

Excel 2007 Advanced: Part II

Stephen Moffat, The Mouse Training Company

 Microsoft®
Office 2007

Excel: Advanced Part II



Stephen Moffat, The Mouse Training Company

Excel 2007 Advanced

Part II



Excel 2007 Advanced: Part II

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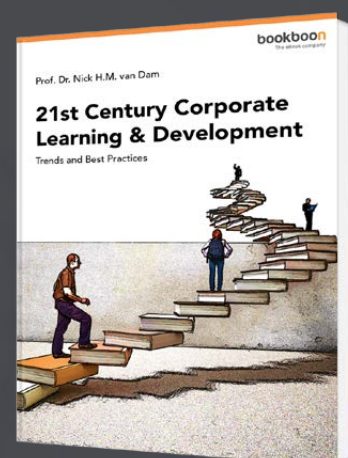


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Section 4 Charts

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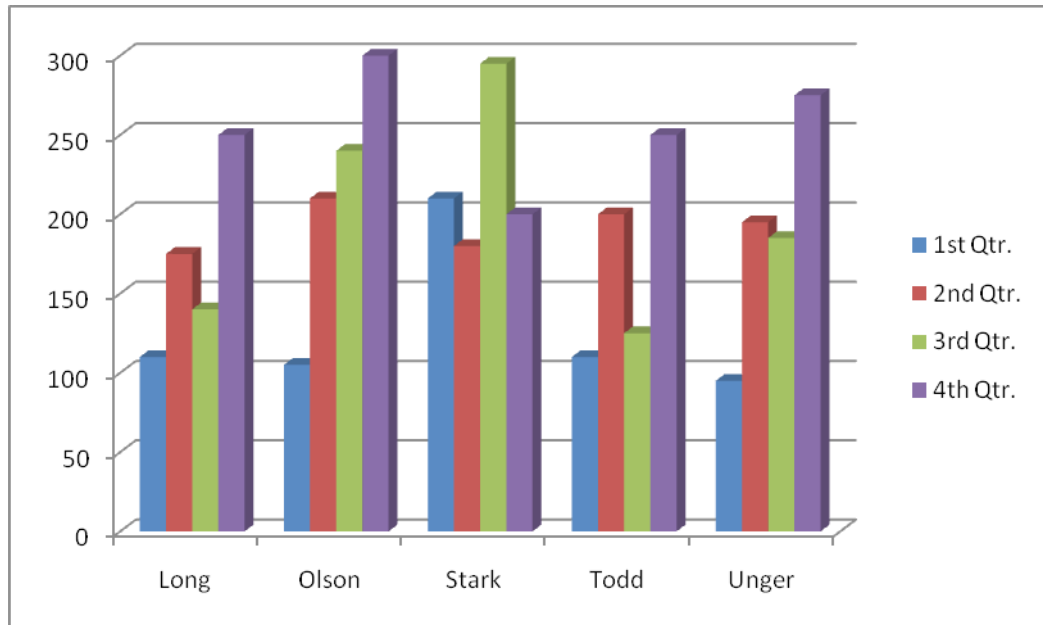
➤ Objectives

By the end of this section you will be able to:

- Create embedded charts
- Create separate page charts
- Change chart types and formats
- Add and remove chart data
- Add trend lines to charts
- Create picture charts

4.1 Introduction to Charting

One of the most impressive aspects of Excel is its charting ability. There are endless variations available, allowing you to produce a chart, edit and format it, include notes, arrows, titles and various other extras as desired. This manual will look at many of the issues involved in producing and formatting Excel charts.



Charts are based on data contained in Excel Worksheets. It is necessary to understand how Excel picks up the data to be used in a chart because the way in which the data is laid out will influence how the chart is presented.

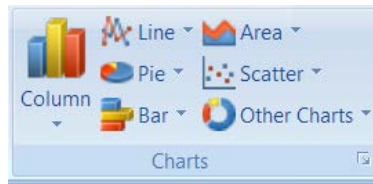
Excel offers a wide range of types and formats from which you can choose when producing charts. However, the charts themselves can exist in different forms and it is important to understand the difference between them. The first form is an embedded chart, the second is a separate chart page.

Terminology

As a starting point, there are some terms used in charting which should be understood by you. The terms defined below relate to the example car sales worksheet and column chart which appear beneath the table:

Data Point	An individual figure on the spreadsheet which is reflected in the chart e.g. Fred's Orion sales figure
Data Series	A collection of related data points, e.g. all of Fred's figures, which will appear on a chart as markers (bars, for example) of the same colour
Legend	The "key" to the chart, identifying which patterns/colours relate to which data series
Marker	A bar, column, or slice of pie for example, representing a data point
Category	The category axis appears across the bottom of a graph (pie charts excepted) and the categories are listed here. Points within the different data series are grouped by category

Embedded Charts



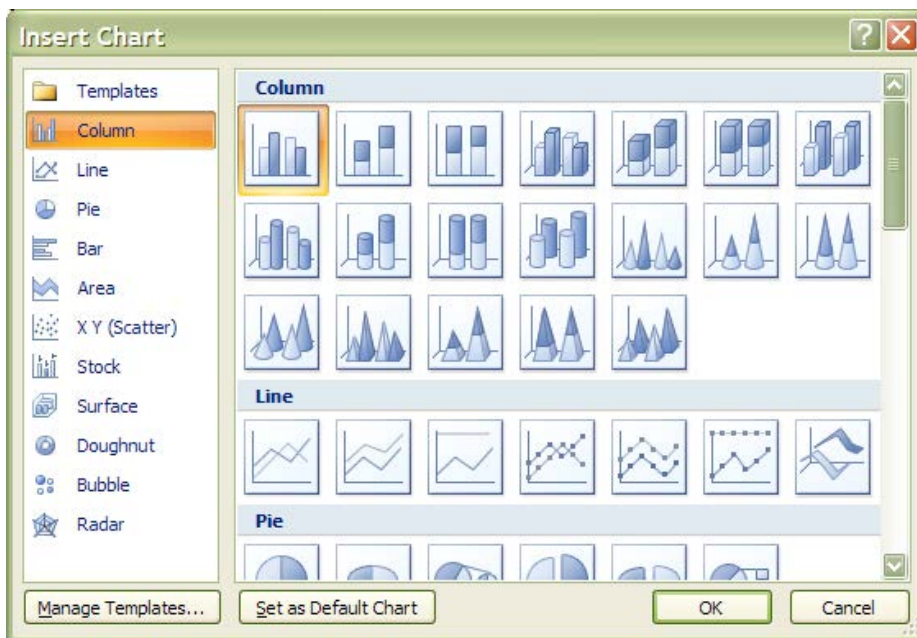
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An embedded chart appears on the worksheet where it was created. It is an embedded object, which does not normally appear in its own window, and has no separate existence apart from the worksheet. The chart is saved only when the worksheet file itself is saved, and will be printed with the worksheet in which it is embedded. You may choose to have an embedded or separate chart at any time. All charts whether embedded or separate are created from the **INSERT** ribbon in the **CHARTS** group.



Separate Chart Pages

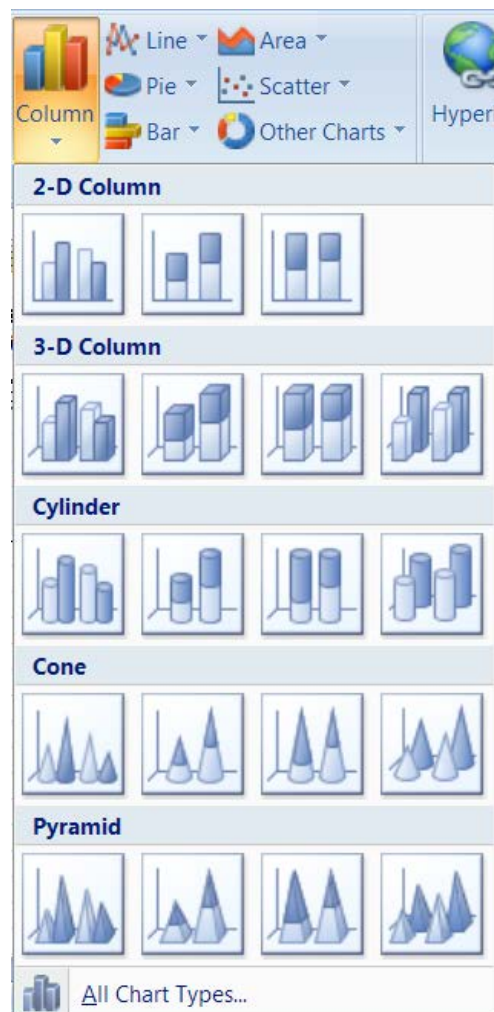
A chart sheet, although linked to the worksheet whose figures it represents, exists as a separate page in a workbook. The F11 key is very useful for creating a default chart from selected data as a new sheet within the workbook

Some chart elements to be aware of.

Chart Element	Description
Titles	This is the area where you can specify the titles to have on the chart (i.e. X-axis "1998", Z-axis "GBP")
Axes	Here you specify whether you want a Y/Z axis and whether you are using timescales to plot your data
Gridlines	The gridline ribbon allows you to switch on and off horizontal and vertical gridlines
Legend	Use this ribbon to switch the legend on and off or reposition it
Data Labels	The Data Labels ribbon allows you to display the amount each point represents or display the label (i.e. in the example above, each cylinder would have Qtr1, Qtr2 displayed as appropriate at the top of each data marker)
Data Table	The Data Table ribbon will display a grid underneath the chart that will show the information that is being plotted.

Three Methods To Create Charts

- To create a chart



Mouse

- Select data for chart.
- Go to the **CHARTS** group on the **INSERT** ribbon. Select a chart type and click
- The menu on the left appears.
- Hovering your mouse over a chart type will bring up an explanation of that chart type
- When you have chosen click once to select a chart type
- The chart is now created based on the selected data as an embedded chart.

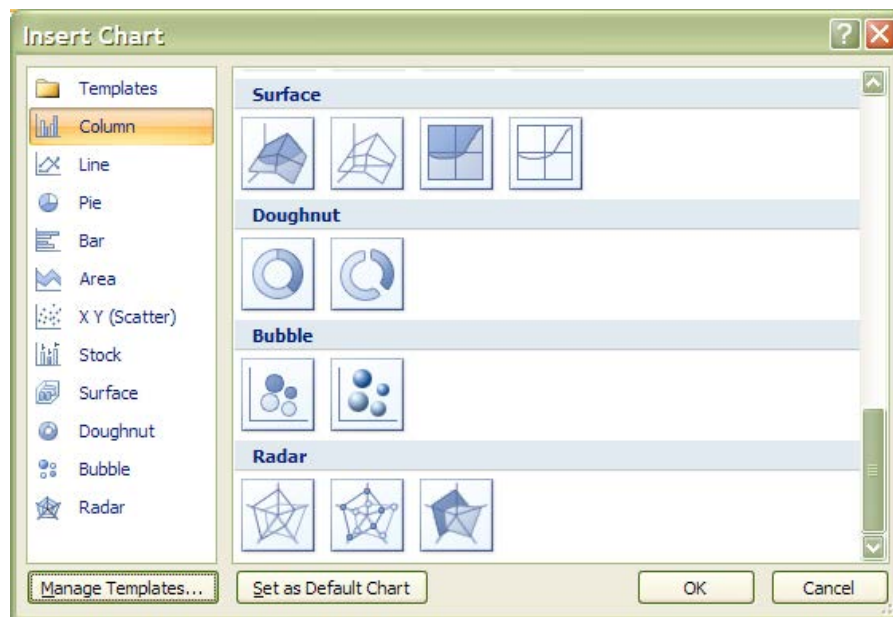
OR

Keyboard

- a) Select Data for chart
- b) Press the F11 Key
- c) Default chart will be created as a chart on a separate sheet.

OR

- a) Select data for chart.
- b) Click on the **DIALOG BOX LAUNCHER** on the **CHARTS** group on the **INSERT** ribbon.



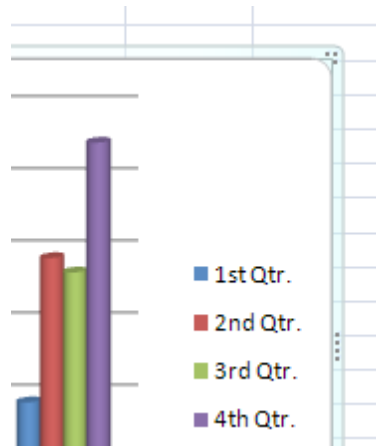
- c) The following dialog will appear
- d) Select a type from the left hand section and a sub type from the right hand section.
- e) Click OK to create the chart.
- f) This will be created as an embedded chart

Moving And Resizing Embedded Charts

Once the chart object has been created and stored as an embedded object, you can move and resize it.

➤ **To move an embedded chart:**

Mouse



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- a) Move mouse over the chart frame border your mouse cursor should have a four pointed black arrow
- b) Click on the chart frame border and hold the mouse button down as you drag. Release the mouse when the chart is in the desired location.

➤ **To resize an embedded chart:**

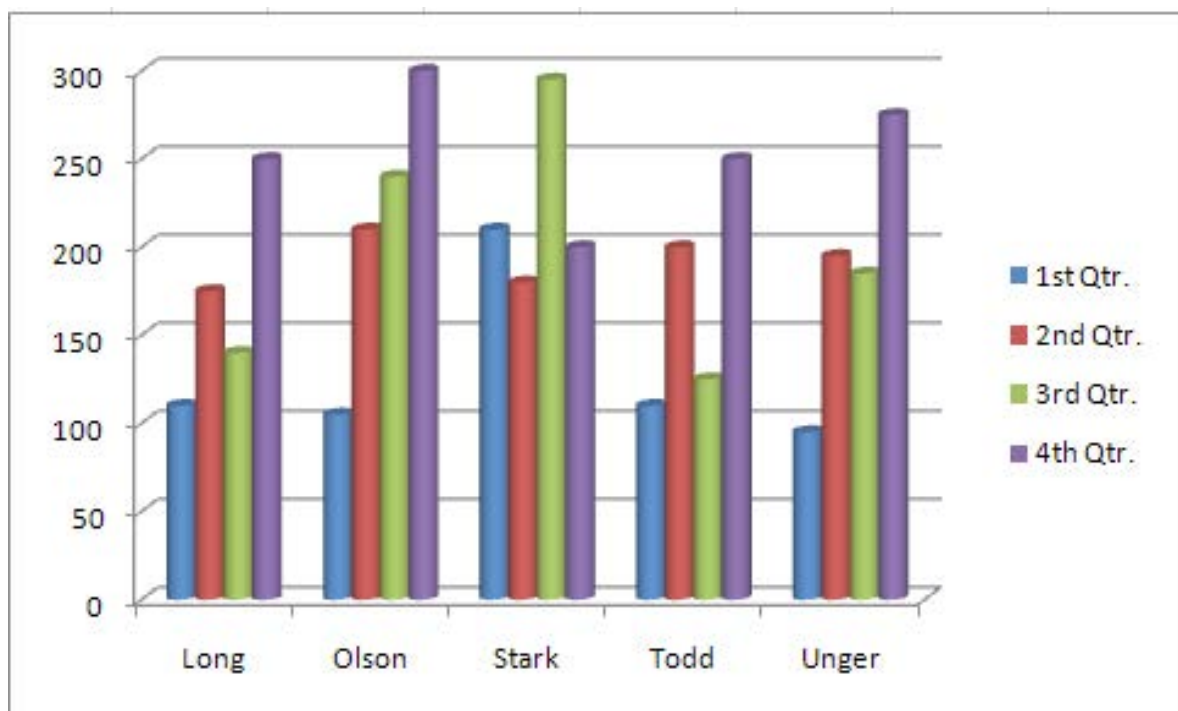
Mouse

- a) Move your mouse over the dotted handles on the Chart frame border.
- b) The mouse cursor should change to a double arrow.
- c) Click and Drag up, down, left or right.

Hold down the [ALT] key if you wish the chart to resize by snapping to the cell gridlines

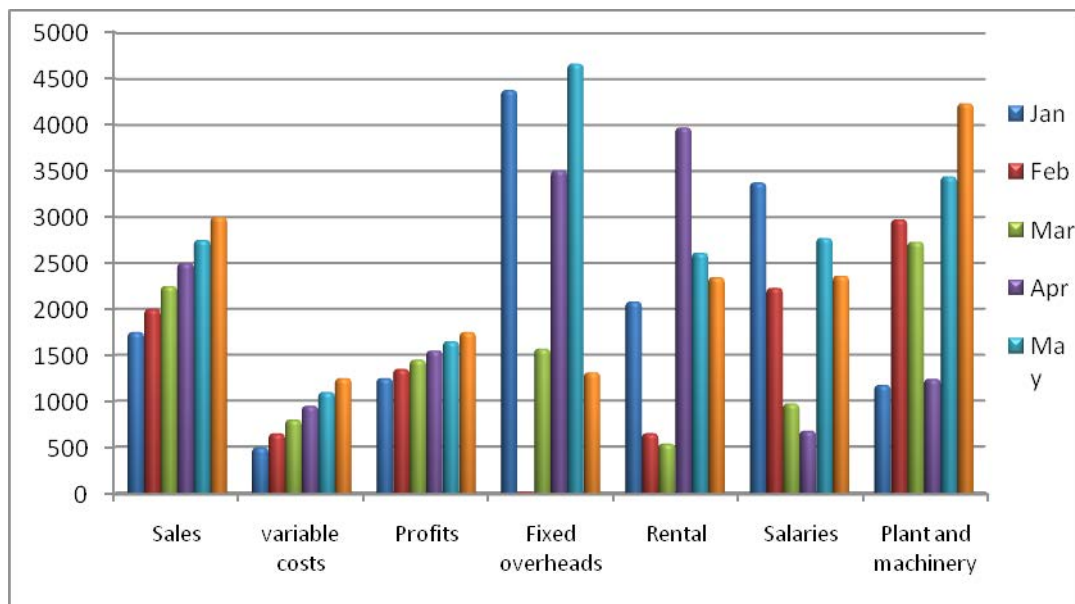
Data Layout

Depending on the “shape” of the selected data, Excel will assign categories and data series to either the rows or columns of information. Usually it will be assumed that there are more categories than data series, therefore, if there are more rows than columns of selected information, the data series will be based on columns, with the legend labels being picked up from the row across the top of the selected area and the category labels being picked up from the leftmost column:



Last Year's Sales Figures				
<i>Australian Division</i>				
<i>Name</i>	<i>1st Qtr.</i>	<i>2nd Qtr.</i>	<i>3rd Qtr.</i>	<i>4th Qtr.</i>
Long	110	175	140	250
Olson	105	210	240	300
Stark	210	180	295	200
Todd	110	200	125	250
Unger	95	195	185	275

If there are more columns than rows in the selected area, the data series will be based on rows, with the legend labels being picked up from the leftmost column and the category labels taken from the top row of the selected area:

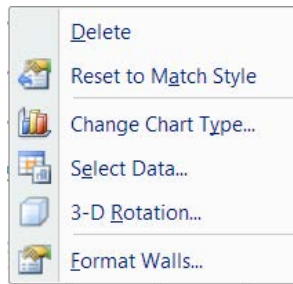


If the number of rows and columns is the same, Excel will opt for data series in rows. It is possible to override the choice made by Excel in how the data series and categories are decided. Details of this procedure will be found under the section on manipulating data.

	A	B	C	D	E	F	G
1	Steady Increase		Profits Figures				
2		Jan	Feb	Mar	Apr	May	Jun
3	Sales	1750	2000	2250	2500	2750	3000
4	variable costs	500	650	800	950	1100	1250
5	Profits	1250	1350	1450	1550	1650	1750
6	Fixed overheads	4376	18	1570	3508	4662	1313
7	Rental	2082	653	539	3969	2611	2345
8	Salaries	3374	2230	975	679	2772	2361
9	Plant and machinery	1176	2972	2730	1243	3439	4232

Shortcut Menu (Right Click)

You may be familiar with the Shortcut menus associated with the selected cell(s) on the Excel worksheet. When working on a chart - embedded either on a worksheet or in its own window, clicking on the chart with the secondary mouse button will call up a Charting Shortcut menu.



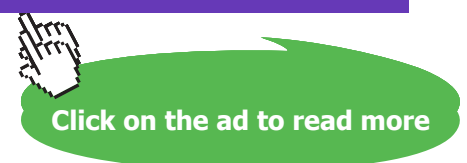
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The Shortcut menu will contain a selection of choices from some of the Standard Menu bar options mostly relating to the chart as an embedded object - almost like a graphic on the worksheet.

Chart Types

There are several different types of chart available within Excel. The type to choose will vary depending on the data involved and what information the chart is intended to convey or highlight. Practice will improve your instinct on which type of chart to use in each instance. Initially it may be useful to try different types until the result is reasonably close to your requirements, and then add custom formats and elements as desired. Some chart types are very specialised and may only be of use to particular business sectors.

► Available Types Of Chart

Selecting any of the types listed will apply a given chart type to the active chart. The most useful types available and some of their applications have been summarised below:

Area



Area charts can be 2 or 3-dimensional. They are used to compare the change in volume of a data series over time, emphasising the amount of change rather than the rate of change. Area charts show clearly how individual data series contribute to make up the whole volume of information represented in the graph.

Bar



Bar charts can be 2 or 3-Dimensional. They are used to show individual figures at a specific time or to compare different items. Categories are listed vertically, so that bars appear on the horizontal, thus there is less emphasis on time flow. Bars extending to the right represent positive values while those extending left represent negative values.

Column



Column charts can be 2 or 3-Dimensional. They are frequently used to show variation of different items over a period of time. Categories (often days or months for example, representing a progression of time) are listed horizontally and columns are displayed side by side, making for easy comparisons. Two variations on the theme of Column charts are represented by further tools on the Chart toolbar. The Stacked Column chart can be used to show variations over a period of time, but also shows how each data series contributes to the whole. A further variation on the 3-D column chart produces 3-D columns in a 3-D plot area, receding away from the viewer.

Line



Line charts can be 2 or 3-Dimensional. Line charts are used to compare trends over time. There are similarities with Area charts, but line charts tend to emphasise the rate of change rather than volume of change over time. 3-D lines appear as “ribbons” which can be easier to see on the chart.

Pie

Pie charts can be 2 or 3-Dimensional. They are used to compare the size of the parts with the whole. Only one data series can be plotted, making up 100%. Pie charts within their own window can be made to “explode” by dragging one or more pieces of pie away from the centre.

Radar

Each category in a radar chart has its own axis radiating from the centre point. Data points are plotted along each spoke, and data points belonging to the same series are connected by lines.

Xy Scatter Charts

XY charts are used to compare two different numeric data series, and can be useful in determining whether one set of figures might be dependent on the other. They are also useful if the data on the X axis represents uneven intervals of time or increments of measurement.

3-D Surface

3-D Surface charts present information in an almost topographical layout. They can be used to pinpoint the high and low points resulting from two changing variables. It can be helpful to think of a 3-D surface chart as a 3-D Column chart which has had a rubber sheet stretched over the tops of the columns.

Combination

A combination chart allows you to overlay one 2-Dimensional chart type on top of another. This can be useful for comparing different types of data, or for charting data requiring two different axis scales. Once the combination chart has been set up, the actual type of the main or overlay chart can be changed by you.

➤ **To change the chart type:**

Mouse

- a) Click on chart to be changed..
- b) Go to the **CHARTS** group on the **INSERT** ribbon. Select a chart type and click
- c) Hovering your mouse over a chart type in the menu will bring up an explanation of that chart type
- d) When you have chosen click once to select a chart type
- e) Your chart will have changed

OR

- a) Click on the **DIALOG BOX LAUNCHER** on the **CHARTS** group on the **INSERT** ribbon. The **INSERT CHART** dialog will appear

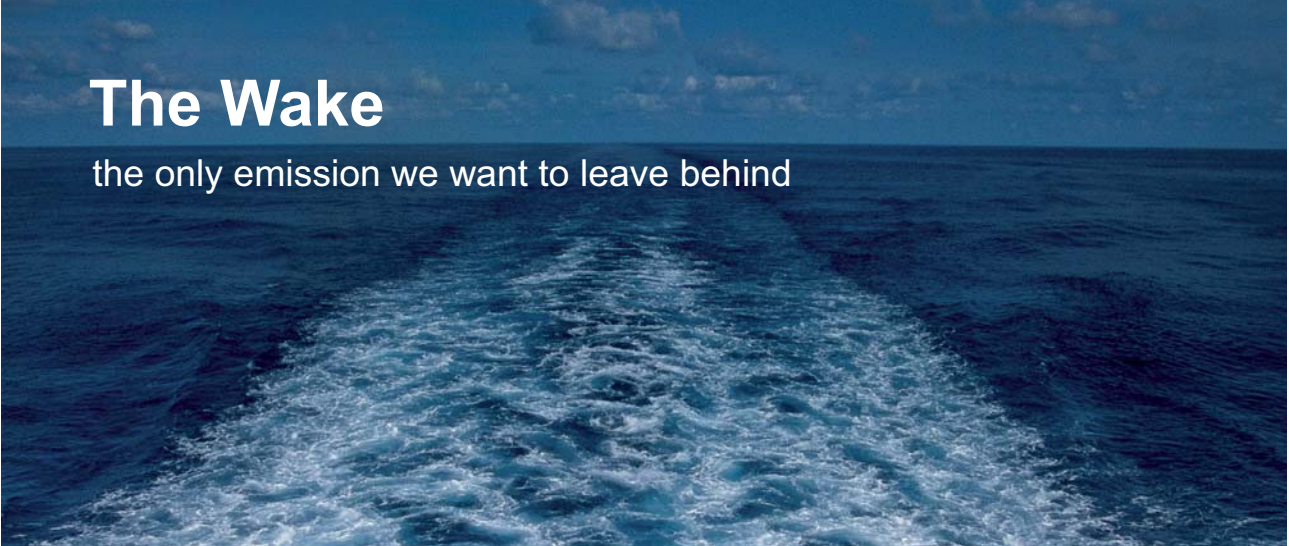
- b) Select a type from the left hand section and a sub type from the right hand section. Click **OK** to change the chart type

OR

- a) Right click on the chart to call up the shortcut menu Click on **CHANGE CHART TYPE**
- b) The **INSERT CHART** dialog will appear Select a type from the left hand section and a sub type from the right hand section. Click **OK** to change the chart type

OR

- a) Click on **CHANGE CHART TYPE** on the **TYPE** group on the **DESIGN** ribbon. The **CHANGE CHART TYPE** Dialog box will appear
- b) Select a new chart type
- c) Click **OK**




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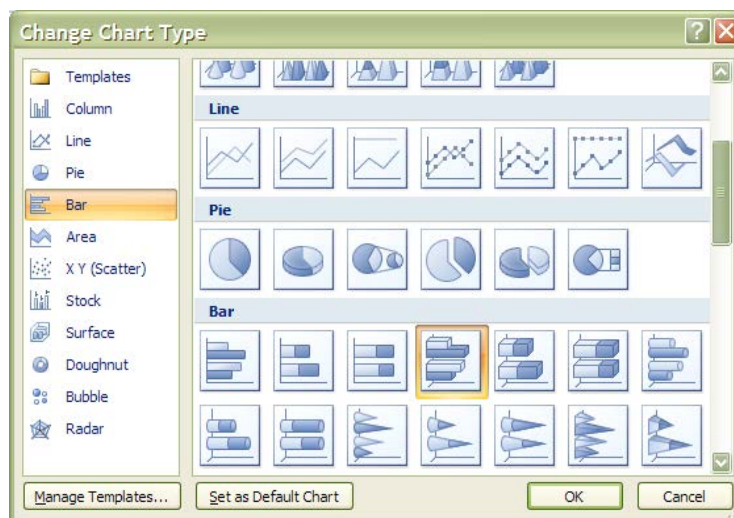
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Default Chart Type

The default graph setting in Excel is set to a simple 2-dimensional column chart, however you can change the default to any of the types offered within the chart type dialog.



► To set the default chart type:

Mouse

- Click on the **DIALOG BOX LAUNCHER** on the **CHARTS** group on the **INSERT** ribbon.
- The following dialog will appear
- Select a type from the left hand section and click on the specific format that you want the chart to have from the gallery of pictures on the right.
- Click the **SET AS DEFAULT CHART** button.
- New charts created from now on will use the default format as defined by you when pressing F11

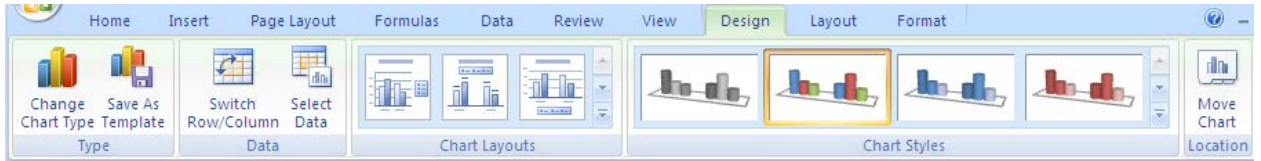
4.2 Formatting Charts

There are several different ways of formatting the various elements in a chart. Some formats, such as adding a legend can be applied to a chart using the following sections

Calling up the Shortcut menu on a Chart will also allow you to access the dialog boxes which can be used to change formatting on the entire chart.

Design Ribbon

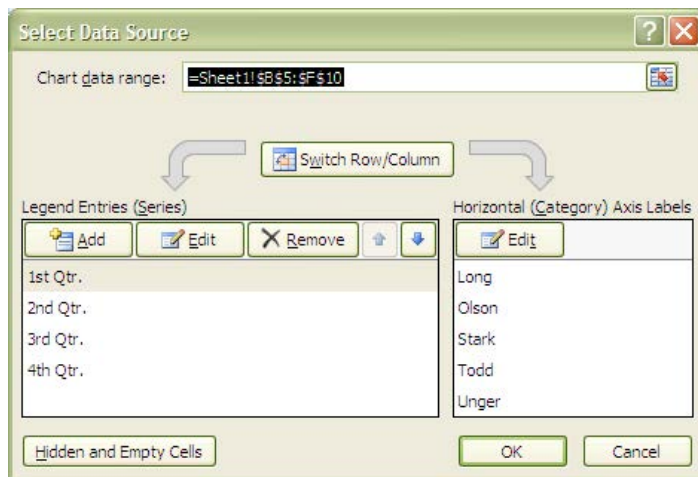
The **DESIGN** ribbon is to change some very basic aspects of your chart globally for the chart we have already looked at changing the chart type. We will look at creating some of our own later on



➤ **To change data source**

Mouse

- a) Click on Chart.
- b) Click on **SELECT DATA** in the **DATA** group the following dialog will appear
- c) In the **CHART DATA RANGE** box a highlighted range will be seen.
- d) If you need a completely new range then delete the values in this box and select a different range for your chart.
- e) Click on **OK**.

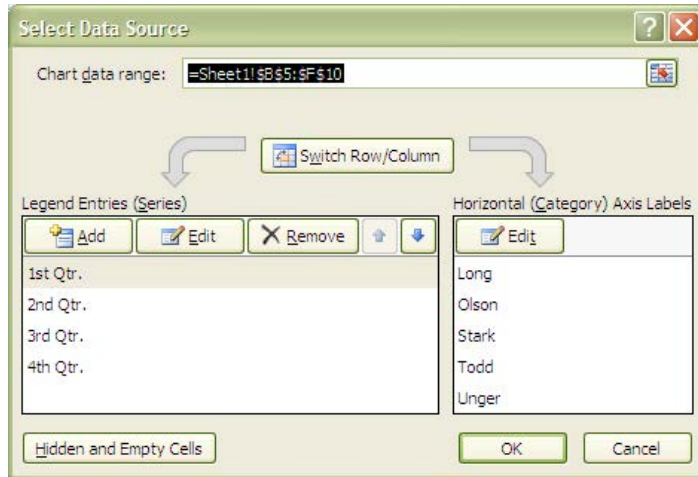


Be sure to include the row and column labels in this range. If you wish you may select more than one range by holding down the [CTRL] key down after you have selected your first range and then select another range.

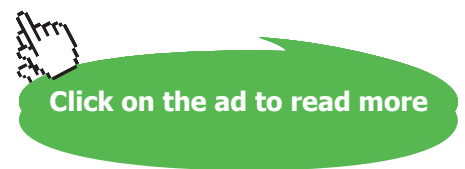
➤ **To add or remove a series or category.**

Mouse

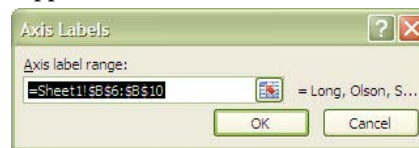
- a) Click on Chart.
- b) Click on **SELECT DATA** in the **DATA** group the **SELECT DATA SOURCE** dialog will appear



- c) In the **LEGEND ENTRIES (SERIES)** box click on **ADD** the **EDIT SERIES** dialog will appear.
- d) In the series name box select the cell that holds the series Label
- e) In the series values box select the range of cells that will make up the data for that series.



- f) Click **OK**
- g) In the **HORIZONTAL (CATEGORY) AXIS LABELS** box click on **EDIT**
- h) The **AXIS LABELS** dialog will appear



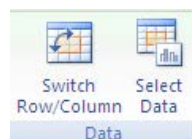
- i) Reselect the range that will include any new category labels.
- j) Click **OK**, and **OK** again to apply the new data to your chart.

➤ To delete a series

Mouse

- a) Click on Chart.
- b) Click on **SELECT DATA** in the **DATA** group the **SELECT DATA SOURCE** dialog will appear
- c) Select the series you wish to delete.
- d) Click on **DELETE** the series will be removed.

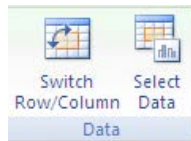
➤ To delete a category



- a) Click on Chart.
- b) Click on **SELECT DATA** in the **DATA** group the **SELECT DATA SOURCE** dialog will appear
- c) Click on the **SWITCH ROW/COLUMN** button. What was a category has now become a series
- d) Now delete series as previously explained.
- e) Click on the **SWITCH ROW/COLUMN** button on the dialog box. What were series have now become categories with the category you wished, removed.

Switch Rows And Columns

- **To switch between rows and columns**



Mouse

- a) Click on Chart.
- b) Click on **SELECT DATA** in the **DATA** group the **SELECT DATA SOURCE** dialog will appear
- c) Click on the **SWITCH ROW/COLUMN** button. What was a category has now become a series

OR

Mouse

- a) Click on chart.
- b) Click on Chart.
- c) Click on **SWITCH ROW/COLUMN** in the **DATA** group
- d) Your data has now switched rows to columns

This facility may not be available if multiple data ranges have been selected for your chart especially if they are different sizes from different locations.

Changing The Chart Layout

As discussed earlier a chart is made up from many elements that can be turned on or off depending on the type of chart or arranged in different places on the chart. To change the layout swiftly instead of laboriously changing each element the change layout tool allows some quick global options.

- **To change the chart layout**



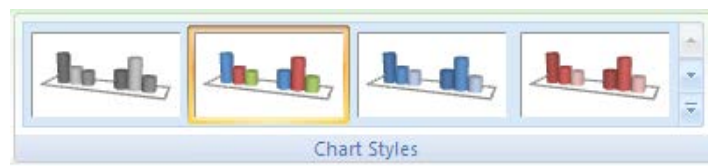
Mouse

- a) Click on the drop down arrow on the **CHART LAYOUT** group
- b) Select a chart Layout
- c) The layout is applied

Chart Styles

A chart style is mainly a theme of formatting for your chart using the existing elements of your chart There are some very exciting colour schemes in this feature

➤ To apply a chart style



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Project Management

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Motivation

Coaching

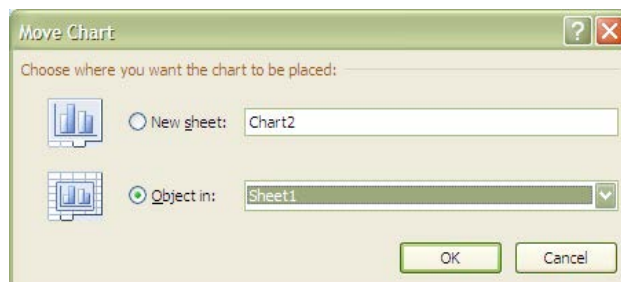
Mouse

- a) Select chart
- b) Click on the drop down arrow to the right of the **CHART STYLES** group.
- c) Select a chart style
- d) Your chart should now adopt the style chosen.

If the chart style is not to your liking apply another style following the same method until you have a style close to what you wish. We will look at formatting the various elements in a later chapter to achieve exactly what you want

Moving Chart Location

If you usually use one method to create a chart you will regularly get either a separate sheet chart or an embedded one and you may wish to switch between the two types. Or move your embedded chart to a different sheet within your workbook.

► To move embedded chart between sheetsMouse

- a) Click on **MOVE CHART** on the **LOCATION** group. A dialog will appear.
- b) Click on drop down arrow to the right of **OBJECT IN** select the sheet you wish to move it to
- c) Click **OK**

➤ **To switch between embedded and separate sheet**

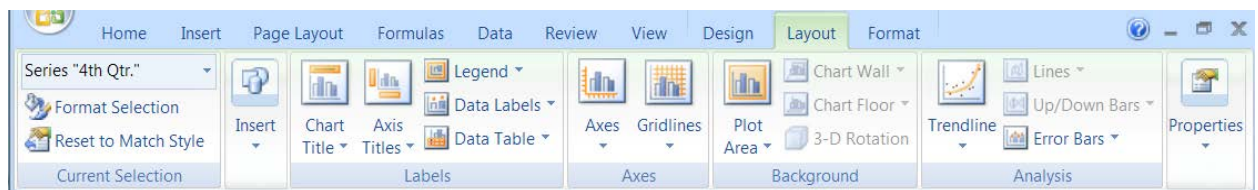
Mouse

- a) Click on **MOVE CHART** on the **LOCATION** group. A dialog will appear.
- b) Click on New sheet
- c) Name sheet in the text box
- d) Click on **OK**
- e) Embedded chart will now be on a separate sheet with the given name.

*To create an embedded chart from a separate sheet chart simply **CHOOSE AS OBJECT** in the dialog box and select a sheet to place it as an embedded object.*

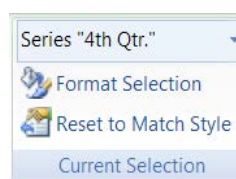
Layout Ribbon

The Layout ribbon allows us to format, add or remove various elements of a chart. Some tools are only available, however for certain types of chart. E.G. you cannot apply 3D rotation to a 2D chart.



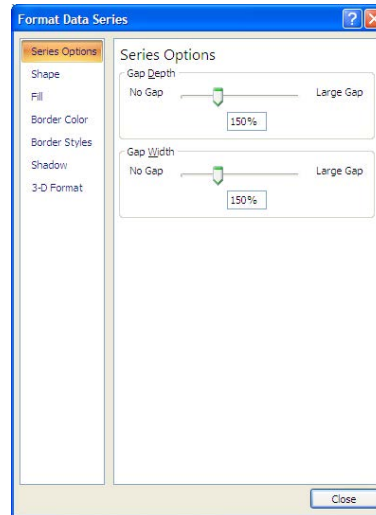
Formatting Chart Elements

➤ **To select and format a chart element.**



Mouse

- a) Go to the **LAYOUT** ribbon.
- b) To select an element of your chart, click on the drop down arrow to the right of top box in the **CURRENT SELECTION** group.



- c) Click on a chart element. That element will be selected
- d) Click on **FORMAT SELECTION** in the **CURRENT SELECTION** group, the following dialog will appear.
- e) The left hand section of the dialog will give the various categories of how you may format your selection (These options may vary depending on the selection.)
- f) The right hand section contains the available formats for that category.
- g) Clicking on each category and setting your format choices will immediately affect you chart.
- h) When you are satisfied with your formatting choices, click **CLOSE**.

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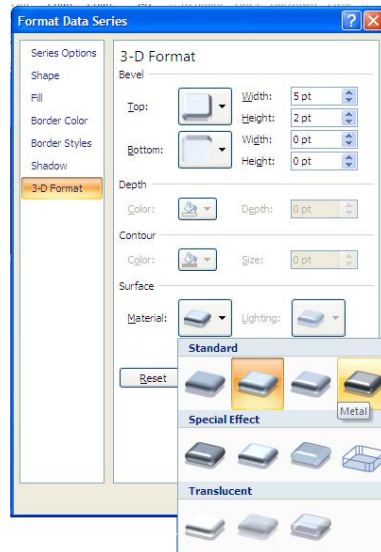
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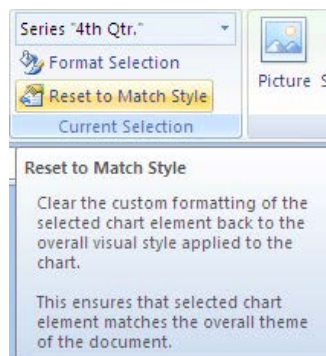




Many of the options displayed in the category options section may involve other drop down boxes to make a selection. (see picture) if you move your mouse over these possible selections a help tip should appear to give you a description of that choice BEFORE actually making a selection. Any choice already applied will already be selected and have a different colour.

Resetting Custom Formats

When experimenting with various formats you may find it difficult to remember exactly what settings were applied to a specific element and therefore you would find it difficult to make it appear as it once was. Resetting the format of specific chart elements can be very useful.



➤ **To reset an element**

Mouse

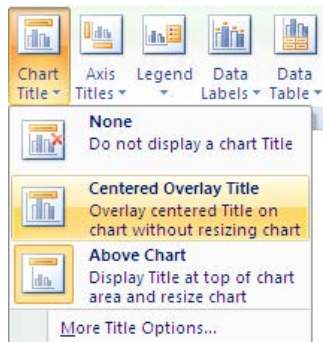
- Make a selection of element to be reset
- Click on **RESET TO MATCH STYLE** button on the **CURRENT SELECTION** group.
- The selected element will revert back to the original format settings of the applied chart style.

Adding, Removing And Formatting Labels



Information labels on your chart are very important on your chart especially if it is on a separate sheet. The **LABELS** group offers a selection of labels you may wish to show or hide on your chart. The chart layout choices previously explained uses a mixture of labels in different locations on your chart but you may wish to put specific labels on your chart and format them yourself and place them where you wish.

➤ **To add or remove labels.**



Mouse

- Select chart if embedded
- Click on drop down arrow of type of label you wish to add or remove from the **LABELS** group.
- Make a selection from choices present.
- Label will appear or disappear dependant on choice

e.g.

- e) Use the **Data Labels** button on the **LABELS** to write the values or the labels on the data markers.
- f) Use the **Data Table** button on the **LABELS** to add the plot data so that it is visible on the chart itself.

➤ **To format labels**

Mouse

- a) Select label element from drop down box in the **CURRENT SELECTION** group as mentioned previously.
- b) Click on **FORMAT SELECTION** in the **CURRENT SELECTION** group as mentioned previously.

➤ **To edit label text**

Mouse

- a) Select label as previously discussed.
- b) Click within the label and delete and retype with the text you require.
- c) Click off label



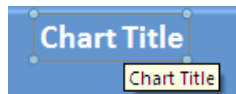
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About e-Learning for Kids Established in 2004, e-Learning for Kids is a global nonprofit foundation dedicated to fun and free learning on the Internet for children ages 5 - 12 with courses in math, science, language arts, computers, health and environmental skills. Since 2005, more than 15 million children in over 190 countries have benefitted from eLessons provided by EFK! An all-volunteer staff consists of education and e-learning experts and business professionals from around the world committed to making difference. eLearning for Kids is actively seeking funding, volunteers, sponsors and courseware developers; get involved! For more information, please visit www.e-learningforkids.org.

➤ **To move or resize chart elements**

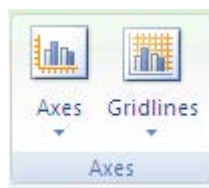
Mouse



- a) Make a selection of a chart element. (E.G. a label)
- b) Handles will appear at each corner to show selection.
- c) Moving mouse over label border should show a 4 pointed Black arrow. This appears to indicate that you are in the right position to click and drag to move the selected element.
- d) Clicking within the label to edit the text the label will automatically resize to the size of the text entered

Selecting an element like the plot area will allow a double black arrow when moving over a handle. Clicking and dragging will resize that element.

Axes



For various types of charts you may not wish to see both axes on the chart you are able to hide or show these axes dependant on your needs.

➤ **To add or remove axes from chart**

Mouse



- a) Select chart if embedded.
- b) Click on drop down button on **AXES** button on **AXES** group
- c) Select **PRIMARY HORIZONTAL** or **PRIMARY VERTICAL AXIS**.
- d) Make a selection from choices shown.

Selecting more primary horizontal or vertical options opens the formatting dialog which would appear if you selected the axis and formatted it. Using the axes menu is best for turning it off or on.

➤ **To format the Category (X) Axis:**

Mouse

- a) Under **TICK MARK TYPE**, you may click on the appropriate option button to specify that tick marks on the axis will appear on the inside or outside of the axis line, cross the axis line, or not appear at all. Minor tick marks can also be included (click on the Scale... button to set the intervals for major and minor tick marks).
- b) The **TICK LABELS** section allows you to dictate where the Labels associated with the selected axis will display. This can be at the High Values end of the axis, the low values end of the axis, next to the axis, or completely suppressed.
- c) Use the **SCALE** ribbon to specify at where the value axis will appear, which categories are labelled and how many categories will appear between each pair of tick marks.
- d) A series of boxes [a]use automatic positioning. The default setting is to have this box checked, which produces a Value Axis at the edge of a given category. Putting a value in the next box down will result in a Value Axis which cuts down the middle of a category. This will also affect the location of tick marks on the axis. Categories may be displayed in reverse order if desired, and the Value Axis may be required to cross at the last plotted category on the chart.
- e) Use the **ALIGNMENT** category to specify the orientation of the category labels.

➤ **To format the Value (Y) axis:**

Mouse

- a) Follow steps described above for the category axis.
- b) The **SCALE** ribbon will have different options relating to the values on the axis.
- c) From the **SCALE** ribbon, you may specify the Minimum and Maximum values to appear on the axis. The intervals to be used as Major and Minor units on the axis may also be set. You may dictate the point at which the value and category axes cross, whether or not the axes are plotted on a Logarithmic Scale, or whether to have the values plotted in Reverse order.

Gridlines

Gridlines are the indicator lines that run across your chart to either divide up your categories or give visual help when deciding on a value for a data point more distant from the value axis. You may need more, or less of these, dependant upon your needs for accuracy or visual impact.

FACTCARDS

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Arriving 33

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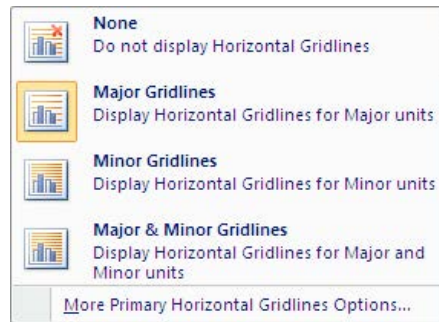
Working 101

Research 50

Factcards.nl offers all the **information** that you need if you wish to proceed your **career** in the **Netherlands**.

The information is ordered in the categories arriving, living, studying, working and research in the Netherlands and it is freely and easily accessible from your smartphone or desktop.

VISIT FACTCARDS.NL



➤ **To change gridline options**

Mouse

- Select chart if it is embedded.
- Click on drop down arrow on **GRIDLINES** on the **AXES** group.
- Choose **PRIMARY HORIZONTAL** or **PRIMARY VERTICAL GRIDLINES** and make a selection from the choices given.

Unattached Text

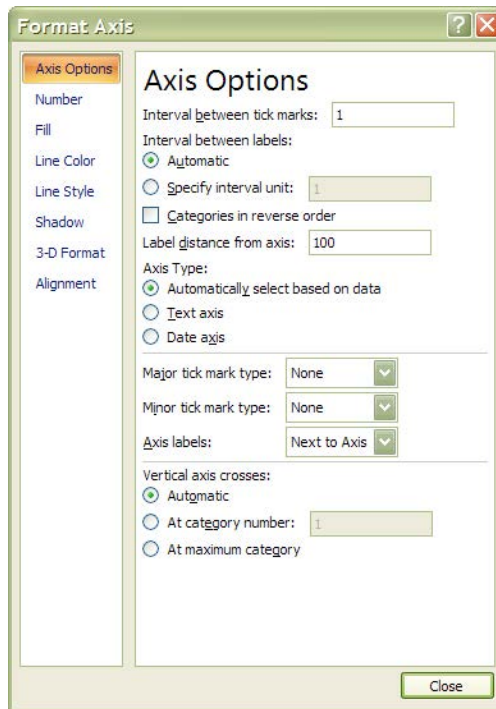
Floating text may be typed directly onto the Chart, then dragged to the desired position.

➤ **To add floating text to a chart:**

Mouse

- Go to the **INSERT** ribbon and select the **TEXT BOX** button click on your chart and a text box will appear. Type required text, resize and format text box and drag to required location.

Format Dialog



➤ Element options

This category varies dependent on what is selected it may show **AXIS, CATEGORY OR SERIES OPTIONS**. For **SERIES OPTIONS** it allows you to change the width of the column or gap between the series. **AXIS OPTIONS** allows you to specify widths and separation options where the axis begins and ends (if available)

➤ Fill

Use the **FILL** category to specify background colours or designs.

➤ Shape

Use this category to set the shape for a selected element (series or data point if available)

➤ Borders

Select the **BORDER** colour to change the border colour and set a border

Set the **BORDER STYLES** category to add a border around the outside of the selected element

➤ **Shadow**

This option allows you to set the shadow depth , colour and direction for the selected element.

➤ **3-D Format**

If you have a chart that has a 3-D format this category will allow you to change many aspects of the 3-D appearance such as the material, lighting, contour, depth and bevel.

Depending on the data being displayed, some data markers on a 3-D chart may be obscured. It is possible to adjust the view so that your data may be seen to its best advantage. You may influence the degree of elevation, perspective or rotation of your chart. A sample chart within the 3-D view dialog box reflects the new views as you change these factors.

Elevation and Rotation can be adjusted either by typing values into the appropriate sections within the dialog box, or by clicking on the arrow buttons displayed around the sample chart. The latter technique is obviously easier.

Elevation dictates the height from which you view the data. Ranging from 90°(above the plot area) to -90°(below the plot area), where 0° represents a view level with the centre of the plot area. With 3-D Pie Charts, the range varies from 10°, almost level with the edge of the pie, to 80°, looking down on the surface of the pie.

➤ **3-D Rotation**

Selecting the plot or chart area will allow you to rotate your chart in any direction or change the perspective of your chart.

Rotation

Rotation allows you to turn the graph on its vertical axis. The range goes from 0°to 360°, where zero views the chart from the front, 90°would view it from the side, and 180° would allow you to see it from the back - effectively reversing the order of the data series for the chart display.

Perspective

Perspective can be changed to make the data at the back of a 3-D chart appear more distant. A perspective of zero means that the farthest edge of the chart will appear as equal in width to the nearest edge. Increasing perspective (up to a maximum of 100) will make the farthest edge appear proportionally smaller.

You may also affect the height of the graph in relation to its width and whether or not you want the axes to remain at right angles. This latter setting would preclude the use of perspective in 3-D charts. Auto-scaling allows Excel to scale a 3-D chart so that, where possible, it is similar in size to its 2-D equivalent.

➤ **Font**

The font for any selected textual element can be set on the **HOME** ribbon from the **FONT** group or right clicking on the highlighted text and using the mini toolbar.

➤ **Formatting The Legend**

The Legend can be selected and formatting like the other chart elements The legend can be positioned manually simply by pointing and dragging it to a new position on the chart, but there are some preset positions which can be selected from legend button in the **LABEL** group

Note that the legend cannot actually be resized. Changing the font size will cause the size of the overall legend to adjust, but it cannot be resized by dragging on the selection handles. No chart element which shows white selection handles (rather than the usual white) can be resized by dragging. Dragging the legend to a new position on the chart will sometimes affect the shape of the legend and the size of the chart. The legend may be placed overlapping the chart. Note that the text appearing in the Legend box is picked up from the worksheet data. Edit the text on the worksheet in order to change the legend text (The legend may be deleted(hidden) by selecting it and pressing the Delete key on the keyboard.



Brain power

By 2020, wind could provide one-tenth of our planet's electricity needs. Already today, SKF's innovative know-how is crucial to running a large proportion of the world's wind turbines.

Up to 25 % of the generating costs relate to maintenance. These can be reduced dramatically thanks to our systems for on-line condition monitoring and automatic lubrication. We help make it more economical to create cleaner, cheaper energy out of thin air.

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Add A Series Manually

► Other methods To add a new data series to a chart:

Mouse

- a) Select the worksheet cells containing the relevant data (including the label to be used if labels were included in the original data).
- b) Copy this data to the clipboard in the usual way.
- c) Activate the chart by clicking on it and choose Edit, Paste. The data series will appear in the chart.

OR

- a) Select the worksheet cells containing the relevant data
- b) If Chart is an embedded chart on current sheet. Drag and drop selected data onto chart.

The added series will invariably come in as the final data series, but the order can be changed by you as outlined later in this document.

The Series Function

If a data series on a chart is selected, the reference area will display the underlying formula. It can be useful to know what elements go to make up the Series function, as you may edit it manually if desired. The Series function includes four arguments:

=SERIES(Series_Name,Categories_Ref,Values_Ref,Plot_Order)

The Series Name can be a reference (Worksheet!Cell) to the cell where the name of this particular data series is being held, or it may consist of text typed in by you and enclosed in quotation marks. The Series Name will be picked up in the legend to describe the data series. The Categories Reference refers to the worksheet name and range of cells where the Category (or x-axis) labels are to be found. If the data series are in rows, the category references will refer to the labels at the top of each column and vice versa. The Values Reference refers to the worksheet name and the range of cells containing the actual values for this data series which are to be plotted on the y-axis (or z-axis on a 3-D chart). The Plot Order number dictates the order in which the selected data series is plotted on the chart and listed on the legend. Often, instead of amending the Series function manually, you may find it easier to edit a data series using the dialog option covered in the earlier section.

Charting With Blocks Of Data


As it is possible to select separate ranges in Excel, it is possible to produce charts based on non-contiguous data. This is vital if some of the information on the worksheet is to be omitted. There are some guidelines to be aware of however. The layout of data is important as was demonstrated at the beginning of this document. The selected ranges must amount to a regular block with consistent height and width measurements so that Excel can interpret it correctly, with categories and data series matching up. Once the data has been successfully selected, choose File, New and click on Chart before clicking on OK, or tap [F11]. An extension of this idea leads to the fact that ranges from separate worksheet files can be included in a single chart. Simply select the worksheet data to be included (subject to the layout provisos above), copy to the clipboard then paste them into the chart.

Section 5 Templates

► Objectives

By the end of this section you will be able to:

- Use the standard Excel templates
- Create Custom templates
- Open and edit templates
- Set template properties



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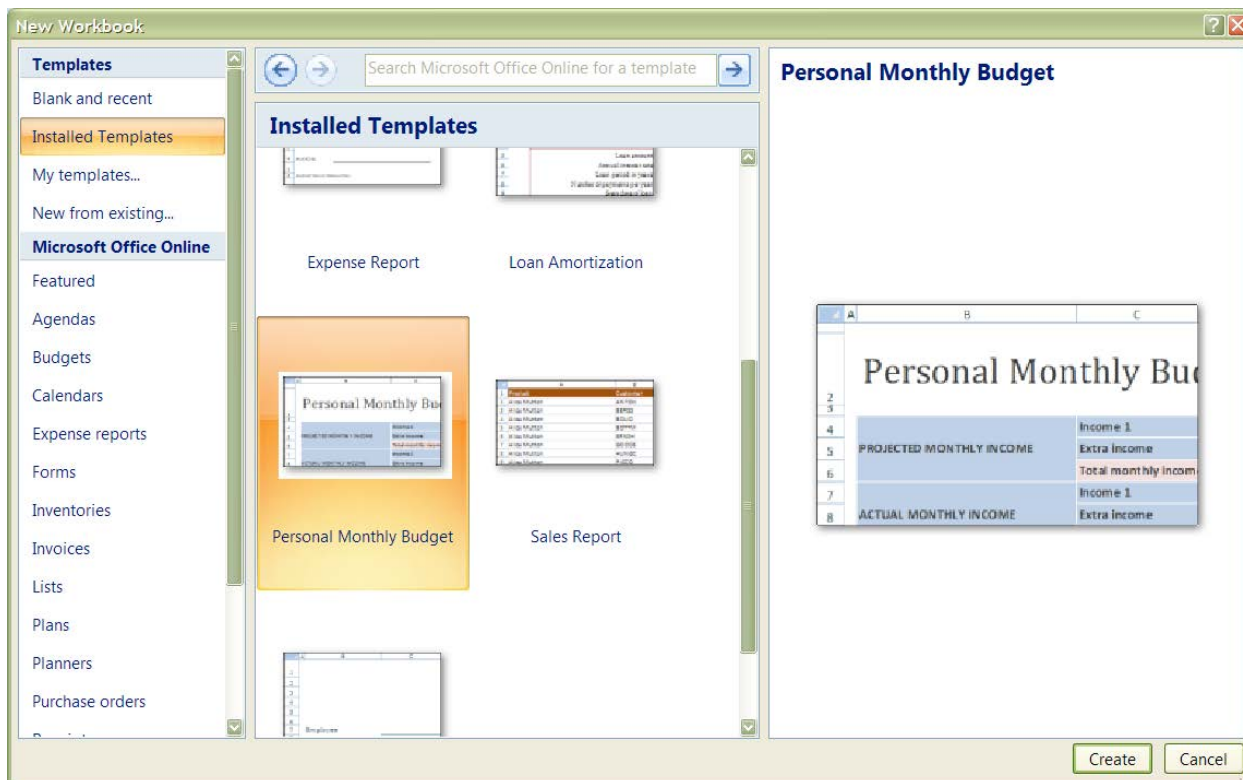
redefining / standards AXA

The advertisement features a young woman with long dark hair, wearing a white blazer, smiling broadly. The background is a blurred city street. A red diagonal line is on the right side. The AXA logo is in the bottom right corner.

5.1 Introduction to Templates

A template is a file used as a form to create other workbooks, sheets and charts. New workbooks created from the template contain the same layout, data, formulae, formats and styles as those of the template. New sheets and charts inserted into a workbook are a copy of the sheet or chart template.


Standard Templates



Excel comes supplied with a selection of templates designed to help in the production of common business and home financial tasks. These templates can be modified for personal use.

► **To use a standard template:**

Mouse

- a)  Click on the **MICROSOFT OFFICE BUTTON** and select the **NEW** button, the dialog above will appear
- b) Click the **INSTALLED TEMPLATES** button on the left to see a list of Excel templates in the centre section of the dialog
- c) Click on the Picture for the template you wish to base the new workbook on to see a preview on the right.
- d) When you have located the template you wish to use click **CREATE**.

OR

- Click on the **MICROSOFT OFFICE BUTTON** and select the **NEW** button, the dialog above will appear
- Click under the **MICROSOFT OFFICE ONLINE** button on the left on a section pertaining to your need to see a list of appropriate Excel templates in the centre section of the dialog.
- Click on the Picture for the template you wish to base the new workbook on to see a preview on the right.
- When you have located the template you wish to use click **CREATE**.

N.B. You must be connected to the internet to use templates from Office online.

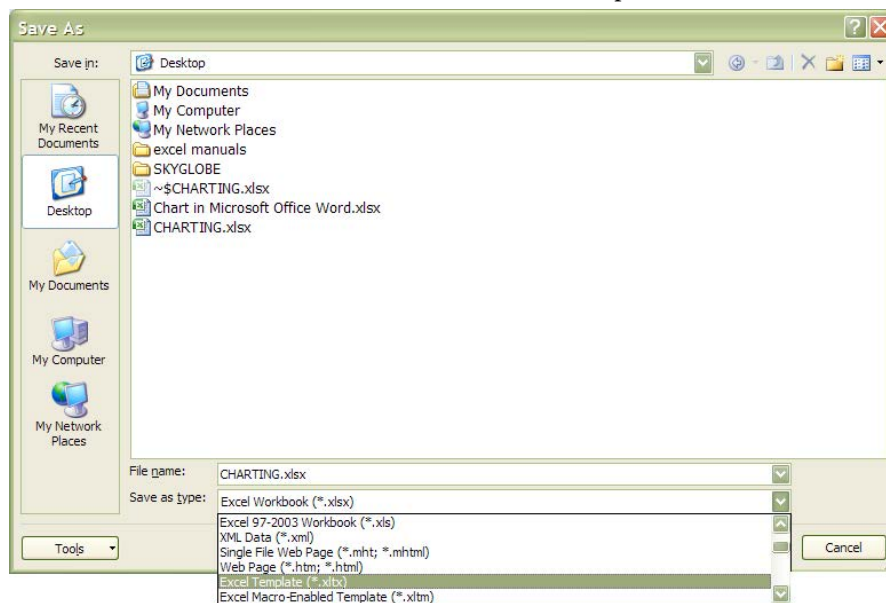
Custom Templates

You can create your own workbook and sheet templates.

- **To create a workbook template:**

Mouse

- Open or create the workbook to be used as the basis for the template.




- Click on the **MICROSOFT OFFICE BUTTON** and select the **SAVE AS** button, click on **EXCEL WORKBOOK**, the save as dialog above will appear
- Type the template name in the **FILE NAME** text box.
- Select **EXCEL TEMPLATE** from the **SAVE AS TYPE** list. An **.XLTX** extension will be added to the template name.

- e) The folder where the file will be stored will automatically change to Templates. By storing all **.XLTX** files in the same folder Excel recognises and keeps track of templates.
- f) Click **SAVE** to save the template.

➤ **To create a worksheet template:**

Mouse

- a) In a new or existing workbook delete all the sheets except the one to be used as the template.
- b)  Click on the **MICROSOFT OFFICE BUTTON** and select the **SAVE AS** button, click on **EXCEL WORKBOOK**, the save as dialog will appear
- c) Type the template name in the **FILE NAME** text box.
- d) Select **EXCEL TEMPLATE** from the **SAVE AS TYPE** list. An **.XLTX** extension will be added to the template name.
- e) The folder where the file will be stored will automatically change to Templates. By storing all **.XLTX** files in the same folder Excel recognises and keeps track of templates.
- f) Click **SAVE** to save the template.

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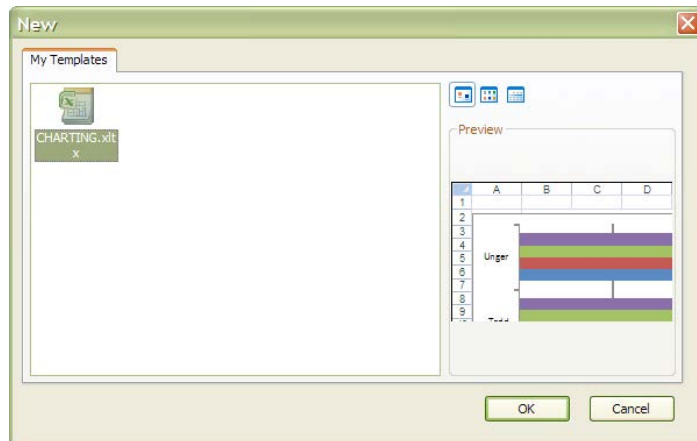
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➤ **To base a new workbook on a template:**

Mouse

- a)  Click on the **MICROSOFT OFFICE BUTTON** and select the **NEW** button, the **NEW WORKBOOK** dialog will appear
- b) Click the **MY TEMPLATES** button on the left a dialog will appear.



- c) Click on the Picture for the template you wish to base the new workbook on to see a preview on the right.
- d) When you have located the template you wish to use click **CREATE**.

➤ **To add a worksheet based on a sheet template:**

Mouse

- a) Click the right mouse button over a sheet tab and choose **INSERT**.
- b) click the icon for the worksheet template you want to base the new sheet on.
- c) Click **OK**

AutoTemplates

An autotemplate is a workbook saved as a template in the XLSTART folder or alternate Startup folder using the specific filename Book.xltx, sheet.xltx, dialog.xltx or macro.xltx. AutoTemplates if they exist will act as the basis for all new items you create in the Excel environment.


The Book.xltx template becomes the default workbook. The Sheet.xltx template becomes the default worksheet.

Opening And Editing Templates

Templates are files just like workbooks. If you need to change a template in any way, simply open, edit and save in the normal way.

➤ To open a template:

Mouse

- a)  Click on the **MICROSOFT OFFICE BUTTON** and select the **OPEN** button
- b) Change the **LOOK IN** location to the Templates folder.
- c) Select the name of the template you want to open. click **OPEN**

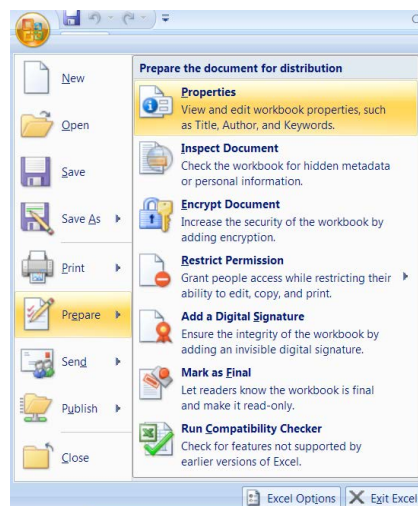
➤ To edit a template:

Mouse

- a) Make changes in the open template.
- b)  Click on the **MICROSOFT OFFICE BUTTON** and select the **SAVE** button

Template Properties

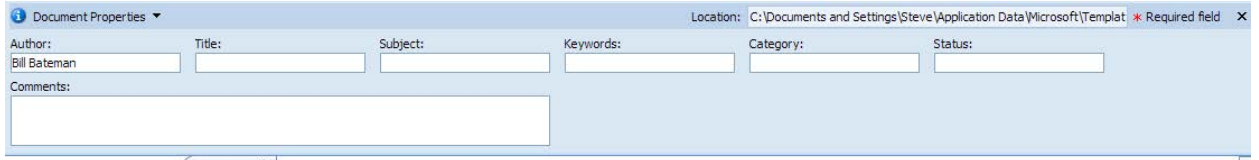
Files have various properties that are saved with them. Some properties, such as date created and last saved date are included and updated automatically by Excel. Others, such as title and subject must be entered manually by the user. Properties are helpful when trying to locate files as you can use the properties to search.



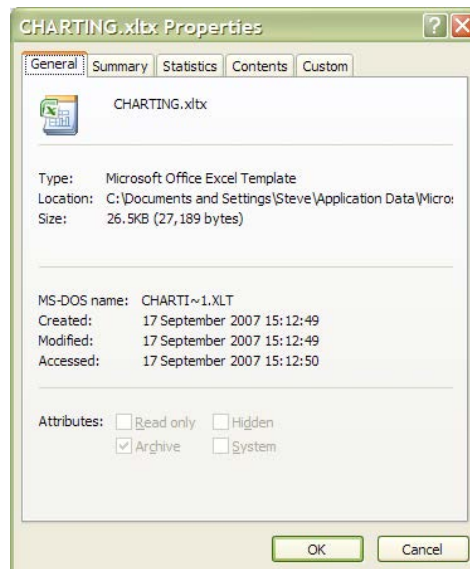
➤ **To set template properties:**

Mouse

- a) With the template open  Click on the **MICROSOFT OFFICE BUTTON** and select the **PREPARE** button and select **PROPERTIES**.



- b) .A section (above) will appear under the formula bar.
 c) Set the properties that apply to the template.
 d) Click **X**.in right hand corner of this bar to close
 e) If you have further properties to set. Click on document properties on the bar and choose **ADVANCED PROPERTIES** the dialog on the right will appear
 f) the 5 separate tabs allow the input of many more pieces of information.
 g) When complete click on **OK**



Templates can contain custom number formats and predefined styles.

Section 6 Auditing

► Objectives

By the end of this section you will be able to:

- Use and understand tracers
- Insert and use cell comments
- Use Watch window
- Use go to special



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6.1 Auditing Features

Tracers

The precedent, dependent and error tracers display arrows on the worksheet to represent the flow of computations: The can be found The **FORMULA AUDITING** group and on the **FORMULAS** ribbon.

Tracer Type	Arrow type
Formula	Solid blue
Error	Solid red
External reference or reference to other worksheet	Dashed black with an icon

COMMENTS



Comments are text or audio messages attached to cells usually giving a more detailed explanation of a cells content.

GO TO SPECIAL

A method of selecting cells with particular contents or properties.

PRECEDENTS AND DEPENDANTS

Precedents are cells referred to by other formulae. Dependants are cells containing formulae that refer to other cells.

A direct precedent is a cell referred to by the formula in the active cell. An indirect precedent is a cell referred to by a formula in a direct precedent cell or another indirect precedent cell.

A direct dependant is a cell containing a formula that refers to the active cell. An indirect dependent is a cell that contains a formula that refers to a direct dependant cell or another indirect dependant cell.

You use the Auditing toolbar to set auditing options.

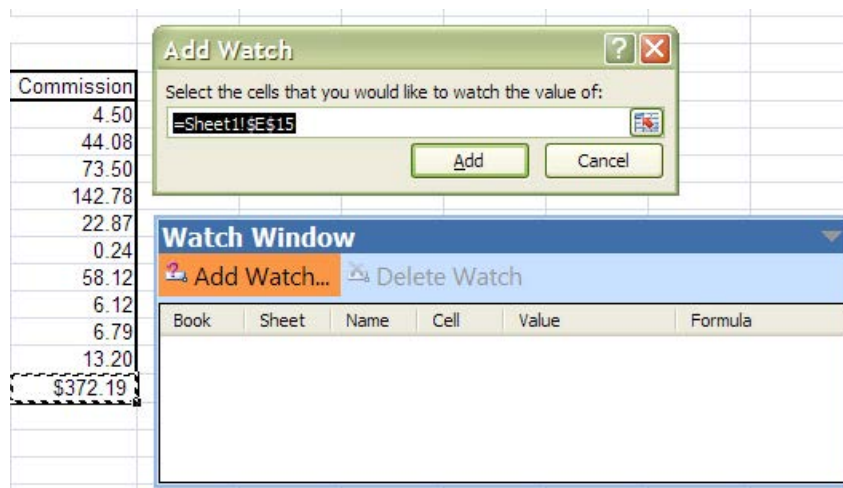
WATCH WINDOW

Is a useful tool which allows you to watch the values of calculated cells on other sheets while you change values that they are dependant on, on a completely different sheet.

➤ To set a watch

Mouse

- Select a cell to which you want to add a Watch
- Go to the **FORMULAS** ribbon and click on **WATCH WINDOW** in the **FORMULA AUDITING** group
- Click on **ADD WATCH**
- Select cell you wish to monitor
- Click on **ADD**
- You may now switch windows or scroll and the watch window will monitor that cell for changes in result as you enter or manipulate figures elsewhere.




➤ **To delete a watch**

Mouse

- Go to the **FORMULAS** ribbon and click on **WATCH WINDOW** in the **FORMULA AUDITING** group
- Select watch to delete
- Click on **DELETE WATCH** on watch window


➤ **To audit for direct and indirect precedents:**

Mouse

-  Click on the cell you want to audit.
- Click the trace precedents button on the Auditing toolbar.

➤ **To audit for direct and indirect dependants:**

Mouse

- a)  Click on the cell you want to audit.
- b) Click the trace dependant's button on the Auditing toolbar.

Click either button a second time to view indirect precedents or dependants of the active cell.

➤ **To remove the tracer arrows:**



Mouse

- a) Click the remove precedent arrows to remove precedent tracers or remove dependant arrows to remove dependant tracers.

“I studied English for 16 years but...
...I finally learned to speak it in just six lessons”

Jane, Chinese architect



ENGLISH OUT THERE

Click to hear me talking before and after my unique course download

OR

- a) Click the remove all arrows button to remove both precedent and dependant tracers.

Comments

When a cell has a comment attached, CellTips automatically display the comments added when the mouse pointer rests over the cell. You can tell which cells have c comments attached as they have a comment indicator (a small red corner triangle).

➤ **To add a comment:**

Mouse

- Click in the cell where you want to insert a comment.
- Choose **COMMENT** from the **REVIEW** ribbon
- In the text box that appears attached to the cell, type your comment.
- Click outside the text box to confirm the entry and close the text box.

➤ **To view comments:**

Mouse

- Position your mouse over the top of the cell that contains the comment. Shown with a tiny coloured triangle in top of the cell corner.
- Your comment will be displayed as a CellTip.

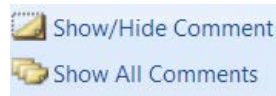
➤ **To edit comments:**

Mouse

- Click in the cell where you want to edit a comment.
- Choose **EDIT COMMENT** from the **REVIEW** ribbon
- In the text box edit your comment.
- Click outside the text box to confirm the entry and close the text box.

➤ **Hiding and redisplaying comments:**

Mouse



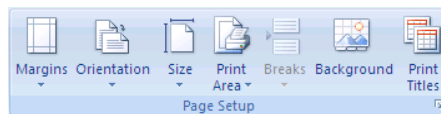
- a) You can hide an individual comment by clicking the right mouse button over the cell that contains the comment and choosing **SHOW/HIDE COMMENT** from the shortcut menu.


OR

- a) Click on **SHOW/HIDE COMMENTS** in the **COMMENTS** group on the **REVIEW** ribbon
 b) When you want to redisplay all individually hidden **COMMENTS** click on **SHOW ALL COMMENTS** in the **COMMENTS** group on the **REVIEW** ribbon

➤ **To print comments:**

Mouse



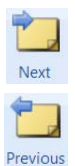
- a)  On the **PAGE LAYOUT** ribbon, in the **PAGE SETUP** group, click the dialog box launcher next to **PAGE SETUP**.
 b) On the **SHEET** tab, in the **COMMENTS** box, click **AS DISPLAYED ON SHEET** or **AT END OF SHEET**.
 c) Click **PRINT**.

To see how comments are printed, you can click Print Preview before you click Print.

➤ **Reviewing comments:**

Mouse

- a) Go to the **COMMENTS** group on the **REVIEW** ribbon.
 b) To view each comment in sequence click the **NEXT COMMENT** button.
 c) To view the comments in reverse order, click the **PREVIOUS COMMENT** button.



Section 7 Other formatting

7.1 Formatting Cells

Themes

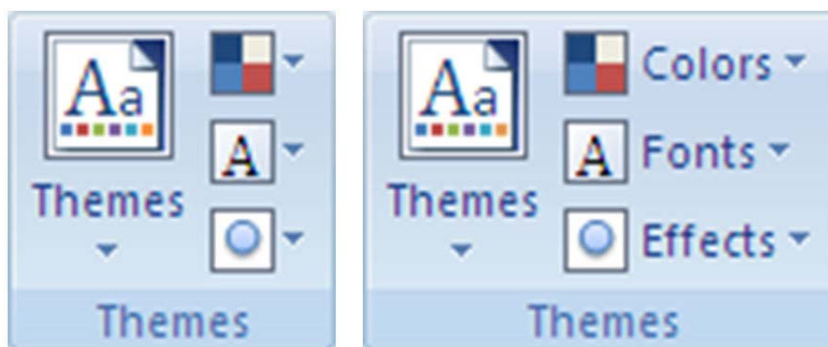
You can quickly and easily format an entire document to give it a professional and modern look by applying a document theme (A set of unified design elements that provides a look for your document by using colour, fonts and graphics.). A document theme is a set of formatting choices that include a set of theme colours, a set of theme fonts (including heading and body text fonts), and a set of theme effects (including lines and fill effects).

Excel provides several predefined document themes, but you can also create your own by customizing an existing document theme, and then by saving it as a custom document theme. Document themes are shared across Office programs so that all of your Office documents can have the same, uniform look.

➤ To Apply a document theme

You can change the document theme that is applied by default in Office programs, such as Word, Excel and PowerPoint, by selecting another predefined document theme or a custom document theme. Document themes that you apply immediately affect the styles (A combination of formatting characteristics, such as font, font size, and indentation, that you name and store as a set. When you apply a style, all of the formatting instructions in that style are applied at one time.) that you can use in your document.

Mouse



- On the **PAGE LAYOUT** ribbon, in the **THEMES** group, click **THEMES**.
- To apply a predefined document theme, click the document theme that you want to use under **BUILT-IN**.
- To apply a custom document theme, click the document theme that you want to use under **CUSTOM**.

Custom is available only if you created one or more custom document themes

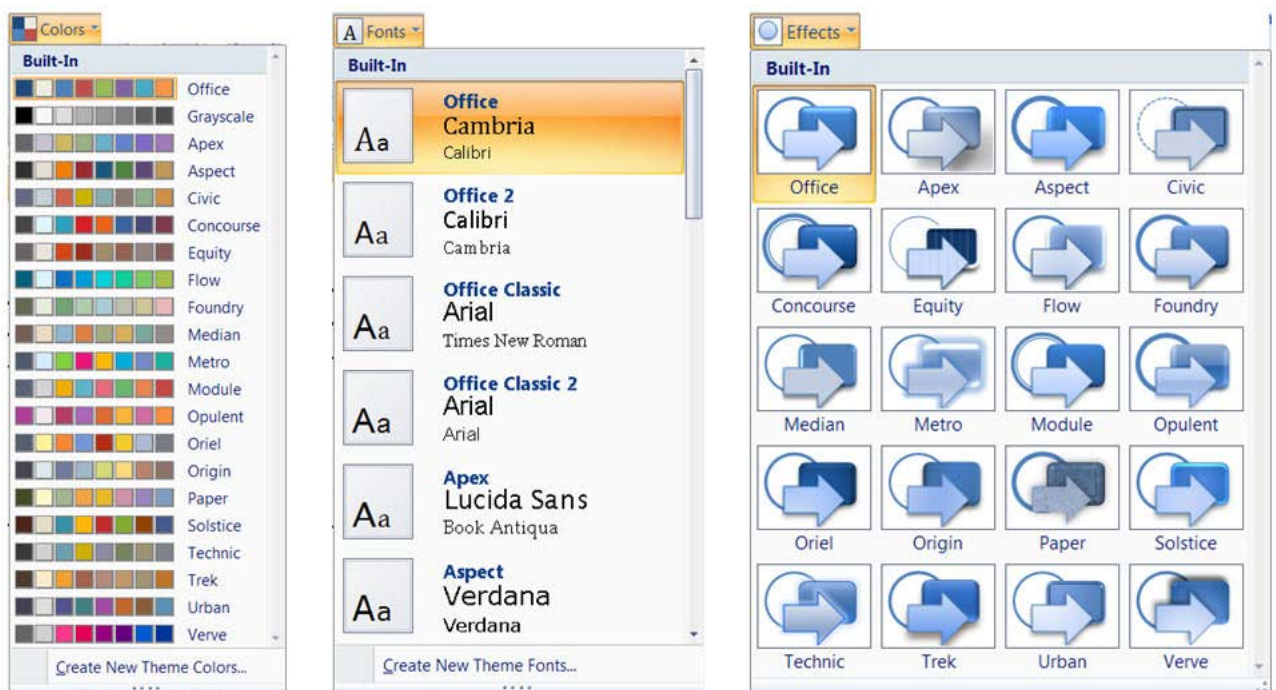
- d) If a document theme that you want to use is not listed, click **BROWSE FOR THEMES** to find it on your computer or a network location.
- e) To search for other document themes on Office Online, click **SEARCH OFFICE ONLINE**.

Customising A Theme

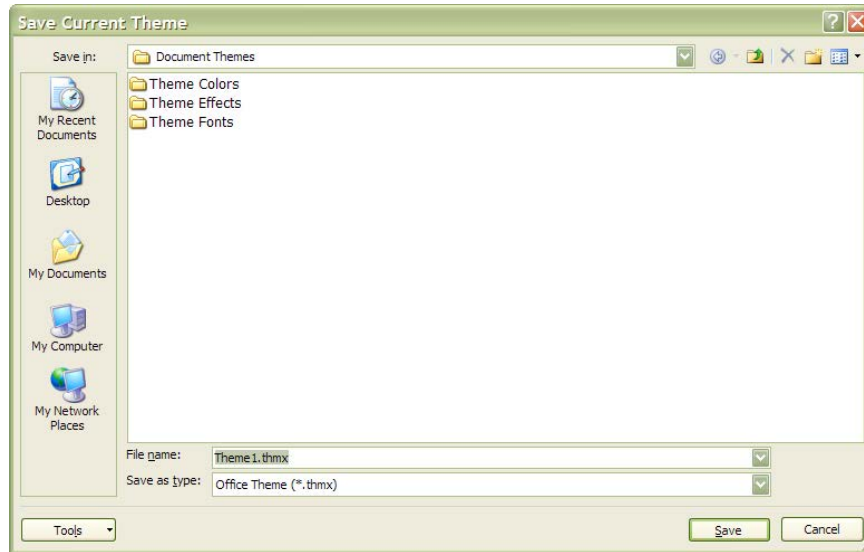
The collection of fonts, colours and effects that make up a theme can all be customised and then saved as a custom theme

➤ To customise a theme

- a) Click on the drop down arrow next to the aspect of the theme you wish to change colours, fonts or effects.



- b) Make a selection from the choices present.
- c) Click on themes and save current theme



d) Clicking on the **THEMES** button in future will display **CUSTOM**, to allow you to use this theme in future workbooks.

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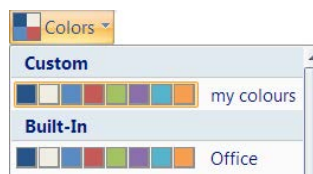
- To set custom colour schemes for a theme

Mouse

- Click on the drop down arrow next to the **COLOURS** button.
- Select **CREATE NEW THEME COLOURS** at the bottom of the menu



- The dialog above is displayed
- Select new colours for the various parts of your theme. A sample is shown on the right to show you how the colours appear together

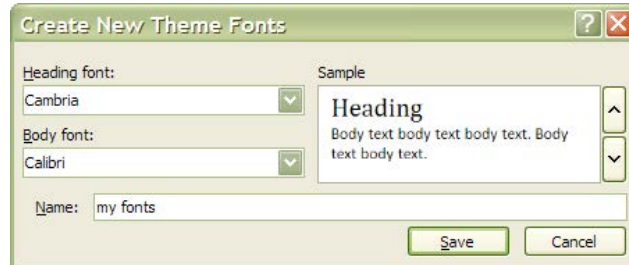


- Enter a name for your colour scheme in the **NAME** box
- Click on **SAVE**.
- Next time you click on the colours button it will display **CUSTOM** and the sets of colours you have created.

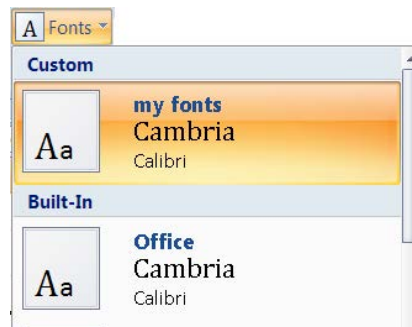
- To create custom font schemes for a theme.

Mouse

- Click on the drop down arrow next to the **FONTS** button.



- Select **CREATE NEW THEME FONTS** at the bottom of the menu





- The dialog above is displayed
- Select Fonts for the heading and a font for the body text see sample on right of dialog.
- Enter a name for your font scheme in the **NAME** box
- Click on **SAVE**.
- Next time you click on the **FONTS** button it will display **CUSTOM** and the sets of fonts you have created.

Styles

To apply several formats in one step, and to ensure that cells have consistent formatting, you can use a cell style. A cell style is a defined set of formatting characteristics, such as fonts and font sizes, number formats, cell borders and cell shading. To prevent anyone from making changes to specific cells, you can also use a cell style that locks cells. Microsoft Office Excel has several built-in cell styles that you can apply or modify. You can also modify or duplicate a cell style to create your own, custom cell style.

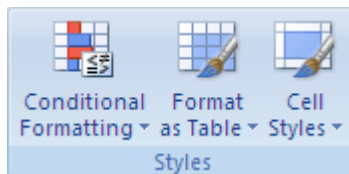
Cell styles are based on the document theme that is applied to the entire workbook. When you switch to another document theme, the cell styles are updated to match the new document theme.

How to select cells, ranges, rows, or columns

To select	Do this
A single cell	Click the cell, or press the arrow keys to move to the cell.
A range of cells	Click the first cell in the range, and then drag to the last cell, or hold down SHIFT while you press the arrow keys to extend the selection. You can also select the first cell in the range, and then press F8 to extend the selection by using the arrow keys. To stop extending the selection, press F8 again.
A large range of cells	Click the first cell in the range, and then hold down SHIFT while you click the last cell in the range. You can scroll to make the last cell visible.
All cells on a worksheet	Click the SELECT ALL button. To select the entire worksheet, you can also press CTRL+A . If the worksheet contains data, CTRL+A selects the current region. Pressing CTRL+A a second time selects the entire worksheet. <div style="text-align: right;">  </div>
Nonadjacent cells or cell ranges	Select the first cell or range of cells, and then hold down CTRL while you select the other cells or ranges. You can also select the first cell or range of cells, and then press SHIFT+F8 to add another nonadjacent cell or range to the selection. To stop adding cells or ranges to the selection, press SHIFT+F8 again. You cannot cancel the selection of a cell or range of cells in a nonadjacent selection without cancelling the entire selection.
An entire row or column	Click the row or column heading. <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="margin-right: 10px;"> <p>1 Row heading</p> <p>2 Column heading</p> </div>  </div> <p>You can also select cells in a row or column by selecting the first cell and then pressing CTRL+SHIFT+ARROW key (RIGHT ARROW or LEFT ARROW for rows, UP ARROW or DOWN ARROW for columns). If the row or column contains data, CTRL+SHIFT+ARROW key selects the row or column to the last used cell. Pressing CTRL+SHIFT+ARROW key a second time selects the entire row or column.</p>
Adjacent rows or columns	Drag across the row or column headings. Or select the first row or column; then hold down SHIFT while you select the last row or column.
Nonadjacent rows or columns	Click the column or row heading of the first row or column in your selection; then hold down CTRL while you click the column or row headings of other rows or columns that you want to add to the selection.
The first or last cell in a row or column	Select a cell in the row or column, and then press CTRL+ARROW key (RIGHT ARROW or LEFT ARROW for rows, UP ARROW or DOWN ARROW for columns).
The first or last cell on a worksheet or in a Microsoft Office Excel table	Press CTRL+HOME to select the first cell on the worksheet or in an Excel list. Press CTRL+END to select the last cell on the worksheet or in an Excel list that contains data or formatting.
Cells to the last used cell on the worksheet (lower-right corner)	Select the first cell, and then press CTRL+SHIFT+END to extend the selection of cells to the last used cell on the worksheet (lower-right corner).
Cells to the beginning of the worksheet	Select the first cell, and then press CTRL+SHIFT+HOME to extend the selection of cells to the beginning of the worksheet.
More or fewer cells than the active selection	Hold down SHIFT while you click the last cell that you want to include in the new selection. The rectangular range between the active cell and the cell that you click becomes the new selection.

To cancel a selection of cells, click any cell on the worksheet.

➤ To Apply a cell style

Mouse

- Select the cells that you want to format.
- On the **HOME** ribbon, in the **STYLES** group, click **CELL STYLES**.
- Click the cell style that you want to apply.

An advertisement for Gaiteye running shoes. The background is a photograph of a person running on a path during a sunrise or sunset, with a warm orange glow. The Gaiteye logo, a yellow square with a white leaf-like shape, is in the top left. The text 'gaiteye' is in a white, lowercase, sans-serif font, with 'Challenge the way we run' in a smaller font below it. In the center, the text 'EXPERIENCE THE POWER OF FULL ENGAGEMENT...' is written in white, uppercase letters. Below this is a horizontal line of yellow dots. Further down, the text 'RUN FASTER. RUN LONGER.. RUN EASIER...' is written in white, uppercase letters. In the bottom right, there is a yellow button with the text 'READ MORE & PRE-ORDER TODAY' and 'WWW.GAITEYE.COM'. A white hand cursor icon is pointing at the button. There are also some white geometric lines and circles overlaid on the runner's feet.



➤ **To create custom cell style**

Mouse

- a) On the **HOME** ribbon, in the **STYLES** group, click **CELL STYLES**.
- b) Click **NEW CELL STYLE**.
- c) In the **STYLE NAME** box, type an appropriate name for the new cell style.
- d) Click **FORMAT**.
- e) On the various tabs in the **FORMAT CELLS** dialog box, select the formatting that you want, and then click **OK**.
- f) In the **STYLE** dialog box, under **STYLE INCLUDES (BY EXAMPLE)**, clear the check boxes for any formatting that you don't want to include in the cell style.
- g) To remove a cell style from selected cells without deleting the cell style, select the cells that are formatted with that cell style.

➤ **To remove a cell style**

Mouse

- a) On the **HOME** ribbon, in the **STYLES** group, click **CELL STYLES**.
- b) To remove the cell style from the selected cells without deleting the cell style, under **GOOD, BAD, AND NEUTRAL**, click **NORMAL**.

OR

- c) To delete the cell style and remove it from all cells that are formatted with it, right-click the cell style, and then click **DELETE**.

*You cannot delete the **NORMAL** cell style.*

Conditional Formatting

Whenever you analyze data, you often ask yourself questions, such as:

- Where are the exceptions in a summary of profits over the past five years?
- What are the trends in a marketing opinion poll over the past two years?
- Who has sold more than £50,000 this month?
- What is the overall age distribution of employees?
- Which products have greater than 10% revenue increases from year to year?
- Who are the highest performing and lowest performing students in the new student class?

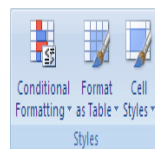
Conditional formatting helps to answer these questions by making it easy to highlight interesting cells or ranges of cells, emphasize unusual values, and visualize data by using data bars, colour scales and icon sets. A conditional format changes the appearance of a cell range based on a condition (or criteria). If the condition is true, the cell range is formatted based on that condition; if the conditional is false, the cell range is not formatted based on that condition.

When creating a conditional format, you can reference other cells in a worksheet, such as =FY2006!A5, but you cannot use external references to another workbook.

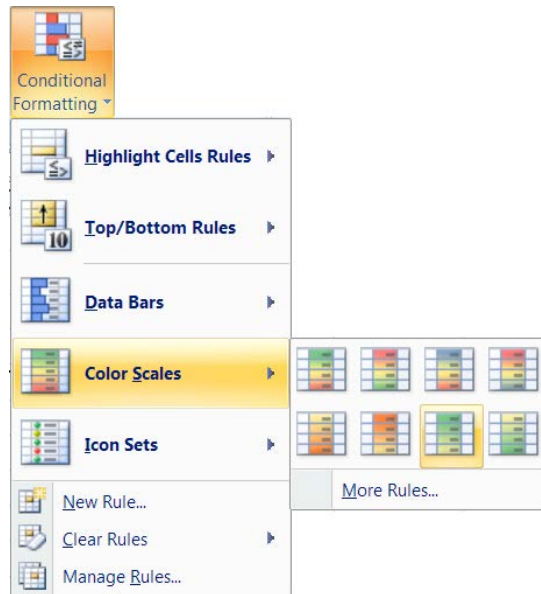
► **To Format all cells by using a two-colour scale**

Colour scales are visual guides that help you understand data distribution and variation. A two-colour scale helps you compare a range of cells by using a gradation of two colours. The shade of the colour represents higher or lower values. For example, in a green and red colour scale, you can specify higher value cells have a greener colour and lower value cells have a redder colour.

Mouse



- a) Select a range of cells, or make sure that the active cell is in a table or PivotTable report.
- b) On the **HOME** ribbon, in the **STYLES** group, click the arrow next to **CONDITIONAL FORMATTING**, and then click **COLOUR SCALES**.
- c) Select a two-colour scale.



Hover over the colour scale icons to see which one is a two-colour scale. The top colour represents higher values and the bottom colour represents lower values.

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➤ **To manage rules for advanced formatting.**

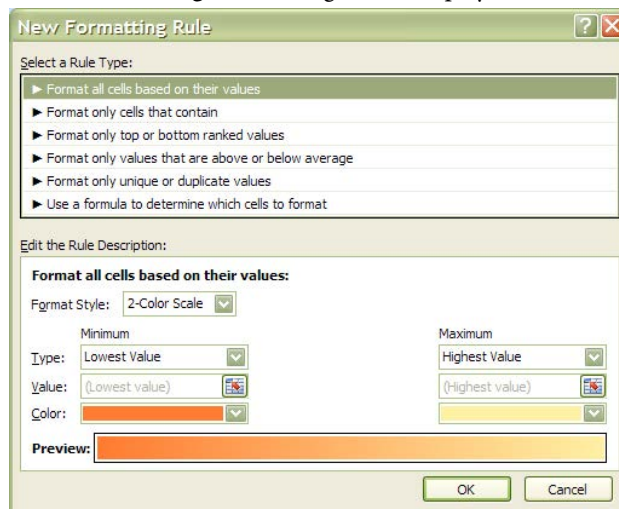
Mouse

- a) Select a range of cells, or make sure that the active cell is in a table or PivotTable report.
- b) On the **HOME** ribbon, in the **STYLES** group, click the arrow next to **CONDITIONAL FORMATTING**, and then click **MANAGE RULES**.
- c) The **CONDITIONAL FORMATTING RULES MANAGER** dialog box is displayed.

➤ **To add a conditional format (new rule).**

Mouse

- a) click **New Rule**. The **New Formatting Rule** dialog box is displayed.




- b) Select a rule type from top section of dialog.
- c) Edit the rule description in bottom section. Rule descriptions will change dependent on the rule type.
- d) Select the colours you wish to apply if the conditions you have set are met.
- e) Click **OK** to create the rule the rule will then appear in the **RULE MANAGER**.
- f) Click ok to apply the rule and close the **RULE MANAGER**

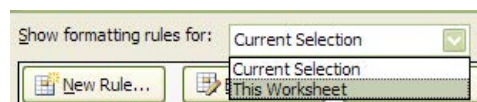
➤ **To conditionally format to two colour scale (advanced)**


Mouse

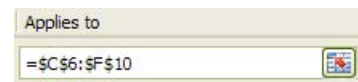
- a) On the **HOME** ribbon, in the **STYLES** group, click the arrow next to **CONDITIONAL FORMATTING**, and then click **MANAGE RULES**.
- b) The **CONDITIONAL FORMATTING RULES MANAGER** dialog box is displayed.

c) Make sure that the appropriate worksheet or table is selected in the **SHOW FORMATTING RULES FOR** list box.

d)  Optionally, change the range of cells by clicking **COLLAPSE DIALOG** in the **APPLIES TO** box to temporarily hide the dialog box, selecting the new range of cells on the worksheet, and then selecting **EXPAND DIALOG**.



e)  Select the rule, and then click **EDIT RULE**. The **EDIT FORMATTING RULE** dialog box is displayed.



f) Under **SELECT A RULE TYPE**, click **FORMAT ALL CELLS BASED ON THEIR VALUES**.

g) Under **EDIT THE RULE DESCRIPTION**, in the **FORMAT STYLE** list box, select **2-COLOR SCALE**.

h) Select a **MINIMUM** and **MAXIMUM TYPE**

- **FORMAT LOWEST AND HIGHEST VALUES** Select Lowest Value and Highest Value. In this case, you do not enter a Minimum and Maximum Value.
- **FORMAT A NUMBER**, date, or time value Select Number, and then enter a Minimum and Maximum Value.
- **FORMAT A PERCENTAGE** Select Percent, and then enter a Minimum and Maximum Value. Valid values are from 0 to 100. Do not enter a percent sign. Use a percentage when you want to visualize all values proportionally because the distribution of values is proportional.
- **FORMAT A PERCENTILE** Select Percentile and then enter a Minimum and Maximum Value. Valid percentiles are from 0 to 100. You cannot use a percentile if the range of cells contains more than 8,191 data points. Use a percentile when you want to visualize a group of high values (such as the top 20th percentile) in one colour grade proportion and low values (such as the bottom 20th percentile) in another colour grade proportion, because they represent extreme values that might skew the visualization of your data.
- **FORMAT A FORMULA RESULT** Select Formula, and then enter a Minimum and Maximum Value. The formula must return a number, date or time value. Start the formula with an equal sign (=). Invalid formulas result in no formatting applied. It's a good idea to test the formula in the worksheet to make sure that it doesn't return an error value.

Minimum and Maximum values are the minimum and maximum values for the range of cells. Make sure that the Minimum value is less than the Maximum value.

You can choose a different Minimum and Maximum Type. For example, you can choose a Minimum Number and Maximum Percent.

i) To choose a **MINIMUM** and **MAXIMUM** colour scale, click **COLOUR** for each, and then select a colour. If you want to choose additional colours or create a custom colour, click **MORE COLOURS**.

- j) The colour scale that you select is displayed in the **PREVIEW** box.
- k) Click **OK** to return to the rule manager
- l) Click **OK** to apply the new rule to selected cells and close rule manager.

➤ **To Format all cells by using data bars quick formatting**

A data bar helps you see the value of a cell relative to other cells. The length of the data bar represents the value in the cell. A longer bar represents a higher value and a shorter bar represents a lower value. Data bars are useful in spotting higher and lower numbers especially with large amounts of data, such as top and bottom selling toys in a holiday sales report.

110	175	140	250
105	210	240	300
210	180	295	200
110	200	125	250
95	195	185	275

Mouse

- a) Select a range of cells, or make sure that the active cell is in a table or PivotTable report.
- b) On the **HOME** ribbon, in the **STYLE** group, click the arrow next to **CONDITIONAL FORMATTING**, click **DATA BARS** and then select a data bar icon.

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➤ **To Format all cells by using data bars advanced formatting**



Mouse

- a) Select a range of cells, or make sure that the active cell is in a table or PivotTable report.
- b) On the **Home** ribbon, in the **Styles** group, click the arrow next to **Conditional Formatting**, and then click **Manage Rules**. The Conditional Formatting **RULES MANAGER** dialog box is displayed.

Either

- c) To add a conditional format, click **NEW RULE**. The **NEW FORMATTING RULE** dialog box is displayed.

OR

- d) To change a conditional format, Make sure that the appropriate worksheet or table is selected in the **SHOW FORMATTING RULES FOR** list box.
- e)  Optionally, change the range of cells by clicking **COLLAPSE DIALOG** in the **APPLIES TO** box to temporarily hide the dialog box, selecting the new range of cells on the worksheet, and then selecting **EXPAND DIALOG**.
- f)  Select the rule, and then click **EDIT RULE**. The **EDIT FORMATTING RULE** dialog box is displayed.
- g) Under **SELECT A RULE TYPE**, click **FORMAT ALL CELLS BASED ON THEIR VALUES**.
- h) Under **EDIT THE RULE DESCRIPTION**, in the **FORMAT STYLE** list box, select **DATA BAR**.
- i) Select a Shortest Bar and Longest Bar Type.
 - **FORMAT LOWEST AND HIGHEST VALUES** Select Lowest Value and Highest Value. In this case, you do not enter a Shortest Bar and Longest Bar Value.
 - **FORMAT A NUMBER, DATE, OR TIME VALUE** Select Number, and then enter a Shortest Bar and Longest Bar Value.
 - **FORMAT A PERCENTAGE** Select Percent, and then enter a Shortest Bar and Longest Bar Value. Valid values are from 0 to 100. Do not enter a percent sign. Use a percentage when you want to visualize all values proportionally because the distribution of values is proportional.
 - **FORMAT A PERCENTILE** Select Percentile and then enter a Shortest Bar and Longest Bar Value. Valid percentiles are from 0 to 100. You cannot use a percentile if the range of cells contains more than 8,191 data points. Use a percentile when you want to visualize a group of high values (such as the top 20th percentile) in one data bar proportion and low values (such as the bottom 20th percentile) in another data bar proportion, because they represent extreme values that might skew the visualization of your data.

- **FORMAT A FORMULA** result Select Formula, and then enter a Shortest Bar and Longest Bar Value. The formula must return a number, date or time value. Start the formula with an equal sign (=). Invalid formulas result in no formatting applied. It's a good idea to test the formula in the worksheet to make sure that it doesn't return an error value.

Make sure that the Shortest Bar value is less than the Longest Bar value.

You can choose a different Shortest Bar and Longest Bar Type. For example, you can choose a Shortest Bar Number and Longest Bar Percent. To choose a Shortest Bar and Longest Bar colour scale, click Bar Colour. If you want to choose additional colours or create a custom colour, click More Colours. The bar colour that you select is displayed in the Preview box. To show only the data bar and not the value in the cell, select Show Bar Only.

➤ **To Clear conditional formats (worksheet)**

Mouse

- On the **HOME** ribbon, in the **STYLES** group, click the arrow next to **CONDITIONAL FORMATTING**, and then click **CLEAR RULES**.
- Click **ENTIRE SHEET**.

➤ **To Clear conditional formats (A range of cells, table, or PivotTable)**

Mouse

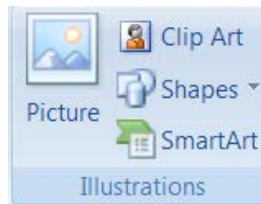
- Select the range of cells, table or PivotTable for which you want to clear conditional formats.
- On the **HOME** ribbon, in the **STYLES** group, click the arrow next to **CONDITIONAL FORMATTING**, and then click **CLEAR RULES**.
- Depending on what you have selected, click **SELECTED CELLS**, **THIS TABLE** or **THIS PIVOTTABLE**.

Section 8 Other Excel features

8.1 Inserting, Formatting and Deleting Objects

Inserting A Drawing Object

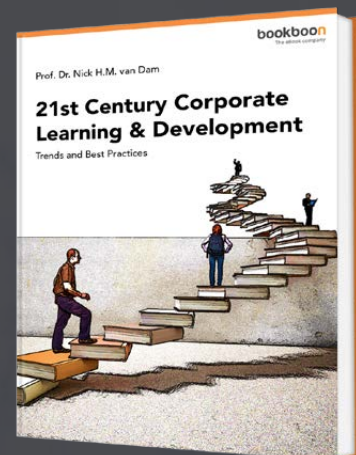
Inserting pictures, text boxes, callouts, scanned images etc onto a worksheet can greatly enhance your overall spreadsheet appearance. The subject of dealing with these objects will be looked at more thoroughly in PowerPoint as that application deals primarily with inserted objects and how to deal with them as word works primarily with text and excel with figures, however here is a brief rundown of some items you may insert and how to deal with them.



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➤ **To insert a shape onto worksheet.**

Mouse

- a) On the **INSERT** ribbon in the **ILLUSTRATIONS** group, click on the drop down arrow to the right of **SHAPES**.
- b) Make a selection by clicking with the left mouse button on the desired shape. If you cannot immediately find what you want, scroll down using the scroll bar to the right to locate other shapes.
- c) The menu will disappear but your mouse cursor will appear as a small black cross. Click and drag diagonally to place the shape on the worksheet.

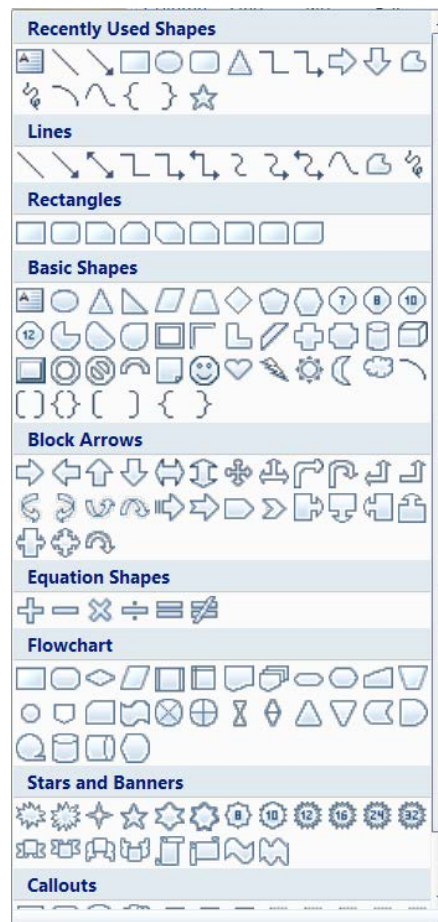
➤ **To move or resize shape**

Mouse

- a) Select shape by clicking on it selection will be shown by handles appearing around the shape.
- b) Moving mouse cursor over shape should give a four pointed arrow clicking and dragging with this cursor will move the shape to desired position.

OR

- a) Use cursor keys for small adjustments in moving shape around worksheet.
- b) Moving mouse cursor over a handle will give a black two pointed arrow. Clicking and dragging will resize the shape to appropriate size.



► **To delete a shape**

Mouse

- a) Select shape by clicking on it selection will be shown by handles appearing around the shape.
- b) Press **DELETE** on the keyboard to remove shape.

SmartArt

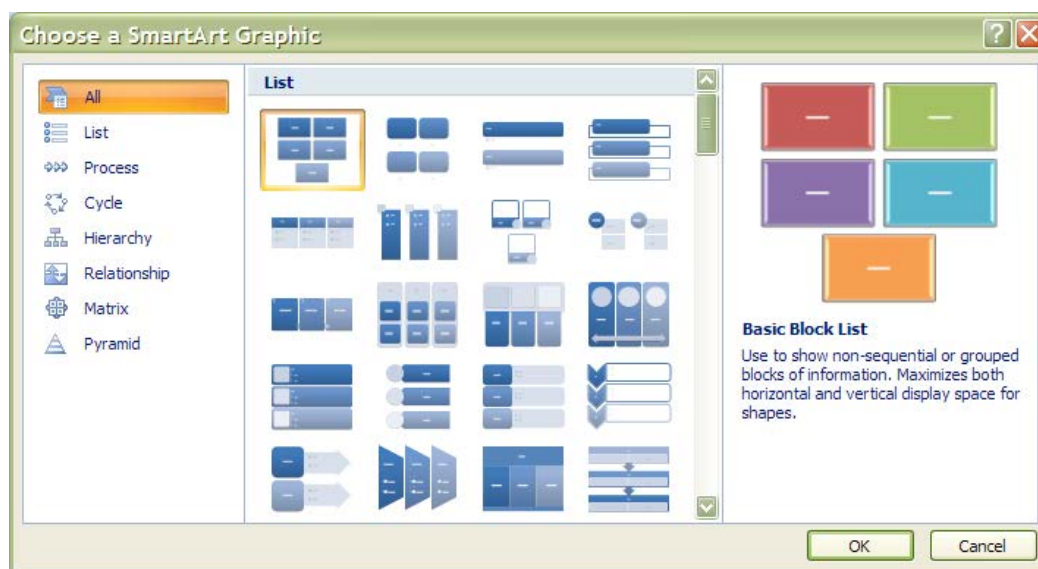
A SmartArt graphic is a visual representation of your information and ideas. You can create SmartArt graphics by choosing from among many different layouts to quickly, easily and effectively communicate your message.

Most people create content that contains only text, even though illustrations and graphics help audiences understand and recall information better than text. Creating designer-quality illustrations can be challenging, especially if you are not a professional designer or you cannot afford to hire a professional designer. If you use earlier versions of Microsoft Office, you can spend a lot of time making shapes the same size and aligning them properly, getting your text to look right, and manually formatting the shapes to match the document's overall style, instead of focusing on your content. With SmartArt graphics and other new features such as themes, you can create designer-quality illustrations with only a few clicks of your mouse.

When you create a SmartArt graphic, you are prompted to choose a type such as **PROCESS**, **HIERARCHY**, **CYCLE**, or **RELATIONSHIP**. A type is similar to a category of SmartArt graphic, and each type contains several different layouts.

When you choose a layout for your SmartArt graphic, ask yourself what you want to convey and whether you want your information to appear a certain way. Because you can quickly and easily switch layouts, try different layouts (across types) until you find the one that best illustrates your message. Experiment with different types and layouts by using the table below as a starting point.

When you switch layouts, most of your text and other content, colours, styles, effects, and text formatting are automatically carried over to the new layout.

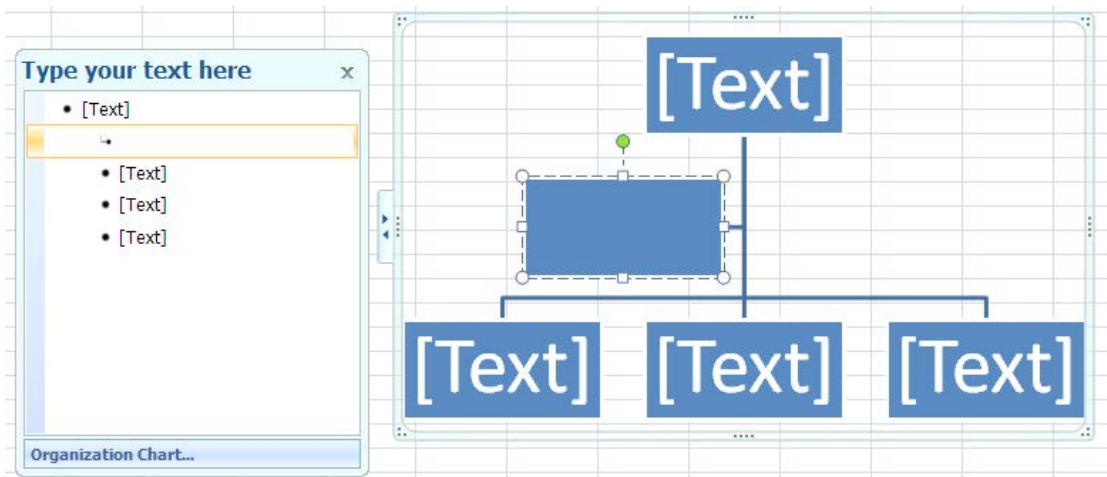


► To insert a SmartArt graphic

Mouse

- On the **INSERT** ribbon in the **ILLUSTRATIONS** group, click on the drop down arrow to the right of **SMARTART** the **SMARTART** dialog above will appear
- Choose a category from the left then a graphic from the centre to see a preview on the right.

- c) When you have the selection you desire click ok to insert the smartart on your worksheet
- d) The smart art will appear on your worksheet as in picture below.



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About the Text pane

The Text pane is the pane that you can use to enter and edit the text that appears in your SmartArt graphic. The Text pane appears to the left of your SmartArt graphic. As you add and edit your content in the Text pane, your SmartArt graphic is automatically updated— shapes are added or removed as needed.

When you create a SmartArt graphic, the SmartArt graphic and its Text pane are populated with placeholder text that you can replace with your information. At the top of the Text pane, you can edit the text that will appear in your SmartArt graphic. At the bottom of the Text pane, you can view additional information about the SmartArt graphic.

➤ To enter text into SmartArt

Mouse

- a) Click on placeholder in the **TEXT PANE**.
- b) Placeholder text will disappear.
- c) Type required text and press **ENTER**
- d) Focus will create a new placeholder and new shape waiting for text
- e) Press **TAB** to move the text lower in the hierarchy in the example above or **SHIFT + TAB** to move it higher.

➤ To remove a SmartArt shape

Mouse

- a) Select the text or placeholder text of the shape you wish to remove in the **TEXT PANE**.
- b) Press **DELETE** key on keyboard
- c) Both text and shape will be removed from graphic

WordArt

WordArt is a gallery of text styles that you can add to your 2007 Microsoft Office system documents to create decorative effects, such as shadowed or mirrored (reflected) text. You can change WordArt text, as you can change any other text in a shape.



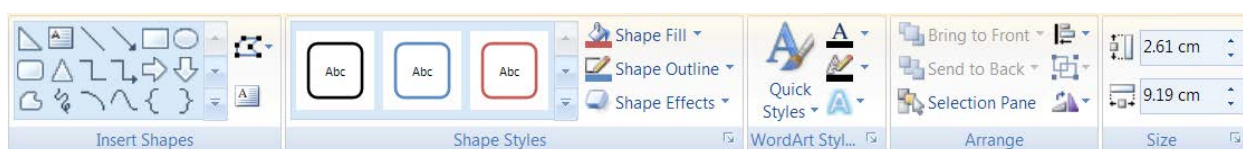
Mouse

On the **INSERT** ribbon, in the **TEXT** group, click **WORDART**, and then click the WordArt style that you want.

- d) Enter your text.#
- e) A WordArt graphic can be resized, rotated, deleted and moved like any other shape.

Formatting Shapes

Any shape inserted on the spreadsheet, when selected, causes a new ribbon to appear called the **FORMAT** ribbon seen below, it offers the options of inserting further shapes. Formatting all aspects of the selected shape and fixing a specific size. The easiest method of formatting your shape is to use the QuickStyle option in the **SHAPE STYLES** group



QuickStyles

Quick Styles are combinations of different formatting options and are displayed in a thumbnail in the various Quick Style galleries. When you place your pointer over a Quick Style thumbnail, you can see how the Quick Style affects your SmartArt graphic or shape.

Quick Styles for SmartArt graphics (SmartArt Styles) include edges, shadows, line styles, gradients and three-dimensional (3-D) perspectives. Try different combinations of SmartArt Styles and colours until you find one that matches the message that you want to communicate. You can pick a layout, a SmartArt Style, and a colour variation that you like, and then change the layout again — your SmartArt Style and colours will stay with your SmartArt graphic, so that you do not need to re-do them.

SmartArt Styles map the theme effects (theme effects: A set of visual attributes that is applied to elements in a file. Theme effects, theme colours and theme fonts compose a theme.) of the document theme to the shapes within the SmartArt graphic. For example, shapes might have thick lines or edges, while arrows might have a more subtle style applied to them. You can also apply colours from the theme colours of the document in different ways, such as changing the colour of the shape border. If you create multiple SmartArt graphics and want them to look alike, you can apply the same colours and SmartArt Style to achieve a consistent, professional look.

You can have shapes that display with edges, depth, and rotate in 3-D space. To make a SmartArt graphic three-dimensional, apply a 3-D SmartArt Style or manually apply a 3-D rotation to each shape. If the entire SmartArt graphic is three-dimensional (called scene coherent 3D), you can continue to edit the text and formatting of each of the individual shapes, but the shapes cannot be repositioned or resized. You can only reposition or resize shapes in a two-dimensional scene. To switch between 2-D and 3-D, under **SmartArt Tools**, on the **Format** ribbon, in the **Shapes** group, click **Edit in 2-D**. The **Edit in 2-D** button temporarily unlocks your SmartArt graphic for editing so that you can move and resize shapes— but the 3-D SmartArt Style is still applied to your SmartArt graphic and reappears when you click **Edit in 2-D** again. When your SmartArt graphic is displayed in a 3-D scene, you can rotate it as a whole and position light sources and the “camera” such that the entire SmartArt graphic appears to pop out of the screen.

SmartArt Styles affect an entire SmartArt graphic, while Quick Styles for Shapes (Shape Styles) affect only the selected shape. You can manually customize a shape by changing the colour, effects or border, or by replacing it with another shape. It is recommended that you customize your SmartArt graphic only after you settle on its content and layout, as some customizations are not transferred because they might not look good in the new layout. For more information about switching layouts for SmartArt graphics, see [Switch the layout or type of a SmartArt graphic](#).

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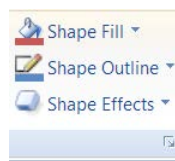
➤ **To apply a QuickStyle**

Mouse

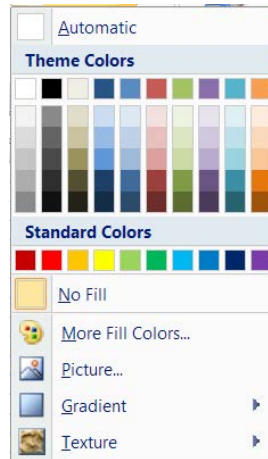
- a) Select the shape or shapes you wish to apply a QuickStyle to.
- b) As you move your mouse over the various options your shape on the worksheet will temporarily take on that format as a preview. See below.
- c) If you prefer to look at the other them fills option at the bottom you will be given the above options
- d) When you locate the style you want click on it to apply it to your shape.



Manual Formatting



Manual formatting can be applied as well. Fill, border, 3D, rotation etc using various tools from the format ribbon. There are also tools for aligning, layering and sizing your shape as in a desktop publishing programme.



➤ **To change fill colour**



Mouse

- a) Select shape to be formatted select **FILL COLOUR** from the **SHAPE STYLES** group.
- b) Select a **THEME COLOUR, STANDARD COLOUR, GRADIENT, TEXTURE, PICTURE** or **MORE FILL COLOURS**.

more fill colours gives a palette with any possible colour you may require. You may match a colour if you know the rgb or cymk numbers)

➤ **To change a border**

Mouse

- a) Select shape to be formatted select **SHAPE OUTLINE** from the shape styles group.
- b) Select a **THEME COLOUR, STANDARD COLOUR** or **MORE OUTLINE COLOURS**.
- c) when you have selected a colour for your shapes outline you may wish to make it thicker or to have a dashed style. Repeat step one and select weight or dashes and make a selection to apply to your shape.

The arrows option is available if your shape happens to be any kind of line you may choose an arrow style as well as a weight and line style

➤ **To apply shape effects**

Mouse

- a) Select shape to be formatted. Click on shape effects to see menu on right
- b) The preset menu shows popular styles made up of the other menu choices. Select a preset to apply.
- c) You may alter aspects of the preset by repeating and selecting a different menu choice.



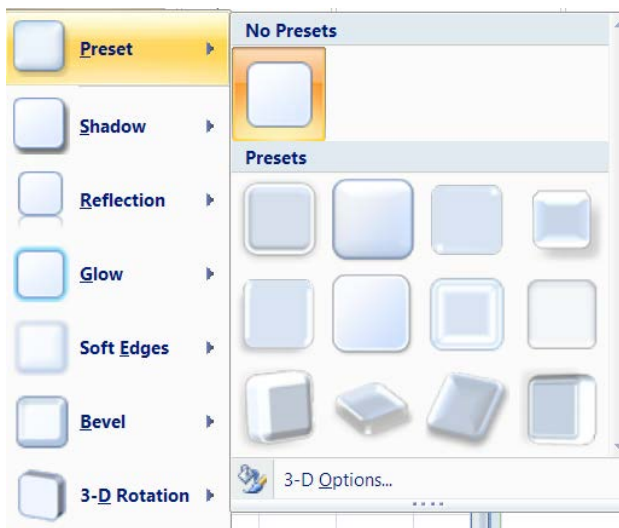
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.....Alcatel-Lucent 

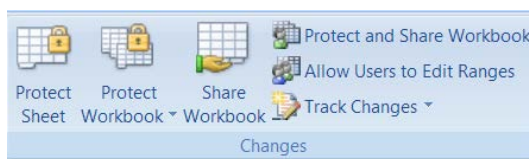
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Using all formatting choices shown gives a very professional finish to any object placed on the worksheet many of these options are available for charts and pictures.

8.2 Reviewing

Protecting



When sending your work to someone else to check, make corrections or comments it is necessary to track the changes that others may make to your work to see what changes they have made as they review your work. You may also want to restrict what they are allowed to do to your work so they do not inadvertently damage formulae and functions that make the workbook produce valid figures. For these reasons we may have to protect the workbook in various ways.

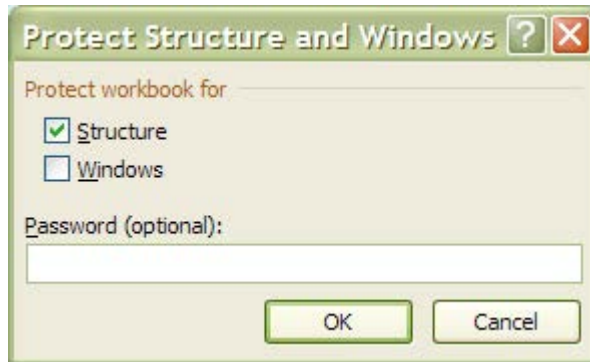
➤ To protect a workbook

Protecting a workbook ensures individuals cannot, insert, delete, move or otherwise tamper with the sheets in your work book. Hidden sheets will not be able to be unhidden if valuable tables or data is stored on them.



Mouse

- Click on **PROTECT WORKBOOK** in the **CHANGES** group on the **REVIEW** ribbon
- Select **PROTECT STRUCTURE AND WINDOWS** the following dialog will appear.



- For security (not essential) enter a password and click on ok. Workbook structure is now protected.

➤ **To unprotect a workbook**

Mouse

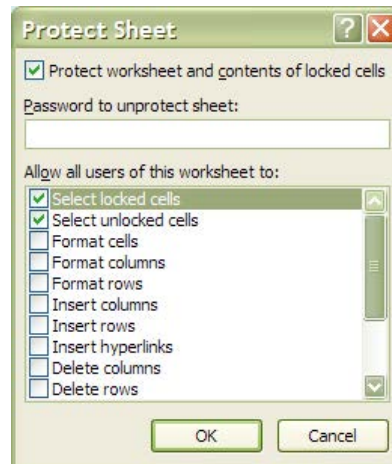
- Click on **PROTECT WORKBOOK** in the **CHANGES** group on the **REVIEW** ribbon
- Select **UNPROTECT STRUCTURE AND WINDOWS** a dialog will appear asking for password
- Enter password, click on **OK**, workbook is now unprotected

➤ **Protect worksheet data**

Mouse

- Select all cells you would like individuals to be allowed to change.
- On the **HOME** ribbon, in the **CELLS** group, click **FORMAT**, and then click **FORMAT CELLS**.
- Click on the protection tab

d) Untick **LOCK CELLS**.



- e) Click on **PROTECT WORKSHEET** in the **CHANGES** group on the **REVIEW** ribbon.
- f) Tick what you wish users to be allowed to do in the locked cells.
- g) Enter a password if you wish
- h) Click on **OK**.
- i) Sheet is now protected any cell that was locked is now uneditable by anyone.

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➤ **To unprotect worksheet data**

Mouse

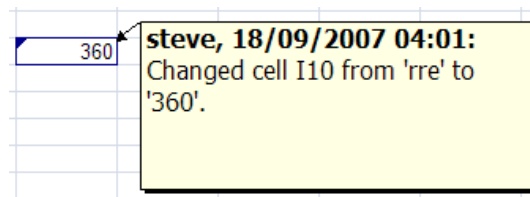
- a) Click on **PROTECT WORKSHEET** in the **CHANGES** group on the **REVIEW** ribbon
- b) Enter password to unprotect sheet
- c) Click **OK**

➤ **To protect for tracked changes**

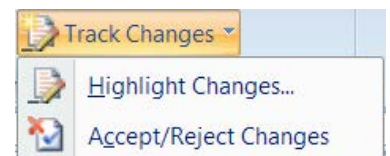


Mouse

- a) Click on **TRACK CHANGES** and then **HIGHLIGHT CHANGES** in the **CHANGES** group on the **REVIEW** ribbon
- b) The **HIGHLIGHT CHANGES** dialog will appear.
- c) Tick the **TRACK CHANGES WHILE EDITING** option
- d) Click on **OK**.
- e) Any changes made to the workbook by anyone now will leave a mark in the cell to show it has been changed by who, when and what the change is.



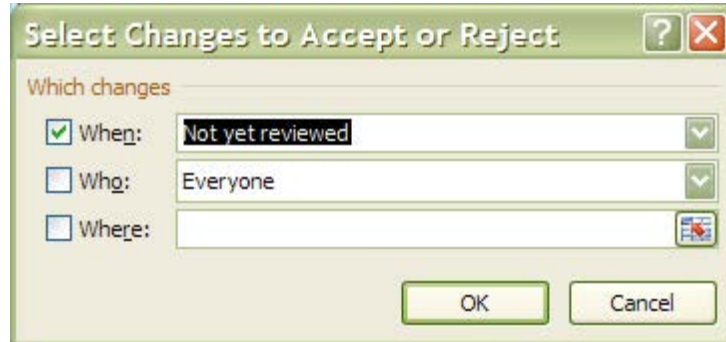
➤ **To Accept/reject changes**



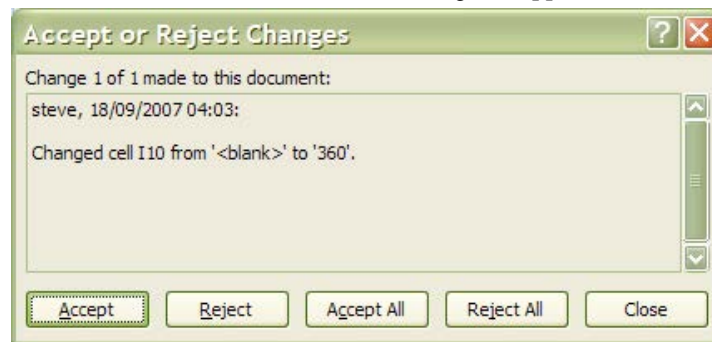
When changes have been made to your workbook you may wish to check those changes and see what has been altered. You may not be happy with some of the changes and wish to reject them for what was previously within a cell.

Mouse

- a) Click on **TRACK CHANGES** and then **ACCEPT/REJECT CHANGES** in the **CHANGES** group on the **REVIEW** ribbon.
- b) The **SELECT CHANGES TO ACCEPT OR REJECT** dialog will appear.



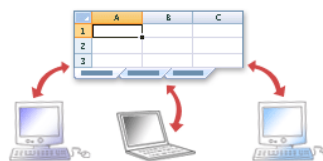
- c) Click **OK**. The **ACCEPT OR REJECT CHANGES** dialog will appear



- d) As you accept or reject each change the dialog will automatically move on to the next change. When you have finished click close to close the dialog and finish reviewing.

Use A Shared Workbook To Collaborate

You can create a shared workbook and place it on a network location where several people can edit the contents simultaneously. For example, if the people in your work group each handle several projects and need to know the status of each other's projects, the group can use a shared workbook to track the status of the projects. All persons involved can then enter the information for their projects in the same workbook.



As the owner of the shared workbook, you can manage it by removing users from the shared workbook and resolving conflicting changes. When all changes have been incorporated, you can stop sharing the workbook.

Share A Workbook

Create a new workbook and enter any data that you want to provide, or open an existing workbook that you want to make available for multi-user editing.

Not all features are supported in a shared workbook. If you want to include any of the following features, you should add them before you save the workbook as a shared workbook: merged conditional formats data validation, charts, pictures, objects including drawing objects, hyperlinks scenarios, outlines subtotals, data tables PivotTable reports workbook and worksheet protection, and macros. You cannot make changes to these features after you share the workbook.



The advertisement features a central graphic on the left consisting of a circular arrangement of four dark blue arrows pointing clockwise, with three stylized human figures and several gears in the center. To the right of this graphic, the text 'UNLEASHING CHANGE MANAGEMENT' is written in large, bold, blue capital letters. Below this, the dates 'OCTOBER 18 & 19, 2018' and the location 'DE RODE HOED AMSTERDAM' are listed in smaller blue text. The bottom of the advertisement is decorated with a silhouette of the Amsterdam skyline, including a windmill and various buildings. In the bottom left corner, the text 'Global Executive Events' is displayed. A hand cursor icon is positioned over a green oval at the bottom right of the advertisement, which contains the text 'Click on the ad to read more'.

Features that are not supported in a shared workbook

In a shared workbook, you cannot	But you may be able to do the following
Create an Excel table	None
Insert or delete blocks of cells	You can insert entire rows and columns.
Delete worksheets	None
Merge cells or split merged cells	None
Add or change conditional formats	Existing conditional formats continue to appear as cell values change, but you can't change these formats or redefine the conditions.
Add or change data validation	Cells continue to be validated when you type new values, but you can't change existing data validation settings.
Create or change charts or PivotChart reports	You can view existing charts and reports.
Insert or change pictures or other objects	You can view existing pictures and objects.
Insert or change hyperlinks	Existing hyperlinks continue to work.
Use drawing tools	You can view existing drawings and graphics.
Assign, change, or remove passwords	Existing passwords remain in effect.
Protect or unprotect worksheets or the workbook	Existing protection remains in effect.
Create, change, or view scenarios	None
Group or outline data	You can continue to use existing outlines.
Insert automatic subtotals	You can view existing subtotals.
Create data tables	You can view existing data tables.
Create or change PivotTable reports	You can view existing reports.
Write, record, change, view, or assign macros	You can run existing macros that don't access unavailable features. You can record shared workbook operations into a macro stored in another nonshared workbook.
Add or change Microsoft Excel 4 dialog sheets	None
Change or delete array formulas	Existing array formulas continue to calculate correctly.
Use a data form to add new data	You can use a data form to find a record.
Work with XML data, including: <ul style="list-style-type: none"> • Import, refresh, and export XML data • Add, rename, or delete XML maps • Map cells to XML elements • Use the XML Source task pane, XML toolbar, or XML commands on the Data menu 	None

➤ **To share a workbook**


Mouse

- a) On the **REVIEW** tab, in the **CHANGES** group, click **SHARE WORKBOOK**.
- b) On the **EDITING** tab, select the **ALLOW CHANGES BY MORE THAN ONE USER AT THE SAME TIME. THIS ALSO ALLOWS WORKBOOK MERGING** check box.




- c) On the **ADVANCED** tab, select the options that you want to use for tracking and updating changes, and then click **OK**.
- d) If this is a new workbook, type a name in the **FILE NAME** box.

OR

- a)  If this is an existing workbook, click **OK** to save the workbook, click **MICROSOFT OFFICE BUTTON** and then click **SAVE AS**.
- b) In the **SAVE IN** box, select a network location that is accessible to the intended users, and then click **SAVE**.

You should use a shared network folder, not a Web server.

- i.  If the workbook contains links to other workbooks or documents, verify the links and update any links that are broken, and then click **SAVE** on the **QUICK ACCESS TOOLBAR**, or press **CTRL+S**.
- **To verify and update links to other workbooks or documents**



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- a) On the **DATA** tab, in the **CONNECTIONS** group, click **EDIT LINKS**.

The Edit Links to Files command is unavailable if your file does not contain linked information.

- b) Click **CHECK STATUS** to verify the status for all links in the list.

This may take a while if there are many links, or if the source workbook for the links is on a network location, and the network is slow.

- c) Check the status in the **STATUS** column, click the link and then take the action that is needed.

If the status is	Take this action
OK	No action is required. The link is working and up to date.
Unknown	Click CHECK STATUS to update the status for all links in the list.
N/A	The link uses Object Linking and Embedding (OLE) or Dynamic Data Exchange (DDE)Microsoft Office Excel cannot check the status of these types of links.
Error: Source not found	Click CHANGE SOURCE , and then select another workbook.
Error: Worksheet not found	Click CHANGE SOURCE , and then select another worksheet. The source may have been moved or renamed.
Warning: Values not updated	Click UPDATE VALUES . The link was not updated when the workbook was opened.
Warning: Click Open Source, and calculate the workbook by pressing F9	The workbook may be set to manual calculation. To set the workbook to automatic calculation, click MICROSOFT OFFICE BUTTON , and then click EXCEL OPTIONS . In the FORMULAS category, under CALCULATION OPTIONS , click AUTOMATICALLY .
Warning: Some names cannot be resolved until the source workbook is opened	Click OPEN SOURCE , switch back to the destination workbook and then click CHECK STATUS . If this does not resolve the problem, make sure that the name is not misspelled or missing. Switch to the source workbook, and then on the FORMULAS tab, in the NAMED CELLS group, click NAME MANAGER , and look for the name.
Warning: Click Open Source	The link cannot be updated until the source is open.
Source is open	The status of a link cannot be checked.
Values updated from <i>file name</i>	No action is required. The values have been updated.
Warning: Excel cannot determine the status of the link	The source may contain no worksheets or may be saved in an unsupported file format. Click UPDATE VALUES .


All users with access to the network share have full access to the shared workbook unless you lock cells and protect the worksheet to restrict access. To protect a shared workbook, click **PROTECT AND SHARE WORKBOOK** in the **CHANGES** group on the **REVIEW** tab. When you protect a shared workbook, you can set a password that all users must enter to open the workbook.

To edit the shared workbook, all users must have one of the following installed on their computers: Microsoft Office Excel, Microsoft Excel 97 or later or Microsoft Excel 98 or later for Macintosh.

Not all Excel features are supported in a shared workbook. For more information, see the table “Features that are not supported in a shared workbook” above.

➤ **To Edit a shared workbook**


After you open a shared workbook, you can enter and change data as you do in a regular workbook.

- a)  Open the shared workbook.
- b) Click the **MICROSOFT OFFICE BUTTON**, and then click **EXCEL OPTIONS**.
- c) In the **POPULAR** category, under **PERSONALIZE YOUR COPY OF OFFICE**, in the **USER NAME** box, enter the user name that you want to use to identify your work in the shared workbook, and then click **OK**.
- d) Enter and edit data on the worksheets as usual.

You won't be able to add or change the following: merged cells, conditional formats, data validation, charts, pictures, objects including drawing objects, hyperlinks, scenarios, outlines, subtotals, data tables, PivotTable reports, workbook and worksheet protection, and macros.

Make any filter and print settings that you want for your personal use. Each user's settings are saved individually by default.

You can also use the filter or print settings that were made by the owner of the workbook whenever you open the workbook.

- e)  To save your changes to the workbook and see the changes that other users have saved since your last save, click **SAVE** on the **QUICK ACCESS TOOLBAR**, or press **CTRL+S**. If the **RESOLVE CONFLICTS** dialog box appears, resolve the conflicts.

To resolve conflicts, see [Resolve conflicting changes in a shared workbook in this topic](#).

*You can see who else has the workbook open on the **Editing** tab of the **Share Workbook** dialog box (**Review** tab, **Changes** group, **Share Workbook** button).*

*You can choose to get automatic updates of the other users' changes periodically, with or without saving, under **Update changes** on the **Advanced** tab of the **Shared Workbook** dialog box.*

➤ **To Remove a user from a shared workbook**

If needed, you can disconnect users from a shared workbook.

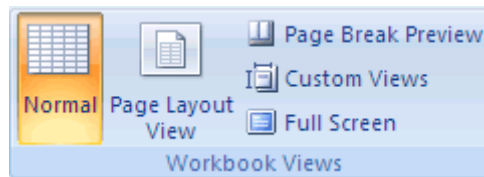
Before disconnecting users, make sure that they have completed their work on the workbook. If you remove an active user, any unsaved work will be lost.

Mouse


- a) On the **REVIEW** tab, in the **CHANGES** group, click **SHARE WORKBOOK**.
- b) On the **EDITING** tab, in the **WHO HAS THIS WORKBOOK OPEN NOW** list, review the names of users.
- c) Select the name of the user who you want to disconnect, and then click **REMOVE USER**.

Although this action disconnects the user from the shared workbook, it does not prevent that user from editing the shared workbook again.

- To delete any personal view settings of the removed user, do the following:

Mouse

- a) On the **View** tab, in the **Workbook Views** group, click **Custom Views**.
- b) In the **Views** list, select the view of another user, and then click **Delete**.

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➤ **Resolve conflicting changes in a shared workbook**

A conflict happens when two users are both editing the same shared workbook and try to save changes that affect the same cell. Excel can keep only one of the changes in that cell. When the second user saves the workbook, Excel displays the **RESOLVE CONFLICTS** dialog box.

Mouse

- a) In the **RESOLVE CONFLICTS** dialog box, read the information about each change and the conflicting changes made by the other user.
- b) To keep your change or the other person's change and to advance to the next conflicting change, click **ACCEPT MINE** or **ACCEPT OTHER**. To keep all of your remaining changes or all of the other user's changes, click **ACCEPT ALL MINE** or **ACCEPT ALL OTHERS**.

➤ **To override resolve conflicts dialog**

To have your changes override all other changes without displaying the **RESOLVE CONFLICTS** dialog box again,:

Mouse

- a) On the **REVIEW** tab, in the **CHANGES** group, click **SHARE WORKBOOK**.
- b) On the **ADVANCED** tab, under **CONFLICTING CHANGES BETWEEN USERS**, click **THE CHANGES BEING SAVED WIN**, and then click **OK**.

➤ **To view how you or others resolved past conflicts**

- a) On the **REVIEW** tab, in the **CHANGES** group, click **TRACK CHANGES**, and then click **HIGHLIGHT CHANGES**.
- b) In the **WHEN** list, select **ALL**.
- c) Clear the **WHO** and **WHERE** check boxes.
- d) Select the **LIST CHANGES ON A NEW SHEET** check box, and then click **OK**.
- e) On the History worksheet, scroll to the right to view the **ACTION TYPE** and **LOSING ACTION** columns.


Conflicting changes that were kept have Won for Action Type. The row numbers in the Losing Action column identify the rows with information about the conflicting changes that were not kept, including any deleted data. History worksheet is A separate worksheet that lists changes being tracked in a shared workbook, including the name of the person who made the change, when and where it was made, what data was deleted or replaced, and how conflicts were resolved.)

To save a copy of the workbook with all your changes, click Cancel in the Resolve Conflicts dialog box, click Microsoft Office Button, click Save As, and then type a new name for the file.

➤ **To Stop sharing a workbook**

Before you stop sharing the workbook, make sure that all other users have completed their work. Any unsaved changes will be lost. Because the change history will also be deleted, you may want to start by printing the History worksheet or by copying it to another workbook.

➤ **To keep a copy of the change history information.**

- a) On the **REVIEW** tab, in the **CHANGES** group, click **TRACK CHANGES**, and then click **HIGHLIGHT CHANGES**.
 - b) In the **WHEN** list, select **ALL**.
 - c) Clear the **WHO** and **WHERE** check boxes.
 - d)  Select the **LIST CHANGES ON A NEW SHEET** check box, and then click **OK**.
- To print the History worksheet, click **MICROSOFT OFFICE BUTTON**, and then click **PRINT**.
 - To copy the history to another workbook, select the cells that you want to copy, click **COPY** on the **HOME** ribbon in the **CLIPBOARD** group, switch to another workbook, click where you want to place the copied data, and then click **PASTE** on the **HOME** tab in the **CLIPBOARD** group.

You may also want to save or print the current version of the workbook, because this history data might not apply to later versions of the workbook. For example, cell locations, including row numbers, in the copied history may no longer be current.

- a) In the shared workbook, on the **REVIEW** tab, in the **CHANGES** group, click **SHARE WORKBOOK**.
- b) On the **EDITING** tab, make sure that you are the only person listed in the **WHO HAS THIS WORKBOOK OPEN NOW** list.
- c) Clear the **ALLOW CHANGES BY MORE THAN ONE USER AT THE SAME TIME. THIS ALSO ALLOWS WORKBOOK MERGING** check box.
- d) When you are prompted about the effects on other users, click **YES**

If this check box is not available, you must first unprotect the workbook. To remove shared workbook protection,

➤ **To unprotect shared workbook**

Mouse

- a) Click **OK** to close the **SHARE WORKBOOK** dialog box.
- b) On the **REVIEW** tab, in the **CHANGES** group, click **UNPROTECT SHARED WORKBOOK**.
- c) If you are prompted, enter the password (A way to restrict access to a workbook, worksheet or part of a worksheet. Excel passwords can be up to 255 letters, numbers, spaces and symbols. You must type uppercase and lowercase letters correctly when you set and enter passwords.), and then click **OK**.

- d) On the **REVIEW** tab, in the **CHANGES** group, click **SHARE WORKBOOK**.
- e) On the **EDITING** tab, clear the **ALLOW CHANGES BY MORE THAN ONE USER AT THE SAME TIME. THIS ALSO ALLOWS WORKBOOK MERGING** check box.
- f) When you are prompted about the effects on other users, click **YES**.

8.3 Proofing Tools

Spelling And Grammar



As a deadline approaches, often there is not enough time to check a document for spelling and grammar mistakes. Your Microsoft Office program provides tools that can help you correct these mistakes faster. You decide if you want to set up the Microsoft Office program so that you can easily see potential mistakes while you work. Or, if you find the wavy red and green lines distracting, you can just check your document when you are ready to finish it.

Maybe you are looking for a way to find and fix spelling mistakes in your document more quickly and easily? Or maybe you don't want to see the wavy red lines that your Microsoft Office program displays in your document? This section explains how automatic spelling and grammar checking works and how to turn it on or off.

There is no option to check spelling while you type in Microsoft Office Access, Microsoft Office Excel or Microsoft Office Project.

Grammar checking is available only in Microsoft Office Outlook and Microsoft Office Word.

e-learning for kids

- The number 1 MOOC for Primary Education
- Free Digital Learning for Children 5-12
- 15 Million Children Reached

About e-Learning for Kids Established in 2004, e-Learning for Kids is a global nonprofit foundation dedicated to fun and free learning on the Internet for children ages 5 - 12 with courses in math, science, language arts, computers, health and environmental skills. Since 2005, more than 15 million children in over 190 countries have benefitted from eLessons provided by EFKI. An all-volunteer staff consists of education and e-learning experts and business professionals from around the world committed to making difference. eLearning for Kids is actively seeking funding, volunteers, sponsors and courseware developers; get involved! For more information, please visit www.e-learningforkids.org.



➤ **To check spelling**

Mouse

- a) Click inside a worksheet that you are editing to check the entire active worksheet, including cell values, cell comments, embedded charts, text boxes, buttons, headers, and footers. Excel does not check protected worksheets, formulas or text that results from a formula. Also, if the formula bar is active when you check spelling, Excel checks only the contents of the formula bar.
- b) Optionally, to check only a specific piece of text, select the text you want to check.
- c) Click on **SPELLCHECKER** in the **PROOFING** group on the **REVIEW** ribbon.
- d) If the program finds spelling mistakes, a dialog box or task pane is displayed, and the first misspelled word found by the spelling checker is selected. You decide how you want to resolve each error that the program finds.
- e) After you resolve each misspelled word, the program flags the next misspelled word, so that you can decide what you want to do.



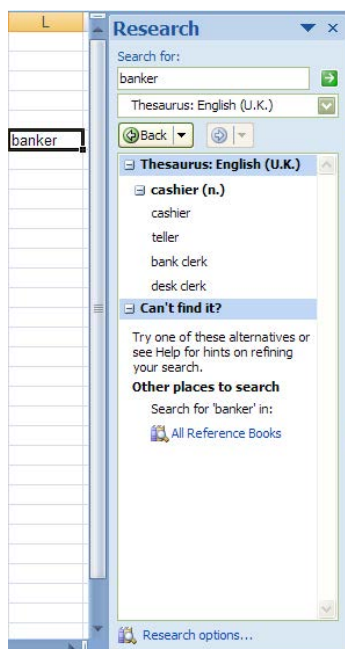
- f) When all spelling has been corrected a dialog appears telling you that the spell check is complete

Thesaurus

- To use thesaurus



Mouse



- On the **REVIEW** tab, click **THESAURUS**.
- Press **ALT** and click the word that you want to look up. Results appear in the **RESEARCH** task pane.



You can type a word or phrase in the Search for box, and then click Start Searching .

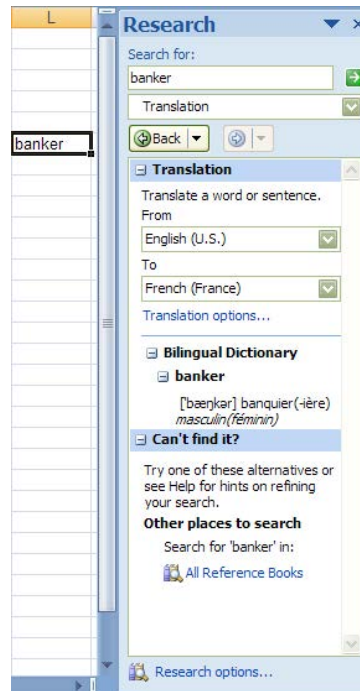
- To use one of the words in the list of results or to search for more words, do one of the following:
- To use one of the words, point to it, click the down arrow and then click **INSERT** or **COPY**.
- To look up additional related words, click a word in the list of results.

*You can also look up words in the thesaurus of another language. If, for example, your document is in French and you want synonyms, click **RESEARCH OPTIONS** in the **RESEARCH** task pane, and then under **REFERENCE Books**, select the thesaurus options that you want.*

Translation



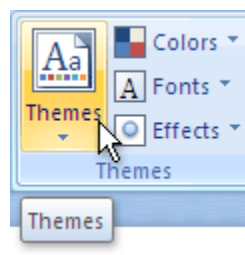
Using the Research feature, you can translate single words or short phrases by using bilingual dictionaries or translate your entire document by using Web-based machine translation services. To translate text, you may also need to satisfy the operating system requirements for specific languages.

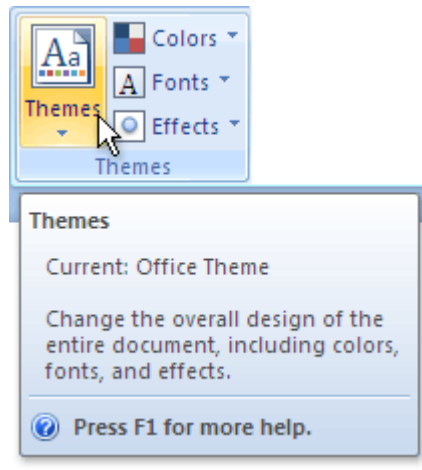


- a) On the **REVIEW** tab, click **TRANSLATE**.
- b) The translation service appears in the **RESEARCH** task pane.
- c) To change the languages that are used for translation, in the **RESEARCH** task pane, under **TRANSLATION**, select the languages that you want to translate from and to. For example, to translate English to French, click **ENGLISH (U.S.)** in the **FROM** list and **FRENCH (FRANCE)** in the **TO** list.
- d) To translate a specific word, press ALT and click a word. The results appear in the **RESEARCH** task pane under **TRANSLATION**.
- e) To translate a short phrase, select the words, press ALT and click the selection. The results appear in the **RESEARCH** task pane under **TRANSLATION**.

 You can type a word or phrase in the **SEARCH FOR** box, and then click **Start Searching**.


Show Or Hide ScreenTips





ScreenTips are small windows that display descriptive text when you rest the pointer on a command or control.

Enhanced ScreenTips are larger windows that display more descriptive text than a ScreenTip and can have a link to a Help topic. Enhanced ScreenTips are available in the following 2007 Microsoft Office system programs: Access, Excel, PowerPoint and Word.

- a)  Click the **MICROSOFT OFFICE BUTTON** , and then click **PROGRAM NAME OPTIONS**, where *Program Name* is the name of the program you are in, for example, **WORD OPTIONS**.
- b) Click **POPULAR**.
- c) Under **TOP OPTIONS FOR WORKING WITH PROGRAM NAME**, in the **SCREENTIP STYLE** list, click the option that you want:

SHOW FEATURE DESCRIPTIONS IN SCREENTIPS This option turns on ScreenTips and Enhanced ScreenTips. This is the default setting.

DON'T SHOW FEATURE DESCRIPTIONS IN SCREENTIPS This option turns off Enhanced ScreenTips. You still see ScreenTips.

DON'T SHOW SCREENTIPS This option turns off ScreenTips and Enhanced ScreenTips.

Excel 2007 specifications and limits

➤ Worksheet and workbook specifications and limits

Feature	Maximum limit
Open workbooks	Limited by available memory and system resources
Worksheet size	1,048,576 rows by 16,384 columns
Column width	255 characters
Row height	409 points
Page breaks	1,026 horizontal and vertical
Total number of characters that a cell can contain	32,767 characters
Characters in a header or footer	255
Sheets in a workbook	Limited by available memory (default is 3 sheets)
Colours in a workbook	16 million colours (32 bit with full access to 24 bit colour spectrum)
Named views (view: A set of display and print settings that you can name and apply to a workbook. You can create more than one view of the same workbook without saving separate copies of the workbook.) in a workbook	Limited by available memory
Unique cell formats/cell styles	64,000
Fill styles	32
Line weight and styles	16
Unique font types	1,024 global fonts available for use; 512 per workbook
Number formats in a workbook	Between 200 and 250, depending on the language version of Excel that you have installed
Names in a workbook	Limited by available memory
Windows in a workbook	Limited by available memory
Panes in a window	4
Linked sheets	Limited by available memory
Scenarios (scenario: A named set of input values that you can substitute in a worksheet model.)	Limited by available memory; a summary report shows only the first 251 scenarios
Changing cells in a scenario	32
Adjustable cells in Solver	200
Custom functions	Limited by available memory
Zoom range	10 percent to 400 percent
Reports	Limited by available memory
Sort references	64 in a single sort; unlimited when using sequential sorts
Undo levels	100
Fields in a data form	32
Workbook parameters	255 parameters per workbook
Filter drop-down lists	10,000

➤ Calculation specifications and limits

Feature	Maximum limit
Number precision	15 digits
Largest number allowed to be typed into a cell	9.999999999999999E+307
Largest allowed positive number	1.79769313486231E+308
Smallest allowed negative number	-2.2251E-308
Smallest allowed positive number	2.229E-308
Largest allowed negative number	-1E-307
Length of formula contents	8,192 characters
Internal length of formula	16,384 bytes
Iterations	32,767
Worksheet arrays	Limited by available memory
Selected ranges	2,048
Arguments in a function	255
Nested levels of functions	64
User defined function categories	255
Number of available worksheet functions	341
Size of the operand stack	1,024
Cross-worksheet dependency	64,000 worksheets that can refer to other sheets
Cross-worksheet array formula dependency	Limited by available memory
Area dependency	Limited by available memory
Area dependency per worksheet	Limited by available memory
Dependency on a single cell	4 billion formulas that can depend on a single cell
Linked cell content length from closed workbooks	32,767
Earliest date allowed for calculation	January 1, 1900 (January 1, 1904, if 1904 date system is used)
Latest date allowed for calculation	December 31, 9999
Largest amount of time that can be entered	9999:59:59

➤ Charting specifications and limits

Feature	Maximum limit
Charts linked to a worksheet	Limited by available memory
Worksheets referred to by a chart	255
Data series (Related data points that are plotted in a chart. Each data series in a chart has a unique colour or pattern and is represented in the chart legend. You can plot one or more data series in a chart. Pie charts have only one data series.) in one chart	255
Data points (Individual values that are plotted in a chart. Related data points make up a data series. Data points are represented by bars, columns, lines, slices, dots, and other shapes. These shapes are called data markers.) in a data series for 2-D charts	32,000
Data points in a data series for 3-D charts	4,000
Data points for all data series in one chart	256,000

➤ **PivotTable and PivotChart report specifications and limits**

Feature	Maximum limit
PivotTable reports (An interactive, cross tabulated Excel report that summarizes and analyzes data, such as database records, from various sources, including ones that are external to Excel.) on a sheet	Limited by available memory
Unique items per field	1,048,576
Row (A field that's assigned a row orientation in a PivotTable report. Items associated with a row field are displayed as row labels.) or column fields(A field that's assigned a column orientation in a PivotTable report. Items associated with a column field are displayed as column labels.) in a PivotTable report	Limited by available memory
Report filters in a PivotTable report	256 (may be limited by available memory)
Value fields in a PivotTable report	256
Calculated item (An item within a PivotTable field or PivotChart field that uses a formula you create. Calculated items can perform calculations by using the contents of other items within the same field of the PivotTable report or PivotChart report.) formulas in a PivotTable report	Limited by available memory
Report filters in a PivotChart report(A chart that provides interactive analysis of data, like a PivotTable report. You can change views of data, see different levels of detail or reorganize the chart layout by dragging fields and by showing or hiding items in fields.)	256 (may be limited by available memory)
Value fields in a PivotChart report	256
Calculated item formulas in a PivotChart report	Limited by available memory
Length of the MDX name for a PivotTable item	32,767
Length for a relational PivotTable string	32,767

➤ **Shared workbook specifications and limits**

Feature	Maximum limit
Users who can open and share a shared workbook (shared workbook: A workbook set up to allow multiple users on a network to view and make changes at the same time. Each user who saves the workbook sees the changes made by other users.) at the same time	256
Personal views (view: A set of display and print settings that you can name and apply to a workbook. You can create more than one view of the same workbook without saving separate copies of the workbook.) in a shared workbook	Limited by available memory
Days that change history (In a shared workbook, information that is maintained about changes made in past editing sessions. The information includes the name of the person who made each change, when the change was made, and what data was changed.) is maintained	32,767 (default is 30 days)
Workbooks that can be merged at one time	Limited by available memory
Cells that can be highlighted in a shared workbook	32,767
Colours used to identify changes made by different users when change highlighting is turned on	32 (each user is identified by a separate colour; changes made by the current user are highlighted with navy blue)

Prepared by Stephen Moffat on the 12th September 2007