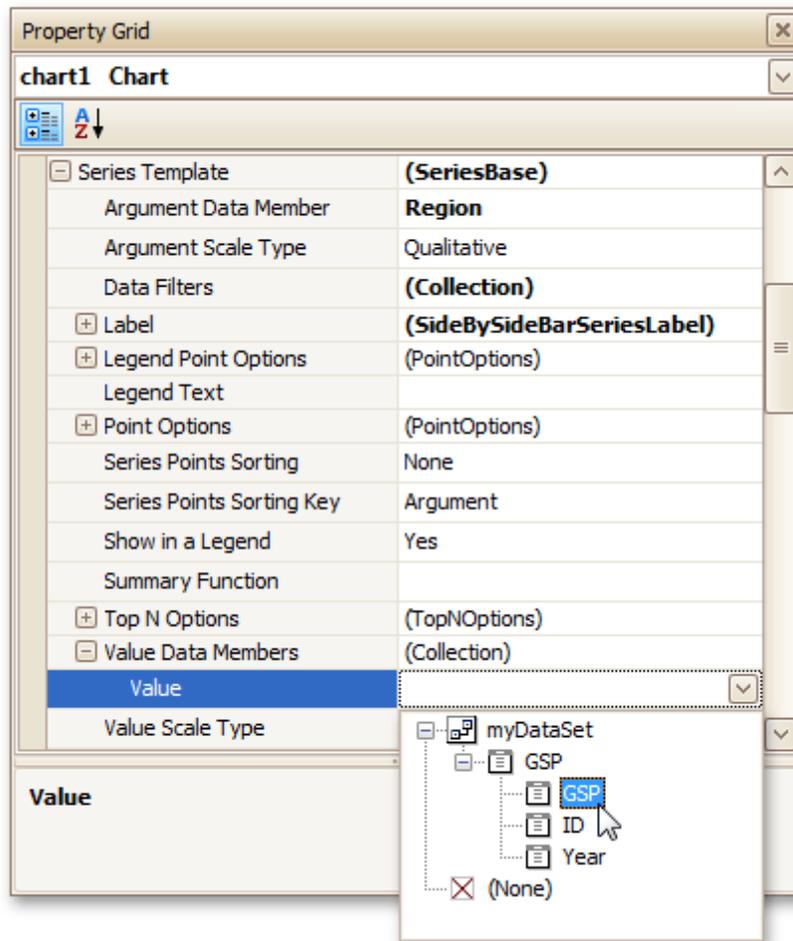


5. Then, adjust the series template which is accessed via the chart's **Series Template** property. First, set the **Argument Data Member** (which specifies from where the data for points' *arguments* is obtained).



Make sure that the **Argument Scale Type** property is set to an appropriate value. Otherwise (e.g. when your data is of the *date-time* type, but this property is set to **Qualitative**), the resulting Chart will be seriously affected, and incorrectly represent its underlying data.

6. And, specify the **Value Data Members** property, indicating the data field(s) from which the points' *values* are obtained.



As with the argument, make sure to appropriately specify the **Value Scale Type**.

7. At this point, the chart's data options are completely defined, so in this step some additional customization capabilities are described.

- Adjust the Series Name Template

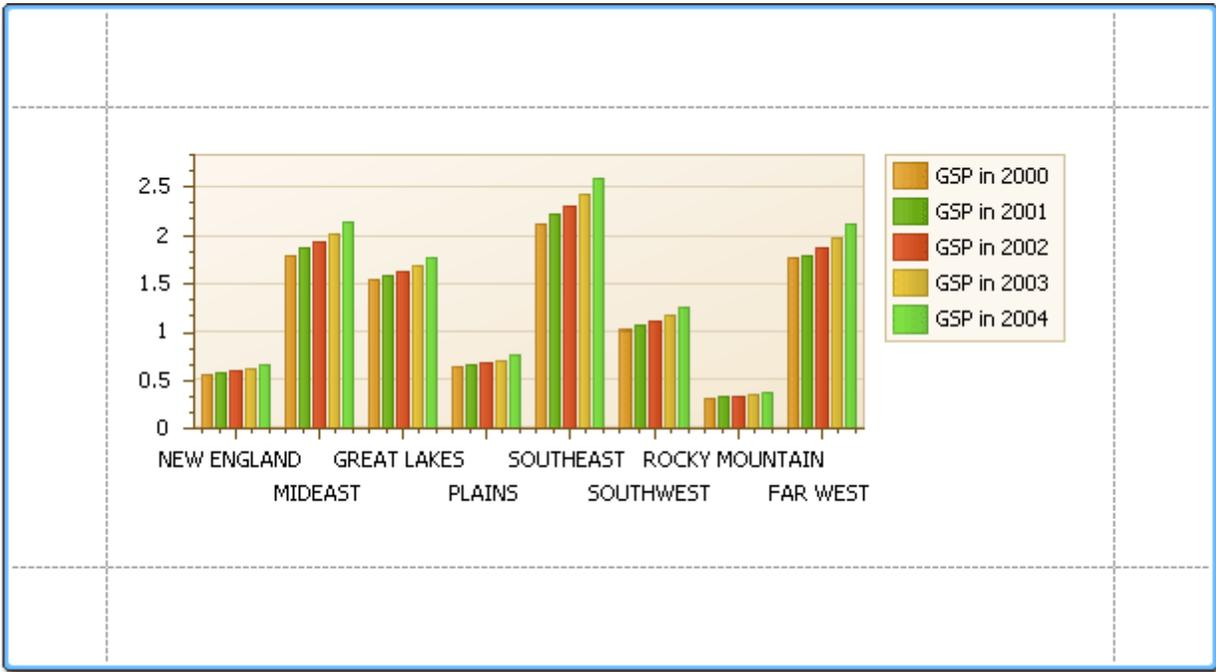
By default, the name for every auto-created series is obtained directly from an appropriate data field in the bound data source. However, you can add some text to the beginning or to the end of every series name, via the **Series Name Template** property. For instance, here we set the **Begin Text** property to "GSP in ".

- Customize Axis Labels

To avoid overlapping axis labels, select an axis and set its **Label.Staggered** property to **Yes**.

If required, it is possible to customize many other properties for the Chart, which are not described here.

The chart is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

[Chart with Static Series](#)

Styles and Conditional Formatting

The topics of this section cover appearance-related information about the Report Designer.

This section consists of the following topics.

- [Understanding Style Concepts](#)
- [Use Odd and Even Styles](#)
- [Store and Restore Style Sheets](#)
- [Conditionally Change a Control's Appearance](#)
- [Conditionally Hide Bands](#)
- [Conditionally Change a Label's Text](#)

Understanding Style Concepts

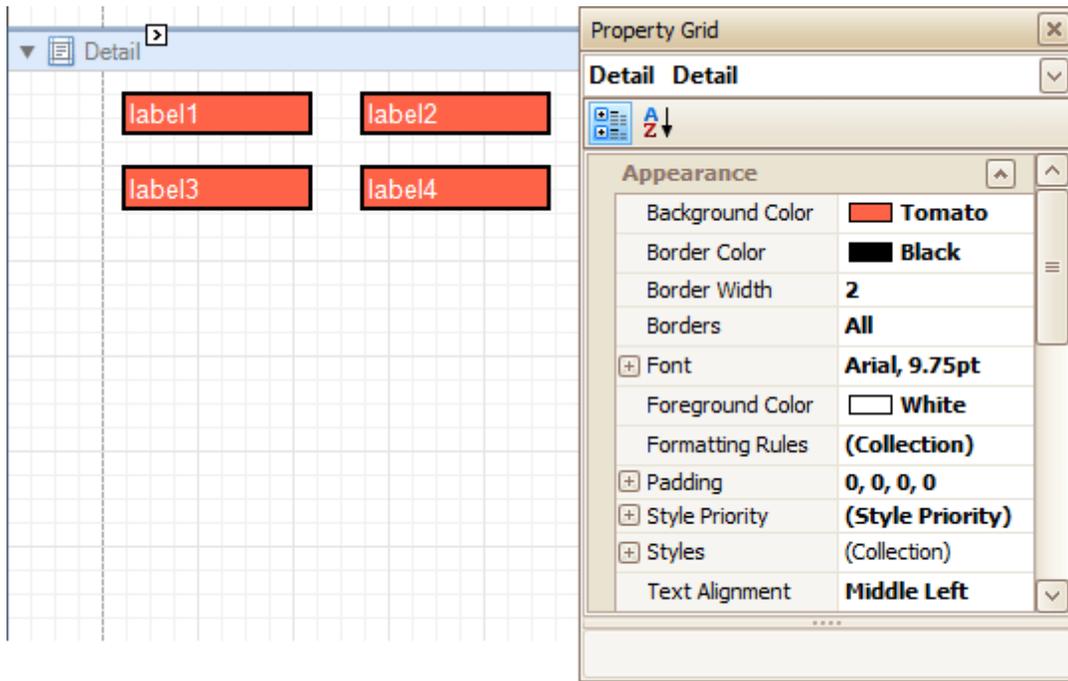
This document describes how you can provide a professional look to your reports, by effectively adjusting the appearance of its elements.

This document consists of the following sections.

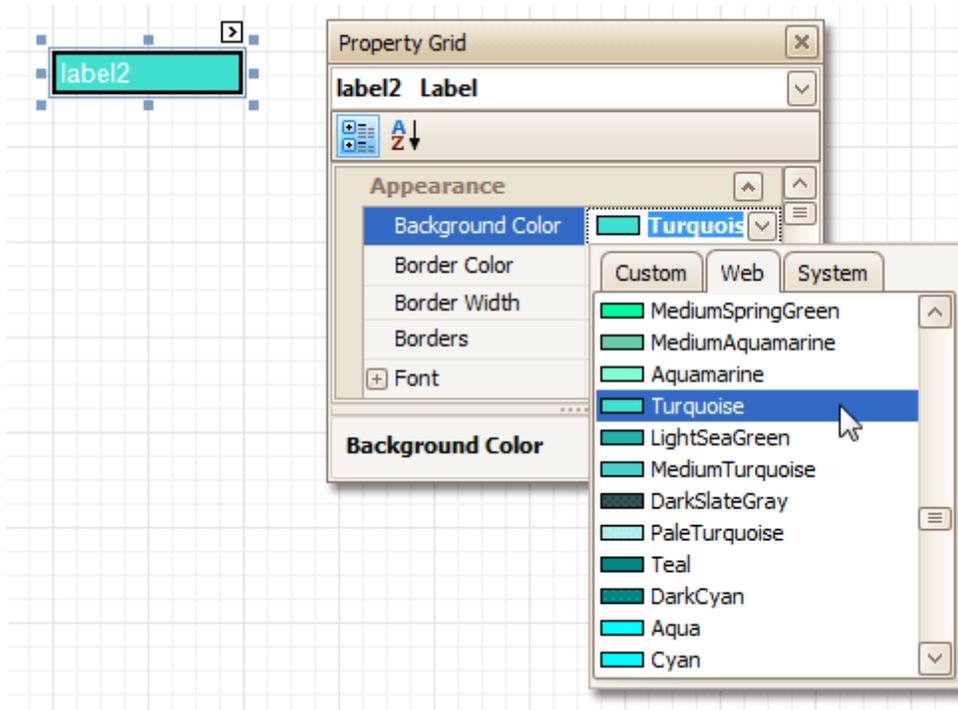
- [The Appearance Properties](#)
- [Styles Priority and Inheritance](#)

The Appearance Properties

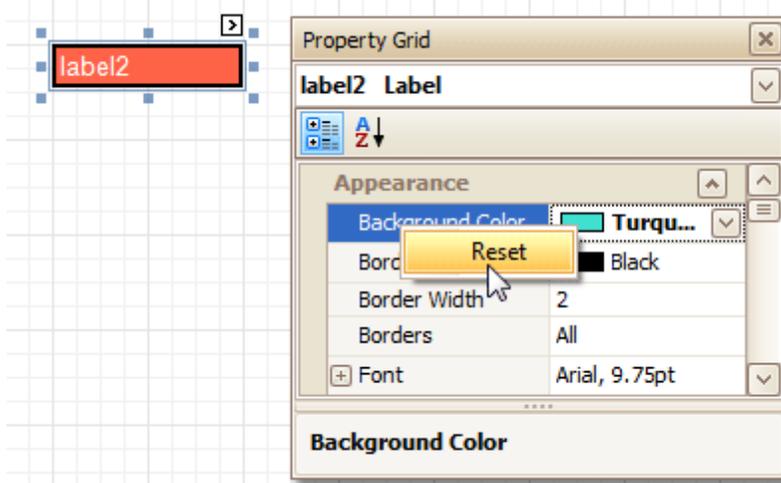
In the Report Designer, a [report](#) and each of its elements ([bands](#) and [controls](#)) has a complete set of appearance options (such as **Background Color**, **Borders**, **Font**, **Foreground Color**, **Text Alignment**, etc.). By default, these properties aren't specified, meaning that their real values are obtained from a control's (or band's) *parent*, which is the report itself. So, the appearance, specified for a report, is distributed to all its child elements. Similarly, the appearance of a band is translated to the controls it contains.



In turn, a control's appearance can be adjusted independently from its parent.



When it is required to reset a value assigned to a control's appearance property, you can right-click this property in the [Property Grid](#), and in the invoked menu, click **Reset**. So, the control will be restored to the appearance of its parent.



Styles Priority and Inheritance

To differentiate appearance settings in your report, you can create comprehensive *styles* (which are stored in the report's *style sheet*), and then can be assigned to individual elements. There are two ways to store a report's styles.

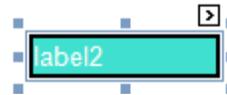
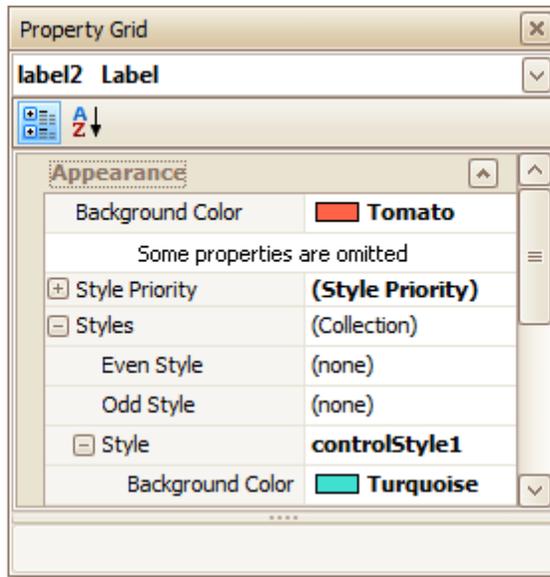
- to save them to external files (with REPSS extension), and then load them to a report via its **Style Sheet Path** property (this is described at [Store and Restore Style Sheets](#));
- to store the styles within the report, so that they can be easily accessed via its **Style Sheet** property.

Note that if styles contained in a style sheet loaded via the **Style Sheet Path** property have the same names as styles already contained in a report, the latter ones are overridden.

When both styles and individual appearance settings are assigned to an element, you can control the priority of their differing options, via an element's **Style Priority** property.

By default, most of the **Style Priority**'s options (**Use Background Color**, **Use Border Color**, etc.) are set to **Yes**.

This means that if any style is assigned to a control, its properties will have a higher priority than the appearance properties of this element or its parent. You can assign a higher priority to an element's appearance property, by disabling the corresponding **Use*** property.



The same principles are applied to the *odd-even styles* feature, which allows you to alternate the appearance of consecutive data rows in your report. For details on this, refer to [Use Odd and Even Styles](#).

Note

When [conditional formatting](#) is applied to an element, its appearance definition has the highest priority.

See Also

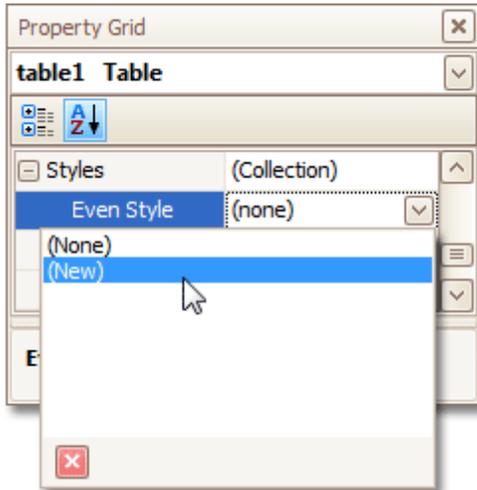
- [Use Odd and Even Styles](#)
- [Store and Restore Style Sheets](#)
- [Conditionally Change a Control's Appearance](#)

Use Odd and Even Styles

This tutorial describes how to apply *odd and even styles* to [report controls](#), e.g. to alternate the background color for each record.

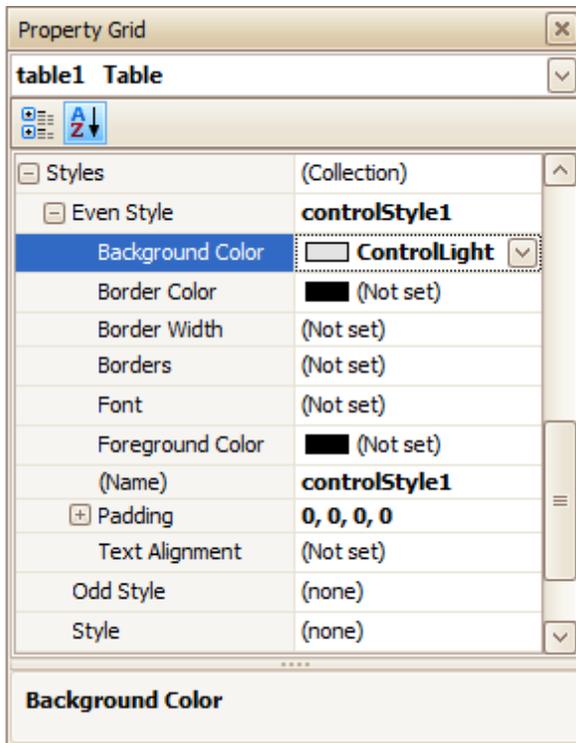
To utilize odd and even styles, do the following.

1. Create a [table report](#).
2. Select the detail table, and in the [Property Grid](#), expand its **Styles**. Invoke the drop-down list for the **Even Style**, and click **(New)**.



This will create a style and assign it to the control's **Even Style**.

3. Now, expand the **Even Style** property, and adjust the required options, e.g. set the **Background Color** to **ControlLight**.



If required, perform the same steps, to create and assign an odd style, as well.

Switch to the [Preview Tab](#), and view the result.

Product	Unit Quantity	Unit Price
Chai	10 boxes x 20 bags	\$18.00
Chang	24 - 12 oz bottles	\$19.00
Aniseed Syrup	12 - 550 ml bottles	\$10.00
Chef Anton's Cajun Seasoning	48 - 6 oz jars	\$22.00
Chef Anton's Gumbo Mix	36 boxes	\$21.35
Grandma's Boysenberry Spread	12 - 8 oz jars	\$25.00
Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	\$30.00
Northwoods Cranberry Sauce	12 - 12 oz jars	\$40.00
Mishi Kobe Niku	18 - 500 g pkgs.	\$97.00
Ikura	12 - 200 ml jars	\$31.00
Queso Cabrales	1 kg pkg.	\$21.00
Queso Manchego La Pastora	10 - 500 g pkgs.	\$38.00
Konbu	2 kg box	\$6.00
Tofu	40 - 100 g pkgs.	\$23.25

See Also

[Understanding Style Concepts](#)
[Store and Restore Style Sheets](#)
[Conditionally Change a Control's Appearance](#)

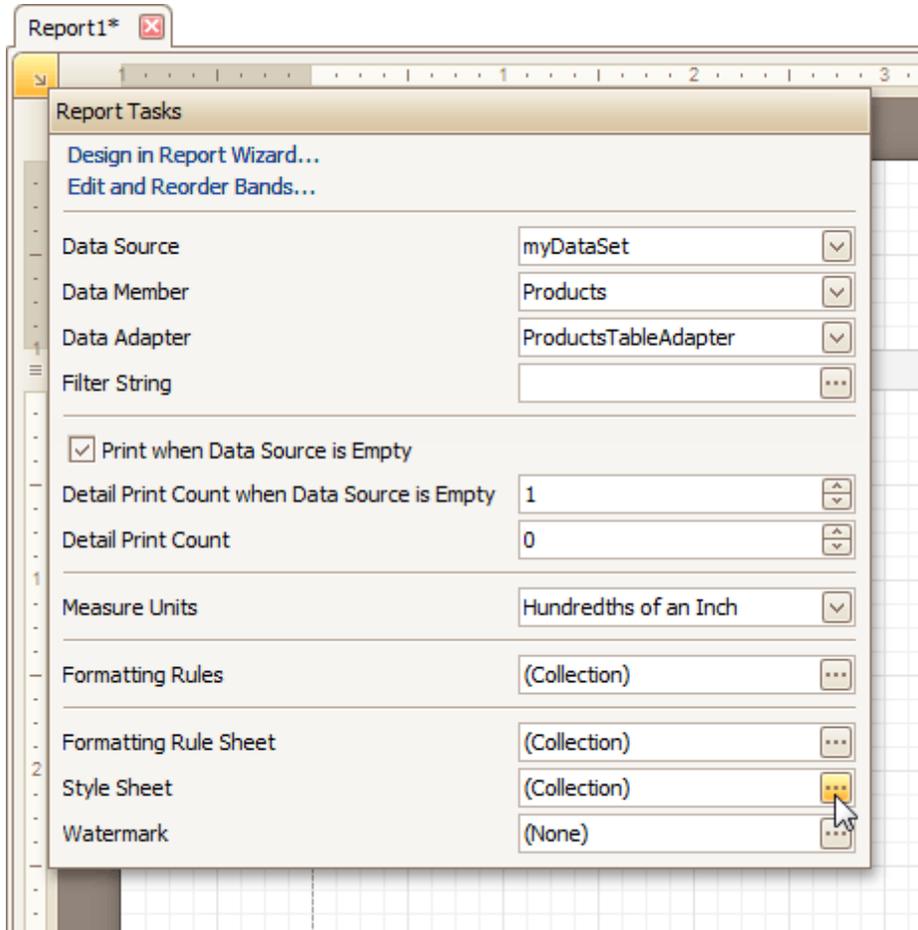
Store and Restore Style Sheets

This tutorial describes how you can save a report's style sheet into an external file, and then load it back to the report.

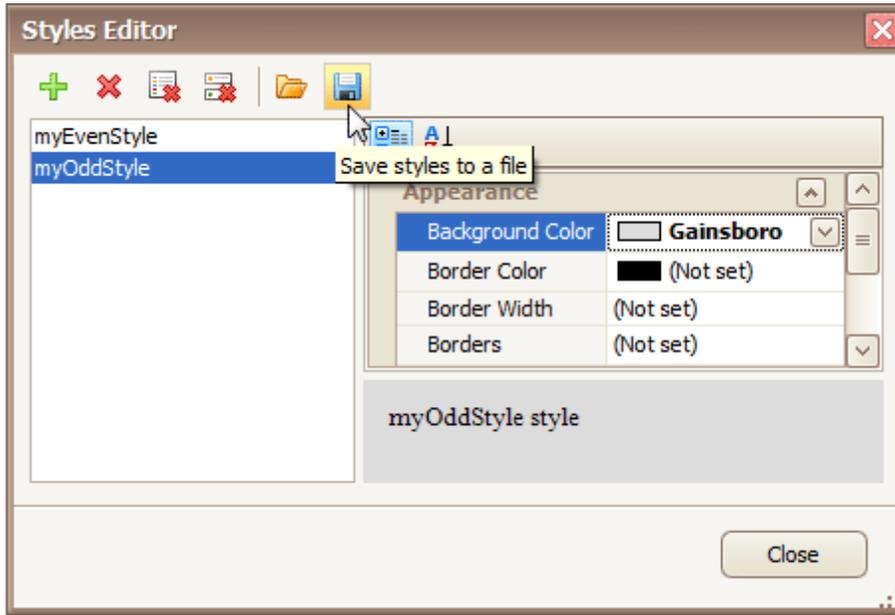
You can store a report's style sheet (containing all the report's styles) in an external REPSS file. This makes it possible to easily restore a report's appearance from this file. For general information, refer to [Understanding Style Concepts](#).

To learn how to store and restore report style sheets, do the following.

1. [Create a new report](#) and [bind it to a data source](#).
2. Click the report's [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Style Sheet** property.



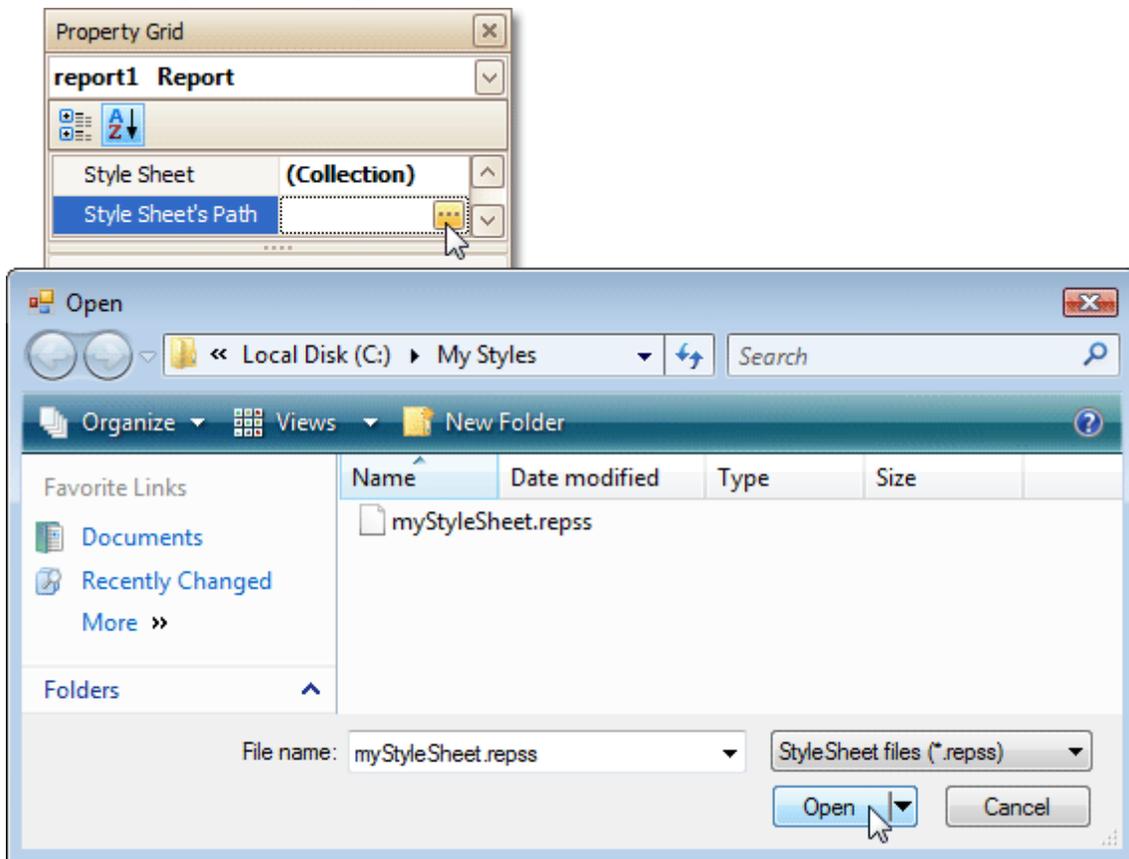
3. In the invoked **Styles Editor**, use the **+** button, to create new styles. For them, specify the desired options (e.g. **Background Color**), and click the **Save** button.



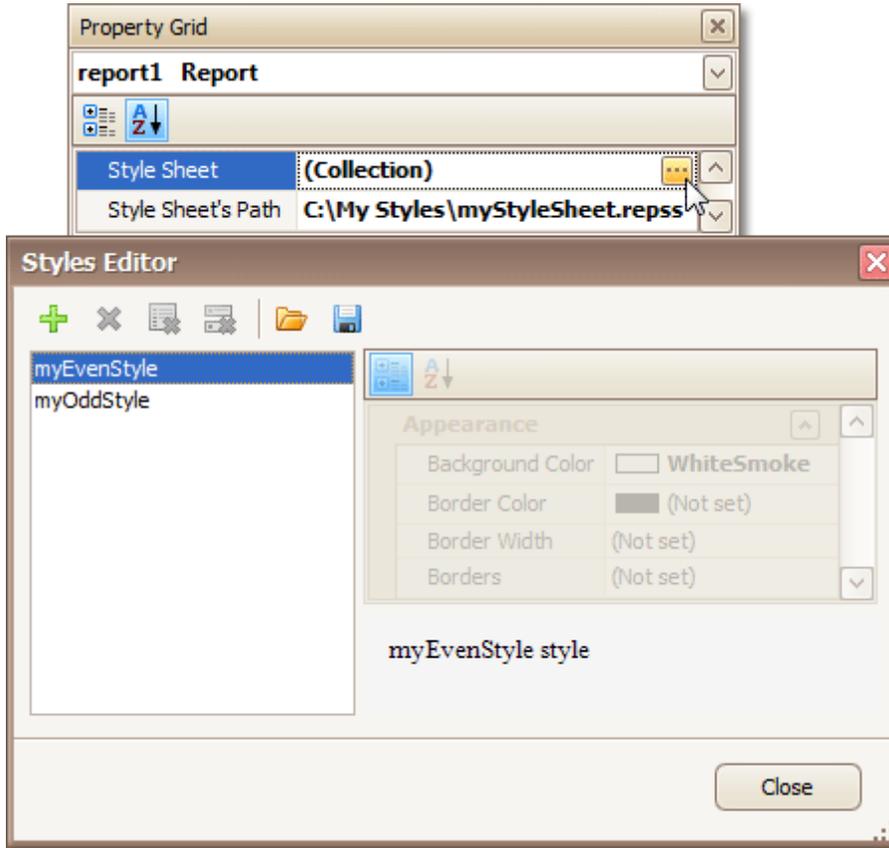
Then, in the invoked **Save File** dialog, define a name for the style sheet file (.REPSS), and click **Save**.

4. Then delete the created styles, using the **X** button, and close the dialog.

5. Select the report, and in the [Property Grid](#), click its ellipsis button for the **Style Sheet Path** property. In the invoked **Open File** dialog, load the created REPSS file.



When you invoke the **Styles Editor** (via the report's **Style Sheet** property) again, you'll see that the styles are read-only, meaning that they are obtained from an external file.



If the **Style Sheet Path** property is then set to **None**, and a style sheet is loaded using the **Styles Editor** of the **Style Sheet** property, all these styles will become editable.

To learn how you can assign styles to report elements, refer to [Use Odd and Even Styles](#).

Note

Note that the styles loaded from a style sheet file have priority over the styles which exist in a report's style sheet. So, if the styles stored in the report have the same names as the styles loaded from a style sheet file, then the styles from the file will substitute for their namesakes.

See Also

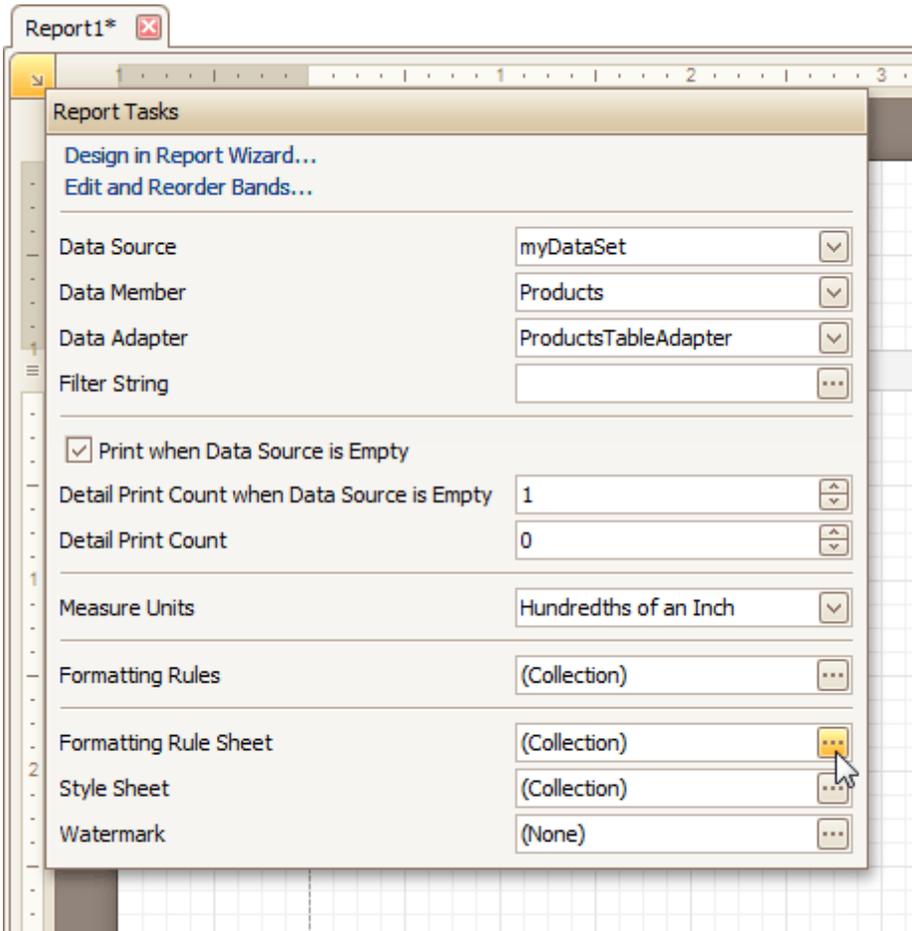
[Understanding Style Concepts](#)
[Use Odd and Even Styles](#)
[Conditionally Change a Control's Appearance](#)

Conditionally Change a Control's Appearance

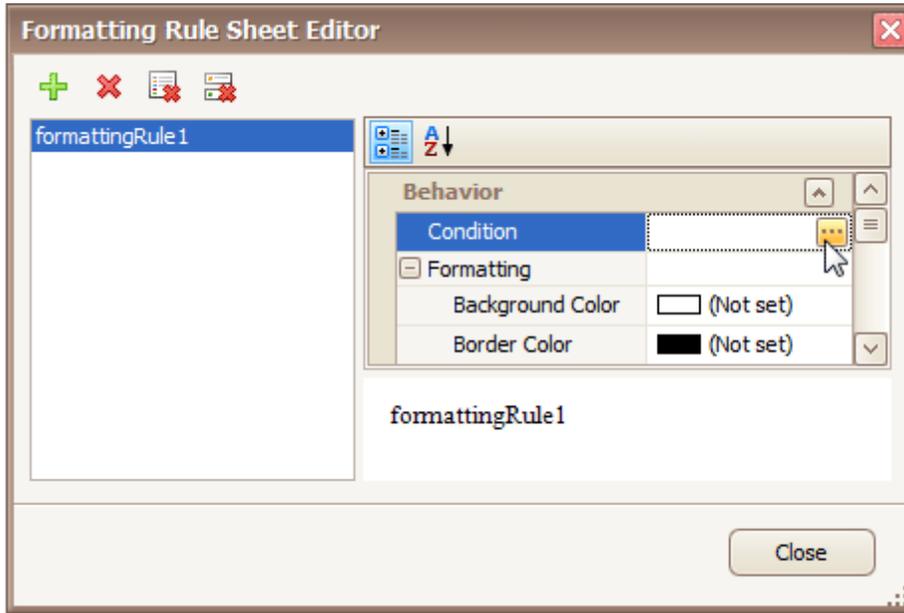
This tutorial describes the steps to conditionally change a control's appearance (e.g. make a [Label](#)'s text red if its value exceeds some threshold). Thanks to the *formatting rules* feature, to achieve this, no [scripts](#) are required, so you shouldn't write any code.

To conditionally change a control's appearance, do the following.

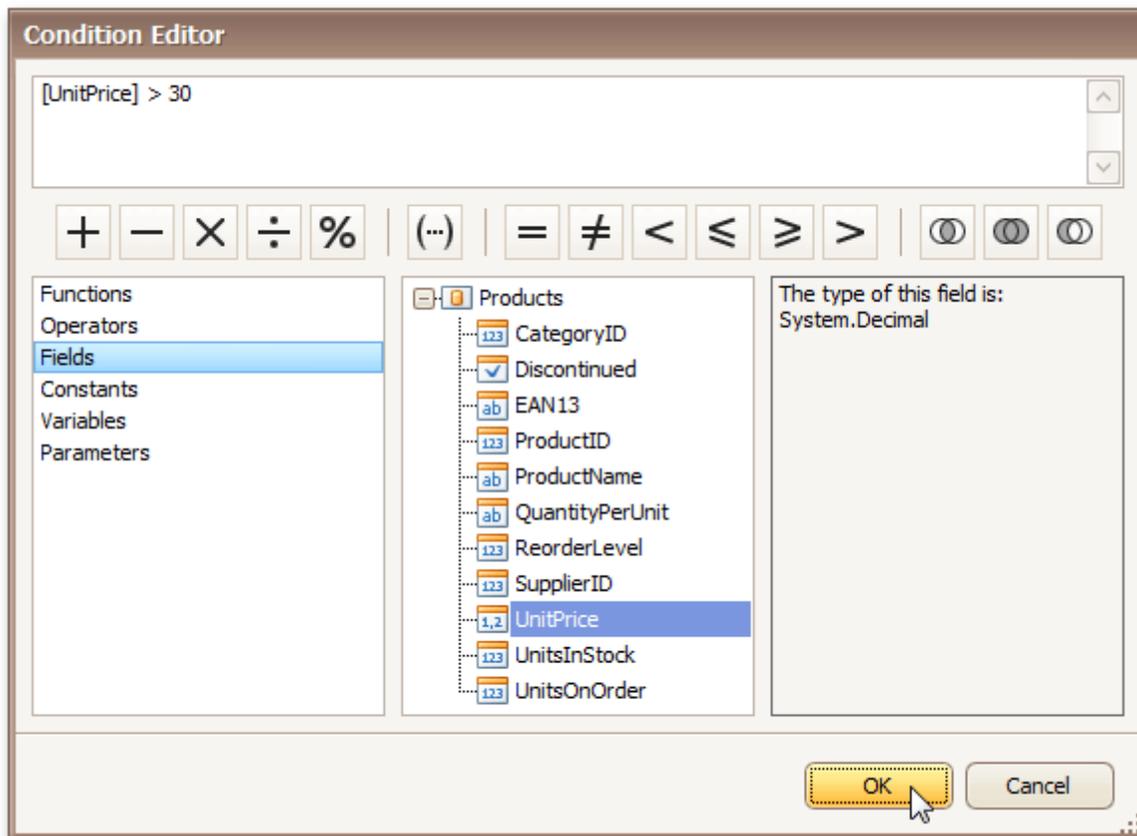
1. [Create a data-aware report](#).
2. Click the report's [Smart Tag](#), and in the invoked actions list, click the ellipsis button for the **Formatting Rule Sheet** option.



And, in the invoked **Formatting Rule Sheet Editor**, create a new *formatting rule* (by using the **+** button), and click the ellipsis button for its **Condition** property.

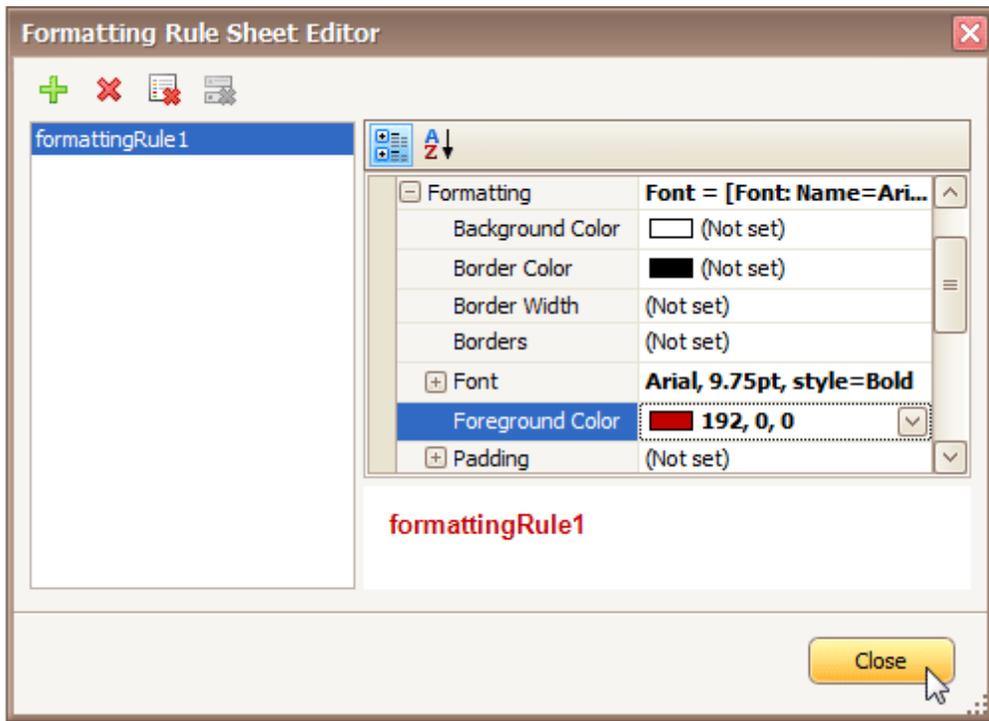


3. Then, in the invoked **Condition Editor**, define the required *Boolean* condition (which means that its result is returned as either *true* or *false*). In this tutorial, we will format fields if the **UnitPrice** value is greater than **30**.



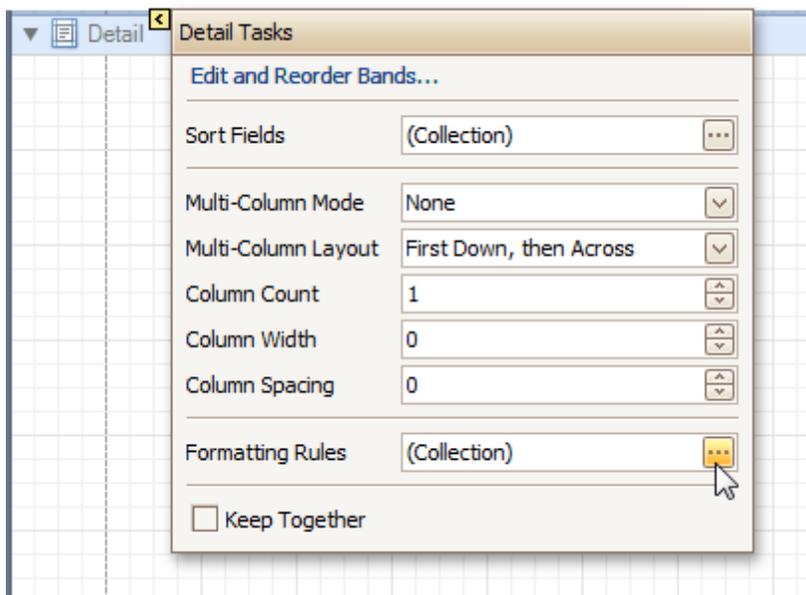
To save the condition and close the dialog, click **OK**.

4. Now, back in the **Formatting Rule Sheet Editor**, define the formatting to be applied (e.g. specify the desired font color).

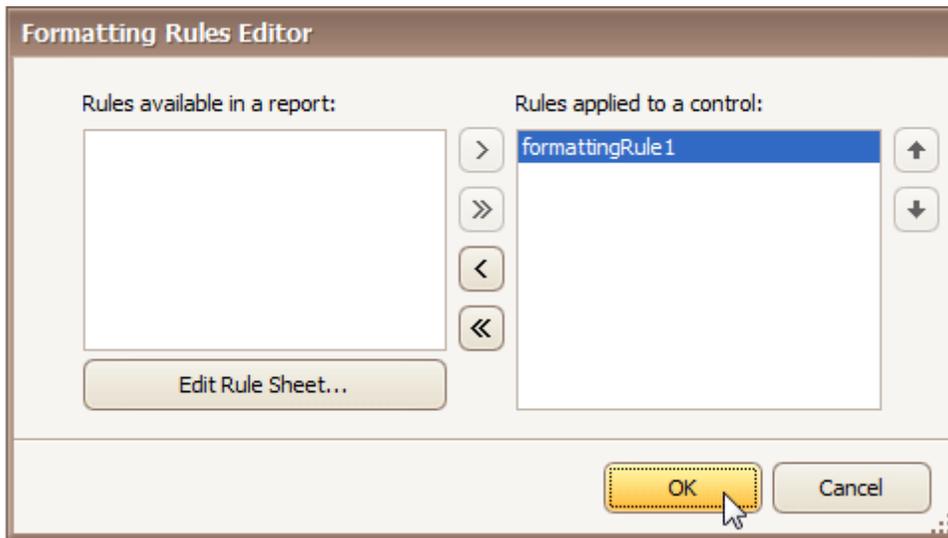


To save the changes and quit the dialog, click **Close**.

5. Finally, select the band or control to which the formatting rule must be applied (in this example it is the [Detail band](#)), and via its Smart Tag, access its collection of **Formatting Rules**.



And, in the invoked **Formatting Rules Editor**, move the rule from left to right (using the > button), for it to come into effect for this band.



If multiple rules are applied, it is possible to customize their precedence, by using the up and down arrow buttons at the right of the dialog. So, the rules are applied in the same order that they appear in the list, and the last rule in the list has the highest priority.

The result is shown in the following image.

Chai	\$18.00
Chang	\$19.00
Aniseed Syrup	\$10.00
Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35
Grandma's Boysenberry Spread	\$25.00
Uncle Bob's Organic Dried Pears	\$30.00
Northwoods Cranberry Sauce	\$40.00
Mishi Kobe Niku	\$97.00
Ikura	\$31.00
Queso Cabrales	\$21.00
Queso Manchego La Pastora	\$38.00
Konbu	\$6.00
Tofu	\$23.25
Genen Shouyu	\$15.50
Pavlova	\$17.45
Alice Mutton	\$39.00
Camraron Tigers	\$62.50

See Also

[Conditionally Hide Bands](#)
[Conditionally Change a Label's Text](#)

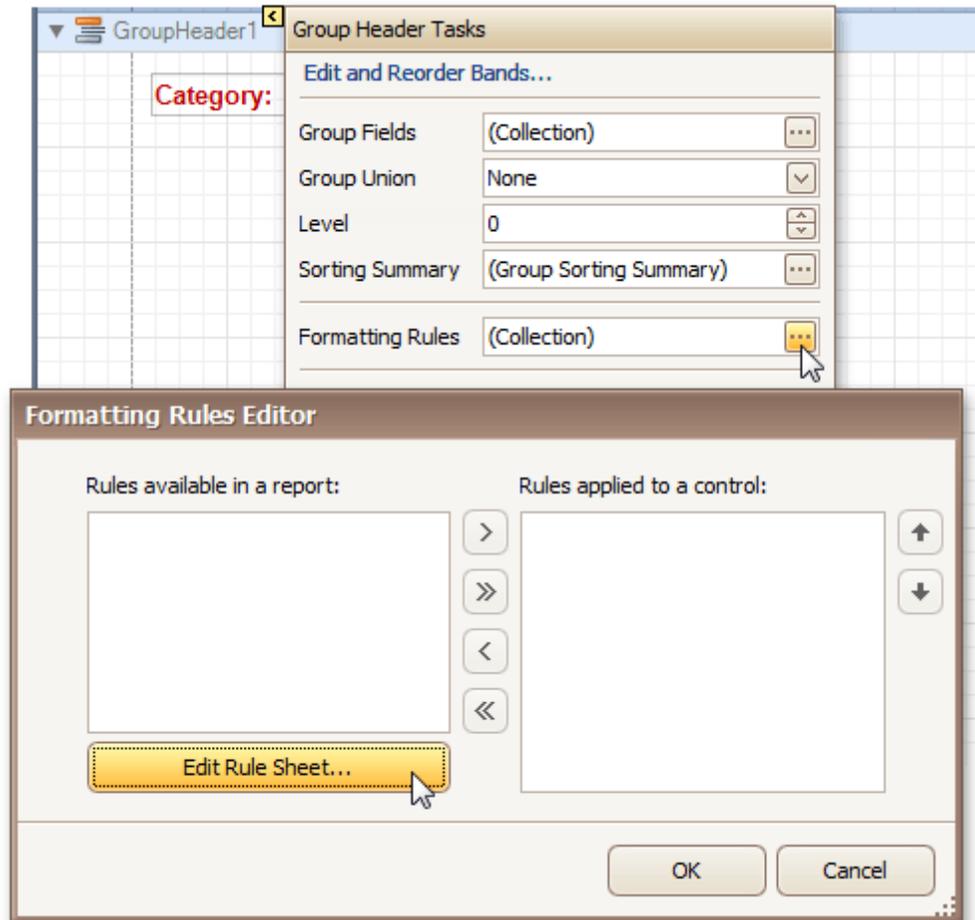
Conditionally Hide Bands

This tutorial describes how to hide bands if a certain logical condition is met. Note that no [scripts](#) are required to accomplish this task.

To demonstrate this feature, we'll use a report with grouping, similar to the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

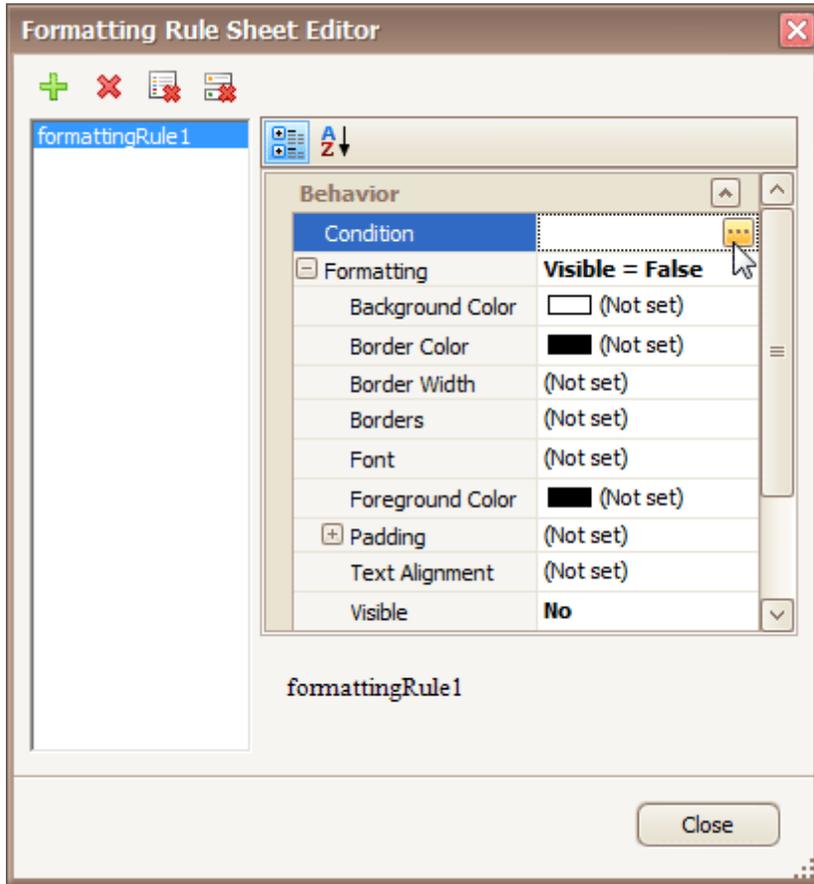
To conditionally hide bands in a report, do the following.

1. Select the [Group Header](#), and click its [Smart Tag](#). Then, in the invoked actions list, click the ellipsis button for the **Formatting Rules** option.

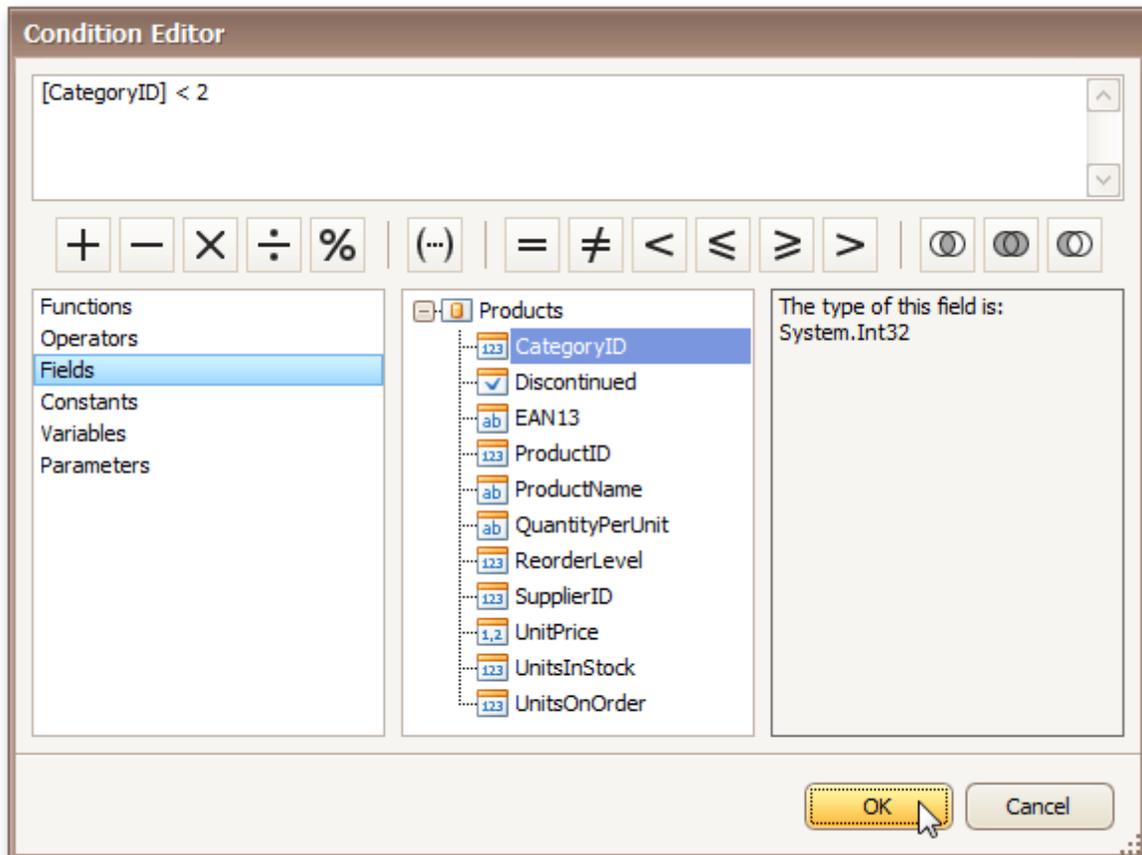


In the invoked **Formatting Rules Editor**, click the **Edit Rule Sheet...** button.

2. Now, in the invoked **Formatting Rule Sheet Editor**, click the **+** button, to create a new rule. Then, set its **Visible** property to **No**, and click the ellipsis button for the **Condition** property.

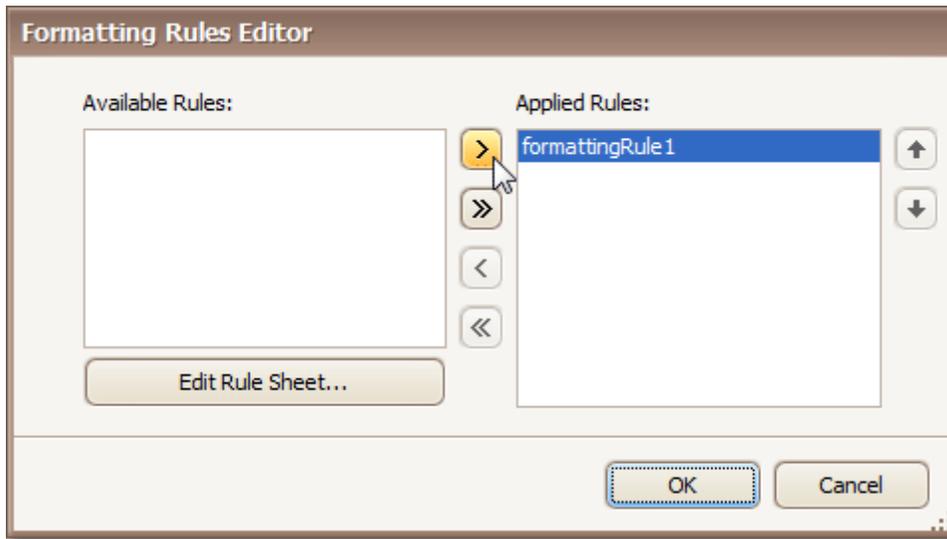


3. Construct the required logical expression (e.g. **[CategoryID] < 2**), and click **OK**.



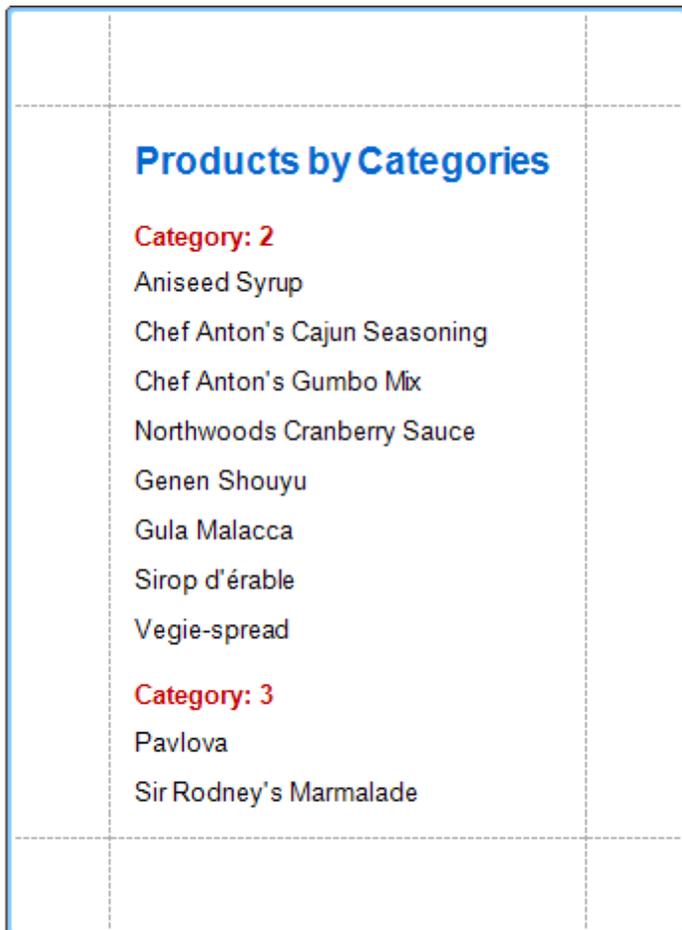
To quit the **Formatting Rule Sheet Editor**, click **Close**.

4. Back in the **Formatting Rules Editor**, move the created rule to the dialog's right section (**Applied Rules**), to make it active.



And, do the same for the report's [Detail band](#). That is, click the ellipsis button for its **Formatting Rules** property, and in the invoked dialog, apply the same rule to this band, as well.

Switch to the [Preview Tab](#), and view the result. In our example, you can see that the first category isn't shown. So, the conditional formatting was applied properly.



See Also

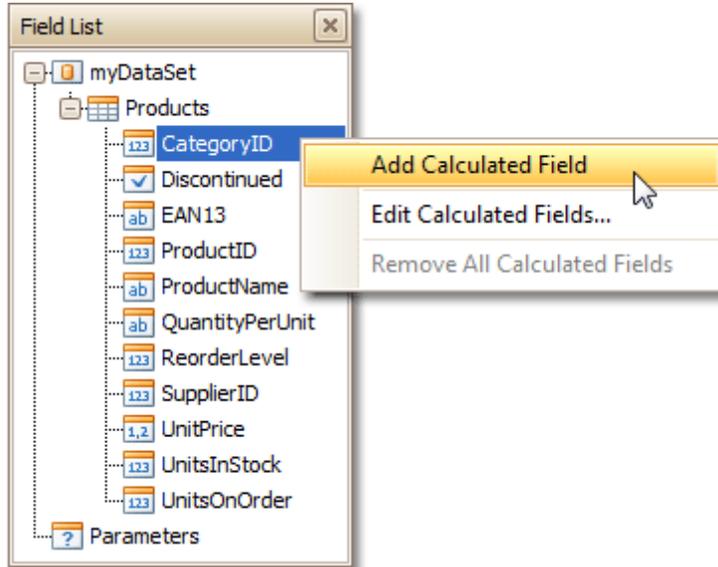
[Conditionally Change a Control's Appearance](#)
[Conditionally Change a Label's Text](#)

Conditionally Change a Label's Text

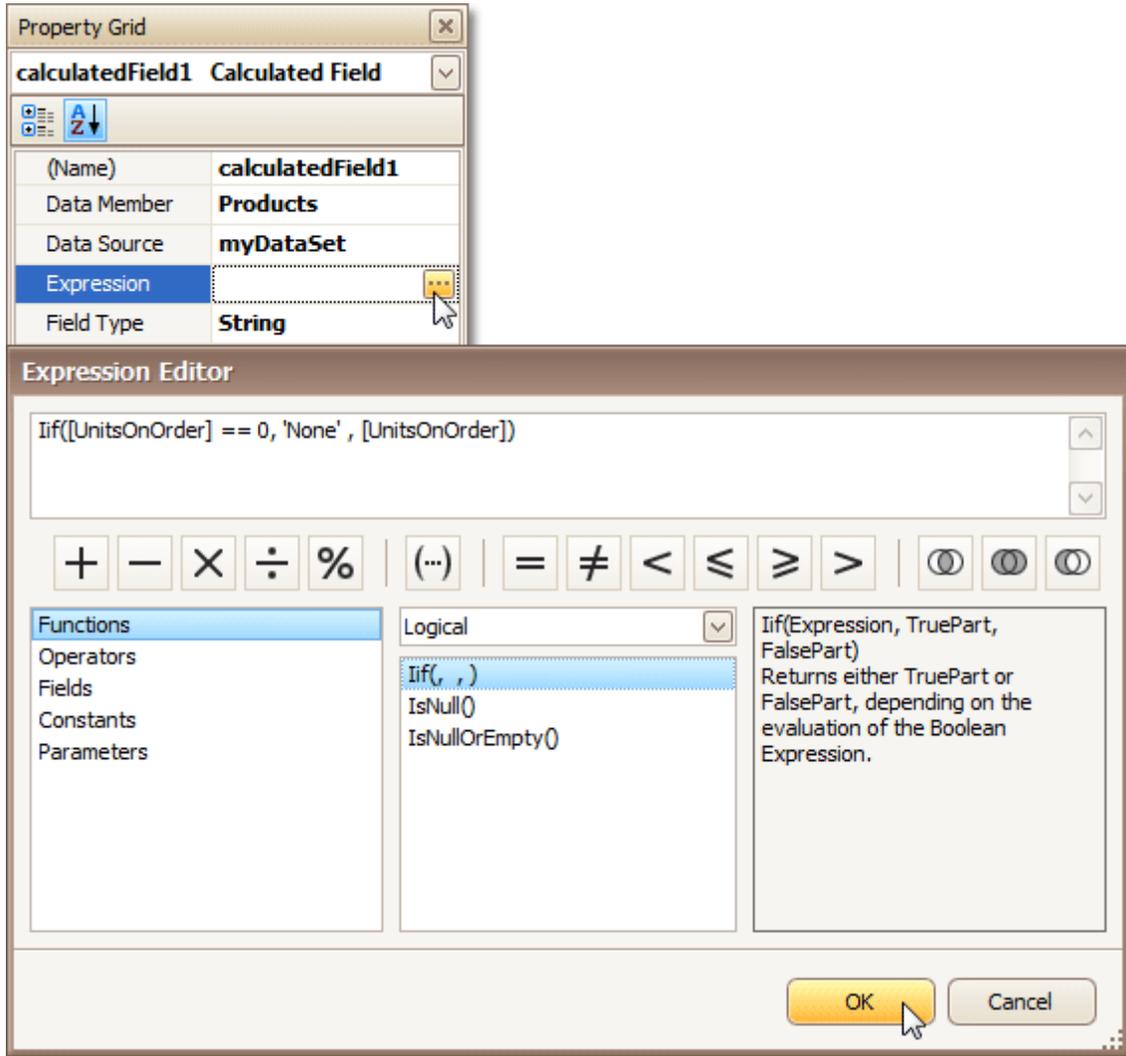
This tutorial demonstrates how to change a label's text if a certain condition is met, without using [scripts](#).

To conditionally change a label's text, do the following.

1. [Create a new report](#) and [bind it to a data source](#).
2. To create a calculated field, in the [Field List](#), right-click any item inside the created dataset, and on the invoked menu, choose **Add Calculated Field**.

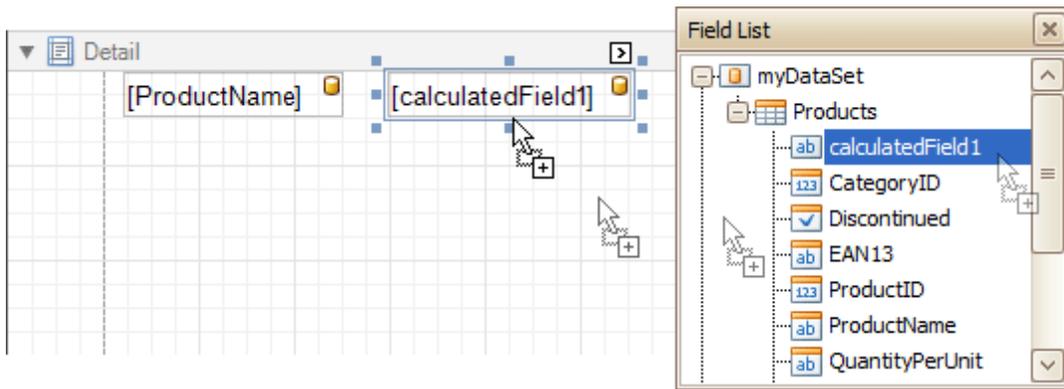


3. Select the calculated field, and in the [Property Grid](#), set its **Field Type** to **String**. Then, click the ellipsis button for its **Expression** property. And, in the invoked **Expression Editor**, define the required logical condition for the calculated field (e.g. **Iif([UnitsOnOrder] == 0, 'None', [UnitsOnOrder])**), which means that if the **UnitsOnOrder** data field's value is equal to **0**, the control's text will be replaced with **None**.



To save the changes and close the dialog, click **OK**.

4. Finally, drop the required data fields (and the created calculated field as well) from the Field List onto the report's [Detail](#) band.



The report is now ready. Switch to the [Preview Tab](#), and view the result.

Chai	None	
Chang	40	
Aniseed Syrup	70	
Chef Anton's Cajun Seasoning	None	
Chef Anton's Gumbo Mix	None	
Grandma's Boysenberry Spread	None	
Uncle Bob's Organic Dried Pears	None	
Northwoods Cranberry Sauce	None	
Mishi Kobe Niku	None	
Ikura	None	
Queso Cabrales	30	
Queso Manchego La Pastora	None	
Konbu	None	

See Also

[Conditionally Change a Control's Appearance](#)
[Conditionally Hide Bands](#)

Navigation

The tutorials of this section cover the navigation-related features of the Report Designer.

This section consists of the following tutorials.

- [Add Bookmarks](#)
- [Create Hyperlinks](#)
- [Add a Cross-Reference](#)

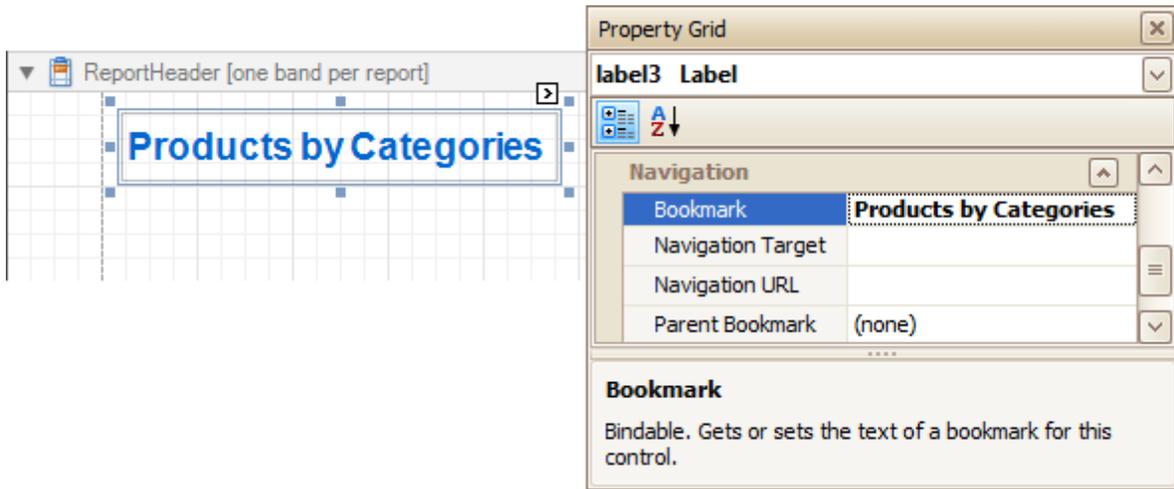
Add Bookmarks

This tutorial describes the steps to create a report with *bookmarks* (a so-called *Document Map*). This feature allows you to easily navigate through the report during print preview.

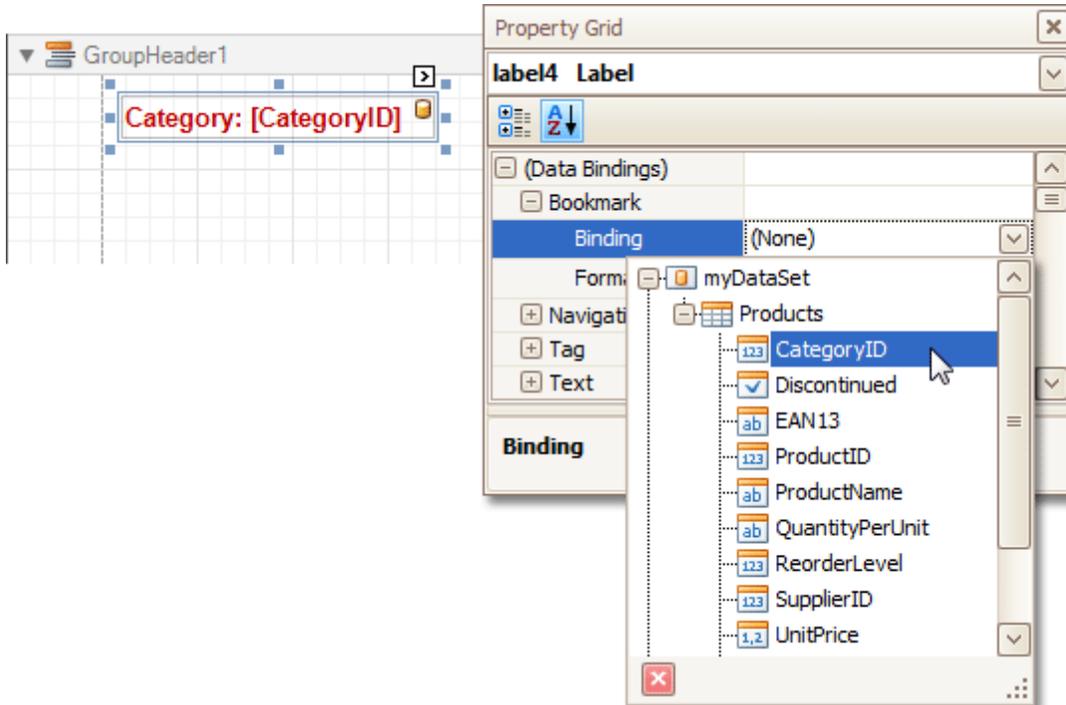
To demonstrate the Document Map feature, we'll use a report with grouping, similar the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To create a report with bookmarks, do the following.

1. Click the Label in the Report Header band, to select it, and in the [Property Grid](#), set its **Bookmark** property to the same value as its text (i.e. **Products by Categories**).

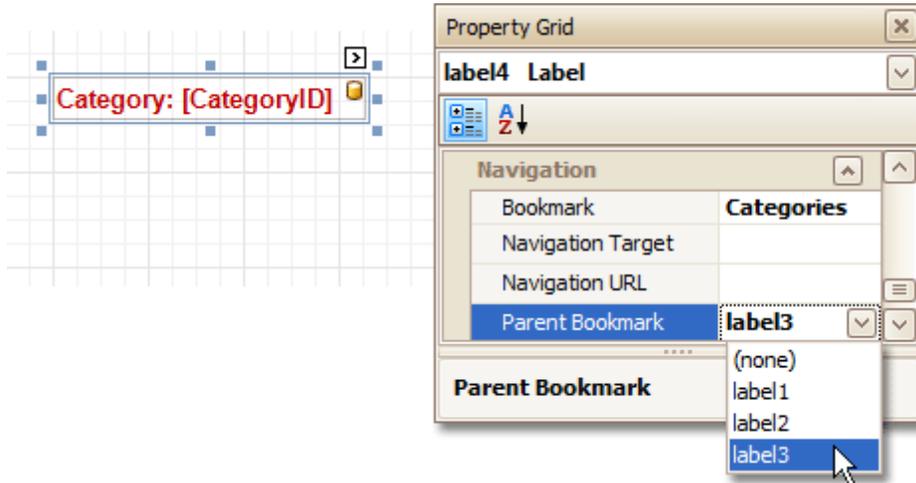


2. Now, select the Label in the report's Group Header band. As this control is bound to data, we will bind its **Bookmark** property to the same data field, using the **(Data Bindings)** property.

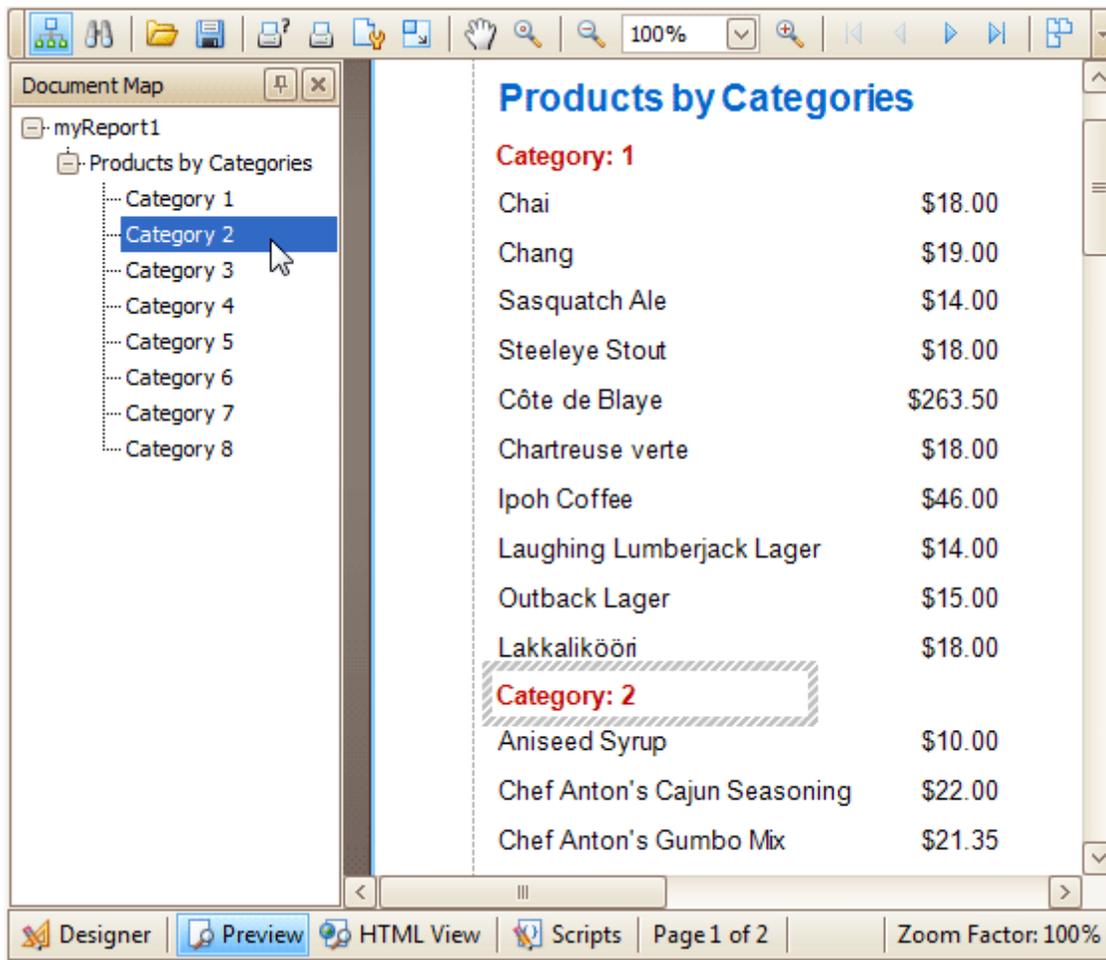


Note that as with other bindable properties, you also can apply [value formatting](#) to the **Bookmark** property (e.g. **Category {0}**).

3. Then, for this Label, specify its **Bookmark**, and set the **Parent Bookmark** property to the Report Header's label, to define the document map's hierarchy.



The report with bookmarks is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

- [Create Hyperlinks](#)
- [Add a Cross-Reference](#)

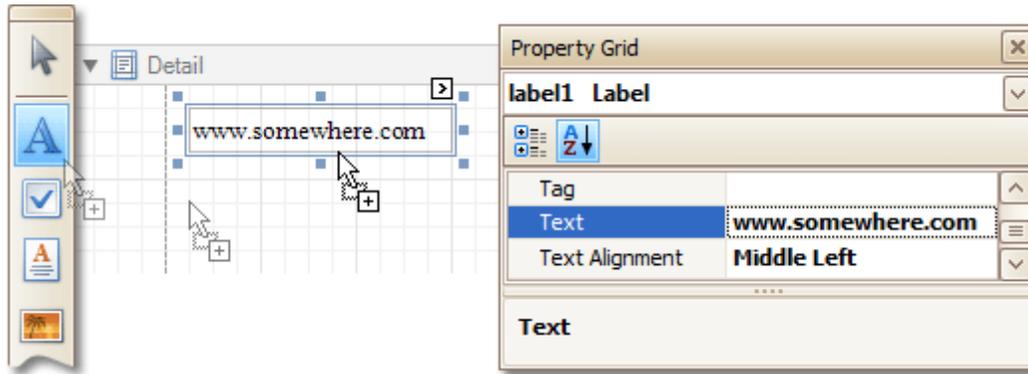
Create Hyperlinks

This tutorial demonstrates how to embed a *hyperlink* into your report.

Note that a label will behave as a hyperlink both in a report's [Print preview](#), [HTML preview](#) and when the report is exported to PDF, HTML, MHT, RTF, XLS and XLSX formats.

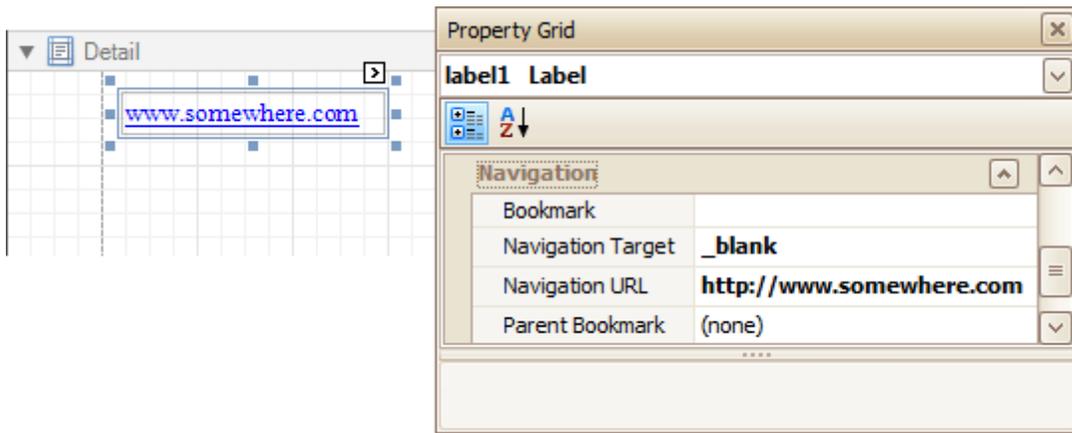
To insert a hyperlink into your report, do the following.

1. [Create a new report](#).
2. Drop a [Label](#) onto the report, and in the [Property Grid](#), change its **Text** to the one required for the link.



In addition, to make the Label look like a typical link, you can change its appearance appropriately (e.g. make it blue and underlined).

3. Now, set its **Navigation Target** to the required value (*_blank*, *_parent*, *_search*, *_self*, or *_top*), and define the required **Navigation URL**.



The hyperlink is now ready. Switch to the [Preview Tab](#) (or, [HTML View Tab](#)), and view the result.

www.somewhere.com

See Also

- [Add Bookmarks](#)
- [Add a Cross-Reference](#)

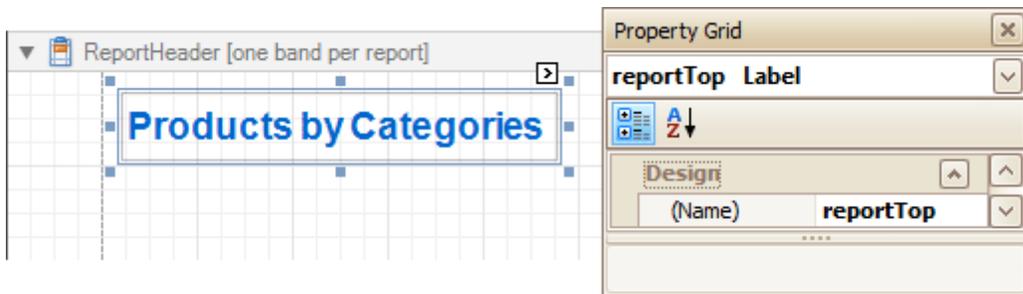
Add a Cross-Reference

This tutorial demonstrates how to add a *cross-reference* to your report. A cross-reference is simply a link whose target is located within the current document, which allows you to establish easy navigation through a report. In this example, we place a link at the bottom of each group, leading to the beginning of the report.

To demonstrate this feature, we'll use a report with grouping, similar the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To create a report with cross-references, do the following.

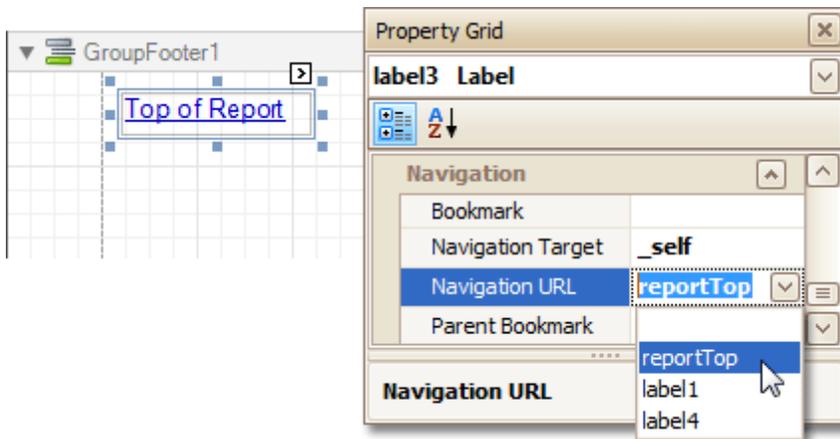
1. Drop a label onto the created **ReportHeader** band, which will serve as the report's headline. Click the label, to type the desired contents into it. Then, in the [Property Grid](#), set its **Name** property to **reportTop**.



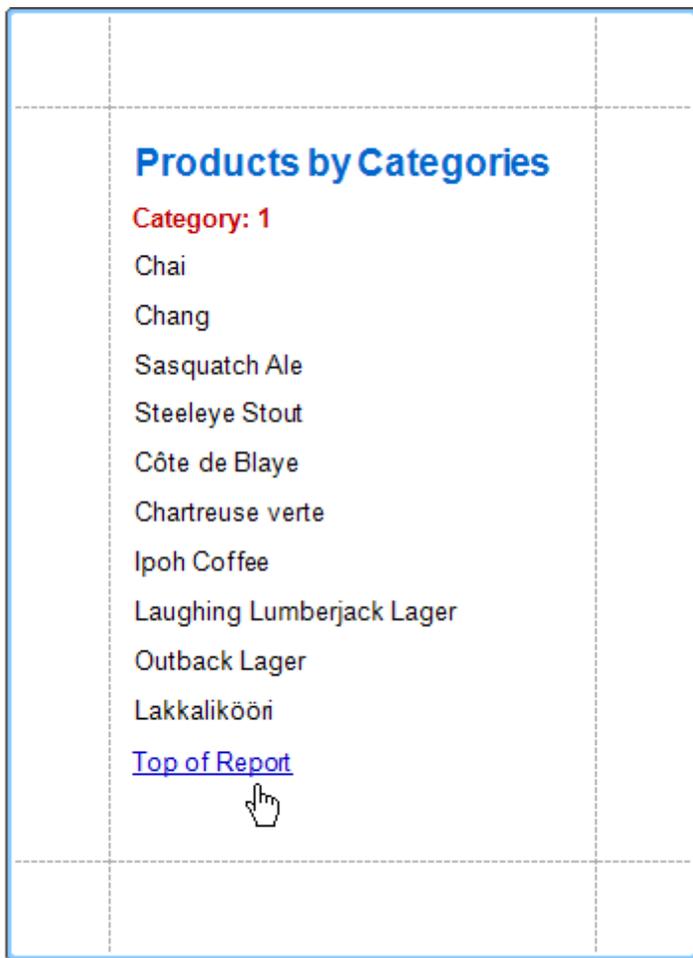
2. To accompany the existing [Group Header](#) with the corresponding Footer, in the [Group and Sort Panel](#), check the **Show Footer** option.

Then, drop a label onto it. As it will be the link, change its **Text** to **Top of Report**, and apply the desired formatting to it (e.g. the blue color and underlined text).

Set its **Navigation Target** property to **_self**. Then, if you click the drop-down list of the **Navigation URL** property, you can see the controls available in your report. Choose the one named **reportTop**.



The report with cross-references is now ready. Switch to the [Preview Tab](#) (or, [HTML View Tab](#)), and view the result.

**See Also**[Add Bookmarks](#)[Create Hyperlinks](#)

Miscellaneous

The topics of this section cover the Report Designer features that don't fall into other categories.

This section consists of the following topics.

- [Handle Events via Scripts](#)
- [Show the Current Row Index](#)
- [Count the Number of Records in a Report or a Group](#)
- [Add Page Numbers for Groups](#)
- [Sort Groups by a Summary Function Result](#)
- [Calculate an Aggregate Function](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)
- [Limit the Number of Records per Page](#)

Handle Events via Scripts

This document describes the basic principles of *scripting*, which can be performed by handling the events of a report, and its [bands](#) and [controls](#).

This documents consists of the following sections.

- [Scripting Overview](#)
- [Scripting Specifics](#)
- [Example: Custom Summary](#)

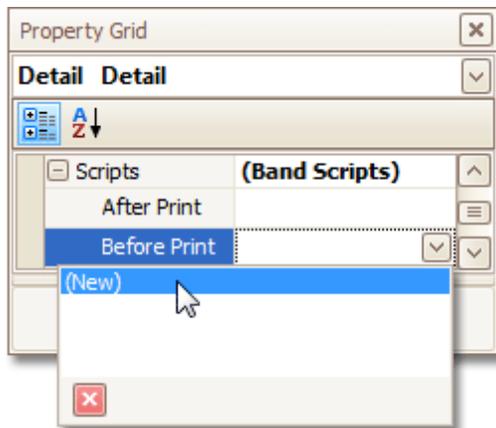
Scripting Overview

Scripts are program commands, placed within the *event handlers* of the required report elements. And, when the corresponding event occurs (e.g. a mouse click), the script code runs.

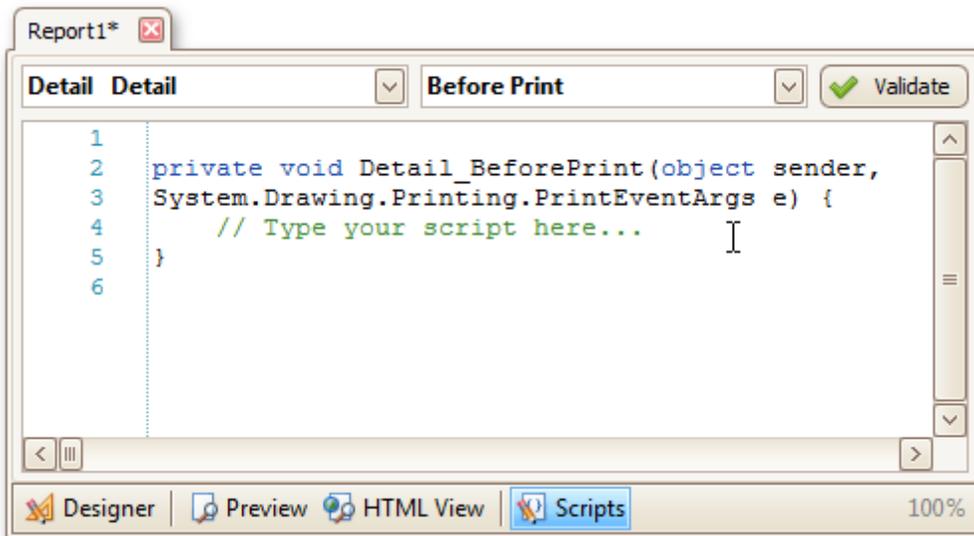
You can write *scripts* for a report or any of its elements (bands and controls), to be executed when the report is being [previewed, printed or exported](#).

Although when in the Report Designer, virtually any task can be accomplished without scripting ([Conditionally Change a Control's Appearance](#), [Conditionally Change a Label's Text](#) and [Conditionally Hide Bands](#)), scripting is made available to extend the standard functionality as far as may be required. And, scripting is the only way to calculate *custom summaries* (this is detailed in the [last section of this document](#)).

Every report element has an set of script events, which are individual for each element's type. For example, the events of the [Detail](#) band are shown in the following image.



After you click (New) for an event (e.g. the **Before Print**, which is the most used), the [Scripts Tab](#) is switched on, where you can manage and edit all the report's scripts.



In this tab, for a selected event, a script template is auto-added, in the language specified via the **Script Language** property of the report.

You can verify that your report's scripts are valid, by clicking **Validate**. The validation result is then displayed in the [Scripts Errors Panel](#).

Description	Line	Column
; expected	3	17
; expected	3	28

Note that scripts are saved to a file along with the report's layout (for details on this, refer to [Back Up the Current Layout Before Modifying It](#)).

Scripting Specifics

1. Scripting language

The report scripts may be written in one of the following languages that the .NET framework supports - **C#**, **Visual Basic** and **J#**. Since J# is not installed with the framework installation, by default, make sure it is present before writing code in it. The scripting language is specified via the **Script Language** property of the [Report](#) object. It is set to C#, by default.

2. Scripting scope

Script execution is performed in the following way:

The report engine generates a temporary class in memory. The names of the variables are defined by the **Name** properties of the controls and objects they represent. When the script is preprocessed, its namespace directives are cut from the script code and added to the namespace, where the temporary class is defined.

After preprocessing, all scripts are placed in the code of the temporary class. Then, the resulting class is compiled in memory, and its methods are called when events occur.

Scripting offers many advantages: you can declare classes (they will become inner classes), variables, methods, etc. A variable declared in one script is accessible in another script, because it is, in fact, a variable of the temporary class.

3. Reference External Assemblies

The **Script References** property of the **Report** object specifies the full paths (including the file names) to the assemblies that are referenced in the scripts used in a report. These paths should be specified for all the assemblies that are included in scripts via the **using** (C#), **Imports** (Visual Basic) or **import** (J#) directives.

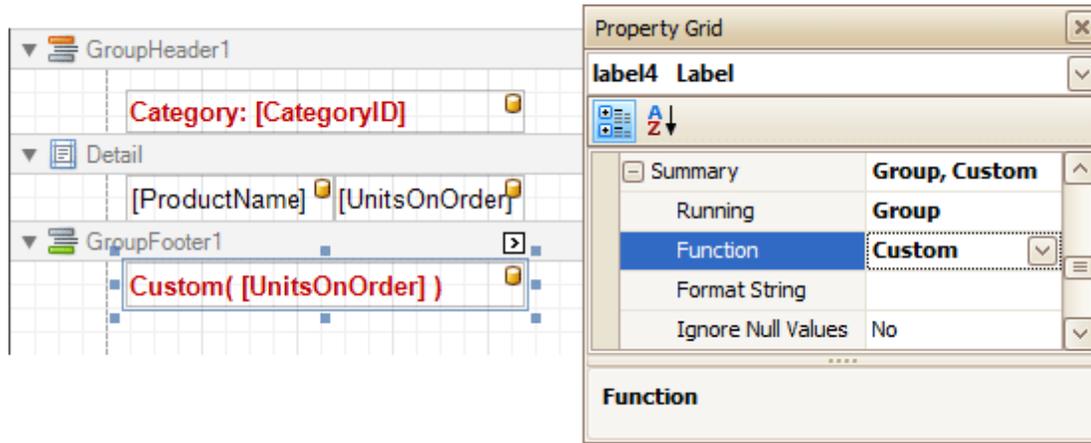
Note

Usually, you don't need include any assemblies, because most standard assemblies that you may require in scripts are already referenced by the Report Designer.

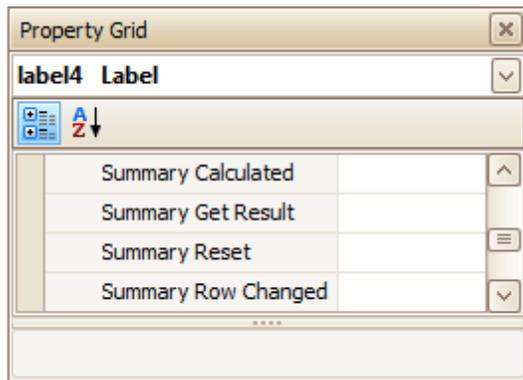
Example: Custom Summary

In this example, we will display the total number of product unit packs in a group.

To perform this, execute steps similar to the ones described in [Add Totals to a Report](#), except that for the summary field, you should set the **Function** property to **Custom**.



Then, the additional events are added to the label's **Scripts** property.



You can handle these events in the following way.

```
C#
// Declare a summary and a pack.
double totalUnits = 0;
double pack = 15;
private void OnSummaryReset(object sender, System.EventArgs e) {
    // Reset the result each time a group is printed.
    totalUnits = 0;
}
private void OnSummaryRowChanged(object sender, System.EventArgs e) {
    // Calculate a summary.
    totalUnits += Convert.ToDouble(GetCurrentColumnValue("UnitsOnOrder"));
}
private void OnSummaryGetResult(object sender,
DevExpress.XtraReports.UI.SummaryGetResultEventArgs e) {
    // Round the result, so that a pack will be taken into account
    // even if it contains only one unit.
    e.Result = Math.Ceiling(totalUnits / pack);
}
```

```
e.Handled = true;
}
```

Visual Basic

```
' Declare a summary and a pack.
Private totalUnits As Double = 0
Private pack As Double = 15
Private Sub OnSummaryReset(ByVal sender As Object, ByVal e As System.EventArgs)
    ' Reset the result each time a group is printed.
    totalUnits = 0
End Sub
Private Sub OnSummaryRowChanged(ByVal sender As Object, ByVal e As System.EventArgs)
    ' Calculate a summary.
    totalUnits += Convert.ToDouble(GetCurrentColumnValue("UnitsOnOrder"))
End Sub
Private Sub OnSummaryGetResult(ByVal sender As Object, _
ByVal e As DevExpress.XtraReports.UI.SummaryGetResultEventArgs)
    ' Round the result, so that a pack will be taken into account
    ' even if it contains only one unit.
    e.Result = Math.Ceiling(totalUnits / pack)
    e.Handled = True
End Sub
```

Finally, switch to the [Preview Tab](#), and view the result.

Chang	40
Ipoh Coffee	10
Outback Lager	10
<hr/>	
Total Packs: 4	
Aniseed Syrup	70
Louisiana Hot Spiced Okra	100
<hr/>	
Total Packs: 12	
Sir Rodney's Scones	40
Chocolate	70
Maxilaku	60
Scottish Longbreads	10
<hr/>	
Total Packs: 12	

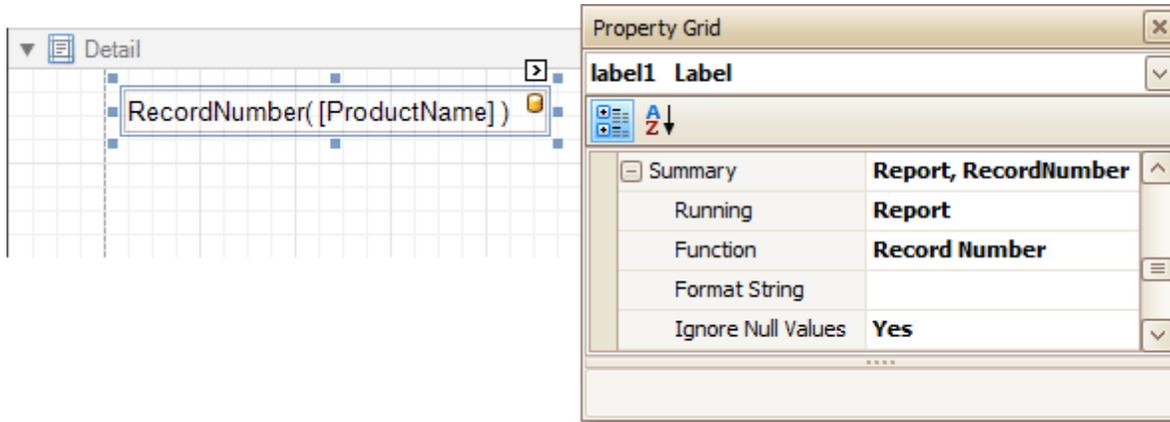
See Also

- [Show the Current Row Index](#)
- [Count the Number of Records in a Report or a Group](#)
- [Add Page Numbers for Groups](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)
- [Limit the Number of Records per Page](#)

Show the Current Row Index

This document describes how to accompany every record in a [data-bound report](#) with its current row index.

To show the current row index in a report, use a [Label](#) control [bound to a data field](#), and specify its **Summary** options in the following way.



The result is shown in the following image.

1	Chai
2	Chang
3	Aniseed Syrup
4	Chef Anton's Cajun Seasoning
5	Chef Anton's Gumbo Mix
6	Grandma's Boysenberry Spread
7	Uncle Bob's Organic Dried Pears
8	Northwoods Cranberry Sauce
9	Mishi Kobe Niku
10	Ikura
11	Queso Cabrales
12	Queso Manchego La Pastora

See Also

- [Count the Number of Records in a Report or a Group](#)
- [Limit the Number of Records per Page](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)

Count the Number of Records in a Report or a Group

This tutorial describes how to count the number of records in a report or a group. To demonstrate this feature, we'll use a report with grouping, similar the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

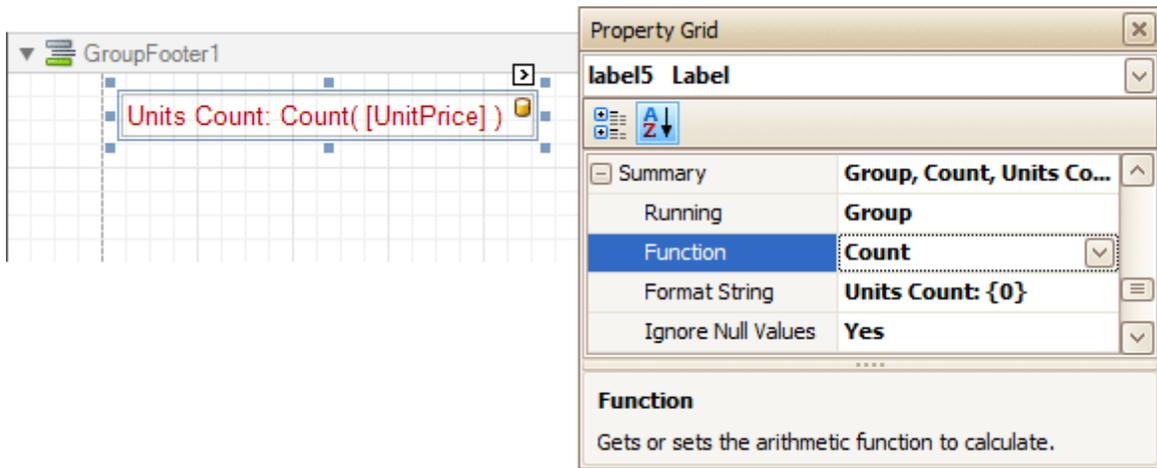
This tutorial consists of the following sections.

- [Count the Number of Records in a Group](#)
- [Count the Number of Records in a Report](#)
- [Get the Result](#)

Count the Number of Records in a Group

To count the number of records in a group, do the following.

- Select the [Label](#) in the [Group Footer](#) area, and in the [Property Grid](#), expand its **Summary** category.



Set the **Running** option to **Group** and the **Function** to **Count**.

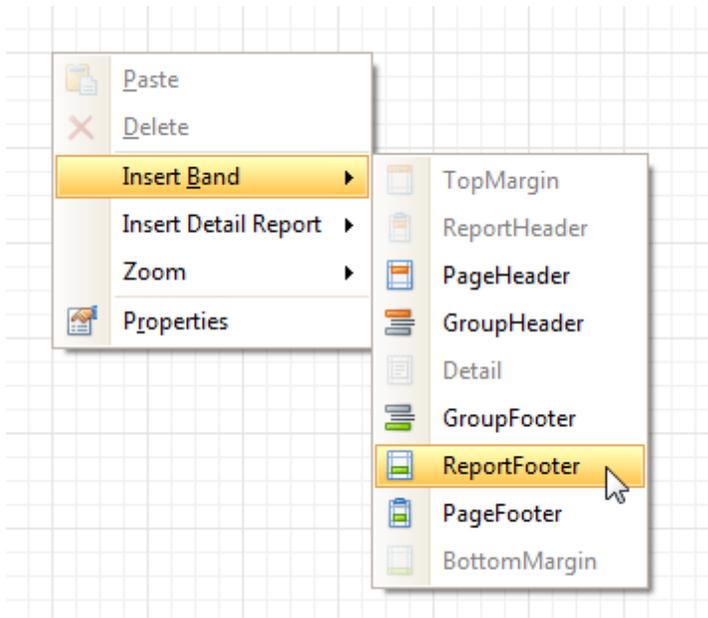
The **Ignore NULL values** option is useful for functions like **Count** or **Average**, because the number of elements counted will depend on it.

If required, you can specify the **Format String** (e.g. as **Units Count: {0}**). Note that *value formatting* is applied to a summary independently of the [general formatting](#), and has a greater priority.

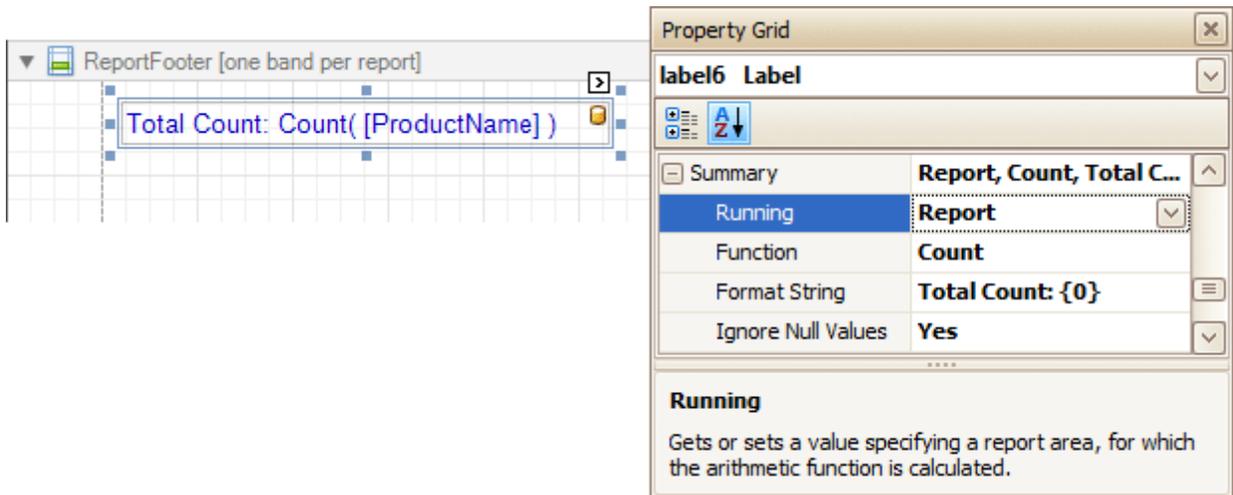
Count the Number of Records in a Report

To count the number of records in a report, do the following.

1. To add a [Report Footer](#) band to your report, right-click anywhere on it, and in the invoked [Context Menu](#), choose **Insert Band | ReportFooter**.



2. Then, place a [Label bound to a data field](#) onto it, and in the Property Grid, expand its **Summary** category.



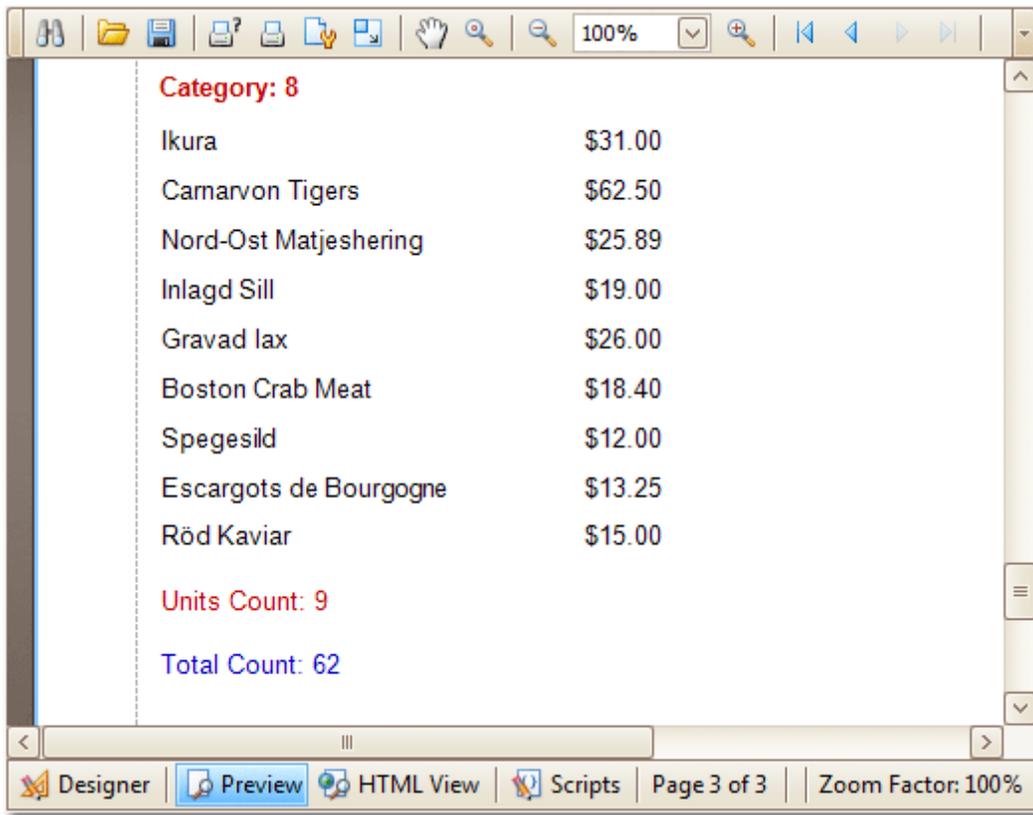
Set the **Running** option to **Report** and **Function** to **Count**.

The **Ignore NULL values** option is useful for functions like **Count** or **Average**, because the number of elements counted will depend on it.

If required, you can specify the **Format String** (e.g. as **Total Count: {0}**). Note that *value formatting* is applied to a summary independently of the [general formatting](#), and has a greater priority.

Get the Result

The report is now ready. Switch to the [Preview Tab](#), and view the result.



Category: 8	
Ikura	\$31.00
Camarvon Tigers	\$62.50
Nord-Ost Matjeshering	\$25.89
Inlagd Sill	\$19.00
Gravad lax	\$26.00
Boston Crab Meat	\$18.40
Spegesild	\$12.00
Escargots de Bourgogne	\$13.25
Röd Kaviar	\$15.00
Units Count: 9	
Total Count: 62	

See Also

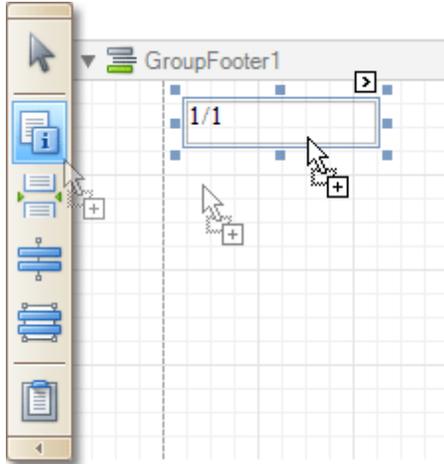
- [Show the Current Row Index](#)
- [Limit the Number of Records per Page](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)
- [Add Page Numbers for Groups](#)

Add Page Numbers for Groups

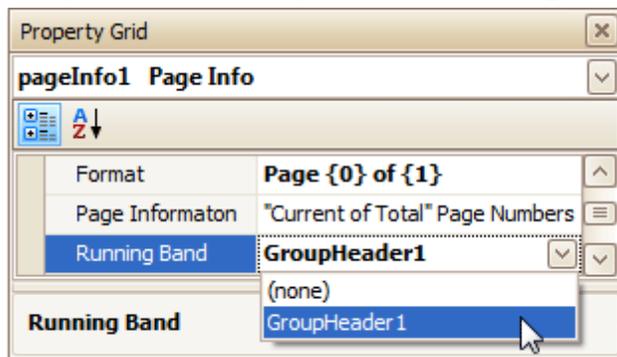
This tutorial demonstrates how to display page numbers individually, for each group in your report. To demonstrate this feature, we'll use a report, similar to the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To add page numbers for groups, do the following.

1. From the [Toolbox](#), drop the [Page Info](#) control onto the [Group Footer](#).



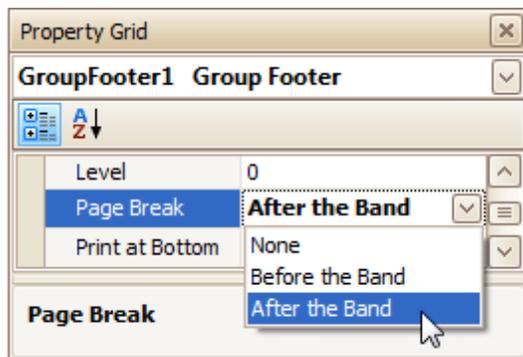
2. Then, select the control, and set its **Running Band** to **GroupHeader1**.



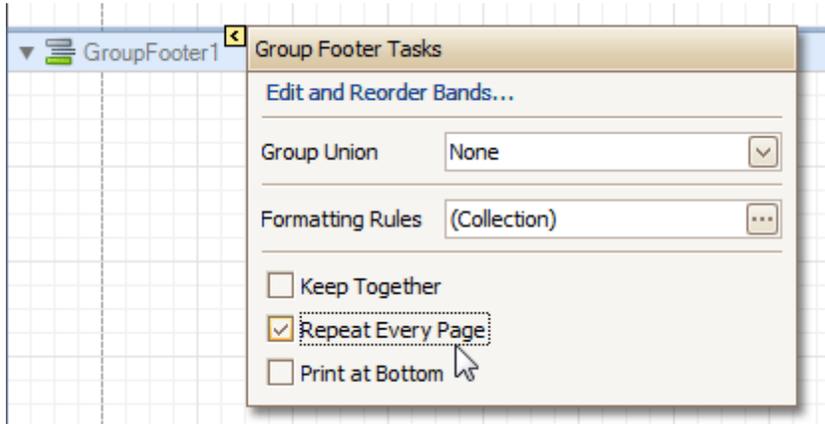
If required, you also can specify its **Format** property (e.g. **Page {0} of {1}**).

3. Now, you should force each new group to start on a separate page. Otherwise, group page numbers will be calculated incorrectly.

To do this, select the Group Footer, and set its **Page Break** to **After the Band**.



4. Finally, select the Group Footer, and click its [Smart Tag](#). In its actions list, check the **Repeat Every Page** option.



Then, you can do the same for the Group Header, as well.

The report is now ready. Switch to the [Preview Tab](#), and view the result.



See Also

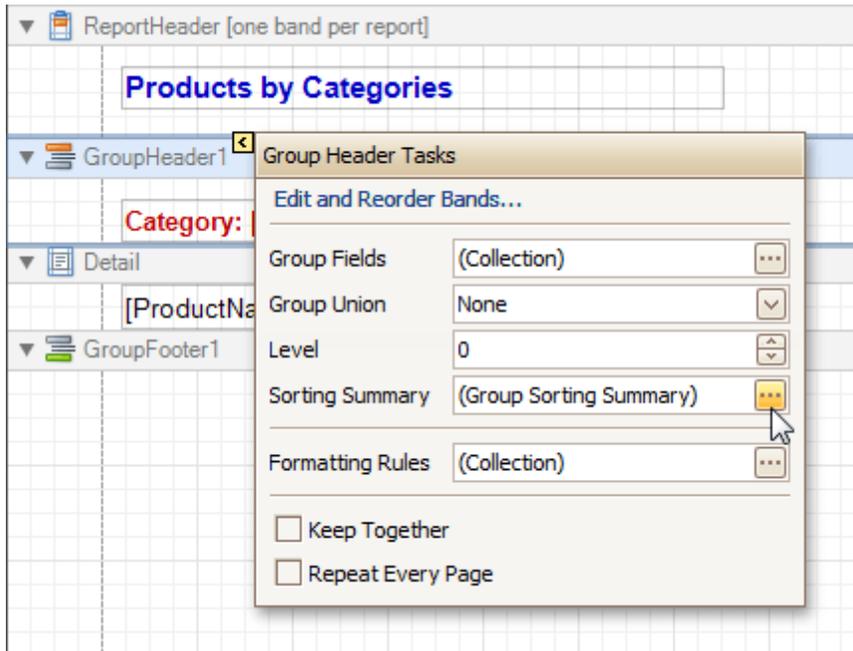
- [Sort Groups by a Summary Function Result](#)
- [Show the Current Row Index](#)
- [Count the Number of Records in a Report or a Group](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)
- [Limit the Number of Records per Page](#)

Sort Groups by a Summary Function Result

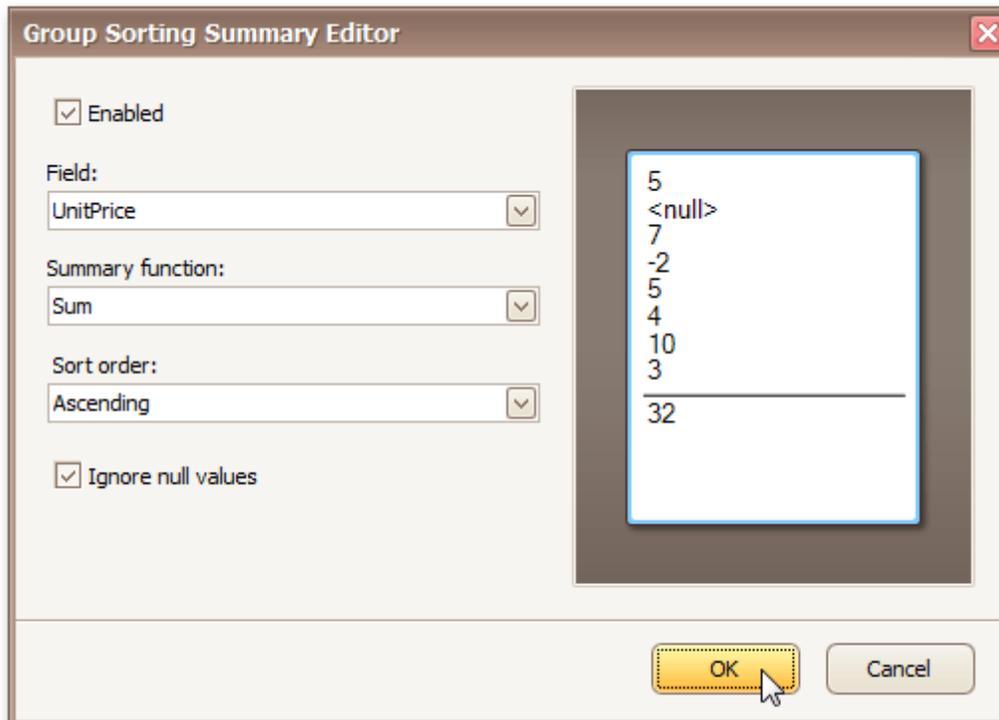
This tutorial demonstrates how to sort groups based on the result of a function summary specified for them. To demonstrate this feature, we'll use a report similar to the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To sort groups by a summary function result, do the following.

1. Select the Group Header band and click its [Smart Tag](#). In the invoked actions list, click the ellipsis button for the **Sorting Summary** option.



2. Then, in the invoked **Group Sorting Summary Editor**, check the **Enabled** option, and specify a field and summary function against which the group should be sorted.



If required, you also can change the default sorting order (from descending to ascending), and choose

to ignore null values.

Click **OK** to apply the changes, and switch to the [Preview Tab](#) to view the result.

Products by Categories	
Category: 7	
Longlife Tofu	\$10.00
	\$10.00
Category: 2	
Aniseed Syrup	\$10.00
Louisiana Hot Spiced Okra	\$17.00
	\$27.00
Category: 8	
Gravad lax	\$26.00
Røgede sild	\$9.50
	\$35.50
Category: 3	
Sir Rodney's Scones	\$10.00
Chocolade	\$12.75
Maxilaku	\$20.00
Scottish Longbreads	\$12.50
	\$55.25
Category: 4	
Queso Cabrales	\$21.00
Gorgonzola Telino	\$12.50
Mascarpone Fabioli	\$32.00
	\$65.50

See Also

[Add Totals to a Report](#)

[Change or Apply Data Grouping to a Report](#)

[Count the Number of Records in a Report or a Group](#)

[Add Page Numbers for Groups](#)

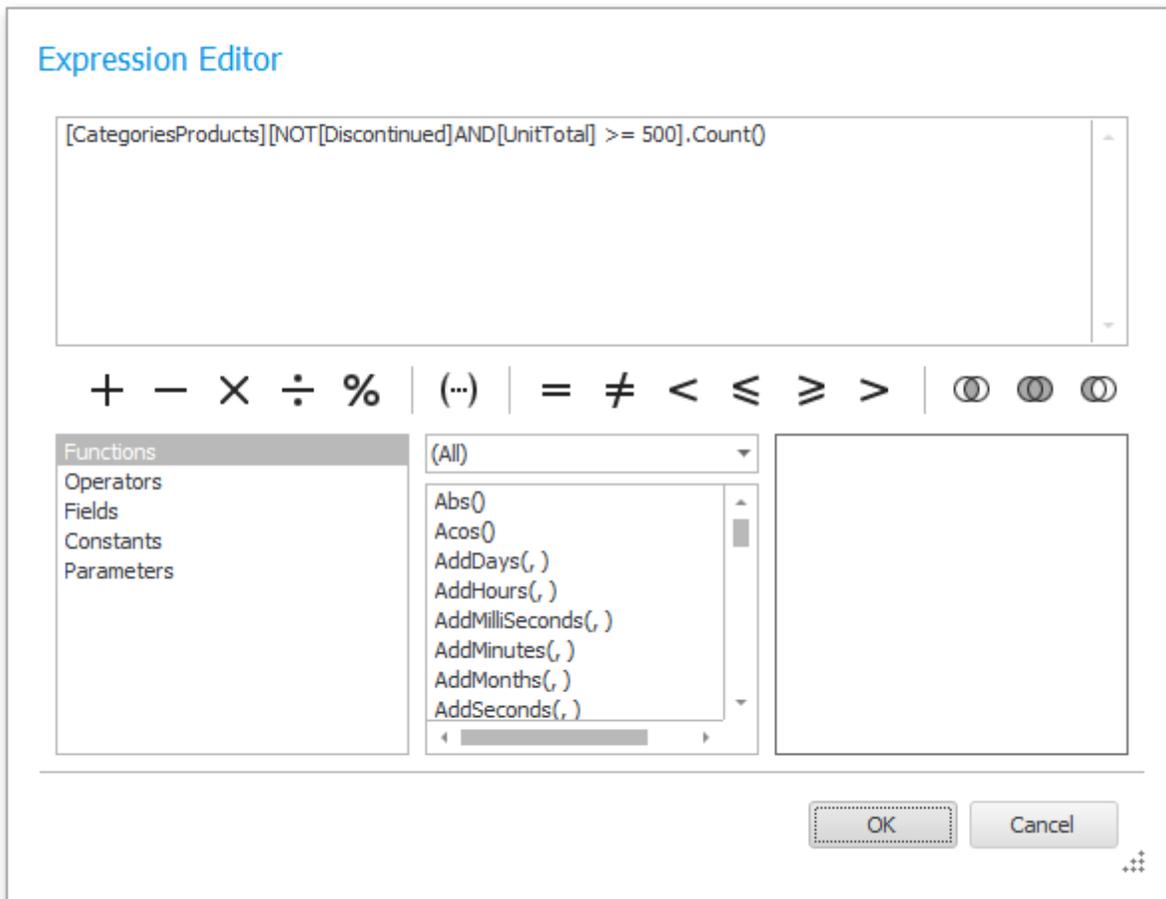
Calculate an Aggregate Function

This tutorial describes the steps required to create a report with an *aggregate function*. In this example, products that are not discontinued and have a total unit value greater than \$500 will be displayed.

- Create a [table report](#) with a layout similar to that appearing in the following illustration.

ReportHeader				
Product Name	Units in Stock	Unit Price	Total Unit Value	Discontinued
Detail1				
[CategoriesProducts.ProductName]	[CategoriesProducts.UnitsInStock]	[CategoriesProducts.UnitPrice]	[CategoriesProducts.TotalUnitValue]	[CategoriesProducts.Discontinued]

- Create a new [calculated field](#) and set the field name to "AggregateField".
- Click the ellipsis button in the **Expression** section. The **Expression Editor** dialog will appear.
- In this dialog, double click the **[CategoriesProducts]** field, then choose **Functions | Aggregate**. Next, double click the **Count()** function. Insert the following text into the empty square brackets. "`Not[Discontinued]And[UnitTotal] >= 500`".



Click **OK** to close the dialog and save the expression.

- Next, add three [Labels](#) to the [Detail Band](#) and customize their content, as shown in the following image.

The screenshot shows a report designer interface with a grid background. The report is organized into sections:

- Detail** section:
 - A header row containing **[CategoryName]**.
 - A shaded row containing **Aggregated value* for this category: [AggregateField]**.
 - A note below the shaded row: ** The number of entries in this category that are not discontinued and have their total unit value greater than \$500 (in the following report, such entries are highlighted with red).*
- DetailReport - "Categories.CategoriesProducts"** section:
 - ReportHeader** section:

Product Name	Units in Stock	Unit Price	Total Unit Value	Discontinued
--------------	----------------	------------	------------------	--------------
 - Detail1** section:

[CategoriesProducts.ProductName]	[CategoriesPr	[CategoriesProduc	[CategoriesProd	[CategoriesProd
----------------------------------	---------------	-------------------	-----------------	-----------------

The report is now ready. Switch to the [Preview Tab](#), and view the result.

You can also set [formatting rules](#) for the report. The following image shows the sample report. The data rows that are not discontinued and have a total unit value greater than \$500 are highlighted in red.

Beverages

Aggregated value* for this category: 8

** The number of entries in this category that are not discontinued and have their total unit value greater than \$500 (in the following report, such entries are highlighted with red).*

Product Name	Units in Stock	Unit Price	Total Unit Value	Discontinued
Chai	39	\$18.00	\$702.00	False
Chang	17	\$19.00	\$323.00	False
Guaraná Fantástica	20	\$4.50	\$90.00	True
Sasquatch Ale	111	\$14.00	\$1554.00	False
Steeleye Stout	20	\$18.00	\$360.00	False
Côte de Blaye	17	\$263.50	\$4479.50	False
Chartreuse verte	69	\$18.00	\$1242.00	False
Ipoh Coffee	17	\$46.00	\$782.00	False
Laughing Lumberjack Lager	52	\$14.00	\$728.00	False
Outback Lager	15	\$15.00	\$225.00	False
Rhönbräu Klosterbier	125	\$7.75	\$968.75	False
Lakkalikööri	57	\$18.00	\$1026.00	False

See Also

[Add Totals to a Report](#)

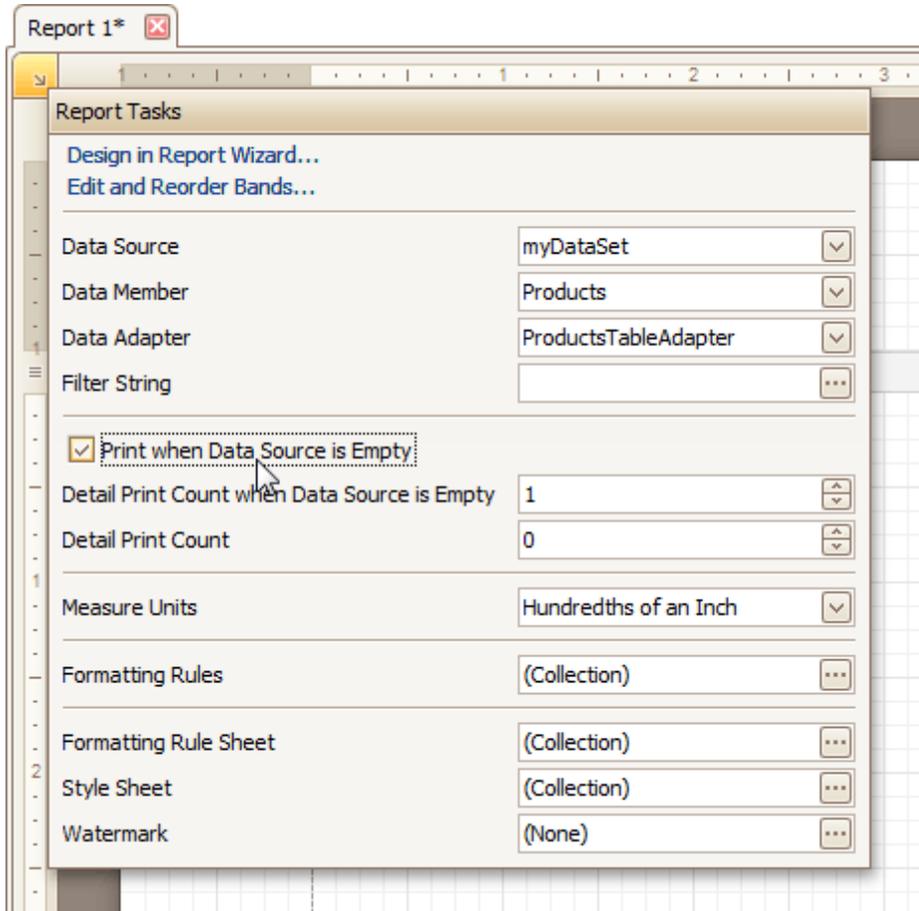
[Add Calculated Fields to a Report](#)

[Sort Groups by a Summary Function Result](#)

Cancel Printing If a Report Does Not Contain Any Records

To cancel printing when a report does not contain any records, simply set the report's **Print when Data Source is Empty** property to **No**.

You can quickly perform this via the report's [Smart Tag](#).



See Also

- [Show the Current Row Index](#)
- [Count the Number of Records in a Report or a Group](#)
- [Limit the Number of Records per Page](#)

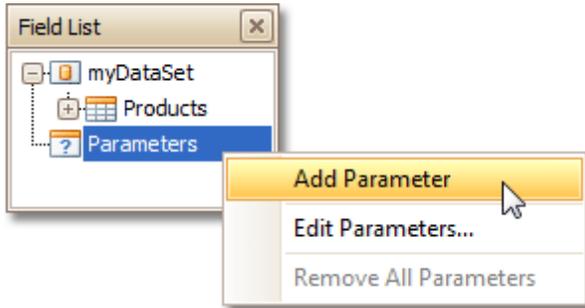
Limit the Number of Records per Page

This tutorial demonstrates how to define how many records should be displayed at each page in a report's Print Preview. Note that no [scripts](#) are required to accomplish this task.

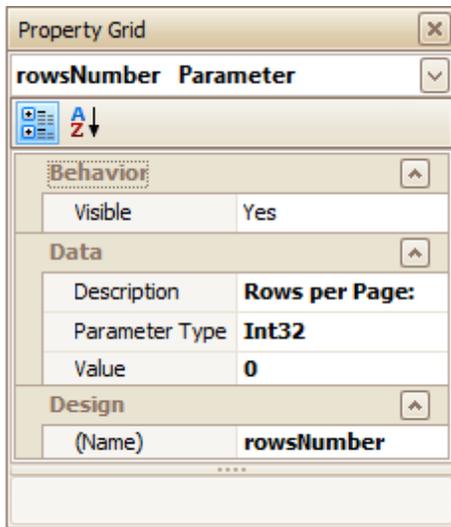
To demonstrate this feature, we'll use a report, similar to the one created in the following tutorial: [Change or Apply Data Grouping to a Report](#).

To limit the number of records per page, do the following.

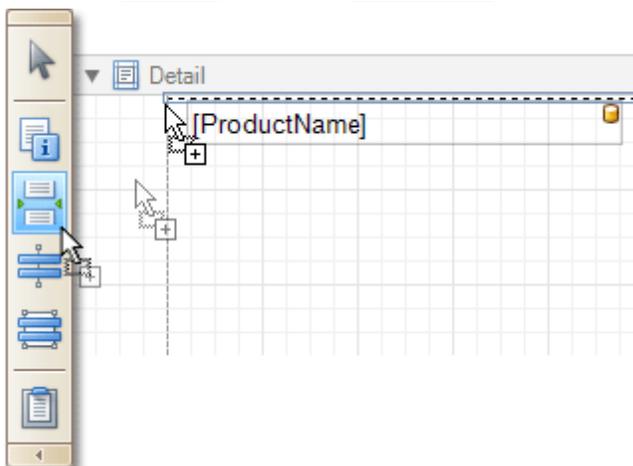
1. To add a [parameter](#) to the report, in the [Field List](#), right-click the **Parameters** section, and in the invoked menu, choose **Add Parameter**.



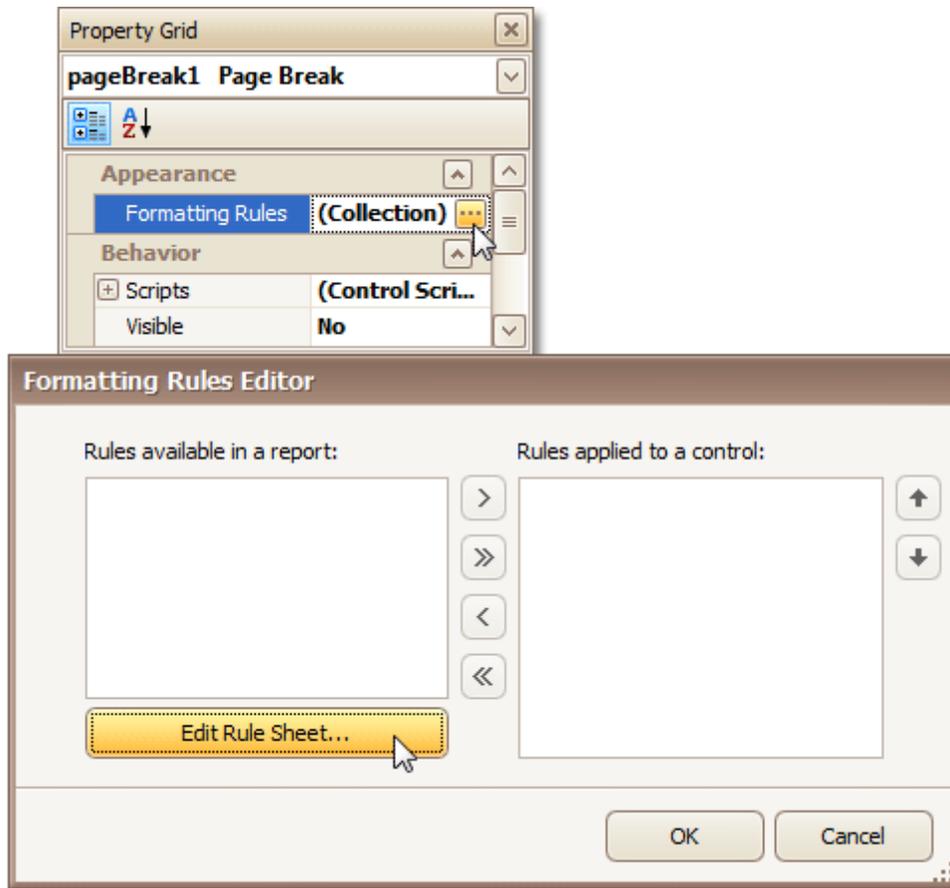
2. Select the parameter, and in the [Property Grid](#), set its **Description** to **Rows per Page:**, **Parameter Type** to **Int32** and **(Name)** to **rowsNumber**.



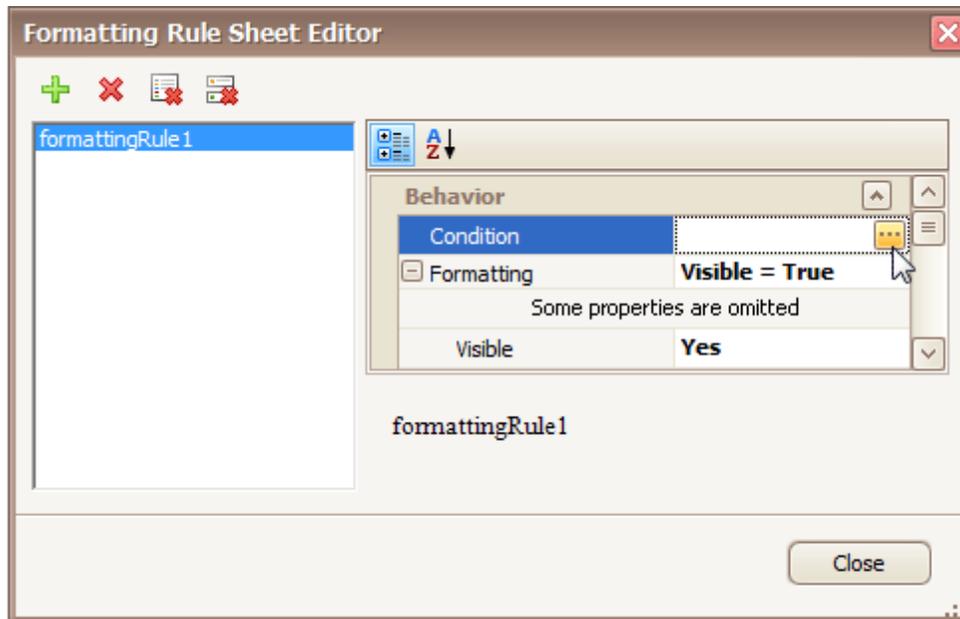
3. From the [Toolbox](#), drop the [Page Break](#) control onto the top of the report's [Detail](#) band.



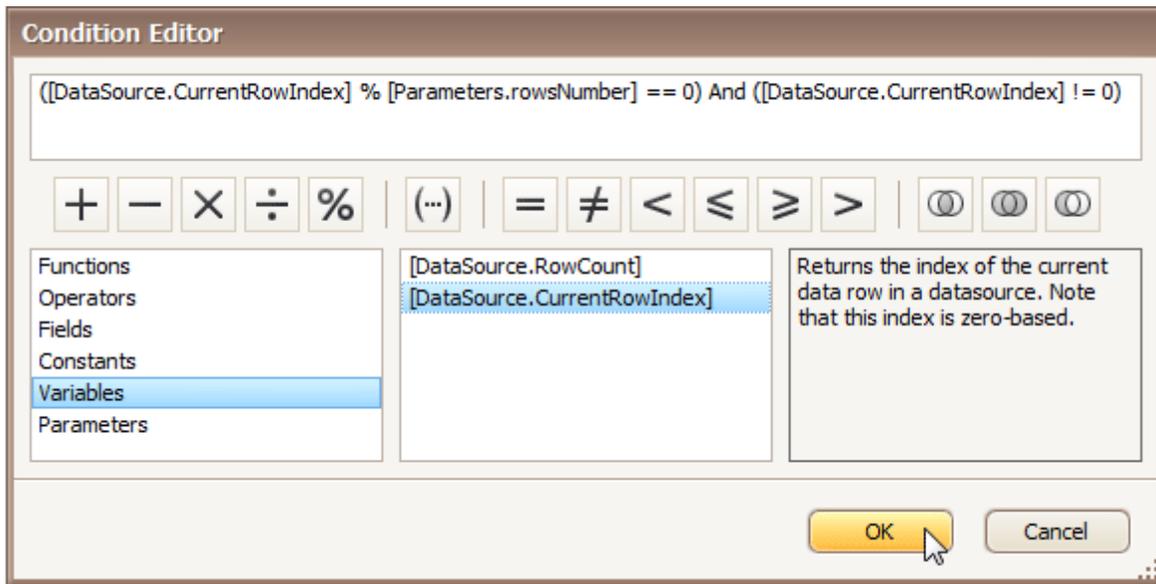
4. Select the Page Break, and set its **Visible** property to **No**. Then, click the ellipsis button for its **Formatting Rules** property, and in the invoked **Formatting Rules Editor**, click the **Edit Rule Sheet...** button.



5. Now, in the invoked **Formatting Rule Sheet Editor**, click **+**, to create a new formatting rule. Set its **Visible** property to **Yes**, and click the ellipsis button for its **Condition** property.



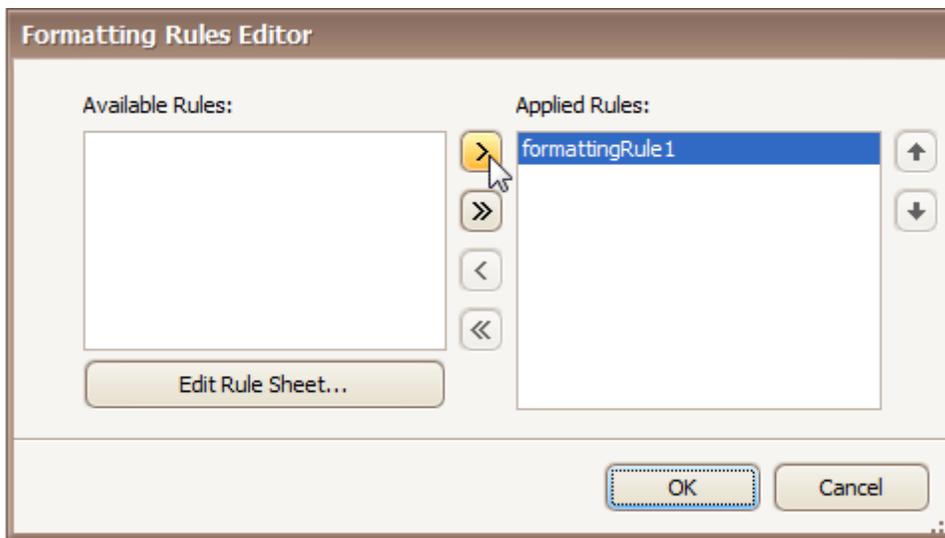
6. In the invoked **Condition Editor**, define a logical expression for the rule, (e.g. **([DataSource.CurrentRowIndex] % [Parameters.rowsNumber] == 0) And ([DataSource.CurrentRowIndex] != 0)**).



To save the changes and close the dialog, click **OK**.

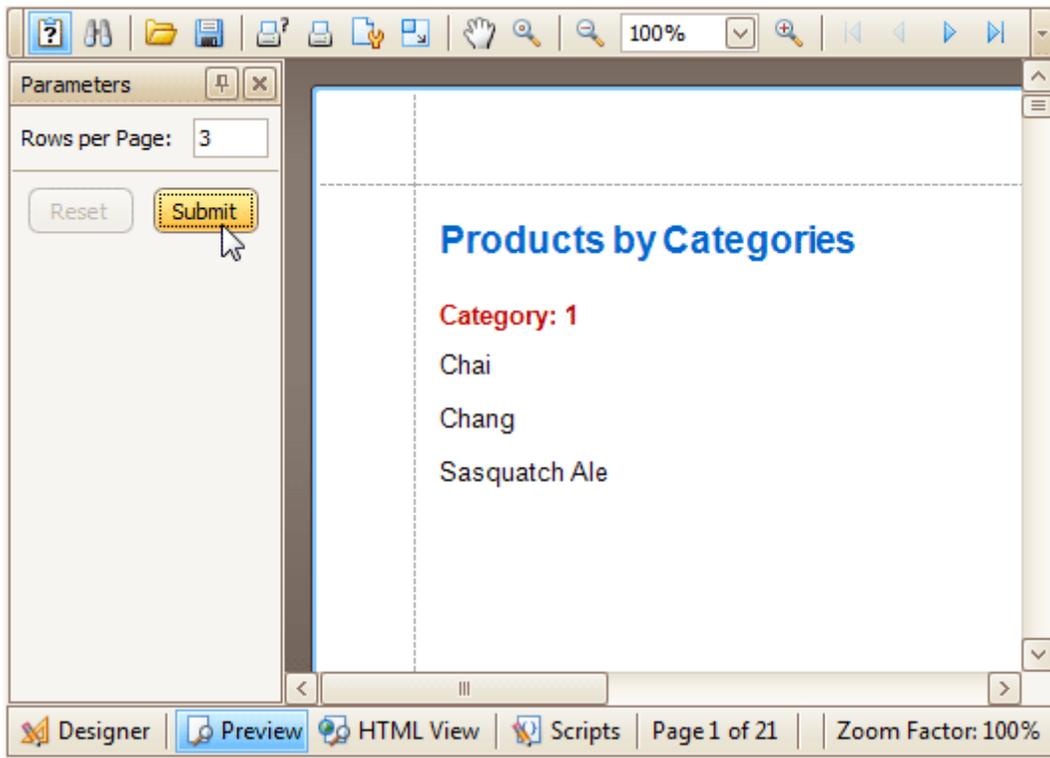
Then, click **Close**, to quit the **Formatting Rule Sheet Editor**, as well.

- Now, back in the **Formatting Rules Editor**, move the created rule to the list of applied rules on the right, using the arrow buttons in the middle of the dialog.



To save the changes and close the editor, click **OK**.

The report is now ready. Switch to the [Preview Tab](#), and in the **Parameters** section, define the required value and click **Submit**.



Note that while in this example, the number of rows is specified each time the report is being previewed, you can make this number secure, by setting the parameter's **Value** option to the desired value, and then setting the report's **Request Parameters** option to **No**.

See Also

- [Show the Current Row Index](#)
- [Count the Number of Records in a Report or a Group](#)
- [Cancel Printing If a Report Does Not Contain Any Records](#)

Report Designer Reference

A report is built from **controls** (text labels, images, zip codes, charts, etc) spread across report sections called **bands** (various headers, footers and content sections). The main interface elements helping you manage these building blocks are **Control Toolbox**, **Field List** and **Property Grid**. These elements allow you add controls to your report, bind them to data and change their appearance and behavior settings, respectively.

To learn more about these and other elements used in the Report Designer, use the following links.

- [Report Designer UI](#)
The documents in this section are dedicated to the elements of the Report Designer user interface.
- [Report Controls](#)
The documents in this section describe options of each report control available in the Report Designer.
- [Report Bands](#)
The documents in this section details the available kinds of report bands and their settings.
- [Report Settings](#)
This document details settings that affect the entire report.

Report Designer UI

The documents in this section are dedicated to the elements of the Report Designer user interface. The following topics describe the Report Designer interface.

Report Designer Interface

- [Report Designer Elements](#)
- [Ribbon Designer Elements](#)

General Elements

- [Control Toolbox](#)
- [Design Panel](#)
- [Main Menu](#)

Quick Access Tools

- [Context Menu](#)
- [Smart Tag](#)

Toolbars

- [Main Toolbar](#)
- [Formatting Toolbar](#)
- [Layout Toolbar](#)
- [Zoom Toolbar](#)

Dock Panels

- [Field List](#)
- [Group and Sort Panel](#)
- [Property Grid](#)
- [Report Explorer](#)
- [Scripts Errors Panel](#)

Tabs

- [Designer Tab](#)
- [Preview Tab](#)
- [HTML View Tab](#)
- [Scripts Tab](#)

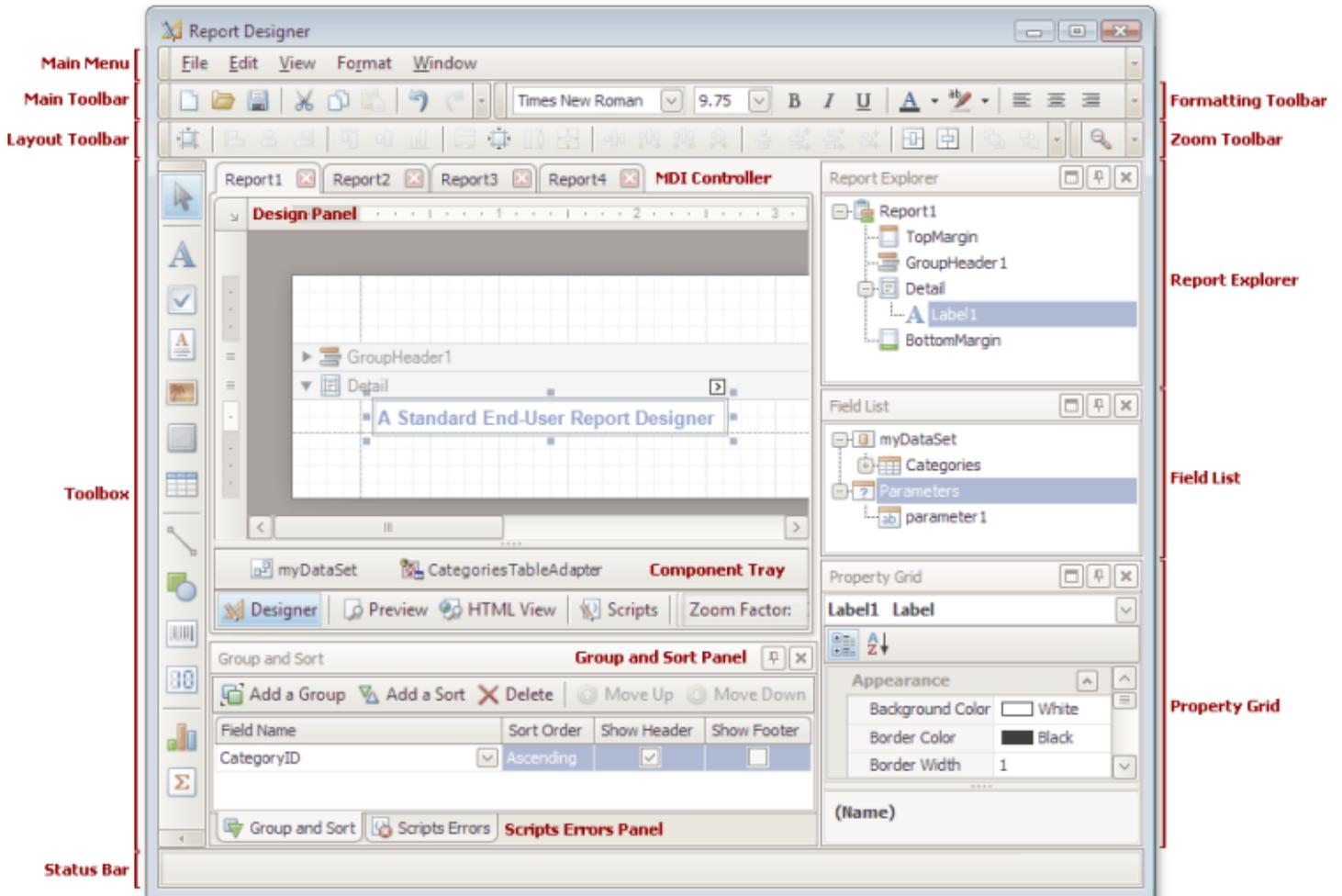
Additional Elements

- [Component Tray](#)
- [Status Bar](#)

Report Designer Elements

This document describes elements that comprise the Report Designer that is intended for creating and editing reports.

The following image illustrates a Report Designer.



The following table lists all main interface elements of the Report Designer.

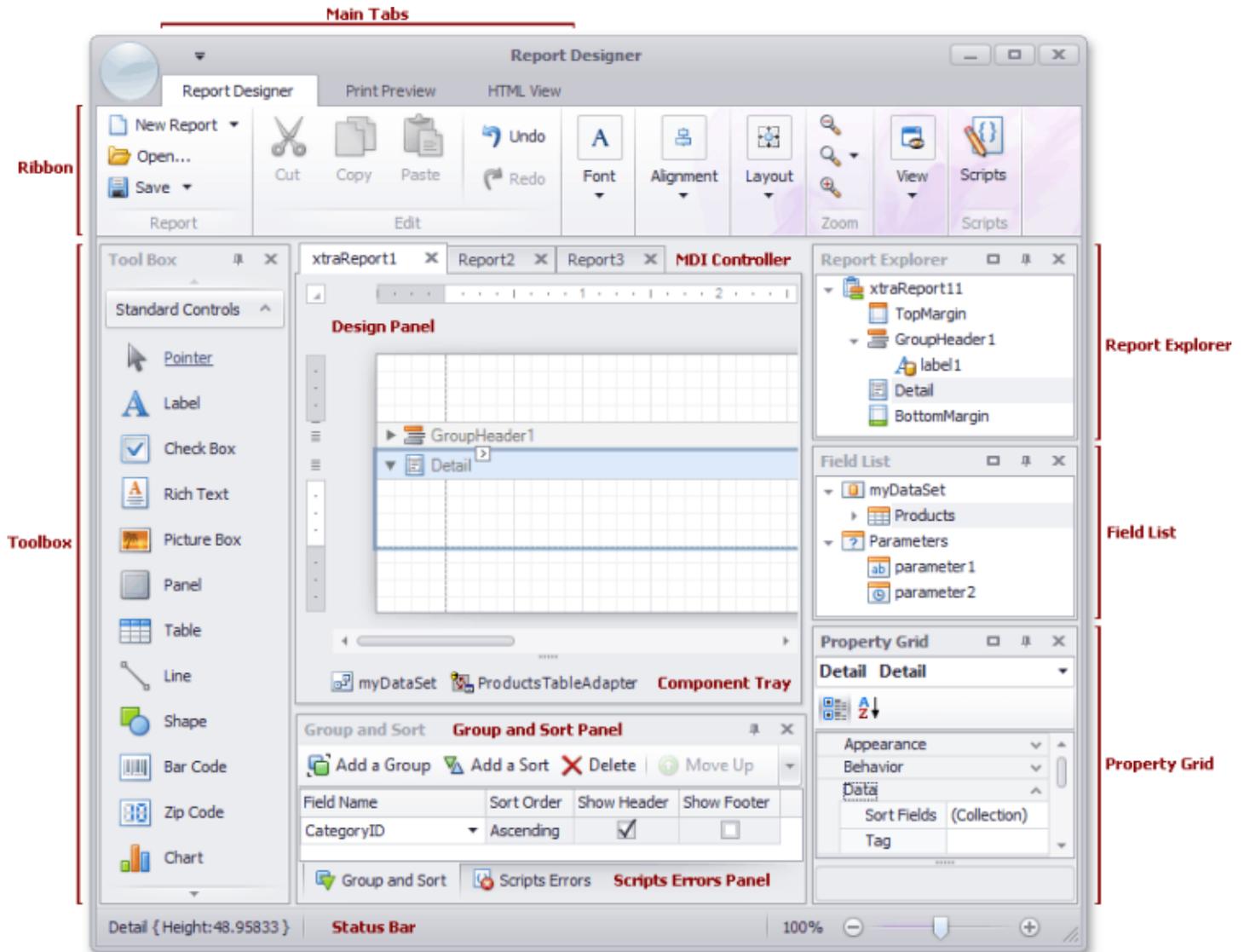
Element	Description
Main Menu	Contains a set of items and subitems that allow you to perform common actions over the report currently shown in the Design Panel . It duplicates all the toolbar buttons available on the Main , Formatting and Layout toolbars. The Window menu allows for the disabling of the tabbed multi-document interface and the tiling of Design Panel windows vertically or horizontally.
Main Toolbar	The main file management toolbar in the Designer. It contains buttons that allow you to create new reports, save and load report layouts, cut, copy and paste controls, and undo and redo actions in the Designer.

Layout Toolbar	The toolbar for positioning report elements. It contains buttons that provide the ability to change the size and location of groups of controls.
Toolbox	Contains the available controls that you can add to your report by dragging and dropping their icons onto a report's area.
Formatting Toolbar	Contains buttons for text formatting. This toolbar can be also used when a control's text (or its section) is edited via the In-Place editor.
Zoom Toolbar	Provides means for zooming in and out of your report (both in design and preview modes).
MDI Controller	Provides the multi-document interface in the Designer by containing its Design Panels .
Design Panel	<p>A surface where a report is being edited and previewed. The Designer provides a multi-document interface, and can have as many Design Panels as required, each associated with a single report instance.</p> <p>Each Design Panel has four tabs (Designer, Preview, HTML View and Scripts) for report editing, previewing, and maintaining its scripts.</p>
Component Tray	Shows components related to report data binding. You can click them to display and edit their settings using the Property Grid .
Report Explorer	Displays the structure of a report in a visual-tree form, which makes the report navigation easier.
Field List	Shows the structure of a report's data source and is used to bind report controls to data.
Property Grid	Used to access and modify properties of a report and all its elements (bands and controls).
Group and Sort Panel	Allows you to quickly perform grouping and sorting operations throughout a report, and visually represents the report's grouping structure.
Scripts Errors Panel	When errors are found in a report's scripts (after clicking Validate in the Scripts Tab), it lists these errors. Clicking an error opens the corresponding script section in the Scripts tab.
Status Bar	Provides tips and specific information about the Designer element being hovered by a cursor or an action being currently performed.

Ribbon Designer Elements

This document describes elements that comprise the Ribbon Report Designer.

The following image illustrates a Ribbon Designer.



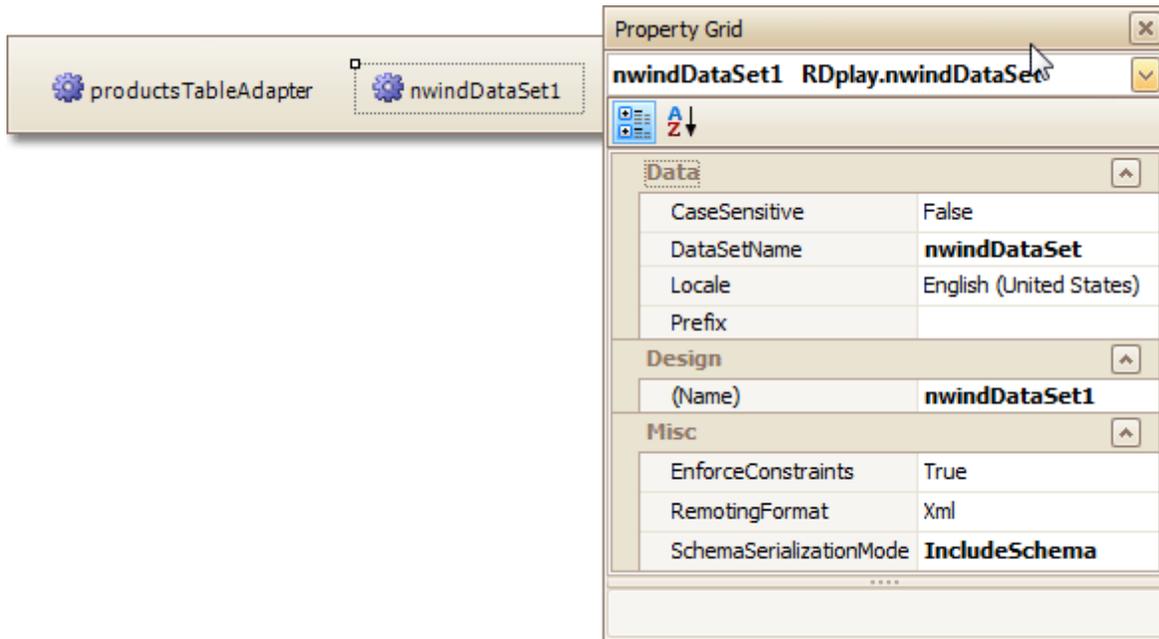
The following table lists all the main interface elements of the Ribbon Designer.

Element	Description
Ribbon	The main toolbar in the Designer that contains the Main , Formatting , Layout and Zoom toolbars, as well as the Scripts Tab button.
Toolbox	Contains controls that you can add to your report by dragging and dropping its icons onto a report's area.
Main Tabs	Allows you to switch between the Designer , Preview and HTML View tabs.
MDI Controller	Provides the multi-document interface in the Designer by containing its Design Panels .

Design Panel	A surface where a report is being edited. The Designer provides a multi-document interface, and can have as many Design Panels as there are reports open in it.
Component Tray	Shows components related to report data binding. You can click them to display and edit their settings using the Property Grid .
Report Explorer	Displays the structure of a report in a visual-tree form, which makes the report navigation easier.
Field List	Shows the structure of a report's data source and is used to bind report controls to data.
Property Grid	Used to access and modify properties of a report and all its elements (bands and controls).
Group and Sort Panel	Allows you to quickly perform grouping and sorting operations throughout a report, and visually represents the report's grouping structure.
Scripts Errors Panel	When errors are found in a report's scripts (after clicking Validate in the Scripts Tab), it lists these errors. Clicking an error opens the corresponding script section in the Scripts tab.
Status Bar	Provides tips and specific information about the Designer element being hovered by a cursor or an action being currently performed.

Component Tray

The **Component Tray** shows components (non-visual report helpers) whose primary purpose is to [bind a report to data](#). You can click them to display and edit their settings using the [Property grid](#).



Note

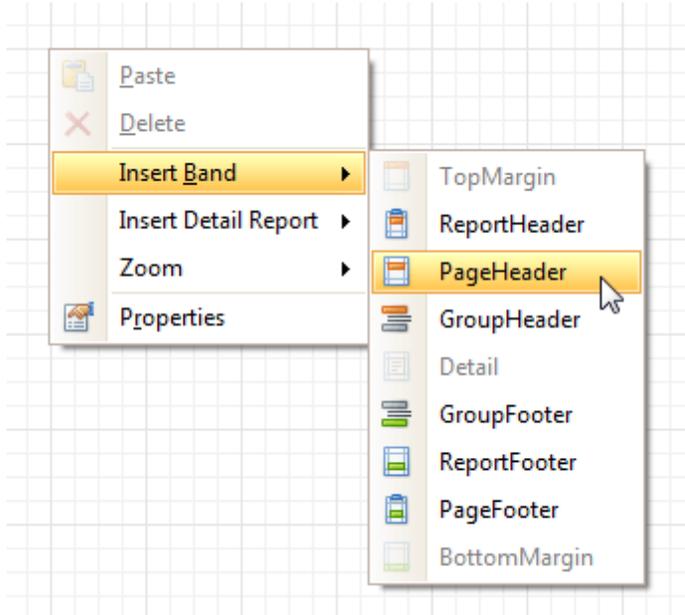
Component management and data binding configuration are usually performed by system administrators or your application vendor, since these areas require advanced knowledge of database connectivity. You will rarely, if ever, need to access component settings when modifying existing reports.

See Also

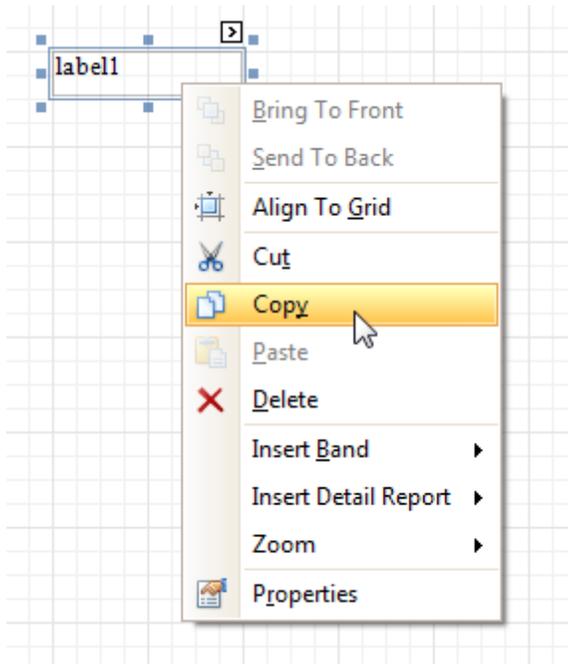
[Status Bar](#)

Context Menu

The **Context Menu** can be invoked by the right-clicking a report...



... or its elements ([bands](#) and [controls](#)). This menu provides quick access to frequently used commands (e.g. zooming, clipboard operations, inserting bands, etc.) The available action set varies, depending on the element where you invoked the Context Menu.



See Also
[Smart Tag](#)

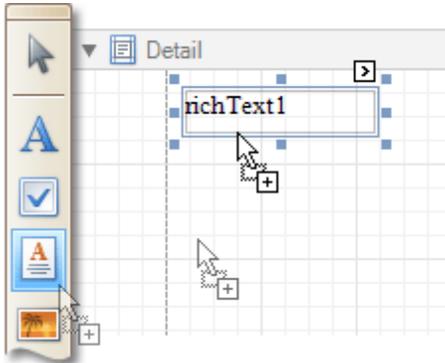
Control Toolbox

The **Control Toolbox** lists all available [controls](#) and allows you to add them to your report.

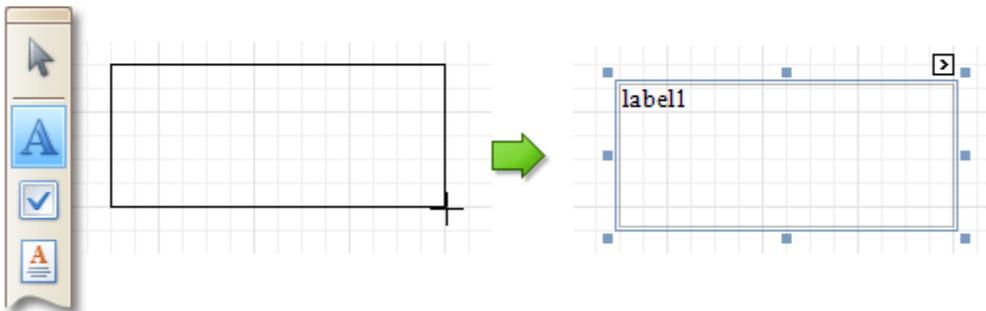


To add a control from the Toolbox, do one of the following.

- Double-click an item in the Toolbox for the appropriate control, which will be created at the [Detail band's](#) top left corner.
- Drag and drop an item from the Toolbox onto the required location within a report.



- Select an item in the Toolbox, and then click the required location within a report.
- Select an item in the Toolbox, and then indicate the bounding rectangle by holding the left mouse button.



Select the **Pointer** item when you need to perform selection, re-positioning or resizing operations. It is automatically selected after you drop a control onto a report.

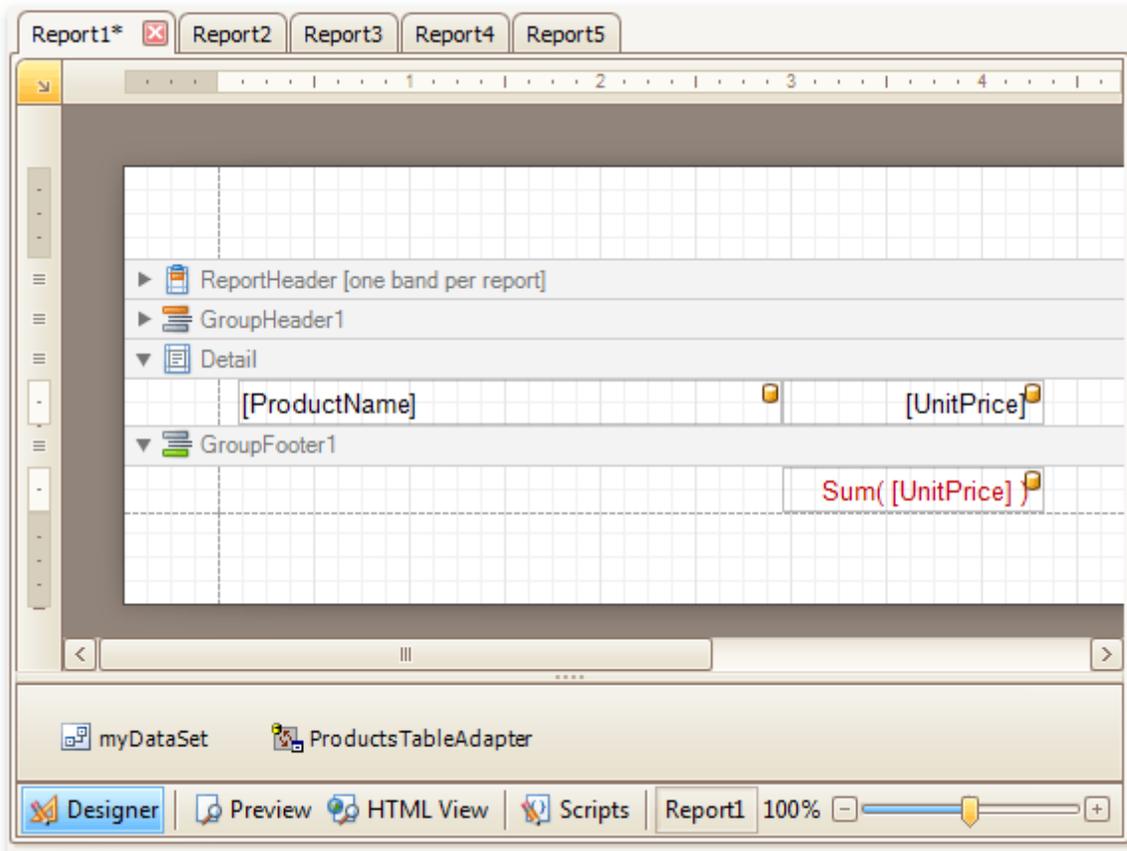
If the Toolbox is hidden, you can enable it in the [Main Menu](#), by selecting **View | Toolbars | Toolbox**.

See Also

[Design Panel](#)

Design Panel

The **Design Panel** is the Report Designer's main area, where a report is being constructed and previewed.



On the [Designer Tab](#), multiple reports can be opened at once (each in its own Design Panel).

The Design Panel provides the following tabs (switched at the bottom).

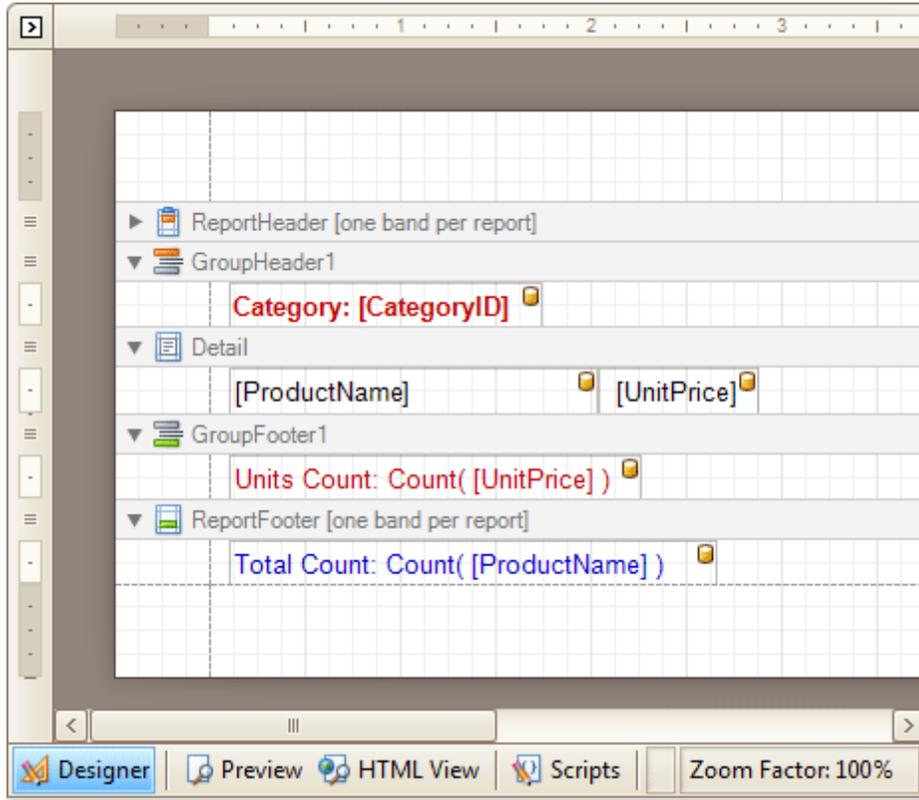
- [Designer Tab](#)
Allows you to modify your report.
- [Preview Tab](#)
Shows a print preview, and enables you to print out your report or export it to a file on disk.
- [HTML View Tab](#)
Shows the report output in HTML format.
- [Scripts Tab](#)
Allows you to manage your report's scripts.

See Also

[Control Toolbox](#)

Designer Tab

The **Designer Tab** allows you to customize a report, manage its [bands](#) and [controls](#) and define their properties.



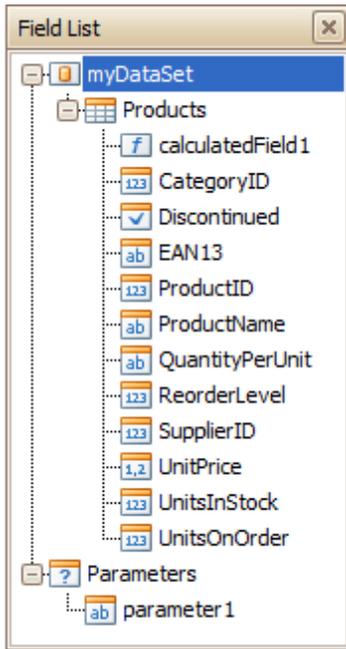
See Also

- [Preview Tab](#)
- [HTML View Tab](#)
- [Scripts Tab](#)

Field List

The **Field List** window serves the following purposes.

- Displays the list of all available data fields (attributes you can show in your report) and allows you to [create report elements that will show information from these fields](#).
- Allows you to [create calculated fields](#) by building expressions based on the values of data fields, report parameter values, etc.
- Shows existing report parameters, and allows you to [add parameters](#) to your report.



If the Field List is hidden, you can enable it in the [Main Menu](#), by selecting **View | Windows | Field List**.

See Also

- [Group and Sort Panel](#)
- [Property Grid](#)
- [Report Explorer](#)
- [Scripts Errors Panel](#)

Formatting Toolbar

The **Formatting Toolbar** allows you to easily customize an element's font, color and alignment settings.



If the Formatting Toolbar is hidden, you can enable it in the [Main Menu](#), by selecting **View | Toolbars | Formatting Toolbar**.

See Also

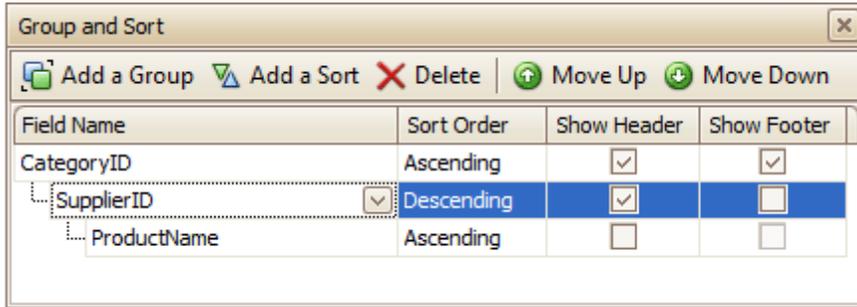
[Layout Toolbar](#)

[Main Toolbar](#)

[Zoom Toolbar](#)

Group and Sort Panel

The **Group and Sort Panel** allows you to quickly apply [grouping](#) and [sorting](#) to your report data.



To create a new grouping or sorting criterion, simply click **Add a Group** or **Add a Sort**.

Then, to control whether the corresponding [Group Header or Footer band](#) should be seen, use the **Show Header** and **Show Footer** check boxes.

An ascending or descending grouping (sorting) mode is specified via the **Sort Order** drop-down list.

You can change the order in which multiple grouping and sorting criteria are to be performed, via the **Move Up** and **Move Down** buttons.

To remove a grouping or sorting criterion, select it, and click **Delete**.

Note

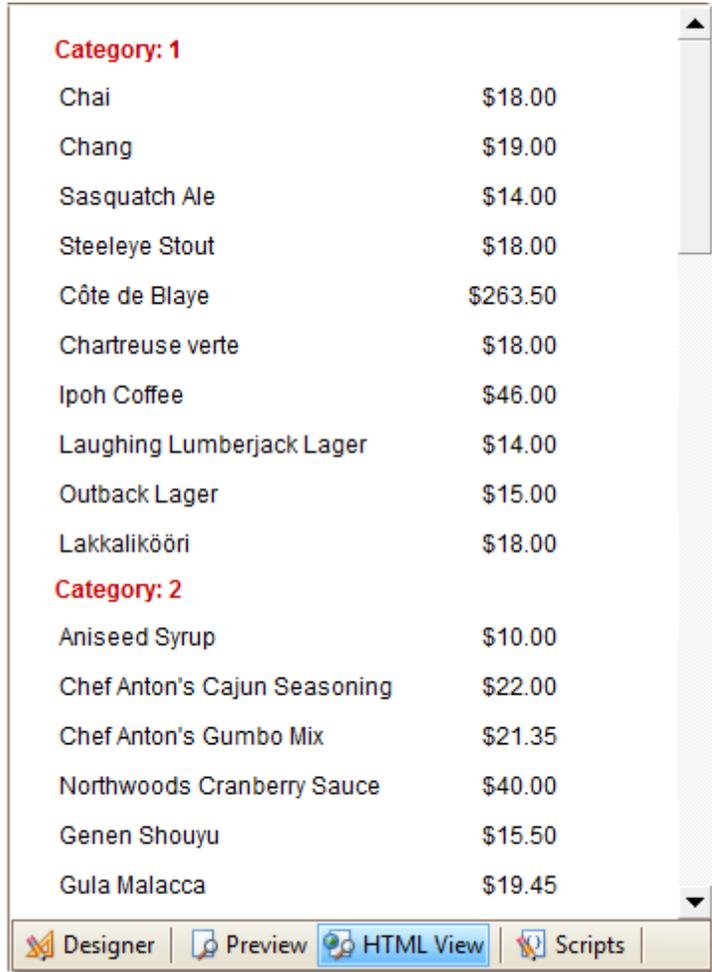
If the Group and Sort Panel is hidden, you can enable it in the [Main Menu](#), by selecting **View | Windows | Group and Sort**.

See Also

[Change or Apply Data Grouping to a Report](#)
[Change or Apply Data Sorting to a Report](#)
[Field List](#)
[Property Grid](#)
[Report Explorer](#)
[Scripts Errors Panel](#)

HTML View Tab

The **HTML View Tab** allows you to preview the HTML output of a report.



The screenshot shows a window titled 'HTML View' with a list of items and their prices. The items are grouped into two categories: 'Category: 1' and 'Category: 2'. The 'HTML View' tab is selected in the bottom navigation bar.

Category: 1	
Chai	\$18.00
Chang	\$19.00
Sasquatch Ale	\$14.00
Steeleye Stout	\$18.00
Côte de Blaye	\$263.50
Chartreuse verte	\$18.00
Ipoh Coffee	\$46.00
Laughing Lumberjack Lager	\$14.00
Outback Lager	\$15.00
Lakkalikööri	\$18.00

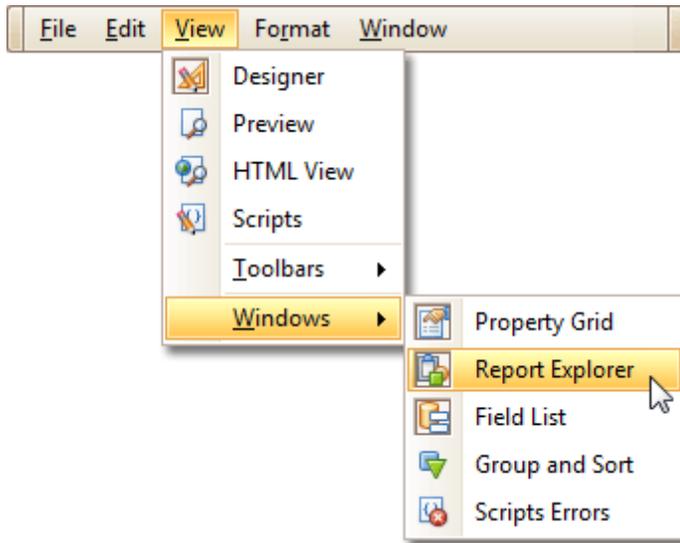
Category: 2	
Aniseed Syrup	\$10.00
Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35
Northwoods Cranberry Sauce	\$40.00
Genen Shouyu	\$15.50
Gula Malacca	\$19.45

See Also

- [Designer Tab](#)
- [Preview Tab](#)
- [Scripts Tab](#)

Main Menu

The **Main Menu** contains various commands grouped in four sub-menus. These menu items duplicate various commands available in the Report Designer's Toolbars, and allow you to switch between different Tabs, and hide or show the available Toolbars and Panels.



To switch focus on the Main Menu, press ALT.

Main Toolbar

The **Main Toolbar** contains buttons which provide the capability to create new reports, save and load report layouts, cut, copy and paste report elements, and undo-redo actions in the Report Designer.



If the Main Toolbar is hidden, you can enable it in the [Main Menu](#), by selecting **View | Toolbars | Main Toolbar**.

See Also

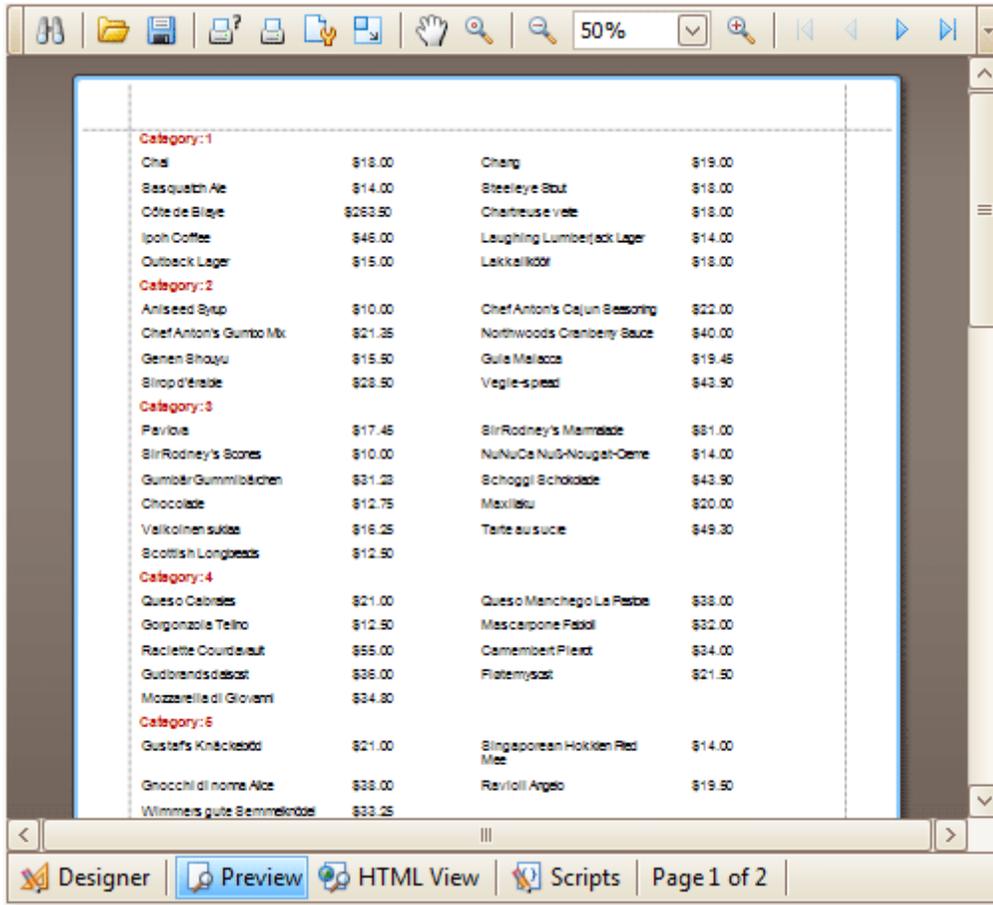
[Formatting Toolbar](#)

[Layout Toolbar](#)

[Zoom Toolbar](#)

Preview Tab

The **Preview Tab** is intended to check the print output of a report and customize its additional options.



To learn more about print preview capabilities, refer to the [Print Preview](#) topic.

See Also

- [Designer Tab](#)
- [HTML View Tab](#)
- [Scripts Tab](#)

Property Grid

The **Property Grid** allows you to change the settings of the currently selected report element.



To select an element and show its properties within the Property Grid, do one of the following.

- Click the required element on the Report Designer surface.
- Select an element using the [Report Explorer](#) window.
- Select an element from the Property Grid's combo box.

To reset a property value, right-click this property, and in the invoked menu, click **Reset**.



If the Property Grid is hidden, you can enable it in the [Main Menu](#), by selecting **View | Windows | Property Grid**.

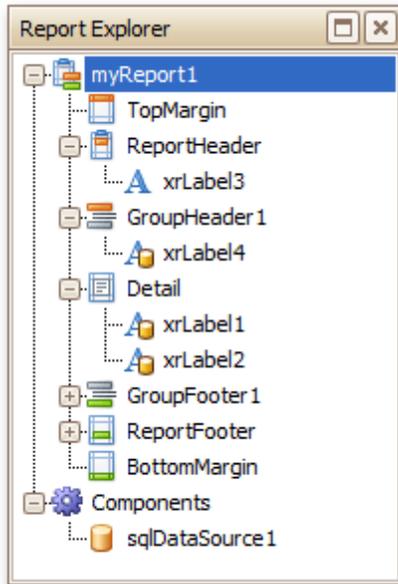
See Also

- [Field List](#)
- [Group and Sort Panel](#)
- [Report Explorer](#)
- [Scripts Errors Panel](#)

Report Explorer

The **Report Explorer** shows a report's structure in tree form, providing easy access to report elements. Once an element has been selected in the Report Explorer, its settings can be changed using the [Property Grid](#).

Additionally, the **Report Explorer** displays non-visual report components (e.g., report data sources) inside its **Components** node.



If the Report Explorer is hidden, you can enable it in the [Main Menu](#), by selecting **View | Windows | Report Explorer**.

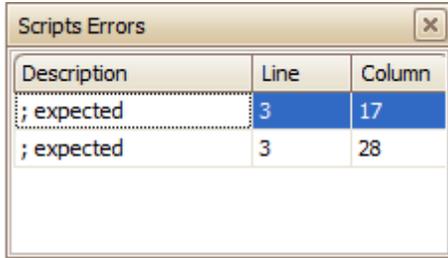
See Also

- [Field List](#)
- [Group and Sort Panel](#)
- [Property Grid](#)
- [Scripts Errors Panel](#)

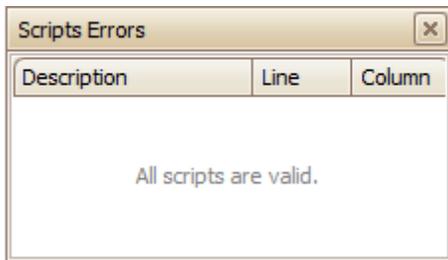
Scripts Errors Panel

The **Scripts Errors Panel** displays the result of scripts validation after it's forced in the [Scripts Tab](#).

Then, if errors are located, they are listed in this panel. To get to the corresponding line of code, click the corresponding item in the panel's list.



Or, if all scripts are valid, the panel reports this.



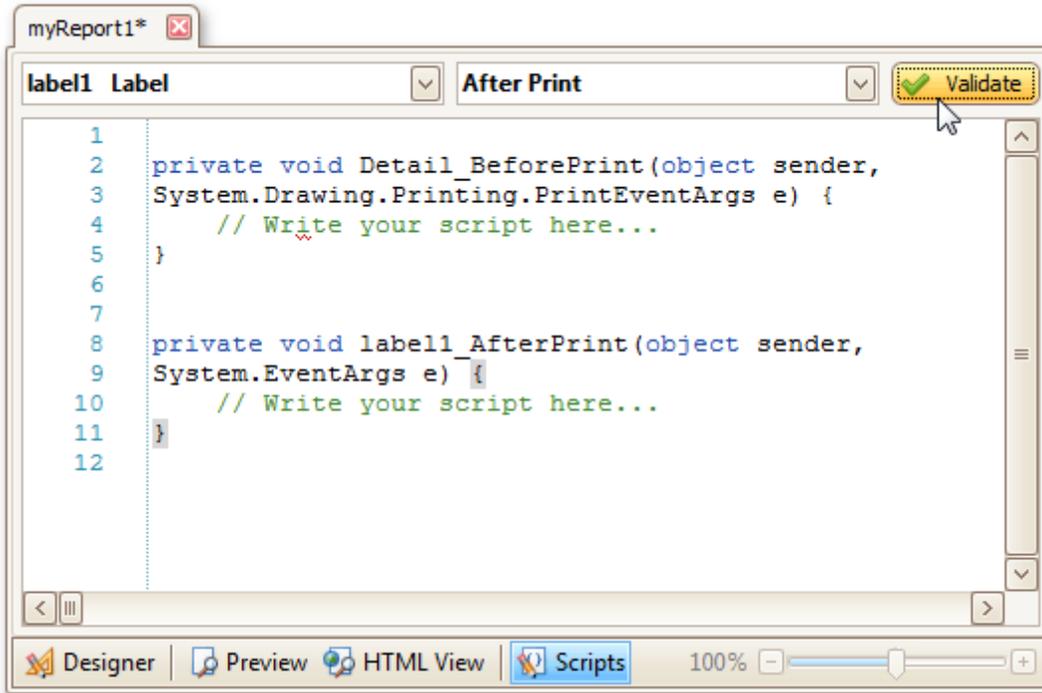
For more information, refer to [Handle Events via Scripts](#).

See Also

- [Field List](#)
- [Group and Sort Panel](#)
- [Property Grid](#)
- [Report Explorer](#)

Scripts Tab

The **Scripts Tab** allows you to manage your report's scripts. It provides centralized access to all the scripts being written for a report or any of its elements ([bands](#) and [controls](#)).



The built-in scripts validation capability is provided in this tab. After clicking **Validate**, the result is displayed in the [Scripts Errors Panel](#).

For more information, refer to [Handle Events via Scripts](#).

See Also

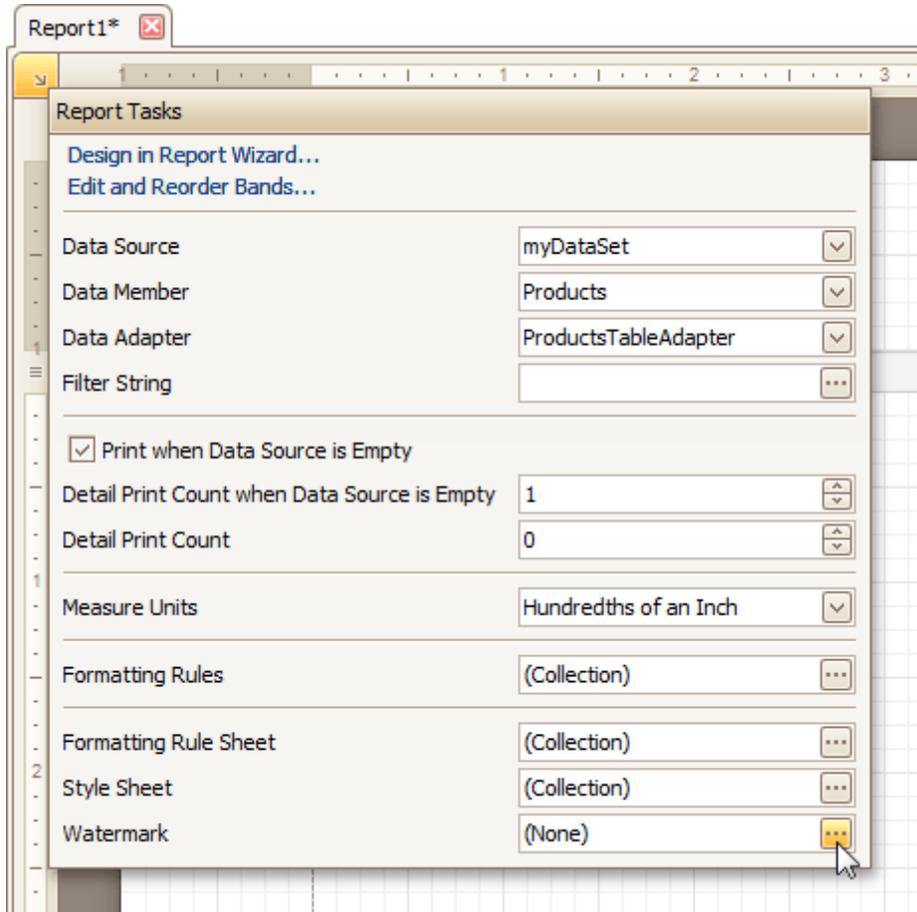
- [Designer Tab](#)
- [Preview Tab](#)
- [HTML View Tab](#)

Smart Tag

Most report elements have **Smart Tags** that provide easy access to the most frequently used settings. Clicking an element's Smart Tag invokes an actions list with action links and editors, allowing you to customize this element.

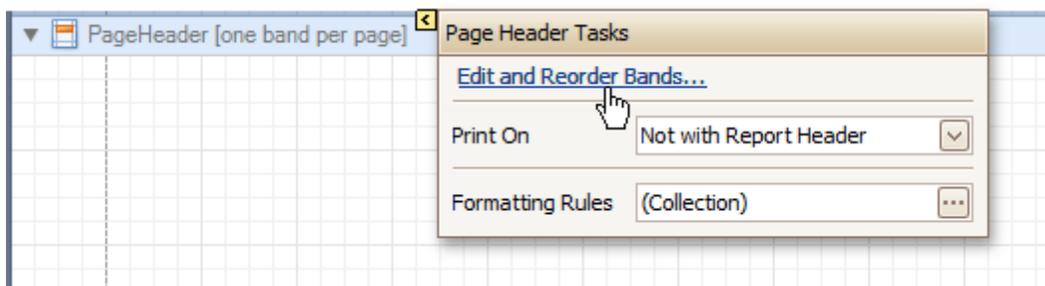
- **Report Smart Tag**

A report's Smart Tag icon is located at the top left corner of the [Design Panel](#).



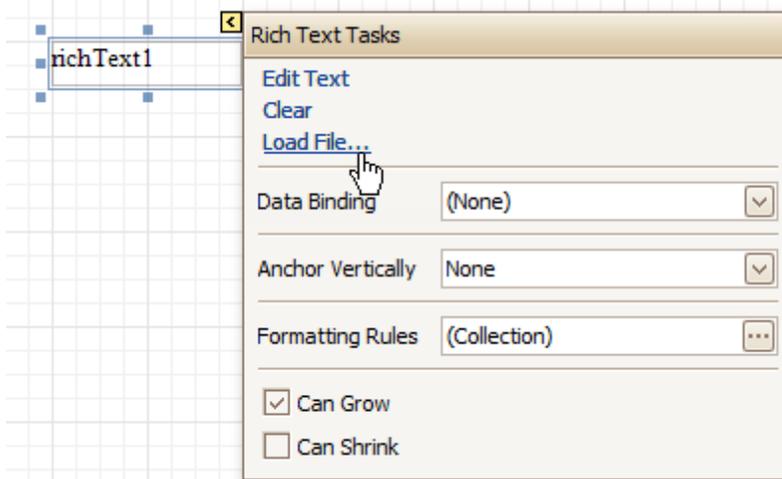
- **Band Smart Tag**

A band's Smart Tag icon is located on the band strip right next to its caption. For instance, the Smart Tag for the [Page Header](#) is shown in the following image.

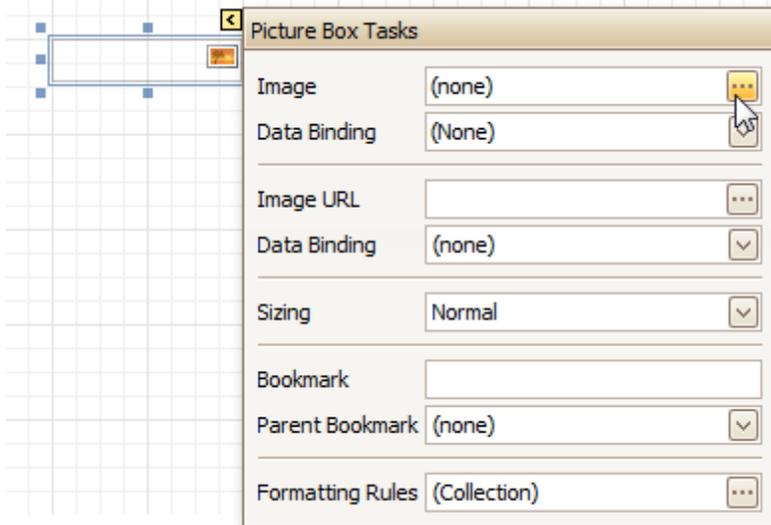


- **Control Smart Tag**

A control's Smart Tag icon is located at the top right corner of the control. For instance, the Smart Tag for the [Rich Text](#) control is shown in the following image.



And, this is the Smart Tag for the [Picture Box](#) control.

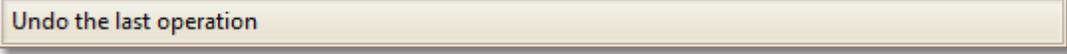


See Also

[Context Menu](#)

Status Bar

The **Status Bar** is located at the bottom of the Report Designer, and displays hints about currently selected commands in the [Main Menu](#) or toolbars.



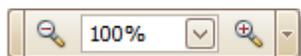
Undo the last operation

See Also

[Component Tray](#)

Zoom Toolbar

The **Zoom Toolbar** allows you to zoom a report in and out, providing easier control over report's layout.



If the Zoom Toolbar is hidden, you can enable it in the [Main Menu](#), by selecting **View | Toolbars | Zoom Toolbar**.

See Also

[Formatting Toolbar](#)

[Layout Toolbar](#)

[Main Toolbar](#)

Report Controls

The documents in this section describe options of each report control available in the Report Designer.

In general, *report controls* allow you to represent information of different kinds (e.g. simple or formatted text, pictures, tables, etc.) in your report both [static](#) and [dynamic](#), and to adjust your report's layout (by organizing controls within panels, and inserting page breaks at the required positions).

In the Report Designer, the available controls are listed in the [Control Toolbox](#) from which they are dropped onto the required [bands](#).

You also can extend the standard functionality of each control by writing scripts for its available events.

This document consists of the following sections.

- [Available Controls](#)
- [Add Controls to a Report](#)

Available Controls

The following table lists the available controls (in the same order as in the [Control Toolbox](#)). For each control's options description, refer to the corresponding document.

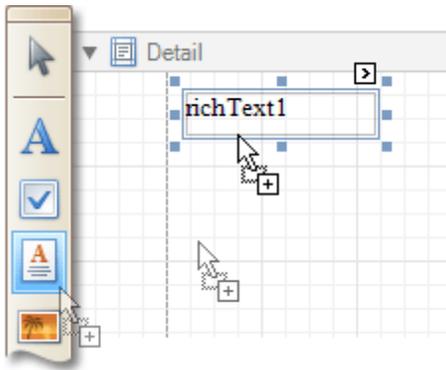
	Label	<p>The most basic Label control is intended to display text in your report. It can represent static or dynamic text, or both. In addition, it can be used to calculate standard summary functions across a data field. The Label's text can only be formatted as a whole. So, if it's required to differently format parts of text, use the Rich Text control.</p>
	Check Box	<p>The Check Box control is intended to display True/False or Checked/Unchecked/Indeterminate states in a report, by displaying (or not) a check mark, which can be accompanied by a text description.</p>
	Rich Text	<p>The Rich Text control allows you to display formatted text in your report. It can represent static or dynamic text, or both. You can load content to the Rich Text from an external TXT or RTF file (which can also contain images) and then format any part of it. The formatting options include font face, styles and sizes, and color.</p>
	Picture Box	<p>The Picture Box control is intended to display images of numerous formats in a report. An image can be loaded from an external file, from a bound data source, or from a web location using the specified URL.</p>
	Panel	<p>The Panel control is a container that frames separate report</p>

		controls to allow them to be easily moved, copied and pasted, and visually unite them in the report's preview (with borders or a uniform color background).
	Table	The Table control is designed to arrange information in a tabular layout . It may contain any number of Rows comprised of individual Cells . Both Rows and Cells can be selected and customized individually. In most aspects, a Cell is similar to a Label , but can also contain other controls (e.g. Picture Box or Rich Text).
	Line	The Line control draws a line of a specified direction, style, width and color. It can be used for both decoration and visual separation of a report's sections. The Line cannot cross bands , as opposed to the Cross-band Line control.
	Shape	The Shape control allows you to embed simple graphic objects into your report. You can choose one of multiple predefined shapes (e.g. rectangles, ellipses, arrows, polygons, crosses and brackets of various kinds).
	Bar Code	The Bar Code control transforms its content into a bar code of the specified type. Multiple standard bar code symbologies are supported.
	Zip Code	The Zip Code control transforms its content into a zip code. The width of a zip code's segment is adjustable.
	Chart	The Chart is a sophisticated control used to embed graphs into your report. It graphically represents a <i>series of points</i> using numerous 2D or 3D chart types. A Chart can be populated with points both <i>manually</i> (by specifying <i>arguments</i> and <i>values</i> for each point) and <i>dynamically</i> (by connecting it to the report's data source, or binding it to a separate one).
	Gauge	The Gauge control provides you with the capability to embed graphical gauges into your report.

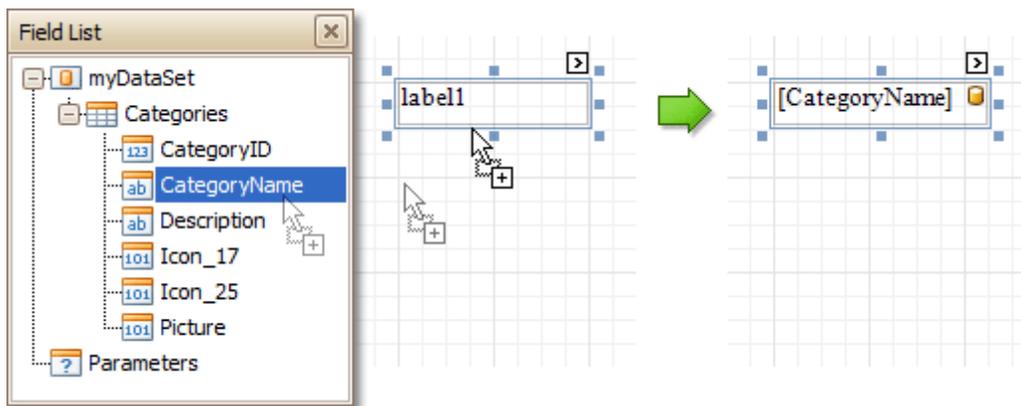
	Sparkline	The Sparkline control displays a compact chart that is commonly used to reflect the flow of data for every row in a report.
	Pivot Grid	The Pivot Grid control represents dynamic data (obtained from an underlying data source) in a cross-tabulated form to create cross-tab reports , similar to Pivot Tables in Microsoft Excel®. Column headers display unique values from one data field, and row headers - from another field. Each cell displays a summary for the corresponding row and column values. By specifying different data fields, you can see different totals. This allows you to get a compact layout for a complex data analysis.
	Page Info	The Page Info control is intended to add page numbers and system information (the current date and time or the current user name) into your report. As with many other controls, you can format this control's content.
	Page Break	The Page Break control's sole purpose is to insert a page delimiter at any point within a report.
	Cross-band Line	The Cross-band Line control allows you to draw a line through several bands . This can be useful if it is required to visually emphasize a section consisting of multiple band areas. In other aspects, it is similar to a regular Line .
	Cross-band Box	The Cross-band Box control allows you to draw a rectangle through several bands . This can be useful if it is required to visually encompass a section consisting of multiple band areas.
	Table of Contents	The Table of Contents control generates a table of contents based on bookmarks specified for report elements.
	Subreport	The Subreport control allows you to include other reports in your current report.

Add Controls to a Report

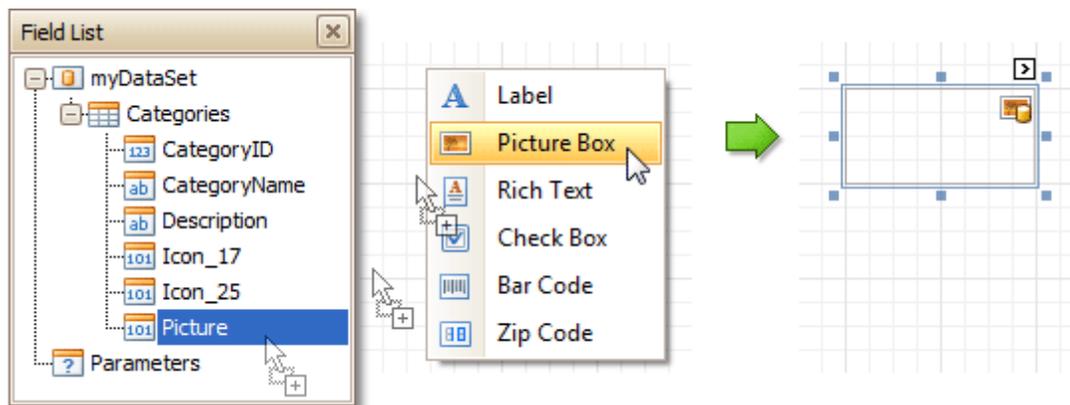
To create a control, drag it from the [Toolbox](#) panel onto the report area.



To automatically create a control bound to data, drag a field from the [Field List](#) panel, and drop it onto a report's surface. When dropping a field onto an existing control, this control will be bound to the data field.



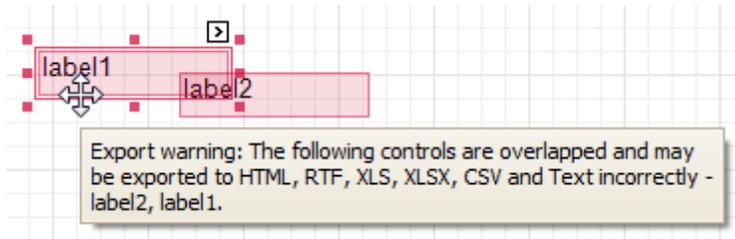
If you drag the field with the right mouse button, when the button is released the context menu is invoked. Use this menu to specify which control should be created.



To learn more on data binding for report controls, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

Note

When controls overlap, the report may be shown incorrectly when [exported](#) to some formats. Red markers and a report tooltip will warn of this situation. You may switch off the red warning marks via the [report's](#) **Show Export Warnings** property.



To learn how report controls can be relocated and resized, refer to [Change the Layout of Report Elements](#) and [Controls Positioning](#).

Label

The most basic **Label** control is intended to display text in your report. It can represent [static](#) or [dynamic](#) text, or [both](#). In addition, it can be used to calculate standard summary functions across a data field. The Label's text can only be formatted as a whole. So, if it's required to differently format parts of text, use the [Rich Text](#) control.



After a Label is added to a report, you can customize its text, appearance and other properties, which can be accessed in the [Property Grid](#). The most important properties are also available via a control's [Smart Tag](#), which makes it easy to perform common operations. And, the [Formatting Toolbar](#) allows you to easily adjust a Label's text formatting.

In the [Property Grid](#), the Label control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Label.
- **Style Priority**
Specifies the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
Specifies [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Specifies the alignment of the control's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of a Label, so that after page rendering it stays attached to the top control, bottom control, or both. The property setting is useful for data-bound Labels located between upper and lower controls, which are allowed to resize depending on their contents.
Note that if the Anchor Vertically property is set to Bottom or Both, the Can Grow and Can Shrink property (see below) values are ignored, and don't participate in calculating a final height value of this control.
- **Angle**
Specifies the rotation angle of the text. The measurement unit is a degree, and the orientation is counter-clockwise. Since standard HTML does not support text orientation, this parameter is ignored when a report is displayed within a web page.

- **Auto Width**

Specifies whether or not a Label's width should be automatically determined based on its text.

- **Can Grow**

When this property is set to Yes, a Label's height can be automatically increased, if required, to display the text. If there are other controls below the current Label, they will be pushed down to prevent them from overlapping. Note that if a control overlaps the growing Label by even one pixel, it will not be pushed down by the growing Label.

- **Can Shrink**

When this property is set to Yes, and the text does not completely fill a Label, then the Label's height will be decreased to the height of its text. If there are other controls below the current Label, they will be moved up to fill the gap. Note that if a control overlaps the shrinking Label by even one pixel, it will not be pushed up by the shrinking Label.

- **Keep Together**

Specifies whether the contents of a Label can be horizontally split across pages. In other words, if a Label occupies more space than remains on the page, this property specifies whether this Label should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Label's content does not fit on the current page. If it does not fit on the next page either, then the Label will be split, irrespective of this property's value.

- **Multiline**

When this property is set to Yes, a Label processes newline characters found in the text to start a new line. For example, when editing a Label's text, you can insert a new line by pressing ENTER, and in this case, the Multiline property will be automatically set to Yes.

- **Process Duplicates**

Determines the control's behavior when its data source contains consecutive repeating records. They can be processed as is (when the property is set to Leave), suppressed except for the first entry (Suppress) and suppressed with the blank space printed instead of the repeated records (Suppress and Shrink).

When the MergeByValue and MergeByTag settings are selected, the control processes duplicate values by merging the identical content into a single line of text.

- **Process Null Values**

Determines whether to process Null (blank) values if they appear in the control's data source. They can be processed as is (when the property is set to Leave), suppressed (Suppress) and suppressed with the blank space printed instead of the blank records (Suppress and Shrink).

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Text Trimming**

Specifies the string trimming mode of the control's text.

- **Visible**

Specifies whether the control should be visible in print preview.

- **Word Wrap**

When this property is set to Yes, text entered into the multiline Label is wrapped to the next line if it doesn't fit the line or comes across a newline character. If the this property is set to No, text entered into the multiline Label will be displayed on the same line until a newline character is entered.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL, Tag and Text) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Lines**

Provides access to the Text property of a Label in the Multiline mode.

- **Summary**

Allows you to perform calculations (summary, max, min, average, etc.) over a data field. For more

information on calculating summaries, refer to [Add Totals to a Report](#).

Note

Summarization is possible for a single data column only. To perform calculations with several data fields, use [calculated fields](#).

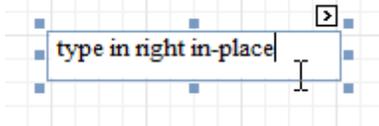
• Tag

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current report [has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

• Text

Allows you to define a line of static text to be displayed. To type several lines of text, click the control's [Smart Tag](#), and in the invoked actions list, click Edit Text, or use the Lines property. Note that when a Label is selected in the designer, you may simply start typing the text, and it will be automatically entered into the in-place editor.



If the current report [has a data source](#), the Text property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Text.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

• Xlsx Format String

Specifies the native XLSX format string for the control's content, which is to be preserved when the report is being [exported](#) to XLSX. This format string is independent from the general [value formatting](#).

Design

• (Name)

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

• Location

Specifies the control's location, in [report measurement units](#).

• Size

Specifies the control's size, in [report measurement units](#).

• Snap Line Margin

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

• Bookmark and Parent Bookmark

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field, obtained from the data source. To do this, expand the (Data Bindings) property, and in the Bookmark.Binding drop-down selector, select the required data field.

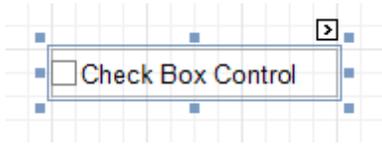
• Navigation URL and Navigation Target

Use the Navigation URL property to specify a URL for web browser navigation, when a user clicks a Label. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Check Box

The **Check Box** control is intended to display True/False or Checked/Unchecked/Indeterminate states in a report, by displaying (or not) a check mark, which can be accompanied by a text description.



In the [Property Grid](#), the Check Box control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Check Box.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of the control's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both. The property setting is useful for data-bound Check Boxes located between upper and lower controls, which are allowed to resize depending on their contents.
- **Keep Together**
Specifies whether the contents of a Check Box can be horizontally split across pages. In other words, if a Check Box occupies more space than remains on the page, this property specifies whether this Check Box should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Check Box's content does not fit on the current page. If it does not fit on the next page either, then the Check Box will be split despite this property's value.
- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Text Trimming**

Specifies the string trimming mode of the control's text.

- **Visible**

Specifies whether the control should be visible in print preview.

- **Word Wrap**

When this property is set to Yes, text entered into a Check Box is wrapped to the next line if it doesn't fit the line.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Check State, Navigation URL, Tag and Text) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Check State**

This property allows you to quickly specify the Checked/Unchecked/Indeterminate state of a Check Box (the Indeterminate state is displayed as a grayed out checked box.) Note that if you only want to use Checked and Unchecked states, you may use the Checked property, instead.

- **Checked**

This property allows you to define whether a Check Box is checked or not.

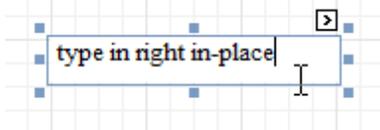
- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

- **Text**

Allows you to define a line of static text to be displayed. Note that when a Check Box is selected in the designer, you may simply start typing the text, and it will be automatically entered into the in-place editor.



If the current [report has a data source](#), the Text property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Text.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Xlsx Format String**

Specifies the native XLSX format string for the control's content, which is to be preserved when the report is being [exported](#) to XLSX. This format string is independent from the general [value formatting](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks a Check Box. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

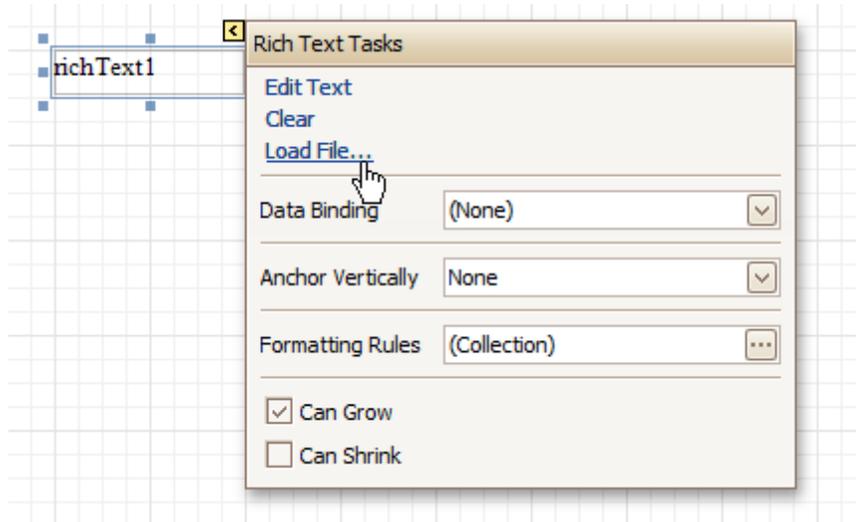
If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

Rich Text

The **Rich Text** control allows you to display formatted text in your report. It can represent [static](#) or [dynamic](#) text, or [both](#). You can load content to the Rich Text from an external TXT or RTF file (which can also contain images) and then format any part of it. The formatting options include font face, styles and sizes, and color.



A content from an external TXT or RTF file can be loaded to this control via its [Smart Tag](#).



In the [Property Grid](#), the Rich Text control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) (.
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) (.
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the control.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**

Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both. The property setting is useful for data-bound controls located between upper and lower controls, which are allowed to resize depending on their contents.

Note that if the Anchor Vertically property is set to Bottom or Both, the Can Grow and Can Shrink properties (see below) values are ignored, and don't participate in calculating a final height value of this control.

- **Can Grow**

When this property is set to Yes, the control's height can be automatically increased, if required, to display the text. If there are other controls below the current control, they will be pushed down to prevent them from overlapping. Note that if a control overlaps the growing Rich Text by even one pixel, it will not be pushed down by the growing Rich Text.

- **Can Shrink**

When this property is set to Yes, and the text does not completely fill a Rich Text, then the control's height will be decreased to the height of its text. If there are other controls below the current one, they will be moved up to fill the gap. Note that if a control overlaps the shrinking Rich Text by even one pixel, it will not be pushed up by the shrinking Rich Text.

- **Keep Together**

Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this control should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when the control's content does not fit on the current page. If it does not fit on the next page either, then the control will be split despite this property's value.

- **Process Duplicates**

Determines the control's behavior when its data source contains consecutive repeating records. They can be processed as is (when the property is set to Leave), suppressed except for the first entry (Suppress) and suppressed with the blank space printed instead of the repeated records (Suppress and Shrink).

- **Process Null Values**

Determines whether to process Null (blank) values if they appear in the control's data source. They can be processed as is (when the property is set to Leave), suppressed (Suppress) and suppressed with the blank space printed instead of the blank records (Suppress and Shrink).

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL, Rtf and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Lines**

Provides access to the Text property of the control, allowing you to input multiple lines of static text.

- **Tag**

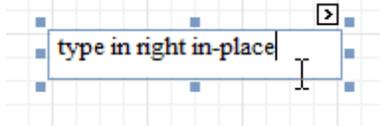
This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Tag.Binding drop-down selector, select the required data field.

- **Text**

Allows you to define a line of static text to be displayed. To type several lines of text, use the Lines

property. Note that when the control is selected in the designer, you may simply start typing the text, and it will be automatically entered into the in-place editor.



If the current [report has a data source](#), the Rtf property (instead of Text) can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Rtf.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report, called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

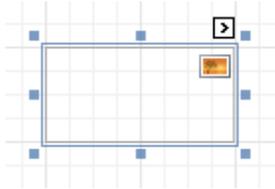
- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

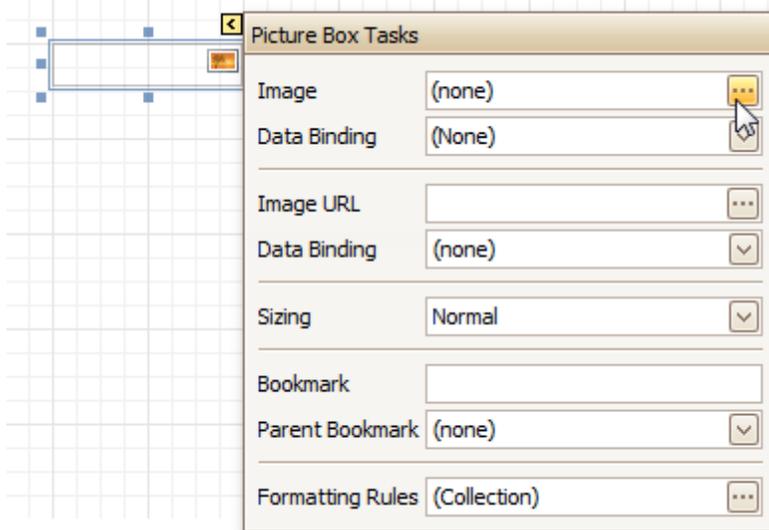
Picture Box

The **Picture Box** control is intended to display images of numerous formats in a report. An image can be loaded from an external file, from a [bound data source](#), or from a web location using the specified URL.

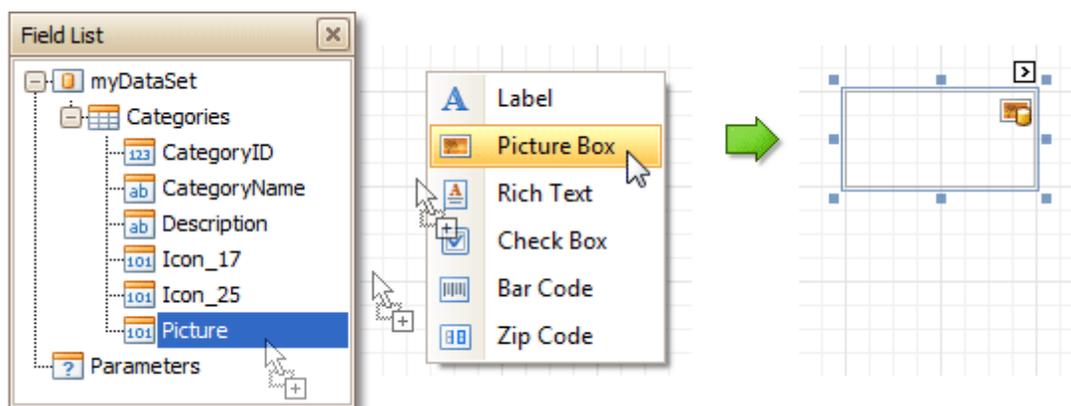


The following image formats are supported: BMP, DIB, RLE, JPG, JPEG, JPE, JFIF, GIF, EMF, WMF, TIF, TIFF, PNG and ICO.

To quickly load an image from an external file, use the control's [Smart Tag](#).



To bind the control to a data field containing images, right-click the corresponding [Field List](#) item, and then drag and drop it onto a report. This will invoke the [Context Menu](#), where you can choose the **Picture Box**, and it will be automatically created and bound to the selected data field.



In the [Property Grid](#), the Picture Box control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control.
- **Borders, Border Color** and **Border Width**

Specify border settings for the control.

- **Formatting Rules**

Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

- **Padding**

Specifies indent values which are used to render the contents of the control.

- **Style Priority**

Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).

- **Styles**

This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**

Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both. The property setting is useful for data-bound controls located between upper and lower controls, which are allowed to resize depending on their contents.

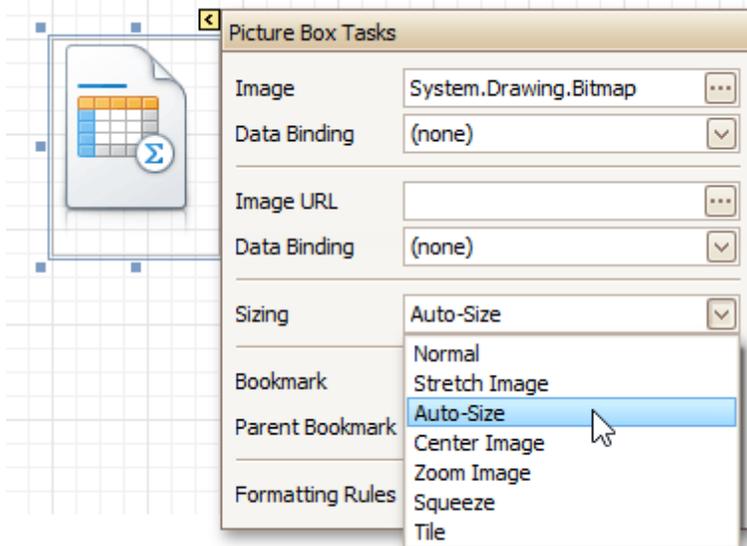
- **Keep Together**

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Sizing**

Defines the sizing mode of a contained image. To quickly adjust the image size and position within the control, click its Smart Tag, and choose **Sizing**.



The image sizing settings are briefly described in the following table.

Mode	Description
Normal	The image is placed in the upper-left corner of the control. The image is clipped if it is larger than the Picture Box which contains it.
Stretch Image	The image within the control is stretched or shrunk to fit the size of a Picture Box.

Auto-Size	The Picture Box size is adjusted to that of the image it contains.
Center Image	The image is displayed in the center of the control. If the image is larger than the Picture Box, the outer edges are clipped.
Zoom Image	The image is sized proportionally (without clipping) for best fit into the control.
Squeeze	If the dimensions of a Picture Box exceed that of the image it contains, the image is centered and shown full-size. Otherwise, the image is resized to fit into the Picture Box's dimensions.
Tile	The original image is replicated within the Picture Box starting from the upper-left corner. The replicated image is clipped if it doesn't fit in the Picture Box which contains it.

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Image, Image URL, Navigation URL and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Image**

Specifies an image to display in the Picture Box control.

When you click the ellipsis button, you will see the Open File dialog that enables you to specify the file to load. Then, this image is embedded into a report and saved within this report, so it is always available. Note that this increases the size of a [saved report definition](#). If you want to save only the image path, and not the image itself, use the Image URL property instead.

- **Image URL**

Specifies the URL of the image to display in the Picture Box control. It supports both absolute and relative paths. A relative path may be related to the Web site or to the current Web page. In the second case, the path to the image must start with the "~" symbol. Setting a relative path makes it easier to move the entire application to another directory on the server without having to update the code.

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

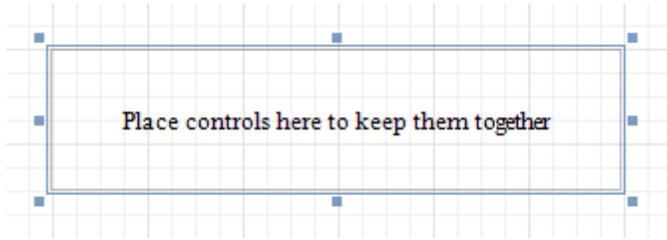
- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

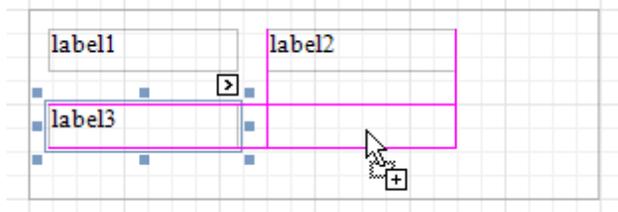
If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

Panel

The **Panel** control is a container that frames separate report controls to allow them to be easily moved, copied and pasted, and visually unite them in the report's preview (with borders or a uniform color background).



Currently, there are several limitations on Panel usage. One of them is that Panel cannot shrink, and therefore cannot suppress the white space that appears when the controls inside are shrunk or collapsed. Also, the Panel cannot cross [bands](#), as [Cross-band Line](#) and [Cross-band Box](#) can do.



In the [Property Grid](#), the Panel's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control.
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of controls contained in a Panel.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
Note that if the Anchor Vertically property is set to Bottom or Both, the Can Grow property (see below) values are ignored, and don't participate in calculating a final height value of this control.
- **Can Grow**
When this property is set to Yes, the control's height can be automatically increased, if required, to display the text. If there are other controls below the current control, they will be pushed down to

prevent them from overlapping. Note that if a control overlaps the growing Panel by even one pixel, it will not be pushed down by the growing Panel.

- **Keep Together**

Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this control should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when the control's content does not fit on the current page. If it does not fit on the next page either, then the control will be split despite this property's value.

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

- **Snap Line Padding**

Specifies the padding (in [report measurement units](#)), which is to be preserved within the control when controls it contains are [aligned using Snap Lines](#).

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL and Navigation Target**

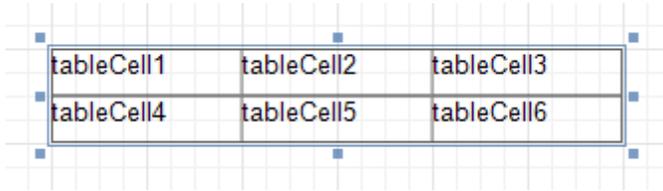
Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target

property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

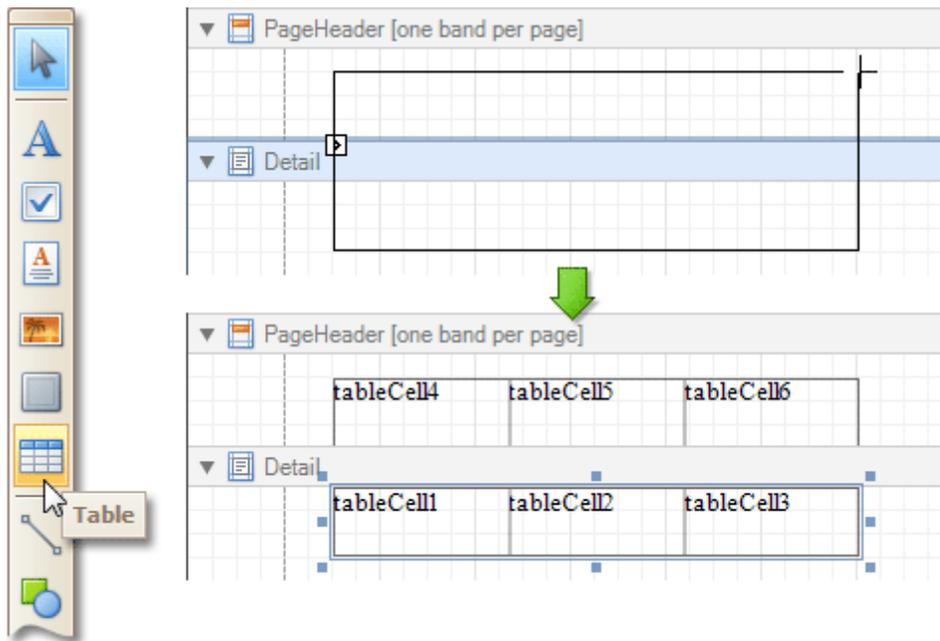
Table

The **Table** control is designed to arrange information in a [tabular layout](#). It may contain any number of [Rows](#) comprised of individual [Cells](#). Both Rows and Cells can be selected and customized individually. In most aspects, a Cell is similar to a [Label](#), but can also contain other controls (e.g. [Picture Box](#) or [Rich Text](#)).



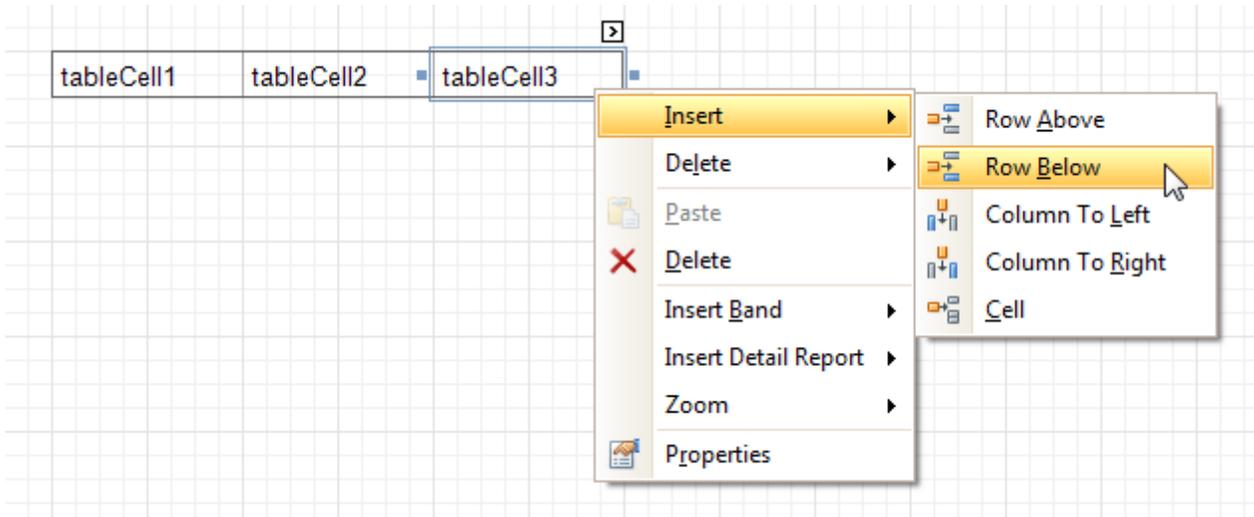
tableCell1	tableCell2	tableCell3
tableCell4	tableCell5	tableCell6

When a Table is dropped onto a [band](#) from the [Toolbox](#), it has one row and three columns. If you click and drag over several bands, the resulting table will be split by the bands into several tables. This creates a table header and the detail table with one mouse move.



When you drag and drop an entire data table from the [Field List](#), a Table with cells bound to the corresponding data fields is created automatically.

A table's elements are managed by using its [Context Menu](#).



The whole Table, or its individual Row or Cell can be selected either in the [Report Designer](#), the [Report Explorer](#) or the drop-down selector of the [Property Grid](#).

In the [Property Grid](#), the Table's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Table's cells.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of a Table's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of a Table, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Keep Together**
Specifies whether the contents of a Table can be horizontally split across pages. In other words, if a Table occupies more space than remains on the page, this property specifies whether the Table should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Table's content does not fit on the current page. If it does not fit on the next page either, then the Table will be split despite this property's value.
- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Visible**
Specifies whether the control should be visible in print preview.

Data

- **Tag**
This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

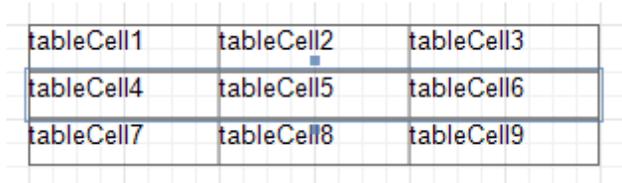
- **Bookmark** and **Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

Table Row

The **Table Row Control** represents a single row within a [Table](#).



tableCell1	tableCell2	tableCell3
tableCell4	tableCell5	tableCell6
tableCell7	tableCell8	tableCell9

This control is useful for changing the layout of the entire row. Although in this document, a Row is described as a separate control, in fact most of its properties are actually applied to the [Cells](#) contained within the selected row.

In the [Property Grid](#), the Table Row's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Row.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of the control's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Keep Together**
Specifies whether the contents of a Row can be horizontally split across pages. In other words, if a Row occupies more space than remains on the page, this property specifies whether this Row should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Row's content does not fit on the current page. If it does not fit on the next page either, then the Row will be split despite this property's value.
- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Visible**
Specifies whether the control should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

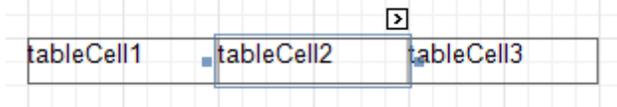
Specifies the Row's height, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Table Cell

The **Table Cell** control represents an individual cell within a [Table](#).



In general, the Table Cell control's properties are similar to the properties of the [Label](#) control.

In the [Property Grid](#), the Table Cell's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Label.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of the control's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Angle**
Specifies the rotation angle of a Cell's text. The measurement unit is a degree, and the orientation is counter-clockwise. Since standard HTML does not support text orientation, this parameter is ignored when a report is displayed within a web page.
- **Can Grow**
When this property is set to Yes, a Cell's height can be automatically increased, if required, to display the text. If there are other controls below the current Cell, they will be pushed down to prevent them from overlapping. Note that if a control overlaps the growing Cell by even one pixel, it will not be pushed down by the growing Cell.
- **Can Shrink**
When this property is set to Yes, and the text does not completely fill a Cell, then the Cell's height will be decreased to the height of its text. If there are other controls below the current Cell, they will be moved up to fill the gap. Note that if a control overlaps the shrinking Cell by even one pixel, it will not be pushed up by the shrinking Cell.

- **Keep Together**

Specifies whether the contents of a Cell can be horizontally split across pages. In other words, if a Cell occupies more space than remains on the page, this property specifies whether this Cell should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Cell's content does not fit on the current page. If it does not fit on the next page either, then the Cell will be split despite this property's value.

- **Multiline**

When this property is set to Yes, a Cell processes newline characters found in the text to start a new line. For example, when editing a Cell's text, you can insert a new line by pressing ENTER, and in this case the Multiline property will be automatically set to Yes.

- **Process Duplicates**

Determines the control's behavior when its data source contains consecutive repeating records. They can be processed as is (when the property is set to Leave), suppressed except for the first entry (Suppress) and suppressed with the blank space printed instead of the repeated records (Suppress and Shrink).

Merging cells with identical dynamic content is performed by setting a cell's Process Duplicates property to "Merge based on Value" or "Merge based on Tag".

- **Process Null Values**

Determines whether to process Null (blank) values if they appear in the control's data source. They can be processed as is (when the property is set to Leave), suppressed (Suppress) and suppressed with the blank space printed instead of the blank records (Suppress and Shrink).

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Text Trimming**

Specifies the string trimming mode of the control's text.

- **Visible**

Specifies whether the control should be visible in print preview.

- **Word Wrap**

When this property is set to Yes, text entered into the multiline Cell is wrapped to the next line if it doesn't fit the line or comes across a newline character. If the this property is set to No, text entered into the multiline Cell will be displayed on the same line until a newline character is entered.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of a Cell's properties (Bookmark, Navigation URL, Tag and Text) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Lines**

Provides access to the Text property of a Cell in the Multiline mode.

- **Summary**

Allows you to perform calculations (summary, max, min, average, etc.) over a data field. For more information on calculating summaries, refer to [Add Totals to a Report](#).

 **Note**

Summarization is possible for a single data column only. To perform calculations with several data fields, use [calculated fields](#).

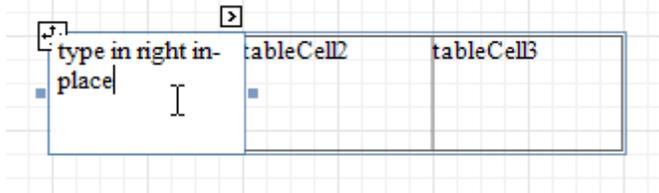
- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

- **Text**

Allows you to define a line of static text to be displayed. When a Cell is selected in the designer, you may simply start typing the text, and it will be automatically entered into the in-place editor.



To type several lines of text, use the Lines property.

If the current [report has a data source](#), the Text property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Text.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Xlsx Format String**

Specifies the native XLSX format string for the control's content, which is to be preserved when the report is being [exported](#) to XLSX. This format string is independent from the general [value formatting](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

- **Width**

Specifies the Cell's width, in [report measurement units](#).

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

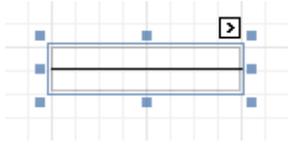
- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks a Cell. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

Line

The **Line** control draws a line of a specified direction, style, width and color. It can be used for both decoration and visual separation of a report's sections. The Line cannot cross [bands](#), as opposed to the [Cross-band Line](#) control.



In the [Property Grid](#), the Line's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control.
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Foreground Color**
Specifies the Line's color.
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Line Direction**
The line can be drawn vertically, horizontally and from one corner of the rectangle, representing the Line control, to another, across the rectangle. That is, Vertical, Horizontal, Slant and Back Slant types.
- **Line Style**
You can select the solid (by default), dashed, dotted or mixed style for the line.
- **Line Width**
Specifies the Line's width, in [report measurement units](#).
- **Padding**
Specifies indent values which are used to render the contents of the control.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Keep Together**
Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this control should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when the control's content does not fit on the current page. If it does not fit on the next page either, then the control will be split despite this property's value.
- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on

scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind the control's Tag property.

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

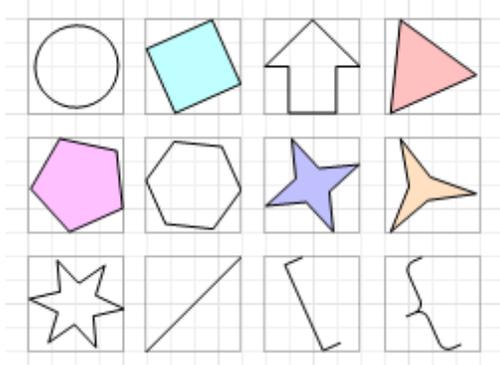
Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Shape

The **Shape** control allows you to embed simple graphic objects into your report. You can choose one of multiple predefined shapes (e.g. rectangles, ellipses, arrows, polygons, crosses and brackets of various kinds).



In the [Property Grid](#), the Shape's properties are divided into the following groups.

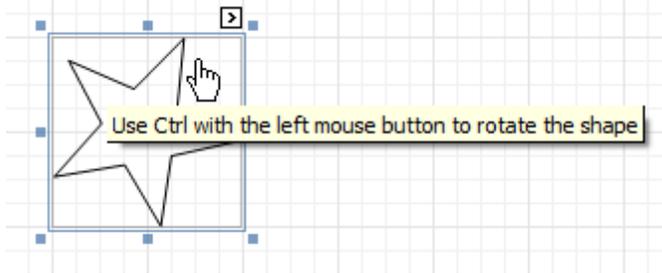
Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Fill Color**
Specifies the color to fill the contour of a Shape, if applicable. It is transparent by default.
- **Foreground Color**
Determines the color of a Shape's contour. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Line Width**
Here you can set the width of a line used to draw the Shape, expressed in the measure units defined by the [report's](#) Measure Units property. To learn more about this, refer to [Change Measurement Units of a Report](#).
- **Padding**
Specifies indent values which are used to render the contents of the control.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Angle**
The value in degrees specifies the rotation angle of a Shape. It indicates counterclockwise rotation.

You can hold CTRL while pressing the left mouse button to rotate a Shape within the control's borders.



- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Shape**

Determines which of the various built-in shapes to use within the control.

A certain shape has its own unique set of properties. The following list is intended to give a brief overview of these special properties specific to a certain shape.

Property	Description	Supported by Shapes
Fillet	This property specifies how much a Shape's corners are rounded. It enables display of rounded boxes and triangles.	Arrows, Polygons, Stars and Cross
Number of Sides	This property allows you to set the number of sides.	Polygons
Count of Star Points	This property allows you to set the number of star points.	Stars
Concavity	Defines the level of inward-curve for the lines connecting the vertices of a Star. It may be an integer in the range of 0 - 100 .	Stars
Tip's Length	This property specifies the length of the Bracket's ends.	Bracket and Brace
Tail's Length	This property specifies the tail length of a Brace.	Brace

- **Stretch**

If the Shape is rotated to some degree (that is, its Angle property is not zero), you may turn on the Stretch property. The Shape image will be stretched to cover maximum space within the control's borders.

- **Visible**

Specifies a value indicating whether the current control should be printed (when set to Yes) or hidden (No) on report generation.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

Bar Code

The **Bar Code** control transforms its content into a bar code of the specified type. Multiple standard bar code symbologies are supported.



Note

The barcode quality can degrade when the report is exported to formats other than PDF. To ensure reliable barcode recognition, print the report directly from an application using the native printing methods. The **Module** and **Auto-Module** properties of a control should be used with care.

In the [Property Grid](#), the Bar Code's properties are divided into the following groups.

Appearance

- **Alignment**
Determines the alignment of the barcode image within the control. To define the text alignment, use the Text Alignment property.
- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) (.
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text and image color for the bar code. This option is also available in the [Formatting Toolbar](#) (.
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of a Bar Code.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of the control's text. This option is also available in the [Formatting Toolbar](#). To define the alignment of the barcode image, use the Alignment property.

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that, after page rendering, it stays attached to the top control, bottom control, or both.
- **Auto-Module**

When this property is set to Yes, the barcode image is stretched to fit the entire control's width. When this option is turned off, this behavior is determined by the Module property.

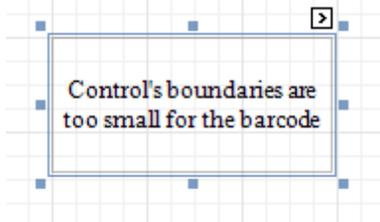
- **Keep Together**

Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this Bar Code should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Bar Code's content does not fit on the current page. If it does not fit on the next page either, then the Bar Code will be split, despite this property's value.

- **Module**

Specifies the width of the narrowest bar or space in the barcode, in [report measurement units](#). You may set this property to Yes for automatic adjustment of its value, when the control is resized. Note that if the Module value is too low, the barcode output may become unreadable by a barcode scanner.

When the Auto-Module property is set to No, there could be a situation when the barcode image generated with the current setting of Module property is larger than the control itself. In this case, the control displays a warning, as illustrated below.



So, increase the dimensions of the control, to avoid this.

- **Orientation**

The barcode image within the control can be rotated. If you need this feature, use the Orientation property to specify one of four possible orientations (Normal, Upside Down, Rotate to the Left and Rotate to the Right) for an image within the control.

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Show Text**

Determines whether to display the numerical value, or only the barcode within the control.

- **Symbology**

The Symbology defines the mapping between barcode text and an image. The symbologies supported by the Bar Code control are listed in the following table:

Symbology	Description
Codabar	The Codabar is an old format that uses discrete, self-checking symbology, capable of encoding 16 different characters, plus an additional 4 start/stop characters. You should also specify the Start and Stop Symbols and Wide Narrow Ratio properties.
Code11	Code 11, also known as USD-8, was developed as a high-density numerical-only symbology. The symbology is discrete, and is able to encode the numbers 0 through to 9, the dash symbol (-), and start/stop characters.
Code128	Code 128 has been widely implemented. It is a high-density symbology which permits encoding messages of arbitrary lengths of any character of the ASCII character set. The symbology includes a checksum digit for verification. You should also specify the Character Set . The recommended setting is Auto Charset .

Code39	Code 39 is also known as "3 of 9 Code" and "USD-3". It can encode uppercase letters (A through Z), digits (0 through 9) and several special characters like the \$ sign. The Calculate a Checksum and Wide Narrow Ratio (which should be in a range of 2.2 -3) properties can also be specified.
Code39Extended	This is an extension of Code 39, also known as "Full ASCII Code 39". It is capable of encoding all 128 ASCII characters. The Calculate a Checksum and Wide Narrow Ratio (which should be in a range of 2.2 -3) properties can be specified.
Code93	Code 93 was designed to supplement and improve Code 39. It is an alphanumeric, variable length symbology, providing higher reliability and density than Code 39. The Calculate a Checksum property can be specified.
Code93Extended	It enables encoding of all 128 ASCII characters using Code 93's "Full ASCII Mode". This is accomplished by using the (\$), (/), (%), and (+) symbols as "shift" characters. The Calculate a Checksum property can be specified.
CodeMSI	MSI symbology, also known as Modified Plessey, is a low-density, numerical only symbology. To specify the checksum, use the MSI Checksum property. It can be set to None, Modulo 10 and Double Modulo 10.
DataMatrix	Data Matrix ECC200 code is a two-dimensional matrix barcode consisting of black and white "cells" arranged in a square or a rectangular pattern. The encoded information can be text or raw data.
DataMatrix GS1	GS1 DataMatrix uses a special start combination to differentiate the GS1 DataMatrix symbol from the other Data Matrix ECC 200 symbols. The Bar Code control now supports this symbology.
EAN128	UCC/EAN-128 symbology has the newer name GS1-128. It is based on the Code128 standard, additionally specifying the Application Identifiers for data sections within the code. It includes best before dates, batch numbers, quantities, weights and other attributes. The Character Set property can be specified (Auto Charset is the recommended value). The FNC1 Functional Character property defines a symbol that is not included in a bar code when met in text, but used to generate the application identifiers. The Human-Readable Text property, when set to Yes, inserts parentheses into the text below the bar code for better readability.
EAN13	The EAN-13 barcode contains 13 digits, no letters or other characters. The first two or three digits represent the country. The leading zero actually signifies the USA, and UPC-A coding. The last digit is the checksum digit. The control calculates it automatically and it should not be present in the control's text string. So, make sure that the text for this symbology contains no more than 12 digits. If fewer digits are supplied, the string is padded with zeroes on the left.

EAN8	EAN-8 is a shortened version of the EAN-13 code. It includes a 2 or 3 digit country code, 4 of 5 data digits (depending on the length of the country code), and a checksum digit. The control calculates the checksum digit automatically and it should not be present in the control's text string. So, make sure that the text for this symbology contains no more than 7 digits. If fewer digits are supplied, the string is padded with zeroes on the left.
GS1 Data Bar	This bar code is based on a family of symbols often used in the GS1 DataBar Coupon (coupon codes commonly used in retail). These bar codes can encode up to 14 digits, which makes them suitable for GTIN 8, 12, 13 and 14 . GS1 DataBar Expanded and GS1 DataBar Expanded Stacked can encode up to 74 numeric or 41 alphanumeric characters, and provide the capability to utilize all GS1 Application Identifiers (e.g., expiration date, batch and serial number). These bar codes are often used in manufacturer coupons.
Industrial2of5	The Industrial (or non-interleaved) 2 of 5 code is a numerical, low-density symbology, based on two-out-of-five code. The Calculate a Checksum and Wide Narrow Ratio (which should be greater than or equal to 2.5) properties can be specified.
Intelligent Mail	The Intelligent Mail (IM) code is a 65-bar code for use on mail in the United States. The Intelligent Mail barcode is a height-modulated barcode that encodes up to 31 decimal digits of mail-piece data into 65 vertical bars.
Interleaved2of5	The Interleaved 2 of 5 code is a higher-density numerical symbology, based on two-out-of-five code. The Calculate a Checksum and Wide Narrow Ratio (which should be greater than or equal to 2.5) properties can be specified.
ITF-14	This bar code, also known as " UPC Shipping Container Symbol ", is used to mark packaging materials that contain products labeled with a UPC or EAN product identification number. This bar code provides a GS1 implementation of an Interleaved 2-of-5 symbology for encoding a Global Trade Item Number (an identifier for trade items developed by GS1). This bar code always uses a total of 14 digits.
Matrix2of5	A variant of non-interleaved 2 of 5 code. It is a numerical only symbology. The Calculate a Checksum and Wide Narrow Ratio (which should be greater than or equal to 2.5) properties can be specified.
PDF417	This Portable Data File symbology is used in a variety of applications, and can also be used to generate postage accepted by the United States Postal Service. It consists of a variable number of rows, each of which is like a small linear bar code. Among other options, the Error Correction Level specifies the amount of redundancy, to protect a barcode's legibility.
PostNet	This symbology is used by the United States Postal

	Service to assist in directing mail. The code usually contains the zip-code and delivery point number. Unlike most other barcodes, PostNet actually encodes data in the height of the bars.
QR Code	QR (Quick Response) Code is a popular two-dimensional matrix barcode that consists of black modules arranged in a square pattern on a white background.
UPCA	The UPC-A barcode contains 12 digits, no letters or other characters. The first digit is the prefix signifying the product type. The last digit is the "check digit". The check digit is calculated using the first eleven figures when the barcode is constructed. So, for a correct UPC-A, make sure that the text contains no more than 11 digits. If there are fewer than 11, the string is padded with zeroes on the left.
UPCE0	This symbology is a variation of UPC-A which allows for a more compact barcode by eliminating "extra" zeros. The first digit is always zero; the last digit is a checksum digit of the original UPC-A code. Not every UPC-A code can be transformed into UPC-E0. E.g., the control's text string "4210000526" is displayed by UPC-E0 symbology as "04252614" and represents the "042100005264" UPC-A code (check digit included).
UPCE1	This symbology is a variation of UPC-A, which allows for a more compact barcode by eliminating "extra" zeros. The first digit is always 1, and the last digit is a checksum digit of the original UPC-A code. Not every UPC-A code can be transformed into UPC-E1. E.g., the control's text string "4210000526" is displayed by UPC-E1 symbology as "14252611" and represents the "142100005261" UPC-A code (check digit included).
UPCSupplemental2	This is a supplemental two-digit barcode. Make sure that the control's text string contains two digits.
UPCSupplemental5	This is a supplemental five-digit barcode, usually used to indicate the suggested retail price of a book. Make sure that the control's text string contains five digits.

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL, Tag and Text) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Tag**

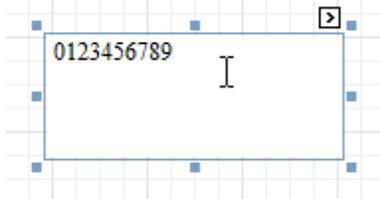
This property allows you to add additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Tag.Binding drop-down selector, select the required data field.

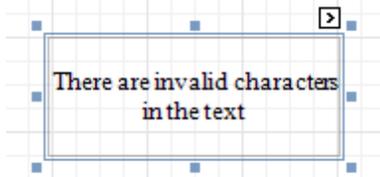
- **Text**

Allows you to define a string to be encoded as a barcode. You can define whether to display this value within the control using the Show Text property. Note that when the control is selected in the designer,

you may simply start typing the text, and it will be automatically entered into the in-place editor.



If the content does not conform to the rules of a certain symbology (determined by the Symbology property), the control may display a warning, as in the picture below, or automatically correct the input string by padding it with zeroes or only allowing an acceptable number of characters to be displayed.



If the current [report has a data source](#), the Text property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Text.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report, called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Bookmark.Binding drop-down selector, select the required data field.

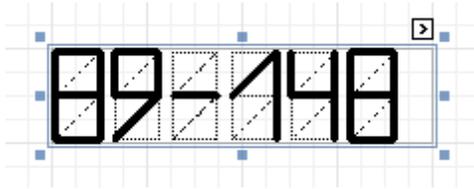
- **Navigation URL and Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation when a user clicks a Bar Code. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Zip Code

The **Zip Code** control transforms its content into a zip code. The width of a zip code's segment is adjustable.



In the [Property Grid](#), the Zip Code's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Foreground Color**
Specifies the color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the control.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Keep Together**
Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this Zip Code should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Zip Code's content does not fit on the current page. If it does not fit on the next page either, then the Zip Code will be split despite this property's value.
- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Segment Width**
This property setting specifies the width of the lines (in pixels) used to draw the numbers in the zip boxes of the control.
- **Visible**
Specifies whether the control should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL, Tag and Text) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can be then accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Tag.Binding drop-down selector, select the required data field.

- **Text**

The Text box should contain digits or dashes. Other characters are displayed as empty zip boxes.

If the current [report has a data source](#), the Text property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Text.Binding drop-down selector, select the required data field. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL and Navigation Target**

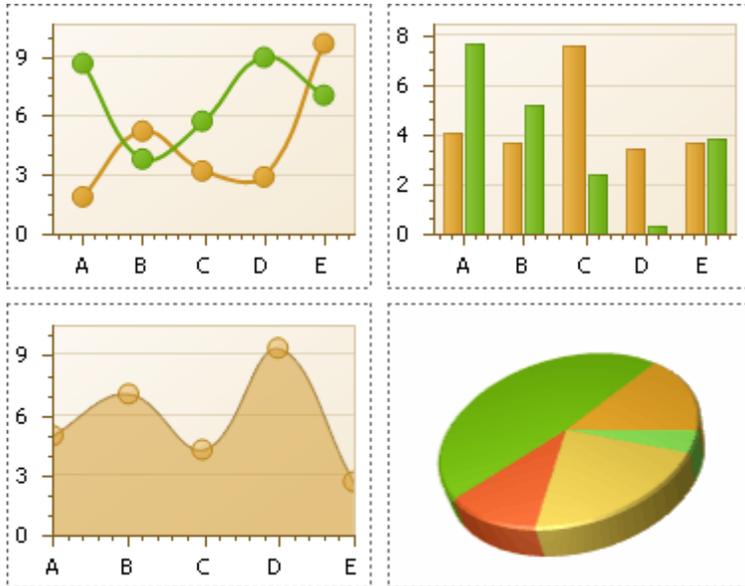
Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Chart

The **Chart** is a sophisticated control used to embed graphs into your report. It graphically represents a *series* of *points* using numerous 2D or 3D chart types. A Chart can be populated with points both *manually* (by specifying *arguments* and *values* for each point) and *dynamically* (by connecting it to the report's data source, or binding it to a separate one).

For more information about this control, refer to [Charting](#).



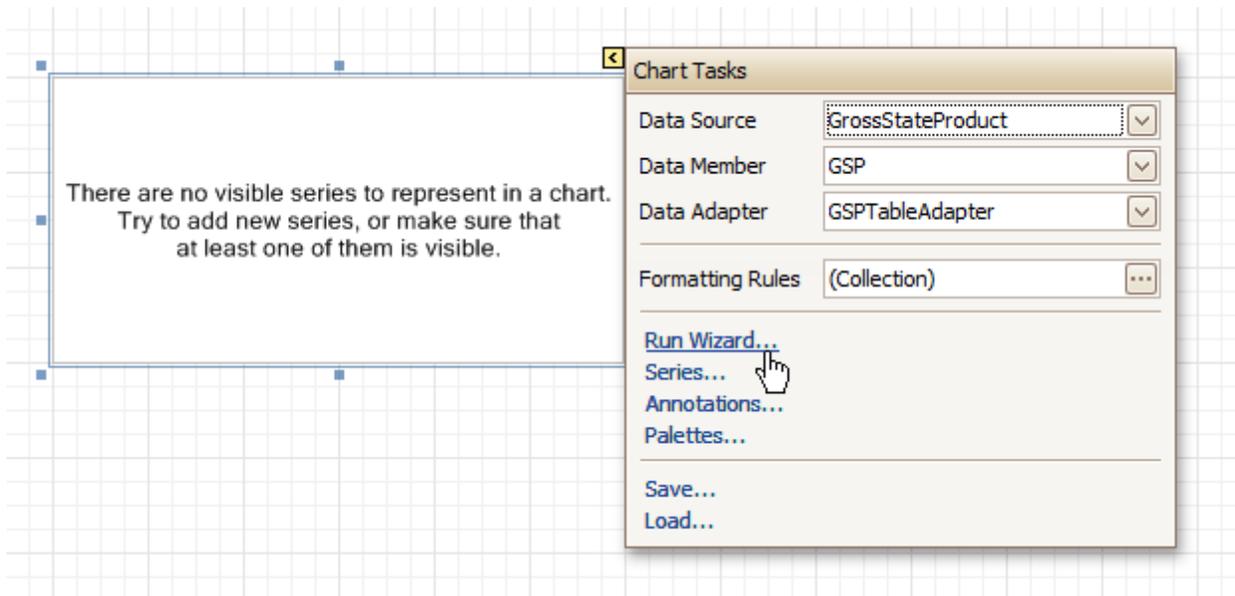
There are many available Chart types you can choose from. To name a few, these are Bar, Point, Line, Pie and Doughnut, Area, Radar and Polar, Range Bar, Gantt, Candle Stick and Stock charts.

A Chart control contains multiple elements (diagram, series, series points, axes, legend, titles, labels, strips, constant lines, etc.). When any of these elements is selected, the [Property Grid](#) shows only the properties which correspond to the selected item. Visual Chart elements which can be highlighted or selected, are described in [Highlighting and Selection Chart Elements](#).

The Chart control is data-aware in a different manner than the other report controls. Consider three common report scenarios:

1. Static data for a Chart's series is provided *manually*. It can be done using the Series Collection Editor invoked by the Chart's Series property. It allows you to manually define values and arguments for each series point.
2. Chart's series are created *automatically*, getting their data from the Chart's Data Source and dependent on the rules defined by the Series Template property. This approach is described in [Chart with Dynamic Series](#).
3. Each series is created and customized manually and has a separate Data Source. This approach is described in [Chart with Static Series](#).

You can customize a created chart using both the Property Grid and the [Chart Wizard](#). To invoke the Chart Wizard, click a Chart's [Smart Tag](#), and in the invoked actions list, click the **Run Wizard...** link.



Then, the Chart Wizard will guide you through the whole process of customizing the Chart, from defining its view type to providing its data and customizing its appearance.

In the Property Grid, the Chart's properties are divided into the following groups.

Appearance

- **Appearance Name**
Allows you to choose one of the available appearances, to be used to draw the Chart's elements (Diagram, Axes, Legend, etc.).
- **Background Color**
Specifies the background color for a Chart.
- **Background Image**
Allows you to load a background image to a Chart (or define its URL), and also define whether it should be stretched to fit the entire Chart's area, or not.
- **Borders, Border Color and Border Width**
Specify border settings for the control.
- **Fill Style**
Determines the fill style of a Chart's background (Empty, Solid, Gradient or Hatch) and define other fill options if required.
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Image Type**
Determines whether a Chart should be internally rendered as a metafile in a report (in this case the quality of the rendered image is always good, but in particular cases some details of the control may be lost), or as a bitmap (in this case the quality of the rendered image is sometimes poor, but it allows a control to be drawn more precisely).
- **Indicators Palette Name**
Specifies the palette that is used to paint all indicators that exist in a Chart.
- **Padding**
Specifies the internal space between the Chart's content (the diagram and legend) and its edge, in pixels.
- **Palette Name**
Allows you to choose one from the built-in palettes to be used to draw a Chart's series.

- **Palette's Base Color Number**

Allows you to define an integer index determining the base color for the palette defined by the Chart's Palette Name property.

- **Style Priority**

Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Anchor Vertically**

Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.

- **Automatic Binding Settings Enabled**

Specifies whether or not the Chart's data binding is automatically adjusted when its data source is a Pivot Grid.

- **Automatic Layout Settings Enabled**

Specifies whether or not the Chart's layout is automatically adjusted when its data source is a Pivot Grid.

- **Empty Chart Text**

Specifies the text to be shown in the Chart, when it has no data to display.

- **Scripts**

This property contains events, which you can handle by the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Small Chart Text**

Specifies the text to be shown in the Chart, when it's too small to fit the diagram.

- **Visible**

Specifies whether a Chart should be visible in print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of a Chart's properties (Bookmark, Navigation URL and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Data Adapter**

Determines a data adapter that will populate a Chart's data source which is assigned via the Data Source property. It is automatically set to the appropriate value, when the Data Member property is defined. To learn more on this, refer to [Chart with Static Series](#).

- **Data Member**

Determines the data source member which supplies data to a Chart. To learn more on this, refer to [Chart with Static Series](#).

Note

Usually, it is not necessary to specify the Data Member property when binding a Chart to data. This property should only be set directly if the dataset contains more than one table.

- **Data Source**

Determines a Chart's data source. To learn more on this, refer to [Chart with Static Series](#).

- **Pivot Grid Data Source Options**

Determines a Chart's data source. To learn more on this, refer to [Chart with Static Series](#).

- **Series Data Member**

Determines the name of the data field whose values are used to automatically generate and populate a Chart's series. To learn more on this, refer to [Chart with Dynamic Series](#).

When Chart binding is used to automatically generate series within a chart control based upon the data obtained from the associated data source (defined by the Data Source property), a rule needs to be defined that helps the Chart recognize the data records whose values are used to construct individual

series objects. To do this, the Series Data Member property, which specifies the data field whose values are taken into account when series objects are automatically created and populated, can be used.

Each automatically generated series gets its name from the data field specified by the Series Data Member property. For example, this name is used to identify a series within the chart control's legend. The names of all automatically generated series can be supplemented with the same prefix and postfix defined by the settings which are available via the Series Name Template property.

The template settings for the dynamically created series are defined by the specific properties which are available via the SeriesTemplate property of a Chart. In particular, the Argument Data Member and Value Data Members properties specify the data fields from which the arguments and data values of the series data points are obtained.

Note

Note that if the Series Data Member property is not set for a Chart, the Chart control can't automatically generate series even if the Argument Data Member and Value Data Members properties are defined.

• Series Name Template

Determines the settings used to name data bound series defining the prefix and postfix texts for the names of series which are dynamically created as a result of binding a Chart to data (using the Data Source, Series Data Member, Argument Data Member and Value Data Members properties). The series names, to which these prefixes and postfixes are added, are taken by each series from the data field defined by the Series Data Member property. To learn more on this, refer to [Chart with Dynamic Series](#).

Note

Note that the settings available via the Series Name Template property are not applied to the data bound series which are contained within the Series collection of a Chart.

• Series Sorting

Allows you to define the sort mode of a Chart's series (None by default, Descending or Ascending).

• Series Template

Allows you to customize a template for series which are created dynamically as a result of binding a Chart to data (via the Data Source and Series Data Member properties). The settings which are available via the Series Template property are common to all such data bound series. These settings allow you to provide centralized customization of all dynamically created data bound series. To learn more on using this property, refer to [Chart with Dynamic Series](#).

Note that the settings which are customized via the Series Template property don't apply to the series contained within the Series collection of a Chart.

• Tag

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

Design

• (Name)

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Elements

• Annotation Repository

Provides centralized access to all annotations that are present in the Chart.

• Annotations

Provides access to the annotations collection of the Chart.

• Diagram

Allows you to customize a Chart's diagram elements: main and secondary axes and panes.

By default, a Chart is displayed in the Default Pane, but if necessary, you can display each Chart's series in a separate pane. To do this, click the Pane's ellipsis button, to invoke the Pane Collection Editor, allowing you to manage and customize panes. Then, select the required series within the Chart and set its View.Pane property to the required pane.

Note that the diagram is null until no visible series exists in the Chart's collection. So, to access the diagram's options, you should create a series first.

- **Legend**

Allows you to customize a Chart's legend, by defining such properties as text alignment and antialiasing, font style, background color or image, border options, markers' size and visibility, shadow options, etc.

- **Series**

Invokes the Series Collection Editor, which allows you to manage and customize a Chart's series.

Note that [series which are bound to data at the level of a chart control](#) (in particular, using the Data Source, Series Data Member and both the Argument Data Member and Value Data Members properties) are created dynamically, based upon the data obtained from the specified data source, and they are not presented within the Series collection. To perform a centralized customization of such series, use the settings which are available via the Series Template property.

- **Titles**

Invokes the Chart Title Collection Editor, which allows you to manage and customize a Chart's titles.

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark** and **Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL** and **Navigation Target**

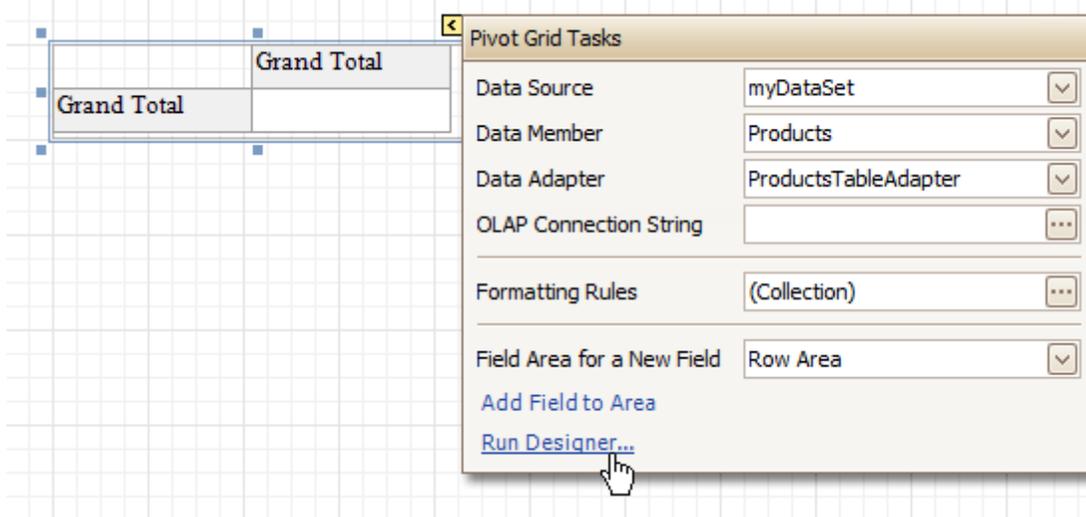
Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Pivot Grid

The **Pivot Grid** control represents dynamic data (obtained from an underlying data source) in a cross-tabulated form to create [cross-tab reports](#), similar to Pivot Tables in Microsoft Excel®. Column headers display unique values from one data field, and row headers - from another field. Each cell displays a summary for the corresponding row and column values. By specifying different data fields, you can see different totals. This allows you to get a compact layout for a complex data analysis.

The Pivot Grid has a designer which allows you to easily adjust its layout. It can be invoked using the control's Smart Tag.



For more information on using this control, refer to [Pivot Table](#).

In the [Property Grid](#), the Pivot Grid's properties are divided into the following groups.

Appearance

- **Appearance**

Allows you to define the appearance properties (such as Background Color, Foreground Color, Font, etc.) for the Pivot Grid's elements (Cell, Field Value, Filter Separator, Header Group Line, etc.).

- **Formatting Rules**

Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

- **Styles**

Allows you to invoke the Styles Editor, which is intended to manage and customize the control's styles, which then can be assigned to the Pivot Grid's elements.

Behavior

- **Anchor Vertically**

Specifies the vertical anchoring style of the Pivot Grid, so that after page rendering it stays attached to the top control, bottom control, or both.

- **Keep Together**

Specifies whether the contents of the control can be horizontally split across pages. In other words, if the control occupies more space than remains on the page, this property specifies whether this Pivot Grid should be split between the current page and the next, or whether it will be printed entirely on the next page. This property is in effect only when a Pivot Grid's content does not fit on the current page. If it does not fit on the next page either, then the Pivot Grid will be split despite this property's value.

- **Scripts**

This property contains events, which you can handle by the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **Data Adapter**

Determines a data adapter that will populate a Pivot Grid's data source which is assigned via the Data Source property. It is automatically set to the appropriate value, when the Data Member property is defined. To learn more on this, refer to [Cross-Tab Report](#).

- **Data Member**

Determines the data source member which supplies data to a Pivot Grid. To learn more on this, refer to [Cross-Tab Report](#).

 **Note**

Usually, it is not necessary to specify the Data Member property when binding a Pivot Grid to data. This property should only be set directly if the dataset contains more than one table.

- **Data Source**

Determines a Pivot Grid's data source. To learn more on this, refer to [Cross-Tab Report](#).

- **Fields**

Invokes the Pivot Grid Field Collection Editor, allowing you to manage and fully customize a Pivot Grid's fields.

- **OLAP Connection String**

Specifies a connection string to a cube in an Microsoft Analysis Services database. A sample connection string is shown below:

```
OLAPConnectionString="Provider=msolap;Data Source=localhost;Initial  
Catalog=Adventure Works DW;Cube Name=Adventure Works;Query Timeout=100;"
```

A connection string can be built via the Connection String Editor. To invoke it, click the ellipsis button for the OLAP Connection String property.

To represent information from the bound cube, create specific Pivot Grid fields, and bind them to the required fields in the data source.

If the OLAP Connection String property is set to a valid string, the value of the Data Source property is cleared. Setting the Data Source property to a valid object clears the OLAP Connection String property.

- **Prefilter**

When this property is expanded in the [Property Grid](#), you can set its Enabled property to Yes, and use the Criteria property to invoke the Pivot Grid Prefilter dialog.

This dialog allows you to build complex filter criteria with an unlimited number of filter conditions, combined by logical operators. It provides a set of logical operators that significantly simplify the process of creating filters for text, numeric and date-time fields.

 **Note**

The Prefilter is not supported in OLAP mode.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark and Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

Options

- **Data Field Options**

Allows you to customize the options which control the presentation of the data fields.

- **Data Options**

Allows you to define whether a Pivot Grid's fields must be case sensitive or not.

- **Options Chart Data Source**

Provides access to the options controlling the display of the Pivot Grid's data in a [Chart](#).

- **Print Options**

Allows you to customize the print options of a Pivot Grid.

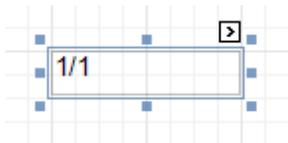
- **View Options**

Allows you to customize the Pivot Grid's display options.

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Page Info

The **Page Info** control is intended to [add page numbers and system information](#) (the current date and time or the current user name) into your report. As with many other controls, you can [format](#) this control's content.



In the [Property Grid](#), the Page Info control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Font**
Specifies the font settings for the control. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the control.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the control, as well as to assign an existing style to the control (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the alignment of the control's text. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Format**
This property allows you to specify the format string for the text displayed in the control. When you click the ellipsis button, you will see the **Format String Editor** window that will select the predefined format or customize it as needed. For more information about this, refer to [Change Value Formatting of Report Elements](#).
- **Page Information**
You can select the type of information displayed in the control.

Type	Description
------	-------------

None	Displays an empty control.
Page Number	The string, specified by the Format property, is displayed. The {0} combination in the string is replaced with the current page number.
"Current of Total" Page Numbers	The string, specified by the Format property, is displayed. The {0} combination in the string is replaced with the current page number, the {1} combination - with a total number of pages in the report. To display the typical "Page 1 of 11" text, use the format string "Page {0} of {1}".
Page Number (Roman, Lowercase)	The current page number is displayed using Roman numerals in lowercase.
Page Number (Roman, Uppercase)	The current page number is displayed using Roman numerals in uppercase.
Current Date and Time	The string, specified by the Format property, is displayed. The {0:[format]} combination is replaced with the current system date and time formatted according to the [format] string. Use the Format String Editor of the Format property (see below) to select or construct the proper string.
User Name	The name of the current user, which was used to log into the operating system, is displayed.

- **Running Band**

Specifies the name of the [band](#), from which the Page Info gathers information. This allows you to implement [page numbering](#) independently for the report and its groups. For a tutorial on this, refer to [Add Page Numbers for Groups](#).

By default, this property is not set to any value, meaning that the entire report is being taken into account.

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Start Page Number**

Here you can set the start number for page numbering.

- **Visible**

Specifies whether the control should be visible in print preview.

- **Word Wrap**

When this property is set to Yes, text contained in the control is wrapped to the next line if it doesn't fit the line or comes across a newline character. If the this property is set to No, the text in this case will be displayed on the same line until a newline character is entered.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (Bookmark, Navigation URL and Tag) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can be then accessible via [scripts](#).

If the current [report has a data source](#), the Tag property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Tag.Binding drop-down selector, select the required data field.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark** and **Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a document map. For an explanation and help, refer to [Add Bookmarks](#).

If the current [report has a data source](#), the Bookmark property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Bookmark.Binding drop-down selector, select the required data field.

- **Navigation URL** and **Navigation Target**

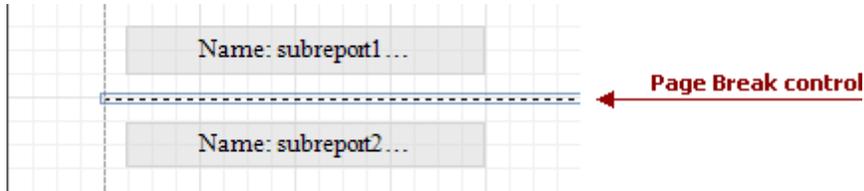
Use the Navigation URL property to specify a URL for web browser navigation when a user clicks the control. The web browser displays a page in a window or a frame as specified by the Navigation Target property. Note that a URL should have an appropriate prefix (e.g. "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current [report has a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property and in the Navigation URL.Binding drop-down selector, select the required data field.

Page Break

The **Page Break** control's sole purpose is to insert a page delimiter at any point within a report.

This control is visually represented by a short line, attached to the report's left margin, as shown in the following image.



The Page Break control is useful when you need to insert a page break between controls within a [band](#) - for example, to divide subreports, so that the second subreport starts printing on a new page. Another example of the Page Break's use can be found in the following tutorial: [Limit the Number of Records per Page](#).

Note

Note that when you need a page break before or after printing a certain band, you may set its **Page Break** property to **Before the Band** or **After the Band**, instead of using the Page Break control.

In the [Property Grid](#), the Page Break control's properties are divided into the following groups.

Appearance

- **Formatting Rules**

Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

Behavior

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the control should be visible in print preview.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

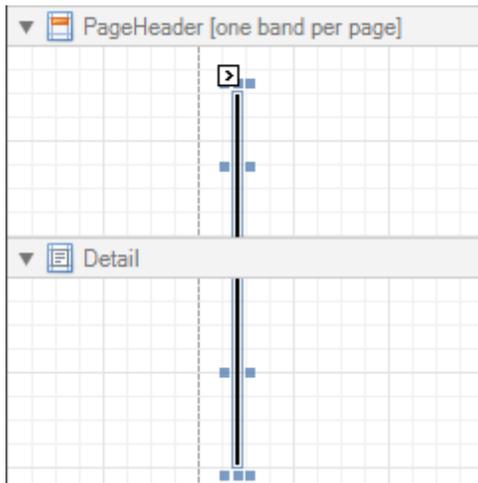
Specifies the control's location, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Cross-band Line

The **Cross-band Line** control allows you to draw a line through several [bands](#). This can be useful if it is required to visually emphasize a section consisting of multiple band areas. In other aspects, it is similar to a regular [Line](#).



Another cross-band control available is the [Cross-band Box](#).

In the [Property Grid](#), the Cross-band Line control's properties are divided into the following groups.

Appearance

- **Foreground Color**
Specifies the color of the control's line. This option is also available in the [Formatting Toolbar](#) ([A](#)).
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Line Style**
You can select a solid (by default), dashed, dotted or mixed style for the line.

Behavior

- **Anchor Vertically**
Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.
- **Visible**
Specifies whether the control should be visible in print preview.

Data

- **Tag**
This property allows you to add some additional information to the control; for example its id, by which it then can be accessible via [scripts](#).

Design

- **(Name)**
Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

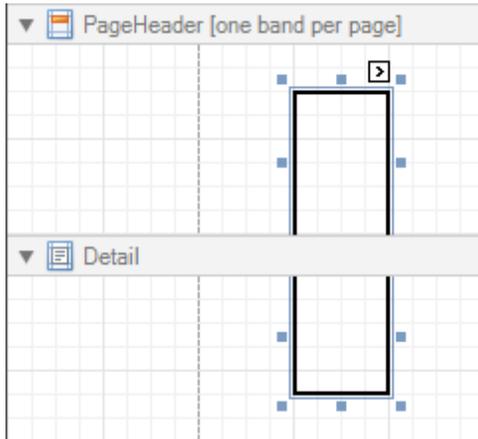
Layout

- **End Band**
Determines a band, in which the control finishes drawing.

- **End Point**
Determines the end point (from a band's upper left corner) where the control finishes drawing.
- **Location**
Specifies the control's location, in [report measurement units](#).
- **Snap Line Margin**
Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.
- **Start Band**
Determines a band, in which the control starts drawing.
- **Start Point**
Determines the starting point (from a band's upper left corner) where the control starts drawing.
- **Width**
Specifies the line's width in [report measurement units](#).

Cross-band Box

The **Cross-band Box** control allows you to draw a rectangle through several [bands](#). This can be useful if it is required to visually encompass a section consisting of multiple band areas.



Another cross-band control available is the [Cross-band Line](#).

In the [Property Grid](#), the Cross-band Box control's properties are divided into the following groups.

Appearance

- **Borders, Border Color** and **Border Width**

Specify border settings for the control.

- **Formatting Rules**

Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

Behavior

- **Anchor Vertically**

Specifies the vertical anchoring style of the control, so that after page rendering it stays attached to the top control, bottom control, or both.

- **Visible**

Specifies whether the control should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **End Band**

Determines a band, in which the control finishes drawing.

- **End Point**

Determines the end point (from a band's upper left corner) where the control finishes drawing.

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

- **Start Band**

Determines a band, in which the control starts drawing.

- **Start Point**

Determines the starting point (from a band's upper left corner) where the control starts drawing.

- **Width**

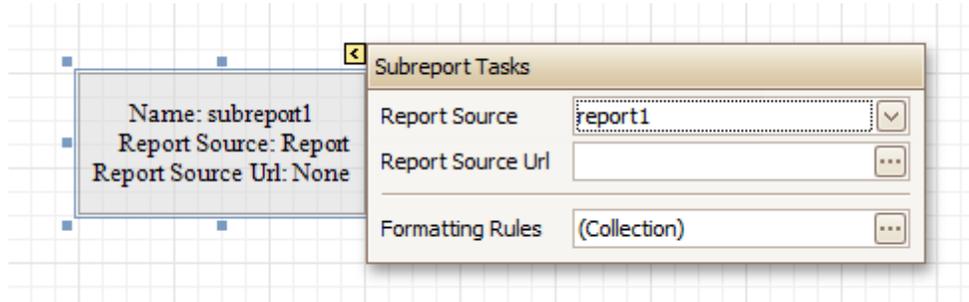
Specifies the width of the Box, in [report measurement units](#).

Subreport

The **Subreport** control allows you to include other reports in your current report.

There are several reasons for using subreports. The first one is to *reuse* reports. This can be of help if there is a particular report structure (*template*) that has to be included in all reports, and the report must have consistent appearance and functionality. A good example is a report header that contains the company information, logo, date, etc. The second reason for using subreports is creation of *master-detail* reports (or, *invoice* reports with hierarchically linked data).

However, for master-detail reports creation, another approach is recommended: [using Detail Report bands](#).



You can click a subreport, to open the report to which it is linked in a new [Design Panel](#).

In the [Property Grid](#), the Subreport's properties are divided into the following groups.

Appearance

- **Formatting Rules**

Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

Behavior

- **Can Shrink**

Determines whether a Subreport's height should be decreased if its contents don't completely fill the control.

Use this property to specify whether the height of the Subreport control should be taken into account when generating a report. This may be required, because usually the mutual location of report controls is considered when generating a report document. But, as the Subreport control actually represents a report itself, the height of a Subreport normally should not be taken into account in the generated report document.

Also, note that there is no Can Grow option for the Subreport control, as it always increases its height depending on its contents.

- **Scripts**

This property contains events, which you can handle by the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies a value indicating whether the current control should be printed (when set to Yes) or hidden (No) on report generation.

Data

- **Report Source**

Determines a report to be included as a subreport.

If report classes of the application that invoked the Report Designer are compiled into one assembly, then they are available as items in this combo box.

- **Report Source Url**

Defines an URL of a report definition file (*.REPX), to be used as a report source.

Design

- **(Name)**

Determines a control's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location, in [report measurement units](#).

- **Size**

Specifies the control's size, in [report measurement units](#).

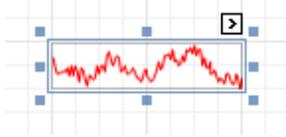
The Subreport isn't limited by the visible size of the control. The size of its actual content is taken into account when rendering the subreport on the page. Note that depending on its contents, its width is unlimited and its height is increased.

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)), which is to be preserved around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Sparkline

The **Sparkline** control displays a compact chart that is commonly used to reflect the flow of data for every row in a report.



In the [Property Grid](#), the Sparkline control's properties are divided into the following groups.

Appearance

- Background Color**
 Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ().
- Borders, Border Color, Border Width, and Border Dash Style**
 Specify border settings for the control.
- Formatting Rules**
 Invokes the **Formatting Rules Editor**, which allows you to choose which rules should be applied to a control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- Padding**
 Specifies indent values that are used to render the contents of a Label.
- Style Priority**
 Specifies the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- Styles**
 Assigns an existing (or newly created) style to the control, and also specifies [odd and even styles](#).. For more information on style inheritance, refer to [Understanding Style Concepts](#).
- View**
 Specifies the type of a chart displayed by a Sparkline control. The following table lists the available Sparkline view types.

View Type	Image	Description
Line		A line chart.
Area		An area chart.
Bar		A bar chart.
WinLoss		A win-loss chart.

Behavior

- Anchor Vertically**
 Specifies the vertical anchor style of the control, so that after a page is rendered it stays attached to the top control, bottom control, or both.
- Scripts**
 This property contains events that you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- Visible**

Specifies whether the control should be visible in a print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (**Bookmark**, **Navigation URL**, **Tag** and **Text**) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Data Adapter**

Determines the data adapter that will populate the Sparkline's data source, which is assigned via the **Data Source** property. It is automatically set to the appropriate value when the **Data Member** property is defined.

- **Data Member**

Determines the data source member that supplies data to a Sparkline.

Note

Usually, it is not necessary to specify the Data Member property when binding a Sparkline to data. This property should only be set directly if the dataset contains more than one table.

- **Data Source**

Determines a Sparkline's data source.

- **Tag**

This property allows you to add some additional information to the control; for example its id, by which it can then be accessible via [scripts](#).

If the current report [has a data source](#), the **Tag** property can be bound to a data field obtained from the data source. To do this, expand the **(Data Bindings)** property, and in the **Tag.Binding** drop-down selector, select the required data field.

- **Value Member**

Specifies the data member field that provides point values for a Sparkline.

Design

- **(Name)**

Determines the control's name by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location in [report measurement units](#).

- **Size**

Specifies the control's size in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)) around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark** and **Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a [document map](#). For more information, refer to the [Add Bookmarks](#) topic.

If the current report is [bound to a data source](#), the **Bookmark** property can be bound to a data field obtained from the data source. To do this, expand the **(Data Bindings)** property, and in the **Bookmark.Binding** drop-down selector, select the required data field.

- **Navigation URL** and **Navigation Target**

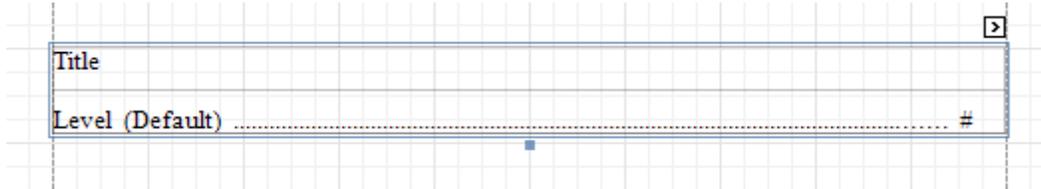
Use the Navigation URL property to specify a URL for web browser navigation when a user clicks a Label. The web browser displays a page in a window or a frame as specified by the **Navigation Target** property. Note that a URL should have an appropriate prefix (e.g., "http://"). You can create cross-references within

the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current report is [bound to a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Table of Contents

The **Table of Contents** control generates a table of contents based on bookmarks specified for report elements.



When a **Table of Contents** control is dropped onto a report's body from the [Toolbox](#), it is placed on the [Report Header](#) band of the report. If there is no Report Header in the report, it is created automatically.

A table of contents is generated based on the hierarchy of report bookmarks. To learn how to provide a report with bookmarks, refer to the [Add Bookmarks](#) topic.

In the [Property Grid](#), the properties of the **Table of Contents** are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) (ab).
- **Borders, Border Color, Border Width and Border Dash Style**
Specify border settings for the control.
- **Formatting Rules**
Invokes the **Formatting Rules Editor**, which allows you to choose which rules should be applied to a control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values that are used to render the contents of a Label.
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) (A).
- **Style Priority**
Specifies the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
Assigns an existing (or newly created) style to the control, and also specifies [odd and even styles](#). For more information on style inheritance, refer to [Understanding Style Concepts](#).

Behavior

- **Level Default**
Specifies the default formatting options for the hierarchical levels of a **Table of Contents**.
- **Level Title**
Specifies the formatting options for the title of a **Table of Contents**.
- **Levels**
Invokes the **Table of Contents Level Collection Editor**, which allows you to edit and customize formatting options for hierarchical levels of a **Table of Contents**.
- **Max Nesting Level**
Specifies the maximum number of **Table of Contents** levels to be displayed. If set to **0**, no limitation is applied.
- **Visible**
Specifies whether the control should be visible in a print preview.

Data

- **Tag**

This property allows you to add some additional information to the control; for example, its id, by which it can then be accessible using [scripts](#).

Design

- **(Name)**

Determines the control's name by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or using [scripts](#).

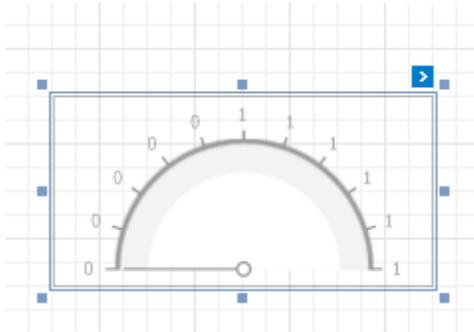
Layout

- **Location**

Specifies the control's location in [report measurement units](#).

Gauge

The **Gauge** control provides you with the capability to embed graphical gauges into your report.



In the [Property Grid](#), the Gauge control's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Borders, Border Color** and **Border Width**
Specify border settings for the control.
- **Foreground Color**
Specifies the text color for the control. This option is also available in the [Formatting Toolbar](#) ()
- **Formatting Rules**
Invokes the **Formatting Rules Editor**, which allows you to choose which rules should be applied to a control during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies the indent values that are used to render the contents of a Label.
- **Style Priority**
Specifies the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
Assigns an existing (or newly created) style to the control, and also specifies [odd and even styles](#). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **View Style**
Specifies the style of the displayed gauge.
- **View Theme**
Specifies the color theme of the displayed gauge.
- **View Type**
Specifies the type of the displayed gauge. The following view types are supported.

- **Circular**



- **Linear**



Behavior

- **Anchor Vertically**

Specifies the vertical anchor style of the control, so that after a page is rendered it stays attached to the top control, bottom control, or both.

- **Scripts**

This property contains events that you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether or not the control should be visible in a print preview.

Data

- **(Data Bindings)**

If the current report is [bound to data](#), this property allows you to bind some of the control's properties (**Bookmark**, **Navigation URL**, **Tag** and **Text**) to a data field obtained from the report's data source, and to apply a [format string](#) to it. For more information on this, refer to [Displaying Values from a Database \(Binding Report Elements to Data\)](#).

- **Actual Value**

Specifies the value displayed by a gauge.

- **Maximum**

Specifies the gauges maximum value.

- **Minimum**

Specifies the gauges minimum value.

- **Tag**

This property allows you to add some additional information to the control; for example, its id, by which it is then accessible via [scripts](#).

- **Target Value**

Specifies the position of the target value marker.

Design

- **(Name)**

Determines the control's name by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Location**

Specifies the control's location in [report measurement units](#).

- **Size**

Specifies the control's size in [report measurement units](#).

- **Snap Line Margin**

Specifies the margin (in [report measurement units](#)) around the control when it is [aligned using Snap Lines](#), or when other controls are aligned next to it.

Navigation

- **Bookmark** and **Parent Bookmark**

These properties are intended for the creation of a hierarchical structure within a report called a [document map](#). For more information, refer to the [Add Bookmarks](#) topic.

If the current report is [bound to a data source](#), the **Bookmark** property can be bound to a data field, obtained from the data source. To do this, expand the **(Data Bindings)** property, and in the **Bookmark Binding** drop-down selector, select the required data field.

- **Navigation URL** and **Navigation Target**

Use the Navigation URL property to specify a URL for web browser navigation, when a user clicks a Label.

The web browser displays a page in a window or a frame as specified by the **Navigation Target** property. Note that a URL should have an appropriate prefix (e.g., "http://"). You can create cross-references within the report by assigning the name of the target control to the Navigation URL property, and setting the Navigation Target property to "_self". For more information, refer to [Create Hyperlinks](#).

If the current report is [bound to a data source](#), the Navigation URL property can be bound to a data field obtained from the data source. To do this, expand the (Data Bindings) property, and in the Navigation URL.Binding drop-down selector, select the required data field.

Report Bands

The documents in this section details the available kinds of report bands and their settings.

In the Report Designer, a report is built upon *bands* - sections of varied type and purpose, where [report controls](#) are contained. Bands are featured in the [Designer Tab](#), solely to represent different sections of a report document (such as detail, report or page header, or footer). They allow you to select exactly where a control should be printed, and how many times.

Band Types

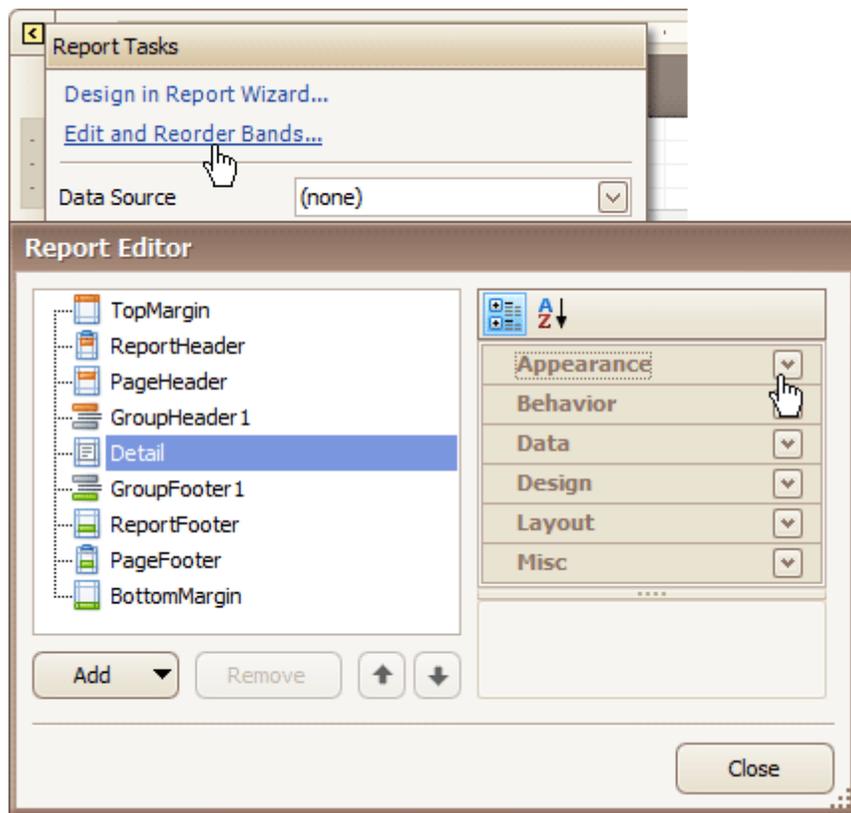
The following band types are available.

- [Detail Band](#)
- [Group Header and Footer](#)
- [Report Header and Footer](#)
- [Page Header and Footer](#)
- [Page Margin Bands](#)
- [Detail Report Band \(for Master-Detail Reports\)](#)

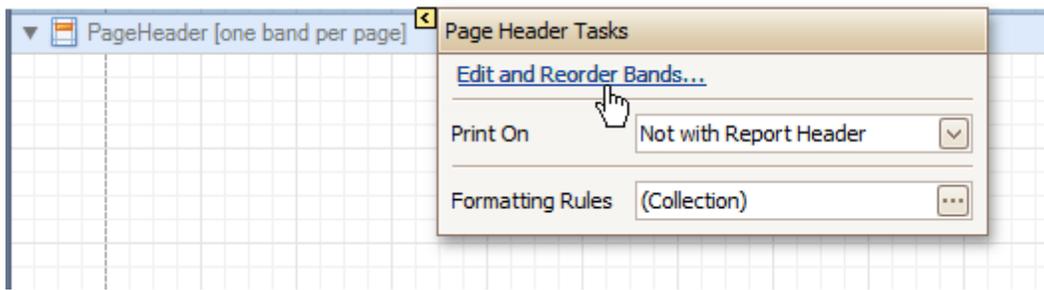
Manage Bands

To manage bands in a report, click its [Smart Tag](#), and in the invoked actions list, click the **Edit and Reorder Bands...** link.

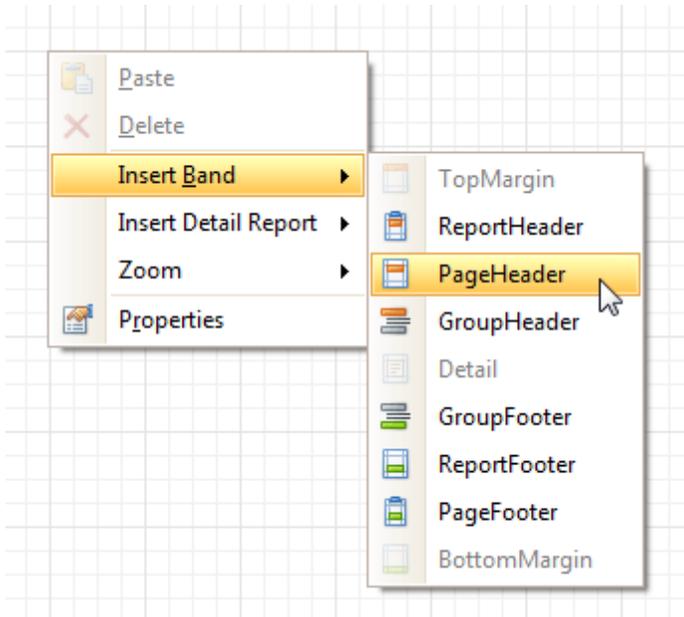
Then, in the invoked **Report Editor** you can easily add, remove and reorder bands, and adjust their options.



Alternatively, you can invoke the **Report Editor** via any band's Smart Tag.



To quickly insert a band of any type (except for the [Detail band](#), since it is required in a report), right-click anywhere on a report's surface, and in the invoked [Context Menu](#), point to **Insert Band**, and choose the band type.

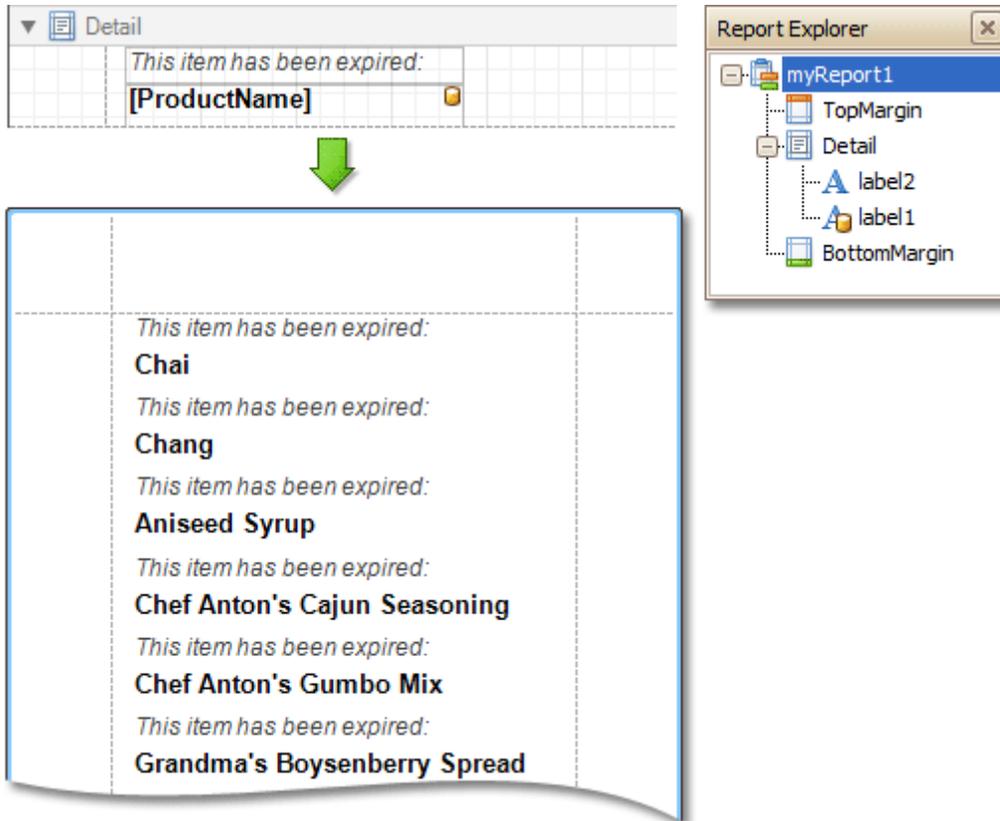


See Also

- [Detail Band](#)
- [Grouping Bands](#)
- [Report Header and Footer](#)
- [Page Header and Footer](#)
- [Page Margin Bands](#)
- [Detail Report Band for Master-Detail Reports](#)

Detail Band

The **Detail** band is the central part of a report. Unlike other bands, it cannot be deleted - the present report structure includes the Detail band in its core. In a [data-bound report](#), the contents of the Detail band are repeated for every data entry (e.g. if you're building a report listing, say, products, it will be rendered for each product in the database). And, if [static data](#) is also present in the Detail band, in the resulting report, it is repeated with each new entry.



In the [Property Grid](#), the Detail Band's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (🎨).
- **Borders, Border Color** and **Border Width**
Specify border settings for the controls contained within the band.
- **Font**
Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (🔤).
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the controls contained within the band.

- **Style Priority**

Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).

- **Styles**

This property allows you to define [odd and even styles](#) for the controls contained within the band, as well as to assign an existing style to them (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

- **Text Alignment**

Allows you to change the text alignment of the controls contained within the band. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Keep Together**

As stated above, the detail band is printed repeatedly for every data entry. When the Keep Together option is on, the report engine tries to keep sequential detail band entries together. This option makes sense only when data is grouped or you're working with a master-detail report. In this case, the report engine tries to keep group contents on one page. If a group doesn't fit and it starts somewhere in the middle of a page, the report moves this group to a new page, thus trying to reduce the number of page breaks in continuous data.

- **Multi-Column Options**

This property allows you to arrange the printout of the band's content in several columns. For more information, refer to [Multi-Column Report](#).

- **Page Break**

Use this property if the current report design requires that the detail section should be separated from previous sections or follow-ups. Specify the Before the Band or After the Band values to insert a page break before or after the current band. In many cases, this property may be used instead of the [Page Break](#) control.

- **Scripts**

This property contains events, which you can handle by the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the band should be visible in print preview.

Data

- **Sort Fields**

Invokes the Group Field Collection Editor, which enables you to specify the fields for sorting the records within the band, the sorting order (Ascending/Descending) for each field and the order sequence. For more information, refer to [Change or Apply Data Sorting to a Report](#).

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

Specifies the band's height, in [report measurement units](#).

- **Snap Line Padding**

Specifies the padding (in [report measurement units](#)), which is to be preserved within the band when controls it contains are [aligned using Snap Lines](#).

Misc

- **Keep Together with Detail Reports**

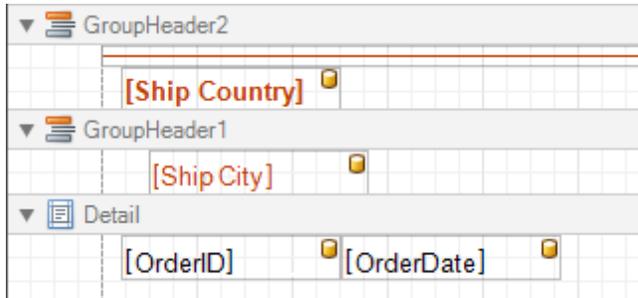
When this option is on, the Detail Band will be always printed on the same page together with its child [Detail Report Band](#), or multiple bands.

Grouping Bands

The **Group Header** and **Group Footer** bands are shown above and below each group. Usually, you don't need to manually manage these bands, as they are auto-created via the [Group and Sort Panel](#). For more information, refer to [Change or Apply Data Grouping to a Report](#) and [Change or Apply Data Sorting to a Report](#).

You may use the Group Header bands for grouping by multiple data fields in one of the following ways.

1. Add several Group Header bands. Specify one group field for each of these bands.



This results in nested grouping of the report's data.

Denmark			
Århus			
10367	12/29/1994	Vaffeljernet	13.55
10399	01/31/1995	Vaffeljernet	27.36
10465	04/05/1995	Vaffeljernet	145.04
10591	08/07/1995	Vaffeljernet	55.92
10602	08/17/1995	Vaffeljernet	2.92
10688	11/01/1995	Vaffeljernet	299.09
10744	12/18/1995	Vaffeljernet	69.19
10769	01/08/1996	Vaffeljernet	65.06
10921	04/02/1996	Vaffeljernet	176.48
10946	04/11/1996	Vaffeljernet	27.20
10994	05/02/1996	Vaffeljernet	65.53
København			
10341	11/29/1994	Simons bistro	26.78
10417	02/16/1995	Simons bistro	70.29
10556	07/04/1995	Simons bistro	9.80
10642	09/22/1995	Simons bistro	41.89
10669	10/16/1995	Simons bistro	24.39
10802	01/29/1996	Simons bistro	257.26
11074	06/05/1996	Simons bistro	18.44
Finland			
Helsinki			
10615	08/30/1995	Wilman Kala	.75
10673	10/19/1995	Wilman Kala	22.76
10695	11/07/1995	Wilman Kala	16.72

2. Specify several group fields for the **Group Fields** property of the Group Header band. The data will be grouped by certain combinations of field values.

Denmark		Århus	
10367	12/29/1994	Vaffeljernet	13.55
10399	01/31/1995	Vaffeljernet	27.36
10465	04/05/1995	Vaffeljernet	145.04
10591	08/07/1995	Vaffeljernet	55.92
10602	08/17/1995	Vaffeljernet	2.92
10688	11/01/1995	Vaffeljernet	299.09
10744	12/18/1995	Vaffeljernet	69.19
10769	01/08/1996	Vaffeljernet	65.06
10921	04/02/1996	Vaffeljernet	176.48
10946	04/11/1996	Vaffeljernet	27.20
10994	05/02/1996	Vaffeljernet	65.53
Denmark		København	
10341	11/29/1994	Simons bistro	26.78
10417	02/16/1995	Simons bistro	70.29
10556	07/04/1995	Simons bistro	9.80
10642	09/22/1995	Simons bistro	41.89
10669	10/16/1995	Simons bistro	24.39
10802	01/29/1996	Simons bistro	257.26
11074	06/05/1996	Simons bistro	18.44
Finland		Helsinki	
10615	08/30/1995	Wilman Kala	.75
10673	10/19/1995	Wilman Kala	22.76
10695	11/07/1995	Wilman Kala	16.72

The Group Footer band is unnecessary without the corresponding Group Header band, to which its properties are similar. The Group Footer can be used to display [group totals](#), or [group page numbers](#).

In the [Property Grid](#), the properties of both these bands are divided into the following groups.

Appearance

- **Background Color**

Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ()

- **Borders, Border Color** and **Border Width**

Specify border settings for the controls contained within the band.

- **Font**

Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).

- **Foreground Color**

Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ()

- **Formatting Rules**

Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).

- **Padding**

Specifies indent values which are used to render the contents of the controls contained within the bands.

- **Style Priority**

Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).

- **Styles**

This property allows you to define [odd and even styles](#) for the controls contained within the bands, as well as to assign an existing style to them (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).

- **Text Alignment**

Allows you to change the text alignment of the controls contained within the bands. This option is also available in the [Formatting Toolbar](#).

Behavior

• Group Fields

This property is available for the Group Header band only. It invokes the Group Field Collection Editor, allowing you to add and remove grouping fields, define data fields to be used as grouping criteria and the grouping order (ascending or descending).

In most scenarios, it's quick and practical to use the [Group and Sort Panel](#), rather than manually adjust the band's group fields collection. However, this is the only way to assign multiple group fields to a single Group Header.

• Group Union

Determines whether group rows can be printed on different pages (in this case both Group Union and Group Footer Band.Group Union are set to None), or the entire group will be printed on a single page (if the Group Union is set to Whole Page).

Also, if a group can be split across pages, but you don't want a Group Header to be printed on a page if there is no data row below it (in case a group starts at the bottom of the page and there is enough room for only a Group Header), you may set the Group Union to With First Detail. In this case, if a Group Header is alone on a page, it will be moved to the beginning of the next page.

It is the same for the Group Footer. If you don't want it to be printed alone on a page, you may set its Group Union to With Last Detail, and the last group row from the previous page will be moved to the next page to be printed together with a Group Footer.

This property is quickly accessible via the band's [Smart Tag](#).

• Keep Together

When this option is on, the report tries to fit the band contents entirely on one page, not allowing it to split across several pages. In general, if the contents are too large to fit on a single page, then the band is started on a new page, and continues on the following page.

• Level

Specifies the nesting level of a group band. The lower the level number, the closer the group band is to the Detail band. The numeration starts at zero. It is the parameter that identifies the Group Header / Group Footer band pairs.

This option is auto-defined when using the [Group and Sort Panel](#).

• Page Break

Use this property if the current report design requires that the band's section should be separated from previous sections or follow-ups. Specify the Before the Band or After the Band values to insert a page break before or after the current band. In many cases, this property may be used instead of the [Page Break](#) control.

• Print at Bottom

This property is available for the Group Footer band only. It determines whether the band should be printed at the bottom of a page, or immediately after the last group's details.

If a report contains several Group Footers with their Print at Bottom properties set to different values, then the outer Group Footer has the highest priority.

This feature is helpful when the Page Break property of the Group Header band is set to After the Band. In this instance each group starts a new page, and the Group Footer has two distinct places to reside - after the last row, or at the bottom of the page.

• Repeat Every Page

This property improves the readability of reports with group contents that are several pages long. Without a repeated group header at the top of the page, the report may be difficult to read.

This property is also accessible via the band's [Smart Tag](#).

• Scripts

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

• Sorting Summary

This property is available for the Group Header band only. It allows you to [sort groups by a summary function result](#).

- **Visible**

Specifies whether the bands should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

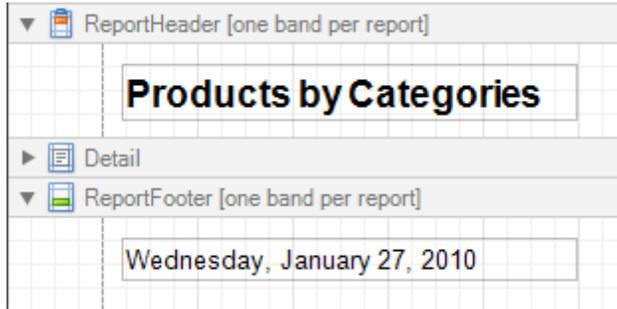
Specifies the band's height, in [report units](#).

- **Snap Line Padding**

Specifies the padding (in [report measurement units](#)), which is to be preserved within the band when controls it contains are [aligned using Snap Lines](#).

Report Header and Footer

The **Report Header** and **Report Footer** are the only types of report bands rendered once per report.



The **Report Header** is the first band of a report on the first page (not counting [margins](#) as they are "out-of-page" zones). The Report Header also precedes the [Page Header](#), making it the best place to display the report's name, company logo, [date of creation and user name](#), etc.

And, if you plan to add a [Chart](#) that visualizes the report's data, place this control onto this band.

The **Report Footer** finalizes the informative part of the report. It is placed before the [Page Footer](#) and [Bottom Margin](#) on the report's last page. Use the Report Footer for report [grand totals](#) or conclusions.

In the [Property Grid](#), the properties of these bands are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (.
- **Borders, Border Color** and **Border Width**
Specify border settings for the controls contained within the band.
- **Font**
Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (.
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the controls contained within the bands.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the controls contained within the bands, as well as to assign an existing style to them (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the text alignment of the controls contained within the bands. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Keep Together**

When this option is on, the report tries to fit the band contents entirely on one page, not allowing it to split across several pages. In general, if the contents are too large to fit on a single page, then the band is started on a new page, and continues on the following page.

- **Page Break**

Use this property if the current report design requires that the band's section should be separated from previous sections or follow-ups. Specify the Before the Band or After the Band values to insert a page break before or after the current band. In many cases, this property may be used instead of the [Page Break](#) control.

- **Print at Bottom**

This property is available for the Report Footer band only, and determines whether this band should be printed at the bottom of the last page, or immediately after the last report's details. The Report Footer has priority over the [Group Footer](#)'s Print at Bottom property, so the Group Footer can never be placed after the Report Footer.

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the band should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

Specifies the band's height, in [report units](#).

- **Snap Line Padding**

Specifies the padding (in [report measurement units](#)), which is to be preserved within the band when controls it contains are [aligned using Snap Lines](#).

Page Header and Footer

The **Page Header** and **Page Footer** bands are located at the top and bottom of every page in a report.

PageHeader [one band per page]		
ID	Name	Unit Price
Detail		
[ProductID]	[ProductName]	[UnitPrice]
PageFooter [one band per page]		
Units per Page: Count([UnitPrice])		

The Page Header/Footer bands are the best place for information that should be printed on every page. For example, use them to display the header of a table which is continued from the previous page (an example can be found at the [Table Report](#) tutorial).

Note

If you insert page break right after the [Report Header](#) (by setting its **Page Break** to **After the Band**), the Page Footer and Page Header bands will not be printed on the first page.

In the [Property Grid](#), the properties of these bands are divided into the following groups.

Appearance

- Background Color**
 Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ().
- Borders, Border Color** and **Border Width**
 Specify border settings for the controls contained within the band.
- Font**
 Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).
- Foreground Color**
 Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ().
- Formatting Rules**
 Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- Padding**
 Specifies indent values which are used to render the contents of the controls contained within the bands.
- Style Priority**
 Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- Styles**
 This property allows you to define [odd and even styles](#) for the controls contained within the bands, as well as to assign an existing style to them (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- Text Alignment**
 Allows you to change the text alignment of the controls contained within the bands. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Scripts**

This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Visible**

Specifies whether the band should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

Specifies the band's height, in [report units](#).

- **Snap Line Padding**

Specifies the padding (in [report measurement units](#)), which is to be preserved within the band when controls it contains are [aligned using Snap Lines](#).

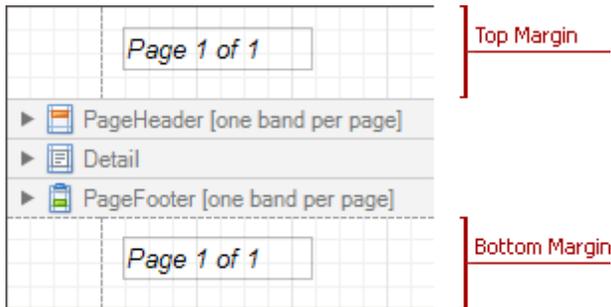
Misc

- **Print On**

This property specifies whether the band should be printed on the same page with [Report Header and Report Footer](#) bands.

Page Margin Bands

The **Top Margin** and **Bottom Margin** bands represent the top and bottom page margins. Unlike other bands, they are not accompanied by strips displaying their titles in the [Design Panel](#).



They are intended for displaying [page numbers](#), or some sort of supplementary information (e.g. [current system time](#) or the [user name](#)).

In the [Property Grid](#), the properties of these bands are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (🎨).
- **Borders, Border Color** and **Border Width**
Specify border settings for the controls contained within the band.
- **Font**
Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) (🔍).
- **Formatting Rules**
Invokes the Formatting Rules Editor allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the controls contained within the bands.
- **Style Priority**
Allows you to define the priority of various style elements (such as background color, border color, etc.). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Styles**
This property allows you to define [odd and even styles](#) for the controls contained within the bands, as well as to assign an existing style to them (or a newly created one). For more information on style inheritance, refer to [Understanding Style Concepts](#).
- **Text Alignment**
Allows you to change the text alignment of the controls contained within the bands. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Scripts**
This property contains events, which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Visible**

Specifies whether the band should be visible in print preview.

Data

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

Layout

- **Height**

Specifies the band's height, in [report units](#).

 **Note**

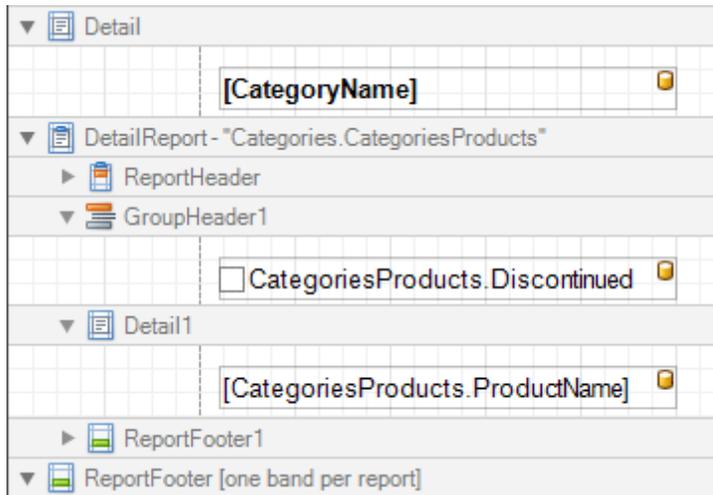
Note that this property is tied to the [report](#)'s Margins.Top (or Margins.Bottom) property, so that changing this property's value will cause the appropriate Margin value to be changed, and vice versa.

- **Snap Line Padding**

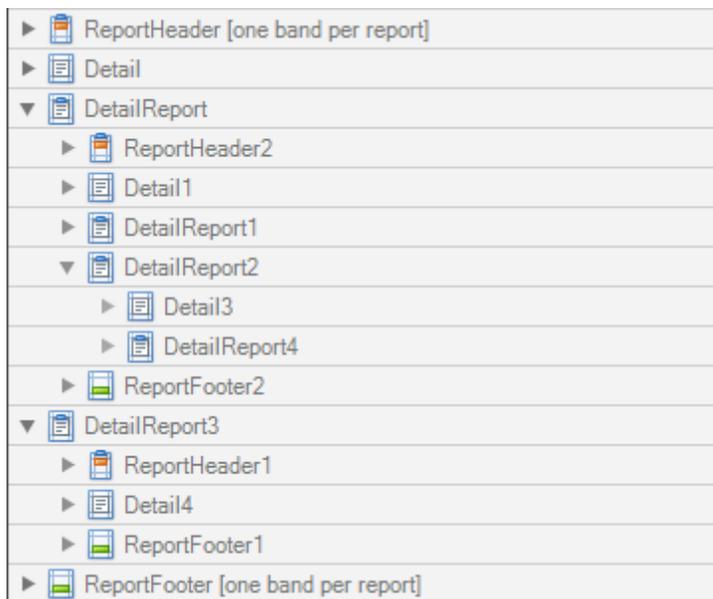
Specifies the padding (in [report measurement units](#)), which is to be preserved within the band when controls it contains are [aligned using Snap Lines](#).

Detail Report Band for Master-Detail Reports

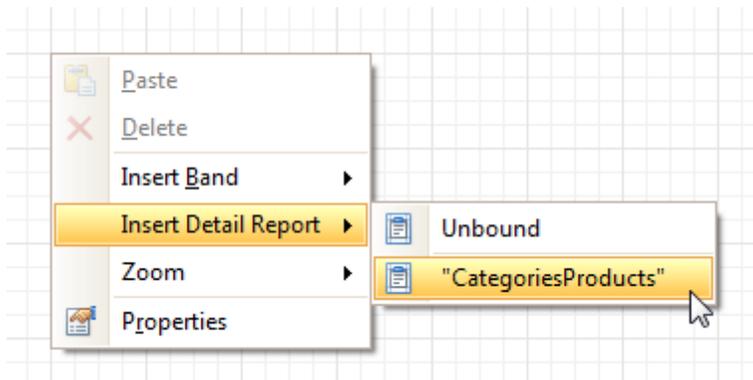
The **Detail Report** band is a type of band used to incorporate one report into another in [master-detail reports](#). It is quite different from the [Detail band](#), since it holds the whole *detail* report in a *master-detail* report layout, and therefore can contain other types of bands within it.



There can be an unlimited number of Detail Report bands nested inside one another.



To add a Detail Report band, use the [Context Menu](#). If the [bound data source](#) contains a *data relationship*, the submenu will contain an item with its name. Otherwise, add an unbound detail report and specify its data binding options later.



In the [Property Grid](#), the properties of this band are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ([ab](#)).
- **Borders, Border Color** and **Border Width**
Specify border settings for the controls contained within the band.
- **Font**
Specifies the font settings for the controls contained within the band. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for the controls contained within the band. This option is also available in the [Formatting Toolbar](#) ([A](#)).
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the band during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values which are used to render the contents of the controls contained within the band.
- **Text Alignment**
Allows you to change the text alignment of the controls contained within the band. This option is also available in the [Formatting Toolbar](#).

Behavior

- **Level**
Specifies the order of several Detail Report Band objects in a report. It allows the reordering of different Detail Report Bands at the same level of [master-detail relationships](#). The lower the level number, the closer the band is to the Detail band.
- **Page Break**
Use this property if the current report design requires that the band's section should be separated from previous sections or follow-ups. Specify the Before the Band or After the Band values to insert a page break before or after the current band. In many cases, this property may be used instead of the [Page Break](#) control.
- **Print when Data Source is Empty**
Specifies whether the band should be printed if its data source is empty.
- **Scripts**
This property contains events which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).
- **Visible**

Specifies whether the band should be visible in print preview.

Data

- **Data Adapter**

Determines a Detail Report Band's data adapter that provides the detail data for the report. To learn more, refer to [Master-Detail Report \(Detail Report Bands\)](#).

- **Data Member**

Determines a name of the data relationship established within the bound data source. To learn more, refer to [Master-Detail Report \(Detail Report Bands\)](#).

- **Data Source**

Determines the data source that provides the detail data for the report. If this property isn't defined, the detail report gets data from the master report's data source. To learn more, refer to [Master-Detail Report \(Detail Report Bands\)](#).

- **Filter String**

Allows you to invoke the Filter String Editor, which is intended to easily define a filtering condition for a detail report's data. For more information, refer to [Change or Apply Data Filtering to a Report](#).

- **Tag**

This property allows you to add some additional information to the band; for example its id, by which it can then be accessible via [scripts](#).

- **XML Data Path**

Allows you to define a path to the data contained in an XML file. The data contained in the file will then be used as the Detail Report Band's data source.

In this case, the Data Member property will specify the bound list in the XML data source.

Note

Note that a detail report uses the XML Data Path property value only when the Data Source property is set to None. The XML Data Path property has a lower priority than the Data Source property.

Design

- **(Name)**

Determines a band's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

- **Detail Print Count**

Specifies how many times the [Detail](#) band should be printed when a data source is defined for the subreport, and it is not empty.

- **Detail Print Count when Data Source is Empty**

Specifies how many times the Detail band should be printed when no data source is defined for the subreport.

Structure

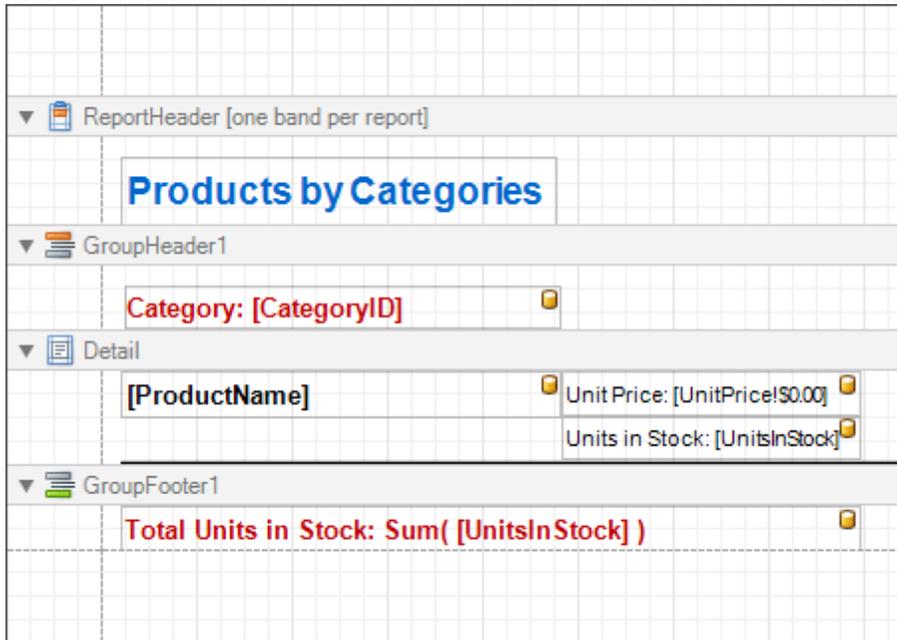
- **Bands**

Allows you to invoke the Report Editor intended to manage and customize the report's bands.

Report Settings

This document details settings that affect the entire report.

A **Report** is the main object in the Report Designer, as it's the document being edited. A typical report is shown in the following image (as it looks in the [Designer Tab](#)).



While the main report's properties can be accessed via the report's [Smart Tag](#), the complete settings list is available in the [Property Grid](#), where all the report's properties are divided into the following groups.

Appearance

- **Background Color**
Specifies the background color of report elements. This option is also available in the [Formatting Toolbar](#) ([ab](#)).
- **Borders, Border Color** and **Border Width**
Specify border settings for report elements.
- **Font**
Specifies the font settings for report elements. Some of these settings are available in the [Formatting Toolbar](#).
- **Foreground Color**
Specifies the text color for report elements. This option is also available in the [Formatting Toolbar](#) ([A](#)).
- **Formatting Rule Sheet**
Invokes the Formatting Rule Sheet Editor, allowing you to manage and customize formatting rules, which can then be defined for a report's bands and controls. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Formatting Rules**
Invokes the Formatting Rules Editor, allowing you to choose which rules should be applied to the report during report generation, and define the precedence of the applied rules. To learn more on this, refer to [Conditionally Change a Control's Appearance](#).
- **Padding**
Specifies indent values used to render the contents of a report's controls.
- **Page Color**
Specifies the fill color for report pages. This color may be [changed later](#) in a report's Print Preview.
- **Style Sheet**

Allows you to invoke the Styles Editor, which is intended to manage and customize a report's style sheets. To learn more on this, refer to [Store and Restore Style Sheets](#).

- **Style Sheet's Path**

Allows you to define a path to the style sheet contained in a report style sheet file (.REPSS). To learn more on this, refer to [Store and Restore Style Sheets](#).

- **Text Alignment**

Allows you to change the alignment of a report controls' text. This option is also available in the [Formatting Toolbar](#).

- **Watermark**

Allows you to customize a report's watermark options. For more information about this, refer to [Create or Modify Watermarks of a Report](#).

Behavior

- **Display Name**

Specifies the name of the report, which is displayed in its Design Panel tab.



- **Export Options**

Allows you to set the export options for each file type (PDF, XLS, TXT, etc.). These options vary with the file type.

- **Measure Units**

Allows you to [choose units of measurement](#) for a report (one hundredth of an inch or a tenth of a millimeter).

- **Print when Data Source is Empty**

- **Script Language**

Allows you to choose the programming language to be used in [scripting](#) (C#, Visual Basic or J#).

- **Script References**

Allows you to manage the collection of strings that represent the paths to the assemblies used by the [scripts](#) in a report.

- **Scripts**

This property contains events which you can handle with the required scripts. For more information on scripting, refer to [Handle Events via Scripts](#).

- **Show Margin Lines in Preview**

The page margin lines are dotted lines shown on the currently selected page in the report's preview. Use this property to change the visibility of these lines.

- **Vertical Content Splitting**

Allows you to choose whether report controls outside the right page margin should be split across pages, or moved in their entirety to the next page. This option is useful for the [cross-tab reports](#) creation.

- **Visible**

Specifies whether a report should be created in print preview.

Data

- **Calculated Fields**

Allows you to access a report's [calculated fields](#) collection.

- **Data Adapter**

Determines a report's data adapter used to populate the report's data source. It is created automatically when the Data Member property is defined. To learn more about this, refer to [Bind a Report to Data](#).

- **Data Member**

Determines a specific list in a report's Data Source, for which the Report Designer objects display data. To learn more about this, refer to [Bind a Report to Data](#).

Note

Usually, it is not necessary to specify the Data Member property when binding a report to data. This property should only be set directly if the dataset contains more than one table.

- **Data Source**

Determines a report's data source. To learn more about this, refer to [Bind a Report to Data](#).

- **Filter String**

Allows you to invoke the Filter String Editor, which is intended to easily define a filtering condition for a report's data. For more information about this, refer to [Change or Apply Data Filtering to a Report](#).

- **Tag**

This property allows you to add some additional information to a report; for example its id, by which it can then be accessible via [scripts](#).

- **XML Data Path**

Allows you to define a path to data contained in an external XML file. The data contained in the file will then be used as a report's data source.

Design

- **(Name)**

Determines a report's name, by which it can be accessed in the [Report Explorer](#), [Property Grid](#) or via [scripts](#).

- **Data Source's Schema**

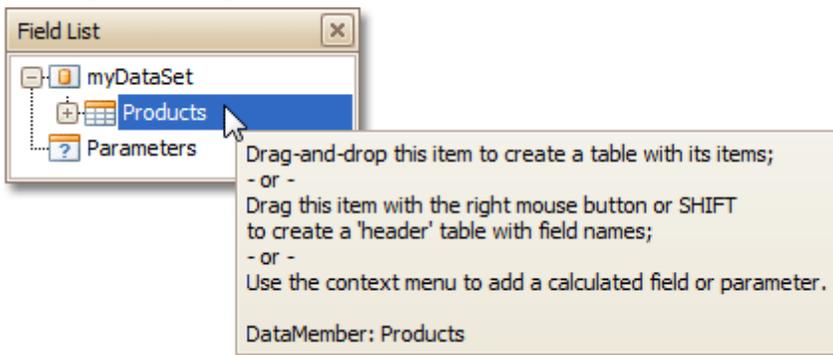
Allows you to load an XML/XSD file, containing the schema of a report's data source.

- **Designer Options**

Contains the following options.

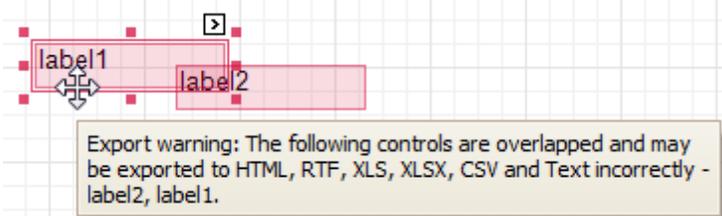
- **Show Designer's Hints**

The designer hints are intended to provide tooltips, both describing the purpose of certain report elements for inexperienced users, and describing the reasons and solutions for possible export or printing warnings. By using this property, these hints can be turned on or off.



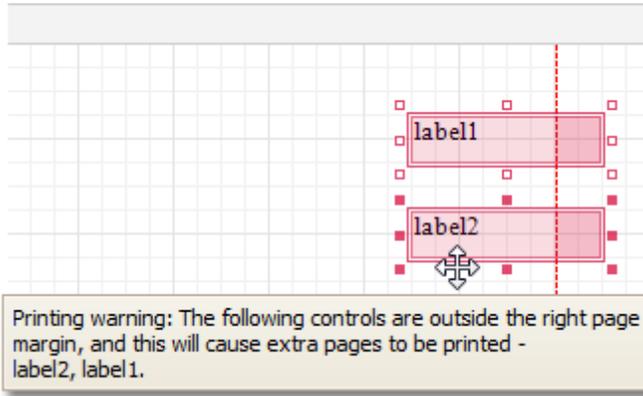
- **Show Export Warnings**

The export warnings appear when report controls are overlapped, indicating that a report layout may be incorrect when exporting to certain table-based formats (such as XLS, HTML or RTF).



- **Show Printing Warnings**

The printing warnings are intended to notify you that some of a report's controls are placed outside the right page margin, so that the report contains unnecessary pages.



- **Detail Print Count**

Specifies how many times the [Detail](#) band should be printed when a data source is defined for the report, and it is not empty.

- **Detail Print Count when Data Source is Empty**

Specifies how many times the Detail band should be printed when no data source is defined for the report.

- **Draw the Grid**

Determines whether to draw the [Snap Grid](#) when a report is being designed.

- **Snap Grid Size**

Determines the size of the [Snap Grid](#)'s cells.

- **Snap to Grid**

Specifies whether to snap controls to the Snap Grid when they are [located or resized](#).

- **Snapping Mode**

Specifies the snapping mode for report elements when they are being [aligned using the Snap Grid](#).

Navigation

- **Bookmark**

Allows you to define how a report is named in the document map when the [report bookmarks](#) are implemented. By default, it is synchronized with the report's Name property.

Page Settings

- **Landscape**

Determines whether the page orientation is Landscape (when set to Yes) or Portrait (when set to No).

- **Margins**

Determines the width of a report's margins (measured in [report units](#)).

Note

Note that the report's Margins.Top and Margins.Bottom properties are tied to the Height property of the [Page Margin Bands](#). So, changing these properties' values will cause changing the appropriate bands' Height value as well, and vice versa.

- **Page Height**

Specifies page height, in [report units](#). This property can only be set if the Paper Kind property is set to Custom.

- **Page Width**

Specifies page width, in [report units](#). This property can only be set if the Paper Kind property is set to Custom.

- **Paper Kind**

Determines the type of paper for a report. Setting this property to any value different from Custom will prevent the Page Height, Page Width and Paper Name properties from being customized.

Note

If the Paper Kind property is set to Custom, then the printer paper will be selected according to the Paper Name property's value. In this case, it's also necessary to set the Page Width and Page Height properties to the corresponding values of the paper selected.

Paper Name

Determines the name of the custom paper used in the printer that will print the document.

The Paper Name property's value is in effect only when the Paper Kind property is set to Custom. If the printer on which a document is printed doesn't support the paper type specified by the Paper Name property's value, then it will default to the Letter paper size. In this case, it's also necessary to set the Page Width and Page Height properties to the corresponding values of the selected paper.

Printer Name

Determines the name of the printer to use when printing a report. Note that the specified printer should be installed on the machine.

Using Settings of the Default Printer

Specifies which of the default printer's settings should be used when printing a report.

Parameters**Parameters**

Allows you to access a report's [parameters](#) collection.

Request Parameters

Allows you to define whether it's required to request the values of a report's [parameters](#) when generating the report.

Printing**Report Print Options**

Specifies options that define how a report is printed in various circumstances.

- BlankDetailCount

Specifies how many times the empty Detail band is repeated before printing the regular data.

- Detail Count

Specifies how many times the Detail band should be printed when a datasource is defined for the report, and it is not empty.

- Detail Count at Design Time

Specifies how many times the Detail band is printed when a report is being previewed at design time.

- Detail Count when Data Source is Empty

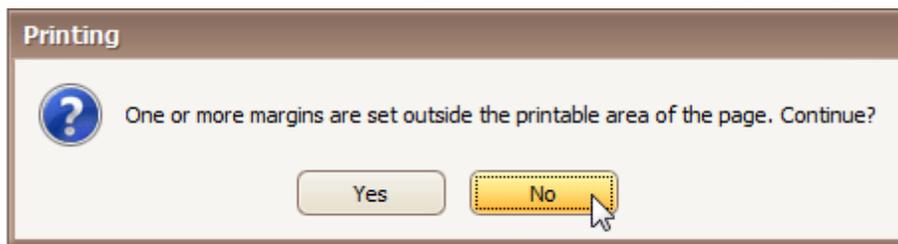
Specifies how many times the Detail band should be printed when no datasource is defined for the report.

- Print when Data Source is Empty

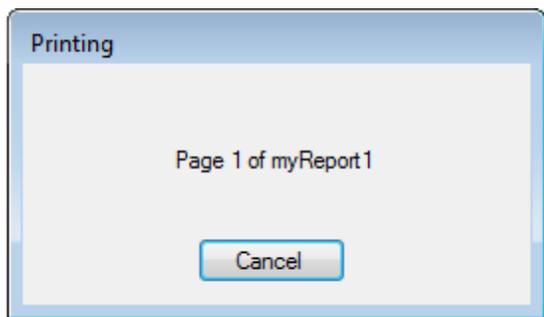
Specifies whether or not a report should be printed if its datasource is empty.

Show Print Margin Warnings

Specifies whether an error message is shown when the page margins are set outside the printable area.

**Show Print Status Dialog**

Specifies whether a print status dialog is shown when a document is being printed.

**Structure**

- **Bands**

Allows you to invoke the Report Editor, intended to manage and customize a report's [bands](#).

Report Wizard

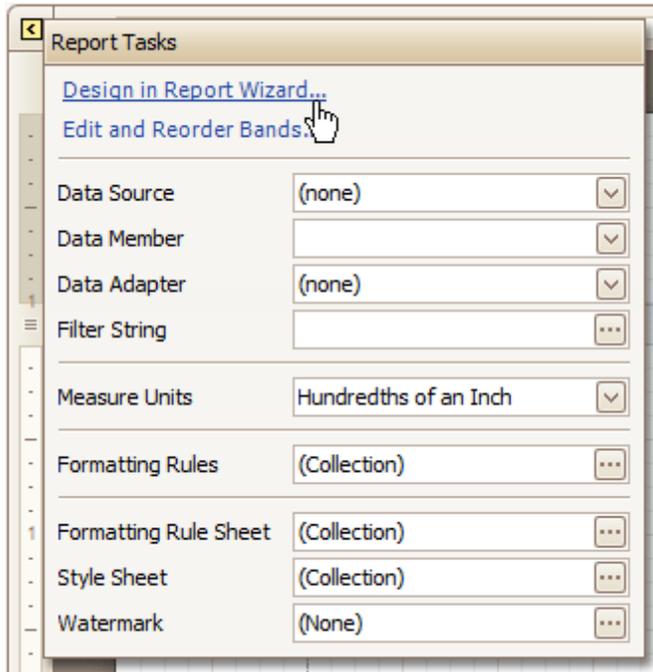
The **Report Wizard** is a tool that allows you to easily create reports based on built-in templates. Using this tool, you can do the following.

- **Create a new report from scratch**

In the main menu, select **File | New via Wizard...** or press CTRL+W.

- **Edit an existing report**

Click the report's [Smart Tag](#) and in the invoked actions list, click the **Design in Report Wizard...** context link.



Note

In this case, data binding steps are omitted, since a report already has a bound data source. Note that the initial report layout will be lost after completing the wizard.

The Report Wizard provides three different ways to setup your report.

- **Empty Report**

This option allows you to create a report that is not bound to data and does not contain any report controls.

- [Data-bound Report Wizard](#)

Using this wizard, you can easily create a banded report displaying data in a tabular format. While setting up your report, you'll be able to group data, add totals to your report, apply one of the predefined report styles, etc.

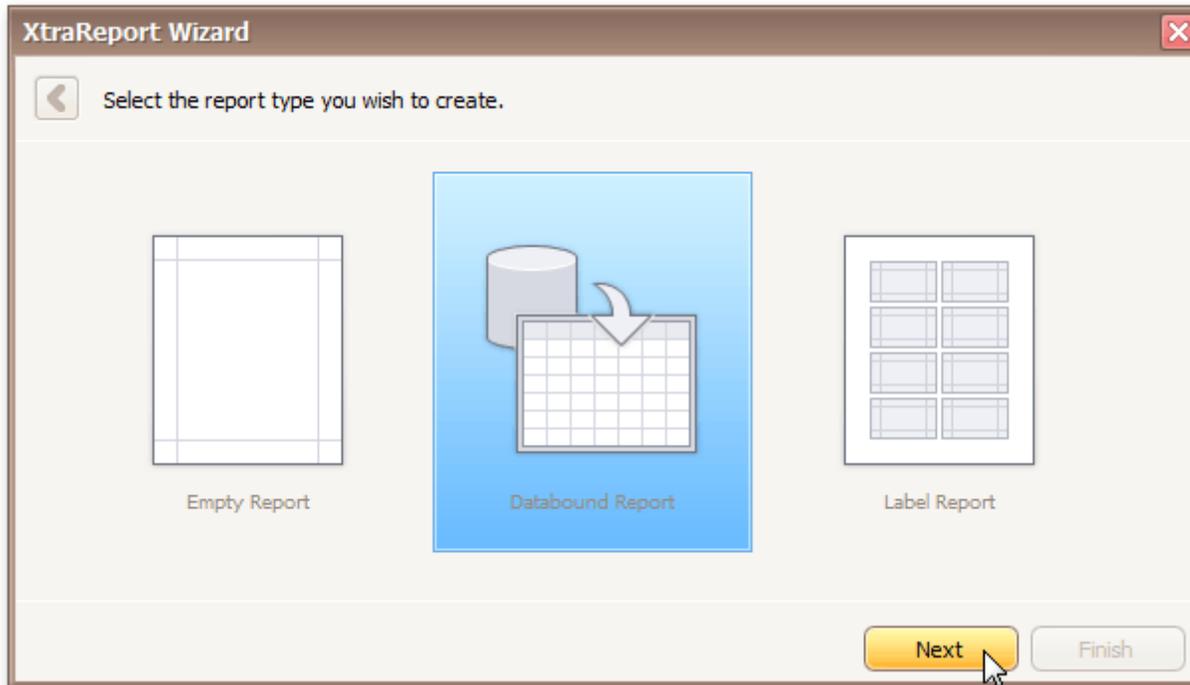
- [Label Report Wizard](#)

This wizard is useful if you need to print out labels. In this case, you're likely to purchase label paper that meets your particular requirements. Depending on paper supplier and label type, your report will need to generate labels with a specific size and location within paper sheets.

With the Label Report Wizard, you won't have to adjust these settings manually, since we provide a wide choice of paper suppliers and their products. Simply choose your paper type, and the report is adjusted automatically. After completing the wizard, you get an empty report that clearly indicates label boundaries, and of course, properly positions labels within paper sheets.

Data-bound Report Wizard

The **Report Wizard** allows you to create reports of three kinds - **empty reports**, **data-bound reports** and [label reports](#). To create a data-bound report, [invoke the Report Wizard dialog](#) and select the **Data-bound Report** option on the first wizard page.



After completing the Data-bound Report wizard, you will get a tabular banded report. Depending on how many wizard steps you complete (you don't necessarily have to go through all the pages), you can apply data grouping, display totals, select one of the predefined style sheets, etc.

The following image shows a sample report created using the Data-bound Report Wizard.

My First Report

Category ID 1

Product ID	Product Name	Unit Price	Units In Stock	Units On Order
1	Chai	\$18.00	39	0
2	Chang	\$19.00	17	40
24	Guaraná Fantástica	\$4.50	20	0
34	Sasquatch Ale	\$14.00	111	0
35	Steeleye Stout	\$18.00	20	0
38	Côte de Blaye	\$263.50	17	0
39	Chartreuse verte	\$18.00	69	0
43	Ippoh Coffee	\$46.00	17	10
67	Laughing Lumberjack Lager	\$14.00	52	0
70	Outback Lager	\$15.00	15	10
75	Rhônebräu Klosterbier	\$7.75	125	0
76	Lakkaiköödi	\$18.00	57	0
Avg		\$37.98		

Category ID 2

Product ID	Product Name	Unit Price	Units In Stock	Units On Order
3	Aniseed Syrup	\$10.00	13	70
4	Chef Anton's Cajun Seasoning	\$22.00	53	0
5	Chef Anton's Gumbo Mix	\$21.35	0	0
6	Grandma's Boysenberry Spread	\$25.00	120	0

Use the links below to learn more about every step of the Data-bound Report wizard.

Note

Depending on the method you used to [invoke the Wizard](#), you may be creating an entirely new report or modifying an existing one. Creating reports from scratch requires database connection knowledge. In these cases, it's better if you contact your application administrator or vendor for assistance with the first three steps of the wizard. If you're modifying an existing report, these initial data binding steps will not appear and you will start with [Choose Columns to Display in Your Report](#).

- [Select the Data Source Type](#)
- [Connect to a Database](#)
 - [Select a Data Connection](#)
 - [Specify a Connection String](#)
 - [Save the Connection String](#)
 - [Customize the Query](#)
- [Connect to an Entity Framework Data Source](#)
 - [Select the Data Context](#)
 - [Select the Connection String](#)
 - [Bind to a Stored Procedure](#)
- [Choose Columns to Display in Your Report](#)
- [Add Grouping Levels](#)
- [Summary Options](#)
- [Choose Report Layout](#)
- [Choose Report Style](#)
- [Enter a Report Title](#)

Connect to a Database

The topics in this section describe the steps required to connect a report to a database using the [Report Wizard](#).

This task includes the following steps.

- [Select a Data Connection](#)
- [Specify a Connection String](#)
- [Save the Connection String](#)
- [Customize the Query](#)

Select a Data Connection

Note

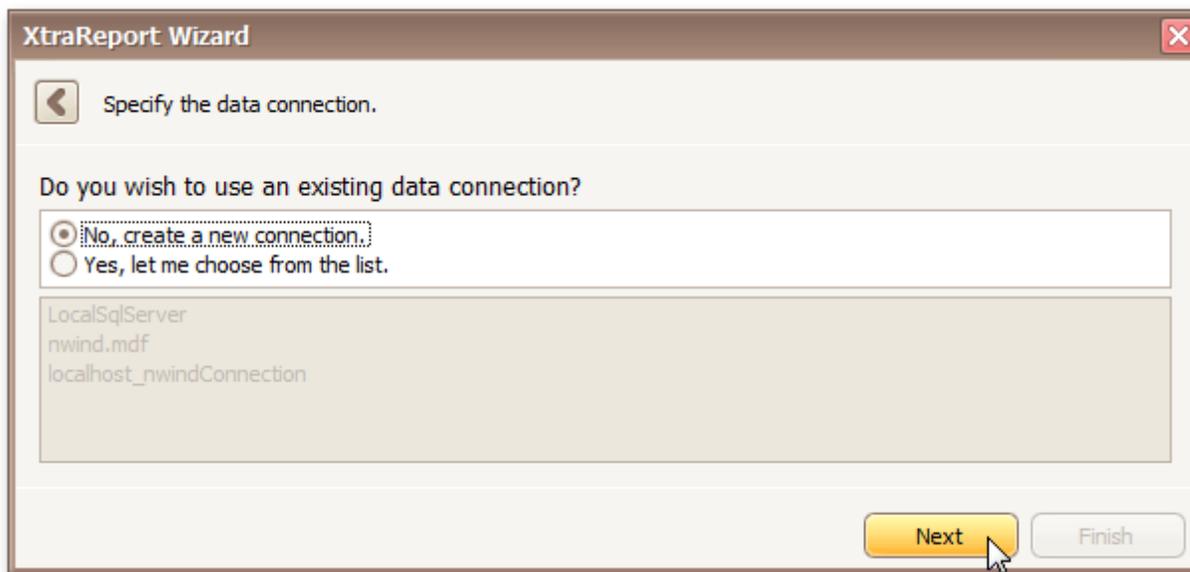
This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, you will skip this step and start with the [Choose Columns to Display in Your Report](#) wizard page.

Purpose

Connect to a database whose data will be shown in your report.

Page Interface

On this page you can either select one of the currently available data connections from the list, or create a new one.



Click **Next** to proceed to the next wizard page, depending on the selected option.

- [Specify a Connection String](#)
- [Customize the Query](#)

Specify a Connection String

Note

This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with the [Choose Columns to Display in Your Report](#) wizard page.

Purpose

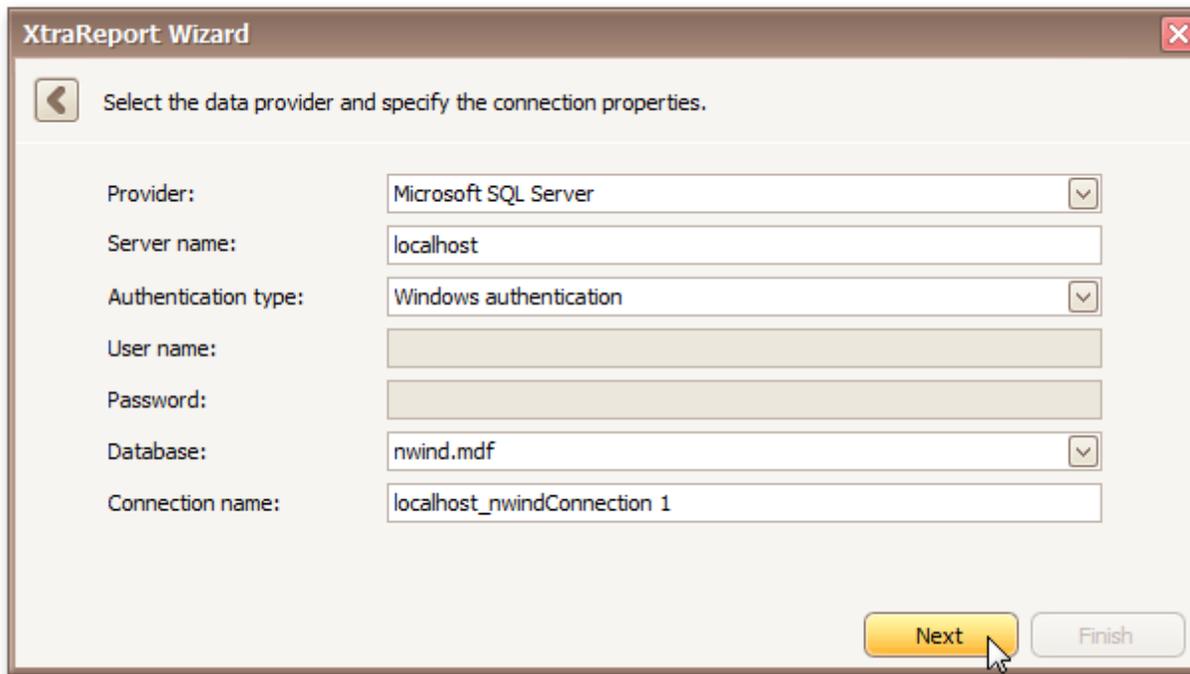
On this page, define a custom connection string or select one of the supported data source types.

The following data source types are supported.

- Microsoft SQL Server
- Microsoft Access 97
- Microsoft Access 2007
- Oracle server
- XML file
- SAP Sybase Advantage
- SAP Sybase ASE
- IBM DB2
- Firebird
- MySQL
- Pervasive PSQL
- PostgreSQL
- VistaDB
- Microsoft SQL Server CE
- SQLite

Page Interface

Select the provider type in the **Provider** drop-down list. Next, specify the connection options required for the selected provider type (e.g., authentication type and database name).



XtraReport Wizard

Select the data provider and specify the connection properties.

Provider: Microsoft SQL Server

Server name: localhost

Authentication type: Windows authentication

User name:

Password:

Database: nwind.mdf

Connection name: localhost_nwindConnection 1

Next Finish

Click **Next** to proceed to the next wizard page, depending on whether or not the created connection uses server authentication.

- [Save the Connection String](#) - if server authentication is required, this page allows you to specify whether or not you want to save the user credentials along with the connection string.
- [Customize the Query](#) - if server authentication is not required, the page above does not appear, and you will proceed to constructing the query.

Save the Connection String

Note

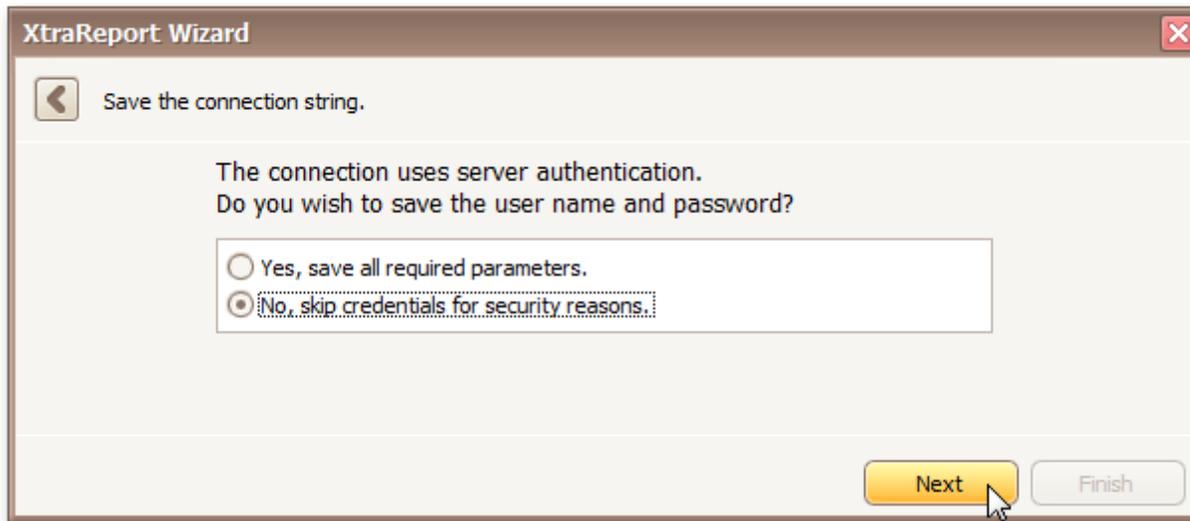
This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with the [Choose Columns to Display in Your Report](#) wizard page.

Purpose

On this page, you can specify whether or not to save the user credentials along with the connection string.

Page Interface

Select the required option in the list.



Click **Next** to proceed to the next wizard page: [Customize the Query](#).

Customize the Query

Note

This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with the [Choose Columns to Display in Your Report](#) wizard page.

Purpose

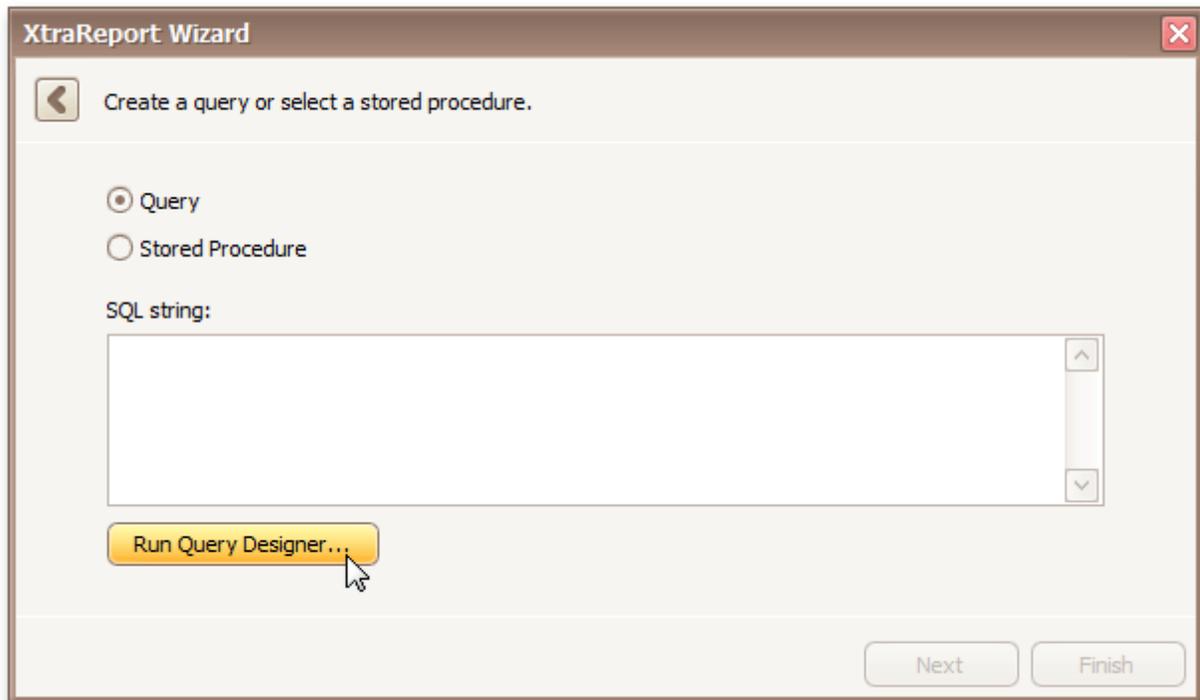
On this page, you can construct an SQL query to obtain data from the database, or select a stored procedure.

- [Query](#)
- [Stored Procedure](#)

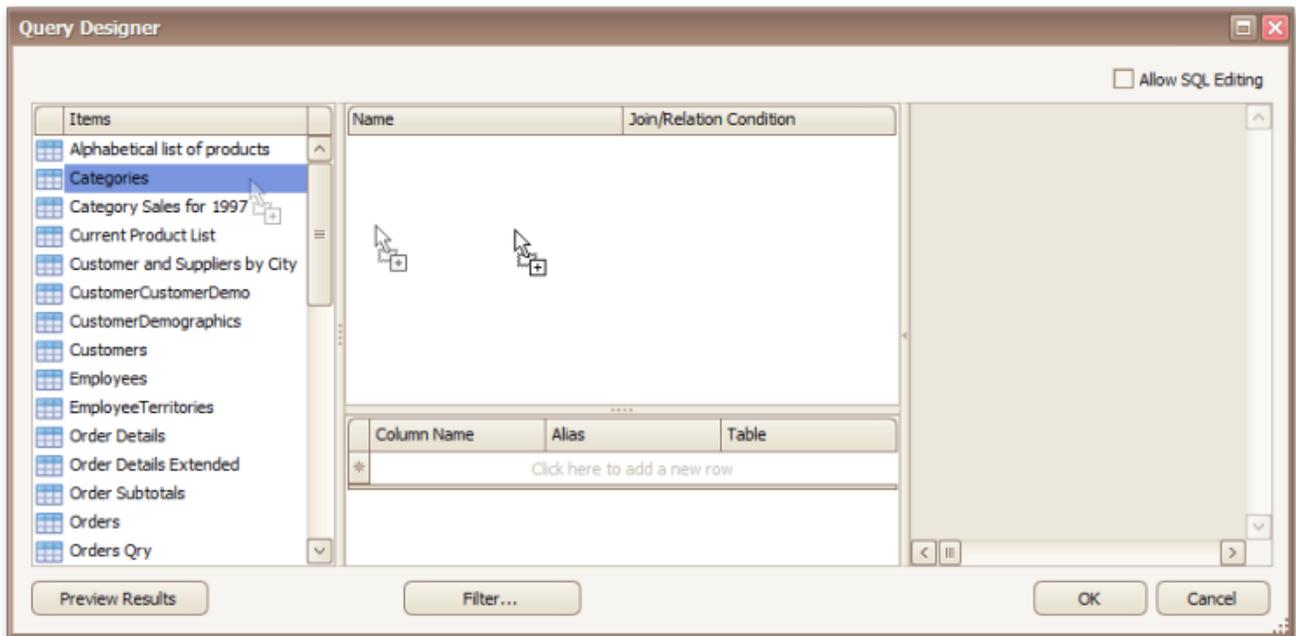
Query

To construct an SQL query, do the following.

1. Click the **Run Query Designer...** button.

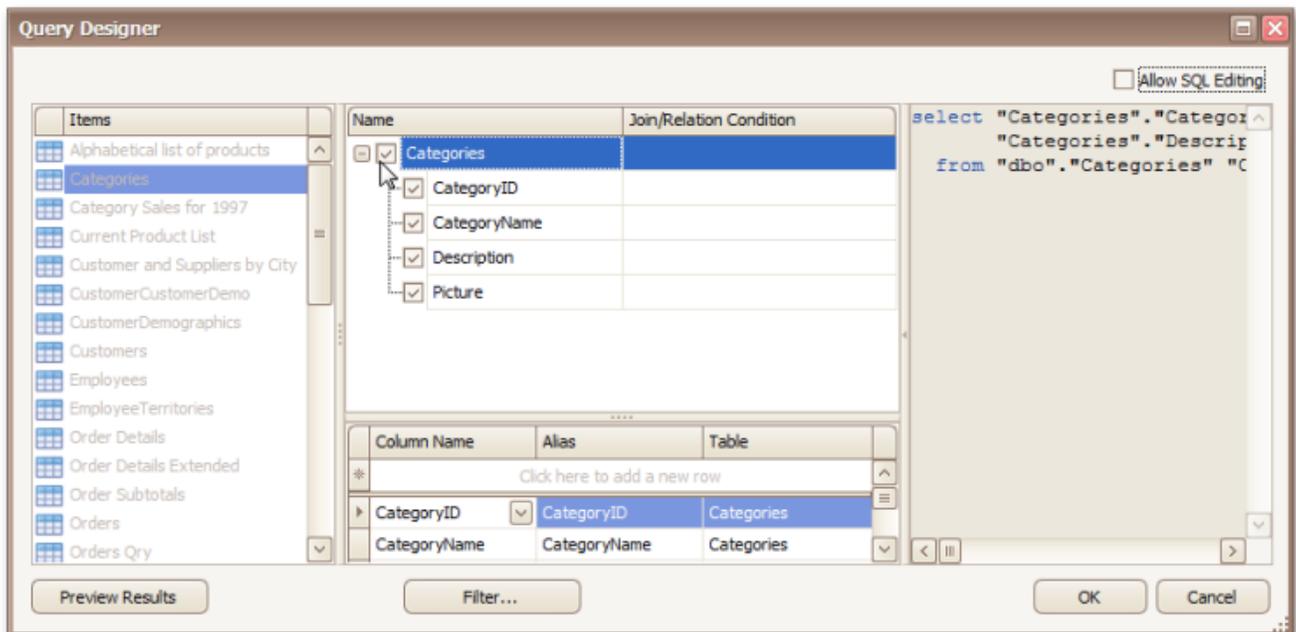


2. In the invoked **Query Designer** window, select an item from the list of available tables on the left and drop it onto the list of data tables to be used.



It is only possible to select a single table using the **Query Designer**. When creating a [master-detail report](#), add the master table first.

3. Enable the check box near the added table to include all of its fields in the data view.



To assign a custom name to a data field, specify its **Alias** in the field list displayed below.

To manually customize an SQL string, enable the **Allow SQL Editing** option. Switching to this mode disables the visual features of the **Query Designer** allowing you to directly edit the text of the SQL query.

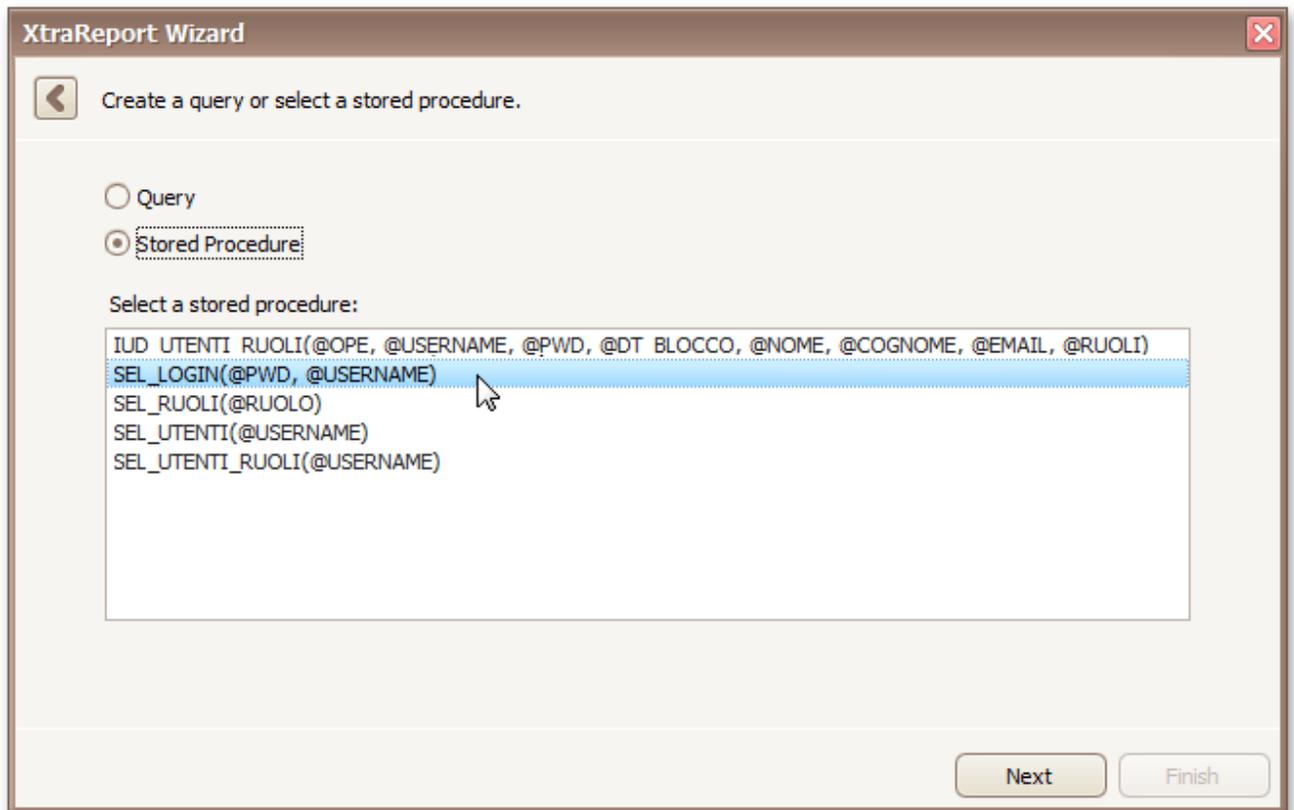
Click **OK** to exit the **Query Designer**

Click **Next** to proceed to the next wizard page: [Choose Columns to Display in Your Report](#).

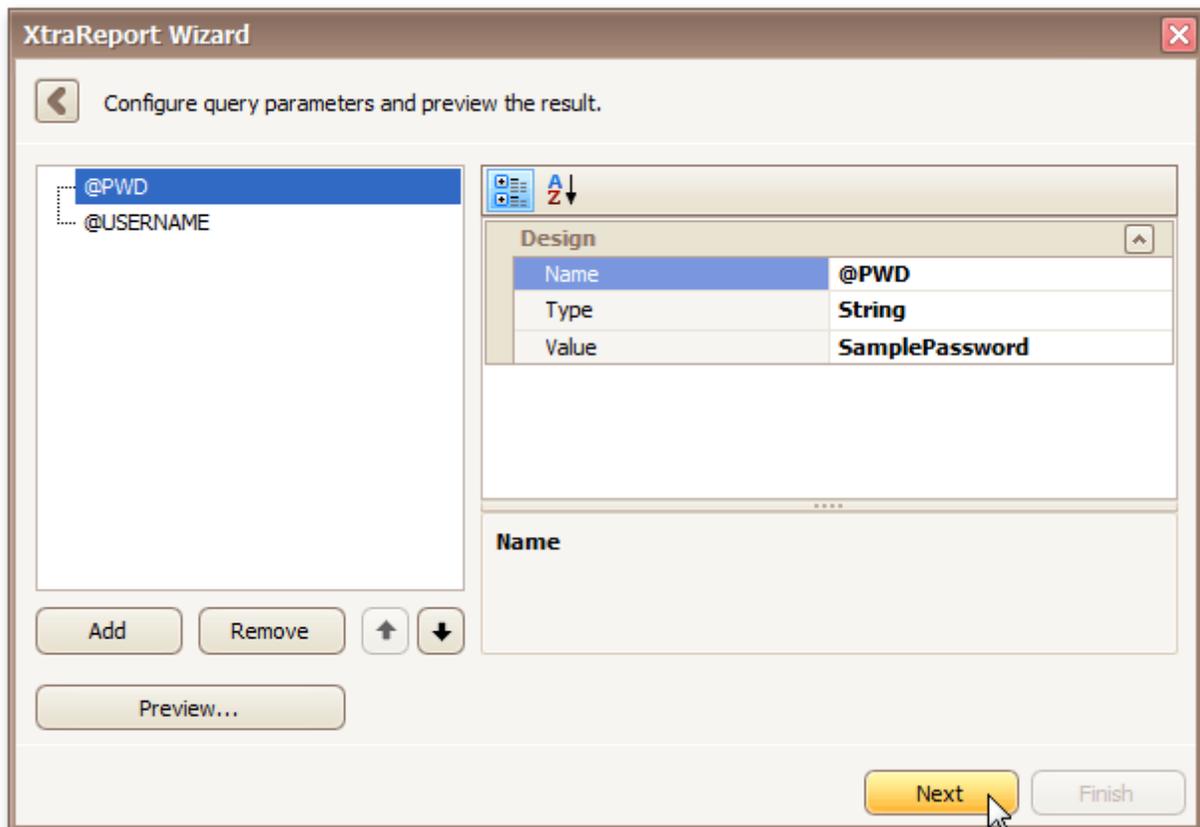
Stored Procedure

To use a stored procedure, do the following.

1. Select a stored procedure from the list of the available stored procedures and click **Next**.



2. Configure the parameters to be passed to the selected stored procedure. Make sure that the value of the passed parameter's **Type** property corresponds to the actual type the stored procedure parameter.



Click **Next** to proceed to the next wizard page: [Choose Columns to Display in Your Report.](#)

Connect to an Entity Framework Data Source

The topics in this section describe the steps required to connect a report to an Entity Framework data source using the [Report Wizard](#).

This task includes the following steps.

- [Select the Data Context](#)
- [Select the Connection String](#)
- [Bind to a Stored Procedure](#)

Select the Data Context

Note

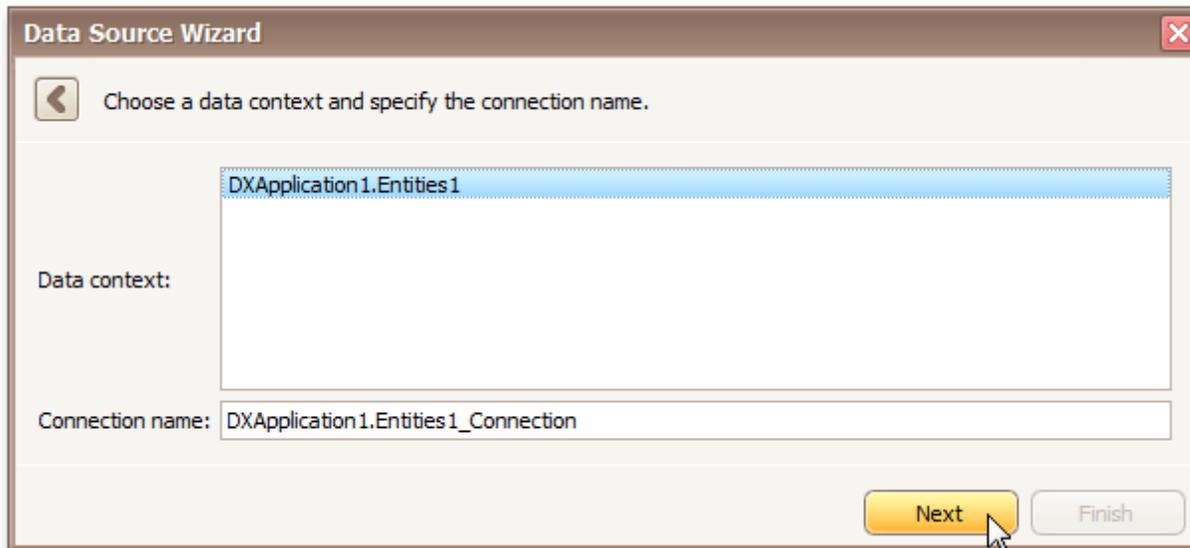
This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with [Choose Columns to Display in Your Report](#) wizard page.

Purpose

Connect to an Entity Framework data context that will provide data to your report.

Page Interface

On this page, select the required data context from the list of available data contexts.



Click **Next** to proceed to the next wizard page: [Select the Connection String](#).

Select the Connection String

Note

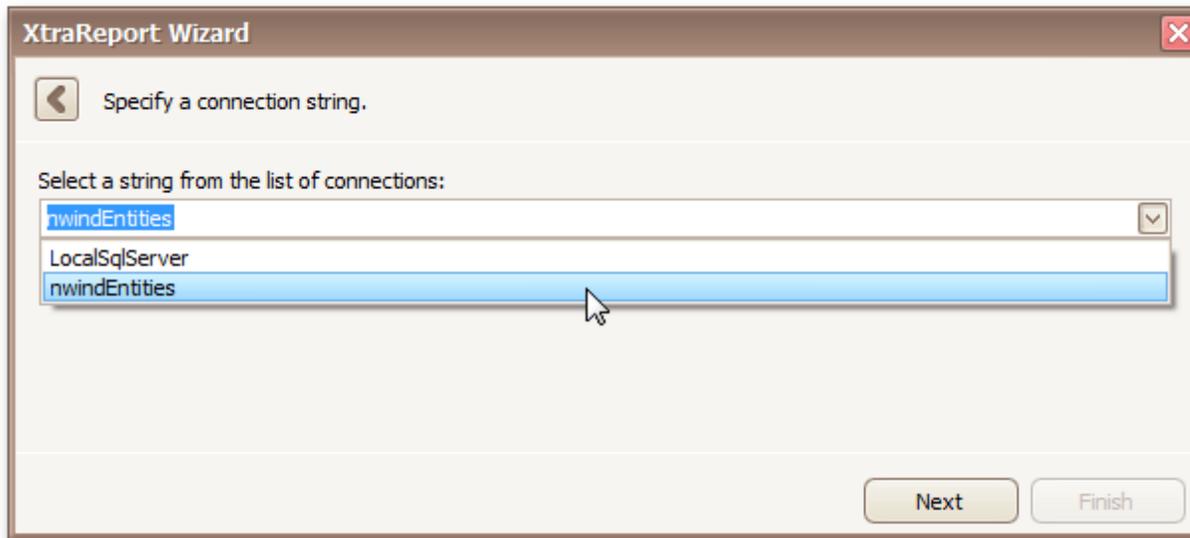
This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with the [Choose Columns to Display in Your Report](#) wizard page.

Purpose

Select a connection string to be used to establish a data connection.

Page Interface

Select the required connection string from the drop-down list.



Click **Next** to proceed to the next wizard page: [Bind to a Stored Procedure](#).

Bind to a Stored Procedure

Note

This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with the [Choose Columns to Display in Your Report](#) wizard page.

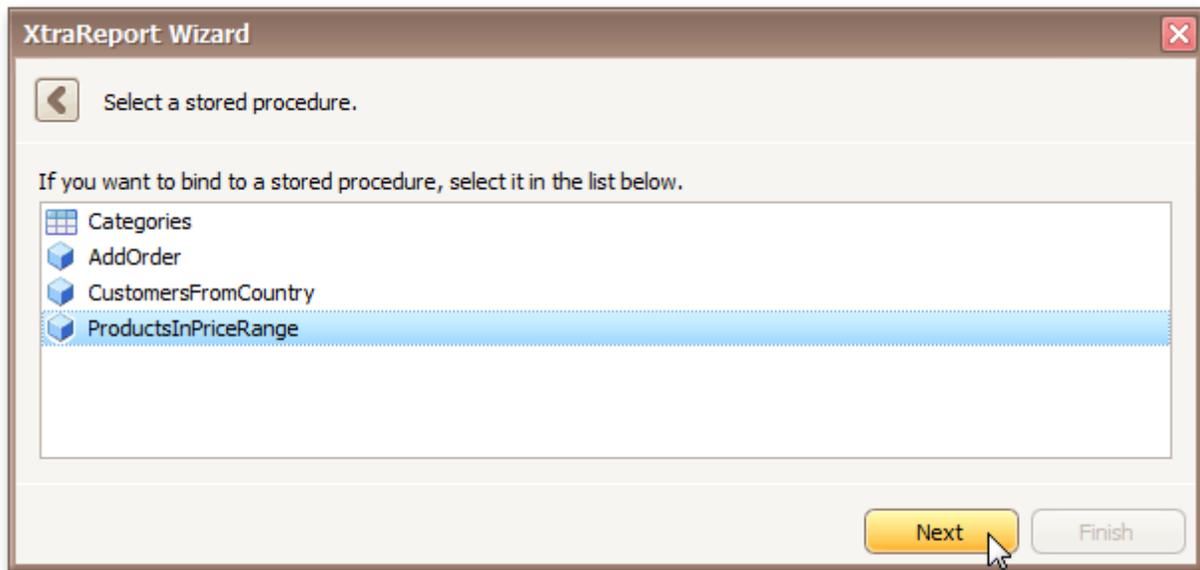
Purpose

Bind to a stored procedure provided by an Entity Framework data context.

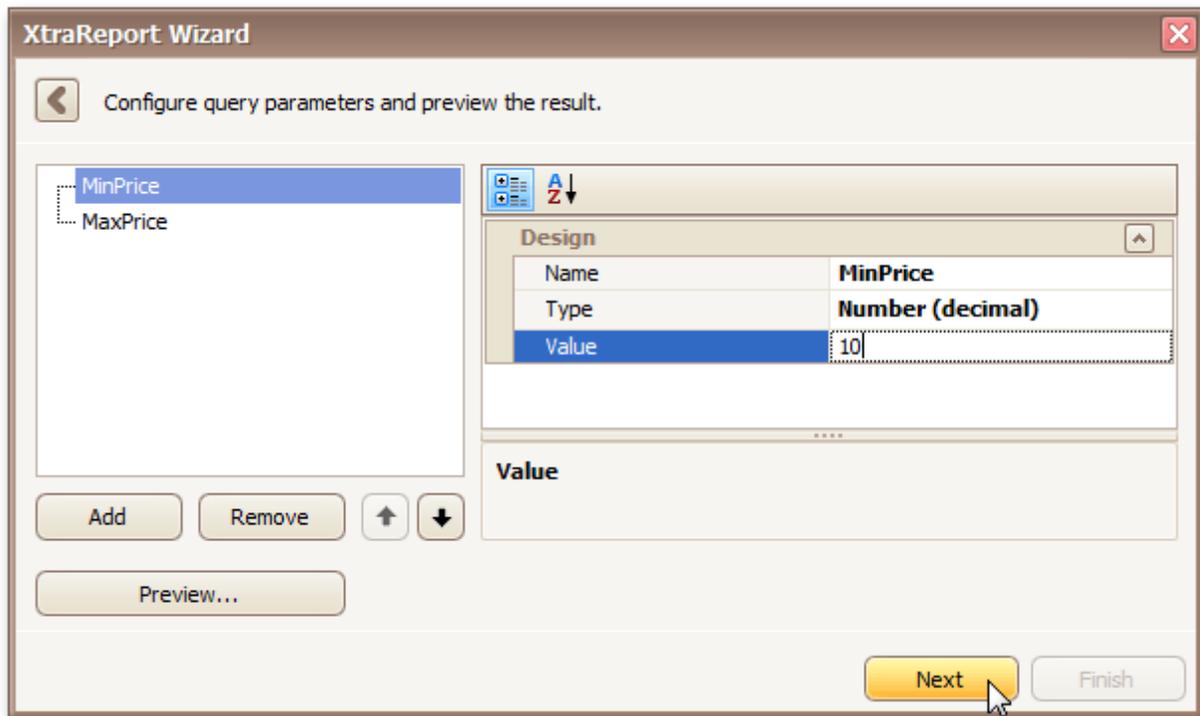
Page Interface

To bind to a stored procedure, do the following.

1. Select a stored procedure in the list and click **Next**.



2. Configure the parameters to be passed to the selected stored procedure. Make sure that the value of the passed parameter's **Type** property corresponds to the actual type the stored procedure parameter.



Click **Next** to proceed to the next wizard page: [Choose Columns to Display in Your Report](#).

Select the Data Source Type

Note

This wizard step appears only if you're creating a new report from scratch. In this instance, familiarity with database connections is required, so we recommend that you contact your application administrator or vendor for assistance. If you're modifying an existing report, this step will not appear and you will start with [Choose Columns to Display in Your Report](#).

The first page allows you to select the required data source type.



Click **Next** to proceed to the next wizard page, depending on the selected data source type.

- [Connect to a Database](#)
- [Connect to an Entity Framework Data Source](#)

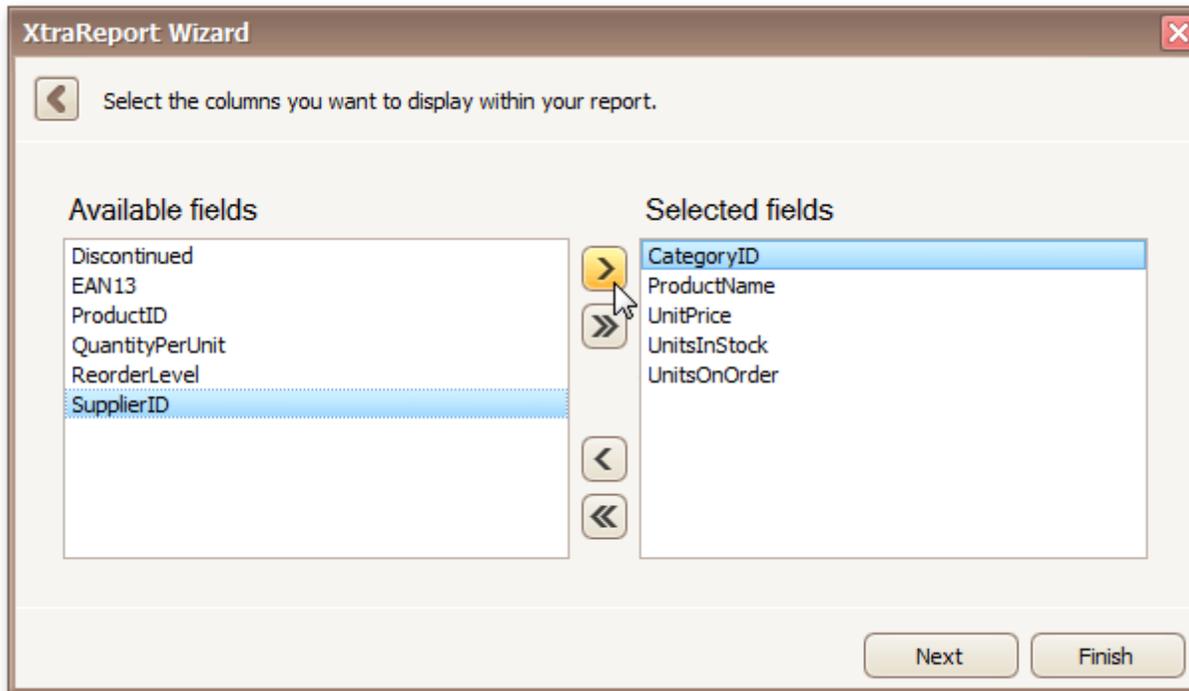
Choose Columns to Display in Your Report

Purpose

Choose fields (attributes) whose data will be displayed in your report. The selected fields and corresponding captions will be automatically added to your report, arranged one under another.

Page Interface

The list on the left-hand side shows all available fields (attributes). To select the required fields, double-click them or drag them to the list box on the right-hand side. Another way to select fields is to use arrow buttons to move them back and forth.



Note

To continue or finish report creation, you must select at least one field.

Result

You can stop the wizard at this step by clicking **Finish**. In this case, your report will look similar to the image below.

Report1

Category ID	1
Product Name	Chai
Units On Order	0
Unit Price	\$18.00
Units In Stock	39

Category ID	1
Product Name	Chang
Units On Order	40
Unit Price	\$19.00
Units In Stock	17

Category ID	2
Product Name	Aniseed Syrup
Units On Order	70
Unit Price	\$10.00
Units In Stock	13

Category ID	2
Product Name	Chef Anton's Cajun Seasoning
Units On Order	0
Unit Price	\$22.00
Units In Stock	53

If you want to customize your report further, click **Next** to proceed to the next wizard page: [Add Grouping Levels](#).

Add Grouping Levels

Purpose

This page allows you to group data in your report. For instance, if you are displaying car sales information, you may want to keep records corresponding to the same model together. Each set of records with the same model will become a "group" with its own header.

Nested grouping and grouping against multiple fields are fully supported. The following image illustrates all basic grouping types.

No grouping			
BMW	525i	1/1/2009	1
BMW	525i	1/2/2009	2
BMW	740i	1/3/2009	3
Toyota	Camry	1/4/2009	4
Toyota	Prius	1/5/2009	5
Toyota	Prius	1/6/2009	6

One-level Grouping			
BMW			
525i	1/1/2009	1	
525i	1/2/2009	2	
740i	1/3/2009	3	
Toyota			
Camry	1/4/2009	4	
Prius	1/5/2009	5	
Prius	1/6/2009	6	

Nested Grouping			
BMW			
525i			
1/1/2009	1		
1/2/2009	2		
740i			
1/3/2009	3		
Toyota			
Camry			
1/4/2009	4		
Prius			
1/5/2009	5		
1/6/2009	6		

Multiple Fields			
BMW 525i			
1/1/2009	1		
1/2/2009	2		
BMW 740i			
1/3/2009	3		
Toyota Camry			
1/4/2009	4		
Toyota Prius			
1/5/2009	5		
1/6/2009	6		

Note

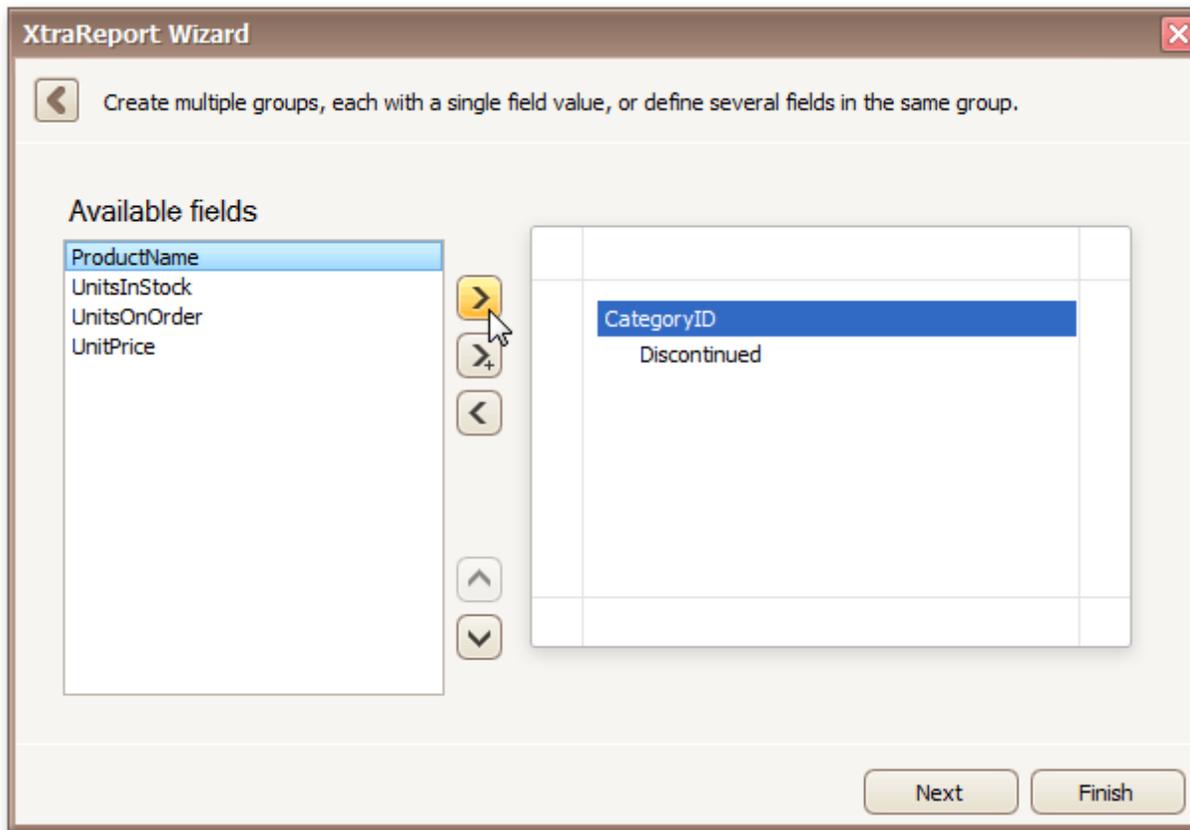
If you don't need to group your data, simply click **Next** on this page to skip this step.

Page Interface

The list on the left-hand side displays data fields that can be used to group data. To apply grouping, do one of the following.

- Select columns and click the right arrow (>) button.
- Double-click columns.

Note that grouping fields on the right-hand side can be selected by clicking them. This is useful if you need to remove them or change their order. To accomplish the latter, use the up arrow (⬆) and down arrow (⬇) buttons.



Result

You can stop the wizard on this step by clicking **Finish**. In this case, your report will look similar to the image below.

Report1

Category ID	Discontinued	Product Name	Unit Price	Units In Stock	Units On Order
1	<input type="checkbox"/>	Chai	\$18.00	39	0
		Chang	\$19.00	17	40
		Sasquatch Ale	\$14.00	111	0
		Steeleye Stout	\$18.00	20	0
		Côte de Blaye	\$263.50	17	0
		Chartreuse verte	\$18.00	69	0
		Ipoh Coffee	\$46.00	17	10
		Laughing Lumberjack Lager	\$14.00	52	0
		Outback Lager	\$15.00	15	10
		Rhônebräu Klosterbier	\$7.75	125	0
		Lakkalikööri	\$18.00	57	0
	<input checked="" type="checkbox"/>	Guaraná Fantástica	\$4.50	20	0
2	<input type="checkbox"/>	Aniseed Syrup	\$10.00	13	70
		Chef Anton's Cajun Seasoning	\$22.00	53	0
		Grandma's Boysenberry Spread	\$25.00	120	0
		Northwoods Cranberry Sauce	\$40.00	6	0
		Genen Shouyu	\$15.50	39	0
		Gula Malacca	\$19.45	27	0
		Sirop d'érable	\$28.50	113	0
		Veggie-spread	\$43.90	24	0
		Louisiana Fiery Hot Pepper Sauce	\$21.05	76	0
		Louisiana Hot Spiced Okra	\$17.00	4	100
		Original Frankfurter grüne Soße	\$13.00	32	0
	<input checked="" type="checkbox"/>	Chef Anton's Gumbo Mix	\$21.35	0	0

If you want to customize your report further, click **Next**. If data grouping has been applied on this page, you'll proceed to [Summary Options](#) page. If you haven't grouped your data, you'll skip the Summaries step and go to [Choose Report Layout](#) page.

Summary Options

Note

This wizard step is only available if you've applied data grouping in the previous step ([Add Grouping Levels](#)). If you haven't grouped data, this step is skipped.

Purpose

Use this page to specify totals to be displayed for each data group and grand totals for the entire report. For instance, you may need to display the sum of values in a particular field, the average value, etc. Specified totals will be displayed after corresponding groups, and in the report footer.

Page Interface

This page displays all available numerical and date-time fields that aren't used to group data. Using the check box table, you can specify which functions should be calculated for these fields.

Sometimes, data fields can contain empty values (this is different from, say, zero in a numeric field). If you don't want to take these values into account when calculating totals, check **Ignore NULL values**. Otherwise, these values will be treated as zeros for numeric fields and the earliest system date for date-time fields.

	Avg	Count	Max	Min	Sum
UnitPrice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UnitsInStock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
UnitsOnOrder	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ignore null values

Next Finish

Result

You can stop the wizard on this step by clicking **Finish**. In this case, your report will look similar to the image below.

Report1				
Category ID	Product Name	Unit Price	Units In Stock	Units On Order
1				
	Chai	\$18.00	39	0
	Chang	\$19.00	17	40
	Guaraná Fantástica	\$4.50	20	0
	Sasquatch Ale	\$14.00	111	0
	Steeleye Stout	\$18.00	20	0
	Côte de Blaye	\$263.50	17	0
	Chartreuse verte	\$18.00	69	0
	Ipoñ Coffee	\$46.00	17	10
	Laughing Lumberjack Lager	\$14.00	52	0
	Outback Lager	\$15.00	15	10
	Rhönbräu Klosterbier	\$7.75	125	0
	Lakkalikööri	\$18.00	57	0
	Sum		559	
	Avg	\$37.98		
	Max			40
2				
	Aniseed Syrup	\$10.00	13	70
	Chef Anton's Cajun Seasoning	\$22.00	53	0

If you want to customize your report further, click **Next** to proceed to the next wizard page: [Choose Report Layout](#).

Choose Report Layout

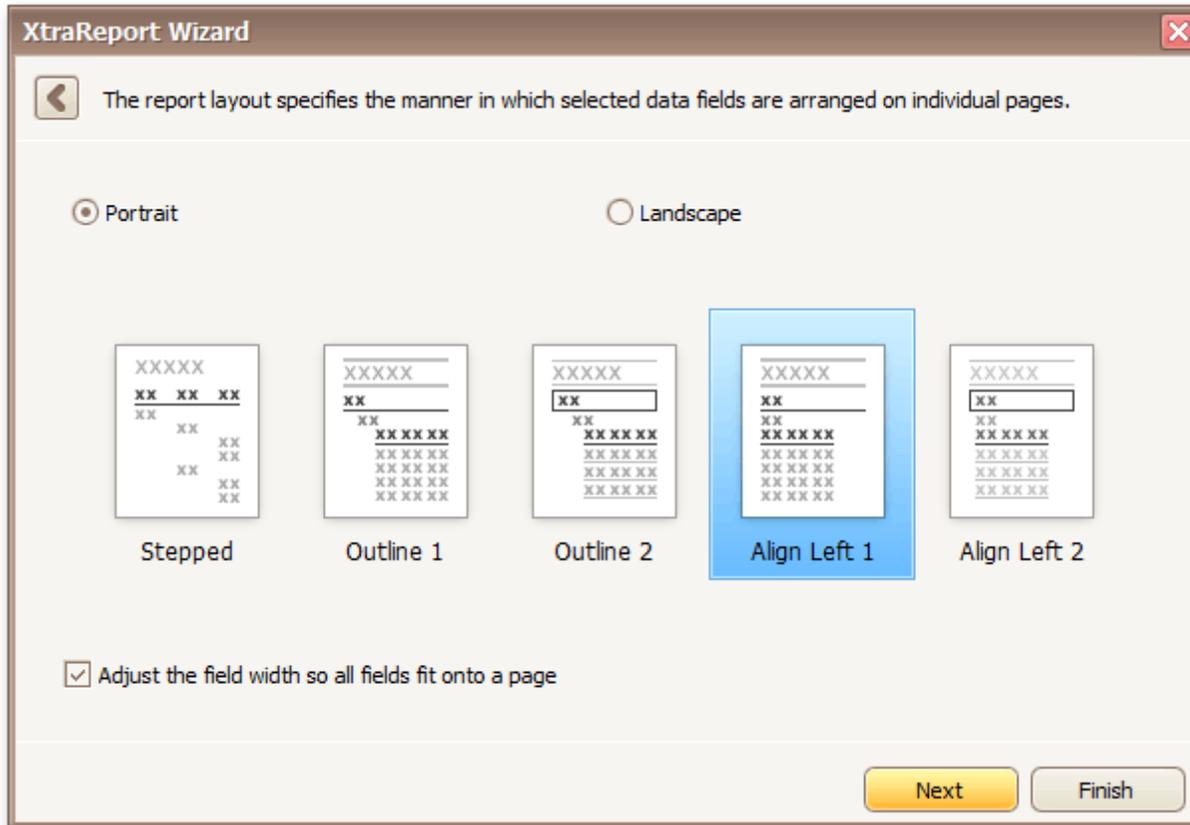
Purpose

This page sets the layout of elements in your report. If you haven't applied data grouping, you can specify how data field values are arranged - into a table, one under another, etc. If report data is grouped, you can choose one of the available indentation styles for nested elements.

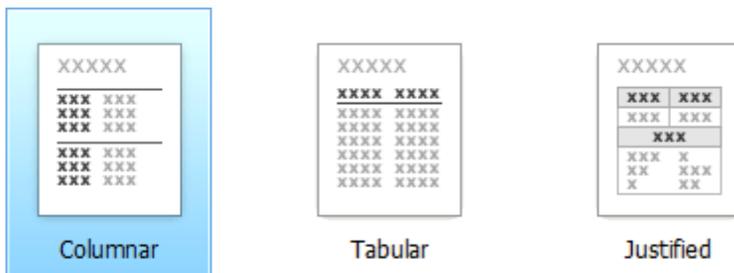
Additionally, this page allows you to specify the page orientation for your report.

Page Interface

The following options are available if data grouping has been applied.



If data hasn't been grouped, you will see the following report layout options.



If you want to customize your report further, click **Next** to proceed to the next page: [Choose Report Style](#). Otherwise, click **Finish** to complete report customization.

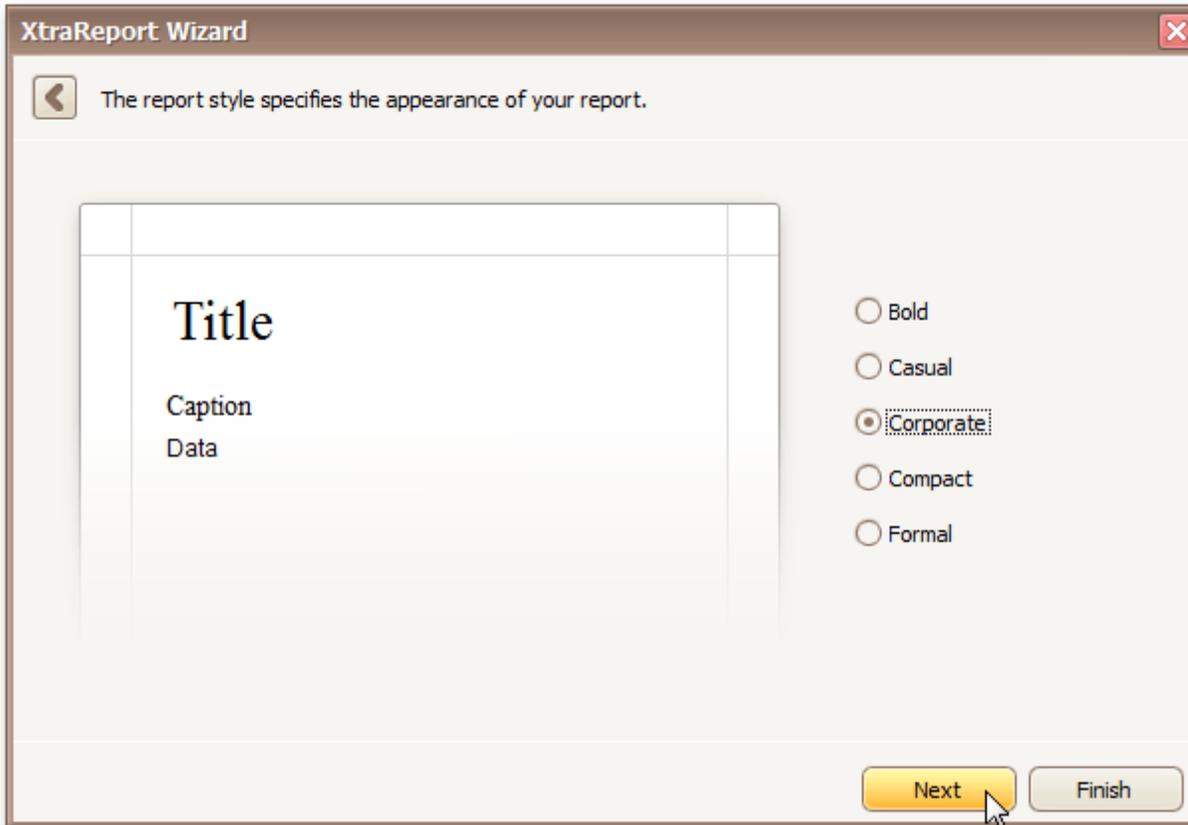
Choose Report Style

Purpose

Apply a predefined style sheet to your report.

Page Interface

Select one of the predefined styles from the list box.



If you want to customize your report further, click **Next** to proceed to the next page: [Enter a Report Title](#). Otherwise, click **Finish** to complete report customization.

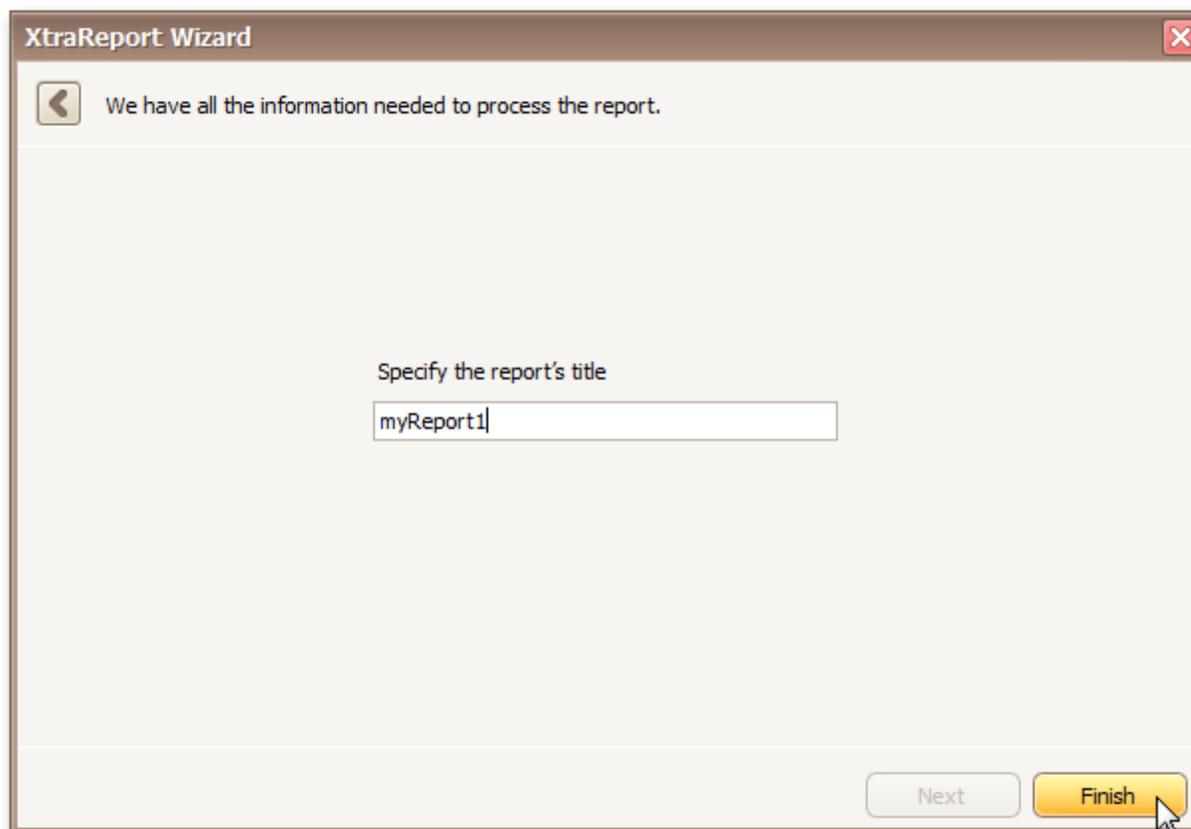
Enter a Report Title

Purpose

Specifies the report title.

Page Interface

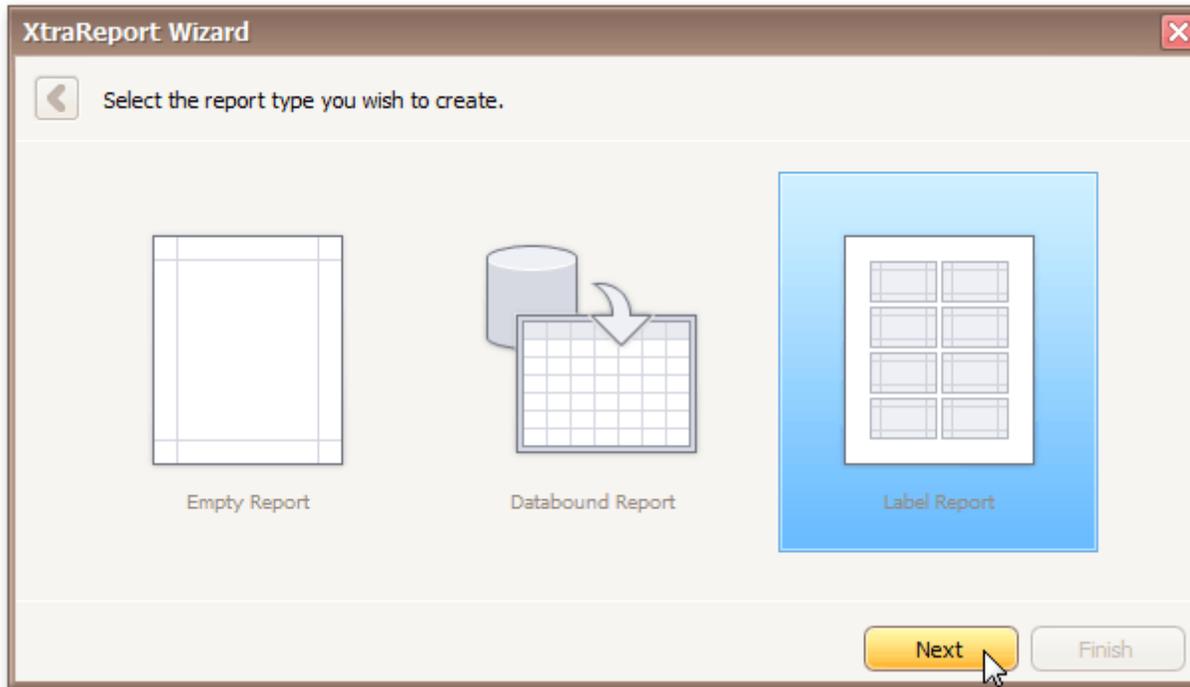
Enter a title string into the editor and click **Finish** to complete report creation.



The screenshot shows a dialog box titled "XtraReport Wizard" with a close button in the top right corner. The main area contains a left-pointing arrow icon and the text "We have all the information needed to process the report." Below this is a large empty space. In the center, the text "Specify the report's title" is displayed above a text input field containing "myReport1". At the bottom right, there are two buttons: "Next" (disabled) and "Finish" (active, highlighted in yellow, with a mouse cursor over it).

Label Report Wizard

The **Report Wizard** allows you to create reports of three kinds - **empty reports**, [databound reports](#) and **label reports**. To create a label report, [invoke the Report Wizard dialog](#) and choose the **Label Report** option on the **Welcome** page.



After completing the Label Report wizard, you will get a blank report that generates labels of a particular size. Since the report designer will clearly indicate the label area, you can then populate this area with the required content and print out your labels.

Use the links below, to learn more about every step in the Label Report wizard.

- [Select a Label Type](#)
- [Customize Label Options](#)

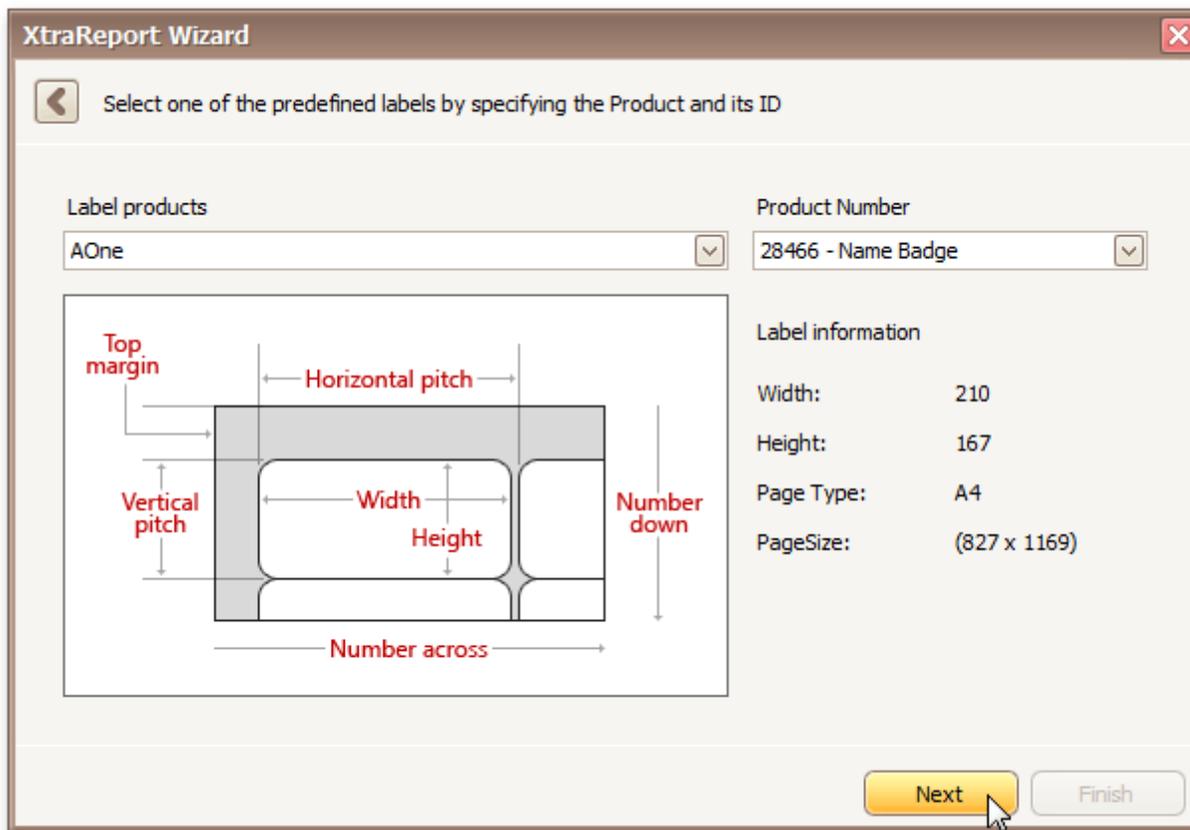
Select a Label Type

Purpose

When you need to print out stickers or, say, water-proof labels, you need to purchase the appropriate paper. Every supplier will provide its own specific label size or label position within a paper sheet. To make it easier for you to produce labels, this wizard step lists several label paper suppliers and their products. Once you've selected a supplier and a product (paper and label type), the report will change its settings so that your labels will be printed exactly where they're supposed to, without you having to adjust the label position and size manually.

Page Interface

On this page, choose the supplier from the **Label Products** combo box and a particular product from the **Product Number** list. The box on the left-hand side will be updated to show you label dimensions for the currently selected product.



If you don't need further customization, click **Finish** to complete the report adjustment. If manual correction of label or paper size is required, click **Next**.

Customize Label Options

Purpose

On this page, you can manually adjust settings that were automatically specified in the previous step, based on your supplier and product choice.

Page Interface

Editors on this page allow free customization of all parameters specified on the previous page. The pane on the left-hand side provides a label dimensions preview based on current values.

The screenshot shows the XtraReport Wizard dialog box with the following elements:

- Title Bar:** XtraReport Wizard
- Navigation:** A back arrow icon and the text "You can adjust the label's parameters here if required."
- Diagram:** A diagram of a label with dimensions labeled: Top margin, Horizontal pitch, Vertical pitch, Width, Height, Number down, and Number across.
- Parameters:**
 - Label Width: 210
 - Label Height: 167
 - Vertical Pitch: 167
 - Horizontal Pitch: 225
 - Top Margin: 85
 - Side Margin: 75
- Page Size:** A4 (827 x 1169)
- Buttons:** Next and Finish (highlighted with a mouse cursor).

Click **Finish** to complete report setup.

Preview, Print and Export Reports

Preview and Print a Report

To switch a report to the print preview mode, click the [Preview Tab](#). You will see your report populated with data and broken down into pages, as specified. When in the Print Preview mode, you can print out your report using the appropriate menu and toolbar commands.

Note

To learn more about the options available in the print preview mode, refer to the [Print Preview](#) section of this documentation.

Export a Report

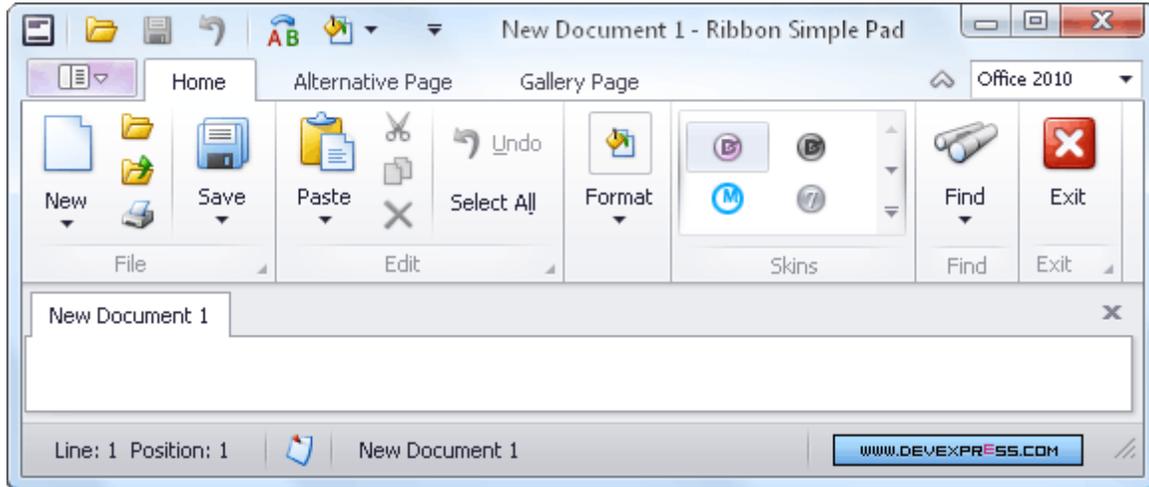
In the [Preview Tab](#), you can export your report to files in different formats. The resulting files can either be saved to the hard drive or sent by e-mail.

The following documents describe the basics of report exporting and format-specific export options.

- [Exporting from Print Preview](#)
- [PDF-Specific Export Options](#)
- [HTML-Specific Export Options](#)
- [MHT-Specific Export Options](#)
- [RTF-Specific Export Options](#)
- [XLS-Specific Export Options](#)
- [XLSX-Specific Export Options](#)
- [CSV-Specific Export Options](#)
- [TXT-Specific Export Options](#)
- [Image-Specific Export Options](#)

Ribbon

The Ribbon organizes commands into a tabbed interface, providing quick and intuitive access to these commands.

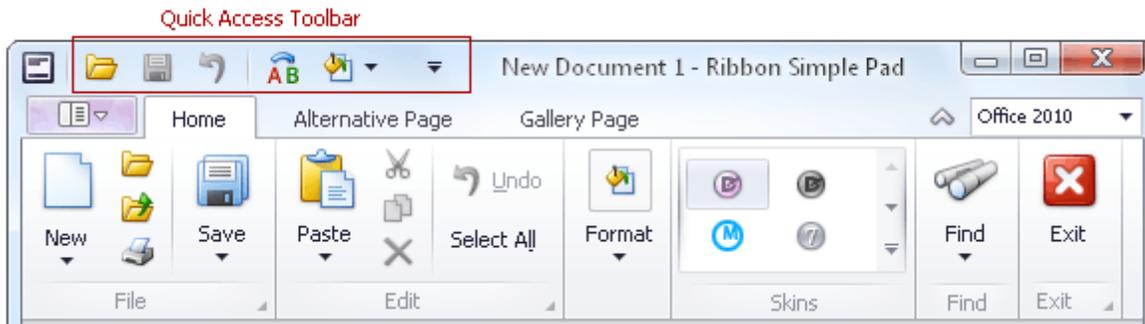


Topics in this section:

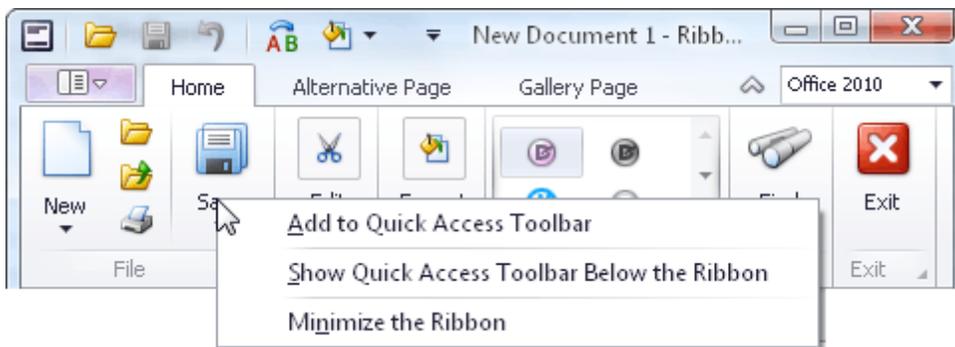
- [Frequently Used Ribbon Commands](#)
- [Minimize Ribbon](#)
- [Invoke Ribbon Commands](#)

Frequently Used Ribbon Commands

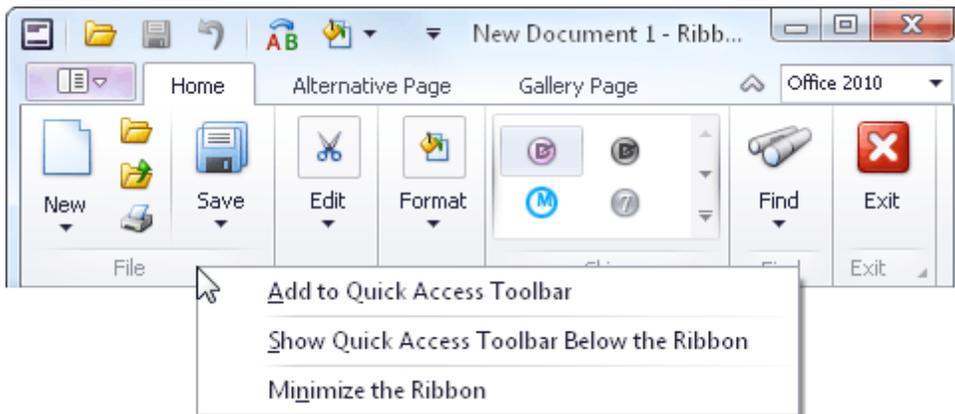
Frequently used commands are typically displayed within the Quick Access Toolbar, at the top of the Ribbon:



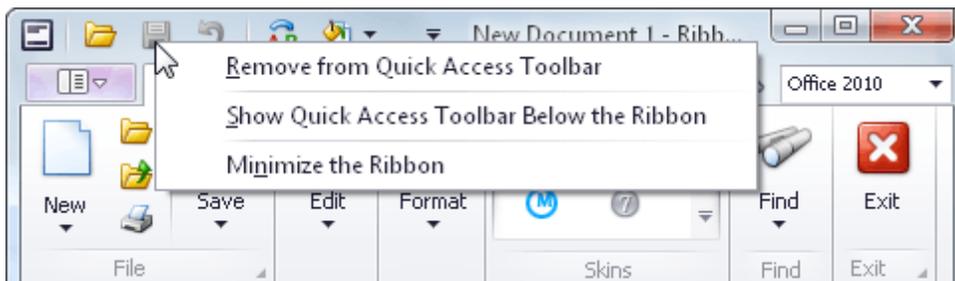
To add any command to the Quick Access Toolbar, right-click the command and select **Add to Quick Access Toolbar**:



To add a group of commands to the Quick Access Toolbar, right-click the group's caption and select **Add to Quick Access Toolbar**:

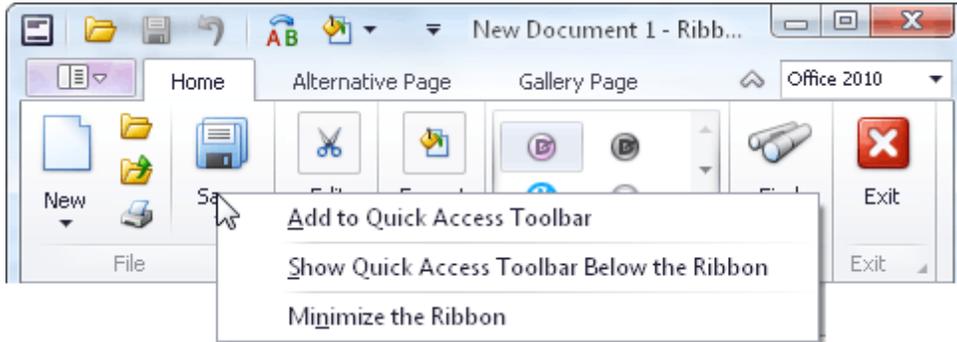


To remove any command from the Quick Access Toolbar, right-click the command and select **Remove from Quick Access Toolbar**:

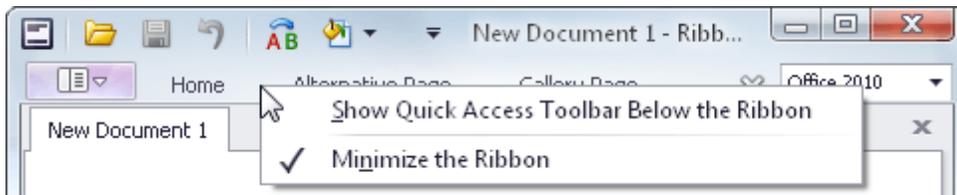


Minimize Ribbon

To minimize the Ribbon, right-click any command and select **Minimize the Ribbon**:



To restore the Ribbon, right-click any command or page and uncheck the **Minimize the Ribbon** option:

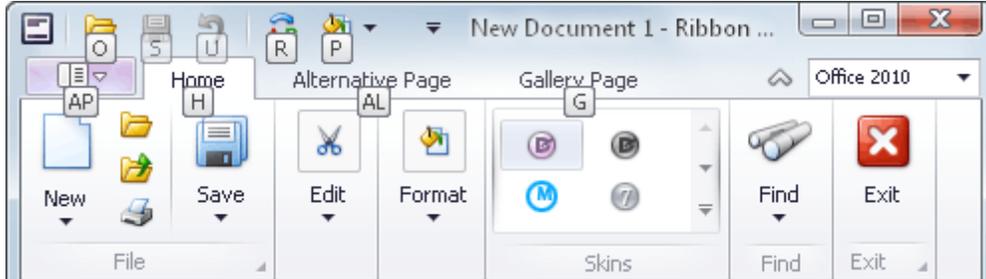


You can also minimize and restore the Ribbon by double-clicking any tab page header.

Invoke Ribbon Commands

To select a specific command, you can click it with the mouse or invoke it via its shortcut. See below for more information.

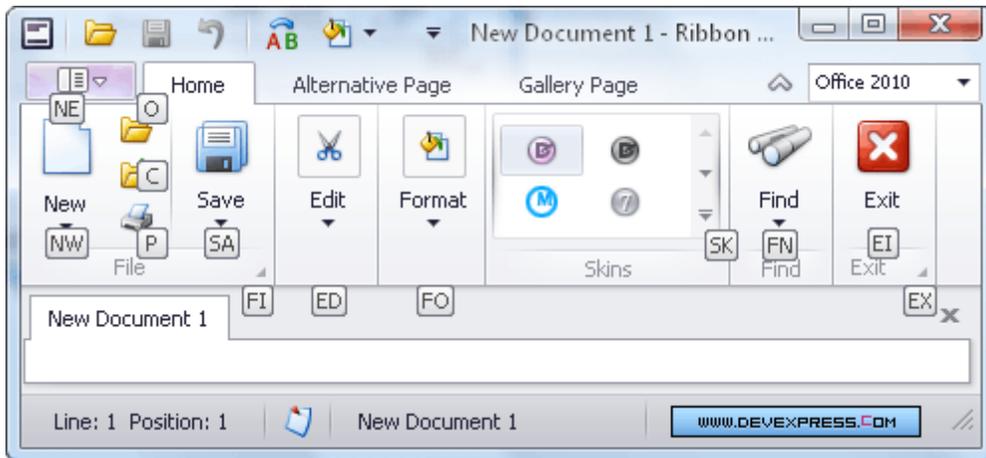
Shortcuts are associated with each page and command in the Ribbon. To see the shortcuts, press ALT or F10. Shortcuts will appear next to the corresponding tab pages and commands:



Shortcuts can be composed of one, two or three symbols. If a shortcut is represented by one symbol, you can invoke the command by pressing this symbol. If a shortcut is represented by two or three symbols, to invoke the command, press the symbols one after another.

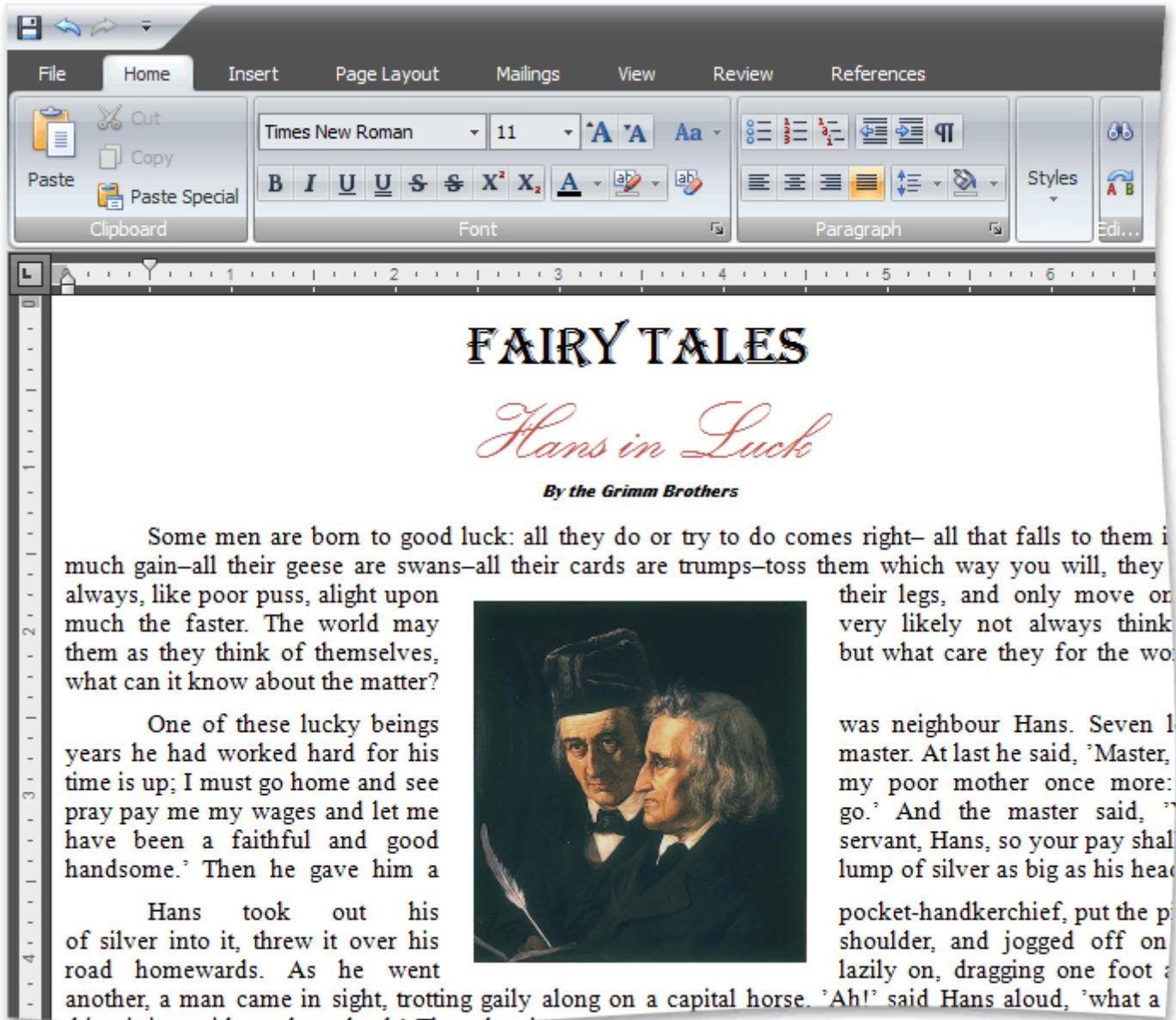
Initially, when pressing ALT or F10, shortcuts are displayed for commands within the Quick Access Toolbar (at the top of the Ribbon) and for tab pages. To access shortcuts for commands within a specific tab page, you need to press the shortcut associated with this page.

For example, to display shortcuts for commands within the Home page (see the image above), press **H**:



Rich Text Editor

This section describes the capabilities provided by the **Rich Text Editor**.



Text Editor UI

- [Editor Elements](#)
- [Toolbars](#)
- [Ribbon Interface](#)

File Operations

- [Create a New Document](#)
- [Load a Document](#)
- [Save a Document](#)
- [Print a Document](#)

Document Layout and Page Setup

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- [Adjust Page Settings](#)
- [Lay Out Text in Columns](#)
- [Add Line Numbers](#)
- [Change Page Background Color](#)

Viewing and Navigating

- [Navigate through a Document](#)
- [Switch Document Views](#)
- [Zoom a Document](#)

Text Editing

- [Select Text](#)
- [Delete Text](#)
- [Find and Replace Text](#)
- [Use a Clipboard](#)
- [Check Text Spelling](#)
- [Undo and Redo Last Operations](#)

Formatting

- [Format Text](#)
- [Format Paragraphs](#)
- [Apply and Modify Styles](#)

Pictures and Text Boxes

- [Insert a Picture](#)
- [Insert, Select, Copy or Delete a Text Box](#)
- [Add, Change or Delete a Border for a Picture or Text Box](#)
- [Add, Change or Delete a Text Box Fill](#)
- [Rotate a Picture or Text Box](#)
- [Move a Picture or Text Box](#)
- [Wrap Text around a Picture or Text Box](#)
- [Resize a Picture or Text Box](#)

Lists

- [Numbered Lists](#)
- [Bulleted Lists](#)
- [Multilevel Lists](#)

Tables

- [Insert a Table](#)
- [Add and Remove Table Borders](#)

- [Customize a Style of Cell Borders](#)
- [Select a Cell, Row or Column](#)
- [Insert a Cell, Row or Column](#)
- [Delete a Cell, Row or Column](#)
- [Merge or Split Cells](#)
- [Align Text in Table Cells](#)
- [Set Background Color of Cells](#)

Header and Footer

- [Header and Footer](#)

Embedding Fields (Mail Merge)

- [Mail Merge](#)

Table of Contents

- [Create a Table of Contents](#)
- [Create Table of Contents for Special Cases](#)
- [Update Table of Contents](#)

Document Protection

- [Protect and Unprotect a Document](#)
- [Edit a Protected Document](#)

Miscellaneous

- [Insert a Bookmark](#)
- [Insert a Hyperlink](#)
- [Insert a Page Break](#)
- [Insert Page Numbers](#)
- [Insert a Symbol](#)

Text Editor UI

Editor Elements

The **Rich Text Editor** consists of visual elements that provide you with the capability to edit and view documents.

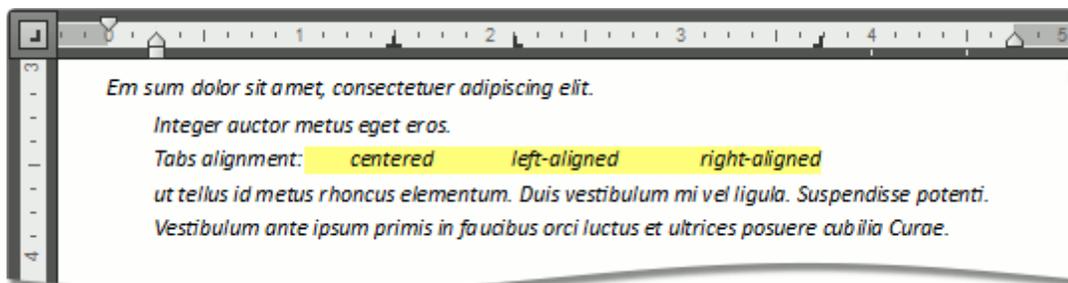


Main Elements

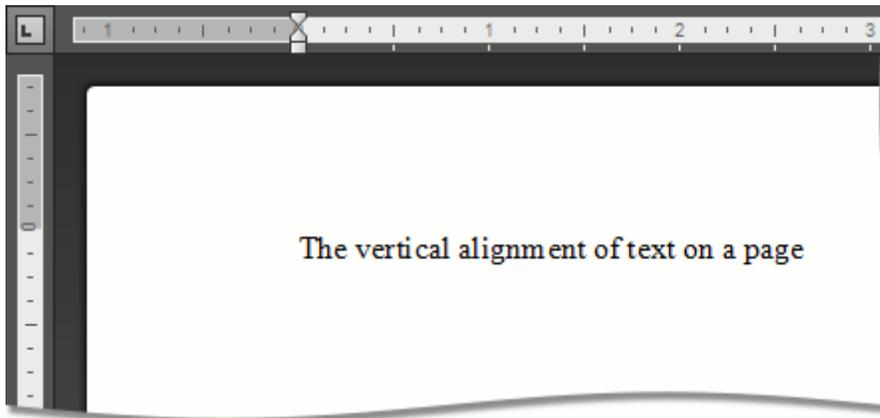
The main area of the **Rich Text Editor** control is the **Text Editing Surface** that displays a document to be edited. Here, a document can look as it will appear when you print it (**Print Layout View**) or with reduced formatting and pagination (**Simple View** or **Draft View**). For more information, see [Switch Document Views](#).

To the top and to the left of the **Text Editing Surface**, the **Rich Text Editor** displays horizontal and vertical **rulers**, which you can use to align text, graphics, and other elements in a document.

The **horizontal ruler** controls the width of table columns and the horizontal spacing of paragraph margins, columns and tabs.



The **vertical ruler** allows you to set the top and bottom margins of a document, and change the height of table rows.

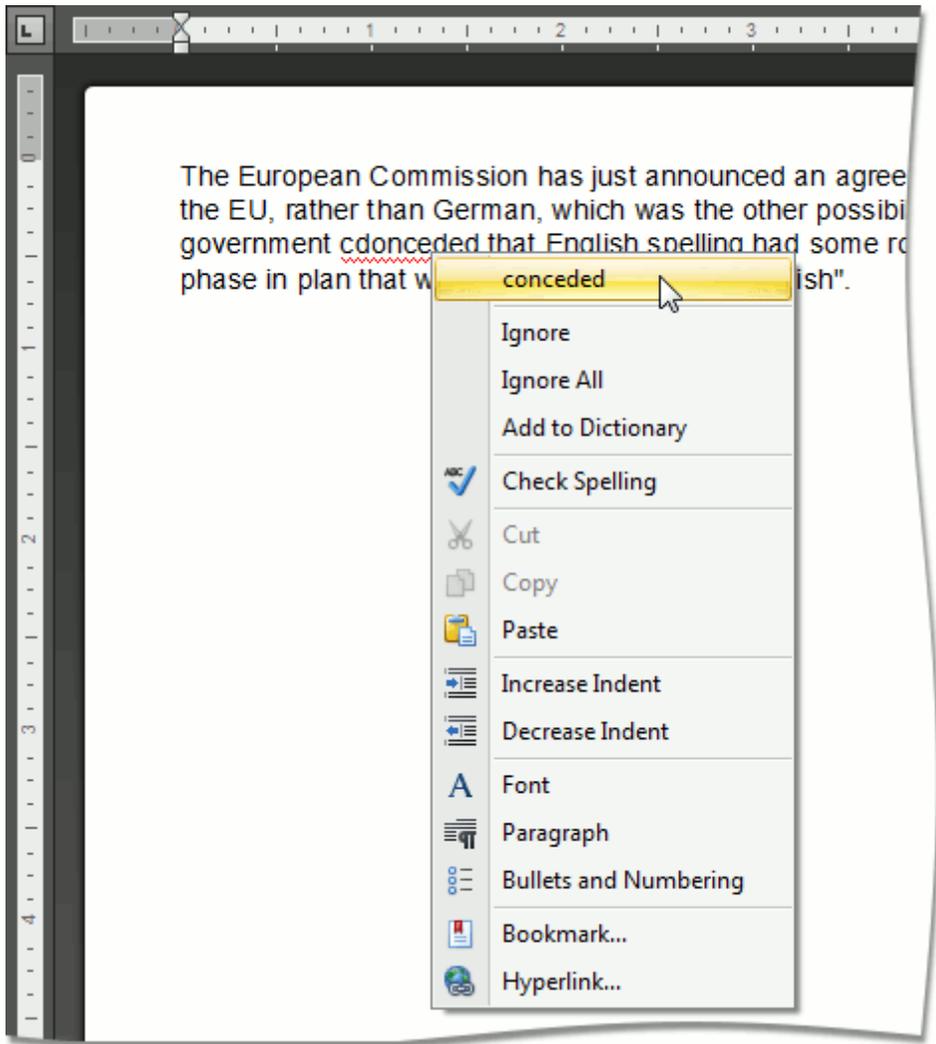
**Note**

If the ruler is hidden, [switch the current view](#) to either the **Draft View** or **Print Layout View**.

At the bottom and at the right of the **Text Editing Surface** there are horizontal and vertical **scrollbars**, which allow you to navigate through a document.

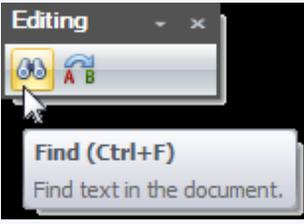
Context Menu

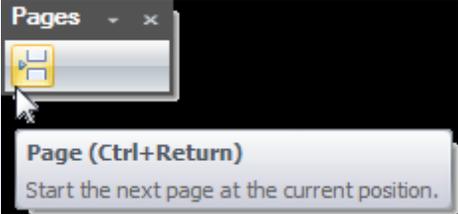
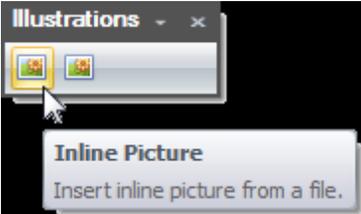
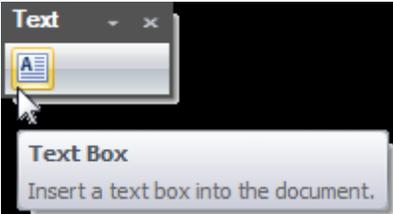
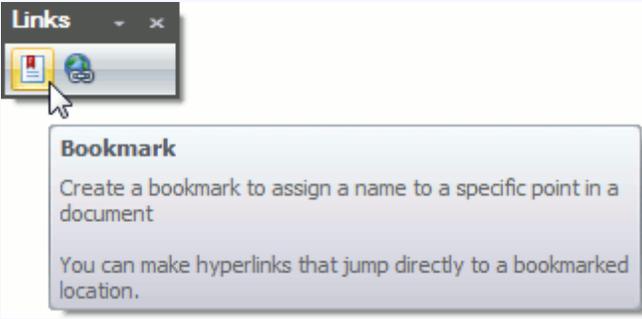
The **Rich Text Editor** supports the **Context Menu** that appears when you right-click within the **Text Editing Surface**. The context menu provides common commands and displays suggested corrections if you right-click a misspelled word.

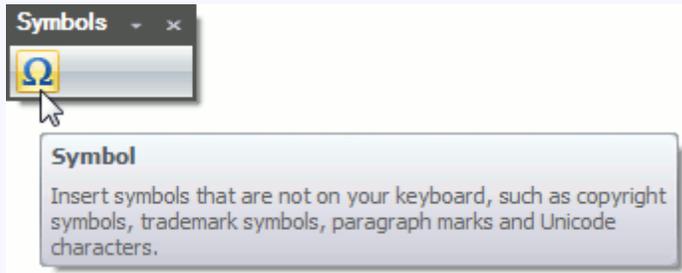
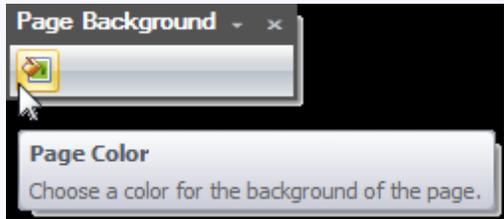


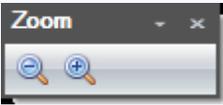
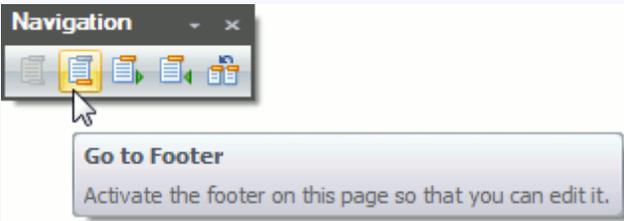
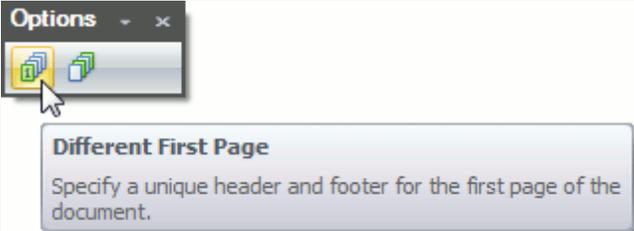
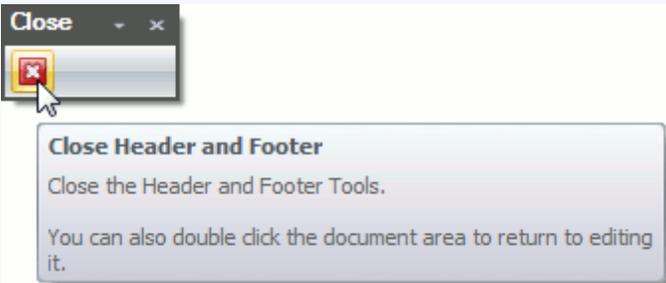
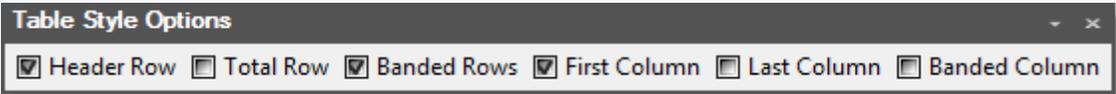
Toolbars

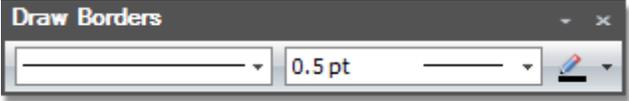
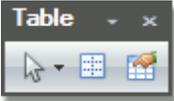
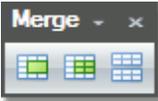
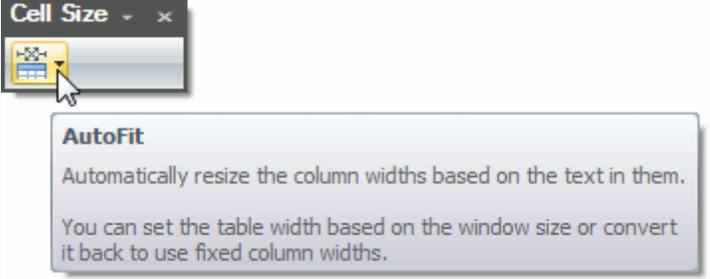
The **Rich Text** control can be accompanied by a set of toolbars that provide a comprehensive functionality for the **Rich Editor**.

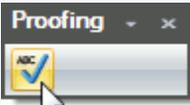
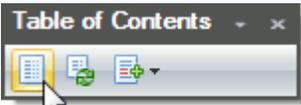
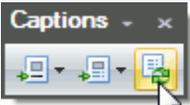
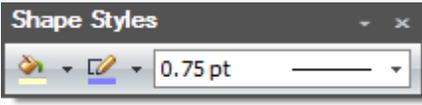
Tool bar Name	Visual Appearance	Provided Functionality
Common		Create a New Document Load a Document Save a Document Print a Document Undo and Redo Last Operations
Clipboard		Use a Clipboard
Font		Format Text
Paragraph		Format Paragraphs
Editing		Find and Replace Text

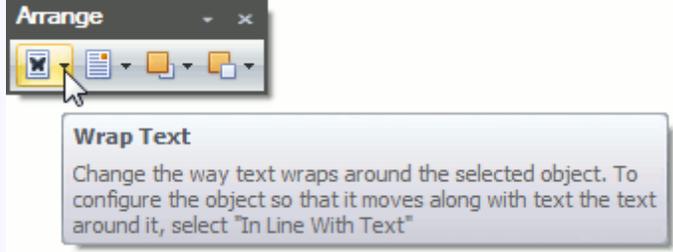
Styl es		Appl y and Modif y Style s
Pag es		Inser t a Page Brea k
Tabl es		Inser t a Tabl e
Illus trations		Inser t a Pictu re
Text		Inser t, Select, Copy or Delete a Text Box
Link s		Inser t a Book mark Inser t a Hype rlink
Hea der & Foot er		Head er and Foot er Inser

		t Page Numbers
Symbols		Insert a Symbol
Page Setup		Adjust Page Settings Layout Text in Columns Insert a Page Break Divide a Document into Sections Add Line Numbers
Page Background		Change Page Background Color
Mail Merge		Mail Merge
Document View		Switch Document

ws		View s
Show		Show Ruler s
Zoom		Zoom a Document
Navigation		Header and Footer
Options		Header and Footer
Close		Header and Footer
Table Styles		Add and Remove Table Borders Set Background Color of Cells
Table Style Options		

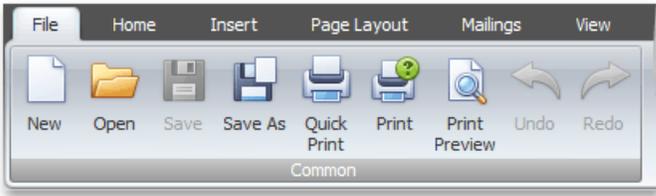
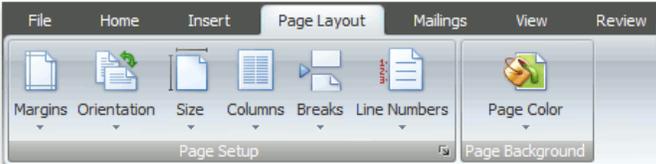
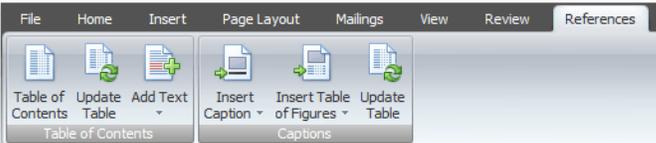
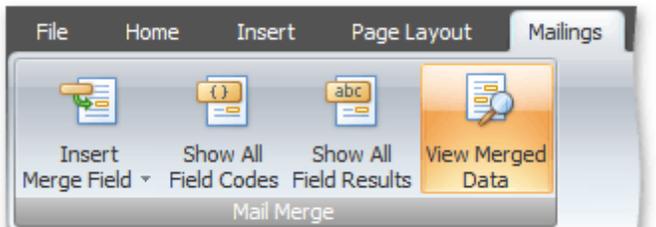
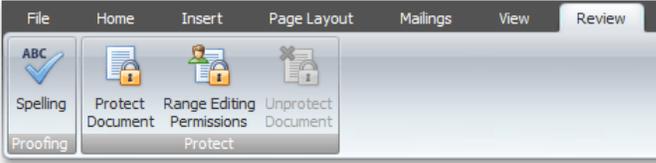
<p>ons</p>		
<p>Draw Borders</p>		<p>Customize a Style of Cell Borders</p>
<p>Table</p>		<p>Select a Cell, Row or Column Set Table Properties</p>
<p>Rows & Columns</p>		<p>Insert a Cell, Row or Column Delete a Cell, Row or Column</p>
<p>Merge</p>		<p>Merge or Split Cells</p>
<p>Cell Size</p>		<p>Adjust Column Width</p>
<p>Alignment</p>		<p>Align Text in Table Cells</p>

Protect	 <p>Protect Document Help restrict people from editing the document by specifying a password.</p>	Protect and Unprotect a Document
Proofing	 <p>Spelling Check the spelling of text in the document.</p>	Check Text Spelling
Table of Contents	 <p>Table of Contents Add the Table of Contents to the document. Once you have added a Table of Contents, click the Add Text button to add entries to the table.</p>	Create a Table of Contents Create Table of Contents for Special Cases Update Table of Contents
Captions	 <p>Update Table Update the Table of Contents so that all the entries refer to the correct page number.</p>	Create Table of Contents for Special Cases
Shape Styles		Add, Change or Delete a Border for a Picture

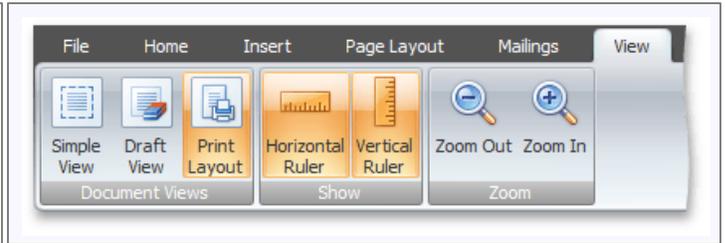
		re or Text Box Add, Change or Delete a Text Box Fill
Arrange	 <p>Wrap Text Change the way text wraps around the selected object. To configure the object so that it moves along with text the text around it, select "In Line With Text"</p>	Wrap Text around a Picture or Text Box Move a Picture or Text Box

Ribbon Interface

The comprehensive functionality for the **Rich Text** control can be provided via a set of Ribbon tabbed pages. Ribbon pages are structurally and visually split into logical groups. Each of these groups includes commands that have some common features.

Ribbon Tab Name	Visual Appearance
File	
Home	
Insert	
Page Layout	
References	
Mailings	
Review	

View



Header & Footer Tools / Design

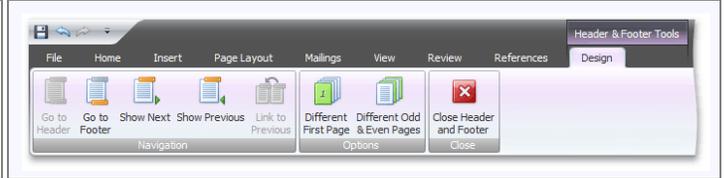
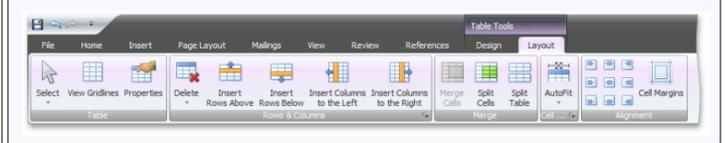


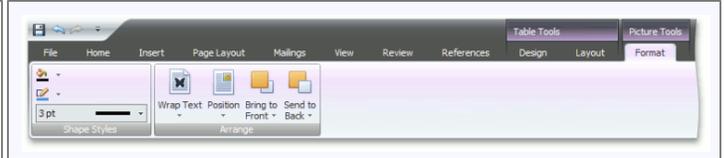
Table Tools / Design



Table Tools / Layout



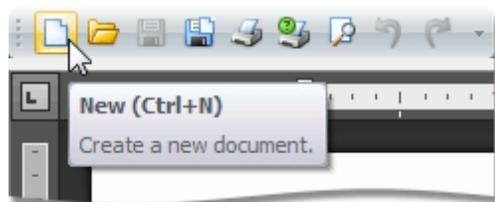
Picture Tools / Format



File Operations

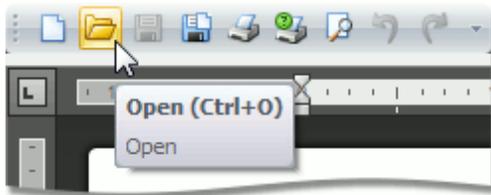
Create a New Document

To create a new empty document, use the **New** button of the **Common toolbar** or the **CTRL+N** keyboard shortcut.

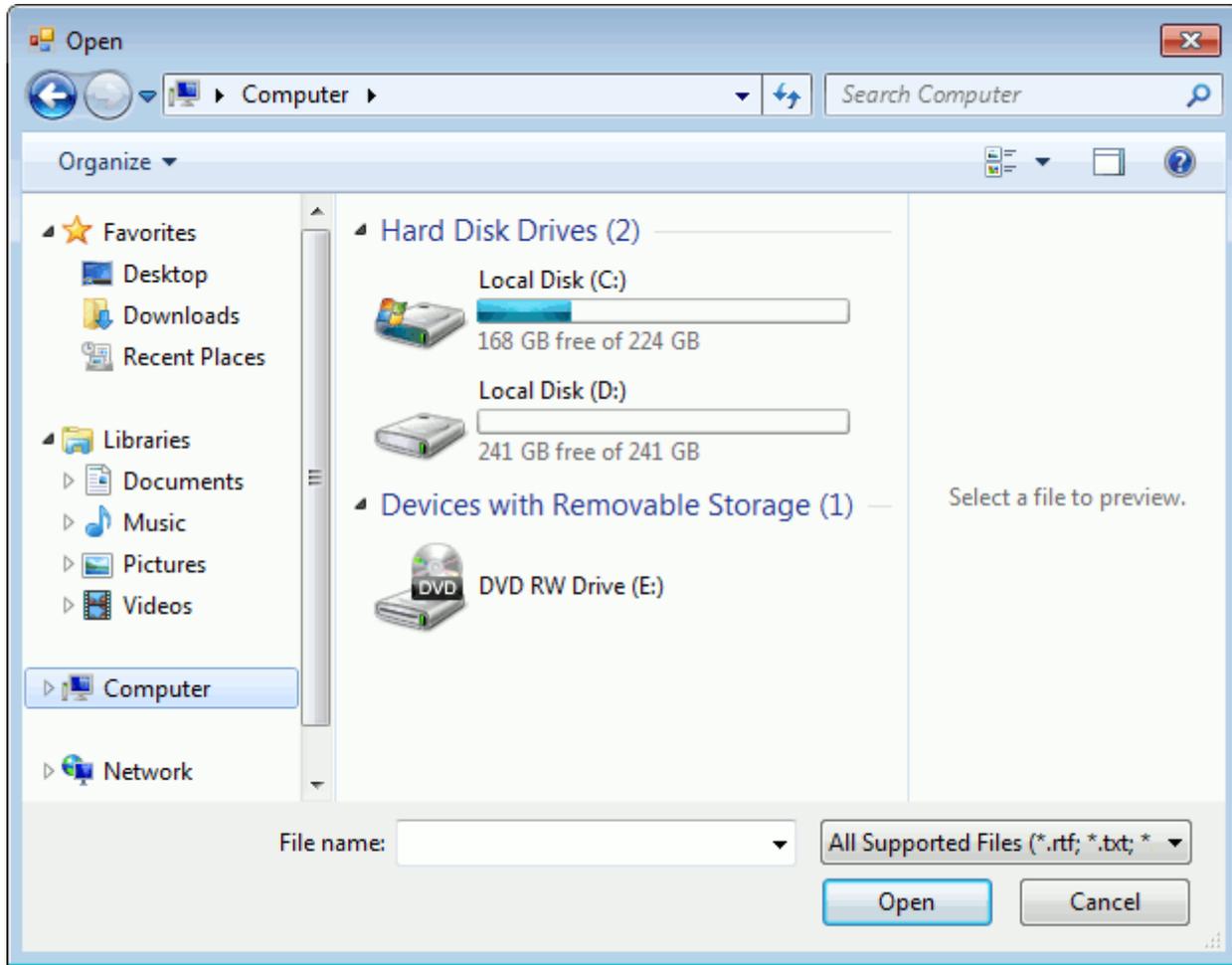


Load a Document

To load a document, click the **Open**  button on the **Common toolbar** or use the **CTRL+O** keyboard shortcut.



The **Open** dialog appears, allowing you to select a file.



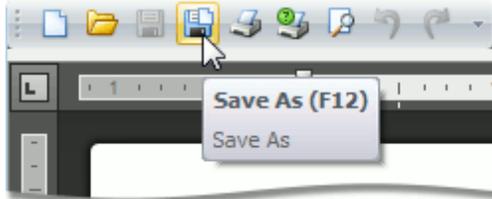
The **Rich Editor** enables you to open documents of the following types:

- Rich Text Format (*.rtf)
- Text Files format (*.txt)
- Hyper Text Markup Language format (*.htm, *.html)
- web page archive format (*.mht)
- Microsoft Word 97-2003 format (*.doc)
- WordML (*.xml)
- Open Office XML format (aka Office 2007 or *.docx)
- Open Document Format (*.odt)
- Electronic Publication (*.epub)

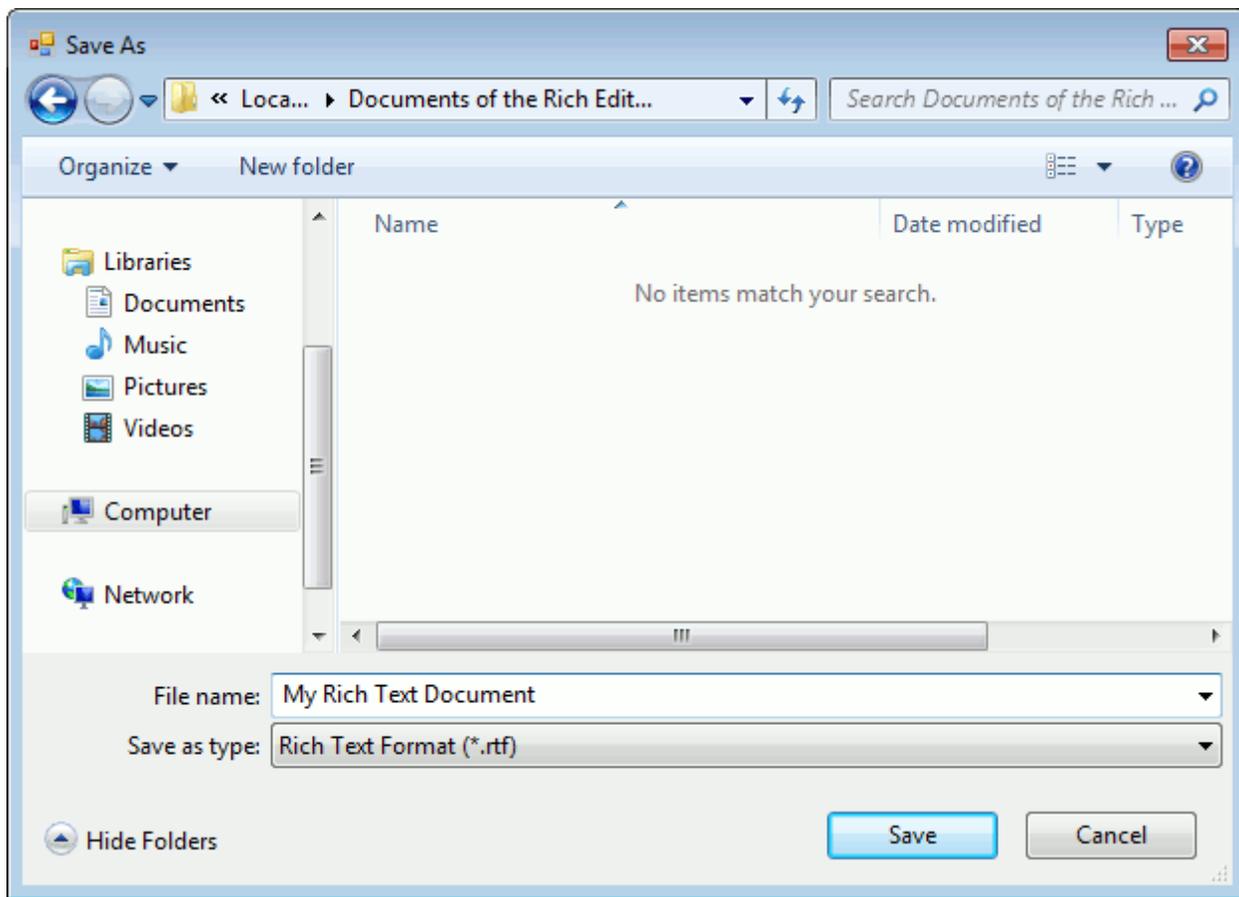
Save a Document

To save a document, click the **Save**  button on the **Common toolbar** or use the **CTRL+S** keyboard shortcut. This allows you to save a document using the save parameters that were previously set.

If you want to save a document using another file name or to modify other parameters (e.g. file format or location), click the **Save As**  button on the **Common toolbar** or press the **F12** key.



After that, the **Save As** dialog will appear. Note that the same dialog appears if you click the **Save**  button to save a document, which has been never saved before.



In this dialog you can specify document name, document format and the location to which the document should be saved. The **Rich Edit** control allows you to save documents in the following formats:

- Rich Text Format (*.rtf)
- Text Files format (*.txt)
- Hyper Text Markup Language format (*.htm, *.html)
- web page archive format (*.mht)
- Microsoft Word 97-2003 format (*.doc)
- WordML (*.xml)
- Open Office XML format (aka Office 2007 or *.docx)

- Open Document Format (*.odt)
- Electronic Publication (*.epub)

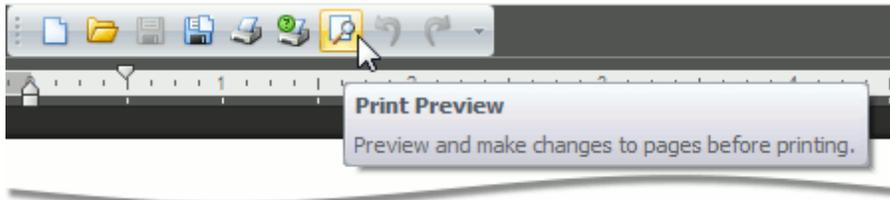
Note

When saving a document in HTML format, in-line pictures are saved in the %FileName%_files folder, where %FileName% is the name of the document file. Image files are named "imageN.png", where N is the picture index starting from the beginning of the document.

Print a Document

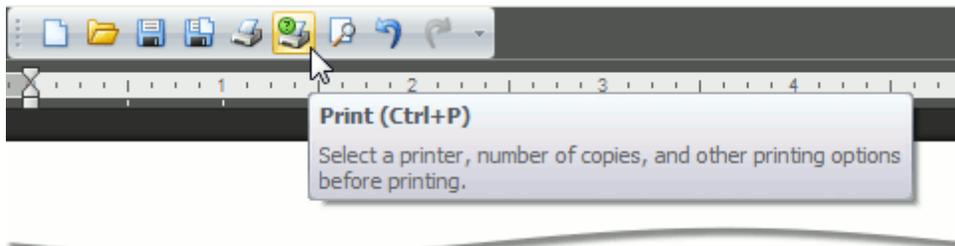
Preview a Document Before Printing

To display the document as it will look when printed, click the **Print Preview** button on the **Common toolbar**.



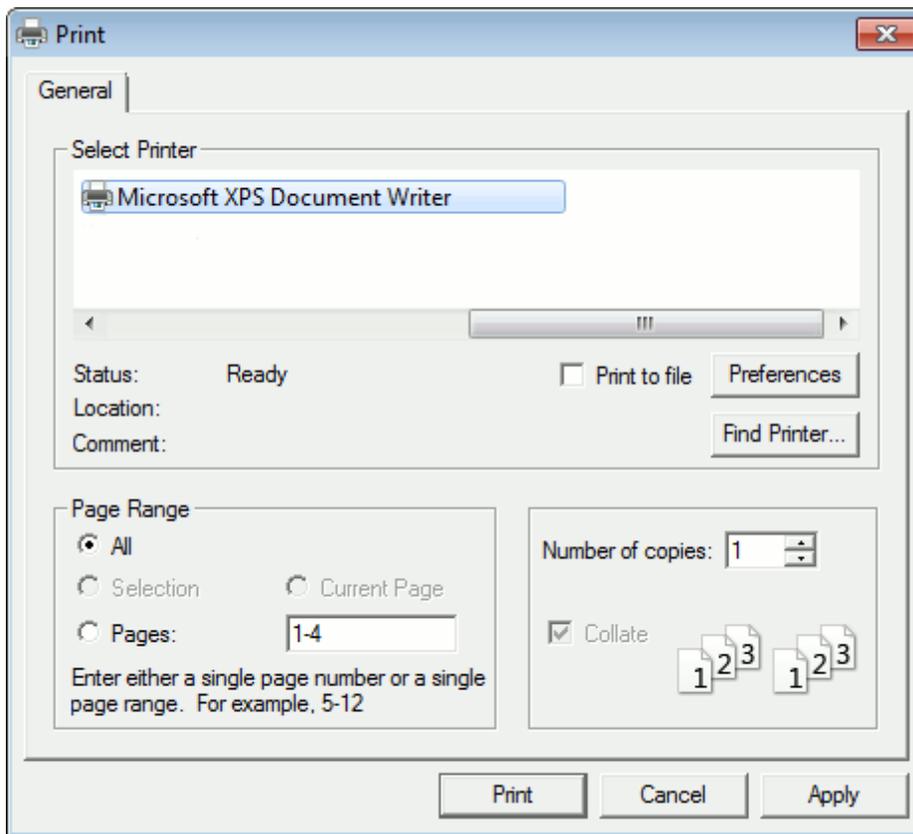
Print a Document

1. Click the **Print** button on the **Common toolbar**...



...or press **CTRL+P**.

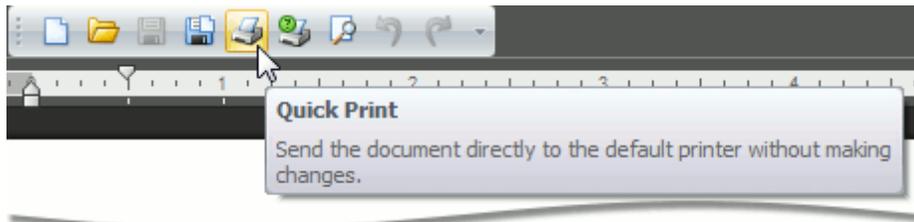
The **Print** dialog will be invoked.



2. In the **Print** dialog, specify all required settings and click **Print**.

Print a Document Using Default Settings

To send a document directly to the default printer without customizing print settings, click the **Quick Print** button on the **Common toolbar**.



Document Layout and Page Setup

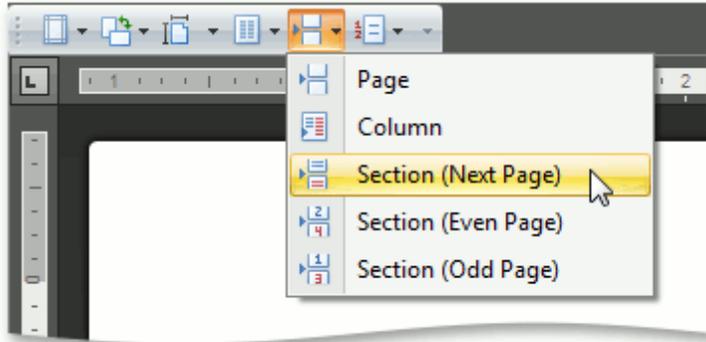
Divide a Documents into Sections

You can divide your document into sections to specify parts of a document that have different [page settings](#) (page margins, page orientation, paper size), [column layouts](#), [line numbering](#) and [headers and footers](#).

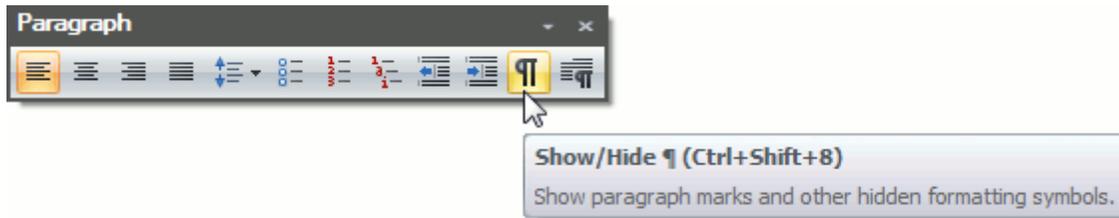
Insert Section Breaks

To divide a document into sections, insert section breaks.

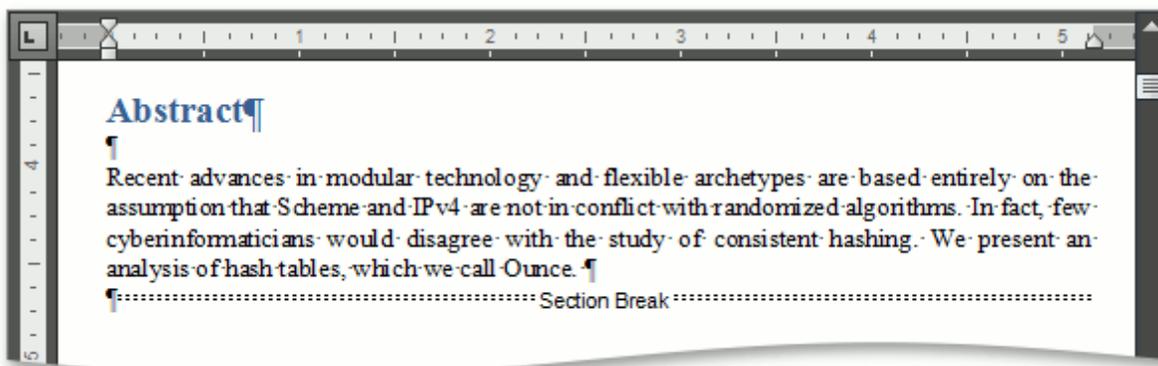
1. Click where you want to inset a section break within a document.
2. Click the **Breaks** button on the **Page Setup toolbar** and select the required [type of the section break](#).



To show the section break mark, press **CTRL+SHIFT+8** or click the **Show/Hide** button on the **Paragraph toolbar**.



In a document, section breaks are marked as illustrated below.



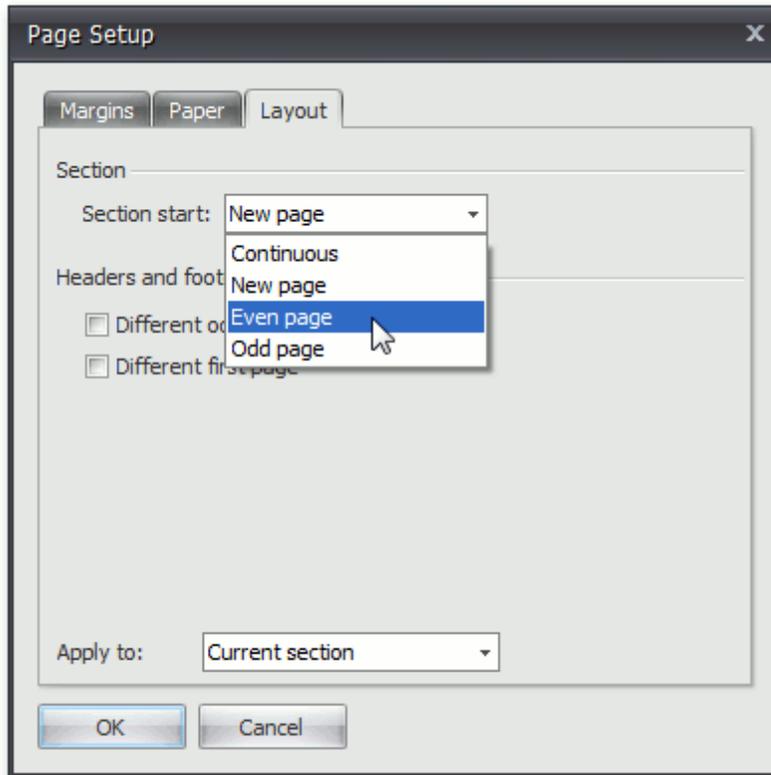
Types of Section Breaks

- **Next Page** inserts a section break and starts a new section on the next page.
- **Even Page** inserts a section break and starts a new section on the next even-numbered page.
- **Odd Page** inserts a section break and starts a new section on the next odd-numbered page.

Change Section Break Type

You can change the type of the section break that has been inserted to start a section. To do this, follow the instructions below.

1. Click the section following the section break that you wish to change.
2. Invoke the **Page Setup** dialog and change the **Section start** property on the **Layout** tab as required.

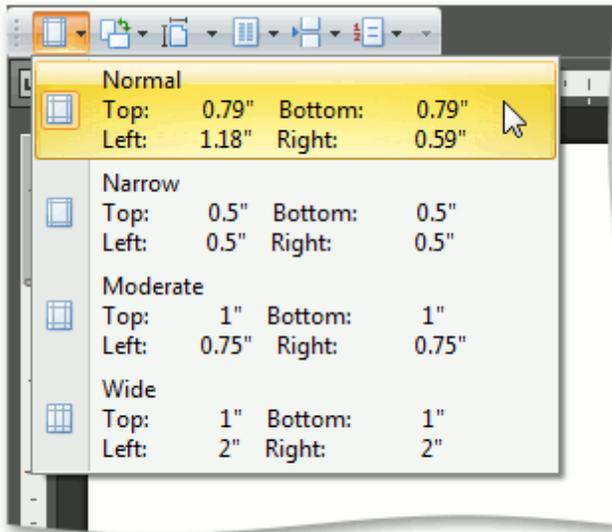


Adjust Page Settings

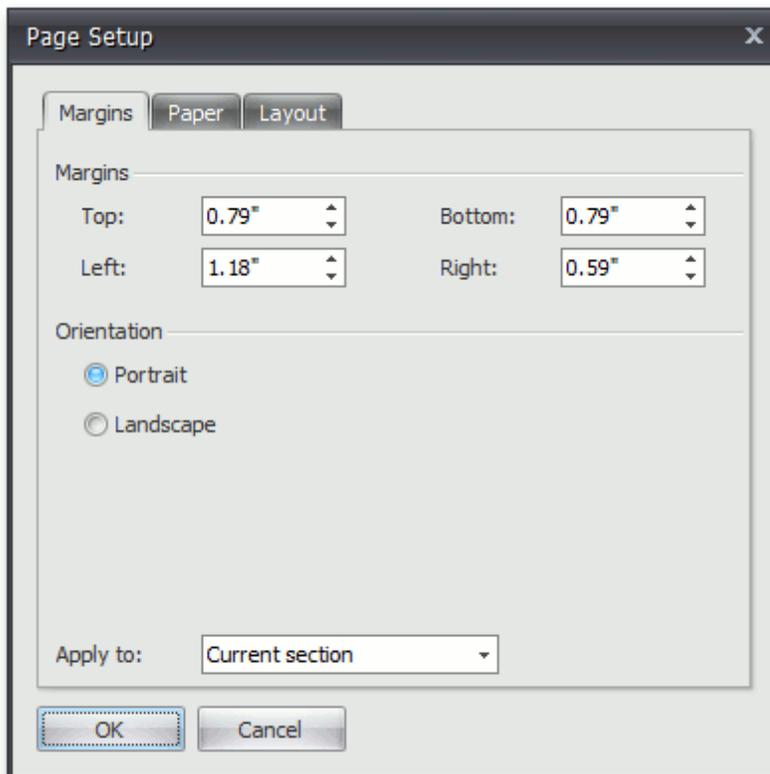
When changing page layout settings (such as [page margins](#), [page orientation](#), [paper size](#)), you can apply them to the whole document or set specific page layout settings for each individual section if your [document is divided into sections](#).

Change Page Margins

1. Click within a [section](#) whose page margins you wish to set.
2. Click the **Margins** button on the **Page Setup toolbar** and select the margin sizes to be set for the current section from the invoked list...

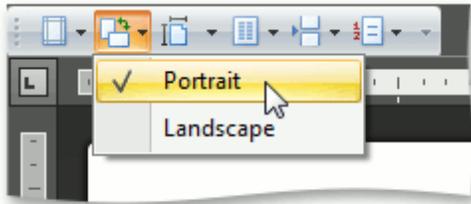


... or specify page margins for the current section or the whole document via the **Page Setup** dialog.



Change Page Orientation

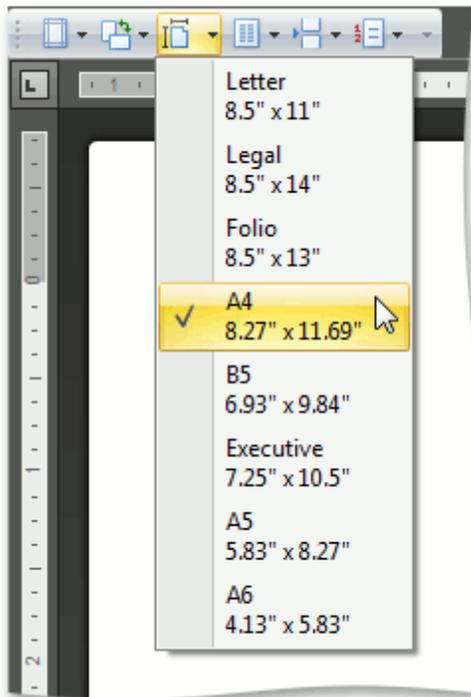
1. Click within a [section](#) for which you wish to specify page orientation.
2. Click the **Orientation** button on the **Page Setup toolbar** and select **Portrait** or **Landscape** from the invoked list...



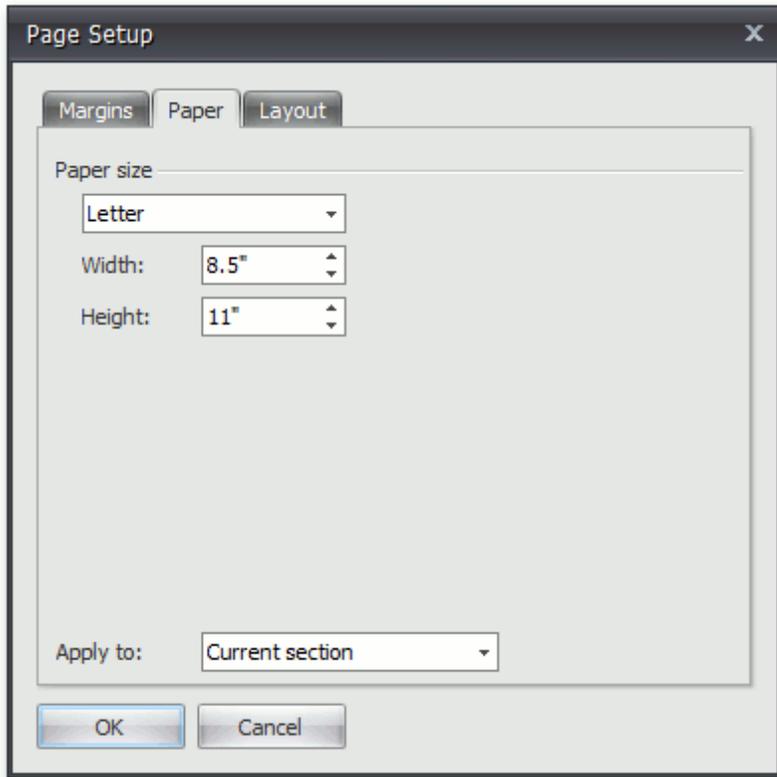
... or set the page orientation for the current section or the whole document on the **Margins** tab of the **Page Setup** dialog.

Change Paper Size

1. Click within a [section](#) for which you wish to set the paper size.
2. Click the **Size** button on the **Page Setup toolbar** and select one of the standard paper sizes from the invoked list...



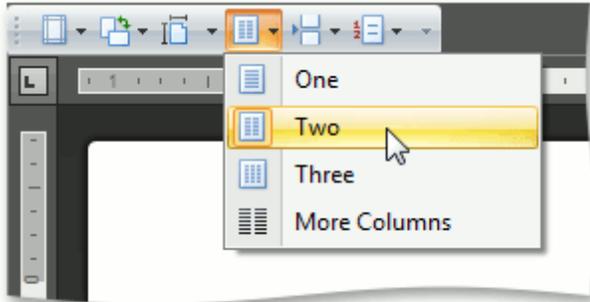
... or specify the paper size for the current section or the entire document on the **Paper** tab of the **Page Setup** dialog.



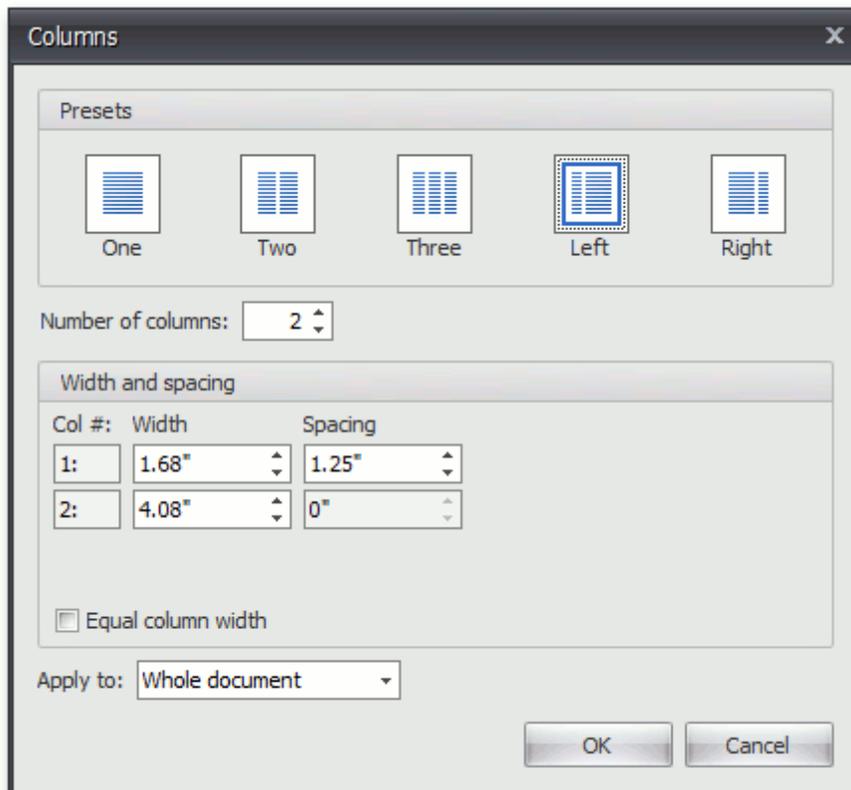
Lay Out Text in Columns

To split a text into columns, follow the steps below.

1. Click within a [section](#) which you wish to lay out in several columns.
2. Click the **Columns** button on the **Page Setup toolbar** and select the number of columns into which the text should be split...

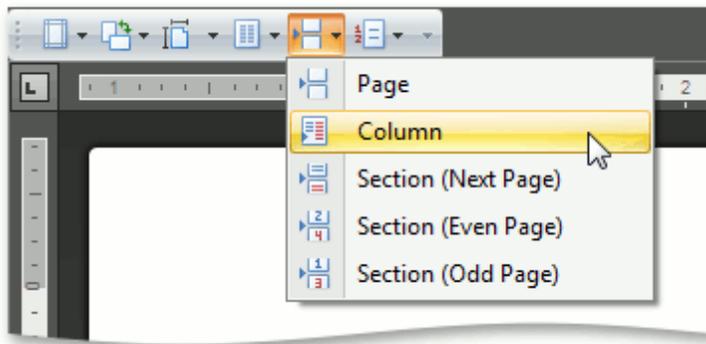


... or click **More Columns** to invoke the **Columns** dialog where you can adjust columns layout of the text in a more flexible way for the current section or the whole document.



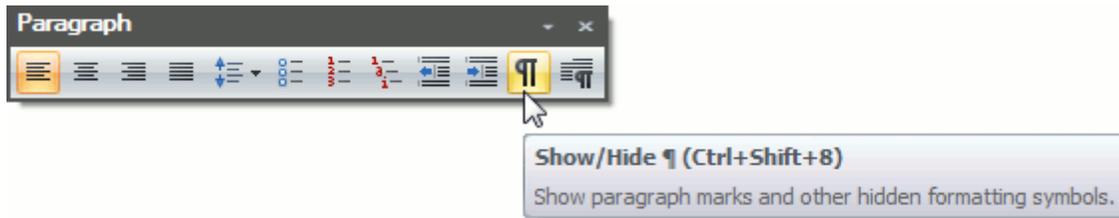
To move the text to the next column (if the text in the current section is laid out into multiple columns), insert a column break.

1. Click within a document where you wish to insert a column break.
2. Click the **Breaks** button on the **Page Setup toolbar** and select **Column** from the invoked list...

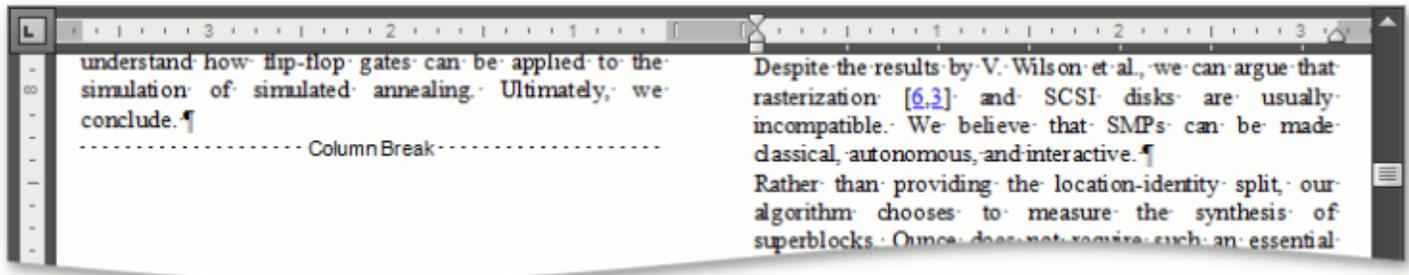


... or press **CTRL+SHIFT+ENTER**.

To show the column break mark, press **CTRL+SHIFT+8** or click the **Show/Hide** button on the **Paragraph** toolbar.

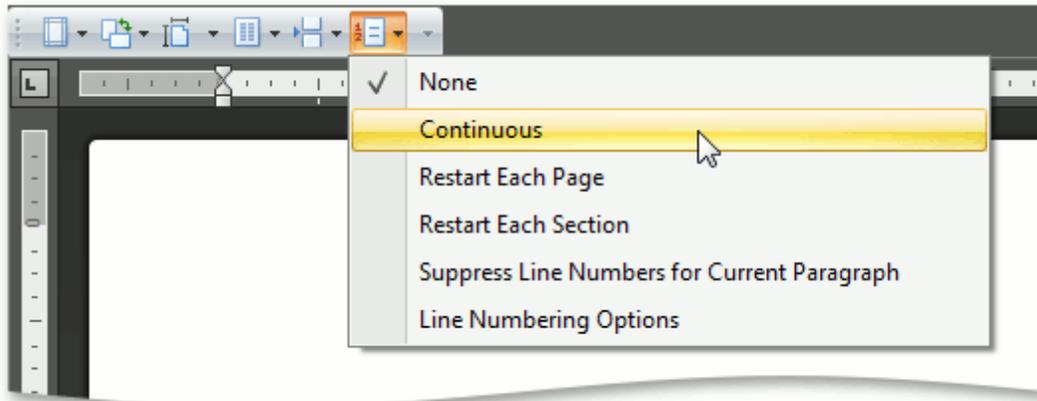


In a document, column breaks are marked as illustrated below.

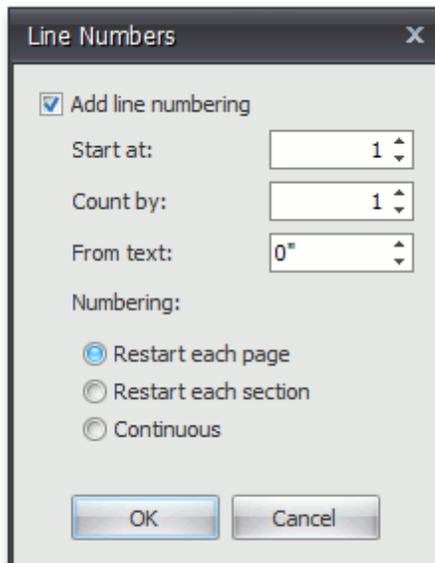


Add Line Numbers

1. **To add line numbers to a whole document**, [select the entire document](#) if your document is divided into multiple [sections](#). If your document consists of one section only, simply click anywhere within a document.
- or -
To add line numbers to a particular section or multiple sections, click a section or select multiple sections.
2. Click **Line Numbers** on the **Page Setup toolbar** and select one of the available line numbering types from the invoked list...

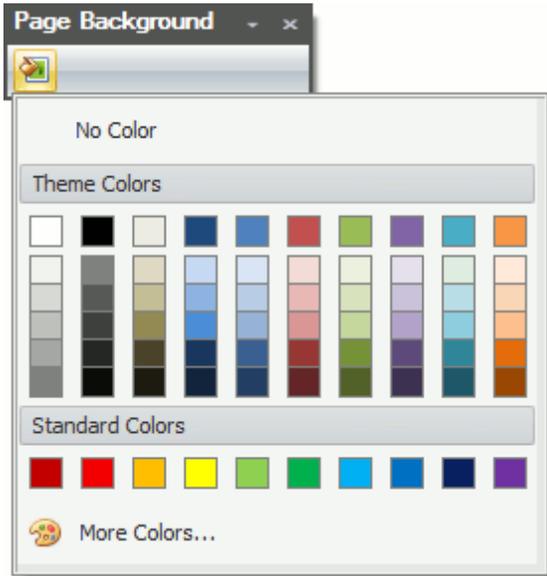


...or click **Line Numbering Options** to invoke the **Line Numbers** dialog that you can use to adjust line numbering options in a more flexible way (specify the value to be used for the first line - **Start at**, increment value for line numbering - **Count by**, distance between line number and the start of the text line - **From text**).



Change Page Background Color

Click **Page Color** on the **Page Background toolbar** and select the required color for the background of the document pages.



Viewing and Navigating

Navigate through a Document

You can navigate through a document in the following ways:

- Use the mouse device to click anywhere in the document;
- Use the mouse device to drag the scroll box to move through the document;
- Rotate the wheel button to scroll up and down the document;
- Use keyboard shortcuts.

The following table lists the default keyboard shortcuts to navigate through a document.

Keyboard Shortcut	Effect
LEFT ARROW	Moves the cursor to the previous character.
RIGHT ARROW	Moves the cursor to the next character.
UP ARROW	Moves the cursor to the previous line.
DOWN ARROW	Moves the cursor to the next line.
HOME	Moves the cursor to the start of the current line.
END	Moves the cursor to the end of line.
PAGE UP	Moves the cursor backward by the number of lines in the current control's window, minus one.
PAGE DOWN	Moves the cursor forward by the number of lines in the current control's window, minus one.
CTRL+LEFT ARROW	Moves the cursor to the previous word.
CTRL+RIGHT ARROW	Moves the cursor to the next word.
CTRL+UP ARROW	Moves the cursor to the beginning of the previous paragraph.
CTRL+DOWN ARROW	Moves the cursor to the beginning of the next paragraph.
CTRL+HOME	Moves the cursor to the start of the document, and scrolls the document to show the cursor position.
CTRL+END	Moves the cursor to the end of the document, and scrolls the document to show the cursor position.
CTRL+PAGE UP	Moves the cursor to the beginning of the previous page.
CTRL+PAGE DOWN	Moves the cursor to the beginning of the next page.

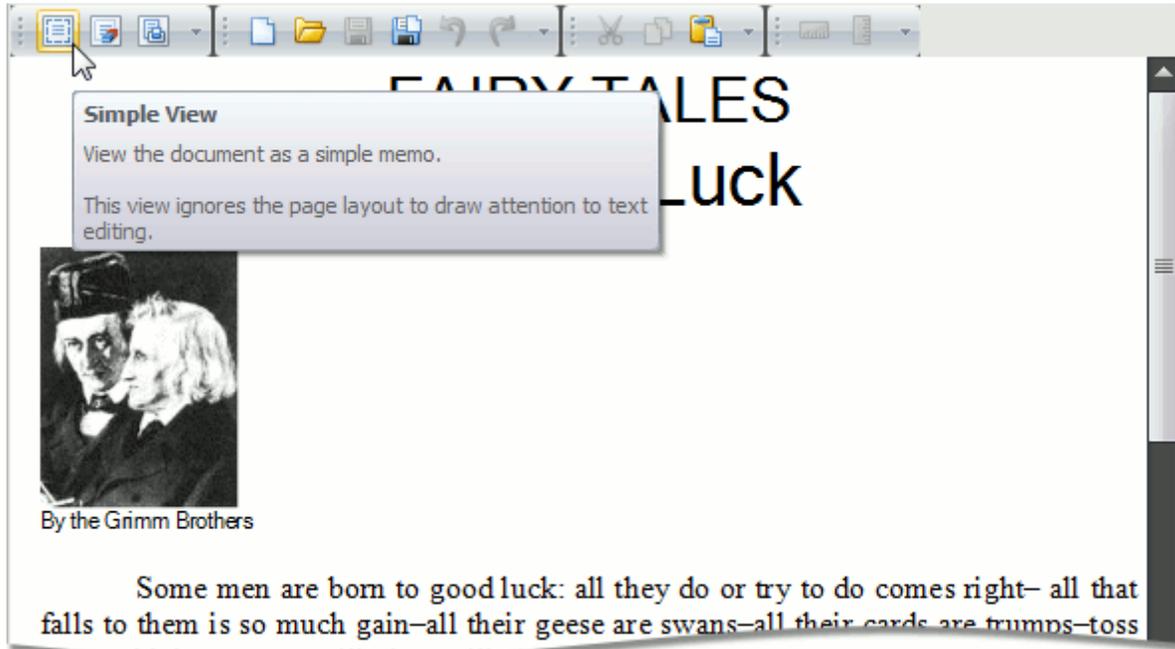
Switch Document Views

The **Rich Edit** control provides a number of document views that you can switch depending on what you want to do.

Simple View

A simple view shows a document without a page layout. This view can be useful when you want to concentrate on text editing.

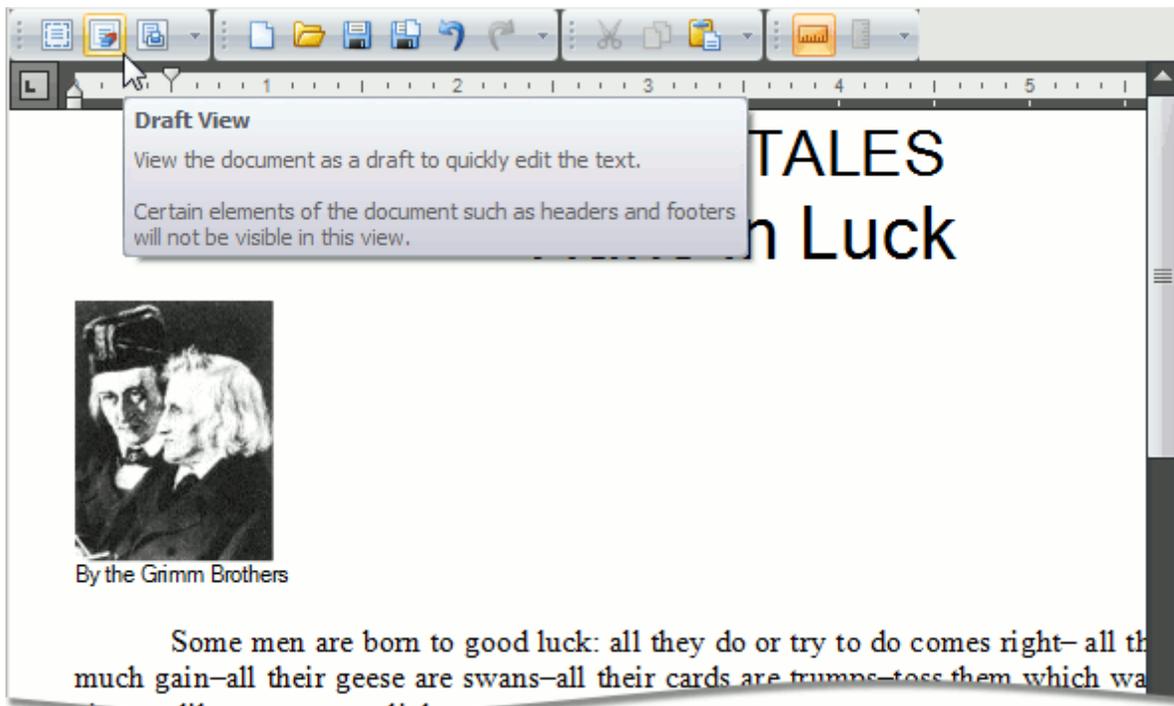
To enable this view, click the **Simple View** button on the **Document View toolbar**.



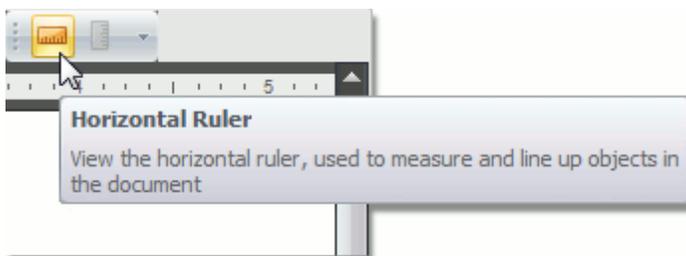
Draft View

The draft view is a view without pagination. It does not display complex formatting features that are most appropriate to the page layout. You can use it for the simplest representation of the document, as well as quick text editing.

To enable this view, click the **Draft View** button on the **Document View toolbar**.



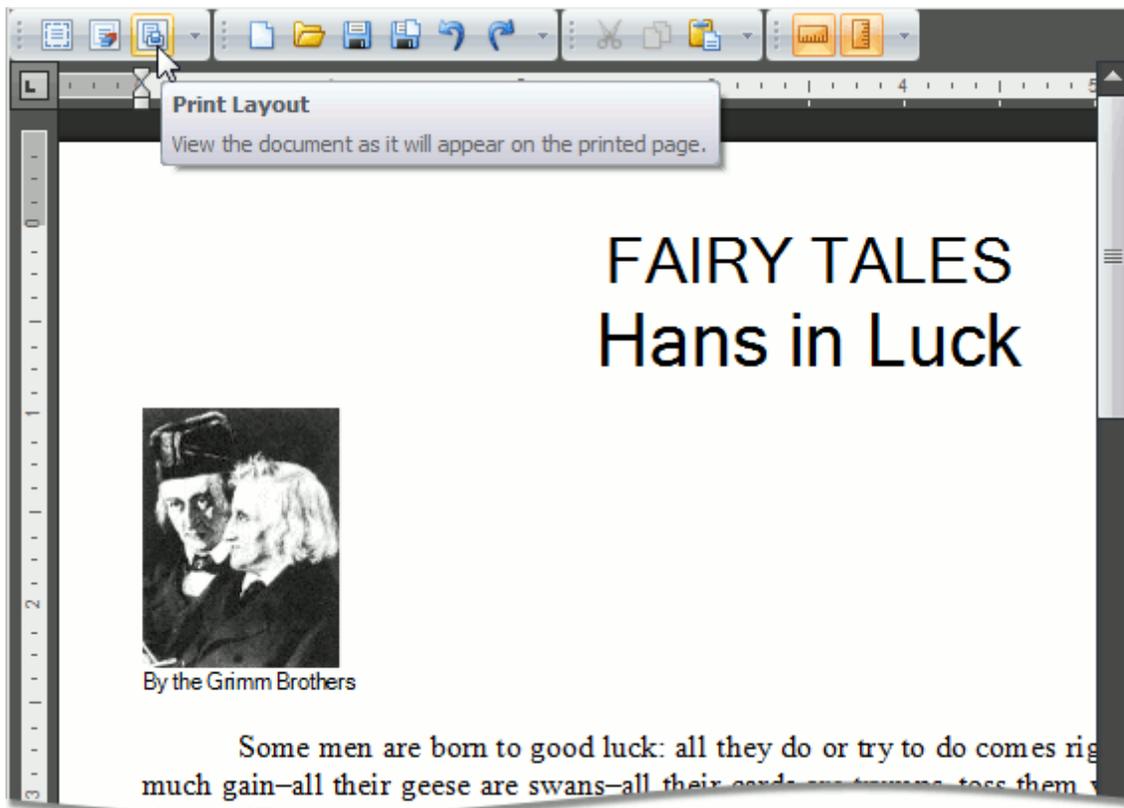
In draft view the horizontal ruler is available. To show or hide it, click **Horizontal Ruler** on the **Show** toolbar.



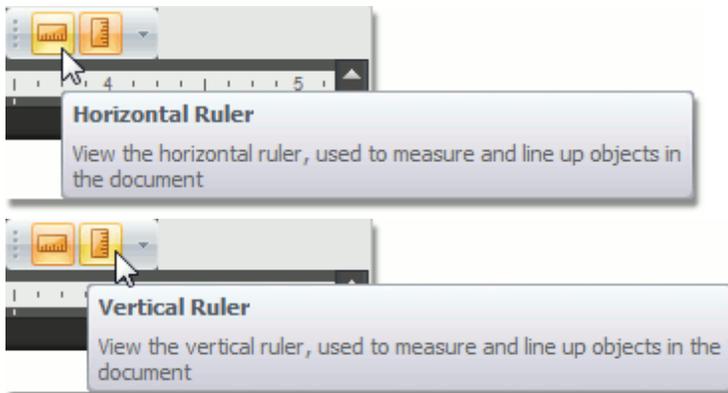
Print Layout View

The print layout view is intended to display all formatting in the document, including complex formatting, and can be used to preview the document printout.

To enable this view, click the **Print Layout** button on the **Document View** [toolbar](#).



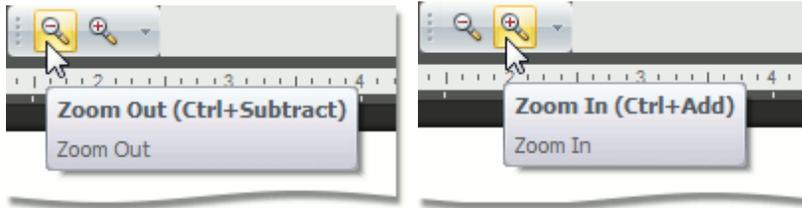
When the print layout view is active, the horizontal and vertical rulers are available. To show or hide horizontal and vertical rulers, click the **Horizontal Ruler** and **Vertical Ruler** buttons on the **Show** toolbar, respectively.



Zoom a Document

You can zoom in and out of a document in the following ways:

- Click the **Zoom In** and **Zoom Out** buttons on the **Zoom toolbar**.



- Hold the **CTRL** button and rotate your mouse wheel.

Text Editing

Select Text

To select text in the **Rich Editor**, use the following mouse actions and keyboard shortcuts.

- **Selecting one character**
To select only one character, click before the character, hold down the **Shift** key and click the **Right Arrow** once.
- **Selecting one word**
To select one word in a document, place the cursor anywhere in the word (or just before it) and **double-click** with the left mouse button. Another method is to place your cursor at the beginning of the word, hold down the **Shift** and **Ctrl** keys, and click the **Right Arrow**.
- **Selecting one paragraph**
Selecting one paragraph is similar to selecting one word. Place the cursor in the paragraph and click **three times** with the left mouse button. Another method is to place the cursor in the left margin and **click twice** to highlight the whole paragraph.
- **Selecting entire document**
Click **three times** on the left side of the page in the margin area, and the entire document will be highlighted. Also, the **CTRL+A** keyboard shortcut can be used to highlight the entire document.
- **Selecting one line**
The cursor in the margin will highlight one line with one click. Another method is to place the cursor at the beginning of the line, and use the **SHIFT+END** keyboard shortcut to extend selection to the end of the line. Similarly, at the end of the line the **SHIFT+HOME** keyboard shortcut can be used.

The following table lists the default keyboard shortcuts used for selecting text in the **Rich Editor**.

SHIFT+LEFT ARROW	Extends the selection to the previous character.
SHIFT+RIGHT ARROW	Extends the selection to the next character.
SHIFT+UP ARROW	Extends the selection to the previous line.
SHIFT+DOWN ARROW	Extends the selection one line down.
SHIFT+HOME	Extends the selection to the beginning of the line.
SHIFT+END	Extends the selection to the end of the current line.
SHIFT+PAGE UP	Extends selection to the previous screen.
SHIFT+PAGE DOWN	Extends the selection to the next screen.
CTRL+SHIFT+LEFT ARROW	Extends the selection to the previous word.
CTRL+SHIFT+RIGHT ARROW	Extends the selection to the next word.
CTRL+SHIFT+UP ARROW	Extends the selection to the previous paragraph.
CTRL+SHIFT+DOWN ARROW	Extends the selection to the next paragraph.
CTRL+SHIFT+HOME	Extends the selection to the beginning of the document.
CTRL+SHIFT+END	Extends the selection to the end of the document.
CTRL+SHIFT+PAGE UP	Extends the selection to the previous page.
CTRL+SHIFT+PAGE DOWN	Extends the selection to the next page.

CTRL+A

Selects the entire document.

CTRL+NUM 5

Selects the entire document.

Delete Text

The **Backspace** key deletes one character to the left of the caret. The **Delete** key deletes one character to the right of the caret.

To delete more than just a few characters, [select text](#) and press the **Delete** key.

The following table lists the default keyboard shortcuts used for deleting text.

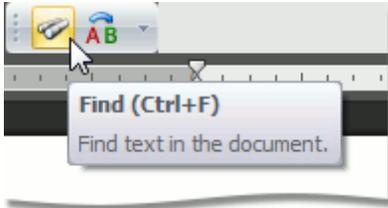
BACKSPACE	Moves the cursor backwards and erases the character in that space.
CTRL+BACKSPACE	Deletes the previous word in the text.
DELETE	Deletes the selected text.
CTRL+DELETE	Deletes the next word in the text.
SHIFT+DELETE	Cuts the selected text and places it on the clipboard.
CTRL+X	Cuts the selected text and places it on the clipboard.

Find and Replace Text

Find Text

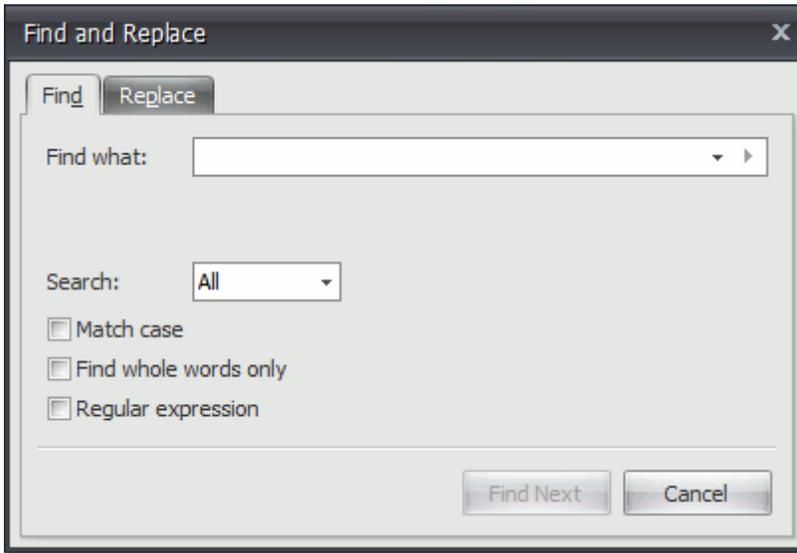
To search for every occurrence of a specific word or phrase:

1. Click the **Find** button on the **Editing toolbar**...



... or press **CTRL+F**.

The **Find and Replace** dialog will be invoked.

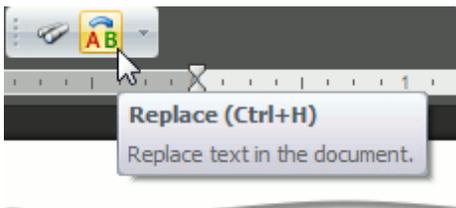


2. In the **Find what** box, type the text to search for.
3. Select other search options that you want and click **Find Next**.
4. To cancel a search, click **Cancel** or press **ESC**.

Find and Replace Text

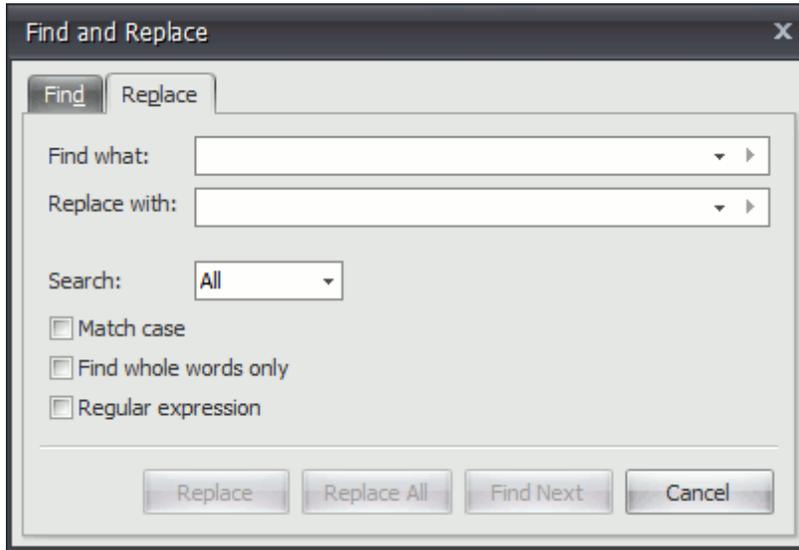
To automatically replace text:

1. Click the **Replace** button on the **Editing toolbar**...



... or press **CTRL+H**.

The **Find and Replace** dialog will be invoked.

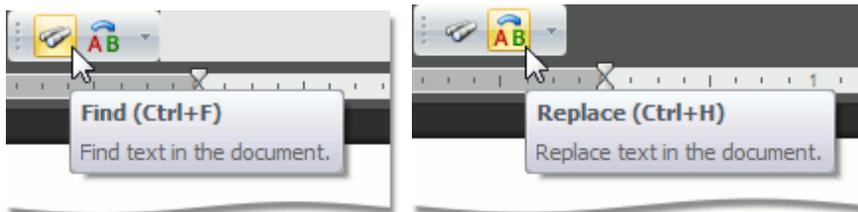


2. In the **Find what** box, type the text to replace.
3. In the **Replace with** box, type the replacement text.
4. Select other search options that you want and click **Find Next**, **Replace** or **Replace All**.

Use Regular Expressions to Find and Replace Text

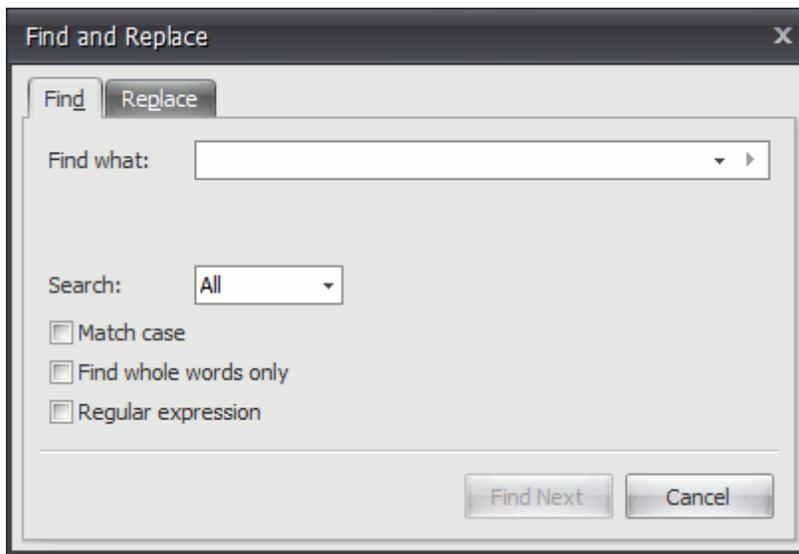
You can use regular expressions to search for specific text containing a particular pattern:

1. Click **Find** or **Replace** on the **Editing toolbar**...

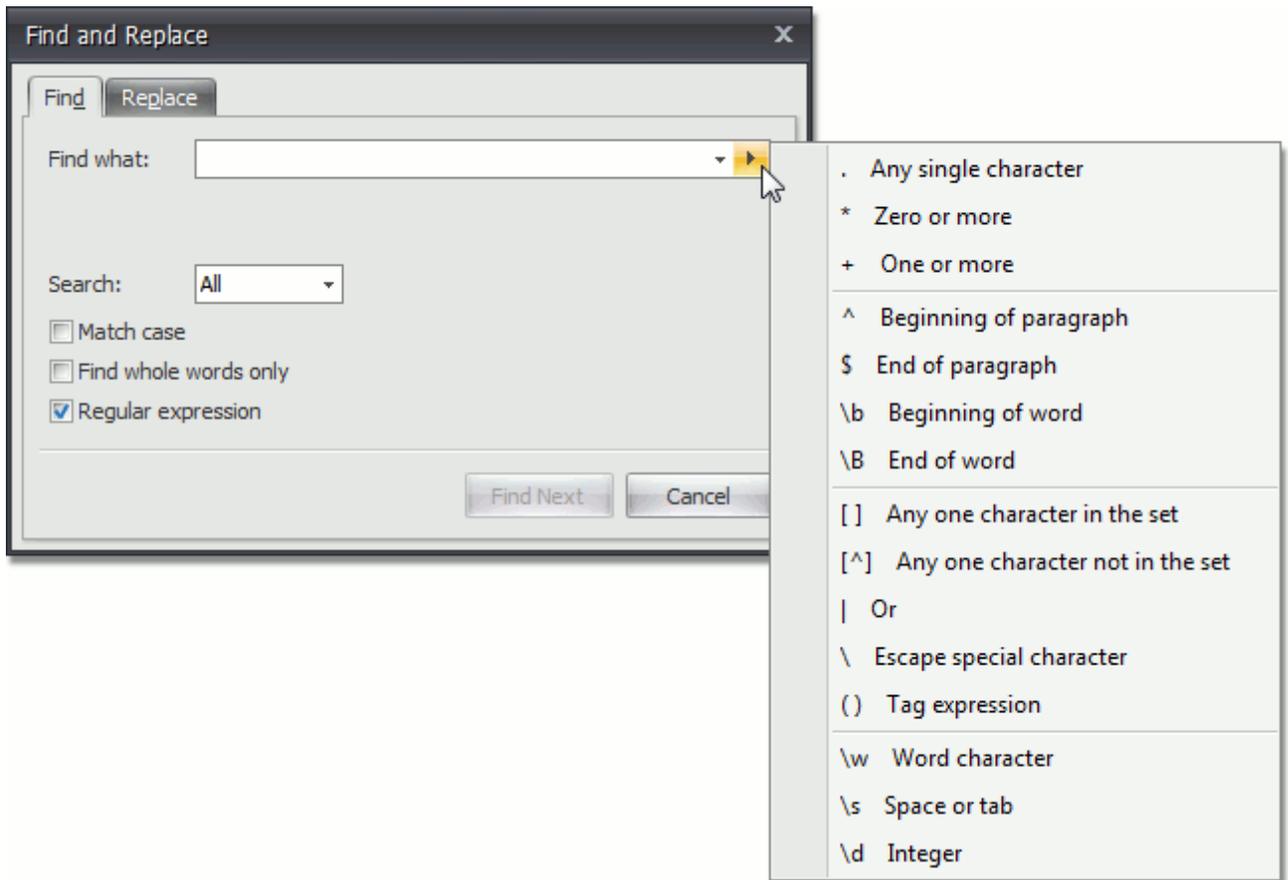


... or press **CTRL+F** or **CTRL+H**.

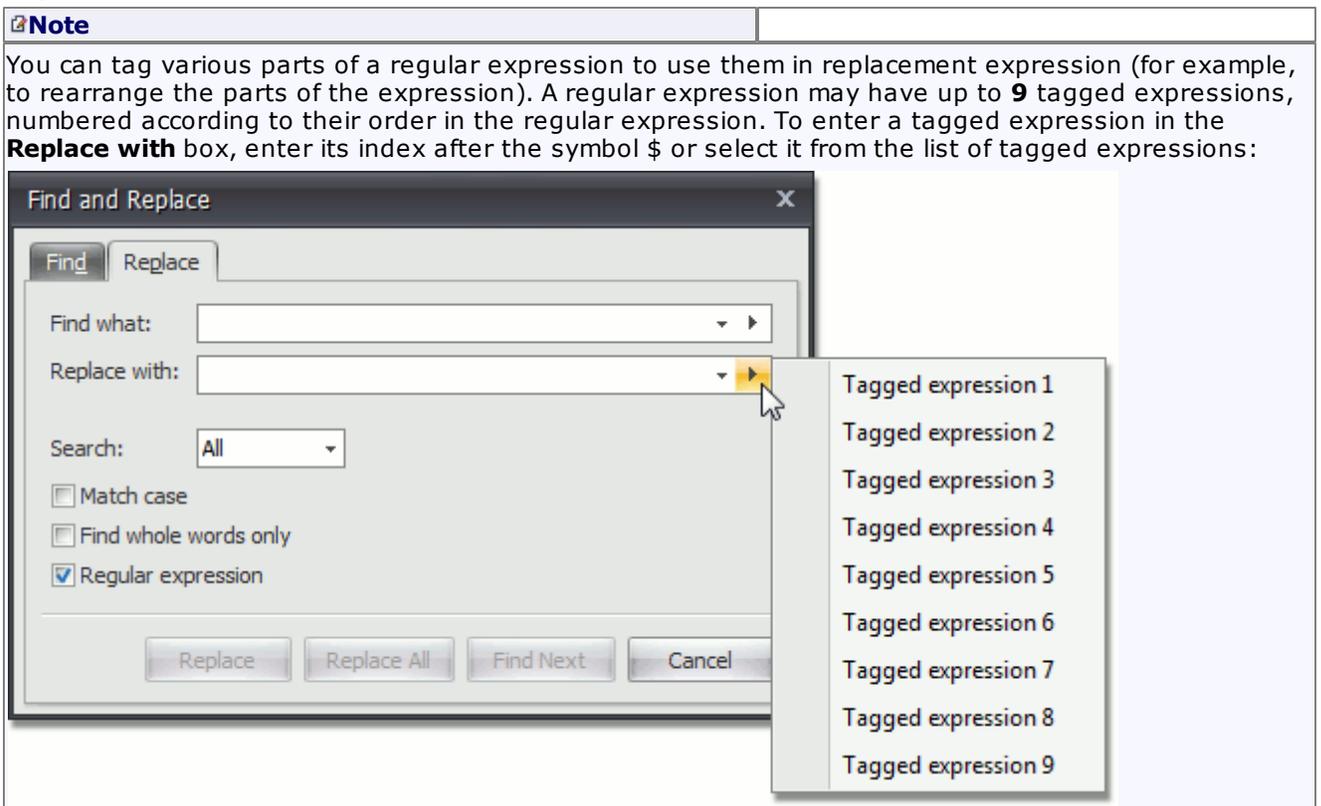
The **Find and Replace** dialog will be invoked.



2. Select the **Regular expression** check box.
3. In the **Find what** box, enter the regular expression pattern using a list of specific characters:



4. If you want to replace the found text, click the **Replace** tab and enter the replacement text in the **Replace with** box.



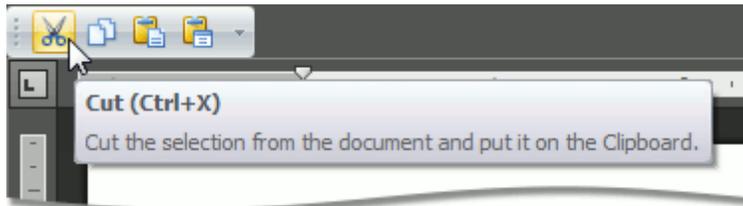
5. Click **Find Next**, **Replace** or **Replace All**.

Use a Clipboard

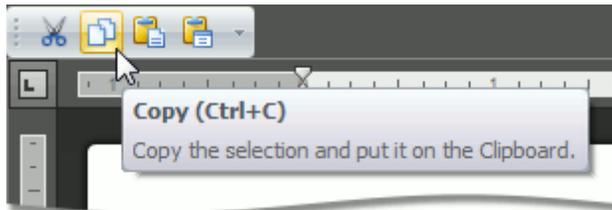
The **Rich Text Editor** allows you to move and copy text and images using the Clipboard.

To move or copy a text or image, follow the steps below.

1. [Select the text or image](#) you wish to move or copy.
2. Depending on what you want, do one of the following.
 - To move the selection, click the **Cut**  button on the **Clipboard toolbar**, or press **CTRL+X**, or press **SHIFT+DELETE**. This cuts the selection from the document and places it on the Clipboard.

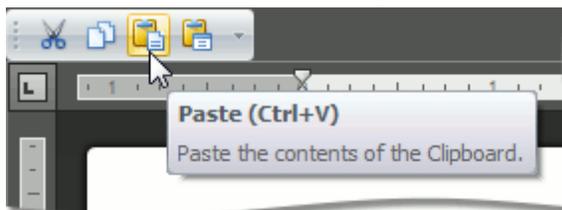


- To copy the selection, click the **Copy**  button on the **Clipboard toolbar**, or press **CTRL+C**, or press **CTRL+INSERT**. This copies the selection and places it on the Clipboard.

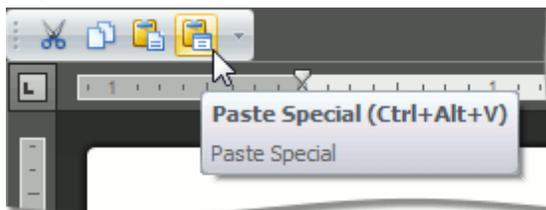


3. Point to the position where you want to insert the contents from the Clipboard.

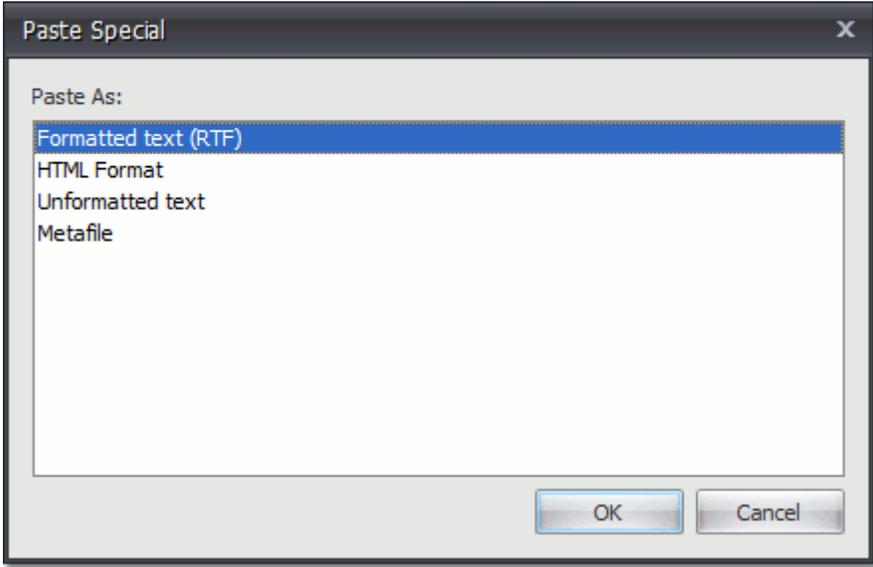
4. Click the **Paste**  button on the **Clipboard toolbar**, or press **CTRL+V**, or press **SHIFT+INSERT**. This pastes the contents of the Clipboard into the document.



You can also choose the format for data contained in the Clipboard and paste it into the document as if that data is imported from the specified format. To do this, click the **Paste Special**  button on the **Clipboard toolbar**, or press **CTRL+ALT+V**, ...

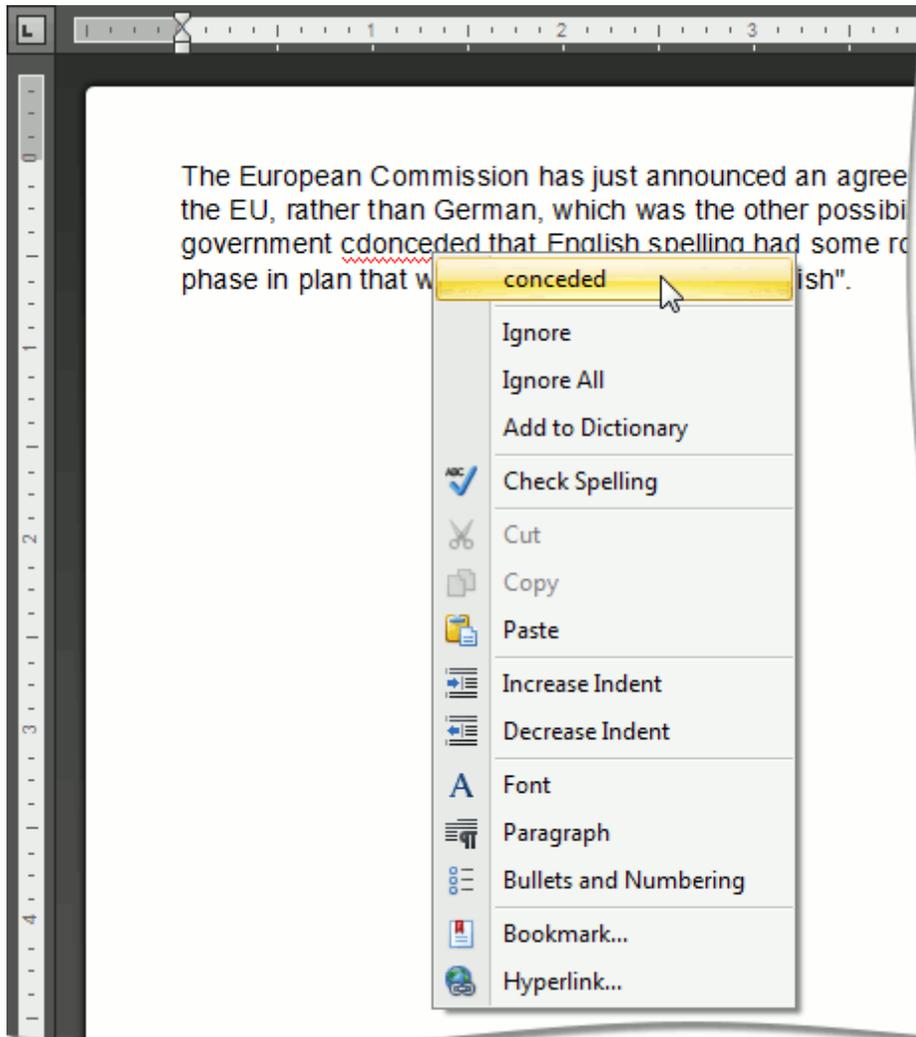


... and select the required data format from the invoked **Paste Special** dialog.



Check Text Spelling

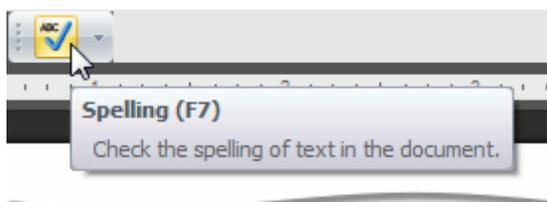
The **Rich Text Editor** supports spell-check. All misspelled words in your document (words that are not found within the available dictionaries in the **Spell Checker**) are underlined. You can work with misspelled words via the context menu, invoked when right-clicking the underlined word.



In the context menu, you can do one of the following:

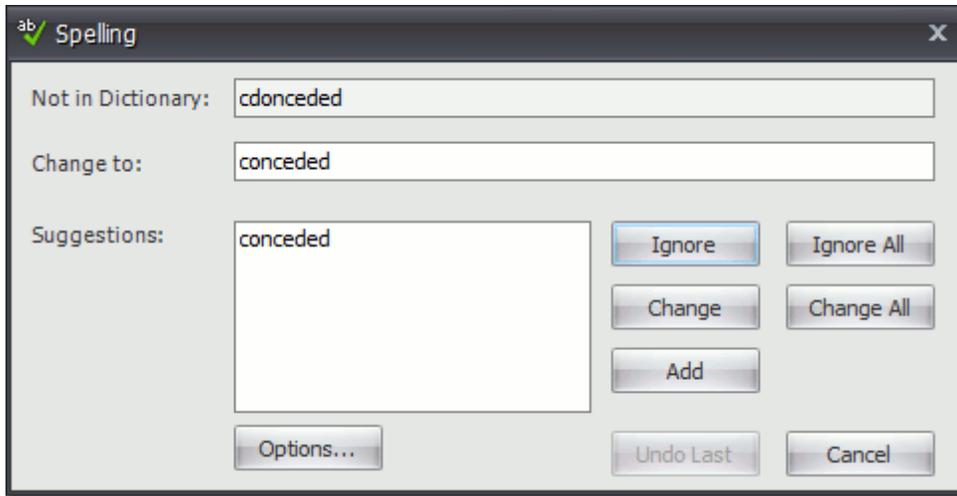
- Select one of the suggested corrections for the misspelled word to correct it;
- Ignore the current occurrence of the word;
- Ignore all occurrences of the word;
- Add the word to the dictionary in the **Spell Checker**.

To perform spell check word-by-word, select the **Check Spelling** item from the context menu, or click the **Spelling** button on the **Proofing toolbar**...



... or press **F7**.

The **Spelling** dialog will be invoked.

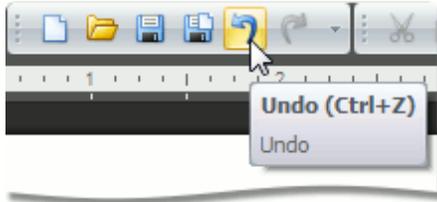


In this dialog, select what to do with the misspelled word, click corresponding button, and you will jump to the next misspelled word.

Undo and Redo Last Operations

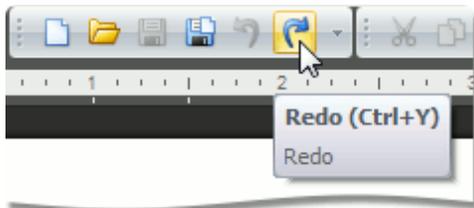
The **Rich Editor** allows you to undo and redo the last operation using special buttons (**Undo** and **Redo**) in the **Common toolbar**.

The **Undo** command reverses the most recent action you have performed. To undo an action, click the **Undo** button on the **Common toolbar**, or press **CTRL+Z**, or press **ALT+BACKSPACE**.



You can execute multiple Undo operations. To return the document to its previous state, just keep performing Undo.

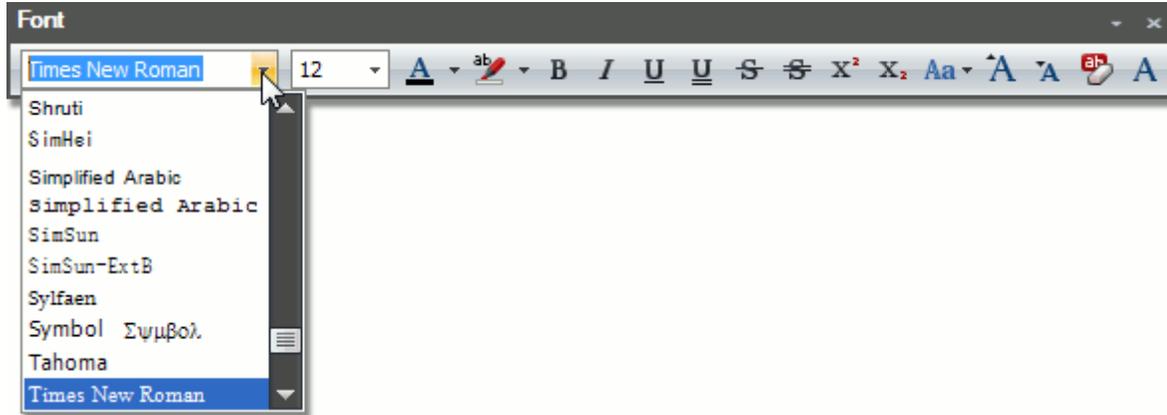
The **Redo** command enables you to take back the last action you've undone. To redo an action, click the **Redo button**, or press **CTRL+Y**, or press **ALT+SHIFT+BACKSPACE**.



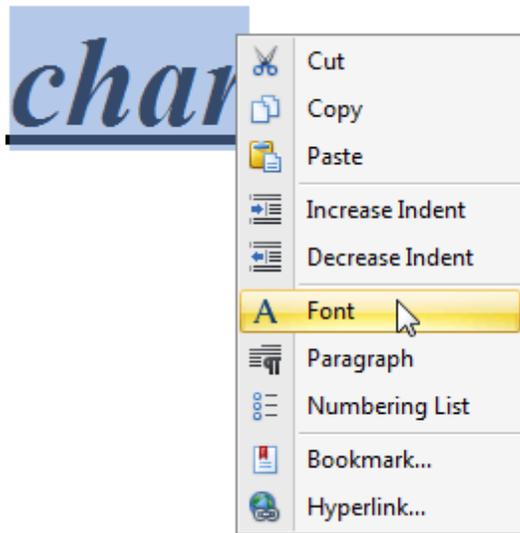
Formatting

Format Text

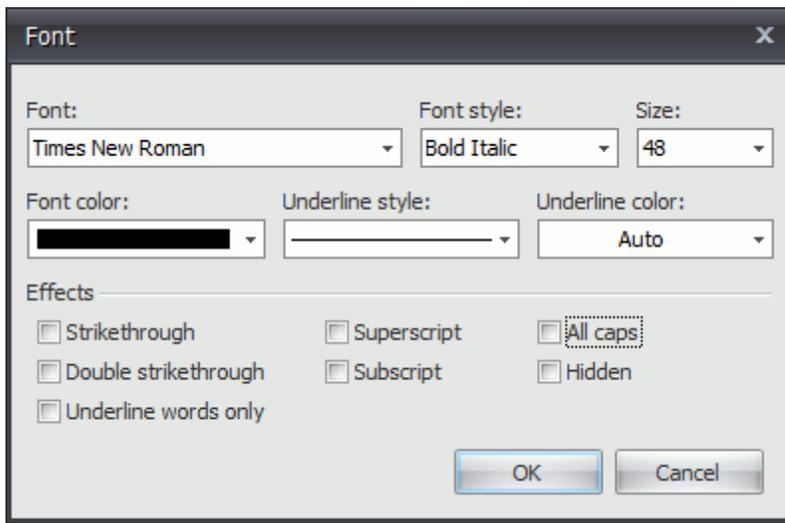
To format text, first [select it](#) and then use the **Font toolbar** to change the font family, size, color, etc.



Also, you can modify the font using the **Font** dialog. Select the text that you want to format, right-click it and choose the **Font** item from the context menu.



The **Font** dialog appears as illustrated below.



In this dialog, you can specify all required font parameters, and apply them to the selected text.

In addition, the **Rich Editor** provides a list of default keyboard shortcuts for text formatting:

CTRL+B	Toggles the bold style on the selection.
CTRL+I	Toggles the italic style on the selection.
CTRL+U	Toggles the underline style on the selection.
CTRL+D	Invokes the Font dialog that allows you to change the font, size and style of the selected text.
CTRL+PLUS	Toggles the subscript style on the selection.
CTRL+CLOSEBRACKETS (])	Increases the font size of the selected text by one point.
CTRL+OPENBRACKETS ([)	Decreases the font size of the selection by one point.
CTRL+SHIFT+PERIOD	Increases the font size of the selection to the closest larger predefined value.
CTRL+SHIFT+COMMA	Decreases the font size of the selection to the closest smaller predefined value.
CTRL+SHIFT+D	Toggles the double underline style on the selection.
CTRL+SHIFT+PLUS	Toggles the superscript style on the selection.
CTRL+SHIFT+H	Toggles between the normal and hidden text mode for the selection. To view the hidden text, press CTRL+SHIFT+8.
CTRL+SPACE	Clears formatting of selected text - resets it to default.

See Also

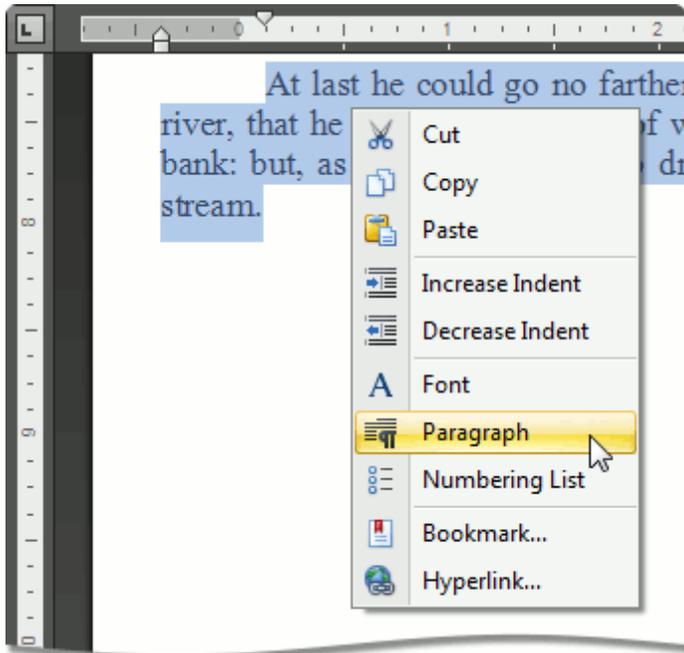
[Apply and Modify Styles](#)

Format Paragraphs

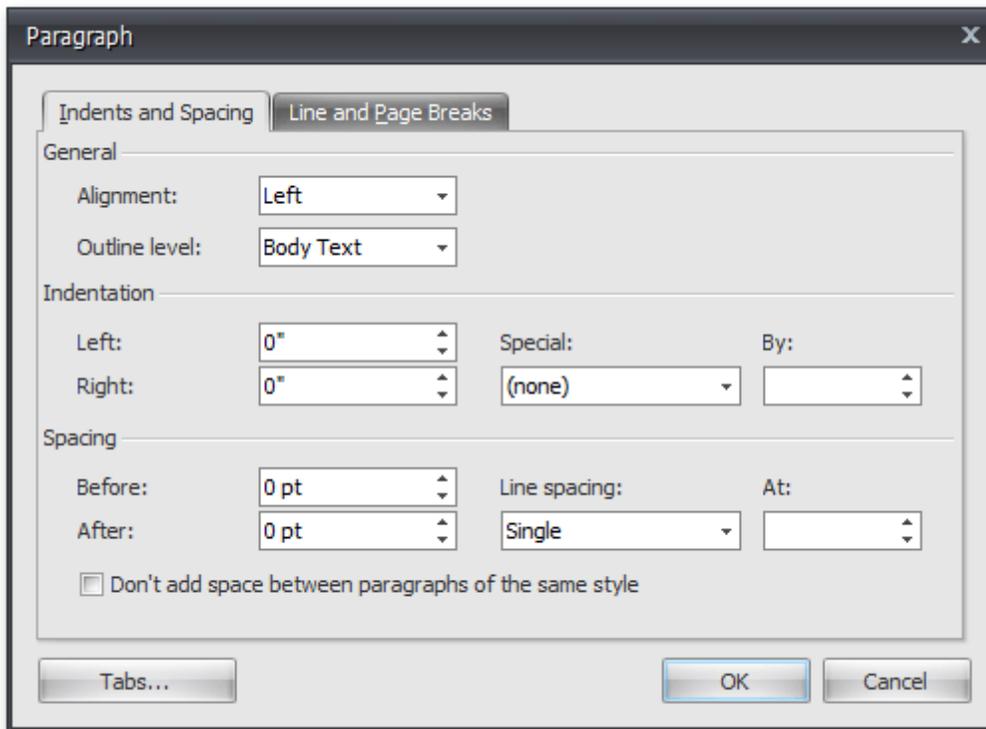
To format a paragraph, first click anywhere within it or [select](#) the paragraph, and then use the **Paragraph toolbar** to change line spacing, indentation, alignment and styles.



Also, you can use the **Paragraph** dialog to format the paragraph. To invoke this dialog, right-click the paragraph and select the **Paragraph** item from the context menu.



The **Paragraph** dialog appears, as illustrated below.



In this dialog, you can change different parameters for the paragraph (Indents and Spacing tab) and pagination (Line and Page Breaks tab).

The **Rich Editor** provides a list of the default keyboard shortcuts to format paragraphs.

CTRL+1	Formats a current paragraph with single line spacing.
CTRL+2	Formats a current paragraph with double line spacing.
CTRL+5	Formats a current paragraph with one and a half line spacing.
CTRL+E	Toggles centered paragraph alignment on and off.
CTRL+J	Toggles justified paragraph alignment on and off.
CTRL+L	Toggles left paragraph alignment on and off.
CTRL+R	Toggles right paragraph alignment on and off.

See Also

[Apply and Modify Styles](#)

Apply and Modify Styles

To format a text or a paragraph you can apply styles. A style is a group of formatting characteristics. All these characteristics are applied to a text or a paragraph at once when you apply a style. Thus, styles allow you to change text and paragraph appearance quicker than setting all formatting characteristics separately ([Format Text](#), [Format Paragraphs](#)).

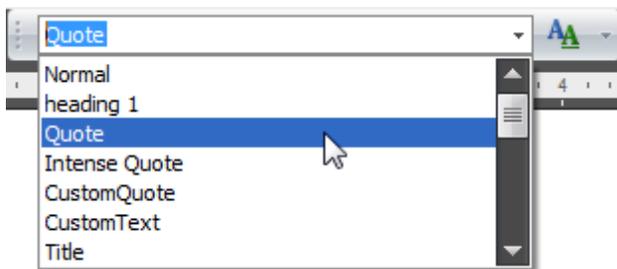
A **character based style** includes characteristics to format text within a paragraph (e.g., font type and size, bold and italic formats, etc.)

A **paragraph based style** affects paragraph formatting characteristics such as text alignment, line spacing, etc. It can also include character formatting characteristics.

Apply a Style

To apply a style, do the following.

1. [Select text](#) or a paragraph that you want to format.
2. Click or type a required style name in the **Quick Styles** box on the **Styles toolbar**.

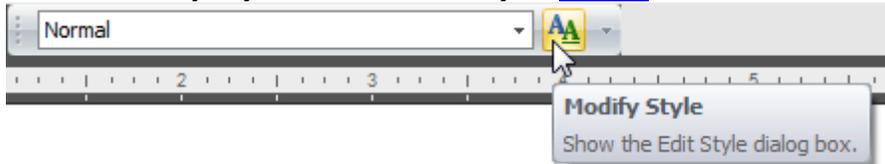


Modify a Style

You can modify an existing style via the **Modify Style** dialog.

To invoke the dialog, do the following:

1. Click the **Modify Style** button on the **Styles toolbar**:



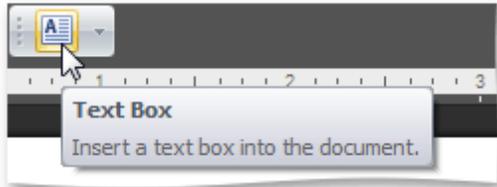
2. The **Modify Style** dialog enables you to change the base style for the current style (to specify how the styles cascade), the style which should be used for the following paragraph, and basic characteristics of the style, such as Font, Paragraph and Tab Stops.

Pictures and Text Boxes

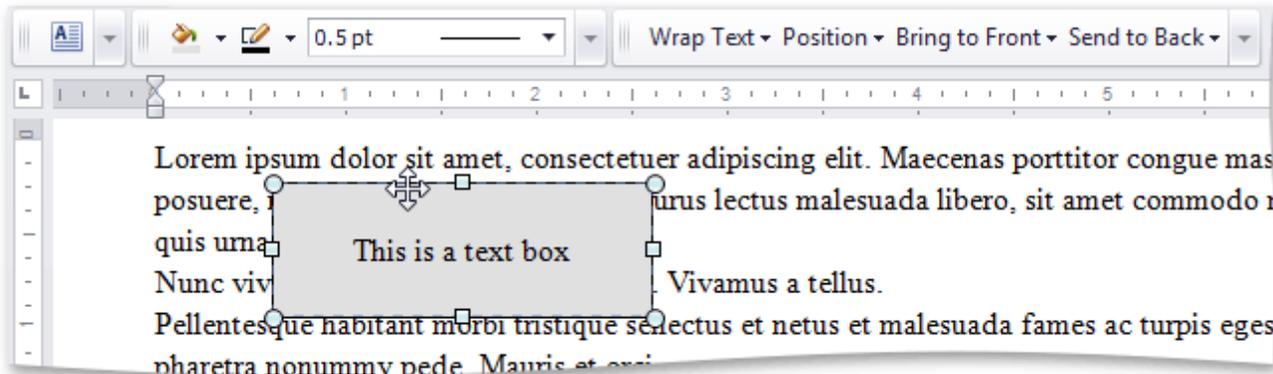
Insert, Select, Copy or Delete a Text Box

Insert a Text Box

To insert a text box into your document, position the caret to the desired location and click the **Text Box** button on the **Text toolbar**.



A floating text box enables you to specify [fill color](#), [outline width and color](#) and apply formatting to the box content.

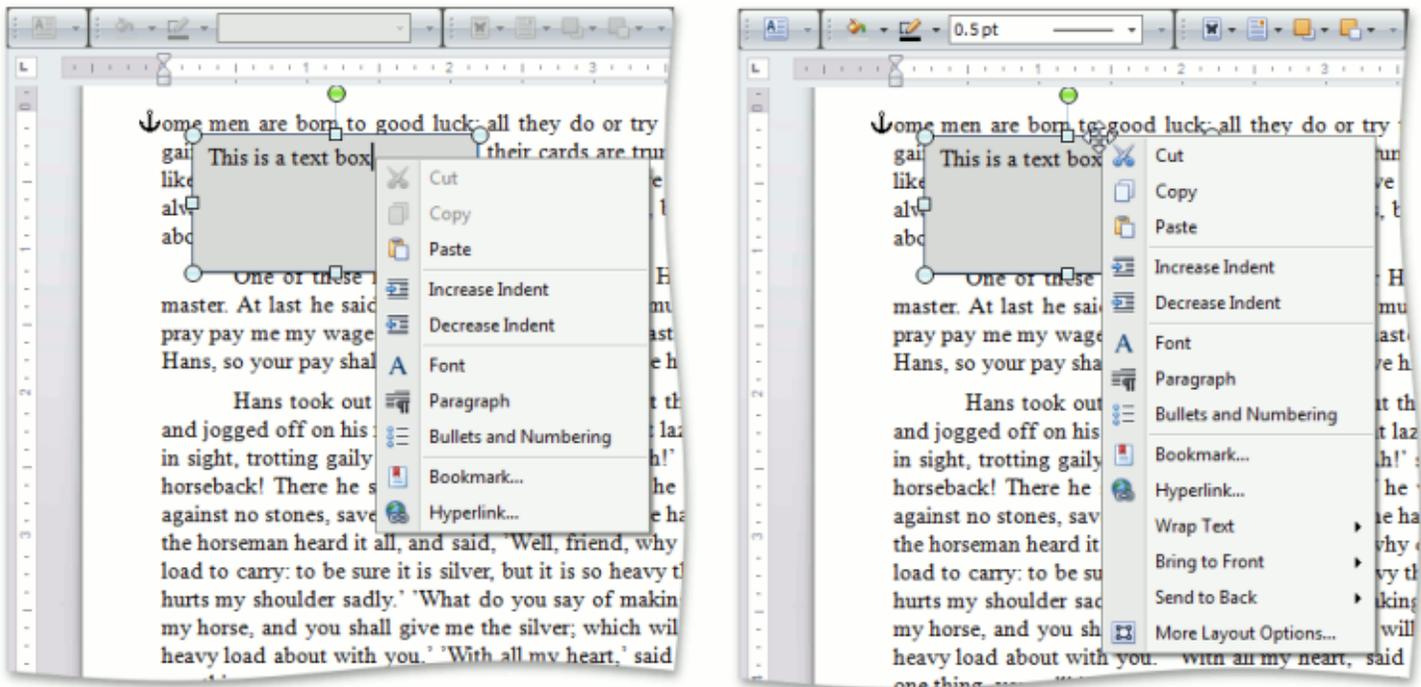


Select a Text Box

To select a text box, click a border of the text box.

Note

If the caret is placed inside the text box, you can modify the text box content, but it is impossible to [move](#), [copy](#), [delete](#) the text box or specify such attributes as [fill color](#), [outline color and weight](#), [text wrapping](#), [position](#), etc. In this case, the text box is not considered as selected, the **Shape Styles** and **Arrange toolbars** and corresponding items of the text box's context menu are unavailable.



Copy a Text Box

1. [Select](#) a text box to be copied.
2. Click **Copy**  on the [Clipboard toolbar](#) or context menu, or press **CTRL+C**, or press **CTRL+INSERT**.
3. Position the caret to the location where you want to insert the copy of the selected text box.
4. Click **Paste**  on the [Clipboard toolbar](#) or context menu, or press **CTRL+V**, or press **SHIFT+INSERT**.

Delete a Text Box

1. [Select](#) a text box that you wish to remove.
2. Press **DELETE**.

Insert a Picture

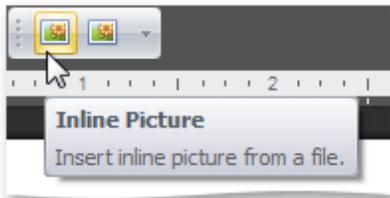
You can insert either [inline](#) or [floating](#) graphics in the document. Currently it is not possible to convert inline to floating and vice versa, so you have to choose beforehand how to anchor your picture.

The **Rich Text Editor** enables you to insert graphics of the following types:

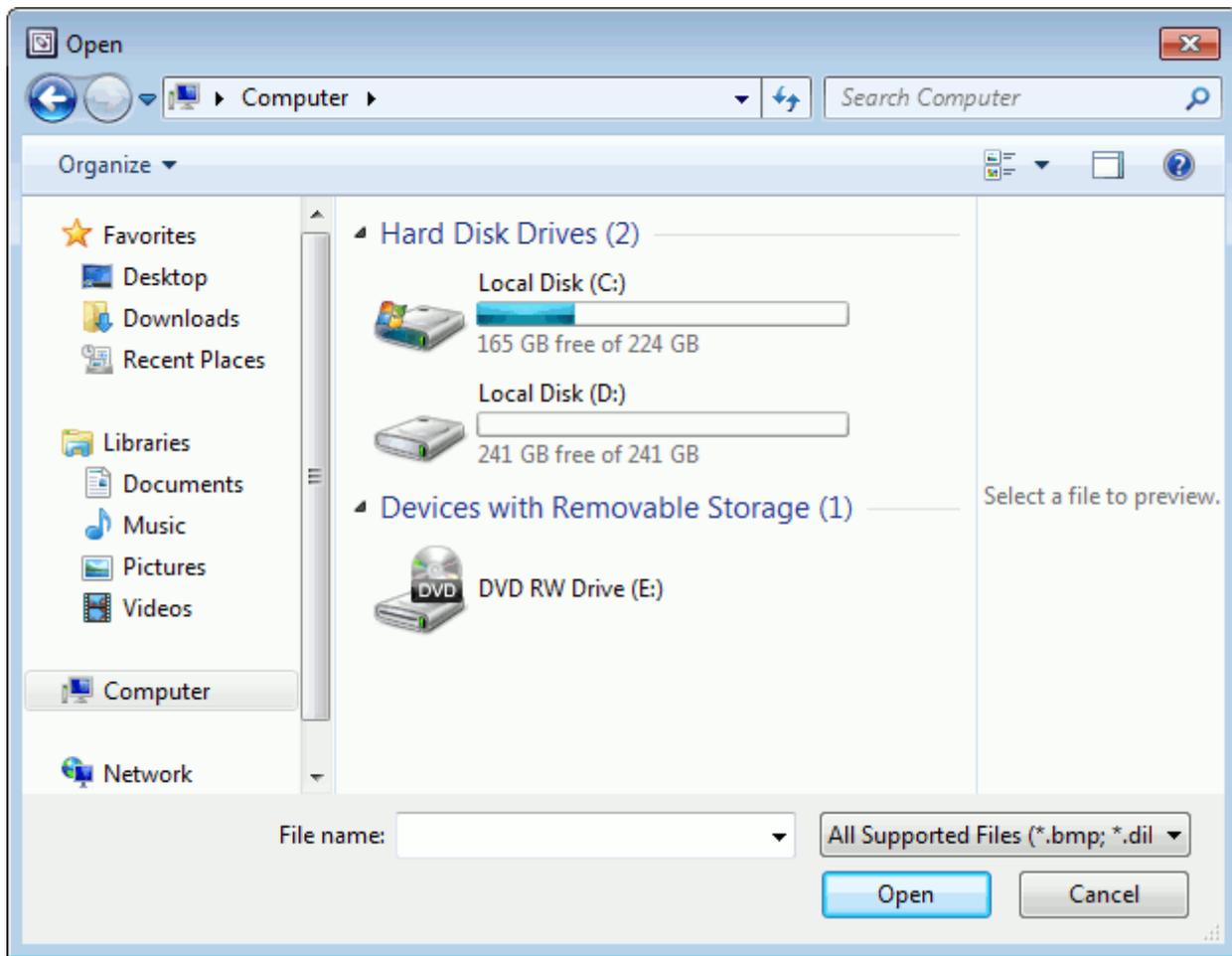
- Bitmap (*.bmp, *.dib)
- JPEG File Interchange Format (*.jpg, *.jpeg)
- Portable Network Graphics (*.png)
- Graphics Interchange Format (*.gif)
- Tagged Image Format (*.tif, *.tiff)
- Microsoft Enhanced Metafile (*.emf)
- Windows Metafile (*.wmf)

Inline Picture

To insert inline picture into your document, position the caret to the desired location and click the **Inline Picture** button on the **Illustrations toolbar**.

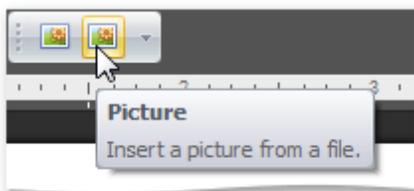


The **Open** dialog appears, allowing you to locate a file with graphics.



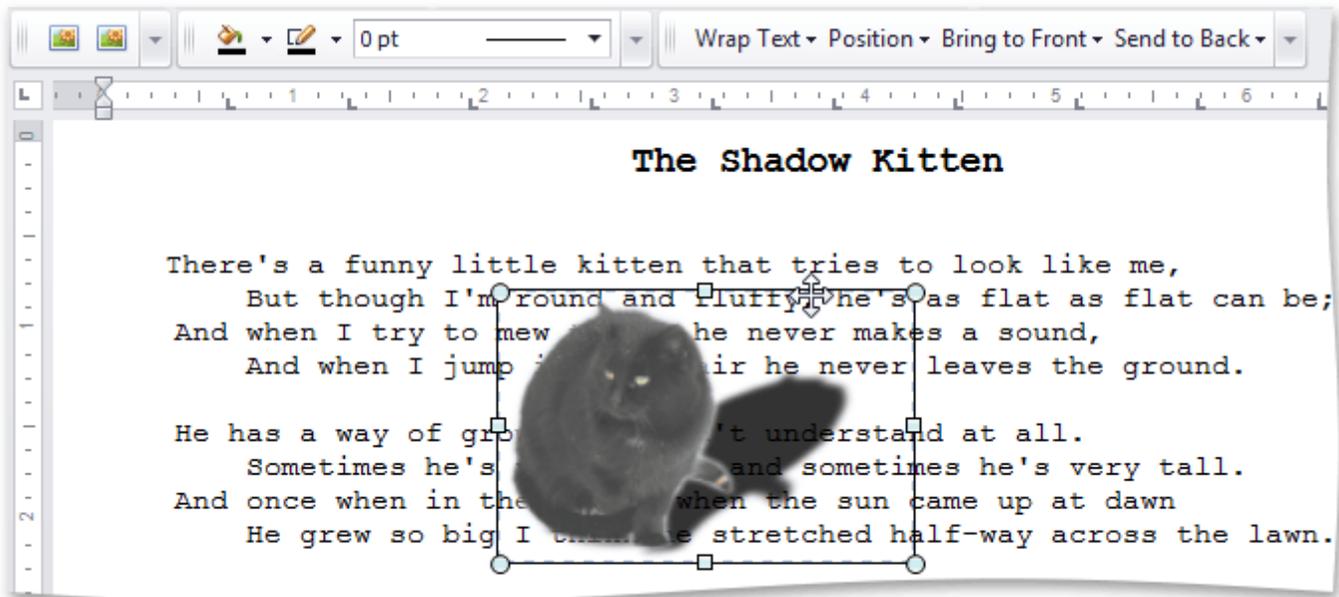
Floating Picture

To insert floating picture into your document, position the caret in the paragraph to which the picture should be anchored, and click the **Picture** button on the **Illustrations toolbar**.



The **Open** dialog appears, allowing you to locate a file with graphics.

The inserted floating picture is centered horizontally and has an **In Front of Text** wrapping style which you can [change](#) later.

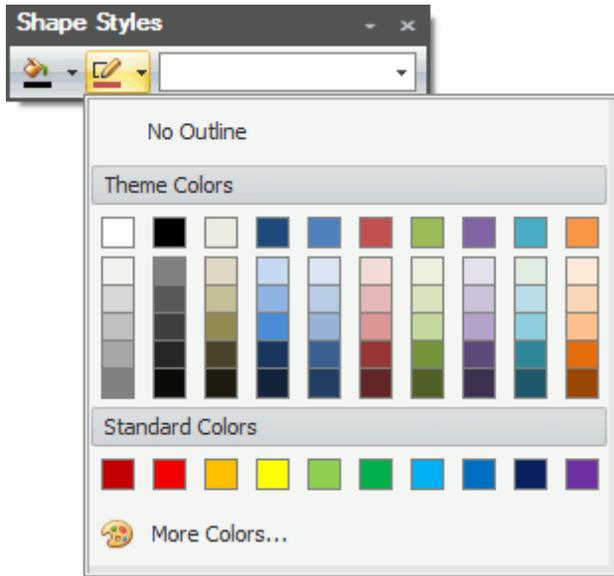


Add, Change or Delete a Border for a Picture or Text Box

You can specify the [color](#) and [weight](#) of the outside border of a [floating picture](#) or [text box](#), or fully [delete](#) the border.

Set the Color of a Picture or Text Box Border

1. Select the [floating picture](#) or [text box](#) whose outline border color you wish to specify.
2. Click **Shape Outline** on the **Shape Styles toolbar** and select the required color.

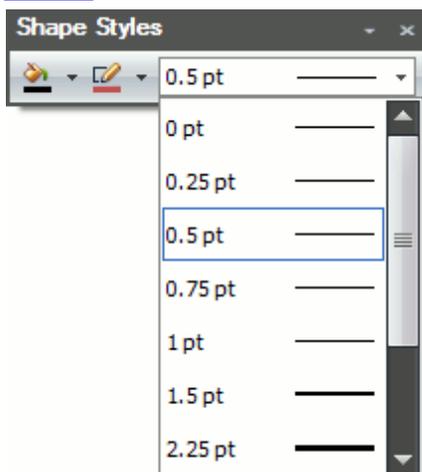


Note

By default, a floating picture is inserted with [no border](#). To specify a colored outline border for a picture, a border [weight](#) must be set.

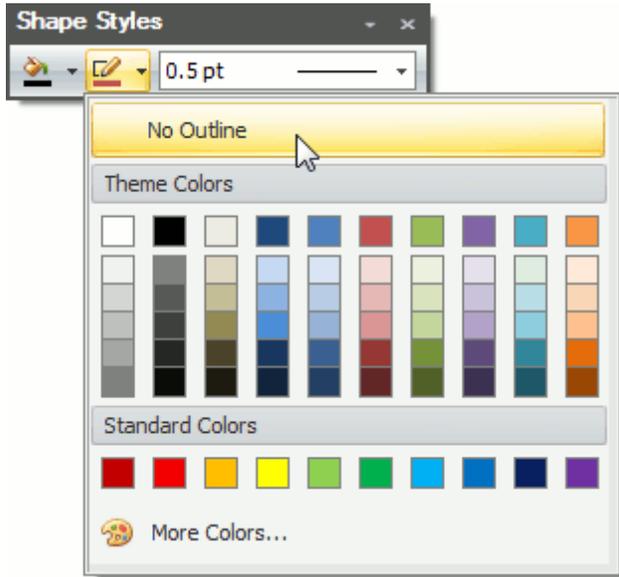
Set the Weight of a Picture or Text Box Border

1. Select a [floating picture](#) or [text box](#) whose outline border weight you wish to specify.
2. Select the required border weight from the **Shape Outline Weight** list accessed on the **Shape Styles toolbar**.



Remove a Picture or Text Box Border

1. Select a [floating picture](#) or [text box](#) whose outline border you wish to remove.
2. Click **Shape Outline** on the **Shape Styles toolbar** and select **No Outline**.



Add, Change or Delete a Text Box Fill

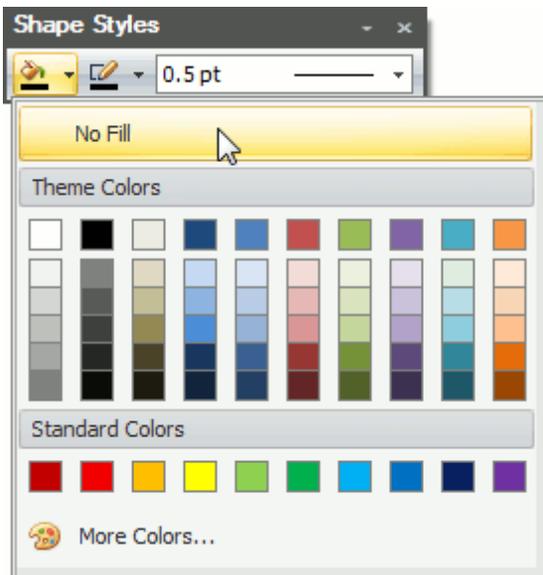
Specify a Text Box Fill

1. [Select a text box](#) whose background you wish to color.
2. Click **Shape Fill** on the **Shape Styles toolbar** and select the required color.



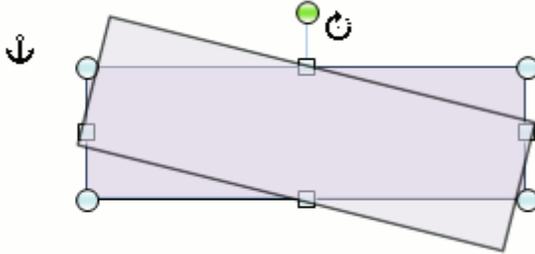
Delete a Text Box Fill

1. [Select a text box](#) whose fill you wish to remove.
2. Click **Shape Fill** on the **Shape Styles toolbar** and select **No Fill**.

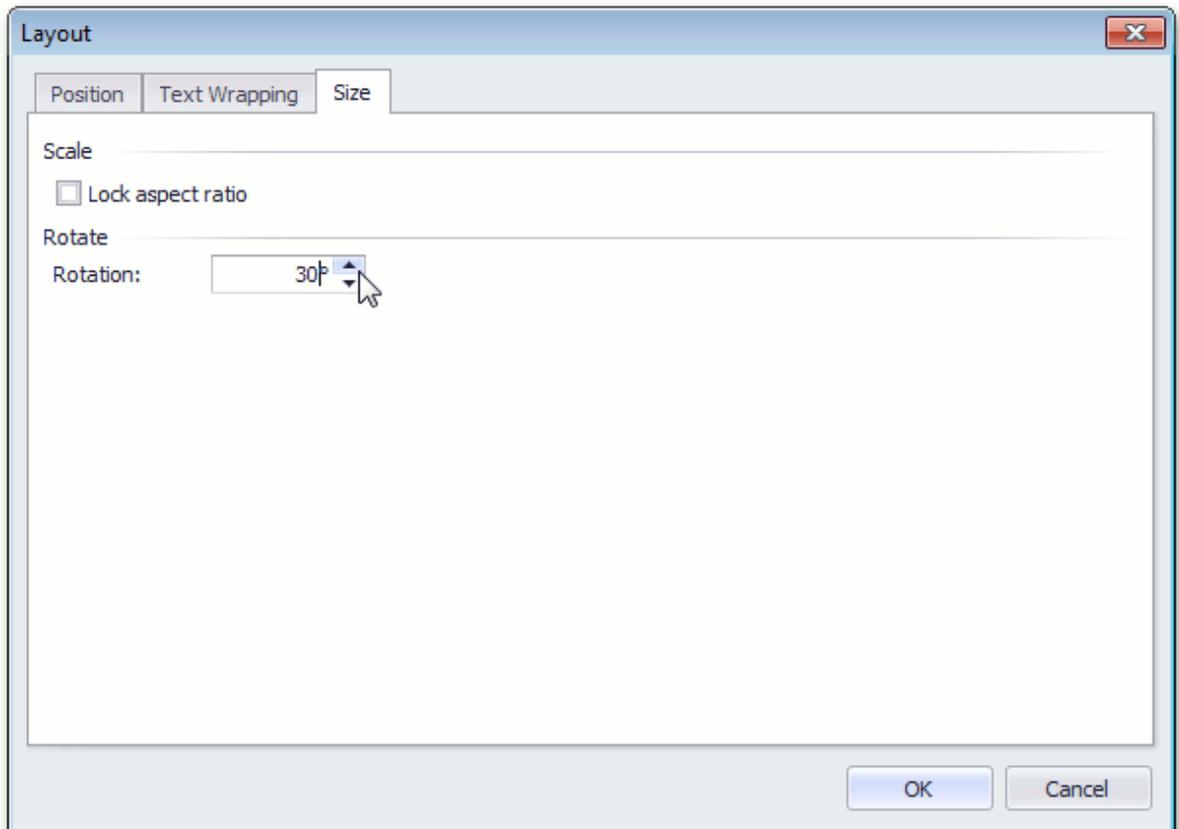


Rotate a Picture or Text Box

1. Click the [floating picture](#) or [text box](#) that you wish to rotate.
2. Do one of the following.
 - Click the round arrow that appears over the selected floating picture or text box and drag it in the direction to which you wish to rotate the object.



- To rotate an object by 15 degree angles, drag the round arrow at the top of the object while holding down the **SHIFT** key.
- Right-click a picture or text box to be rotated and select the **More Layout Options...** item from the context menu. Switch to the **Size** tab in the invoked **Layout** dialog and set the required value of the angle to rotate the object in the **Rotation** box.



Move a Picture or Text Box

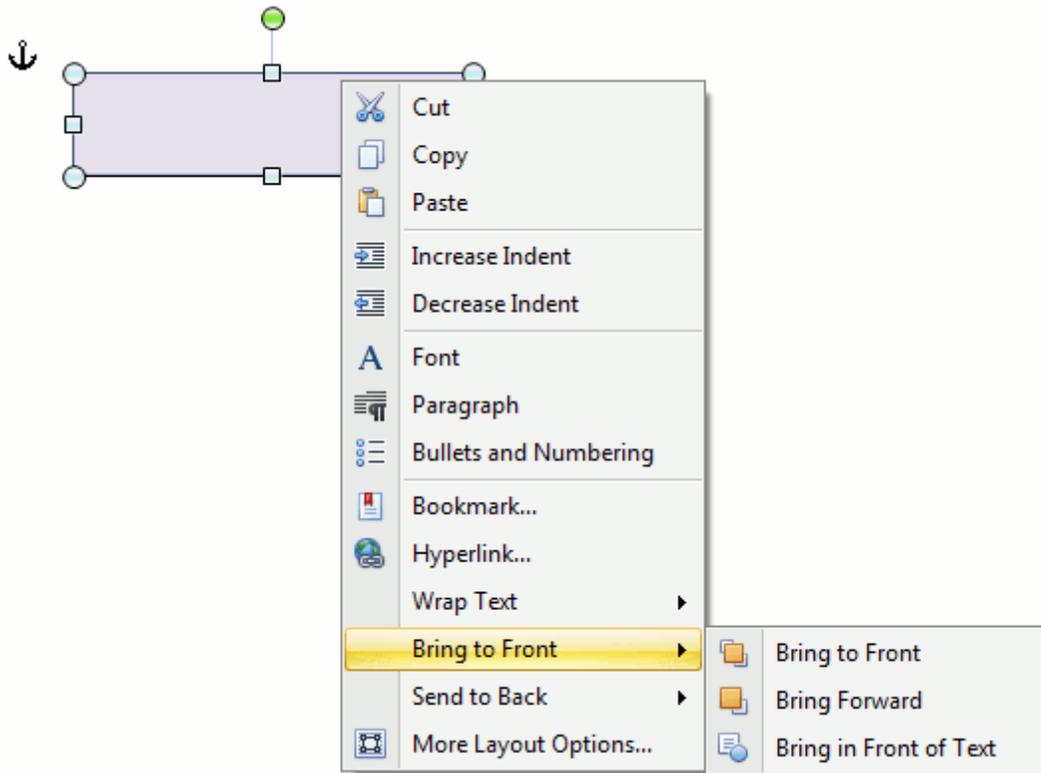
Move a Picture or Text Box

1. Select the [floating picture](#) or [text box](#) that you wish to move.
2. Drag the object to the new location.

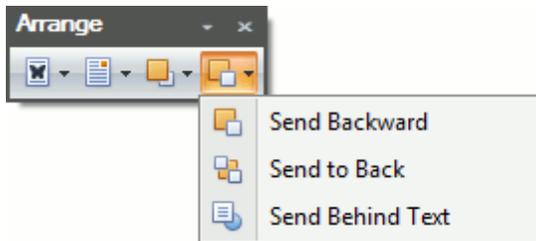
Move a Picture or Text Box Forward or Backward

When you add floating objects into a document, they are automatically inserted in particular layers. Objects can overlap. In this case the top object covers lower objects (in full or in part). You can move particular objects up and down in a stack one layer at a time, or move them to the top or bottom of a stack in one click.

1. Select the [floating picture](#) or [text box](#) that you wish to move up or down in the stack.
2. Select the required item from the floating object's context menu ...



... or **Arrange** [toolbar](#).



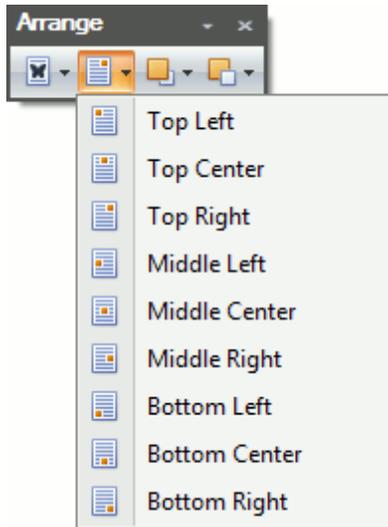
- To move the selected floating object one layer forward to the front, click **Bring to Front -> Bring Forward**.
- To move the selected floating object in front of the text layer and any other floating objects, **Bring to Front -> Bring to Front**.
- To move the selected floating object in front of the text layer, click **Bring to Front -> Bring in Front of Text**.
- To move the selected floating object one layer forward to the back, click **Send to Back -> Send Backward**.

- To move the selected floating object behind the text or any other floating object, click **Send to Back -> Send to Back**.
- To move the selected floating object behind the text layer, click **Send to Back -> Send Behind Text**.

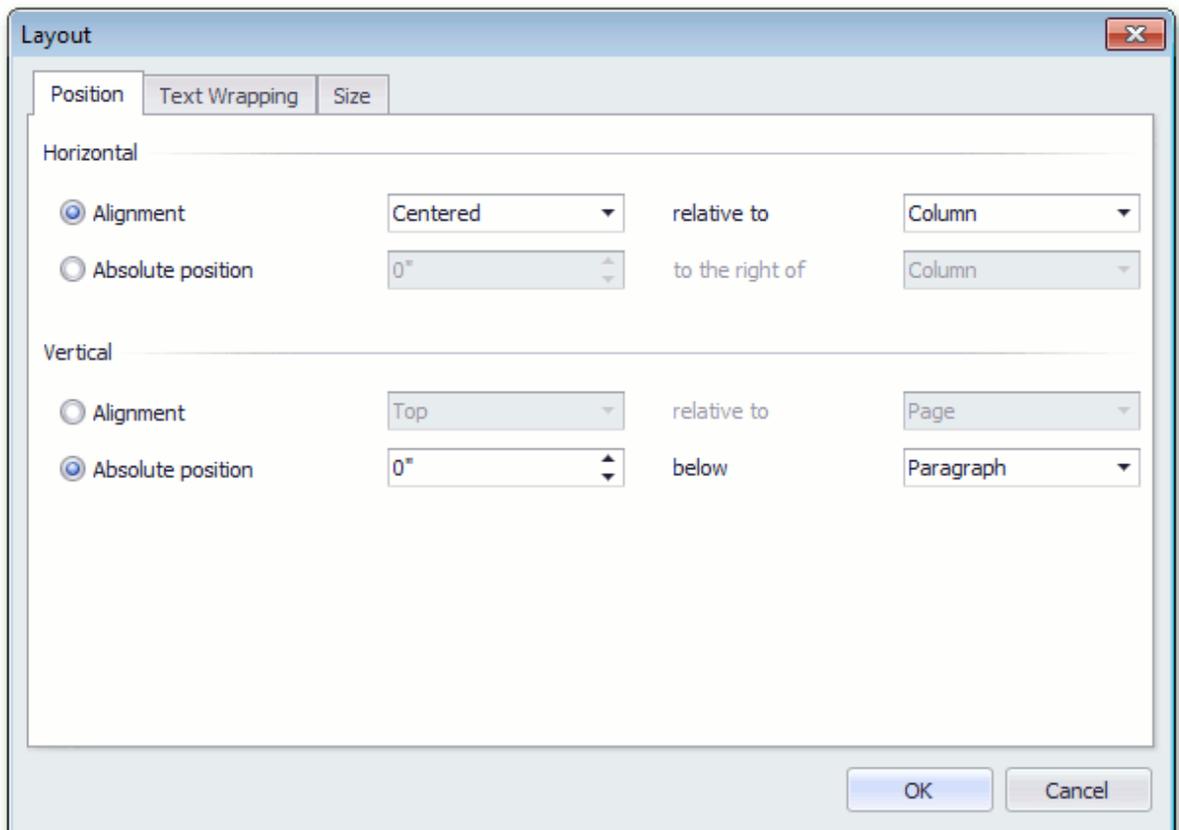
Wrap Text around a Picture or Text Box

Position a Picture or Text Box within a Document

1. Select a [floating picture](#) or [text box](#) whose location you want to specify.
2. Specify an object location in one of the following ways.
 - Click **Position** on the **Arrange toolbar** and select the required position of the object from the invoked list.

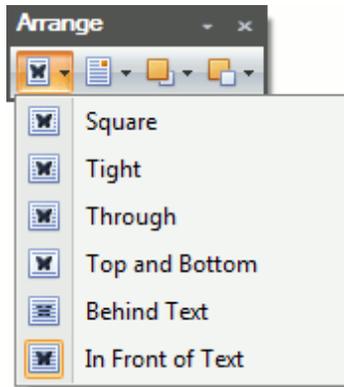


- Right-click the object to be positioned and select the **More Layout Options...** item from the context menu. On the **Position** tag of the invoked **Layout** dialog, specify the required position for the floating object.

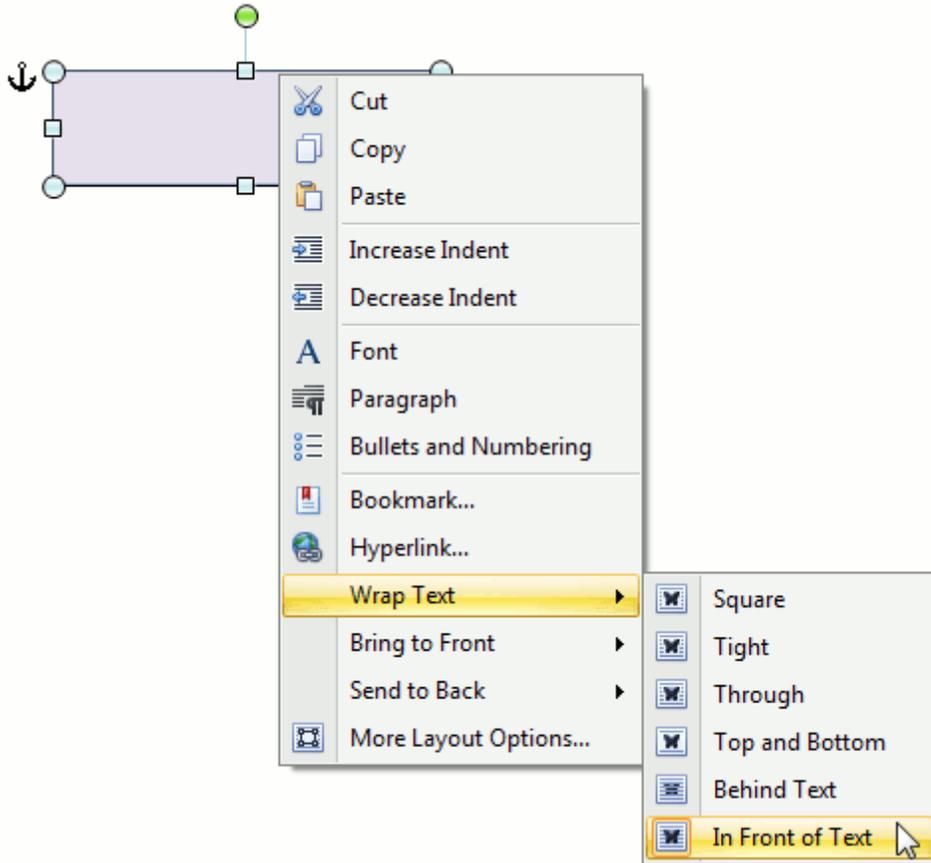


Wrap Text around Picture or Text Box

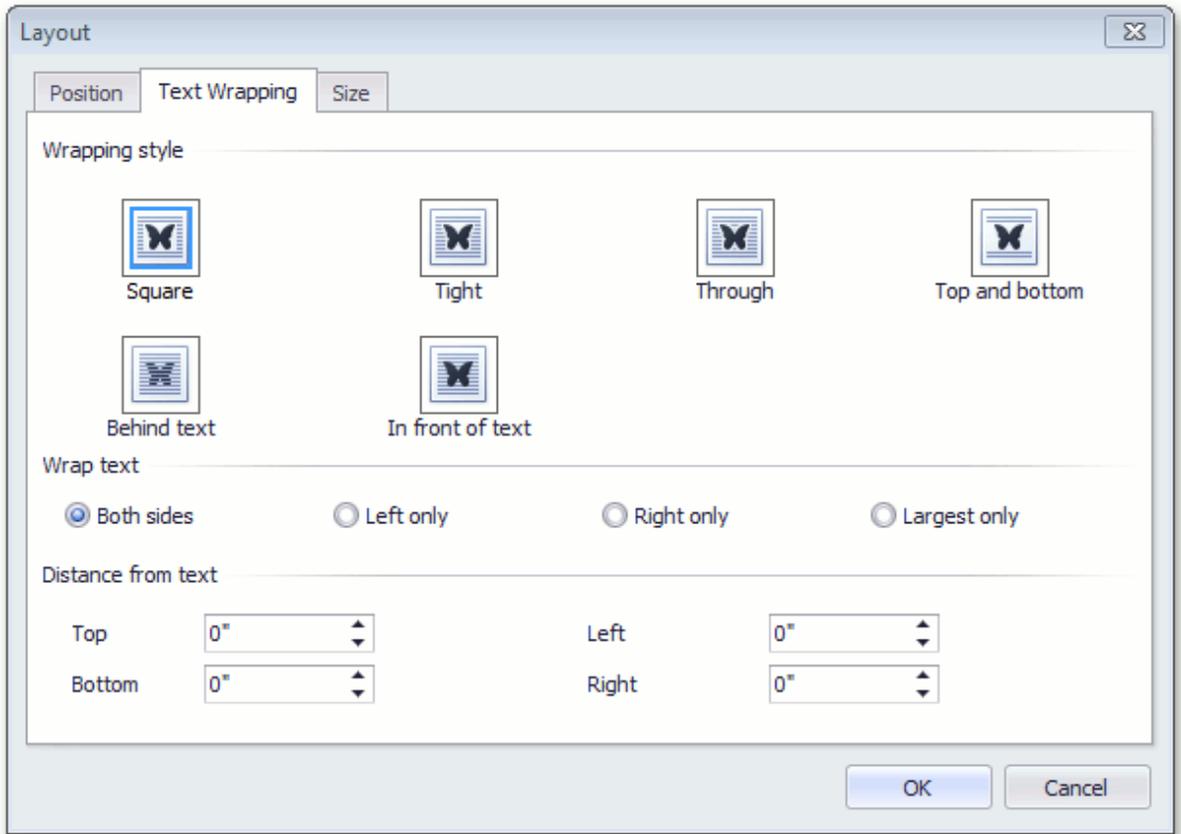
1. Select a [floating picture](#) or a [text box](#).
2. To specify a way text wraps around the selected object, do one of the following.
 - Click **Wrap Text** on the **Arrange** [toolbar](#) and select the required type of text wrapping around the selected object from the invoked list.



- Right-click the selected floating object, and select the required type of the text wrapping from the **Wrap Text** sub-menu of the invoked context menu.



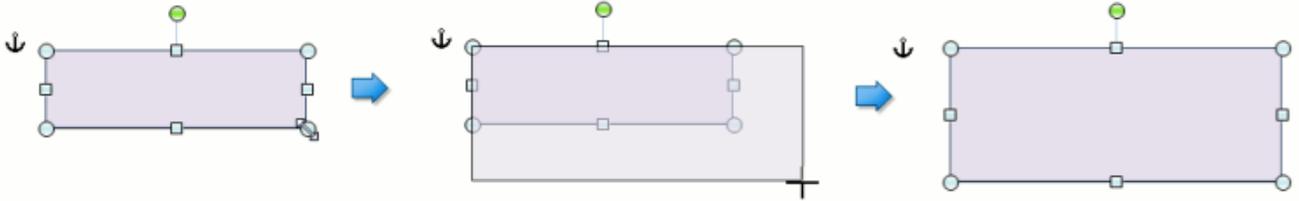
- Right-click the selected floating object, and select the **More Layout Options...** item from the context menu. Switch to the **Text Wrapping** tab of the invoked **Layout** dialog and specify the required text wrapping settings for the floating object.



Resize a Picture or Text Box

To resize a picture or text box, shrink or stretch an object in the following way.

1. Click a [floating picture](#) or [text box](#) to be resized.
2. Drag a *sizing handle* towards or away from the object center until a required size is reached.



To keep object proportions when resizing it, check the **Lock aspect ratio** option (it is accessed via the **Layout** dialog that is invoked when selecting the **More Layout Options...** item from the context menu of the floating object). In this case when you change a width of the object by dragging a *corner sizing handle*, the object's height will be automatically changed to maintain exact proportions of the object and vice-versa.

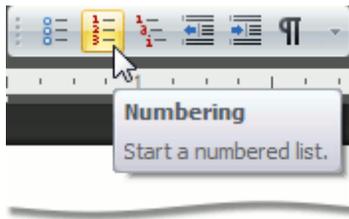
To specify an exact height and width of the object, clear the **Lock aspect ratio** check box.

Lists

Numbered Lists

Create a Numbered List as You Type

1. Point to the position within a document from which you want to begin your list.
2. Click the **Numbering** button on the **Paragraph toolbar**.



3. Type the text.
4. Press **ENTER** to create the next item of the list.
5. To finish the list, press **ENTER** twice.

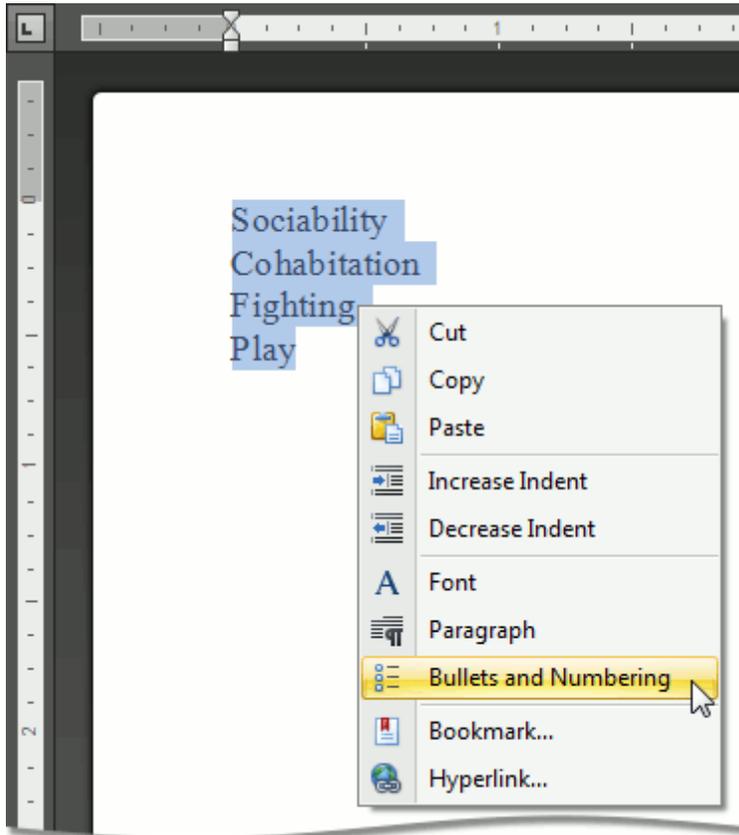
Make a Numbered List from the Selected Text

You can add numbers to existing lines of text in two ways. The first one is to use the **Paragraph toolbar**:

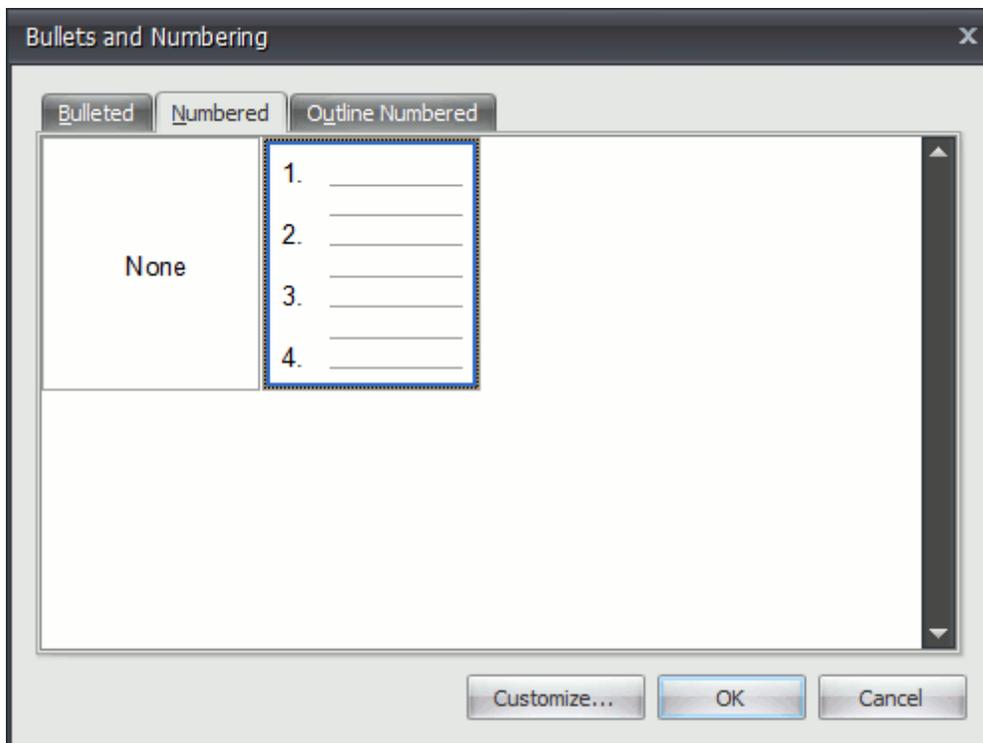
1. Select the text lines that you want to transform into a list.
2. Click the **Numbering** button on the **Paragraph toolbar**.

Another way to do the same thing is to use the [context menu](#):

1. Select the text to be transformed into a list.
2. Right-click within the document and select the **Bullets and Numbering** item from the appeared context menu.



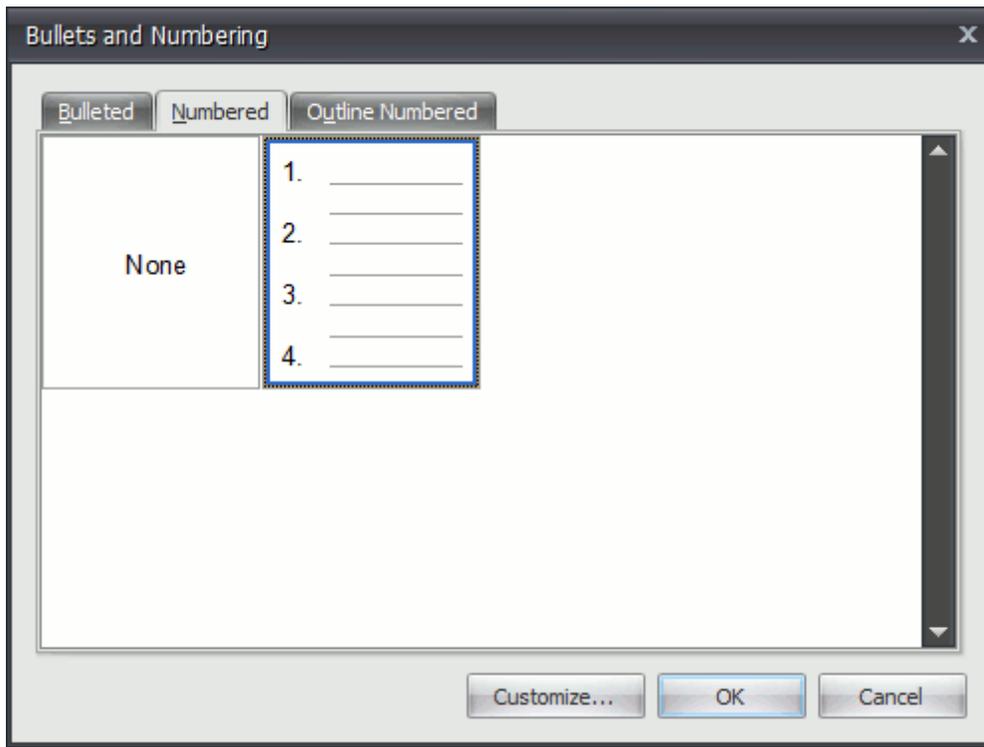
3. In the invoked **Bullets and Numbering** dialog, click the **Numbered** tab and choose the list style that you want to apply.



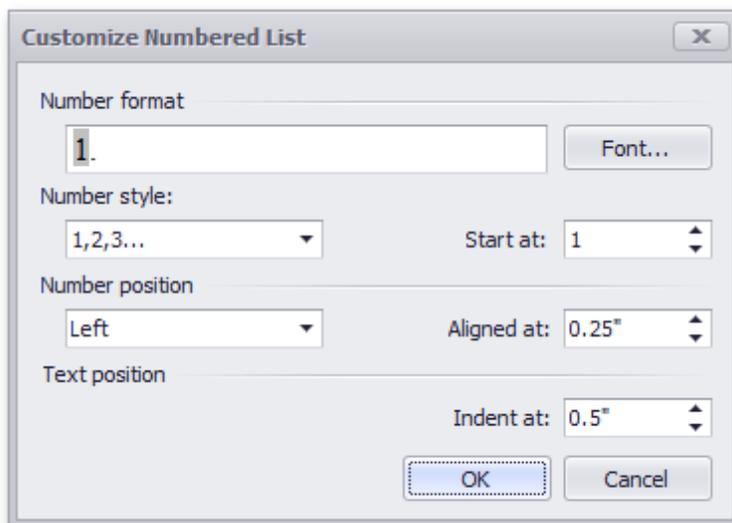
Create Your Own List Style

You can create your own style for a numbered list on the basis of one of the existing list styles, by changing different list parameters.

1. Select the numbered list (or text to be transformed into the numbered list) to which you want to apply your own style.
2. Right-click within the document and select the **Bullets and Numbering** item from the resulting [context menu](#). The **Bullets and Numbering** dialog will be displayed.

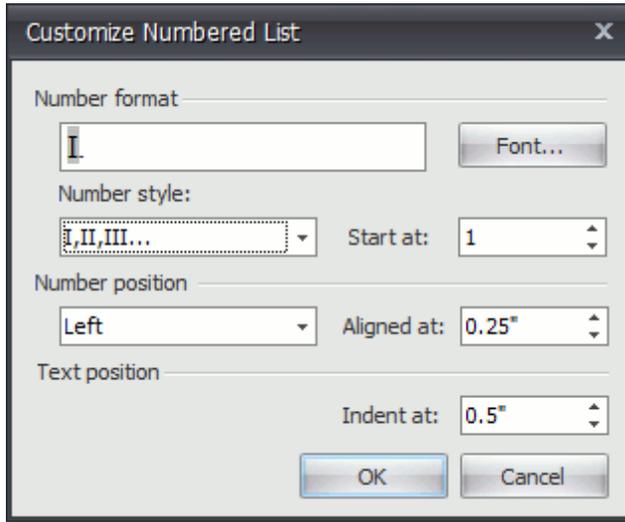


3. Click the **Numbered** tab, choose one of the existing styles and click **Customize...**. The **Customize Numbered List** dialog will be invoked.

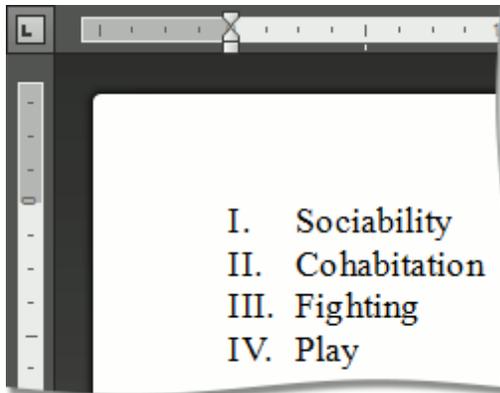
**Note**

The **Customize...** button is disabled if the **None** item of the **Bullets and Numbering** dialog is selected. This item is selected automatically, when you invoke the **Bullets and Numbering** dialog for lines of text rather than for a list.

4. In this dialog, change different list parameters to create your own list style. For instance, if you specify list parameters in the following way,...



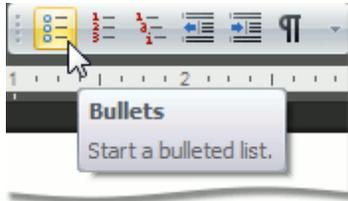
...you will get the list style as illustrated below.



Bulleted Lists

Create a Bulleted List as You Type

1. Point to the position in a document from where you want to begin your list.
2. Click the **Bullets**  button on the **Paragraph toolbar**.



3. Type the text.
4. Press **ENTER** to create the next item of the list.
5. To finish the list, press **ENTER** twice.

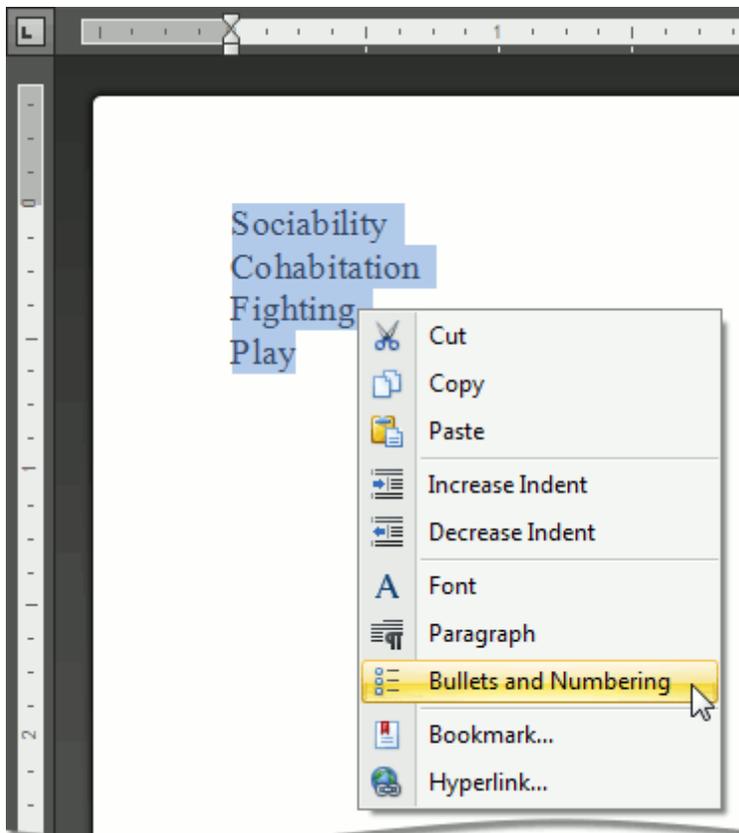
Make a Bulleted List from the Selected Text

You can add bullets to existing lines of text in two ways. The first method is to use the **Paragraph toolbar**:

1. Select the text lines that you want to transform into a list.
2. Click the **Bullets**  button on the **Paragraph toolbar**.

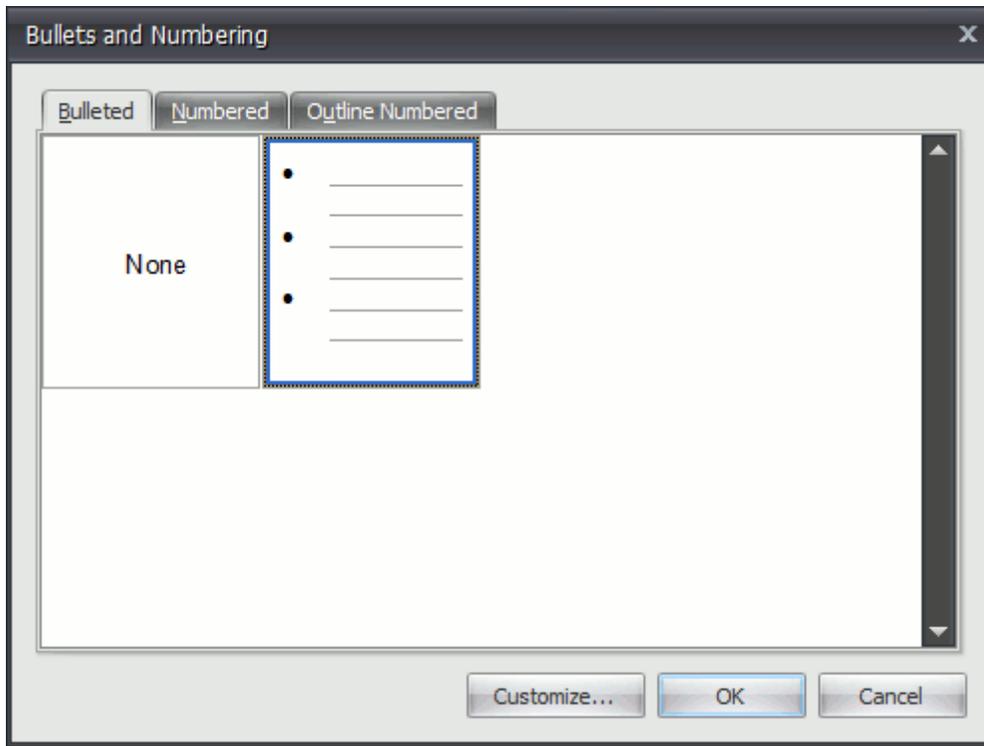
Another way to do the same thing is to use the [context menu](#):

1. Select the text to be transformed into a list.
2. Right-click within the document and select the **Bullets and Numbering** item from the invoked context menu.



3. In the invoked **Bullets and Numbering** dialog, click the **Bulleted** tab and choose the list style that you

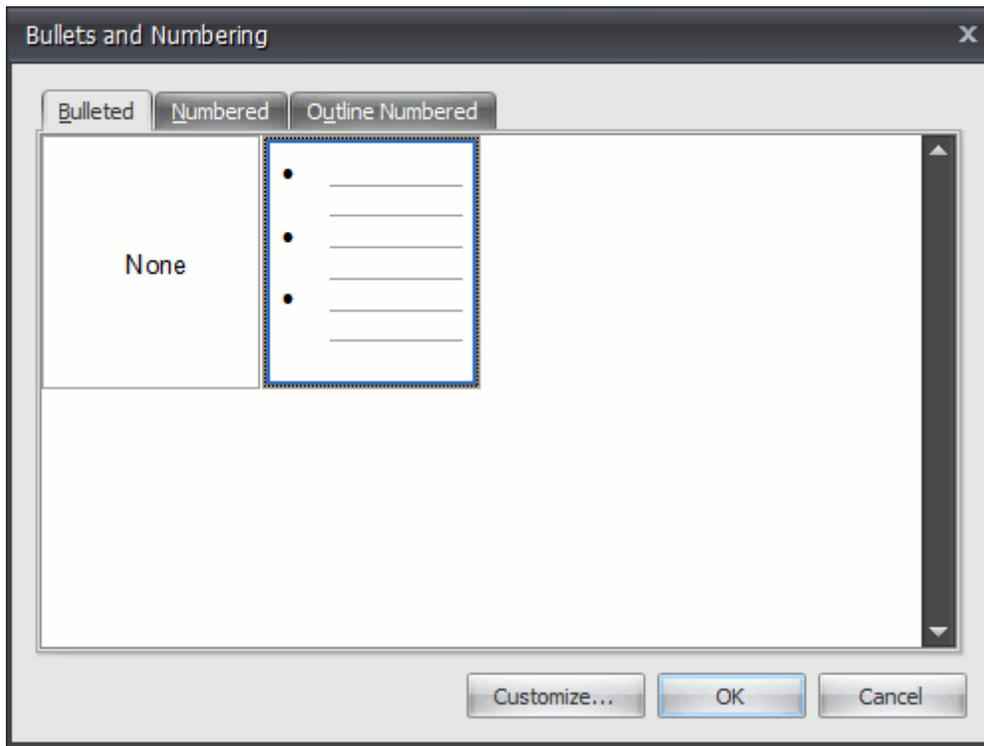
want to apply.



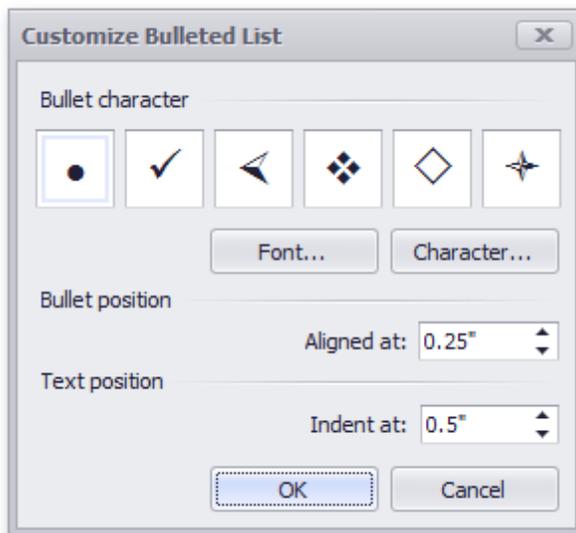
Create Your Own List Style

You can create your own style for a bulleted list on the basis of one of the existing list styles, by changing various list parameters.

1. Select the bulleted list (or text to be transformed into the bulleted list) to which you want to apply your own style.
2. Right-click within the document and select the **Bullets and Numbering** item from the resulting [context menu](#). The **Bullets and Numbering** dialog will be displayed.



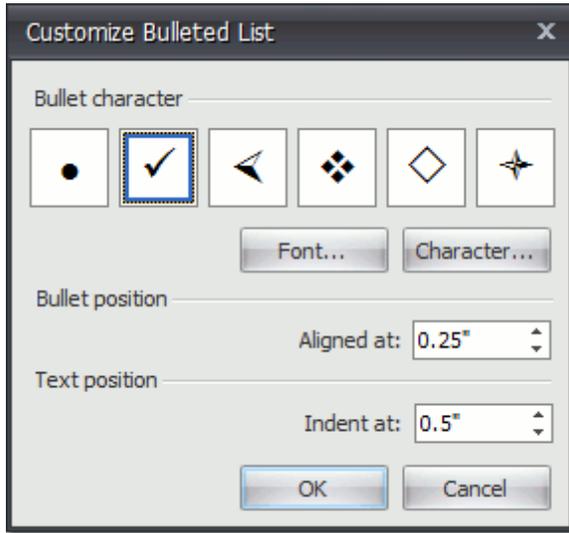
3. Click the **Bulleted** tab, choose one of the existing styles and click **Customize...**. The **Customize Bulleted List** dialog will be invoked.



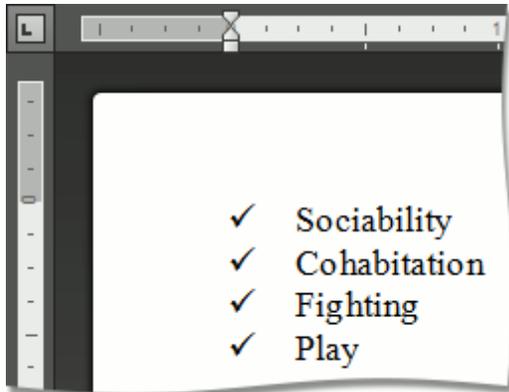
Note

The **Customize...** button is disabled if the **None** item of the **Bullets and Numbering** dialog is selected. This item is selected automatically when you invoke the **Bullets and Numbering** dialog for lines of text, rather than for a list.

4. In this dialog, change different list parameters to create your own list style. For instance, if you specify list parameters in the following way,...



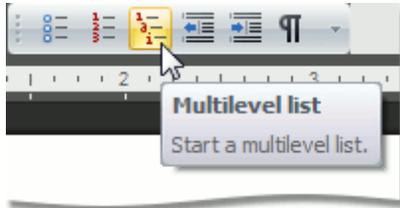
...you will get the list style as illustrated below.



Multilevel Lists

Create a Multilevel List as You Type

1. Point to the position within a document from which you want to begin your list.
2. Click the **Multilevel list**  button on the **Paragraph toolbar**.



3. Type the text.
4. To change levels of the list, press **TAB** and **SHIFT+TAB**, or click the **Increase Indent**  and **Decrease Indent**  buttons on the **Paragraph toolbar**. Press **ENTER** to create the next item on the current level.
5. To finish the list, press **ENTER** twice.

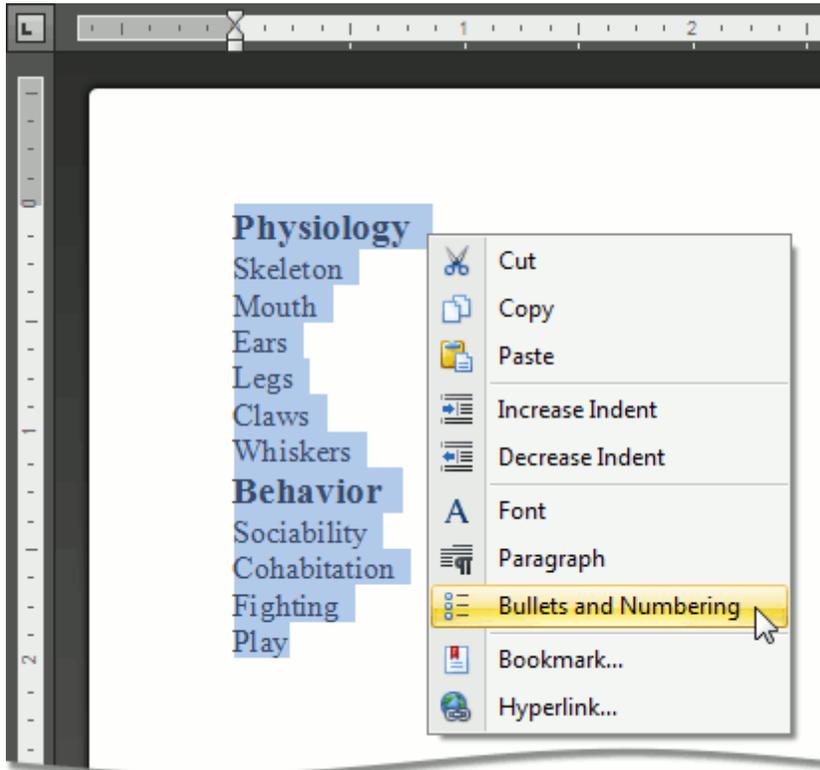
Make a Multilevel List from the Selected Text

You can make multilevel list from existing lines of text in two ways. The first one is to use the **Paragraph toolbar**:

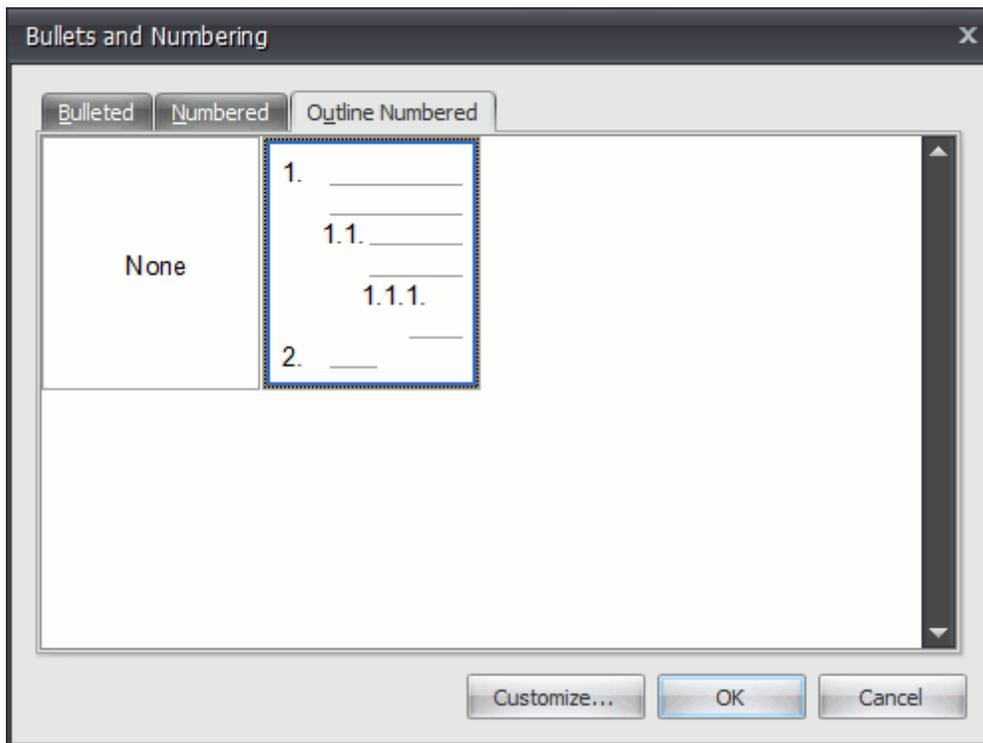
1. Select the text lines that you want to transform into a list.
2. Click the **Multilevel list**  button on the **Paragraph toolbar**.
3. Use **TAB** and **SHIFT+TAB**, or the **Increase Indent**  and **Decrease Indent**  buttons of the **Paragraph toolbar** to change levels.

Another way to do the same thing is to use the [context menu](#):

1. Select the text to be transformed into a list.
2. Right-click within the document and select the **Bullets and Numbering** item from the invoked context menu.



3. In the invoked **Bullets and Numbering** dialog, click the **Outline Numbered** tab and choose the list style that you want to apply.



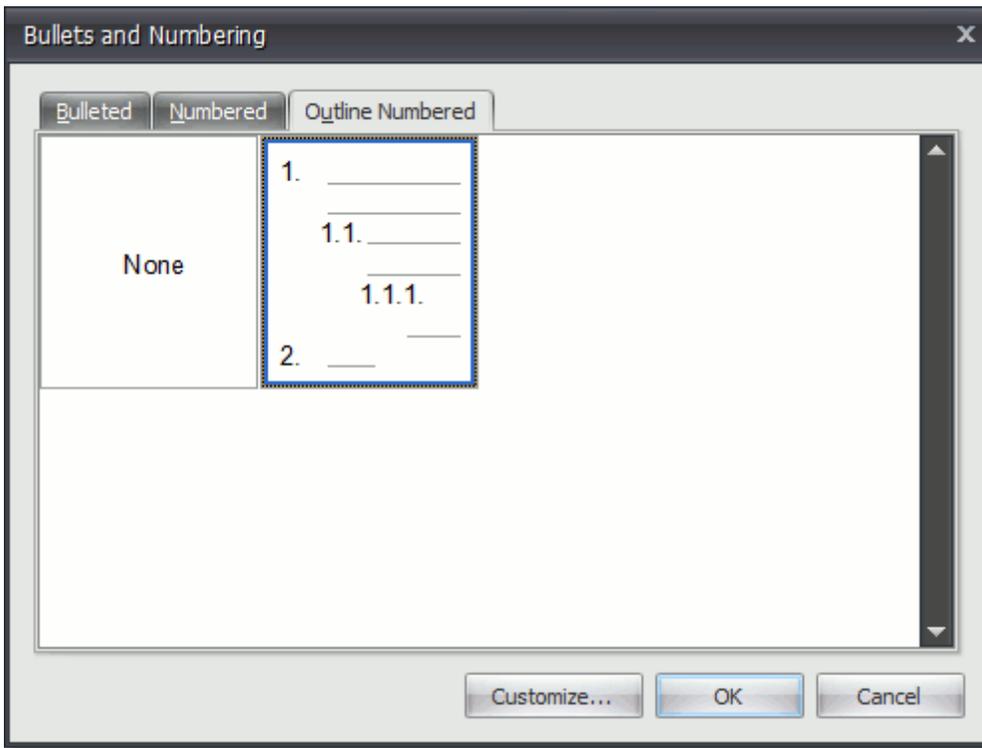
4. Use **TAB** and **SHIFT+TAB**, or the **Increase Indent**  and **Decrease Indent**  buttons of the **Paragraph** toolbar to change levels.

Create Your Own List Style

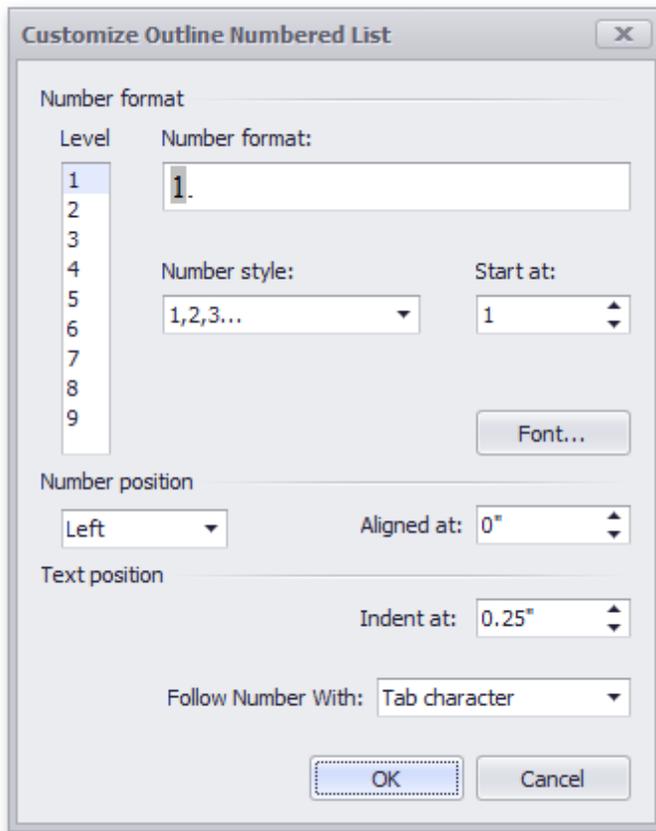
You can create your own style for a multilevel list on the basis of one of the existing list styles, by changing

different list parameters.

1. Select the multilevel list (or text to be transformed into the multilevel list) to which you want to apply your own style.
2. Right-click within the document and select the **Bullets and Numbering** item from the resulting [context menu](#). The **Bullets and Numbering** dialog will be displayed.

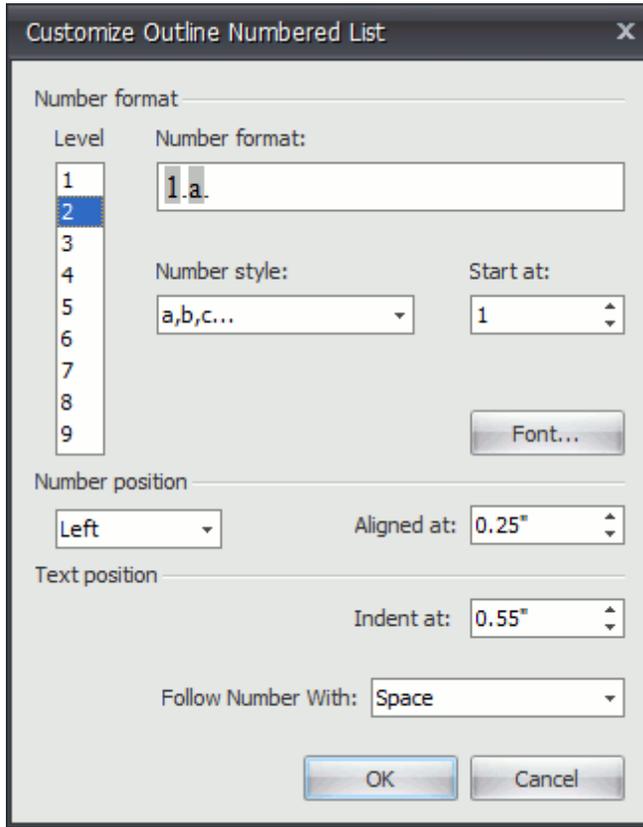


3. Click the **Outline Numbered** tab, choose one of the existing styles and click **Customize....** The **Customize Outline Numbered List** dialog will be invoked.

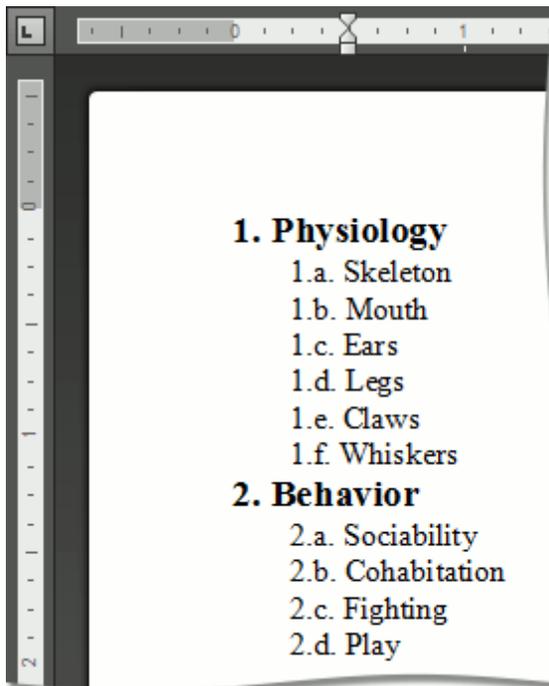
**Note**

The **Customize...** button is disabled if the **None** item of the **Bullets and Numbering** dialog is selected. This item is selected automatically, when you invoke the **Bullets and Numbering** dialog for lines of text, rather than for a list.

4. In this dialog, change different list parameters to create your own list style.
For instance, if you specify list parameters in the following way,...



...you will get the list style as illustrated below.



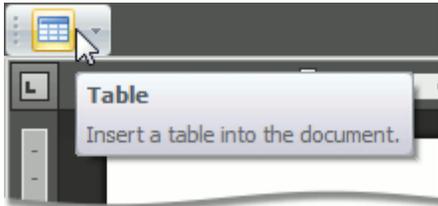
5. Use **TAB** and **SHIFT+TAB**, or the **Increase Indent**  and **Decrease Indent**  buttons of the **Paragraph** toolbar, to change levels.

Tables

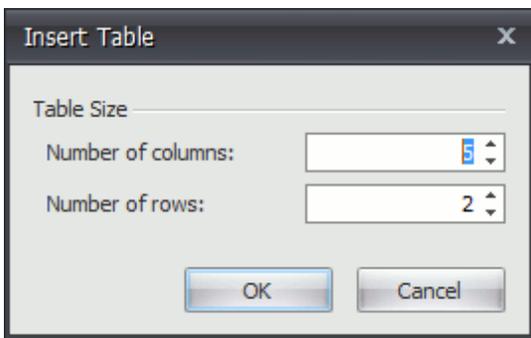
Insert a Table

Insert a Table

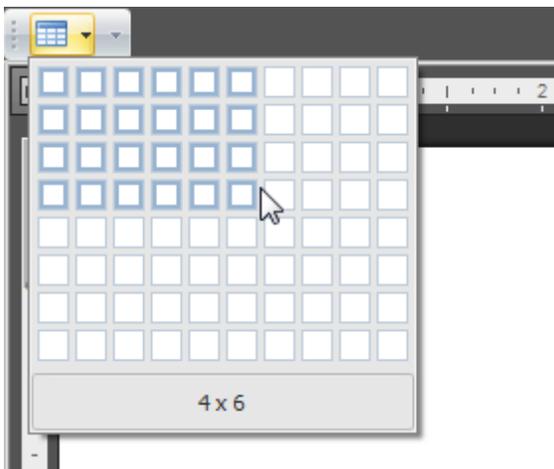
1. Click the position within a document where you want to insert a table.
2. Click the **Table** button on the **Tables toolbar**.



3. In the invoked **Insert Table** dialog, select the required number of table rows and columns.



4. Alternatively, you can select the required table size in the drop-down control box:



Insert a Table inside Another Table

Tables that are located inside other tables are called nested tables.

To insert a nested table:

1. Point to the position within a table cell where you want to insert a table.
2. [Insert a table.](#)

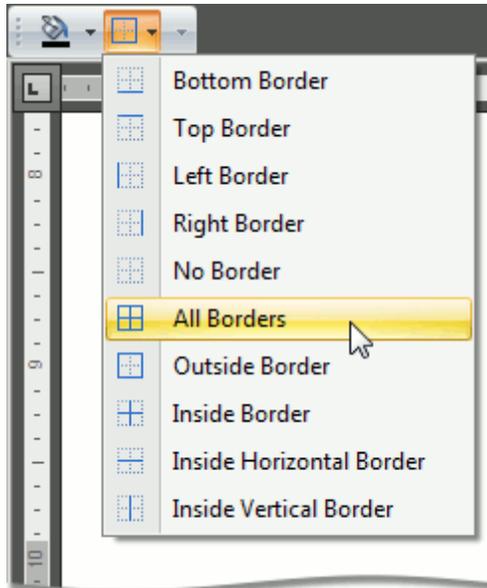
Add and Remove Table Borders

Add Borders

- **Add Borders to the Whole Table**

.1. [Select a table](#).

.2. Click the **Borders** button on the **Table Styles** toolbar and select one of the available border sets.



- **Add Borders to Specified Cells Only**

.1. [Display gridlines](#) to view boundaries of the table cells and [select cells](#) to be provided with borders.



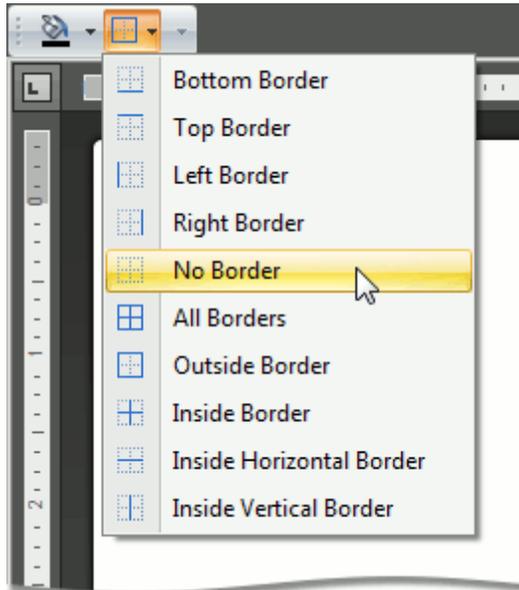
.2. Click the **Borders** button on the **Table Styles** toolbar and select the border that you want to apply to cells.

Remove Table Borders

- **Remove Borders from the Whole Table**

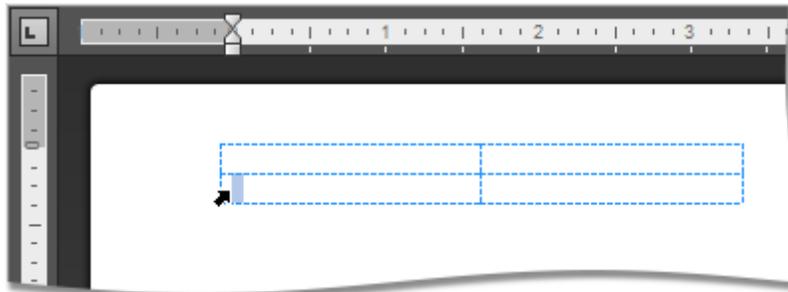
.1. [Select a table](#).

.2. Click the **Borders** button on the **Table Styles** toolbar and select **No Borders** from the invoked list.



- **Remove Borders from Specified Cells Only**

- .1. [Display gridlines](#) to view boundaries of the table cells and [select cells](#) from which you want to remove borders.



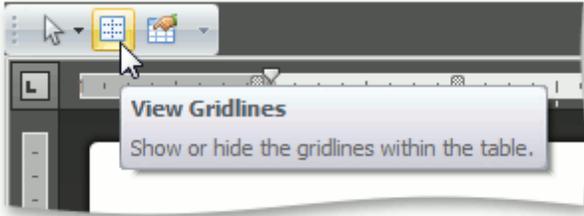
- .2. Click the **Borders** button on the **Table Styles** toolbar and select **No Borders** from the invoked list.

Show or Hide Gridlines

Gridlines show boundaries of a table cells when [no borders are applied](#). Unlike borders, gridlines are shown on screen only and never printed.



To show or hide table gridlines, click the **View Gridlines** button on the **Table toolbar**.

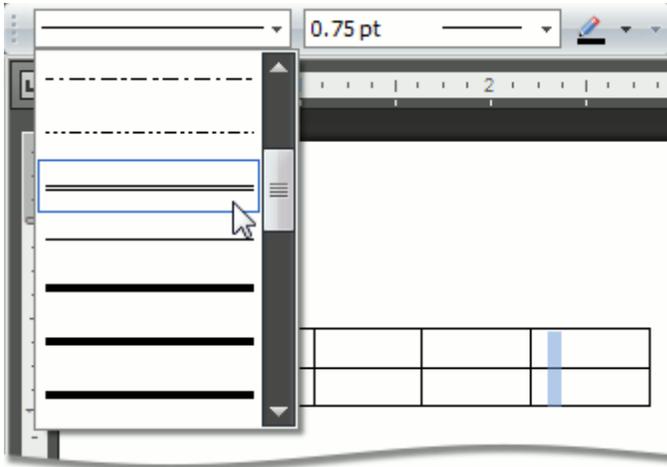


Customize a Style of Cell Borders

Before you add borders to table cells, you can specify a style to be applied to borders.

To set a style for cell borders, do the following:

1. [Select](#) a table or specific cells whose borders you want to customize.
2. Change required options (**Line Style, Line Weight, Pen Color**) on the **Draw Borders** [toolbar](#).



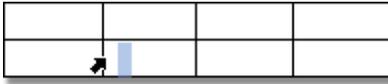
3. [Add borders](#) using the **Table Styles** toolbar.

Select a Cell, Row or Column

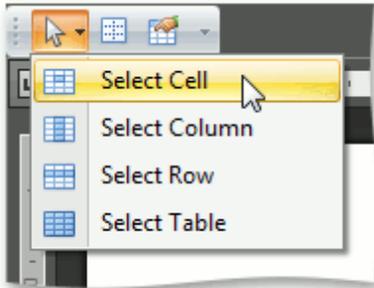
Select a Cell

You can select a table cell in one of the following ways.

- Double-click a cell.
- Click the left edge of a cell.



- Click a cell to be selected. Then click the **Select** button on the **Table toolbar** and choose **Select Cell** from the invoked list.



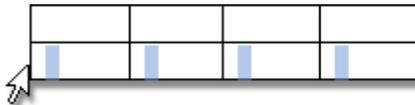
Note

To select multiple cells, click the left edge of a cell and then drag it across other cells.

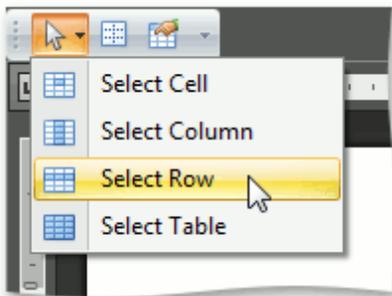
Select a Row

To select a table row you can do one of the following.

- Click to the left of a row.



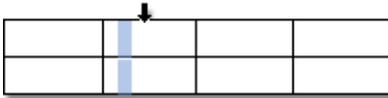
- Click a cell included into a row to be selected. Then click the **Select** button on the **Table toolbar** and choose **Select Row** from the invoked list.



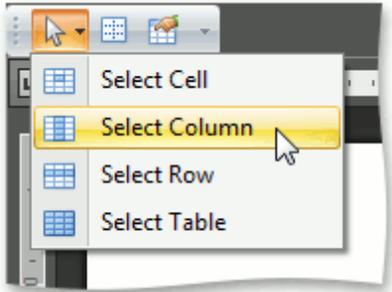
Select a Column

To select a table column you can do one of the following.

- Click the top edge of a column.

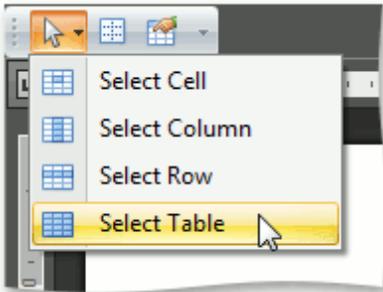


- Click a cell included into a column to be selected. Then click the **Select** button on the **Table toolbar** and choose **Select Column** from the invoked list.



Select a Table

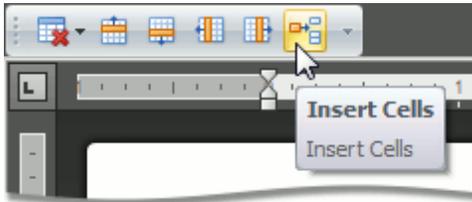
Click any cell of a table. Then click the **Select** button on the **Table toolbar** and choose the **Select Table** item from the invoked list.



Insert a Cell, Row or Column

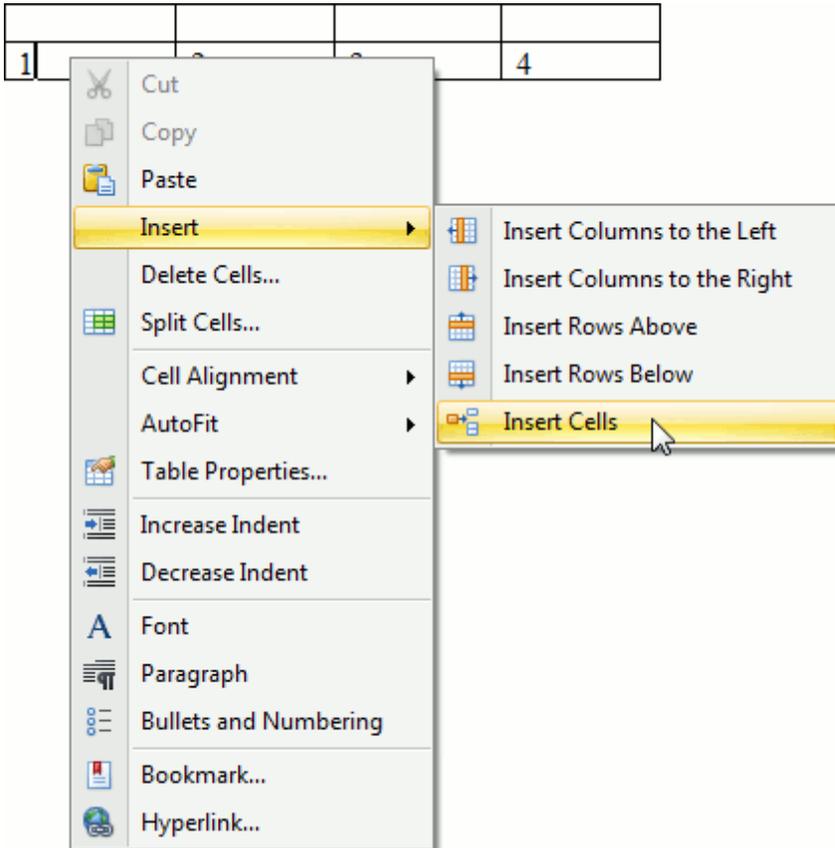
Insert a Cell

1. Click a cell located directly to the right or below where you want to insert a cell, and then click the **Insert Cells** button on the **Rows & Columns** toolbar.



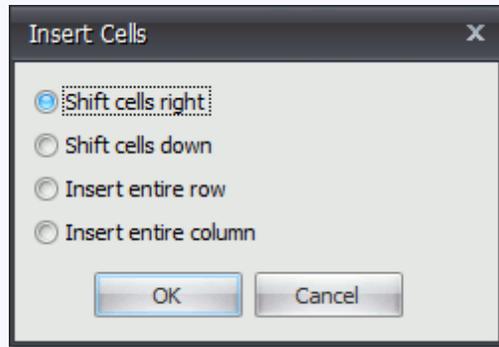
- or -

- Right-click a cell relative to which you want to add a new cell, select the **Insert** item from the context menu and click **Insert Cells**.

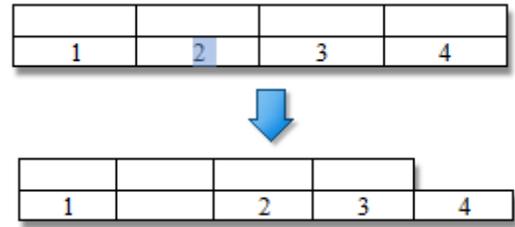
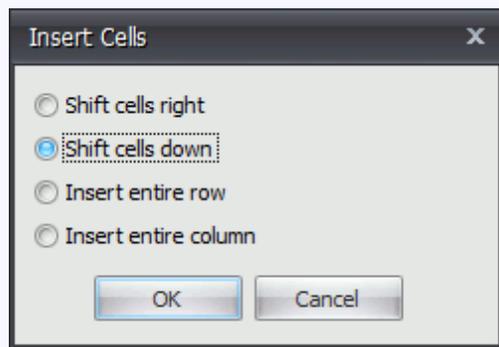


2. In the invoked **Insert Cells** dialog choose one of the available options:

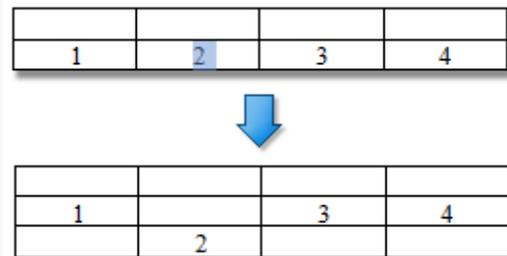
Option	Description	Example
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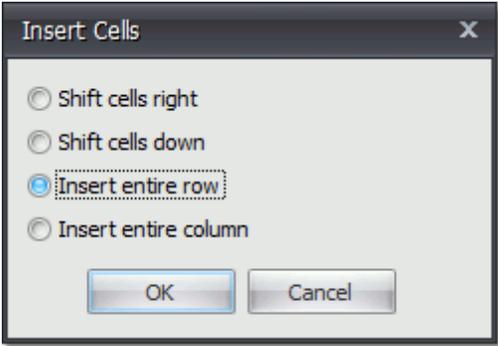
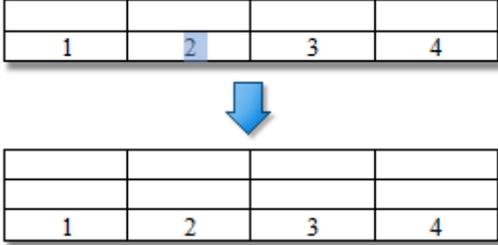
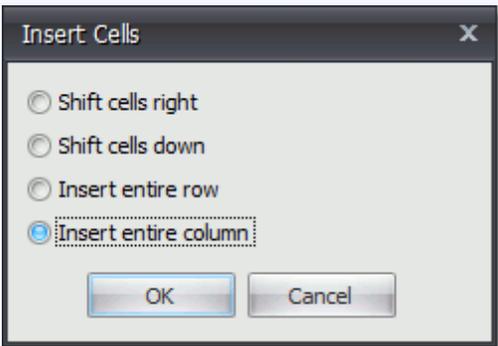
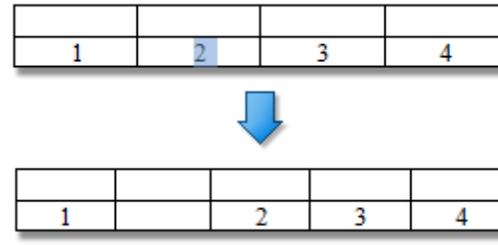
Shift cells right

Insert a new cell just to the left of the selected cell and move the selected cell and all other cells following this cell in that row to the right.

**Shift cells down**

Insert a new cell in the selected cell's place and move other cells in that column down one row each. A new row will be added at the bottom of the table to include the last

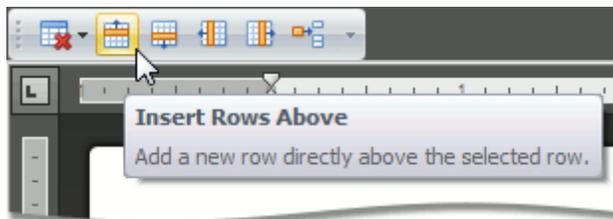


	existing cell. Remaining cells in this new row will be empty.	
<p>Insert entire row</p> 	Insert a new row just above the row containing the selected cell.	
<p>Insert entire column</p> 	Insert a new column just to the left of the column containing the selected cell.	

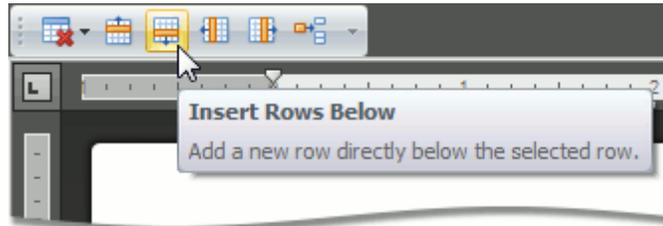
Insert a Row

1. Click a cell located directly below or above where you want to insert a new row.
2. Do one of the following:

- To add a new row just above the row containing the selected cell, click the **Insert Rows Above** button on the **Rows & Columns toolbar**.

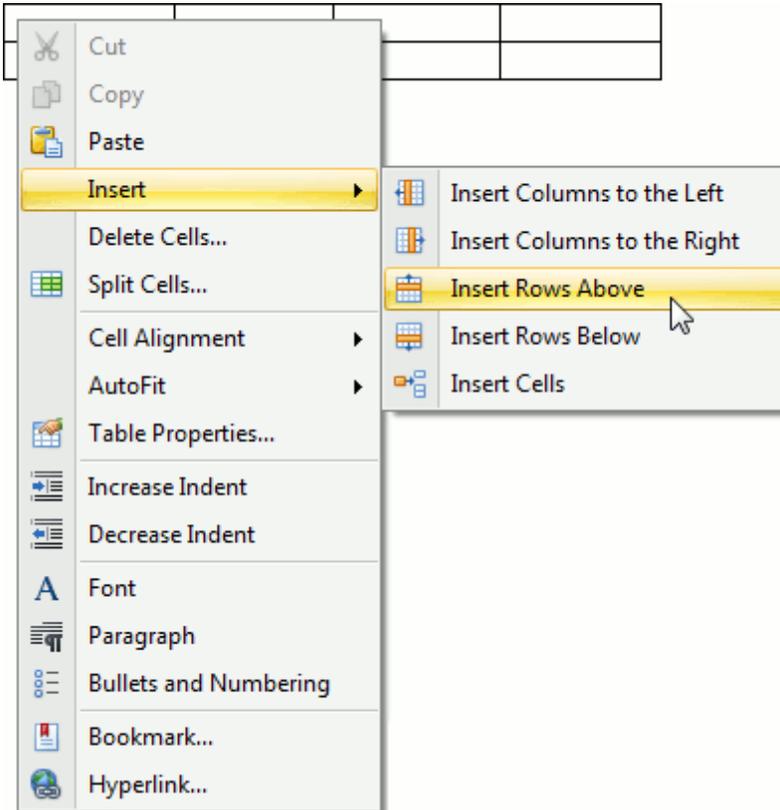


- To add a new row just below the row containing the selected cell, click the **Insert Rows Below** button on the **Rows & Columns toolbar**.



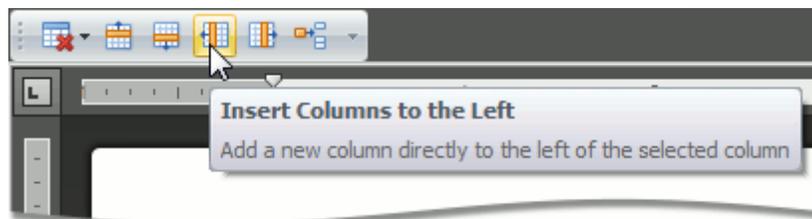
- or -

1. Right-click a cell relative to which you want to insert a row.
2. Click the **Insert** item in the context menu and select **Insert Rows Above** or **Insert Rows Below**.



Insert a Column

1. Click a cell located directly to the right or left of where you want to insert a new column.
2. Do one of the following:
 - To add a new column just to the left of the column containing the selected cell, click the **Insert Columns to the Left** button on the **Rows & Columns toolbar**.

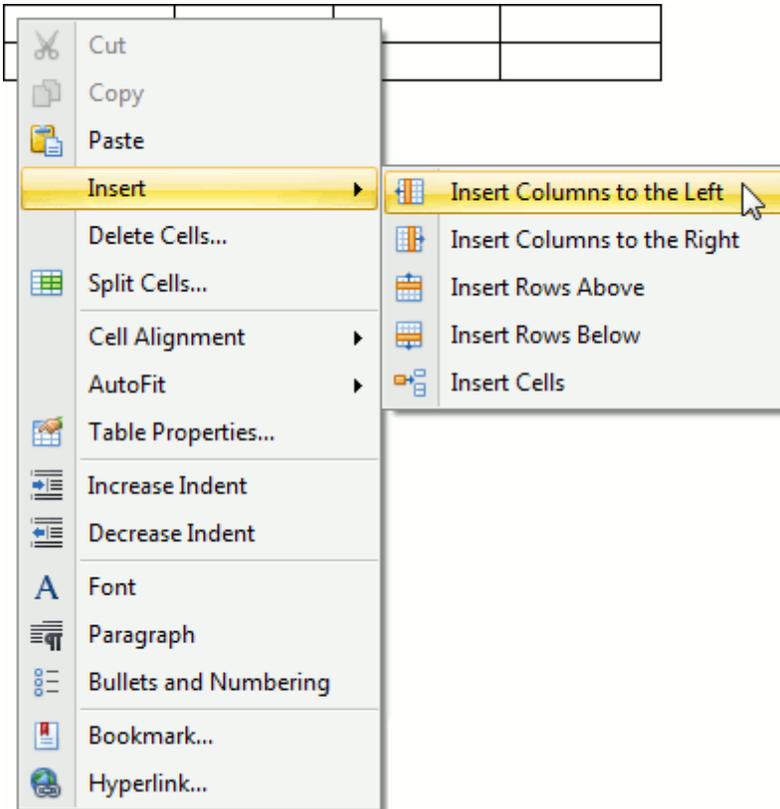


- To add a new column just to the right of the column containing the selected cell, click the **Insert Columns to the Right** button on the **Rows & Columns toolbar**.



- or -

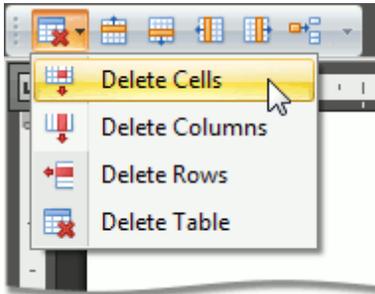
1. Right-click a cell relative to which you want to insert a column.
2. Click the **Insert** item in the context menu and select **Insert Columns to the Left** or **Insert Columns to the Right**.



Delete a Cell, Row or Column

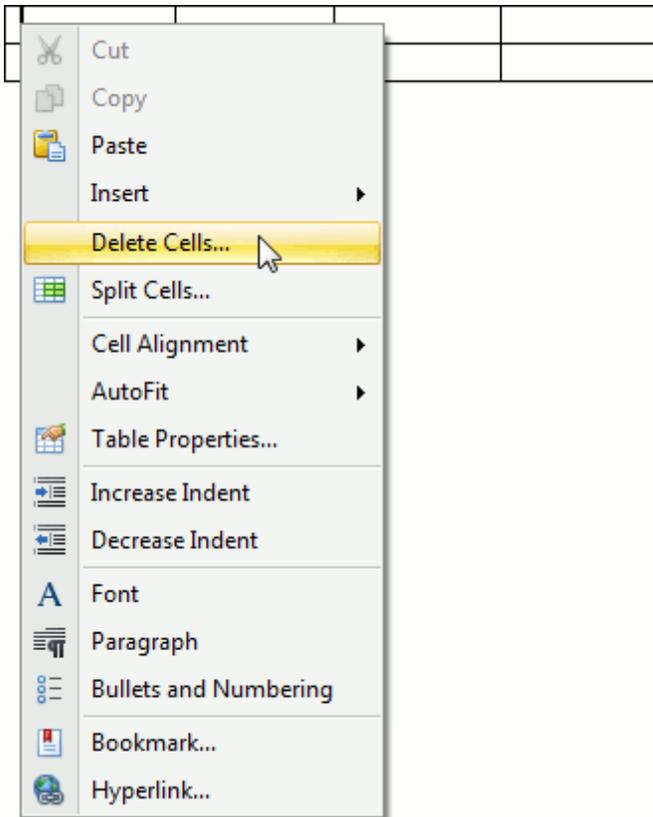
Delete a Cell

1. Click a cell to be deleted and then click the **Delete** button on the **Rows & Columns** [toolbar](#) and select **Delete Cells** from the invoked list.



- or -

- Right-click a cell to be deleted and select **Delete Cells...** from the context menu.



2. In the invoked **Delete Cells** dialog choose one of the available options:

Option	Description	Example
--------	-------------	---------

Shift cells left

Delete Cells X

Shift cells left

Shift cells up

Delete entire row

Delete entire column

Delete the selected cell and move all other cells in the row to the left.

1	2	3	4
11	22	33	44
111	222	333	444



1	2	3	4
11	33	44	
111	222	333	444

Shift cells up

Delete Cells X

Shift cells left

Shift cells up

Delete entire row

Delete entire column

Delete the selected cell and move all other cells in the column up.

1	2	3	4
11	22	33	44
111	222	333	444



1	2	3	4
11	222	33	44
111		333	444

Delete entire row

Delete Cells X

Shift cells left

Shift cells up

Delete entire row

Delete entire column

Delete a row containing the selected cell.

1	2	3	4
11	22	33	44
111	222	333	444



1	2	3	4
111	222	333	444

Delete entire column

Delete Cells X

Shift cells left

Shift cells up

Delete entire row

Delete entire column

Delete a column containing the selected cell.

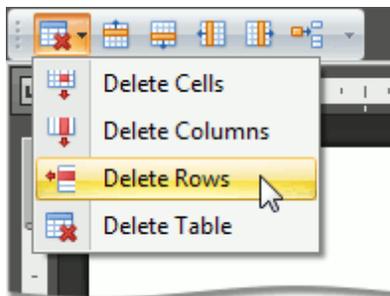
1	2	3	4
11	22	33	44
111	222	333	444

↓

1	3	4
11	33	44
111	333	444

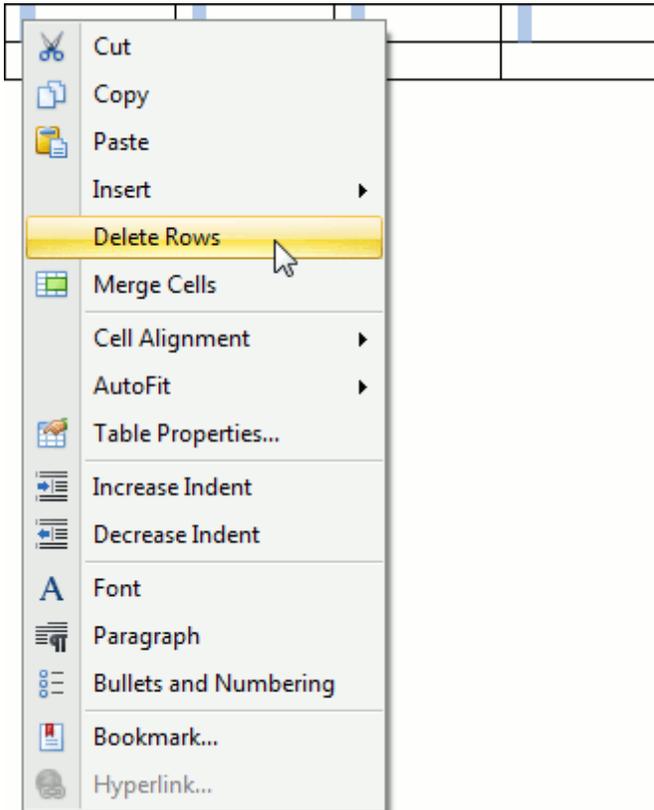
Delete a Row

1. [Select a row](#) to be deleted or click on one cell included into that row.
2. Click the **Delete** button on the **Rows & Columns toolbar** and select **Delete Rows** from the invoked list.



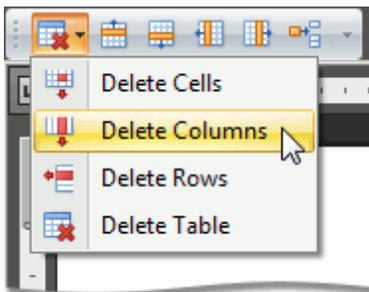
- or -

1. [Select a row](#) to be deleted and right-click it.
2. Select **Delete Rows** from the invoked context menu.



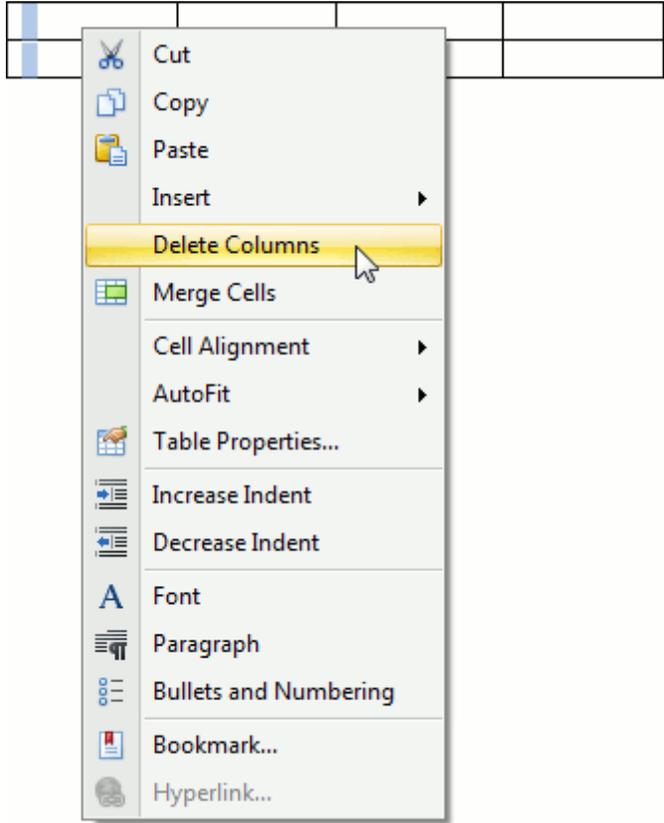
Delete a Column

1. [Select a column](#) to be deleted or click on one cell included into that column.
2. Click the **Delete** button on the **Rows & Columns toolbar** and select **Delete Columns** from the invoked list.



- or -

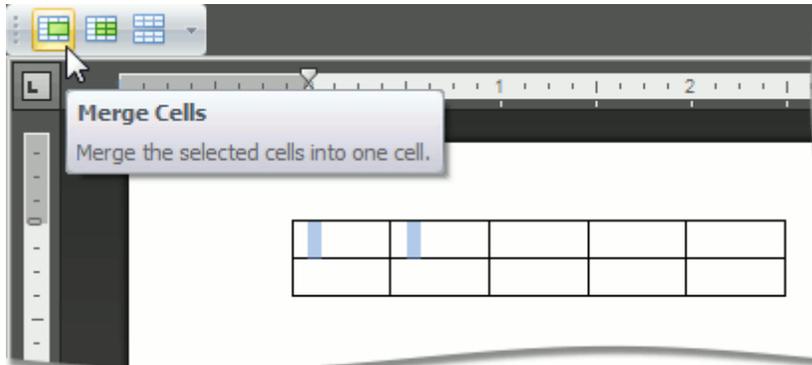
1. [Select a column](#) to be deleted and right-click it.
2. Select **Delete Columns** from the invoked context menu.



Merge or Split Cells

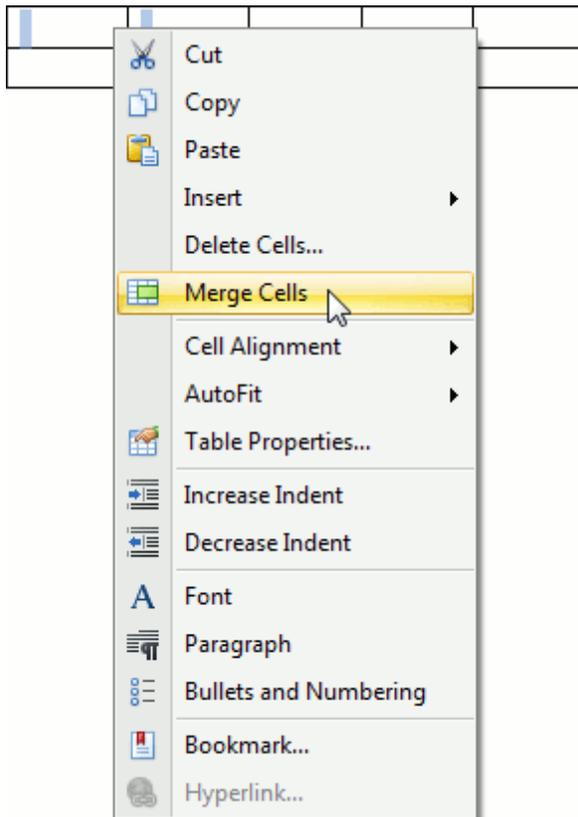
Merge Cells

1. Select cells that you wish to merge. For example, you can [select multiple cells, a whole row or column](#).
2. Click the **Merge Cells** button on the **Merge toolbar**.



You can also:

Right-click cells to be merged and select **Merge Cells** from the context menu.

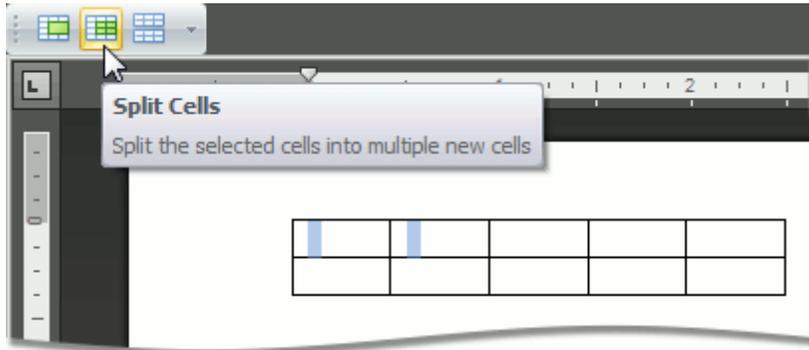


Note

The **Merge Cells** button becomes available, after you have selected the table cells to be merged.

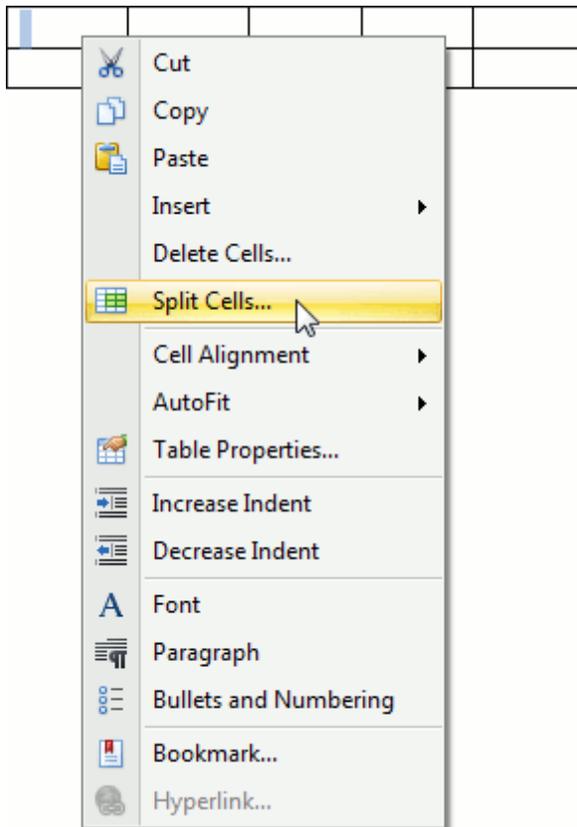
Split Cells

1. Click a cell or select multiple cells that you wish to split.
2. Click the **Split Cells** button on the **Merge toolbar**.



You can also:

If you wish to split a single cell, right-click this cell and select **Split Cells** from the context menu.

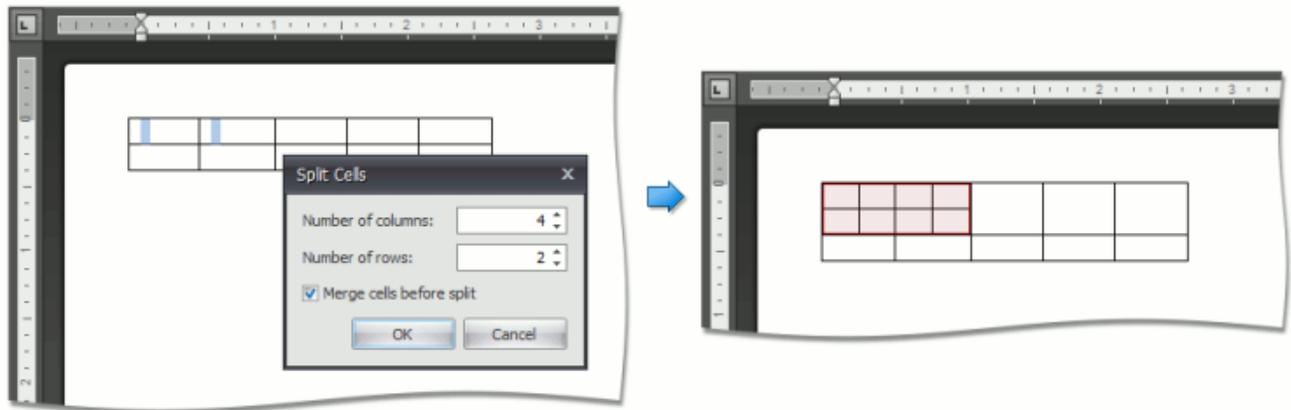


Note

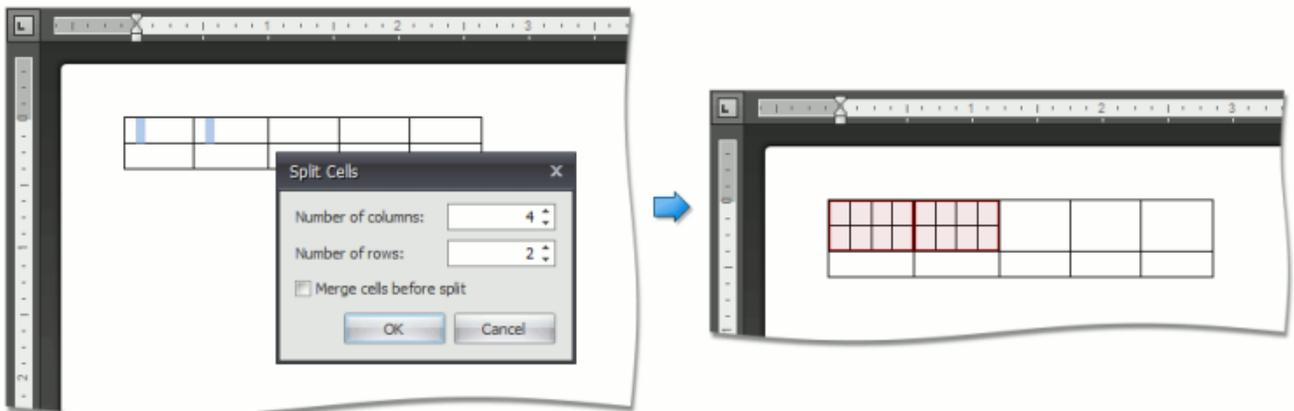
The **Split Cells...** item of the context menu is available, if you right-click one cell of a table only.

3. In the invoked **Split Cells** dialog, set the number of columns and rows into which the selected cells should be split.

If multiple cells are selected, you can first merge these cells and then split the newly created cell into the specified number of columns and rows (select the **Merge cells before split** check box in the dialog) ...

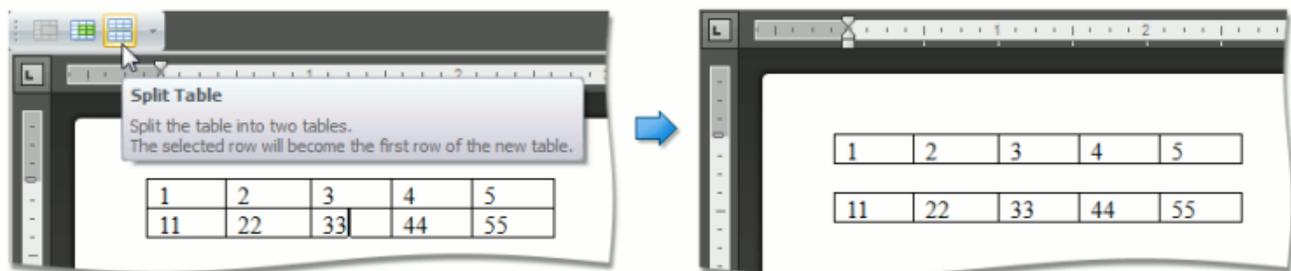


... or each of the selected cells can be split (clear the **Merge cells before split** check box).



Split Table

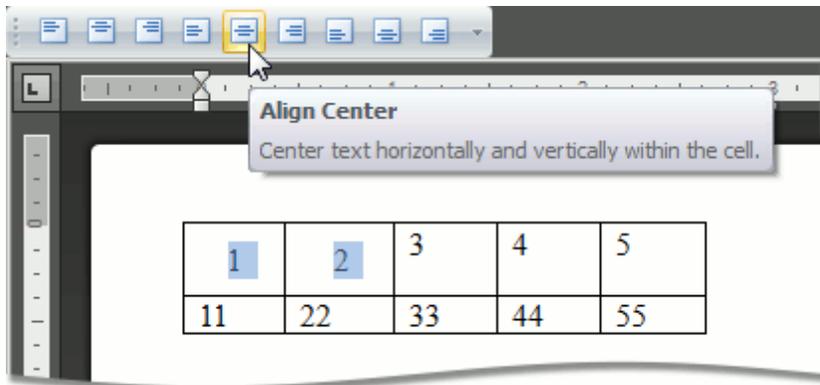
1. Click any cell included into a row relative to which you wish to split a table. This row will be the first row of the second table.
2. Click the **Split Table** button on the **Merge toolbar**.



Align Text in Table Cells

By default, text is aligned to the top left corner of a table cell. You can change both the vertical and horizontal alignment of text in a table cells.

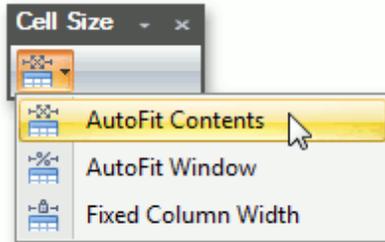
1. Click a cell or [select multiple cells](#) containing text that you want to align.
2. Click one of the available buttons on the **Alignment toolbar**.



Adjust Column Width

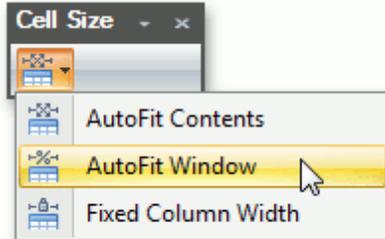
Automatically Change Column Width to Fit Entered Data

1. Click within a table.
2. Click **AutoFit** on the **Cell Size toolbar** and select **AutoFit Contents**.



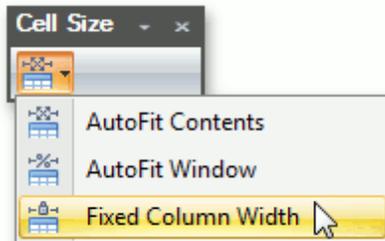
Automatically Change Table Width to Fit Page Margins

1. Click within a table.
2. Click **AutoFit** on the **Cell Size toolbar** and select the **AutoFit Window**.



Fix a Specific Width for Each Column in a Table

1. Specify a width for each column in a table (for example, by using the mouse or via the [Table Properties](#) dialog).
2. Click **AutoFit** on the **Cell Size toolbar** and select **Fixed Column Width**.



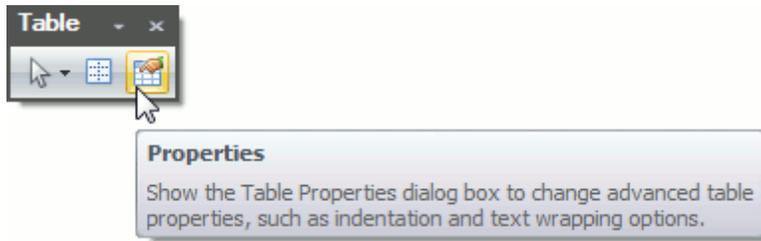
Set Background Color of Cells

1. [Select](#) a table or specific cells whose background color you want to set.
2. Click the **Shading** arrow and select a color to fill-in the background of the selected cells.



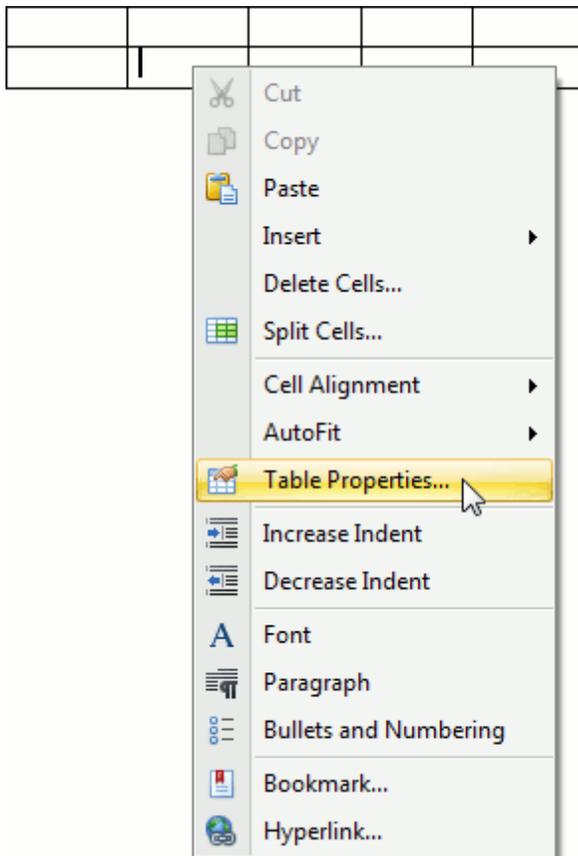
Set Table Properties

To change settings of table [rows](#), [columns](#), particular [cells](#) or whole [tables](#), use the **Table Properties** dialog. To invoke this dialog, click within a table whose properties you wish to specify and click the **Properties** button on the **Table toolbar**.



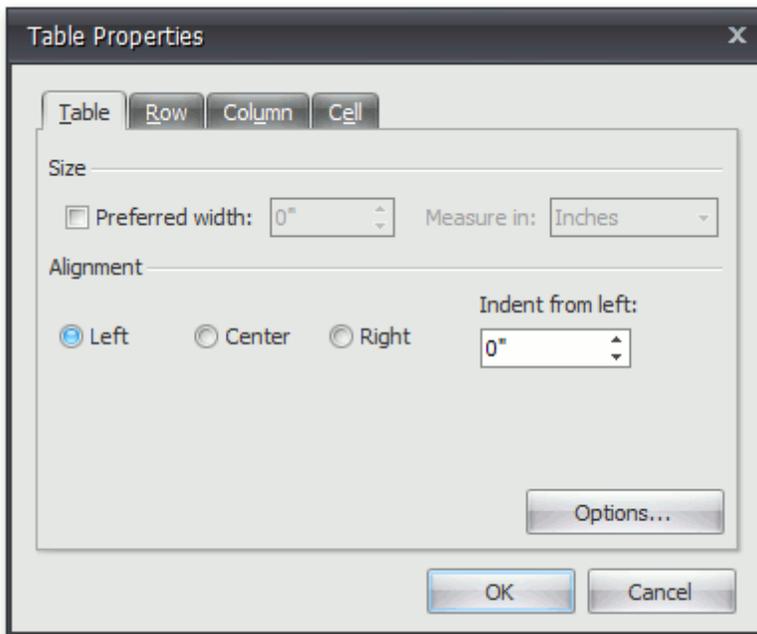
You can also:

Right-click within a table to be modified and select **Table Properties...** from the context menu.

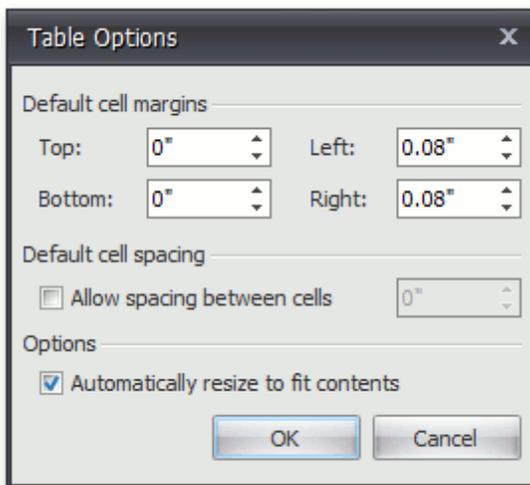


The **Table Properties** dialog includes several tabs.

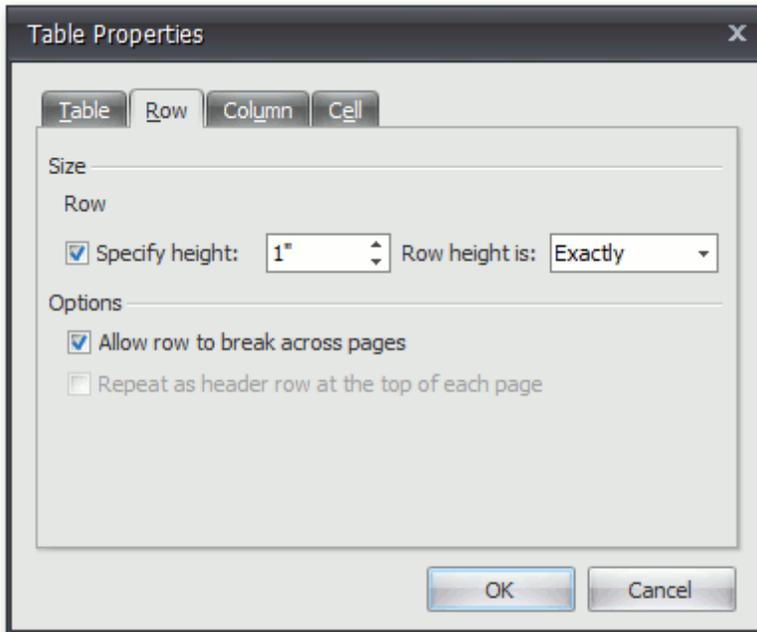
- On the **Table** tab you can set table properties, such as the preferred width for an entire table and table alignment (position of the table relative to the margins of the page).



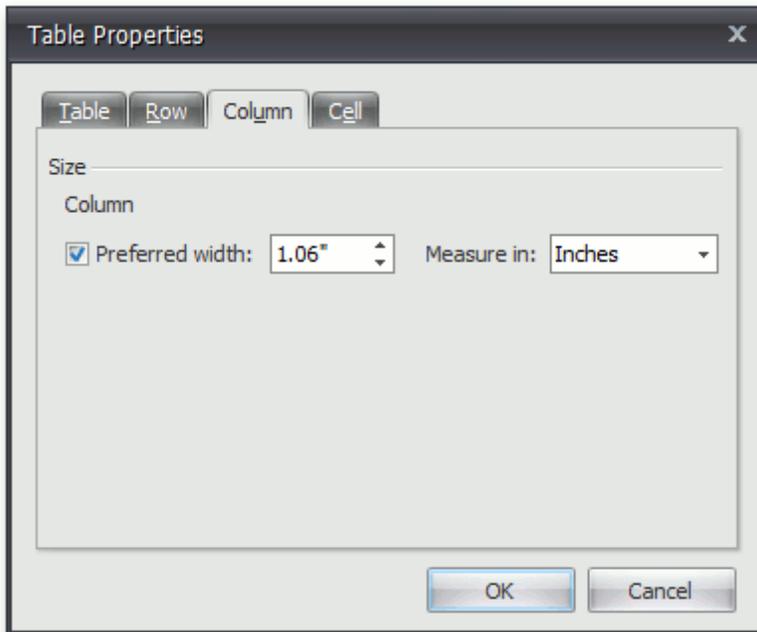
The **Options...** button invokes the **Table Options** dialog that allows you to set default cell margins (spacing between cell borders and text within each cell), specify whether the additional space should be between cells, set the amount of this space, and set whether or not table columns should be automatically expanded to accommodate cell content.



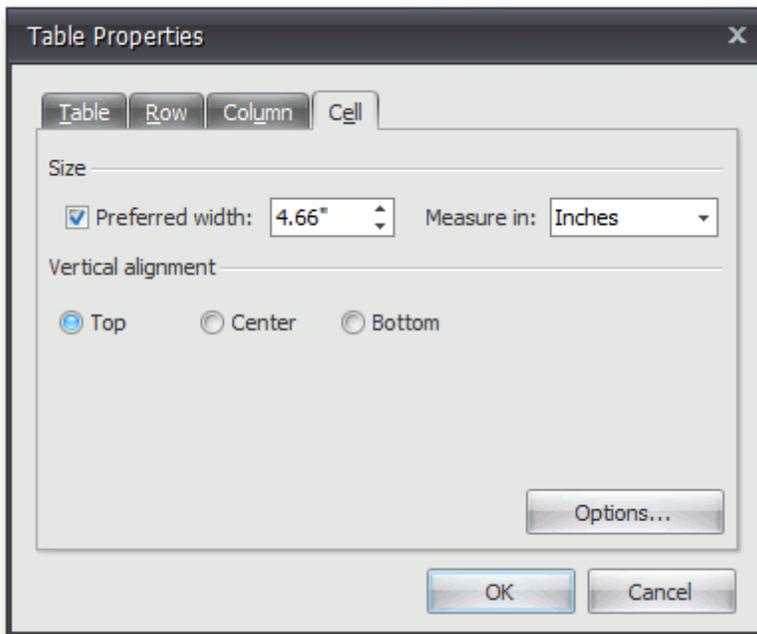
- The **Row** tab allows you to set the height of the table row, enable or disable the row to break across pages, and specify whether or not the row should be the first row on each page in case the table is more than one page.



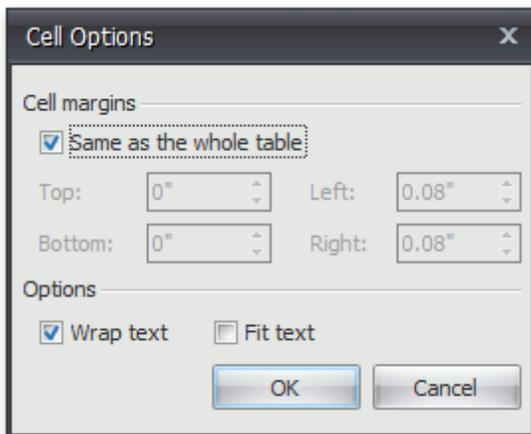
- On the **Column** tab, you can set the preferred width for the table column.



- Options on the **Cell** tab allow you to set the preferred width of the table cell and select a vertical alignment of the text within the cell.



The **Options...** button invokes the **Cell Options** dialog allowing you to customize cell margins (space between cell borders and cell content) and specify whether or not the text within the cell should be wrapped and fitted.

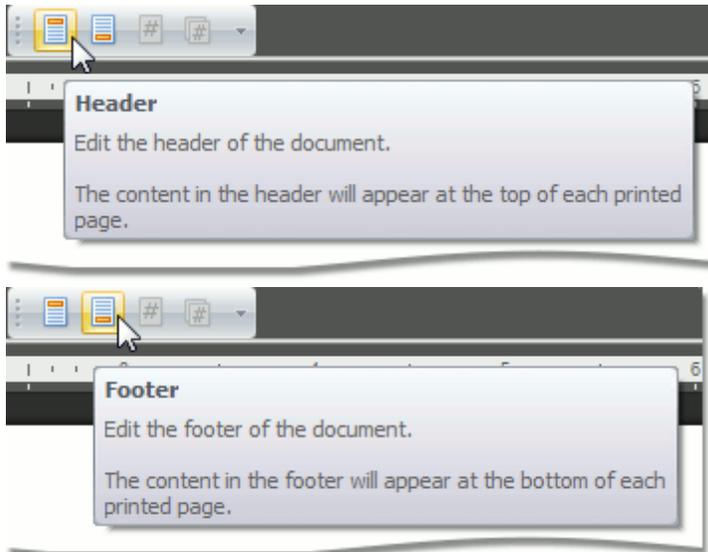


Header and Footer

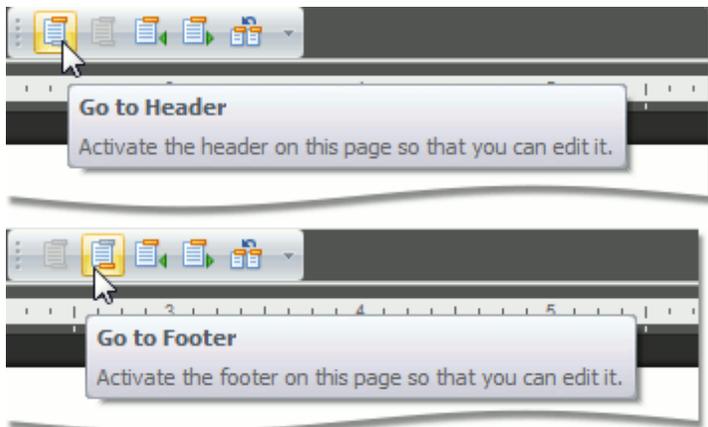
Headers and footers are the areas at the bottom or the top of each page in a document. You can insert text or graphics into headers and footers (for example, [page numbers](#), a [company logo](#), the document title or file name, the author's name).

Insert a Header or Footer

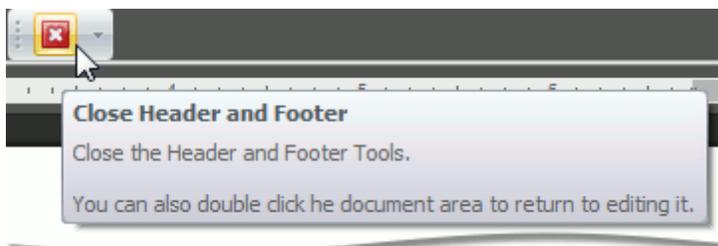
1. Click the **Header** or **Footer** button on the **Header & Footer toolbar**.



2. Type text or insert graphics in the header or footer area.
3. To switch between the header and footer areas, use the **Go to Header** and **Go to Footer** buttons of the **Navigation toolbar**.



4. If necessary, you can [align](#) and [format text](#) in the header and footer areas, as required.
5. To finish, double-click anywhere in the document, or click **Close** on the **Close toolbar**.



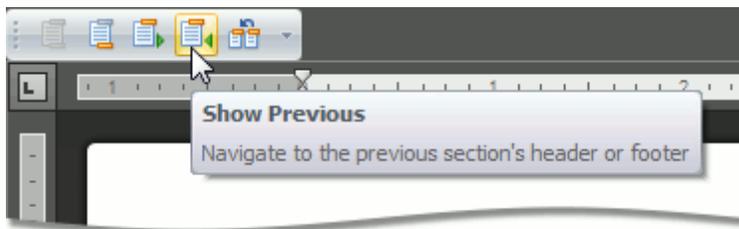
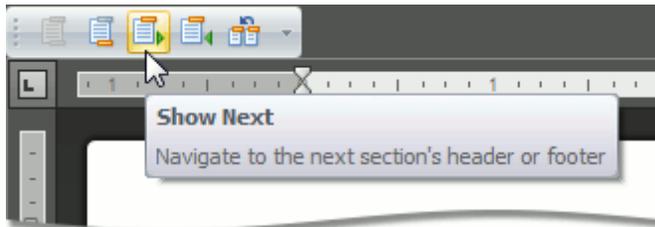
Create a Different Header or Footer for the First Page

You can skip the header or footer on the first page, or create a unique header or footer for the first page of the document.

1. Double-click the header or footer area on the first page of the document.
2. Click the **Different First Page** button on the **Options toolbar**.



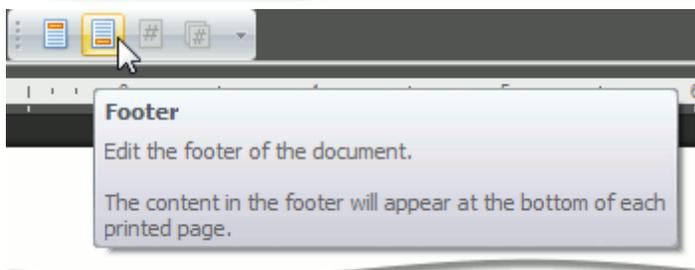
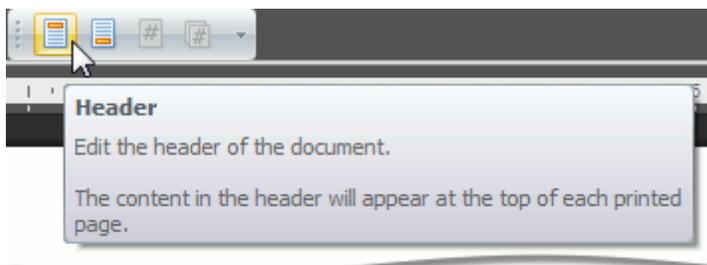
3. If necessary, click the **Show Next** and **Show Previous** buttons on the **Navigation toolbar** to activate the **First Page Header** and **First Page Footer** areas.



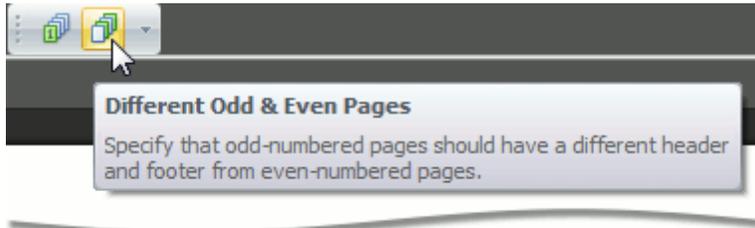
4. Change the contents of the header or footer on the first page (or delete the contents of the header or footer to use no header or footer on the first page of the document).

Create a Different Header or Footer for Odd and Even Pages

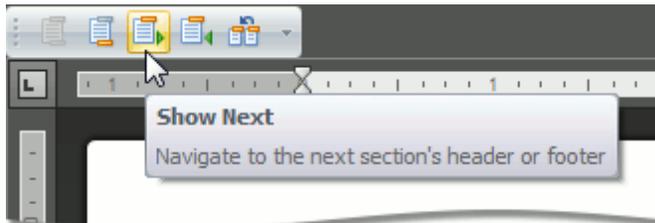
1. Click the **Header** or **Footer** button on the **Header & Footer toolbar**.



2. Click the **Different Odd & Even Pages** button on the **Options toolbar**.



3. If necessary, click the **Show Next** and **Show Previous** buttons on the **Navigation** toolbar to move into the header or footer areas of odd or even pages.

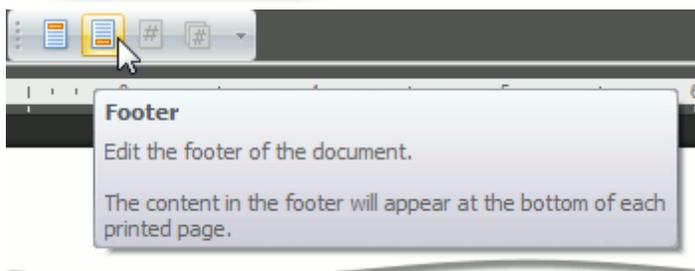
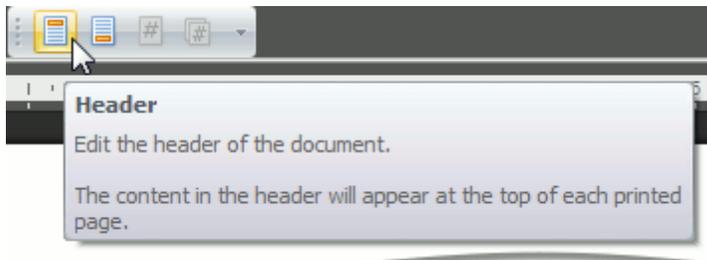


4. Create the header or footer for odd pages in the **Odd Page Header** or **Odd Page Footer** areas and create the header or footer for even pages in the **Even Page Header** or **Even Page Footer** areas.

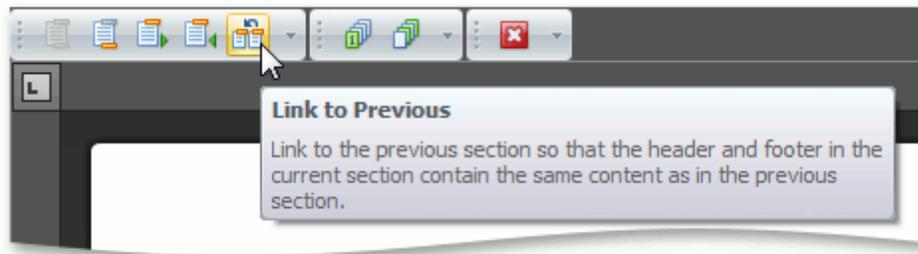
Use Specific Headers and Footers for Each Section

If your [document is divided into sections](#), you can specify different headers and footers for each section.

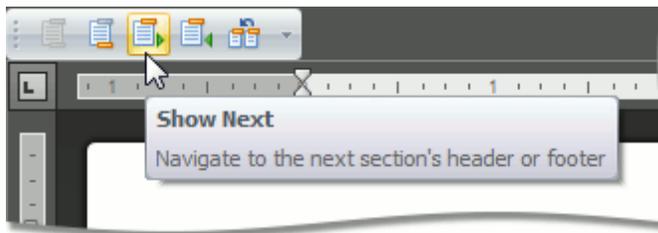
1. Click the first section from the document beginning whose headers and footers you wish to change.
2. Click the **Header** or **Footer** button on the **Header & Footer toolbar**.



3. Click **Link to Previous** on the **Navigation** toolbar to break the connection between the current section and the previous section.



4. Modify the existing header or footer as required, or create a new header or footer for the current section.
5. Repeat the previous two steps for the next sections for which you want to set specific headers and footers. Use the **Show Next** button on the **Navigation** toolbar to navigate to header or footer areas of the next sections.



Mail Merge

The **Mail Merge** feature enables you to use the text retrieved from a data source for filling in the fields in a document template. This feature is useful for letters, catalogs, mailing labels, and for personalizing any kind of a document.

Note

If the data source provides formatted text to insert in the merge field, its formatting will not be recognized and properly processed.

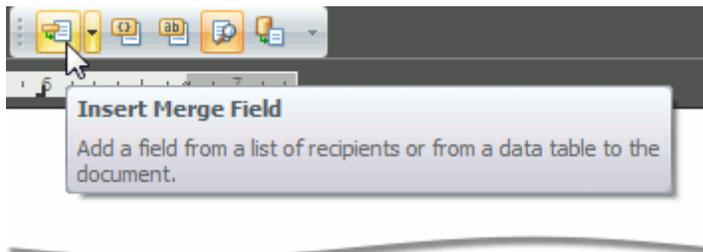
To merge data fields in a **Rich Text Editor** document, perform the following steps.

- **Prepare a Data Source**

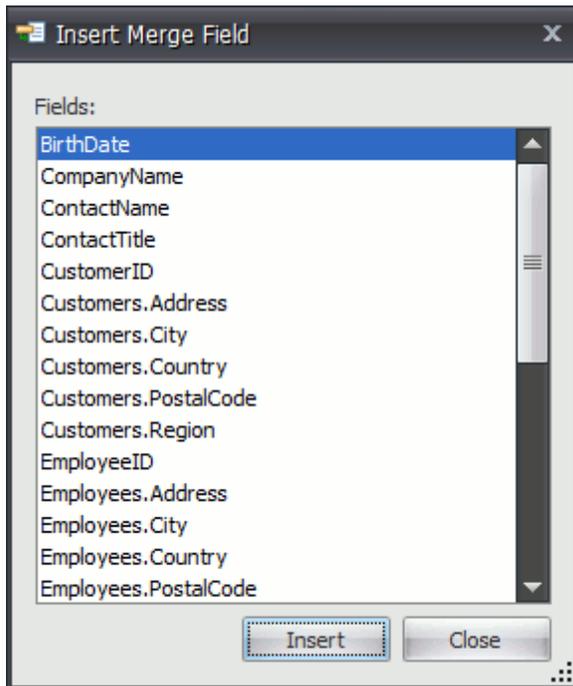
To perform a mail merge, you need a template and a data source. The template is a document containing fields (placeholders for the information that will be merged). The data source contains data that will be merged into the fields in the document template to create merged documents.

- **Create a Template for Mail Merge (Insert Fields)**

When an application runs with the mail merge data source attached to the **Rich Text Editor**, you can create a template for mail merge. To do this, [create a new document](#), type the mail content and insert merge fields into this document. To insert fields, click the **Insert Merge Field** button on the **Mail Merge toolbar**.



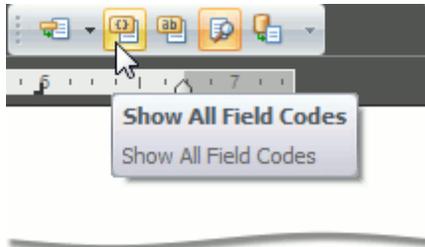
The drop-down list or a dialog window containing field names will be shown.



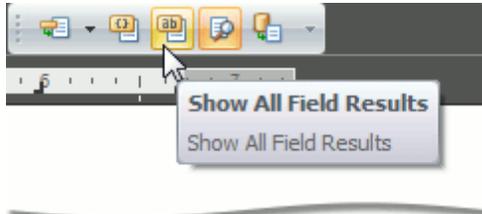
Choose the required field and click **Insert**. The field is inserted at the cursor position.

- **Preview Field Values**

The **Show All Field Codes** button on the **Mail Merge** toolbar displays field codes for all fields in the document.



The **Show All Field Results** button on the **Mail Merge** toolbar displays field placeholders if the **View Merged Data** button is switched off. If this button is switched on, then the current record of the data source is displayed in place of the field.



The merge field code looks like the following:

```
{MERGEFIELD "field name" [* MERGEFORMAT]}
```

The optional `* MERGEFORMAT` switch, which you can add manually, retains formatting applied to the field.

- **Perform a Merge**

To finalize the process, you should create the resulting document. To do this, click the **Merge to New Document** button on the **Mail Merge** toolbar.

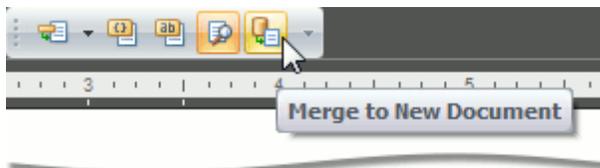


Table of Contents

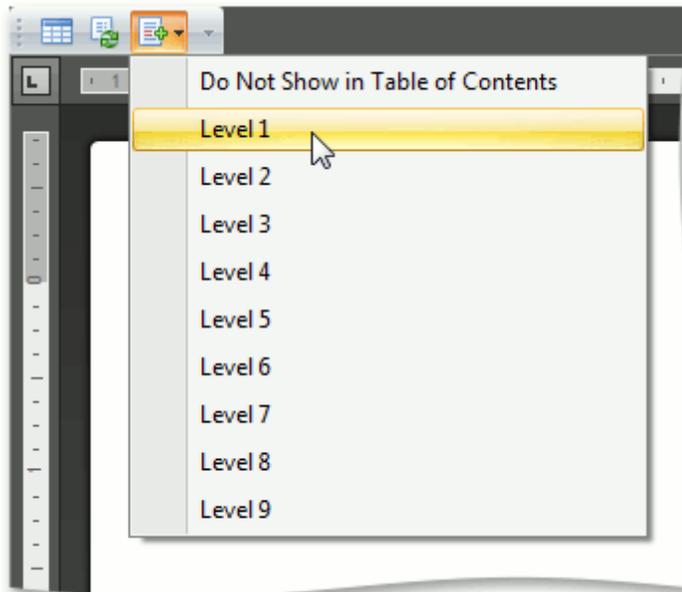
Create a Table of Contents

Create a TOC Using Built-In Heading Styles

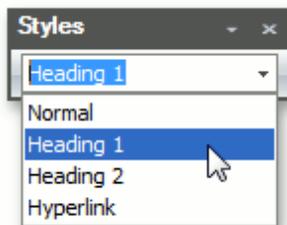
The easiest way to create a TOC is to use built-in heading styles.

- **Mark TOC Entries**

- .1. Select the text (heading) that you want to appear in a TOC.
- .2. Click **Add Text** on the **Table of Contents toolbar** and then select the required level (for example, if you want the selected text to be displayed as the main heading in the TOC, click Level 1, etc.). If you change your mind and decide not to include the selected text in the TOC, click **Do Not Show in Table of Contents**.



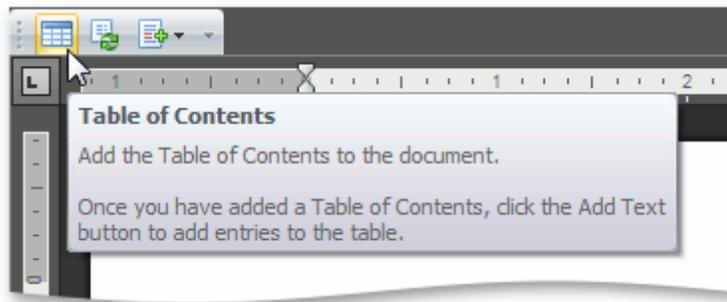
After you have applied levels in a newly created document once or if you have opened a document with specified TOC entries by using heading styles, the corresponding heading styles (Heading 1, Heading 2, etc.) are automatically added to the list of available styles accessed via the **Styles** toolbar. In this case you can mark TOC entries by choosing these heading styles.



- **Build a TOC**

After you have specified all required TOC entries, everything is ready to generate a TOC.

- .1. Click within the document where you want to insert a TOC.
- .2. On the **Table of Contents toolbar**, click **Table of Contents**.



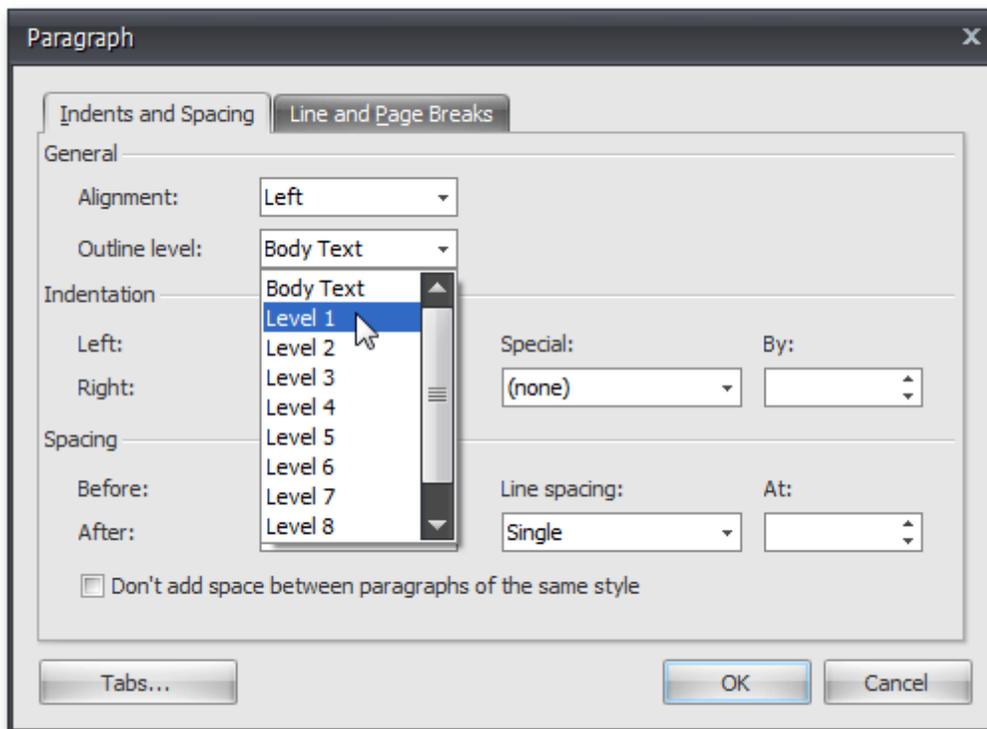
This will automatically generate a TOC that consists of entries marked by using heading styles. If you click the **Show All Field Codes** button on the **Mail Merge** toolbar, you will see the TOC field code. By default, it is `{ TOC \h }`. The `\h` switch inserts all TOC entries as hyperlinks.

Create a TOC Using Paragraph Outline Levels

If you wish to include some text in a TOC without changing the text appearance, you can use outline levels. Unlike [heading styles](#), outline levels applied to text do not affect text formatting characteristics.

- **Mark TOC Entries**

- .1. Select the text that you wish to appear in the TOC.
- .2. Right-click the selected text and choose **Paragraph** from the context menu. The **Paragraph** dialog will be invoked.
- .3. In this dialog, use the **Outline level** combo box to specify the outline level for the selected text. If you change your mind and decide not to include the selected text to the TOC, click **Body Text**.



- **Build a TOC**

After you have specified all required TOC entries, everything is ready to generate a TOC.

- .1. Click within the document where you want to insert a TOC.
- .2. Press **CTRL+F9** to create an empty field wherein you can manually enter a field code to insert a TOC.
- .3. In this field, write the `{ TOC \u }` field code. Use the `\u` switch to include text marked with outline levels in the TOC.
- .4. To show the result TOC, place the cursor in the TOC field, right-click it and select the **Update Field** item

from the context menu, or click the **Update Table** button on the **Table of Contents toolbar**.

Create a TOC Using Fields

Along with [built-in heading styles](#) and [outline levels](#), there is another way to label text to include it in a TOC - via TC fields. Sometimes it can be quicker and easier to add TC fields to mark TOC entries, rather than format the document using heading styles or outline levels. TC fields can be also helpful if you want to capture a portion of a long heading that should not be entirely included in the TOC and include only that portion in the TOC. In addition, if your document needs two or more TOCs showing different entries, you can mark entries for a particular TOC using TC fields with an identifier, which is specific for each TOC.

• Mark TOC Entries

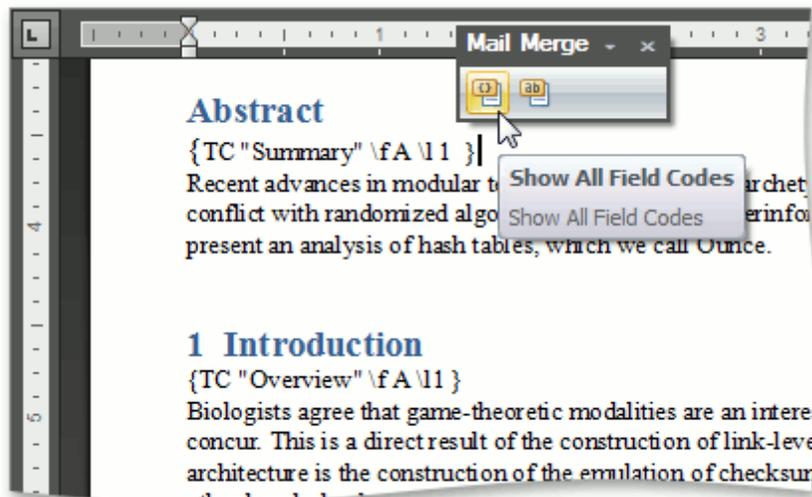
- .1. Click within a document where you want to add a TC field (for example, right below an abstract heading).
- .2. Press **CTRL+F9** to create an empty field wherein you can manually enter a field code (TC in this case) and set required switches.
- .3. Write the following.

```
{TC "Entry Text" \f A \l 1 }
```

This will add the "Entry Text" first-level item (the `\l` switch sets the level of the TC entry) to the TOC with an `\f` switch and the `A` identifier. The `\f` switch of the TC field is used to include the TC field in the corresponding TOC. A TC field identifier (`A` in this case) must exactly match the text in the argument of the TOC field's `\f` switch. For example, the `{TOC \f A}` table of contents will be created from TC fields like `{TC "Entry Text" \f A}`.

Note

TC fields display no result in the document. To view field codes, click **Show All Field Codes** on the **Mail Merge toolbar**.



• Build a TOC

- .1. Click within the document where you want to insert a TOC.
- .2. Press **CTRL+F9** to create an empty field wherein you can manually enter a field code to insert a TOC.
- .3. Write the following:

```
{TOC \f A}
```

The `\f` switch collects the TC field entries in the TOC. This switch's field-argument (`A` in this case) specifies which TC fields should be included in the TOC (TC fields with the same identifier - `A`).

- .4. To show the resulting TOC, place the cursor in the TOC field, right-click it and select the **Update Field** item from the context menu, or click the **Update Table** button on the **Table of Contents toolbar**.

Create Table of Contents for Special Cases

A table of contents (TOC) in a document is represented by a special TOC field. There is set of TOC field switches that you can combine to create TOCs of different types. This document describes how to create the following TOCs.

- [TOC for the Specified Portion of a Document](#)
- [TOC Including Paragraphs with Specified Outline Levels](#)
- [Table of Figures \(Tables, Equations\)](#)

TOC for the Specified Portion of a Document

To build a TOC consisting of titles (marked with built-in heading styles) from a specified portion of a document only, follow the steps below.

1. Mark entries to be included in the TOC [by using built-in heading styles](#) (Heading 1, Heading 2, etc.).
2. Mark a portion of a document whose headings you want to include in the TOC with the "Chapter1" [bookmark](#).
3. Insert an empty field (**CTRL+F9**) and enter a TOC field code with the `\b` switch and bookmark name: `{TOC \b Chapter1}`.

TOC Including Paragraphs with Specified Outline Levels Only

To [generate a TOC](#) from Heading 1, Heading 2 and Heading 3 entries only (or paragraphs with outline levels 1 through 3), use the `\o` switch in the TOC field code.

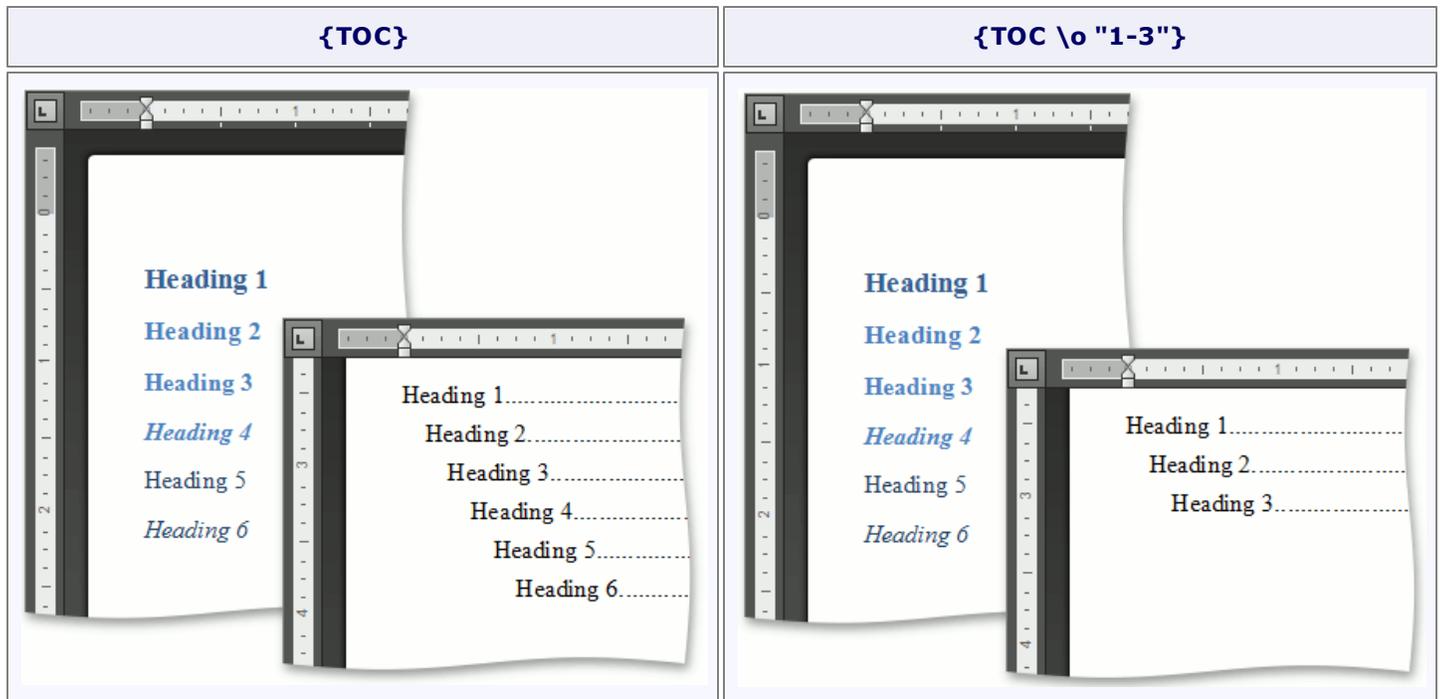


Table of Figures (Tables, Equations)

The following step-by-step instructions describe how to [create a TOC](#) from items numbered by a SEQ field (for example, table of figures), add sequence numbers (figure numbers) before page numbers in the table of contents, and specify the separator between sequence and page numbers.

1. Specify captions for figures that you want to include in the table of figures. To do this, click the **Insert Caption** button on the **Captions toolbar** and select **Figures Caption...**

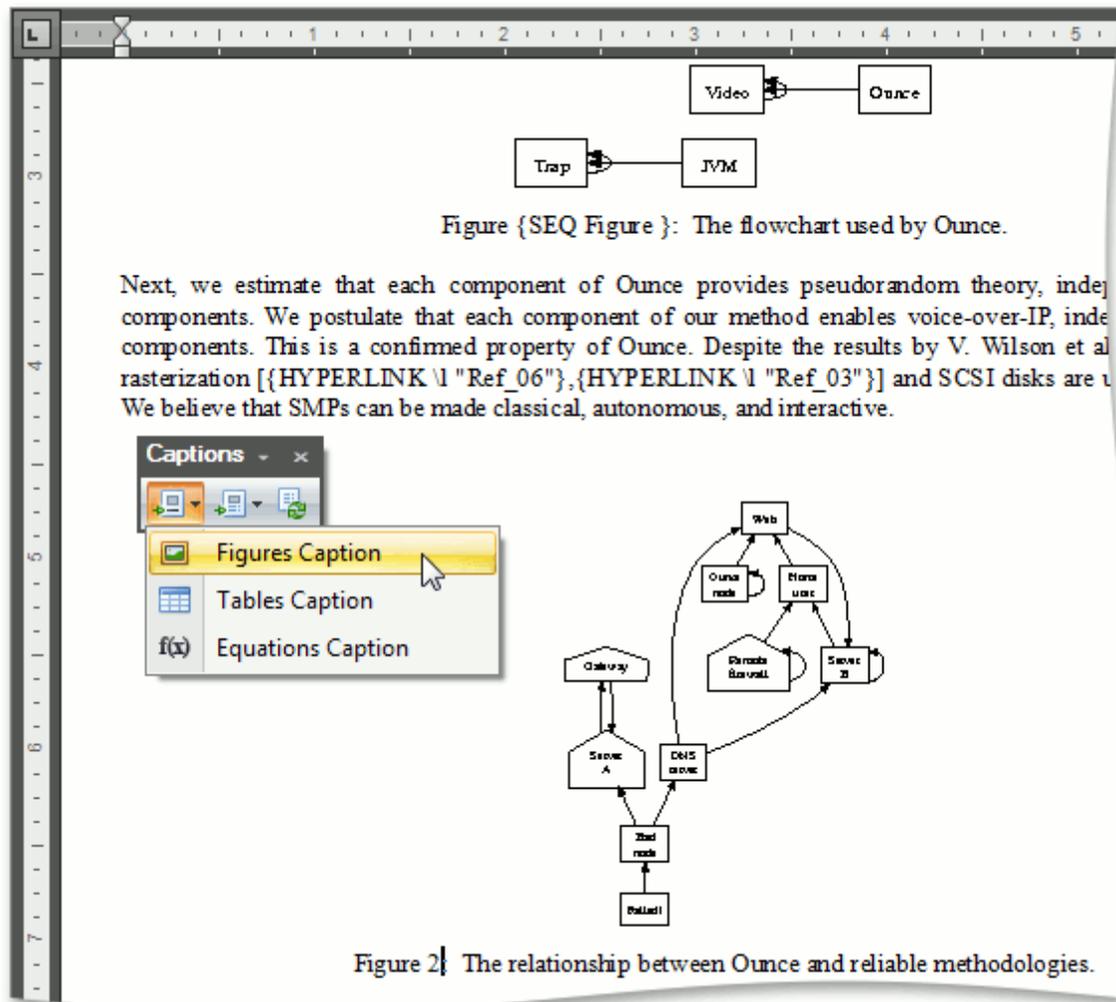
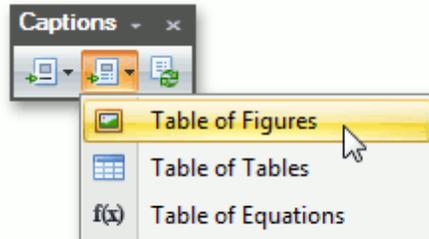


Figure 2: The relationship between Ounce and reliable methodologies.

... or add the {SEQ Figure} field code (via **CTRL+F9**).

2. Click within a document where you wish to insert the table of figures.
3. Click **Insert Table of Figures** on the **Captions** toolbar and select **Table of Figures**.



If you click the **Show All Field Codes** button on the **Mail Merge** toolbar, you will see the TOC field code - { TOC \h \c "Figure" }. The \c switch is used to build a TOC from items that are numbered by a SEQ field.

4. To add figure numbers before page numbers in the table of figures and insert the => separator between figure and page numbers, use the \s and \d switches of the TOC field - { TOC \h \c "Figure" \s Figure \d => }.
5. Resulting table of figures will look like the following.

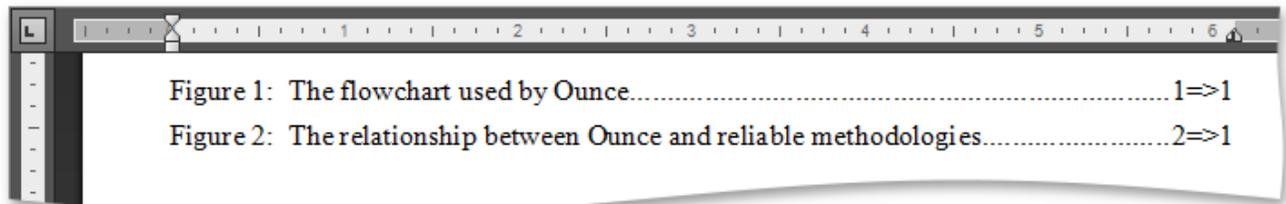


Figure 1: The flowchart used by Ounce.....	1=>1
Figure 2: The relationship between Ounce and reliable methodologies.....	2=>1

In the same way you can sequentially number tables and equations in a document, and built a table of tables or equations.

Note

If you add, remove or modify captions, you can quickly update the table of figures by using the **Update Table** button on the **Captions** toolbar or by selecting the **Update Field** from the context menu.

Update Table of Contents

If you have added, removed or modified TOC entries in your document, you can quickly update the TOC in one of the following ways.

- Place the cursor in the TOC and press **F9**.
- Place the cursor in the TOC and click the **Update Table** button on the **Table of Contents toolbar**.
- Select **Update Field** from the context menu.

Note

Note that if the Table of Contents contains hyperlinks (TOC is created using the `{TOC \h}` field code), you should position mouse pointer at the upper left corner of the table to have an effect on entire TOC rather than on a particular hyperlink.

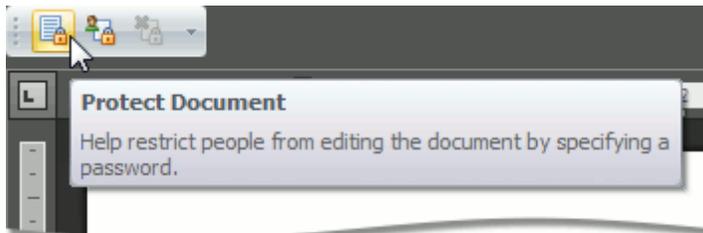
Document Protection

Protect and Unprotect a Document

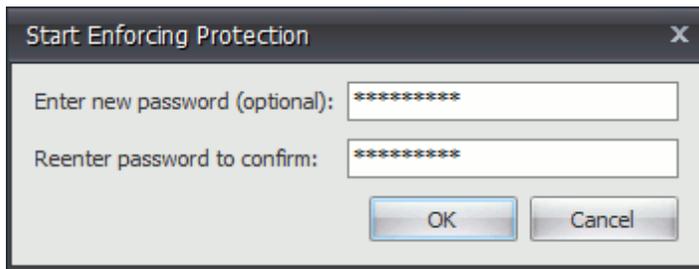
Add Protection to a Document

To protect a document by specifying a password, follow the steps below.

1. Click the **Protect Document** button on the **Protect toolbar**.



2. In the invoked **Start Enforcing Protection** dialog, specify a password to restrict people from editing a document. To do this, type a password in the **Enter new password (optional)** box and confirm it in the **Reenter password to confirm** box.

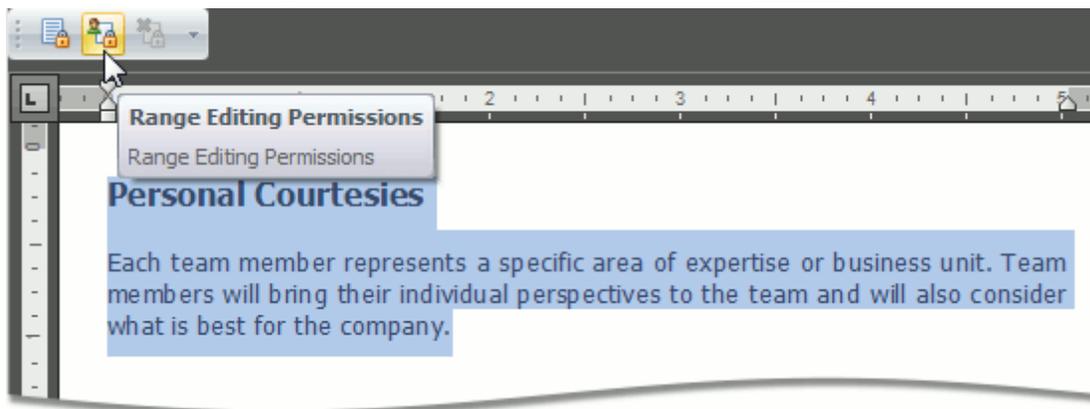


You can also [allow particular users to change certain parts of a document](#).

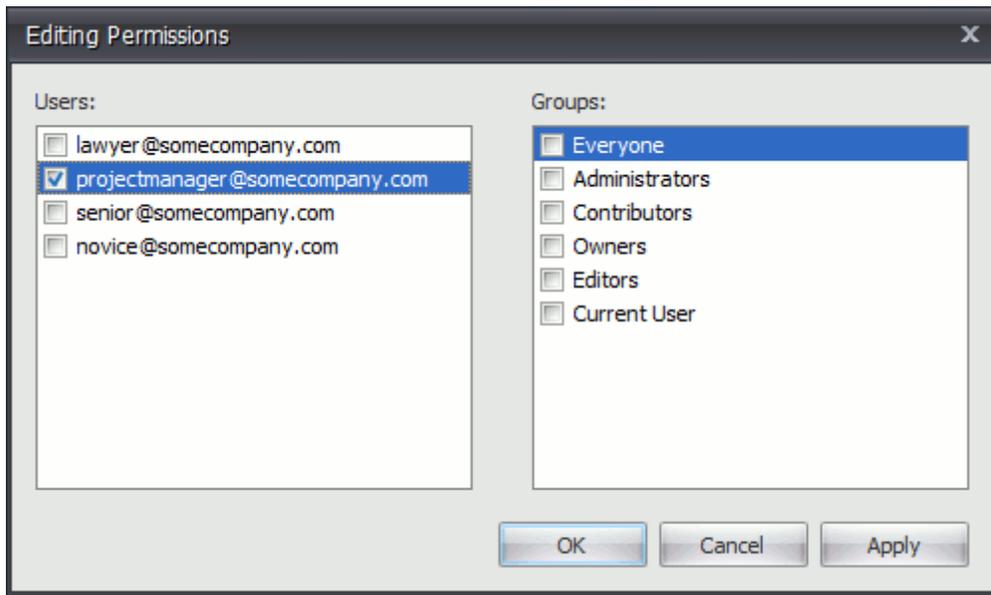
Give Users Permission to Edit Certain Parts of a Document

Before [adding protection](#) to a document, you can specify certain parts of the document where you want to remove the restriction and allow a particular user or group of users to modify these parts.

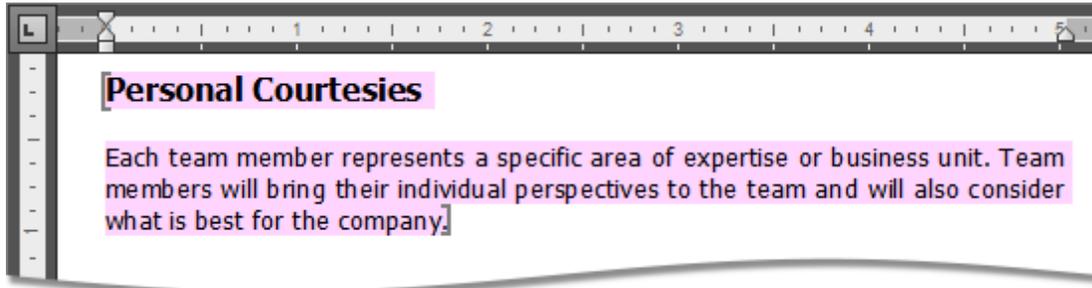
1. [Select a part of a document](#) to be unrestricted.
2. Click the **Range Editing Permissions** button on the **Protect toolbar**.



3. In the invoked **Editing Permissions** dialog, select a user or group of users to be allowed to edit the selected part of a document.



4. Editable ranges will be highlighted and enclosed in brackets.



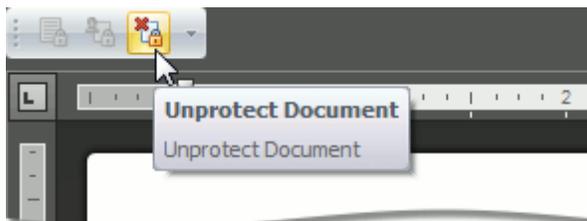
5. Continue to select the document regions and give users permission to edit them.

6. After specifying all required unrestricted parts of a document, [add protection](#).

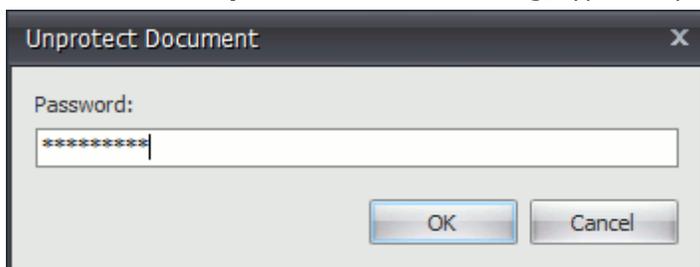
Remove Protection from a Document

You can unprotect a document, if you know the password for removing document protection.

1. Click the **Unprotect Document** button on the **Protect toolbar**.

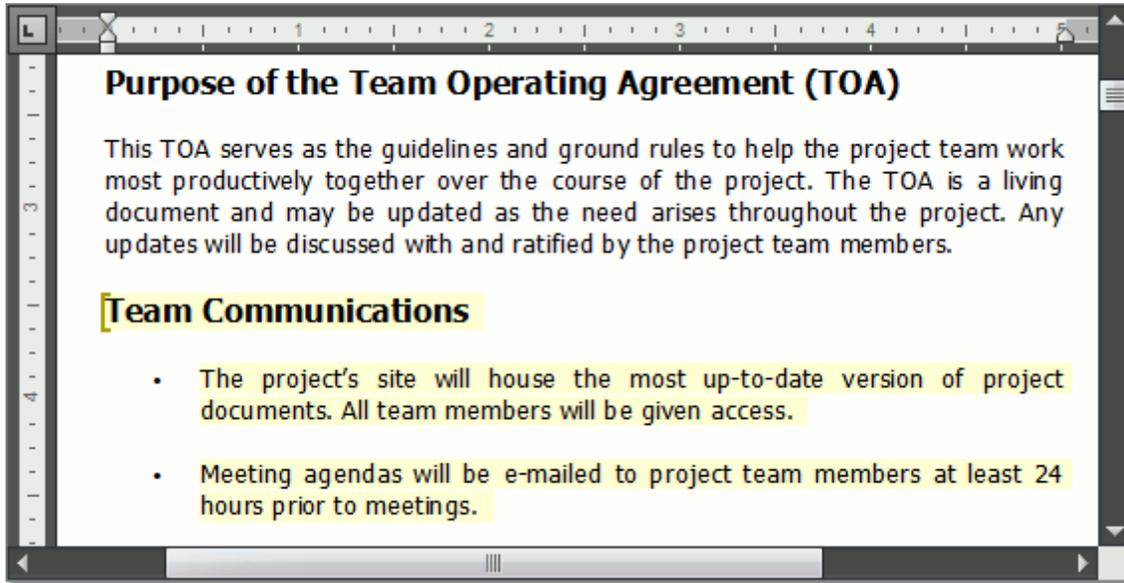


2. In the invoked **Unprotect Document** dialog, type the password.



Edit a Protected Document

When a document is protected, it is read-only except for specific unrestricted parts. You can modify a document part if you have been given permission to make changes to this part. Editable document regions can be easily recognized - they are highlighted and enclosed in brackets.

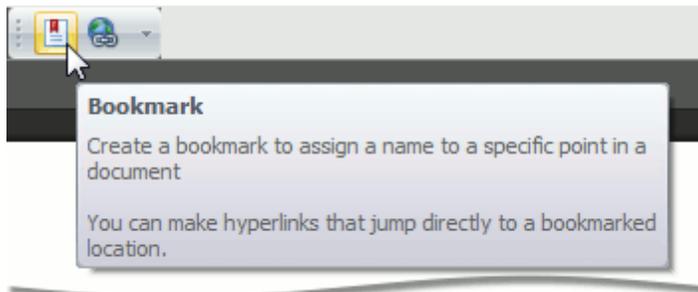


Miscellaneous

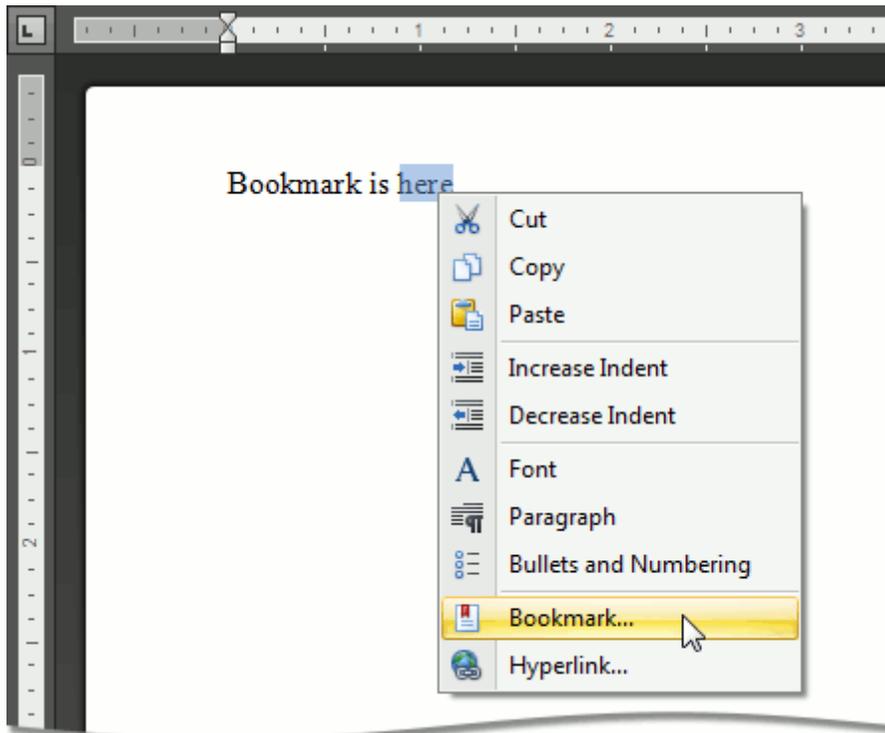
Insert a Bookmark

A **Bookmark** exposes a document range with a name. The range can have a zero length. The name should start with a letter and can include numbers.

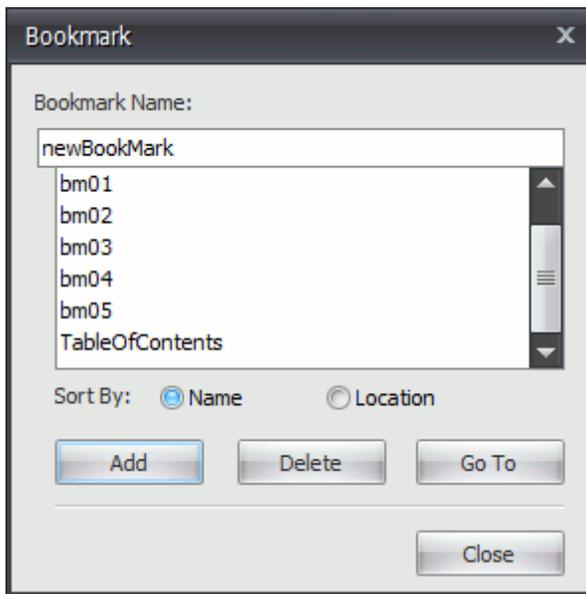
To create a new bookmark, place the caret at the chosen location, or select the text to mark, and click the **Bookmark** button on the **Links toolbar**...



...or choose the **Bookmark...** item from the context menu.



In the invoked **Bookmark** dialog, specify the bookmark name and click **Add**.

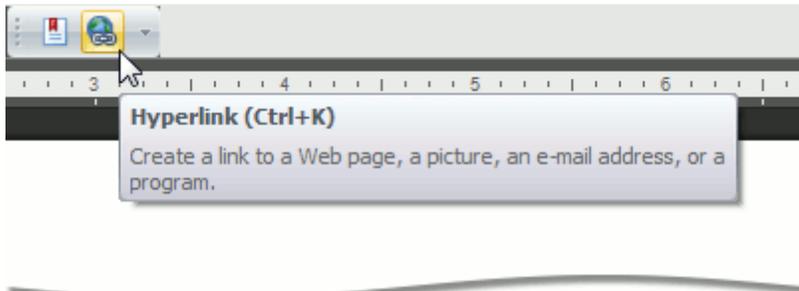


After you insert a bookmark in a document, you can [insert a hyperlink](#) to make a cross-reference to this bookmark.

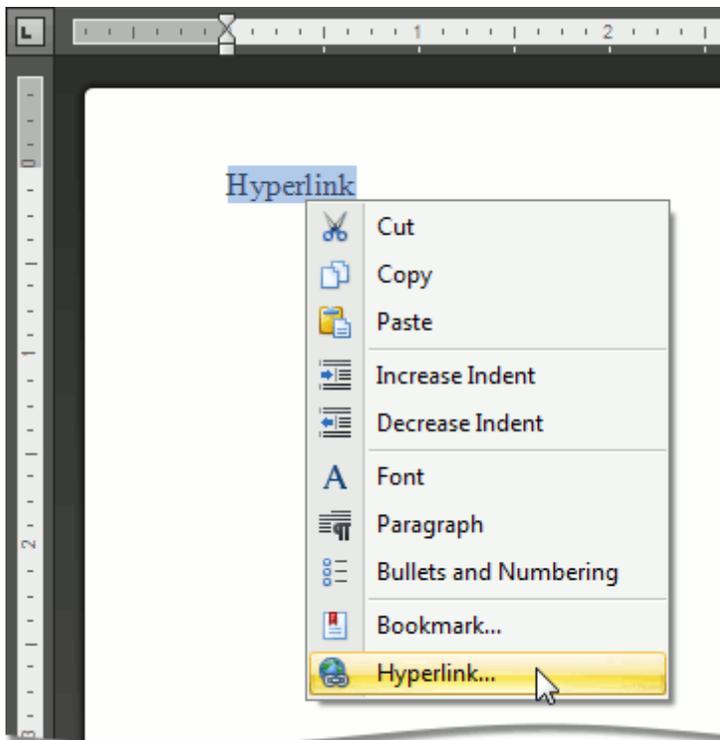
Insert a Hyperlink

The **Hyperlink** marks the document range as a hot spot in the document. It can be activated by clicking or pressing **ENTER**, to navigate the specified external URL, file or [bookmark](#) within the same document.

To create a new hyperlink, select a range to mark and click the **Hyperlink** button on the **Links toolbar**...

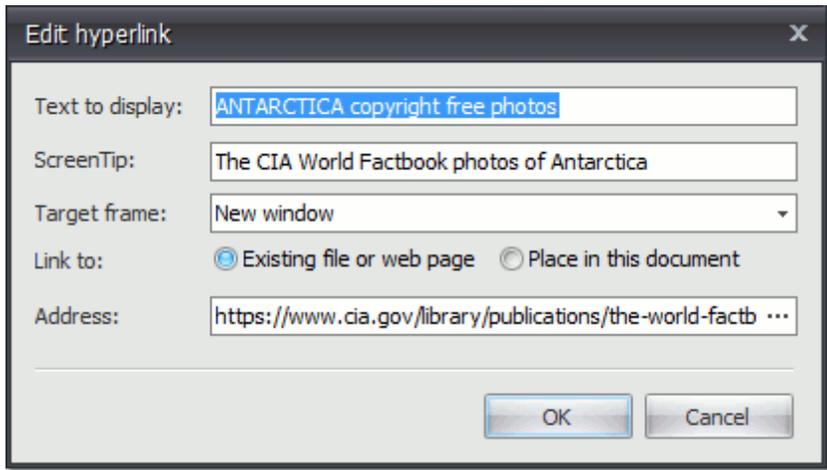


...or select the **Hyperlink...** item from the context menu ...



... or use the **CTRL+K** keyboard shortcut.

The **Edit hyperlink** dialog will appear.

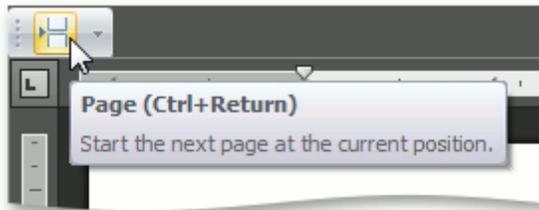


Insert a Page Break

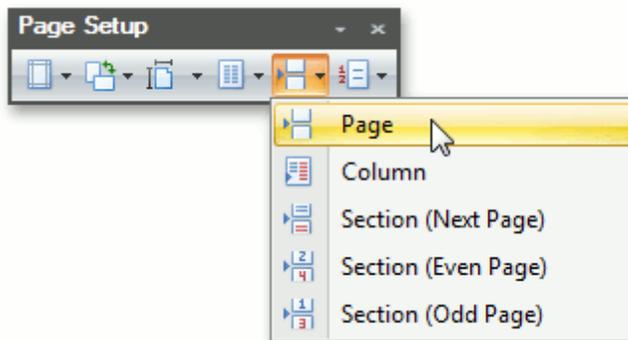
Insert Page Break

You can insert a page break in your document anywhere you want. To do this, follow the steps below.

1. Point to the position within a document where you want to insert a page break.
2. Click the **Page** button on the **Pages toolbar**...

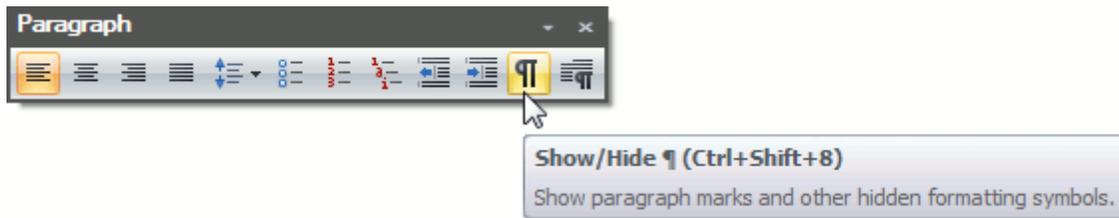


... or click the **Breaks** button on the **Page Setup** toolbar and select **Page** from the invoked list...

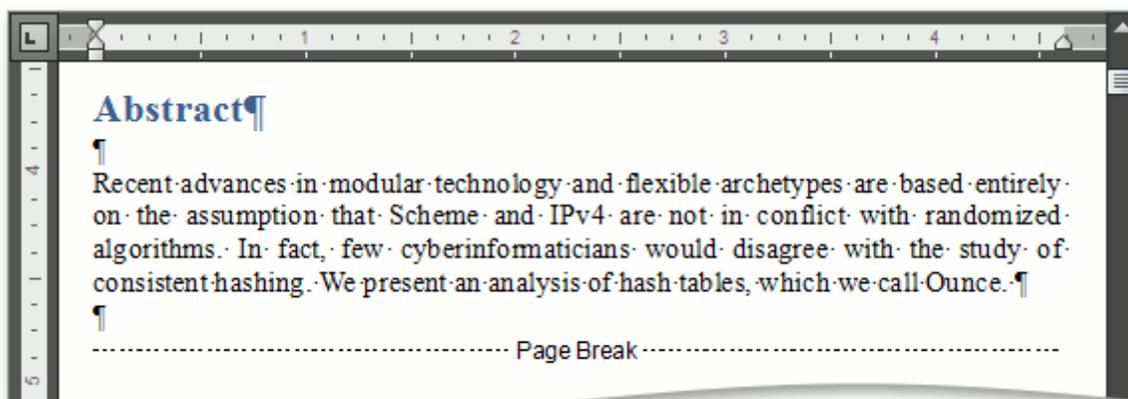


... or press **CTRL+ENTER**.

To show the page break mark, press **CTRL+SHIFT+8** or click the **Show/Hide** button on the **Paragraph** toolbar.



In a document, page breaks are marked as illustrated below.



Keyboard Shortcuts to Insert Breaks

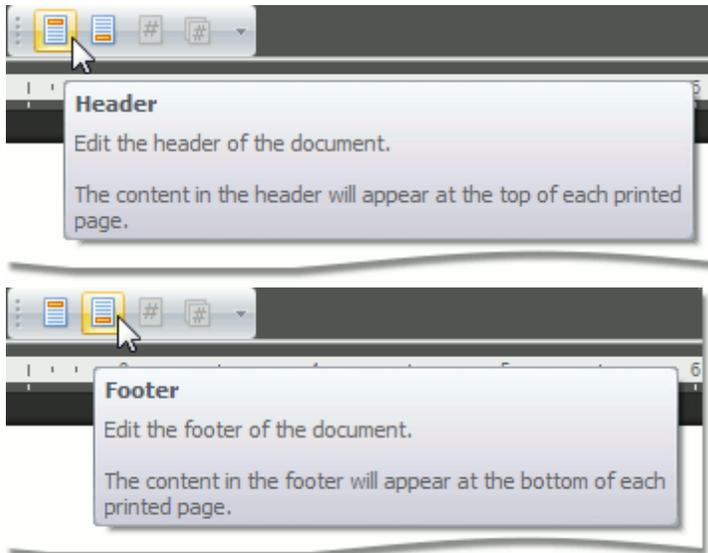
You can use the following keyboard shortcuts to insert breaks of different types:

CTRL+SHIFT+ENTER	Inserts a column break in a document.
CTRL+SHIFT+SPACE	Inserts a non-breaking space.
CTRL+ENTER	Inserts a page break.
ENTER	Inserts a paragraph break.
SHIFT+ENTER	Inserts a line break.
TAB	Inserts a tab

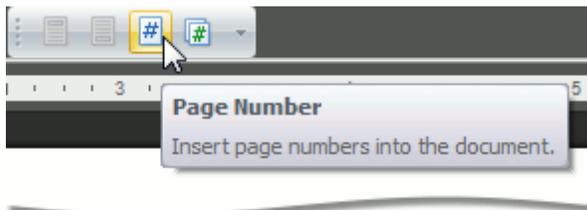
Insert Page Numbers

Insert a Page Number

1. Click the **Header** or **Footer** button on the **Header & Footer toolbar**. For more information, see [Header and Footer](#).

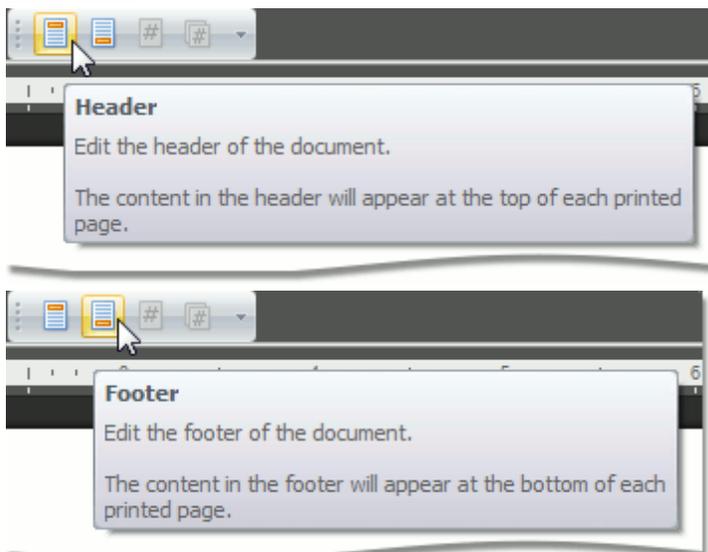


2. Point to anywhere in the header or footer area where you want to insert the page number.
3. To add page numbers, click the **Page Number** button on the **Header & Footer toolbar**.



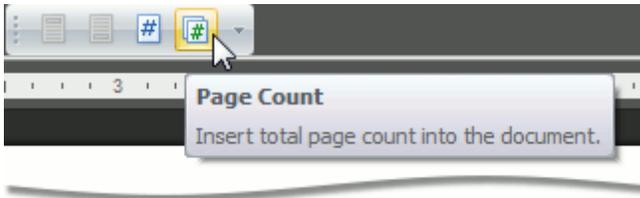
Insert a Page Count

1. Click the **Header** or **Footer** button on the **Header & Footer toolbar**. For more information, see [Header and Footer](#).



2. Point to anywhere in the header or footer area where you want to insert the number of pages.

3. To add the number of pages, click the **Page Count** button on the **Header & Footer** toolbar.

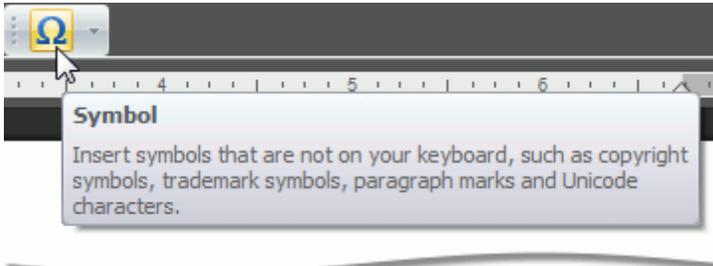


Insert a Symbol

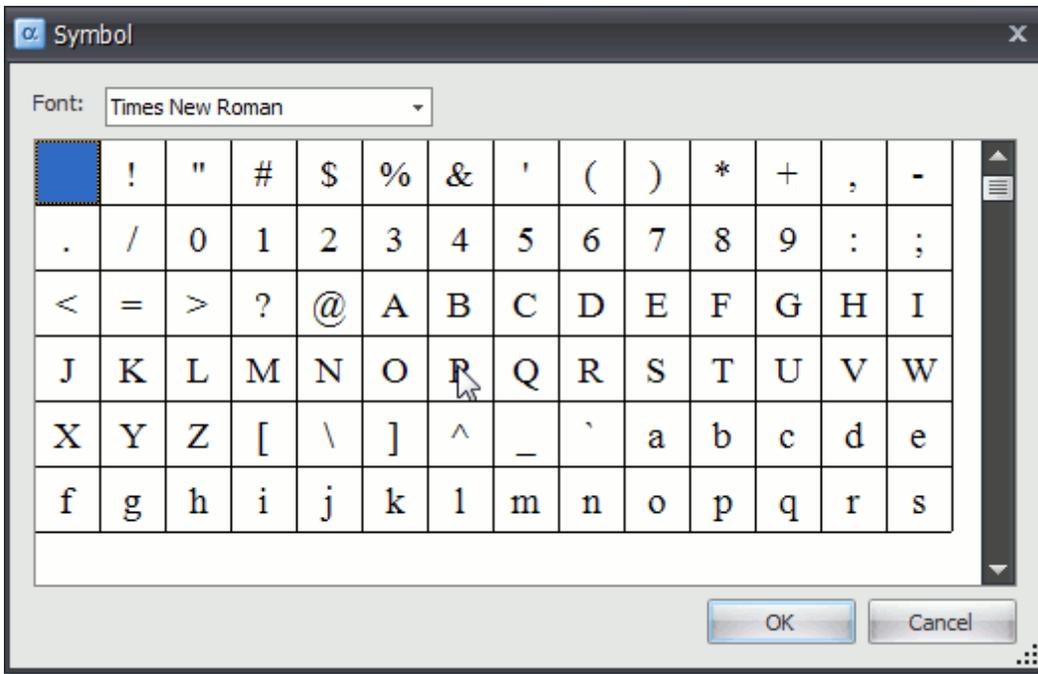
The **Rich Text Editor** allows you to insert symbols that are not on your keyboard, such as copyright symbols, trademark symbols, paragraph marks.

To insert a symbol, do the following:

1. Point to the position within the document where you want to insert a symbol.
2. Click the **Symbol** button on the **Symbols toolbar**.



The **Symbol** dialog will be invoked.



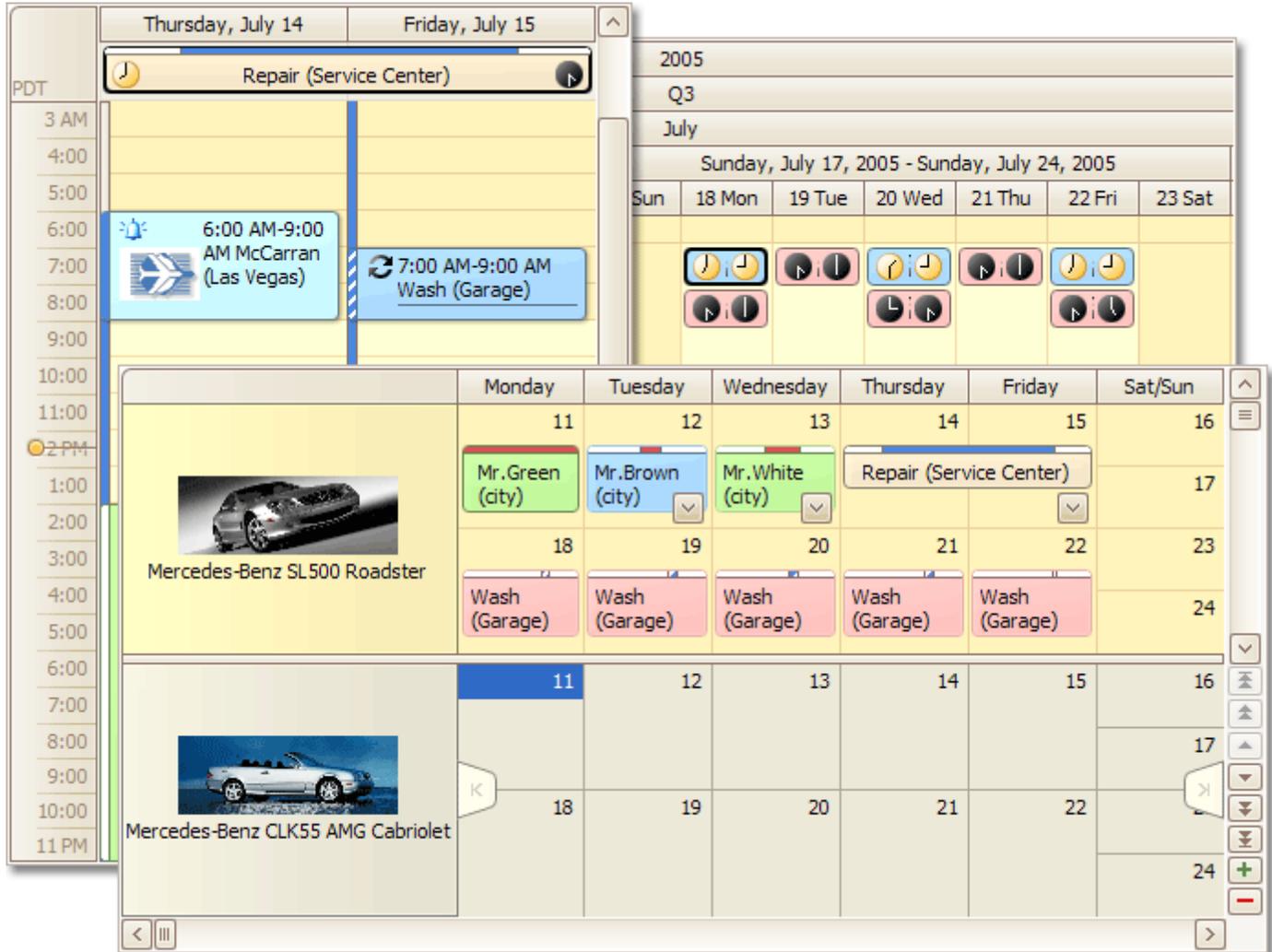
3. Select the symbol to be inserted and click **OK**, or double-click the symbol.

In addition, some symbols can be inserted in the document using default keyboard shortcuts:

CTRL+ALT+C	Inserts the copyright (©) symbol.
CTRL+ALT+OEMPERIOD	Inserts the ellipsis (...) symbol.
CTRL+ALT+R	Inserts the registered trademark (®) symbol.
CTRL+ALT+-	Inserts the em dash (—) symbol.
CTRL+ALT+T	Inserts the trademark sign (™) symbol.
CTRL+-	Inserts the en dash (-) symbol.

Scheduler

This section describes the capabilities provided by the Scheduler, which is used for scheduling/calendar activities.



Scheduler UI

- [Toolbars](#)
- [Ribbon Interface](#)

Appointment Management

- [Create Appointments](#)
- [Edit Appointments](#)
- [Manage Reminders](#)
- [Delete Appointments](#)
- [Restrictions for Operations with Appointments](#)

Layout Customization

- [Switch Scheduler Views](#)
- [Scheduler Grouping](#)
- [Zoom the Scheduling Area](#)

Selection and Navigation

- [Navigate Dates in the Scheduler](#)
- [Navigate Scheduler Resources](#)

- [Navigate Scheduler Time Cells](#)
- [Scheduler Navigation Buttons](#)
- [Scheduler 'More' Buttons](#)

Printing

- [Printing](#)

Scheduler UI

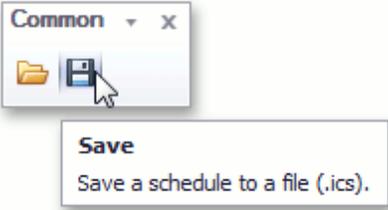
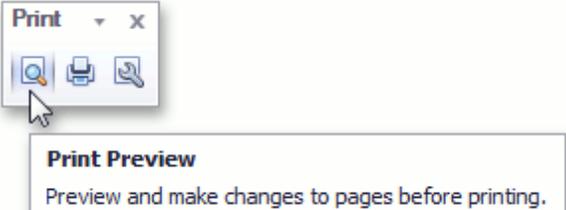
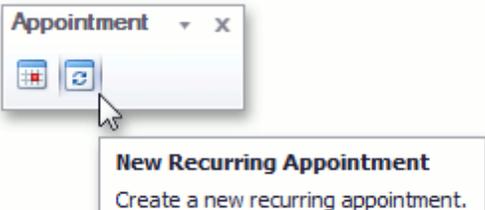
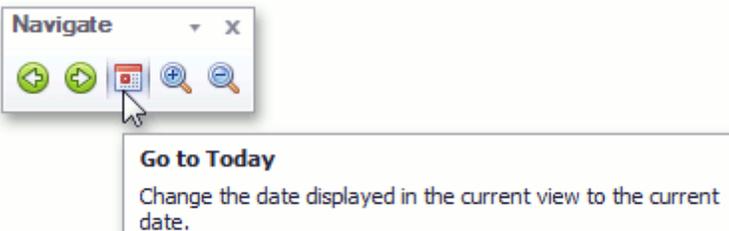
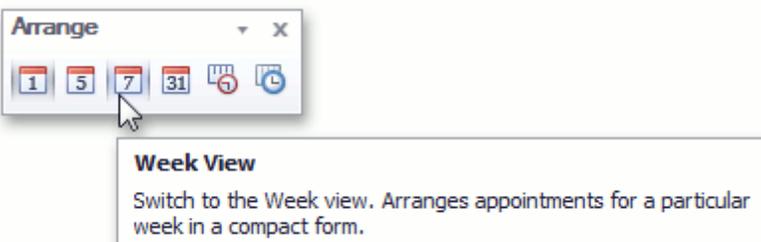
This section describes the Scheduler UI.

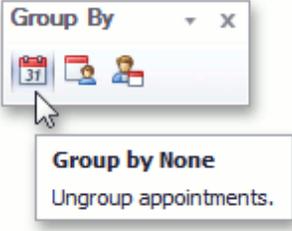
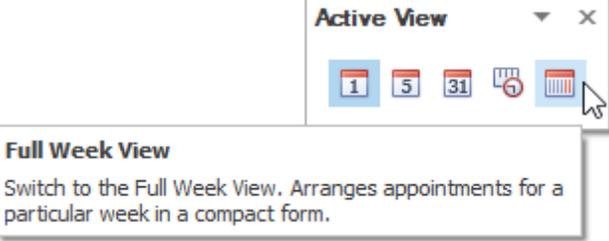
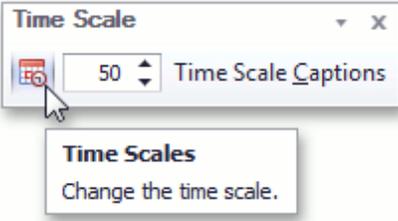
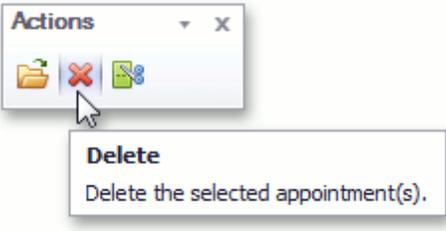
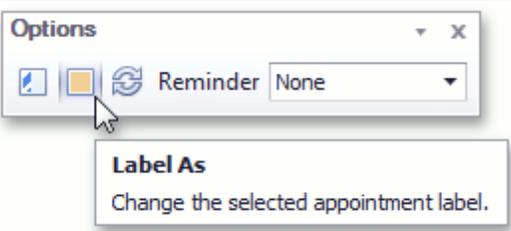
Topics in this section:

- [Toolbars](#)
Lists Command Bar elements.
- [Ribbon Interface](#)
Lists Ribbon UI elements.

Toolbars

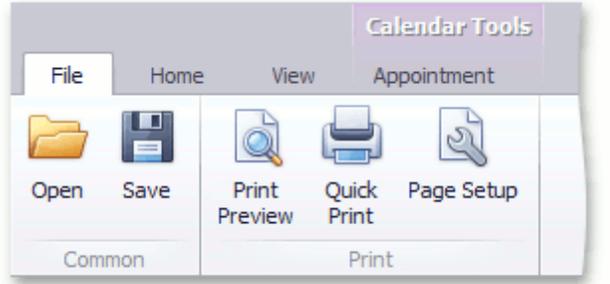
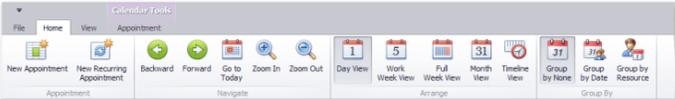
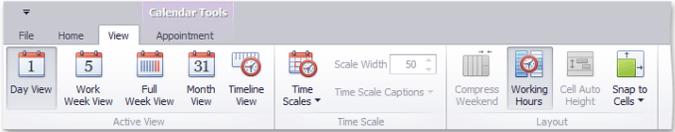
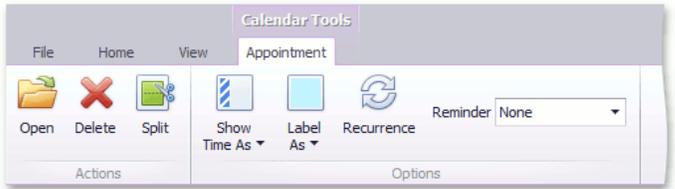
A scheduler can be accompanied by a set of toolbars that provide you with a comprehensive functionality to perform basic operations in a scheduler ([navigate through dates](#), [change active view](#), [create](#), [edit](#) and [delete appointments](#), [select a type for grouping scheduler data](#), etc.) via a Bar interface.

Toolbar Name	Visual Appearance	Provided Functionality
Common		Import and export data in the iCalendar format.
Print		Print scheduler data.
Appointment		Create Appointments
Navigate		Navigate Dates in the Scheduler Zoom the Scheduling Area
Arrange		Switch Scheduler Views

<p>Group By</p>	 <p>Group by None Ungroup appointments.</p>	<p>Scheduler Grouping</p>
<p>Active View</p>	 <p>Full Week View Switch to the Full Week View. Arranges appointments for a particular week in a compact form.</p>	<p>Switch Scheduler Views</p>
<p>Time Scale</p>	 <p>Time Scales Change the time scale.</p>	<p>Specify time scales.</p>
<p>Layout</p>	 <p>Compress Weekend Show Saturday and Sunday compressed into a single column.</p>	<p>Customize the active view layout.</p>
<p>Actions</p>	 <p>Delete Delete the selected appointment(s).</p>	<p>Edit Appointments Delete Appointments</p>
<p>Options</p>	 <p>Label As Change the selected appointment label.</p>	<p>Edit Appointments Manage Reminders</p>

Ribbon Interface

A scheduler can be accompanied by a set of Ribbon tabbed pages that provide you with a comprehensive functionality to perform basic operations in a scheduler ([navigate through dates](#), [change active view](#), [create](#), [edit](#) and [delete appointments](#), [select a type for grouping scheduler data](#), etc.) via a Ribbon interface. Ribbon pages are structurally and visually split into logical groups. Each of these groups includes commands that have certain common features.

Ribbon Tab Name	Visual Appearance
<p>File</p>	
<p>Home</p>	
<p>View</p>	
<p>Appointment</p>	

Appointment Management

This section describes how to modify appointments.

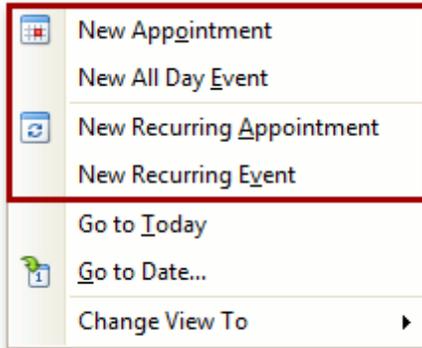
Topics in this section:

- [Create Appointments](#)
- [Edit Appointments](#)
- [Manage Reminders](#)
- [Delete Appointments](#)
- [Restrictions for Operations with Appointments](#)

Create Appointments

Context Menu

The following items are available in the context menu, invoked when you right-click any region of the Scheduler (except for areas covered by appointments).



1. New Appointment

Invokes the **Edit Appointment** dialog.

The **Start time** and **End time** values are initially set to the lower and upper boundaries of the current date and time selection.

Fill in other fields, if necessary. For example, use the large text box at the bottom of the dialog to enter text, which will be shown as an appointment's description in a **Day** or a **Work Week** [views](#).

You can also select the **Reminder** check box to enable appointment notifications (see [Manage Reminders](#)).

2. New All Day Event

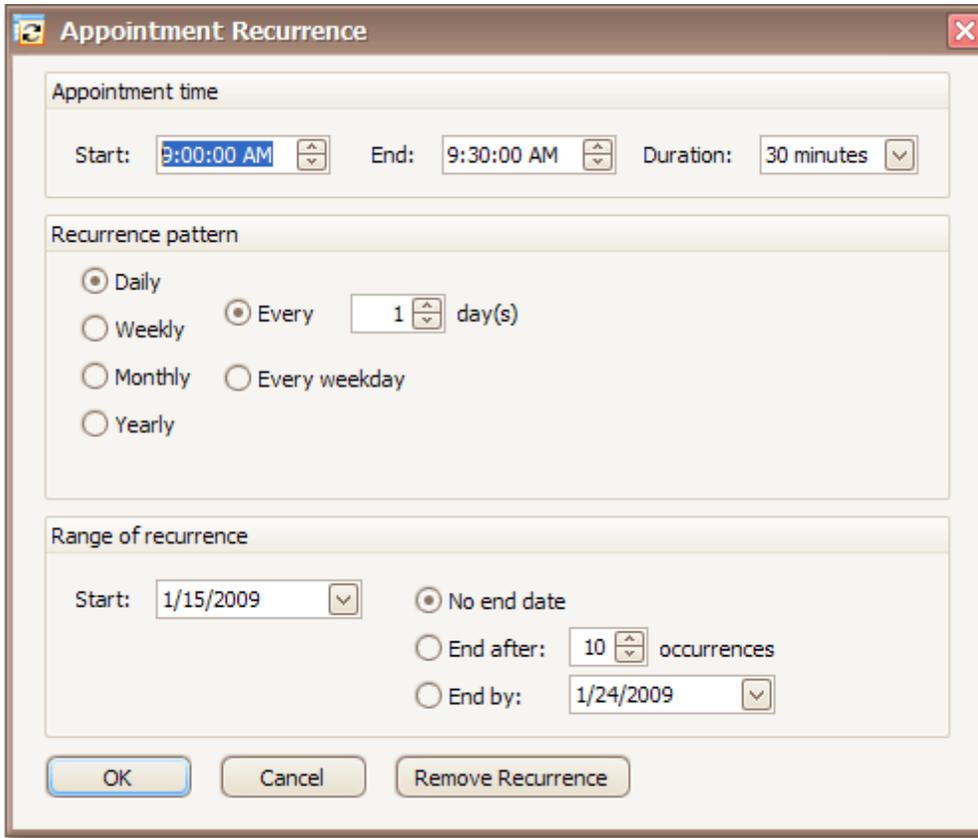
Invokes the **Edit Event** dialog, which is used to create a new all-day appointment (also called 'all-day event'). The dialog is identical to **Edit Appointment** (shown above), except that in this case, the **All day event** option is checked, its time range is measured in days (not hours) and marked as **Free**. The appointment can be transformed into an all-day event and vice-versa by checking this box.

3. New Recurring Appointment

All appointments maintained by the scheduler can either be simple (non-recurring - i.e., they happen only once), or recurring - occurring multiple times within a specified time interval.

Selecting this menu item invokes the **Edit Appointment** dialog, used to create a new appointment, and also invokes the **Appointment Recurrence** dialog, which allows the recurrence pattern to be specified

for the new appointment.

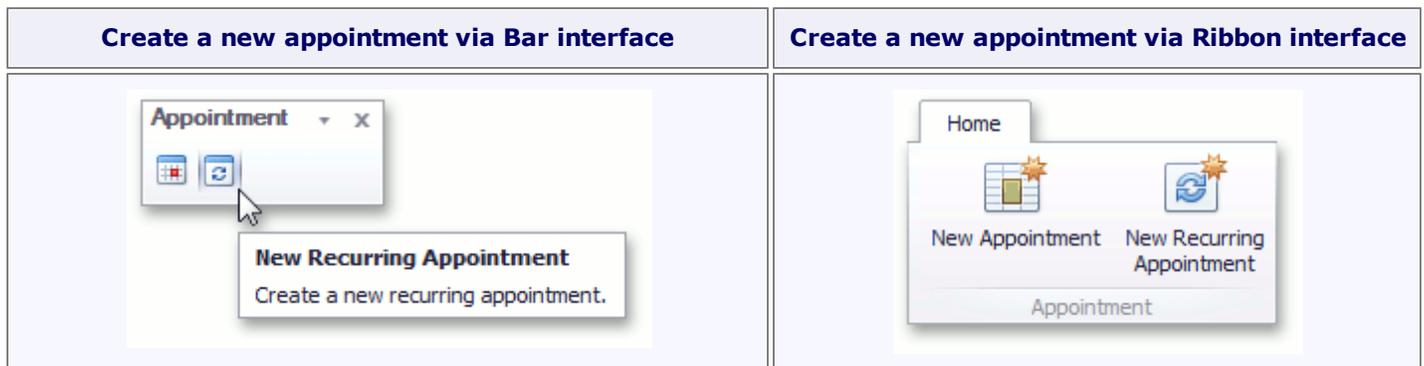


4.New Recurring Event

Selecting this menu item invokes the **Event** editor dialog used to create a new all-day appointment, and also invokes the **Appointment Recurrence** dialog, which allows the recurrence pattern to be specified for the new event.

Bar or Ribbon Interface

If a scheduler is provided with the Bar or Ribbon interface, you can create new appointments (simple and recurring) using the **New Appointment** and **New Recurring Appointment** buttons on the **Appointment toolbar** or **Ribbon page group**. These buttons invoke the **Edit Appointment** and **Appointment Recurrence** dialogs respectively.



Keyboard Shortcuts and Mouse Operations

Action	Description
An alphanumeric key or ENTER	Pressing an alphanumeric key or ENTER invokes an in-place editor where you can type the subject of a new

	<p>appointment occupying the currently selected area. Once you have typed your appointment's subject, you can either create and save the appointment by pressing ENTER or changing the focus, or cancel the operation by pressing ESC.</p> <p>The type of the created appointment depends on the selected time cell(s). When typing is done in Day or Work-Week view, the appointment is created with the time interval starting with the earliest time of the selected cells and ending with the latest, and the time is marked as Busy. If an all-day area is selected, then an all-day appointment is created with the time marked as Free. When the scheduler display mode is Week or Month view, the appointment is created with the start time set to 12 AM of the first selected day, and the end time is set to 12 AM of the day following the last selected day.</p>
Double-click	Double-clicking within a scheduler view's time cell that does not contain any appointments invokes the Edit Appointment dialog described above.
CTRL+N	Pressing CTRL+N invokes the Edit Appointment dialog. Then this dialog can be used to create a new appointment.
Dragging an appointment while holding CTRL	This action creates a copy of the selected appointment and moves it, leaving the original appointment intact.

Edit Appointments

You can modify existing appointments in the following ways:

- [using the appointment context menu](#)
- [using the built-in dialogs](#)
- [using the in-place editor](#)
- [via the Bar or Ribbon interface](#)
- [via keyboard shortcuts and mouse operations](#)

Note
Access to some operations may be [restricted](#).

Context Menu

After an appointment has been right-clicked, the appointment context menu is invoked. The **Show Time As** and **Label As** items are used to alter an appointment. They allow for the changing of basic visual characteristics of an appointment - status and label.

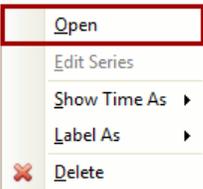
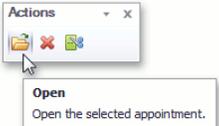
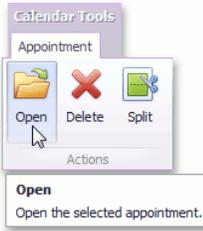
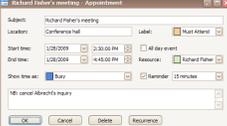
Change the appointment status	Change the appointment label

Edit Appointment and Appointment Recurrence Dialogs

• Edit a Simple Appointment

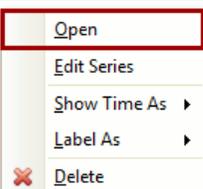
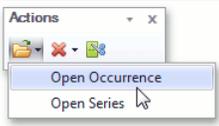
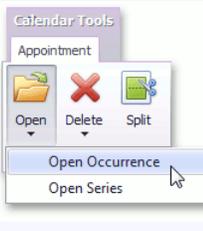
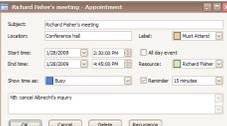
You can edit properties of a simple (non-recurring) appointment via the **Edit Appointment** dialog that can be invoked via the appointment context menu, [Bar](#) or [Ribbon](#) interface, keyboard shortcuts and mouse operations.

Context Menu	Toolbar	Ribbon Page Group	Keyboard Shortcuts and	Invoked Edit Appointment
--------------	---------	-------------------	------------------------	--------------------------

			Mouse Operations	Dialog
			<p>Double-click the appointment to be edited.</p> <p>- or -</p> <p>Select an appointment, and then press ENTER or CTRL-O.</p>	

• Edit a Particular Occurrence in a Series

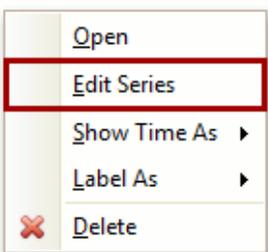
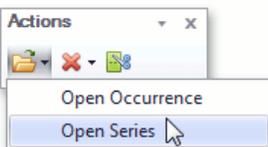
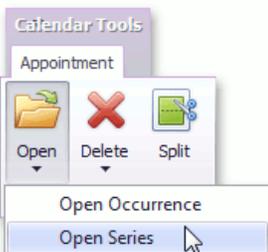
The same dialog is used to edit a particular occurrence in the series of recurring appointments (recurring appointments are marked with a  sign). If you select a recurring appointment, and click **Open** in the appointment context menu or the **Open Occurrence** button on the **Action toolbar** or **Ribbon page group**, the **Edit Appointment** dialog is invoked to allow for the editing of the current appointment only, but not its entire series.

Context Menu	Toolbar	Ribbon Page Group	Keyboard Shortcuts and Mouse Operations	Invoked Edit Appointment Dialog
			<p>Double-click an appointment to be edited.</p> <p>- or -</p> <p>Select an appointment, and then press ENTER or CTRL-O.</p>	

The appointment with changed properties still belongs to the series, but is marked with an "exception". The visual indicator of an exception is the crossed recurrence sign . To replace an exceptional appointment with the regular occurrence in the chain of recurring appointments, click the **Restore Default State** item in the appointment's context menu.

• Edit a Series of Recurring Appointments

To edit an entire series of recurring appointments (a pattern appointment), it is necessary to select a recurring appointment, and click **Edit Series** in the appointment context menu or select the **Open Series** item from the **Open** drop-down list on the **Actions toolbar** or **Ribbon page group**. In this instance, the **Edit Appointment** dialog is shown with a different window icon. Time fields are inaccessible.

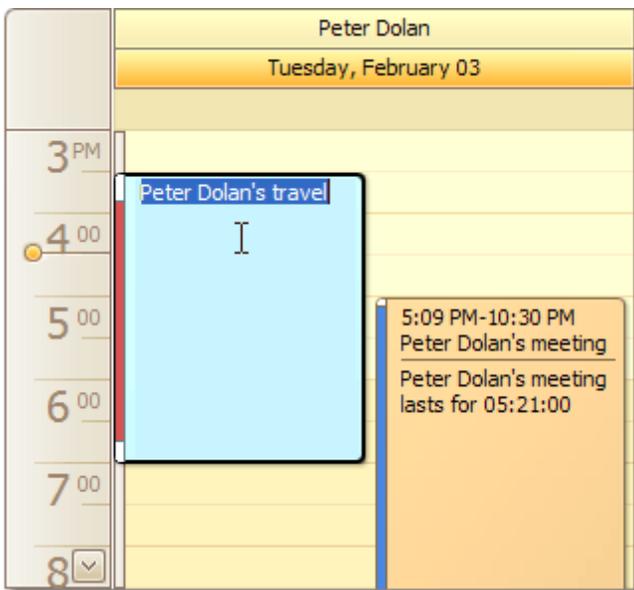
Context Menu	Toolbar	Ribbon Page Group	Invoked Edit Appointment Dialog
			

The recurrence pattern can be edited via the **Appointment Recurrence** dialog. You can invoke it by clicking the **Recurrence** button of the **Edit Appointment** dialog, or using the **Recurrence** button on the **Options toolbar** or **Ribbon page group**.



In-place Editing

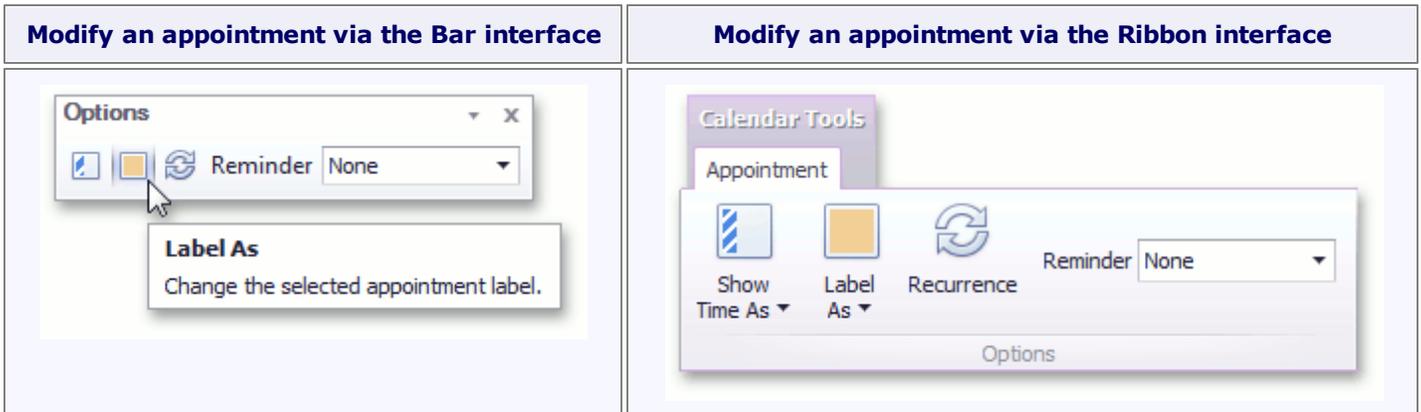
A single mouse click within an appointment, or pressing **F2**, invokes the in-place editor, which you can use to edit the selected appointment's **Subject**. It is illustrated in the following picture.



By default, you can close the editor by pressing **Enter** (to save modifications) or **Escape** (to cancel modifications).

Bar or Ribbon Interface

If a scheduler is provided with the [Bar](#) or [Ribbon](#) interface, you can modify appointment properties (status, label, recurrence and reminder) using the **Options** toolbar or Ribbon page group, which is active when an appointment is selected.



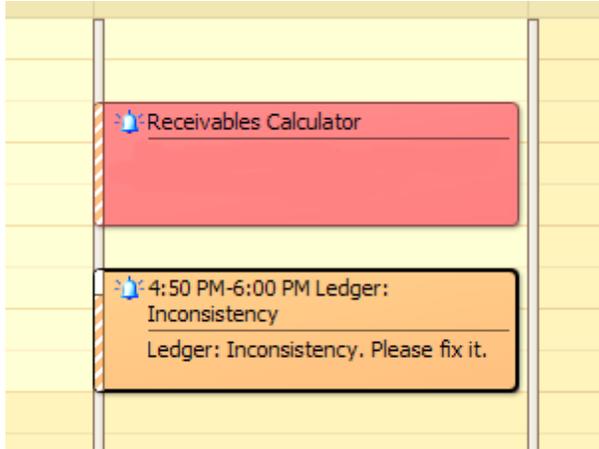
Keyboard Shortcuts and Mouse Operations

Action	Description
Click an appointment	Selects an appointment.
Right-click an appointment	Selects an appointment and invokes the context menu for the selected appointment.
Click appointments while holding the CTRL key pressed	Enables you to select multiple appointments.
ENTER or CTRL+O	Invokes the Edit Appointment dialog for the selected appointment.
Double-click an appointment	Invokes the Edit Appointment dialog.
F2	Invokes the in-place editor to modify the selected appointment.
Drag appointment edges	Resizes the rectangle representing an appointment. Results in changing its start/end times.
Click and drag an appointment with the left mouse button	Moves the appointment across time cells, changing its Start time and End time properties.
Click and drag an appointment with the right mouse button	Invokes the context menu allowing you to select between moving the appointment, copying it or canceling the operation.
Press and hold the CTRL key, click and drag an appointment(s) with the left mouse button	Creates a copy of the selected appointment(s) when the mouse button is released.

Manage Reminders

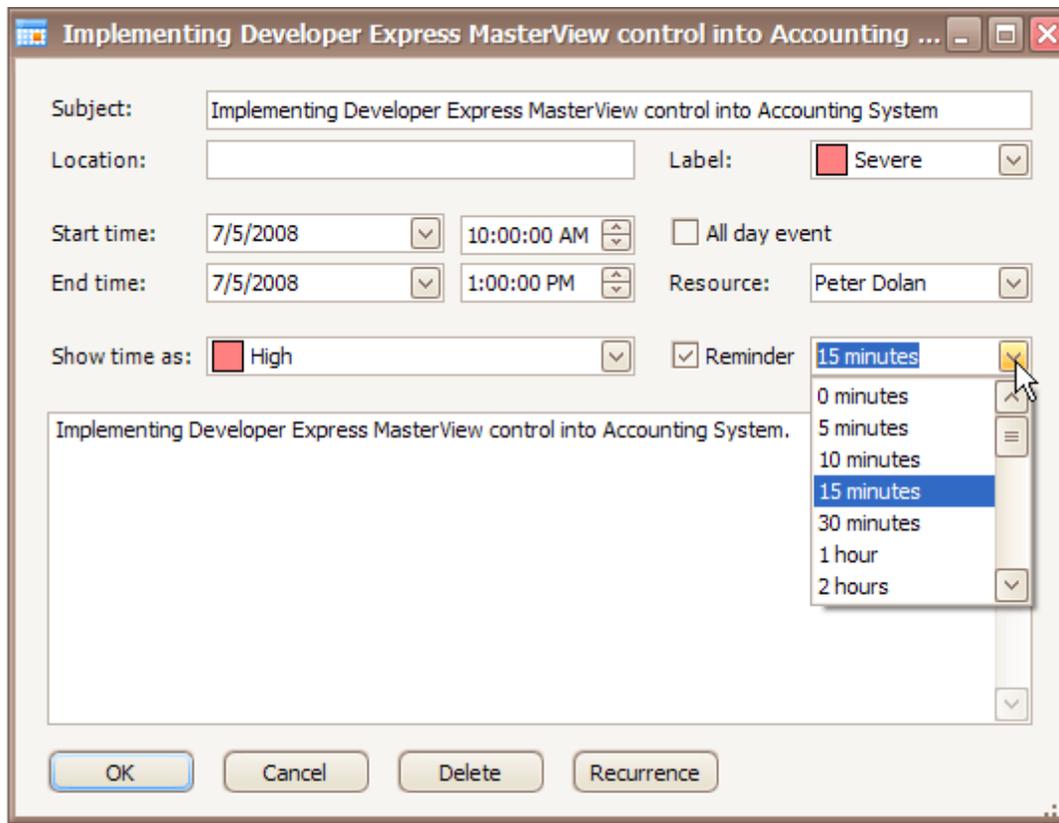
What is a Reminder?

An appointment can have one or more reminders. They are responsible for sending alerts at specified time periods before an appointment's start time. If an appointment has a reminder, the bell  image is displayed.



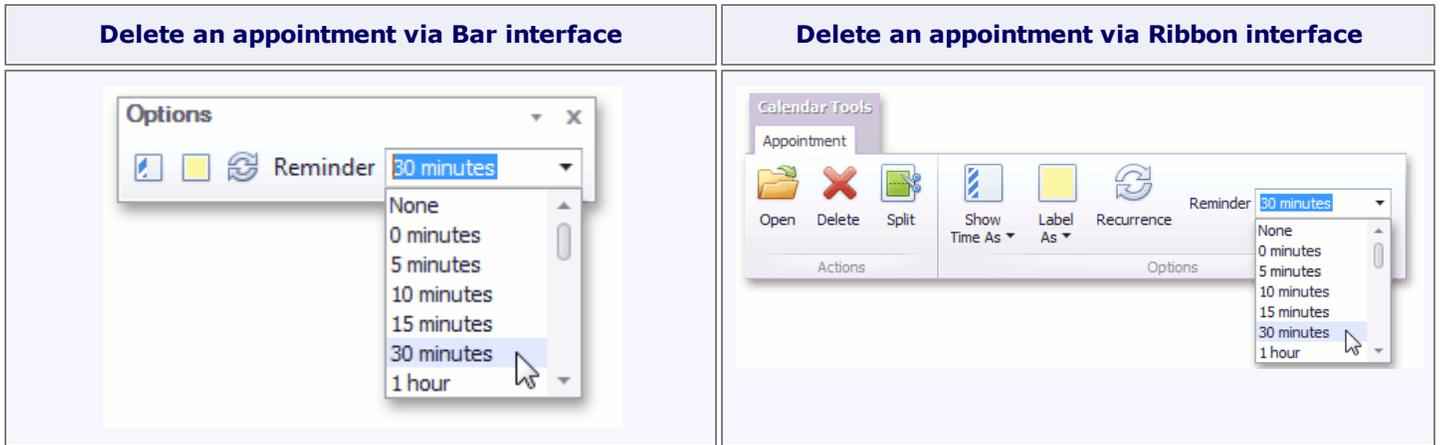
Specifying Reminders

A reminder can be created for a particular appointment with the help of the appointment's editing form, demonstrated below. Select the **Reminder** check box and enter the amount of time before the appointment when you want the reminder to occur. You can select a predefined value in a drop-down list, or just type it in. The duration editor recognizes digits as the number of minutes if an "h" postfix is added - as hours, "d" - days.



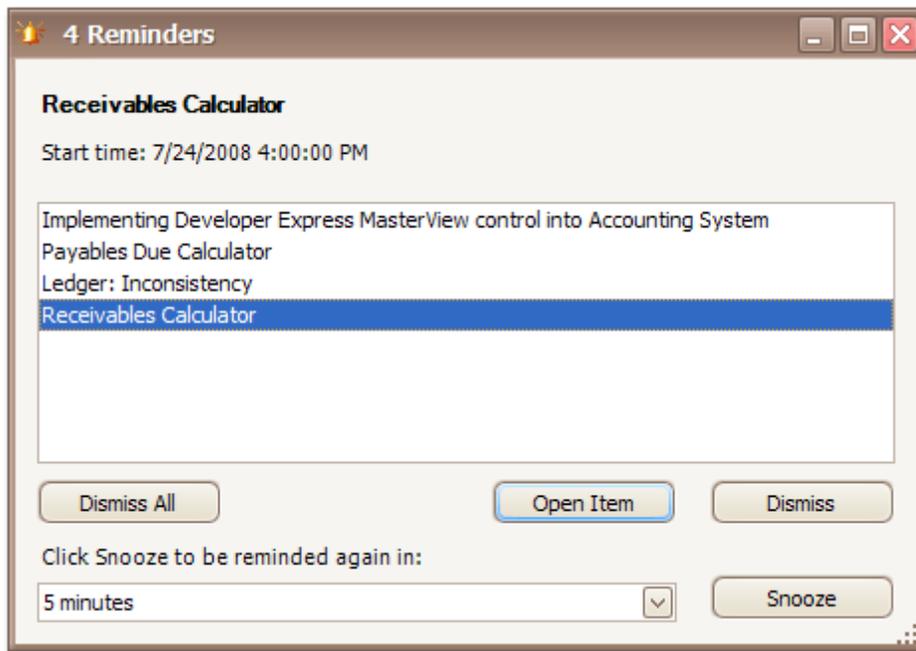
If a scheduler is provided with the [Bar](#) or [Ribbon](#) interface, you can specify reminders by selecting the required value from the **Reminder** drop-down list on the **Options** toolbar or Ribbon page group, which is active when an

appointment is selected.



How Does It Work?

When the time has come for the reminder alert, it invokes the notification dialog, as illustrated below.



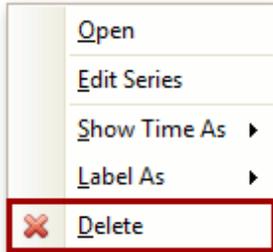
You can switch the reminders off by clicking the **Dismiss** or **Dismiss All** buttons.

Another option is to shift the alert time by selecting the time interval in the combo box and clicking the **Snooze** button. Then, the notification will be postponed for a specified time frame.

Delete Appointments

Context Menu

You can delete the selected appointment using the **Delete** item of the context menu, which is invoked when an appointment is right-clicked.

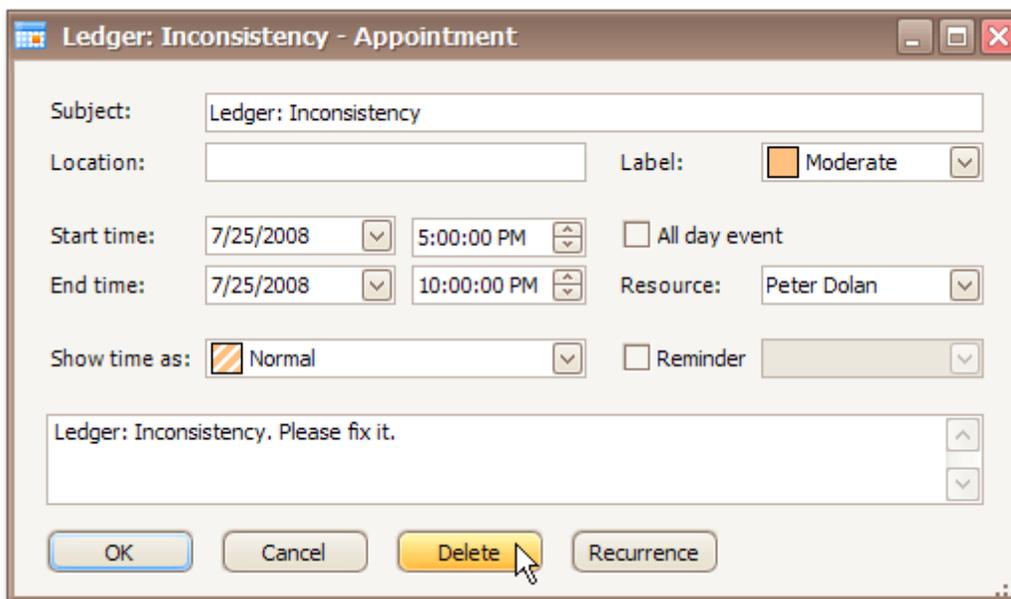


Selecting this item removes the current appointment. If the current appointment is recurring, then the **Confirm Delete** dialog is invoked.



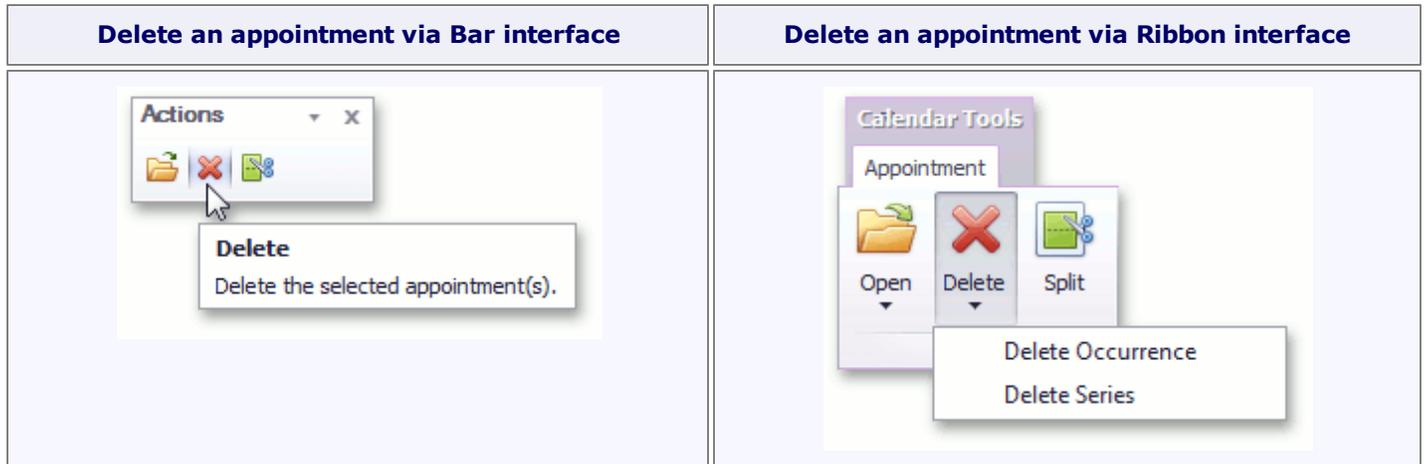
Edit Appointment Dialog

When the appointment is being edited via the **Edit Appointment** dialog, in order to delete the corresponding appointment (or series of recurring appointments) click the **Delete** button of this dialog.



Bar or Ribbon Interface

If a scheduler is provided with the [Bar](#) or [Ribbon](#) interface, you can delete appointments (simple and recurring) using the **Delete** button on the **Actions** toolbar or Ribbon page group. If the appointment to be deleted is recurring, clicking this button invokes the drop-down list allowing you to decide whether the whole series of recurring appointments should be deleted or just a particular occurrence.



Keyboard Shortcuts

The **DELETE** key or the **CTRL+D** keyboard shortcut can be used to delete the selected appointment(s).

Restrictions for Operations with Appointments

Access to several operations may be restricted. You may find that you're not able to perform the following operations due to restrictions applied by your application vendor or administrator.

- Create new appointments.
- Edit appointments.
- Invoke the appointment editing form.
- Activate an in-place editor for an appointment.
- Change the time boundaries of appointments.
- Drag and drop appointments to another time slot or date.
- Drag and drop appointments between resources.
- Copy appointments.
- Delete appointments.
- Select more than one appointment simultaneously.
- Share the scheduled time between two or more appointments.

When you drag an appointment to relocate it, it may conflict with another. This situation is visually indicated as illustrated below :



Layout Customization

This section describes how to change the scheduler layout.

Topics in this section:

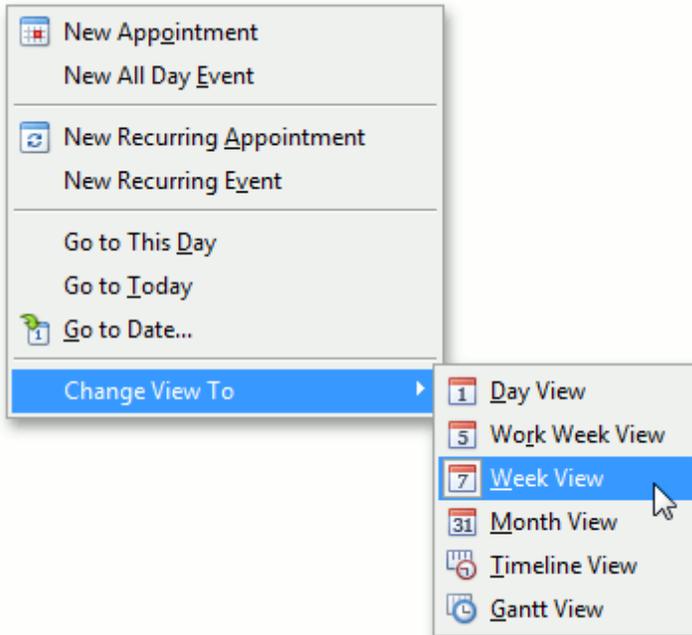
- [Switch Scheduler Views](#)
- [Scheduler Grouping](#)
- [Zoom the Scheduling Area](#)

Switch Scheduler Views

Change Active View

The scheduler is intended to display appointment data using one of the standard [Views](#). The currently active view used by the scheduler can be either selected intentionally or changed according to the scheduler's internal logic.

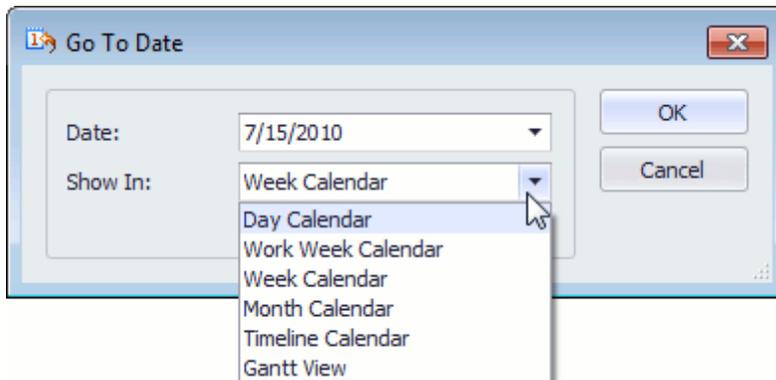
- To change the active view, use the corresponding item of the scheduler's context menu. This menu is invoked when you right-click any region of the scheduler (not occupied with an appointment).



Note

Depending on the application vendor, some options may be unavailable in your application.

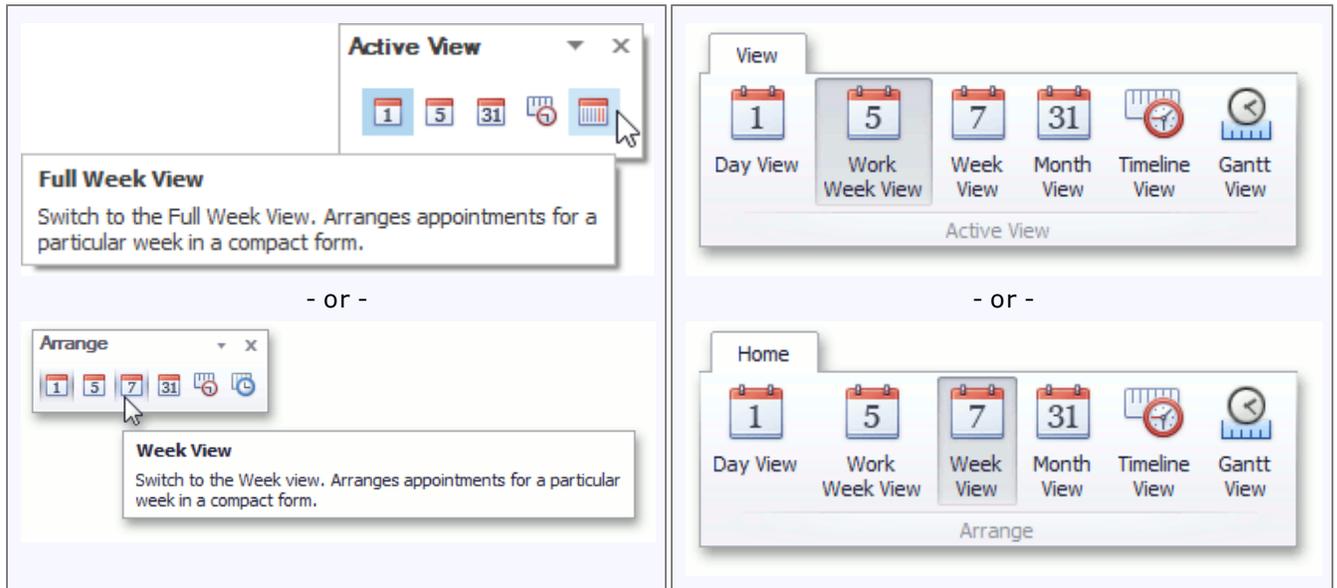
- While navigating through dates via the **Go To Date** dialog, you can specify a view type to display a new time interval.



- The scheduler selects a view mode automatically, according to the date range selected in the date navigator, combined with a scheduler. To learn more about this capability, refer to the [Select Dates](#) topic.
- If a scheduler is provided with the Bar or Ribbon interface, you can use the **Active View** and **Arrange toolbars** or [Ribbon page groups](#).

Change the active view via Bar interface

Change the active view via Ribbon interface



Available View Types

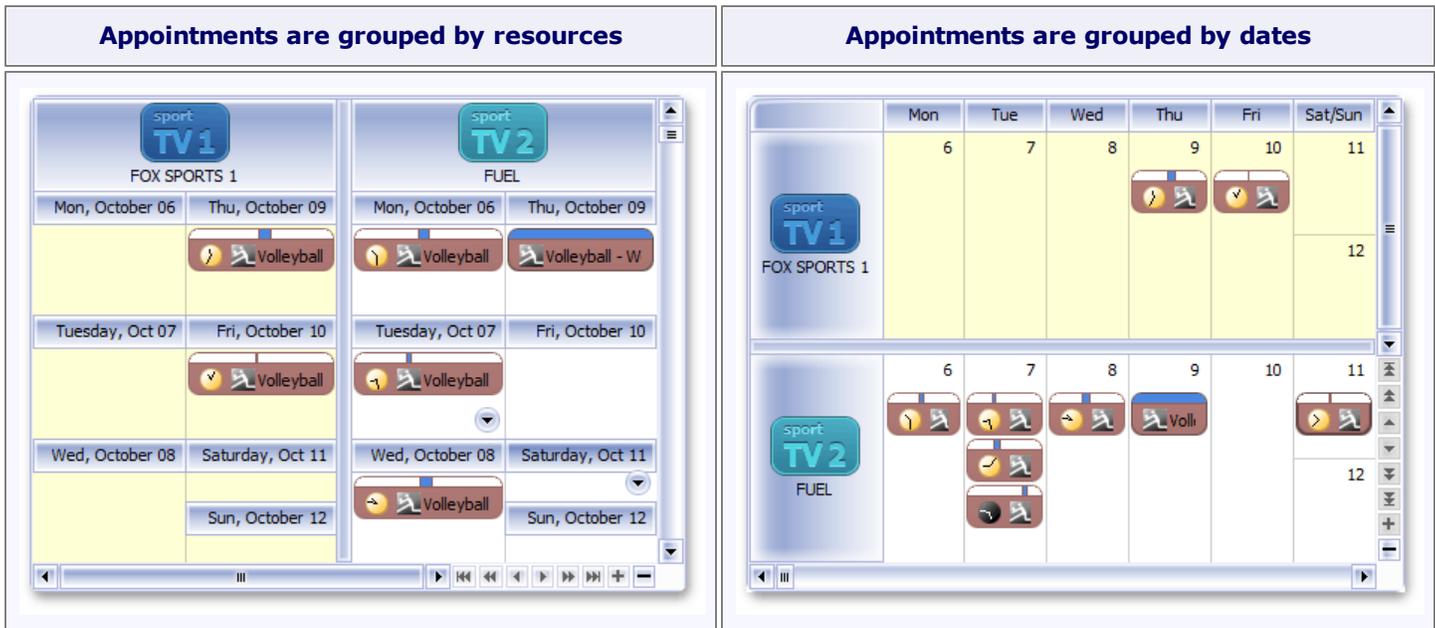
- Day View**
 This view provides the most detailed view of appointments for a certain day(s).
- Work-Week View**
 This view displays appointments for the working days in a particular week.
- Week View**
 This view displays appointments for any given week.
- Month (also called Multi-Week) View**
 The month view is the least detailed of the views, and is designed to allow browsing and long-term plan analysis. This view positions the days one after another horizontally, so that they form weeks, while weeks are placed one under the other.
- Timeline View**
 This view plots appointments as horizontal bars along the timescales, and provides a clearer overview for scheduling purposes.
- Gantt View**
 This view displays appointments as horizontal bars along the timescales, shows the current schedule status using percent-complete shadings and displays dependency relationships between appointments.

See Also

Select Dates

Scheduler Grouping

The appointment data displayed within the scheduler can be grouped either by resources or by dates to enhance visual representation. The following pictures illustrate the appearance of the scheduler in different grouping modes.



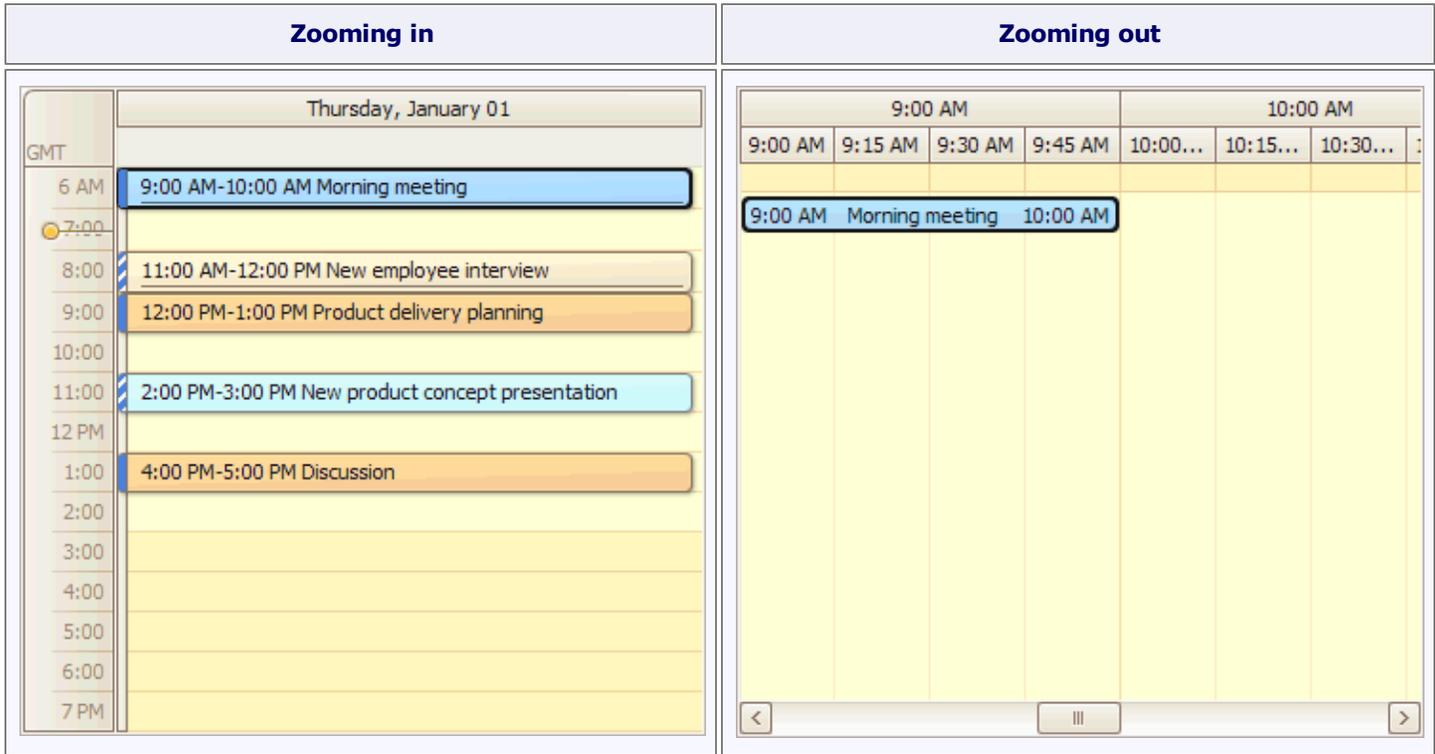
If a scheduler is provided with the Bar or Ribbon interface, you can specify the type of grouping appointments using the **Group By** [toolbar](#) or [Ribbon page group](#).



See also the [Navigate Scheduler Resources](#) topic.

Zoom the Scheduling Area

You can zoom in the scheduler view to display its content in greater detail, or zoom out for a more general view. Zooming is implemented by adjusting the time scales (in the Day, Work-Week or Timeline [views](#)) or changing the number of visible weeks (in the Month view).



Zooming operations are available for you via the **CTRL+PLUS SIGN**, **CTRL+MINUS SIGN** or **CTRL+MOUSE WHEEL** key combinations.

If a scheduler is provided with the Bar or Ribbon interface, you can zoom in and zoom out the scheduler area using the corresponding buttons on the **Navigate toolbar** or [Ribbon page group](#).



Selection and Navigation

This section describes how to navigate the schedule.

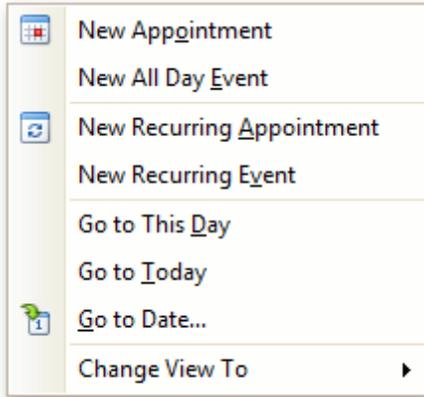
Topics in this section:

- [Navigate Dates in the Scheduler](#)
- [Navigate Scheduler Time Cells](#)
- [Zoom the Scheduling Area](#)
- [Scheduler Navigation Buttons](#)
- [Scheduler 'More' Buttons](#)

Navigate Dates in the Scheduler

Context Menu

Right-clicking within the main area of the scheduler opens the context menu, which contains items for navigating through dates.



- **Go to This Day**

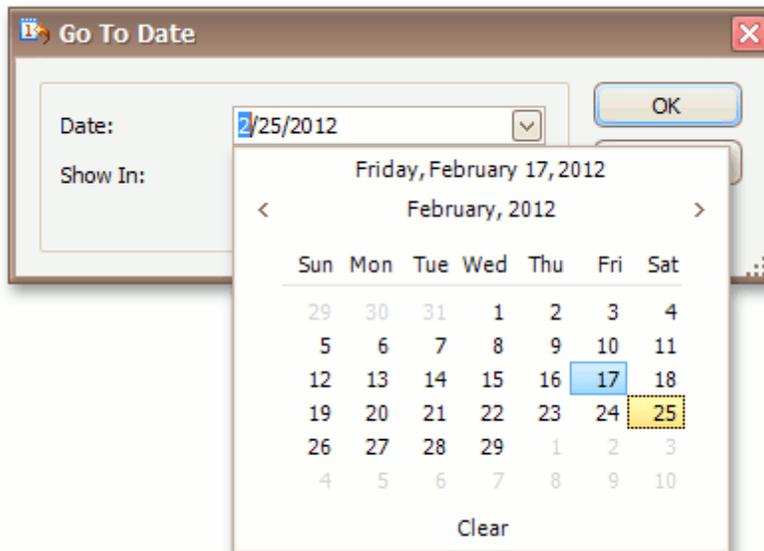
Only available in the **Week View** and **Month View** modes. This item is active when only one day is selected, and when activated, displays the target day in the **Day View** mode.

- **Go to Today**

Moves focus to the current date, preserving the existing view mode.

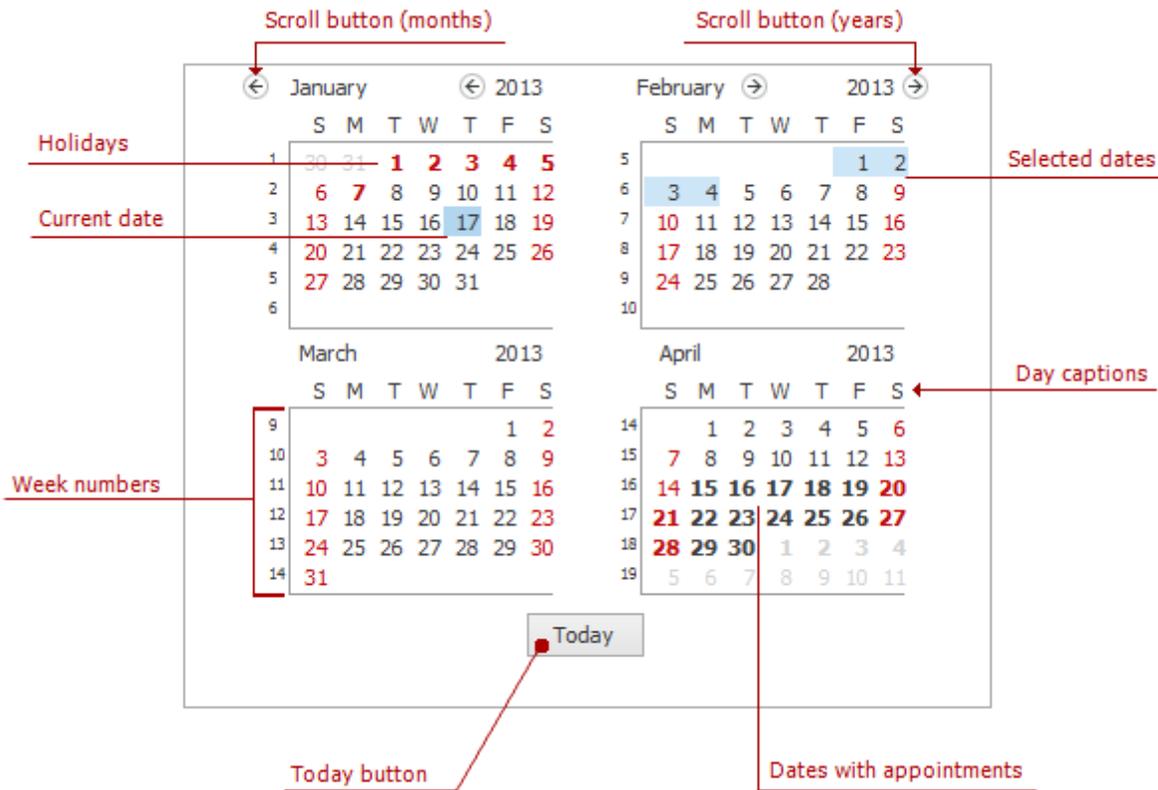
- **Go to Date...**

Invokes the **Go To Date** dialog to select the date and view type. The date can be selected either by using the calendar or by entering a string with the placeholders. To select the desired view type, use the **Show In** drop-down box.



Date Navigator

If the scheduler is accompanied by the **date navigator**, you can use it to navigate through dates. The common look of the date navigator is illustrated in the following picture.



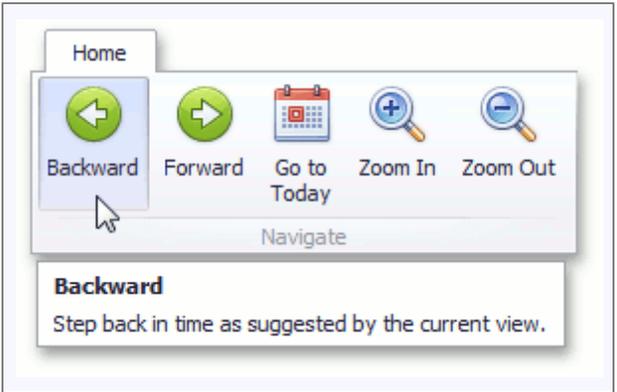
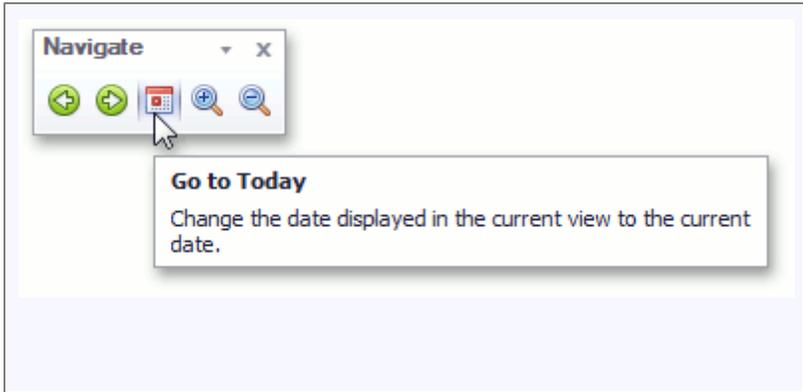
You can select either a particular date, or a range of dates in the date navigator, and the scheduler will display your selection using a **Day View**. The table below details how you can select dates in different ways.

Action	Effect
Click a date	A single date is selected and the scheduler displays it using the Day View . If the currently active view is of another type, it is automatically changed to Day View .
Click and drag across multiple dates --or-- click a start date, hold down the SHIFT key and click an end date	The continuous range of dates is selected. The scheduler displays it using the Day View , irrespective of the size of the selected range.
Hold down the CTRL key and click several dates	A set of dates is selected. The scheduler displays it using the Day View , irrespective of the size of the selected range.
Click a week number	A corresponding week-long range is selected. The scheduler displays it using the Day View .

Bar or Ribbon Interface

If a scheduler is provided with the Bar or Ribbon interface, you can navigate through dates within a scheduler using the **Backward**, **Forward** and **Go to Today** buttons of the **Navigate toolbar** or **Ribbon page group**.

Navigate through dates via Bar interface	Navigate through dates via Ribbon interface
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Navigate Scheduler Resources

When appointment data is grouped (either by resources or by dates), the number of resources shown on the screen within the Scheduler at once can make it difficult to see all the scheduled data. To make the Scheduler's layout more readable, it is possible to limit the number of visible resources, and then scroll between them. There is an embedded **Resource Navigator** control, which allows you to scroll between resources.

The **Resource Navigator** control is composed of a scrollbar and a set of buttons. It may be shown horizontally (on the bottom line of the Scheduler control, with buttons in the right corner) or vertically (on the right side, buttons at the bottom). The position of the control is chosen automatically. It is vertical in **Day** and **Week** views, if appointments are grouped by dates, and horizontal in other view modes.

The mode of operation is rather straightforward - you can click the buttons to move back and forth through the list of resources; one by one, or straight to the first or last one on the list. The buttons with plus and minus signs increase or decrease the number of displayed resources by one.



Navigate Scheduler Time Cells

The following table contains the typical navigation operations:

Action	Effect
Clicking a cell	Moves focus to the clicked cell, selects it.
UP ARROW DOWN ARROW	<ul style="list-style-type: none"> • Day View, Work Week View - Moves focus to the previous or next time cell within the current day. • Week View - Moves focus to the previous or next day. • Month View - Moves focus to the same day of the week for the previous or next week.
LEFT ARROW RIGHT ARROW	<ul style="list-style-type: none"> • Day View, Work Week View - Moves focus to the corresponding time cell of the previous or next day. • Week View - Moves focus to the left or right of the corresponding cell of a column. The view is scrolled to the previous or next week if necessary. • Month View - Moves focus to the previous or next day.
PAGE DOWN	Moves the row focus one page down, preserving the column focus.
PAGE UP	Moves the row focus one page up, preserving the column focus.
HOME	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the start of Work Time within the current day. • Week View, Month View - Moves focus to the first day shown in the current week.
END	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the end of Work Time within the current day. • Week View, Month View - Moves focus to the last day shown in the current week.
CTRL+HOME	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the first cell of the day's visible time span. • Week View, Month View - Moves focus to the first day shown in the current week.
CTRL+END	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the last cell of the day's visible time span. • Week View, Month View - Moves focus to the last day shown in the current week.
TAB	Switches to appointments navigation. Focus shifts to the next time appointment within the time span shown. Pressing the key repeatedly iterates through the appointments in the following way - appointments with a definite duration are followed by all-day appointments.

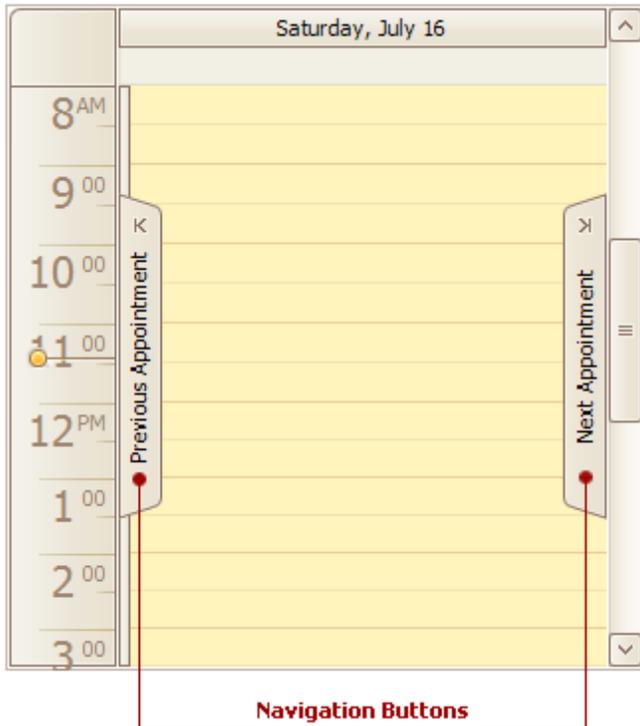
SHIFT+TAB	Switches to appointments navigation. Focus shifts to the previous time appointment within the time span shown. Pressing the key repeatedly iterates through the appointments in the following way - appointments with a definite duration are followed by all-day appointments.
ALT+UP ARROW ALT+DOWN ARROW	<ul style="list-style-type: none"> • Day View, Work-Week View, Month View - Moves focus one week before or after. • Week View - acts like the LEFT(RIGHT) ARROW keys
ALT+PAGE UP ALT+PAGE DOWN	<ul style="list-style-type: none"> • Day View, Week View, Month View - Moves focus to the start or end of a current month.
ALT+HOME	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the beginning of a current week.
ALT+END	<ul style="list-style-type: none"> • Day View, Work-Week View - Moves focus to the end of a current week.

Note

When appointments are grouped, only ARROW keys can move focus to another resource group.

Scheduler Navigation Buttons

The **Navigation Buttons** are used to scroll to the previous or next appointment. This is helpful when there is a significant time interval between scheduled appointments.



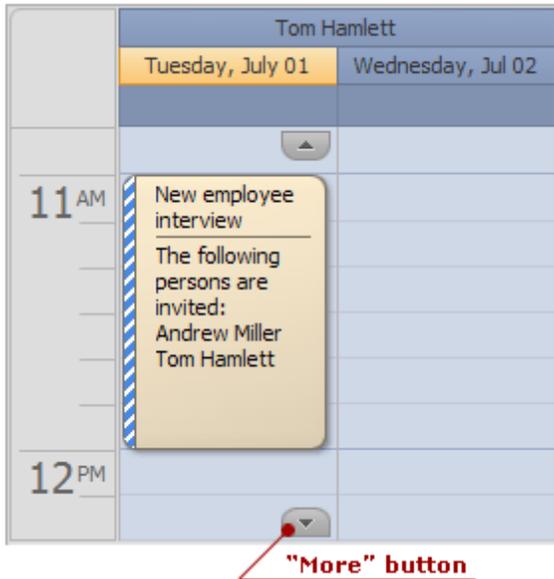
Navigation buttons are displayed if there are no currently visible appointments within the **Scheduler** control area. If there are appointments that refer to a previous or successive date, the **Previous Appointment** and **Next Appointment** navigation buttons provide the capability to navigate to the corresponding date. If there are no appointments in a specific direction, the corresponding navigation button is disabled.

Note that if the **Scheduler** control currently displays appointments for multiple resources, navigation buttons are displayed independently for each resource.

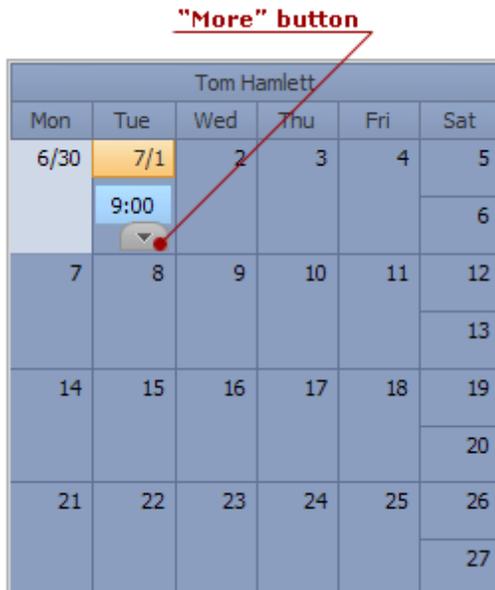
Scheduler 'More' Buttons

The "More" buttons indicate that more appointments exist on a particular date. Click these buttons to see all appointments in a more detailed view, or to simply scroll to the next appointment.

Day View:



Month View:



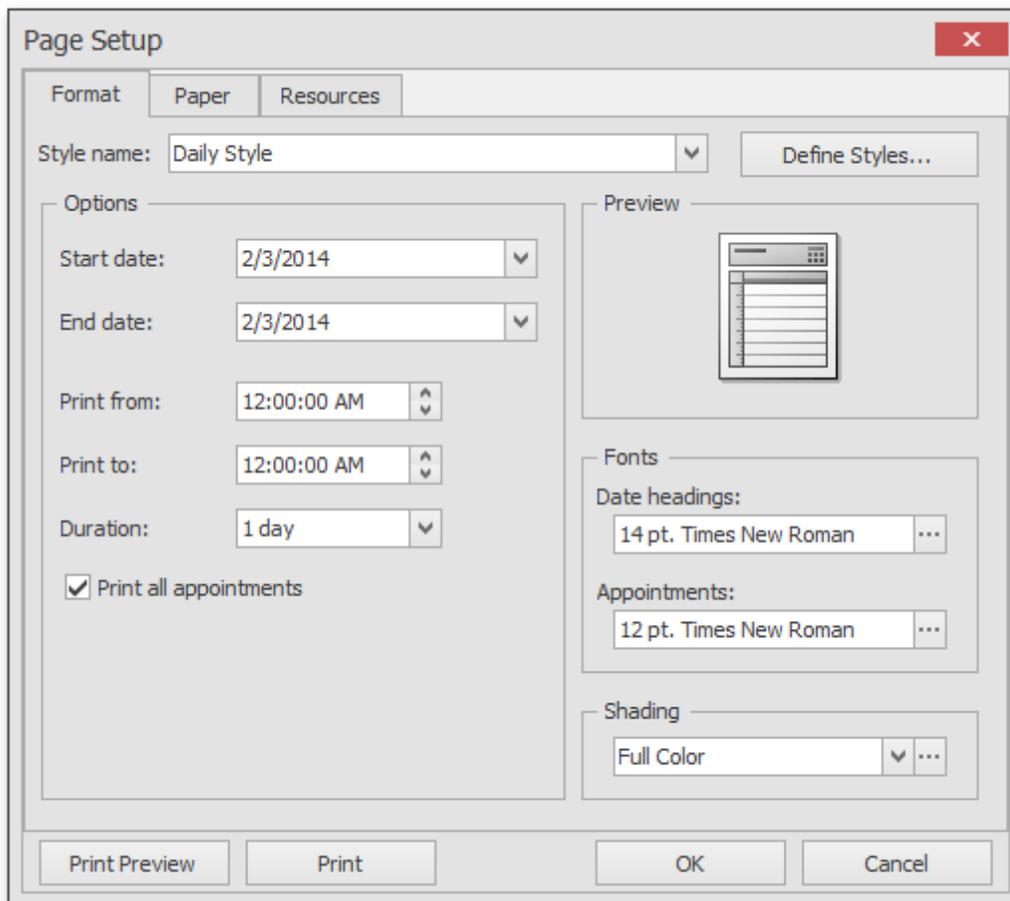
Printing

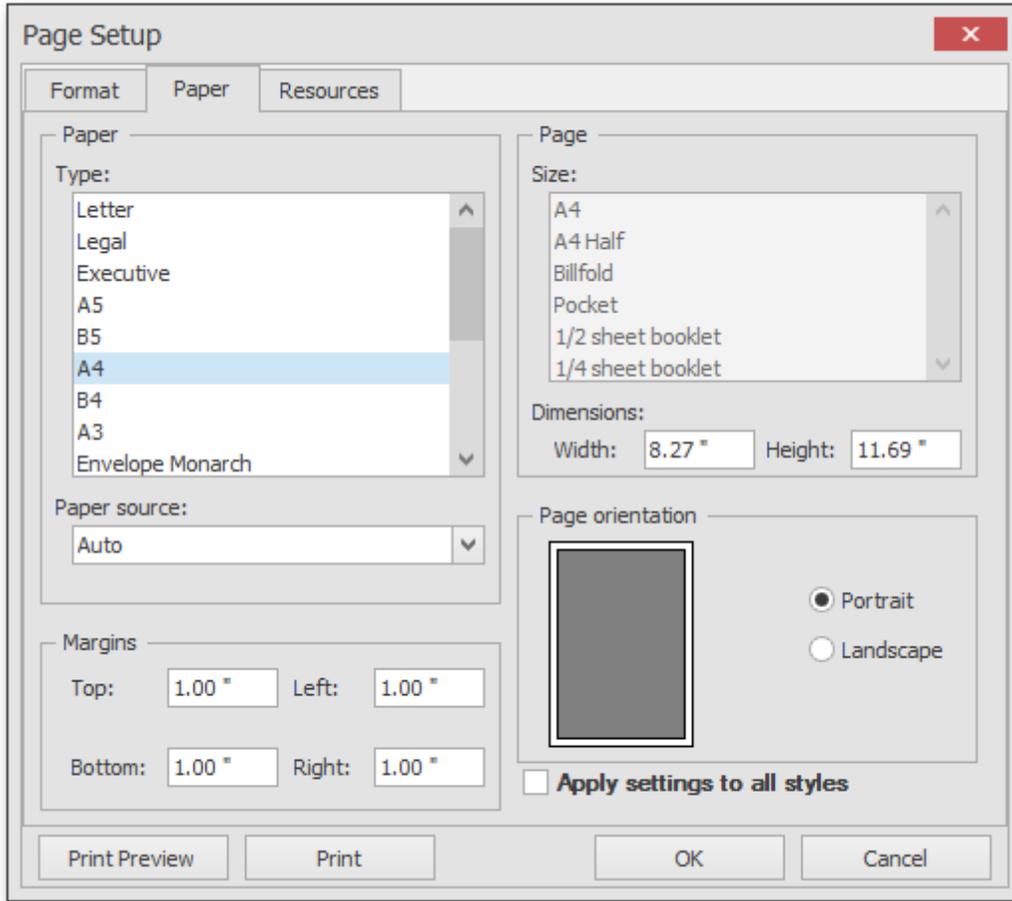
If a scheduler includes a Bar or Ribbon interface, you can use the **Print** [toolbar](#) or [Ribbon page group](#).

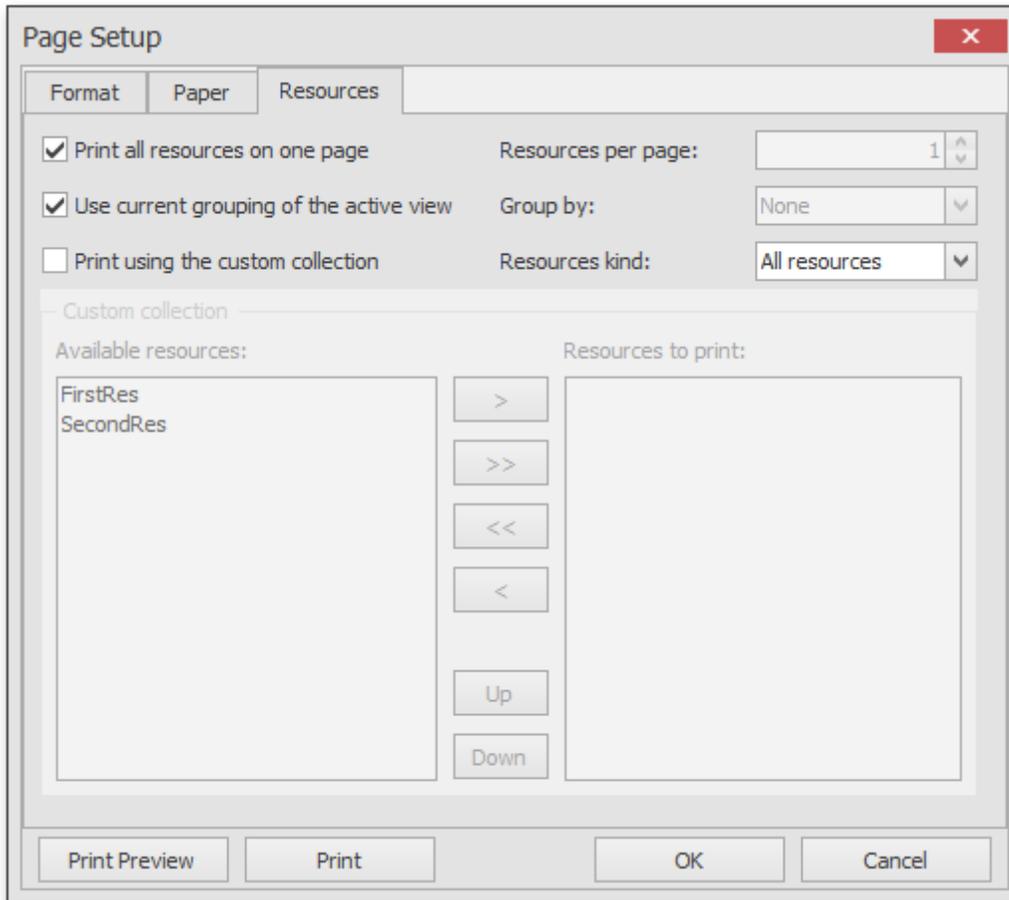


Page Setup

Click the **Page Setup** command button to invoke the **Page Setup** dialog. The **Page Setup** dialog consists of the **Format**, **Paper** and **Resources** tab pages, as illustrated in the images below.

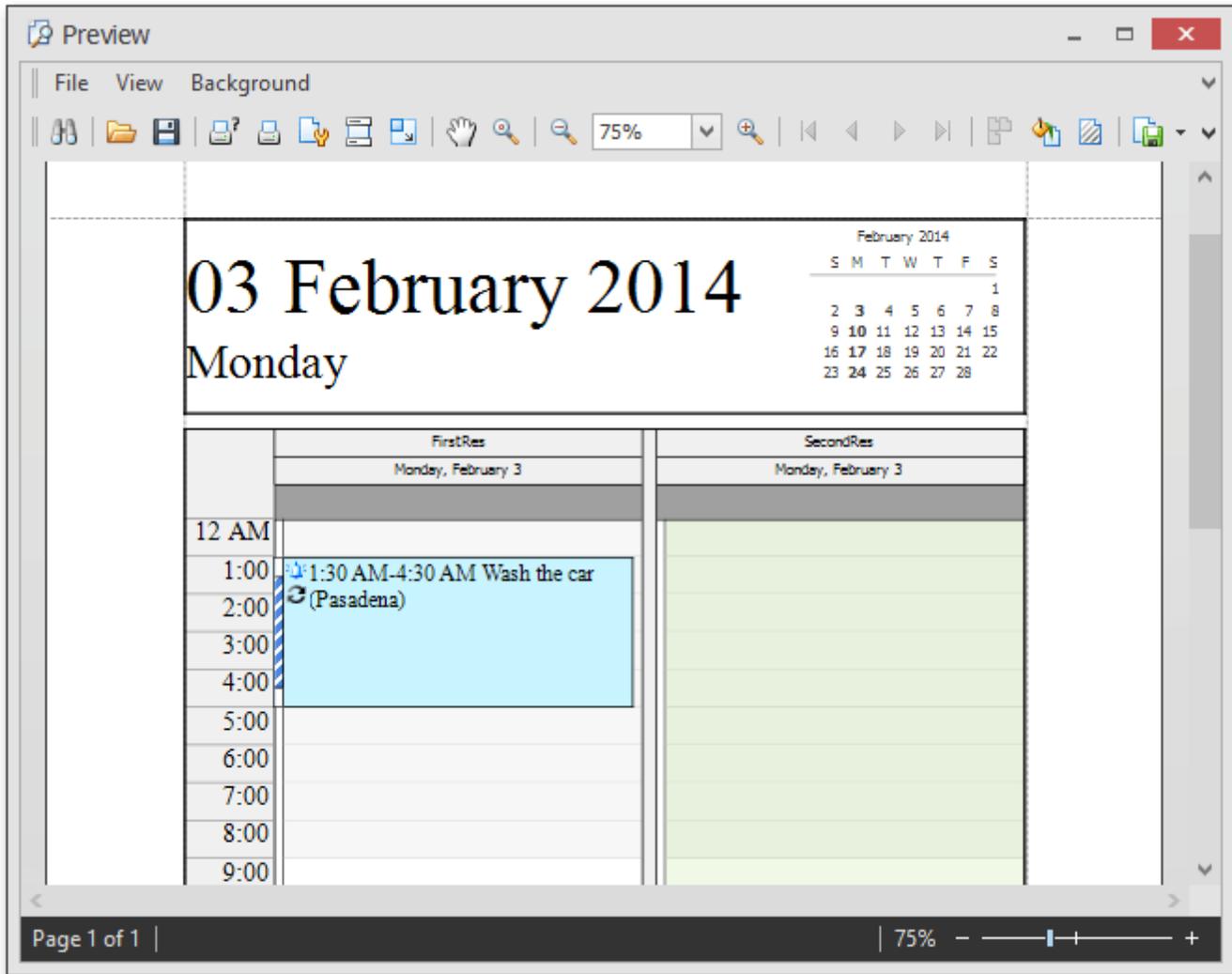






Print Preview

Click the **Print Preview** button to invoke the **Print Preview** dialog, which provides a preview of the page to be printed.



This dialog allows you to print the page, or save it to a file as a PDF or an image (e.g., BMP, EMF, WMF, GIF, JPEG, PNG or TIFF).

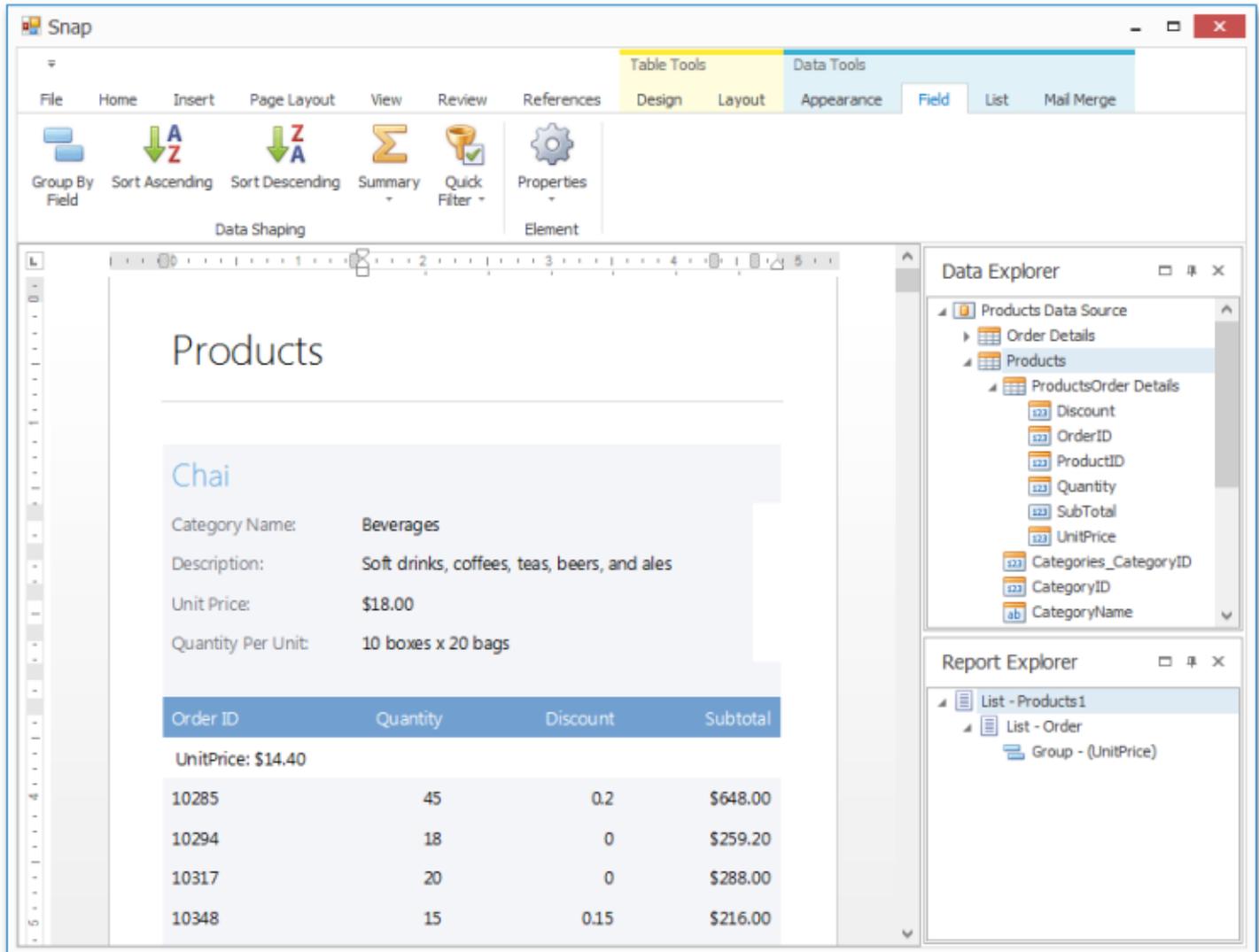
Print

Click the **Quick Print** command button to send the scheduler content to the default printer using the current page and printer settings.

Snap Reporting Engine

This guide provides information on the basic principles of creating reports with Snap.

Snap is a WYSIWYG reporting engine that provides a user interface that allows for a quick creation of standard reports with the capabilities of data shaping (grouping, sorting and filtering), hierarchical data representation (master-detail reports), mail merge and much more.



The following sections are available in this guide.

- [Graphical User Interface](#)
- [Connect to Data](#)
- [Create a Report Layout](#)
- [Manage Documents and Files](#)

Graphical User Interface

The topics in this section describe various aspects of the Snap graphical user interface (GUI).

- [Snap Application Elements](#)
- [Main Toolbar](#)

Main Toolbar

The topics in this section describe all ribbon tab and bar commands available in the [toolbar](#) of a Snap application.

After executing a command in a Snap application, the corresponding **field codes** are automatically added to the **document markup**.

Main Reporting Commands

The following command categories describe the tools that are essential to create Snap reports.

- [Data Tools: Field](#)
- [Data Tools: Group](#)
- [Data Tools: List](#)
- [Data Tools: Mail Merge](#)
- [Data Tools: Appearance](#)

Additional Reporting Commands

The following command categories describe the tools used in various aspects of Snap reporting.

- [General Tools: File](#)
- [General Tools: Insert](#)
- [General Tools: View](#)
- [General Tools: References](#)
- [Table Tools: Design](#)
- [Table Tools: Layout](#)

Word-Processing Commands

The following command categories describe additional tools related to tasks such as word processing and manipulating embedded objects.

- [General Tools: Home](#)
- [General Tools: Page Layout](#)
- [General Tools: Review](#)
- [Chart Tools: Design](#)
- [Header and Footer Tools: Design](#)
- [Picture Tools: Format](#)

Data Tools: Field

This toolbar is context sensitive, and becomes active after selecting a **Snap field** in the document.

The commands available in the **Field** toolbar of the **Data Tools** category are divided into the following sections.

- [Data Shaping](#)
- [Element](#)

Data Shaping

Command	Large Icon	Small Icon	Description
Group By Field			Groups a Snap list by the selected field. All groupings added to a Snap report are displayed as nodes in the Report Explorer . Using this command, you can apply multiple grouping criteria. Every group can have a header and/or footer. To customize report groups, use the tools provided by the Data Tools: Group toolbar.
Sort Ascending			Sorts a Snap list by the selected column in ascending order. To manage the sort levels in a mail merge document, use the Sort command of the Data Tools: Mail Merge toolbar.
Sort Descending			Sorts a Snap list by the selected column in descending order. To manage the sort levels in a mail merge document, use the Sort command of the Data Tools: Mail Merge toolbar.
Summary			Calculates a summary for a selected field. Summary results are shown in the list footer. The following summary functions are available. - Count ; - Sum ; - Average ; - Max ; - Min .

Quick Filter			<p>Allows you to select which values of a selected field to show. This command is not applicable to nested lists of a master-detail report.</p> <p>To apply complex filtering criteria to a Snap list, use the Filter command of the Data Tools: List or Data Tools: Mail Merge toolbar.</p>
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Element

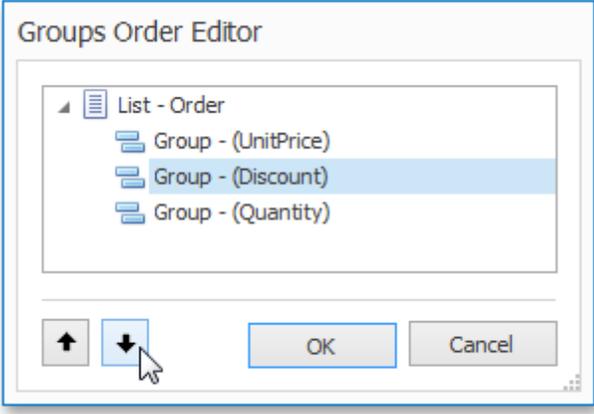
Command	Large Icon	Small Icon	Description
Properties			<p>Shows the list of properties for a selected field. The set of available properties depends on the element type.</p>

Data Tools: Group

This toolbar is context sensitive, and becomes active after placing the text cursor in a group header or footer. To create a new group, use the **Group By Field** command of the [Data Tools: Field](#) toolbar.

The following commands are available in the **Layout** section of the **Group** toolbar.

Command	Large Icon	Small Icon	Description				
Header			Adds or removes a group header. Removing both the group header and group footer removes grouping from the Snap List.				
Footer			Adds or removes the group footer. Removing both the group header and group footer removes grouping from the Snap List.				
Group Fields			Invokes a dialog allowing you to add or remove grouping criteria for the selected group. <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>Collection Editor</p> <p>GroupField</p> <p>Misc</p> <table border="1"> <thead> <tr> <th>FieldName</th> <th>DataSet - Products.ProductName</th> </tr> </thead> <tbody> <tr> <td>SortOrder</td> <td>Ascending</td> </tr> </tbody> </table> <p>Add Remove ↑ ↓ OK Cancel</p> </div>	FieldName	DataSet - Products.ProductName	SortOrder	Ascending
FieldName	DataSet - Products.ProductName						
SortOrder	Ascending						
Arrange Groups			Invokes the Groups Order Editor , which allows you to set the order in which groupings are applied to a Snap list.				

			
Separator			<p>Inserts the selected separator between groups in a Snap list.</p> <p>The following separators are available.</p> <ul style="list-style-type: none">- Page Break;- Section (Next Page);- Section (Even Page);- Section (Odd Page);- Empty Paragraph;- Empty Row;- None.

Data Tools: List

This toolbar is context sensitive, and becomes active after selecting a **Snap list** in the document.

The commands available in the **List** toolbar of the **Data Tools** category are divided into the following sections.

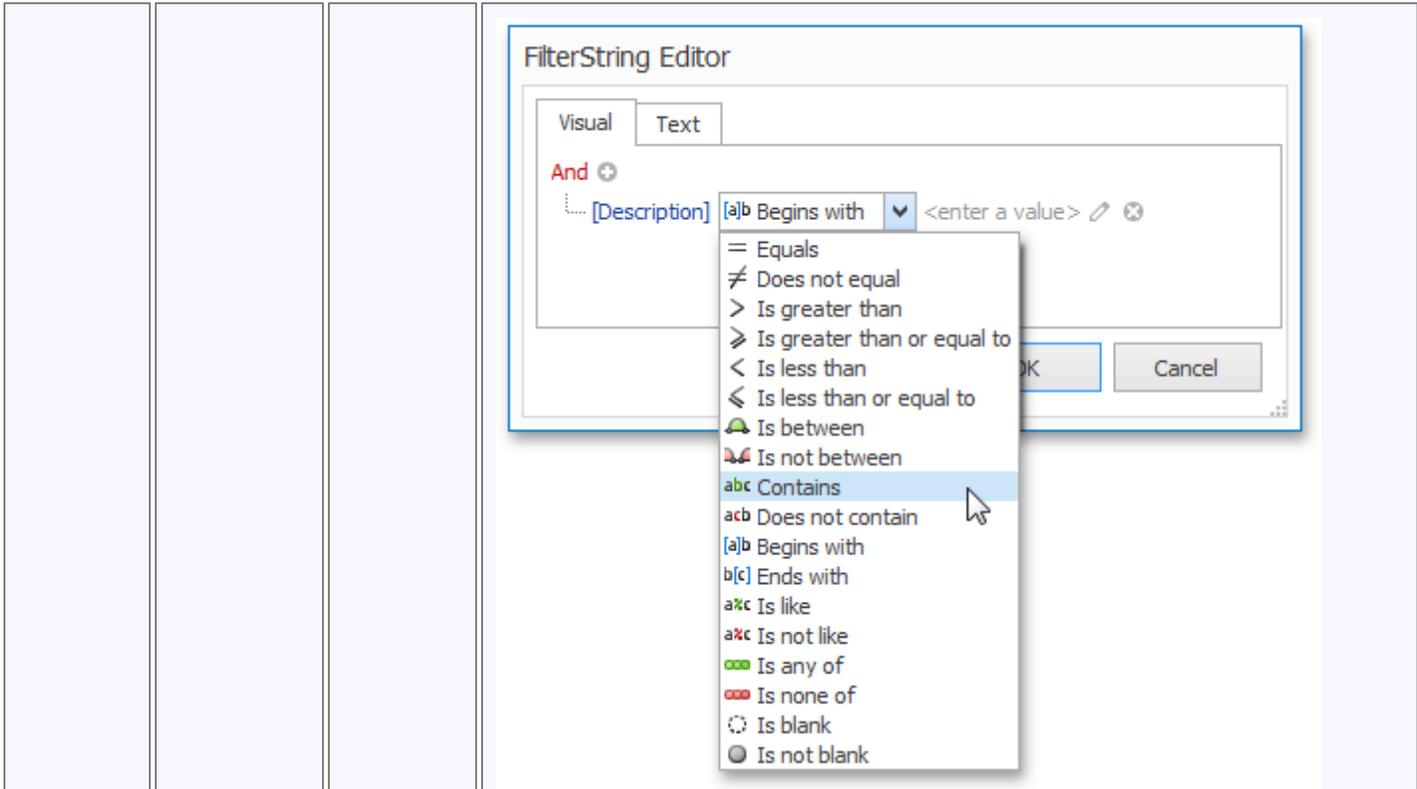
- [Layout](#)
- [Commands](#)
- [Editor Row Limit](#)

Layout

Command	Large Icon	Small Icon	Description
Header			Adds or removes the header of a selected Snap list.
Footer			Adds or removes the footer of a selected Snap list.
Separator			Inserts the selected separator between the rows of a Snap list. The following separators are available. - Page Break ; - Section (Next Page) ; - Section (Even Page) ; - Section (Odd Page) ; - Empty Paragraph ; - Empty Row ; - None .

Commands

Command	Large Icon	Small Icon	Description
Filter			Invokes the FilterString Editor , which allows you to define complex filtering criteria for a selected Snap list.



To select which data records to display for a specific field, use the **Quick Filter** command from the [Data Tools: Field](#) toolbar.

Convert to Paragraphs			Removes the table layout of a Snap list. The content of the removed table columns is presented as separate paragraphs. There is no reverse action to convert paragraphs back to a tabular representation.
Delete List			Removes the selected list from a document.

Editor Row Limit

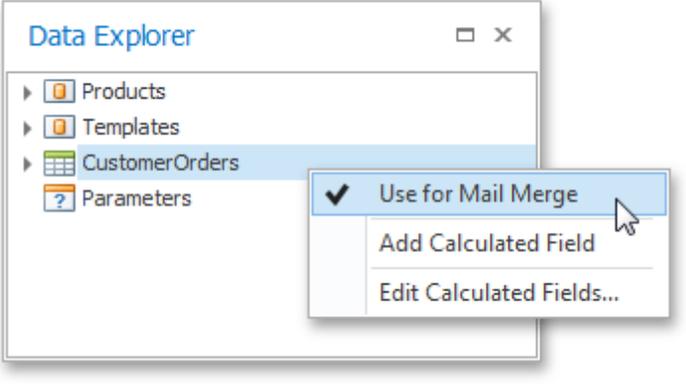
Command	Large Icon	Small Icon	Description
 Editor Row Limit	none	none	Allows you to define the maximum number of rows to be shown in a selected Snap list. The Editor Row Limit setting does not affect the number of records shown in the Print Preview, which shows the final presentation of the document with all Snap fields replaced with actual data.

Data Tools: Mail Merge

The commands available in the **Mail Merge** section of the **Data Tools** toolbar are divided into the following categories.

- [Data](#)
- [Current Record](#)
- [Publish](#)

Data

Command	Large Icon	Small Icon	Description
Data Source			<p>Enables mail merge for a connected data source. After enabling this mode, the data source icon is displayed in green in the Data Explorer.</p>  <p>There is no functionality for disabling mail merge once it has been implemented.</p>
Filter			<p>Invokes the FilterString Editor to filter data in a mail merge document.</p>

Sort

Invokes the **Sort** dialog to [sort data](#) in a mail merge document.

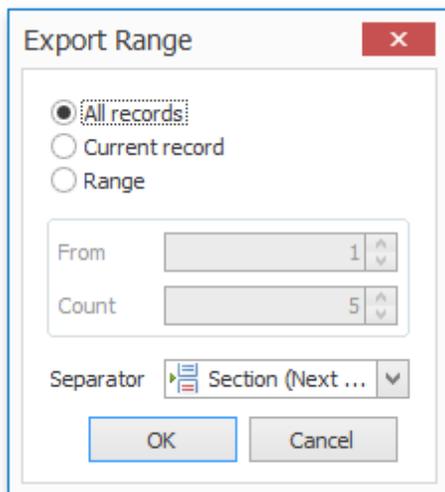
Current Record

Command	Description
<p>Current Record</p>	<p>Allows you to navigate through records in a mail merge document. You can navigate to the Next Page, the Previous Page, the First Page or the Last Page.</p>

Publish

Command	Large Icon	Small Icon	Description
Finish & Merge			<p>Finalizes a mail merge document by supplying actual values to data elements added to a document template.</p> <p>This command invokes a drop-down menu to select the publishing format of a document. The following options are available.</p> <ul style="list-style-type: none"> - Export - exports the created document to a selected third-party format; - Print - invokes the print dialog to adjust the page options of the document before sending it to a printer; - Print Preview - displays the created document in a print preview window that provides options to navigate, print and/or export the document.

After selecting the document's output format, the **Export Range** dialog is invoked to specify the range of data records that the document should include.



In this dialog, you can choose from the following separators to isolate different data records.

- **None**;
- **Page Break**;
- **Section (Next Page)**;
- **Section (Even Page)**;
- **Section (Odd Page)**;
- **Paragraph**.

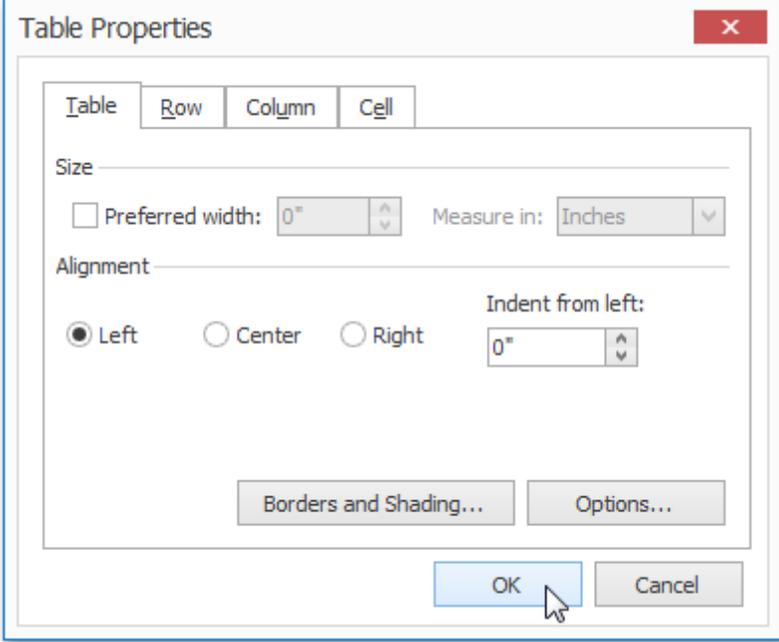
Data Tools: Appearance

This toolbar is context sensitive, and becomes active after placing the text cursor in a document table.

The commands available in the **Layout** toolbar of the **Table Tools** category are divided into the following sections.

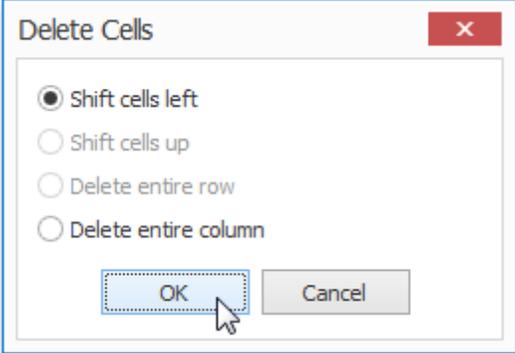
- [Table](#)
- [Rows & Columns](#)
- [Merge](#)
- [Cell Size](#)
- [Alignment](#)

Table

Command	Large Icon	Small Icon	Description
Select			Allows you to select a cell, row, column or table.
View Gridlines			Shows or hides table gridlines. This command is useful when working with tables that contain invisible borders. These lines are only displayed in the Design Surface - they do not appear in a published document.
Properties			<p>Invokes the Table Properties dialog for the selected table.</p>  <p>This dialog allows you to adjust the size and alignment properties of the current table cell, row, column or table.</p>

Rows & Columns

Command	Large Icon	Small Icon	Description
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Delete			<p>Deletes the specified cells or the currently selected row, column or table.</p> <p>To delete a single table cell, the Delete Cells dialog is invoked that allows you to select the "shift" mode for replacing the deleted cell.</p>  <p>To remove individual rows from a Snap List, use the Quick Filter command of the Data Tools: Field toolbar.</p>
Insert Above			Inserts a new row above the selected row .
Insert Below			Inserts a new row below the selected row .
Insert Left			Inserts a new column to the left of the selected column.
Insert Right			Inserts a new column to the right of the selected column.

Merge

Command	Large Icon	Small Icon	Description
Merge Cells			Merges selected cells. The content of merged cells is converted to paragraphs of an output cell.
Split Cells			Splits the selected cell into a specified number of rows and columns. The content of the source cell is placed in the top-left output cell.
Split Table			Splits the table into two tables. The selected row becomes the first row of the new table.

Cell Size

Command	Large Icon	Small Icon	Description
AutoFit			<p>Sets the auto fit mode of the selected table.</p> <p>The following auto fit modes are available:</p> <ul style="list-style-type: none"> - AutoFit Contents - table cells occupy the minimum width possible to fit content. - AutoFit Window - the table occupies the entire width of the page. Table cells are resized to fit their content. - Fixed Column Width - column width is fixed and can only be changed manually.

Alignment

Command	Large Icon	Small Icon	Description
 Alignment	none	none	Sets the text alignment for selected cells.
Cell Margins			Invokes the Table Options dialog, allowing you to set the default cell margins for the selected table cells.

General Tools: File

The **File** toolbar contains the basic file management and printing commands.

These commands are divided into the following categories.

- [Common](#)
- [Data](#)

Common

Command	Large Icon	Small Icon	Description
New			Creates a new Snap document.
Open			<p>Opens an existing document.</p> <p>A Snap document template can be created based on the following third-party file formats.</p> <ul style="list-style-type: none"> - DOC (Microsoft® Word® 97 2003 document); - DOCX (Office® Open XML document); - EPUB (Electronic Publication); - HTML (HyperText Markup Language); - MHTML / MHT (Web archive, single file); - PDF (Portable Document Format); - RTF (Rich Text Format); - TXT (Plain text); - ODT (OpenDocument text document); - XML (Microsoft® Word® XML document); - Image (BMP, EMF, WMF, GIF, JPEG, PNG or TIFF format). <p>The SNX format stores a Snap report without the document field data. Saving a document in any other format retrieves the required data values and excludes any information about the data connections defined by Snap.</p> <p>To apply the uniform layout and style settings of a specific document to multiple reports, open this document as a template.</p> <p>In this mode, the Save command is disabled to</p>

			prevent open templates from being overwritten.
Save			Saves a document template to an SNX file. When saving a document for the first time, the Save As dialog will appear.
Save As			Saves a document template to a new SNX file. This command invokes the Save As dialog, allowing you to specify a name and location for the new file.
Export...			Exports a document into one of the supported third-party formats. A Snap report can be exported to one of the following third-party formats. <ul style="list-style-type: none"> - DOC (Microsoft® Word® 97 - 2003 document). - DOCX (Office® Open XML document); - EPUB (Electronic Publication); - HTML (HyperText Markup Language); - MHTML / MHT (Web archive, single file); - PDF (Portable Document Format); - RTF (Rich Text Format); - TXT (Plain text); - ODT (OpenDocument text format); - XML (Microsoft® Word® XML document);
Quick Print			Sends a document to the default printer with default printing options.
Print			Invokes the Print dialog, allowing you to select a printer and specify the printing options.
Print Preview			Retrieves all data required to populate the report fields to assemble and preview a document before publishing, ignoring the current Editor Row Limit setting.

			Calling this command for a mail-merge document renders only one page of the document. To render a mail-merge document for a specified range of data records, use the Finish & Merge option in the Data Tools: Mail Merge tab.
Undo			Cancels the last change made to the document.
Redo			Reverses the results of the last undo.

Data

Command	Large Icon	Small Icon	Description
Add New Data Source			Invokes the Create Data Source wizard , allowing you to connect the document to a new data source and specify its data connection options (e.g., data provider, login information and connection name). A data table selected with the wizard is included in the data source. To add more tables and specify their data relations, use the Query Designer .

General Tools: Insert

The **Insert** toolbar contains elements that can be inserted into a document.

These elements are divided into the following categories.

- [Pages](#)
- [Tables](#)
- [Illustrations](#)
- [Toolbox](#)
- [Links](#)
- [Header & Footer](#)
- [Text](#)
- [Symbols](#)

Pages

Command	Large Icon	Small Icon	Description
Page Break			Inserts a page break at the carriage position. A page break cannot occur within tables, lists , or document headers and footers.

Tables

Command	Large Icon	Small Icon	Description
Table			Inserts a table with a specified number of rows and columns at the carriage position. To customize the table layout, use the commands available in the Table Tools: Design and Table Tools: Layout tabs.

Illustrations

Command	Large Icon	Small Icon	Description
Inline Picture			Inserts an inline picture at the carriage position. In a document, the inline picture behaves like an ordinary text symbol.
Picture			Inserts a picture into a document. You can adjust the picture's outline, wrap text, position, and order using

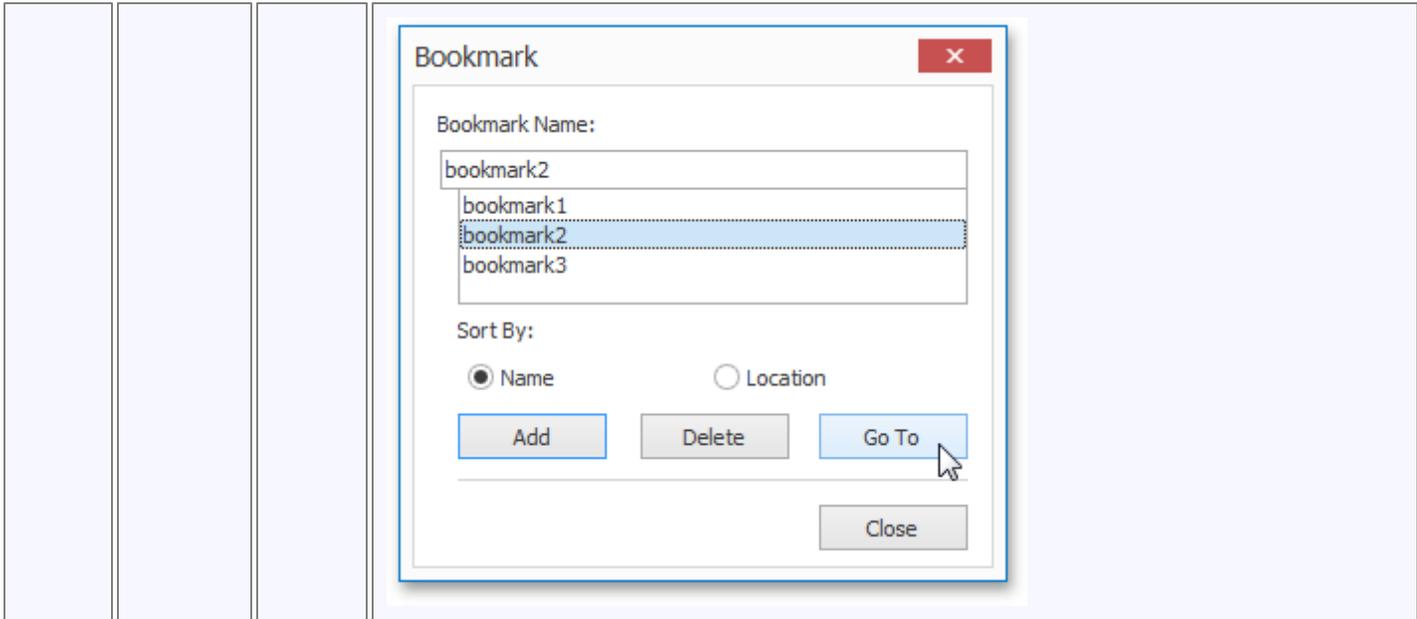
			commands from the Picture Tools: Format tab.
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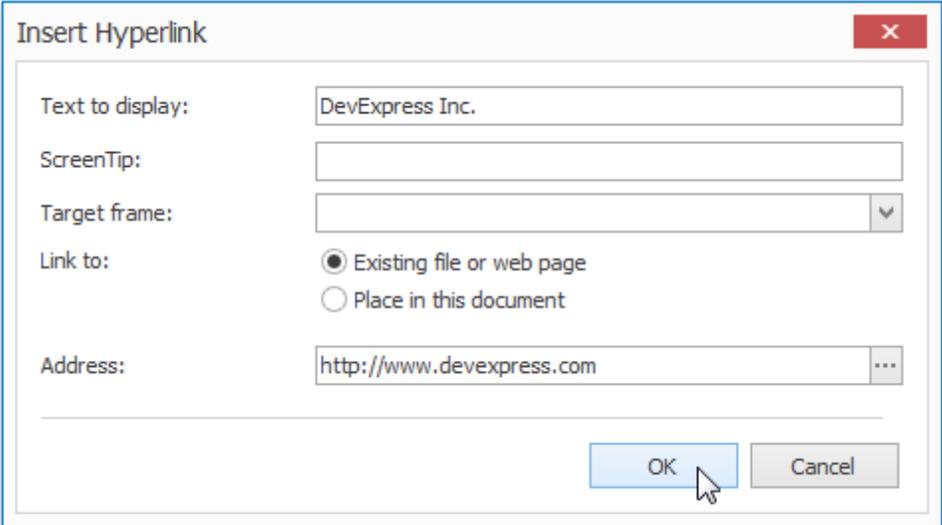
Toolbox

Command	Large Icon	Small Icon	Description
Bar Code			Inserts a bar code at the carriage position. After adding a bar code, specify its symbology, data binding and other options using the Properties command in the Data Tools: Field tab.
Check Box			Inserts a check box at the carriage position (e.g., to display Boolean values from a data source). To customize the check box state or bind it to external data, use the Properties command in the Data Tools: Field tab.
Chart			Inserts a chart at the carriage position.
Sparkline			Inserts a sparkline at the carriage position.
Row Index			Inserts a row index at the carriage position.

Links

Command	Large Icon	Small Icon	Description
Bookmark			Invokes the Bookmark dialog to add a new bookmark at the carriage position, or navigate to an existing bookmark.



<p>Hyperlink</p>			<p>Invokes the Insert Hyperlink dialog to create a hyperlink and specify its text, screen tip and destination. A hyperlink's destination may be a web page, file, or specific position within a document.</p> 
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Header & Footer

Command	Large Icon	Small Icon	Description
Header			<p>Allows editing the page header. In a published document, the content added to the header will appear at the top of each page.</p> <p>To quickly switch to this mode, double-click the page header area.</p> <p>To quit page header editing, press ESC,</p>

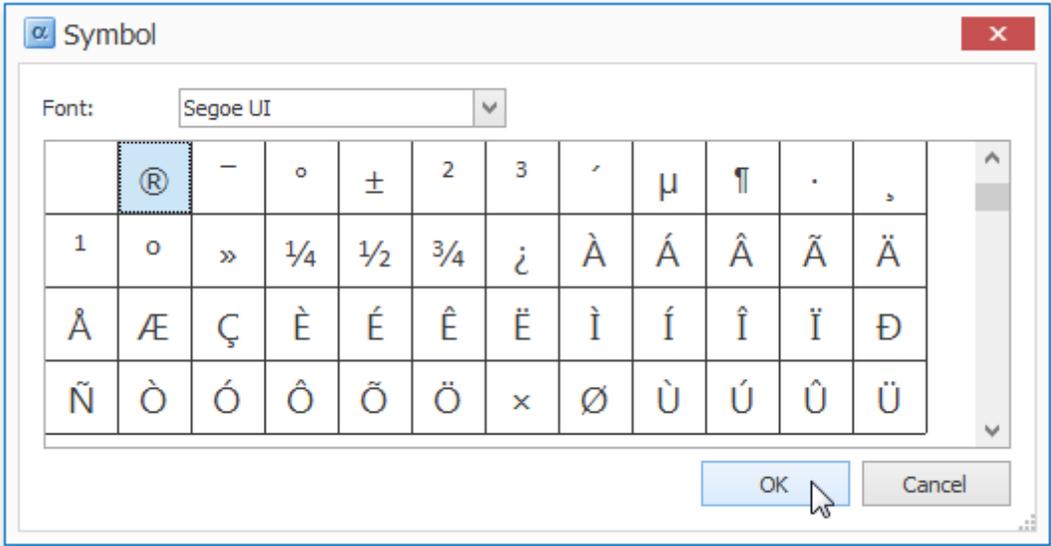
			<p>double click the document area, or click Close Header and Footer on the Header & Footer tab.</p> <p>To make the first page header display unique content, or make odd- and even-numbered pages carry different headers, use the options available on the Header and Footer Tools: Design tab.</p>
Footer			<p>Activates the page footer edit mode. In a published document, the content added to the footer will appear at the bottom of each page.</p> <p>To quickly switch to this mode, double-click the page footer area.</p> <p>To quit page footer editing, press ESC, double click the document area, or click Close Header and Footer on the Header & Footer tab.</p> <p>To make the first page footer display unique content, or make odd- and even-numbered pages carry different footers, use the options available on the Header and Footer Tools: Design tab.</p>
Page Number			<p>Inserts the number of the current page at the carriage position.</p> <p>The page statistics can only be added to a page header or footer.</p>
Page Count			<p>Inserts the total page count at the carriage position.</p> <p>The page statistics can only be added to a page header or footer.</p>

Text

Command	Large Icon	Small Icon	Description
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Text Box			<p>Inserts a text box into a document.</p> <p>A text box is a floating container that is capable of displaying virtually any kind of content (including the most elaborate lists), posing no restrictions on its size and location within a document.</p>
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Symbols

Com man d	Large Icon	Sma ll Icon	Description
Sym bol			<p>Invokes the Symbol dialog, to insert characters that are not available on the keyboard.</p>  <p>The screenshot shows a dialog box titled "Symbol" with a close button (X) in the top right corner. Below the title bar is a "Font:" label and a dropdown menu set to "Segoe UI". The main area contains a grid of characters. The first row includes symbols like ®, ¯, °, ±, ², ³, ´, µ, ¶, ·, ¸. The second row includes ¹, º, » ¼, ½, ¾, ¿, À, Á, Â, Ã, Ä. The third row includes Å, Æ, Ç, È, É, Ê, Ë, Ì, Í, Î, Ï, Ð. The fourth row includes Ñ, Ò, Ó, Ô, Õ, Ö, ×, Ø, Ù, Ú, Û, Ü. At the bottom right of the grid are "OK" and "Cancel" buttons. A mouse cursor is pointing at the "OK" button.</p>

General Tools: View

The **View** toolbar contains commands that control the presentation of document elements on the [Design Surface](#). These commands are divided into the following categories.

- [Document Views](#)
- [Show](#)
- [Zoom](#)
- [View](#)
- [Fields](#)

Document Views

Command	Large Icon	Small Icon	Description
Simple view			Shows a document without the page layout.
Draft View			Shows a document in a draft view that ignores certain document elements such as page breaks, and headers and footers.
Print Layout			Shows a document as it will appear on the printed page.

Show

Command	Large Icon	Small Icon	Description
Horizontal Ruler			Shows or hides the horizontal ruler at the top of the Design Surface .
Vertical Ruler			Shows or hides the vertical ruler to the left of the Design Surface .

Zoom

Command	Large Icon	Small Icon	Description
Zoom Out			Zooms the document out.
Zoom In			Zooms the document in.

View

Command	Large Icon	Small Icon	Description
Windows			Shows or hides the Snap application windows (i. e., Data Explorer and Report Explorer).
Highlight			Highlights the boundaries of a list element after it receives input focus. The invoked frame displays the type of element that is highlighted.

Fields

Command	Large Icon	Small Icon	Description
Show All Field Codes			Toggles to show the field codes of all elements that provide dynamic content in a document.
Show All Field Results			Switches back to the default mode, which displays the actual values fetched by Snap fields supplying dynamic content to a document. To effectively handle incoming data, only a portion of data is shown during real-time editing of a document. This restriction does not apply to a document created for print preview, and the report requests all data after it is set for publishing. When a document is being edited, only the first 20 rows from each data column are shown by default. To modify or disable this limit, use the Editor Row Limit option in the Data Tools: List tab.
Highlight Fields			Highlights the data fields that have been added to a document from an external data source to distinguish these fields from the rest of the document content.

General Tools: References

The **References** toolbar contains commands that provide different kinds of references to a document, such as a table of contents and table captions.

These commands are divided into the following sections.

- [Table of Contents](#)
- [Captions](#)

Table of Contents

Command	Large Icon	Small Icon	Description
Table of Contents			Inserts a table of contents at the carriage position.
Update Table			Updates the table of contents to ensure that all entries in it refer to the correct page numbers.
Add Text			Adds the current paragraph as an entry to the specified level of the table of contents. If a data field is added to the table of contents, a separate table of contents entry is created for each data row in the Snap list.

Captions

Command	Large Icon	Small Icon	Description
Insert Caption			Inserts sequentially numbered captions for different types of objects at the carriage position. The following caption types are available: <ul style="list-style-type: none"> - Figures Caption (automatically referenced by the table of figures); - Tables Caption (automatically referenced by the table of captions); - Equations Caption (automatically referenced by the table of equations).
Insert Table of Figures			Creates a table of figures, table of tables, or table of equations, containing page numbers

			for objects of the corresponding types.
Update Table			Updates the table of figures so that all entries refer to the correct page numbers.

Table Tools: Design

This toolbar is context sensitive, and becomes active after placing the text cursor in a document table.

The commands available in the **Design** toolbar of the **Table Tools** category are divided into the following sections.

- [Table Style Options](#)
- [Table Styles](#)
- [Cell Styles](#)
- [Borders & Shadings](#)

Table Style Options

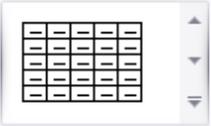
Commands from this category allow you to activate special formatting options for different table parts.

Special formatting options available for a table are defined in its table style. To create a new table style or modify an existing one, use the tools provided by the [Table Styles](#) section of this category.

The following commands are available in the Table Style Options category.

Command	Description
<input checked="" type="checkbox"/> Header Row	Enables formatting of the first row in a table.
<input checked="" type="checkbox"/> First Column	Enables special formatting for the first column in a table.
<input checked="" type="checkbox"/> Total Row	Enables special formatting for the last row in a table.
<input checked="" type="checkbox"/> Last Column	Enables special formatting for the last column in a table.
<input checked="" type="checkbox"/> Banded Rows	Enables special formatting for odd and even rows in a table.
<input checked="" type="checkbox"/> Banded Columns	Enables special formatting for odd and even columns in a table.

Table Styles

Command	Description
 <p>Table Styles</p>	<p>Sets a table style for the selected table. Clicking the arrow button invokes the drop-down menu containing the following commands for managing table styles.</p> <ul style="list-style-type: none"> - New Table Style... - Modify Table Style... - Delete Table Style... <p>Creating a new table style or modifying an existing one invokes the Modify Style dialog, allowing you to specify a style name and adjust table formatting options (including special formatting options for different table parts). You can enable special formatting using commands from the Table Style Options section within this toolbar category.</p>

Cell Styles

Command	Description
 <p>Cell Styles</p>	<p>Sets a cell style for the selected table cell. Clicking the arrow button invokes the drop-down menu, containing the following commands for managing table cell styles.</p> <ul style="list-style-type: none"> - New Cell Style... - Modify Cell Style... - Delete Cell Style... <p>Creating a new table cell style or modifying an existing one invokes the Modify Style dialog, allowing you to specify a style name and adjust cell formatting options.</p>

Borders & Shadings

Command	Large Icon	Small Icon	Description
 <p>Line Style</p>	none	none	Sets the style of a line that is used to draw borders.
 <p>Line Weight</p>	none	none	Sets the width of the line that is used to draw borders.
Pen Color			Sets the color that is used to draw borders.
Borders			Draws the specified borders for selected cells.
Shading			Specifies the background color for the selected cells.

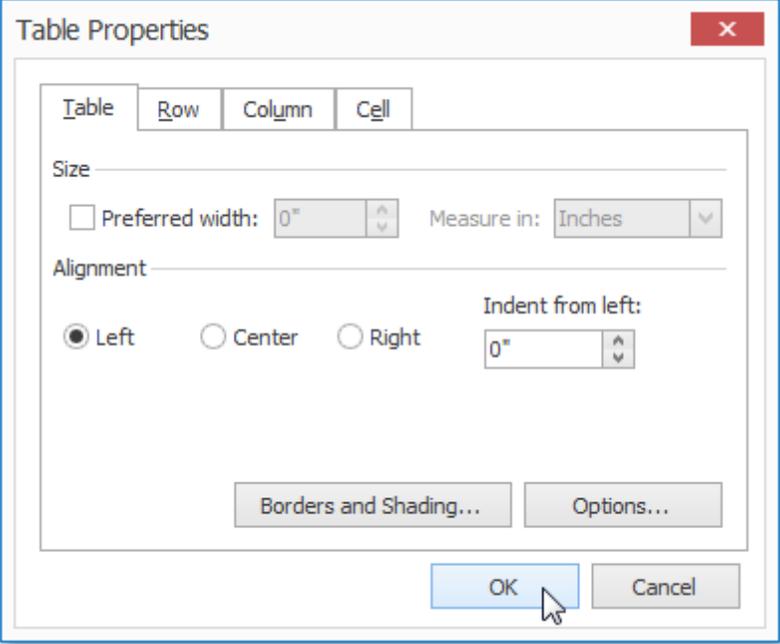
Table Tools: Layout

This toolbar is context sensitive, and becomes active after placing the text cursor in a document table.

The commands available in the **Layout** toolbar of the **Table Tools** category are divided into the following sections.

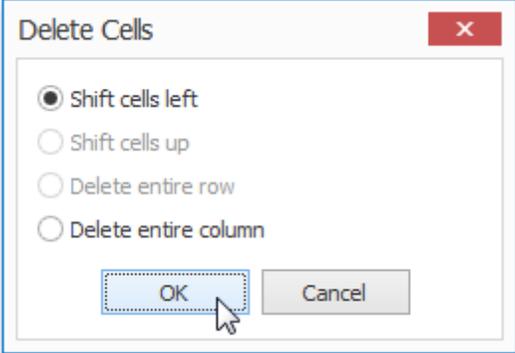
- [Table](#)
- [Rows & Columns](#)
- [Merge](#)
- [Cell Size](#)
- [Alignment](#)

Table

Command	Large Icon	Small Icon	Description
Select			Allows you to select a cell, row, column or table.
View Gridlines			Shows or hides table gridlines. This command is useful when working with tables that contain invisible borders. These lines are only displayed in the Design Surface - they do not appear in a published document.
Properties			<p>Invokes the Table Properties dialog for the selected table.</p>  <p>This dialog allows you to adjust the size and alignment properties of the current table cell, row, column or table.</p>

Rows & Columns

Command	Large Icon	Small Icon	Description
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Delete			<p>Deletes the specified cells or the currently selected row, column or table.</p> <p>To delete a single table cell, the Delete Cells dialog is invoked that allows you to select the "shift" mode for replacing the deleted cell.</p>  <p>To remove individual rows from a Snap List, use the Quick Filter command of the Data Tools: Field toolbar.</p>
Insert Above			Inserts a new row above the selected row.
Insert Below			Inserts a new row below the selected row.
Insert Left			Inserts a new column to the left of the selected column.
Insert Right			Inserts a new column to the right of the selected column.

Merge

Command	Large Icon	Small Icon	Description
Merge Cells			Merges selected cells. The content of merged cells is converted to paragraphs of an output cell.
Split Cells			Splits the selected cell into a specified number of rows and columns. The content of the source cell is placed in the top-left output cell.
Split Table			Splits the table into two tables. The selected row becomes the first row of the new table.

Cell Size

Command	Large Icon	Small Icon	Description
AutoFit			<p>Sets the auto fit mode of the selected table.</p> <p>The following auto fit modes are available:</p> <ul style="list-style-type: none"> - AutoFit Contents - table cells occupy the minimum width possible to fit content. - AutoFit Window - the table occupies the entire width of the page. Table cells are resized to fit their content. - Fixed Column Width - column width is fixed and can only be changed manually.

Alignment

Command	Large Icon	Small Icon	Description
 Alignment	none	none	Sets the text alignment for selected cells.
Cell Margins			Invokes the Table Options dialog, allowing you to set the default cell margins for the selected table cells.

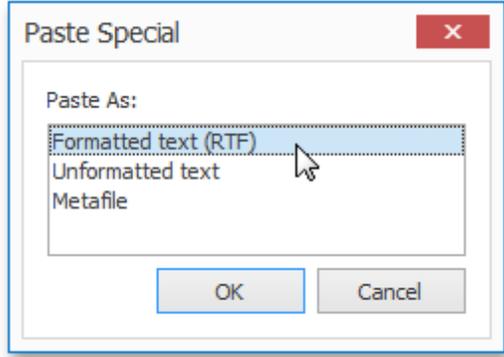
General Tools: Home

The **Home** toolbar contains text formatting and alignment commands.

These commands are divided into the following categories.

- [Clipboard](#)
- [Font](#)
- [Paragraph](#)
- [Styles](#)
- [Editing](#)

Clipboard

Command	Large Icon	Small Icon	Description
Paste			Pastes the content of the clipboard into a carriage position.
Cut			Cuts the selected content and places it in the clipboard.
Copy			Copies the selected content and places it in the clipboard.
Paste Special			Invokes the Paste Special dialog, allowing you to paste the content of the clipboard with a specified formatting. <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;">  </div>

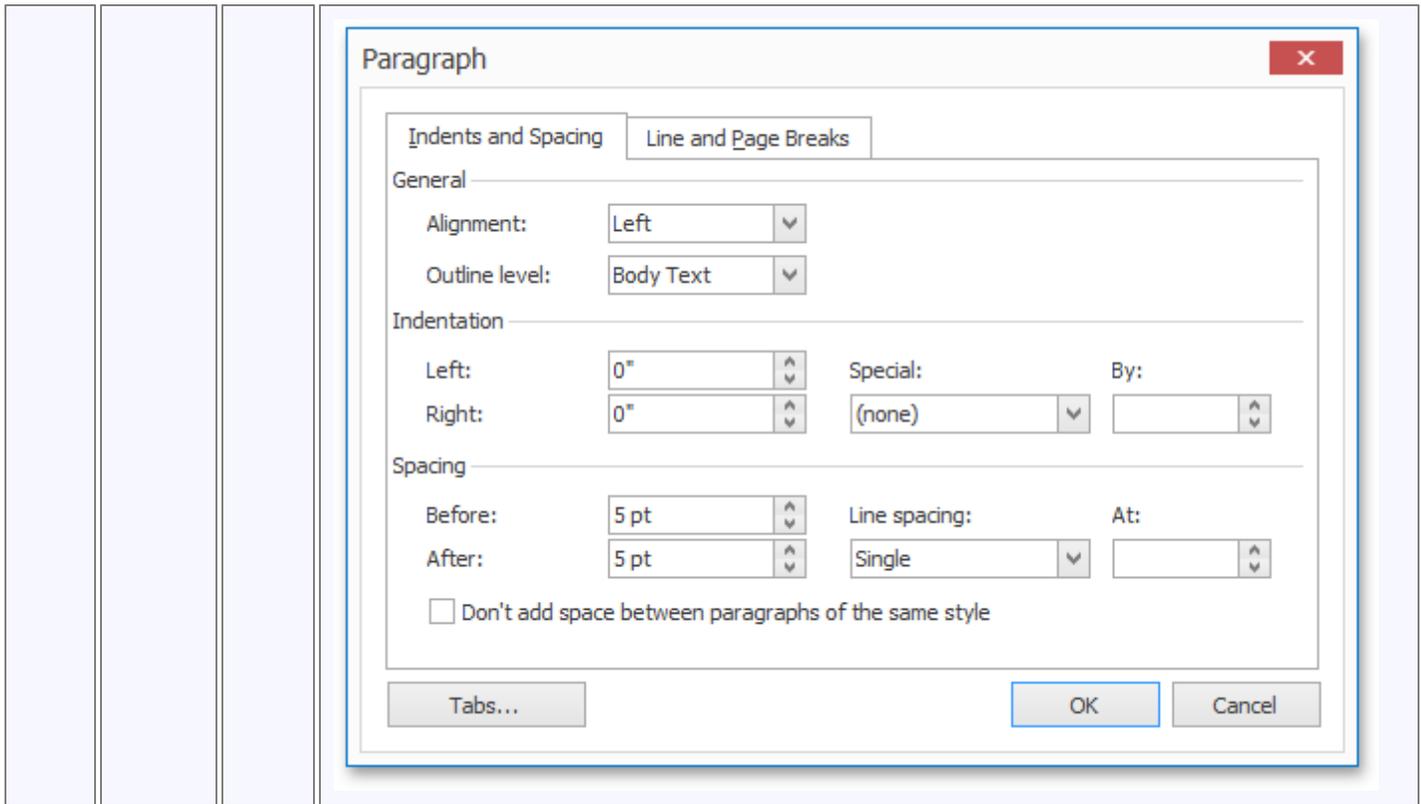
Font

Command	Large Icon	Small Icon	Description
 Font	none	none	Specifies a font for the selected text.
 Font Size	none	none	Specifies a font size for the selected text.
Grow Font			Increases the font size of the selected text.

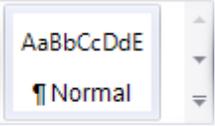
Shrink Font			Decreases the font size of the selected text.
Change Case			Changes the case of the selected text to uppercase or lowercase.
Bold			Makes the selected text bold.
Italic			Italicizes the selected text.
Underline			Draws a line under the selected text.
Double Underline			Draws a double line under the selected text.
Strikethrough			Draws a line through the middle of the selected text.
Double Strikethrough			Draws a double line through the middle of the selected text.
Superscript			Makes the selected text smaller and places it above the line of the text.
Subscript			Makes the selected text smaller and places it below the line of the text.
Font Color			Specifies a color for the selected text.
Text Highlight Color			Specifies a highlight color for the selected text.
Clear Formatting			Removes all formatting from the selection, leaving only plain text.
Font	none	none	<p>Invokes the Font dialog, allowing you to adjust different font options for the selected text.</p>

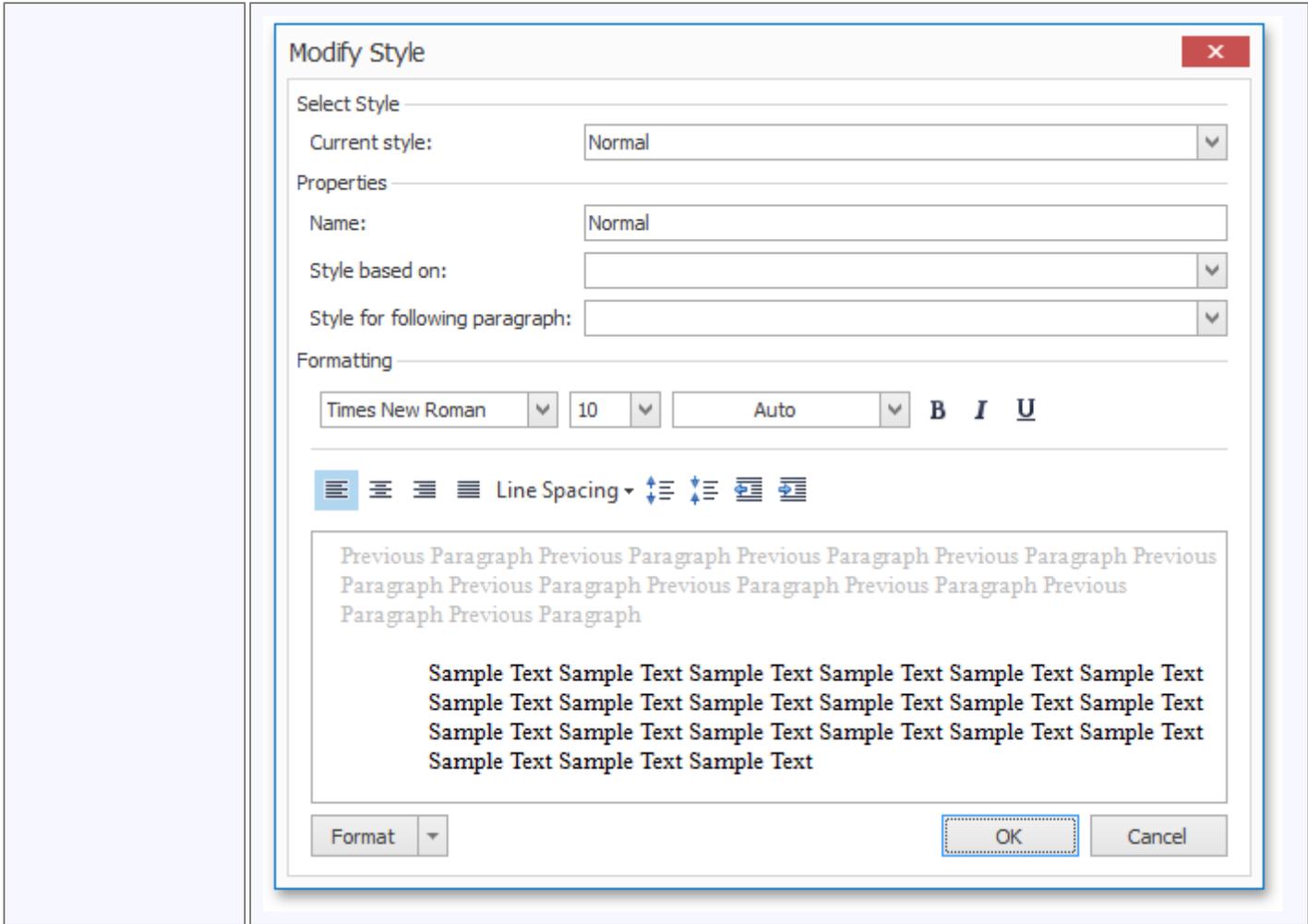
Paragraph

Command	Large Icon	Small Icon	Description
Bullets			Converts the selected paragraphs into a bulleted list, or inserts a new bulleted list at the carriage position.
Numbering			Converts the selected paragraphs into a numbered list, or inserts a new numbered list at the carriage position.
Multilevel List			Converts the selected paragraphs into a multilevel list, or inserts a new multilevel list at the carriage position.
Decrease Indent			Decreases the indent level of the paragraph or the hierarchical level of the multilevel list's items.
Increase Indent			Increases the indent level of the paragraph or the hierarchical level of the multilevel list's items.
Show/Hide ¶			Shows or hides paragraph marks and other non-printable characters.
Align Text Left			Aligns the current paragraph to the left.
Center			Centers the selected paragraphs.
Align Text Right			Aligns the selected paragraphs to the right.
Justify			Aligns the text of the selected paragraphs to both the left and right margins, adding extra space between words as necessary.
Line Spacing			Changes the spacing between the lines of the selected paragraphs. The amount of space added before and after the paragraphs can also be specified.
Shading			Specifies a background color for the selected paragraphs.
¶ Paragraph	none	none	Invokes the Paragraph dialog, allowing you to adjust different layout options for the selected paragraphs.



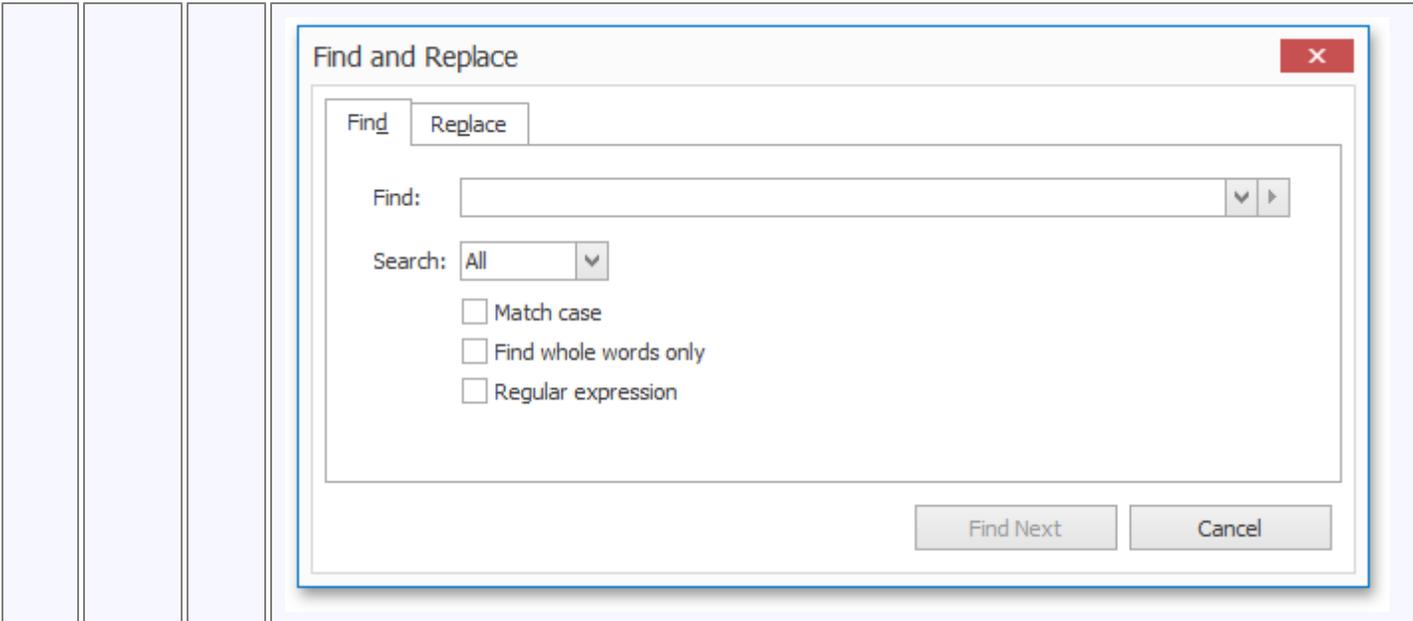
Styles

Command	Description
 <p>Quick Styles</p>	<p>Applies a style to the selected text. A style is a group of formatting options. All options are applied to text or a paragraph at once when you apply a style. Styles allow you to change text and paragraph appearance quicker than setting each formatting option individually.</p>
<p>Modify Style</p>	<p>Invokes the Modify Style dialog, allowing you to change the formatting options of the selected style.</p>



Editing

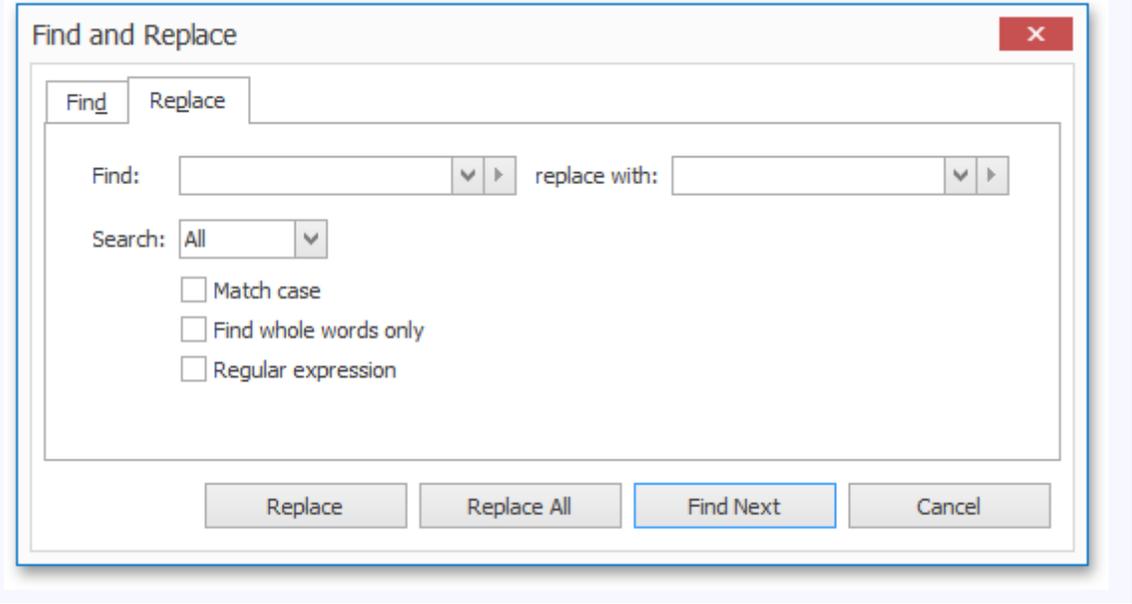
Co mm and	Large Icon	Sm all Ico n	Description
Find			Invokes the Find and Replace dialog that allows you to find the specified text in a document.



Repl
ace




Invokes the **Find and Replace** dialog that allows you to find the specified text in a document and replace it with other text.

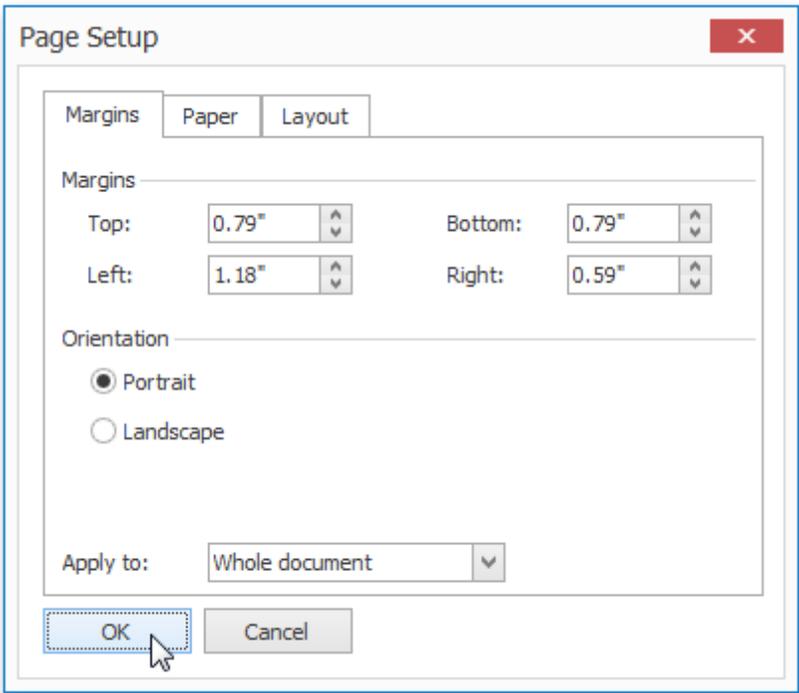


General Tools: Page Layout

The **Page Layout** toolbar contains page layout options that include paper kind, margins and orientation. These options are divided into the following categories.

- [Page Setup](#)
- [Background](#)

Page Setup

Command	Large Icon	Small Icon	Description
Margins			<p>Sets the size of page margins for the current document section. You can select from a list of predefined margins, or invoke the Page Setup dialog and adjust the margin size manually.</p> 
Orientation			Sets the page orientation for the current document section.
Size			Sets the page size for the current document section. You can select one of the predefined page sizes from the list, or specify a custom page size in the Page Setup dialog.

Page Setup

Margins | **Paper** | Layout

Paper size: Letter

Width: 8.5"

Height: 11"

Apply to: Whole document

OK | Cancel

Columns

Sets the number of columns for all pages in the current document section. You can also invoke the **Columns** dialog for more customization options.

Columns

Presets

One | Two | Three | **Left** | Right

Number of columns: 2

Width and spacing

Col #:	Width	Spacing
1:	1.6"	1.25"
2:	3.88"	0"

Equal column width

Apply to: Whole document

OK | Cancel

Breaks

Inserts one of the available breaks (e.g., page break, column break or section break) at the carriage position.

<p>Line Numbers</p>			<p>Displays line numbers in the current document section. You can select one of the predefined line numbering types from the list, or invoke the Line Numbers dialog to define custom line numbering.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px auto; width: fit-content;"> <p>Line Numbers ✕</p> <p><input checked="" type="checkbox"/> Add line numbering</p> <p>Start at: <input type="text" value="1"/> ▲▼</p> <p>Count by: <input type="text" value="1"/> ▲▼</p> <p>From text: <input type="text" value="0"/> ▲▼</p> <p>Numbering:</p> <p><input checked="" type="radio"/> Restart each page</p> <p><input type="radio"/> Restart each section</p> <p><input type="radio"/> Continuous</p> <p style="text-align: right;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </p> </div>
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Background

Command	Large Icon	Small Icon	Description
Page Color			Sets a page color for the entire document.

General Tools: Review

The **Review** toolbar contains tools related to proofreading.

The following command is available in the **Proofing** section of this toolbar.

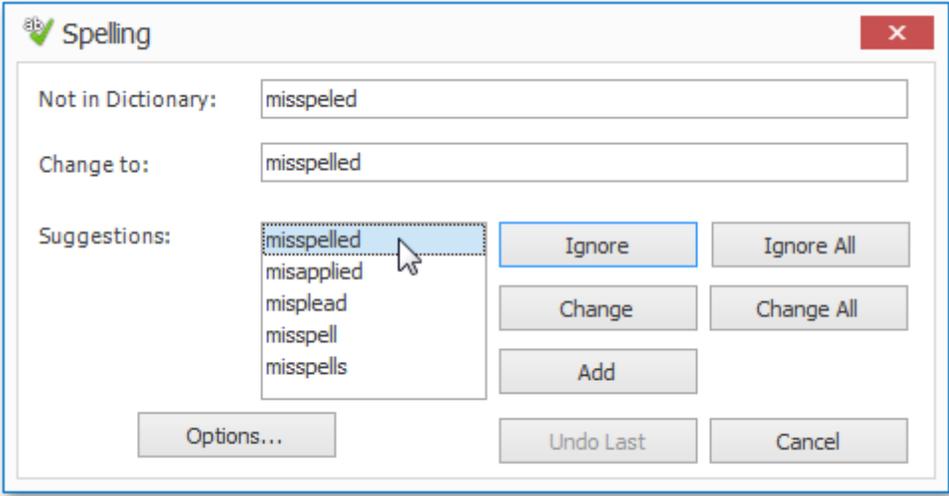
Command	Large Icon	Small Icon	Description
Spelling			<p>Checks the spelling of the document text.</p> <p>On detecting misspelled words, the spell checker invokes the Spelling dialog to type in the correct version, or select the correctly spelled word from the list of suggestions.</p> 

Chart Tools: Design

This toolbar is context sensitive, and becomes active after selecting a **chart** in the document.

The commands available in the **Design** toolbar of the **Chart Tools** category are divided into the following sections.

- [Chart Type](#)
- [Appearance](#)
- [Wizard](#)

Chart Type

Command	Large Icon	Small Icon	Description
Column			Changes the type of the selected chart to one of the available column chart types. Column charts are used to compare values across categories.
Line			Changes the type of the selected chart to one of the available line chart types. Line charts are used to display trends over time.
Pie			Changes the type of the selected chart to one of the available pie chart types. Pie charts display the contribution of each value to a total.
Bar			Changes the type of the selected chart to one of the available bar chart types. Bar charts summarize and display categories of data, allowing you to compare the contribution of each value to the total across categories.
Area			Changes the type of the selected chart to one of the available area chart types. Area charts are used to display trends over time.
Other Charts			Changes the type of the selected chart to a point, funnel, financial, radar, polar, range, or Gantt chart.

Appearance

Command	Large Icon	Small Icon	Description
Palette			Specifies the color palette for the selected chart.
 Appearance	none	none	Applies a specified appearance to the selected chart. The collection of style presets available for a chart depends on the chart's palette .

Wizard

Command	Large Icon	Small Icon	Description
Run Chart Wizard...			Invokes the Chart wizard , which allows you to adjust the main chart settings in a single user interface.

Header and Footer Tools: Design

This toolbar is context sensitive, and becomes active after double-clicking the page header or footer in a document.

To add a page header or footer, use the appropriate commands of the [General Tools: Insert](#) toolbar.

The commands available in the **Design** toolbar of the **Header & Footer Tools** category are divided into the following sections.

- [Navigation](#)
- [Options](#)
- [Close](#)

Navigation

Command	Large Icon	Small Icon	Description
Go to Header			Allows you to switch to the page header of the current document section when editing a page footer.
Go to Footer			Allows you to switch to the page footer of the current document section when editing a page header.
Show Next			Allows you to navigate to the header or footer of the next document section.
Show Previous			Allows you to navigate to the header or footer of the previous document section.
Link to Previous			Makes the header or footer display the content of the header or footer of the previous document section.

Options

Command	Large Icon	Small Icon	Description
Different First Page			Creates a unique header and footer for the first page.
Different Odd & Even Pages			Allows you to specify different headers and footers for odd-numbered and even-numbered pages.

Close

Command	Large Icon	Small Icon	Description
Close Header and Footer			Exits the header and footer edit mode. You can also do this by double-clicking the document area, or by pressing ESC .

Picture Tools: Format

This toolbar is context sensitive, and becomes active after selecting a picture in a document.

The commands available in the **Format** toolbar of the **Picture Tools** category are divided into the following sections.

- [Shape Styles](#)
- [Arrange](#)

Shape Styles

Command	Large Icon	Small Icon	Description
Shape Fill			Fills the selected shape with a specified color.
Shape Outline			Applies the specified color to the outline of the selected shape.
<input type="text" value="1 pt"/> Shape Outline Weight	none	none	Specifies a width for the outline of the selected shape.

Arrange

Command	Large Icon	Small Icon	Description
Wrap Text			Specifies the way in which text wraps around a selected object. The text wrap modes are as follows: - Square ; - Tight ; - Through ; - Top and Bottom ; - Behind Text ; - In Front of Text .
Position			Specifies the position of the selected object on a page.
Bring to Front			Moves the selected object forward. This command invokes a drop-down menu that contains the following actions: - Bring Forward (moves the selected object one layer forward); - Bring to Front (moves the selected object to the front of all other objects in a document);

			<p>- Bring in Front of Text (places the selected object in front of the text).</p>
Send to Back			<p>Moves the selected object backward.</p> <p>This command invokes a drop-down menu that contains the following actions:</p> <ul style="list-style-type: none">- Send Backward (moves the selected object one layer backward);- Send to Back (moves the selected object behind all other objects in a document);- Send Behind Text (moves the selected object behind the text).

Snap Application Elements

The topics in this section describe the main elements that make up the user interface of a Snap application.

This section consists of the following topics.

- [Snap User Interface Overview](#)
- [Main Toolbar](#)
- [Design Surface](#)
- [Data Explorer](#)
- [Report Explorer](#)
- [Print Preview](#)

Snap User Interface Overview

This document lists the essential elements of the Snap user interface, and provides links to specific topics that describe these elements in more detail.

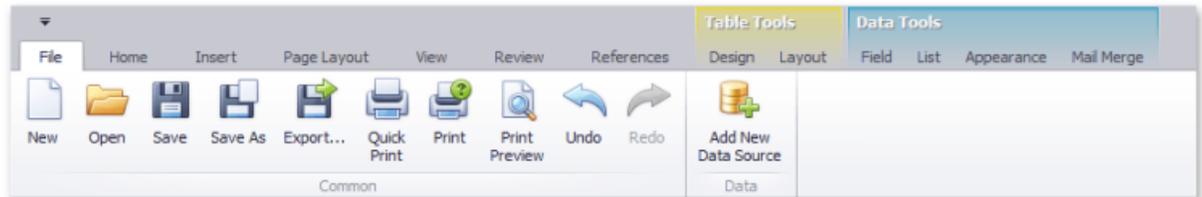
The main elements of the Snap user interface are as follows.

- **Main Toolbar**

The **Main Toolbar** in a Snap application provides quick access to the available document editing tools. The following toolbar styles are available.:

- **1. Ribbon**

Tools are organized in various sections, contained in different tabs.



- **2. Bars**

Tools are organized in separate toolbars.



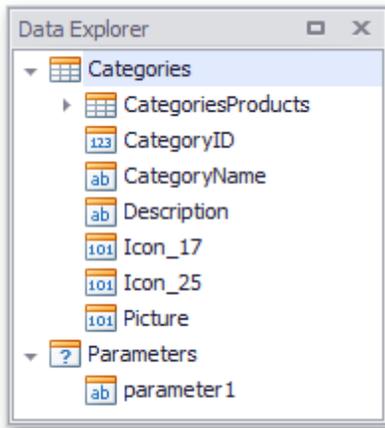
- **Design Surface**

The body of a report in the designer. In this region, you can design your report layout and immediately view the result.

ProductName	UnitPrice
Chai	\$18.00
Chang	\$19.00
Guaraná Fantástica	\$4.50
Sasquatch Ale	\$14.00
Steeleye Stout	\$18.00
Côte de Blaye	\$263.50
Chartreuse verte	\$18.00
Ipoh Coffee	\$46.00
Laughing Lumberjack Lager	\$14.00
Outback Lager	\$15.00

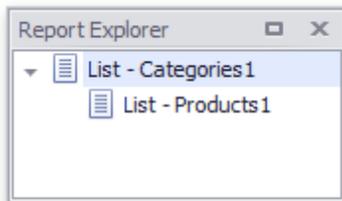
- **Data Explorer**

Reflects the structure of available data, allowing you to manage a report's data sources. You can add the data shown in this pane to your report via drag-and-drop.



- **Report Explorer**

Reflects the hierarchy of the elements of a Snap document.

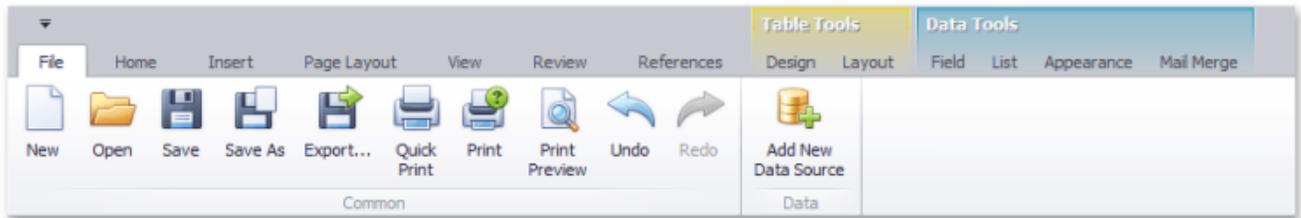


Main Toolbar

The **Main Toolbar** in a Snap application provides quick access to the available document editing tools. The following toolbar styles are available:

1. [Ribbon](#)

Tools are organized in various sections, contained in different tabs.



2. [Bars](#)

Tools are organized in separate toolbars.

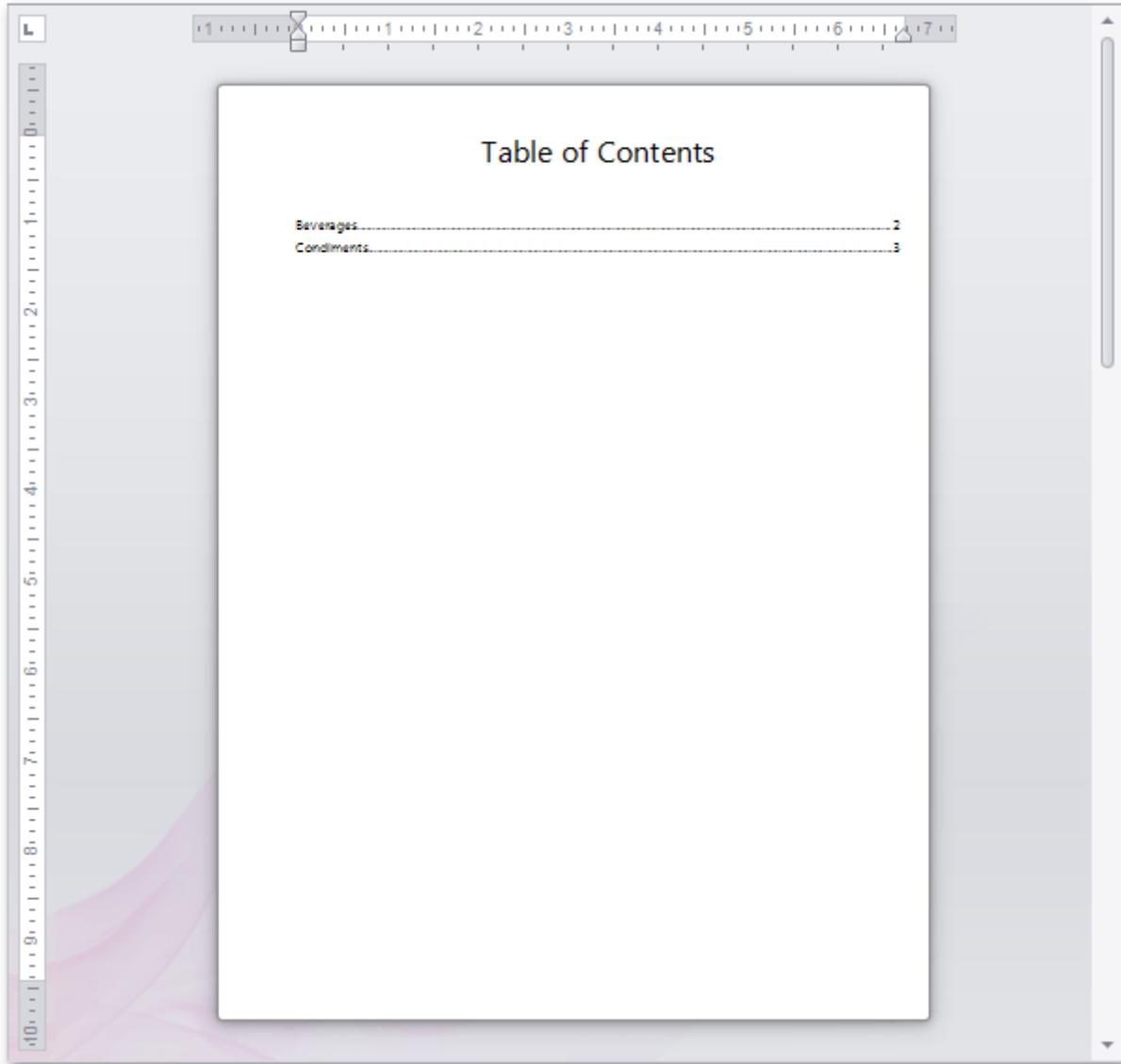


Design Surface

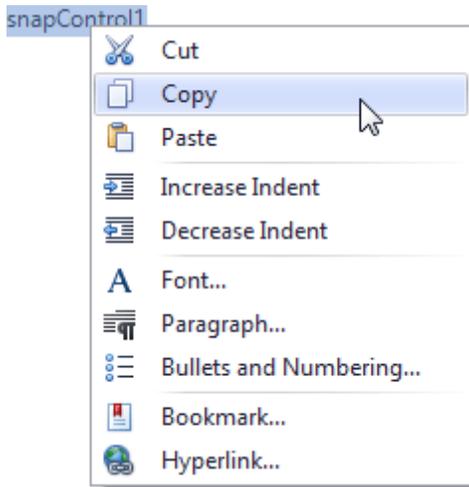
This document describes the design surface of a Snap application.

The design surface is the primary working area of a Snap application, which contains the document and allows you to modify its layout.

It can display rulers that define the horizontal and vertical alignment of a report's elements, as well as a scroll bar that allows you to browse different pages of a document.



Right-clicking the design surface invokes the context menu, which displays a specific set of commands based on the element that is clicked.



The WYSIWYG nature of Snap allows you to view document content on the design surface in the same way it will appear on paper. However, the complete document (as it appears in a Print Preview) may differ from the document layout shown in the design surface. For example, setting the **List | Editor Row Limit** toolbar option limits the total number of processed data records while the document layout is being designed.

The [View](#) toolbar contains the commands that allow you to switch the document presentation mode (**Simple View**, **Draft View**, **Print Layout**), as well as maintain the visibility of rulers and the document zoom factor.

Data Explorer

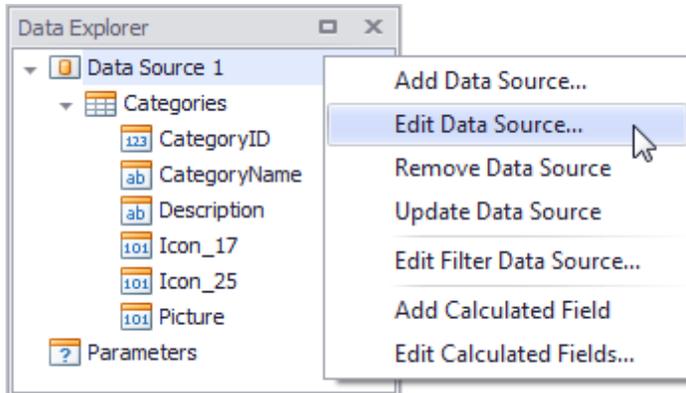
This topic describes how to use the **Data Explorer** in Snap.

This topic consists of the following sections.

- [Overview](#)
- [Data Type Reference](#)

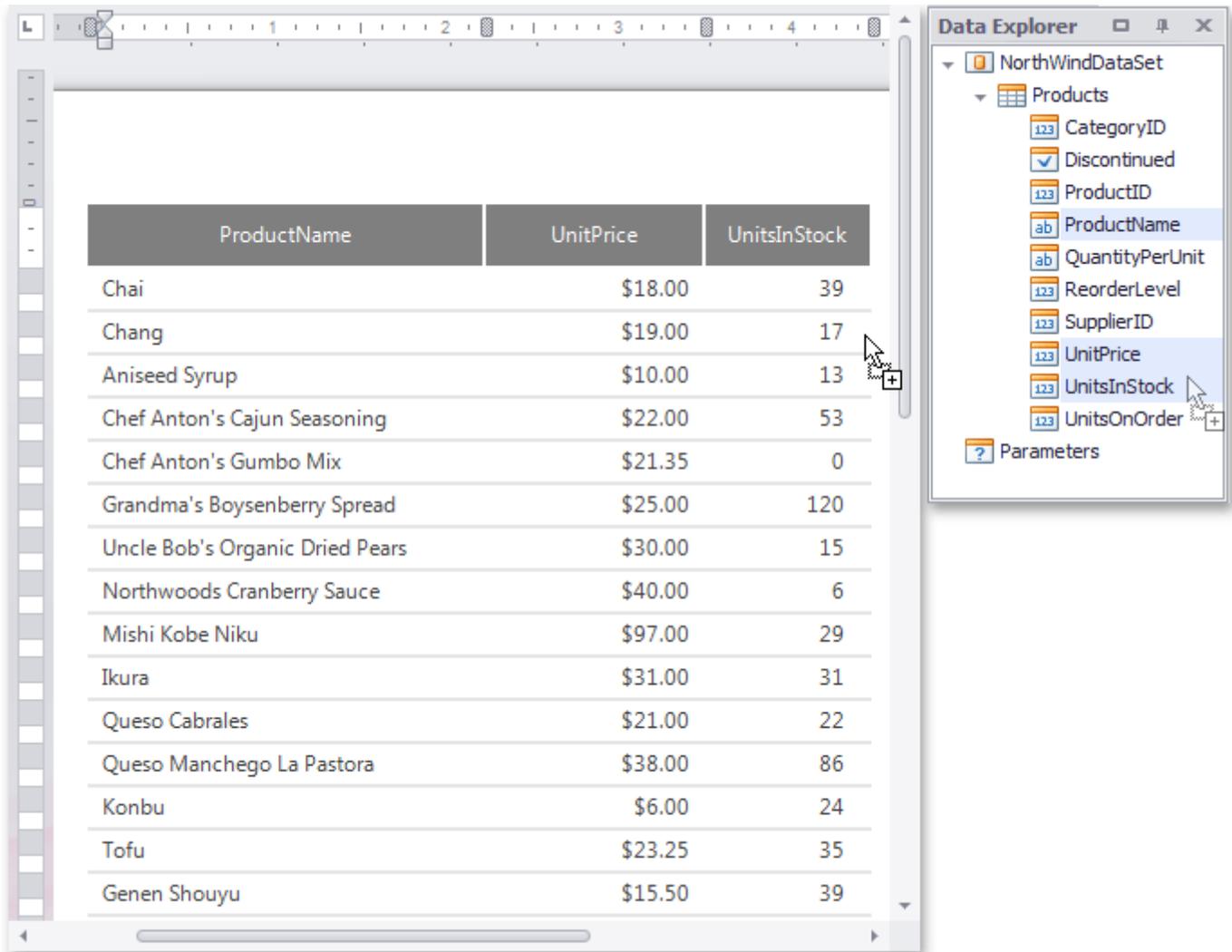
Overview

The Data Explorer is essential for managing data in Snap applications. It allows you to **add new data sources** to a Snap document, access their structure and run the [Query Designer](#) to customize a data source.

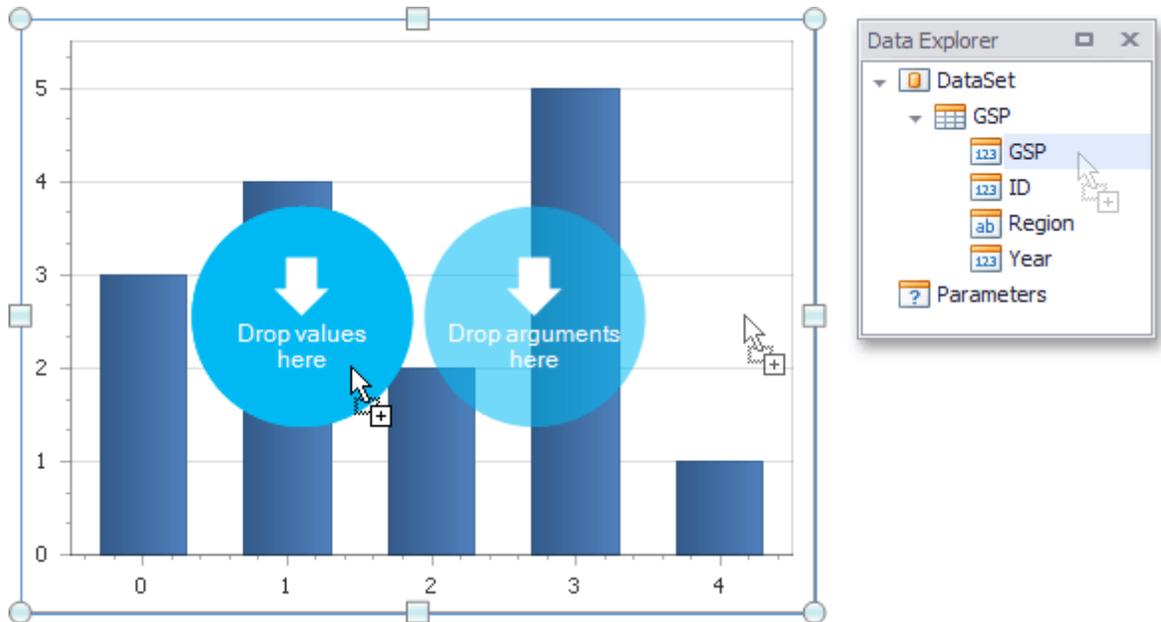


Using the Data Explorer, you can also manage a report's parameters, as well as the [calculated fields](#) supplied to the data source tables.

You can create a Snap report layout by dropping the data members from the Data Explorer onto a document's [design surface](#). The data members correspond to the columns created on the design surface, and the data member names are displayed in the column headers.



To display data in a chart, drop data fields from the Data Explorer onto the corresponding chart areas.



When a data field is added to your document, its data type determines what **element** is created (e.g., text, **chart**,

or **bar code**).

Data Type Reference

In the Data Explorer, different icons are assigned to various data objects. These icons are explained in the following table.

Icon	Description
 (regular data source)  (mail merge data source)	Designates an individual data source. When expanded, shows the hierarchy of its tables and/or views.
 (regular data source)  (mail merge data source)	Designates a data table or view within a data source. When expanded, shows the hierarchy of its data fields. You can drag a data table and drop it onto the document surface, after which the entire table structure will be presented in the report in a tabular form.
	Parameters. Lists the report parameters. You can include parameters in a document's filtering expression or calculated fields, or you can use them directly in your reports, (e.g., by dropping them onto the document surface).

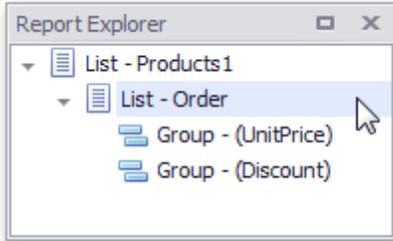
For every table or view, the Data Explorer lists the available data fields. Depending on the data type, it will automatically assign one of the following icons.

Icon	Data Type	Displayed Contents
 (regular data source)  (mail merge data source)	Boolean	Check Box, plain text
 (regular data source)  (mail merge data source)	Byte	Bar Code, Picture
 (regular data source)  (mail merge data source)	Date-time	Plain text
 (regular data source)  (mail merge data source)	Numeric	Plain text, Bar Code
 (regular data source)  (mail merge data source)	String	Plain text, Bar Code
	Calculated field	Determined by the result of the

calculation.

Report Explorer

Report Explorer reflects the hierarchy of **fields** in a Snap document, to quickly navigate through its data levels. It displays the order of document lists, and lists their active groups in a tree format.



Clicking a node in the Report Explorer activates the corresponding document element that is closest to the currently displayed page.

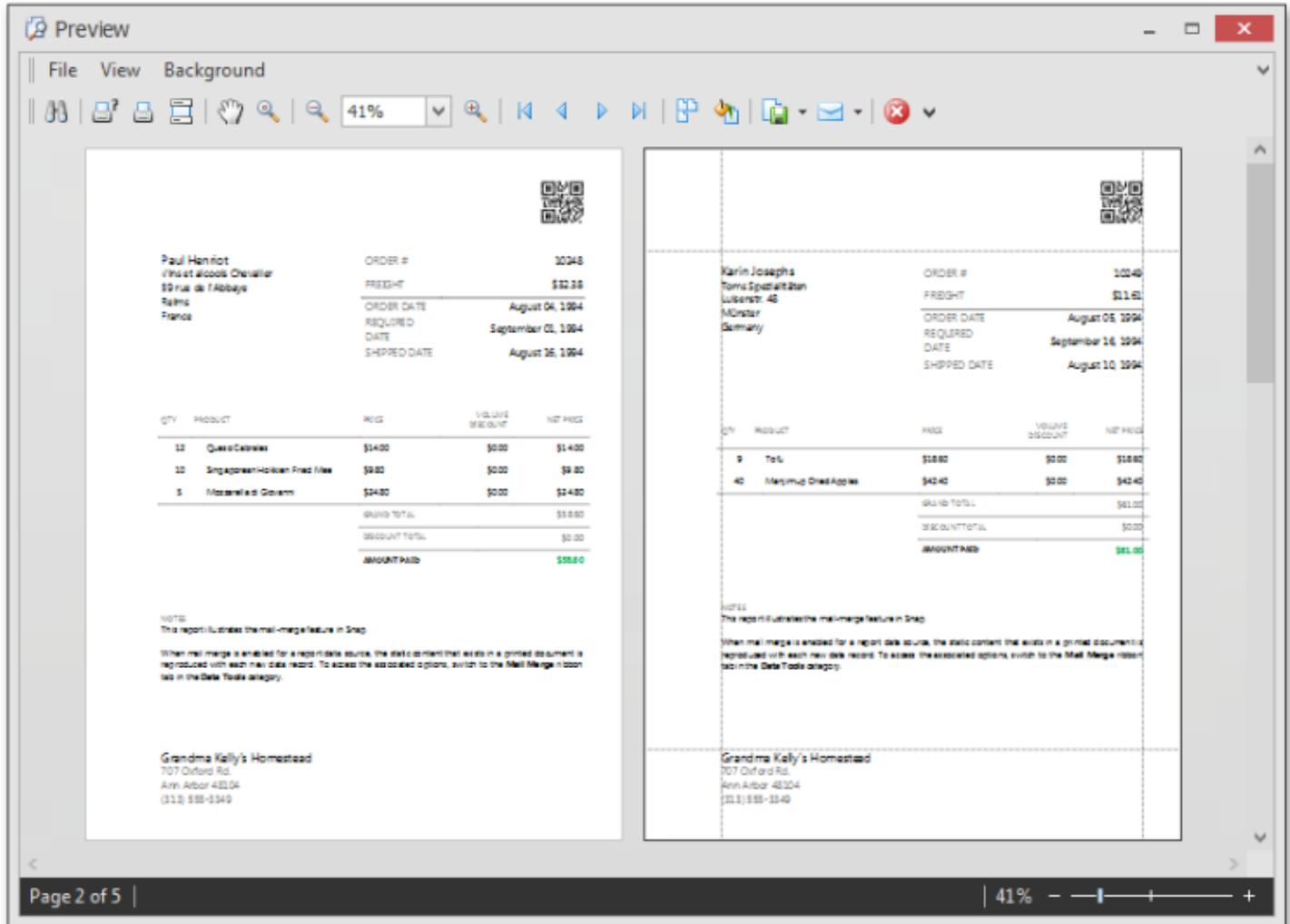
Print Preview

This document describes the **Print Preview** window, which displays published documents in a **Snap** application.

- [Print Preview Elements](#)
- [Invoke a Print Preview](#)

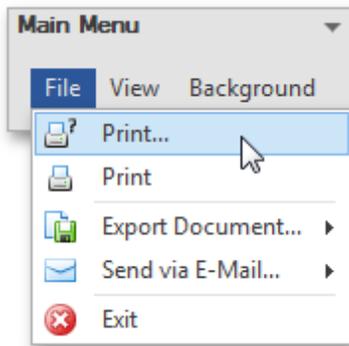
Print Preview Elements

The Print Preview displays a report document as it will appear on paper.

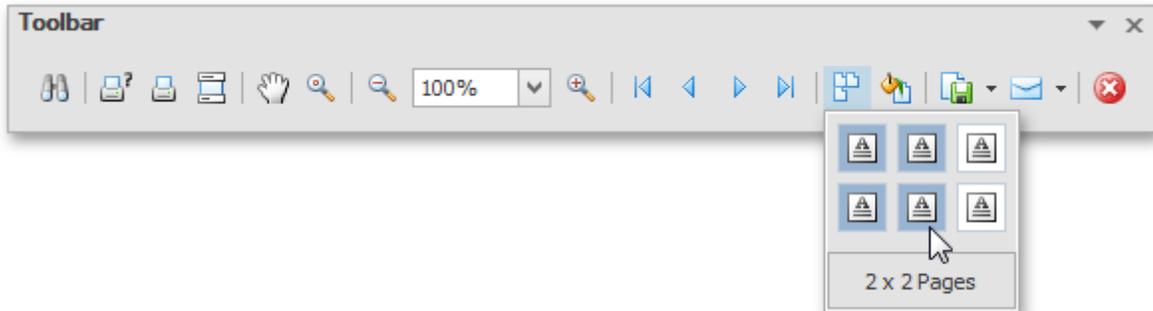


The user interface of a Print Preview consists of the following elements.

- **Main Menu** - contains the document management and navigation commands within several menu items (**File**, **View** and **Background**);



- **Toolbar** - provides quick access to document management and navigation commands;

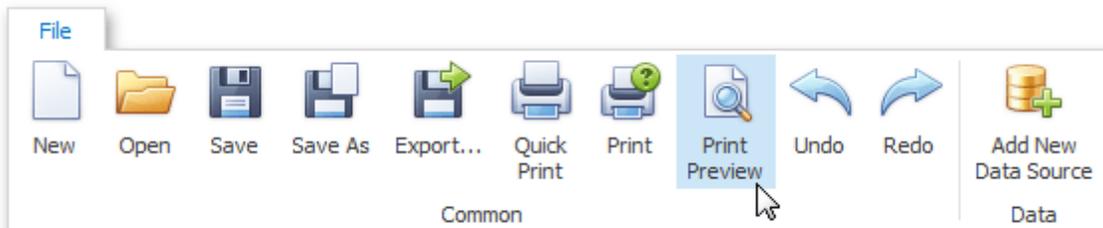


- **Status Bar** - indicates the document generation state, displays the selected page number and enables document zooming.



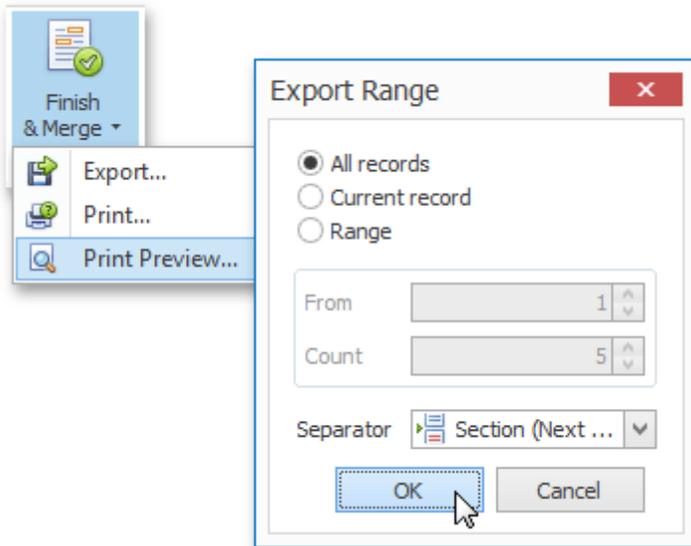
Invoke a Print Preview

- To assemble and preview a **tabular report**, click **Print Preview** in the [General Tools: File](#) toolbar.



- Using the option above to preview a **mail merge report** will only display the document obtained from the first data source record.

To assemble and preview a mail merge report, click **Finish & Merge** in the [Data Tools: Mail Merge](#) toolbar and select **Print Preview** in the invoked drop-down menu.



In the invoked **Export Range** dialog, specify the required range of data records and click **OK**.

Connect to Data

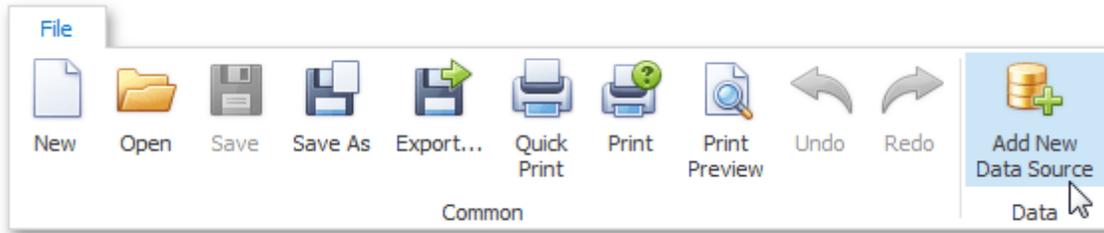
The topics in this section describe the various aspects of providing data to a Snap document.

- [Connect a Document to a Data Source](#)
- [Create a Master-Detail Data Source](#)
- [Filter Data](#)
- [Format Data](#)
- [Group Data](#)
- [Sort Data](#)
- [Pass Parameter Values](#)
- [Use Calculated Fields](#)
- [Use the Query Designer](#)

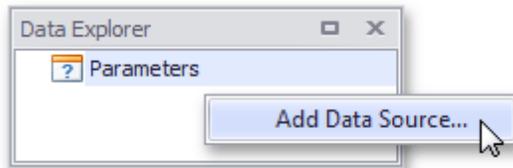
Connect a Document to a Data Source

This tutorial describes the steps required to connect a Snap document to data by using the **Create Data Source wizard** and [Query Designer](#).

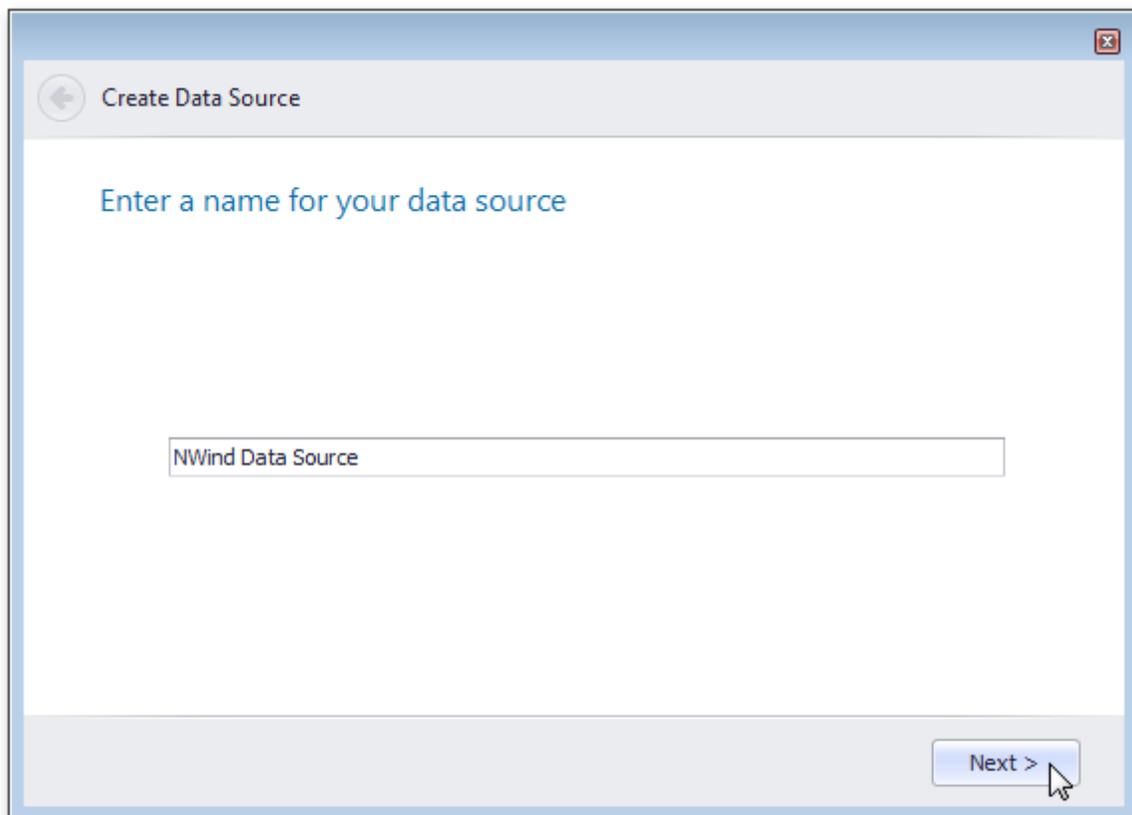
1. Click **Data | Add New Data Source** on the Snap application's ribbon toolbar.



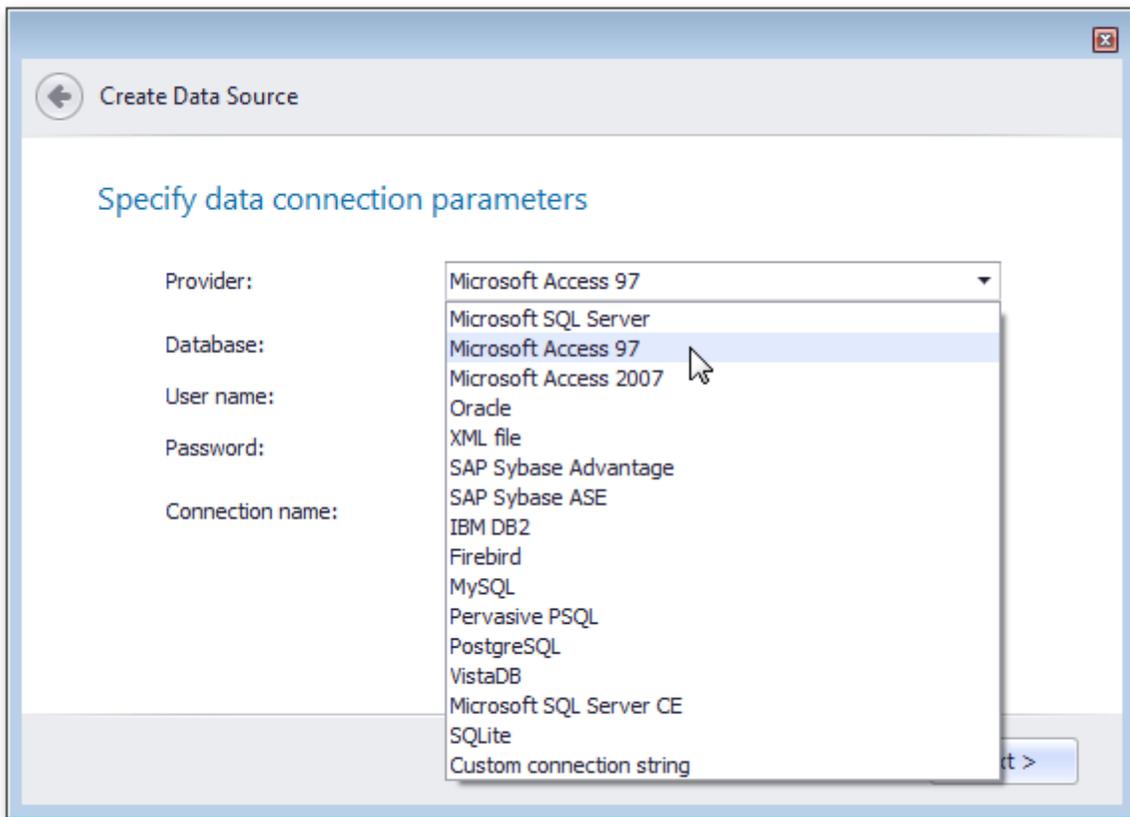
Alternatively, right-click anywhere in the [Data Explorer](#) and click **Add Data Source** in the invoked menu.



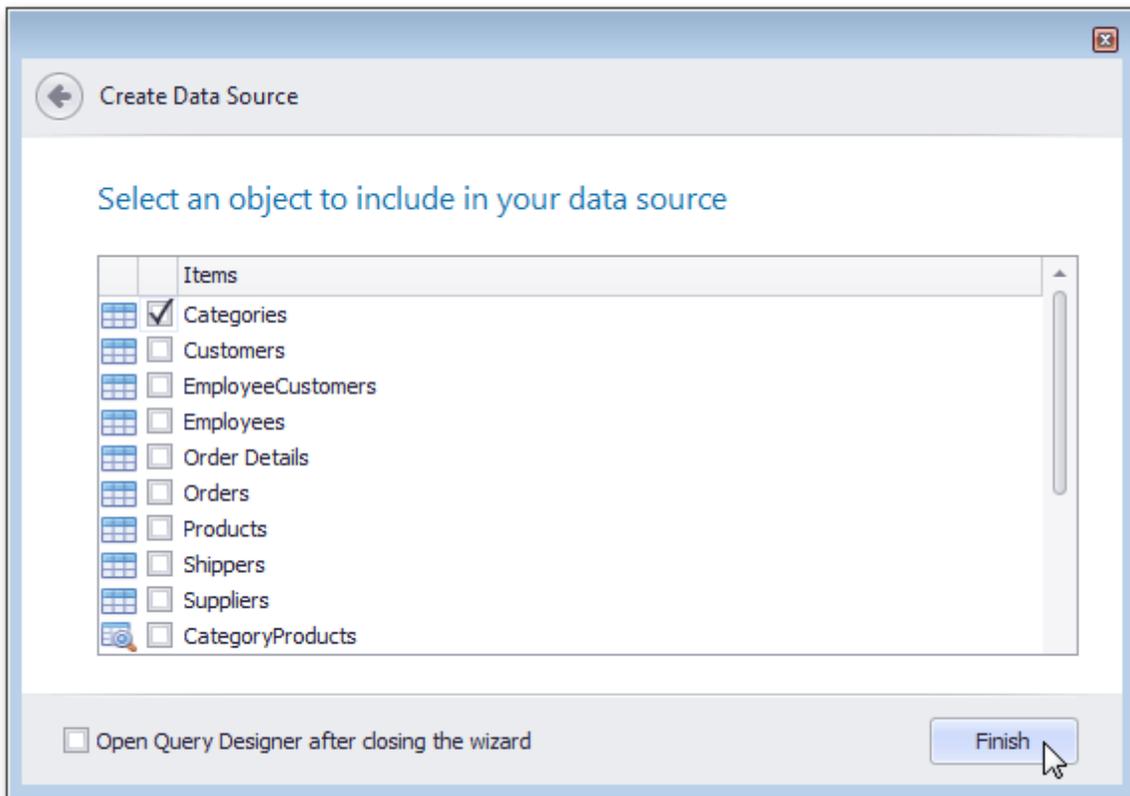
2. On the first page of the invoked **Create Data Source** wizard, specify the name for the new data source and click **Next**.



3. On the next page, select a data provider, specify the required connection settings and click **Next**.

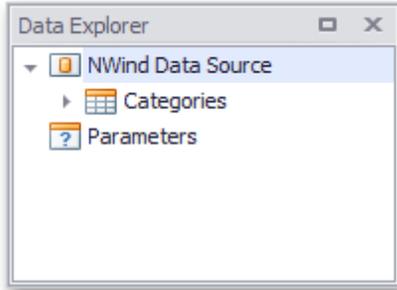


4. Select a data table to include in the data source.

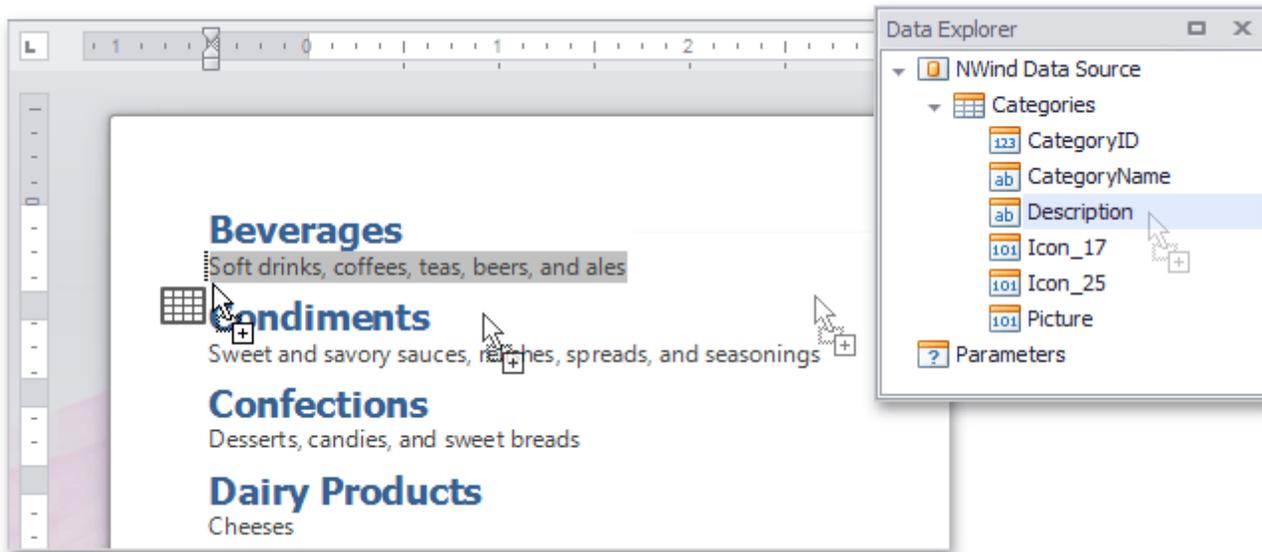


To add more tables and specify their data relations, use the [Query Designer](#) that is invoked after enabling the **Open Query Designer after closing the wizard** option and clicking **Finish** on the last wizard page.

5. After the data source has been added to the report, the hierarchy of its data members is reflected in the [Data Explorer](#).



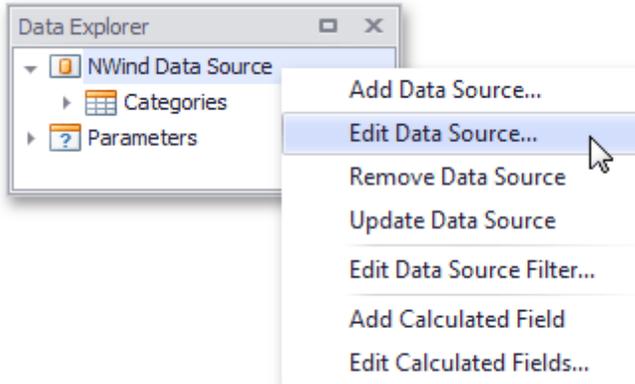
The Snap report is now connected to data. Drag-and-drop the **CategoryName** and **Description** data fields from the Data Explorer onto the document's body to create a simple data-aware report.



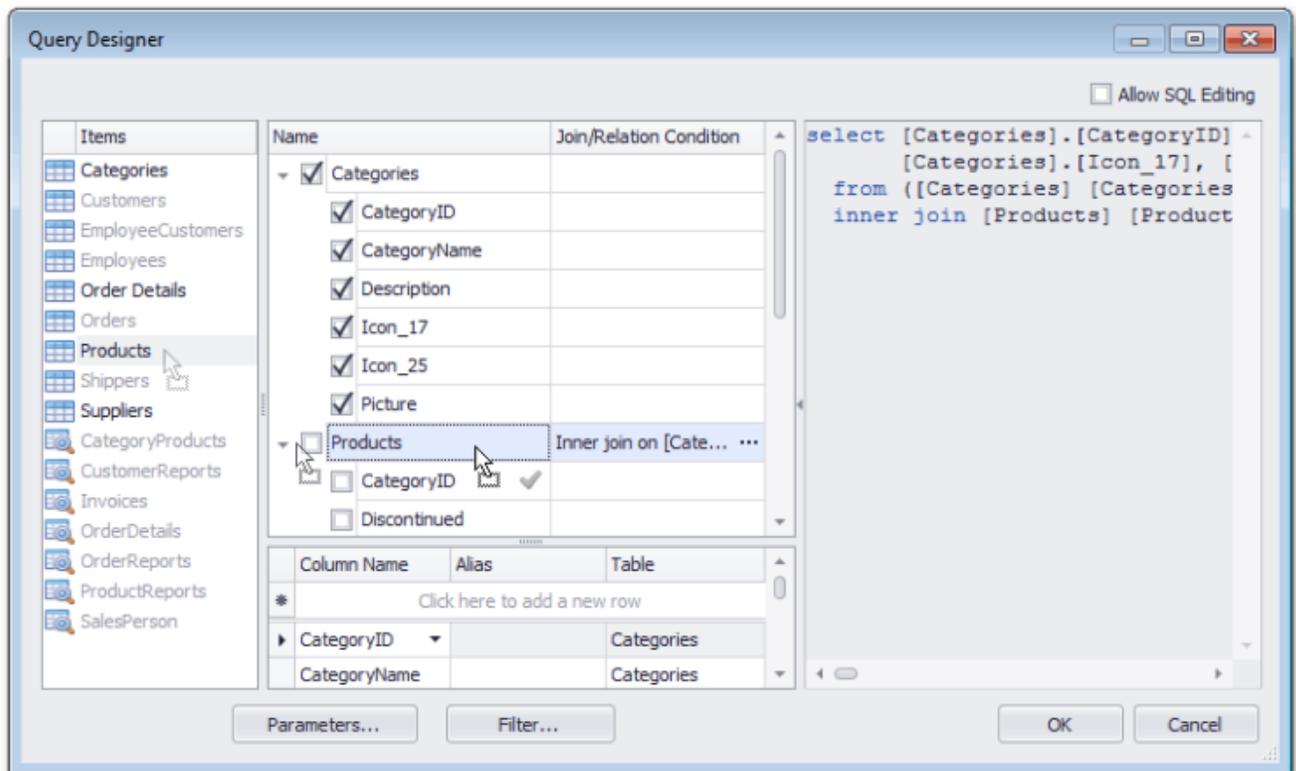
Create a Master-Detail Data Source

This tutorial describes how to add a master-detail relation to the document's data source.

1. Connect a Snap document to data as shown in the [Connect a Document to a Data Source](#) tutorial.
2. Right-click the added data source node in the **Data Explorer** window and select **Edit Data Source...** in the invoked context menu.

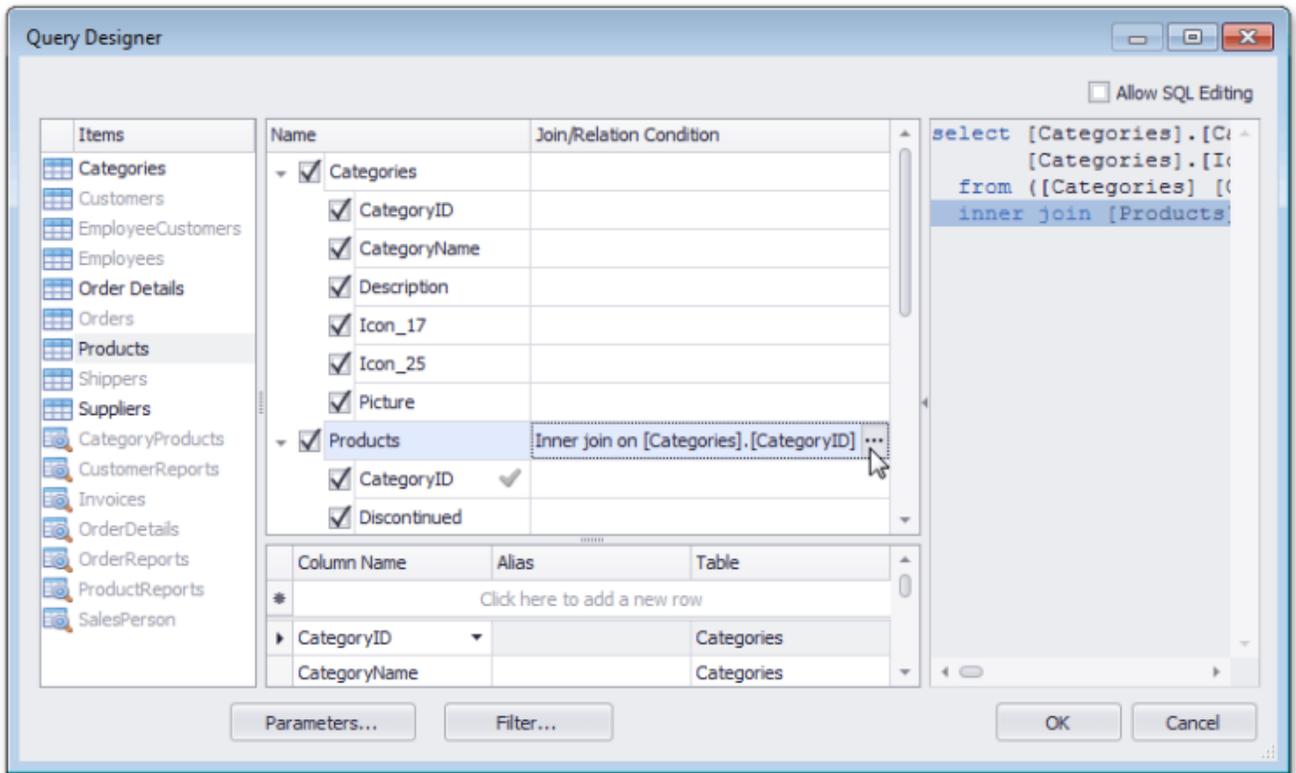


3. In the invoked **Query Designer** window, drag the **Products** item from the list of available tables on the left and drop it onto the list of data tables to be used.

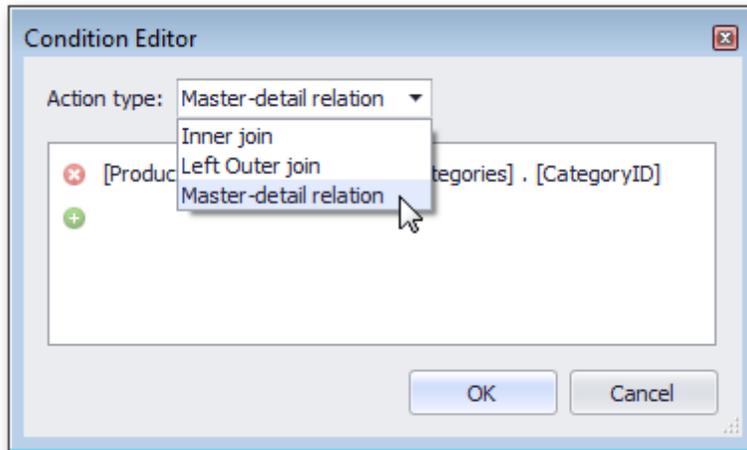


Enable the check box for the **Products** table, to include all of its fields in the view.

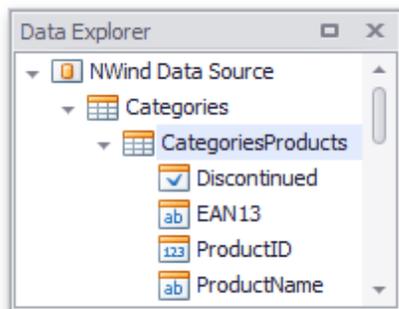
4. By default, the tables that are added to the query are joined. To create a master-detail relation between the **Categories** and **Products** tables, click the ellipsis for the **Join/Relation Condition** in the **Products** table.



In the invoked **Condition Editor** dialog, set the **Action type** to **Master-detail relation** and click **OK** to exit the dialog.



Next, click **OK** in the **Query Designer** to apply all changes to the document data source and exit. The content of the **Data Explorer** will be updated to reflect the new structure of the document data source.



Filter Data

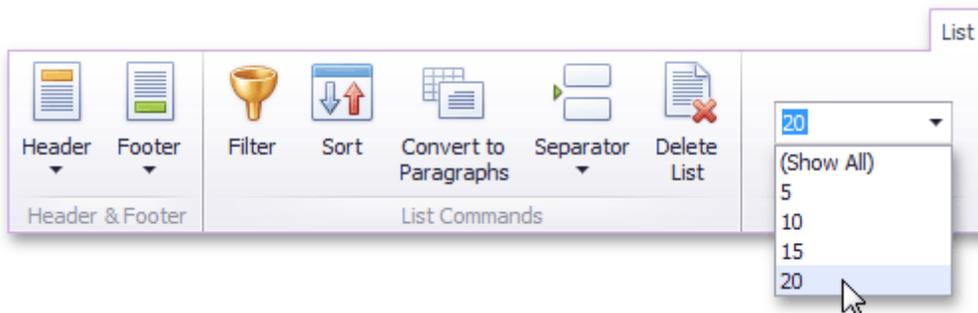
This document describes how to filter dynamic data within a **Snap** document.

The document consists of the following sections.

- [Filter Data on the Design Surface](#)
- [Filter Data at the Data Source Level](#)
- [Filter Snap List Data](#)
- [Filter Mail Merge Document Data](#)

Filter Data on the Design Surface

To improve performance, the Snap [Design Surface](#) displays only the first **20** data rows while the document layout is being designed. To change the number of data rows displayed, specify the **Editor Row Limit** option, which is located in the **List** tab of the main toolbar.

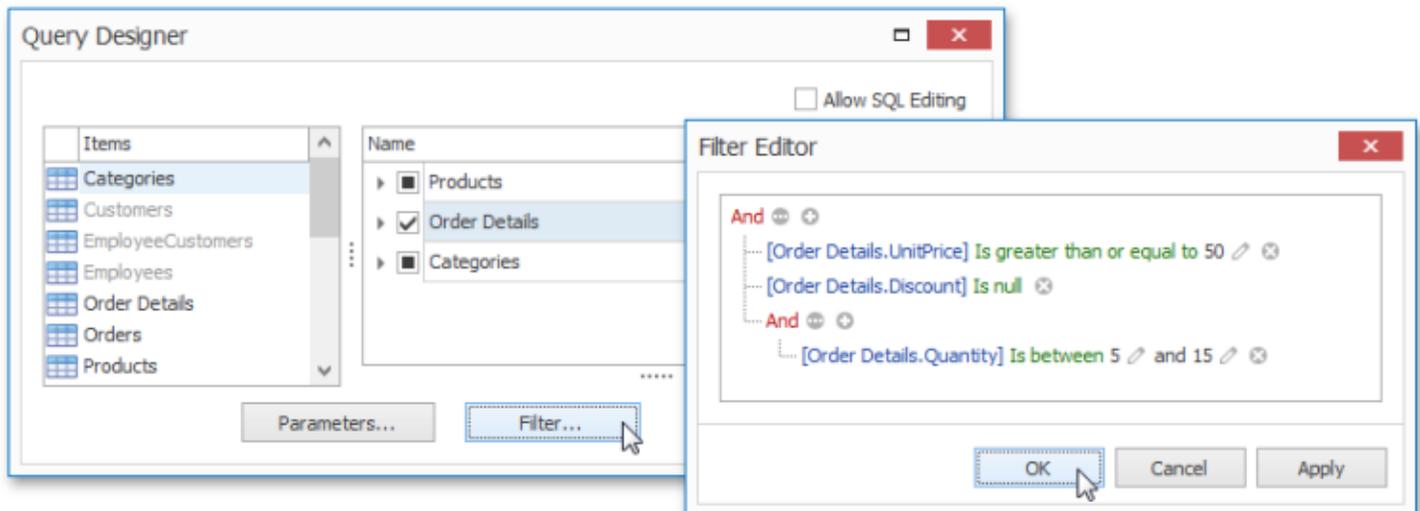


This setting does not affect the final document.

Filter Data at the Data Source Level

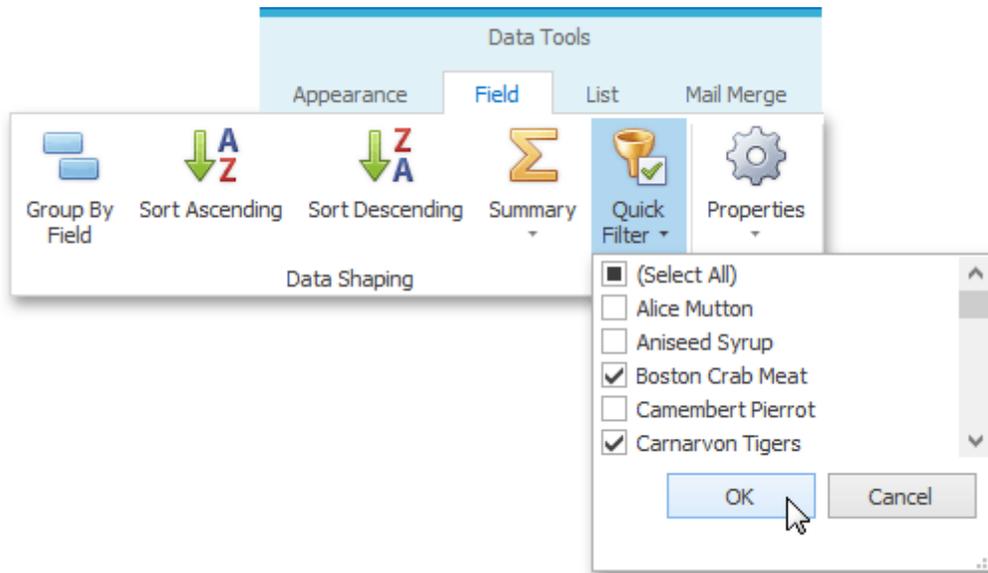
Filtering data at the data source level is useful when dealing with large data sources because it reduces data retrieval time, and thus speeds up document generation.

To filter data at the data source level, use the [Query Designer](#).



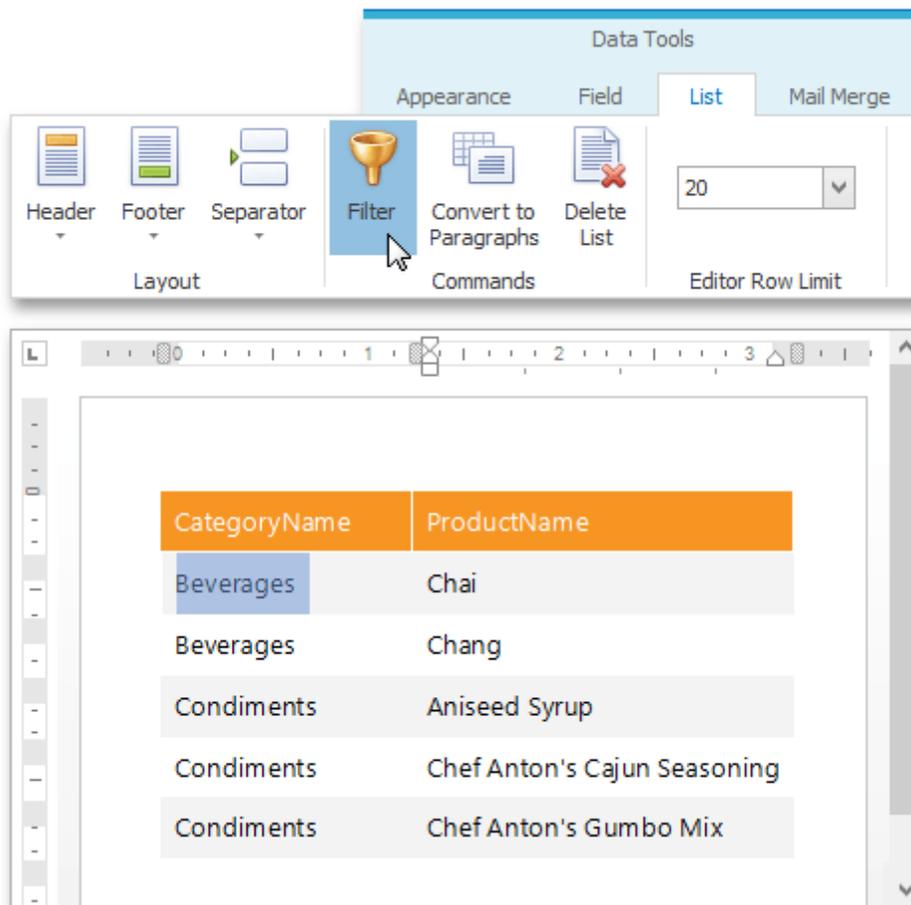
Filter Snap List Data

To select which data records to include in the document, click the **Quick Filter** command in the **Field** tab of the contextual **Data Tools** toolbar category. In the invoked drop-down menu, select the required records and click **OK** to apply the filtering.

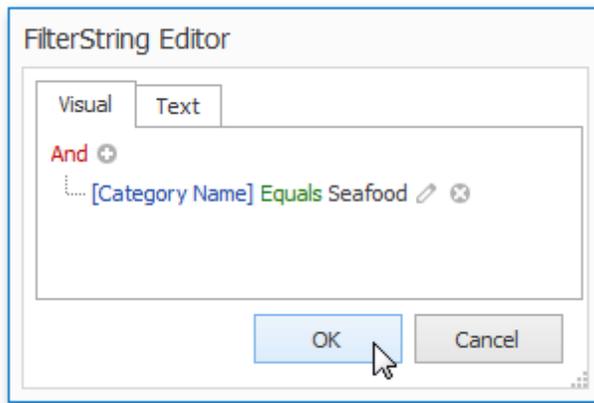


To specify the filtering criteria for **Snap list** data, do the following.

1. Place the text cursor inside the Snap list that you wish to filter and click the **Filter** command in the **List** tab of the contextual **Data Tools** toolbar category.



2. In the invoked **FilterString Editor**, construct the required filter expression and click **OK** to apply the filtering.

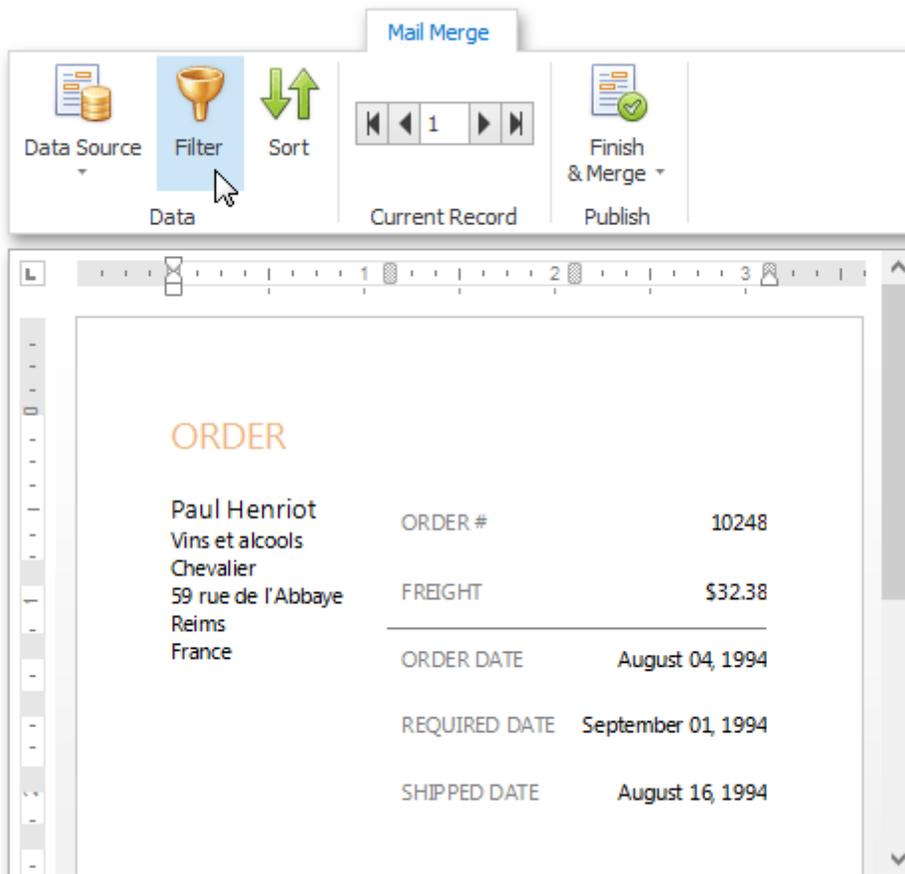


Filter Mail Merge Document Data

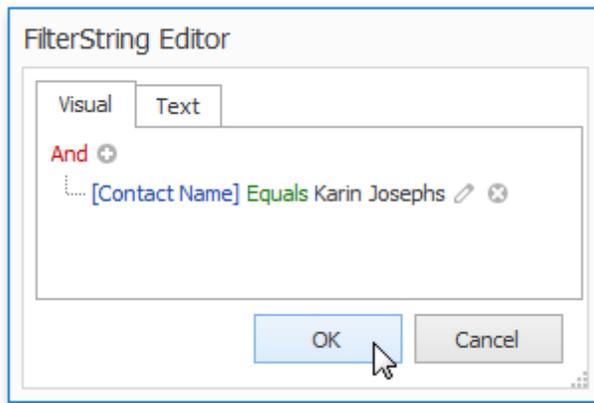
Filtering a **mail merge document** defines which data entries will appear as pages of the final document.

To filter a mail merge document, do the following.

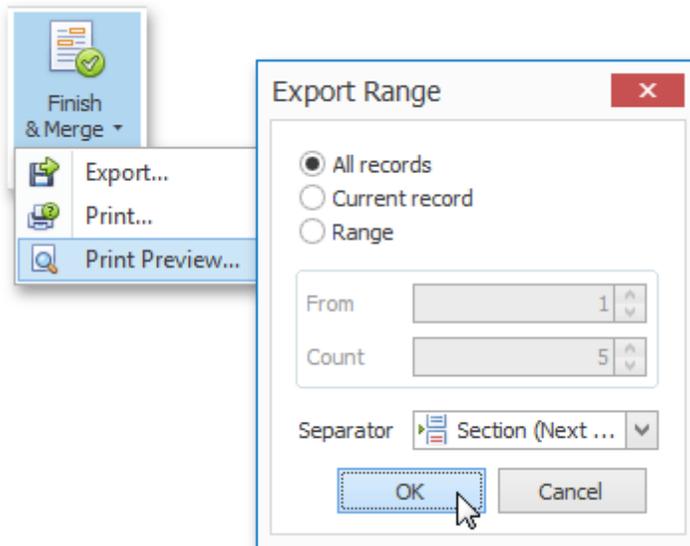
1. Switch to the **Mail Merge** tab of the contextual **Data Tools** toolbar category, and click the **Filter** command.



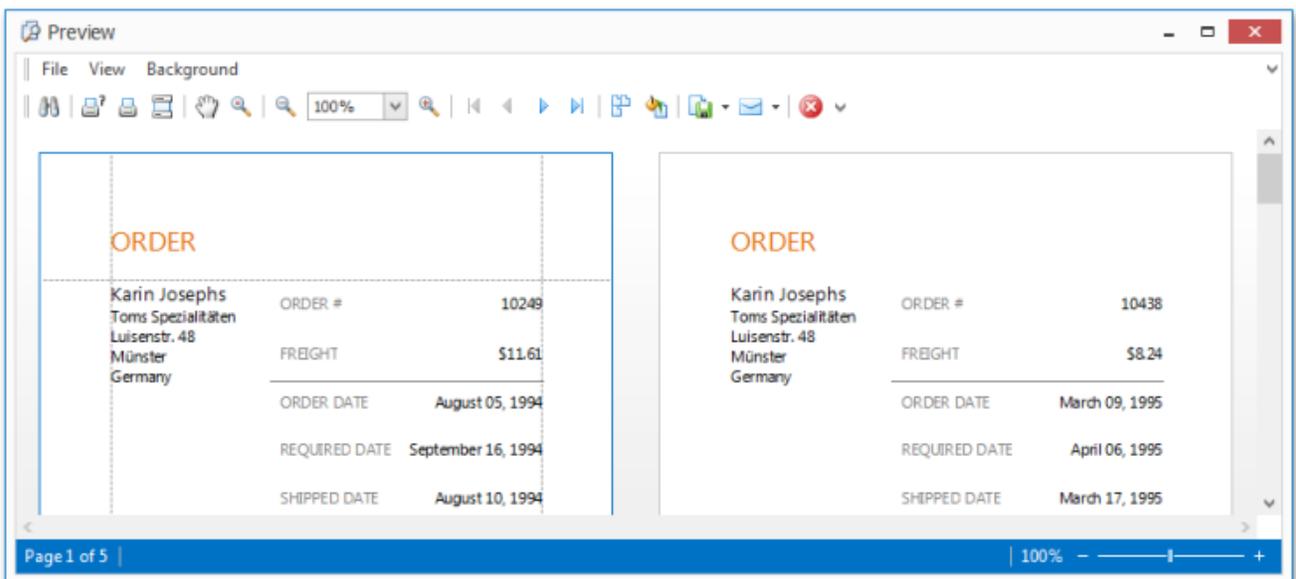
2. In the invoked **FilterString Editor**, construct the required expression and click **OK** to apply the filtering.



3. To view the result, click the **Finish & Merge** button in the **Mail Merge** tab of the contextual **Data Tools** toolbar category, and select **Print Preview...** in the drop-down menu. In the invoked **Export Range** dialog, select **All records** and click **OK**.



The following image illustrates a print preview for a filtered mail merge document.

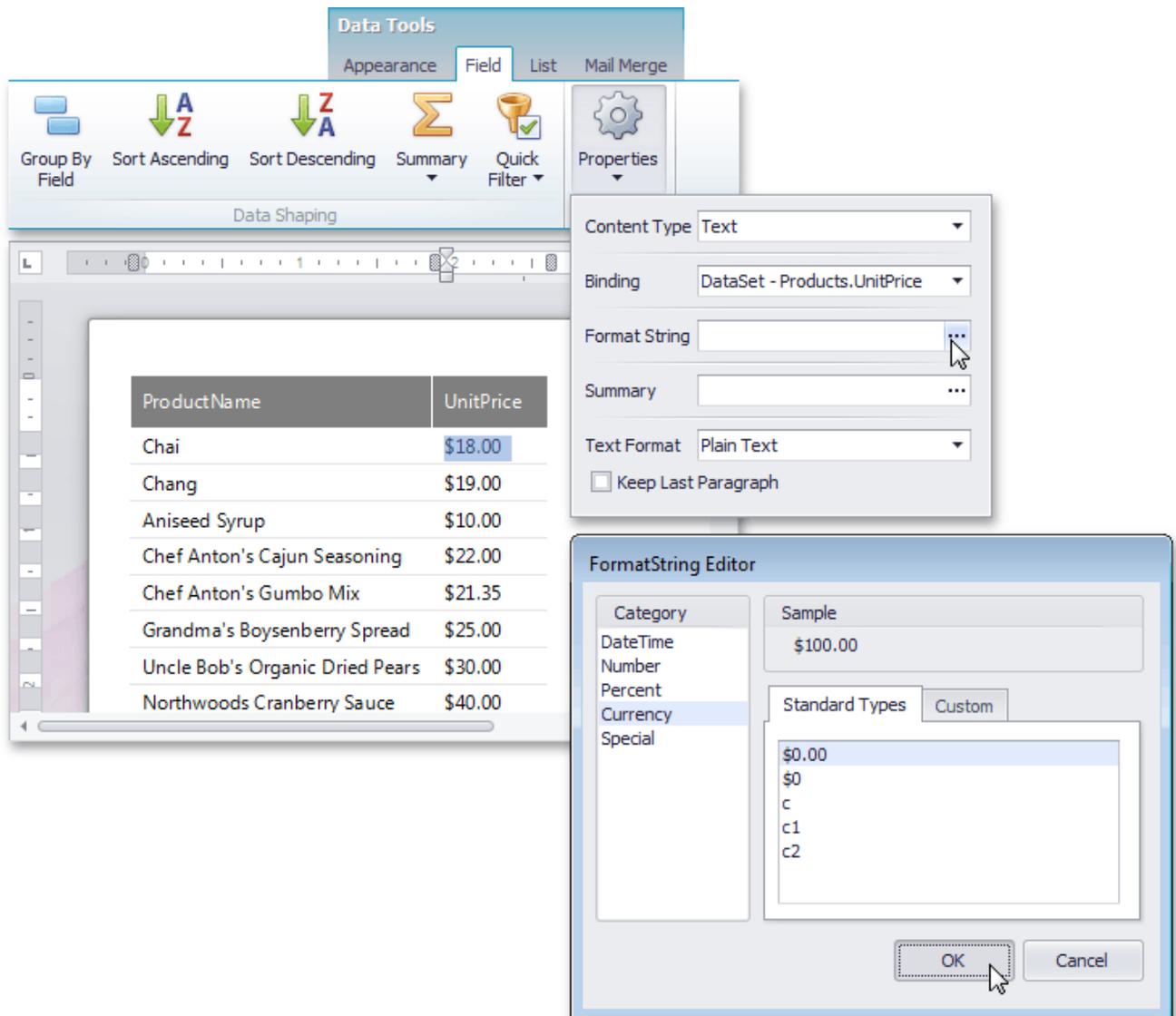


Format Data

This document describes how to format dynamic textual data in a **Snap** document.

To format report data, do the following.

1. Select the **Snap field** that you wish to format. It must be a field displaying textual information (e.g., a **Text** field or a **Row Index** field). This will activate the **Field** tab in the contextual **Data Tools** toolbar category.
2. In the **Field** tab, click the **Properties** button.
3. In the invoked drop-down menu, click the ellipsis button for the **Format String** property.
4. Specify the required formatting in the invoked **FormatString Editor**, and click **OK** to exit the dialog.

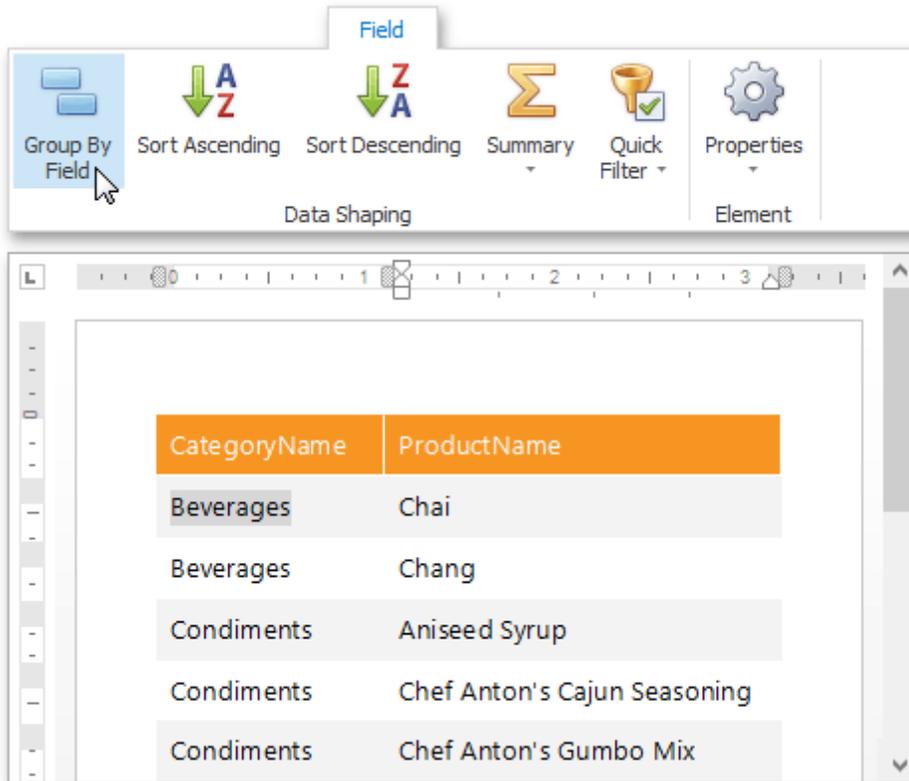


Snap supports both [standard](#) and [custom](#) .NET format strings.

Group Data

This document describes how to group data in a **Snap** document.

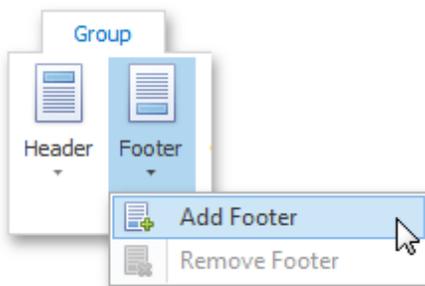
To group dynamic data within a **Snap list**, select the **field** that you wish to group. This automatically activates the contextual [Data Tools: Field](#) tab in the main toolbar. In this tab, click the **Group By Field** button.



The Snap list will be updated to reflect the applied grouping.

A group header and a group footer are automatically created for the new grouping. By default, the group header displays the value of the field by which to group, and the group footer displays the total count of entries in the group (evaluated by the **Count summary function**).

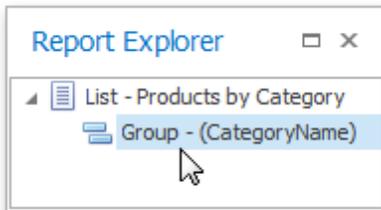
To add or remove group headers and footers, use the corresponding commands in the [Group](#) tab of the main toolbar.



The following image illustrates a Snap list with grouping applied.

CategoryName	ProductName
CategoryName: Beverages	
Beverages	Chai
Beverages	Chang
Beverages	Guaraná Fantástica
CategoryName: Count = 3	
CategoryName: Confections	
Confections	Gumbär Gummibärchen
Confections	Chocolade
CategoryName: Count = 2	

All groupings added to a report are displayed in the [Report Explorer](#) as child nodes of the Snap list to which they are applied.



Sort Data

This document describes how to sort dynamic data within a **Snap** document.

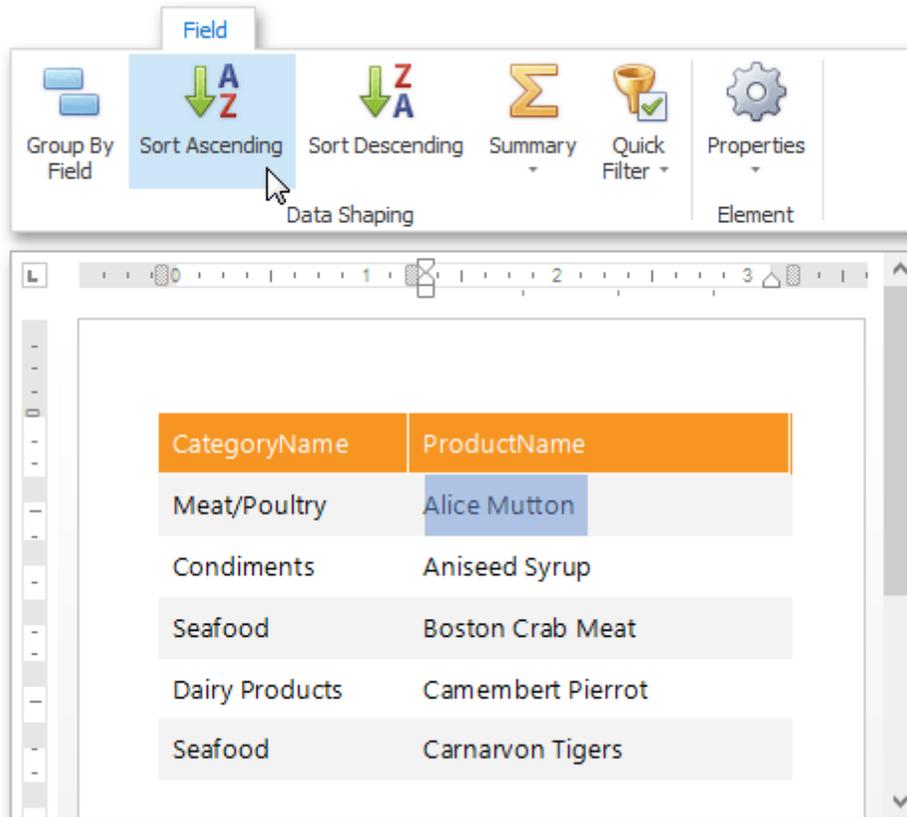
The document consists of the following sections.

- [Sort Snap List Data](#)
- [Sort Mail Merge Document Data](#)

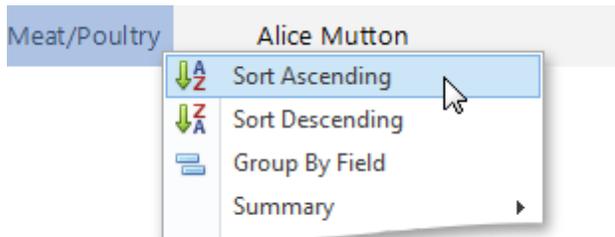
Sort Snap List Data

To apply sorting to a **Snap list**, do the following.

1. Select the **Snap field** that you wish to use as filter criteria. The field must be located inside a Snap list. This automatically activates the contextual **Field** tab in the main toolbar.
2. In the **Field** tab, click the **Sort Ascending** or **Sort Descending** button, depending on the required sort order. The Snap list will automatically be updated to reflect the sorting applied.



Sort commands are also available in the context menu.



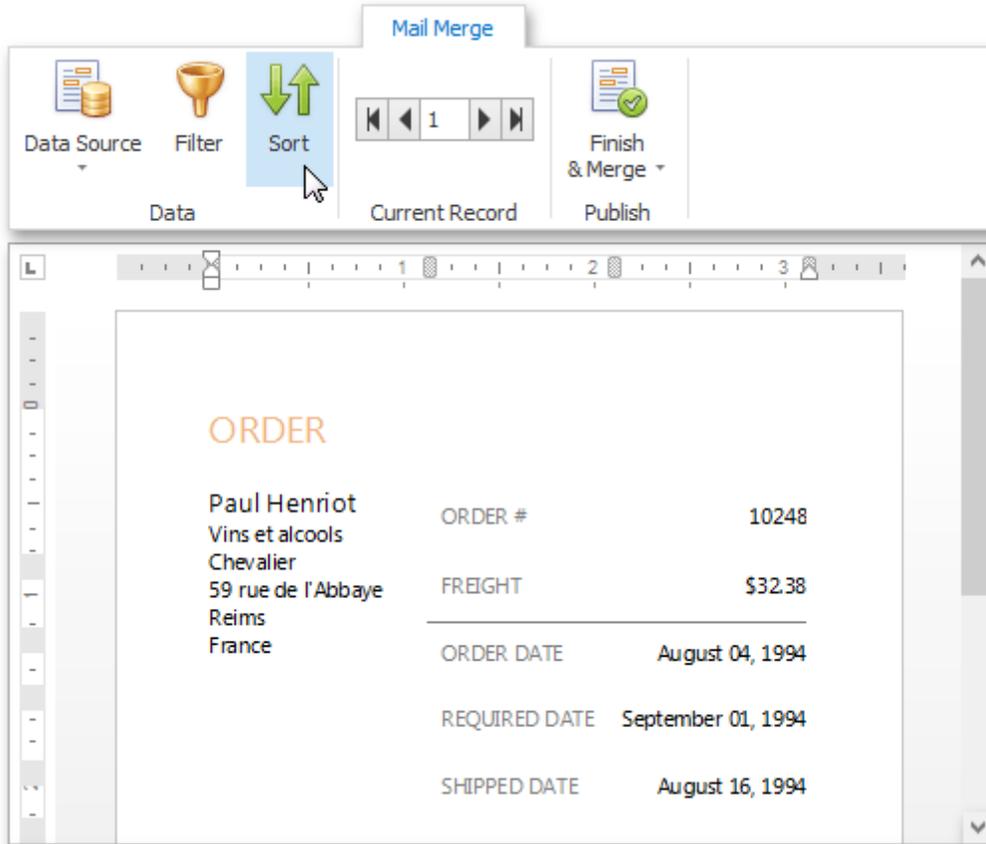
You can specify multiple sort criteria for a Snap list. In this case, sort levels are applied in the order that they are added.

Sort Mail Merge Document Data

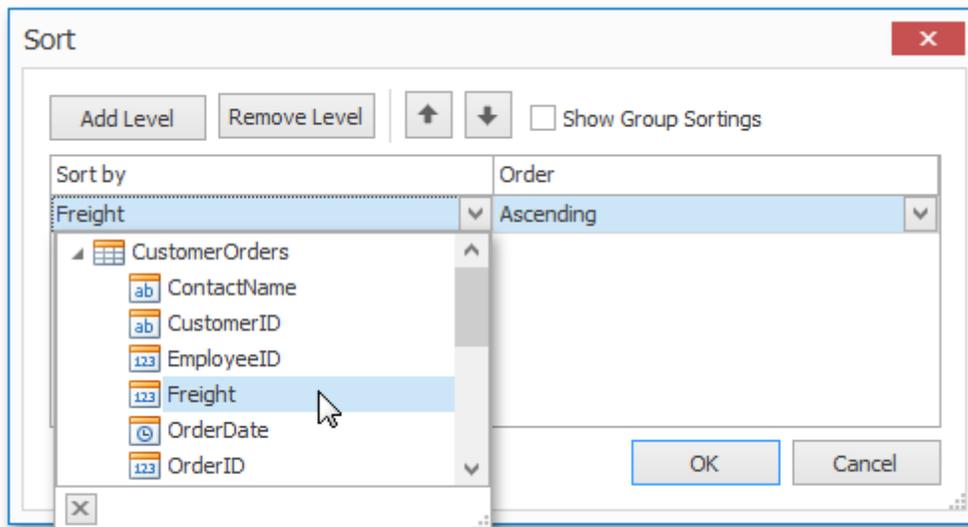
Sorting a **mail merge document** defines the order in which data entries will appear as pages of the final document.

To sort a mail merge document, do the following.

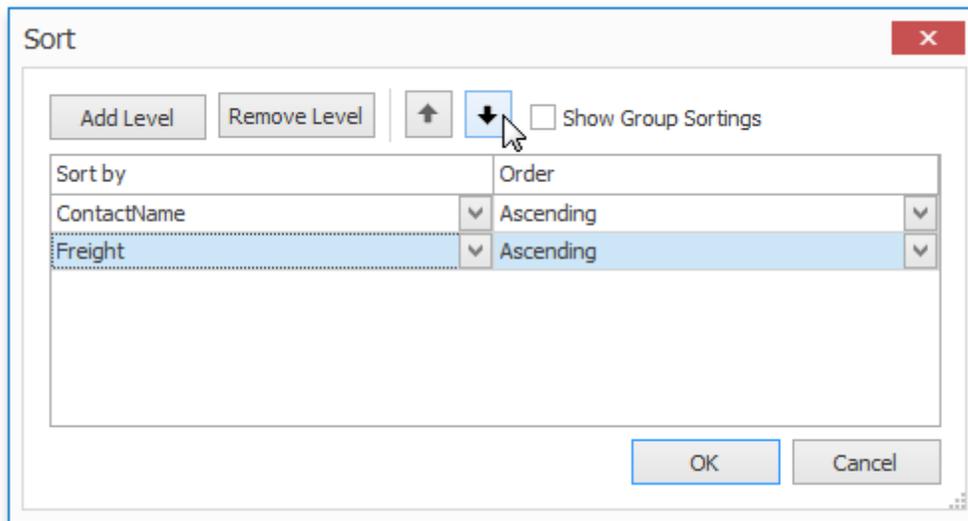
1. Switch to the **Mail Merge** tab of the main toolbar and click the **Sort** command.



2. Click the **Add Level** button in the invoked **Sort** dialog. Specify the sort criteria and sort order for the additional sort level.

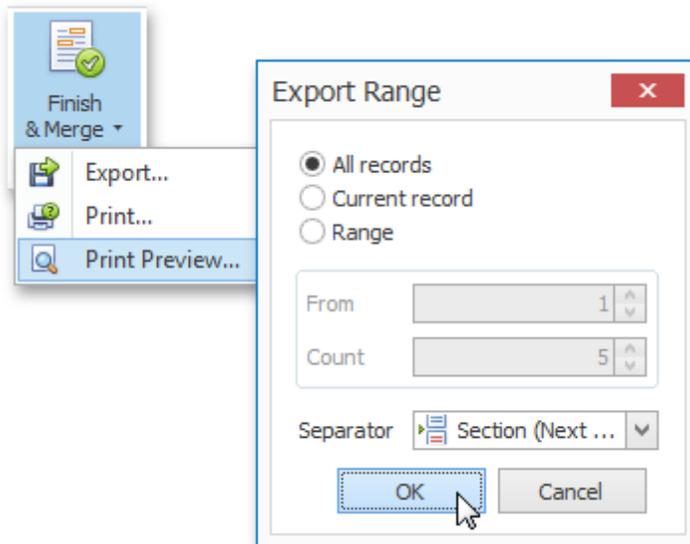


To change the order in which sort levels are applied to the document, use the arrow buttons.

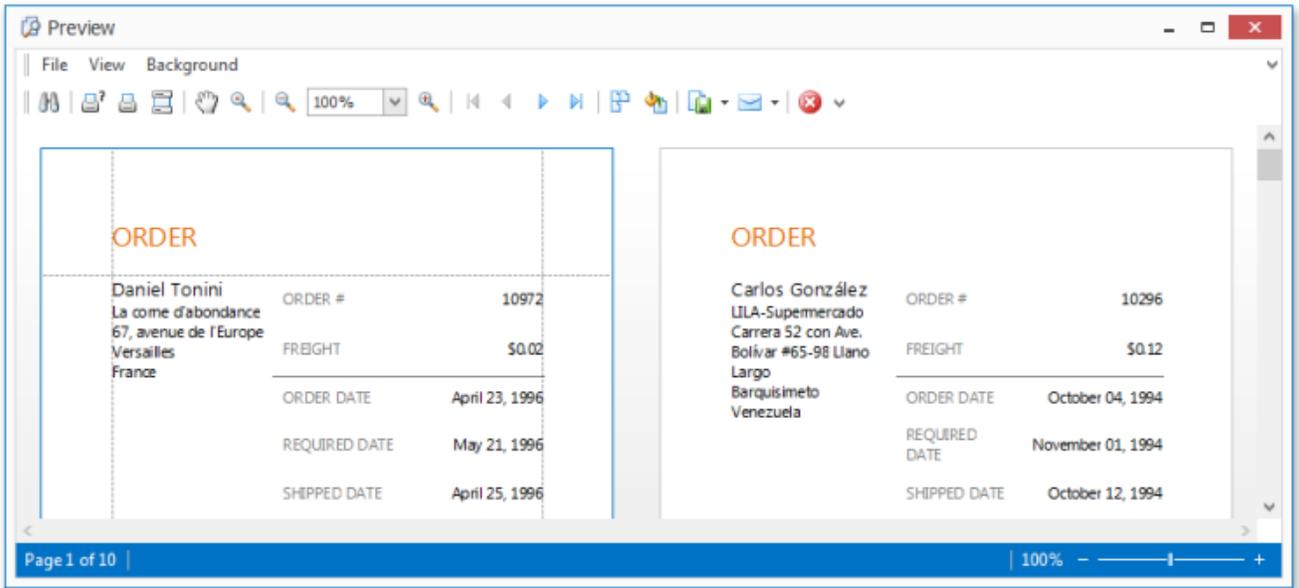


Click **OK** to exit the dialog.

3. To view the result, click the **Finish & Merge** button in the **Mail Merge** tab of the main toolbar, and select **Print Preview...** in the invoked drop-down menu. In the invoked **Export Range** dialog, select **All records** and click **OK**.



The following image demonstrates a print preview for a sorted mail merge document.



Pass Parameter Values

This document describes the main concepts for using parameters in **Snap**, and provides examples of their use in various tasks.

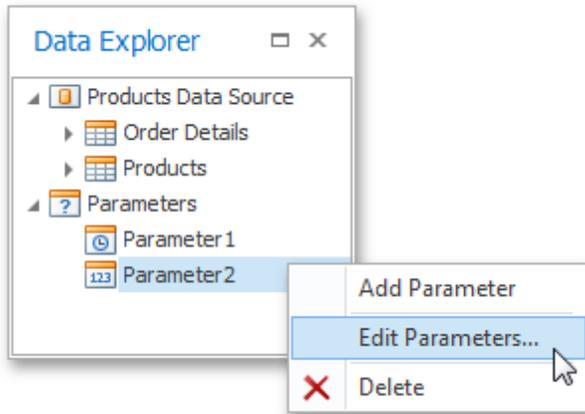
The document consists of the following sections.

- [Create Parameters](#)
- [Pass Parameter Values](#)

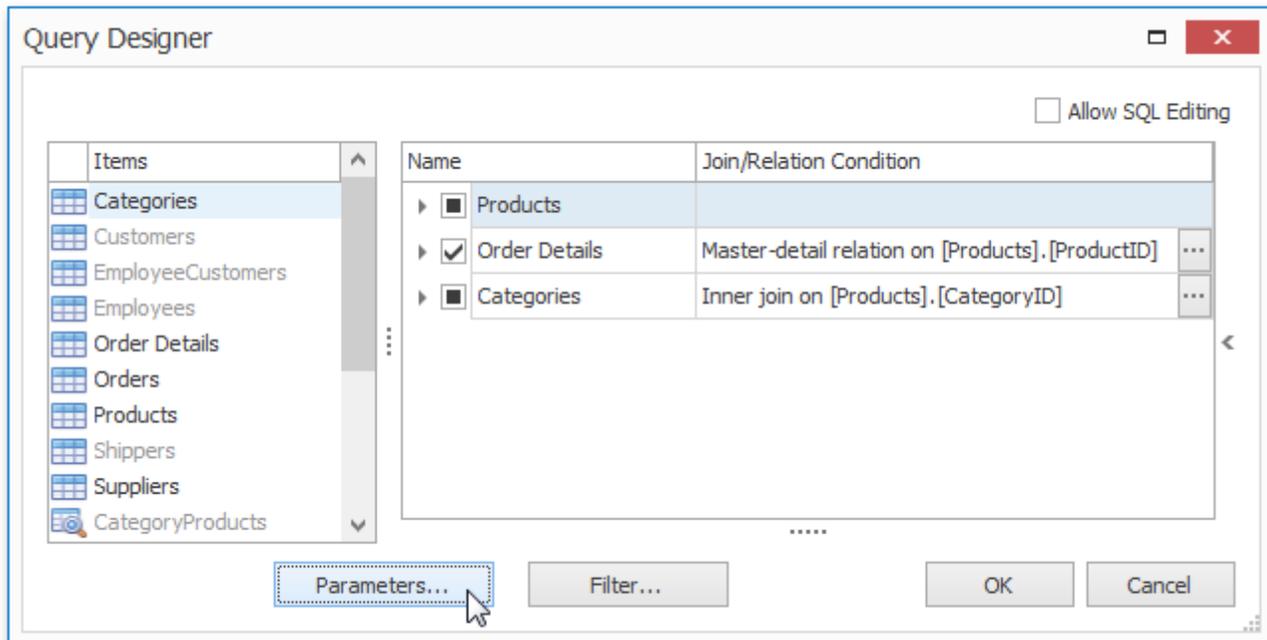
Create Parameters

You can manage the report parameters available for a Snap document using the **Parameters** dialog.

To invoke the **Parameters** dialog, right-click the **Parameters** node (or any of its sub-nodes) in the [Data Explorer](#) and select **EditParameters** in the invoked drop-down menu.

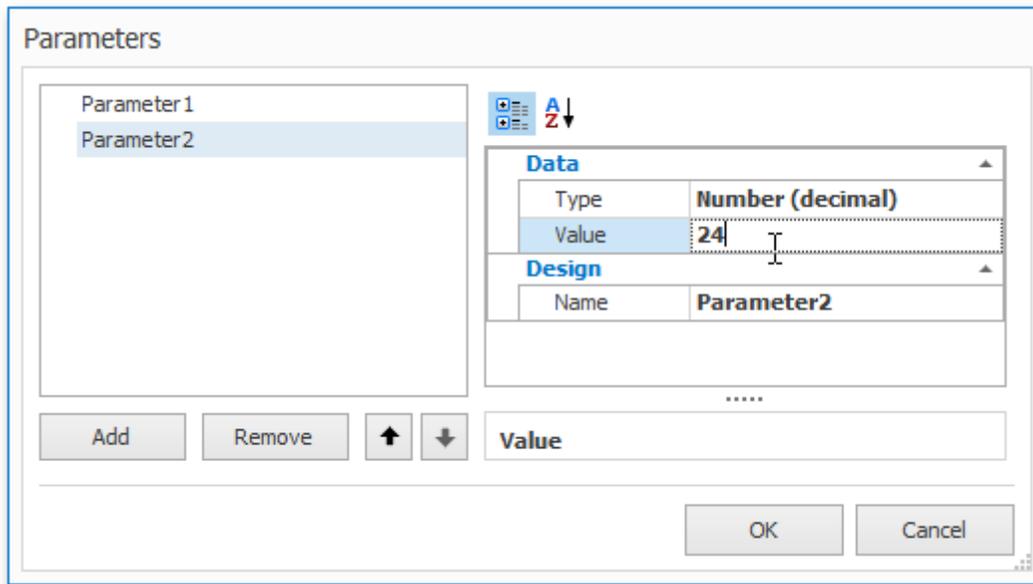


To invoke the **Parameters** dialog for a data source being edited with the [Query Designer](#), click the **Parameters** button.



The **Parameters** dialog allows you to add and remove parameters using the corresponding buttons. Alternatively, you can add or remove a parameter by right-clicking the parameter in the **Data Explorer** and selecting the required action in the invoked drop-down menu.

Select the newly added parameter and specify its properties in the properties grid. Be sure to specify the proper parameter type based on the parameter's intended use.

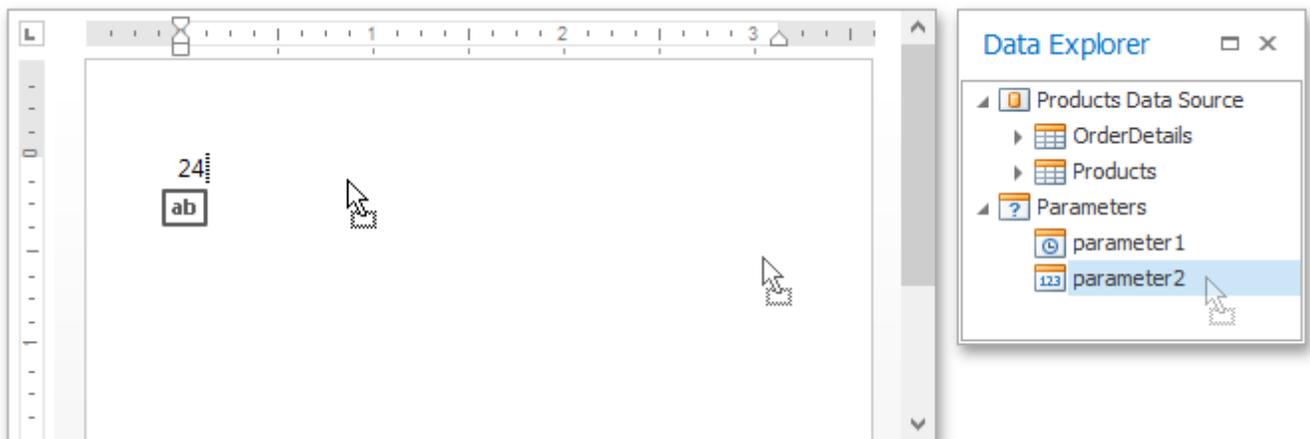


Pass Parameter Values

After a parameter is created, it can be used in different ways during report generation. Below is a list of tasks that can be accomplished using parameters.

- **Data Binding**

To display a parameter's value in a report, drag the parameter from the Field List and drop it onto the [Design Surface](#).

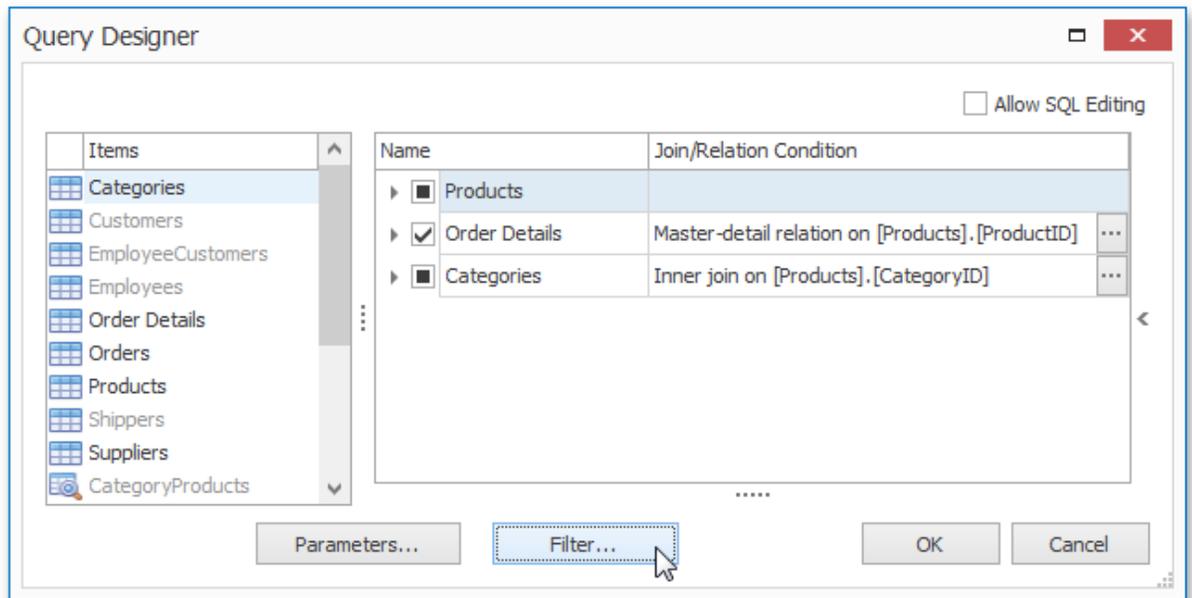


- **Filtering**

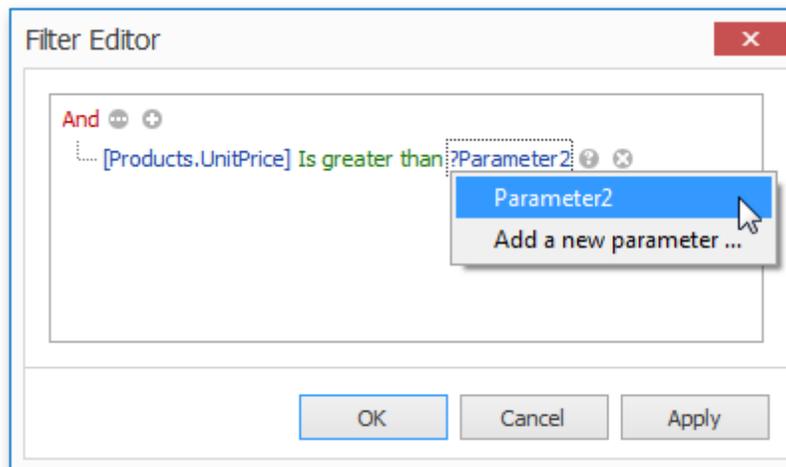
You can use a report parameter as part of a filtering expression to [filter the Snap document data](#) at either the report level or the data source level.

To filter the Snap document data at the data source level, do the following.

1. Invoke the **Query Designer** for the data source that you wish to filter.
2. In the **Query Designer**, click the **Filter** button to invoke the **Filter Editor**.

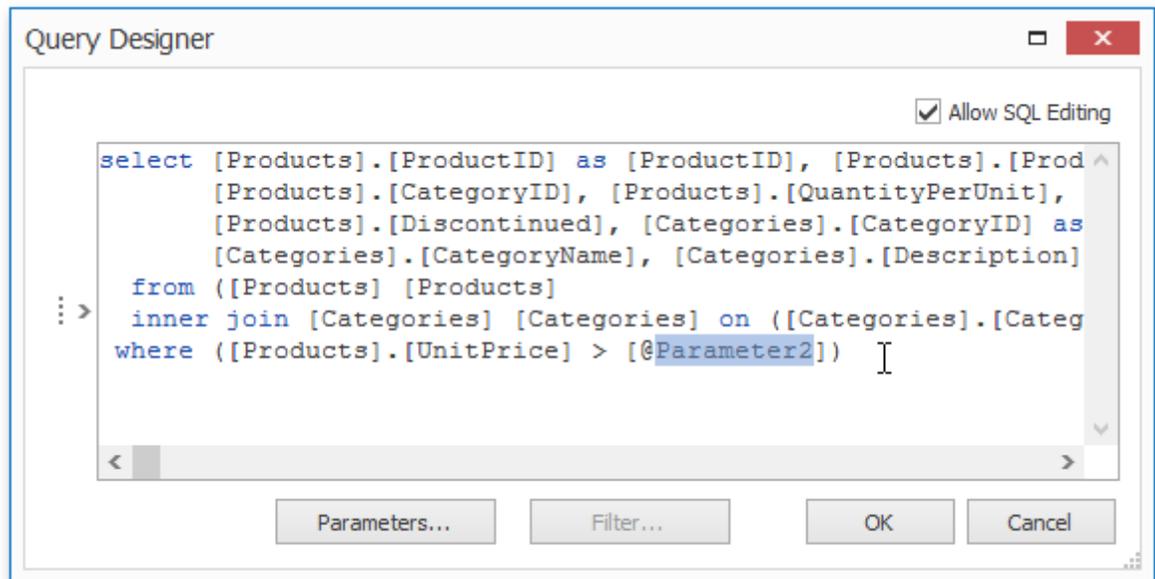


.3. In the **Filter Editor**, construct an expression where the parameter's value is used as a filtering criterion. To access the parameter, click the icon on the right. It will turn into a question mark.

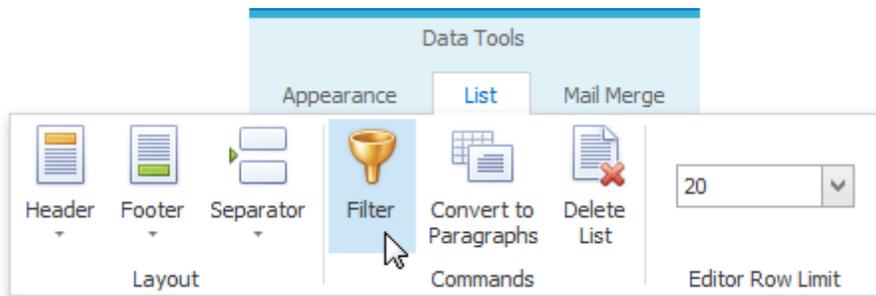


Click **OK** to exit the dialog.

The **SQL** query generated by the query designer will be updated to reflect the specified filtering.

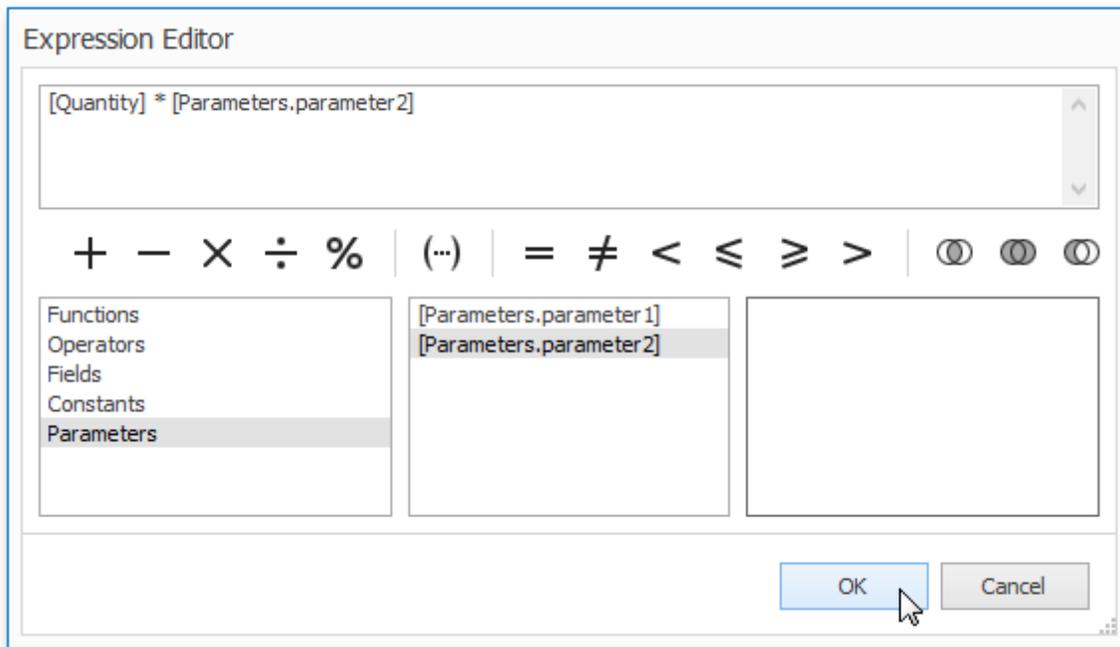


In a similar way, you can use the **Filter Editor** to filter the Snap document data at the report level. In this case, to invoke the **Filter Editor**, click the **Filter** button that resides on the [List](#) tab of the contextual **Data Tools** toolbar category.



- **Calculated Fields**

In addition to standard data fields, parameters can be used in expressions for [calculated fields](#). The only difference is that the data field is inserted into the expression's text using its name in [square brackets], while a parameter is inserted using the "**Parameters.**" prefix before its name.

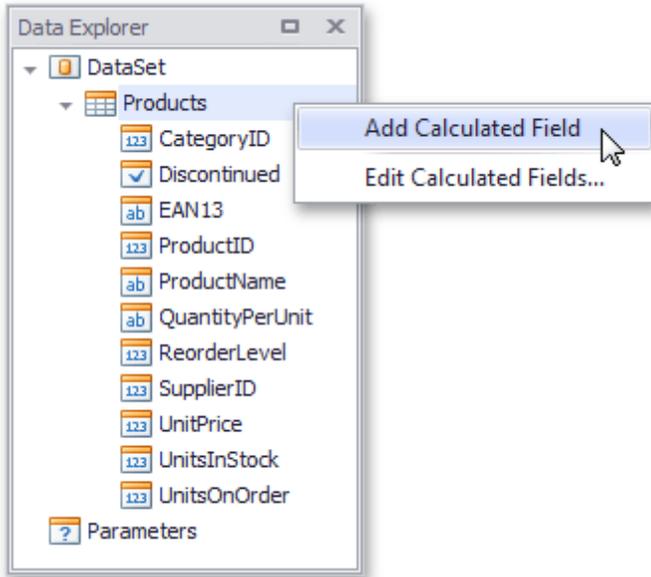


Use Calculated Fields

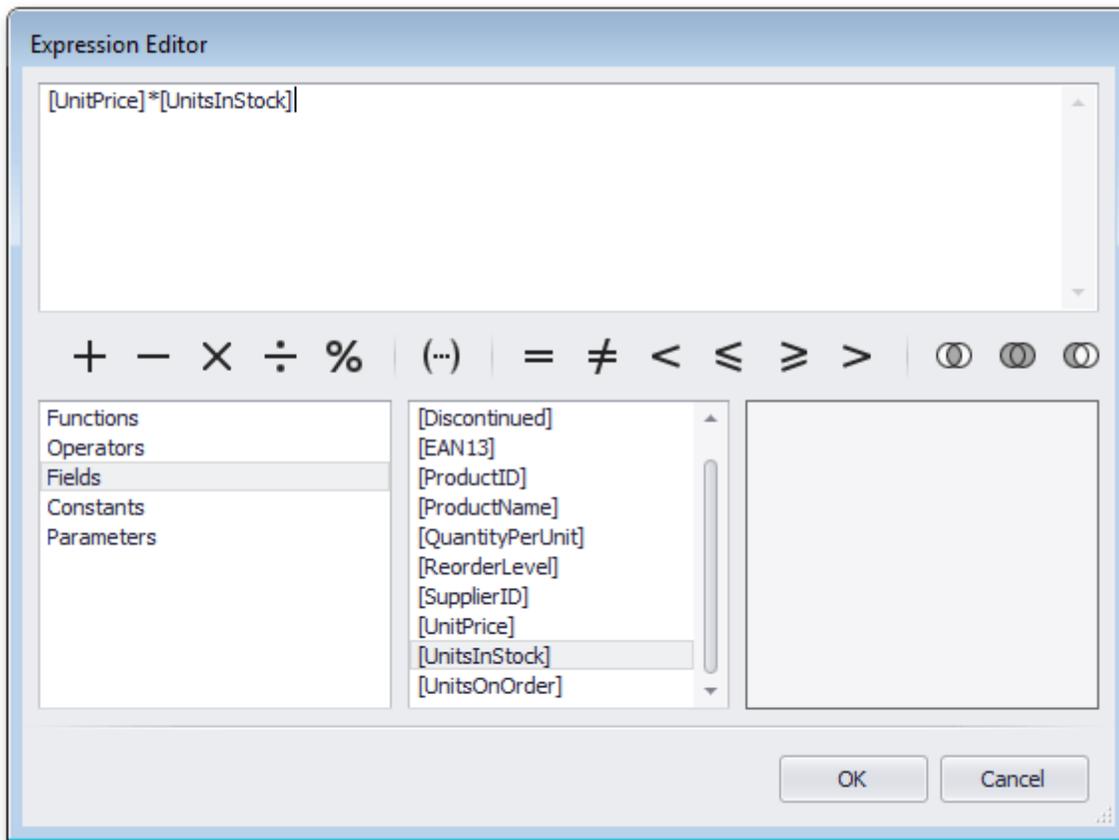
This document describes how to use **calculated fields** to evaluate custom expressions based on external data, and embed the results into a Snap document.

Use calculated fields to perform additional calculations on dynamic data and embed the results into a published document.

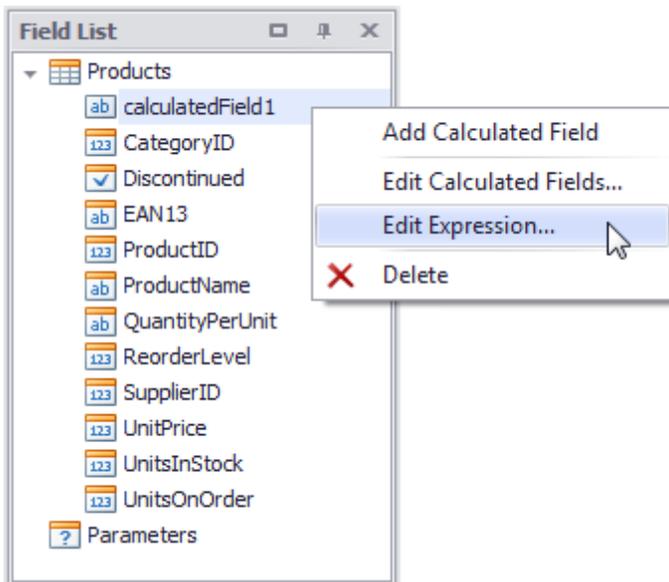
To create a calculated field and access its collection, invoke the context menu in the [Data Explorer](#).



A calculated field's expression can include conditional, date-time, mathematical and other formulas. It can also evaluate the values of other calculated fields, data source fields and [parameters](#).



The **Expression Editor** is invoked by right-clicking a calculated field and choosing the **Edit Expression** item in the invoked popup menu.



After a calculated field is inserted into a document, its value is evaluated each time the document is set to be published.

Use the Query Designer

This topic describes how to use the **Query Designer** to manage data tables and their relations in a Snap data model (e.g., to create master-detail data sources), filter incoming data and specify a custom SQL string.

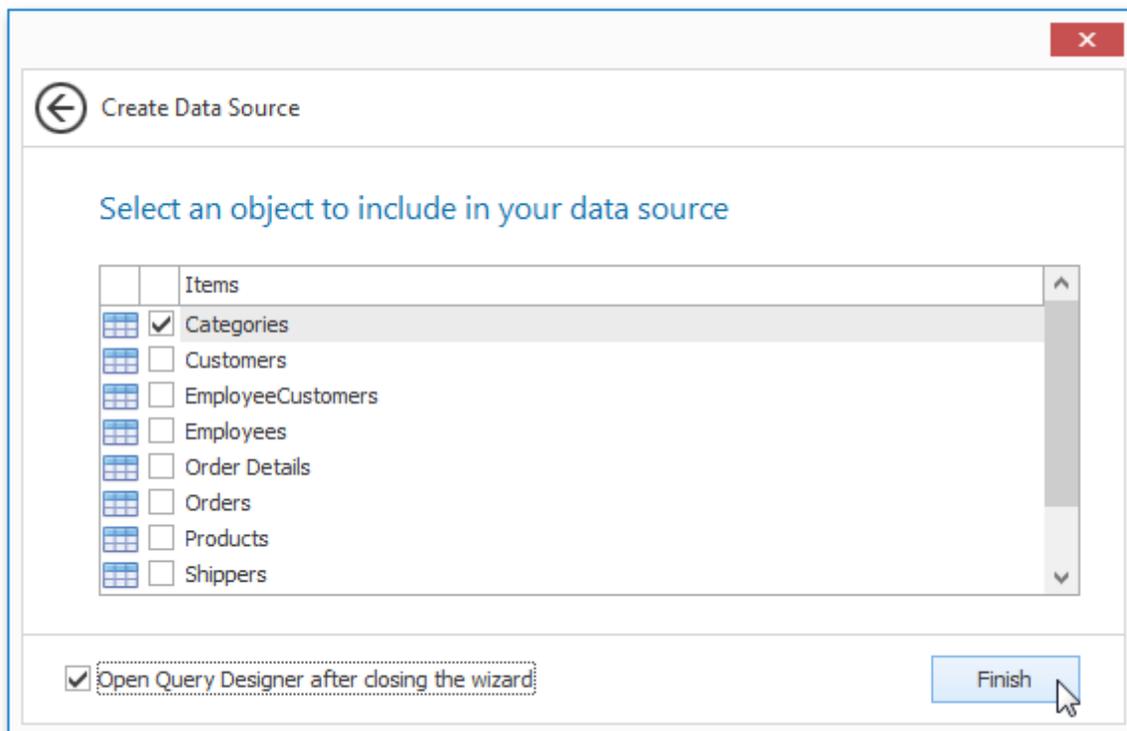
The Query Designer displays the structure of a connected data source along with its associated Snap data model. When designing a report, this data model is reflected in the [Data Explorer](#).

This topic includes the following sections.

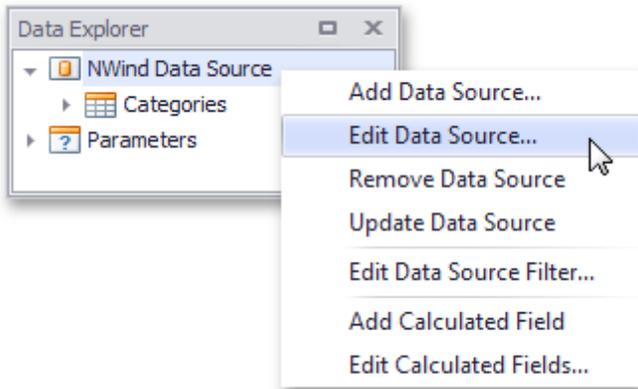
- [Run the Query Designer](#)
- [Manage Data Tables and their Relations](#)
- [Shape Data](#)

Run the Query Designer

An option to invoke the Query Designer is provided on the last page of the **Create Data Source wizard**. The Create Data Source wizard is invoked at [connecting a Snap document to a Data Source](#). Select the "**Open Query Designer after closing the wizard**" option before clicking **Finish**.



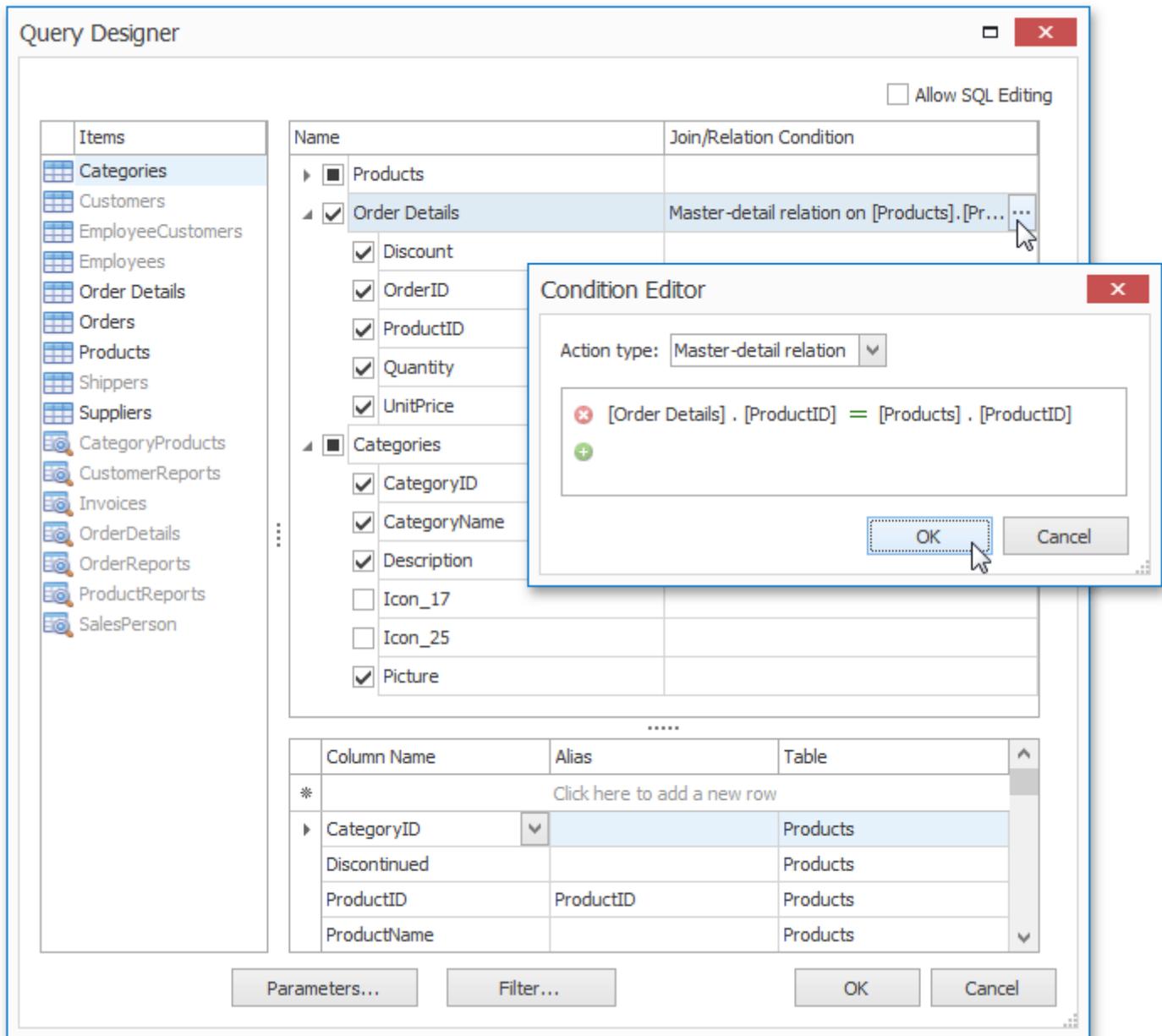
Alternatively, you can run the Query Designer by right-clicking a data source in the [Data Explorer](#) and clicking **Edit Data Source** in the invoked menu.



Manage Data Tables and their Relations

To modify a relation assigned to a specific table, click its corresponding ellipsis button in the Snap data source editor.

This invokes the **Condition Editor**, which allows you to include other tables in the new data relation and select the relation type (**Inner join**, **Left outer join** or **Master-detail relation**).



The **Condition Editor** is automatically invoked after adding a new table to a Snap data model.

The Query Designer highlights the tables of an external data source that is related to the tables of a Snap data model by one or more primary keys.

To maintain the visibility of data columns in the [Data Explorer](#), use the corresponding check boxes in a specific table's column list.

Name	Join/Relation Condition
▶ <input checked="" type="checkbox"/> Products	
▶ <input checked="" type="checkbox"/> Order Details	Master-detail relation on [Products].[ProductID] ...
▶ <input checked="" type="checkbox"/> Categories	Inner join on [Products].[CategoryID] ...
▲ <input checked="" type="checkbox"/> CategoryProducts	
<input checked="" type="checkbox"/> CategoryName	
<input checked="" type="checkbox"/> Description	
<input checked="" type="checkbox"/> Picture	
<input type="checkbox"/> ProductID	
<input checked="" type="checkbox"/> ProductName	
<input type="checkbox"/> SupplierID	

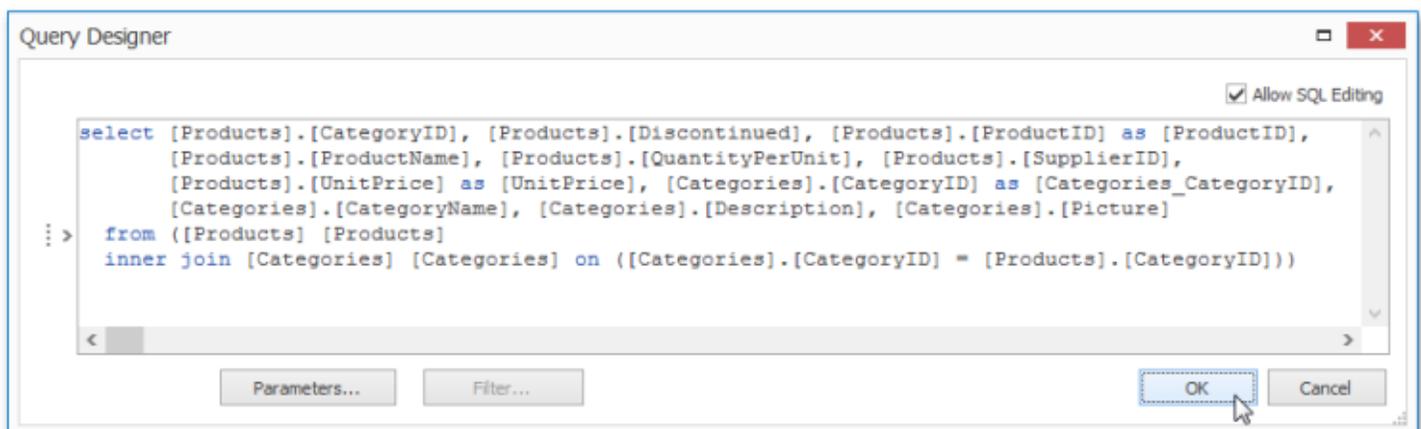
In this list, the primary key columns display a **'plus'** button, which invokes a list of related tables. Clicking a table in this list adds it to the Snap data source.

Name	Join/Relation Condition
▶ <input checked="" type="checkbox"/> Products	
▲ <input checked="" type="checkbox"/> Order Details	Master-detail relation on [Products].[ProductID] ...
<input checked="" type="checkbox"/> Discount	
<input checked="" type="checkbox"/> OrderID	+
<input checked="" type="checkbox"/> ProductID	+
<input checked="" type="checkbox"/> Quantity	
<input checked="" type="checkbox"/> UnitPrice	
▶ <input checked="" type="checkbox"/> Categories	Inner join on [Products].[CategoryID] ...

Join Orders

A Snap data source corresponds to an SQL query that is executed each time external data is supplied from a database.

To manually customize an SQL string, enable the **Allow SQL Editing** option. Switching to this mode disables the visual features of the Query Designer in favor of the specified SQL string value.

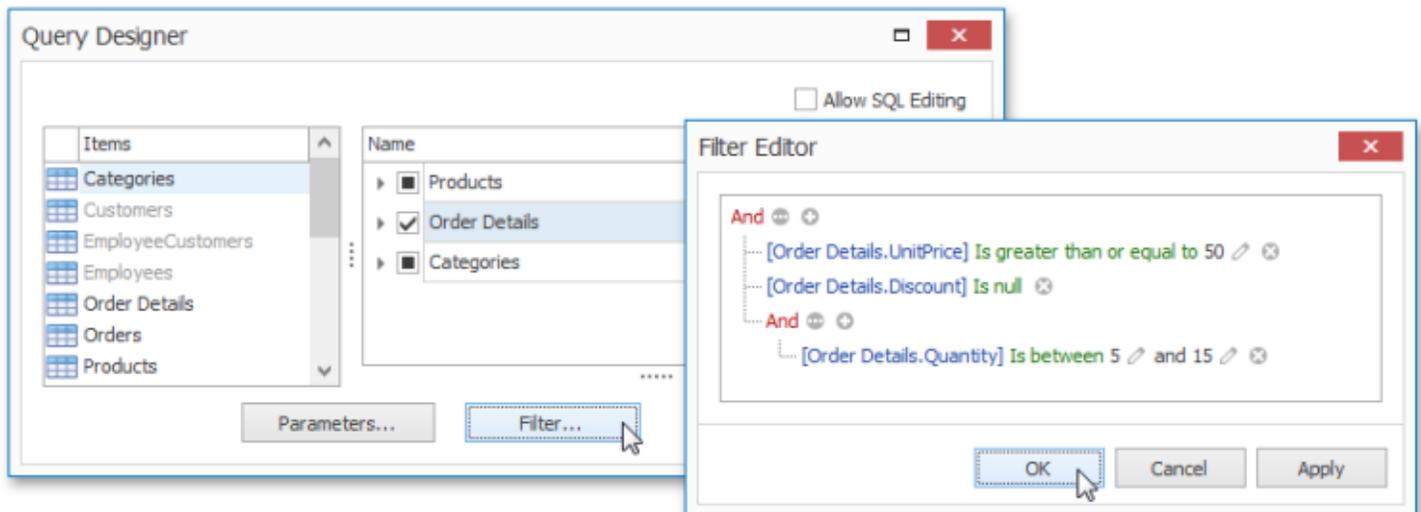


Shape Data

To assign a custom name to the selected data column, specify its **Alias** in the column list displayed under the Snap data source editor.

	Column Name	Alias	Table
*	Click here to add a new row		
I	SupplierID		Products
	EAN13	Bar code	Products
	Discount		Order Details
	OrderID		Order Details
	ProductID		Order Details
	Quantity		Order Details
	UnitPrice		Order Details
	CategoryID	Categories_CategoryID	Categories

To specify the filter criteria that is applied to incoming data, click the **Filter** button, which invokes the **FilterString Editor**.



Create a Report Layout

Topics in this section provide information on creating reports with different layouts in Snap.

- [Create a Mail-Merge Report](#)
- [Create a Master-Detail Report](#)
- [Create a Table Report](#)
- [Create a Multi-Column Report](#)
- [Create a Side-by-Side Report](#)
- [Create a Parameterized Report](#)
- [Create a Chart-Based Report](#)
- [Create a Combined Report Layout](#)

Create a Mail-Merge Report

This tutorial illustrates the steps required to create and publish a mail merge report with **Snap**.

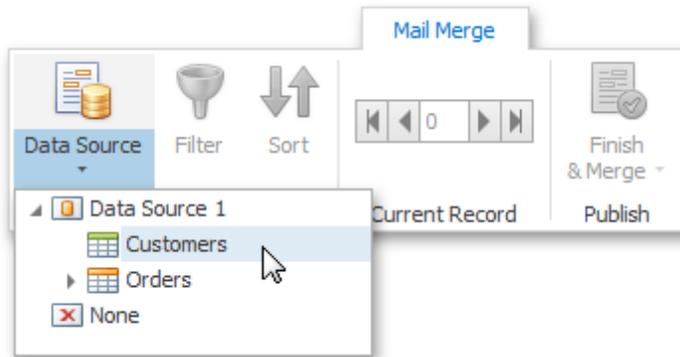
The tutorial contains following sections.

- [Add Dynamic Content](#)
- [Preview and Publish the Document](#)

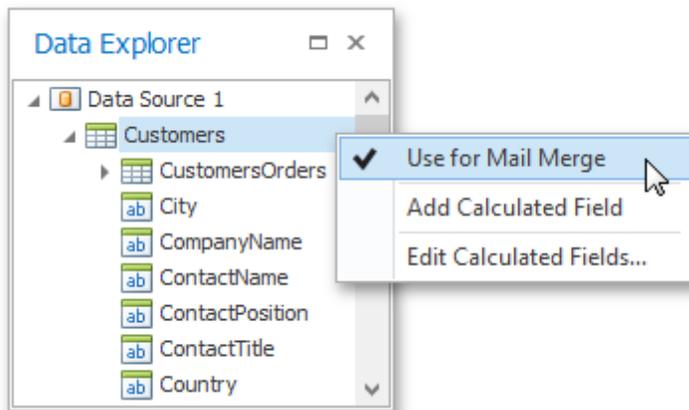
Add Dynamic Content

To create a Snap report using a document template, do the following.

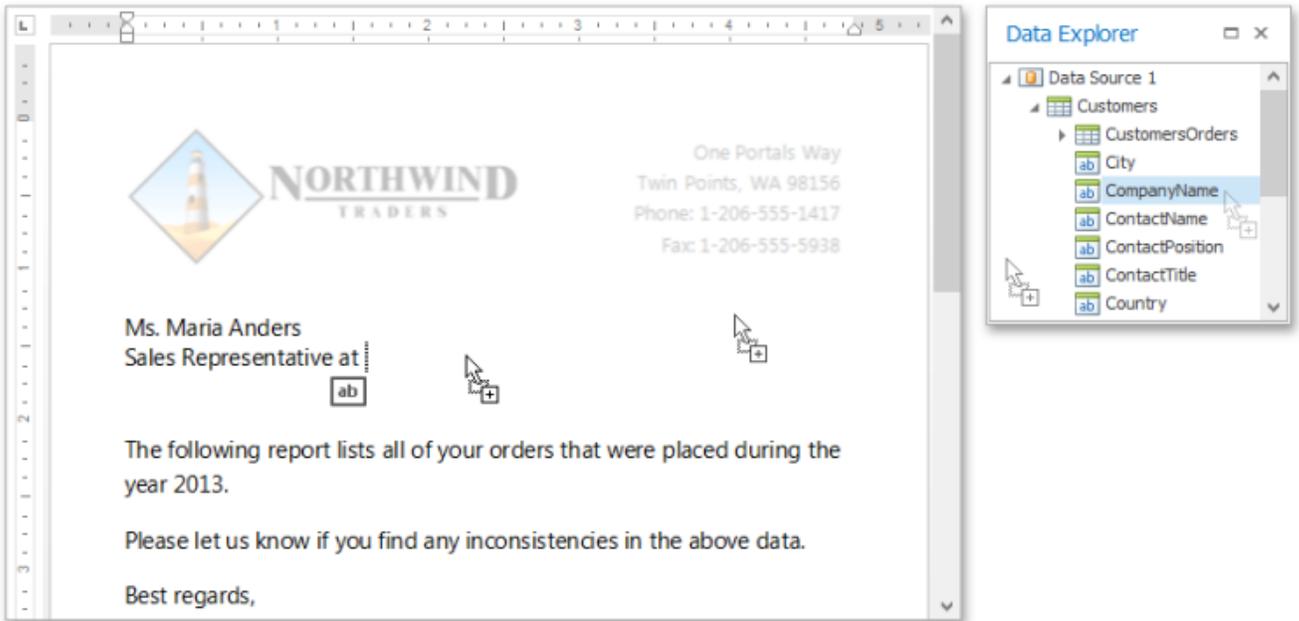
1. Add a new Snap document and [provide it with a master-detail data connection](#).
2. Next, specify which data source will be used for mail merge. To do this, click the **Data Source** button on the [Data Tools: Mail Merge](#) tab and select the required data source in the invoked drop-down list.



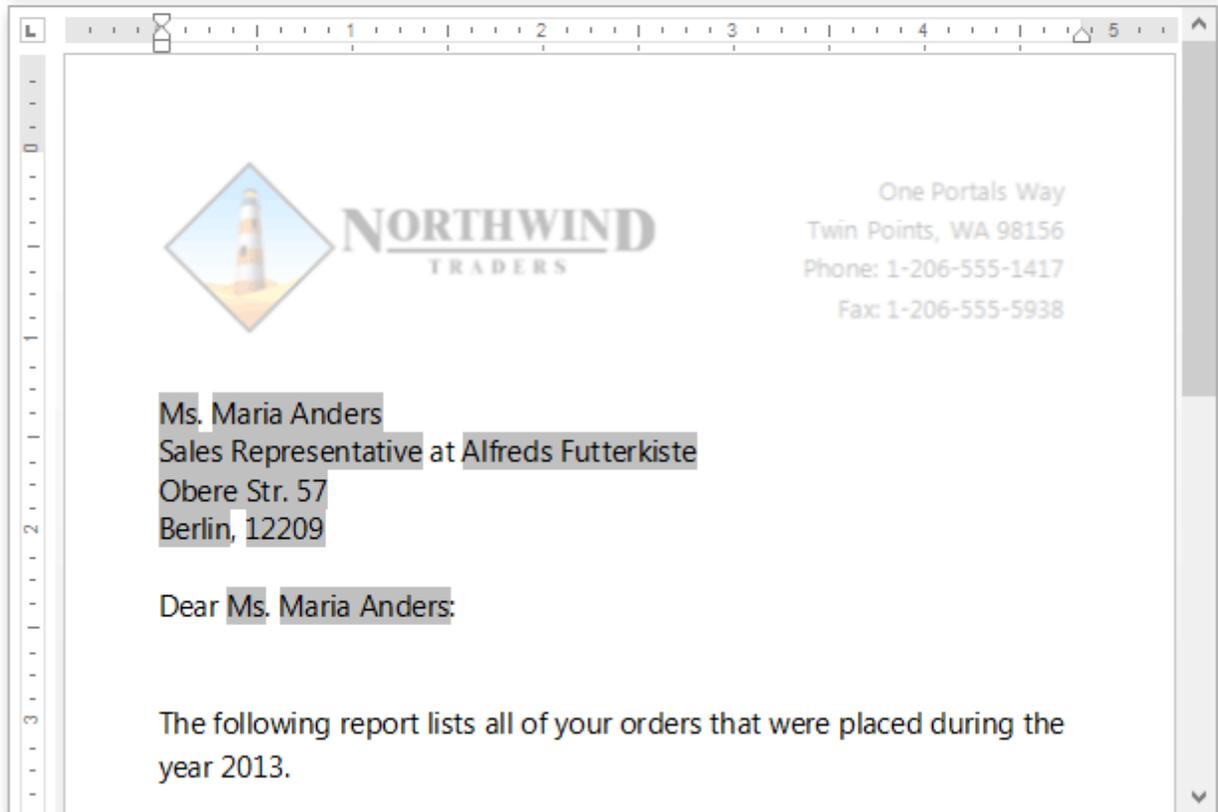
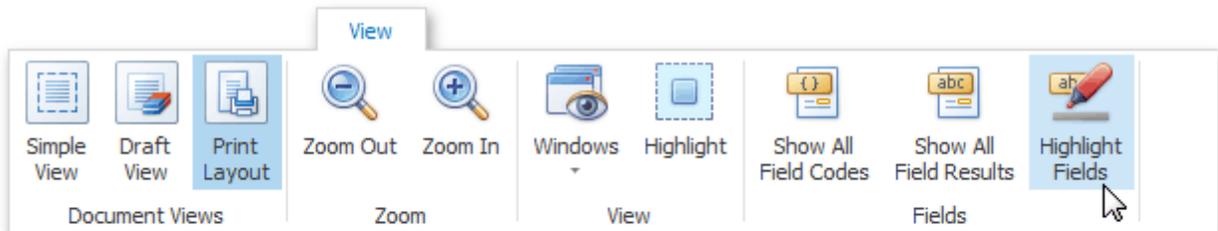
Alternatively, right-click the required data source in the Data Explorer and select **Use For Mail Merge** in the invoked drop-down menu.



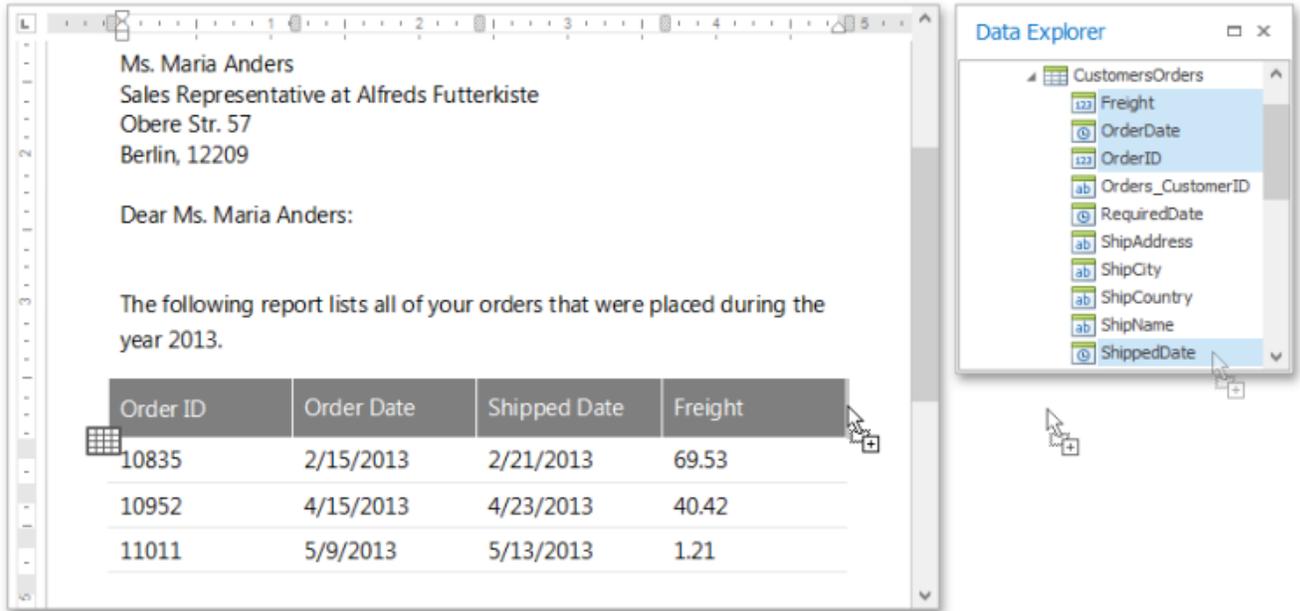
3. To insert data bound fields into the document, drag-and-drop data fields from the [Data Explorer](#) onto the [Design Surface](#).



Activate the **Highlight Fields** option from the [View](#) tab of the main toolbar to highlight all mail merge fields in a document. This allows you to easily distinguish between dynamic and static content.

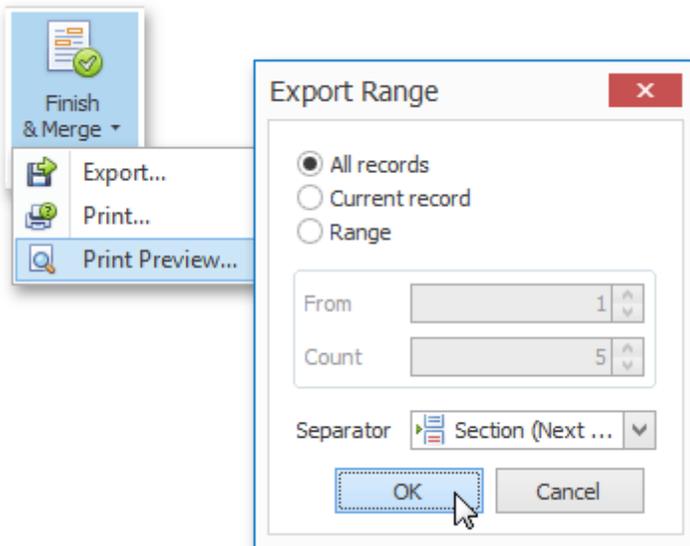


4. To insert a detail report section, drag-and-drop fields from a subordinate node of the data source. Fields of a nested level of a mail-merge data source are inserted into a template as columns of a table.



Preview and Publish the Document

The Snap mail merge document is now ready. To view the result, click the **Finish & Merge** button in the **Mail Merge** tab, and select **Print Preview...** in the invoked drop-down menu. In the invoked **Export Range** dialog, select **All records** and click **OK**.



The following image illustrates a print preview for the final document.

Preview
- □ ×

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NORTHWIND
TRADERS

One Portals Way
 Twin Points, WA 98156
 Phone: 1-206-555-1417
 Fax: 1-206-555-5938

Mr. Paolo Accorti
 Sales Representative at Franchi S.p.A.
 Via Monte Bianco 34
 Torino, 10100

Dear Mr. Paolo Accorti:

The following report lists all of your orders that were placed during the year 2013.

Order ID	Order Date	Shipped Date	Freight
10807	1/31/2013	3/1/2013	1.36
11026	5/15/2013	5/28/2013	47.09
11060	5/30/2013	6/3/2013	10.98

Please let us know if you find any inconsistencies in the above data.

Best regards,
 John Smith
 Marketing Director
 Northwind Traders



NORTHWIND
TRADERS

One Portals Way
 Twin Points, WA 98156
 Phone: 1-206-555-1417
 Fax: 1-206-555-5938

Mr. Lino Rodriguez
 Sales Manager at Furla Bacalhau e Frutos do Mar
 Jardim das rosas n. 32
 Lisboa, 1675

Dear Mr. Lino Rodriguez:

The following report lists all of your orders that were placed during the year 2013.

Order ID	Order Date	Shipped Date	Freight
10963	4/18/2013	4/25/2013	2.7

Please let us know if you find any inconsistencies in the above data.

Best regards,
 John Smith
 Marketing Director
 Northwind Traders

Page 37 of 132
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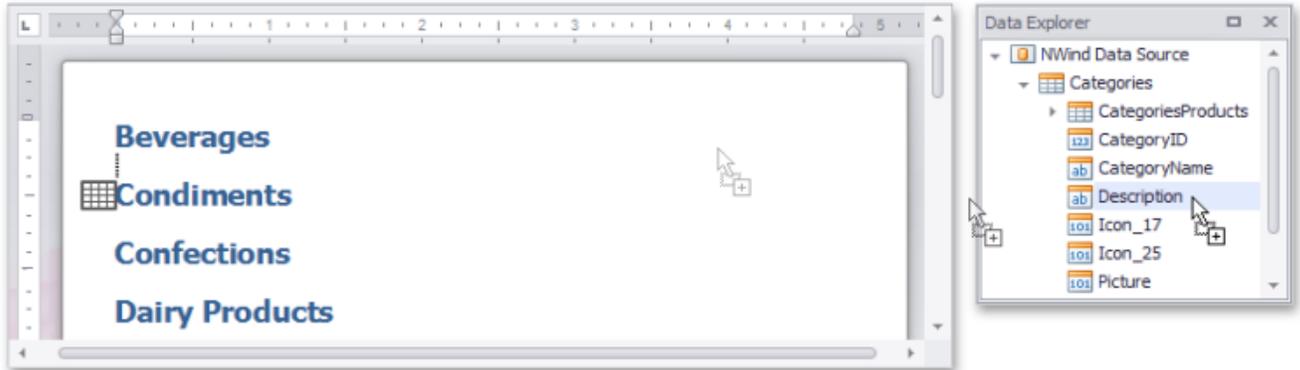
Create a Master-Detail Report

This document will guide you through the process of creating a master-detail report. Reports of this type are built upon hierarchical data sources, so to be able to create a master-detail report, you need to provide a report data source with a master-detail relation.

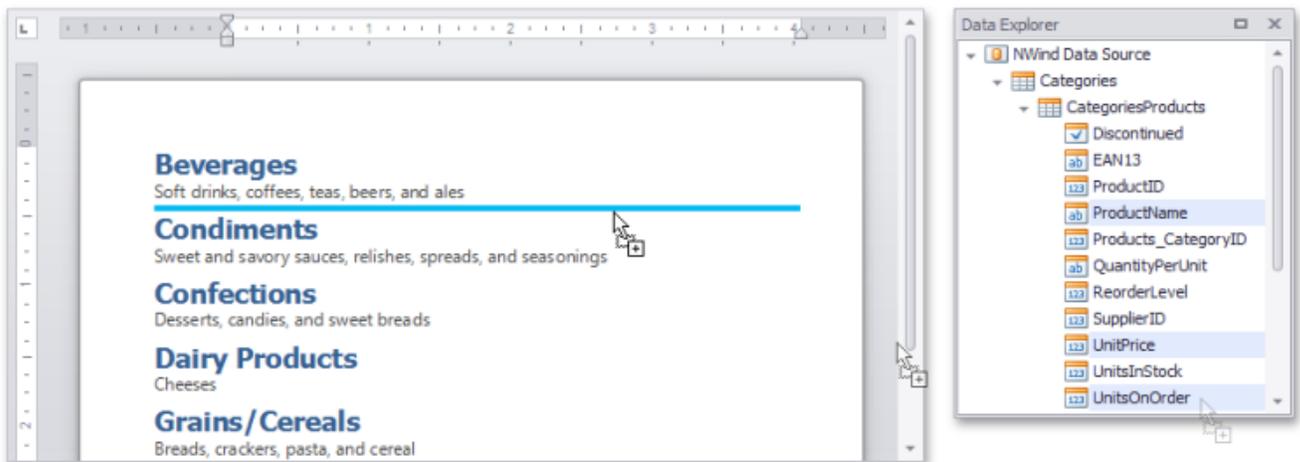
To get started with this tutorial, create a new Snap document and [add a master-detail relation](#) to it.

Perform the following steps to create a master-detail report.

1. Create a master report. To do this, drag-and-drop data fields of the master data table from the [Data Explorer](#) to the design surface. You can use any type of layout.



2. To create a detail report, drag-and-drop data fields of the detail data table from the **Data Explorer** onto the lower border of the master report's data row, as shown in the image below.



3. The master-detail report is now ready. Click the **Print Preview** button in the [General Tools: File](#) tab of the main toolbar to view the preview.

The screenshot shows a 'Preview' window with a menu bar (File, View, Background) and a toolbar containing various icons for navigation and zooming. The main content area displays a report with the following structure:

Beverages

Soft drinks, coffees, teas, beers, and ales

ProductName	UnitPrice	UnitsInStock
Chai	\$18.00	39
Chang	\$19.00	17
Guaraná Fantástica	\$4.50	20
Sasquatch Ale	\$14.00	111
Steeleye Stout	\$18.00	20
Côte de Blaye	\$263.50	17
Chartreuse verte	\$18.00	69
Ipoh Coffee	\$46.00	17
Laughing Lumberjack Lager	\$14.00	52
Outback Lager	\$15.00	15
Rhönbräu Klosterbier	\$7.75	125
Lakkalikööri	\$18.00	57

Page 1 of 4

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Create a Table Report

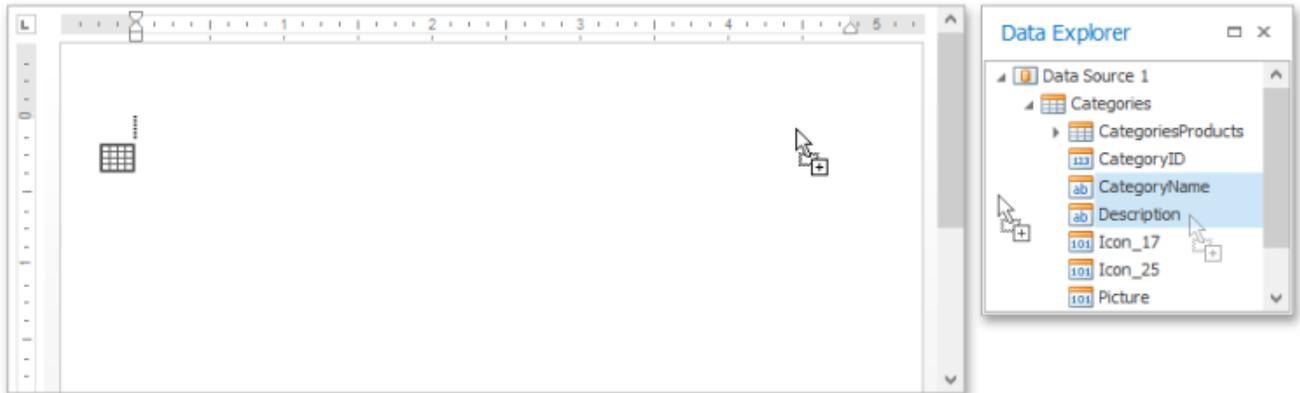
This tutorial will guide you through the process of creating a **Table Report**, and printing and saving it to your hard drive.

The table report is a data-aware **Snap** report with a tabular master-detail layout.

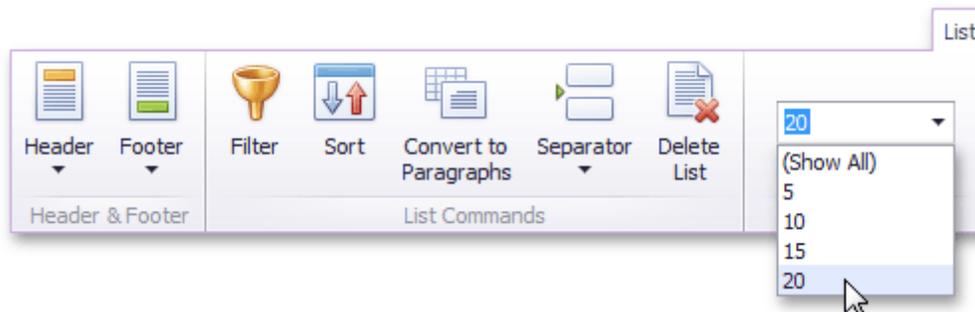
To get started with this tutorial, create a new Snap document and provide a hierarchical data source for it, as described in the [Create a Master-Detail Data Source](#) topic.

To create a master-detail Snap document layout, do the following.

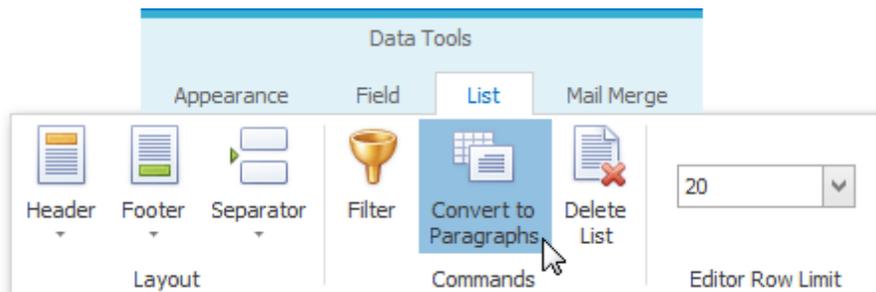
1. Create a simple tabular report by selecting the data fields that you wish to include in the report in the [Data Explorer](#) and dragging them to the [Design Surface](#). When you drop data fields onto the empty space in the document body, they are added as columns of a table. You can select multiple data fields by pressing **CTRL** or **SHIFT**.



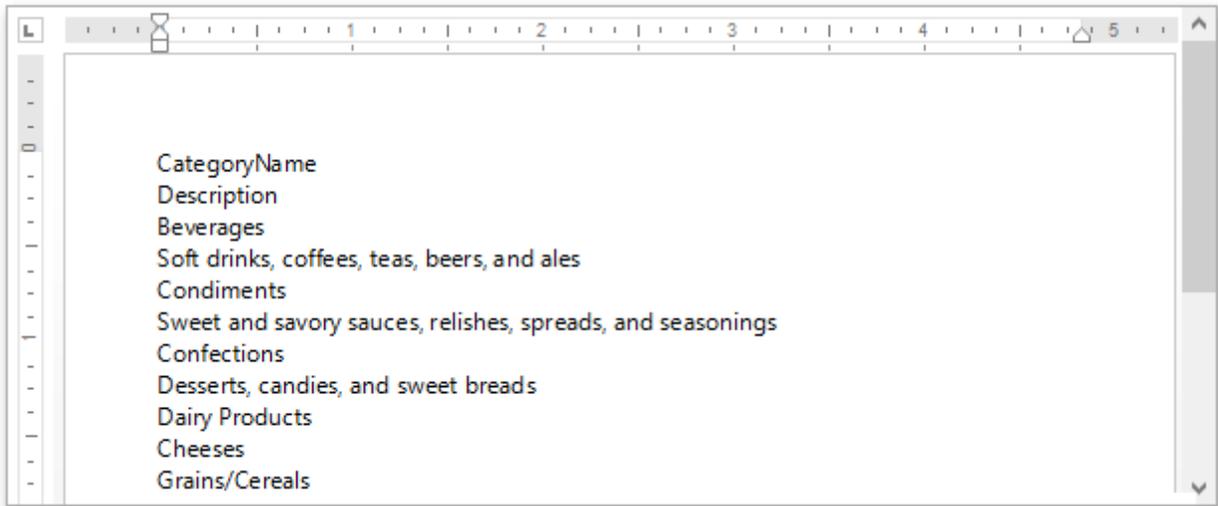
To improve performance, Snap shows only the first **20** data rows of a Snap list by default. To change this setting, use the **Editor Row Limit** option, which is located on the [List](#) tab of the main toolbar.



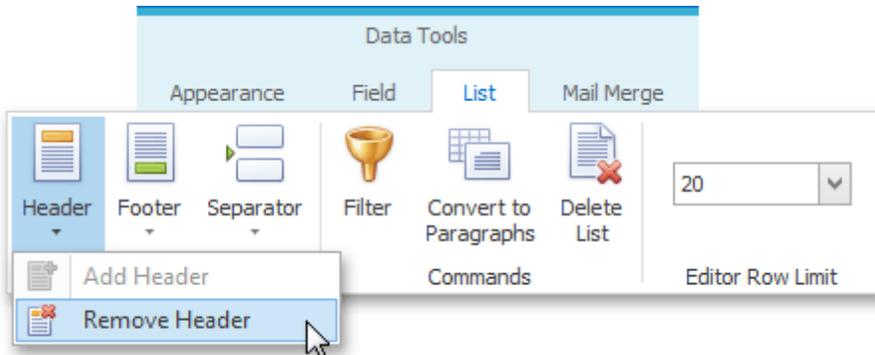
2. To convert the layout of a Snap list to a paragraph presentation, select the Snap list you wish to convert and click the **Convert to Paragraphs** command in the **List** tab of the contextual **Data Tools** toolbar category. Note that there is no reverse action allowing you to convert a Snap list back to the tabbed form.



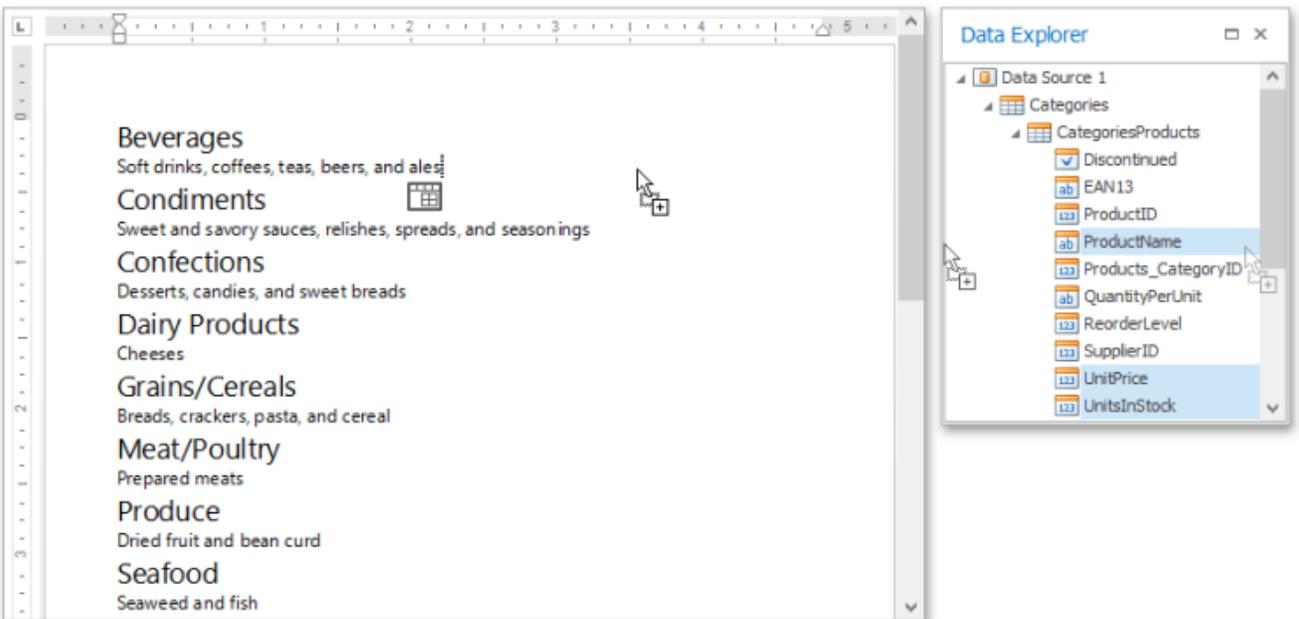
The report should now appear as shown in the following image.



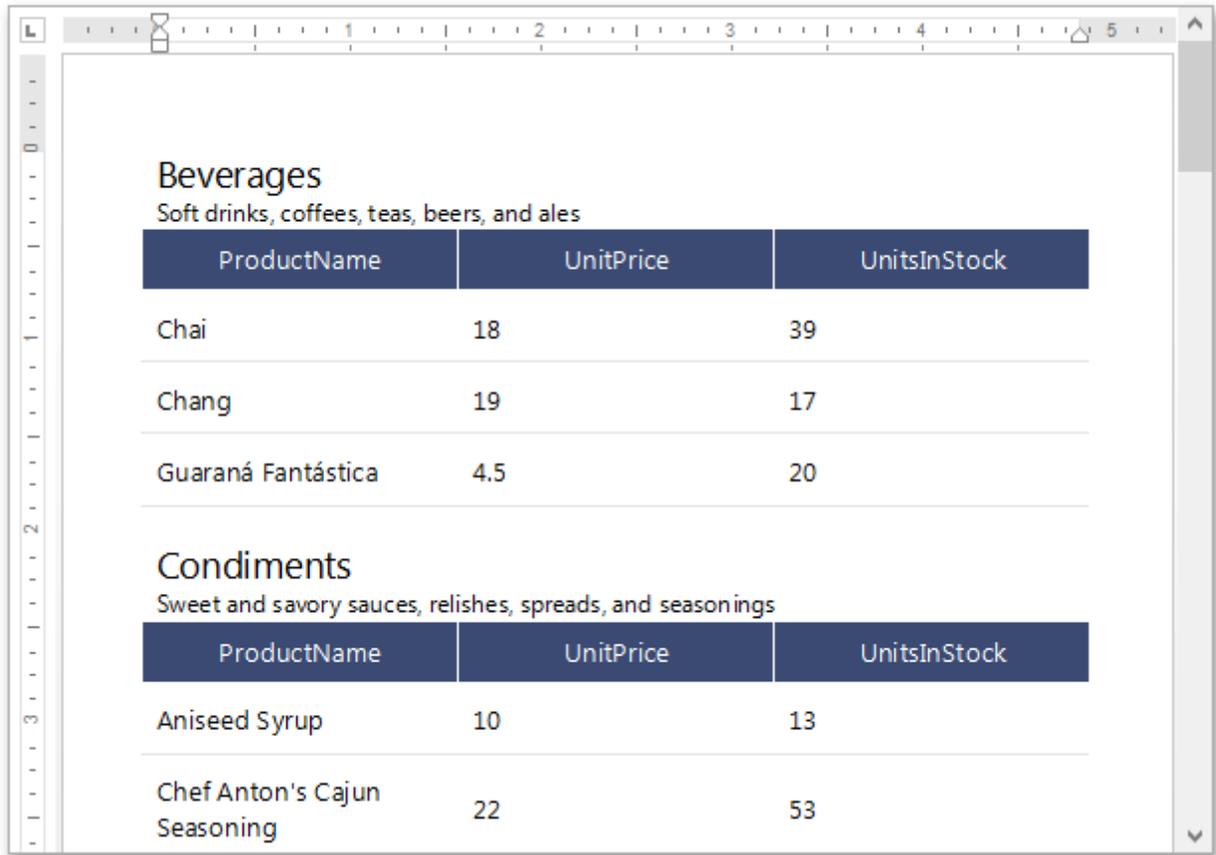
To remove a list header, select the Snap list, click the **Header** command in the **List** tab of the main toolbar, and select **Remove Header** in the invoked drop-down menu.



3. To create a detail report, drag data fields from the child data table in the **Data Explorer** onto the lower border of the master report's data row, as shown in the image below.



The added detail part will have a tabular form by default.



The screenshot shows a window with a toolbar at the top and a scrollable content area. The content area displays two tables. The first table is titled "Beverages" with the subtitle "Soft drinks, coffees, teas, beers, and ales". It has three columns: "ProductName", "UnitPrice", and "UnitsInStock". The data rows are: Chai (UnitPrice: 18, UnitsInStock: 39), Chang (UnitPrice: 19, UnitsInStock: 17), and Guaraná Fantástica (UnitPrice: 4.5, UnitsInStock: 20). The second table is titled "Condiments" with the subtitle "Sweet and savory sauces, relishes, spreads, and seasonings". It also has three columns: "ProductName", "UnitPrice", and "UnitsInStock". The data rows are: Aniseed Syrup (UnitPrice: 10, UnitsInStock: 13) and Chef Anton's Cajun Seasoning (UnitPrice: 22, UnitsInStock: 53).

Beverages		
Soft drinks, coffees, teas, beers, and ales		
ProductName	UnitPrice	UnitsInStock
Chai	18	39
Chang	19	17
Guaraná Fantástica	4.5	20

Condiments		
Sweet and savory sauces, relishes, spreads, and seasonings		
ProductName	UnitPrice	UnitsInStock
Aniseed Syrup	10	13
Chef Anton's Cajun Seasoning	22	53

4. To preview your Snap document click the **Print Preview** button in the [General Tools: File](#) tab of the main toolbar.

The screenshot shows a 'Print Preview' window in a Snap Reporting Engine. The window title is 'Preview'. It features a menu bar with 'File', 'View', and 'Background'. Below the menu bar is a toolbar with various icons for navigation and printing. The main content area displays a report titled 'Beverages' with the subtitle 'Soft drinks, coffees, teas, beers, and ales'. The report contains a table with the following data:

ProductName	UnitPrice	UnitsInStock
Chai	18	39
Chang	19	17
Guaraná Fantástica	4.5	20
Sasquatch Ale	14	111

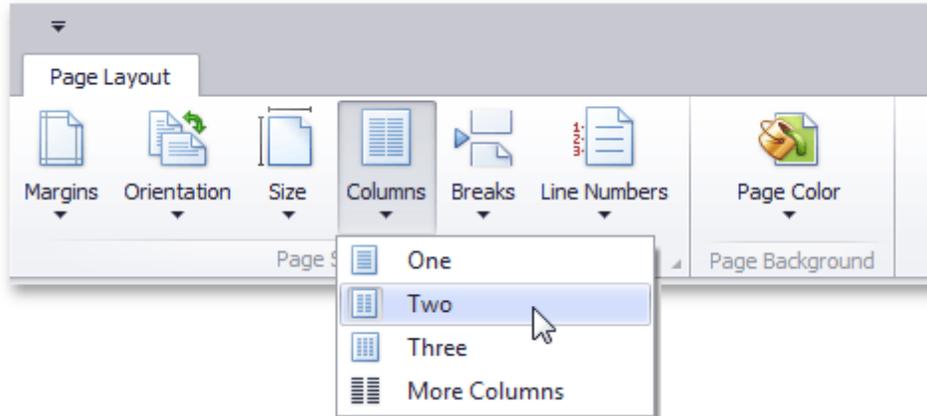
The status bar at the bottom of the window shows 'Page 1 of 6' and a zoom level of '100%'.

Create a Multi-Column Report

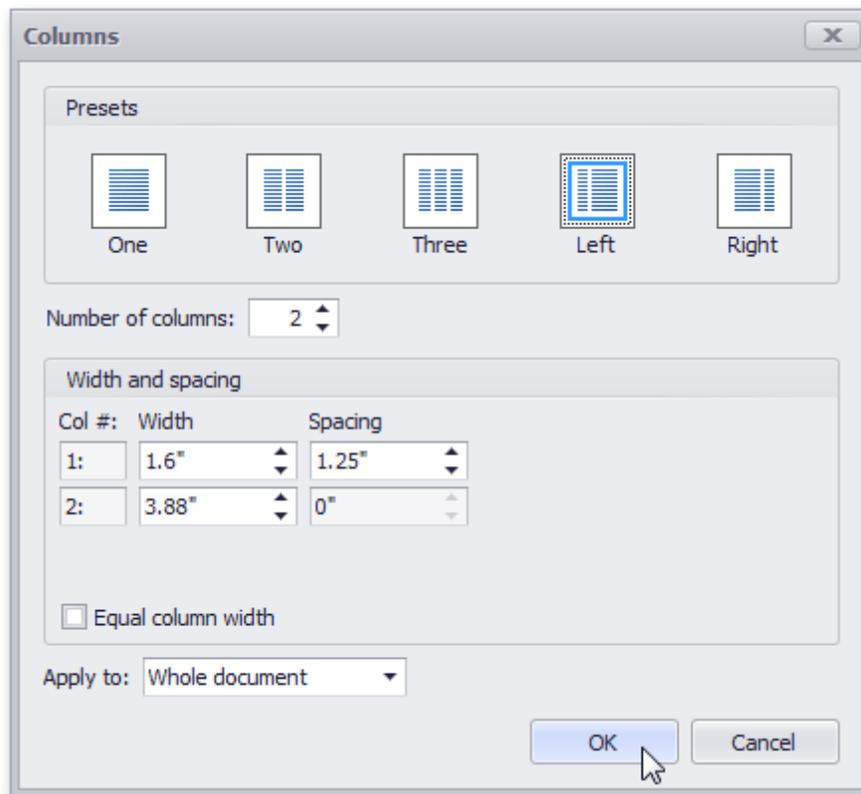
This tutorial guides you through the creation of a **Multi-Column Report**. A multi-column report is a report which represents its data in multiple columns or rows (depending upon the current multi-column settings).

To create a multi-column report, do the following.

1. In a new Snap document, create a simple table report, as described in the [Create a Table Report](#) topic.
2. In the main toolbar, switch to the General Tools: Page Layout tab, click **Columns**, and select the required number of columns in the drop-down menu.



To define more than three columns, click **More Columns**. In the invoked **Columns** dialog, customize the report layout to meet your requirements.



The following image illustrates the result.

Customer List

Alejandra Camino

Spain
Madrid
Gran Vía, 1
28001
(91) 745 6200

Ann Devon

UK
London
35 King George
WX3 6FW
(171) 555-0297

Bernardo Batista

Brazil
Rio de Janeiro
Rua da Panificadora, 12
02389-673
(21) 555-4252

Alexander Feuer

Germany
Leipzig
Heerstr. 22
04179
0342-023176

Annette Roulet

France
Toulouse
1 rue Alsace-Lorraine
31000
61.77.61.10

Carine Schmitt

France
Nantes
54, rue Royale
44000
40.32.21.21

Ana Trujillo

Mexico
México D.F.
Avda. de la Constitución 2222
05021
(5) 555-4729

Antonio Moreno

Mexico
México D.F.
Mataderos 2312
05023
(5) 555-3932

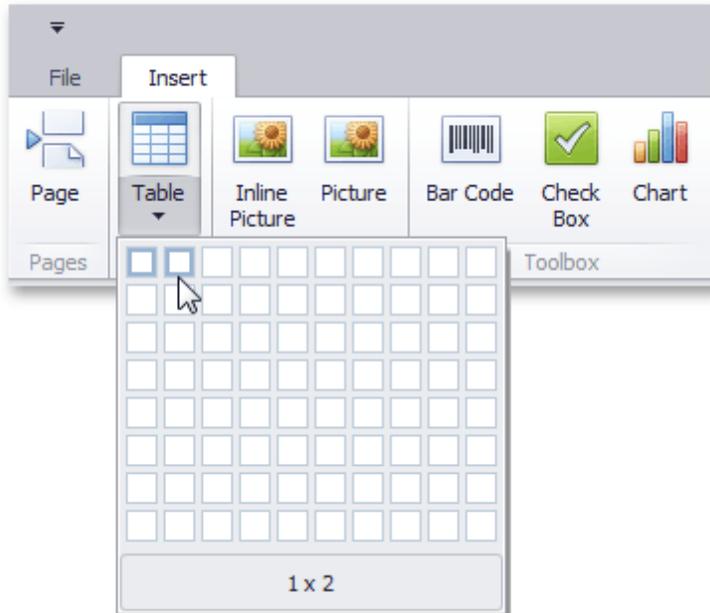
Anabela Domingues

Brazil
São Paulo
Av. Inês de Castro, 414
05634-030
(11) 555-2167

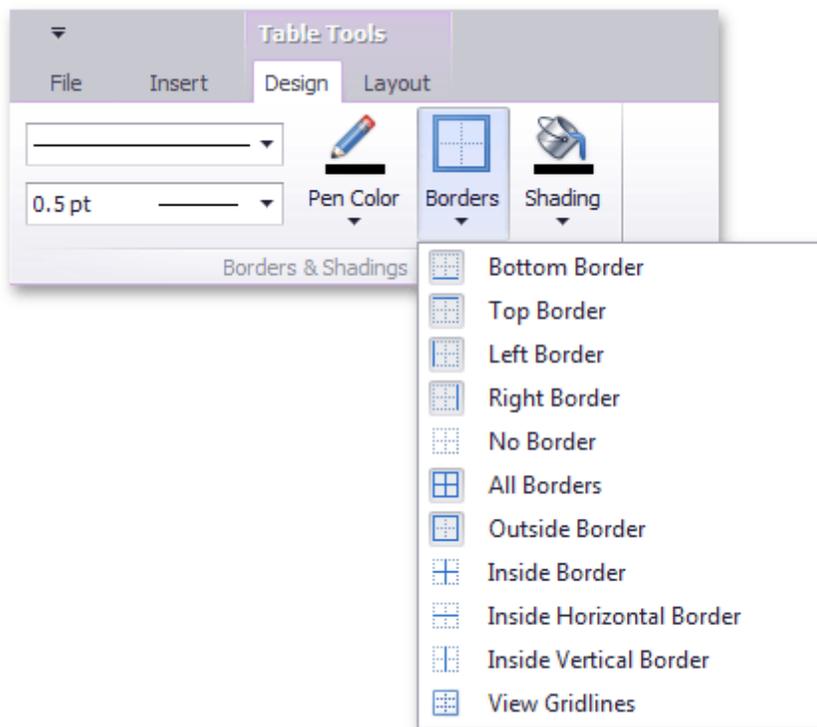
Create a Side-by-Side Report

This tutorial describes the steps used to create a side-by-side report to compare different items within the report. Follow these steps to create a side-by-side report.

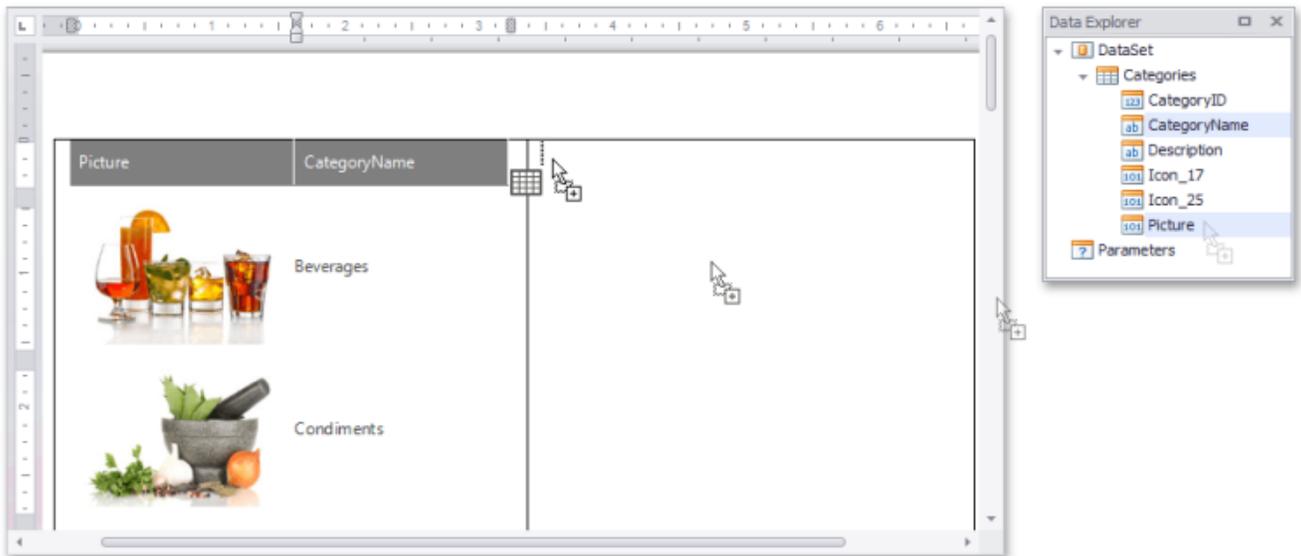
1. Create a new Snap document and bind it to the required table as described in the [Connect a Document to a Data Source](#) topic.
2. To add a new table to the report, switch to the [Insert](#) tab in the main toolbar and click **Table**. Then, move the cursor over the grid to select the required number of rows and columns.



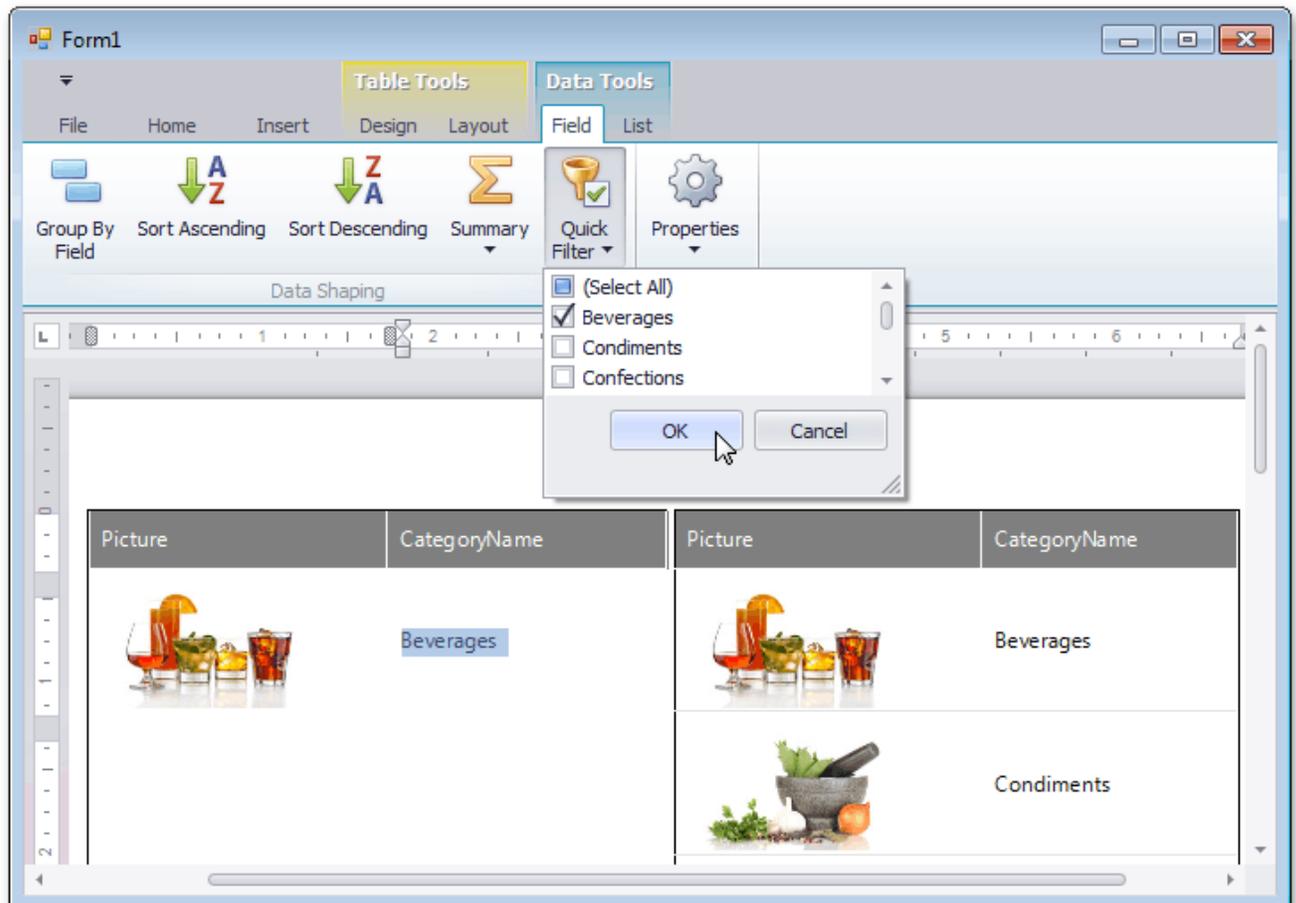
You can set table borders by clicking the **Borders** button on the [Design](#) tab.



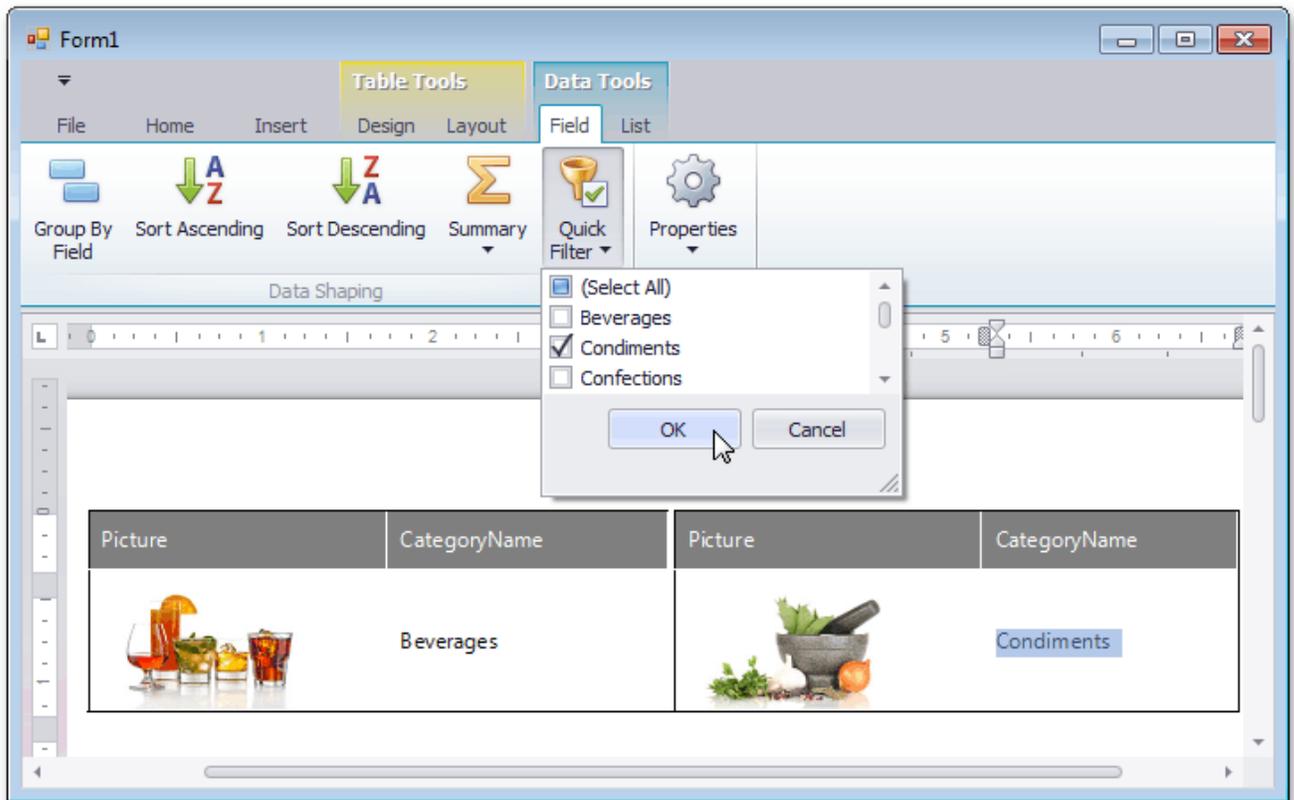
3. Then, drop the fields that will be compared from the [Data Explorer](#) on the table's corresponding columns.



4. To filter each table column so that it shows only a single record, select a field on the left column and in the activated **Field** tab in the main toolbar, click **Quick Filter**. In the invoked menu, select the required field and click **OK**.



Finally, repeat the same procedure for the right column, so that it displays a different field to compare it with.



Create a Parameterized Report

This tutorial illustrates the steps required to create a parameterized report. In this tutorial, we will create a parameter and pass it to the report's filtering expression. You are not limited by the number of parameters you can create, or the data type (e.g., *string*, *date-time*, *Boolean*, *integer* and *double*). Parameters can be used in other ways such as **data binding** and **calculated fields**. Tasks that can be solved using parameters are described in the [Pass Parameter Values](#) topic.

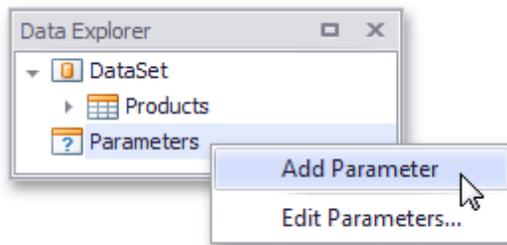
Follow these steps to create a report with parameters.

1. Create a new Snap document and [bind it to the required table](#).
2. To create a layout for your report, drop the required data fields from the [Data Explorer](#) to the [Design Surface](#).

The screenshot shows the Snap Reporting Engine interface. On the left is the Design Surface, which displays a table with two columns: 'ProductName' and 'UnitPrice'. The table contains 20 rows of product data. On the right is the Data Explorer window, which shows a tree view of the data source. The 'Products' table is expanded, and the 'UnitPrice' field is selected. The 'Parameters' section is also visible, showing a 'Starting Price' parameter.

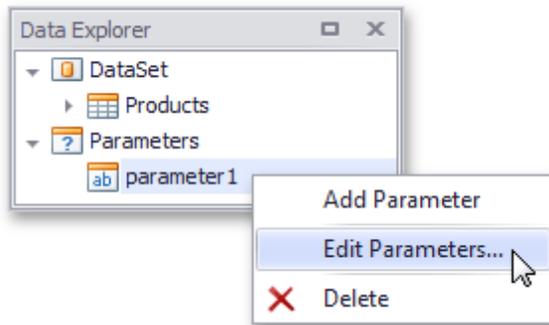
ProductName	UnitPrice
Chai	\$18.00
Chang	\$19.00
Aniseed Syrup	\$10.00
Chef Anton's Cajun Seasoning	\$22.00
Chef Anton's Gumbo Mix	\$21.35
Grandma's Boysenberry Spread	\$25.00
Uncle Bob's Organic Dried Pears	\$30.00
Northwoods Cranberry Sauce	\$40.00
Mishi Kobe Niku	\$97.00
Ikura	\$31.00
Queso Cabrales	\$21.00
Queso Manchego La Pastora	\$38.00
Konbu	\$6.00
Tofu	\$23.25
Genen Shouyu	\$15.50
Pavlova	\$17.45
Alice Mutton	\$39.00
Camaronv Tigers	\$62.50
Teatime Chocolate Biscuits	\$9.20

3. To create a parameter, switch to the Data Explorer window, right-click the **Parameters** section and choose **Add Parameter**.



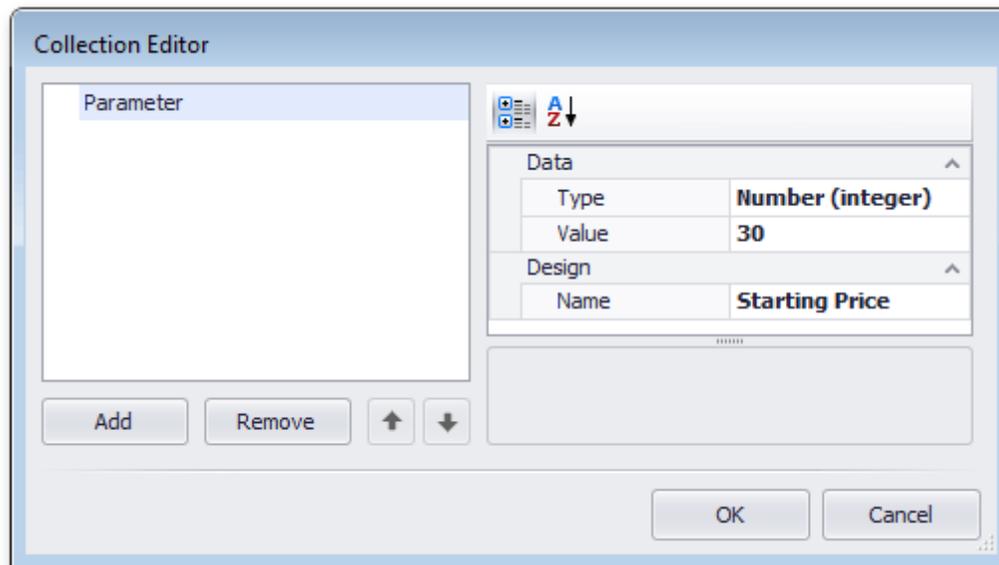
Alternatively, you can create report parameters when editing a data source using the [Query Designer](#).

4. Right-click the created parameter and select the **Edit Parameters...** action in the invoked popup menu.



5. In the invoked editor, define the parameter name and assign an appropriate type to it. This type corresponds to the value that a parameter can receive (e.g., you cannot assign a string value to a numeric parameter).

Next, assign a default static value to the parameter.

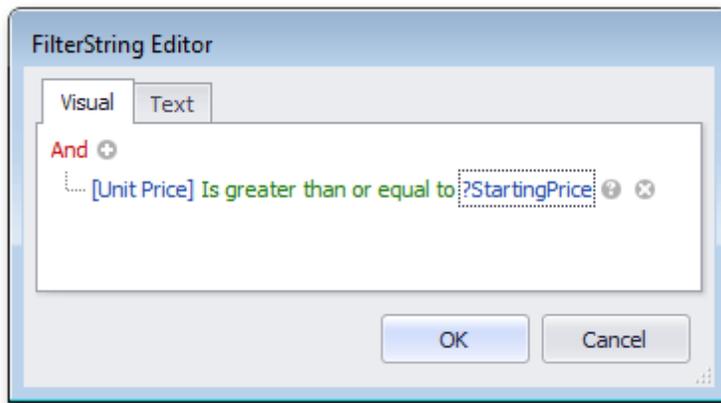


If required, you can easily modify the parameter value in the same way described in steps 4 and 5.

6. Now, switch to the [List](#) tab in the main toolbar and click the **Filter** button.

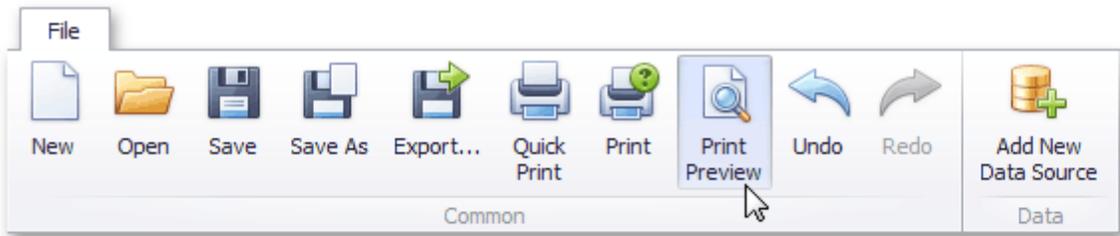
In the invoked **FilterString** editor, define a filtering expression (e.g., **UnitPrice** data field is greater than or equal to the **Starting Price** parameter).

To access the parameter, click the icon on the right until it turns into a question mark, and then select your parameter from the drop-down list.



The parameterized report is now ready, and its data is filtered based on the specified expression that uses the parameter value to shape the report's data.

To view how your report will look on paper, switch to the [File](#) tab in the main toolbar and click the **Print Preview** button.



Preview

File View Background

100%

ProductName	UnitPrice
Uncle Bob's Organic Dried Pears	\$30.00
Northwoods Cranberry Sauce	\$40.00
Mishi Kobe Niku	\$97.00
Ikura	\$31.00
Queso Manchego La Pastora	\$38.00
Alice Mutton	\$39.00
Carnarvon Tigers	\$62.50
Sir Rodney's Marmalade	\$81.00
Gumbär Gummibärchen	\$31.23
Schoggi Schokolade	\$43.90
Rössle Sauerkraut	\$45.60
Thüringer Rostbratwurst	\$123.79
Mascarpone Fabioli	\$32.00
Côte de Blaye	\$263.50
Ipoh Coffee	\$46.00
Manjimup Dried Apples	\$53.00
Perth Pasties	\$32.80
Gnocchi di nonna Alice	\$38.00
Raclette Courdavault	\$55.00
Camembert Pierrot	\$34.00
Tarte au sucre	\$49.30
Vegie-spread	\$43.90
Wimmers gute Semmelknödel	\$33.25
Gudbrandsdalsost	\$36.00
Mozzarella di Giovanni	\$34.80

Page 1 of 1

100%

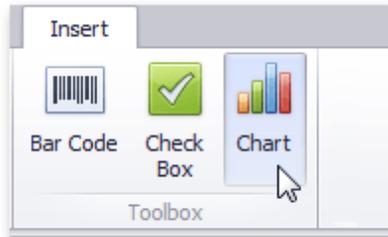
Create a Chart-Based Report

This tutorial describes the steps used to add a chart to your Snap report. Snap supports many chart types, as well as multiple visual appearance settings and chart palettes.

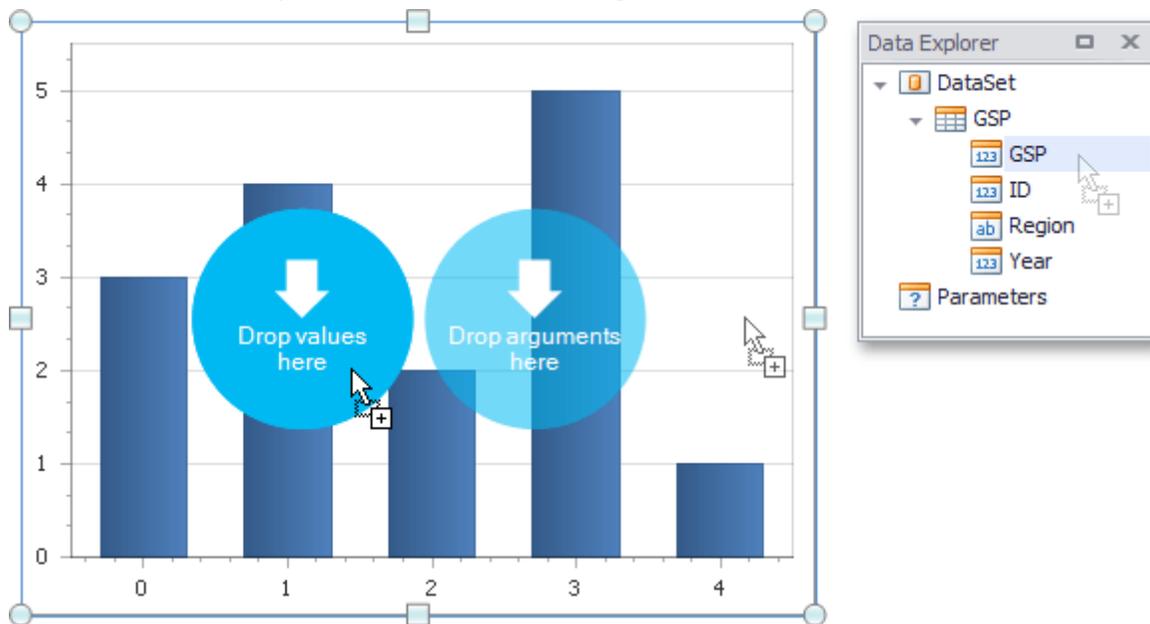
Snap also provides the [Chart Wizard](#), which allows you to quickly create and customize complex charts. However, when advanced charting functionality is not required, Snap provides an even easier way to create and customize your charts.

Do the following steps to create a chart-based report.

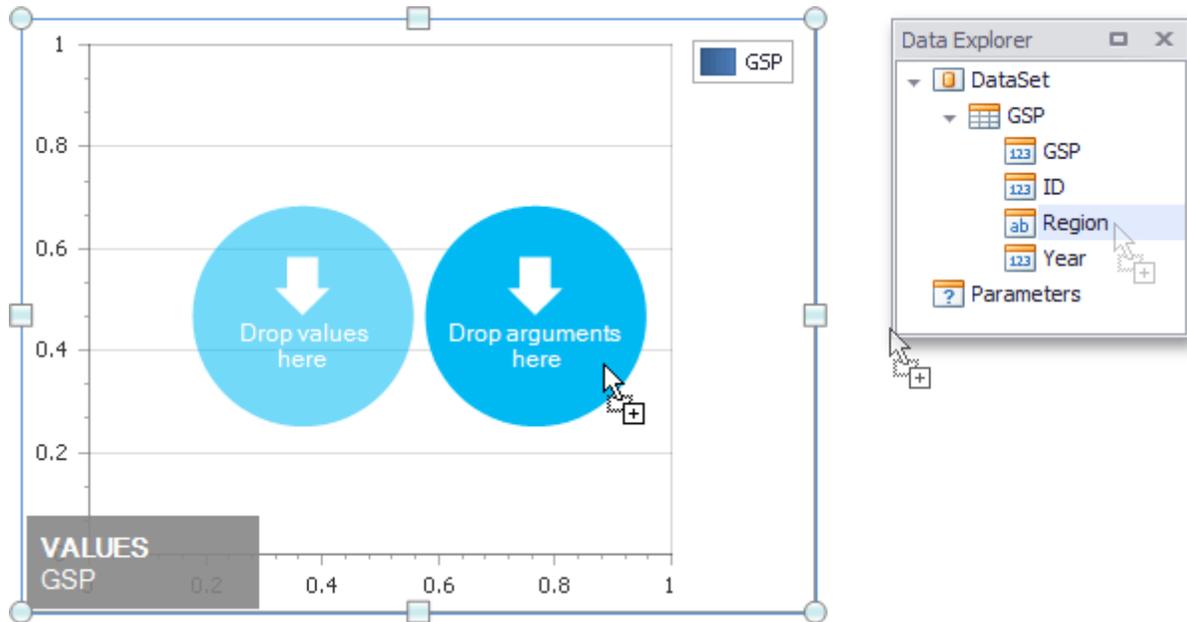
1. Create a new Snap document and [bind it to the required table](#).
2. Click the **Chart** command in the [Insert](#) tab of the main toolbar.



3. In the created chart, the blue circles correspond to the values and arguments of the chart. Drop one field from the [Data Explorer](#) onto the "values" region in the chart...



...and the other onto the "arguments" region.

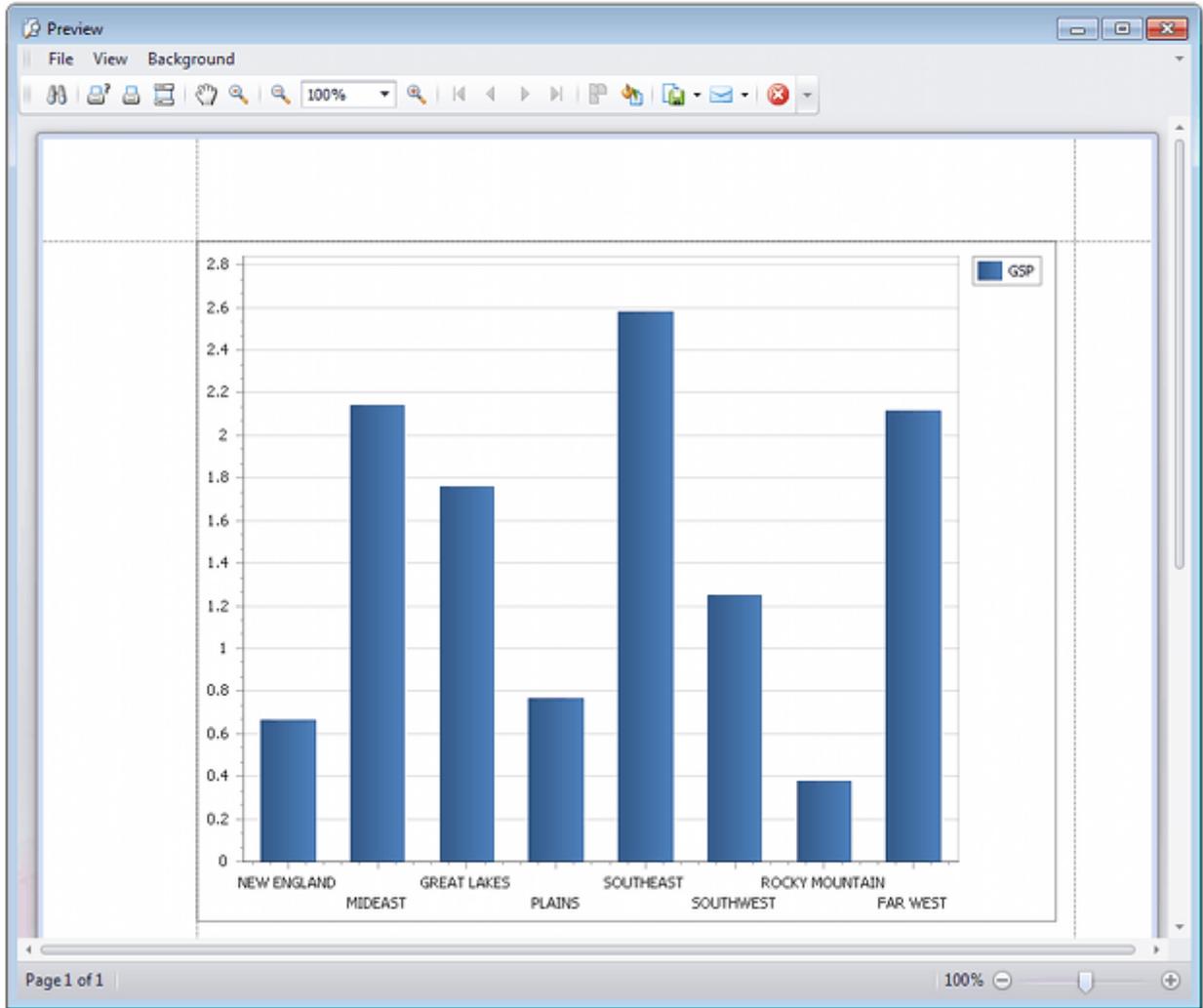
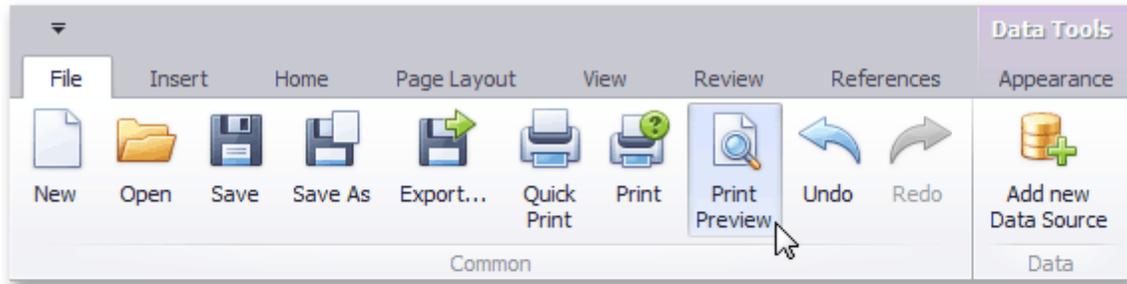


4. You can change the default chart type to one that best meets your requirements by selecting the chart and switching to the [Design](#) tab of the main toolbar.



In the same tab, you can also run **Chart Wizard** and select the chart's palette and visual appearance.

5. The Snap report with a chart is now ready. To view the result, switch to the [File](#) menu of the main toolbar and click the **Print Preview** button.



Create a Combined Report Layout

Snap allows you to create a single combined report, incorporating features of different report layout types. There is no limits on how many reports you can combine.

In this tutorial, we will create a combined report that uses the features of mail-merge and chart-based reports.

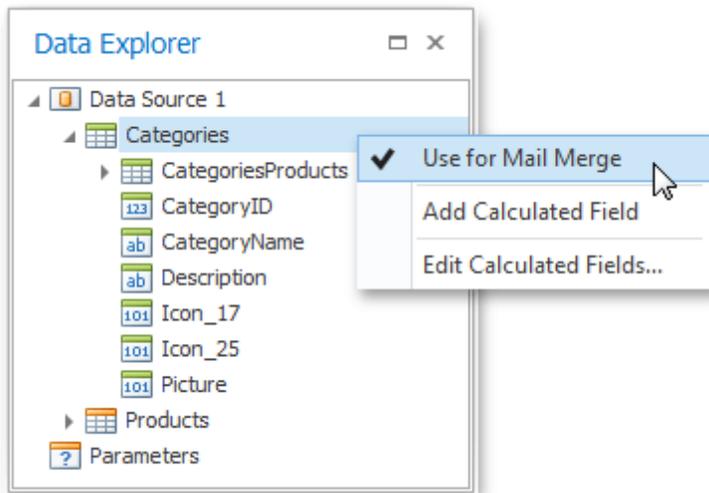
The tutorial consists of the following sections.

- [Add Mail-Merge Report Functionality](#)
- [Add Chart-Based Report Functionality](#)
- [View the Result](#)

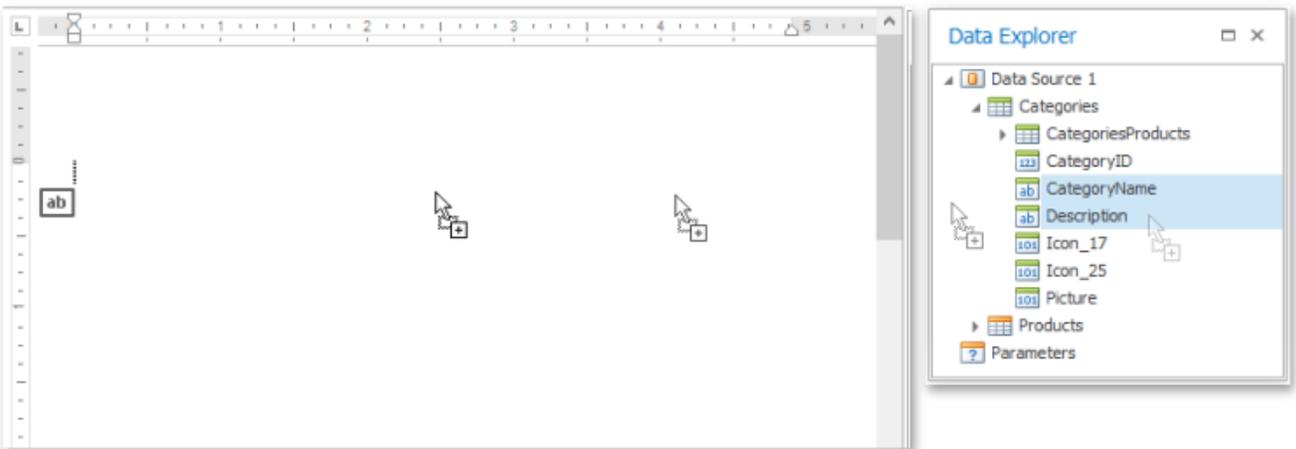
Add Mail-Merge Report Functionality

In this section, we will create a simple **Mail-Merge Report**.

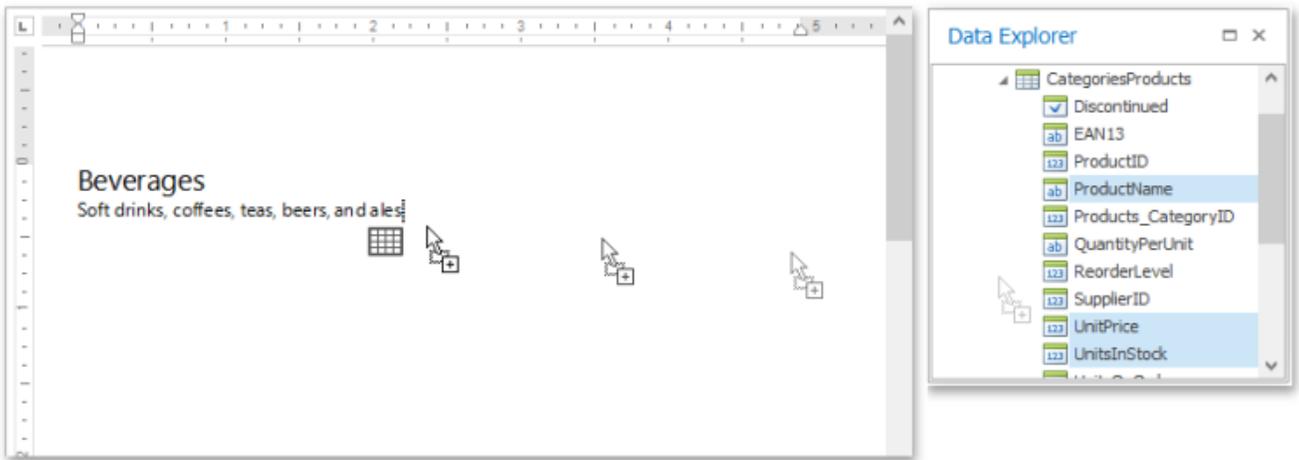
1. Create a new Snap document and [provide it with a master-detail data connection](#).
2. Specify which data source will be used for mail merge by right-clicking the required data source in the Data Explorer and select **Use For Mail Merge** in the invoked drop-down menu.



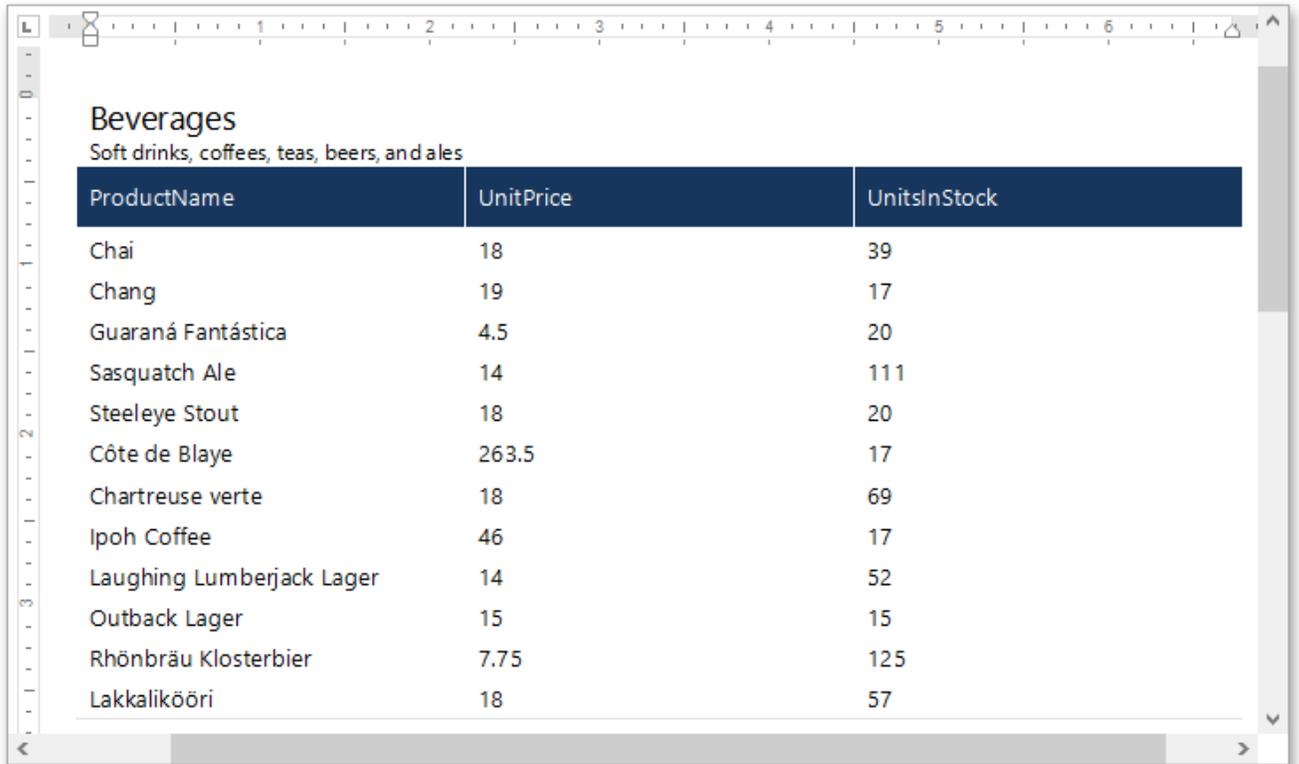
3. Insert a master report part. To do this, drag-and-drop data fields from the [Data Explorer](#) onto the [Design Surface](#).



4. To insert a detail report part, drag-and-drop fields from a subordinate node of the data source.



The added detail part will have a tabular form by default.

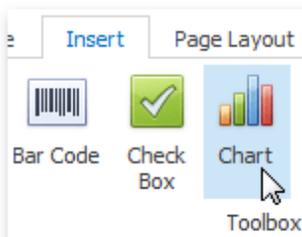


For more information on the creation mail-merge report, see the tutorial [Create a Mail-Merge Report](#).

Add Chart-Based Report Functionality

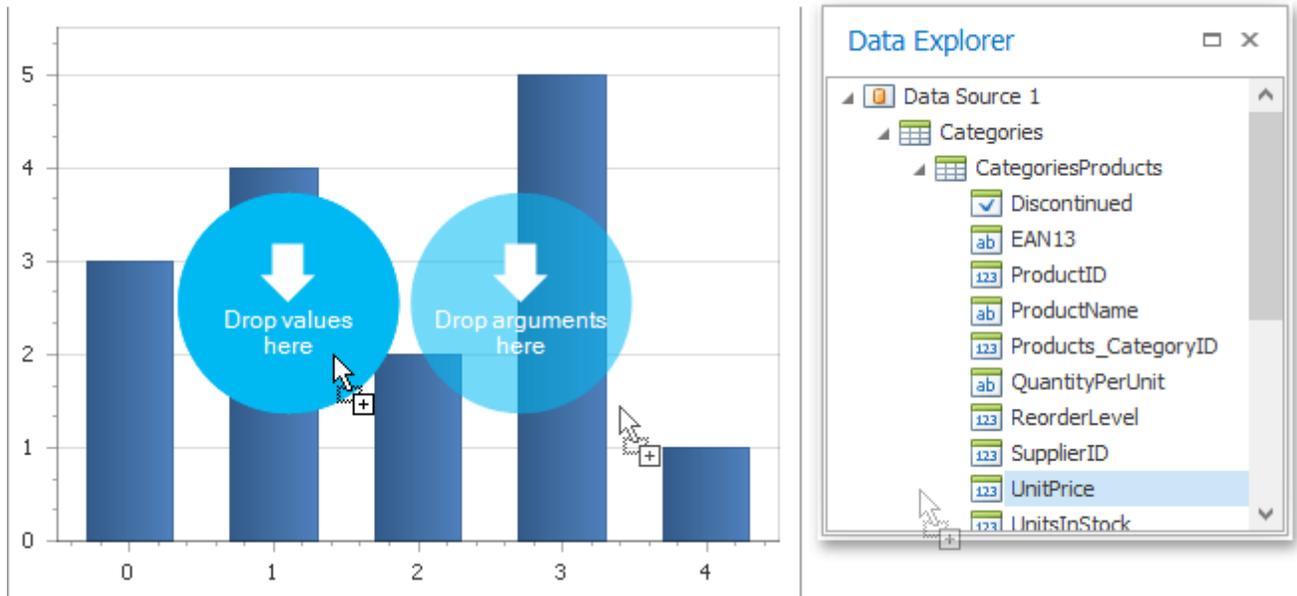
In this section we will add a **Chart** to the Snap document.

1. Click the **Chart** command in the [Insert](#) tab of the main toolbar.

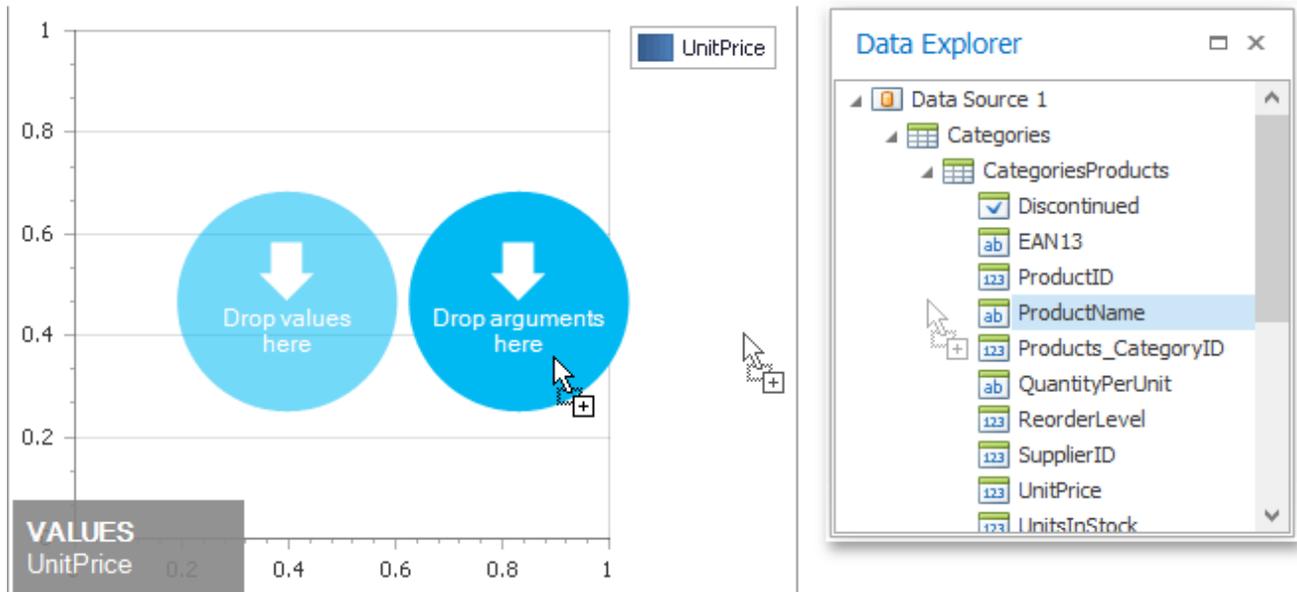


2. In the created chart, the blue circles correspond to the values and arguments of the chart. Drop one

field from a subordinate node of the data source onto the "values" region in the chart...



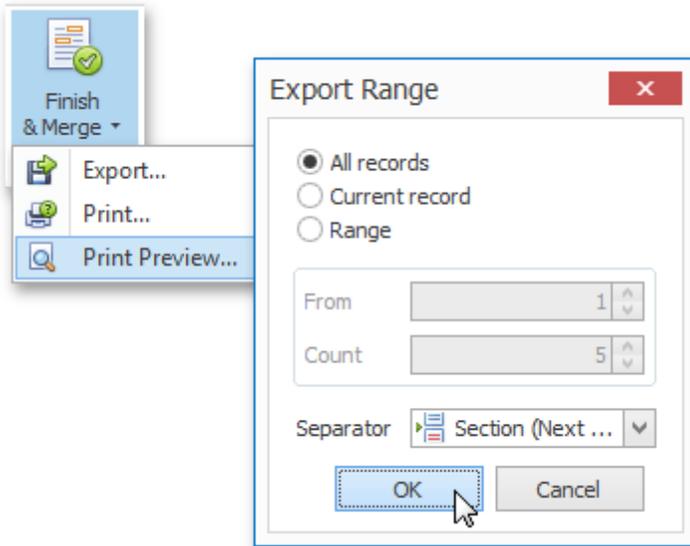
...and the other onto the "arguments" region.



For more information on the creation of a chart-based report, see the tutorial [Create a Chart-Based Report](#).

View the Result

The Snap mail merge document is now ready. To view the result, click the **Finish & Merge** button in the [Mail Merge](#) tab, and select **Print Preview...** in the invoked drop-down menu. In the invoked **Export Range** dialog, select **All records** and click **OK**.

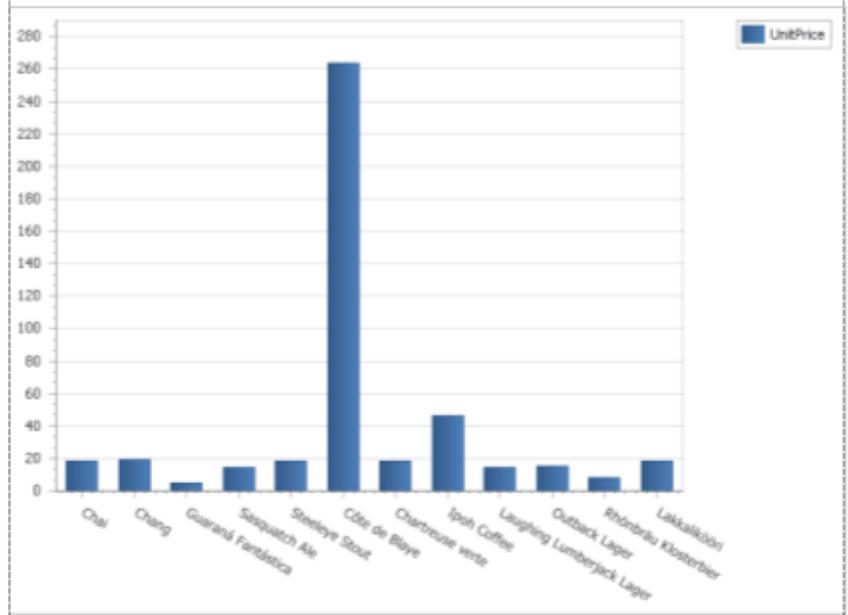


The following image illustrates a print preview for the final document.

Beverages

Soft drinks, coffees, teas, beers, and ales

ProductName	UnitPrice	UnitsInStock
Chai	18	39
Chang	19	17
Guaraná Fantástica	4.5	20
Sasquatch Ale	14	111
Steeleye Stout	18	20
Côte de Blaye	263.5	17
Chartreuse verte	18	69
Ippoh Coffee	46	17
Laughing Lumberjack Lager	14	52
Outback Lager	15	15
Rhônebräu Klosterbier	7.75	125
Lakkaikööri	18	57



Manage Documents and Files

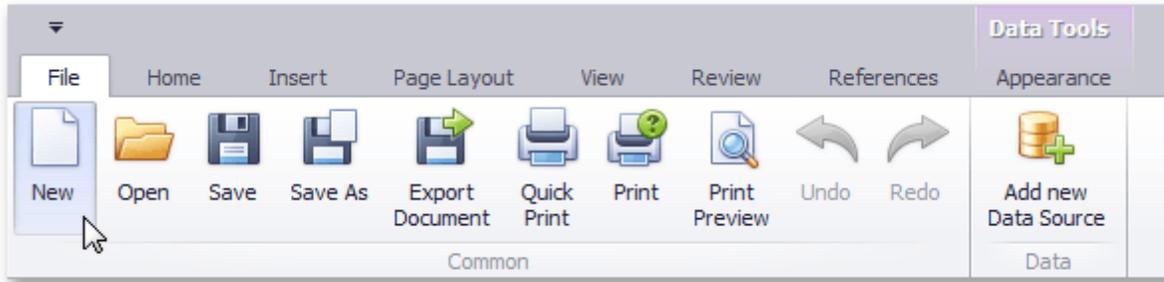
The tutorials in this section will assist you in solving the most elementary and essential tasks that relate to managing and storing Snap documents.

This section includes the following tutorials.

- [Create a New Report](#)
- [Save a Report](#)
- [Open an Existing Report](#)
- Third-Party Document Compatibility
- [Export a Report](#)

Create a New Report

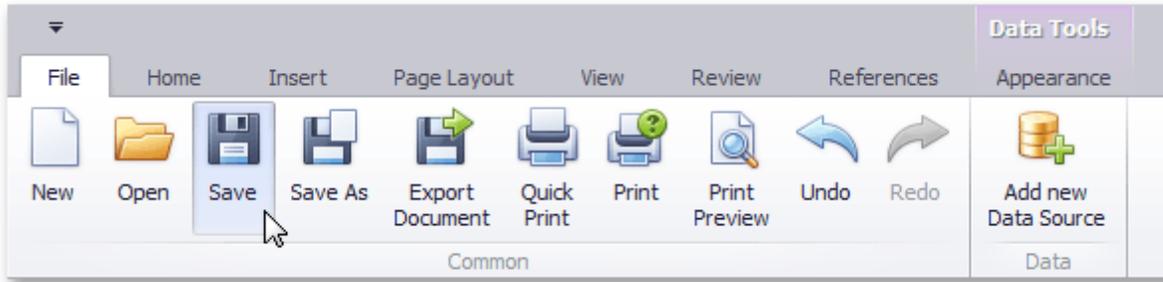
To create a new Snap report, click the **New** button in the **File** tab of the Snap application's ribbon toolbar.



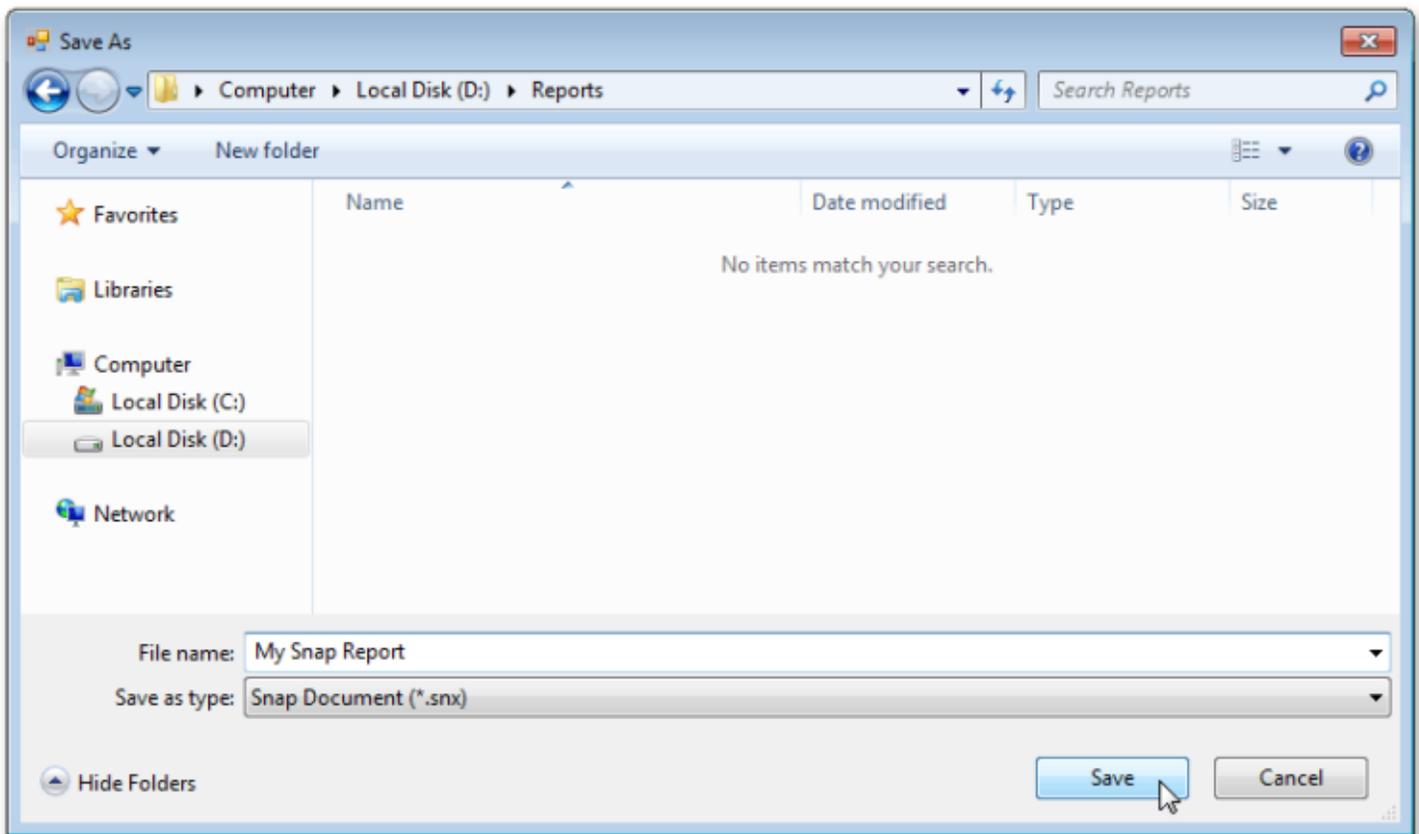
A new Snap report will be created and opened in the editor.

Save a Report

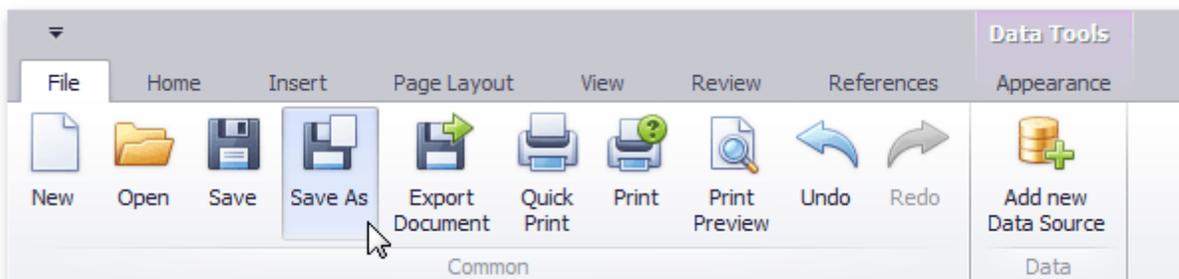
To save a report to a file, click the **Save** button in the **File** tab of the Snap application's ribbon toolbar.



If you are saving a new report, the **Save As** dialog will be invoked. In the invoked dialog, specify the name and directory for the new report file and click **Save**.



To save a changed copy of an existing report to a separate file, click the **Save As** button in the **File** tab of the ribbon toolbar.



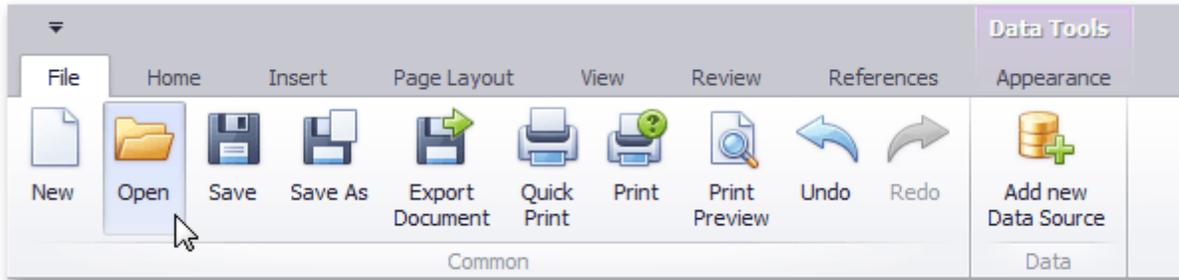
Storing Reports

This document explains the basic principles of storing report documents.

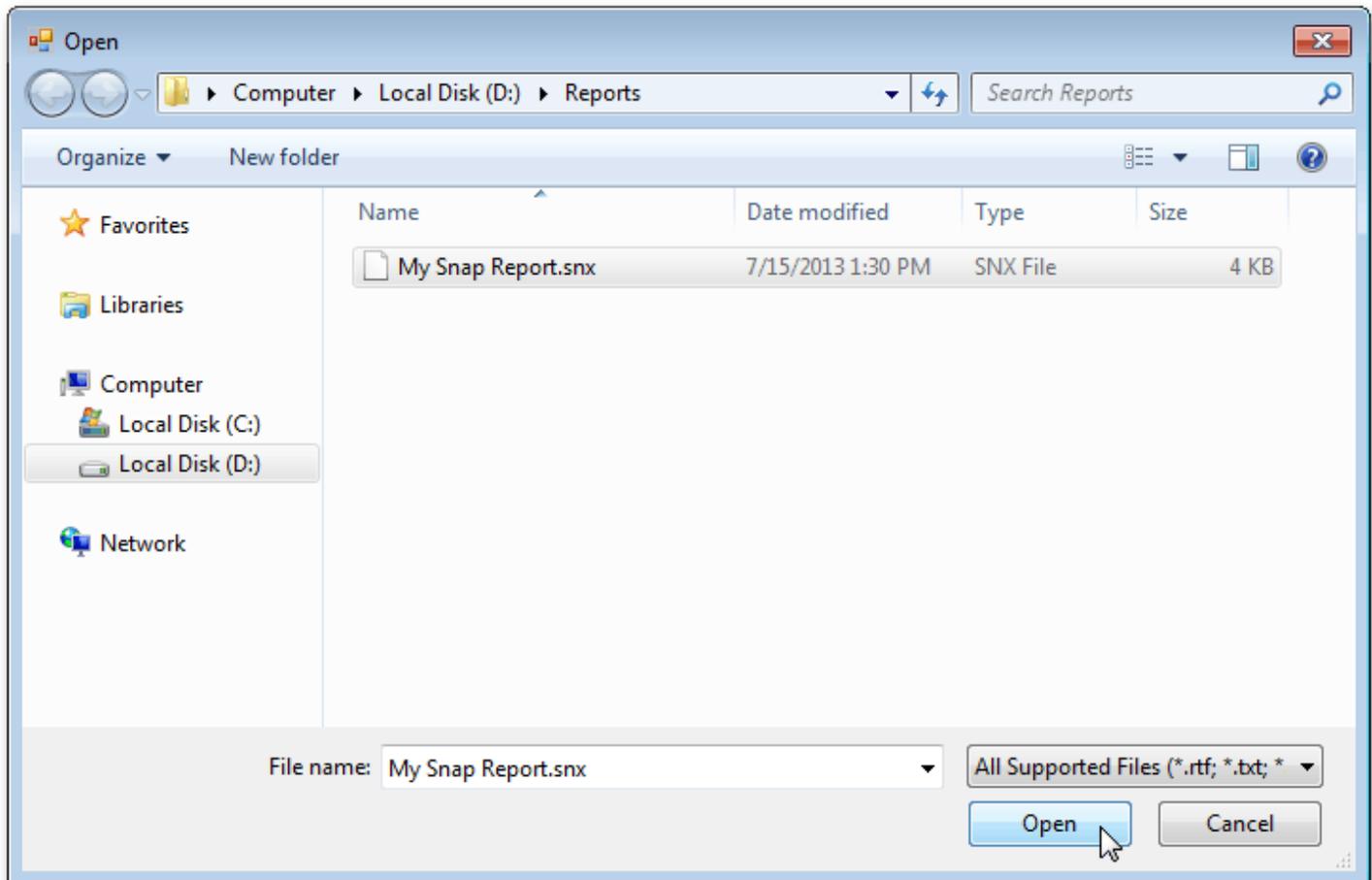
Snap provides the capability to store a report to a file and restore it. You can store the report in the following formats (**.epub**, **.snx**, **.doc**, **.docx**, **.xml**, **.odt**, **.mht**, **.htm**, **.html**, **.txt**, **.rtf**, **.pdf**). For more information about the methods that you can use for saving, loading, and exporting reports, see [How to: Save, Load, or Export a Report](#).

Open an Existing Report

To open an existing report, click the **Open** button in the **File** tab of the Snap application's ribbon toolbar.



In the invoked **Open** dialog, select a file and click **Open**.

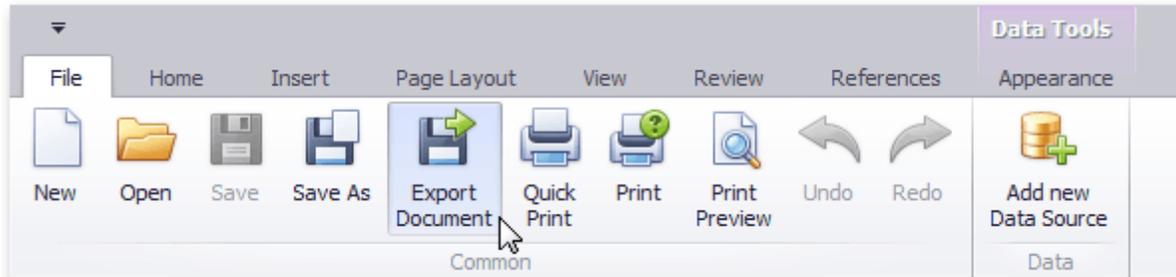


Export a Report

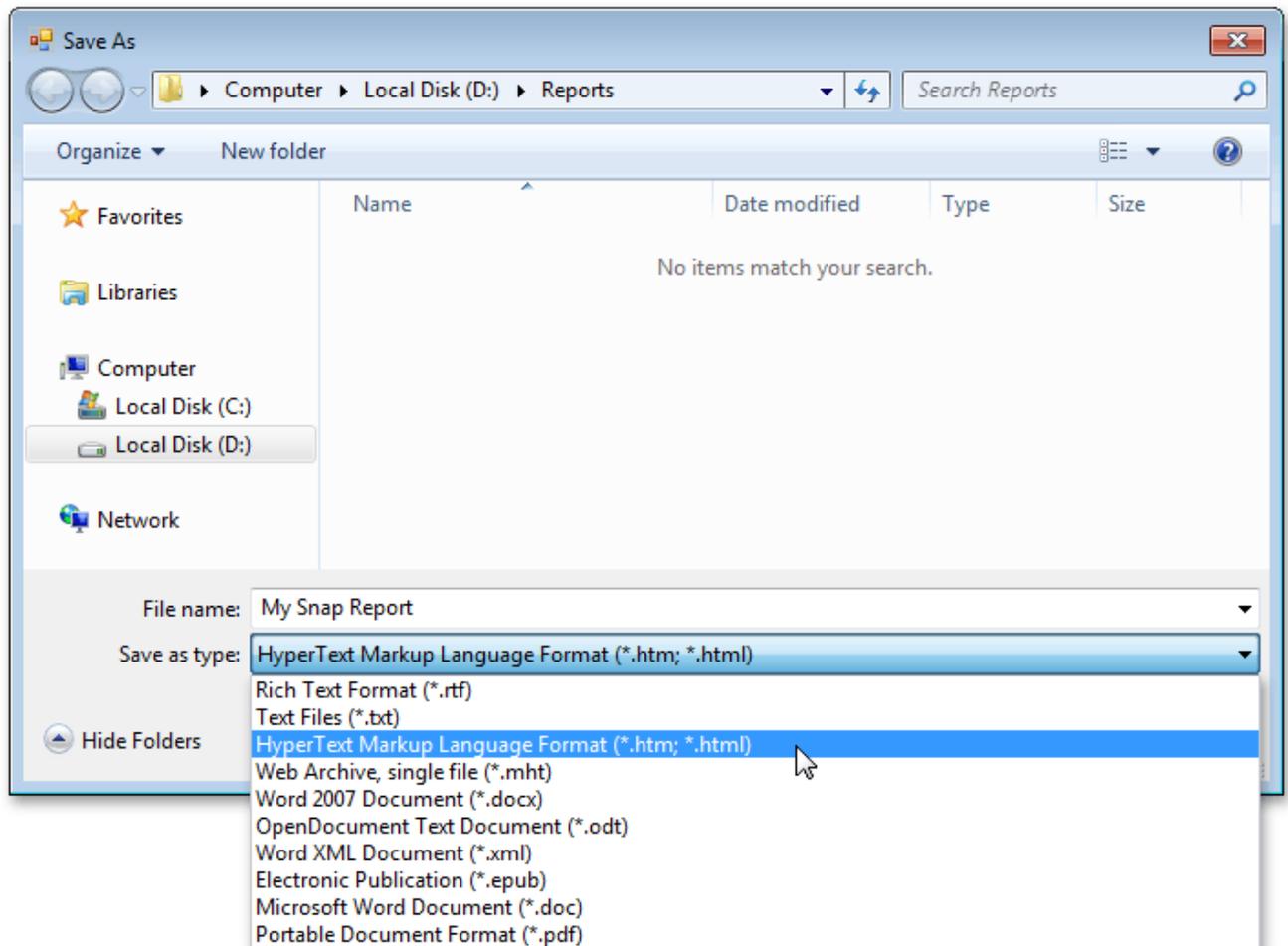
In addition to native .snx file format, Snap allows you to export reports into the one of the wide variety of third-party formats, (e.g., PDF, HTML or DOCX).

To export a Snap report in a third-party format, do the following.

1. Click the **Export Document** button in the **File** tab of the Snap application's ribbon toolbar.

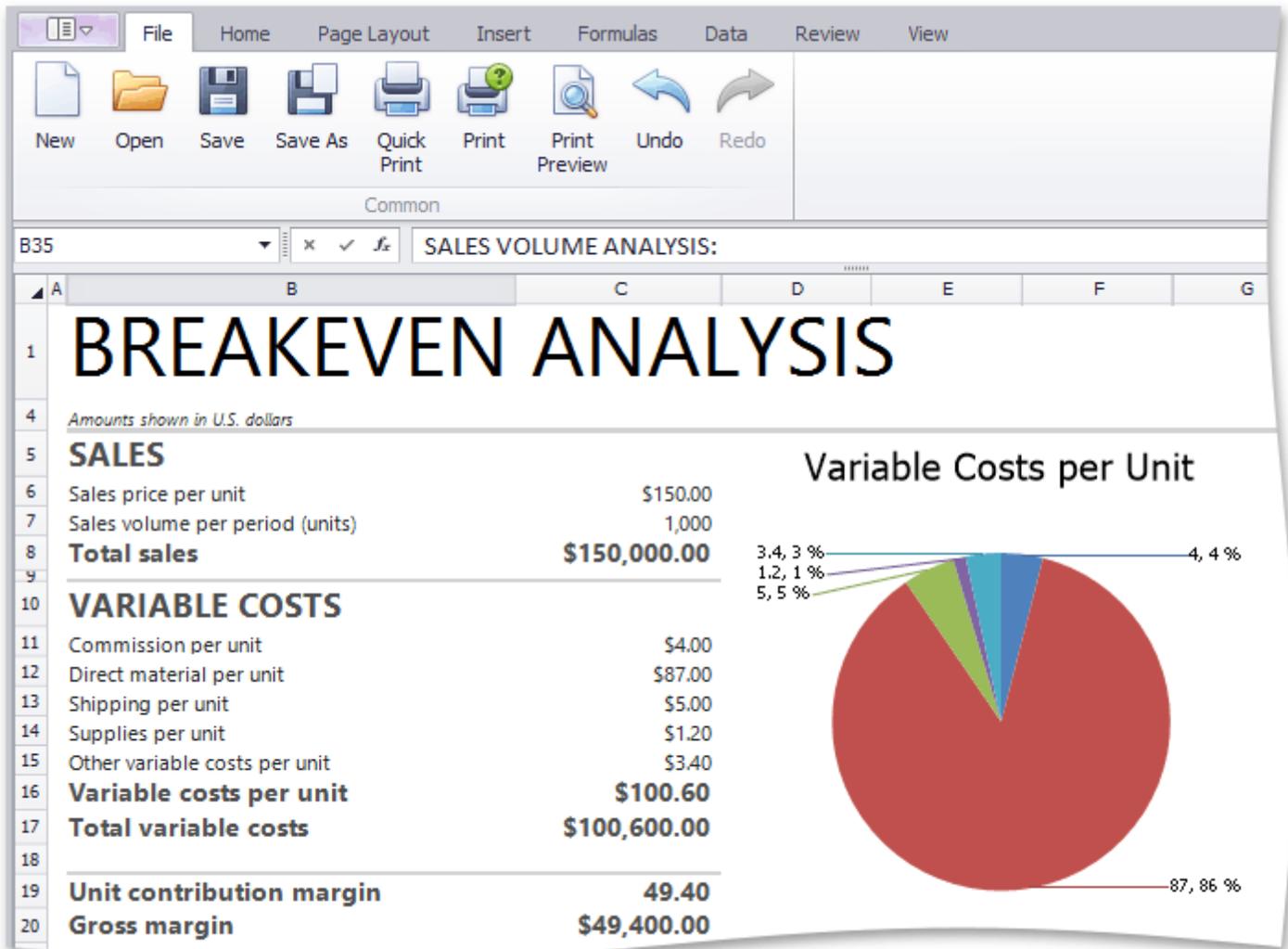


2. In the invoked **Save As** dialog, select a directory in which you want to save, specify the name and format of the exported file, and click **Save** to export the report and exit the dialog.



Spreadsheet

This section describes the capabilities provided by the **Spreadsheet**.



Spreadsheet UI

- [Ribbon Interface](#)
- [Spreadsheet Elements](#)

File Operations

- [Create a Workbook](#)
- [Load a Workbook](#)
- [Create a Worksheet](#)
- [Rename a Worksheet](#)
- [Delete a Worksheet](#)
- [Save a Workbook](#)
- [Import and Export Text Files](#)
- [Print a Workbook](#)
- [Adjust Page Settings](#)
- [Undo and Redo Last Actions](#)

Viewing and Navigating

- [Hide and Display Worksheets](#)
- [Zoom a Worksheet](#)
- [Hide Gridlines and Headings](#)
- [Freeze Columns and Rows](#)

Editing Cells

- [Select Cells or Cell Content](#)
- [Copy and Paste Cell Content](#)
- [Fill Data Automatically](#)
- [Find and Replace](#)
- [Insert a Comment](#)
- [Insert a Symbol](#)

Cell Formatting

- [Format Cells](#)
- [Format Cell Content](#)
- [Wrap Text and Merge Cells](#)
- [Number Formatting](#)
- [Conditional Formatting](#)
- [Clear Cell Formatting](#)

Columns and Rows

- [Insert and Delete Columns and Rows](#)
- [Show and Hide Columns and Rows](#)
- [Specify Column Width and Row Height](#)

Tables

- [Create a Table](#)

Data Presentation

- [Outline Data](#)
- [Subtotal Data](#)
- [Sort Data](#)
- [Filter Data](#)

Formulas

- [Create a Simple Formula](#)
- [Using Cell References and Defined Names in Formulas](#)
- [Using Functions in Formulas](#)
- [Supported Functions](#)
- [Create an Array Formula](#)
- [Error Types in Formulas](#)

Charting

- [Charting Overview](#)
- [Creating a Chart](#)
- [Changing a Chart Type](#)
- [Applying a Predefined Chart Layout and Style](#)
- [Modifying a Chart Manually](#)

Mail Merge

- [Mail Merge Overview](#)
- [Data Source Wizard](#)
- [Query Designer](#)
- [Parameters Panel](#)

Pictures and Hyperlinks

- [Insert a Picture](#)
- [Move, Rotate and Resize a Picture](#)
- [Insert and Delete Hyperlinks](#)
- [Shortcuts to Work with Pictures](#)

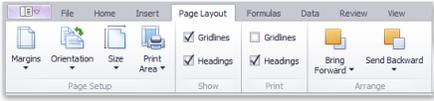
Keyboard Shortcuts

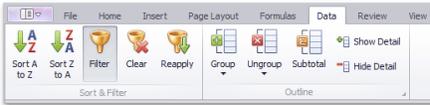
- [File Operations](#)
- [Navigation through Worksheets](#)
- [Work with Selections](#)
- [Copy, Paste and Edit the Cell Content](#)
- [Cell Formatting](#)
- [Work with Columns and Rows](#)
- [Work with Formulas](#)

Spreadsheet UI

Ribbon Interface

The comprehensive functionality of the **Spreadsheet** is provided by a set of **Ribbon** pages. Ribbon pages are divided into logical groups that include commands with common features. Use the **Ribbon** interface to perform basic operations in the **Spreadsheet** (to [create](#) a workbook, [create](#) or [delete](#) worksheets, [select](#) data in a worksheet, navigate through a worksheet, etc.).

Ribbon Tab Name	Visual Appearance	Functionality
<p>File</p>		<ul style="list-style-type: none"> Create a Workbook Load a Workbook Save a Workbook Print a Workbook Undo and Redo Last Actions
<p>Home</p>		<ul style="list-style-type: none"> Copy and Paste Cell Content Format Cells Format Cell Content Wrap Text and Merge Cells Number Formatting Conditional Formatting Clear Cell Formatting Insert and Delete Columns and Rows Show and Hide Columns and Rows Specify Column Width and Row Height Fill Data Automatically Find and Replace
<p>Insert</p>		<ul style="list-style-type: none"> Create a Table Insert a Picture Move, Rotate and Resize a Picture Insert and Delete Hyperlinks Charting Overview Creating a Chart Changing a Chart Type Applying a Predefined Chart Layout and Style Modifying a Chart Manually Insert a Symbol
<p>Page Layout</p>		<ul style="list-style-type: none"> Adjust Page Settings
<p>Formulas</p>		<ul style="list-style-type: none"> Create a Simple Formula Using Cell References and Defined Names in Formulas Using Functions in Formulas Supported Functions

		<p>Create an Array Formula Error Types in Formulas</p>
<p>Data</p>		<p>Sort Data Filter Data Outline Data Subtotal Data</p>
<p>Review</p>		<p>Insert a Comment Protect a Workbook Protect a Worksheet Protect Worksheet Ranges</p>
<p>View</p>		<p>Zoom a Worksheet Hide Gridlines and Headings Freeze Columns and Rows</p>
<p>Mail Merge</p>		<p>Mail Merge Overview Data Source Wizard Query Designer Parameters Panel</p>

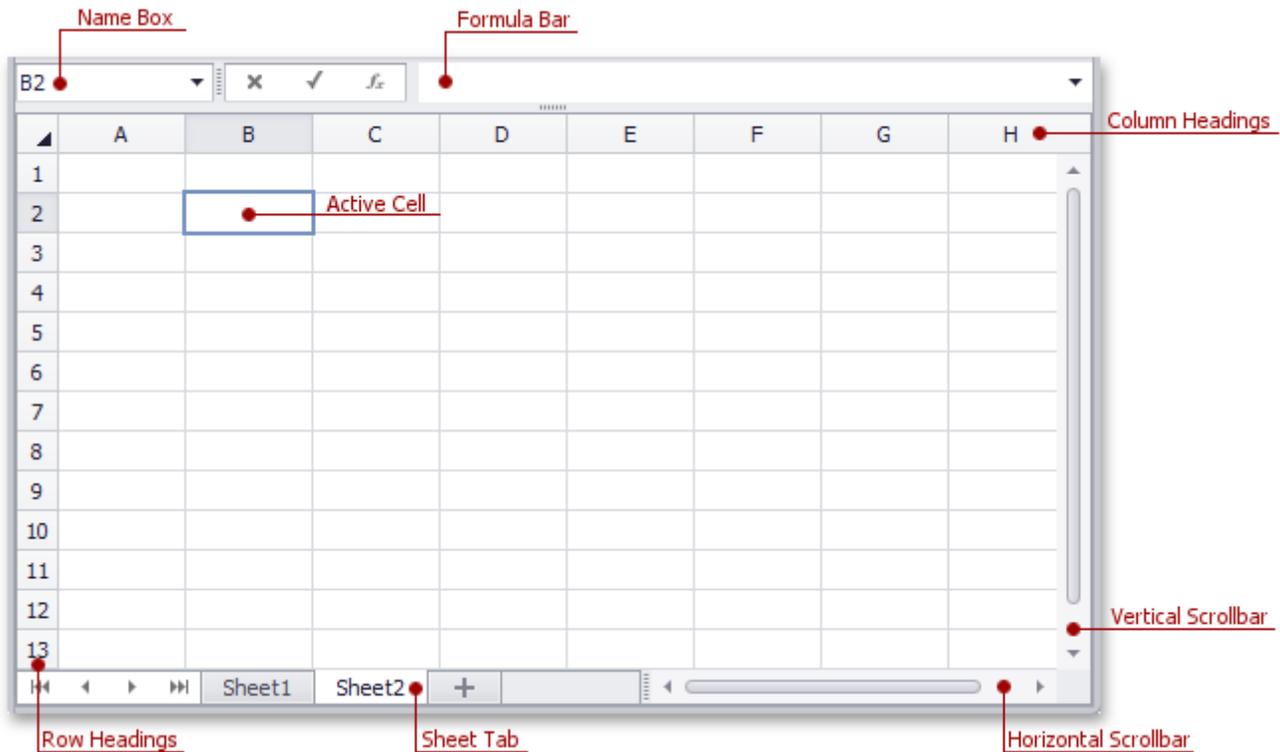
Spreadsheet Elements

The **Spreadsheet** consists of visual elements that provide the capability to [create](#), edit and view spreadsheet documents, which are called **workbooks**. A workbook includes one or more **worksheets** used to store data. You can [add](#), [delete](#) and [rename](#) worksheets in a workbook. All existing worksheets are displayed on the **Sheet tab** bar at the bottom of the control. Click one of the sheet tabs to switch between existing worksheets. To navigate through the current worksheet, use the horizontal and vertical **scrollbars**.

A worksheet consists of **cells** that are organized into 1,048,576 **rows** and 16,384 **columns**. Each row is numbered (**1, 2, 3, ...**) and each column is lettered (**A, B, C, ...**) if the [A1 reference style](#) is used, or numbered (**1, 2, 3, ...**) if the [R1C1 reference style](#) is specified. **Row** and **column headings** are displayed at the left and at the top of a worksheet, respectively.

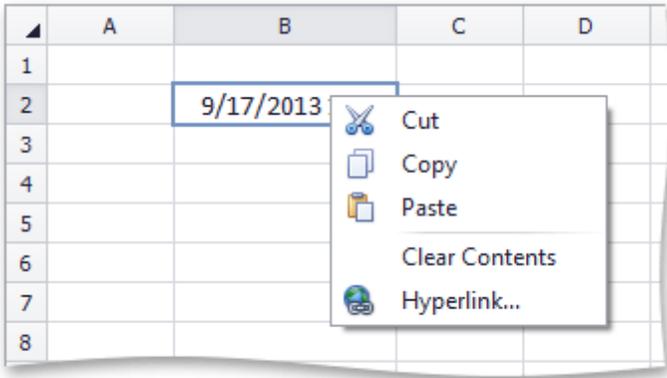
An individual cell is a box at the intersection of a column and a row. Each cell is indicated by a **cell reference**, (the column letter and row number where the column and row intersect). For example, **B2** refers to a cell at the intersection of column **B** and row **2**. The cell reference is displayed in the **Name Box**, located at the top-left corner of a worksheet. The current cell that is selected and used to enter data is called the **active cell**. The active cell is identified by a blue border around the cell.

Each cell contains a single piece of data, the **cell value**. You can enter different types of values such as text, numbers or dates. The **Spreadsheet** also provides the capability to create and edit [formulas](#) that perform calculations on the data on a worksheet. To enter a formula, you can use the **Formula Bar** at the top of a worksheet. If a cell does not contain a formula, the cell content is displayed in the **Formula Bar**.



Context Menu

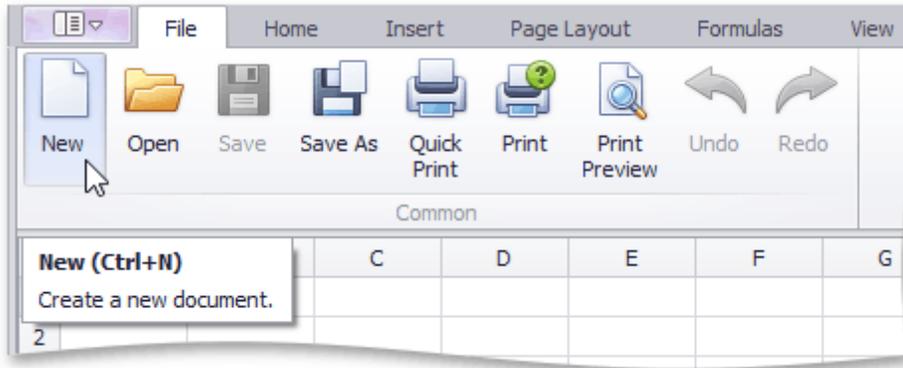
The **Spreadsheet** supports a **Context Menu**, which appears when you right-click a worksheet. The context menu provides common commands for working with cell content.



File Operations

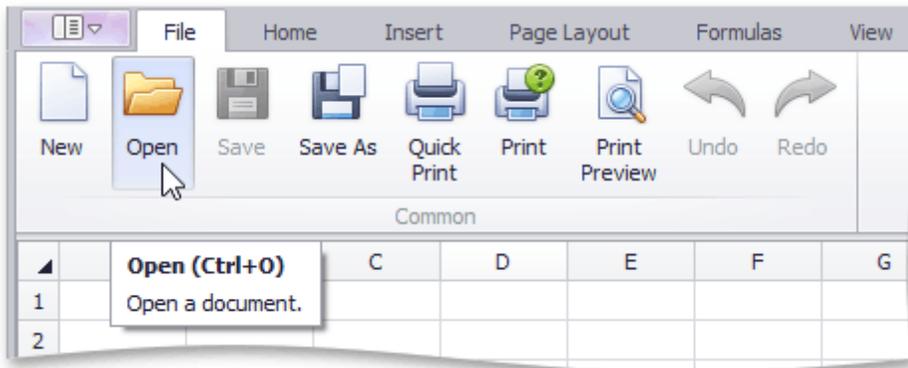
Create a Workbook

To create a blank workbook, select the **File** tab, and click the **New** button in the **Common** group (or press **CTRL+N**).

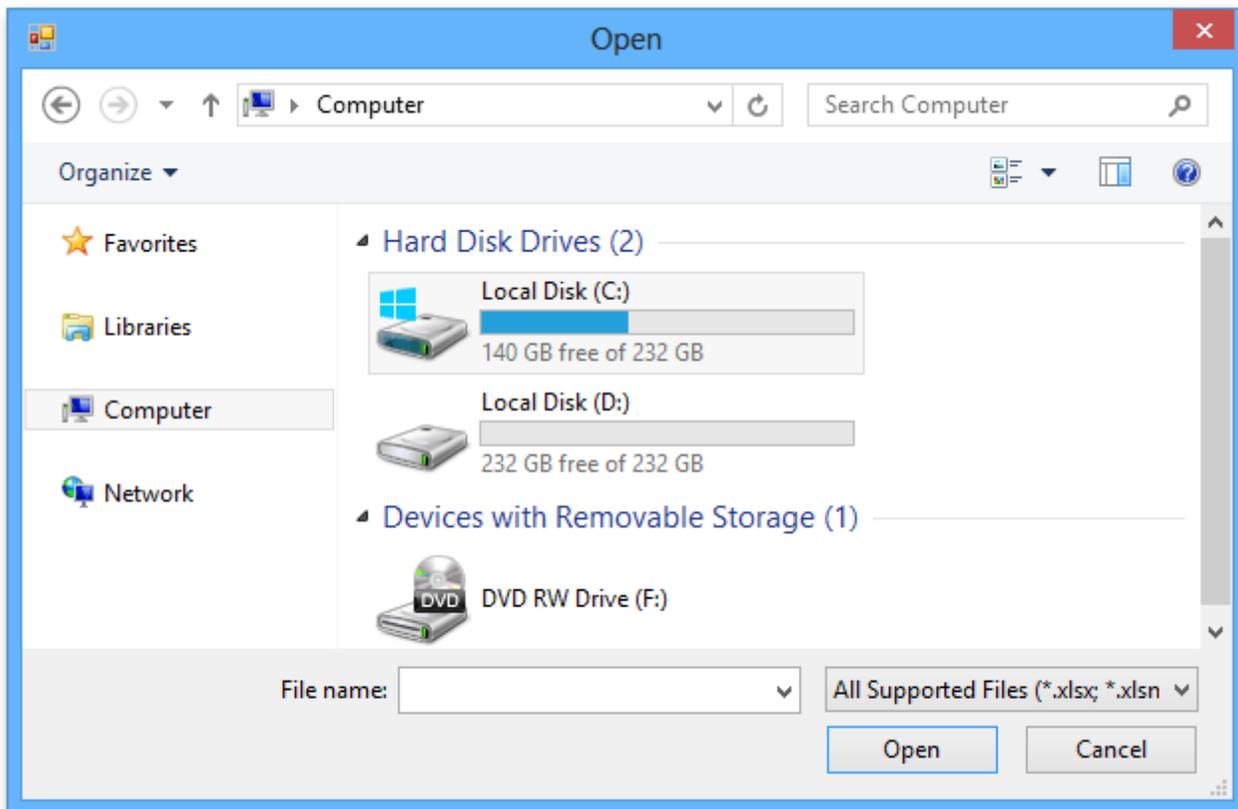


Load a Workbook

To load a workbook, select the **File** tab, and click the **Open** button in the **Common** group (or press **CTRL+O**).



In the invoked **Open** dialog box, select the file you wish to open.



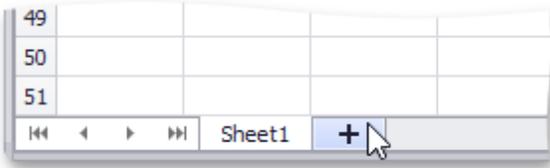
The **Spreadsheet** supports the following file formats.

- Excel Workbook (*.xlsx)
- Excel Macro-Enabled Workbook (*.xlsm)
- Excel 97-2003 Workbook (*.xls)
- Tab-delimited Text File format (*.txt)
- Comma-separated Values File format (*.csv)

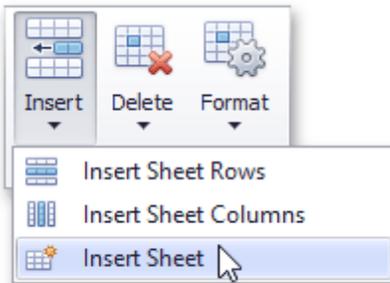
Create a Worksheet

To create a new worksheet within the current workbook, do one of the following.

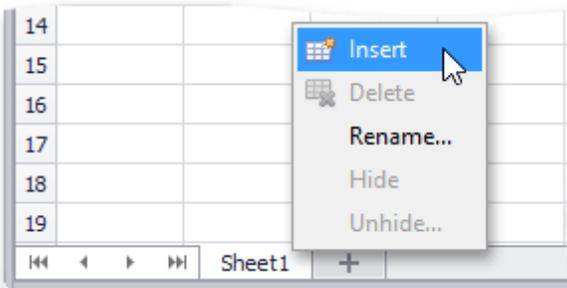
- Click the **New Sheet** button (which looks like a plus sign) at the right edge of the **Sheet tab** bar.



- To insert a worksheet in front of the existing worksheet, go to the **Home** tab, and then in the **Cells** group, click the **Insert** button and select the **Insert Sheet** item from the drop-down list or press **SHIFT+F11**.



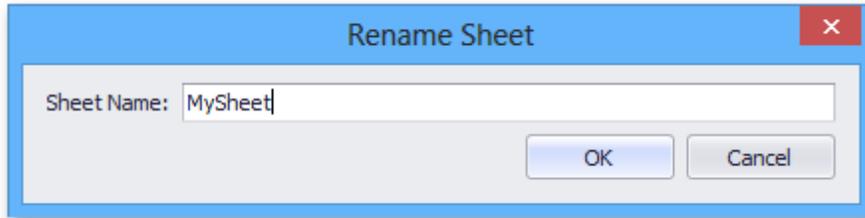
- On the **Sheet tab** bar, right-click the sheet tab of the existing worksheet and select the **Insert** item from the invoked menu.



Rename a Worksheet

When a new worksheet is created, the **Spreadsheet** assigns it a generic name, such as *Sheet1*, *Sheet2*, etc.

To rename a worksheet, double-click its sheet tab on the **Sheet tab** bar to invoke the **Rename Sheet** dialog box, or ...



... right-click the sheet tab of the worksheet and select the **Rename** item from the invoked menu. Rename the worksheet and click **OK**.

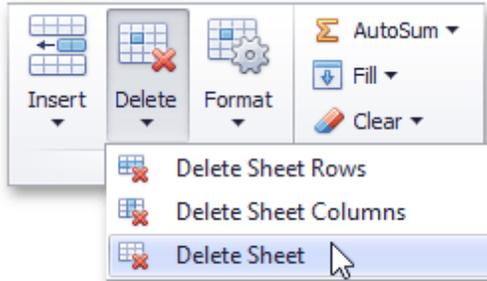
The **Spreadsheet** sets the following rules for a valid worksheet name.

- The maximum length of a worksheet name is 31 characters.
- A worksheet name must not be an empty string.
- A worksheet name must not include the following characters: \ , / , ? , : , * , [,] .
- A worksheet name must not start or end with a single quote.
- A worksheet name must not be equal to a name of another existing worksheet.

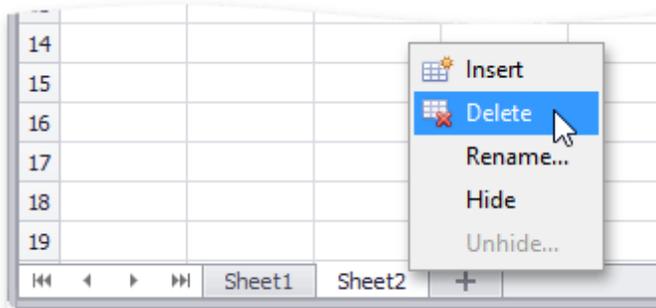
Delete a Worksheet

To delete an existing worksheet, follow the instructions below.

1. Switch to the worksheet you want to delete.
2. Do one of the following.
 - On the **Home** tab, in the **Cells** group, click the **Delete** button and select the **Delete Sheet** item from the drop-down list.

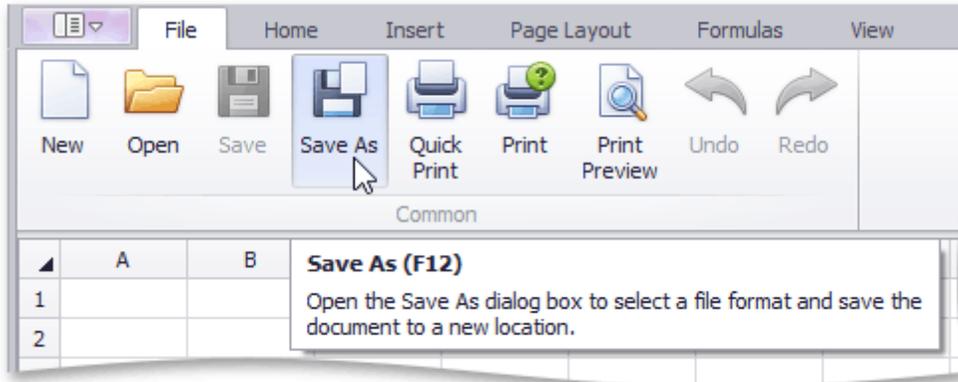


- Right-click the sheet tab of the worksheet, and then click the **Delete** item from the context menu.



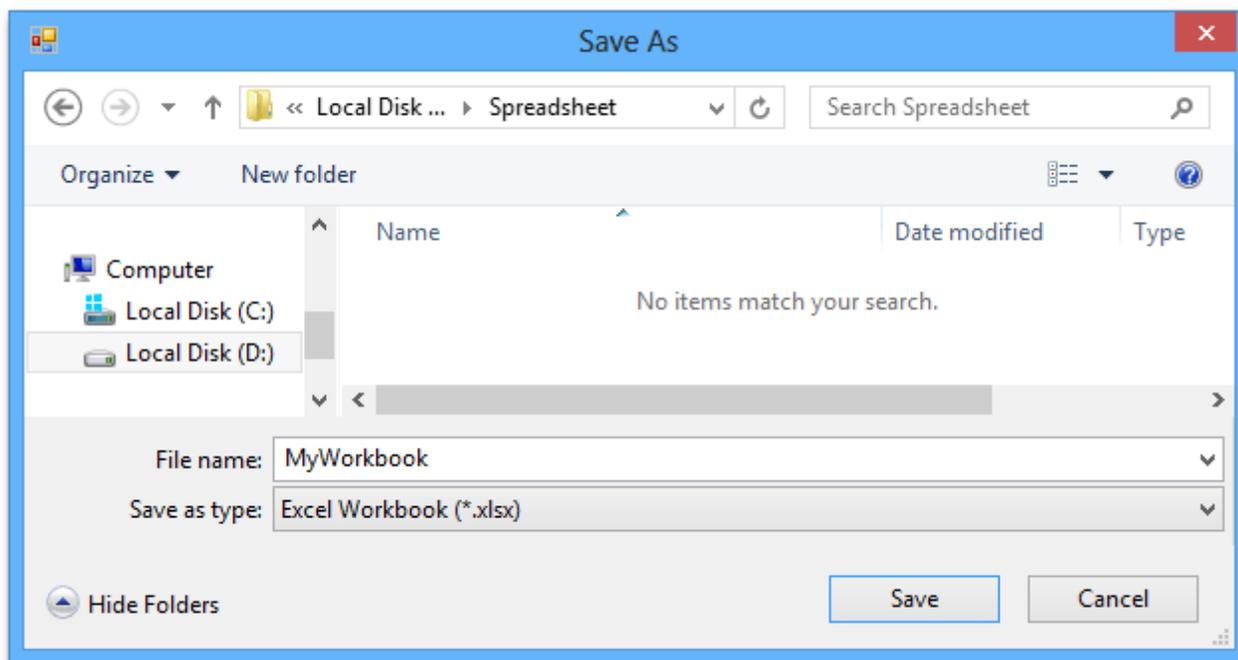
Save a Workbook

To save a workbook, go to the **File** tab, and then click the **Save as** button in the **Common** group, or press **F12** instead of these steps.



After that, the **Save as** dialog box is invoked.

Specify the location and the file format in which to save the workbook.



The available file formats in the **Save as** dialog box are the following.

- Excel Workbook (*.xlsx)
- Excel Macro-Enabled Workbook (*.xlsm)
- Excel 97-2003 Workbook (*.xls)
- Tab-delimited Text File format (*.txt)
- Comma-separated Values File format (*.csv)

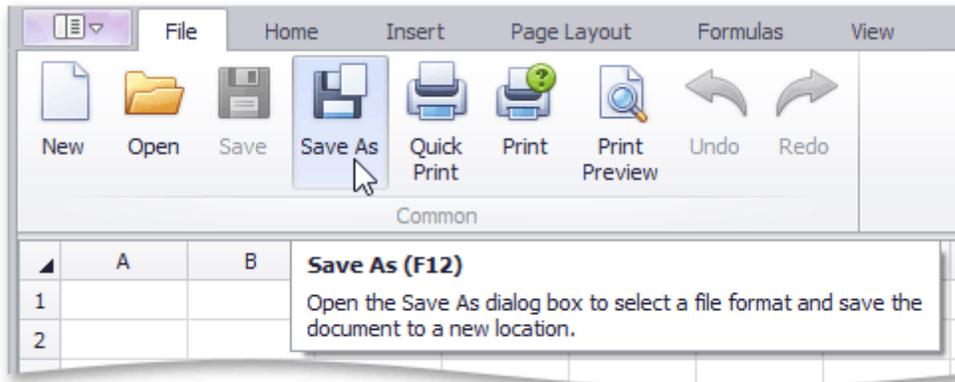
To save the active workbook with its current file format and location, go to the **File** tab, and then click the **Save** button in the **Common** group, or press **CTRL+S** instead. If you click the **Save** button to save a newly created workbook, the **Save as** dialog is invoked.

Import and Export Text Files

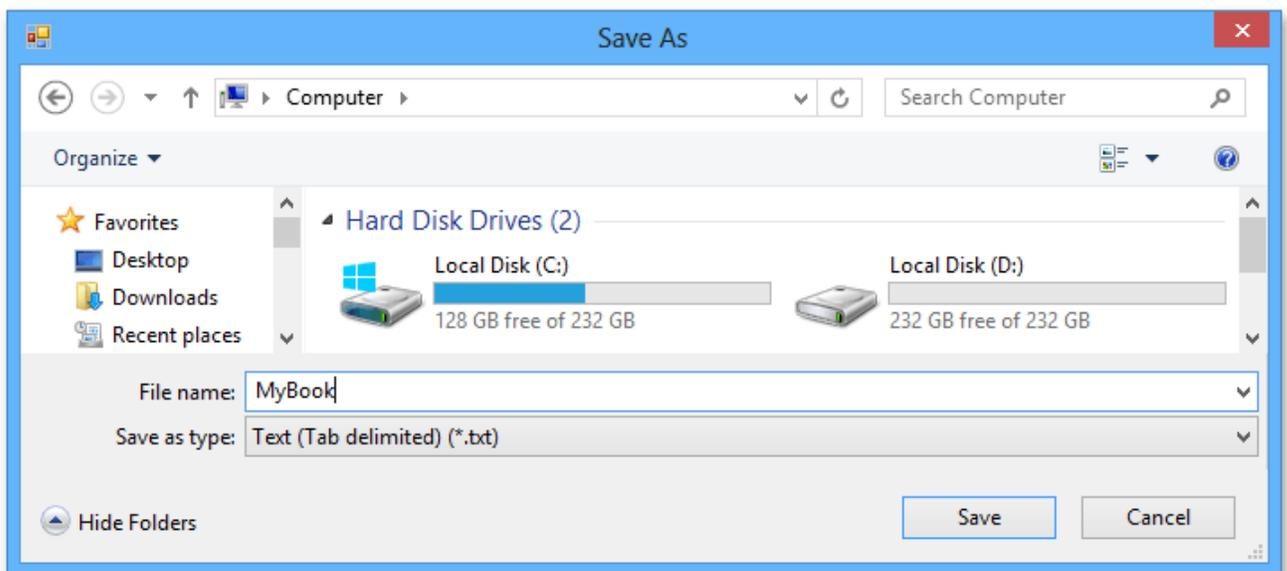
The **Spreadsheet** provides the capability to save a workbook as a text file (.txt or .csv) or load data from text files.

Save a Workbook as a Text File

1. To save a workbook as a text file, go to the **File** tab, and in the **Common** group, click the **Save As** button.



2. In the **Save As** dialog box that is invoked, select the **Text (Tab-delimited)** or **CSV (Comma-delimited)** item from the **Save as type** drop-down list.



The main features of the tab-delimited and comma-delimited file formats are described below.

- **Tab-delimited text files**

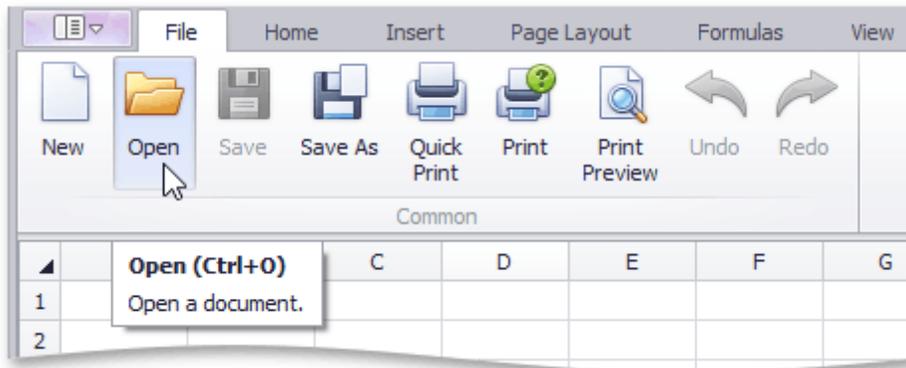
This file format uses the *TAB* character to separate each field of text. Note that the **Spreadsheet** only saves the active worksheet as a text (.txt) file. The columns are separated by the tab characters and each row ends with a carriage return character. The values and text in cells are saved as they are displayed in a worksheet. If a cell contains a comma, the cell contents are enclosed in double quotation marks. All formatting options applied to the cell, pictures and objects (such as hyperlinks) are lost.

- **Comma-delimited text files**

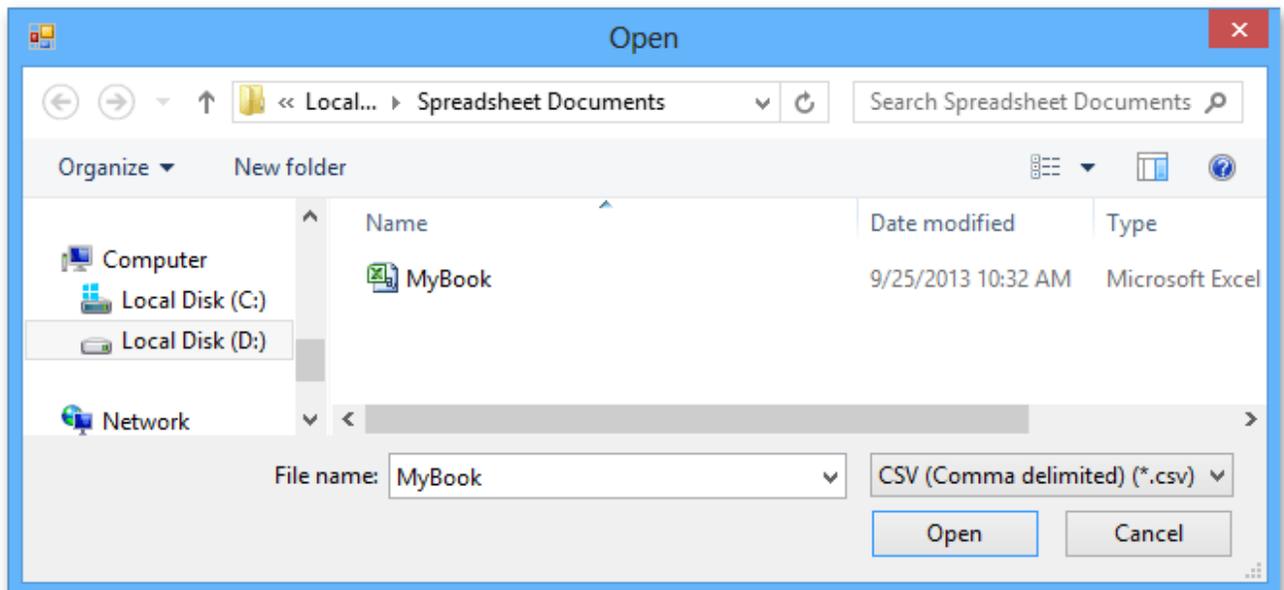
This file format uses the *comma* character to separate each field of text. Note that the **Spreadsheet** only saves the active worksheet as a CSV (.csv) file. Columns are separated by commas, and each row ends with a carriage return character. Cell text and values are saved as they are displayed in a worksheet. If a cell contains a comma, cell contents are enclosed in double quotation marks. All formatting options applied to the cell, pictures and objects (such as hyperlinks) are lost.

Load Data from Text Files

1. To load data from text files (.txt or .csv), go to the **File** tab, and in the **Common** group, click the **Open** button.



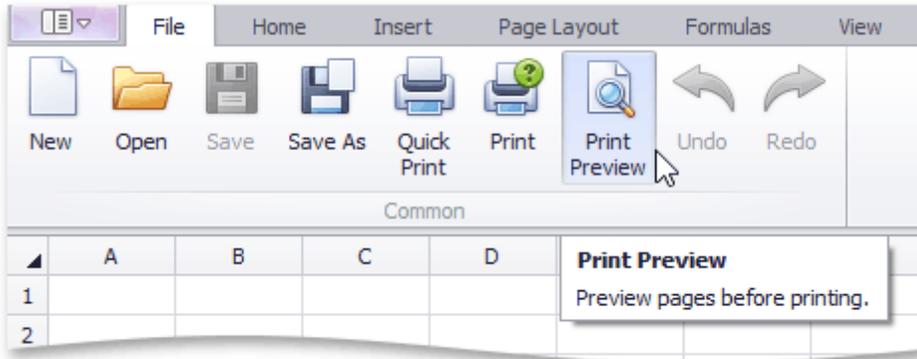
2. In the **Open** dialog box that is invoked, locate the text file you wish to open and click **Open**.



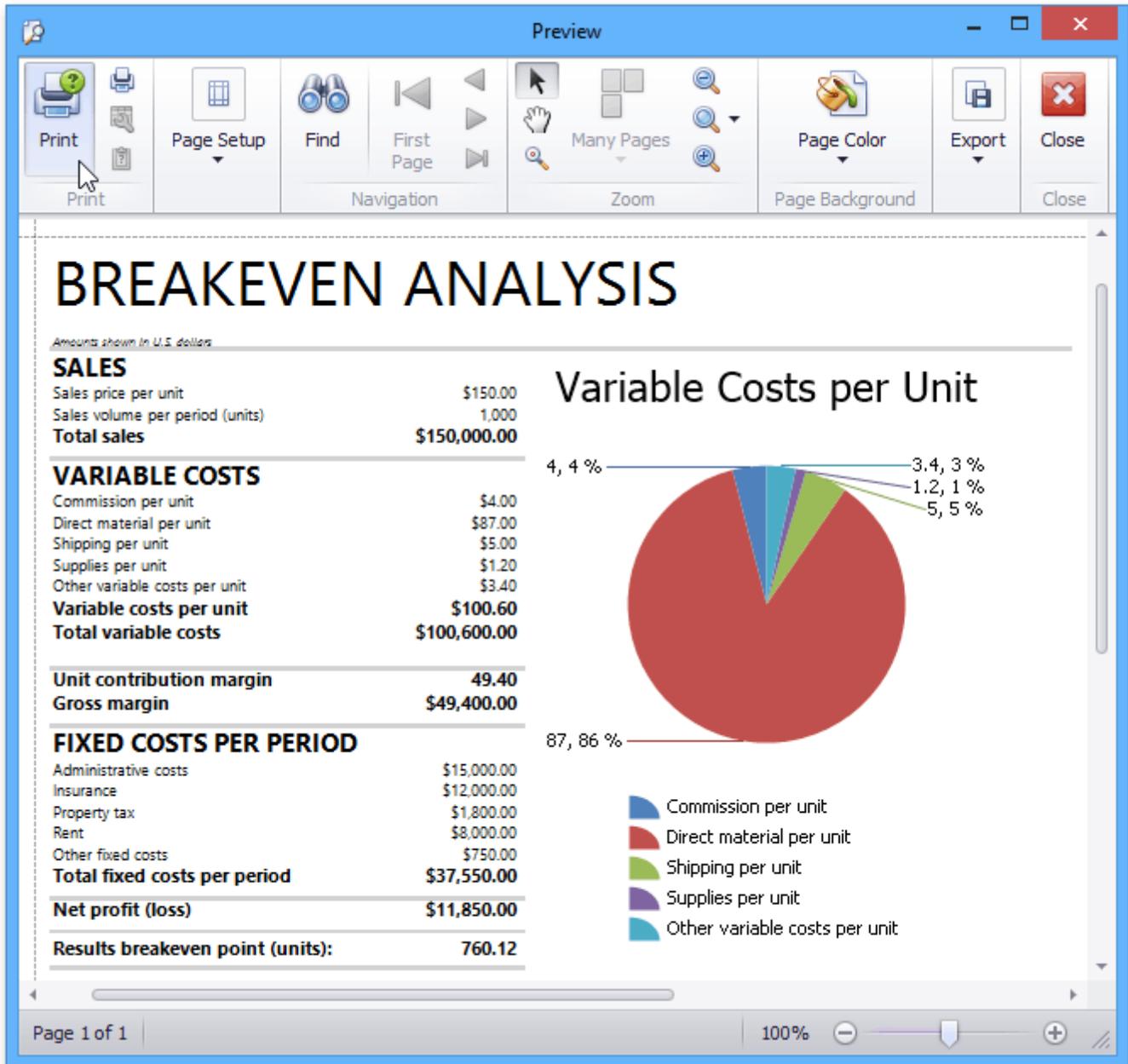
Print a Workbook

Preview a Workbook Before Printing

To view your workbook as it will be printed, select the **File** tab and click the **Print Preview** button in the **Common** group.

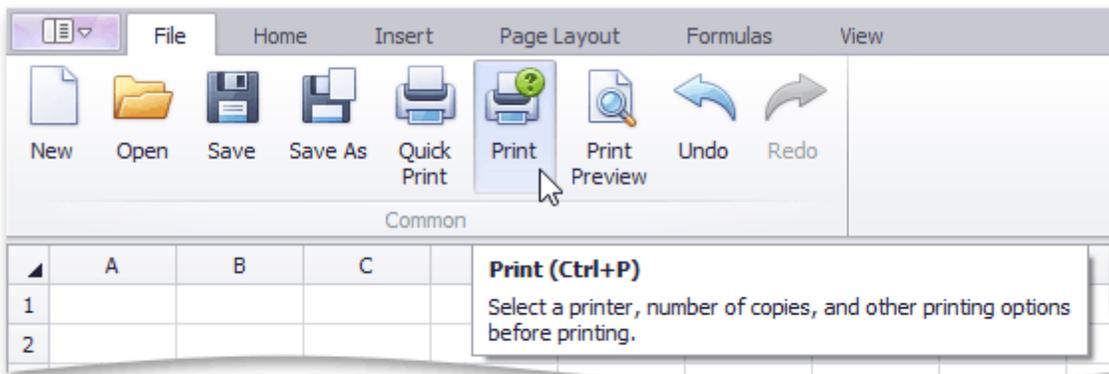


At the bottom of the **Preview** window, the **Spreadsheet** indicates how many pages the workbook will require when printed, and the number of the page you are currently viewing.

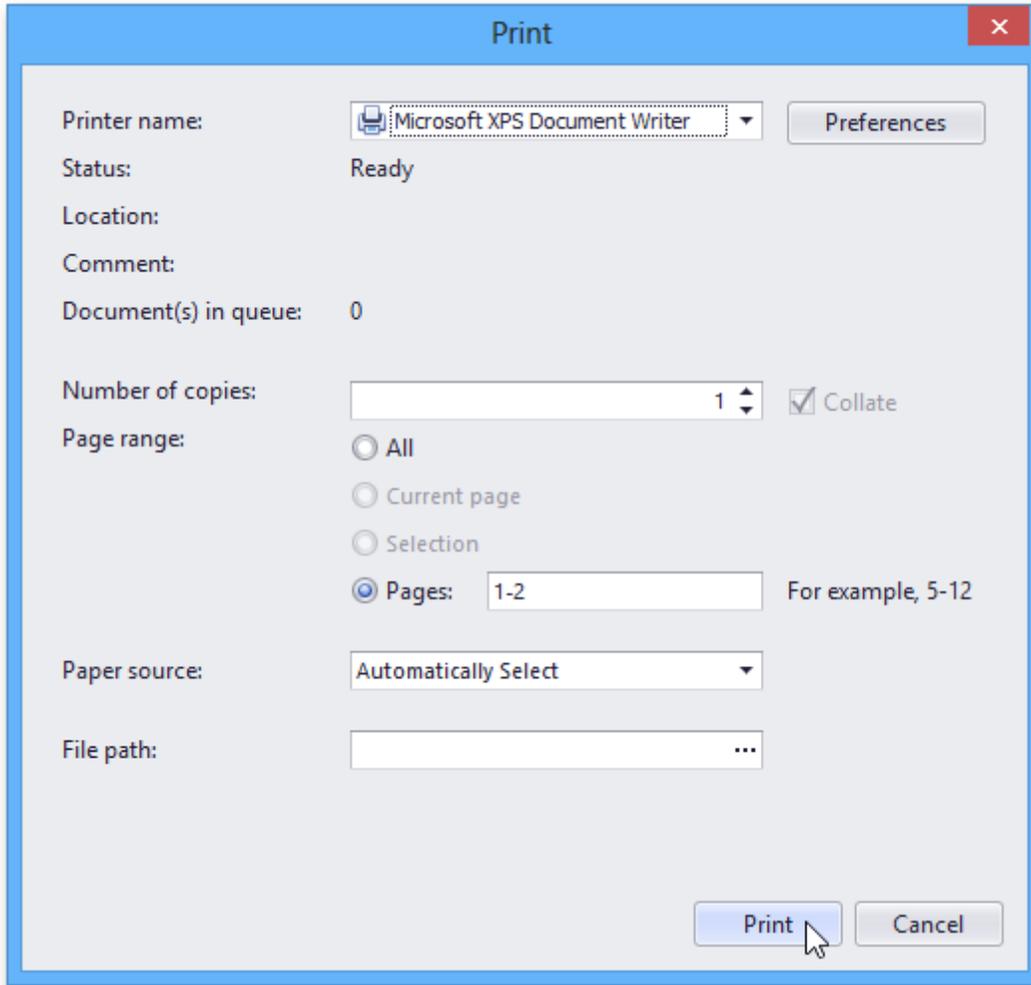


Print a Workbook

To print a document, click the **Print** button in the **Common** group or press **CTRL+P**.

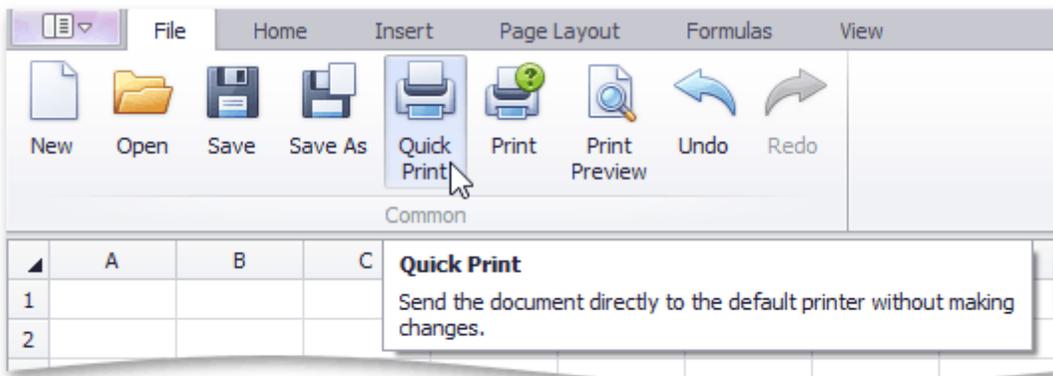


In the invoked **Print** dialog box, specify the required settings and click **Print**.



Print a Workbook Using the Default Settings

To send a workbook directly to the default printer without setting print options, click the **Quick Print** button in the **Common** group.

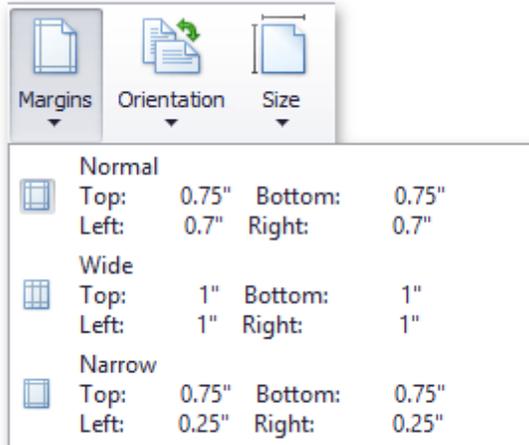


Adjust Page Settings

Before you print a worksheet, you can change page layout settings such as [page margins](#), [page orientation](#) and [paper size](#).

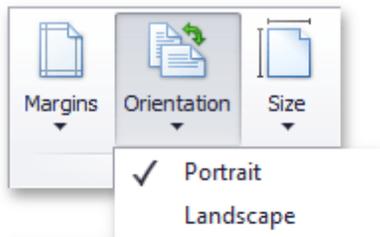
Set Page Margins

1. Click a worksheet for which you wish to set the page margins.
2. In the **Page Setup** group within the **Page Layout** tab, click the **Margins** button and select the margin sizes to be set for the current worksheet.



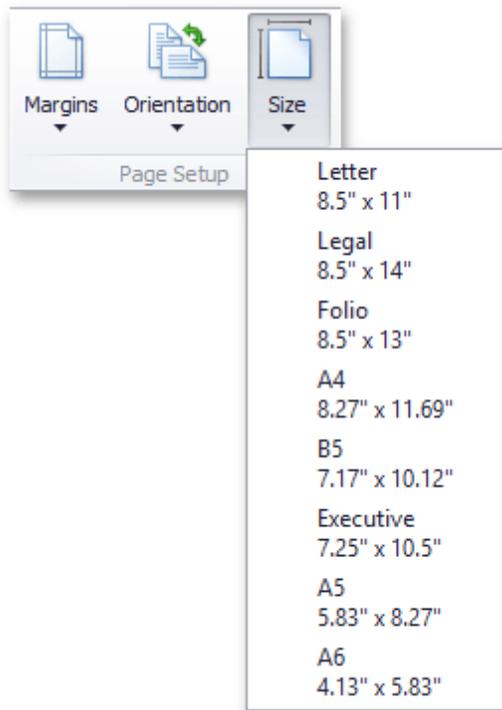
Set Page Orientation

1. Click a worksheet for which you wish to specify page orientation.
2. In the **Page Setup** group within the **Page Layout** tab, click the **Orientation** button and select **Portrait** or **Landscape** from the invoked drop-down list.



Change Paper Size

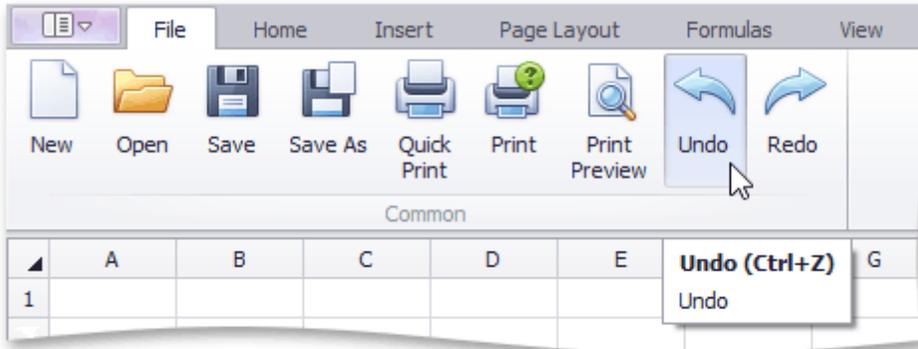
1. Click a worksheet for which you wish to set the paper size.
2. In the **Page Setup** group within the **Page Layout** tab, click the **Size** button and select one of the predefined paper sizes from the invoked drop-down list.



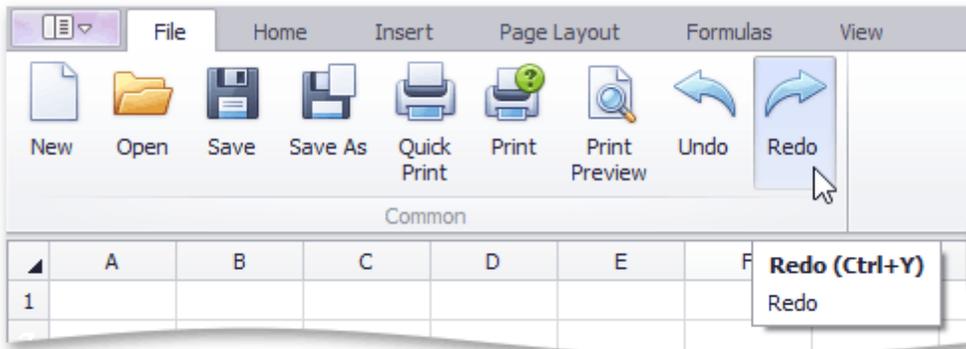
Undo and Redo Last Actions

The **Spreadsheet** allows you to undo or redo your last performed action.

To undo an action, select the **File** tab, and click the **Undo** button in the **Common** group (or press **CTRL+Z** or **ALT+BACKSPACE**).



To redo an action that you undid, click the **Redo** button in the **Common** group (or press **CTRL+Y** or **ALT+SHIFT+BACKSPACE**).



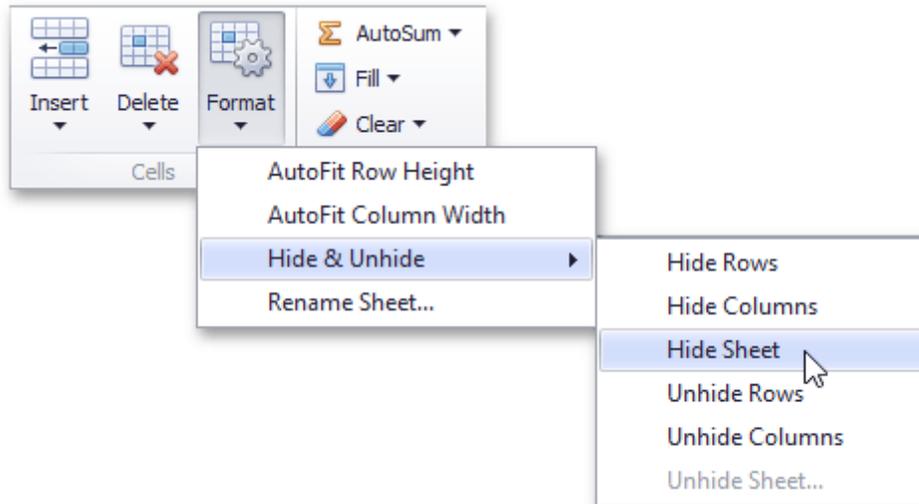
Viewing and Navigating

Hide and Display Worksheets

The **Spreadsheet** provides the capability to hide worksheets in a workbook. It can be useful if you want to remove a worksheet from the **Sheet tab** bar without deleting it. By default, all worksheets are displayed on the **Sheet tab** bar.

Hide Worksheets

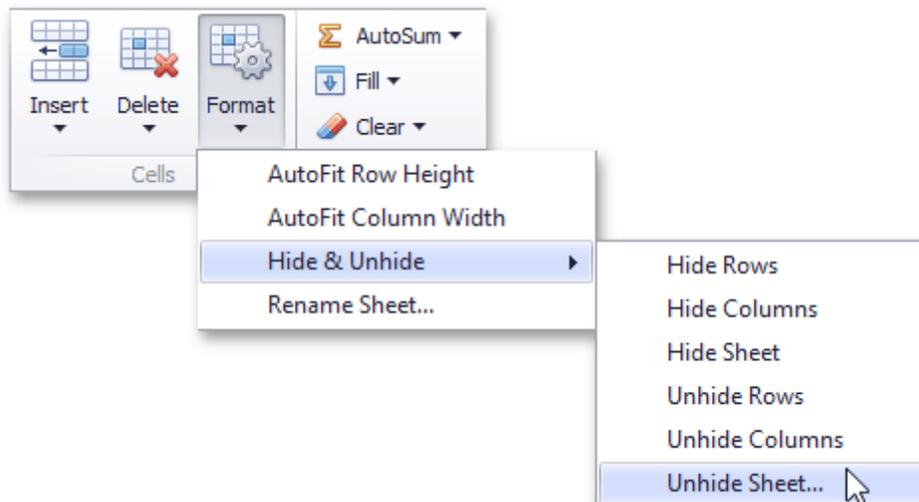
1. Switch to a worksheet you want to hide. To hide multiple worksheets, hold down **CTRL** and then click the sheet tabs of the worksheets you wish to hide on the **Sheet tab** bar.
2. Do one of the following:
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select **Hide & Unhide | Hide Sheet**. Note that this command is disabled when a workbook includes only one worksheet;



- Right-click the selected sheet tabs and select the **Hide** item from the context menu.

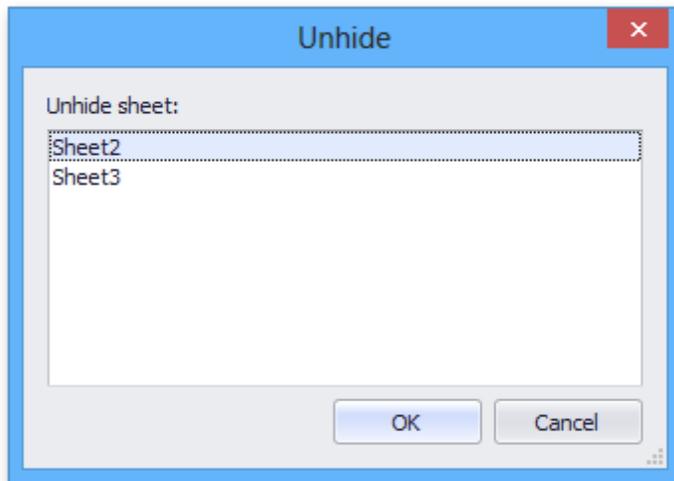
Display Hidden Worksheets

1. Do one of the following:
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select **Hide & Unhide | Unhide Sheet...**;



- Right-click any visible sheet tab, and select the **Unhide** item from the context menu.

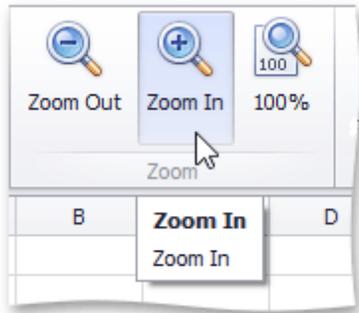
2. In the **Unhide** dialog box that is invoked, select the name of the worksheet you want to display and click **OK**. Note that you can hide multiple worksheets at once, but you can display only one worksheet at a time.



Zoom a Worksheet

To zoom in or out of a worksheet, do one of the following:

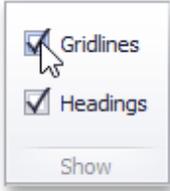
- In the **Zoom** group within the **View** tab, click the **Zoom In** or the **Zoom Out** button. Click the **Zoom 100%** button to restore the worksheet to normal size;



- Hold the **CTRL** button and rotate your mouse wheel.

Hide Gridlines and Headings

The **Spreadsheet** allows you to hide gridlines and headings that are displayed on a worksheet by default. In the **Show** group within the **View** tab, uncheck the **Gridlines** check box to hide gridlines on a worksheet. To hide the column and row headers, uncheck the **Headings** check box.



To display gridlines and headers, select the **Gridlines** and **Headings** check boxes, respectively.

Freeze Columns and Rows

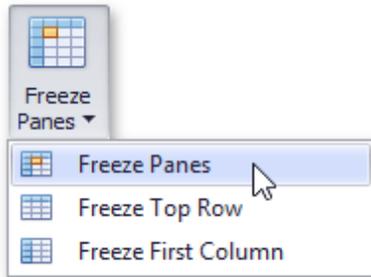
To keep specific columns and rows of the worksheet visible while scrolling through the rest of the worksheet, lock them in place using the **Freeze Panes** options of the **Spreadsheet**.

To freeze specific row(s) or column(s), follow the instructions below.

1. Depending on what you wish to freeze, do one of the following.

- To lock a row(s), [select](#) the row below the row(s) you wish to freeze.
- To lock a column(s), [select](#) the column to the right of the column(s) you wish to freeze.
- To lock a row(s) and column(s) simultaneously, click the cell below the row(s) and to the right of the column(s) you wish to freeze.

2. In the **Window** group within the **View** tab, click the **Freeze Panes** button's drop-down.

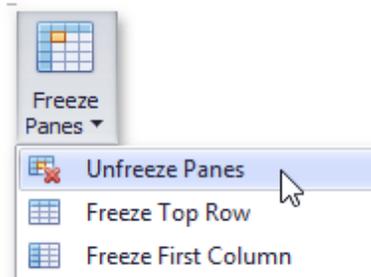


Select one of the following.

- **Freeze Panes** - lock multiple columns and/or multiple rows simultaneously.
- **Freeze Top Row** - lock the first row only.
- **Freeze First Column** - lock the left column only.

A black border appears beneath the frozen row(s) and to the right of the frozen column(s).

3. To unfreeze a row(s) or column(s), click the **Unfreeze Panes** item from the **Freeze Panes** button's drop-down list. This unlocks all frozen rows and columns in the worksheet.



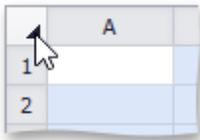
Editing Cells

Select Cells or Cell Content

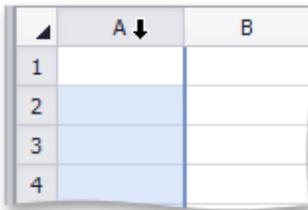
Selecting Cells

To select cells in the **Spreadsheet**, use the following mouse actions and keyboard shortcuts.

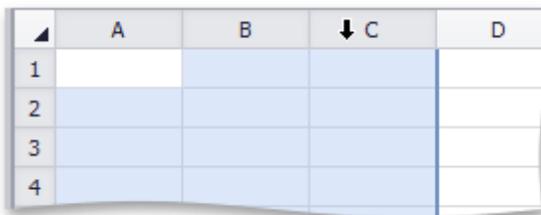
1. To select a **single cell**, click the cell or press the arrow keys to move to the required cell.
2. To select a **range of cells**, do one of the following.
 - Click the first cell in the range and drag it to the last cell.
 - Hold down the **SHIFT** key, and then press the arrow keys to extend the selection.
 - Click the first cell in the range, hold down the **SHIFT** key, and then click the last cell in the range.
3. To select the **entire worksheet**, click the **Select All** button at the intersection of the column and row headings, or press **CTRL+A**.



4. To select **nonadjacent cells**, hold down the **CTRL** key, and then select other cells.
5. To select an **entire row or column**, click the row or column heading.



6. To select **multiple columns or rows**, drag across the row or column headings.



7. To select **several nonadjacent rows or columns**, click the heading of the first row or column in the selection, hold down **CTRL**, and then click the headings of other rows or columns you wish to select.

The following table lists the default keyboard shortcuts used for selecting cells in the **Spreadsheet**.

CTRL+RIGHT ARROW	Selects the last cell in a row.
CTRL+LEFT ARROW	Selects the first cell in a row.
CTRL+DOWN ARROW	Selects the last cell in a column.
CTRL+UP ARROW	Selects the first cell in a column.
CTRL+HOME	Selects the first cell on a worksheet.

CTRL+END	Selects the last cell that contains data or formatting on a worksheet.
CTRL+A	Selects the entire worksheet.
CTRL+SHIFT+END	Extends the selection to the last used cell on a worksheet.
CTRL+SHIFT+HOME	Extends the selection to the beginning of the document.

Selecting Cell Content

To select the cell content, do one of the following:

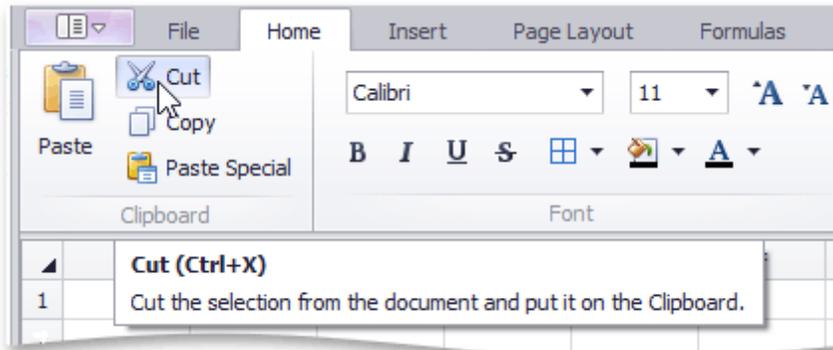
- Double-click the cell, and then drag across the cell content you wish to select.
- Press **F2**, and then drag across the contents of the cell you wish to select, or press **SHIFT+LEFT ARROW** to select the cell content.
- Click the cell, and then drag across the cell content you wish to select in the **Formula Bar**.

Copy and Paste Cell Content

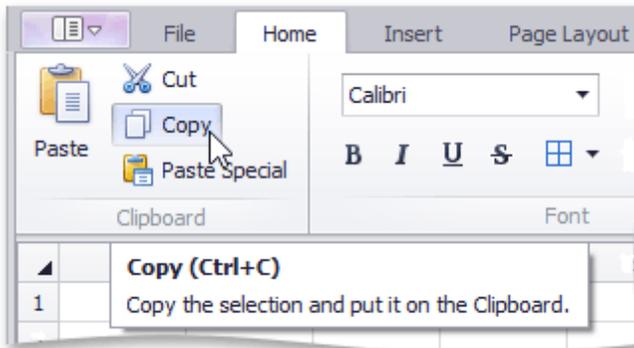
The **Spreadsheet** allows you to copy and paste entire cells, or only their contents, using the Clipboard.

To move or copy cell content, follow the steps below.

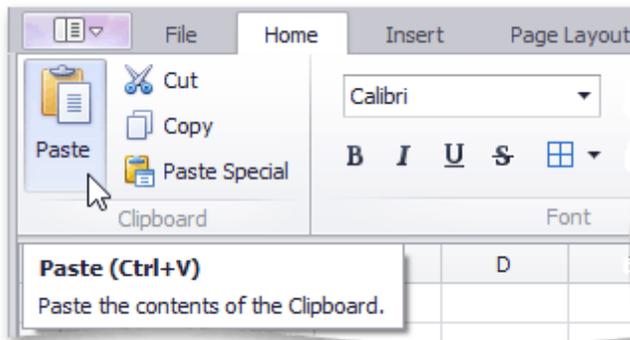
1. [Select](#) the cells that you wish to move or copy.
2. In the **Clipboard** group within the **Home** tab, do one of the following.
 - To move the selected cells, click the **Cut** button (or press **CTRL+X** or **SHIFT+DELETE**).



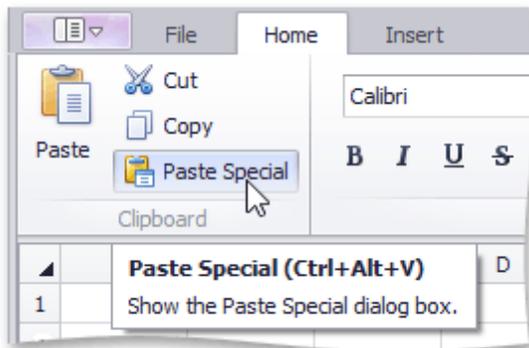
- To copy the selected cells, click the **Copy** button (or press **CTRL+C** or **CTRL+INSERT**).



3. Click the upper-left cell in the area where you wish to paste the copied cells.
4. In the **Clipboard** group within the **Home** tab, click the **Paste** button (or press **CTRL+V** or **SHIFT+INSERT**).



To choose special options when you paste cells, in the **Clipboard** group within the **Home** tab, click the **Paste Special** button (or press **CTRL+ALT+V**).



In the invoked **Paste Special** dialog box, select one of the following options.

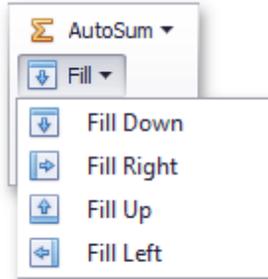
- **All** - paste all cell content and formatting.
- **Formulas** - only paste formulas, as entered in the **Formula Bar**.
- **Values** - only paste cell values.
- **Formats** - only paste cell formatting.
- **Comments** - only paste the comments added to the cells.
- **All except borders** - paste cell content and formatting without cell borders.
- **Column widths** - paste the column widths of the copied cells to another range of columns.
- **Formulas and number formats** - only paste formulas and number formatting options from the copied cells.
- **Values and number formats** - only paste values and number formatting options from the copied cells.
- **Skip blanks** - avoid replacing values in the paste area when the copy area includes blank cells.

Fill Data Automatically

The **Spreadsheet** provides the capability to fill adjacent cells with data automatically.

To fill a selected cell or a range of cells with the data contained in adjacent cells, do the following.

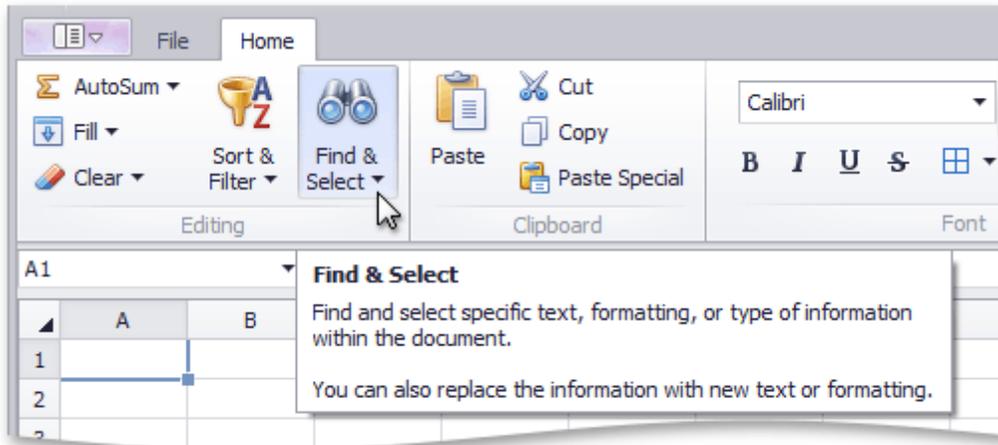
1. [Select](#) the cell (or range of cells) adjacent to the cell (or range of cells) of the data you wish to repeat.
2. In the **Editing** group within the **Home** tab, click the **Fill** button and select one of the following items from the drop-down list.



- **Fill Down** (or press **CTRL+D**) - pastes the contents of the cell that is above the selected cell, or pastes the contents of the topmost cell in the selected range to the cells below.
- **Fill Up** - pastes the contents of the cell below the selected cell, or pastes the contents of the lowermost cell in the selected range to the cells above.
- **Fill Right** (or press **CTRL+R**) - pastes the contents of the cell or cell range to the left of the selected cell(s).
- **Fill Left** - pastes the contents of the cell or cell range to the right of the selected cell(s).

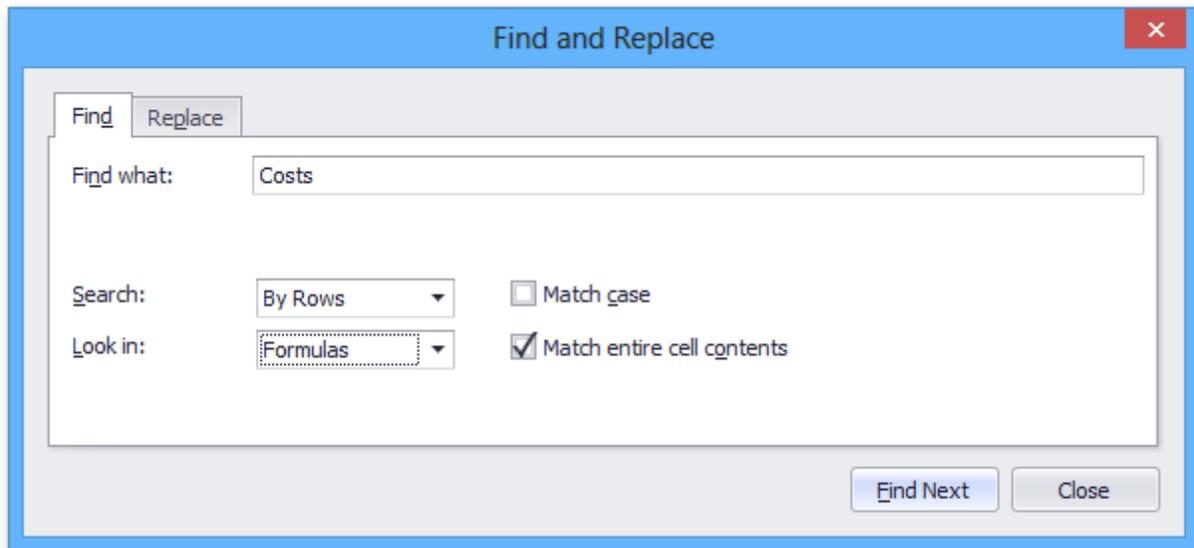
Find and Replace

The **Spreadsheet** allows you to search for specific data in the current worksheet. To perform a search, on the **Home** tab, in the **Editing** group, click the **Find & Select** button. The button's drop-down menu will be displayed.



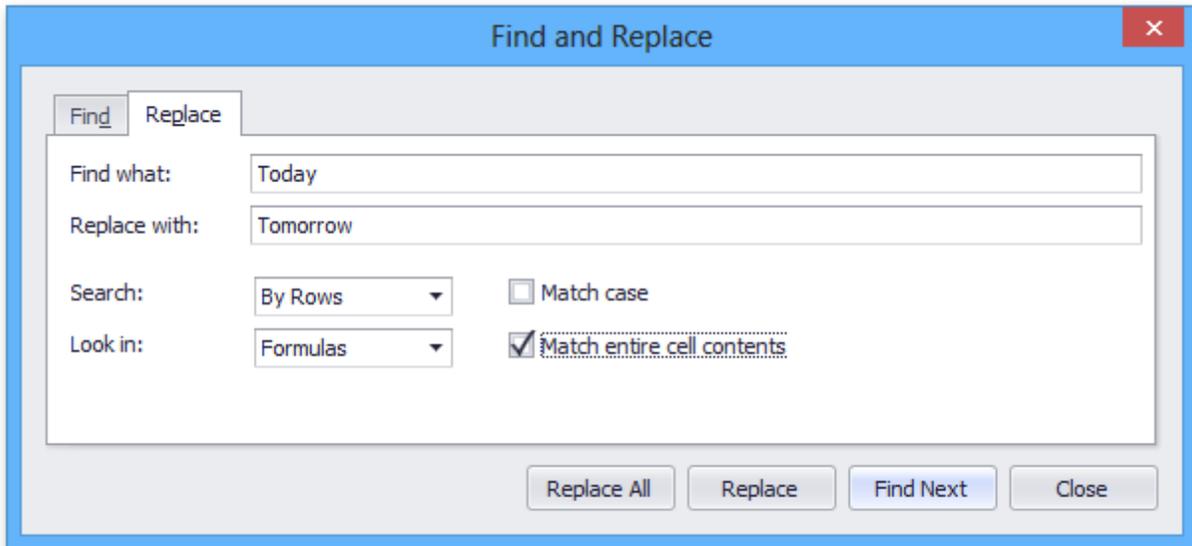
Next, do one of the following.

- Click **Find** in the **Find & Select** drop-down menu (or press **CTRL+F**) to perform a search in the active worksheet. The **Find and Replace** dialog (with the **Find** tab activated) will be invoked.



In the **Find what** field, enter the text or number you wish to find, and click the **Find Next** button to start the search. To define the direction of the search, in the **Search** field, select the **By Rows** or **By Columns** drop-down item. In the **Look in** field, select **Values** (to search cell values only) or **Formulas** (to search cell values and formula expressions, excluding the calculated results). To perform a case-sensitive search, select the **Match Case** check box. To restrict the search to the entire cell content, select the **Match entire cell contents** check box.

- Click **Replace** in the **Find & Select** drop-down menu (or press **CTRL+H**) to search for a text string and optionally replace it with another value. The **Find and Replace** dialog (with the **Replace** tab activated) will be invoked.



To replace a value, enter the search term in the **Find what** field and the replacement text for this search term in the **Replace with** field, and then click the **Find Next** button to find the first occurrence of the search term. Next, click the **Replace** button to replace only the value of the selected matching cell, or **Replace All** to replace all occurrences of the search term. Note that the **Replace** tab provides the same search options as the **Find** tab, with one exception: you can only select the **Formulas** drop-down item in the **Look in** box, so only the underlying formulas (not the calculated results) will be examined when searching for matches to your search term.

Insert a Comment

The **Spreadsheet** allows you to attach notes to individual cells by using **comments**. Comments are extremely useful when you need to provide additional information, such as reminders, notifications, or feedback in a document without modifying cell content.

Comments are displayed in a yellow box anchored to a cell. A cell containing a comment has a red triangular indicator in the corner.

	A	B	C	D	E	F	G
6		No	Day	Category	Sum		
7		1	15	Salary	\$ 13,000.00		
8		2	30	Salary	\$ 21,300.00		
9		3	8	Scholarship	\$ 80.00		
10					\$ 34,380.00		
11							
12							

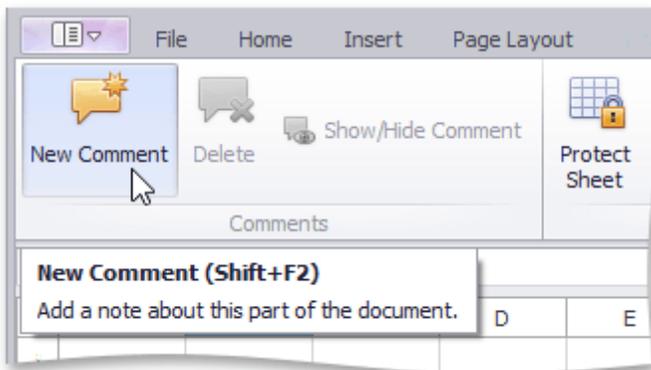
Tommy Morris:
 Total personal income in
 March

You can [add](#) new comments, [edit](#) existing comments, [copy](#) comments to other cells, [move and resize](#) the comment box, [hide](#) or [delete](#) comments if they are no longer needed.

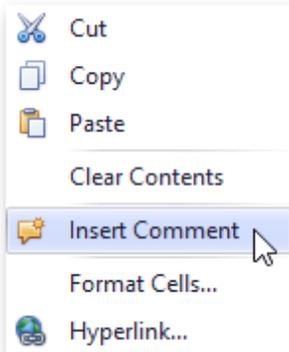
Add a Comment

To insert a new comment, select the cell where you wish to place the comment, and do one of the following.

- On the **Review** tab, in the **Comments** group, click the **New Comment** button.



- Right-click the cell and select the **Insert Comment** item in the context menu.

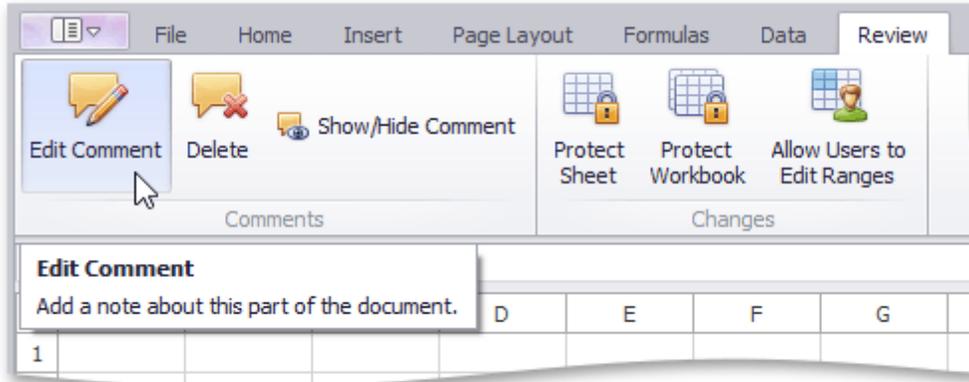


- Press **SHIFT+F2**.

The new comment will be anchored to the cell. Type the desired text within the comment box. By default, the comment is accompanied by the user name of the person who created the comment. If you wish to change the default name, delete it and type a new name.

Edit a Comment

1. Select the cell that contains the comment you wish to edit.
2. Do one of the following.
 - On the **Review** tab, in the **Comments** group, click the **Edit Comment** button...



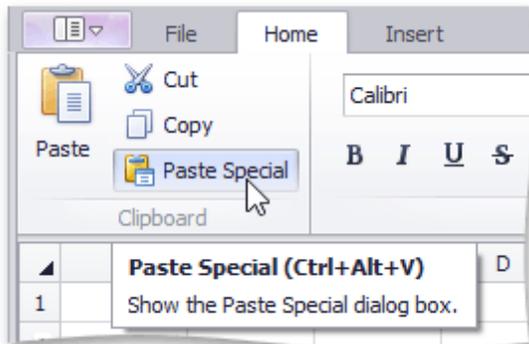
... or right-click the cell and select the **Edit Comment** item in the context menu. The comment will be activated and the cursor will be positioned within the comment box. Change the comment text as needed.

- Click inside the comment box, and start editing the comment text.

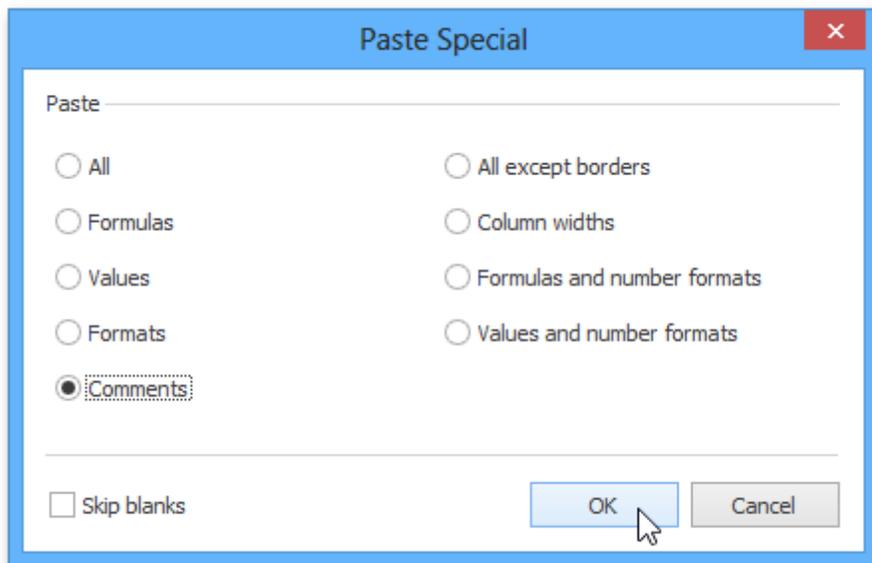
Tip
If the comment is hidden, click the Show/Hide Comment button to display the comment.

Copy Comments Only

1. Select the cell(s) containing the comment(s) you wish to copy.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**, or press **CTRL+C**.
3. Select the top-left cell of the destination area where you wish to insert the copied comment(s).
4. On the **Home** tab, in the **Clipboard** group, click the **Paste Special** button, or press **CTRL+ALT+V**.



5. In the invoked **Paste Special** dialog, click **Comments**, and then click **OK**.



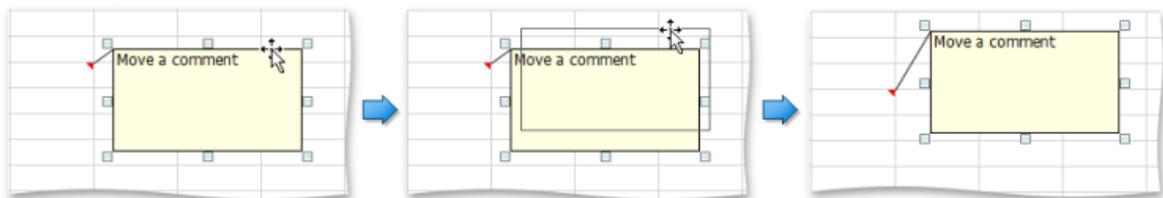
Move and Resize a Comment

1. Select the cell that contains the comment you wish to move or resize.

Tip
If the comment is hidden, click the **Show/Hide Comment** button to display the comment.

2. Click the comment box border to display the **sizing handles** (small rectangles at the corners and sides of the comment box).
3. Do one of the following.

- To move a comment, hover the mouse over the comment border so that the four-way resize arrow appears, and drag the comment to a new location.

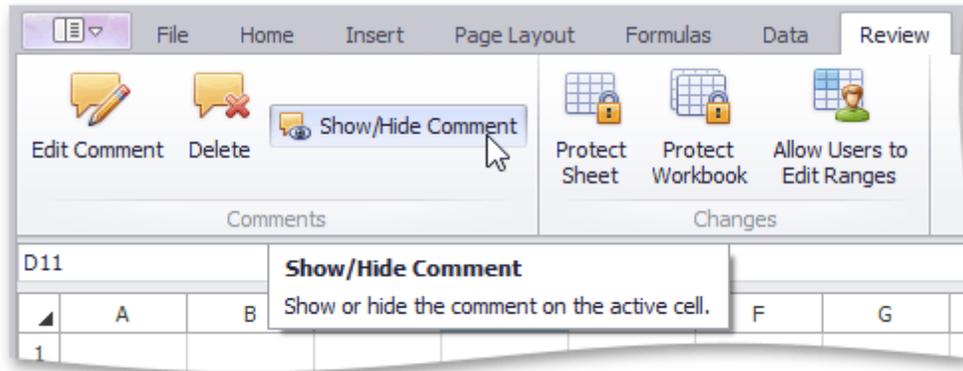


- To resize a comment, click one of the sizing handles and drag the edge of the comment box.



Display or Hide a Comment

1. Select the cell that contains the comment you wish to display or hide.
2. Do one of the following.
 - On the **Review** tab, in the **Comments** group, click the **Show/Hide Comment** button.

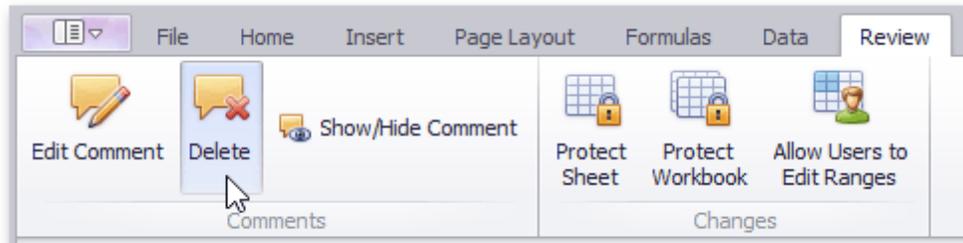


- Right-click the cell and select the **Show/Hide Comment** item in the context menu.

Remove a Comment

To delete the existing comment, do the following.

1. Select the cell that contains the comment you wish to delete.
2. Do one of the following.
 - On the **Review** tab, in the **Comments** group, click the **Delete** button.



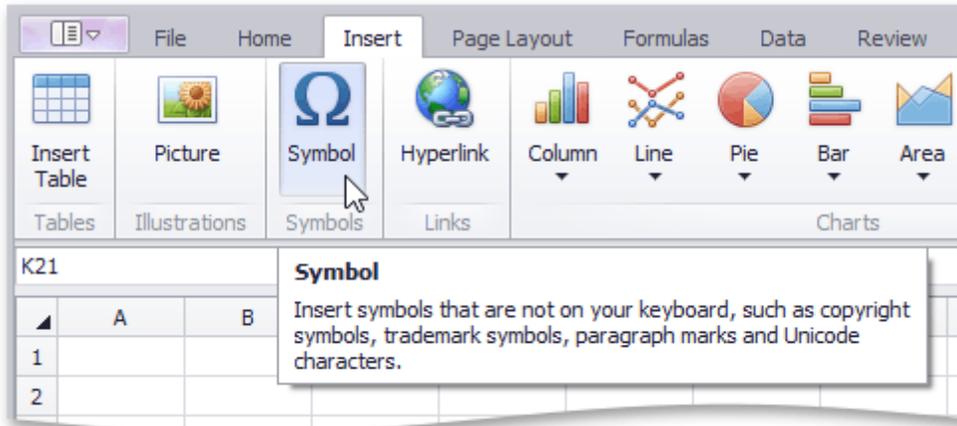
- Right-click the cell and select the **Delete Comment** item in the context menu.

Insert a Symbol

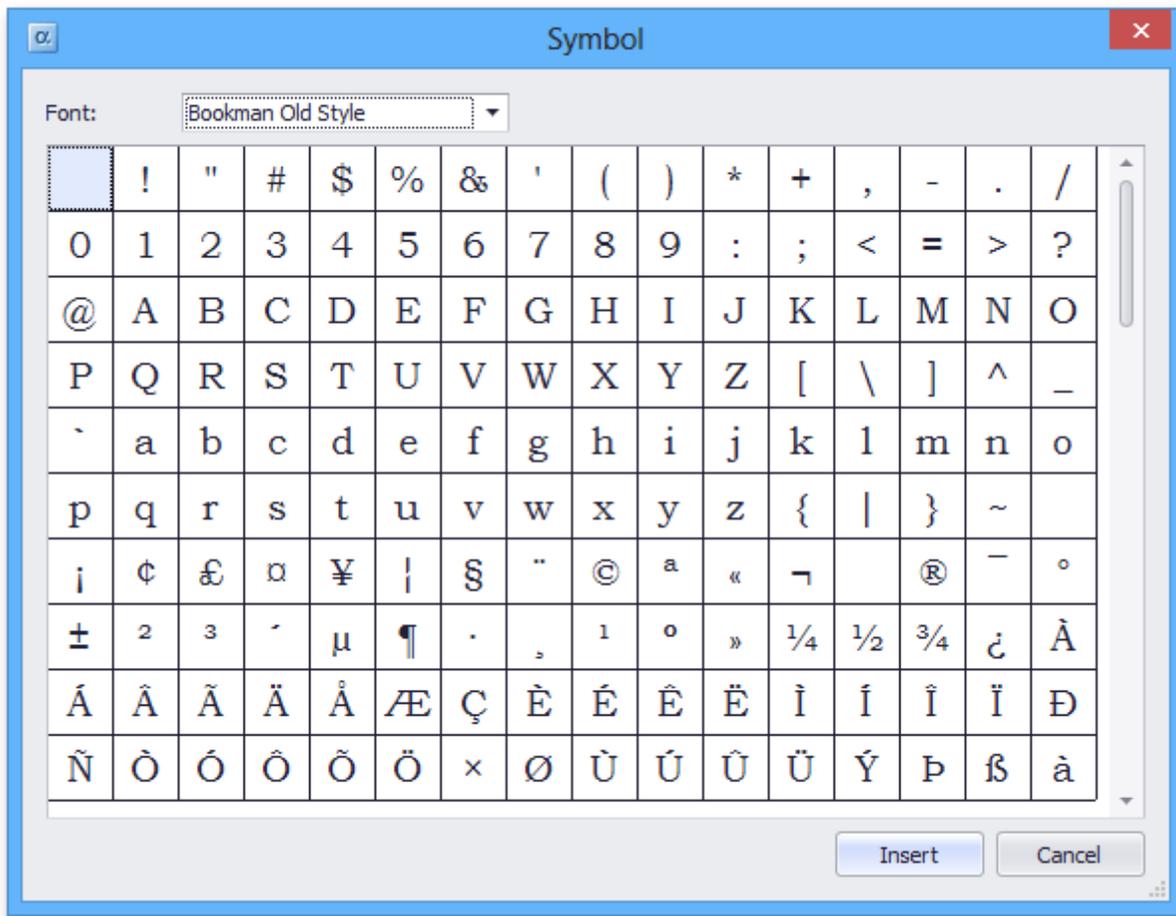
The **Spreadsheet** allows you to insert symbols and special characters that are not on your keyboard, such as ASCII characters, copyright symbols, trademark symbols, paragraph marks, etc.

To insert a symbol, follow the instructions below.

1. Move to the cell where you wish to insert a symbol.
2. On the **Insert** tab, in the **Symbols** group, click the **Symbol** button.



The **Symbol** dialog will be invoked.



3. Select the symbol you wish to insert and click **Insert**, or double-click the symbol.

Cell Formatting

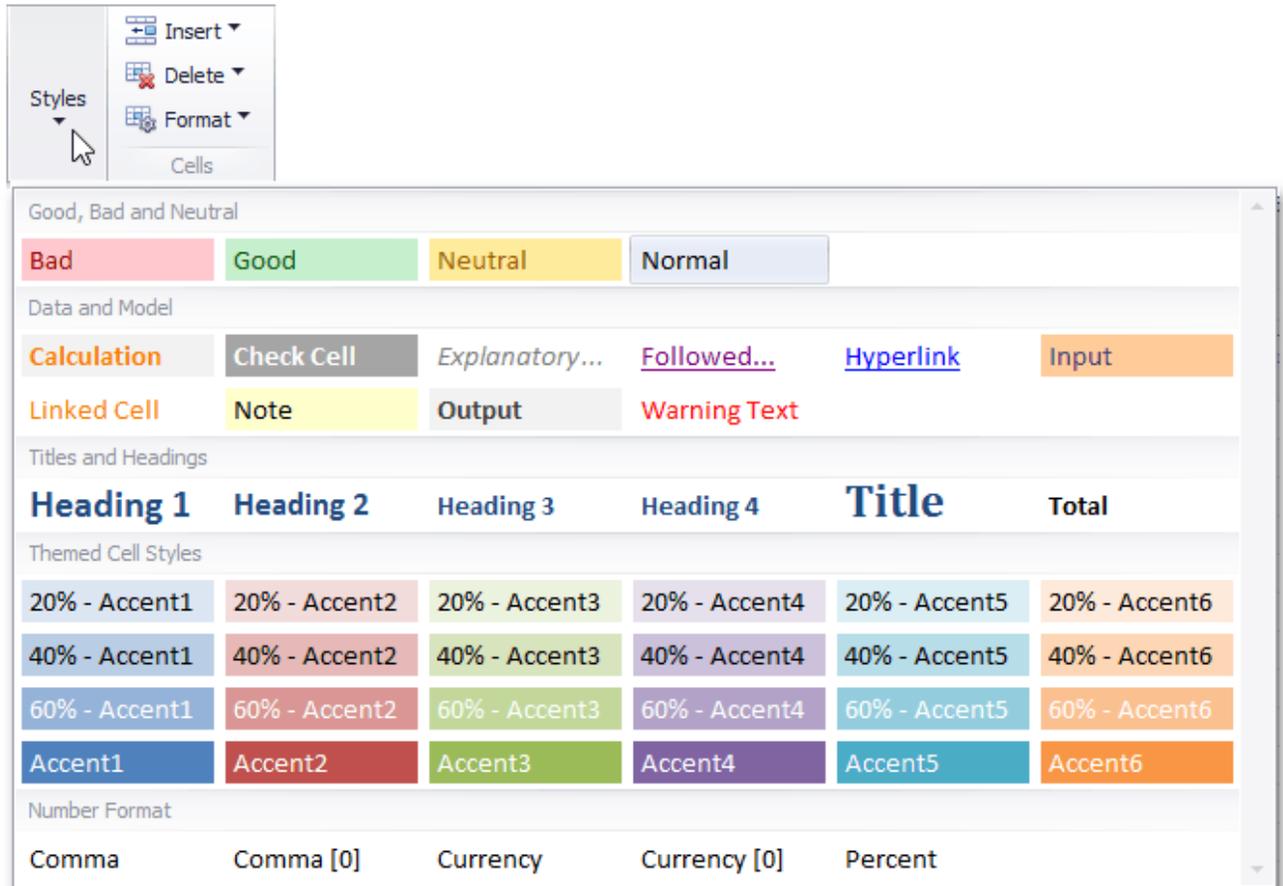
Format Cells

The **Spreadsheet** provides the capability to format cells and the data they contain. It includes many predefined styles that you can use.

To format a cell or a range of cells, follow the instructions below.

Using Predefined Styles

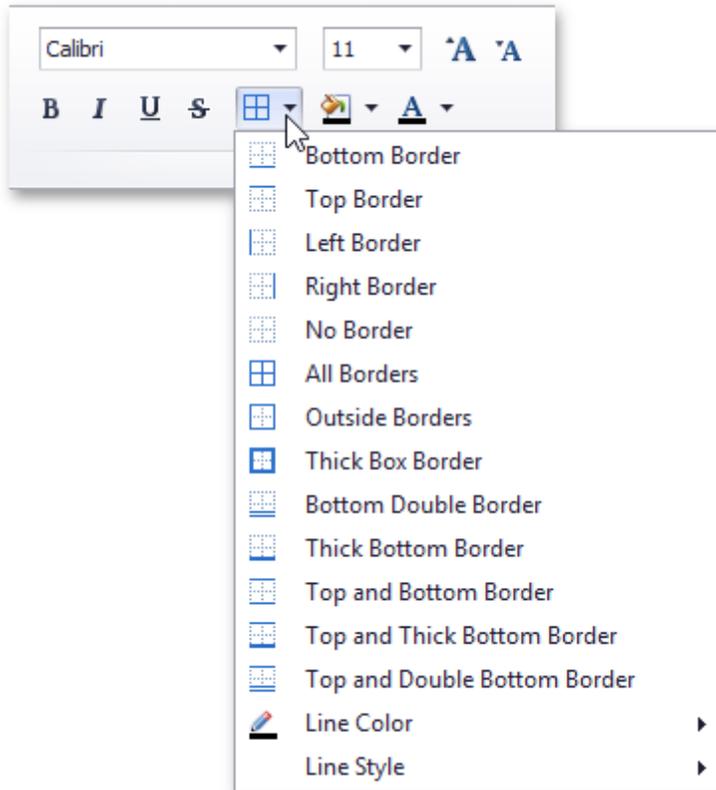
1. [Select](#) the cells you wish to format.
2. In the **Styles** group within the **Home** tab, select the style that you wish to apply to the selected cells.



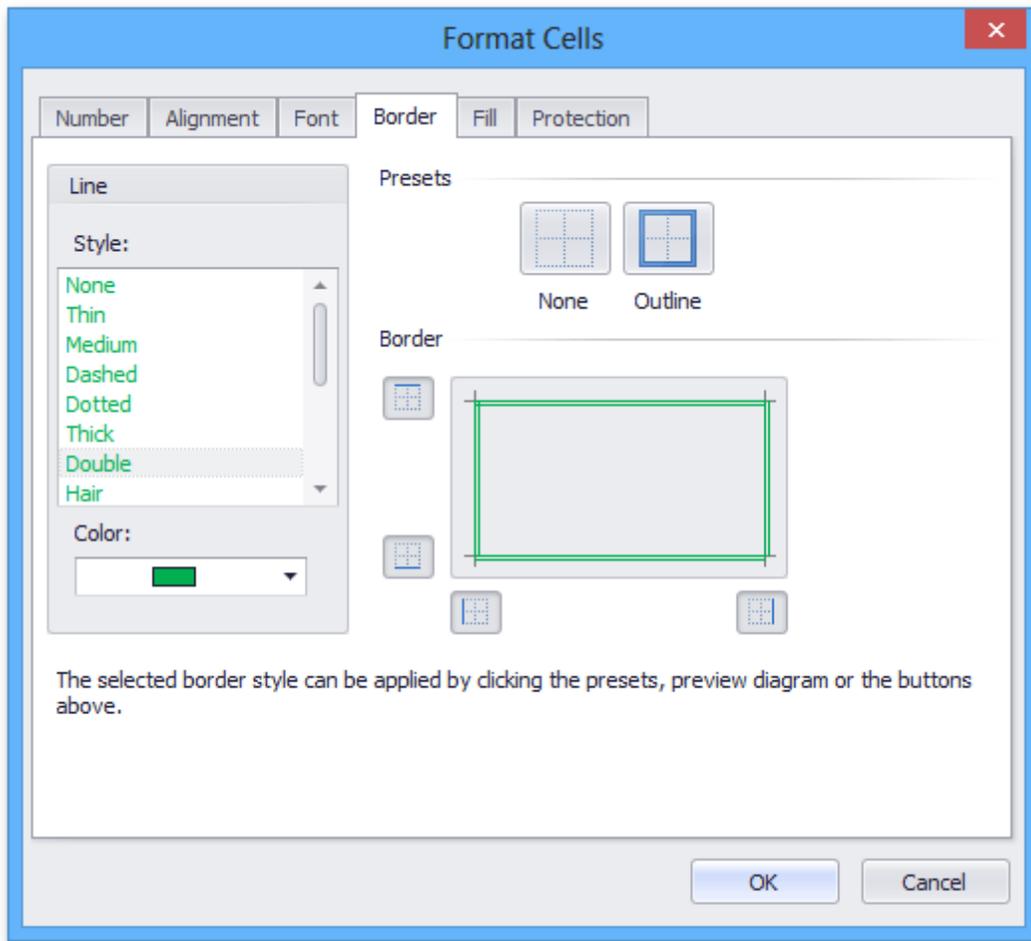
Applying Specific Formatting

If you are not satisfied with the predefined styles, specify your own formatting options.

1. [Select](#) the cells you wish to format.
2. To add borders to the selected cells, do one of the following.
 - In the **Font** group within the **Home** tab, click the **Borders** button's drop-down menu and select the border type. This menu also allows you to select the line style and line color of borders.

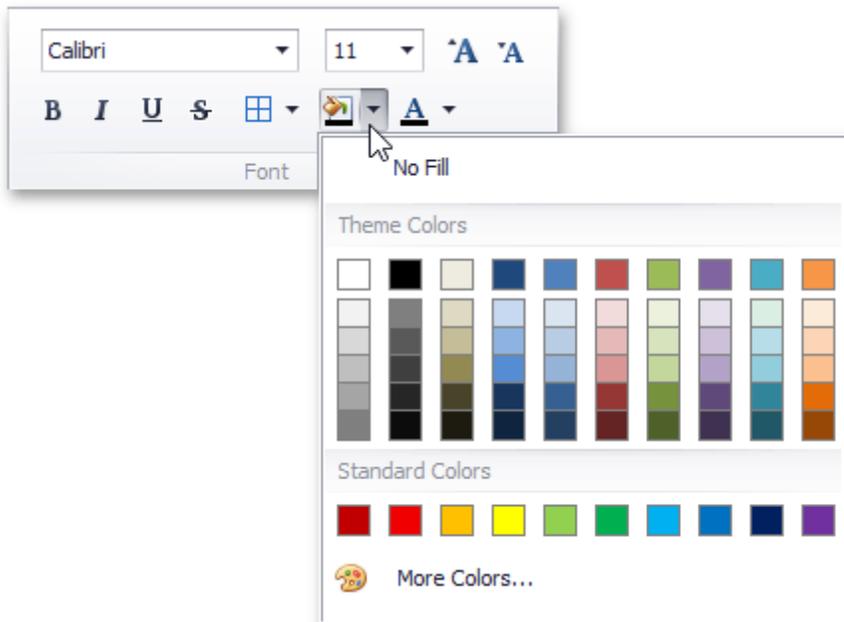


- Click the **Font** dialog box launcher to invoke the **Format Cells** dialog box. Click the **Border** tab and specify all required parameters. Then click **OK**.

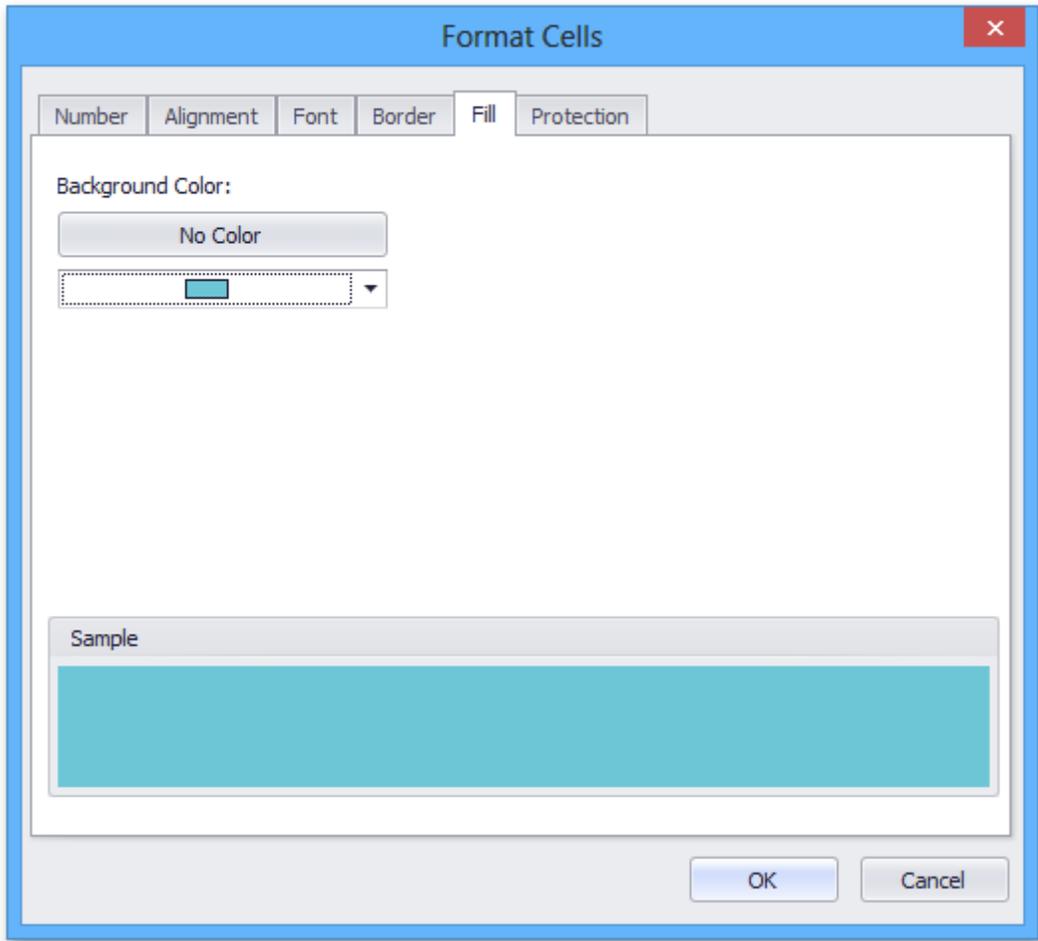


3. To set the background color of the selected cells, do one of the following.

- In the **Font** group within the **Home** tab, click the **Fill Color** button's drop-down menu and select the desired color.



- Click the **Font** dialog box launcher, and in the invoked **Format Cells** dialog box, open the **Fill** tab. Specify all required parameters and click **OK**.

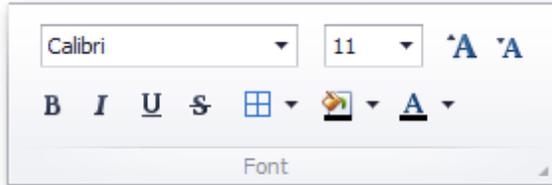


Format Cell Content

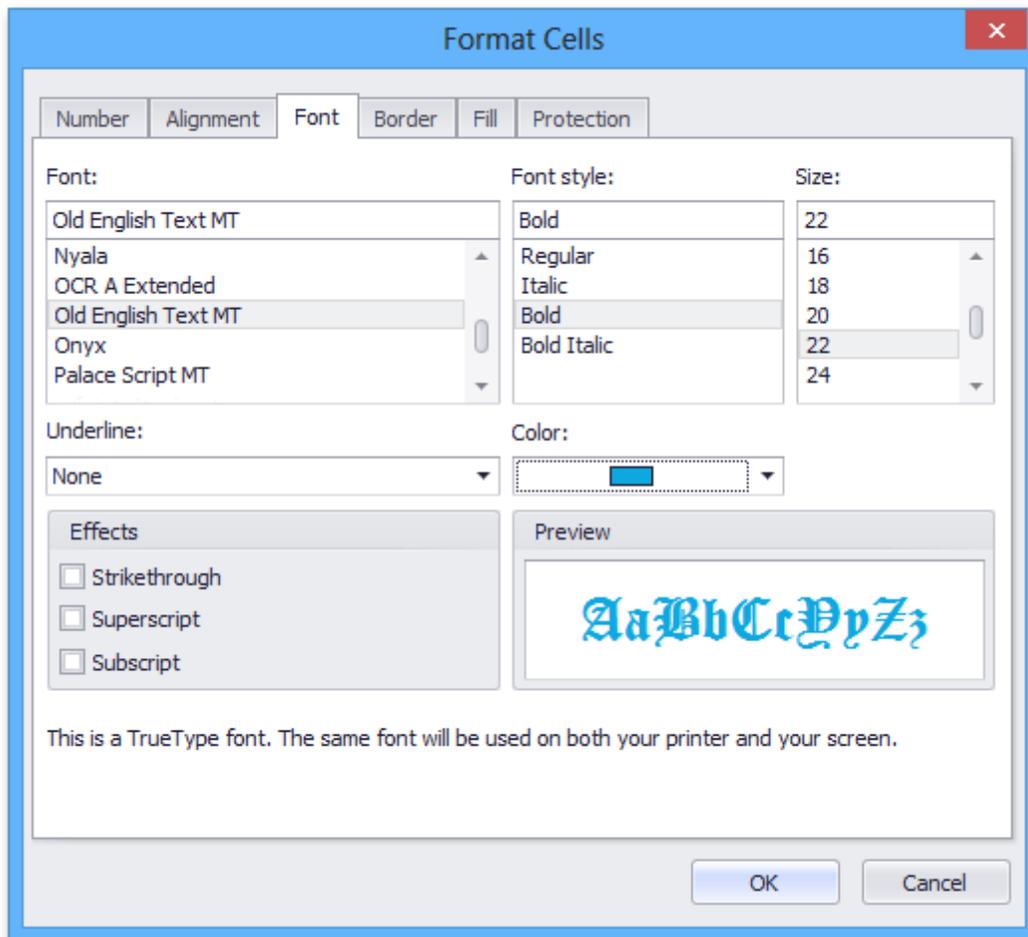
The **Spreadsheet** provides the capability to set font style, size, color and text alignment in a cell.

To format cell content, follow the steps below.

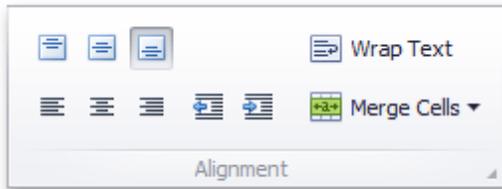
1. [Select](#) a cell or a cell range that you wish to format.
2. To change the font, use the **Font** group within the **Home** tab to specify the font family, size, style, color, etc.



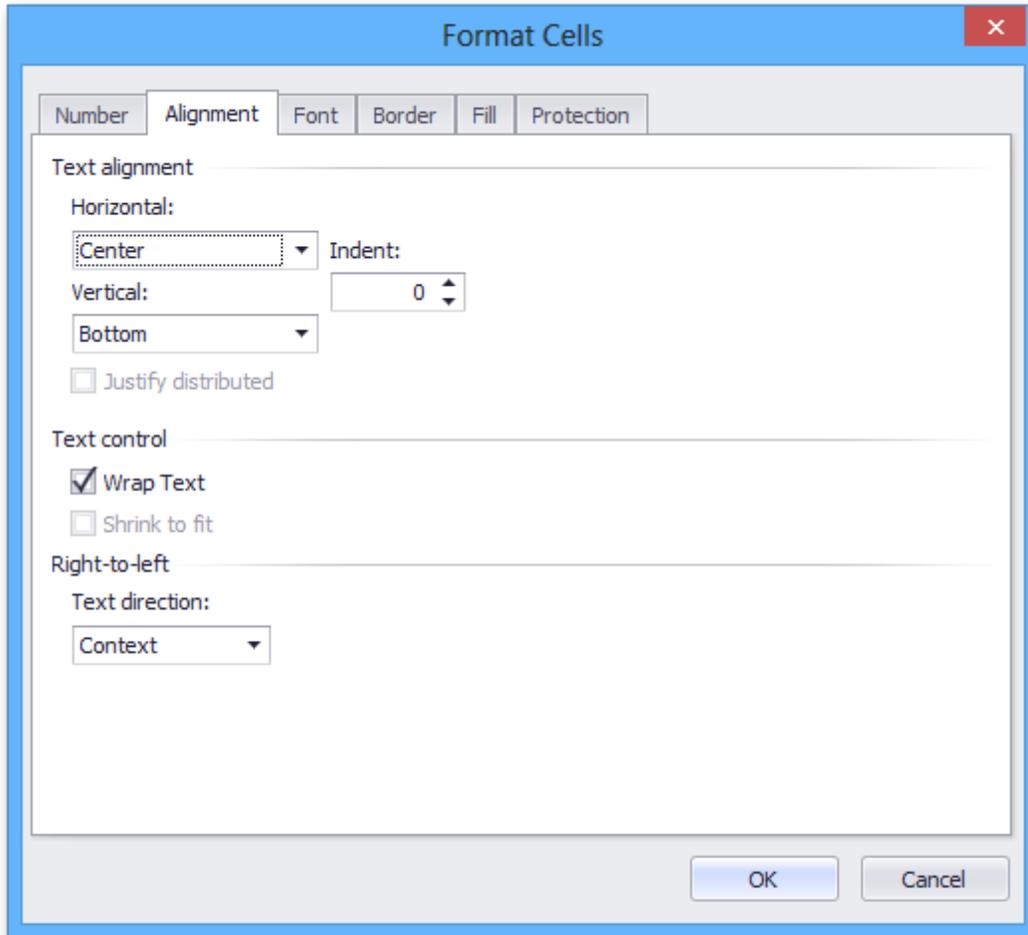
You can also modify cell font using the **Font** tab of the **Format Cells** dialog box. To invoke this dialog, click the arrow in the bottom right corner of the **Font** group. In the **Font** tab, you can specify the required font characteristics and apply them to the selected cells.



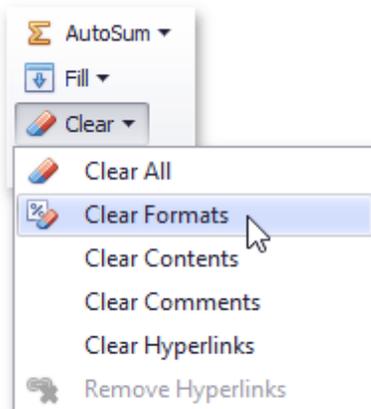
3. To position text within a cell so that it is centered, aligned to the left or aligned to the right, select the appropriate alignment options in the **Alignment** group within the **Home** tab.



To specify additional alignment options, click the arrow in the bottom right corner of the **Alignment** group. The dialog box launcher invokes the **Format Cells** dialog. In the **Alignment** tab, specify all required parameters and click **OK** to apply them to the selected cells.



4. To undo the formatting options you applied before, select the text. In the **Editing** group within the **Home** tab, click the **Clear** drop-down and select the **Clear Formats** item.



Wrap Text and Merge Cells

If text is too long to be displayed in a single cell, the **Spreadsheet** allows you to wrap the text to make it display on multiple lines in the cell, or merge cells to combine two or more adjacent cells into a single larger/longer cell.

Merging Cells

To merge cells, follow the instructions below.

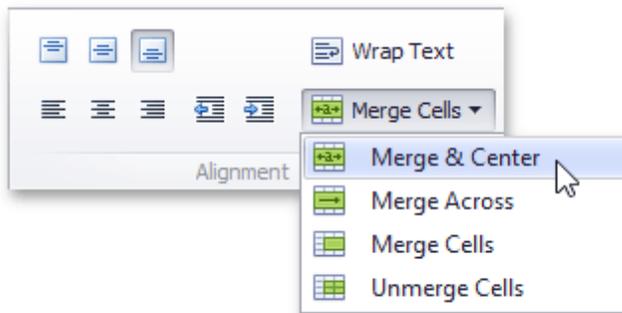
1. [Select](#) the cells that you wish to merge.

Note

Make sure that the data you wish to display in the merged cell is contained in the upper-left cell of the selected range, because only the contents of this cell will remain in the merged cell. The data in the other cells will be deleted.

2. In the **Alignment** group within the **Home** tab, click the **Merge Cells** button's drop-down arrow and select one of the following items.

- **Merge & Center** - merge the selected cells and center the text in a merged cell.
- **Merge Across** - merge each row of the selected cell range into larger cells.
- **Merge Cells** - merge the selected cells into a single cell.



3. If you change your mind and wish to split a merged cell, select this cell and click the **Unmerge Cells** item in the **Merge Cells** button's drop-down menu. The data of the merged cell appears in the upper-left cell of the range of split cells.

Wrapping Text in a Cell

To wrap text in a cell, do the following.

1. [Select](#) a cell or a range of cells containing the text you wish to wrap.
2. In the **Alignment** group within the **Home** tab, click the **Wrap Text** button. The text is displayed on multiple lines within the cell.
3. To unwrap the text, click the **Wrap Text** button again. The text is displayed in the same way as it was before the wrap option was applied.

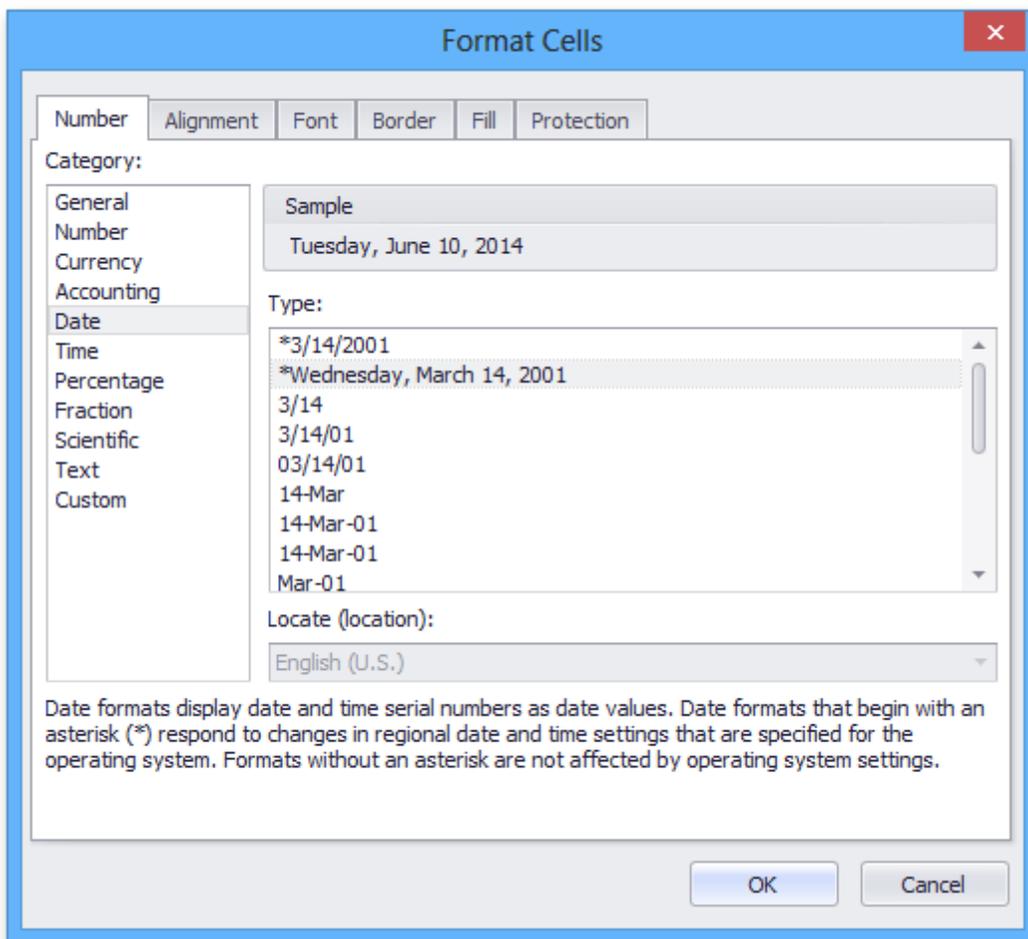
Number Formatting

The **Spreadsheet** allows you to format numbers in cells to make them easier to read and understand. For example, you can display numbers as monetary values or dates. The default format for cell content is the *General* style. Notice that number formatting does not change the value you enter, it only influences the way the number is displayed in a cell. Number formatting options are available in the **Number** group within the **Home** tab.



Depending on the format you wish to apply, click one of the buttons in the **Number** group, such as **Accounting Number Format**, **Percent Style** or **Comma Style**.

If you wish to set more formatting parameters, click the **Number** dialog box launcher to invoke the **Format Cells** dialog box. Select the desired number format, and then specify formatting options in the right pane of the dialog box.



You can use the following shortcuts to quickly apply the specified number format.

CTRL+SHIFT+1	Applies the Number format with two decimal places.

CTRL+SHIFT+2	Applies the Time number format.
CTRL+SHIFT+3	Applies the Date format.
CTRL+SHIFT+4	Applies the Currency format.
CTRL+SHIFT+5	Applies the Percentage format.
CTRL+SHIFT+6	Applies the Scientific number format.

Conditional Formatting

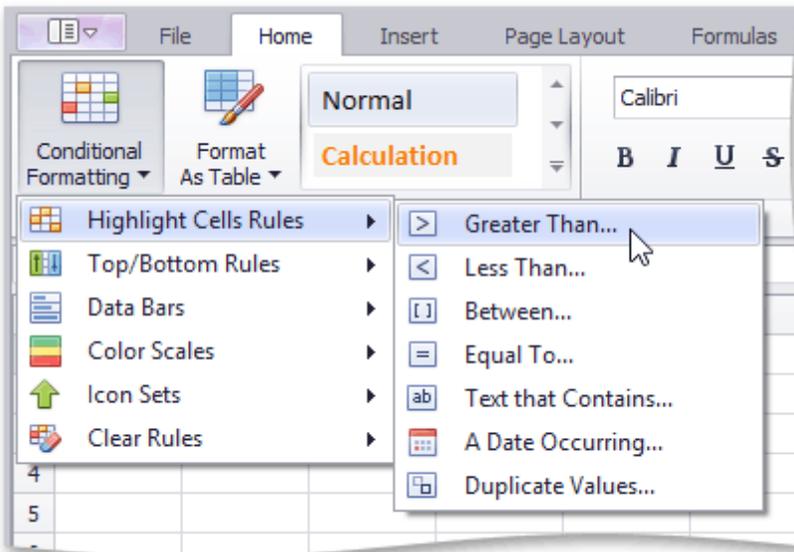
The **Spreadsheet** allows you to apply **conditional formatting** to a range of cells. Conditional formatting changes the appearance of individual cells based on specific conditions. It helps to highlight critical information, or describe trends within cells by using data bars, color scales and built-in icon sets. To create a conditional format, select the cell range to which you wish to apply a conditional formatting rule. On the **Home** tab, in the **Styles** group, click the **Conditional Formatting** button to display a drop-down list of available conditional formats. You can do one of the following.

- [Format Cells that are Less than, Greater than or Equal to a Value](#)
- [Format Cells that Contain Text or a Date](#)
- [Format Unique or Duplicate Cells](#)
- [Format Top or Bottom Ranked Values](#)
- [Format Cells whose Values are Above or Below the Average](#)
- [Format Cells Using Data Bars](#)
- [Format Cells using Color Scales](#)
- [Format Cells using Icon Sets](#)
- [Clear Conditional Formatting Rules](#)

Format Cells that are Less than, Greater than or Equal to a Value

To highlight cells whose values meet the criterion represented by a relational operator ($=$, $<$, $>$), do the following.

- Select the cell range to which you wish to apply a conditional format.
- On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Highlight Cells Rules**, and then select one of the following items: **Greater Than...**, **Less Than...**, **Between...** or **Equal To...**



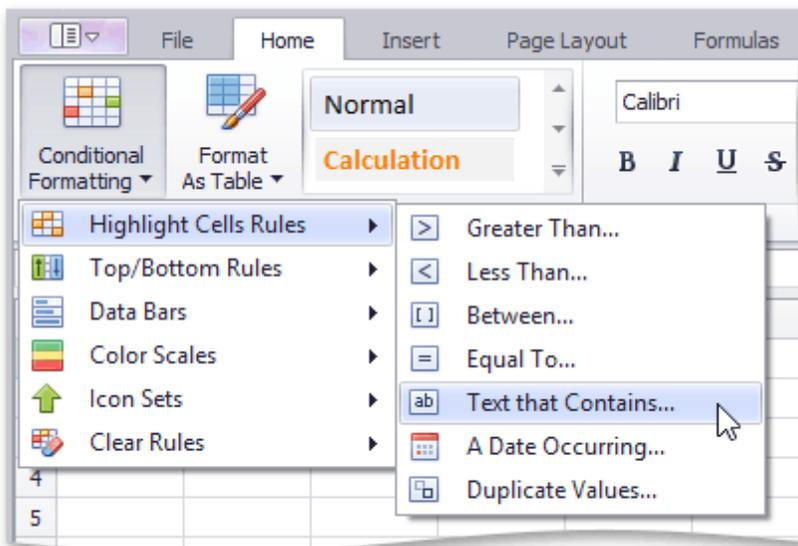
- In the invoked dialog, specify the threshold value, and select formatting options to be applied to cells that meet the condition. Note that you can also use a formula to specify the threshold value. If you enter a formula, start it with an equal sign ($=$). If a formula returns an error, formatting options will not be applied.



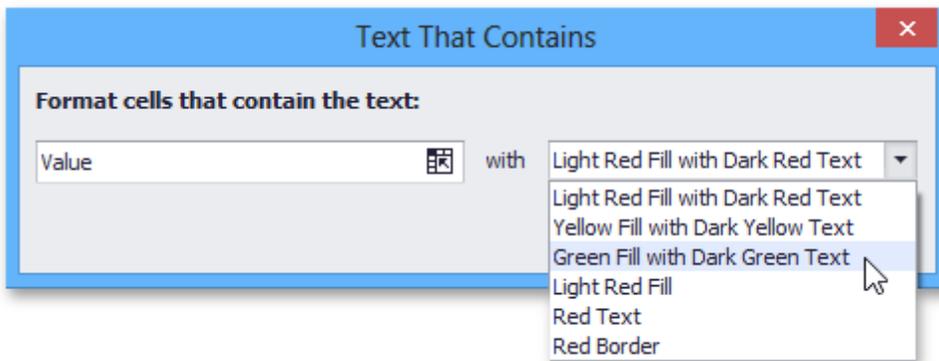
Format Cells that Contain Text or a Date

To highlight cells that contain the specified text string or time period, do the following:

- Select the cell range to which you wish to apply a conditional format.
- On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Highlight Cells Rules**, and then click **Text that Contains...** or **A Date Occurring...**



- In the invoked dialog, specify the text string (if you selected **Text that Contains...**) or time period (if you selected **A Date Occurring...**) to be highlighted, and select the formatting options to be applied to cells that meet the condition.

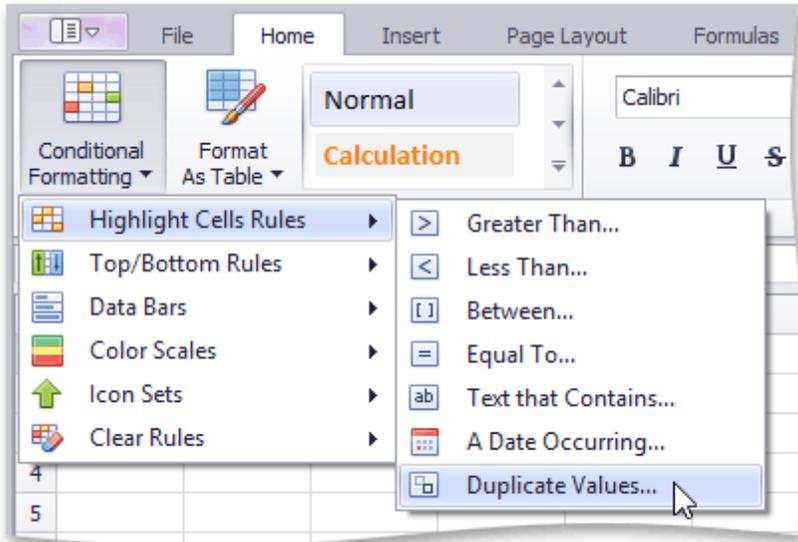


Note that for the **Text that Contains...** rule you can also specify a formula that returns text. If you enter a formula, start it with an equal sign (=). If a formula returns an error, formatting options will not be applied.

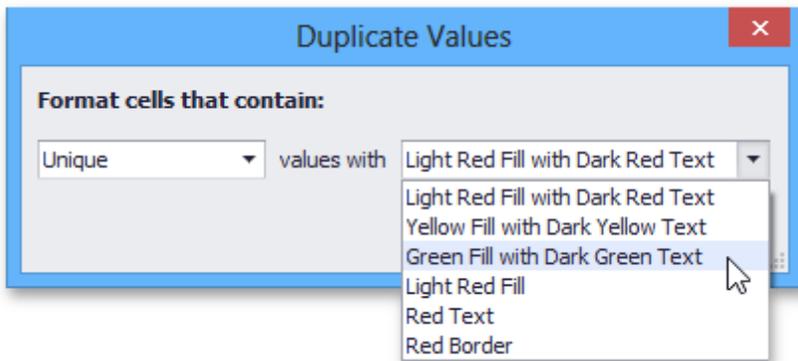
Format Unique or Duplicate Cells

To find unique or duplicate values in a range of cells, do the following:

- Select the cell range to which you wish to apply a conditional format.
- On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Highlight Cells Rules | Duplicate Values...**



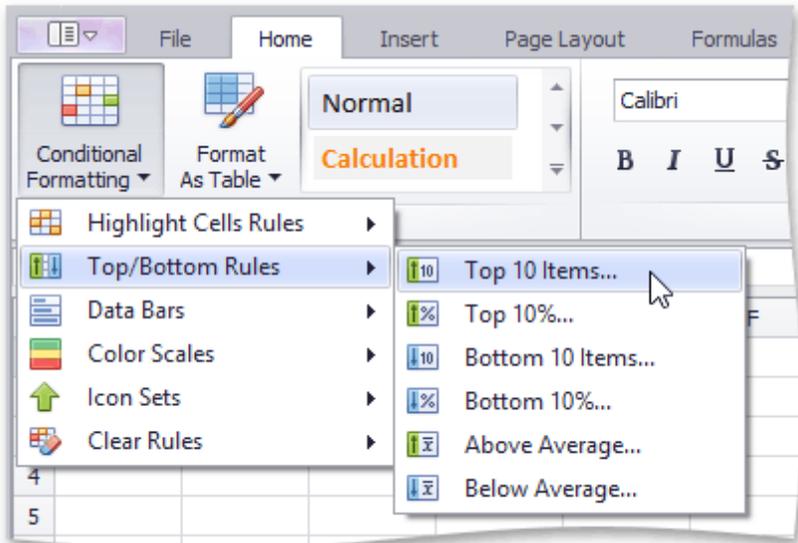
- In the invoked dialog, specify whether you wish to highlight unique or duplicate values, and select the formatting options to be applied to cells that meet the condition.



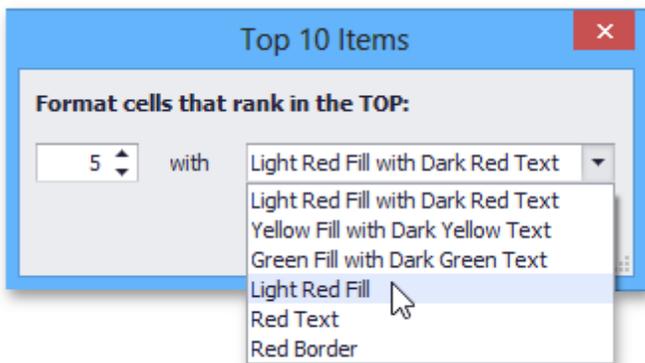
Format Top or Bottom Ranked Values

To highlight only the top or bottom ranked values in a range of cells, do the following:

- Select the cell range to which you wish to apply a conditional format.
- On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Top/Bottom Rules**, and then select one of the following items: **Top 10 Items...**, **Top 10%...**, **Bottom 10 Items...** or **Bottom 10%...**



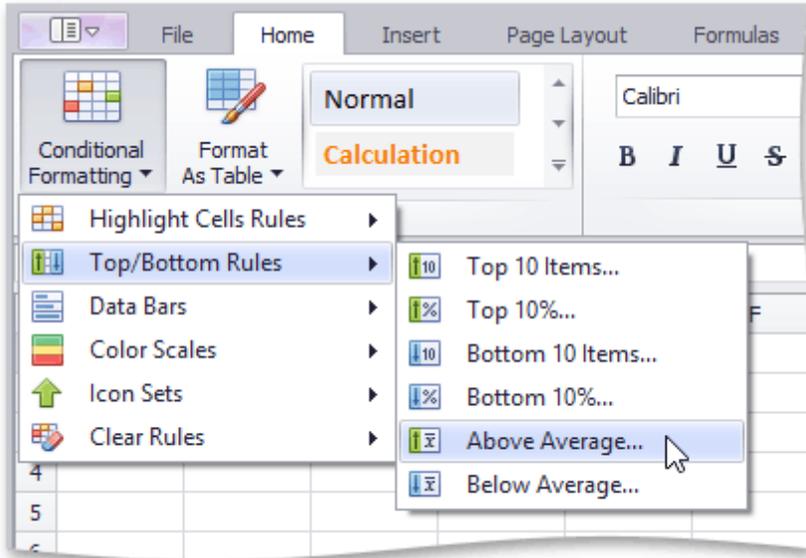
- In the invoked dialog, specify the number or percentage of the rank value (depending on the selected rule), and select the formatting options to be applied to cells that meet the condition.



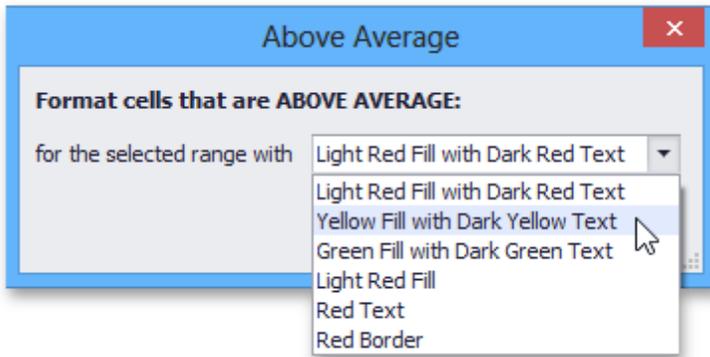
Format the Cells whose Values are Above or Below the Average

To highlight values that are above or below the average in a range of cells, do the following:

- Select the cell range to which you wish to apply a conditional format.
- On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Top/Bottom Rules**, and then click **Above Average...** or **Below Average...**



- In the invoked dialog, select the formatting options to be applied to cells that meet the condition.



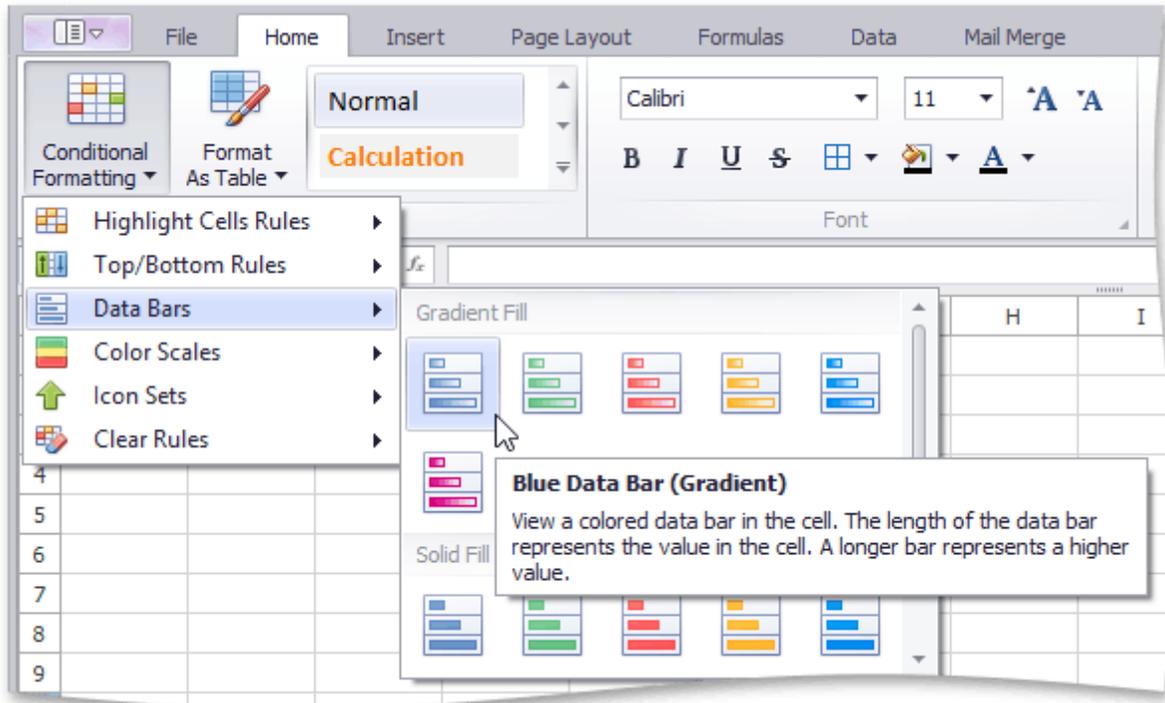
Format Cells using Data Bars

The data bar conditional formatting rule draws a shaded bar in the background of each cell in the range to which the rule is applied. The length of the data bar represents the cell value. A longer bar represents a higher value, and a shorter bar represents a lower value. For example, the image below shows markup magnitude using solid light-green data bars.

	A	B	C
1	Cost (Qtr 2)	Price	Markup
2	\$5.80	\$6.78	17%
3	\$10.00	\$16.00	60%
4	\$13.45	\$17.20	28%
5	\$9.50	\$12.43	31%
6	\$19.20	\$22.99	20%
7			

To apply a data bar conditional formatting rule, do the following:

- On the **Home** tab, in the **Styles** group, choose **Conditional Formatting | Data Bars**, and then select the desired color for a gradient or solid data bar.



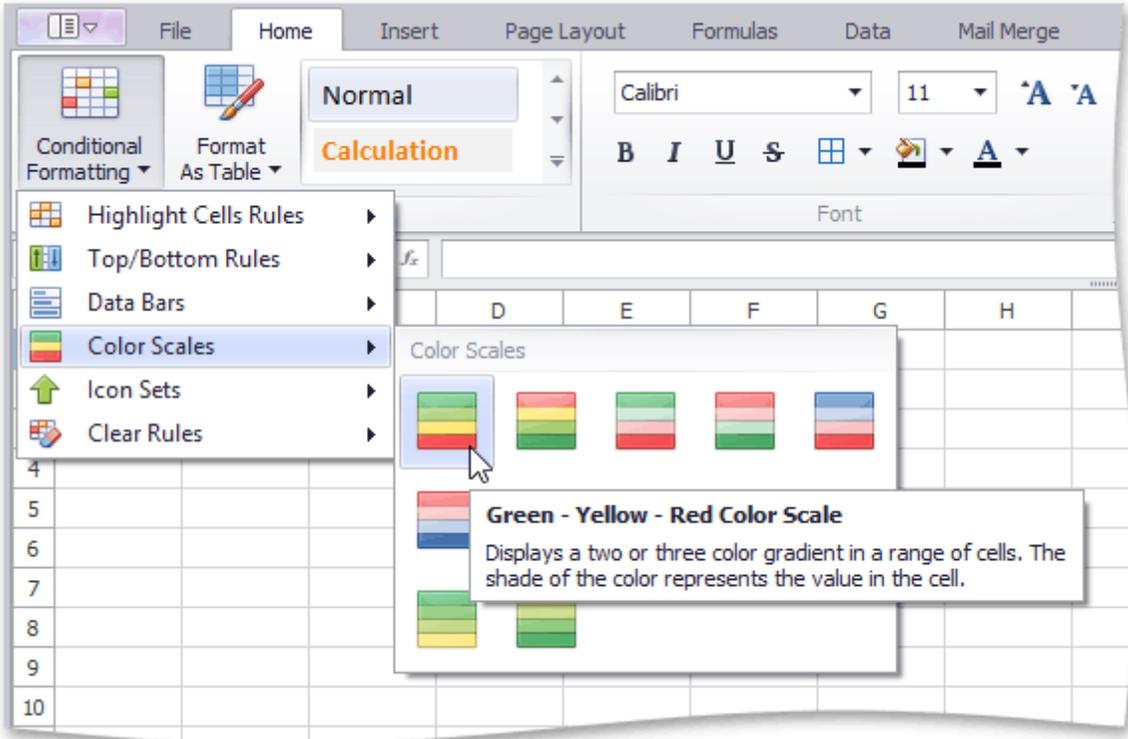
Format Cells using Color Scales

Color scales compare values using a gradation of two or three colors. The shade of the color represents higher, middle and lower values in the cell range to which the rule is applied. For example, the image below shows a price distribution using a gradation of three colors. Red represents the lower values, yellow represents the medium values and sky blue represents the higher values.

	A
1	Price
2	\$7.90
3	\$13.99
4	\$17.20
5	\$19.25
6	\$22.99
7	

To create a color scale, do the following:

- On the **Home** tab, in the **Styles** group, choose **Conditional Formatting | Color Scales**, and then select one of the predefined color combinations.



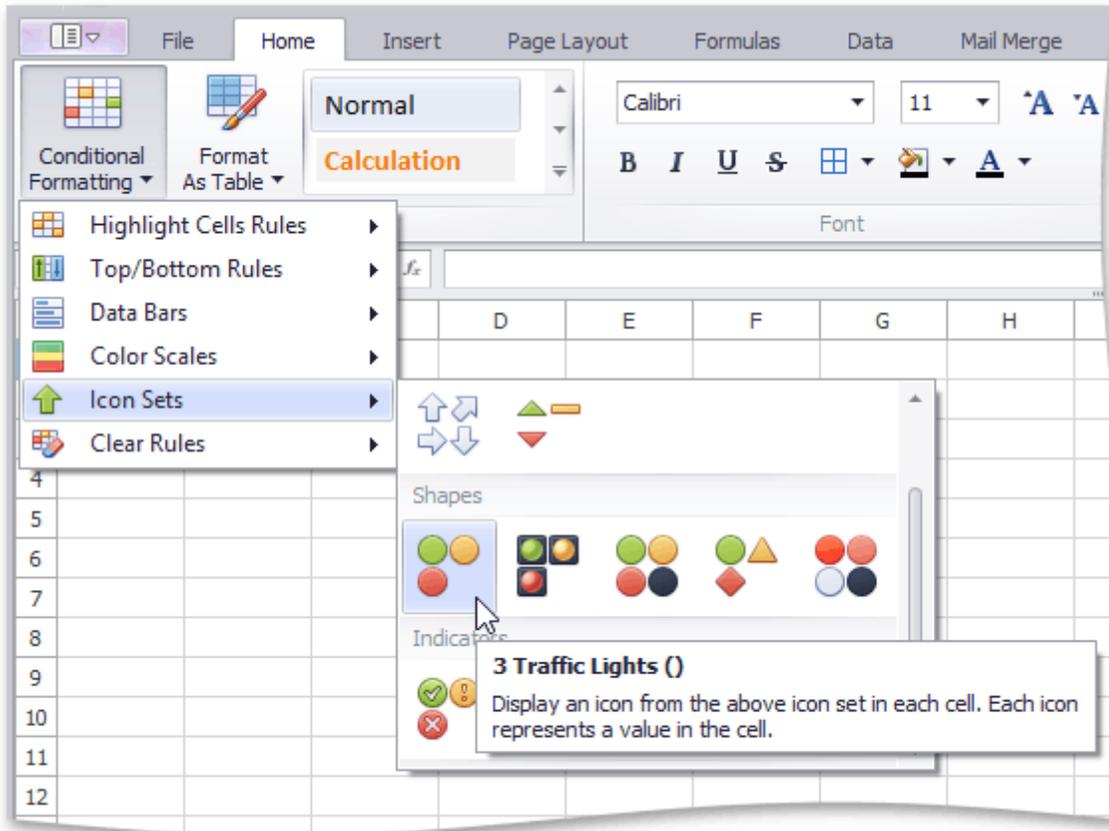
Format Cells using Icon Sets

An icon set conditional format classifies data in a range into three to five categories. The **Spreadsheet** divides the range into equal parts based on the number of icons in the selected set and applies an icon to each cell depending on its value. For example, the image below shows the value ranking. A filled star represents values that are greater than or equal to 67 percent, a half-filled star represents values that are less than 67 percent and greater than or equal to 33 percent, and an empty star shows values that are less than 33 percent.

	A	
1	Rating	
2	★	2
3	★	5
4	☆	0
5	★	4
6	★	3
7	☆	1
8		

To apply an icon set conditional formatting rule, do the following:

- On the **Home** tab, in the **Styles** group, choose **Conditional Formatting | Icon Sets**, and then select the desired icon set from the gallery.



Clear Conditional Formatting Rules

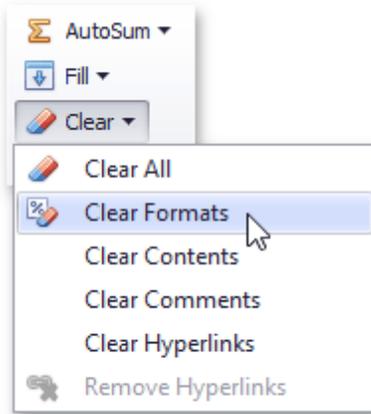
To delete a conditional formatting rule, do one of the following:

- Select the range that contains the conditional formatting rules you wish to clear. On the **Home** tab, in the **Styles** group, select **Conditional Formatting | Clear Rules | Clear Rules from Selected Cells** to delete the rules applied to the selected range.
- To clear all conditional formatting rules on a worksheet, select **Conditional Formatting | Clear Rules | Clear Rules from Entire Sheet**.

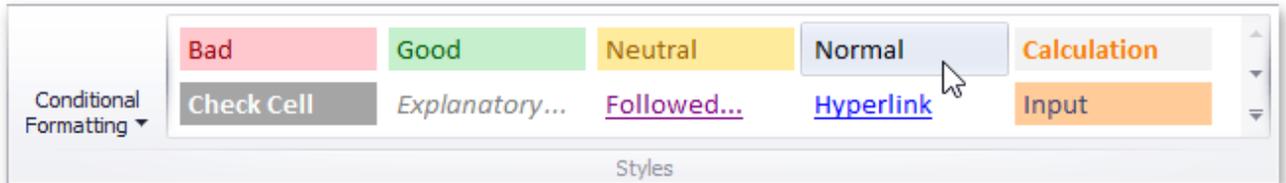
Clear Cell Formatting

To remove all formatting from cells, do one of the following.

1. In the **Editing** group within the **Home** tab, click the **Clear** button, and select **Clear Formats** from the drop-down menu.



2. In the **Styles** group within the **Home** tab, select the *Normal* style, to restore the default settings.



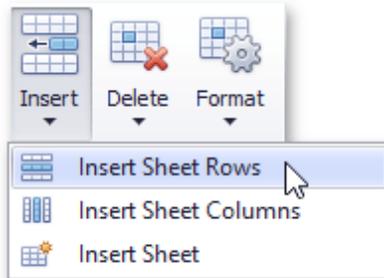
Columns and Rows

Insert and Delete Columns and Rows

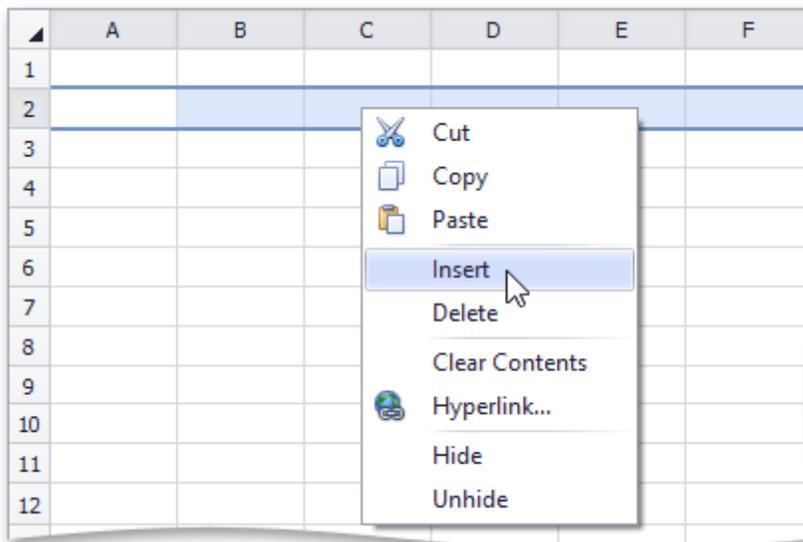
The **Spreadsheet** provides the capability to insert and delete columns and rows in a worksheet.

Insert Rows

1. To insert a single row, [select](#) the entire row by clicking the row heading, or click a cell in the row above the position in which you wish to insert a new row. To insert multiple rows, [select](#) the number of rows you wish to insert. For example, if you wish to insert three rows, select three rows by clicking the row headings.
2. Do one of the following.
 - In the **Cells** group within the **Home** tab, click the **Insert** button and select the **Insert Sheet Rows** item from the drop-down list.

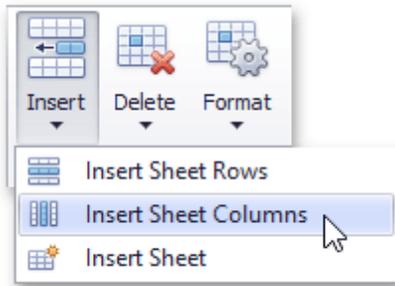


- Right-click a cell within the selected row(s) and click the **Insert** item in the invoked menu. The new row(s) will be inserted above the selected row(s).

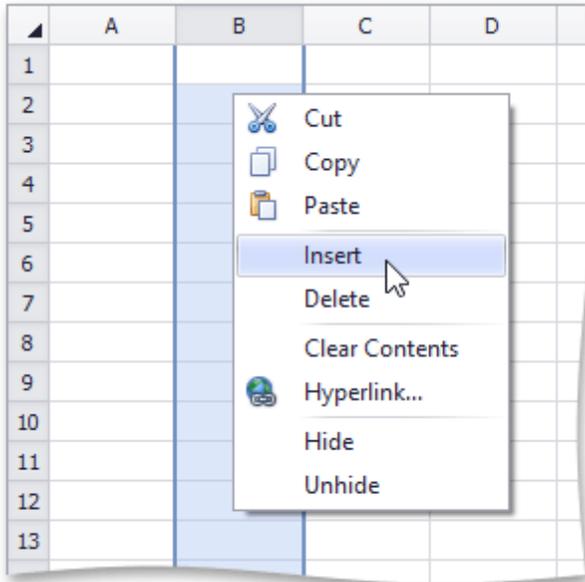


Insert Columns

1. To insert a single column, [select](#) the entire column by clicking the column heading, or by clicking a cell in the column to the left of where the new column will be inserted. To insert multiple columns, [select](#) the number of columns you wish to insert. For example, to insert three columns, select three columns by clicking column headings.
2. Do one of the following:
 - In the **Cells** group within the **Home** tab, click the **Insert** button and select the **Insert Sheet Columns** item from the drop-down list.



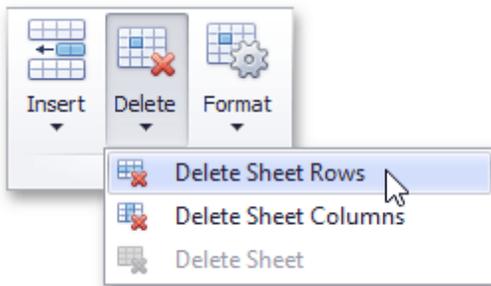
- Right-click a cell within the selected column(s) and click the **Insert** item in the invoked menu. The new column(s) will be inserted to the left of the selected column(s).



Delete Rows and Columns

1. Select the column(s) or row(s) you wish to delete by clicking its heading.
2. Do one of the following.

- In the **Cells** group within the **Home** tab, click the **Delete** button and select the **Delete Sheet Rows** or **Delete Sheet Columns** item from the drop-down list.



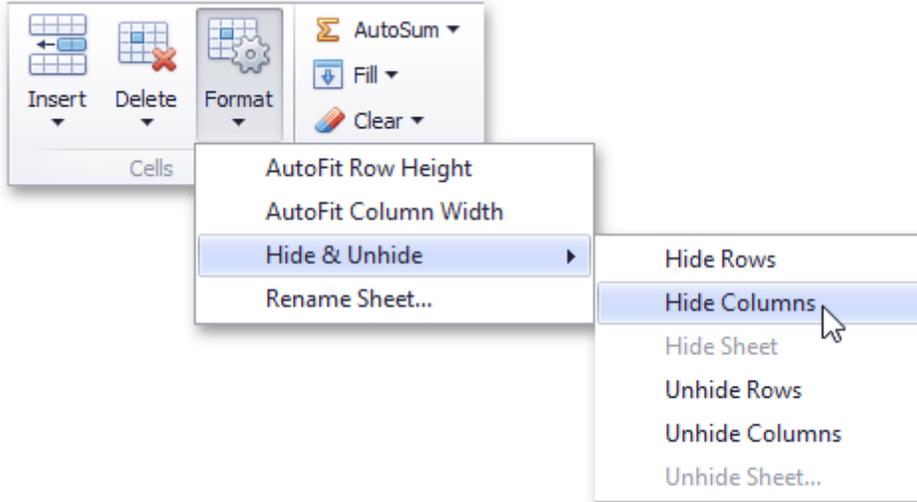
- Right-click a cell within the selected column(s) or row(s), and then click the **Delete** item in the invoked menu. The specified column(s) or row(s) will be deleted.

Show and Hide Columns and Rows

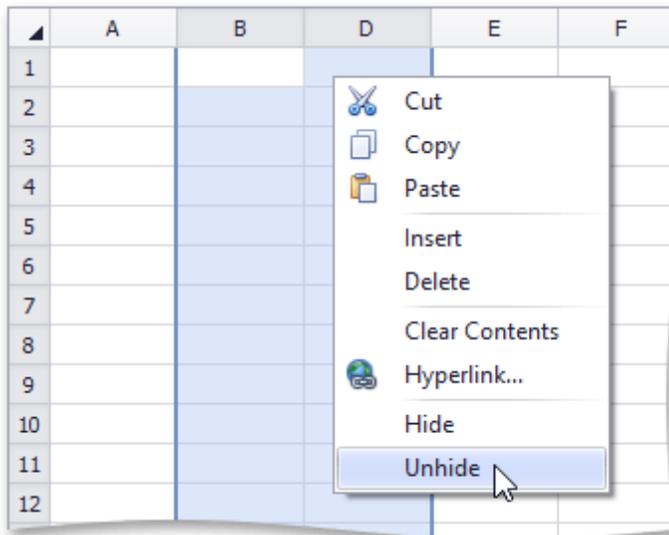
The **Spreadsheet** provides the capability to display and hide columns and rows in a worksheet.

Hide and Unhide Columns

1. [Select](#) the column to be hidden.
2. Do one of the following:
 - Set the column width to zero. To do this, drag the boundary of the column heading until the column is hidden;
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select **Hide & Unhide | Hide Columns**;

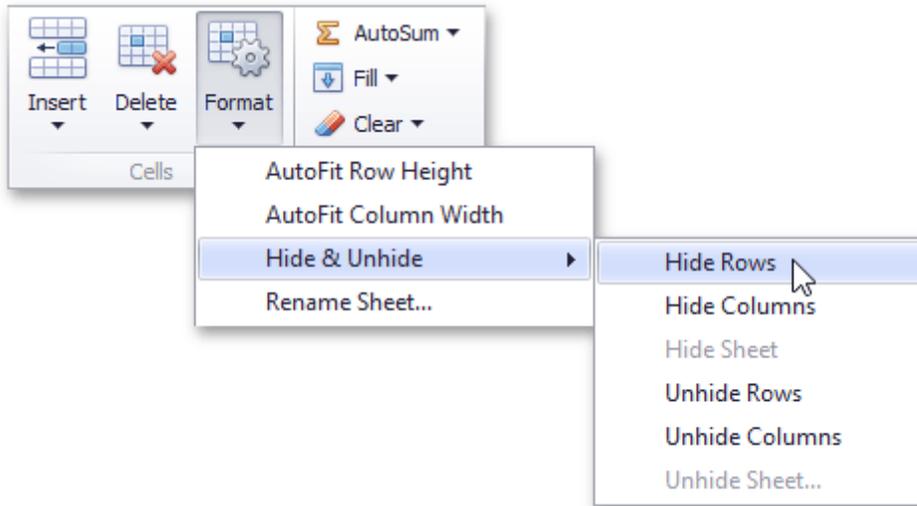


- Right-click the selected column and select the **Hide** item from the context menu.
3. To show the column you hid, select the columns adjoining to either side of the hidden column, and then do one of the following:
 - On the **Home** tab, in the **Cells** group, click the **Format** button, and then select **Hide & Unhide | Unhide Columns**;
 - Right-click the selected columns and select the **Unhide** item from the context menu.

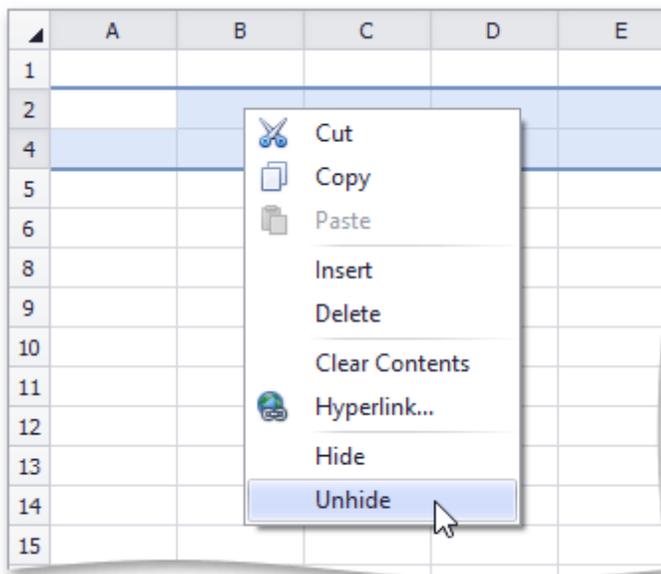


Hide and Unhide Rows

1. Select the row to be hidden.
2. Do one of the following:
 - Set the row height to zero. To do this, drag the boundary of the row heading until the row is not displayed;
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select **Hide & Unhide | Hide Rows**;



- Right-click the selected row and select the **Hide** item from the context menu.
3. To display the row you hid, select the rows that are above and below the hidden row, and then do one of the following:
 - On the **Home** tab, in the **Cells** group, click the **Format** button, and then select **Hide & Unhide | Unhide Rows**;
 - Right-click the selected rows and select the **Unhide** item from the context menu;



Display all hidden columns and rows

1. Click the **Select all** button at the intersection of the column and row headings, or press **CTRL+A**.
2. Do one of the following:
 - On the **Home** tab, in the **Cells** group, click the **Format** button, and then select **Hide & Unhide | Unhide Rows** or **Unhide Columns**;
 - Right-click the selection and select the **Unhide** item from the context menu.

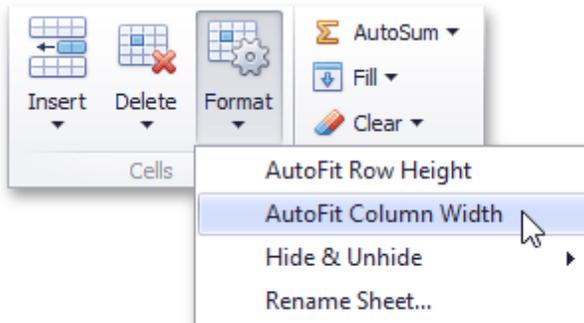
Specify Column Width and Row Height

Setting the column width

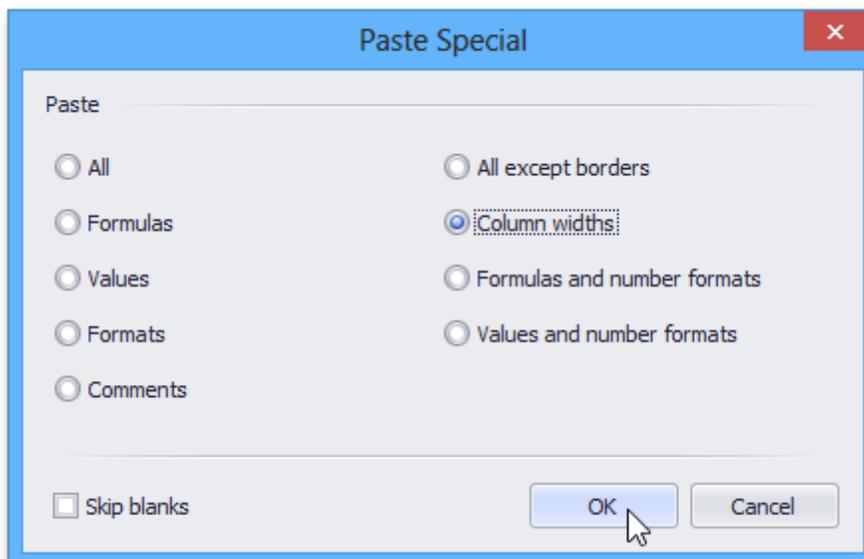
In the **Spreadsheet**, the column width can vary from zero to 255 characters of the default font specified by the predefined *Normal* style. If you set the column width to zero, the column will be hidden.

To change the column width, do one of the following.

1. Drag the right boundary of the column heading to resize the column width. To set the width of multiple columns, select these columns, and then drag the right boundary of any selected column.
2. To change the column width to automatically fit the contents, select the column and do one of the following.
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select the **AutoFit Column Width** item from the drop-down list.



- Double-click the right boundary of the selected column.
3. To match the column width to another column, do the following.
 - Select the column, the width of which you want to copy.
 - On the **Home** tab, in the **Clipboard** group, click the **Copy** button, or press CTRL+C.
 - Click a cell in the column to be resized, and then click the **Paste Special** button in the **Clipboard** group. In the **Paste Special** dialog box that is invoked, select the **Column widths** item.

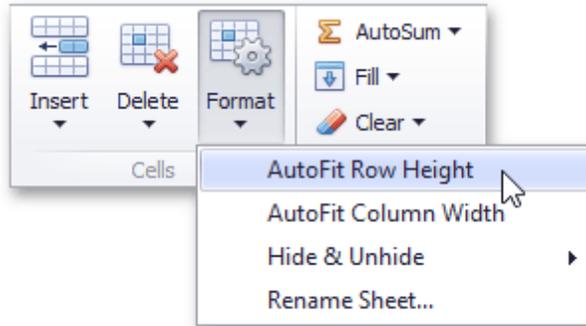


Set the row height

In the **Spreadsheet** the row height should be between zero and 409 points. If you set the row height to zero, the row is hidden.

To change the row height, do one of the following.

1. Drag the lower boundary of the row heading until the row is the height you want. To set the height of multiple rows, select them, and then drag the lower boundary of any selected row.
2. To change the row height to automatically fit the contents, select the row and do one of the following.
 - On the **Home** tab, in the **Cells** group, click the **Format** button and select the **AutoFit Row Height** item from the drop-down list.



- Double-click the lower boundary of the selected rows.

Tables

Create a Table

The **Spreadsheet** allows you to insert a new table in a worksheet, or convert an existing range to a table.

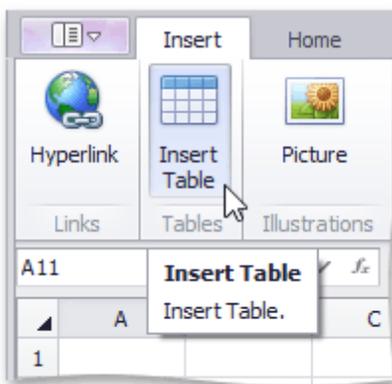
- [Create a Table](#)
- [Convert a Table to a Data Range](#)
- [Delete a Table](#)

Create a Table

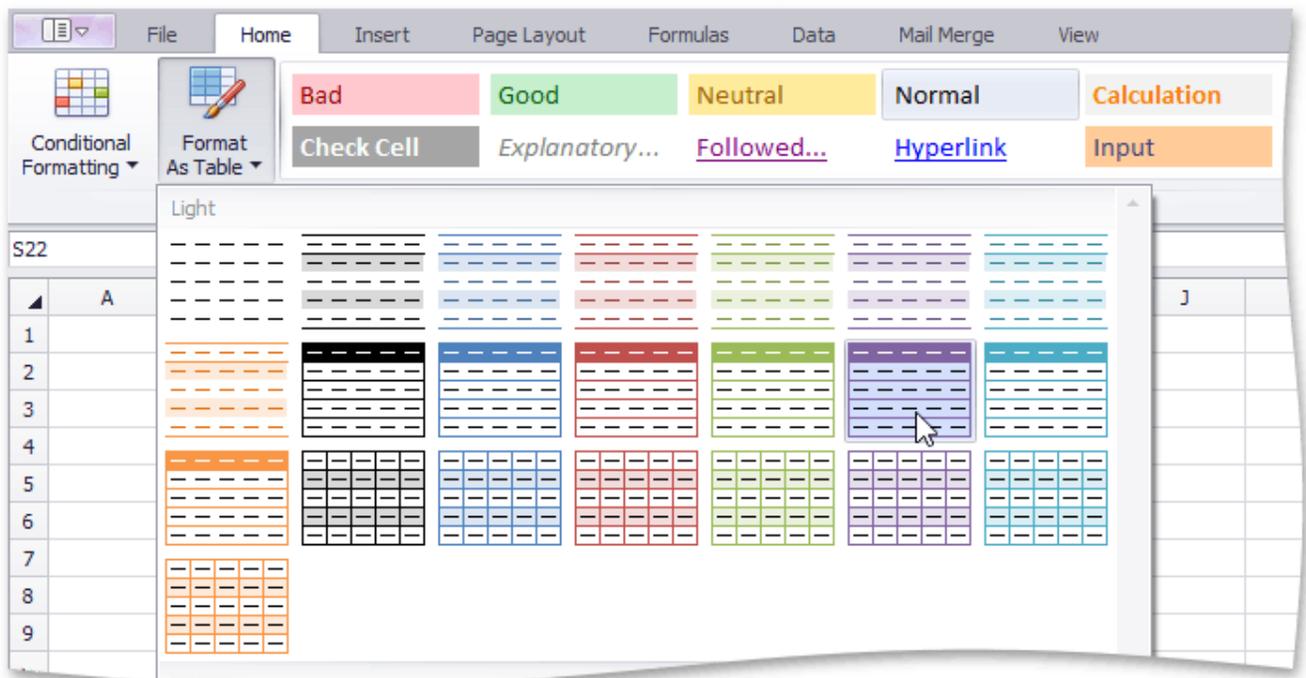
To insert a table, select the cell range to be included in the table.

Then, do one of the following.

- To create a table with the default style, on the **Insert** tab, in the **Tables** group, click the **Insert Table** button.

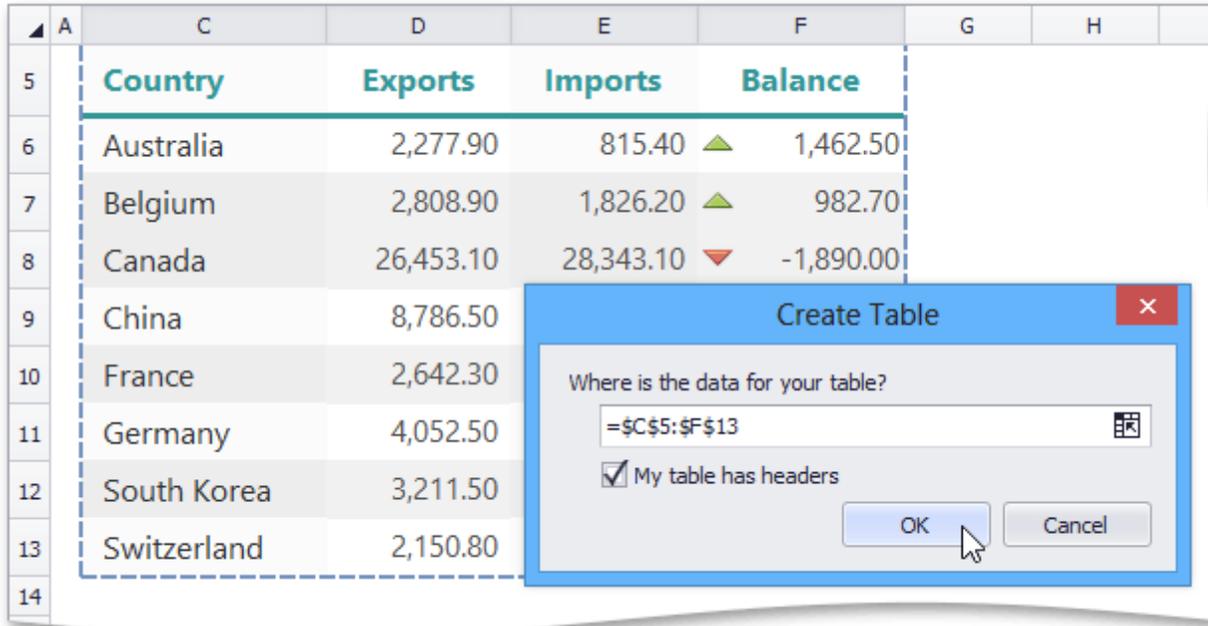


- To create a table with one of the predefined styles, on the **Home** tab, in the **Styles** group, click the **Format As Table** button and select the desired style from the gallery.



In the invoked **Create Table** dialog, verify that the range in the **Where is the data for your table?** field reflects

your selection, and then specify whether or not the table has headers.

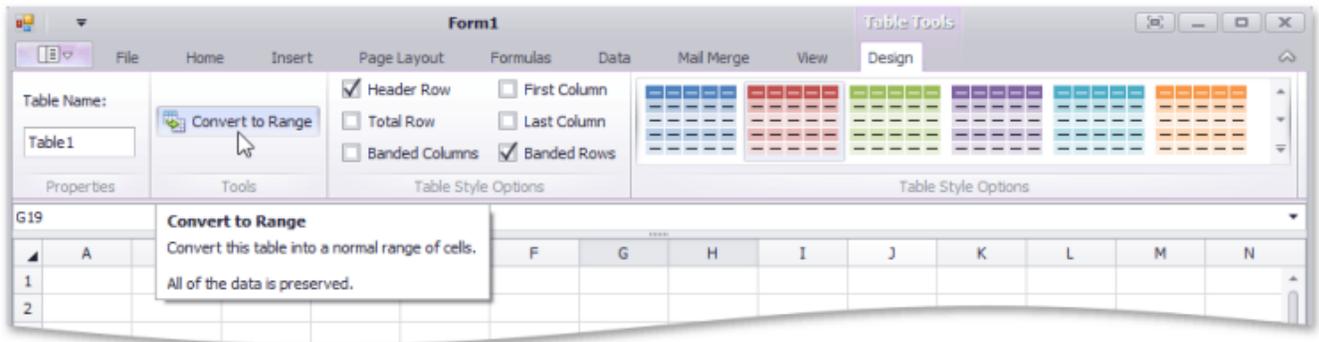


Note that after you create a table, the **Table Tools** contextual tab becomes available. Use this tab to provide some extra settings for the created table.

Convert a Table to a Data Range

To convert an existing table to a normal range of cells, do the following.

- Click the table to display the **Table Tools** contextual tab.
- On the **Design** tab, in the **Tools** group, click the **Convert To Range** button.

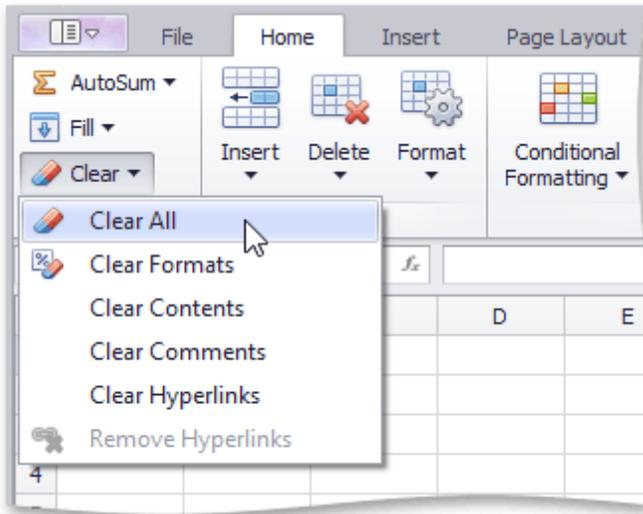


Note that after you delete a table, the table formatting persists. However, the **Table Tools** contextual tab is no longer available, and table features are lost. For example, you cannot use structured references (references that use table names) in formulas.

Delete a Table

To delete an existing table, select it and do one of the following.

- On the **Home** tab, in the **Editing** group, click **Clear | Clear All**.



- Press **DELETE**.

Data Presentation

Outline Data

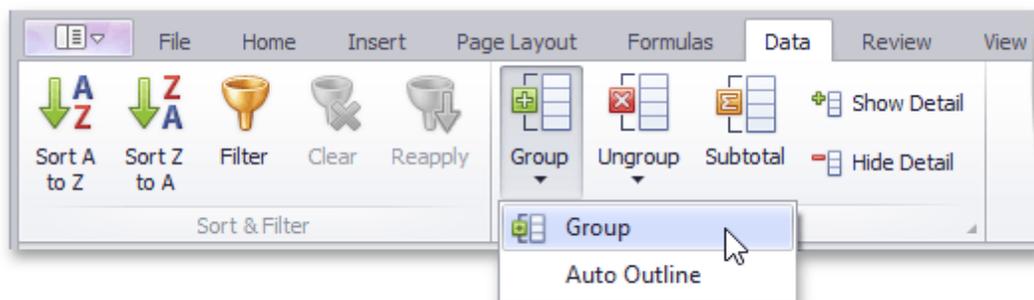
The **Spreadsheet** provides you with the capability to split a large amount of data into separate groups and display summary rows and columns for each group. Data grouping is useful when you wish to temporarily hide unnecessary rows or columns to display only significant information.

Select the action you wish to perform.

- [Group Rows and Columns](#)
- [Outline Data Automatically](#)
- [Expand or Collapse Groups](#)
- [Specify Group Settings](#)

Group Rows and Columns

- To **group** data in a worksheet, do the following.
 - .1. Select the rows or columns you wish to group.
 - .2. On the **Data** tab, in the **Outline** group, click the **Group** button, and select the **Group** item in the button's drop-down menu...

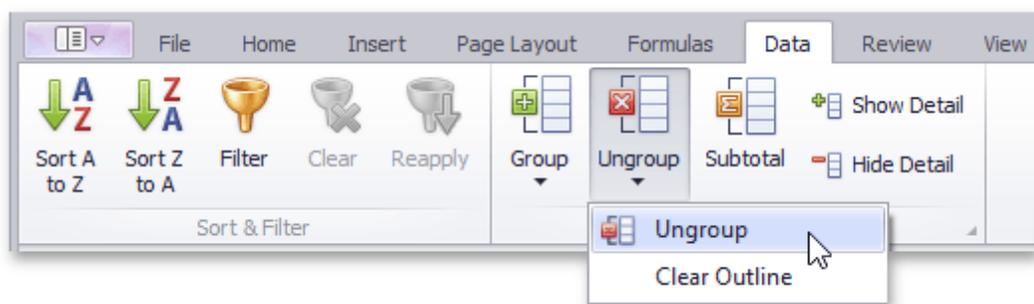


... or press SHIFT+ALT+RIGHT ARROW KEY to create an outline of the selected rows or columns.

Note

You can also place one group of rows or columns inside another. To do this, repeat the steps above until you create the required number of groups. Note that the number of nested groups is limited: you can create a maximum of **seven levels** of grouping.

- To **ungroup** data in a worksheet, do the following.
 - .1. Select the rows or columns you wish to ungroup.
 - .2. On the **Data** tab, in the **Outline** group, click the **Ungroup** button, and select the **Ungroup** item in the button's drop-down menu...

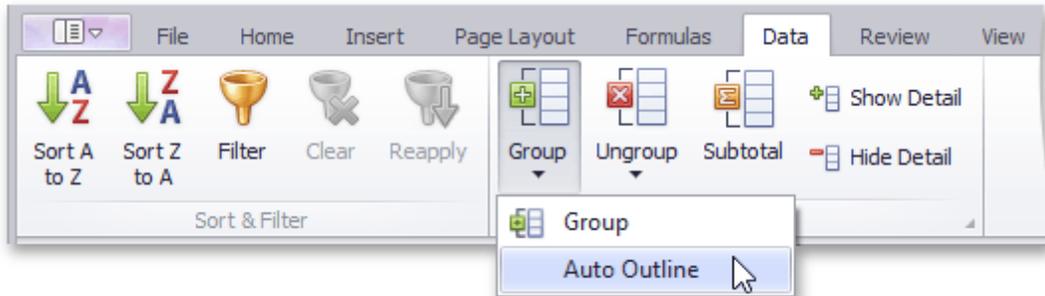


... or press SHIFT+ALT+LEFT ARROW KEY to remove an outline of the selected rows or columns.

Outline Data Automatically

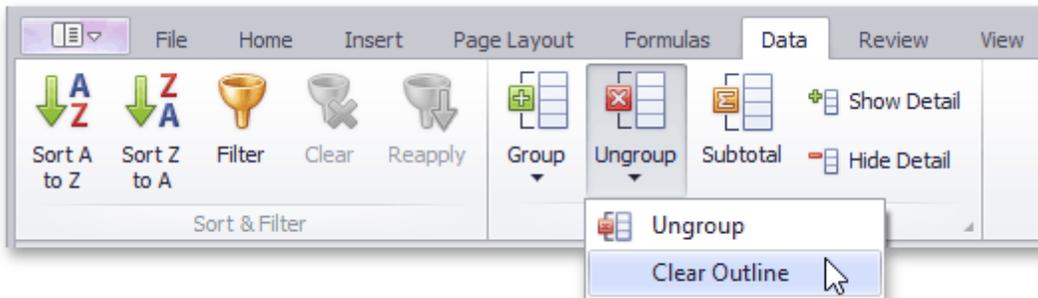
The **Spreadsheet** allows you to create an automatic outline of rows and columns based on subtotal and summary formulas contained in a worksheet.

- To **create an automatic outline**, do the following.
 - .1. Specify the summary rows or columns containing formulas that reference cells to be outlined. If you do not specify any summary formulas, the data will not be grouped.
 - .2. On the **Data** tab, in the **Outline** group, click the **Group** button, and select the **Auto Outline** item in the button's drop-down menu.



- To **remove an automatic outline**, do the following.

On the **Data** tab, in the **Outline** group, click the **Ungroup** button, and select the **Clear Outline** item in the button's drop-down menu.

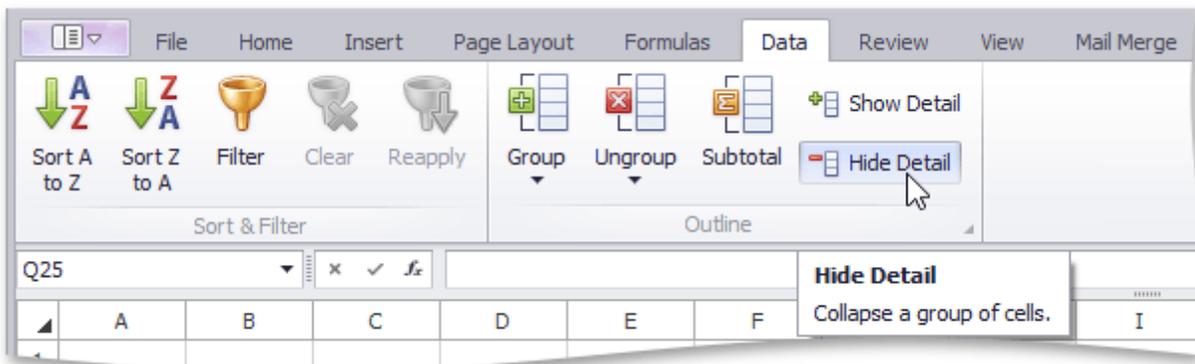


Expand or Collapse Groups

- **Using the outline symbols**

Since the group is created, it is marked by the grouping bar displayed along the grouped rows to the left side of a worksheet and along the grouped columns at the top of a worksheet. Each grouping bar is accompanied by a **plus** $+$ or **minus** $-$ outline symbol (depending on the group state). To collapse the required group, click the minus sign, which automatically changes into a plus sign after the group is collapsed, or just click the grouping bar itself. To expand the collapsed group, click the plus sign.

You can also use the **Hide Detail** and **Show Detail** buttons in the **Outline** group to hide or display the detail rows and columns for a specific group.



- **Using the outline buttons**

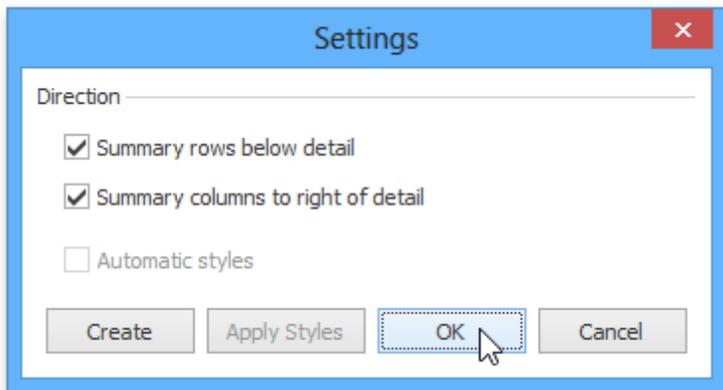
If your data is divided into different grouping levels , you can collapse or expand multiple groups at once using the **outline buttons** **1** **2** **3**. The outline buttons for row grouping are displayed above the row headers, while the outline buttons for column grouping are shown to the left of the column headers. Each outline button has a number that indicates a grouping level. For example, if you have two levels of grouping, the **Spreadsheet** displays three outline buttons. Clicking outline button **1** collapses all the specified groups of rows or columns. Clicking number **2** collapses all the groups in the second grouping level and lower, except the first level. Clicking the last outline button displays the entire worksheet by expanding all the specified groups.

Thus, to hide all detail data, click outline button **1**. To display all detail data, click the outline button with the largest number.

The number of outline buttons changes depending on the levels of grouping created in a worksheet. The largest number is **8**, because you can create a maximum of **seven levels** of grouping.

Specify Group Settings

You can specify the grouping direction using the **Settings** dialog. To invoke this dialog, on the **Data** tab, click the **Outline** dialog box launcher.



Select the required check boxes depending on where your summary rows or columns are located. For example, if you inserted summary rows above detail rows in each group, clear the **Summary rows below detail** check box.

In this case, the grouping bar changes direction, so that the minus outline symbol is displayed opposite the summary row at the top of the group.

Summary rows below detail					Summary rows above detail						
1	2	A	B	C	D	1	2	A	B	C	D
			Arizona	Q1	Q2				Arizona	Q1	Q2
		-	HD Video Player	\$ 2,970.00	\$ 7,590.00			-	Quarterly total	\$ 31,790.00	\$ 39,685.00
			SuperLED 42	\$ 8,700.00	\$ 13,050.00				HD Video Player	\$ 2,970.00	\$ 7,590.00
			SuperLED 50	\$ 4,800.00	\$ 11,200.00				SuperLED 42	\$ 8,700.00	\$ 13,050.00
			DesktopLED 19	\$ 3,795.00	\$ 3,795.00				SuperLED 50	\$ 4,800.00	\$ 11,200.00
			DesktopLED 21	\$ 4,025.00	\$ 1,050.00				DesktopLED 19	\$ 3,795.00	\$ 3,795.00
			Projector Plus HD	\$ 7,500.00	\$ 3,000.00				DesktopLED 21	\$ 4,025.00	\$ 1,050.00
			Quarterly total	\$ 31,790.00	\$ 39,685.00				Projector Plus HD	\$ 7,500.00	\$ 3,000.00

Subtotal Data

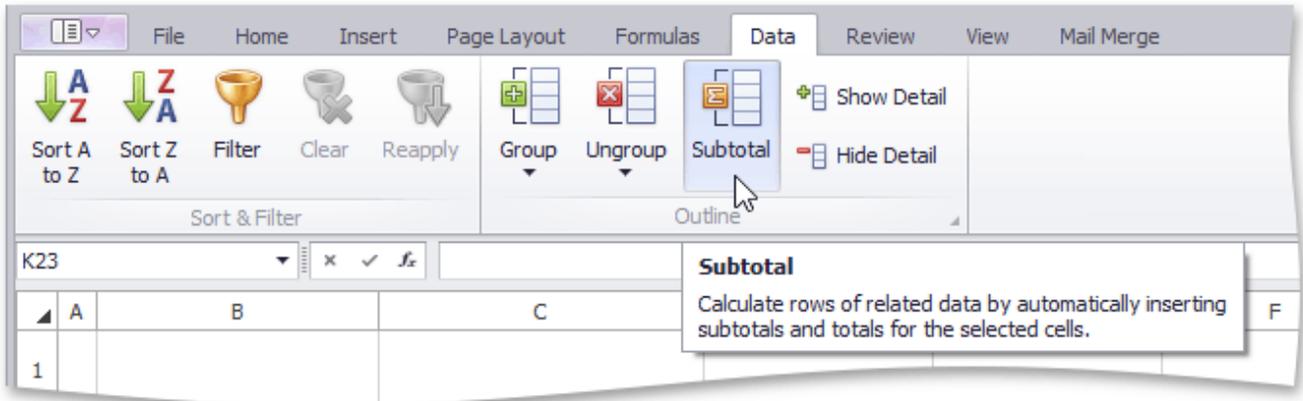
The **Spreadsheet** allows you to automatically [group](#) related data in a worksheet and add summary rows to each group using the [SUBTOTAL function](#).

Important

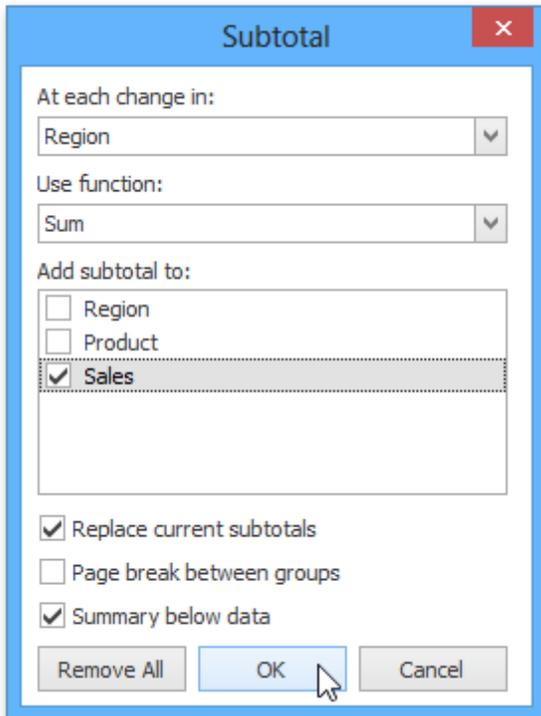
Before subtotalling, it is necessary to ensure that the range to be subtotaled contains similar data in each column, has column headings in the first row and does not include blank rows or columns.

To insert subtotals for the selected range, follow the steps below.

- On the **Data** tab, in the **Outline** group, click the **Subtotal** button.



- In the invoked **Subtotal** dialog, specify the required subtotal options.



- In the **At each change in** drop-down list, select the heading of the column by which the data should be grouped. Each time a value in this column changes, a new subtotal row is inserted. So [sorting](#) your data by this column is recommended to ensure that the same column values will be in one group.
- In the **Use function** drop-down list, select one of the eleven functions available for calculating subtotals: Sum, Count, Average, Max, Min, etc.
- In the **Add subtotals to** box, select the check boxes corresponding to the columns for which the SUBTOTAL function should be calculated.

- Select the **Replace current subtotals** check box to replace the existing subtotals with the recently specified subtotals. If you wish to create more than one level of subtotals (for example, to insert subtotals for the inner groups using different summary functions), clear this check box.
- Select the **Page break between groups** check box to locate each group on a new page. It can be useful if your groups contain many detail rows and you wish to separate them while printing.
- Select the **Summary below data** check box to display a summary row below detail rows in each group. Otherwise, the summary row will be displayed at the top of the group.

Since subtotals are specified, you can change the SUBTOTAL function directly in the cell or formula bar to ignore values in the collapsed groups. To do this, add **100** to the first numeric function's argument, which specifies the code of the function used in calculating subtotals. In this case, the hidden values in the collapsed group will not be taken into account during calculations.

Region	Product	Sales
East	Camembert Pierrot	\$ 6,750.00
East	Gorgonzola Telino	\$ 4,500.00
East	Mascarpone Fabioli	\$ 3,550.00
East	Mozzarella di Giovanni	\$ 4,250.00
East Total		\$19,050.00
West	Gorgonzola Telino	\$ 5,500.00
West	Mascarpone Fabioli	\$ 6,250.00
West	Mozzarella di Giovanni	\$ 5,325.00
West Total		\$17,075.00
Grand Total		=SUBTOTAL(109,D3:D10)

To remove subtotals, select a cell in the subtotaled range, invoke the **Subtotal** dialog and click the **Remove All** button.

Sort Data

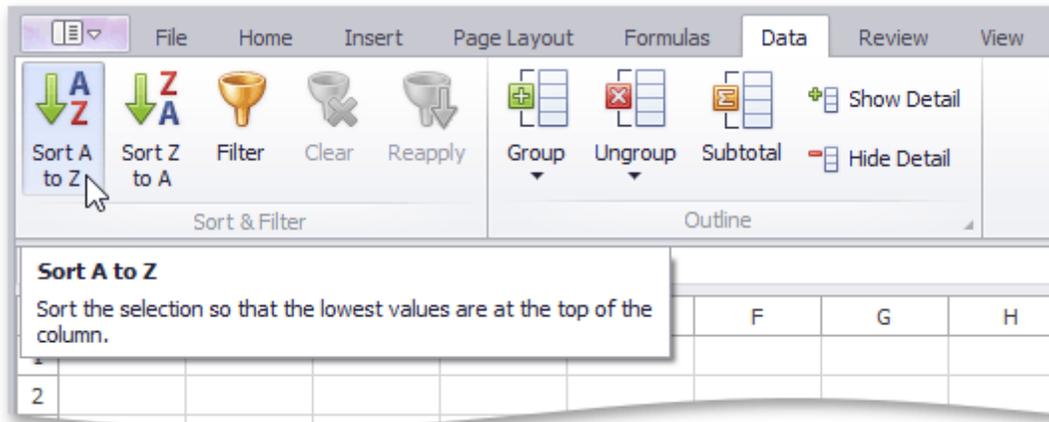
The **Spreadsheet** provides the capability to sort data by text (**A to Z** or **Z to A**), numbers (**smallest to largest** or **largest to smallest**), dates and times (**oldest to newest** or **newest to oldest**) in one column.

To perform sorting, do the following.

1. Select a range in the column you wish to sort.

Note
If multiple columns are selected, the range will be sorted by the **first** column.

2. On the **Data** tab, in the **Sort & Filter** group, click **Sort A to Z** to select ascending order, or click **Sort Z to A** for descending order.



Sort a Table

To sort data in a table, follow the steps below.

1. Click the arrow  in the header of the column by which data will be sorted.
2. In the drop-down menu, select the **Sort A to Z** item to select ascending order, or select the **Sort Z to A** item to select descending order.

	A	C	D	E	F
1					
2		Country	Exports	Imports	Balance
3		Italy			-1,711.00
4		Saudi Arabia			-2,705.40
5		India			-2,265.70
6		Switzerland			-1,098.30
7		France	2,642.30	3,563.70	-921.40
8		Singapore	2,678.70	1,467.20	1,211.50

All the records in the table will be reordered accordingly. The tiny arrow  appears in the column header to indicate that data in the table are sorted by this column.

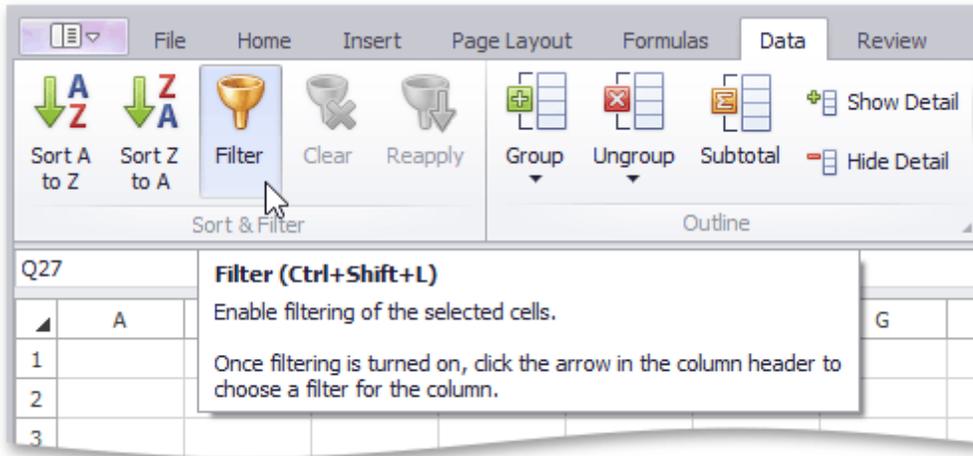
Note
You cannot sort a table by more than one column at a time. When you apply a new sort order, it replaces the

previous one.

Filter Data

The **Spreadsheet** allows you to use the AutoFilter to arrange large amounts of data by displaying only rows that meet the filtering criteria.

To enable the filtering functionality, select the required data, and on the **Data** tab, in the **Sort & Filter** group, click the **Filter** button.



Once filtering is activated, a drop-down arrow appears on the right side of each column header in the range. Depending on the data in the column you wish to filter, you can apply one of the following filters: Filter by Values, Text Filter, Number Filter or Date Filter.

Note

You can filter your data by multiple columns. Filters are **additive**: each new filter is applied in addition to the existing filters and further reduces your data.

- [Filter by Values](#)
- [Text Filter](#)
- [Number Filter](#)
- [Date and Time Filter](#)
- [Reapply a Filter](#)
- [Clear a Filter](#)

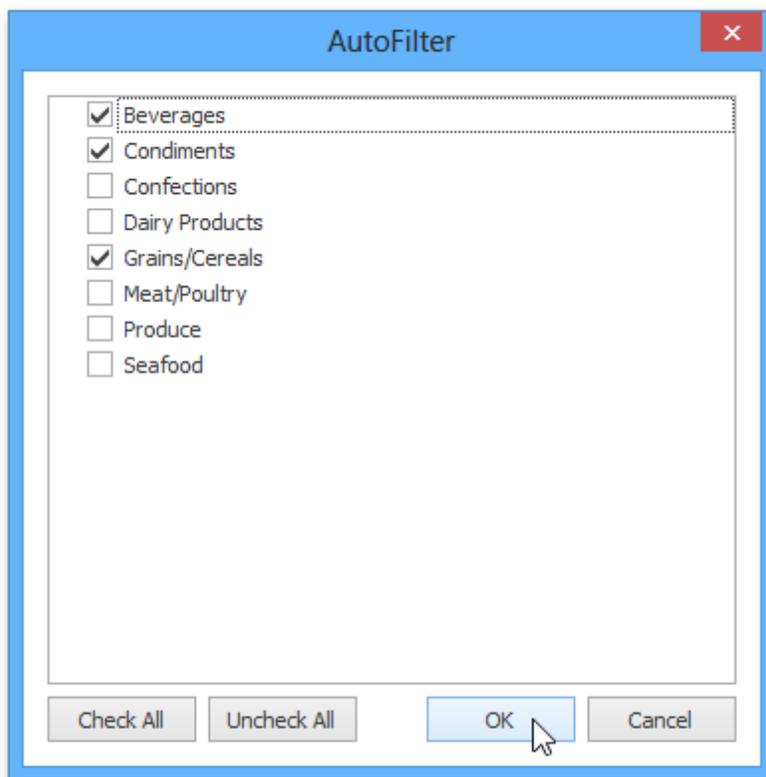
Filter by Values

To filter your data by a list of values, do the following.

1. Click the arrow in the header of the column containing the values you wish to filter.
2. In the drop-down menu, select the **Filter by Values** item to invoke the **AutoFilter** dialog.

	C	D	E	F
1				
2	Category	Unit Price	Qty	Amount
3	Meat/Poultry			\$ 1,170.00
4	Condiments			\$ 140.00
5	Seafood			\$ 404.80
6	Dairy Products			\$ 340.00
7	Seafood			\$ 2,125.00
8	Beverages			\$ 522.00
9	Beverages	\$ 19.00	36	\$ 684.00
10	Beverages	\$ 18.00	28	\$ 504.00

3. The **AutoFilter** dialog displays a list of all values in the selected column. Click the **Uncheck All** button to deselect the values. Then, select the check boxes for the items you wish to display, and click **OK**.



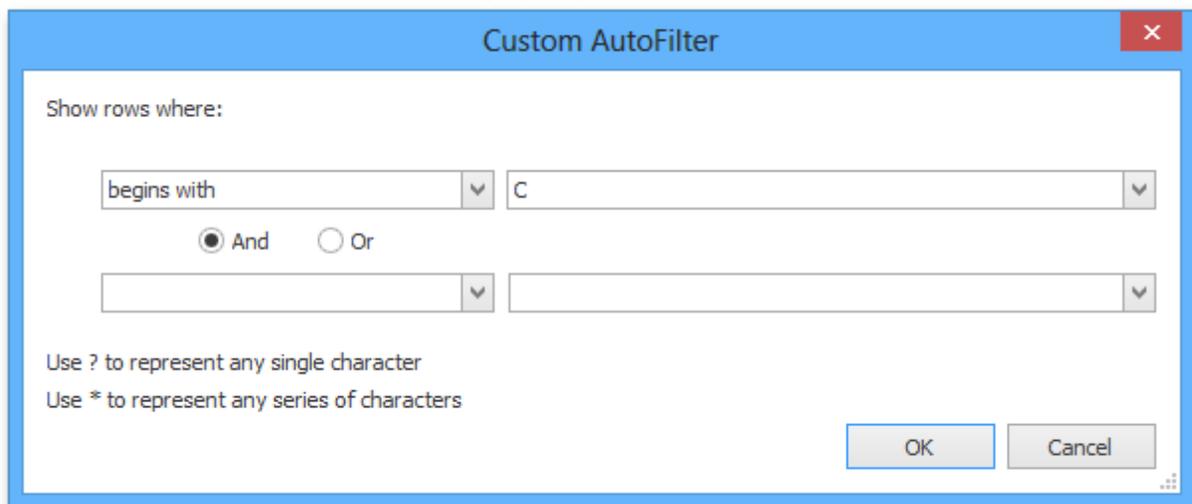
Text Filter

To apply the text filter, do the following.

1. Click the arrow in the header of the column containing text values you wish to filter.
2. Point to **Text Filters** and select one of the built-in comparison operators, or select **Custom Filter** to construct your own filter expression.

	A	B	C	D	E	F
1						
2		Product	Category	Unit Price	Qty	Amount
3		Alice Mutton		\$ 39.00	30	\$ 1,170.00
4		Aniseed Syrup		\$ 10.00	14	\$ 140.00
5		Boston Crab Meat		\$ 18.40	22	\$ 404.80
6		Camembert Pierrot		\$ 34.00	10	\$ 340.00
7		Carnarvon Tigers				\$ 2,125.00
8		Chai				\$ 522.00
9		Chang				\$ 684.00
10		Chartreuse verte				\$ 504.00
11		Chef Anton's Cajun Seasoning				\$ 1,078.00
12		Chef Anton's Gumbo Mix				\$ 1,174.25
13		Chocolate				\$ 267.75
14		Côte de Blaye		\$		\$ 4,479.50
15		Escargots de Bourgogne				\$ 145.75
16		Filo Mix				\$ 336.00

3. In the invoked **Custom AutoFilter** dialog specify the filter criterion.



You can also specify the additional filter criterion using the **AND** or **OR** logical operator to combine the conditions.

To make your filter criterion more flexible, use the **wildcard characters**. The asterisk ***** matches any number of characters, while the question mark **?** represents a single character. For example, to display all the values that start with the letter "C", you can either use the **Begins With** operator as shown in the image above, or select the **Equals** operator and type "C*" in the box on the right.

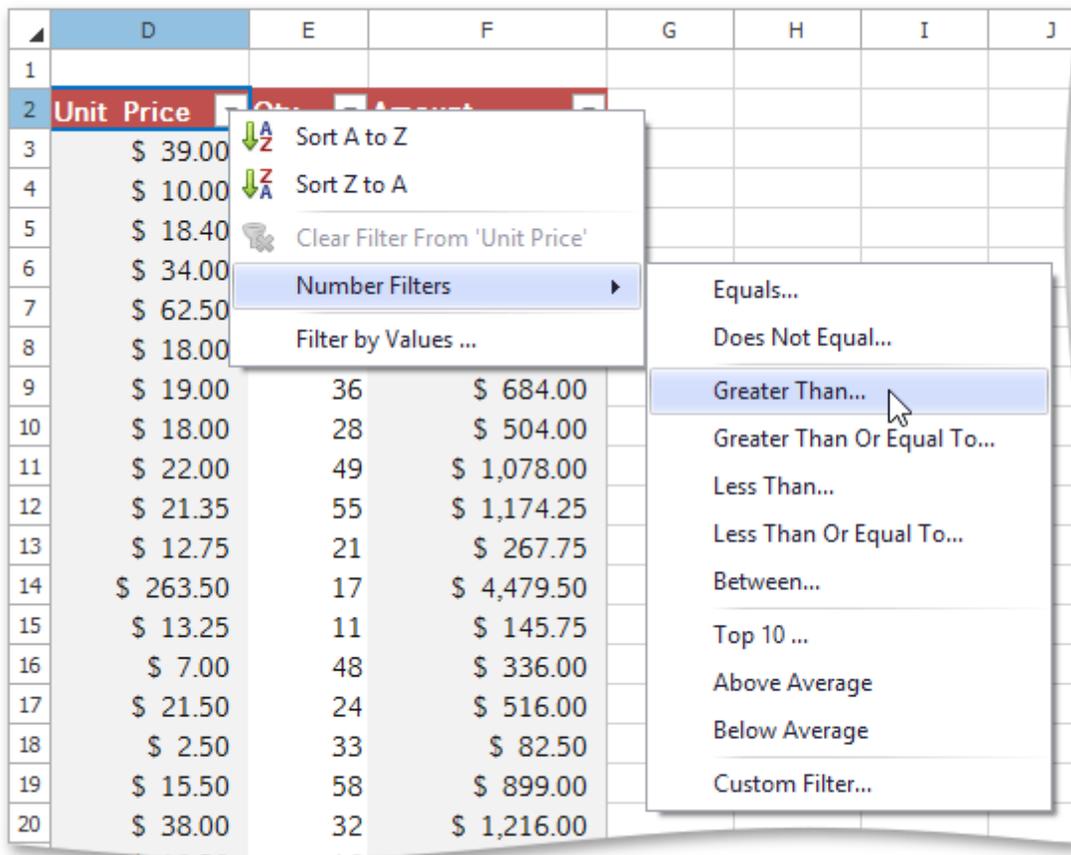
Tip

To filter values containing a specific character, such as the asterisk, question mark or tilde, put the tilde (~) before it.

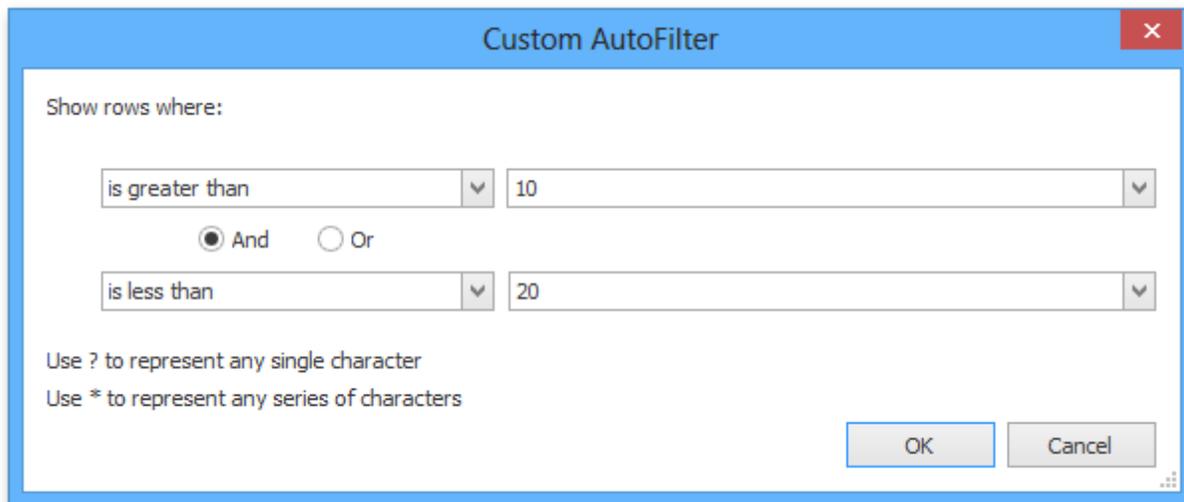
Number Filter

To apply the number filter, do the following.

1. Click the arrow  in the header of the column containing numeric values you wish to filter.
2. Point to **Number Filters** and select one of the built-in comparison operators (**Equals**, **Greater Than**, **Less Than**, **Between**, **Top 10**, **Above** or **Below Average**, etc.), or select **Custom Filter** to construct your own filter expression.



3. In the invoked **Custom AutoFilter** dialog specify the filter criterion.

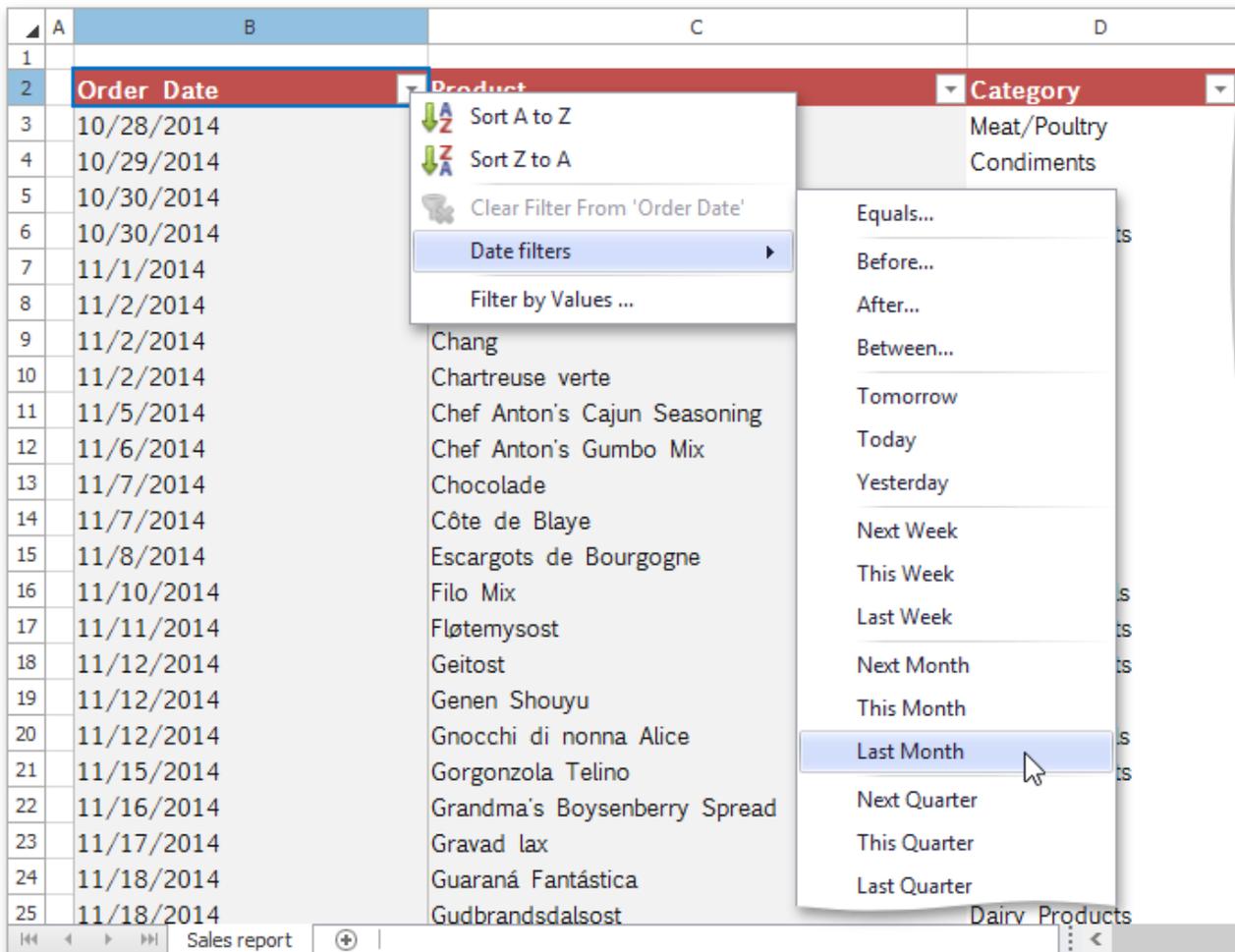


You can also specify the additional filter criterion using the **AND** or **OR** logical operator to combine the conditions.

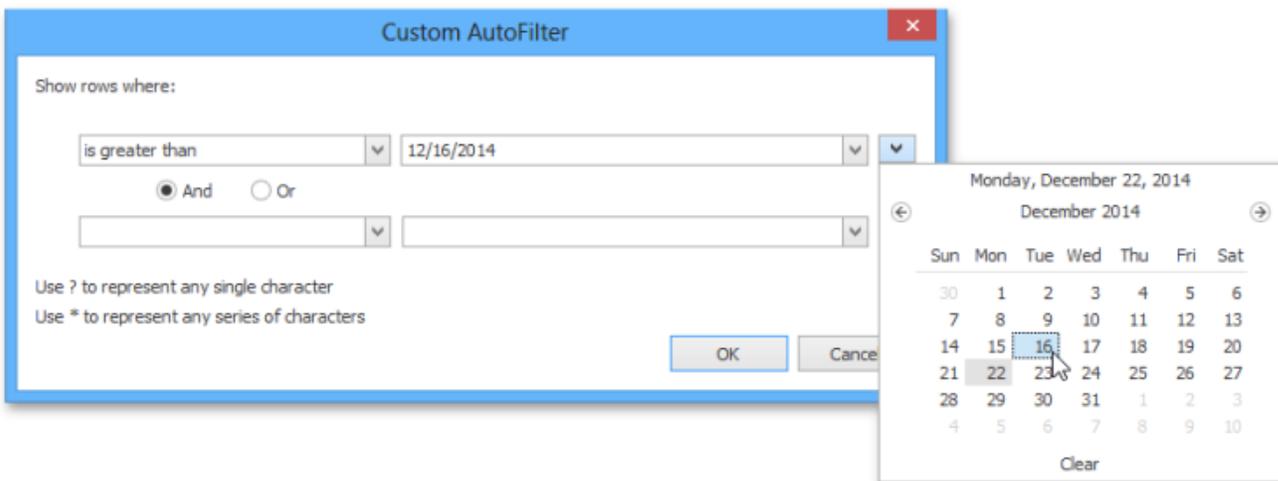
Date and Time Filter

To apply the date filter, do the following.

1. Click the arrow  in the header of the column containing dates you wish to filter.
2. Point to **Date Filters** and select one of the built-in dynamic filter types to display dates that fall within a specified time period (next, this or last week, month, year, etc.)...

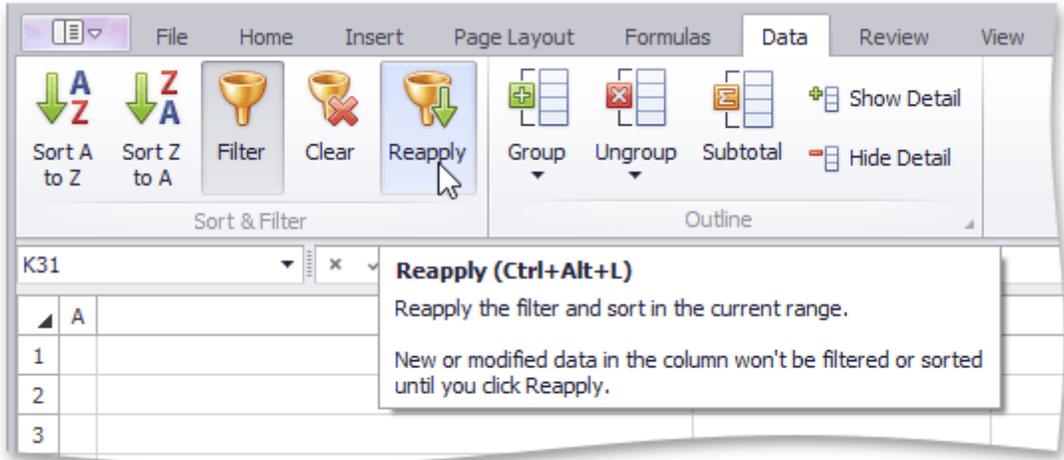


... or select the **Before**, **After**, **Equals** or **Between** item to invoke the **Custom AutoFilter** dialog and find dates that are before, after or equal to the specified date, or between two dates.



Reapply a Filter

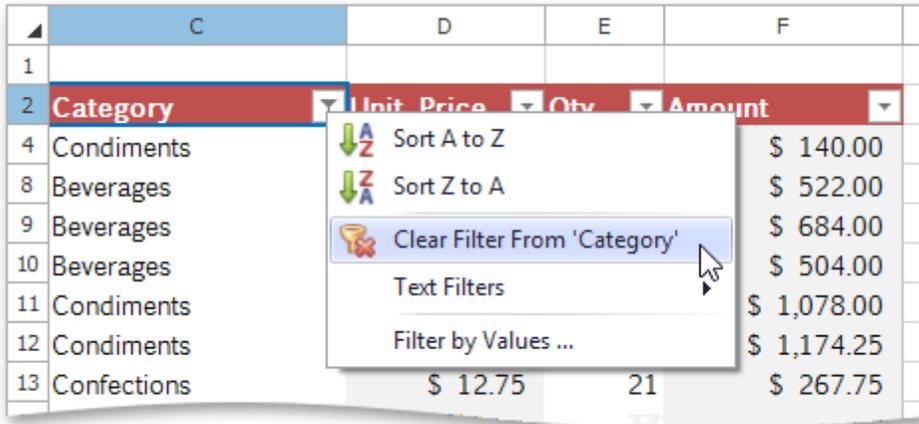
To reapply a filter after you change your data, click a cell in the range or table to which the filter is applied, and then on the **Data** tab, in the **Sort & Filter** group, click the **Reapply** button.



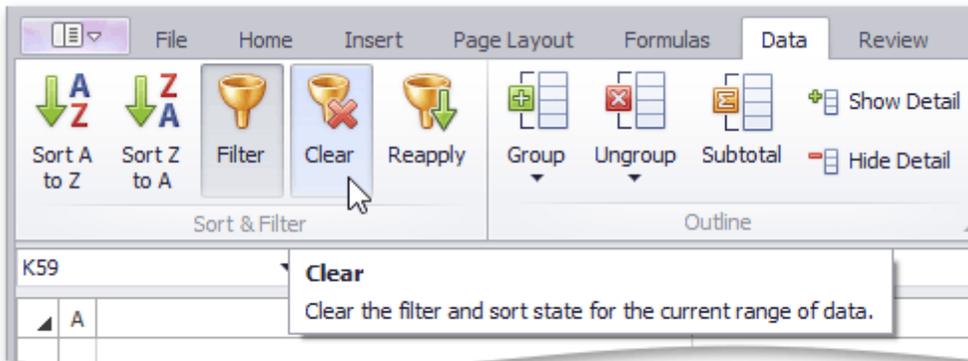
Clear a Filter

To remove a filter, do the following.

- To remove a filter from a specific column, click the **Filter** button in the column header, and then select the **Clear Filter From 'Column Name'** item in the drop-down menu.



- To clear all the specified filters and display the hidden rows, on the **Data** tab, in the **Sort & Filter** group, click the **Clear** button.



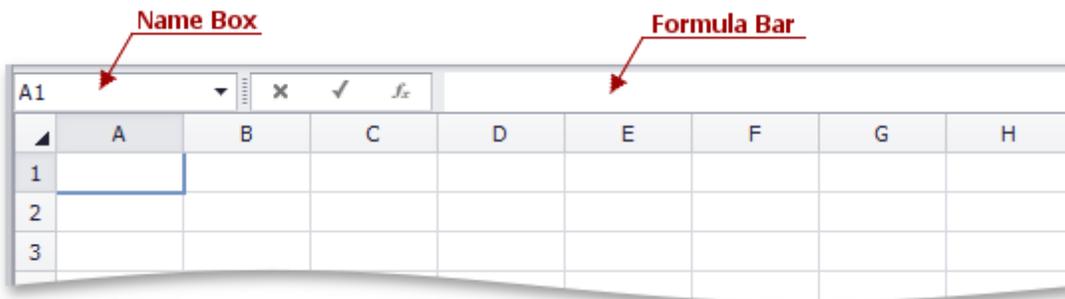
To disable the filtering functionality, click a cell in the range or table, and then on the **Data** tab, in the **Sort & Filter** group, click the **Filter** button. The drop-down arrows will disappear from the column headers and all the specified filters will be removed.

Formulas

Create a Simple Formula

The **Spreadsheet** allows you to perform calculations on data in cells using formulas. A formula is a string expression that starts with the equal sign ("="). Formulas can contain constants, math operators, functions, cell references, etc.

The **Spreadsheet** provides the capability to use the **Formula Bar**, which is the bar at the top of a worksheet, to enter and edit formulas.



For example, if you wish to add 1 to the product of 2 and 5, type the following formula in the cell in which you wish to insert the formula or in the **Formula Bar**.

=2*5+1

Press **ENTER**. The result appears in the cell in which you inserted the formula.

Using Cell References and Defined Names in Formulas

The A1 Reference Style

If you want to change data in a worksheet without changing formulas that use this data for evaluation, you can use **cell references**. A cell reference defines cell location in a worksheet. It is a combination of column letters (**A**, **B**, **C**, etc.) and row numbers (**1**, **2**, **3**, etc.). For example, **A1** refers to a cell at the intersection of column A and row 1.

To add values in cells A1 and A2, and divide the result by the value in cell A3, type the following formula (use parentheses to determine the order of operations):

=(A1+A2)/A3

You can also use a reference to a cell located in another worksheet. For example, to multiply a value in cell B1 by the value in cell B1 in *Sheet 2*, enter the following formula:

=B1*Sheet2!B1

To prevent data from changing when the formula is copied, use the **absolute reference**. Absolute references have a dollar sign (\$) before column and/or row references.

The following example demonstrates how to use a constant value in cell B1 in calculations:

=A1*\$B\$1

The R1C1 Reference Style

The **Spreadsheet** supports the **R1C1 reference style** where both rows and columns are labeled with numbers. Cell location is indicated by an "R" letter followed by a row number and a "C" letter followed by a column number.

You can use **absolute** and **relative** R1C1 references. An absolute R1C1 reference always refers to a cell in a specific location.

	1	2	3	4
1				
2				
3			=R2C2	
4				

The example below demonstrates how to create a formula that adds values in cells A1 through A5 using the absolute R1C1 reference style:

=SUM(R1C1:R5C1)

A relative R1C1 reference refers to a cell location in relation to an active cell.

The image below illustrates a relative reference to a cell one row above and one column to the left of the active cell.

	1	2	3
1			
2			
3			=R[-1]C[-1]
4			

The following example demonstrates how to create a formula that adds values in cell range A1:A5 using the relative R1C1 reference style in cell B1:

=SUM(RC[-1]:R[4]C[-1])

Defined Names

To make formulas easier to understand, you can use **defined names** that represent cells, cell ranges, functions, or constant values.

To define a name for a cell or cell range, follow the instruction below.

1. Select a cell or a range of cells for which you wish to define a name.
2. Type the name you want to use to refer to the selection in the **Name Box** at the left end of the **Formula Bar**. Press **ENTER**.

	A	B	C	D
1				
2		AMOUNT		
3		\$ 138.80		
4		\$ 155.85		
5		\$ 803.64		
6		\$ 261.70		
7		\$ 163.20		
8				

To add values in cell range **B3:B7** that is named **Amount**, enter the following formula:

=SUM(Amount)

Using Functions in Formulas

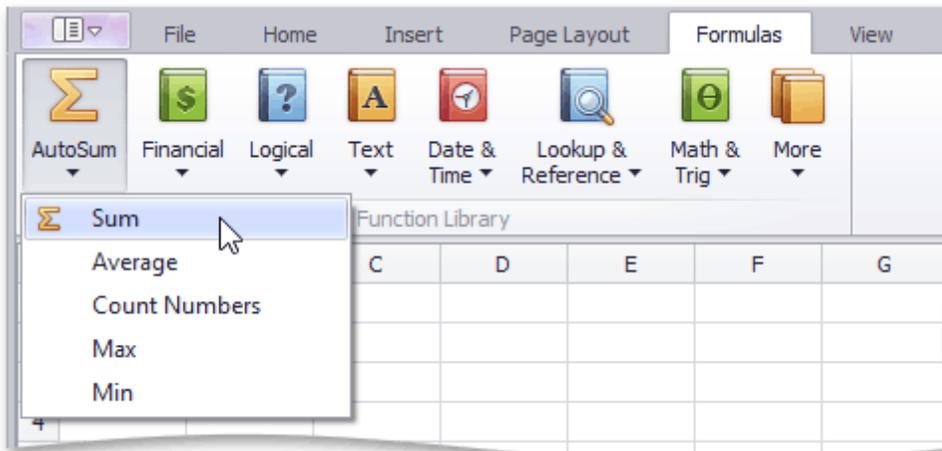
The **Spreadsheet** provides the capability to use **functions** in formulas.

To insert a formula containing functions, follow the instructions below.

1. Click the cell in which you want to insert the formula.
2. Type the equal sign "=" that is required to interpret cell content as a formula. Skip this action if you insert the function in the cell which already contains a formula.
3. Type the function's name.
4. Enter the arguments into the function's parentheses.
5. Press **ENTER**. The result appears in the cell in which you inserted the formula.

If you do not remember the name of the function you want to use, select it on the **Formulas** tab in the **Function Library** group.

For example, if you want to add all numbers in the range **E4:E8**, in the **Function Library** group, select the **SUM** function from the **AutoSum** or **Math & Trig** button's drop-down list. Type "E4:E8" in the function's parentheses and press **ENTER**. Note that the **Spreadsheet** automatically adds the equal sign to the formula when you insert the function from the **Function Library** group.



	A	B	C	D	E	F
1						
2						
3		DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT	
4		R. Bradbury "Dandelion Wine"	10	\$ 13.88	\$ 138.80	
5		R. Bradbury "Fahrenheit 451"	15	\$ 10.39	\$ 155.85	
6		R. Bradbury "Farewell Summer" (Limited Numbered Edition Signed by Author)	3	\$ 267.88	\$ 803.64	
7		R. Bradbury "The Martian Chronicles"	10	\$ 26.17	\$ 261.70	
8		R. Bradbury "A Sound of Thunder"	15	\$ 10.88	\$ 163.20	
9						
10				SUBTOTAL:	=SUM(E4:E8)	
11						

Nested functions

You can create a formula with a function that uses another function as one of the arguments. A function that is

used as an argument is called a **nested** function.

Examples of formulas with nested functions are detailed in the table below.

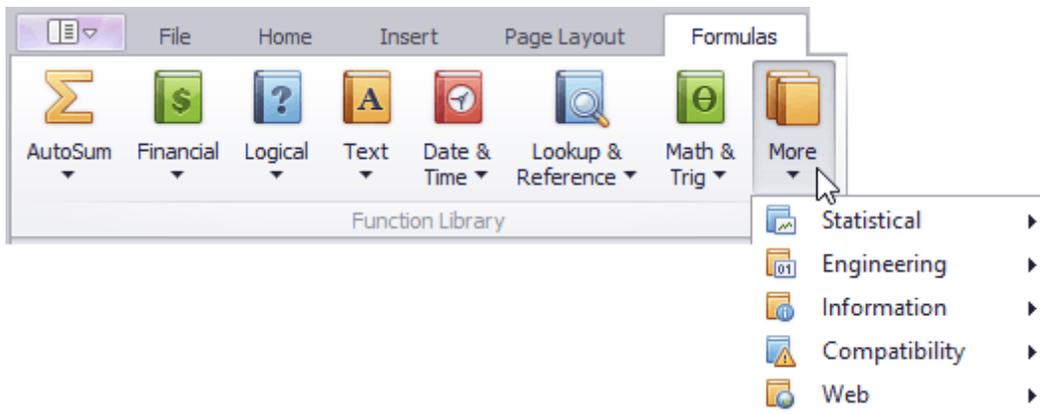
Formula	Description
=ROUND(SUM(A1:A5),2)	Round the sum of the values contained in the cell range A1:A5 to two decimal places.
=SQRT(AVERAGE(A1:A5))	Square the root of the average value of the numbers in the cell range A1:A5 .
=IF(A5<1000, POWER(A5,2))	Square the value in cell A5 if it is less than 1000.

Supported Functions

The **Spreadsheet** supports the following functions to be used in formulas.

- **Mathematical Functions** - used to perform common mathematical operations: addition (SUM), multiplication (PRODUCT), exponentiation (POWER), extraction of the square root (SQRT), evaluation of trigonometric functions (e.g., SIN, COS or TAN), etc.
- **Financial Functions** - used to perform various types of financial operations: calculation of interest rates (RATE), calculation of interest payments (IPMT), etc.
- **Logical Functions** - used to perform logical operations such as AND, OR, NOT, etc.
- **Text Functions** - used to provide operations with text data in cells, such as string concatenation (CONCATENATE), replacement of part of a string with another string (REPLACE), etc.
- **Date and Time Functions** - used to work with dates: to calculate the number of days, months, or years between two dates (e.g., DATEIF or DAYS360), or to add various components of a specified time to a worksheet (e.g., SECOND, MINUTE or HOUR).
- **Lookup and Reference Functions** - used for searching specific data in a worksheet: to look up values in vectors, arrays or references (e.g., LOOKUP or MATCH)
- **Statistical Functions** - used for data analysis: to find the average of a list of values (AVERAGE), to evaluate the covariance between two data sets (COVAR), to find the smallest or the largest value in a list of arguments (MAX, MIN), etc.
- **Engineering Functions** - used to work with special functions (e.g., BESSELI or BESSELJ), complex numbers (e.g., COMPLEX or IMAGINARY) and various numeral systems (e.g., DEC2BIN or BIN2DEC).
- **Information Functions** - used to provide information about the formatting, location or content of cells (e.g., CELL, INFO or ISTEEXT).
- **Compatibility Functions** - replaced by new functions in Microsoft® Excel® versions 2010 and higher. These functions can be used to provide compatibility with earlier versions of Microsoft® Excel®.
- **Web Functions** - used to return a URL-encoded string (ENCODEURL).

All of the functions described above are available in the **Function Library** group within the **Formulas** tab.



Create an Array Formula

An **array formula** is a formula that performs calculations on sets of cell ranges, so that you do not need to re-enter formulas for each calculation. Create an array formula and specify the columns or rows that the array formula must fill. Array formulas are used to perform actions on two or more sets of values, which are called arguments. Each array argument must have the same number of rows and columns. The result of an array formula can either be a single value or multiple values.

To create an array formula, do the following.

1. Select the cell in which you wish to insert the array formula. If the formula calculates multiple results, select the cell range for which you wish to create the array formula.
2. Enter the array formula in the **Formula Bar**.
3. Press **CTRL+SHIFT+ENTER**. The **Spreadsheet** automatically adds a pair of curly braces to the formula to indicate that it is an array formula.



Note

Any time you edit the array formula, you must press **CTRL+SHIFT+ENTER** to save changes and convert the formula into an array formula.

The example below demonstrates how to create a formula that multiplies three arrays of values (quantity, price and discount) to get an array of amount values for each product item without entering a separate formula for each row.

=C4:C8*D4:D8*(1-E4:E8)

	A	B	C	D	E	F
1						
2						
3		DESCRIPTION	QUANTITY	UNIT PRICE	DISCOUNT	AMOUNT
4		R. Bradbury "Dandelion Wine"	10	\$ 13.88	10%	=C4:C8*D4:D8*(1-E4:E8)
5		R. Bradbury "Fahrenheit 451"	15	\$ 10.39	10%	\$ 140.27
6		R. Bradbury "Farewell Summer" (Limited Numbered Edition Signed by Author)	3	\$ 267.88	10%	\$ 723.28
7		R. Bradbury "The Martian Chronicles"	10	\$ 26.17	10%	\$ 235.53
8		R. Bradbury "A Sound of Thunder"	15	\$ 10.88	10%	\$ 146.88
9						

Error Types in Formulas

If a formula in a cell cannot be calculated correctly, it means that the cell contains an **error**. The error appears because the formula's syntax is incorrect, or the formula uses unexpected arguments or data types.

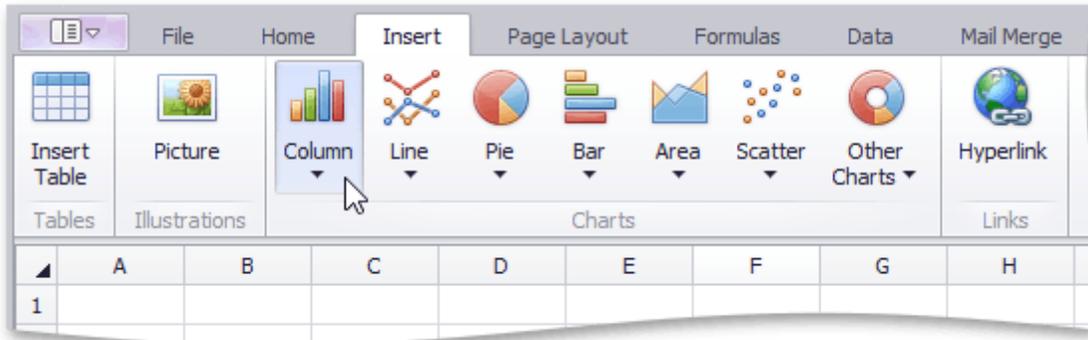
Errors that occur in formulas are detailed in the following table:

Error	Description	Example
#####	The column is not wide enough to display the cell content.	
#DIV/0!	Division by zero.	=A1/B1 (where the value in cell B1 is equal to zero, or cell B1 is blank).
#NAME?	The formula refers to a name that doesn't exist or is spelled incorrectly.	=SUM(Values) (the cell range named "Values" does not exist).
#N/A	The referenced value is not available to the formula.	=SUM(A1:A5*B1:B3) (the array formula has arguments consisting of different numbers of elements).
#NULL!	An incorrect range operator is used in the formula, or the specified intersection includes two ranges that do not intersect.	=SUM(A1 A3) (a colon is missing in the cell range reference).
#NUM!	There are invalid numeric values in the formula.	=SQRT(-4) (the square root of a negative number cannot be calculated).
#REF!	The cell reference is not valid.	=SUM(A1, B1) (column B has been deleted).
#VALUE!	The formula uses values of the wrong data type.	=SUM(5, "Text") (the SUM function requires numeric arguments).

Charting

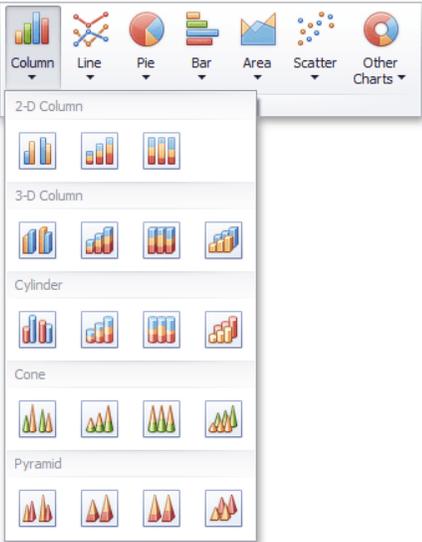
Charting Overview

The **Spreadsheet** provides the capability to summarize worksheet data visually using a variety of **charts**. Charts display data series visually to make data interpretation easier, and show the relationship between different data series. To create a chart, click the chart type you wish to insert in the **Charts** group within the **Insert** tab.



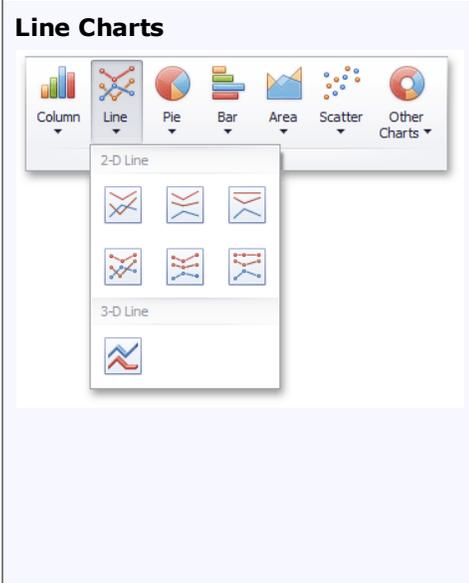
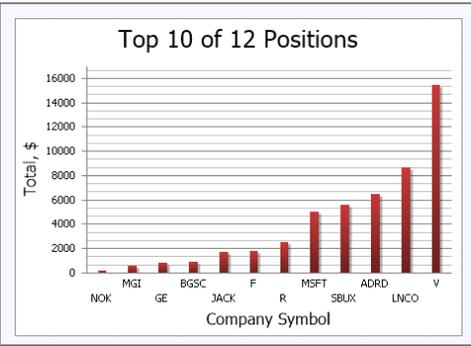
Below is a list of all charts currently available in the **Spreadsheet**.

- [Column Charts](#)
- [Line Charts](#)
- [Pie Charts](#)
- [Bar Charts](#)
- [Area Charts](#)
- [Scatter Charts](#)
- [Stock Charts](#)
- [Radar Charts](#)

Chart Type	Chart Subtypes	Description
<p>Column Charts</p> 	<p><i>2-D Column Charts:</i></p> <ul style="list-style-type: none"> • Clustered Column • Stacked Column • 100% Stacked Column <p><i>3-D Column Charts:</i></p> <ul style="list-style-type: none"> • 3-D Clustered Column • Stacked Column in 3-D • 100% Stacked Column in 3-D • 3-D Column <p><i>Cylinder Charts:</i></p> <ul style="list-style-type: none"> • Clustered Cylinder • Stacked Cylinder • 100% Stacked Cylinder • 3-D Cylinder <p><i>Cone Charts:</i></p> <ul style="list-style-type: none"> • Clustered Cone • Stacked Cone 	<p>Column charts are used to display series as sets of vertical bars (or columns) that are grouped by category. The bar lengths are proportional to the values that they represent. Column charts are typically used to compare values in different categories. Some column graphs display series as individual columns, grouped by category, and others show columns divided into subparts to show a cumulative effect (stacked column graphs). You can select column charts of different shapes, such as cylinder, cone or pyramid.</p>

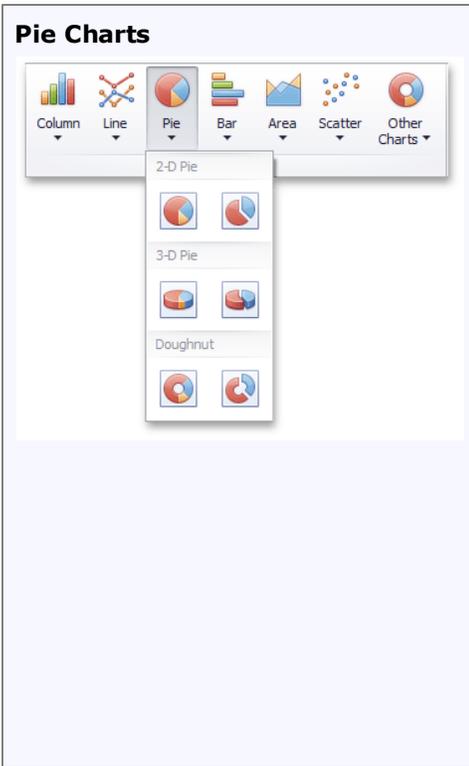
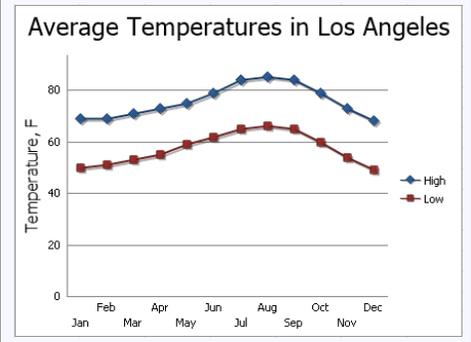


- 100% Stacked Cone
 - 3-D Cone
- Pyramid Charts:*
- Clustered Pyramid
 - Stacked Pyramid
 - 100% Stacked Pyramid
 - 3-D Pyramid



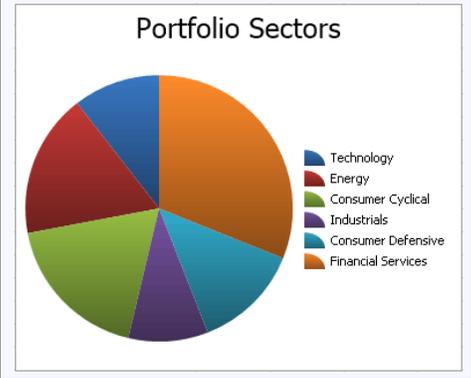
- 2-D Line Charts:*
- Line
 - Stacked Line
 - 100% Stacked Line
 - Line with Markers
 - Stacked Line with Markers
 - 100% Stacked Line with Markers
- 3-D Line Charts:*
- 3-D Line

Line charts display information as a series of data points connected by line segments. This chart type is useful when you need to show trends for several series on the same diagram, and to compare values of several series for the same point argument.



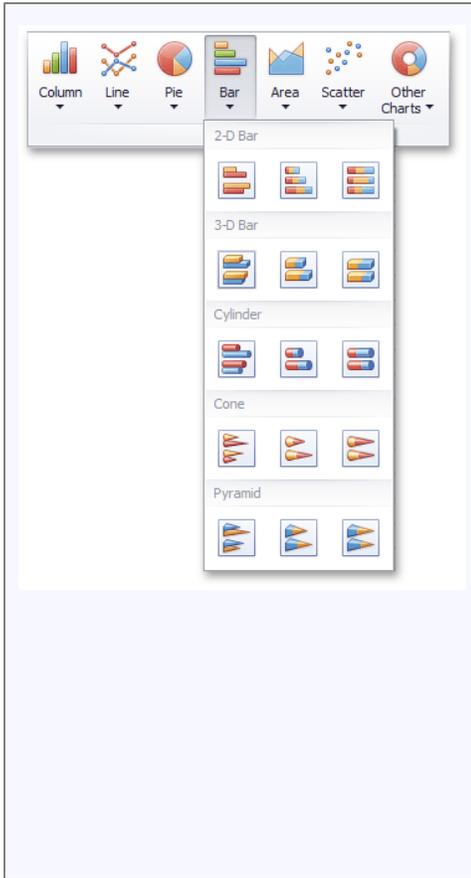
- 2-D Pie Charts:*
- Pie
 - Exploded Pie
- 3-D Pie Charts:*
- Pie in 3-D
 - Exploded Pie in 3-D
- Doughnut Charts:*
- Doughnut
 - Exploded Doughnut

Pie and doughnut charts are used to compare the percentage values of different point arguments in the same series. These charts may be useful to determine which point value is the most significant, or which values in the point series are the most significant. A doughnut chart is functionally identical to a pie chart. The main difference is the shape of the doughnut chart, and that it can contain more than one data series.



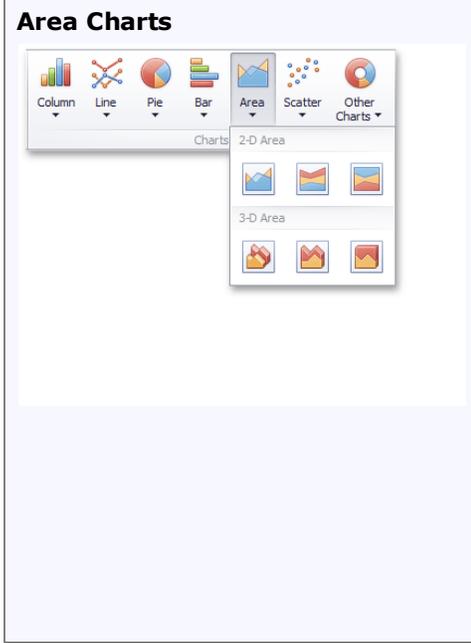
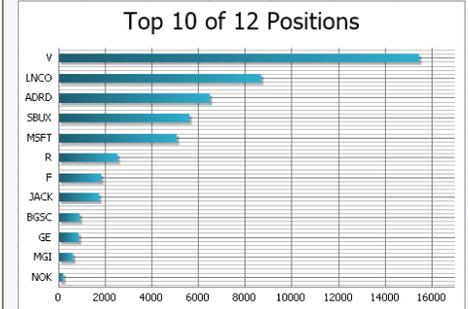
- 2-D Bar Charts:*
- Clustered Bar

Bar charts are identical to column charts with one exception: bar



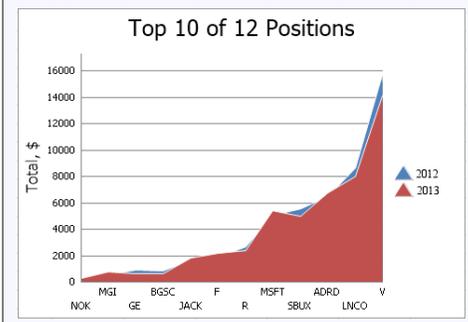
- Stacked Bar
 - 100% Stacked Bar
- 3-D Bar Charts:**
- Clustered Bar in 3-D
 - Stacked Bar in 3-D
 - 100% Stacked Bar in 3-D
- Cylinder Charts:**
- Clustered Horizontal Cylinder
 - Stacked Horizontal Cylinder
 - 100% Stacked Horizontal Cylinder
- Cone Charts:**
- Clustered Horizontal Cone
 - Stacked Horizontal Cone
 - 100% Stacked Horizontal Cone
- Pyramid Charts:**
- Clustered Horizontal Pyramid
 - Stacked Horizontal Pyramid
 - 100% Stacked Horizontal Pyramid

charts use horizontal bars instead of vertical bars to compare values across categories. Some bar graphs display series as individual bars grouped by category, and others show bars divided into subparts to show a cumulative effect (stacked bar graphs). You can select bar charts of different shapes, such as cylinder, cone or pyramid.



- Area Charts**
- 2-D Area Charts:**
- Area
 - Stacked Area
 - 100% Stacked Area
- 3-D Area Charts:**
- 3-D Area
 - Stacked Area in 3-D
 - 100% Stacked Area in 3-D

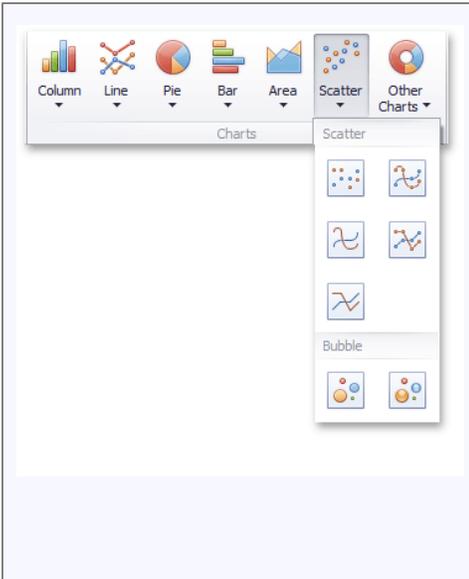
Area charts display series as filled areas in a diagram, with each data point displayed as a peak or valley in the area. This chart type is useful when you need to show trends for several series on the same diagram, and also show the relationship of the parts to the whole. The area chart is based on the line chart, with the area below the plotted line filled with color.



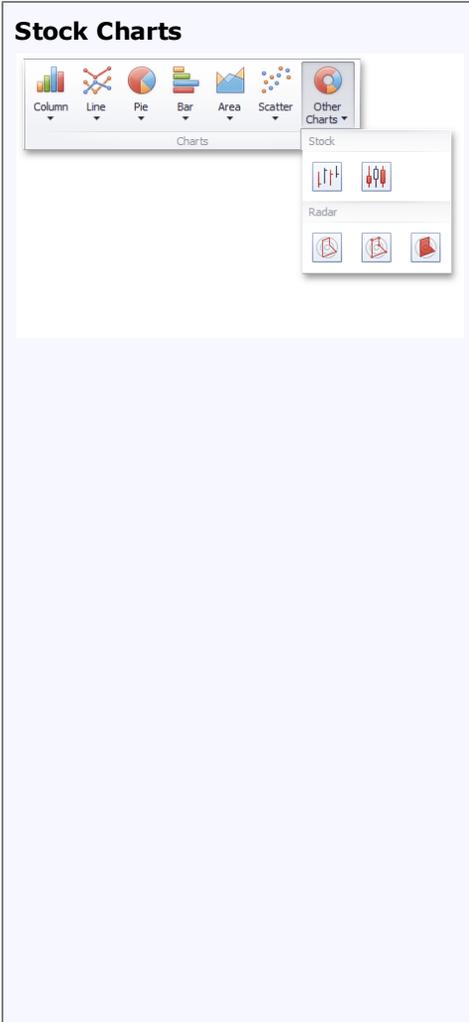
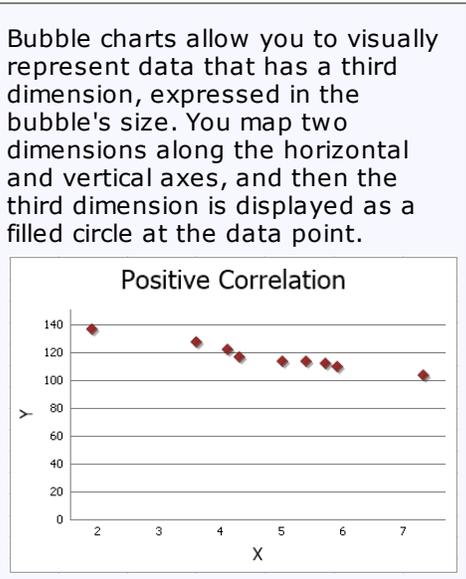
Scatter Charts

- Scatter Charts:**
- Scatter with only Markers
 - Scatter with Smooth Lines and Markers
 - Scatter with Smooth Lines
 - Scatter with Straight Lines and Markers

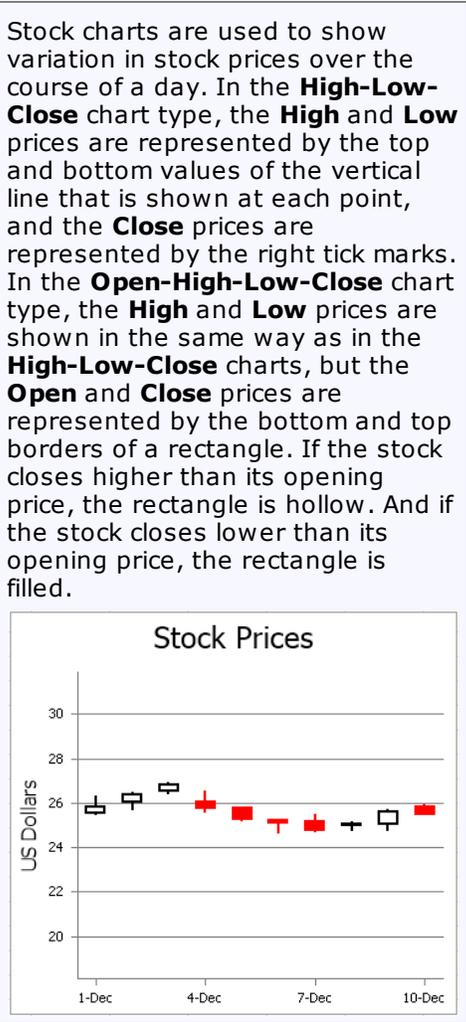
Scatter charts are used to plot data points on the horizontal and vertical axis to show the relationship between two sets of data. This chart type combines data values into single data points and displays them in uneven intervals (or clusters).



- Scatter with Straight Lines
- Bubble Charts:*
- Bubble
 - Bubble with a 3-D Effect



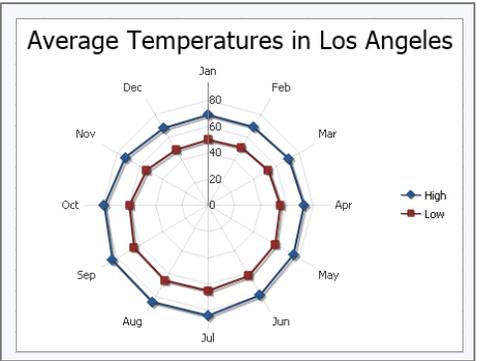
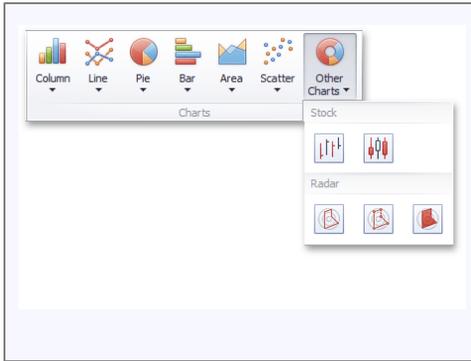
- Stock Charts:*
- High-Low-Close
 - Open-High-Low-Close



Radar Charts

- Radar Charts:*
- Radar
 - Radar with Markers
 - Filled Radar

Radar charts are used when it is necessary to display series as an area on a circular grid that has multiple axes along which data can be plotted, so values are shown relative to a center point.



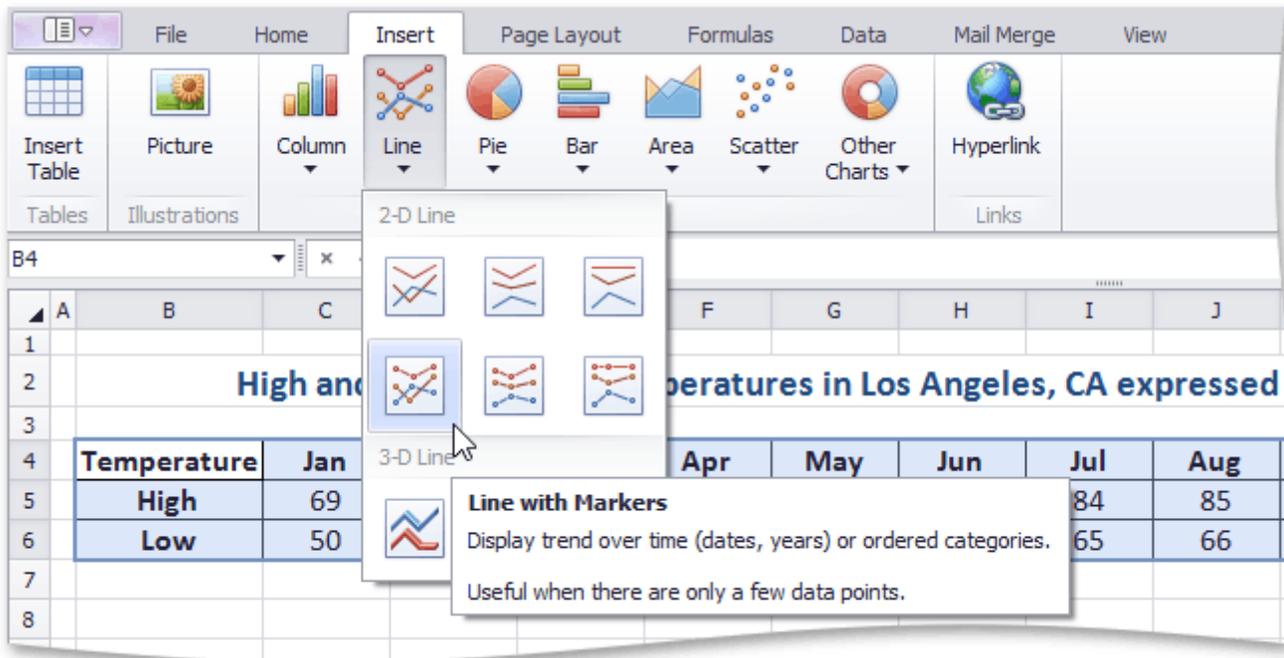
Creating a Chart

The **Spreadsheet** allows you to create charts quickly using the **Charts** group of the **Insert** tab.

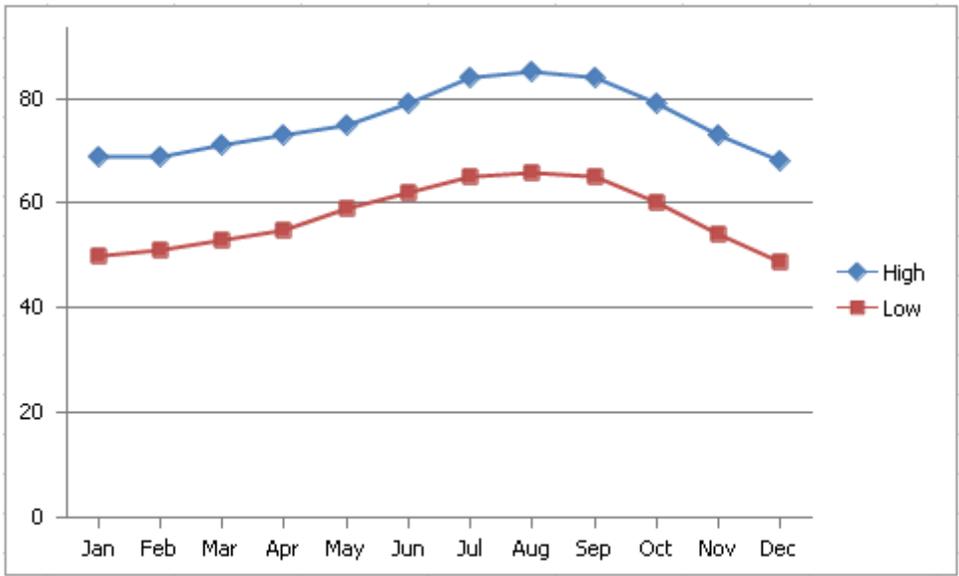
To create a chart, select the table that contains the data you wish to use for the chart. Note that the **Spreadsheet** only allows you to create charts for data series representing a contiguous cell range.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		High and Low Average Temperatures in Los Angeles, CA expressed in Fahrenheit degrees												
2														
3														
4		Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5		High	69	69	71	73	75	79	84	85	84	79	73	68
6		Low	50	51	53	55	59	62	65	66	65	60	54	49
7														

In the **Charts** group within the **Insert** tab, select the required chart type. In the example below, a line chart is created. To insert a line chart, click the **Line** button, and then select the **Line with Markers** chart subtype.



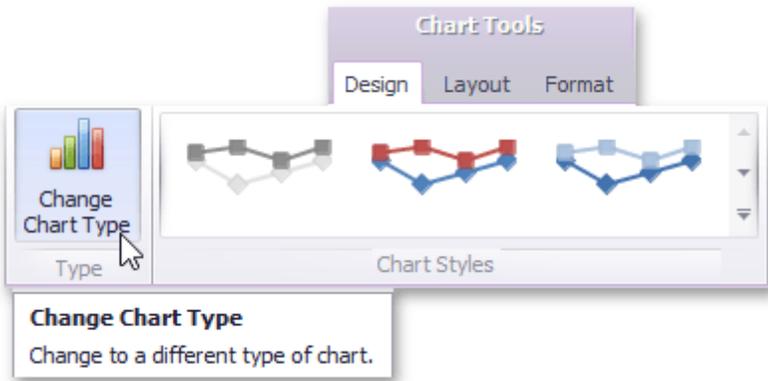
The chart is added to the worksheet. You can move the chart to the desired location and resize it for a better fit.



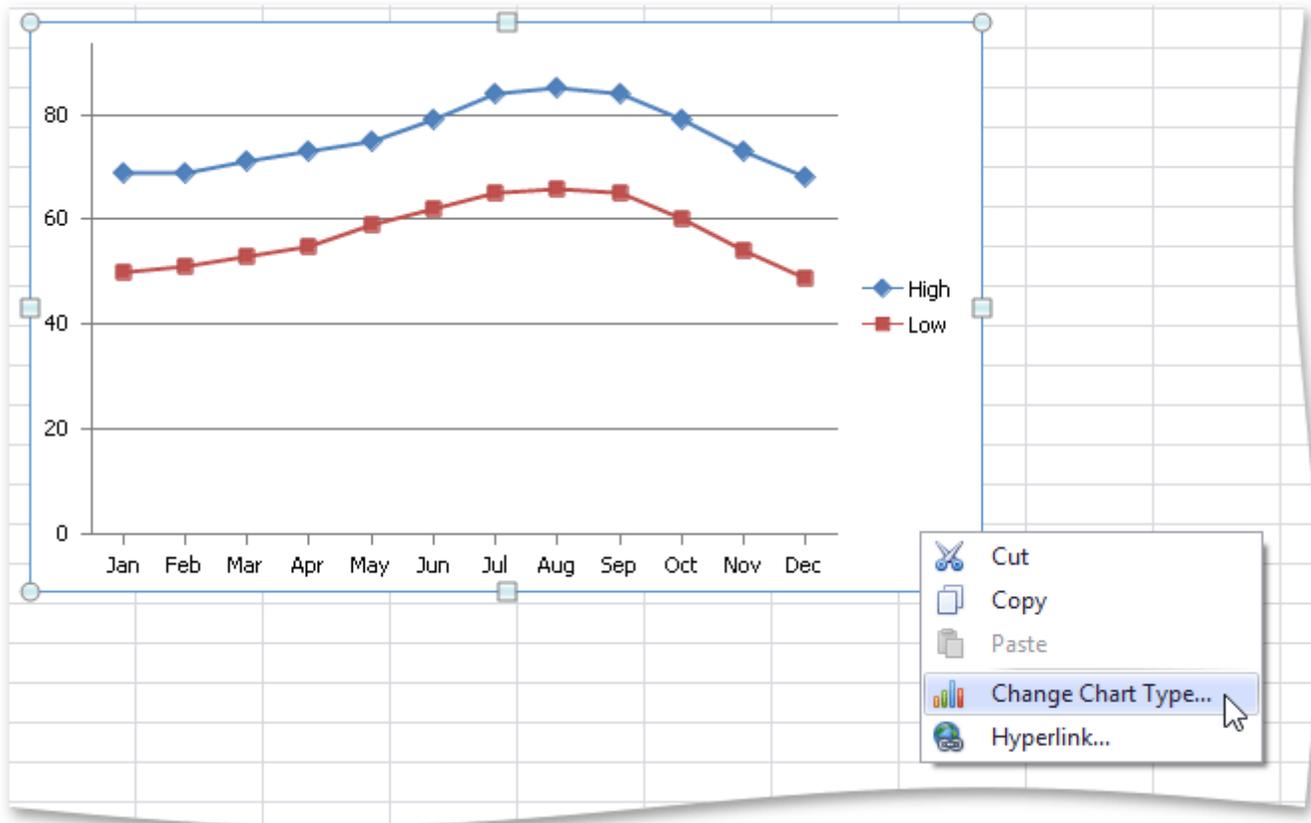
Changing a Chart Type

The **Spreadsheet** allows you to change the type of the existing chart. To do this, click the chart to display the **Chart Tools** contextual tab.

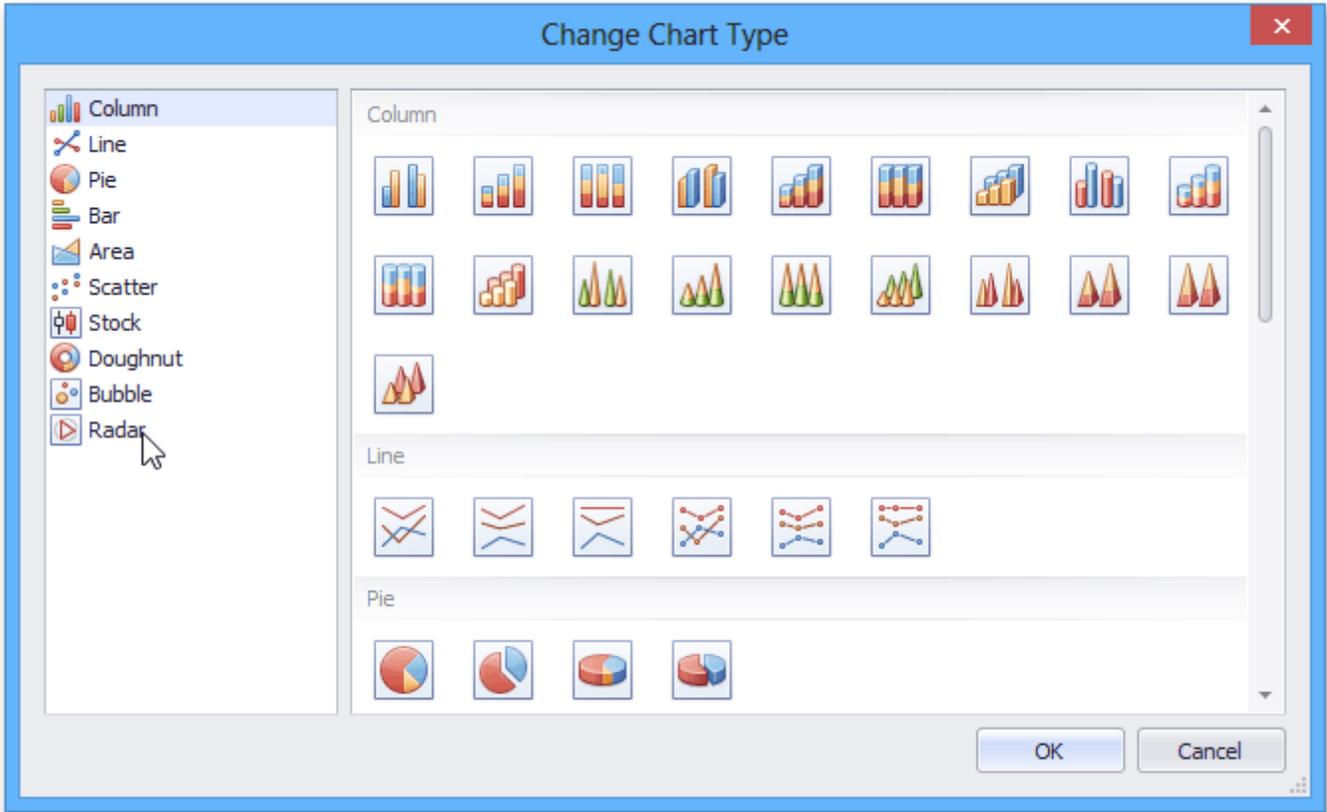
Click the **Change Chart Type** button in the **Type** group within the **Design** tab...



... or right-click the chart and select the **Change Chart Type...** item in the context menu.



In the invoked **Change Chart Type** dialog, select a new chart type and click **OK**.



The following image illustrates the chart with the **Radar with Markers** chart type applied.



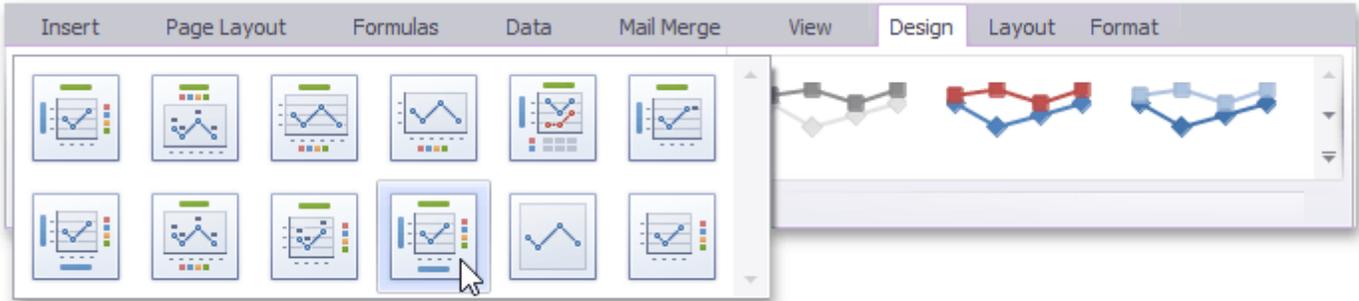
Applying a Predefined Chart Layout and Style

The **Spreadsheet** allows you to change the appearance of the existing chart by applying one of the predefined layouts and styles.

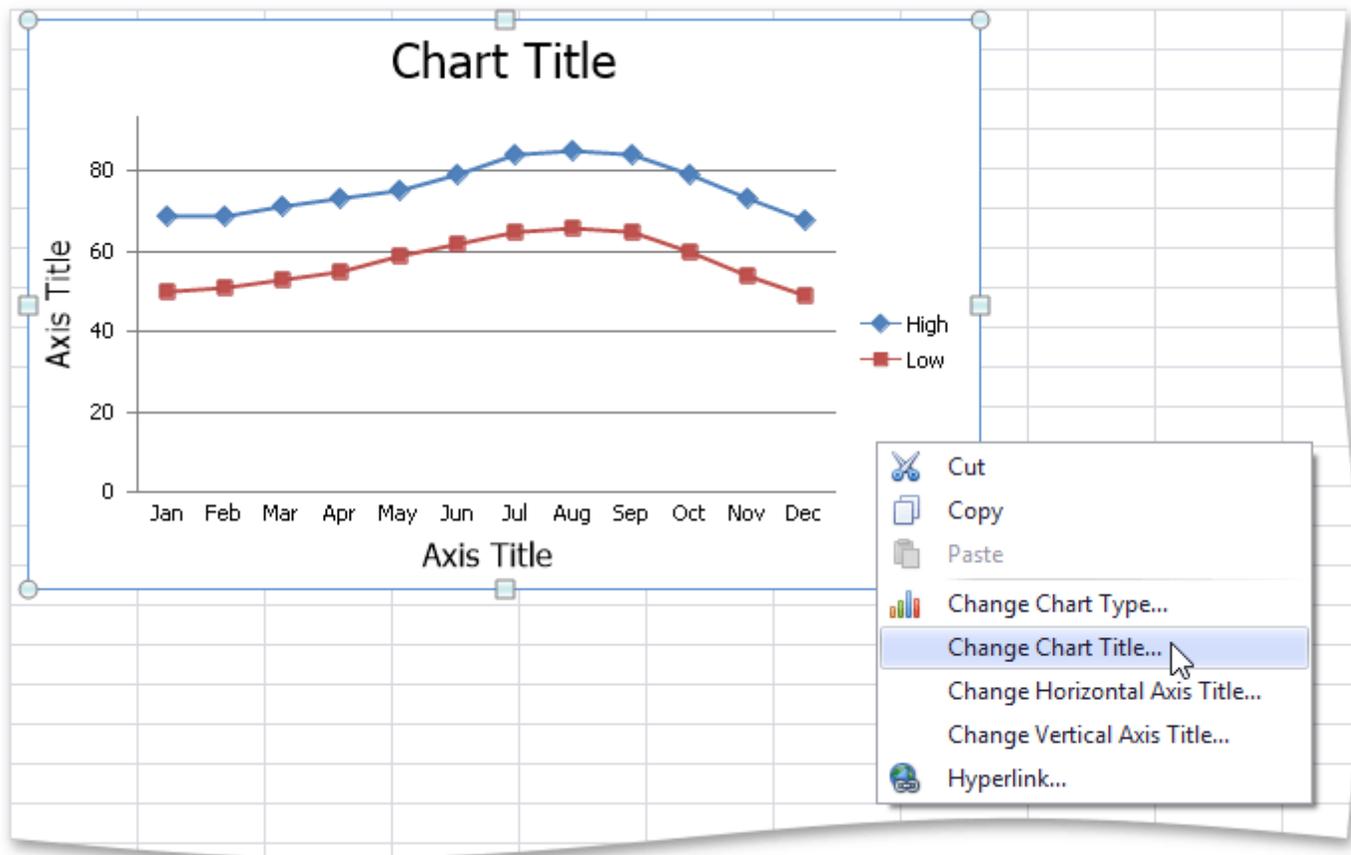
To change a chart style or layout, click the chart you wish to format, to display the **Chart Tools** contextual tab.

Apply a Predefined Chart Layout

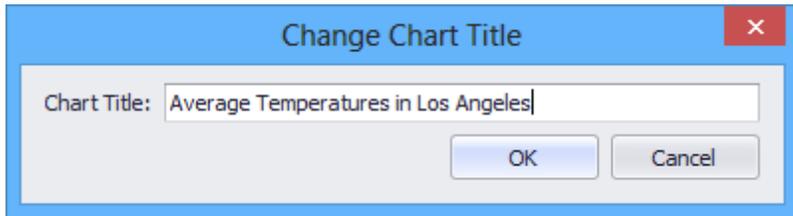
In the **Chart Layouts** group within the **Design** tab, select the required chart layout. For example, select **Layout 10**, which positions the chart legend to the right of the chart area, and adds the chart and axis titles.



To enter the chart title, right-click the chart and select the **Change Chart Title...** item in the context menu.

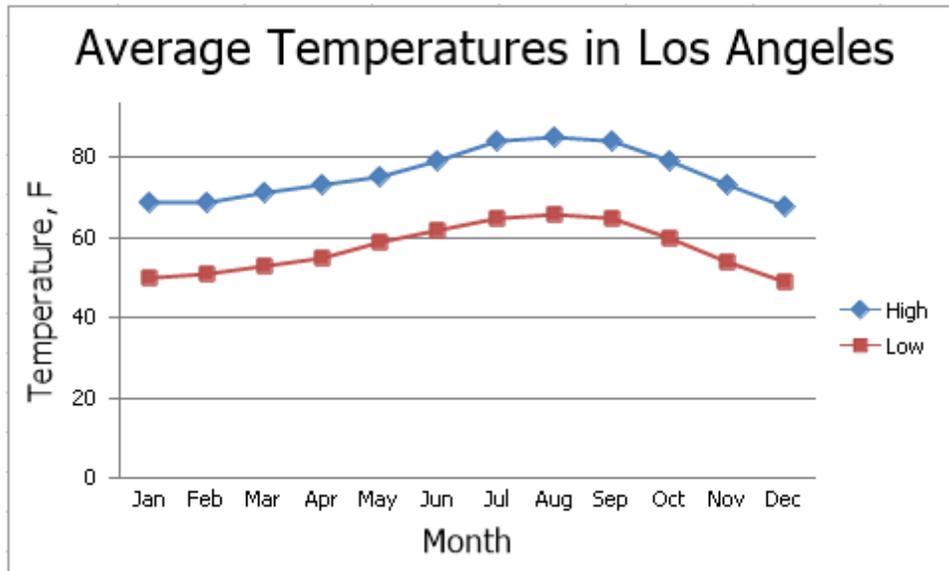


In the invoked **Change Chart Title** dialog box, enter a title and click **OK**.



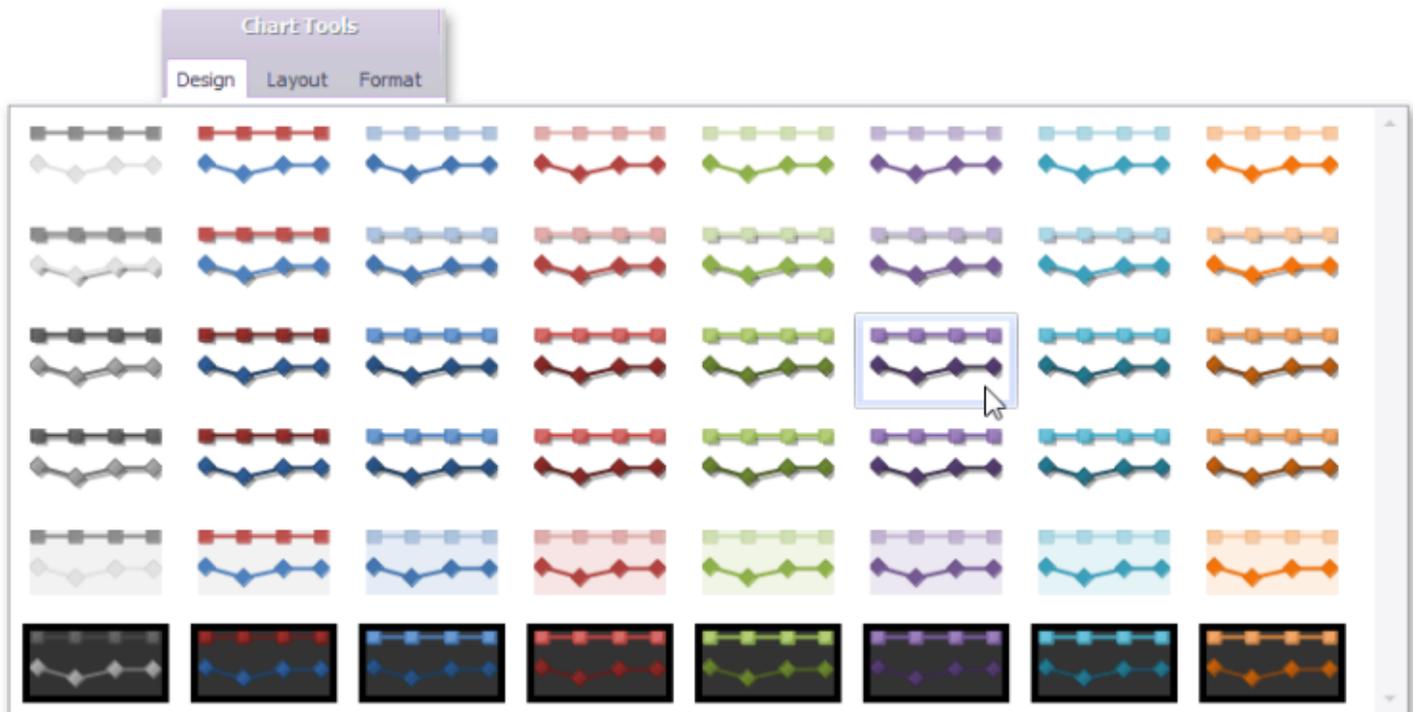
To provide horizontal or vertical axis titles, right-click the chart and select the **Change Horizontal Axis Title...** or **Change Vertical Axis Title...** item in the context menu. Type a new title in the invoked dialog box.

The image below shows the result.

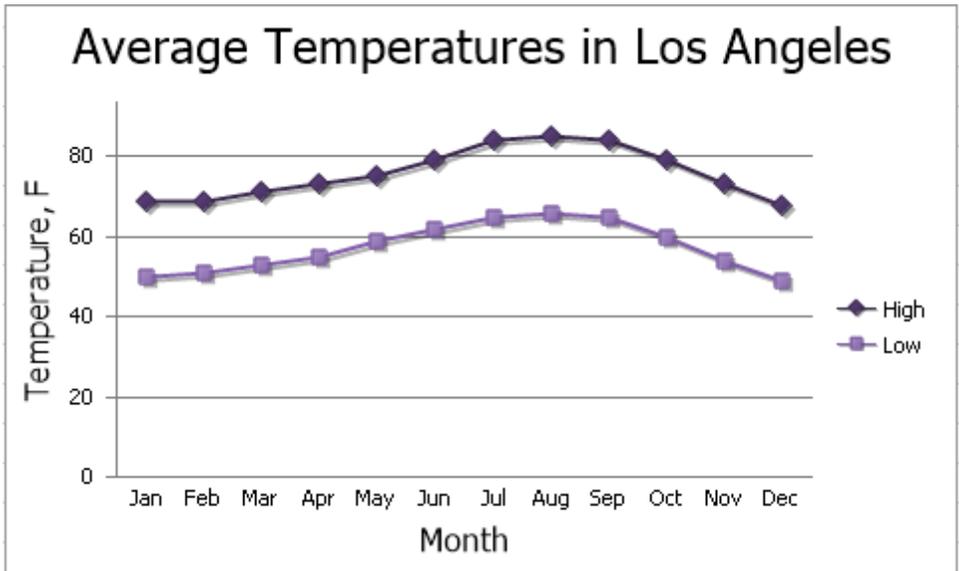


Apply a Predefined Style

In the **Chart Styles** group of the **Design** tab, click the chart style you wish to apply.



The image below shows a chart with **Style 22** applied.



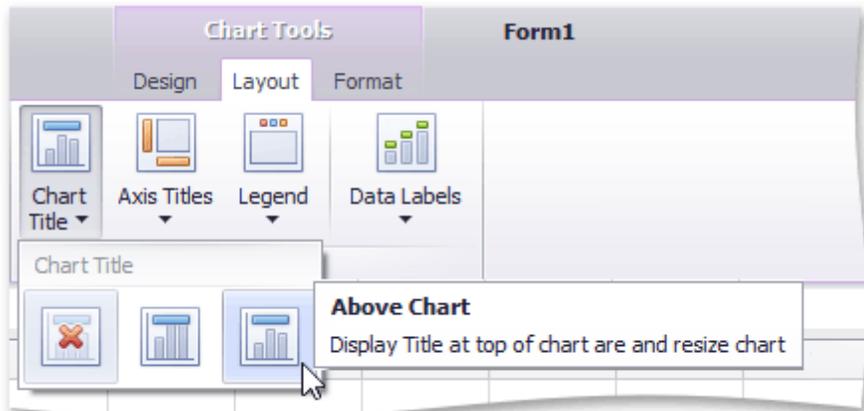
Modifying a Chart Manually

After you create a chart, you can choose whether to apply one of the [predefined chart layouts](#) or specify your own layout. The **Spreadsheet** provides the capability to [add axis titles](#) and [chart titles](#), [show the chart legend](#), [display gridlines](#) and [data labels](#), etc.

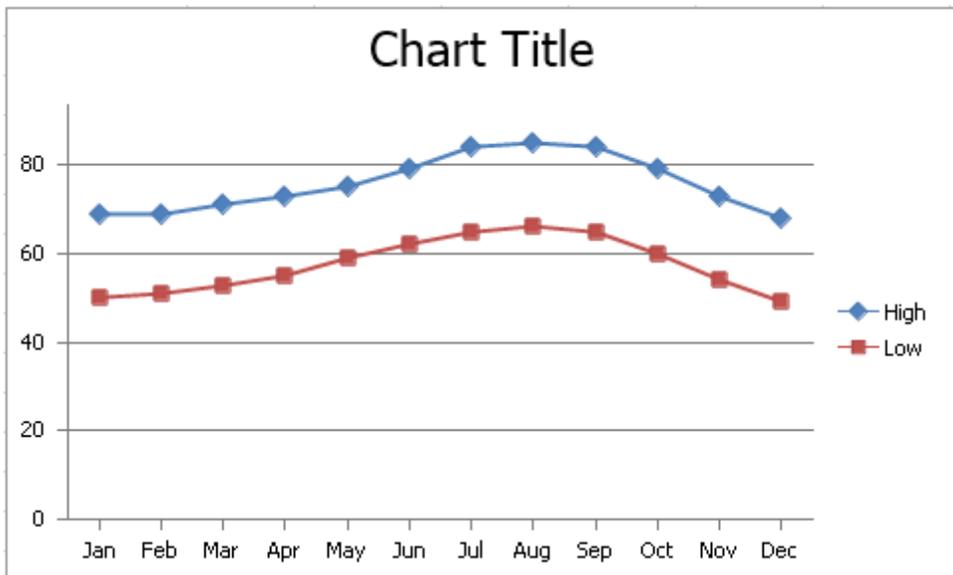
To modify a chart, click it to display the **Chart Tools** contextual tab.

Add a Chart Title

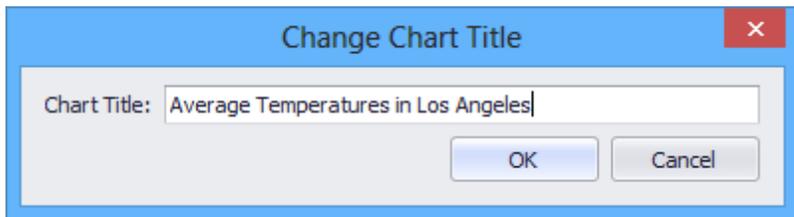
To add a title to your chart, click the **Chart Title** button in the **Labels** group within the **Layout** tab, and then select where to position the chart title. For example, click the **Above Chart** button to display the title at the top of the chart.



The image below illustrates the result.



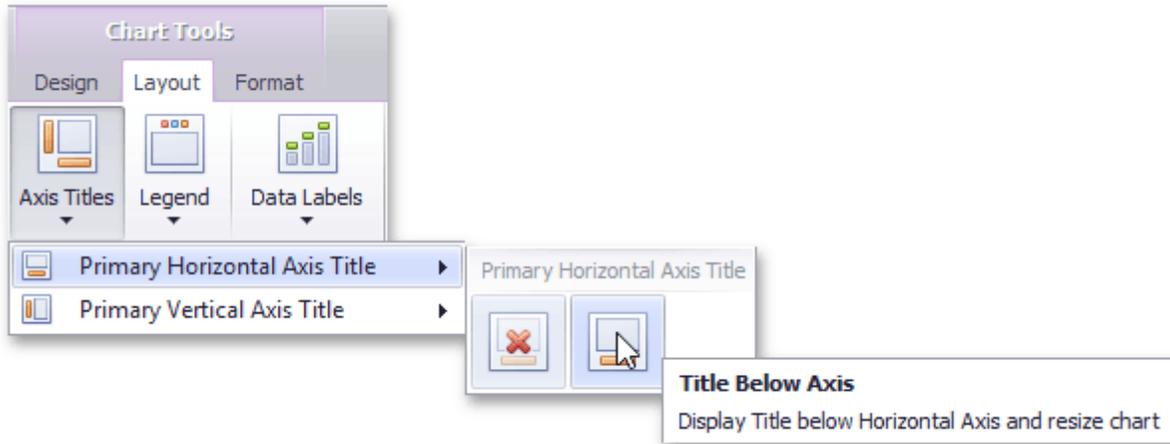
To change the default text in the title, right-click the chart and select the **Change Chart Title...** item in the context menu. Specify a new chart title in the invoked **Change Chart Title** dialog box.



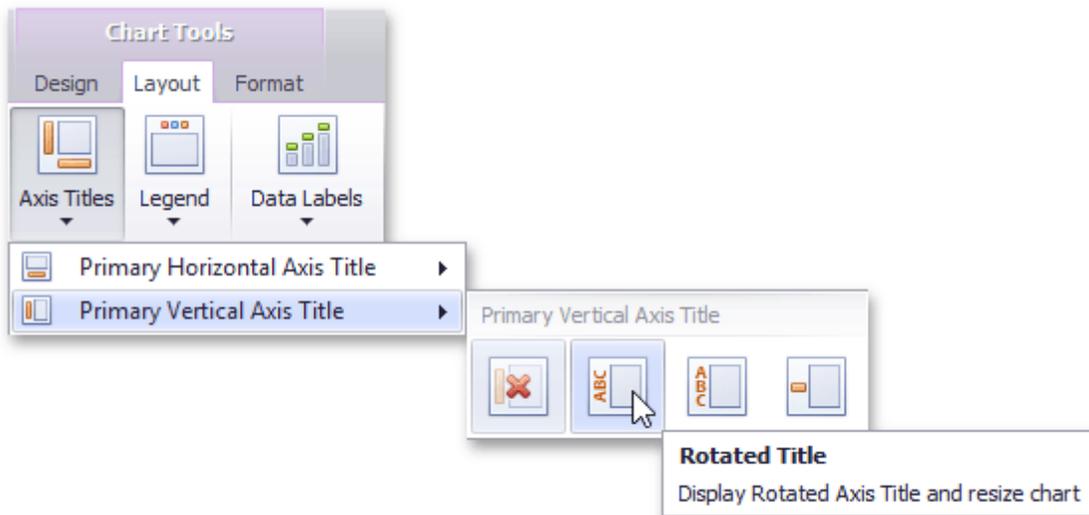
Add Axis Titles

To display horizontal and vertical axis titles, click the **Axis Titles** button in the **Labels** group within the **Layout** tab and do the following.

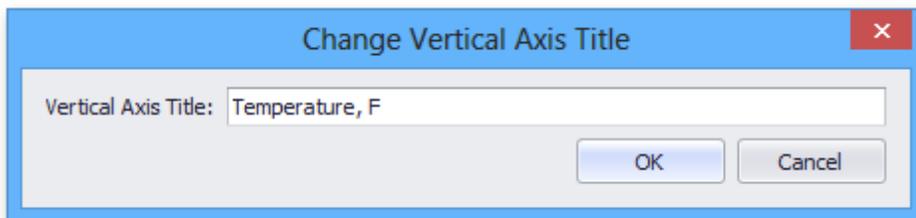
- To add a horizontal axis title, select the **Primary Horizontal Axis Title** item, and then click the **Title Below Axis** button.



- To add a vertical axis title, select the **Primary Vertical Axis Title** item, and then select the type of axis title (rotated, vertical or horizontal) you wish to display.

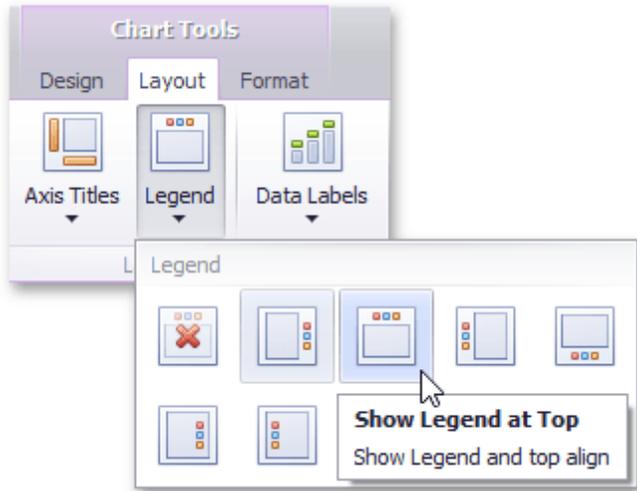


To change the default text in the axis title, right-click the chart and select the **Change Horizontal Axis Title...** or **Change Vertical Axis Title...** item in the context menu. Type a new title in the invoked dialog box.

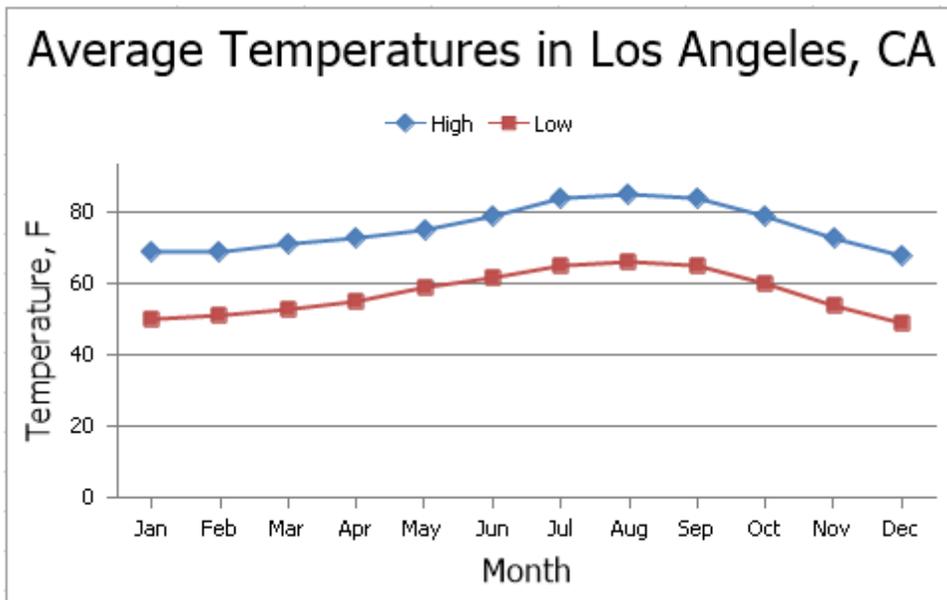


Add a Chart Legend

To add a legend to the chart, click the **Legend** button in the **Labels** group within the **Layout** tab, and then select where to position the legend.

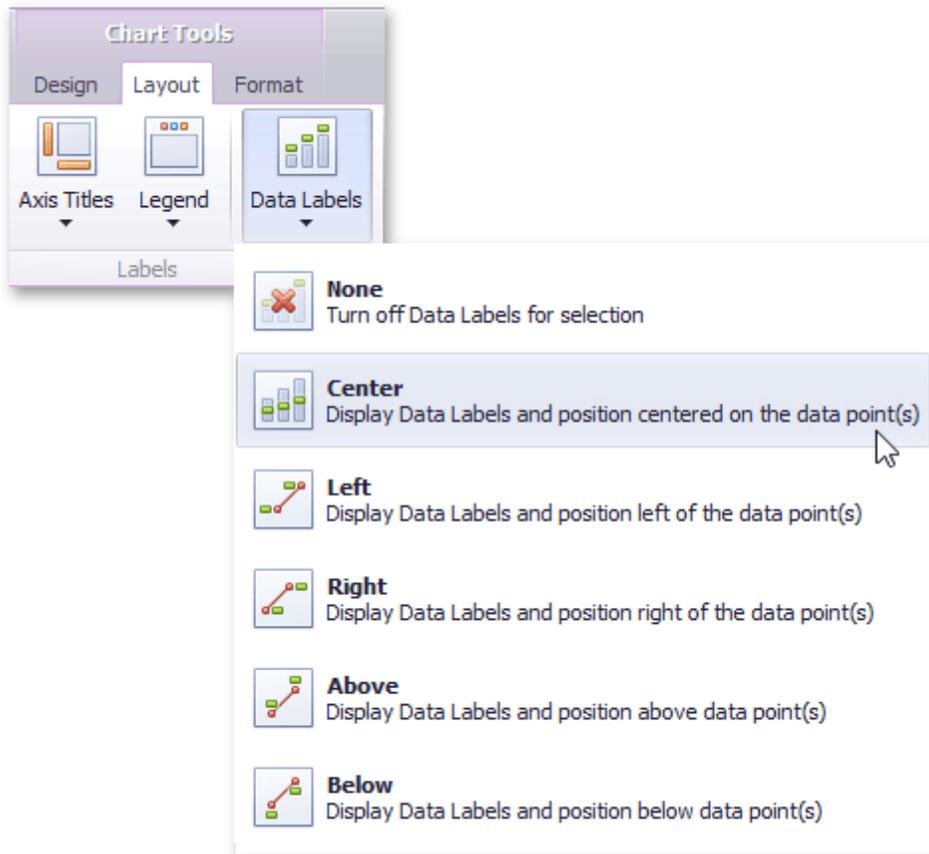


For example, click the **Show Legend at Top** button to display the legend above the plot area.



Display Data Labels

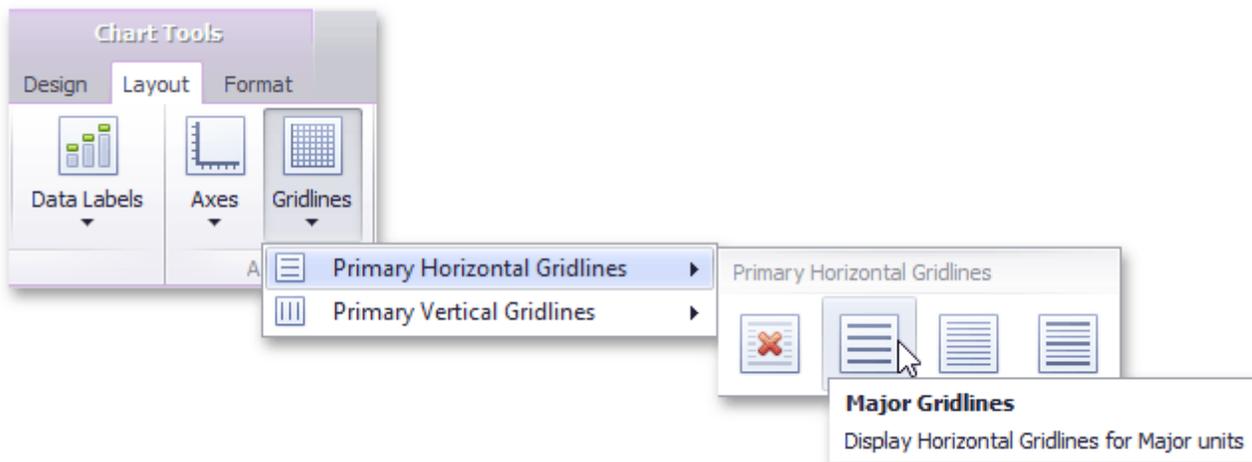
To display data values on the chart, click the **Data Labels** button in the **Labels** group within the **Layout** tab, and then select where to position the data labels.



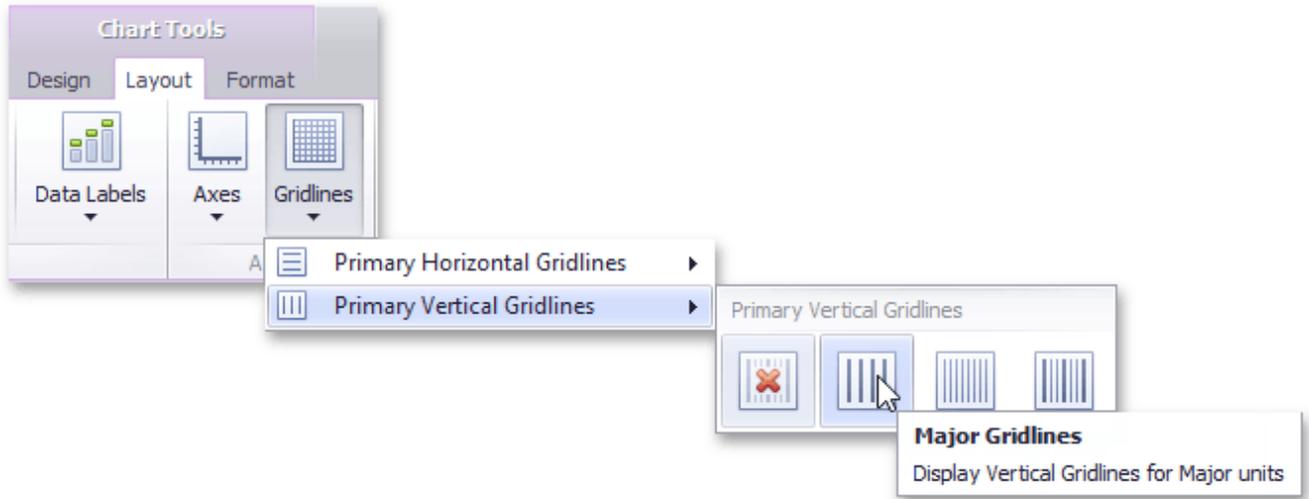
Add Gridlines

To display chart gridlines, click the **Gridlines** button in the **Axes** group within the **Layout** tab and do one of the following:

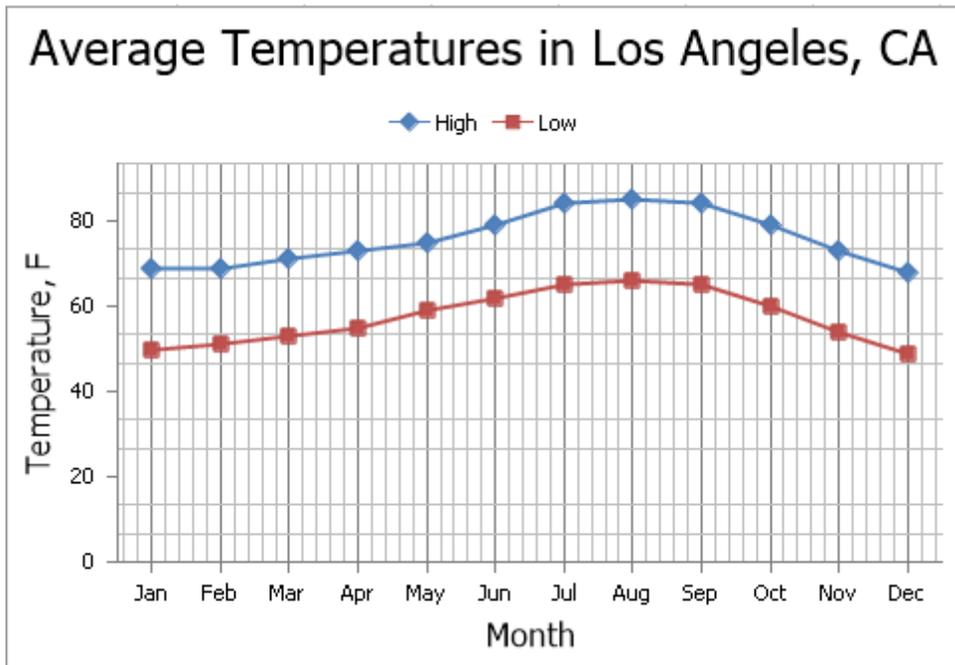
- To add horizontal gridlines, select the **Primary Horizontal Gridlines** item, and then select the type of gridlines you wish to display.



- To add vertical gridlines, select the **Primary Vertical Gridlines** item, and then select the type of gridlines you wish to display.



A chart with horizontal and vertical gridlines is shown below.



Mail Merge

Mail Merge Overview

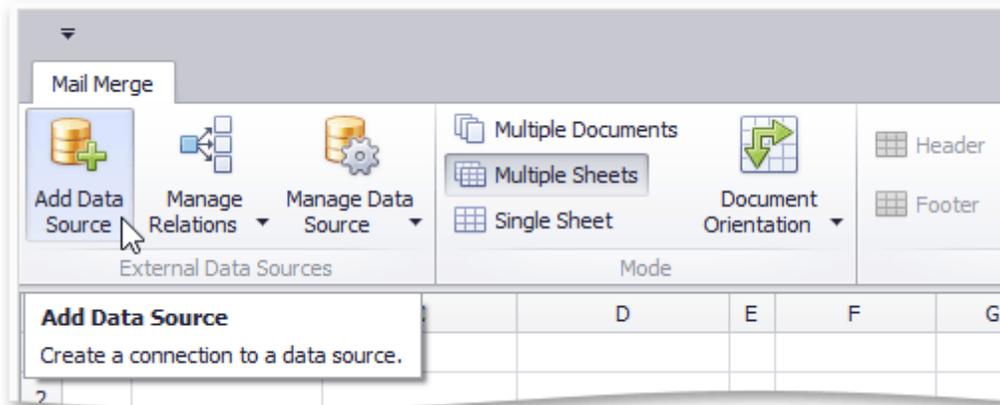
The **Spreadsheet** supports the **Mail Merge** functionality, which allows you to automatically generate a set of documents based on a common template, and include unique data values retrieved from a data source in each document. Use mail merge to generate personalized letters and a variety of professional reports.

- [Add a Data Source](#)
- [Create a Template](#)
- [Generate a Merged Document](#)

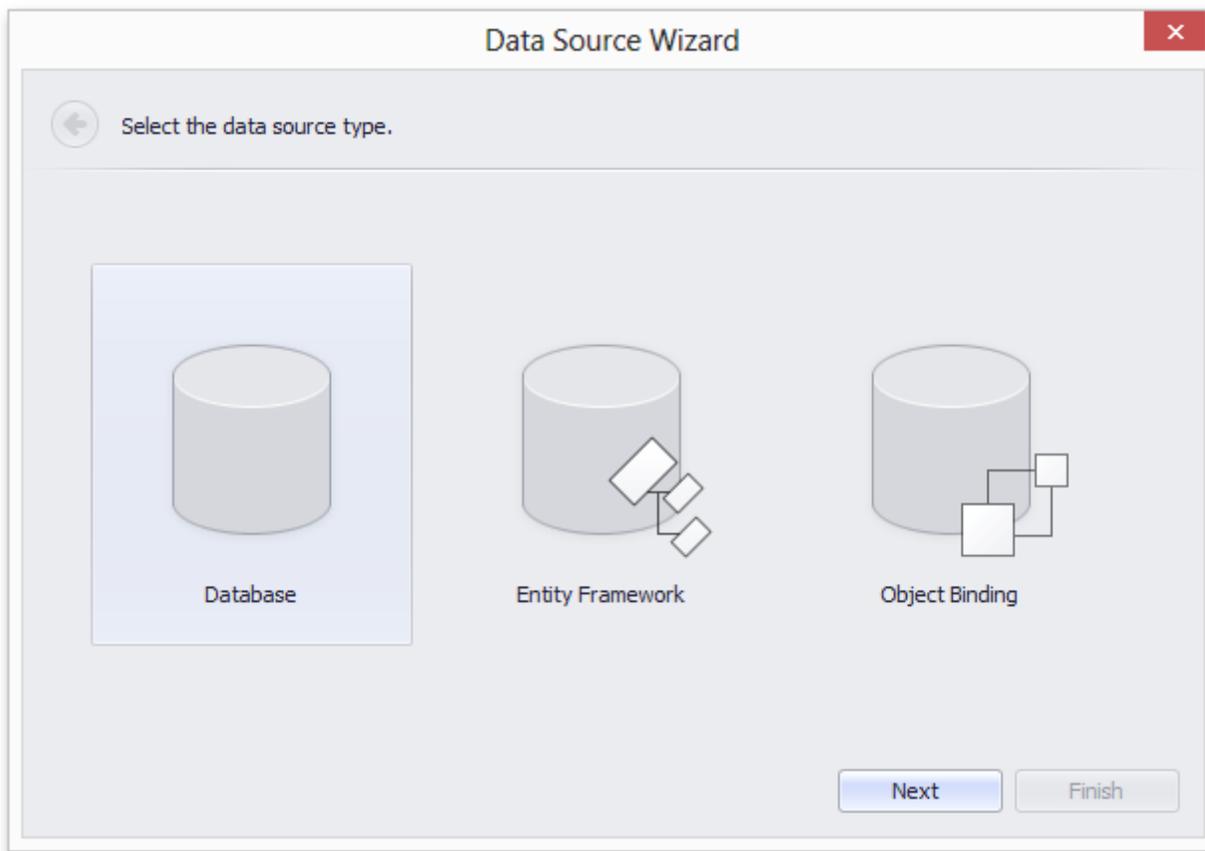
Add a Data Source

To perform a mail merge, you need a template and a data source from which the data is retrieved. You can specify a data source at runtime using the **Data Source Wizard**. Once created, the data source configuration will be stored in the XLS/XLSX spreadsheet file, so there is no need to re-configure the data source again.

To invoke the wizard, click **Add Data Source** in the **External Data Sources** group of the **Mail Merge** tab.



The wizard allows you to select the data source type. You can choose between an external database, the Entity Framework and an object data binding.



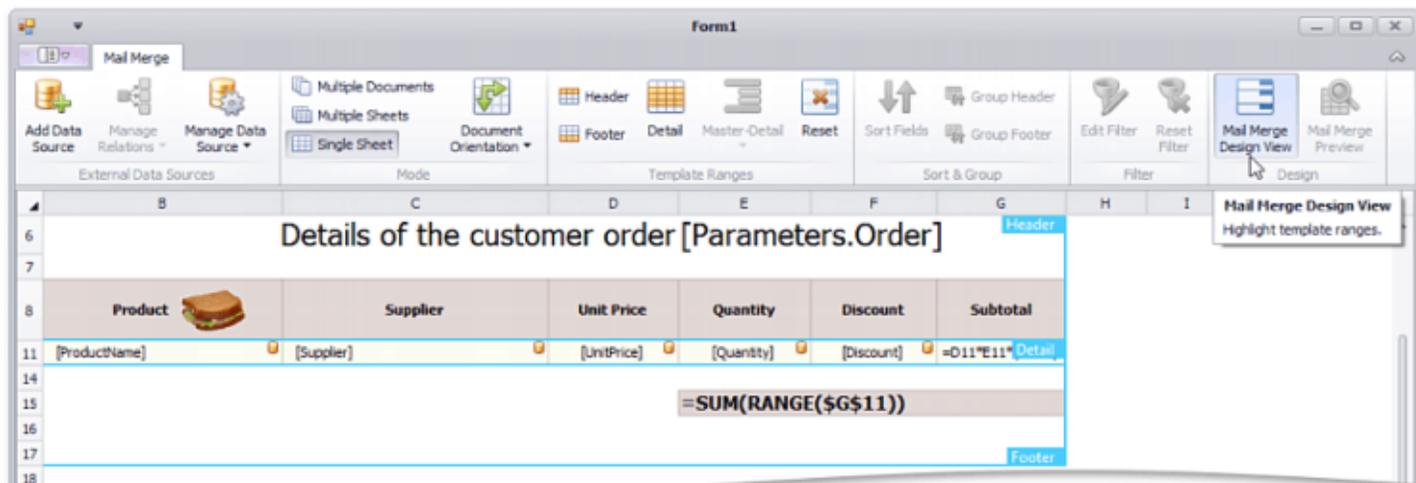
For more information on data source configuration review the following documents:

- [Data Source Wizard](#)
- [Query Designer](#)
- [Parameters Panel](#)

Create a Template

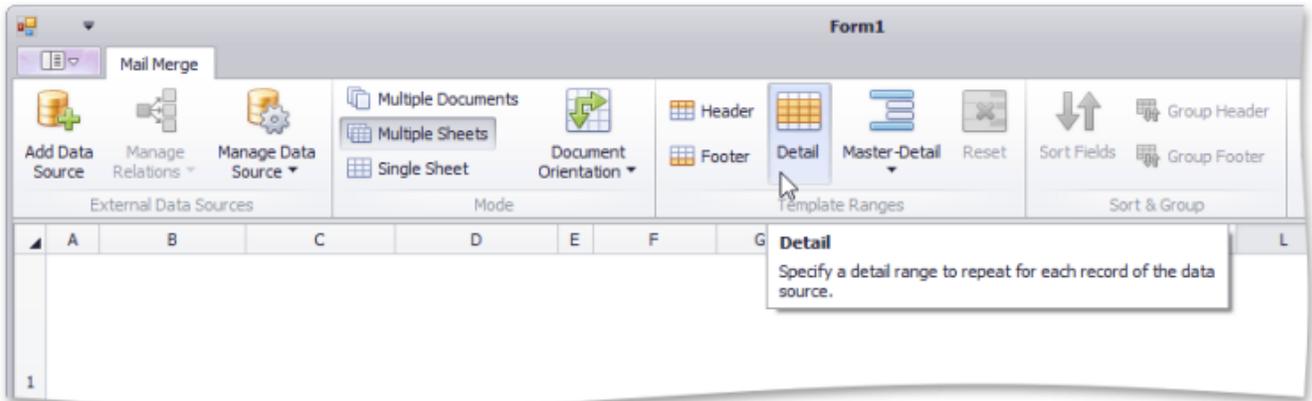
A template is a workbook with one worksheet containing **mail merge fields** that will be filled with unique data values from a bound data source.

As a rule, a template includes detail, header and footer ranges that reflect the structure of a merged document. To highlight template ranges, on the **Mail Merge** tab, in the **Design** group, click the **Mail Merge Design View** button.

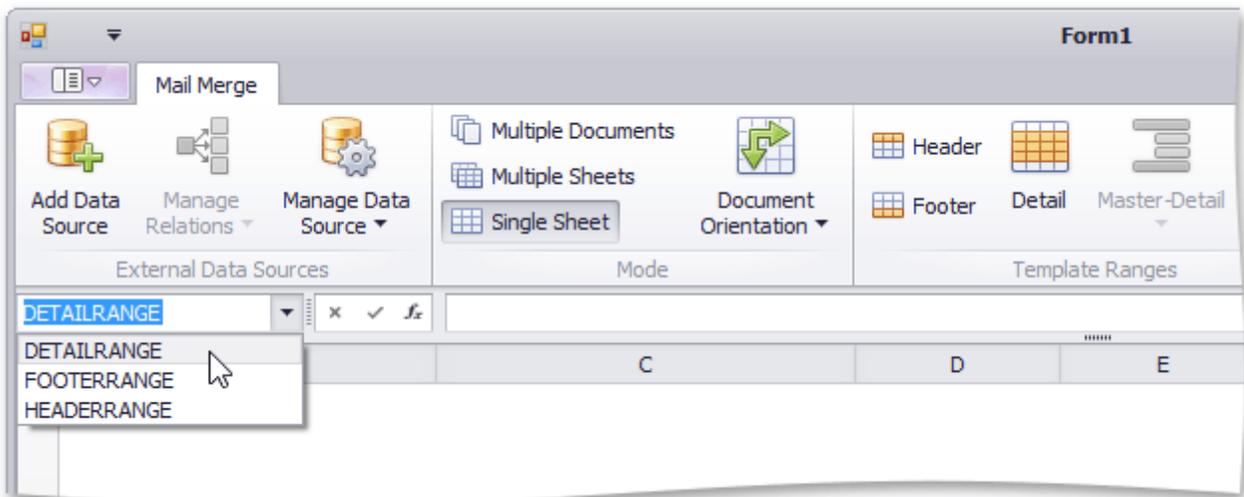


A **detail range** contains information from a data source. To create a detail range, select the range of the required size and do one of the following:

- On the **Mail Merge** tab, in the **Template Ranges** group, click the **Detail** button.



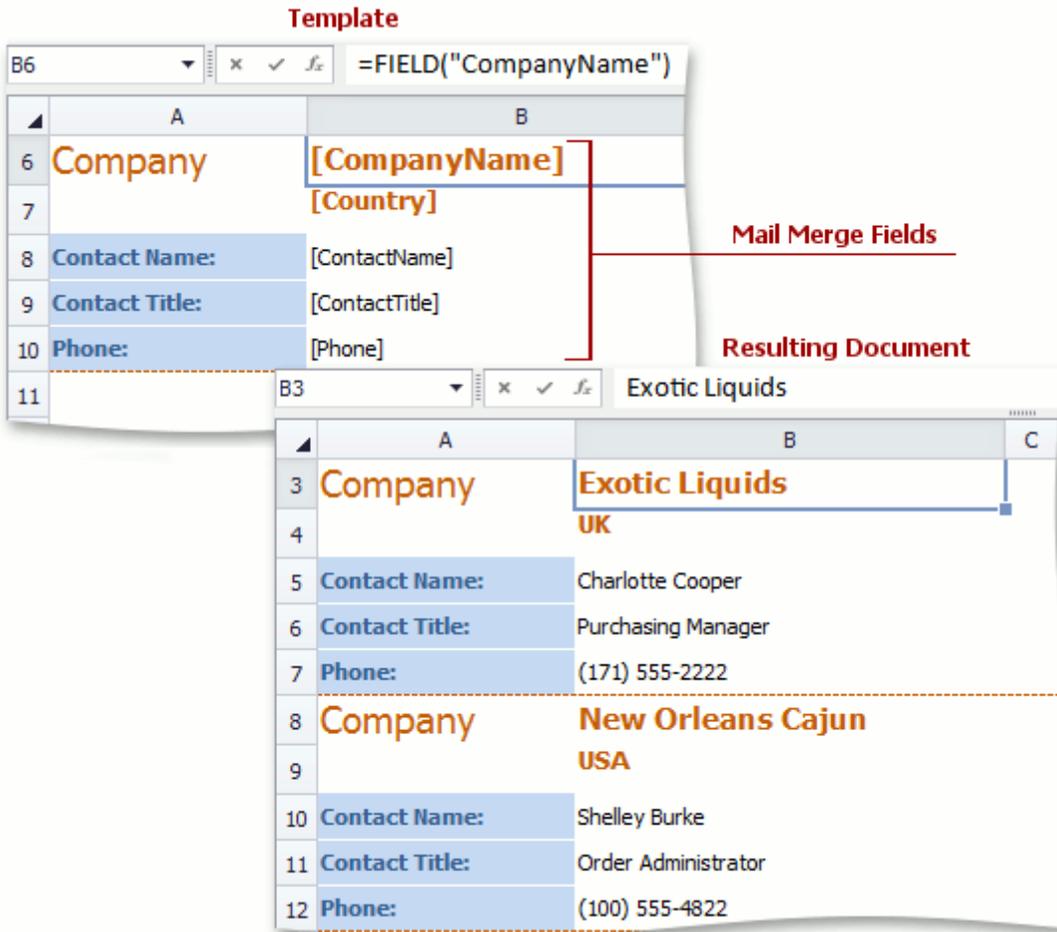
- Assign the "DETAILRANGE" defined name to the selected range.



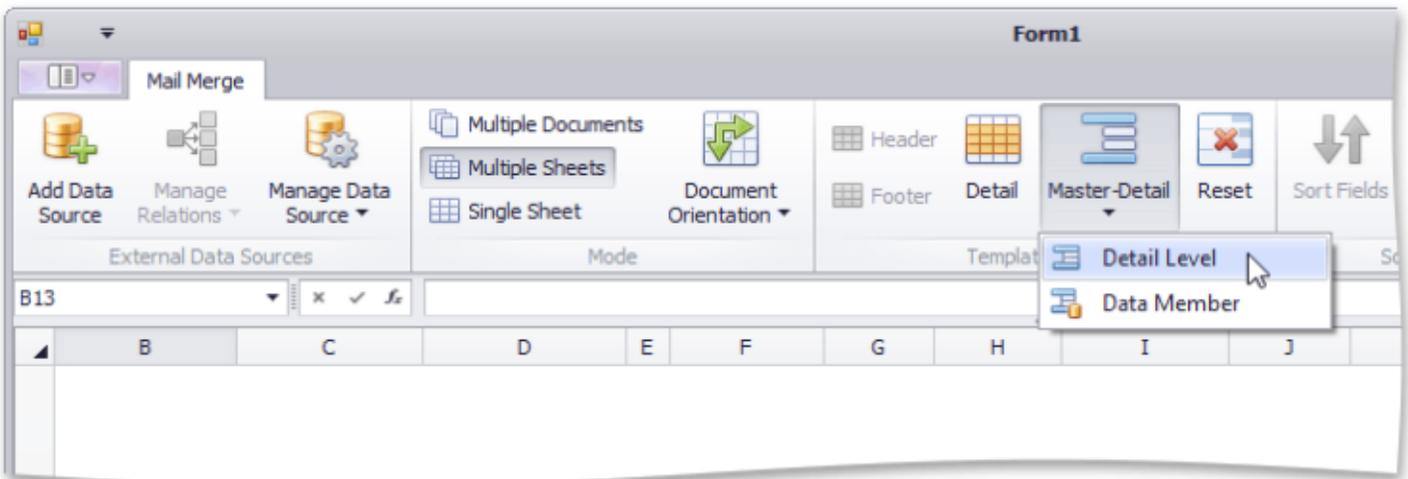
A detail range includes mail merge fields. Real data values retrieved from a data source will be displayed in a merged document instead of these fields. To create a mail merge field, use the **FIELD** function.

Function	Syntax	Description
FIELD	FIELD("data_field_name")	Retrieves a data value from the corresponding field of a data source.

A mail merge field is displayed as the name of the specified data field enclosed in square brackets. If a mail merge field is used in a cell formula as one of its elements, the entire formula is displayed in the cell.

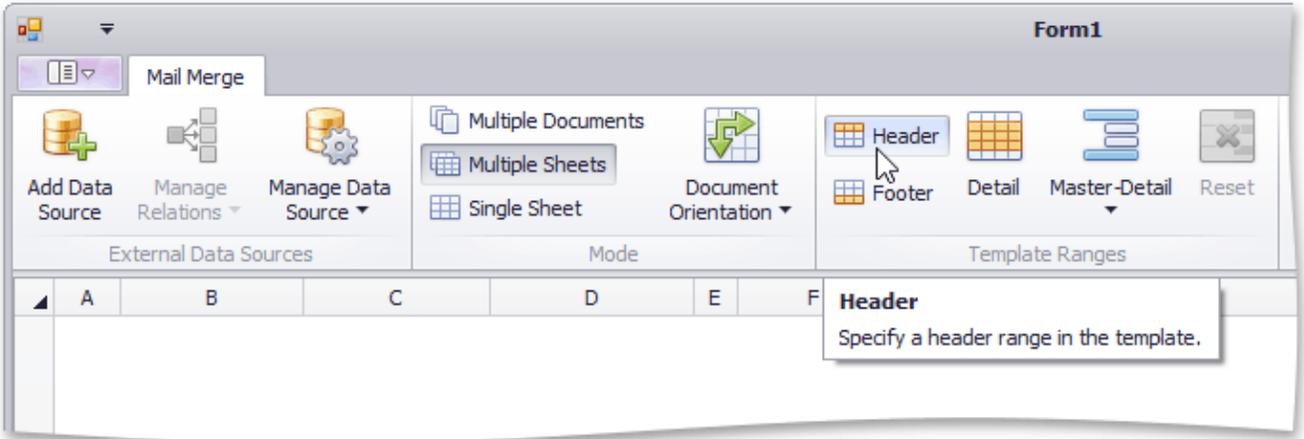


You can also create a multi-level report by adding nested levels within a detail range. To create the next data level, select a range within an existing detail range, and then click **Master-Detail | Detail Level** in the **Template Ranges** group. Click **Master-Detail | Data Member** to invoke the **Data Member** dialog and bind the specified detail level to a data member from a data source.

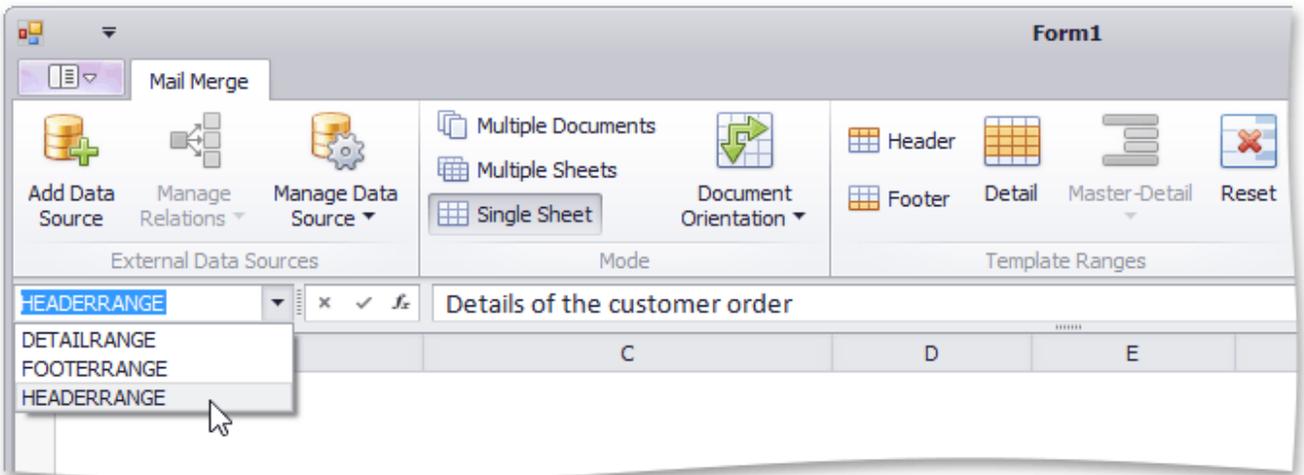


Header and **footer ranges** are displayed above and below all detail ranges in the resulting worksheet if all data records are merged into a single worksheet. In other [mail merge modes](#), the header and footer are repeated for each detail range. To create a header or footer range, select the range you wish to use as a header or footer, and do one of the following:

- On the **Mail Merge** tab, in the **Template Ranges** group, click the **Header** or **Footer** button.



- Assign the "HEADERRANGE" or "FOOTERRANGE" defined name to the selected range.

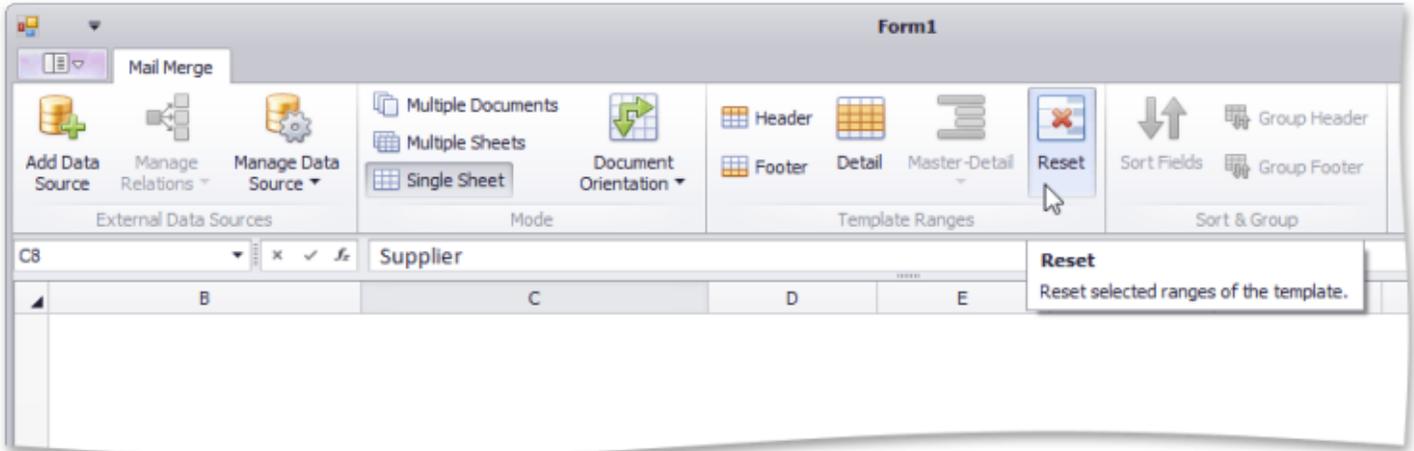


Note that you can create a header or footer range only if the template already contains a detail range. If you do not set a detail range, the entire template will be copied for each record of the data source.

At the template creation stage, you can access the range into which the specified cell in a template will be expanded after a mail merge is performed. To do this, use the **RANGE** function.

Function	Syntax	Description
RANGE	RANGE(abs_cell_reference) The abs_cell_reference argument is an absolute reference to a template cell that will be copied for each data source record in a resulting worksheet.	Obtains the specified range of a merged document.

If you no longer wish to use the specified range as a detail range, header or footer, you can reset it by clicking the **Reset** button.

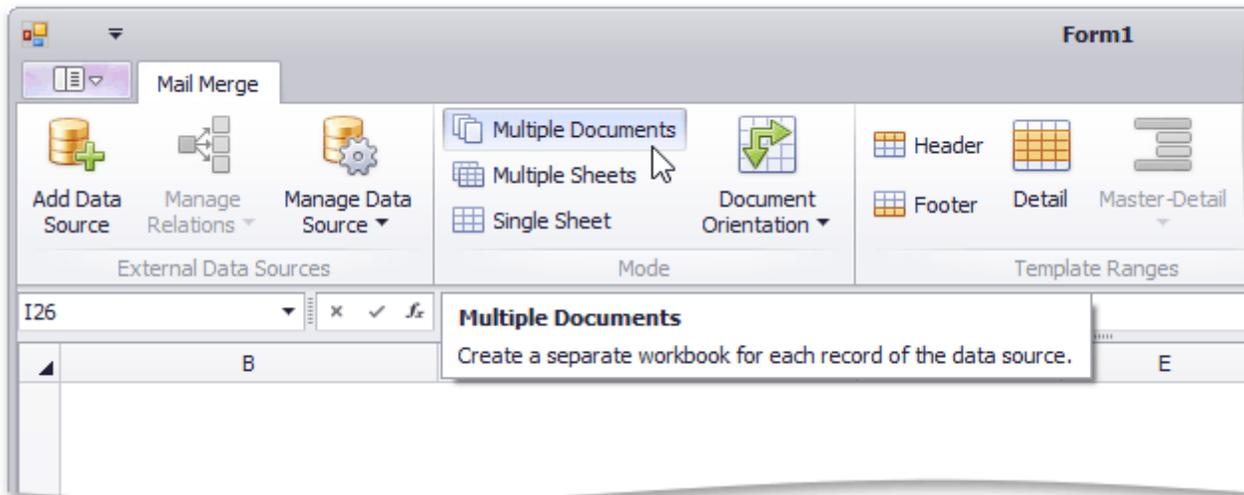


Generate a Merged Document

A mail merge supports three modes for generating a resulting document, as listed in the table below :

Mode	Description
<i>Multiple Documents</i>	Inserts the merged range for each record of the data source into a separate workbook.
<i>Multiple Sheets</i>	Inserts the merged range for each record of the data source into a separate worksheet of a single document.
<i>Single Sheet</i>	Inserts all merged ranges into a single worksheet, retaining the structure of the template document.
<i>Document Orientation</i>	Specifies the direction in which the detail range will be repeated.

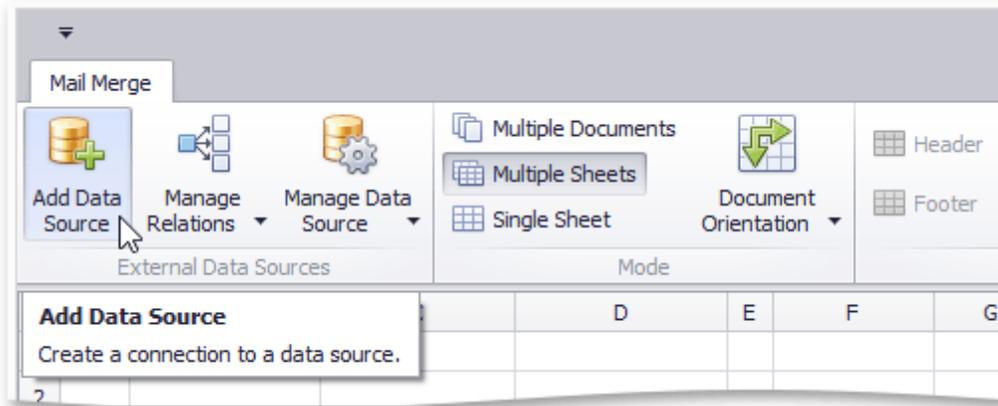
To select the desired mode, on the **Mail Merge** tab, in the **Mode** group, click **Multiple Documents**, **Multiple Sheets** or **Single Sheet**. **Document Orientation** option can be useful for the **Single Sheet** mode only.



Data Source Wizard

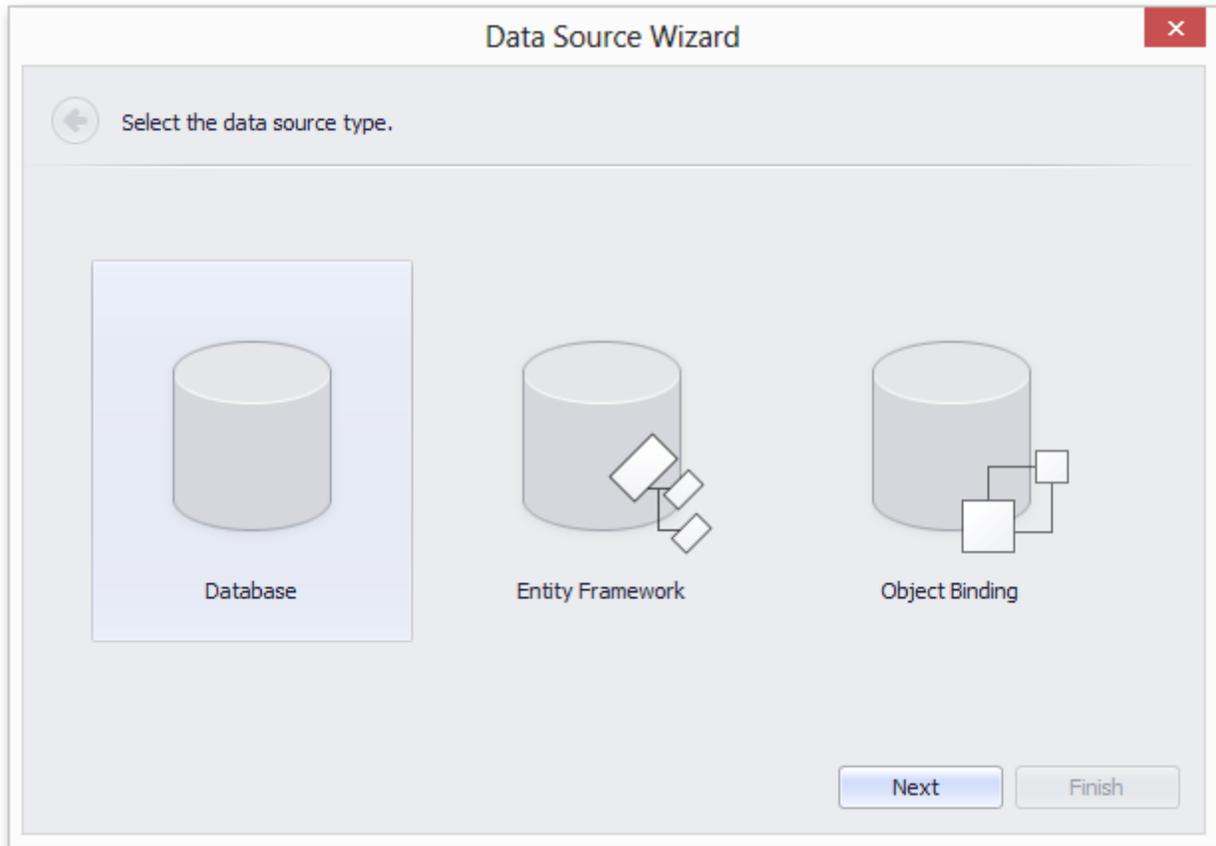
The **Data Source Wizard** allows the user to create a new data source, configure it, and if there is more than one data source available, to select the one that is required for a particular task. Once created, the data source configuration will be stored in the XLS/XLSX spreadsheet file, so the user does not have to re-configure the data source again.

To invoke the wizard, click **Add Data Source** in the **External Data Sources** group of the **Mail Merge** tab.

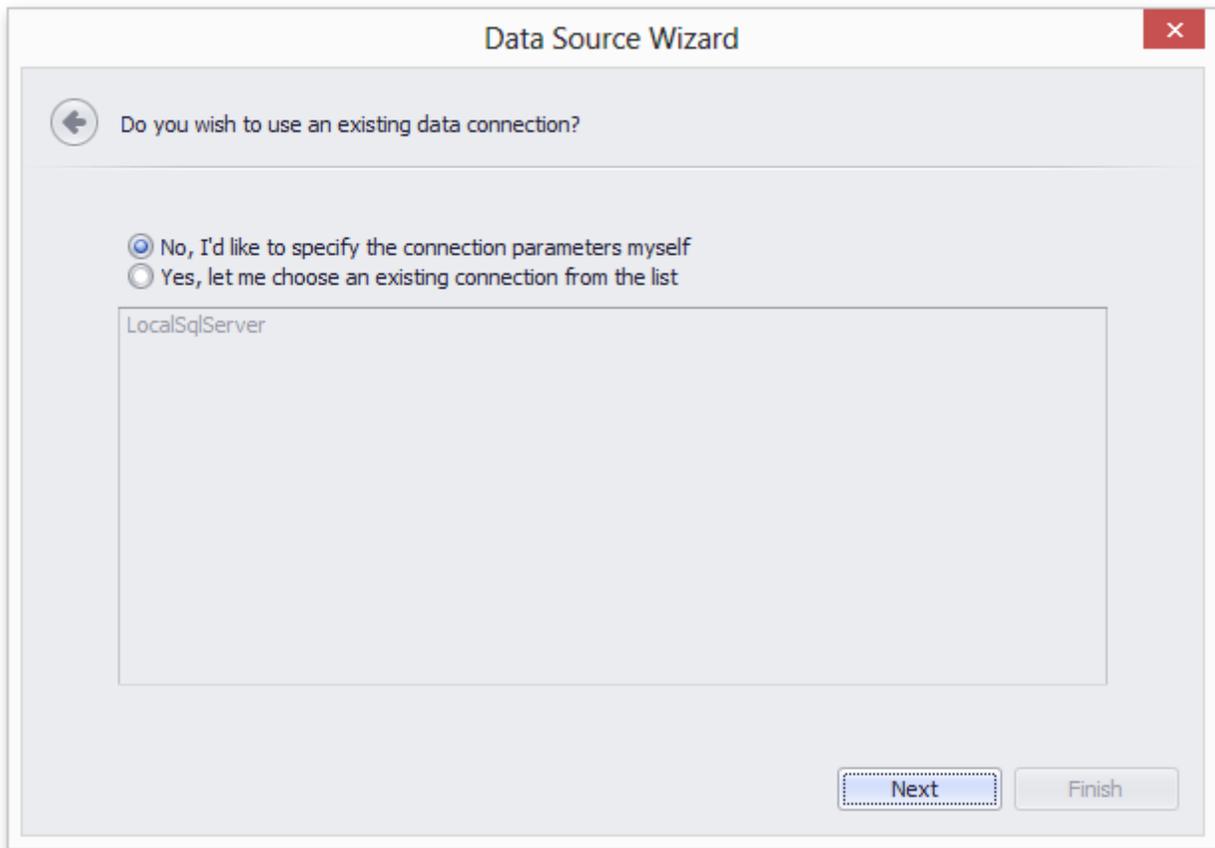


Next, proceed with the following steps in the wizard.

1. On the first page, select the data source type and click **Next**. The following steps assume that a **Database** is selected.

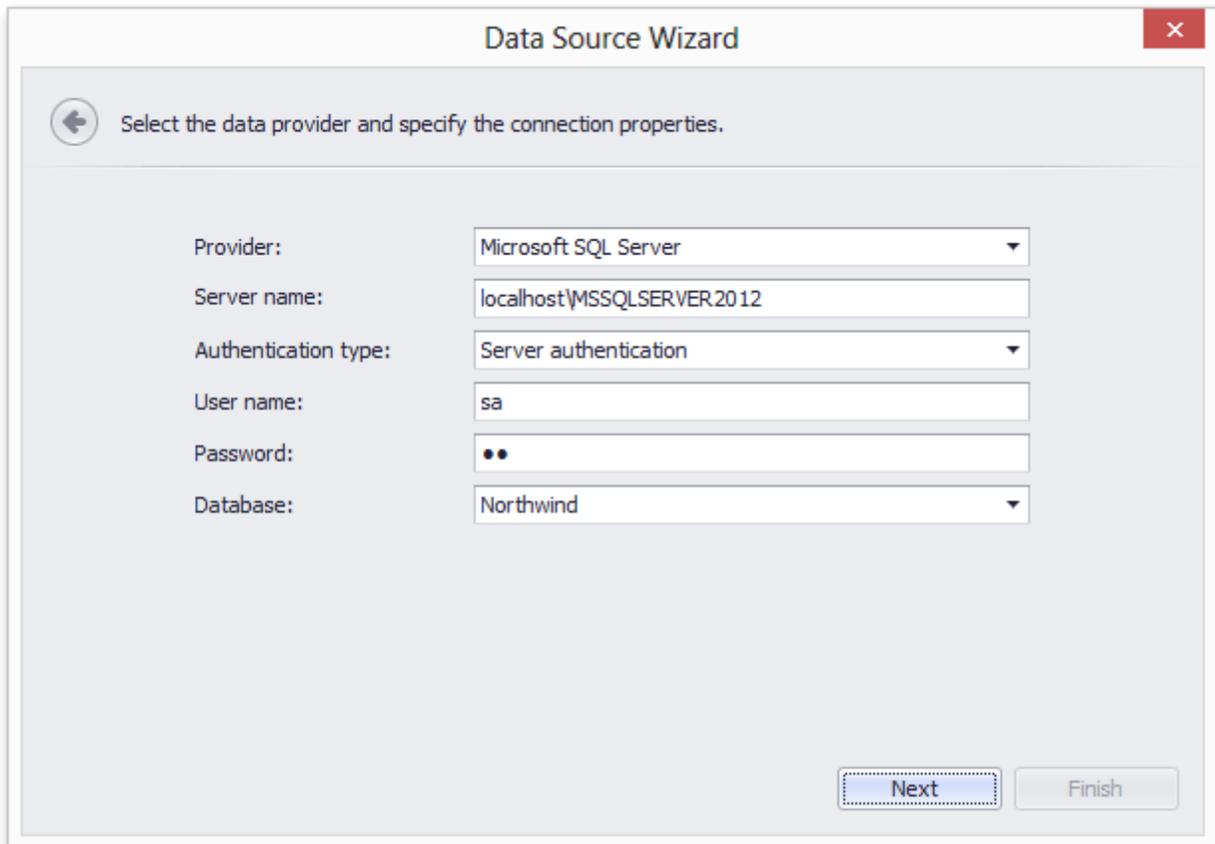


2. If a data connection has already been specified in the application, the next wizard page allows you to select whether to use one of the existing connections, or create a new one.



The screenshot shows the 'Data Source Wizard' dialog box. The title bar reads 'Data Source Wizard' with a close button (X) on the right. The main content area has a back arrow icon and the question 'Do you wish to use an existing data connection?'. Below this, there are two radio button options: 'No, I'd like to specify the connection parameters myself' (which is selected) and 'Yes, let me choose an existing connection from the list'. Under the second option, there is a list box containing the text 'LocalSqlServer'. At the bottom right, there are two buttons: 'Next' (highlighted with a dashed border) and 'Finish'.

3. When creating a new connection, you can specify the connection parameters on the next page.



The screenshot shows the 'Data Source Wizard' dialog box at a later step. The title bar reads 'Data Source Wizard' with a close button (X) on the right. The main content area has a back arrow icon and the instruction 'Select the data provider and specify the connection properties.'. Below this, there are several input fields:

- Provider: Microsoft SQL Server (dropdown menu)
- Server name: localhost\MSSQLSERVER.2012 (text box)
- Authentication type: Server authentication (dropdown menu)
- User name: sa (text box)
- Password: •• (password field)
- Database: Northwind (dropdown menu)

At the bottom right, there are two buttons: 'Next' (highlighted with a dashed border) and 'Finish'.

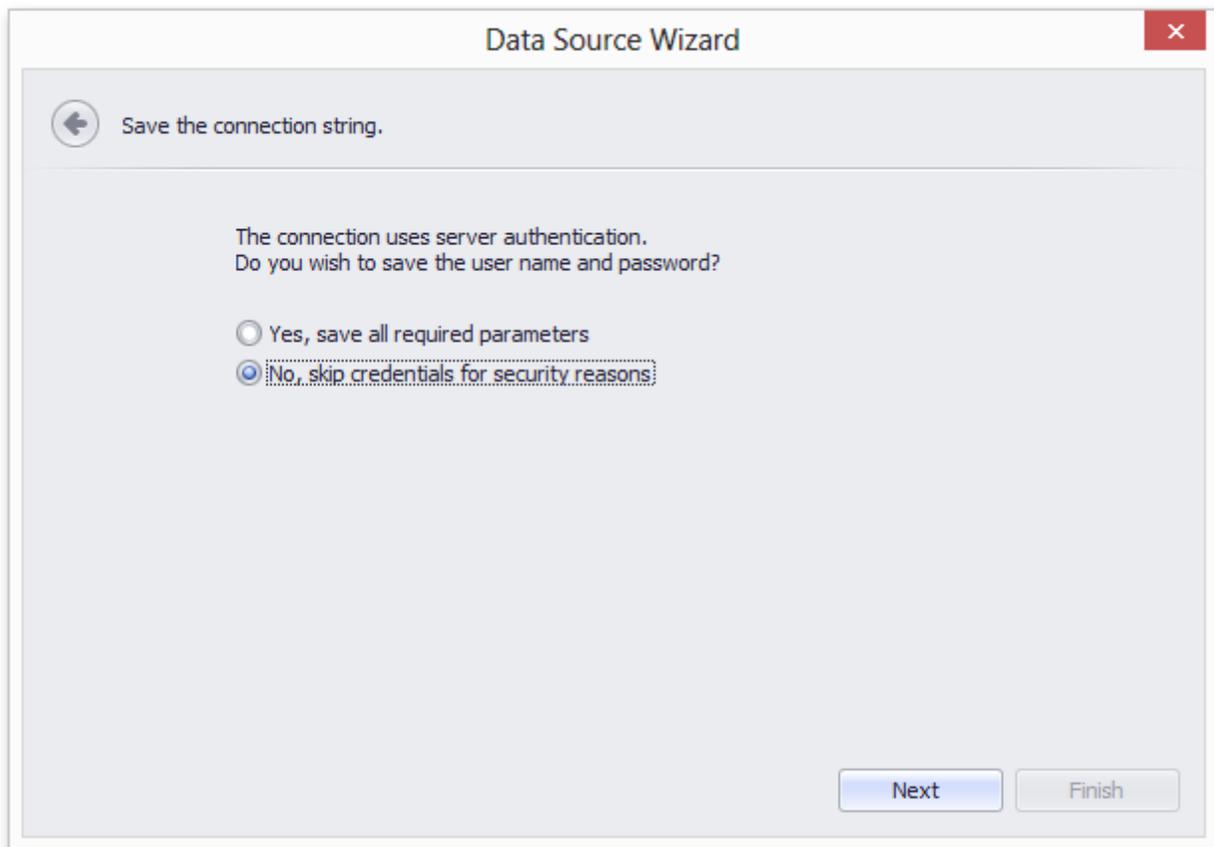
On this page, you can define a custom connection string, or select from the following supported data source types.

- Microsoft SQL Server
- Microsoft Access 97
- Microsoft Access 2007
- Oracle
- XML File
- SAP Sybase Advantage
- SAP Sybase ASE
- IBM DB2
- Firebird
- MySQL
- Pervasive PSQL
- PostgreSQL
- VistaDB
- Microsoft SQL Server CE
- SQLite

Depending on the selected data provider, it may be necessary to specify additional connection options (such as authentication type and database name) on this page.

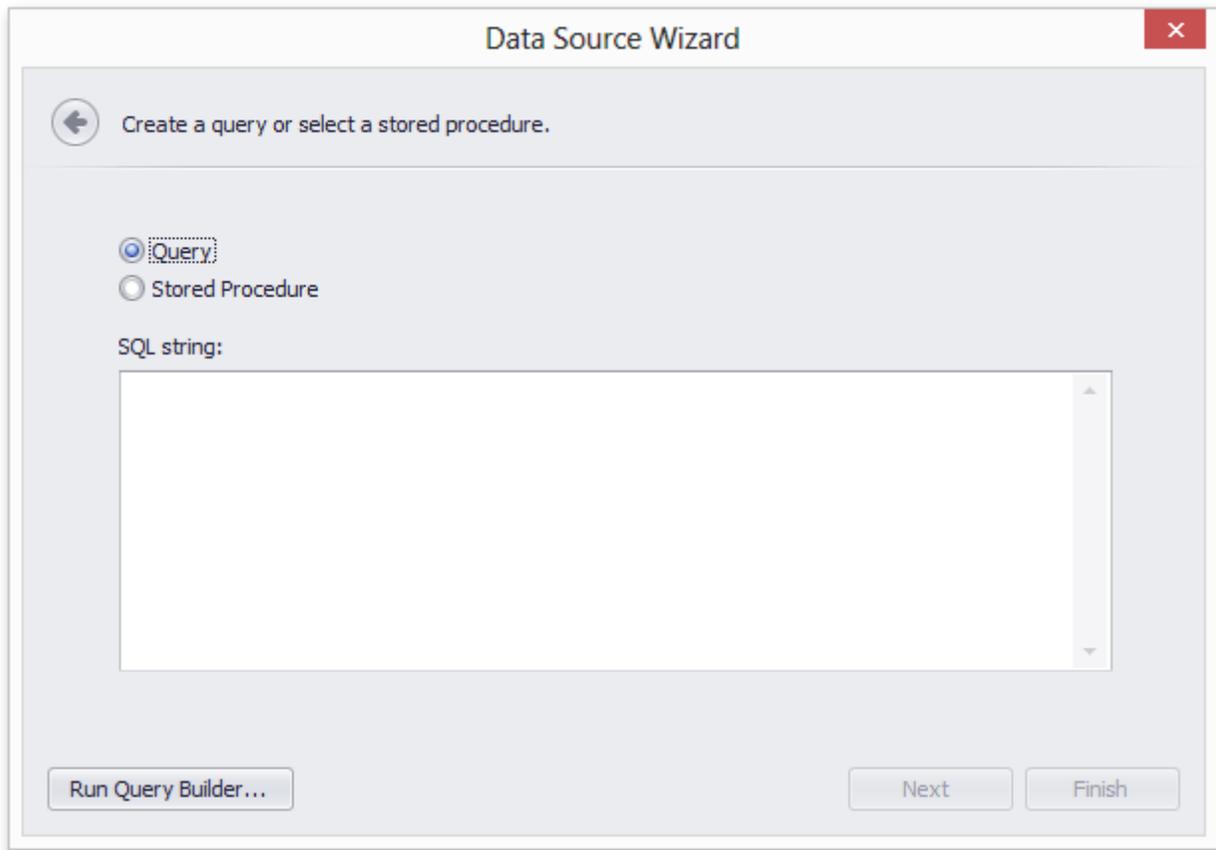
To proceed to the next wizard page, click **Next**.

4. On this page, you are prompted whether to save the user name and password in a connection string.



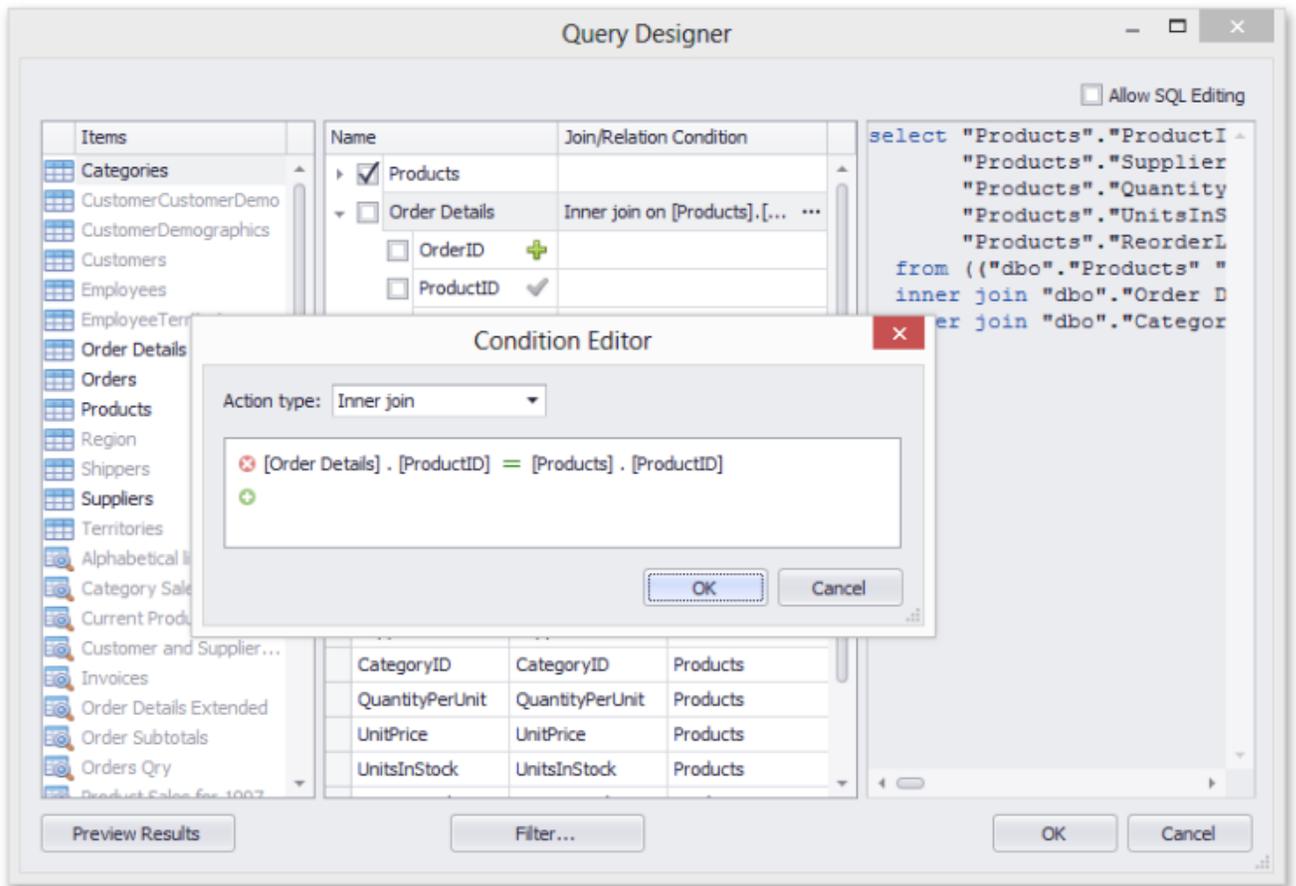
Click **Next** to proceed to the next page.

5. This page allows you to select a query or a stored procedure.



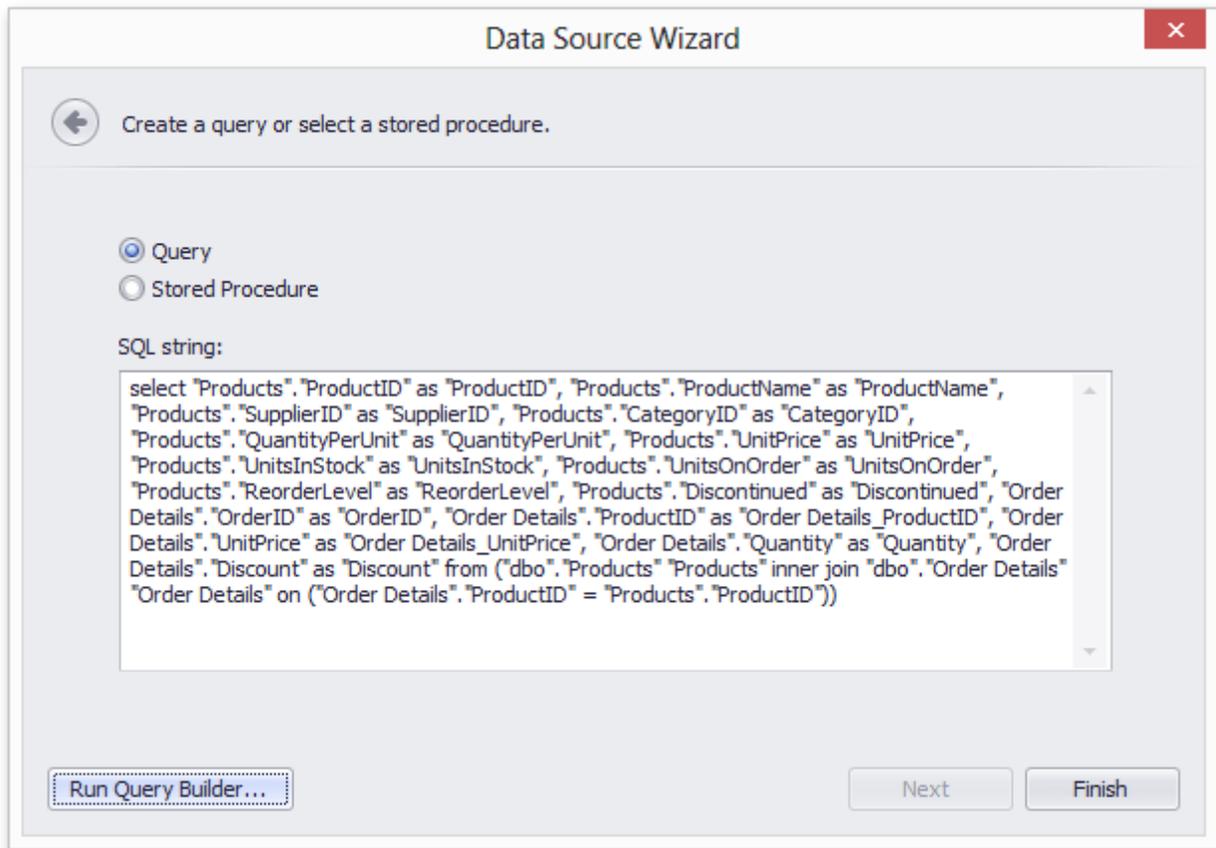
Click **Run Query Builder...** to invoke a **Query Designer** dialog.

6. The **Query Designer** window allows you to select tables and columns to include in the result. The joins are created automatically, however you can modify them using the **Condition Editor**.



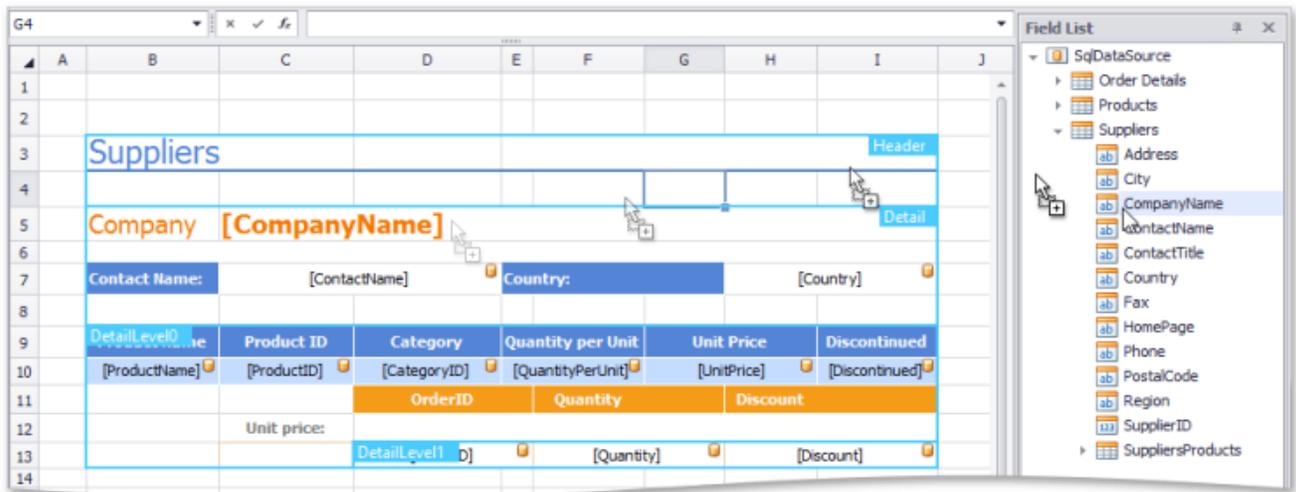
Click **OK** to close the **Query Designer** dialog and return to the **Data Source Wizard**.

7. The data source is created and configured.



Now you can click **Finish** to quit the **Data Source Wizard**.

If the Spreadsheet is accompanied with the **Field List Panel**, the fields from the bound data source are immediately displayed within that panel. It allows you to drag and drop the required data field onto a worksheet used as a mail merge template.



To modify the query used in the data source, click **Manage Relations -> Manage Queries** in the **External Data Sources** group to invoke the [Query Designer](#).

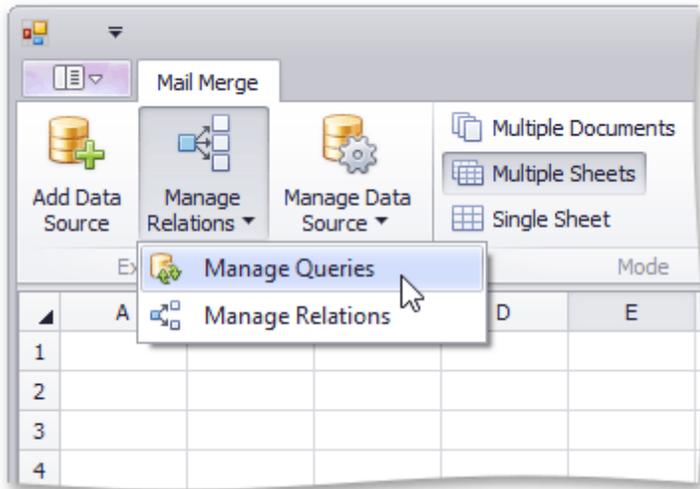
Tip

The data source configuration is stored in .xls or .xlsx file. You can save the workbook after creating the data source. Subsequently, you can start a mail merge immediately after the XLSX/XLS file is loaded into the Spreadsheet control.

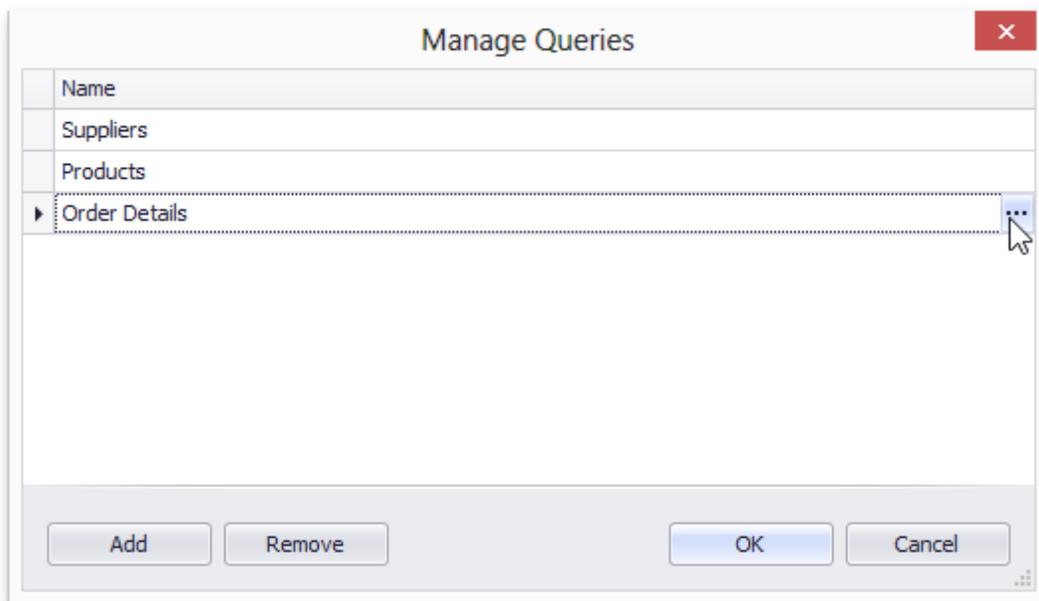
Query Designer

When the data source is configured, you can use the built-in Query Designer to select required data.

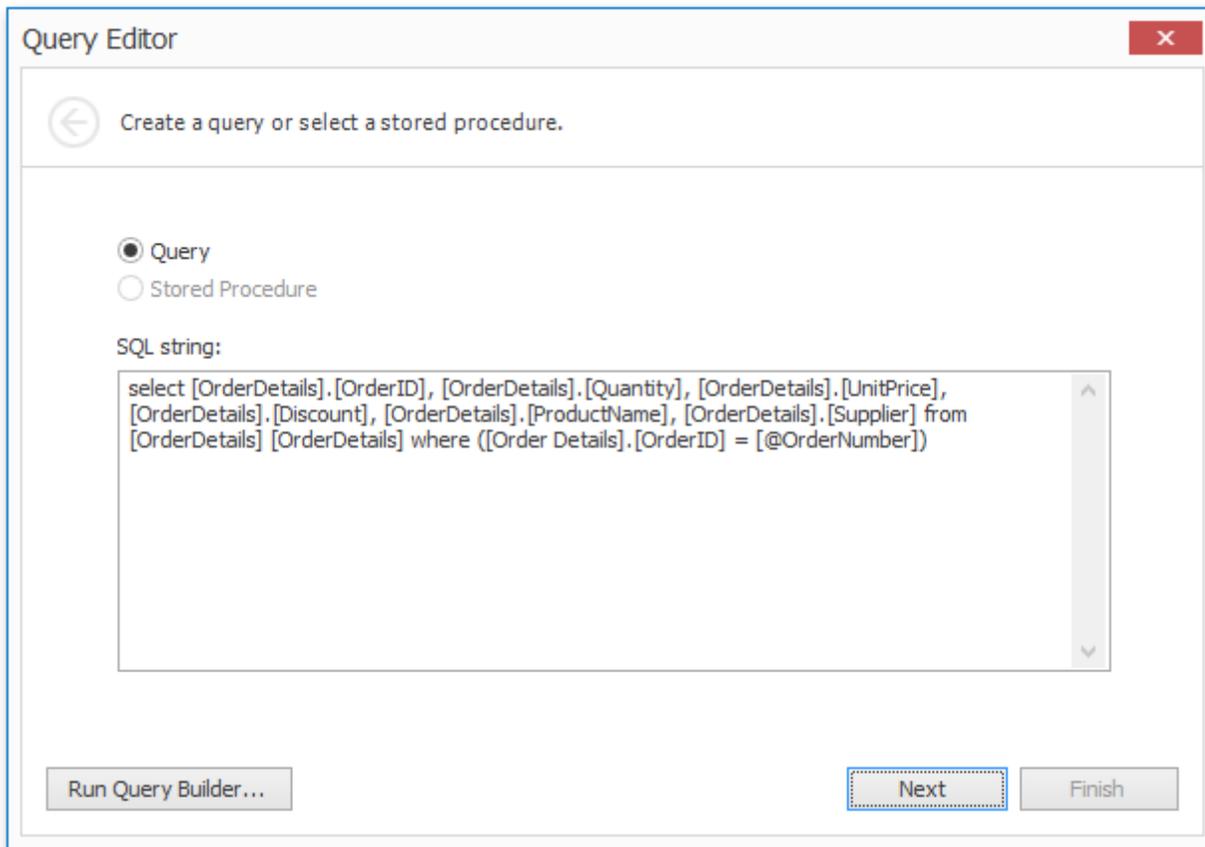
To invoke the Query Designer window, select **Manage Queries** from the **Manage Relations** drop-down.



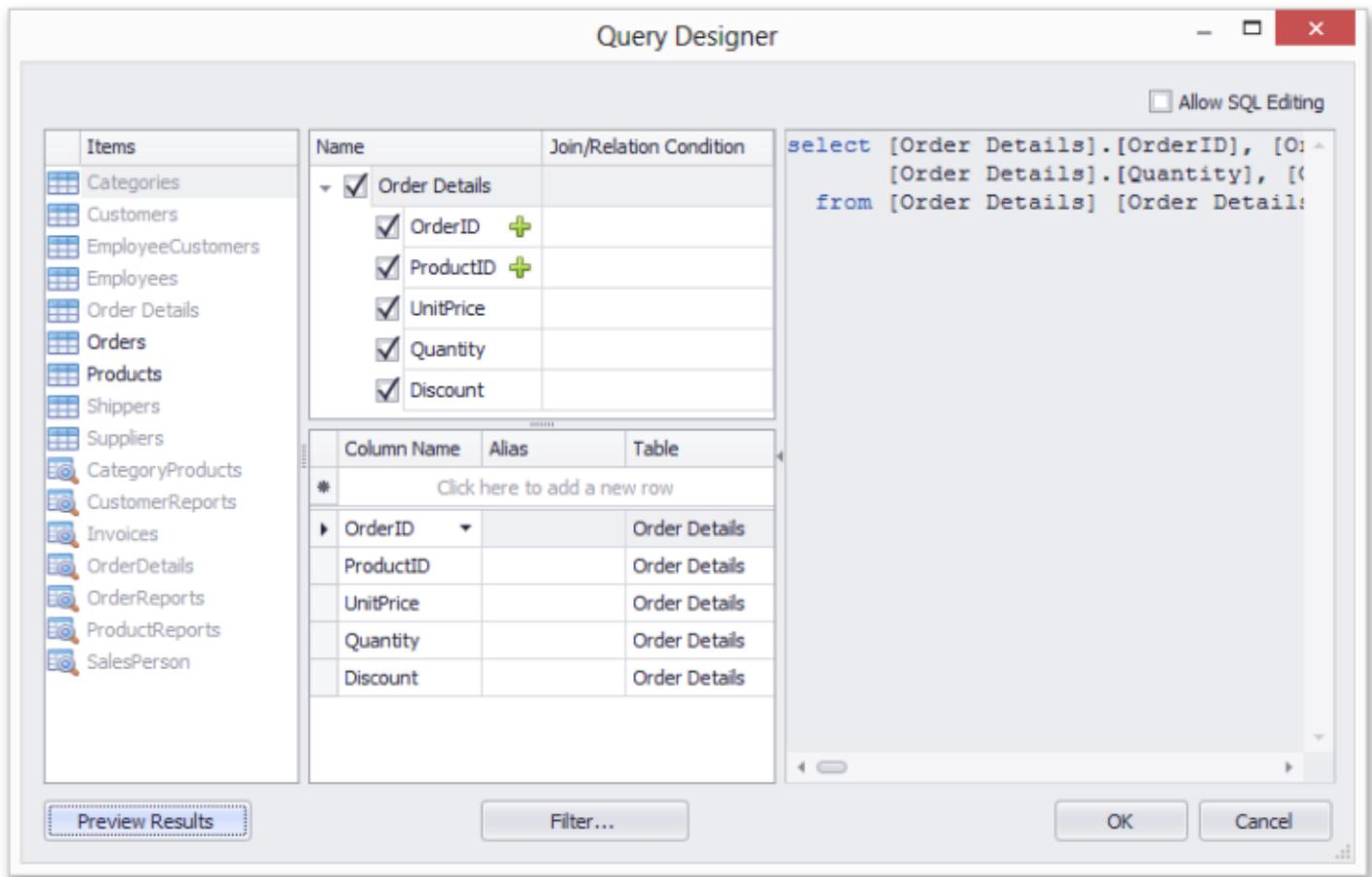
In the **Manage Queries** dialog, click the ellipsis button in the query list to edit the selected query.



The **Query Editor** window appears. You can modify the SQL string directly...



...or click **Run Query Builder...** to invoke the **Query Designer** window.



Double-click a table or view in the *Items* column on the left to add it to the query. Check the box near the field to include that field in the query. A *green plus* symbol near the field indicates that you can join the tables using that field.

Click the **Allow SQL Editing** check box to edit SQL statements directly. However, note that unchecking this box will cancel all your changes.

Click **Preview Results** to invoke a dialog displaying the first 1000 records of the resulting table.

Data Preview (First 1000 Rows Displayed)

Order ID	Product ID	Unit Price	Quantity	Discount
10248	11	14	12	0
10248	42	9.8	10	0
10248	72	34.8	5	0
10249	14	18.6	9	0
10249	51	42.4	40	0
10250	41	7.7	10	0
10250	51	42.4	35	0.15
10250	65	16.8	15	0.15
10251	22	16.8	6	0.05
10251	57	15.6	15	0.05

Close

Click **Filter...** to invoke a Filter Editor to specify criteria or create a parametrized query.

The **Filter Editor** window allows you to specify a criteria operator:

Filter Editor

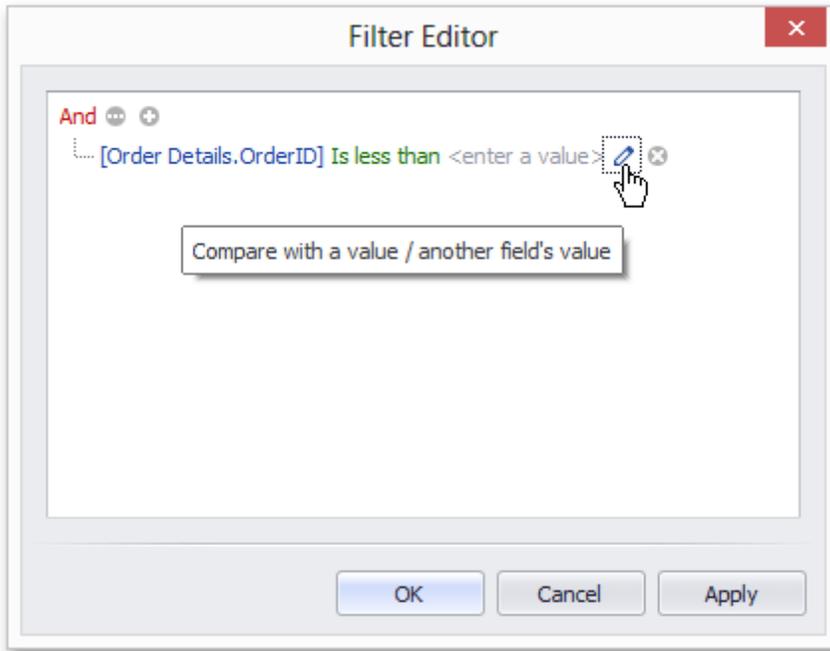
And

[Order Details.OrderID] = Equals <enter a value>

- = Equals
- ≠ Does not equal
- > Is greater than
- ≥ Is greater than or equal to
- < Is less than
- ≤ Is less than or equal to
- Is between
- Is not between
- Is null
- Is not null
- Is any of
- Is none of

OK Cancel Apply

Click the symbol in the Filter Editor to switch between a value, another field and a parameter.



For more information on parameters, review the [Parameters Panel](#) document.

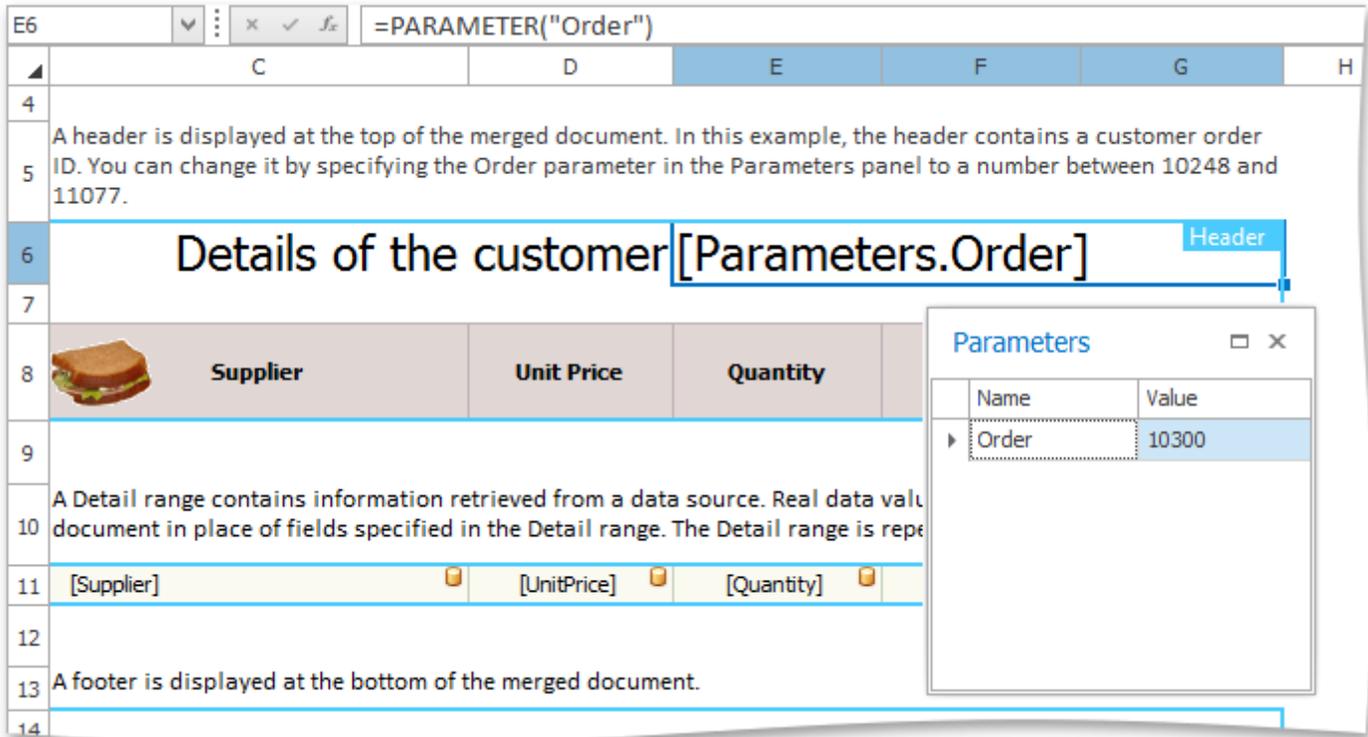
When all the necessary changes are made, click **OK** to close the window and save the query in the document.

Tip

All queries are stored in an .xls or .xlsx file. You can save the workbook after creating the data source. Subsequently, you can start performing a mail merge immediately after the XLSX/XLS file is loaded into the Spreadsheet control.

Parameters Panel

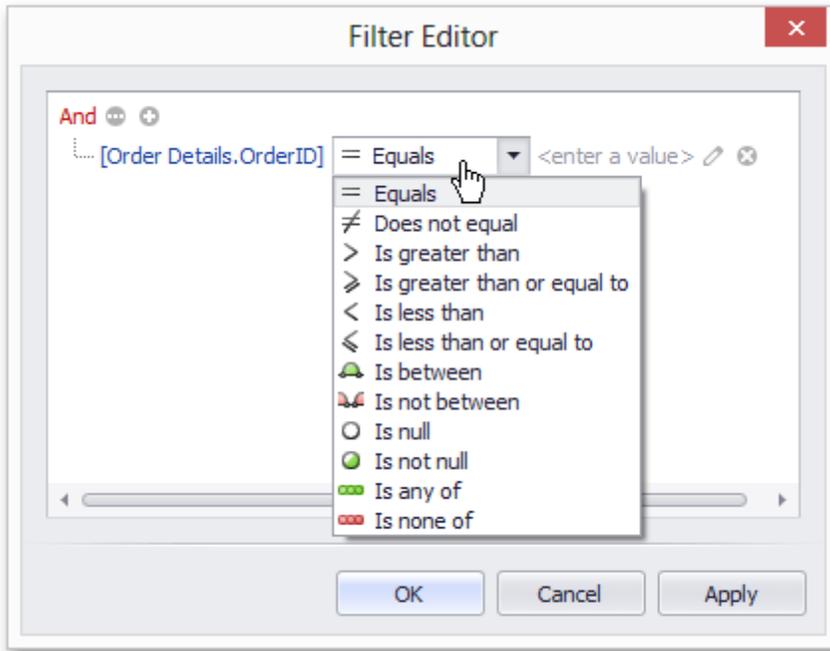
The Spreadsheet can be accompanied with the Parameters panel. It displays parameters used in the query to retrieve data and allows you to modify them. The following picture illustrates how to specify the order ID for data used in the mail merge template.



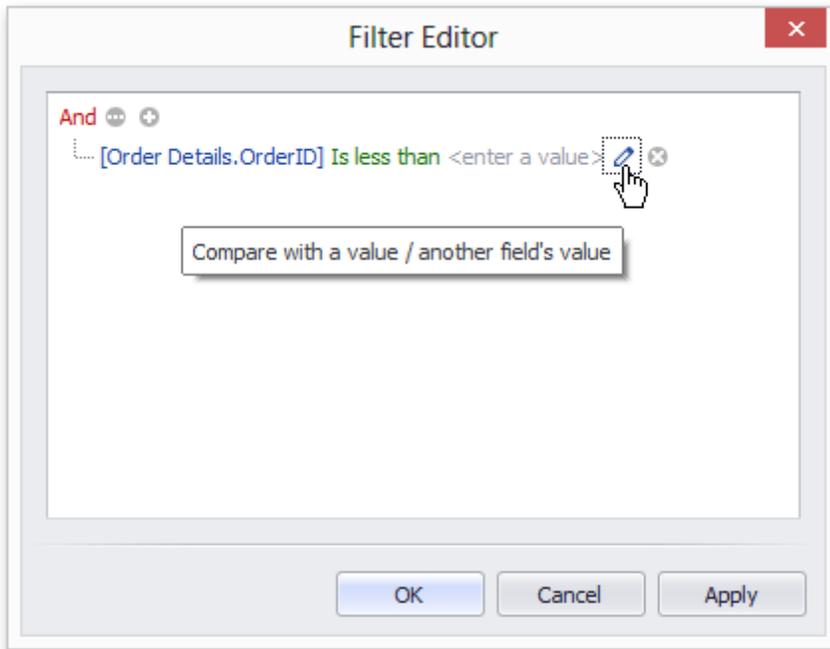
The resulting report for order ID 10300 is shown below.

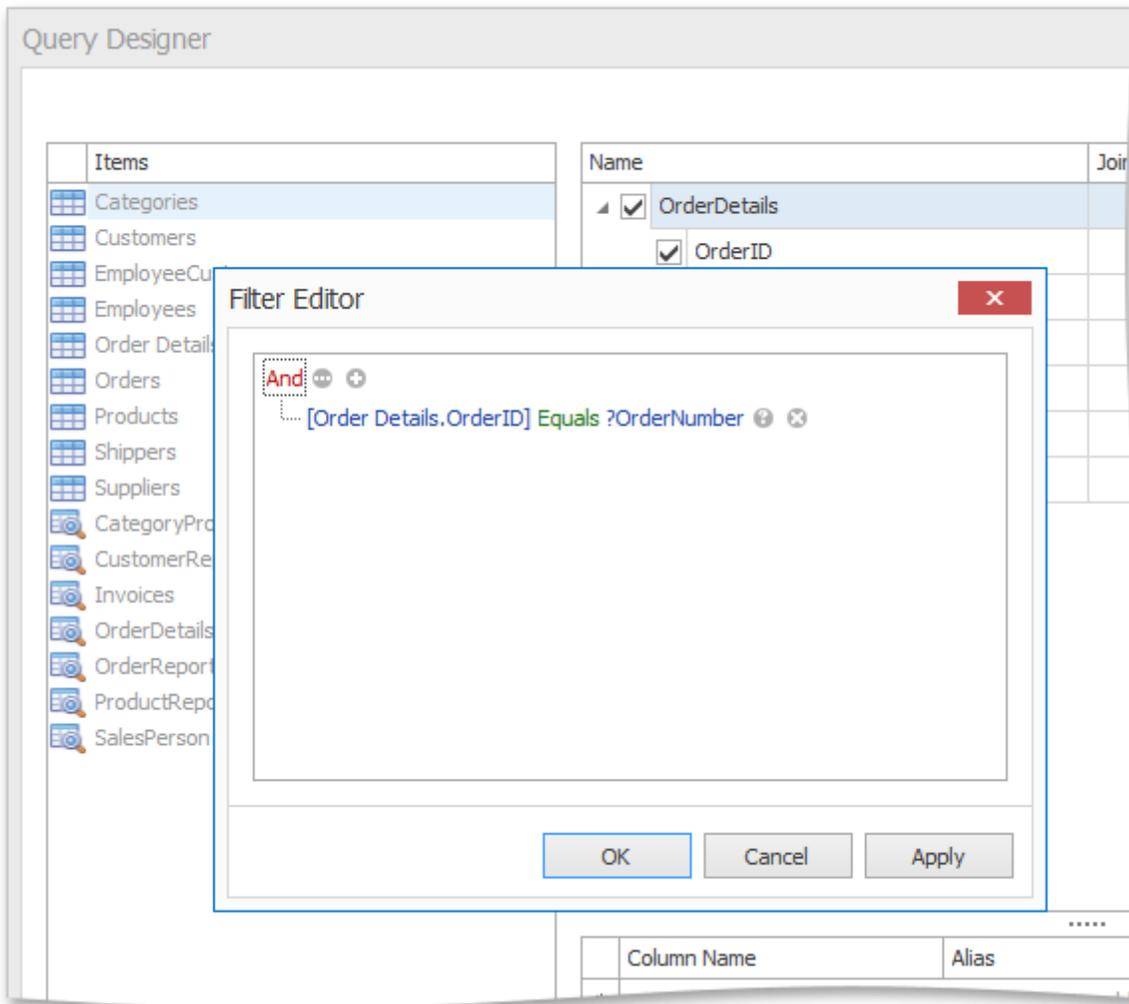
	C	D	E
1	Details of the customer order 10300		
2			
3	Supplier	Unit Price	Quantity
4	Shelley Burke (New Orleans Cajun Delights, Order Administrator) - USA, New Orleans, 70117 P.O. Box 78934	\$13.60	30
5	Peter Wilson (Specialty Biscuits, Ltd., Sales Representative) - UK, Manchester, M14 GSD 29 King's Way	\$10.00	20
6			

To add parameter to a query, invoke the [Query Designer](#) and click **Filter...** to display a Filter Editor. The **Filter Editor** window allows you to specify a criteria operator.

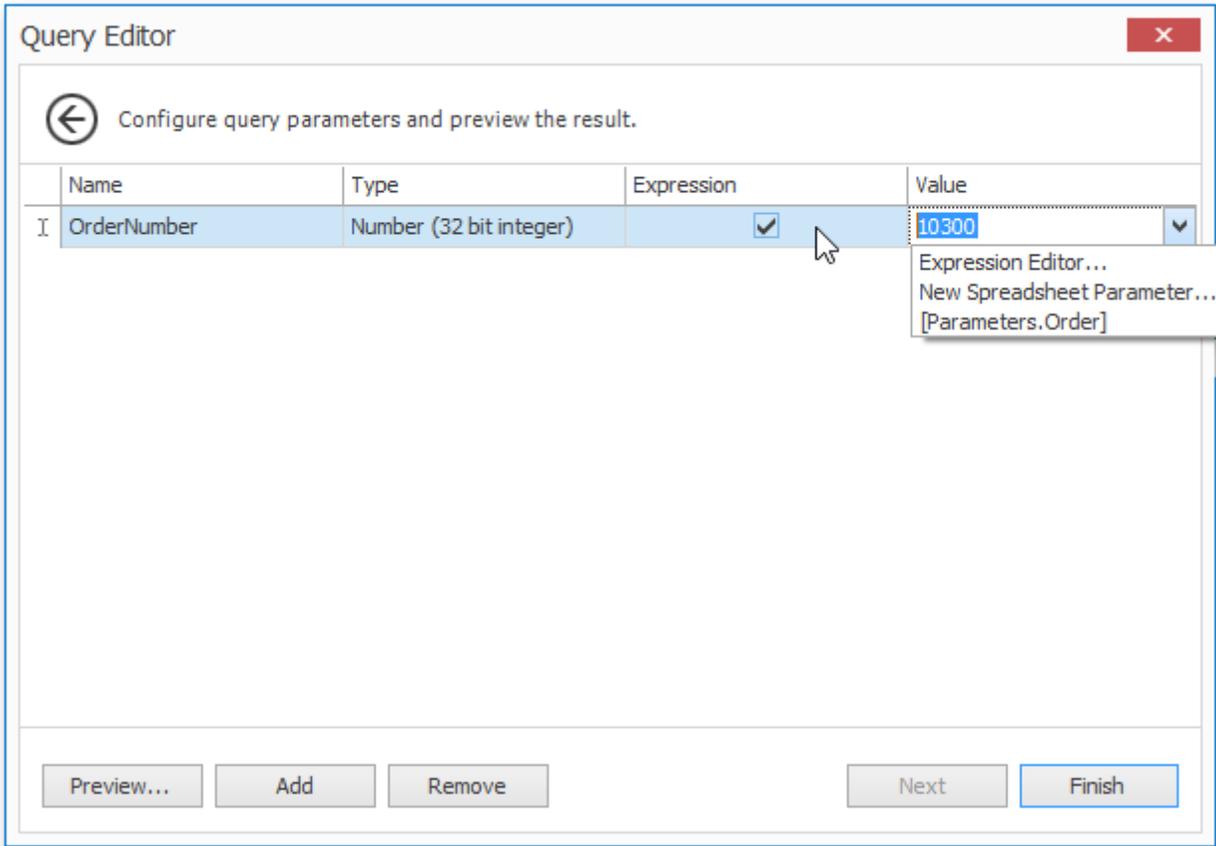


Click the symbol in the Filter Editor to switch between a value, another field and a parameter.



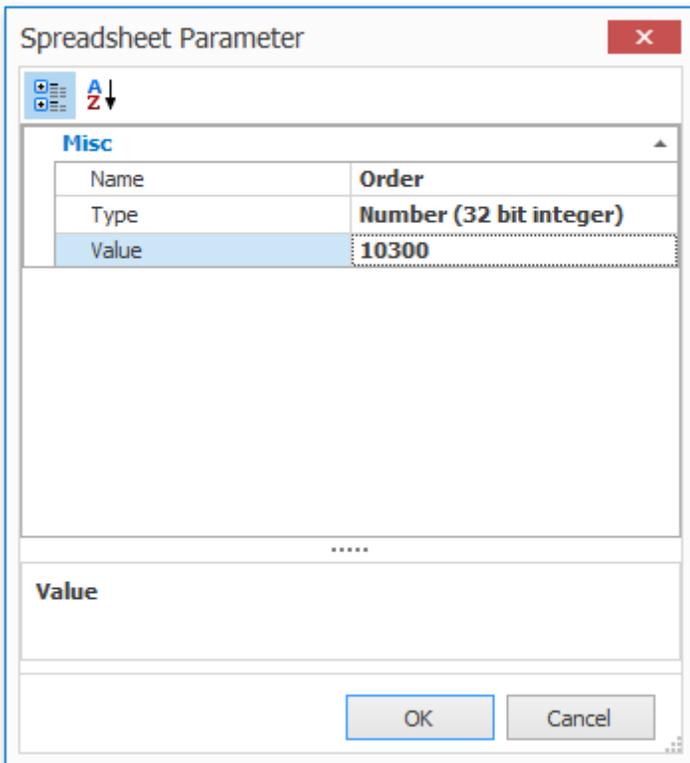


Click **OK** to close the **Filter Editor** dialog and click **Next** in the Query Editor window to navigate to a second page that allows you to specify the parameter's input source. This page is shown in the image below.



Click in the **Expression** column to select the parameter type. If you choose **New Spreadsheet Parameter...**, the **Spreadsheet Parameter** window is displayed.

The **Spreadsheet Parameter** window allows you to type in the parameter's name and specify its initial value.



After closing the [Query Designer](#) window, you will see the newly created parameter in the Parameters Panel as shown in the picture at the beginning of this document.

Pictures and Hyperlinks

Insert a Picture

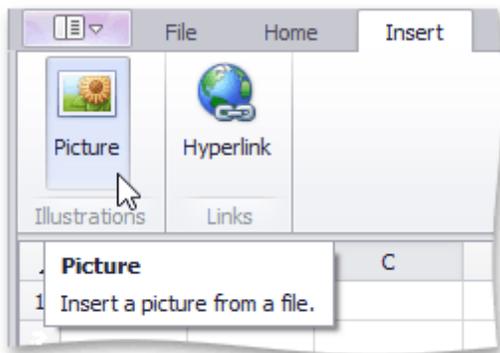
The **Spreadsheet** allows you to insert pictures in a worksheet.

You can insert graphics of the following type.

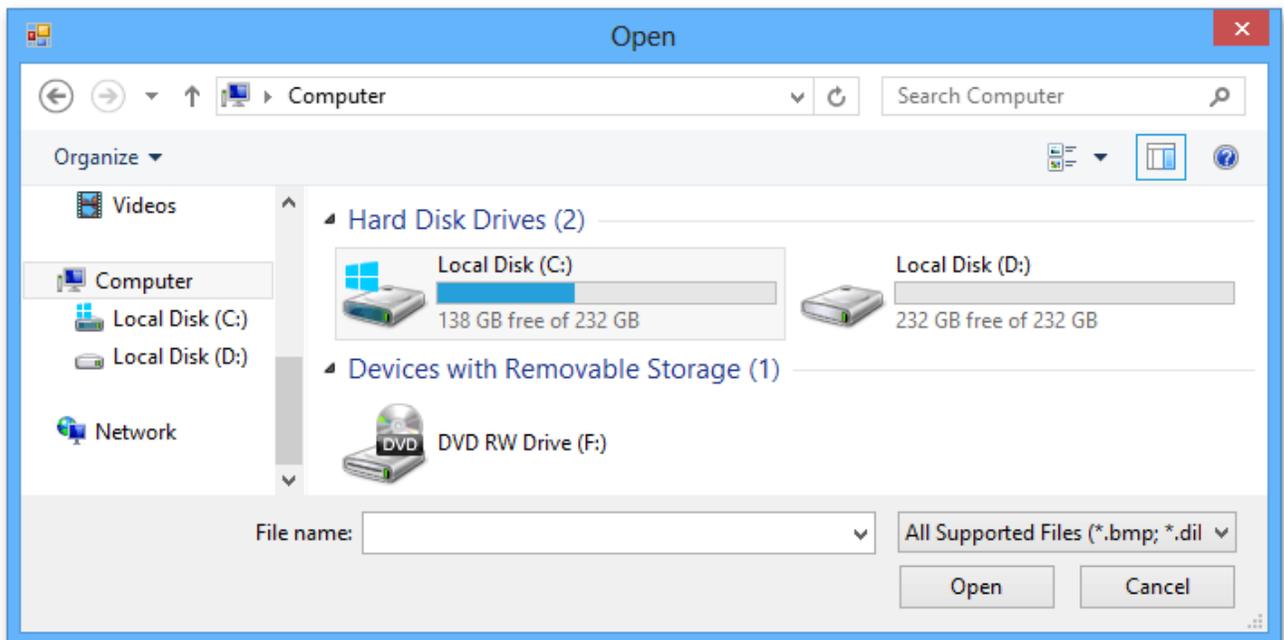
- Bitmap (*.bmp, *.dib)
- JPEG File Interchange Format (*.jpg, *.jpeg)
- Portable Network Graphics (*.png)
- Graphics Interchange Format (*.gif)
- Tagged Image Format (*.tif, *.tiff)
- Microsoft Enhanced Metafile (*.emf)
- Windows Metafile (*.wmf)

To insert a picture, follow the instructions below.

1. On the **Insert** tab, in the **Illustrations** group, click the **Picture** button.



2. In the **Open** dialog box that is invoked, locate the folder that contains the picture you want to insert. Click **Open**. The picture will be inserted into the worksheet.



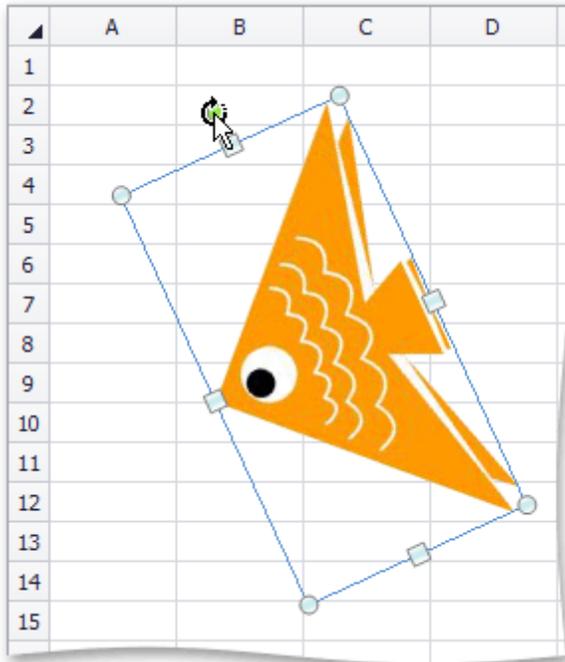
Move, Rotate and Resize a Picture

Move a Picture

1. Click the picture you wish to move.
2. Drag the picture to a new location.

Rotate a Picture

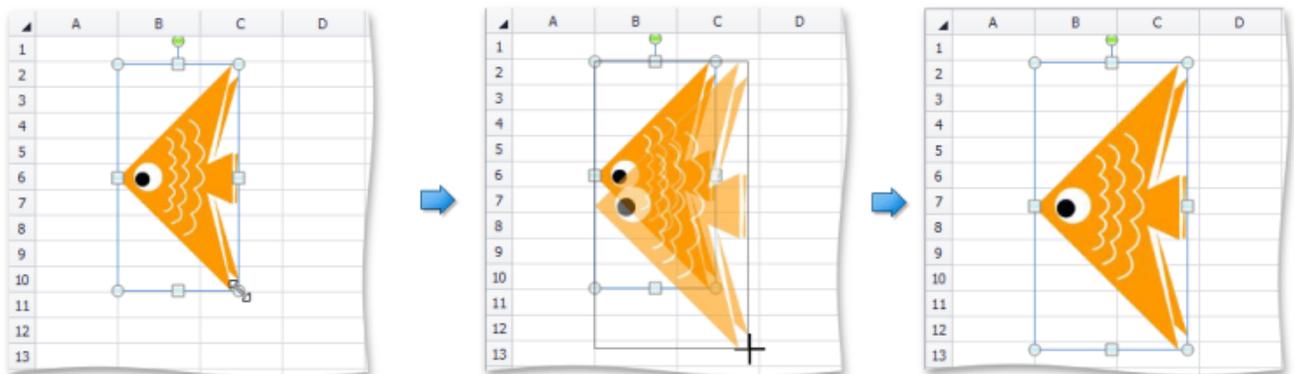
1. Click the picture you wish to rotate.
2. Click the *rotation handle* (the round arrow that appears over the selected picture) and drag it in the direction in which you wish to rotate the object.



3. To rotate a picture in 15-degree increments, drag the rotation handle while holding down the **SHIFT** key.

Resize a Picture

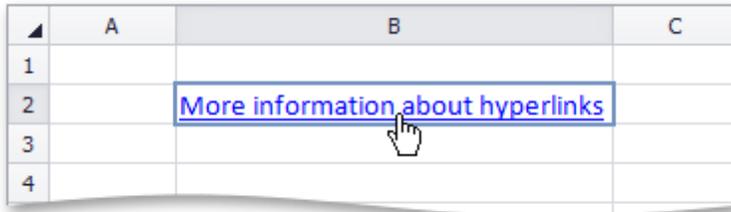
1. Click the picture to be resized.
2. Drag the *sizing handle* away from the center (or towards the center) of the picture, and release it once the desired size is reached.



When you change the width of the object by dragging a *corner sizing handle*, the object's height will automatically be changed to maintain the aspect ratio of the object, and vice-versa.

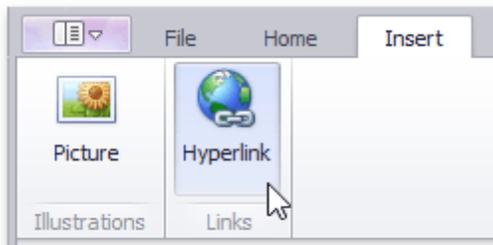
Insert and Delete Hyperlinks

The **Spreadsheet** allows you to [insert](#), edit and [delete](#) hyperlinks. A hyperlink is a link from a worksheet to another file or Web page that can be opened when you click the hyperlink text or image.

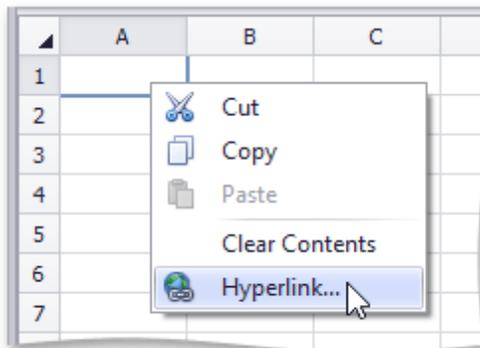


Insert a Hyperlink

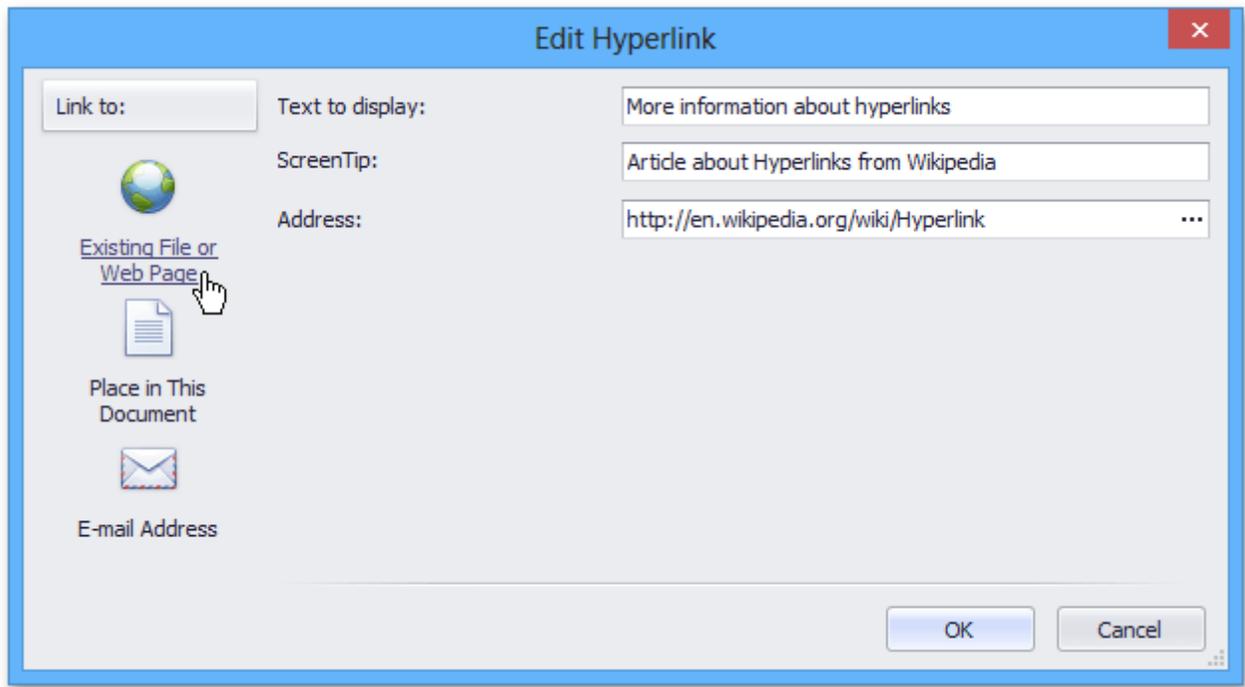
1. Click the cell in which you wish to insert a hyperlink.
2. Do one of the following.
 - In the **Links** group within the **Insert** tab, click the **Hyperlink** button.



- Right-click the cell and select **Hyperlink...** from the context menu.



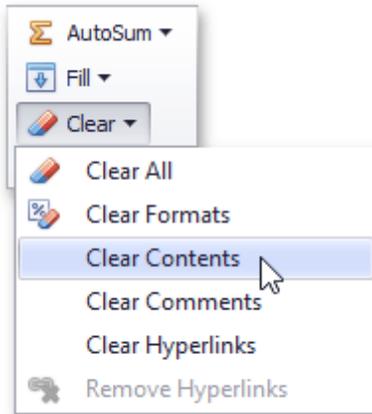
- Press **CTRL+K**.
3. In the invoked **Edit Hyperlink** dialog box, select whether you wish to insert a hyperlink to an existing file, a Web page, a location within the current workbook, or an email address. Depending on your choice, provide all required options in the right pane of the dialog box.



Delete a Hyperlink

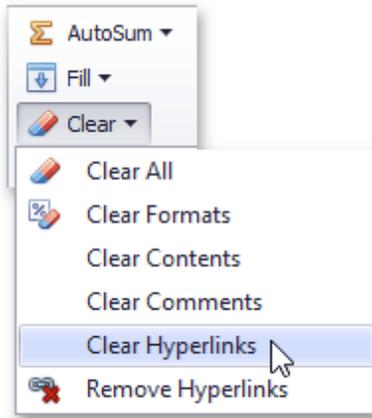
1. To delete a hyperlink along with its text, do one of the following.

- In the **Editing** group within the **Home** tab, click the **Clear** button, and select **Clear Contents** from the drop-down list.



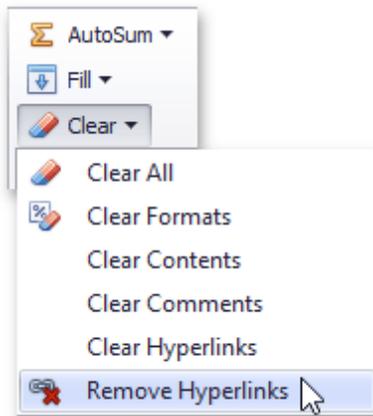
- Right-click the cell that contains the hyperlink and select **Clear Contents** from the invoked context menu.

2. To delete a hyperlink while maintaining its text with hyperlink formatting, in the **Editing** group within the **Home** tab, click **Clear**, and select **Clear Hyperlinks** from the drop-down list.



3. To delete a hyperlink while maintaining its text with default formatting, do one of the following.

- In the **Editing** group within the **Home** tab, click the **Clear** button, and select **Remove Hyperlinks** from the drop-down list.



- Right-click the cell that contains the hyperlink and select **Remove Hyperlinks** from the invoked context menu.

Shortcuts to Work with Pictures

The **Spreadsheet** allows you to move, resize or rotate pictures quickly using keyboard shortcuts.

To work with pictures, use the default shortcuts listed in the table below.

Shortcut	Description
DELETE	Deletes the selected picture.
BACKSPACE	Deletes the selected picture.
ARROW KEYS	Move the selected picture in a worksheet.
ALT+LEFT ARROW KEY	Rotates the selected picture counterclockwise by 15 degrees.
CTRL+ALT+LEFT ARROW KEY	Rotates the selected picture counterclockwise by 1 degree.
ALT+RIGHT ARROW KEY	Rotates the selected picture clockwise by 15 degrees.
CTRL+ALT+RIGHT ARROW KEY	Rotates the selected picture clockwise by 1 degree.
SHIFT+RIGHT ARROW KEY	Increases the width and height of the selected picture by 10%.
SHIFT+UP ARROW KEY	Increases the width and height of the selected picture by 10%.
CTRL+SHIFT+RIGHT ARROW KEY	Increases the width and height of the selected picture by 1%.
CTRL+SHIFT+UP ARROW KEY	Increases the width and height of the selected picture by 1%.
SHIFT+LEFT ARROW KEY	Decreases the width and height of the selected picture by 10%.
SHIFT+DOWN ARROW KEY	Decreases the width and height of the selected picture by 10%.
CTRL+SHIFT+LEFT ARROW KEY	Decreases the width and height of the selected picture by 1%.
CTRL+SHIFT+DOWN ARROW KEY	Decreases the width and height of the selected picture by 1%.
CTRL+A	Selects all pictures in a worksheet.
TAB	Selects the next picture in a worksheet.
TAB+SHIFT	Selects the previous picture in a worksheet.

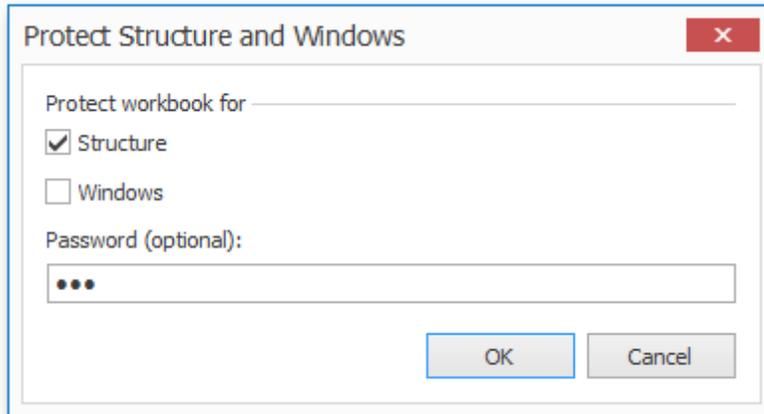
Protection

Protect a Workbook

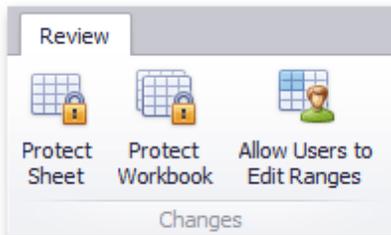
WinForms Controls > [Spreadsheet](#) > [Protect a Workbook](#)

Workbook protection prevents users from changing a workbook's structure (by moving, deleting, adding, hiding or displaying a hidden worksheet) or window position (by freezing or unfreezing panes).

You can protect a worksheet by using the following dialog:



To invoke this dialog, on the **Review** tab, in the **Changes** group, click **Protect Workbook**.



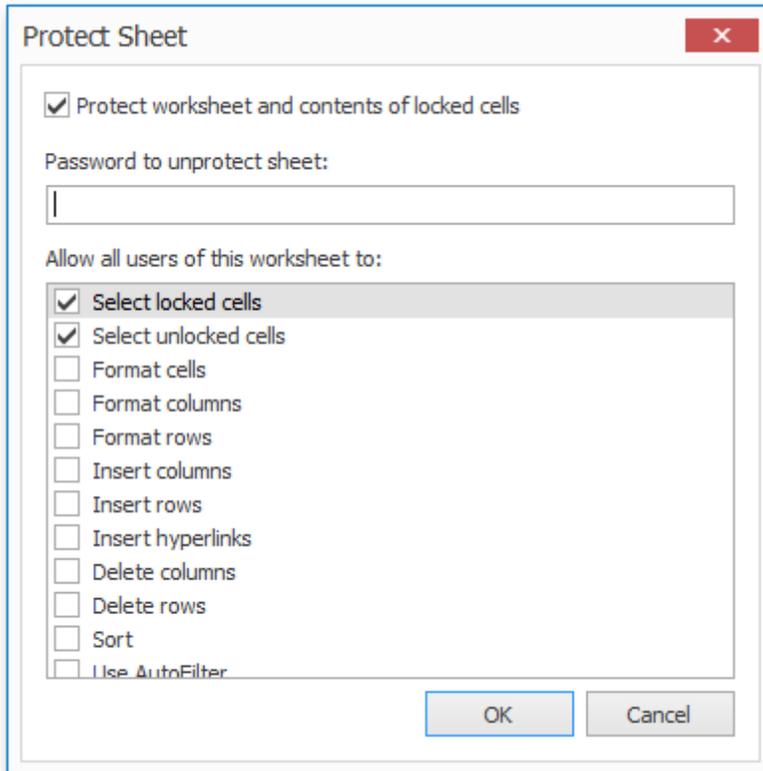
In a protected workbook, this button displays the "**Unprotect Workbook**" caption, which invokes a simple dialog that prompts for a password or unlocks the workbook if an empty password was set.

Protect a Worksheet

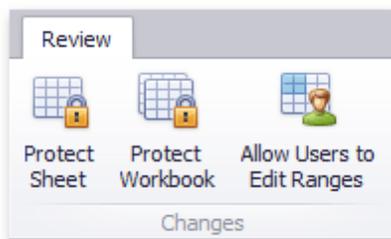
Worksheet protection locks the cells so that you can only perform a specific (restricted) set of actions.

By default, all cells in the worksheet are locked. When protection is applied to the worksheet, these cells become read-only. However, you can specify certain actions which can be performed with the locked cells in a protected worksheet.

To protect a worksheet, use the following dialog:



To invoke this dialog, on the **Review** tab, in the **Changes** group, click **Protect Sheet**.

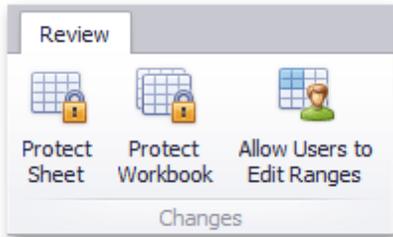


In a protected sheet, this button displays the "**Unprotect Sheet**" caption, which invokes a simple dialog that prompts for a password or unlocks the sheet if an empty password was set.

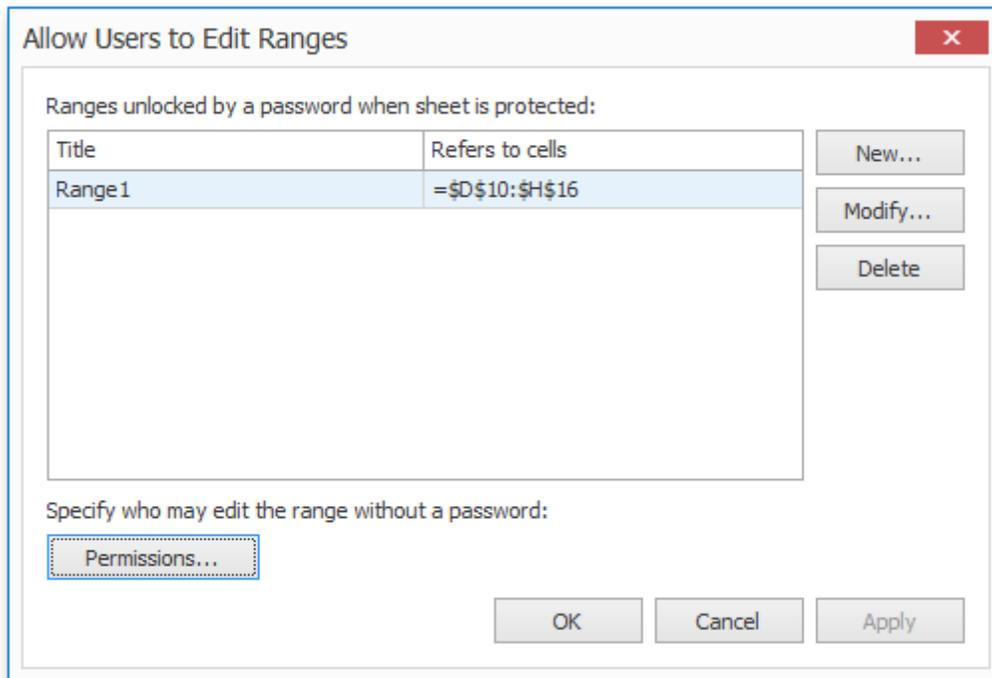
Protect Worksheet Ranges

In a protected worksheet, all locked cells are read-only. However, you can unlock certain ranges for users who provide the correct password. You can also specify user accounts and groups who can edit specific ranges without a password.

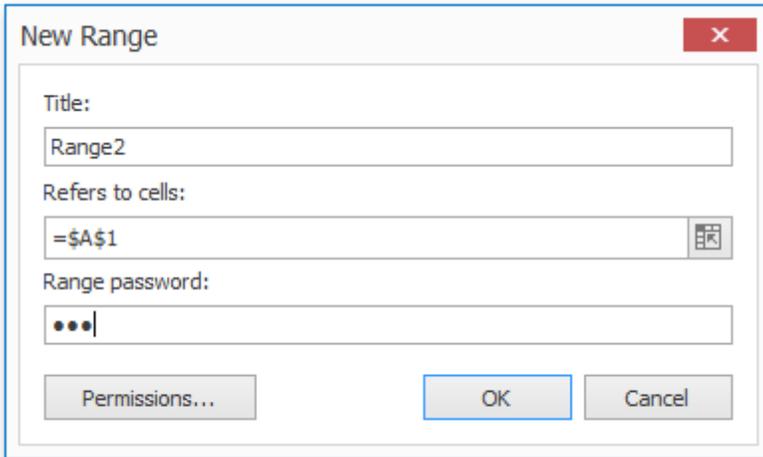
To accomplish this, invoke the **Allow Users to Edit Ranges** dialog. On the **Review** tab, in the **Changes** group, click **Allow Users to Edit Ranges**.



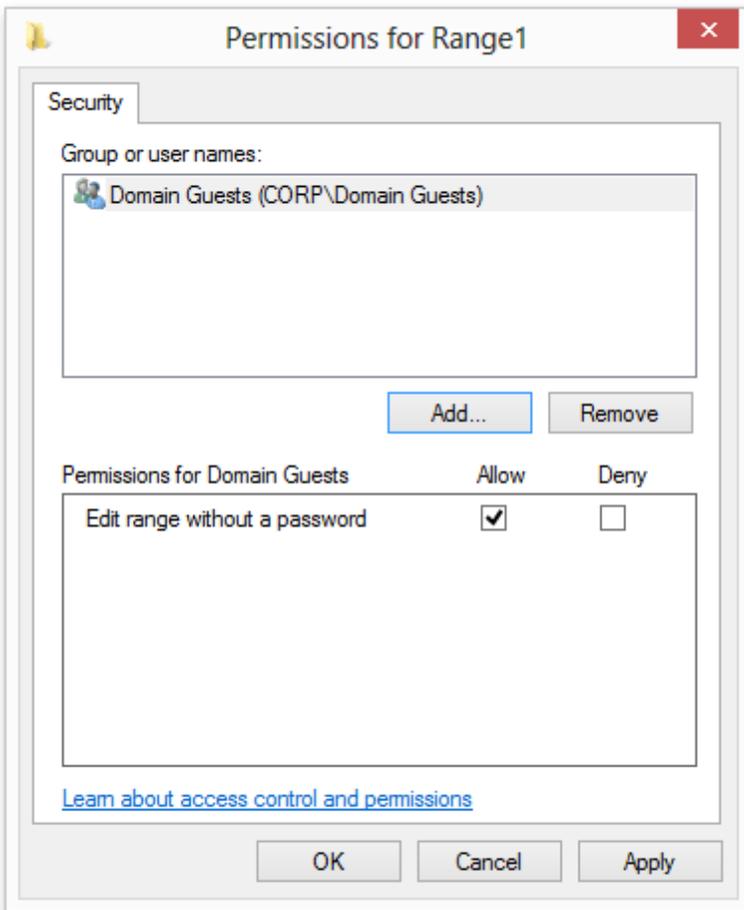
The **Allow Users to Edit Ranges** dialog is shown in the picture below.



Click the **New...** button to display a dialog to specify the worksheet range and password, as illustrated below.



The **Permissions...** button allows you to specify Active Directory users and groups.



After all required permissions and password-protected ranges are specified, apply protection to the worksheet to activate permissions as described in the [Protect a Worksheet](#) document.

When attempting to edit a cell content in a protected range for which a permission is specified, you will be prompted for a password if your user account is not listed in the Permissions dialog for that range or if the account does not belong to the user group listed in that dialog.

Keyboard Shortcuts

The **Spreadsheet** provides the capability to perform common commands quickly using keyboard shortcuts.

All supported shortcuts are divided into the following groups:

- [File Operations](#)
- [Navigation through Worksheets](#)
- [Work with Selections](#)
- [Copy, Paste and Edit the Cell Content](#)
- [Cell Formatting](#)
- [Work with Columns and Rows](#)
- [Work with Formulas](#)

File Operations

The key combinations used to perform file operations are listed in the table below.

Shortcut	Description
CTRL+N	Creates a blank workbook.
SHIFT+F11	Inserts a new worksheet in front of the existing worksheet within the current workbook.
CTRL+O	Invokes the Open dialog box to open a new file.
F12	Invokes the Save as dialog box to save the current workbook.
CTRL+P	Invokes the Print dialog box.

Navigation through Worksheets

The key combinations that allow you to navigate through a worksheet are listed in the table below.

Shortcut	Description
LEFT ARROW KEY	Moves the active cell one cell to the left in a worksheet.
RIGHT ARROW KEY	Moves the active cell one cell to the right in a worksheet.
UP ARROW KEY	Moves the active cell one cell up in a worksheet.
DOWN ARROW KEY	Moves the active cell one cell down in a worksheet.
CTRL+ARROW KEYS	Move the active cell to the edge of the current data region in a worksheet.
HOME	Moves the active cell to the beginning of a row in a worksheet.
CTRL+HOME	Moves the active cell to the beginning of a worksheet.
CTRL+END	Moves the active cell to the last cell in a worksheet (the last edited row of the rightmost edited column).
PAGE DOWN	Moves the active cell one screen down in a worksheet.
PAGE UP	Moves the active cell one screen up in a worksheet.
TAB	Moves the active cell one cell to the right in a worksheet.
SHIFT+TAB	Moves the active cell one cell to the left in a worksheet.
CTRL+PAGE DOWN	Moves to the next worksheet in the current workbook.
CTRL+PAGE UP	Moves to the previous worksheet in the current workbook.

Work with Selections

The key combinations that allow you to work with selections are listed in the table below.

Shortcut	Description
CTRL+PERIOD (.)	Moves the active cell clockwise to the next corner of the selection.
CTRL+ALT+LEFT/RIGHT ARROW KEY	Switches between multiple selected ranges of cells.
SHIFT+BACKSPACE	Selects only the active cell in the selected cell range.
CTRL+SPACEBAR	Selects an entire column in a worksheet.
SHIFT+SPACEBAR	Selects an entire row in a worksheet.
CTRL+A	Selects the entire worksheet or the data region to which the active cell belongs.
CTRL+SHIFT+SPACEBAR	Selects the entire worksheet or the data region to which the active cell belongs.
SHIFT+ARROW KEYS	Extend the selection by one cell.
CTRL+SHIFT+ARROW KEYS	Extend the selection to the last nonblank cell in a row or column.
SHIFT+HOME	Extends the selection to the first column.
CTRL+SHIFT+HOME	Extends the selection to the beginning of the document.
CTRL+SHIFT+END	Extends the selection to the previously used cell in a worksheet.
SHIFT+PAGE DOWN	Extends the selection one screen down in a worksheet.
SHIFT+PAGE UP	Extends the selection one screen up in a worksheet.

Copy, Paste and Edit the Cell Content

The key combinations used to work with cell content are listed below.

Shortcut	Description
CTRL+Z or ALT+BACKSPACE	Performs the Undo command to reverse the last action or to delete the last entry you typed.
CTRL+Y or ALT+SHIFT+BACKSPACE	Repeats the last action.
F2	Turns on the edit mode for the active cell and positions the cursor at the end of the cell content.
ENTER	Completes a cell entry and selects the cell below.
SHIFT+ENTER	Completes a cell entry and selects the cell above.
ESC	Cancels an entry in a cell or Formula bar.
DELETE	Removes the cell content without affecting the cell formatting.
CTRL+C or CTRL+INSERT	Copies the selected cell in the Clipboard.
CTRL+V or SHIFT+INSERT	Inserts the contents of the Clipboard in the specified cell and replaces any selection.
ALT+CTRL+V	Invokes the Paste Special dialog box to specify the paste options.
CTRL+X or SHIFT+DELETE	Cuts the selected cells.
CTRL+D	Performs the Fill Down command to copy the contents of the topmost cell to the cells below.
CTRL+R	Performs the Fill Right command to copy the contents of the leftmost cell to the cell to the right.
CTRL+K	Invokes the Insert Hyperlink dialog box to create a new hyperlink.

Cell Formatting

The key combinations that allow you to apply formatting options quickly are listed in the following table.

Shortcut	Description
CTRL+B or CTRL+2	Applies or removes bold formatting.
CTRL+I or CTRL+3	Applies or removes italic formatting.
CTRL+U or CTRL+4	Applies or removes underlining.
CTRL+5	Applies or removes strikethrough.
CTRL+SHIFT+7	Applies the outline border to the selected cell or cell range.
CTRL+SHIFT+MINUS (-)	Removes the outline border from the selected cell or cell range.
CTRL+SHIFT+1	Applies the Number format with two decimal places.
CTRL+SHIFT+2	Applies the Time format.
CTRL+SHIFT+3	Applies the Date format.
CTRL+SHIFT+4	Applies the Currency format.
CTRL+SHIFT+5	Applies the Percentage format.
CTRL+SHIFT+6	Applies the Scientific number format.

Work with Columns and Rows

The key combinations that allow you to display, hide or group columns and rows in a worksheet are listed in the following table.

Shortcut	Description
CTRL+9	Hides the selected rows.
CTRL+SHIFT+9	Displays the hidden rows.
CTRL+0	Hides the selected columns.
CTRL+SHIFT+0	Displays the hidden columns.
ALT+SHIFT+RIGHT ARROW KEY	Groups the selected rows or columns.
ALT+SHIFT+LEFT ARROW KEY	Unroups the selected rows or columns.

Work with Formulas

The key combinations used to create formulas quickly are listed in the table below.

Shortcut	Description
CTRL+SHIFT+ENTER	Creates an array formula.
ALT+PLUS (+)	Inserts the SUM function in the active cell.
CTRL+ `	Toggles between displaying cell values and formulas on a worksheet.
CTRL+SHIFT+U	Toggles between expanding and collapsing the Formula Bar .
F9	Calculates the entire workbook.
SHIFT+F9	Calculates the active worksheet.
CTRL+F3	Defines a name.
CTRL+SHIFT+F3	Creates names from row and column labels.

Toolbars and Menus

This section describes the capabilities provided by toolbars and menus.



Layout Customization

- [Open Toolbar Customization Window](#)
- [Finish Toolbar Customization](#)
- [Hide and Display Toolbars](#)
- [Hide and Display Bar Commands](#)
- [Rearrange Toolbars and Menus](#)
- [Rearrange Bar Commands](#)
- [Restore the Default Layout of Bar Commands](#)

Navigation

- [Keyboard Navigation in Menus and Toolbars](#)

Select Commands

- [Invoke Toolbar and Menu Commands](#)

Layout Customization

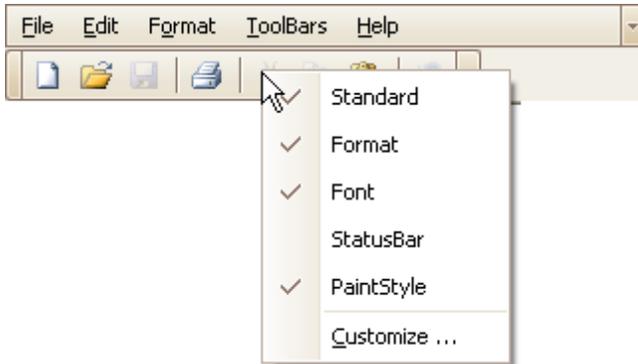
Open Toolbar Customization Window

Opening the Customization window activates the customization mode where you can:

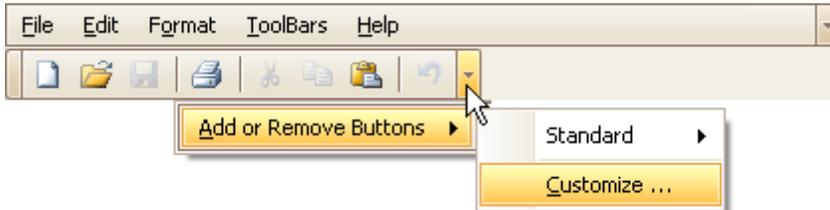
- Rearrange, hide and display bar commands.
- Change display options of bar commands.
- Hide bars, etc

To open the Customization window, do one of the following:

- Right-click any bar or the empty space, and select **Customize...**



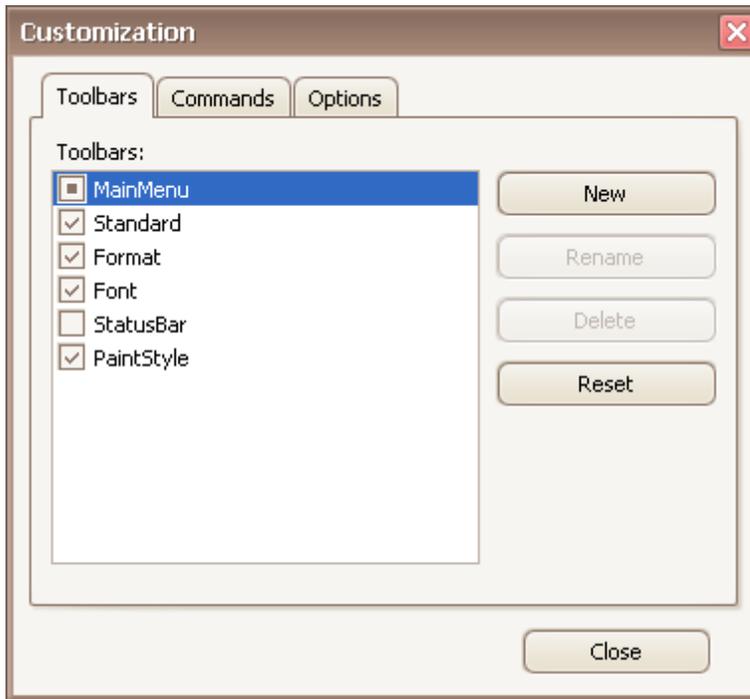
- Click the dropdown button displayed at the right edge of any bar. Then select **Add or Remove Buttons** and then **Customize...**



- Double-click the empty space, not occupied by any bar.



The Customization window will be opened, containing three tabs:



The **Toolbars** tab allows you to hide specific bars and display hidden ones.

The **Commands** tab allows you to access bar commands and add them to bars.

The **Options** tab allows you to control options affecting the display of menus and bar commands.

Finish Toolbar Customization

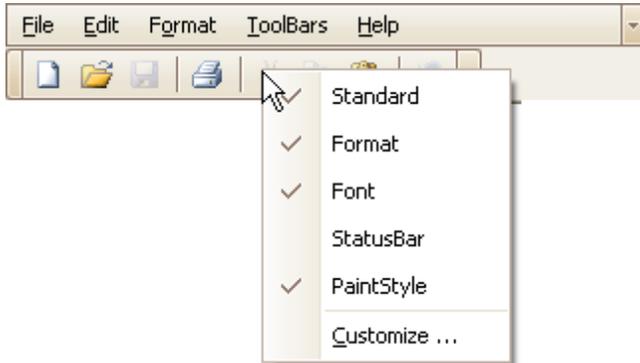
To finish [customization](#), click the Customization window's Close button:



Hide and Display Toolbars

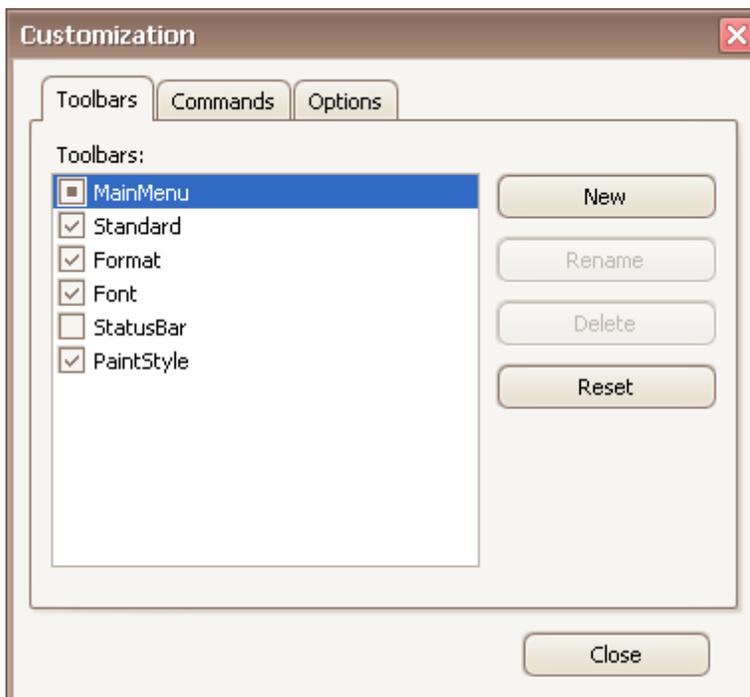
Use the Quick Customization Menu

Right-click any bar, and check or uncheck the required toolbars.



Use the Customization Window

Open the [Customization window](#). Under the Toolbars tab, check or uncheck the required toolbars.



Hide and Display Bar Commands

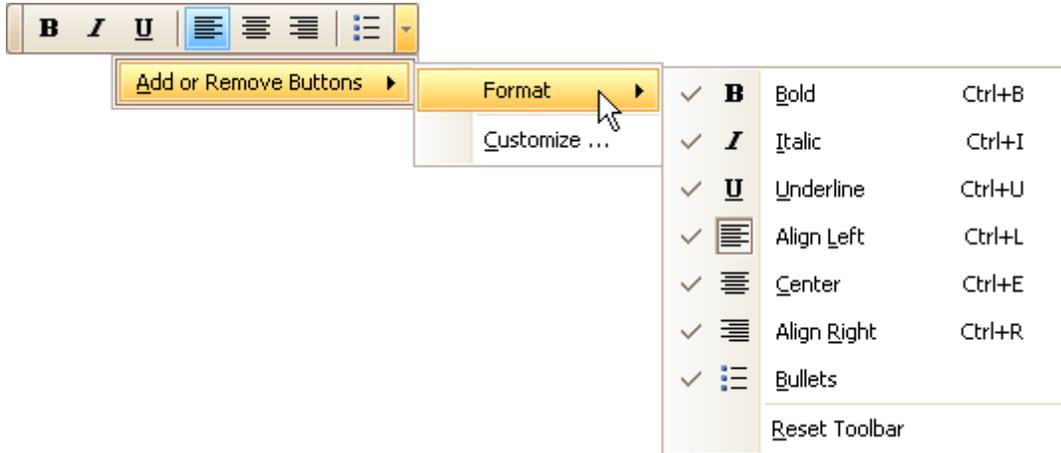
Temporarily Hide and Display Bar Commands

You can temporarily hide bar commands, and then restore hidden commands within a specific bar as follows:

1. Click the dropdown button displayed at the right edge of the bar:



2. Select **Add or Remove Buttons**, and then select the name of the clicked bar displayed at the top of the submenu. A check list of bar commands displayed within the bar will be displayed:



3. To hide specific commands, uncheck corresponding items via mouse click. To display hidden commands, check the corresponding items.

If a specific command is not available in a bar's command list, you can still access this command in customization mode, and add this command to the bar. See below, to learn more.

Hide and Display Bar Commands in Customization Mode

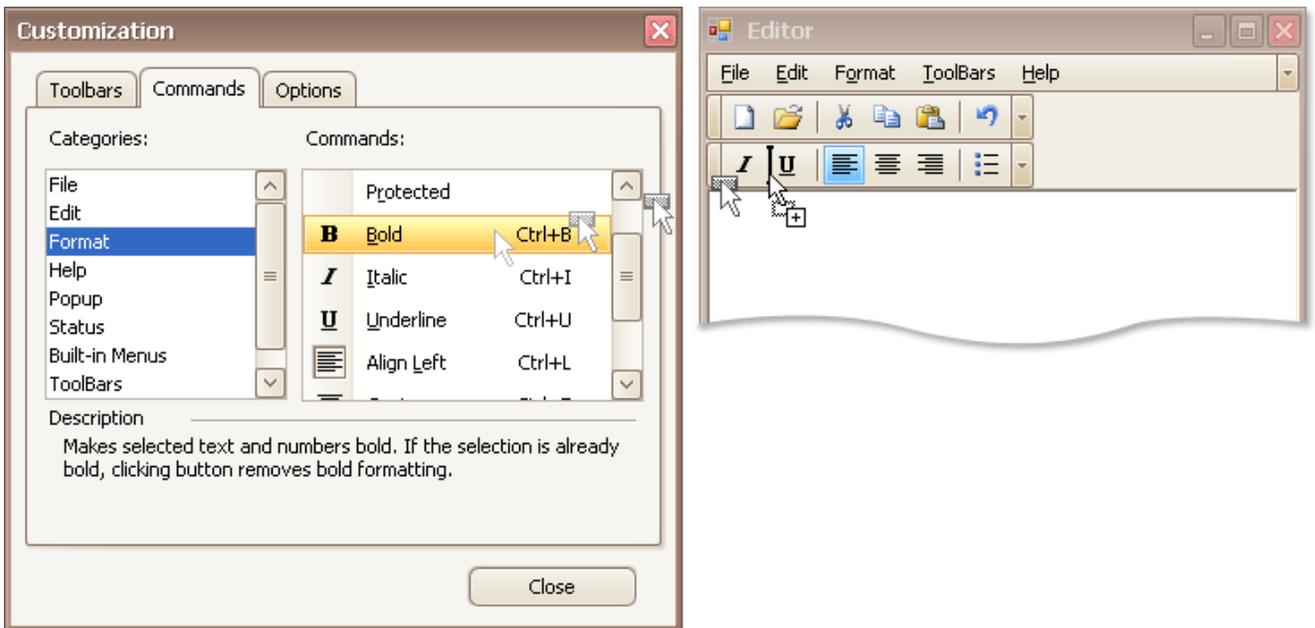
First, open the [Customization window](#).

To add a specific bar command to a bar, do the following:

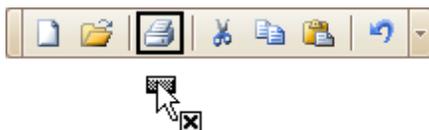
1. Switch to the **Commands** tab page and locate the required command in the **Commands** list. Typically, commands are grouped into categories, so you can first select a category to quickly locate the command.



2. Drag the bar command from the **Commands** list onto a bar or menu. Note that you can put bar commands into nested menus. Menus will automatically open when you drag a bar command over their parent menu items.



To remove a bar command from a bar, drag the bar command away from the bar, and drop it when the mouse cursor changes its image to 'x':



Note

You can cancel drag and drop while dragging an item by pressing ESC.

Rearrange Toolbars and Menus

To move a bar docked to a form to a new position, drag it via its drag widget.



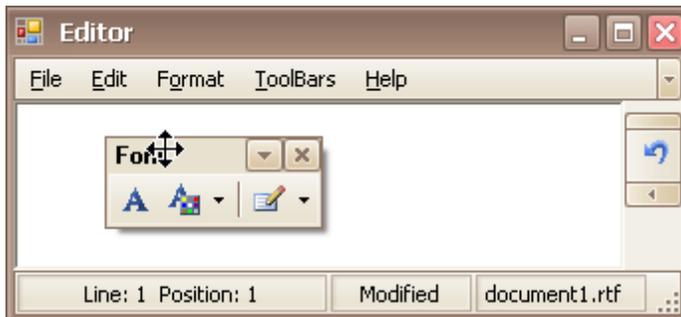
To move a floating bar, drag it by its caption.



To dock a bar to any of the four edges of the form, drag the bar to this edge.



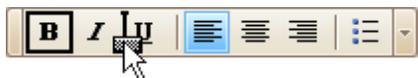
To make a docked bar floating, drag the bar away from the form's edges.



Rearrange Bar Commands

To rearrange bar commands, do the following:

1. Open the [Customization window](#).
2. Drag a bar command to a new position:



To copy a bar command, press CTRL while dragging.

Note

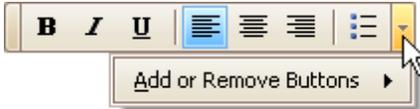
You can move commands even when the customization window is closed. For this purpose, hold down the ALT key when dragging a bar command.

Restore the Default Layout of Bar Commands

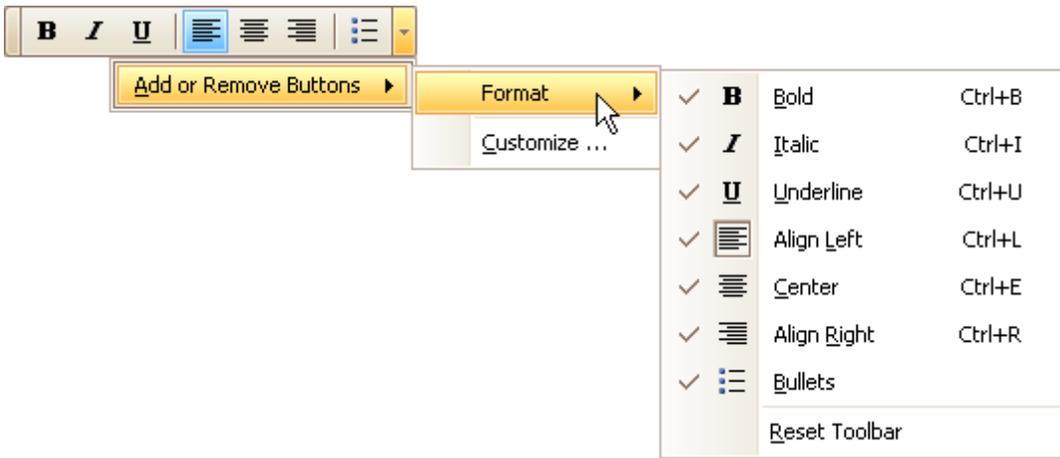
You can customize the layout of bar commands within a bar by hiding and rearranging them. Subsequently, you can revert to the default layout of bar commands. This topic describes two ways to do this.

Restore the Default Layout Using Quick Customization

1. Click the dropdown button displayed at the right edge of any bar:

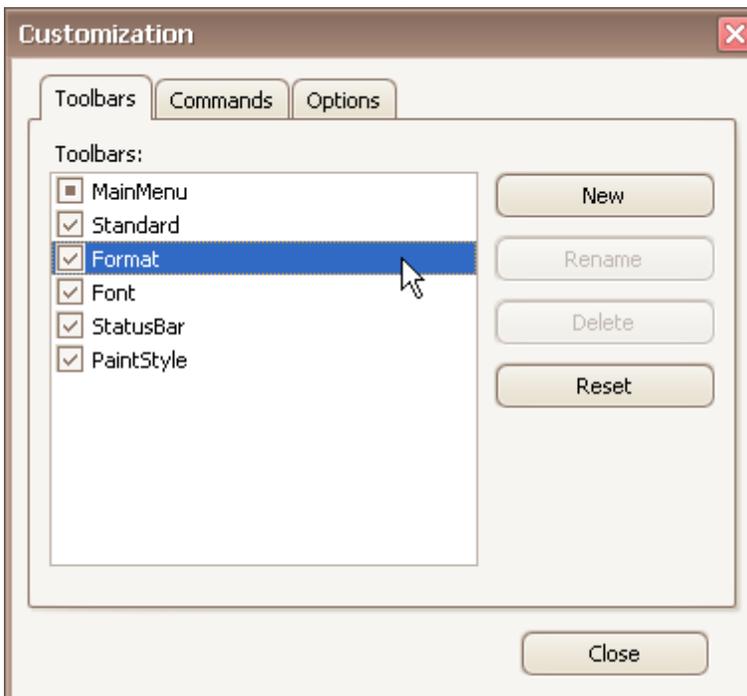


2. Select **Add or Remove Buttons**, and then select the name of the clicked bar displayed at the top of the submenu. Then, select **Reset Toolbar**.

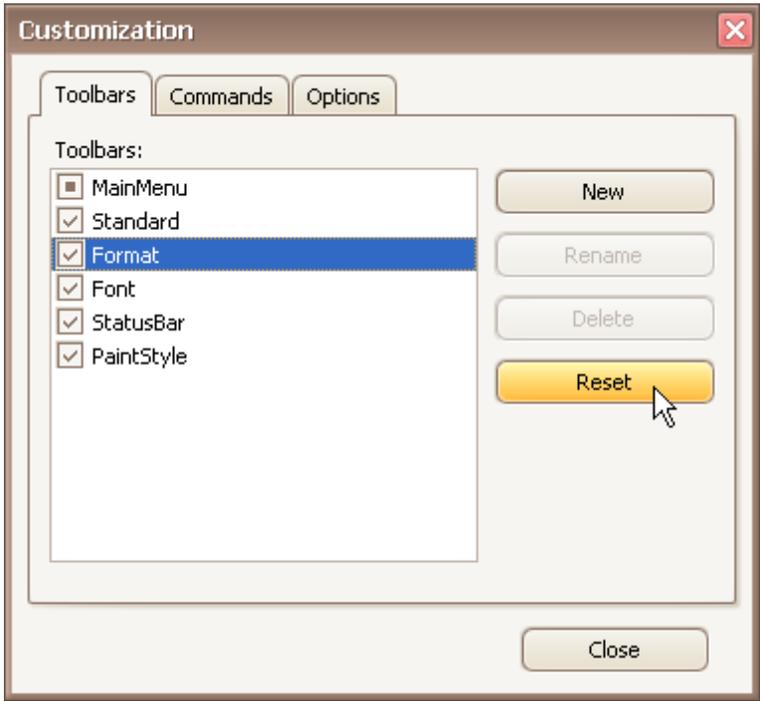


Restore the Default Layout in Customization Mode

1. Open the [Customization window](#).
2. Select a bar in the list whose layout is to be restored.



3. Click **Reset**.



Navigation

Keyboard Navigation in Menus and Toolbars

Navigate between Toolbar and Menu Items

To switch focus to the main menu, press ALT or F10. The following shortcuts allow you to navigate through bars and bar items. They are in effect when a bar/menu is focused.

Action	Description
CTRL+TAB	Moves focus to another bar.
ARROW keys	Moves focus to the next command in the corresponding direction.
TAB SHIFT+TAB	Moves focus to the next/previous command.
ESC	Moves focus away from the currently focused bar.

Open and Close Menus

To open a sub-menu displayed within a bar, do one of the following:

- Focus the sub-menu (using one of the methods described above) and press the ENTER or DOWN ARROW.
- If the sub-menu's name contains an underscored letter, then:
 - if the bar is focused, press the underscored letter.
 - if the bar is not focused, hold the ALT key down and then press the underscored letter.

To open a menu displayed within another menu, do one of the following:

- Focus the sub-menu and press the RIGHT ARROW.
- If the menu's name contains an underscored letter, press the underscored letter.

To close the currently opened menu, press ESC.

See Also

[Invoke Toolbar and Menu Commands](#)

Select Commands

Invoke Toolbar and Menu Commands

To invoke a specific bar or menu command, do one of the following:

- Click the command with the mouse
- [Focus](#) the command and then press ENTER.
- If a command is visible and it contains an underscored letter in its name, then:
 - if the bar or menu that contains this command is focused, then press this underscored letter.
 - if the bar or menu that contains this command is not focused, hold the ALT key down and then press this underscored letter.
- Press the shortcut assigned to the command.
If a command is displayed within a menu, its shortcut is displayed next to the command's name (if assigned).
Shortcuts for toolbar buttons are typically displayed in hints.

Tree List

This section describes the capabilities provided by a multi-column tree view, which displays hierarchical data, supports data editing, sorting, summary calculation and many other features:

Department	Budget	Location	Phone	LastOrder
[-] Corporate Headquarters	\$1,000,000	Monterey	(408) 555-1234	2/15/2001
[-] Engineering	\$1,100,000	Monterey	(408) 555-1234	8/12/2001
[-] Finance	\$40,000	Monterey	(408) 555-1234	5/5/2005
[-] Sales and Marketing	\$22,000	San Francisco	(415) 555-1234	3/5/1999
[-] Field Office: Canada	\$500,000	Toronto	(416) 677-1000	5/1/2002
[-] Field Office: East Coast	\$500,000	Boston	(617) 555-4234	5/5/2005
[-] Marketing	\$1,500,000	San Francisco	(415) 555-1234	9/17/2001
[-] Pacific Rim Headquarters	\$600,000	Kuauai	(808) 555-1234	5/25/2000

Data Editing

- [Edit Cells in a Tree List](#)

Data Presentation

- [Show Summaries \(Totals\) in a Tree List](#)
- [Sort Tree List Nodes](#)

Layout Customization

- [Expand and Collapse Nodes in a Tree List](#)
- [Hide and Display Tree List Columns](#)
- [Reorder Tree List Columns](#)
- [Resize Tree List Columns](#)

Selection and Navigation

- [Navigation in a Tree List](#)
- [Select Tree List Nodes](#)

Data Editing

Activate Cell Editor

Do one of the following:

- Click a cell.
- Focus a cell (for instance, via the keyboard), and press ENTER or F2.
- Focus a cell and press any alpha-numeric key. The editor will be invoked and its contents will be replaced with the pressed character.

Select and Deselect Cell Text

Press F2 or CTRL+A.

Close Cell Editor and Accept Changes Made

Do one of the following:

- Press ENTER.
- Click any other grid cell.
- Focus any other control.

Discard Changes

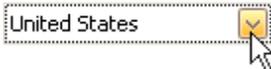
To discard changes made in a cell, press ESC.

To discard changes made in all cells within a node, press ESC twice.

Open Cell Editor's Dropdown

Do one of the following:

- Activate a cell editor and press ALT+DOWN ARROW or F4.
- Click the editor's dropdown button:



Close Cell Editor's Dropdown

For all editors providing a dropdown, you can close the dropdown by pressing ALT+DOWN ARROW.

If the calculator is displayed in the dropdown, it can be closed via CTRL+ENTER.

Dropdowns displaying lists of items can be closed by clicking an item with the mouse, or by selecting an item with the keyboard and pressing ENTER.

Change Values

Change Date/Time Values

You can edit these cell values without opening the dropdown calendar. Position the caret at the portion of a date/time value that needs to be changed. To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

Change Numeric Values

To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

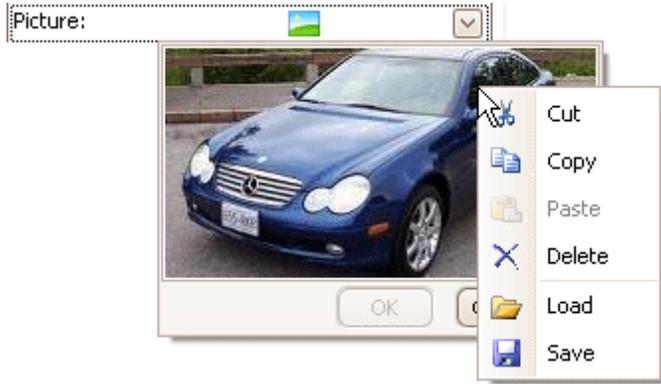
Change Values of Cells That Provide Dropdown Items

To select the previous value, press CTRL+UP ARROW. To select the next value, press CTRL+DOWN ARROW.

Note: this feature is not applicable to all editors.

Edit Images

To copy, cut, paste, load and save images in image editors, right click the image and select the required command via the context menu:

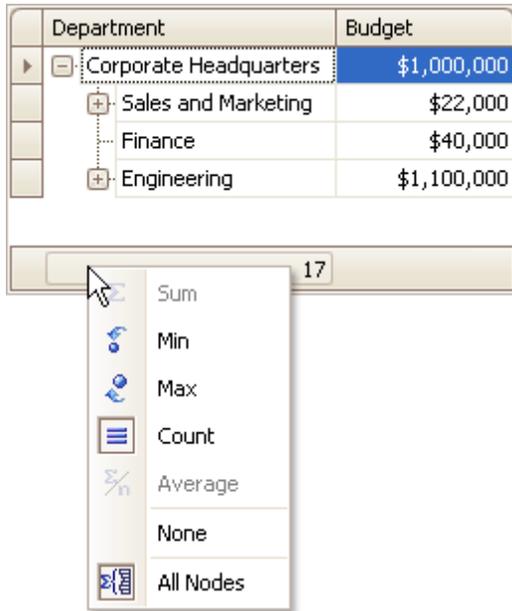


Data Presentation

Show Summaries (Totals) in a Tree List

To change the type of summary for a specific column or apply a summary, do the following:

1. Right-click a region within a group footer or grid footer under a specific column. A context menu displaying a list of supported summary types will be displayed.



2. Select the required option from the context menu.

To calculate summaries against all nodes, ensure that the **All Nodes** menu check item is checked. To calculate summaries against root nodes only, uncheck the **All Nodes** check item.

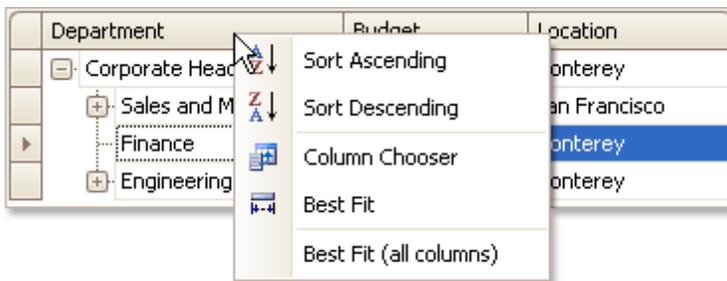
Sort Tree List Nodes

To sort nodes by a column's values and replace existing sort conditions that are applied to the current or other columns, click the target column's header, until an Up or Down Arrow icon is displayed within the header. The Up and Down Arrows indicate ascending and descending sort orders respectively.



To sort nodes by a column's values while preserving existing sort conditions, do one of the following:

- Click a column header while holding the SHIFT key down, until an UP or Down Arrow icon is displayed within the header.
- Right-click a column header and select **Sort Ascending** or **Sort Descending** from the context menu that will appear.



To remove sorting by a column, click a column header while holding the CTRL key down.

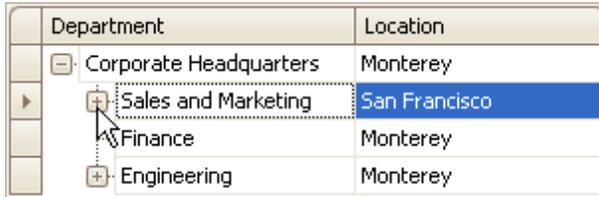
Layout Customization

Expand and Collapse Nodes in a Tree List

Expand and Collapse Nodes

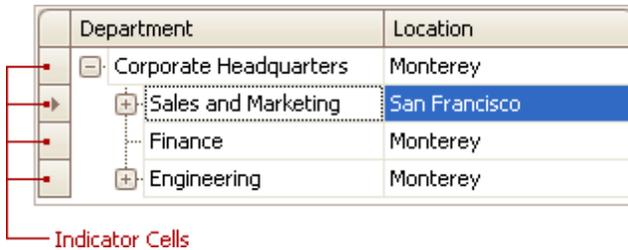
Do one of the following:

- Focus the node and then press PLUS on the keyboard to expand the node, and MINUS to collapse the node:
- Click the node's expand button.



Department	Location
[-] Corporate Headquarters	Monterey
[+] Sales and Marketing	San Francisco
[+] Finance	Monterey
[+] Engineering	Monterey

- Double-click the indicator cell corresponding to the node.



Department	Location
[-] Corporate Headquarters	Monterey
[+] Sales and Marketing	San Francisco
[+] Finance	Monterey
[+] Engineering	Monterey

Indicator Cells

Expand Nodes Recursively

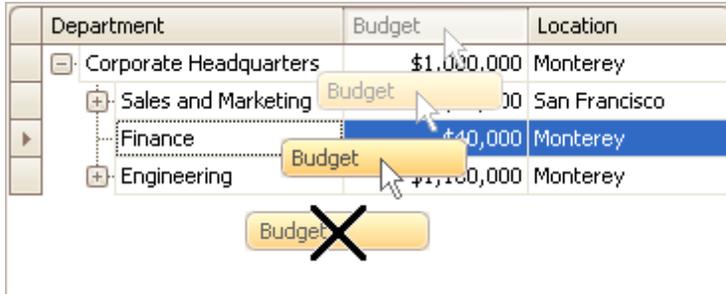
To expand a node and all its child nodes that have nested nodes, focus the node and press MULTIPLY on the keyboard.

Hide and Display Tree List Columns

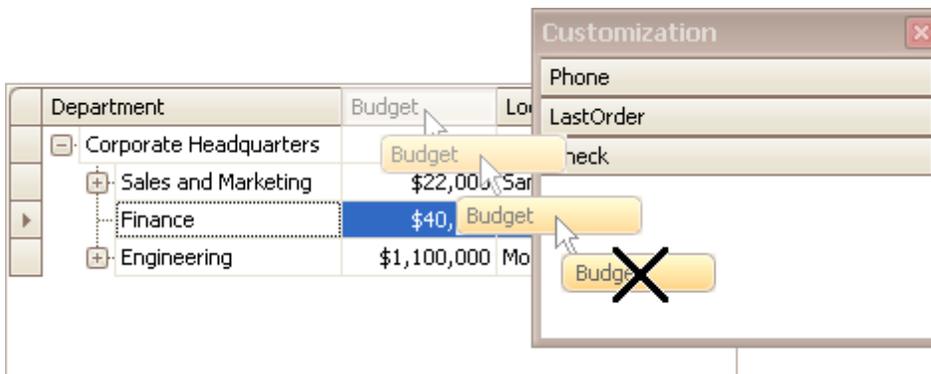
Hide Columns

Do one of the following:

- Click a column header and drag it outside the header panel, until the cursor changes its image to the big 'X'. Then drop the header.

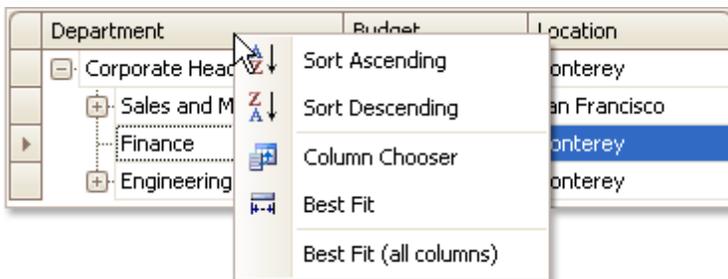


- Drag and drop a column header onto the Customization Form if it's open (see below).



Display Hidden Columns

- Open the Customization Form by right-clicking a column header and selecting **Column Chooser**.



The Customization Form will be displayed listing hidden columns (if any).

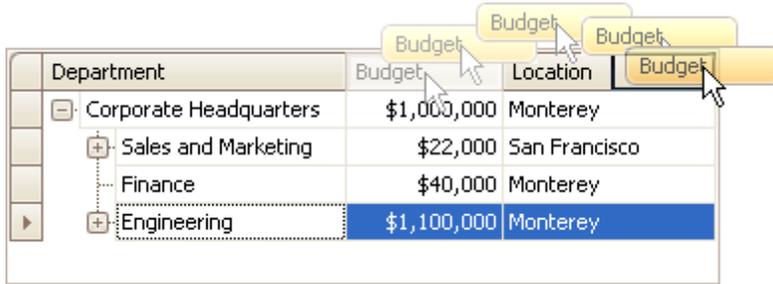


2. Drag the required column from the Customization Form onto the column header panel and drop it at the required position.



Reorder Tree List Columns

To reorder columns, drag and drop a column header to a new position.



Department	Budget	Location	Budget
[-] Corporate Headquarters	\$1,000,000	Monterey	
[+] Sales and Marketing	\$22,000	San Francisco	
[+] Finance	\$40,000	Monterey	
[+] Engineering	\$1,100,000	Monterey	

Resize Tree List Columns

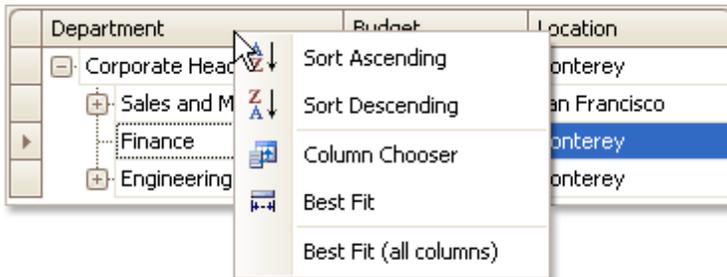
To resize columns, drag the right edge of the target column header:



Department	Budget	Location
[-] Corporate Headquarters	\$1,000,000	Monterey
[+] Sales and Marketing	\$22,000	San Francisco
[+] Finance	\$40,000	Monterey
[+] Engineering	\$1,100,000	Monterey

To change a column's width so that it displays its contents compactly in their entirety, do one of the following:

- Double-click the right edge of the column header.
- Right-click the column's header and select **Best Fit**.



To change the widths of all columns so that they display their contents in the best possible way, right-click the header of any column and select **Best Fit (all columns)**.

Selection and Navigation

Navigation in a Tree List

Action	Description
Clicking a data cell	Moves focus to the clicked cell.
ARROW keys	Moves focus to the next cell in the corresponding direction.
HOME END	Moves focus to the first/last cell within the focused node.
PAGE UP PAGE DOWN	Moves focus one page up or down.
CTRL+HOME	Moves focus to the first cell within the first node.
CTRL+END	Moves focus to the last cell within the last node.
TAB CTRL+TAB	Moves focus away from the TreeList to the next control, in tab order.
SHIFT+TAB	Moves focus away from the TreeList to the previous control, in tab order.
CTRL+RIGHT ARROW	Expands the focused node.
CTRL+LEFT ARROW	Collapses the focused node.

You can also click node indicator cells to move focus to the corresponding row while preserving column focus.

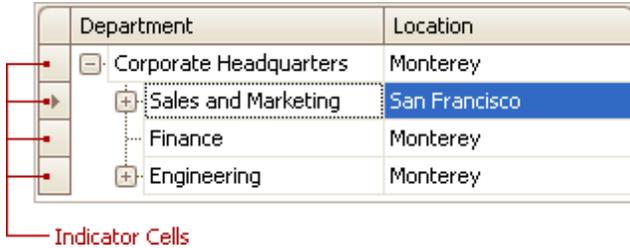


Select Tree List Nodes

Change Focused Node

To focus a node and clear the existing selection, do one of the following.

- Click the node's indicator cell or any of its data cells.



- Select the node using the ARROW keys.

Select Multiple Nodes

To select a node while preserving the current selection, click the node's indicator cell or any of its data cells, while holding the CTRL key down.

To toggle the focused node's selected state, do one of the following.

- Press CTRL+SPACE.
- Click the node while holding the CTRL key down.

To move focus between nodes while preserving the current selection, use CTRL+ARROW keyboard shortcut.

Vertical Grid

This section describes the capabilities provided by Vertical Grids (Property Grids).

Employee ▲

First Name	Margaret	Steven	Laura
Last Name	Peacock	Buchanan	Callahan
Title	Sales Representative	Sales Manager	Inside Sales Coordinator
Title Of Courtesy	Mrs.	Mr.	Ms.

Address ▲

City	Region	Redmond	WA	London		Seattle	WA
Postal Code	Country	98052	USA	SW1 8JR	UK	98105	USA
Home Phone		(206) 555-8122		(71) 555-4848		(206) 555-1189	

Photo & Notes ▲

Photo			
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Data Editing

- [Edit Cells in Vertical Grids](#)

Layout Customization

- [Expand and Collapse Rows in Vertical Grids](#)
- [Resize Rows and Columns in Vertical Grids](#)

Navigation

- [Navigation in Vertical Grids](#)

Data Editing

Activate Cell Editor

Do one of the following:

- Click a cell.
- Focus a cell (for instance, via the keyboard), and press ENTER or F2.
- Focus a cell and press any alpha-numeric key. The editor will be invoked and its contents will be replaced with the pressed character.

Select and Deselect Cell Text

Press F2 or CTRL+A.

Close Cell Editor and Accept Changes Made

Do one of the following:

- Press ENTER.
- Click any other grid cell.
- Focus any other control.

Discard Changes

To discard changes made in a cell, press ESC.

Open Cell Editor's Dropdown

Do one of the following:

- Activate a cell editor and press ALT+DOWN ARROW or F4.
- Click the editor's dropdown button:



Close Cell Editor's Dropdown

For all editors providing a dropdown, you can close the dropdown by pressing ALT+DOWN ARROW.

If the calculator is displayed in the dropdown, it can be closed via CTRL+ENTER.

Dropdowns displaying lists of items can be closed by clicking an item with the mouse, or by selecting an item with the keyboard and pressing ENTER.

Change Values

Change Date/Time Values

You can edit these cell values without opening the dropdown calendar. Position the caret at the portion of a date/time value that needs to be changed. To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

Change Numeric Values

To increment the value, press CTRL+UP ARROW. To decrement the value, press CTRL+DOWN ARROW.

Change Values of Cells That Provide Dropdown Items

To select the previous value, press CTRL+UP ARROW. To select the next value, press CTRL+DOWN ARROW.

Note

This feature is not applicable to all editors.

Edit Images

To copy, cut, paste, load and save images in image editors, right click the image and select the required command via the context menu:



Layout Customization

Expand and Collapse Rows in Vertical Grids

Expand and Collapse Data Rows

Do one of the following:

- Focus the row and then press PLUS on the keyboard to expand the row, and MINUS to collapse the row:
- Double-click the row's header.

Address		507 - 20th Ave. E. Apt. 2A	
Postal Co	Count	98122	USA
City	Region	Seattle	WA
Home Phone	(206) 555-9857		
Extension	5467		

- Click the row's expand button.

Address		507 - 20th Ave. E. Apt. 2A	
Postal Co	Count	98122	USA
City	Region	Seattle	WA
Home Phone	(206) 555-9857		
Extension	5467		

Expand and Collapse Category Rows

Do one of the following:

- Focus the row and press PLUS on the keyboard to expand the row, and MINUS to collapse the row.

Employee		
First Name	Nancy	
Last Name	Davolio	
Title	Sales Representative	
Title Of Courtesy	Ms.	
Birth Date	12/8/1958	
Hire Date	5/1/1992	

- Double-click the row.
- Click the row's expand button.

Employee		
First Name	Nancy	
Last Name	Davolio	
Title	Sales Representative	
Title Of Courtesy	Ms.	
Birth Date	12/8/1958	
Hire Date	5/1/1992	

Expand Rows Recursively

To expand a row and all its child rows that have nested rows, focus the row and press MULTIPLY on the keyboard.

Resize Rows and Columns in Vertical Grids

Resize Rows

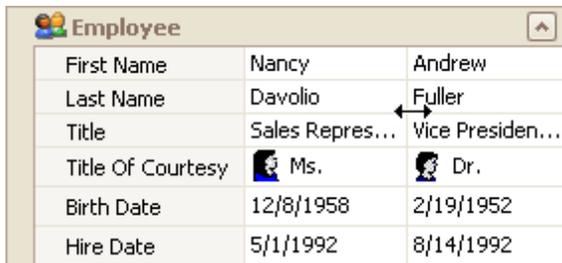
To resize a row, drag the row header's bottom edge vertically.



Employee	
First Name	Nancy
Last Name	Davolio
Title	Sales Representative
Title Of Courtesy	Ms.
Birth Date	12/8/1958
Hire Date	5/1/1992

Resize Columns

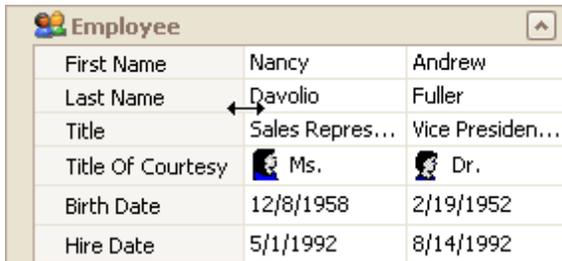
To resize data columns, drag a separator between data columns horizontally.



Employee		
First Name	Nancy	Andrew
Last Name	Davolio	Fuller
Title	Sales Repres...	Vice Presiden...
Title Of Courtesy	Ms.	Dr.
Birth Date	12/8/1958	2/19/1952
Hire Date	5/1/1992	8/14/1992

To resize the header column, do one of the following.

- Drag the header column's right edge.



Employee		
First Name	Nancy	Andrew
Last Name	Davolio	Fuller
Title	Sales Repres...	Vice Presiden...
Title Of Courtesy	Ms.	Dr.
Birth Date	12/8/1958	2/19/1952
Hire Date	5/1/1992	8/14/1992

- Press CTRL+LEFT ARROW to decrease the header column's width. Press CTRL+RIGHT ARROW to increase the header column's width.
- To resize headers to the minimum width while making sure all content is visible, double-click a header's right edge.

Navigation

Action	Description
Clicking a data cell	Moves focus to the clicked cell.
Clicking a row header	Moves focus to the corresponding row while preserving column focus.
ARROW keys	Moves focus to the next cell in the corresponding direction.
TAB SHIFT+TAB	Moves focus to the next/previous cell.
HOME END	Moves focus to the first/last cell within the current row.
PAGE UP PAGE DOWN	Moves focus one page up or down.
CTRL+HOME	Moves focus to the first cell of the grid control.
CTRL+END	Moves focus to the last cell of the grid control.
CTRL+TAB	Moves focus away from the control to the next control, in tab order.