Training for ECDL

Advanced Spreadsheets

A Practical Course in Windows XP and Office 2007

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Note to Reader

The Manual

Advanced Spreadsheets for Microsoft Office 2007 for ECDL offers a practical, step-by-step guide for those who wish to upgrade their spreadsheet skills to acquire a thorough competence in this application. Similar to the other Blackrock Education Centre training materials, it has been designed as either a stand-alone study guide or for use in a tutor-led environment. However, as is characteristic of Blackrock Education Centre training materials, the content of this manual offers additional support information through explanations, demonstrations and practical exercises as well as a support website, www.becpublishing.com.

Design

Every use has been made of the expertise we have gained training students in ICT over many years. The knowledge and skills of our substantial pool of trainers hugely influenced the content and layout of the material.

- The manual is written in plain English.
- There are step-by-step, detailed explanations and action sequences.
- Particular attention is given to relating what is seen on the pages of the manual to what is seen on the computer screen.
- The A4 size of the manual and the side-by-side layout of graphics and text, combine to make it an ideal training manual.

Exercises

At the end of each section, there are two kinds of exercises. There are self-check questions designed to jog your memory of important details. There are also practical exercises that have been designed to revise some of the more important skills associated with using Microsoft Excel.

In successfully completing each set of exercises, the student can be confident, that progress in learning more sophisticated skills has been achieved.

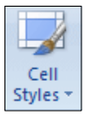
Web Support

Support material is available on the CD enclosed in the manual and on the internet at www.becpublishing.com.

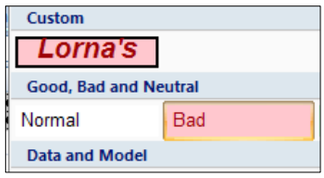
This manual was produced – text, design and layout – using only the Microsoft Office suite of programs and the skills described in the manual. The screen shots were captured using a small utility program and most were inserted directly onto the page.

1

1.2.3 Applying Customised Cell Styles



- Select the cell or range of cells to be formatted with the new style.
- From the **Home** tab and the **Styles** group, select the **Cell Styles** arrow.
  The new style will be displayed in the **Custom** section of the drop-down menu.
- Select the custom style to apply it to the selected cell(s).



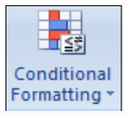
1.3 Conditional Formatting (4.1.1.2)

Conditional formatting enables the user to format specific cells based on the contents of the cells. For example, in order to see at a glance the best selling products in a Sales spreadsheet, all cells containing figures over a specified amount can be displayed in a chosen colour. All cells containing figures below a specified amount can also be formatted to display in a different colour. Conditional formatting is also referred to as **rules**.

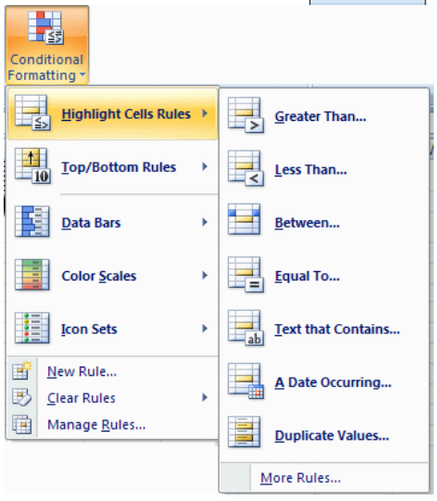
Rules can be predefined or created by the user.

1.3.1 Predefined Rules

To apply predefinded rules, do the following:

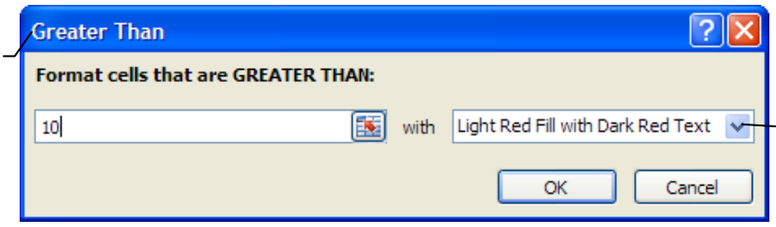


- Select the cell range or table to be formatted.
- From the **Home** tab/**Styles** group select the **Conditional Formatting** button.
- Select an option from the drop-down menu.



- Use the **Highlight Cell Rules** ▸ for comparison operators, such as **Greater Than**, **Less Than** or **Equal To**.
  - Choose the comparison operator from the Highlight Cells Rules pop-up menu.
    The **Greater Than** (or **Less Than**/**Equal To**) window opens.
  - Enter the figure.
  - Choose the required format from the drop-down menu.
  - Click **OK**.

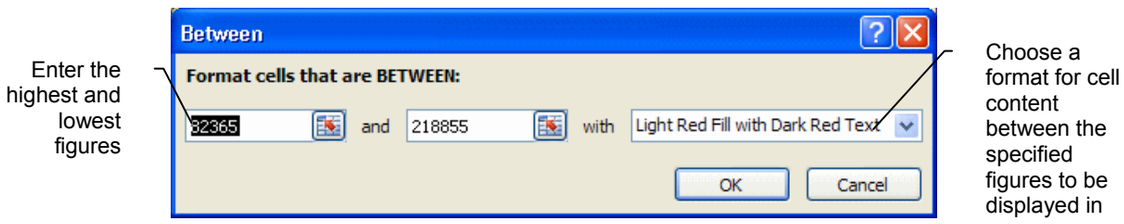
This window is similar for **Greater Than**, **Less Than** and **Equal To**



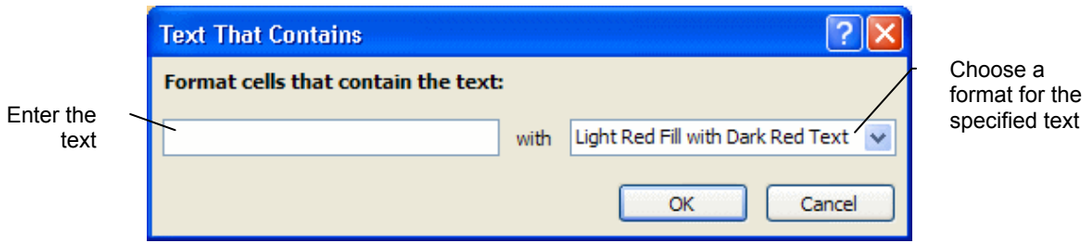
Drop-down menu

1

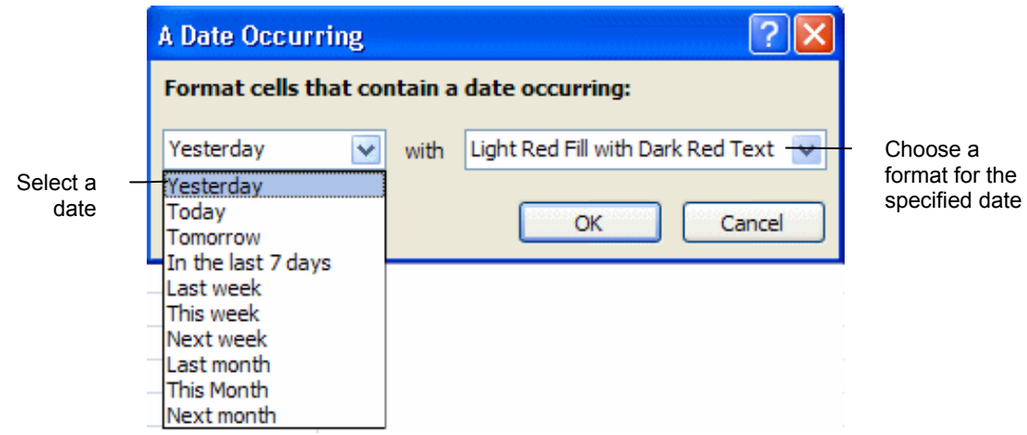
- Use the **Highlight Cell Rules ▸ Between** comparison operator to find cell content between a specified highest and lowest figure.
  - Choose **Between** from the Highlight Cells Rules pop-up menu.
    The **Between** window opens.
  - Enter the highest and lowest figures.
  - Choose the required format from the drop-down menu.
  - Click **OK**.



- Use the **Highlight Cell Rules ▸ Text that Contains** option to format cells that contain specified text..
  - Choose **Text that Contains** from the Highlight Cells Rules pop-up menu.
    The **Text That Contains** window opens.
  - Enter the text that will be formatted when used.
  - Choose the required format from the drop-down menu.
  - Click **OK**.

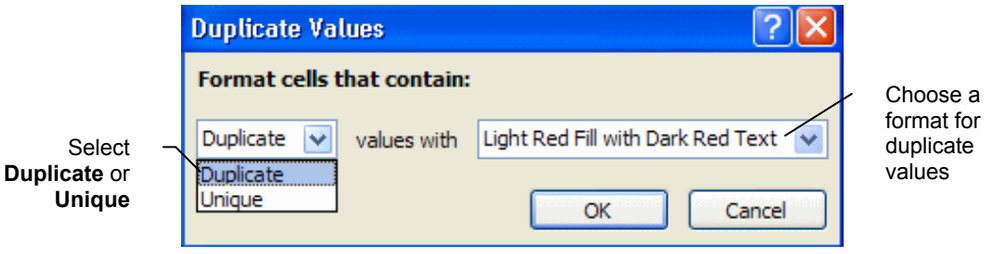


- Use the **Highlight Cell Rules ▸ A Date Occurring** option to format cells containing a specified date.
  - Choose **A Date Occurring** from the Highlight Cells Rules pop-up menu.
    The **A Date Occurring** window opens.
  - Enter the date that will be formatted when it is used.
  - Choose the required format from the drop-down menu.
  - Click **OK**.

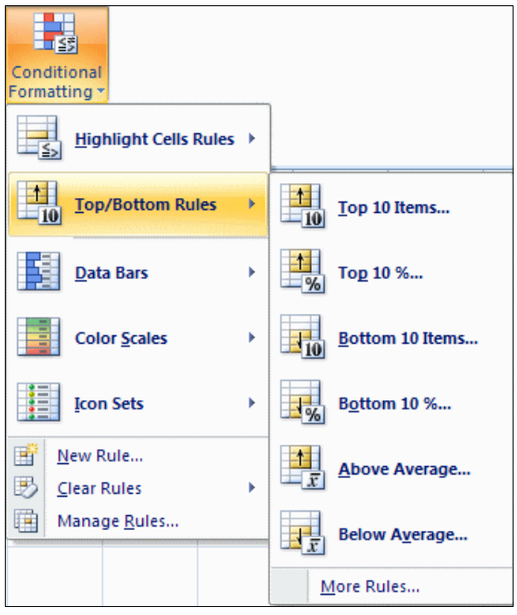


1

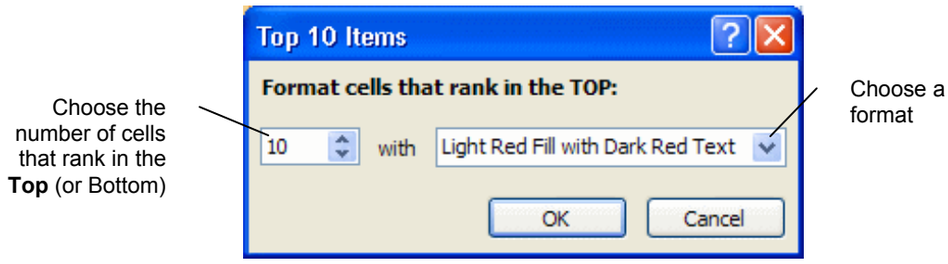
- Use the **Highlight Cell Rules ▸ Duplicate Values** option to format cells that contain duplicate or unique values.
  - Choose **Duplicate Values** from the Highlight Cells Rules pop-up menu.
    The **Duplicate** window opens.
  - Choose **Duplicate** or **Unique** (if only occurring once)
  - Choose the required format from the drop-down menu.
  - Click **OK**.



- Use **Top/Bottom Rules** to format cells with the **Top** or **Bottom** items; **Top** or **Bottom 10%** or **Above** or **Below** average.

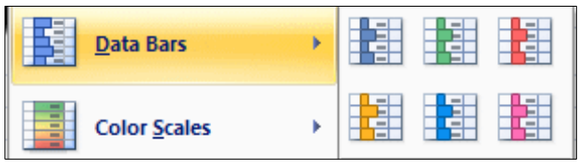


  - Choose **Top 10 Items** (or **Top 10%**, etc.) from the Top/Bottom Rules pop-up menu.
    The **Top 10 Items** (or **Top 10%**, etc.) window opens.
  - Choose the number of cells that will rank in the top (or bottom).
  - Choose the required format from the drop-down menu.
  - Click **OK**.



1

- Use the **Data Bars** option to colour data in a cell.



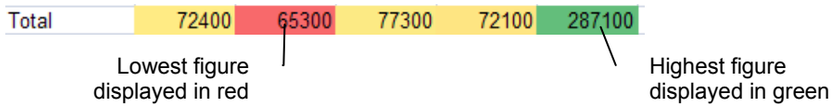
  - Choose **Data Bars**.
  - Choose the required colour from the menu.

Using **Data Bars**, the longer the colour bar, the higher the value in the cell.

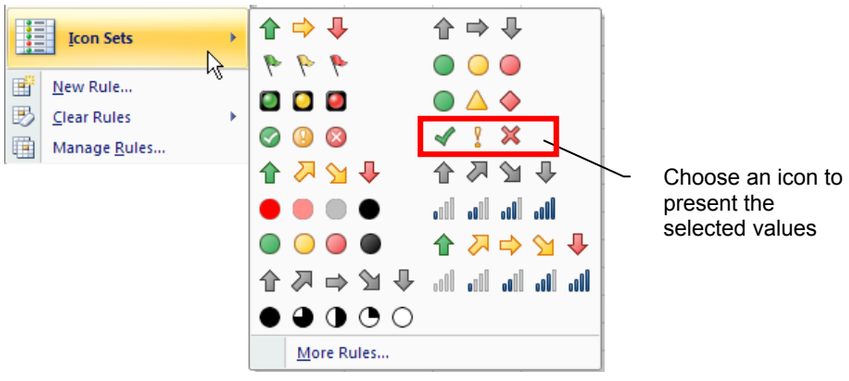
- Use the **Color Scales** option to display colours from the red, green, blue and yellow colour scales to display as gradient colours where each colour indicates a value.

  - Choose **Color Scales**.
  - Choose the required colour from the pop-up menu.

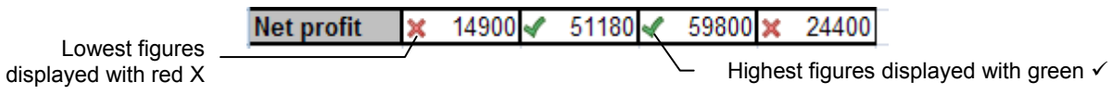
Using Colour Scales, the lowest figure may display in red and the highest value in green, with the remainder of the cells displaying in yellow.



- Use the **Icon Sets** option to display an icon representing a value in each cell. The icon displays next to the figure in the cell.
  - Choose **Icon Sets**.
  - Choose the required icon set from the pop-up menu.



Using Icon Sets, figures can be displayed with a red cross for low values and a green tick for the highest values.



- Enter the cell reference which contains the number or enter the number that you want to round up.
- Enter the number of digits in the **Num_digits** box to which the figure should be rounded (up, away from zero).
- Select **OK**.

note

The Rounddown and Roundup functions can also be entered manually.

- Select the cell in which the function is to be entered and displayed.
- Enter the = sign.
- Enter the function **ROUNDDOWN** to round a figure down towards zero or **ROUNDUP** to round a figure up, away from zero.
- As you enter the function name a menu appears.
- Double-click an option or do the following:
  - Enter an open round bracket **(**.
  - Enter the cell, e.g. **=ROUNDDOWN(A1** or **=ROUNDUP(A1**.
  - Enter a comma followed by the number of digits that you want to round down or up, e.g. **=ROUNDDOWN(A1, 0** or **=ROUNDUP(A1, 0**.
  - Close the bracket, e.g. **=ROUNDDOWN(A1, 0)** or **=ROUNDUP(A1, 0)**.

  Alternatively, after the open bracket, drag the mouse over the cell range to select it and press Enter.

2

1.2.3 SUMIF

The SUMIF function returns results from a range of cells based on criteria that you have specified.

In the example below, finding the total of the cell range B2:B5 can be performed using the SUM function.

	A	B
1	SUBJECT	ENROLLED
2	Advanced Spreadsheets	24
3	Advanced Word Processing	18
4	Advanced Databases	20
5	Advanced Presentations	22
6		
7	TOTAL ENROLMENTS	84

A simple SUM function is used to find the total number of enrolments in all subjects

To find the sum of enrolments over 20 requires a modification of the SUM function, using a SUMIF function. In the example below, the number of enrolments on the Advanced Spreadsheets and the Advanced Presentations courses total more than 20 students (24 and 22 respectively). The SUMIF function only totals the enrolments that are over 20, providing a total of 46 (the sum of 24 and 22).

	A	B
1	SUBJECT	ENROLLED
2	Advanced Spreadsheets	24
3	Advanced Word Processing	18
4	Advanced Databases	20
5	Advanced Presentations	22
6		
7	TOTAL ENROLMENTS	84
8		
9	ENROLMENTS OVER 20	46

A SUMIF function is used to find the total number of enrolments in subjects that have more than 20 enrolled

The syntax for the SUMIF function above is as follows: **=SUMIF(B2:B5, ">20")**.

All functions must start with the **=** sign.
This is followed by the function name **(SUMIF)**.
The function name is followed by an open bracket **(**.
The open bracket is followed by the **range**, in the example above this is **B2:B5**.
This is followed by the **criteria**, in the example above this is **">20"**.
The final element is a close bracket **)**.

The **Sum_Range** are the range of numbers to be totalled. A **Sum_Range** should only be entered if it differs from the range. If the **Sum_Range** is omitted from the formula, the cells from the **range** are used.

Text or criteria containing mathematical or logical symbols must be enclosed in double “quotation marks”.

An example of a SUMIF function using the Sum_Range is shown on the right.

	A	B
1	SUBJECT	ENROLLED
2	Advanced Spreadsheets	24
3	Advanced Word Processing	18
4	Advanced Databases	20
5	Advanced Presentations	22
6	Improving Productivity	24
7	TOTAL ENROLMENTS	108
8		
9	ENROLMENTS OVER 20	46
10		
11	TOTAL ENROLMENTS FOR ADVANCED SUBJECTS	84

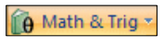
In the above example, the syntax for the SUMIF function to find the total of all subjects that contain the word "Advanced" is: **=SUMIF(A2:A6, "Advanced*", B2:B6)**.

The **range** in which the criteria can be found is **A2:A6**.
The criteria (using a wildcard) is **Advanced***.
The range to sum (for cells corresponding to the criteria) is **B2:B6**.

The enrolment for Improving Productivity is omitted from the result as it does not contain the word ‘Advanced’.

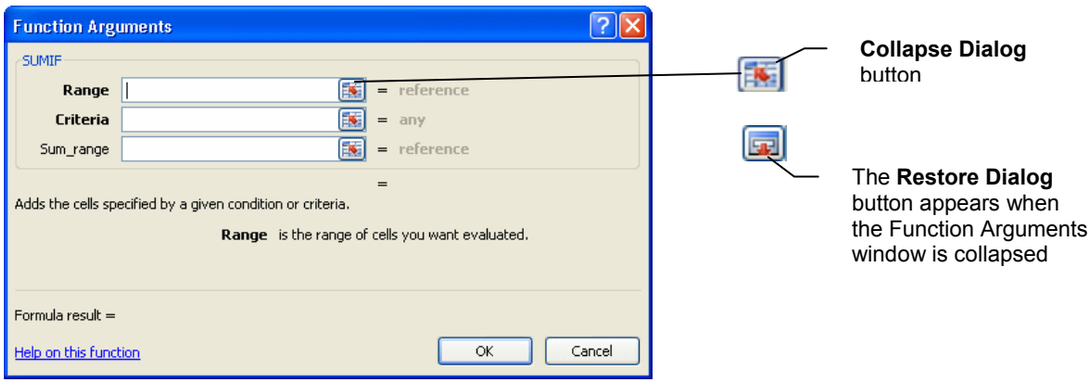
To use the SUMIF function, do the following:

- Click into the cell that is to display the results of the formula.
- Select the **Formulas** tab.
- From the **Function Library** group, select the **Math & Trig** arrow.



- Scroll down the list and select **SUMIF**.
  The **Function Arguments** window opens.
- Enter the range to be evaluated.

Alternatively, click the Collapse Dialog button at the end of the **Range** box to return to the spreadsheet in order to highlight the range (then click the Restore Dialog button to return to the Function Arguments window).



- Enter the criteria.

  Alternatively, click the Collapse Dialog button at the end of the ***Criteria*** box to return to the spreadsheet in order to highlight the criteria if it exists on the worksheet (then click the Restore Dialog button to return to the Function Arguments window).
- Enter the **sum_range**.

  Alternatively, click the Collapse Dialog button at the end of the **Sum_range** box to return to the spreadsheet in order to highlight the range on the worksheet (then click the Restore Dialog button to return to the Function Arguments window).
- Click **OK**.

note

The SUMIF function can also be entered manually.

- Select the cell in which the function is to be entered and displayed.
- Enter the **=** sign.
- After the = sign, enter the function **SUMIF**.
- As you enter the function name a menu appears.
- Double-click an option or begin entering the formula.

Examples are shown below:
=SUMIF(B3:B6, ">20").
=SUMIF(A3:A6, "Advanced Word Processing", B3:B6).

Remember, text or criteria containing mathematical or logical symbols must be enclosed in double “quotation marks”.

1.3 Statistical Functions (4.2.1.3)

Statistical functions include **COUNTIF**, **COUNTBLANK** and **RANK**.

1.3.1 COUNTIF

The COUNTIF function returns results from a range of non-blank cells based on a single criterion that you have specified, e.g. count the number of enrolments over 20. For example, a spreadsheet may contain a list of courses which includes the amount of students enrolled on each course. Counting the amount of enrolments on each course can be performed using a straightforward COUNT function, but to count only enrolments that are over 20, a COUNTIF function is required. See the example below:

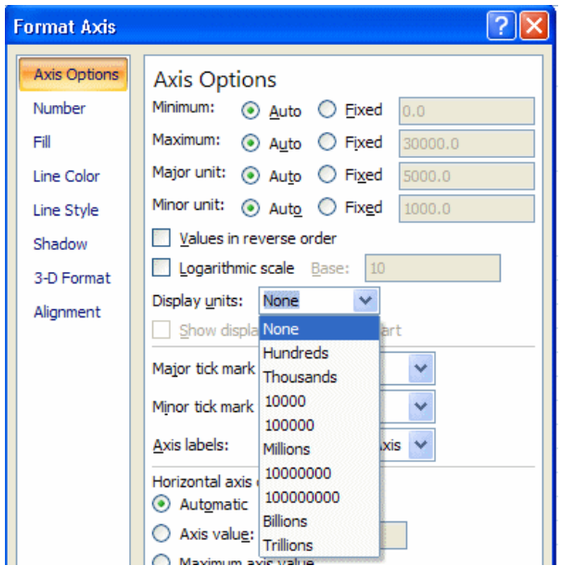
2.3 Changing Display Units (4.3.2.3)

The values on a primary or secondary value axis can be displayed in units of hundreds, thousands or millions without changing the data source.

To change display units, do the following:

- Select the chart.
- From the **Chart Tools/Layout** tab and the **Axes** group, select the **Axes** command.
- Select **Primary Vertical Axis** or **Secondary Vertical Axis**.
- Select **More Primary Vertical Axis Options** (or **More Secondary Vertical Axis Options** if applicable).

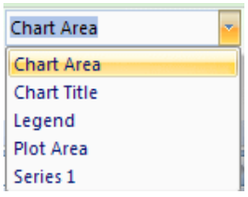
  The **Format Axis** window opens.
- Ensure that the **Axis Options** tab is selected.
- Select the **Display Units** list box arrow.
- Choose a display unit, e.g. Hundreds, Thousands, Millions.
- Click **Close**.



2.4 Formatting Chart Elements to Display Images (4.3.2.4)

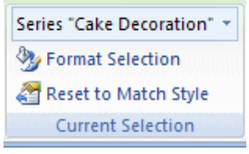
To format columns, bars, plot area and chart area to display an image, do the following.

- Select the chart element to be formatted. (To do this, click the chart element or select the chart and then select **Chart Tools/Format** tab and the **Current Selection** group, select the **Chart Elements** arrow and then select a chart element from the menu (e.g. data series for a column/bar or plot/chart area).



- From the the **Chart Tools/Format** tab and **Current Selection** group, select the **Format Selection** command.

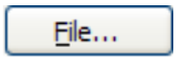
  The **Format Data Series** window opens.
- Select the **Fill** tab.
- Select the **Picture or texture fill** option button.

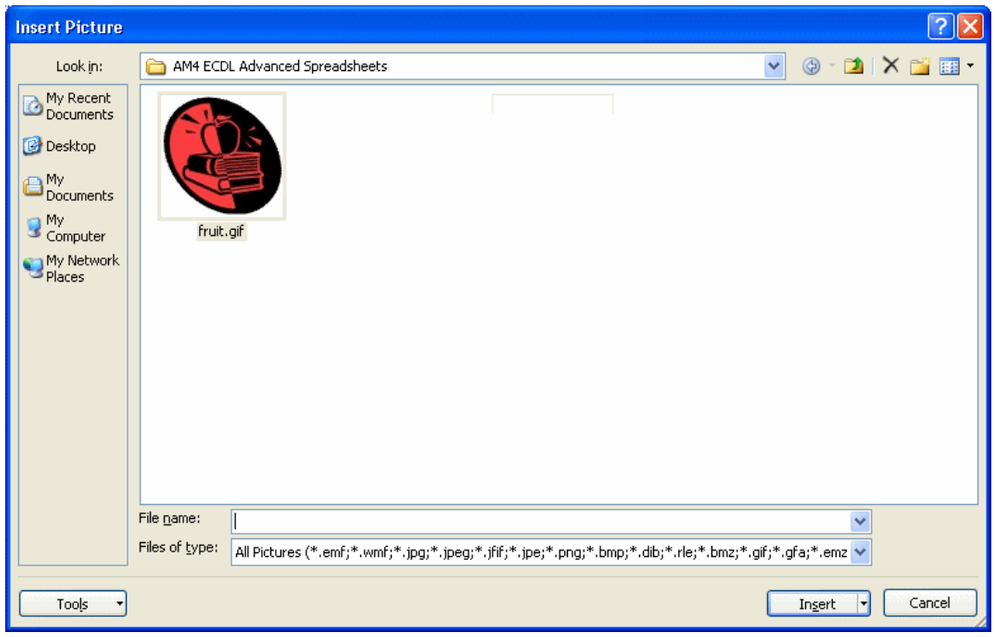


Inserting Pictures from File

- Under **Insert from…** select the **File…**button

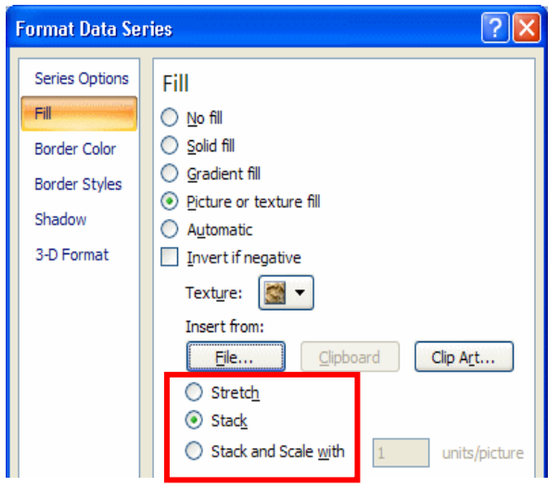
  The **Insert Picture** window opens.
- Select the file location from the **Look in:** drop-down menu.
- Select the image file.
- Click **Insert**.



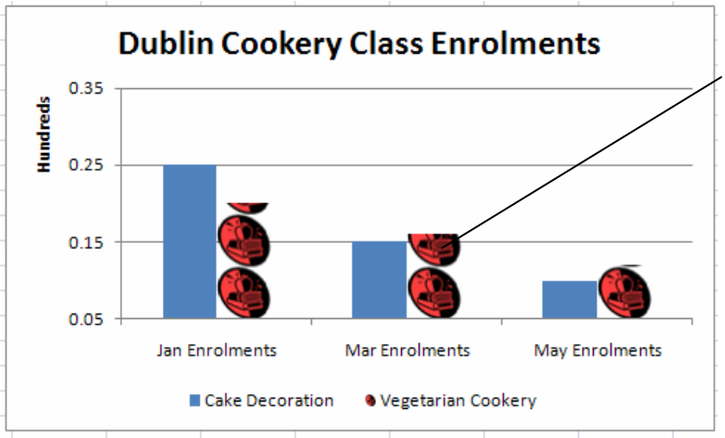


- Select a display option from the following:
  - Stretch.
  - Stack.
  - Stack and scale with: (and choose the number of units/pictures to be stacked)
- Click **Close**.

  The selected data series will display an image with the chosen format.



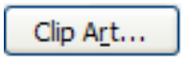
For example:

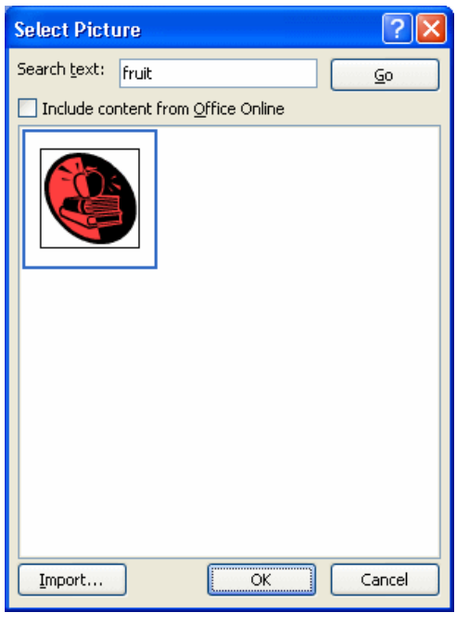


The Selected data series (Vegetarian Cookery) displays fruit image with **Stack** format

Inserting Pictures from Clipart

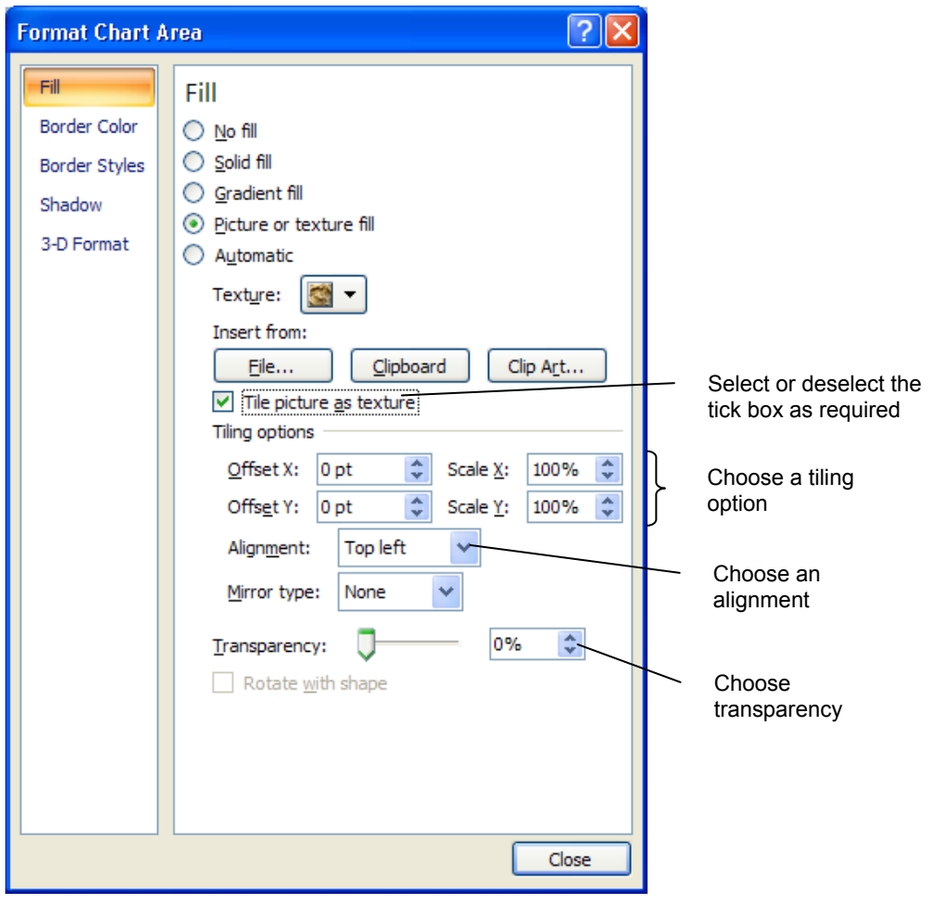
- Under **Insert from…** select the **Clipart** button.
  The **Select Picture** window opens.
- Enter the search word into the **Search text** box.
- Click **Go** (select or deselect the **Include content from Office Online** if you want to include/exclude images from Internet sources).
- Select an image.
- Click **OK**.
- Select a display option from the following:
  - Stretch.
  - Stack.
  - Stack and scale with: (and choose the number of units/pictures to be stacked).
- Click **Close**.





note

When the plot area or chart area is selected, the option to **Tile picture as texture** becomes available. Select or deselect this box as applicable. Tiling options also become available.



Practice Sequence

Complete the following exercises as a review of the topics covered in this chapter. Should you require assistance with any of the steps within these exercises, refer back to the corresponding sections within this chapter.

Exercise 1

1 Create a new spreadsheet. Create a combined column/ line chart (with a 2-D column chart type and a line with markers chart type) from the following data. ☐

	A	B	C	D
1	FOOD FOR THOUGHT BOOKS SALES			
2				
3		Vegetarian	Vegan	Non-vegetarian
4	Year 1	20000	23000	34000
5	Year 2	35000	40000	23000
6				

2 Add a Year 3 data series to the chart from the data below. ☐

Year 3	25000	36000	30000

3 Remove the Year 1 data series from the chart. ☐

4 Change the Year 2 data series to a 2-D column chart type. ☐

5 To make it easier to distinguish between values in the two data series, add a secondary axis to the combined chart. ☐

6 Change the scale of the Primary Vertical Axis to the following: Minimum 0 and the Maximum 50000. ☐

7 Change the major unit for the Secondary Vertical Axis so that the interval between each value is 10000. ☐

8 Display Thousand units on the Secondary Vertical Axis. ☐

9 Reposition the legend to appear on the left-hand side of the chart. ☐

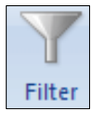
10 Format the chart area to display the image **Background.png** ☐

11 Save the spreadsheet file as **Food_book_sales.xlsx** and close. ☐

2.3.1 Text Filters

To create a text filter, do the following:

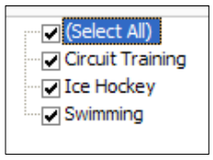
- Select the data to be filtered or click anywhere within the data range.
- From the **Data** tab and the **Sort & Filter** group, select the **Filter** command.
- Filter arrows are displayed for each of the column headings within the selected data.



The data in the example below is unfiltered.

COURSE	THEME	DAY	TIME	NO ENROLLED	START DATE
Swimming	Kids Eve	Thursday	6-7pm	5	07/01/2010
Swimming	Women Only Day	Thursday	9-11am	9	08/01/2010
Swimming	Women Only Eve	Thursday	6-8pm	10	09/01/2010
Swimming	Adult Day	Friday	9-11am	11	10/01/2010
Swimming	Adult Eve	Friday	7-9pm	21	11/01/2010
Swimming	Kids Day	Sunday	1-3pm	13	03/01/2010
Ice Hockey	Kids Day	Saturday	12-1pm	12	02/01/2010
Ice Hockey	Kids Eve	Saturday	5-6pm	10	02/01/2010
Circuit Training	Womens Only Day	Saturday	9-11am	15	02/01/2010
Circuit Training	Adult Day	Friday	9-11am	16	10/01/2010
Circuit Training	Adult Eve	Thursday	7-9pm	19	07/01/2010
Swimming	Women Only Day	Thursday	9-11am	9	08/01/2010

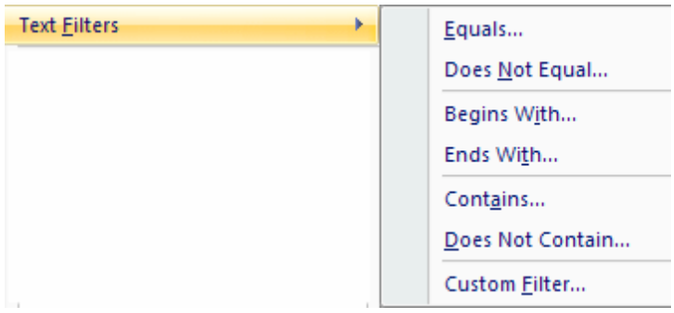
- Select a filter arrow and, from the Filter pane, deselect (clear) or select data item tick boxes (e.g. select only Swimming tick box to filter the data and display only Swimming courses).



The filter arrow changes to indicate that the column is filtered.

COURSE	THEME	DAY	TIME	NO ENROLLED	START DATE
Swimming	Kids Eve	Thursday	6-7pm	5	07/01/2010
Swimming	Women Only Day	Thursday	9-11am	9	08/01/2010
Swimming	Women Only Eve	Thursday	6-8pm	10	09/01/2010
Swimming	Adult Day	Friday	9-11am	11	10/01/2010
Swimming	Kids Day	Sunday	1-3pm	13	03/01/2010
Swimming	Adult Eve	Friday	7-9pm	21	11/01/2010

Alternatively, select **Text Filters** and then select a comparison operator from the sub-menu:



Below is an explanation of comparison operators.

Comparison Operator	Action	Comparison Operator	Action
Equals	Will find data that matches the criteria. For example, **Equals Swimming** will extract only Swimming courses.	**Does Not Equal**	Will find data **not** matching the criteria. For example, **Does Not Equal Swimming** will find all courses except the Swimming courses.
Begins With	Will find data that begins with a specified character. For example, **Begins With C** will extract courses beginning with C (Circuit Training, etc.).	**Ends With**	Will find data that ends with a specified character. For example, **Ends With G** will extract courses ending in this character (swimming, Circuit Training, etc.).
Contains	Will find data based on specified characters that are specified. For example, **Contains W** will find courses that contain this character (e.g. Swimming, Water Aerobics).	**Does Not Contain**	Will filter all data **except** for all courses containing the specified character (e.g. If **W** is specified as the criteria, the filtered data would not include (swimming, or Water Aerobics, etc.).

4

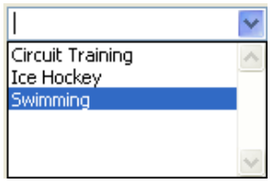
The **Custom AutoFilter** window opens.

The first drop-down list in the window will display the chosen comparison operator.

To change the comparison operator, select the list arrow and choose an option from the menu.

- Choose the required data item from the parallel drop-down list (a data item is each piece of data within a field). For example, a leisure courses table may include a COURSE field which in turn may contain data items such as Swimming, Circuit Training, etc.

  Alternatively, enter criteria into the box (e.g. type **swimming**).



- Choose the **And/Or** option button to add further criteria to the filter.
- Select a further comparison operator and enter or select criteria as required.
- Click **OK**.

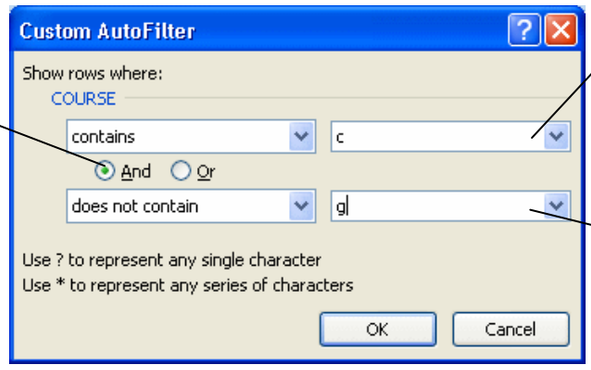
In the example on the next page, courses containing the character **c and not** containing the character **g** should be filtered and displayed.

Because **AND** is used, it restricts the filter to finding only Ice Hockey courses because Circuit Training contains the character **g**.

Unfiltered data source

COURSE	THEME	DAY	TIME	NO ENROLLED	START DATE
Swimming	Kids Eve	Thursday	6-7pm	5	07/01/2010
Swimming	Women Only Day	Thursday	9-11am	9	08/01/2010
Swimming	Women Only Eve	Thursday	6-8pm	10	09/01/2010
Swimming	Adult Day	Friday	9-11am	11	10/01/2010
Swimming	Adult Eve	Friday	7-9pm	21	11/01/2010
Swimming	Kids Day	Sunday	1-3pm	13	03/01/2010
Ice Hockey	Kids Day	Saturday	12-1pm	12	02/01/2010
Ice Hockey	Kids Eve	Saturday	5-6pm	10	02/01/2010
Circuit Training	Womens Only Day	Saturday	9-11am	15	02/01/2010
Circuit Training	Adult Day	Friday	9-11am	16	10/01/2010
Circuit Training	Adult Eve	Thursday	7-9pm	19	07/01/2010
Swimming	Women Only Day	Thursday	9-11am	9	08/01/2010

The AND operator is selected



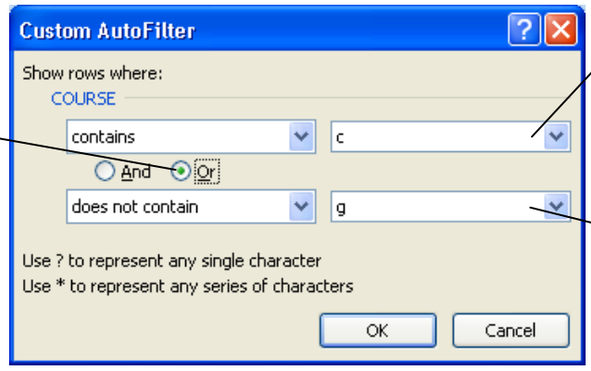
Comparison operator **Contains** is selected in order to find courses containing the character **C**

Comparison operator **Does not contain** is selected in order to find courses **not** containing the character **G**

COURSE	THEME	DAY	TIME	NO ENROLLED	START DATE
Ice Hockey	Kids Day	Saturday	12-1pm	12	02/01/2010
Ice Hockey	Kids Eve	Saturday	5-6pm	10	02/01/2010

In the following example, courses containing the character **c or not** containing the character **g** should be filtered and displayed. Because **OR** is used, the filter displays both Ice Hockey and Circuit Training courses, but not Swimming.

The OR operator is selected



Comparison operator **Contains** is selected in order to find courses containing the character **C**

Comparison operator **Does not contain** is selected in order to find courses **not** containing the character **G**

Both courses contain the character c. Circuit Training also contains the character g, but because the **OR** operator is selected, both courses are displayed

COURSE	THEME	DAY	TIME	NO ENROLLED	START DATE
Ice Hockey	Kids Day	Saturday	12-1pm	12	02/01/2010
Ice Hockey	Kids Eve	Saturday	5-6pm	10	02/01/2010
Circuit Training	Womens Only Day	Saturday	9-11am	15	02/01/2010
Circuit Training	Adult Day	Friday	9-11am	16	10/01/2010
Circuit Training	Adult Eve	Thursday	7-9pm	19	07/01/2010

Wildcards

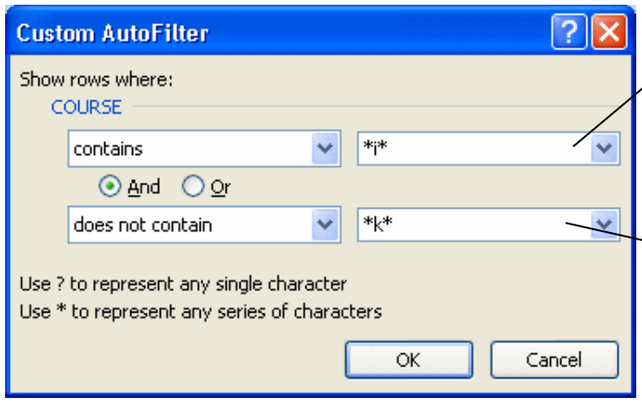
Wildcards are characters such as **?** and * that are used to represent a single character (**?**) within a field or any series of characters within a field (*).

For example:

- **Contains *l*** will filter and extract data that matches fields containing the character **l**.
- Entering **S?i??ing** will filter and extract data that matches fields containing the specified characters – e.g. swimming. The **?** wildcard character represents the missing characters.

For example:

A spreadsheet contains data relating to leisure courses: Swimming, Circuit Training and Ice Hockey. A custom autofilter is applied to filter courses that contain the character **i AND** do not contain the character **k**. A wildcard (*) is used to represent the missing characters.



Will find any course containing the character **i** …

… **AND** will find any course not containing the character **k**

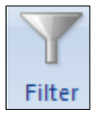
The following courses are filtered and extracted: Swimming and Circuit Training (they both contain the character **i** as specified). Ice Hockey is not displayed as, although it matches the **contains** criteria (**i**), it also contains the **does not contain** criteria **k**.

However, if the **OR** operator is selected, all of the courses would be displayed (swimming, circuit training and ice hockey all match the first set of criteria).

2.3.2 Number Filters

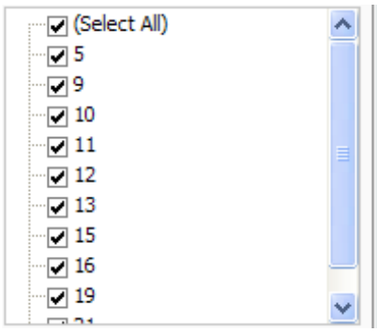
To create a number filter, do the following:

- Select the data to be filtered.
- From the **Data** tab and the **Sort & Filter** group, select the **Filter** command.
- Filter arrows are displayed for each of the column headings within the selected data.



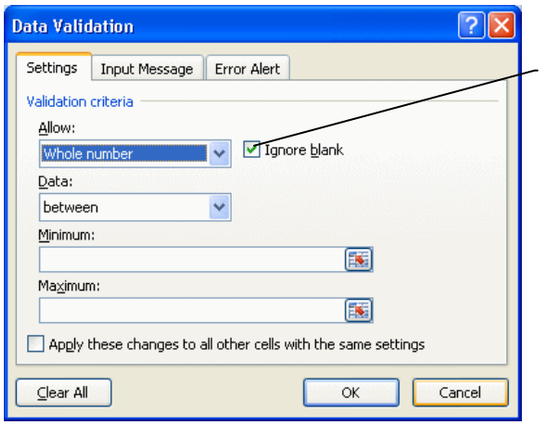
- Select a filter arrow.
- From the Filter pane, deselect (clear) or select data item tick boxes.

  The filter arrow changes to indicate that the column is filtered.



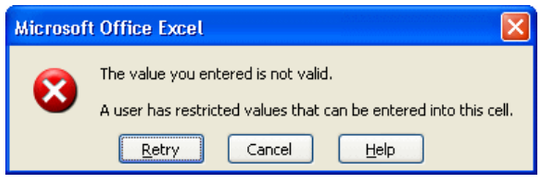
- **Equal to** – will only allow a specified number to be entered (e.g. *Equal to 10* will only allow entry of number equal to 10).
- **Not equal to** - will not allow a specified number to be entered (e.g. *Not equal to 10* will allow entry of any number other than 10).
- **Greater than** – will allow entry data greater than a specified number (e.g. *greater than* 10 will restrict users to enter numbers greater than 10)
- **Less than** - will allow entry of data less than a specified number (e.g. *less than* 10 will restrict users to enter numbers that are below 10)
- **Greater than or equal to** - will allow entry of data greater than or equal to a specified number (e.g. *greater than or equal to* 10 will restrict users to enter numbers that equal 10 or over. Will allow 10, 21, 32, 43 etc, but not 9)
- **Less than or equal to** - will allow entry of data less than or equal to a specified number (e.g. *less than or equal to* 10 will restrict users to enter numbers that are 10 or below)

- Enter a minimum number in the **Minimum** box or select the Collapse Dialog button and select the data in the spreadsheet. Select the Expand Dialog button to return to the window.
- Enter a maximum, number in the **Maximum** box or select the Collapse Dialog button and select the data in the spreadsheet. Select the Expand Dialog button to return to the window.
- Select or deselect the **Ignore blank** tick box to ignore or include blank cells in the validation. When the **Ignore** blank check box is selected it allows any value to be entered into a blank cell, unrestricted by data validation. If you want to apply the validation criteria to all other cells in the spreadsheet that share the same settings, select the tick box.



Select this to ignore blank cells or deselect to include blank cells

- Click **OK**.
- When invalid data, not matching the validation criteria, is entered in a cell, the following default error message appears.



- Click Cancel to re-enter data that match the validation criteria.

1.1.3 Setting Validation Criteria for Lists

Data within a drop-down menu can be taken from other cells within the worksheet or from cells within a different worksheet or entered directly into the Source box in the Data Validation window. Data entered into the Source box must be separated by a comma.

For example, a drop-down list that asks a specific question may include the following data items: **Yes, No**.

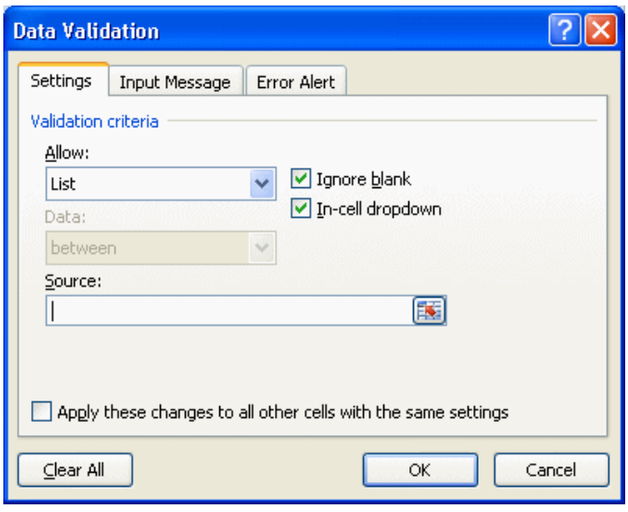
To set validation criteria so that users are restricted to choosing data from a drop-down list, do the following:

Entering List Items Manually

- Select the cell where the drop down list is to be located on the spreadsheet.
- Open the **Data Validation** window and the **Settings** tab.
- Select **List** from the **Allow:** list arrow under **Validation Criteria**.
- Click into the **Source** box and enter the items that should be included in the drop-down list. Ensure that the data items are separated by a comma, e.g. Yes, No:

Separate list items with a comma

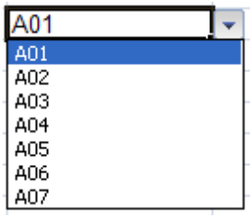
- Select or deselect the **Ignore blank** tick box to ignore or include blank cells in the validation.
- In order to see the drop-down list arrow, ensure that the **In-cell dropdown** tick box is selected. If you want to apply the validation criteria to all other cells in the spreadsheet that share the same settings, select the tick box.



- Click **OK**.

  A list arrow is displayed in the selected cell.

  When the arrow is clicked a drop-down list appears, displaying the specified data.
- Click a list item to enter it into the cell.

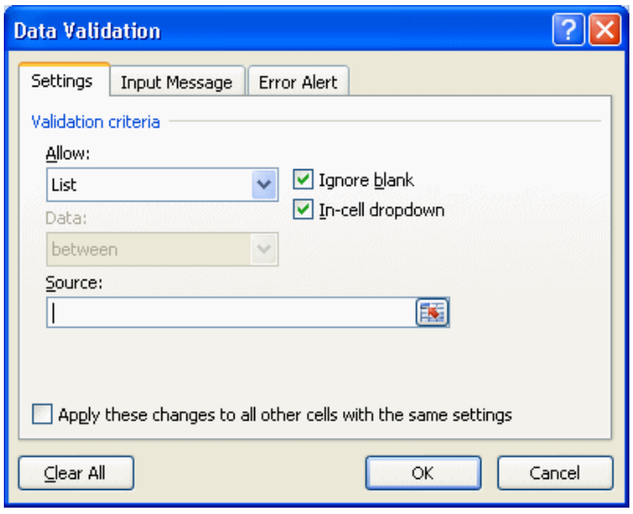


- When invalid data, not matching an item within the drop-down list, is entered in a cell, an error message opens.

- Click Cancel to re-enter or select data that matches the validation criteria.

Creating a Drop-Down List from an Existing Cell Range within a Worksheet

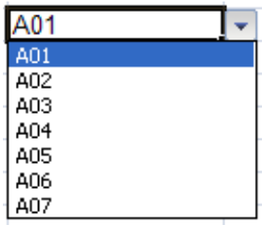
- Enter the data items to appear in the drop-down list in a separate area of the worksheet.
- Select the cell where the drop-down list is to be located on the worksheet.
- Open the **Data Validation** window and the **Settings** tab.
- Select **List** from the **Allow:** list arrow under **Validation Criteria**.
- Select the **Source** Collapse Dialog box icon and then select the cell range containing the data list items.
- Select the Expand Dialog box icon to return to the window.
- Select or de-elect the **Ignore blank** tick box to ignore or include blank cells in the validation.
- In order to see the drop-down list arrow, ensure that the **In-cell dropdown** tick box is selected. If you want to apply the validation criteria to all other cells in the spreadsheet that share the same settings, select the tick box.



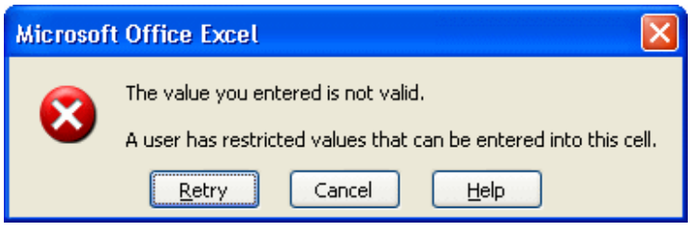
- Click **OK**.

  A list arrow is displayed in the selected cell.

  When the arrow is clicked a drop-down list appears, displaying the specified data.
- Click a list item to enter it into the cell.



- When invalid data, not matching an item within the dropdown list, is entered in a cell, an error message opens.

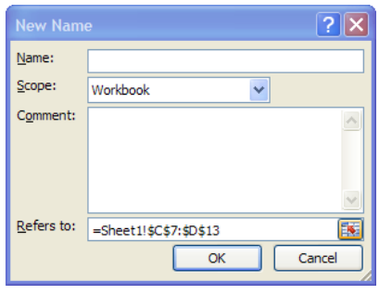


- Click **Cancel** to re-enter or select data that matches the validation criteria.

Creating a Drop-Down List from a Defined Name Cell Range from a Different Worksheet

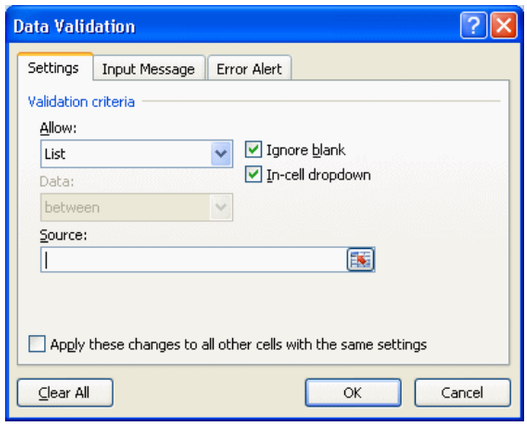
- Open a separate worksheet.
- Enter the data items to appear in the drop-down list within the worksheet.
- Select the data items.
- Select the **Formulas** tab.
- Select the **Define Names** command from the **Defined Names** group.

  The **New Name** window opens.



- Enter a name for the selected cell range.
- Click **OK** to close the New Name window.
- Return to the worksheet to contain the drop-down list.
- Select the cell where the drop-down list is to be located.
- Open the **Data Validation** window and the **Settings** tab.
- Select **List** from the **Allow:** list arrow under **Validation Criteria**.
- Click into the **Source** box and enter the defined name (enter the equals sign = before the defined name, e.g. =Sales_ID).

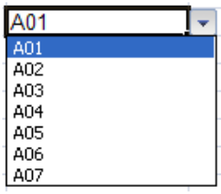
- Select or deselect the **Ignore blank** tick box to ignore or include blank cells in the validation.
- In order to see the drop-down list arrow, ensure that the **In-cell dropdown** tick box is selected. If you want to apply the validation criteria to all other cells in the spreadsheet that share the same settings, select the tick box.



- Click **OK**.

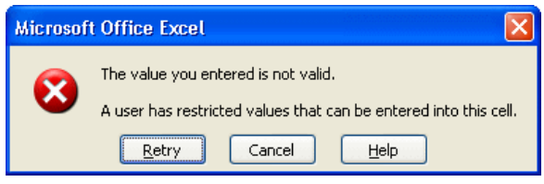
  A list arrow is displayed in the selected cell.

  When the arrow is clicked a drop down list appears, displaying the specified data.



- Click a list item to enter it into the cell.

  When invalid data, not matching an item within the drop-down list, is entered in a cell, an error message opens.



- Click **Cancel** to re-enter or select data that matches the validation criteria.

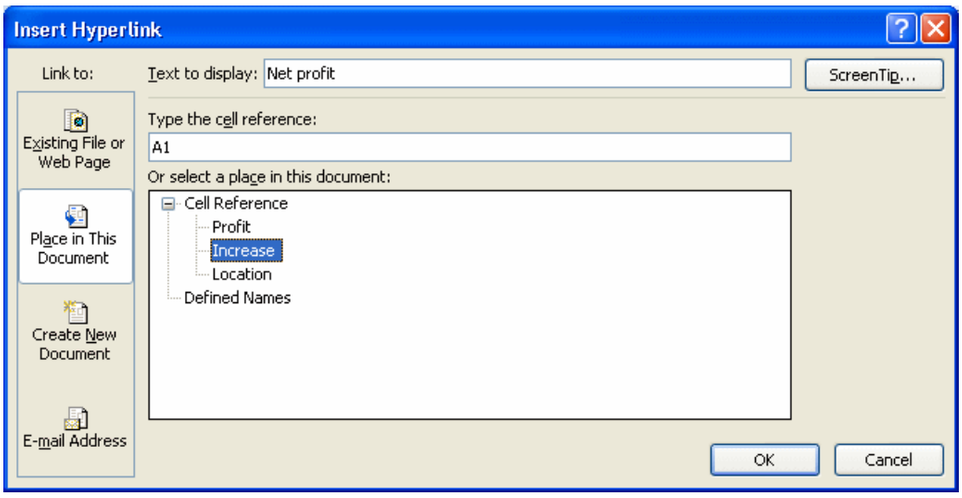
4.1.1 Inserting a Hyperlink

To insert a hyperlink, do the following:

Within a Spreadsheet

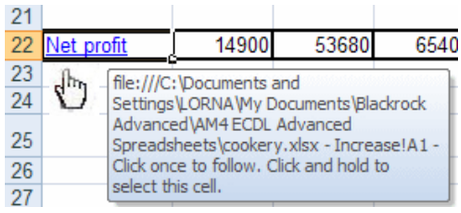
- Select the cell which is to contain the hyperlink.
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.

  The **Insert Hyperlink** window opens.
- Ensure that **Place in This Document** is selected in the **Link to:** list.
- Click into the **Text to display:** box and enter the text that is to be displayed as the hyperlink text.
- Select the **ScreenTip…** button to add or change the text that will be displayed when the cursor is hovered over the hyperlink.
- Type in the cell reference or select a place in a specific worksheet (hyperlinks can also be applied to defined named cell ranges within the spreadsheet).



- Click **OK** to return to the spreadsheet.

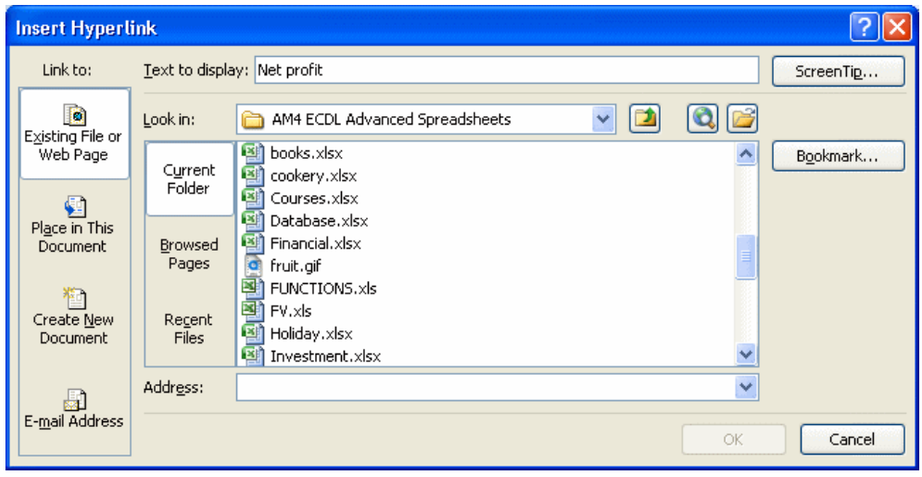
  The hyperlink text will be displayed with a blue underline. When the cursor is hovered over the hyperlink, it turns into a white hand icon and the ScreenTip appears detailing the location of the hyperlink.
- Click the mouse to follow the link.



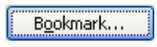
To a Different Spreadsheet or File

- Select the cell that is to contain the hyperlink.
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.
- Ensure that **Existing File or Web Page** is selected in the **Link to:** list.
- Click into the **Text to display:** box and enter the text that is to be displayed as the hyperlink text.
- Select the **ScreenTip…** button to add or change the text that will be displayed when the cursor is hovered over the hyperlink.

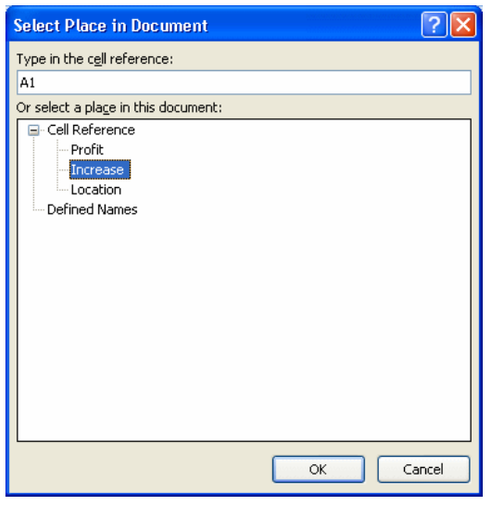
- Choose the correct drive/folder from the **Look in:** drop-down menu.
- Select a spreadsheet file from the list.



- To create a hyperlink to a specific location within the selected spreadsheet, select the **Bookmark** button.

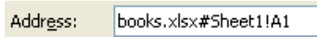


  The **Select Place in Document** window opens.
- Type in the cell reference or select a place in a specific worksheet (hyperlinks can also be applied to defined named cell ranges within the spreadsheet).



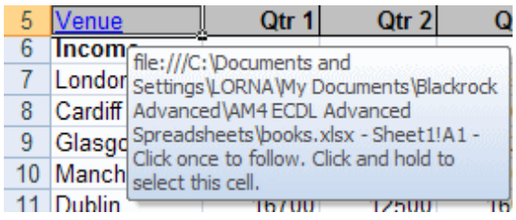
- Click OK to return to the **Insert Hyperlink** window.

  The hyperlink location will be displayed in the **Address** box.



- Click **OK**.

  The hyperlink text will be displayed with a blue underline. When the cursor is hovered over the hyperlink, it turns into a white hand icon and the ScreenTip appears detailing the location of the hyperlink.
- Click the mouse to follow the link.



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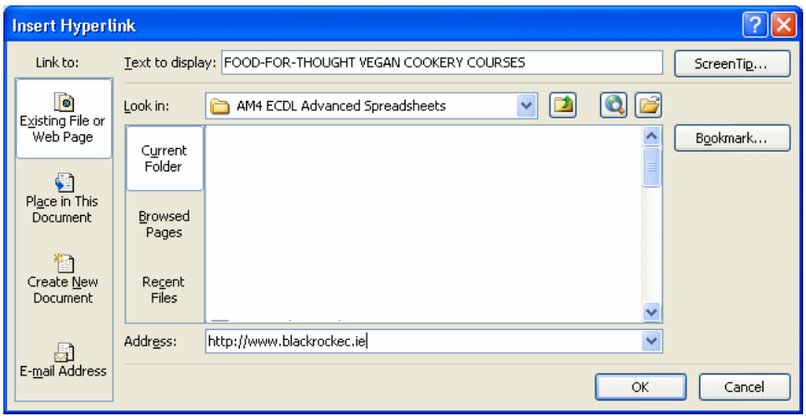
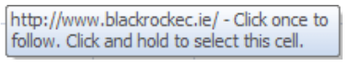
To an Internet Address

- Select the cell that is to contain the hyperlink.
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.
- Ensure that **Existing File or Web Page** is selected in the **Link to:** list.
- Click into the **Text to display:** box and enter the text that is to be displayed as the hyperlink text.
- Select the **ScreenTip…** button to add or change the text that will be displayed when the cursor is hovered over the hyperlink.
- Enter the web address in the **Address:** box.
- Click **OK**.



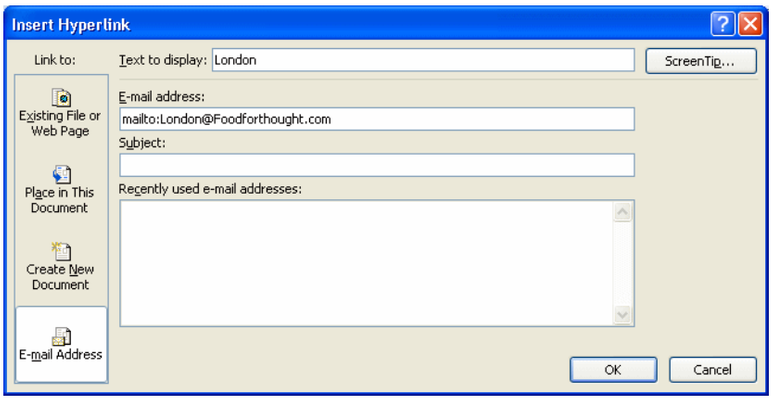
The hyperlink text will be displayed with a blue underline. When the cursor is hovered over the hyperlink, it turns into a white hand icon and the ScreenTip appears detailing the web address of the hyperlink.

- Click the mouse to follow the link.



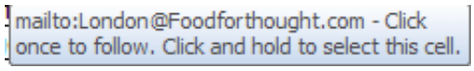
To an E-Mail Address

- Select the cell which is to contain the hyperlink.
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.
- Ensure that **E-mail Address** tab is selected in the **Link to:** list.
- Click into the **Text to display:** box and enter the text that is to be displayed as the hyperlink text.
- Select the **ScreenTip…** button to add or change the text that will be displayed when the cursor is hovered over the hyperlink.
- Enter the e-mail address in the **E-mail address:** box.
- Enter a subject for the email message if required.
- Click **OK**.



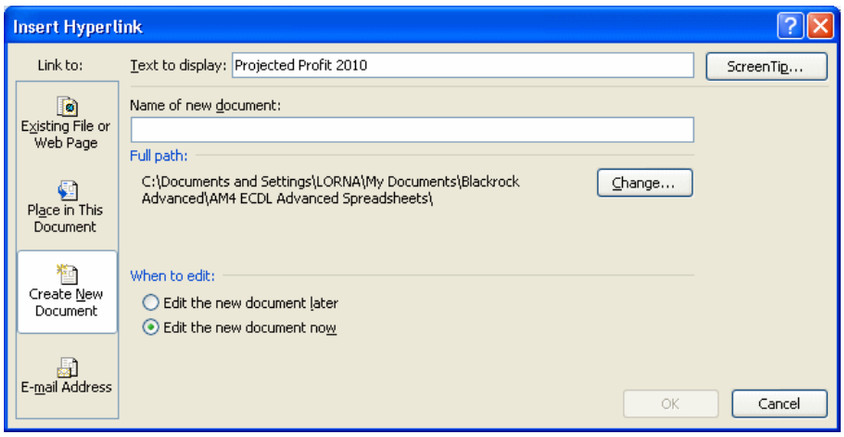
The hyperlink text will be displayed with a blue underline. When the cursor is hovered over the hyperlink, it turns into a white hand icon and the ScreenTip appears detailing the e-mail address of the hyperlink.

- Click the mouse to follow the link.



To a New Document

- Select the cell which is to contain the hyperlink.
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.
- Ensure that **Create New Document** is selected in the **Link to:** list.
- Click into the **Text to display:** box and enter the text that is to be displayed as the hyperlink text.
- Select the **ScreenTip…** button to add or change the text that will be displayed when the cursor is hovered over the hyperlink.
- Change the drive/folder location if required by selecting the **Change** button and then selecting a new location.
- Enter a name for the new file.
- Choose an option button for one of the following:
  - Edit the new document later.
  - Edit the new document now.
- Click **OK**.



The hyperlink text will be displayed with a blue underline. When the mouse is hovered over the hyperlink, the mouse pointer turns into a white hand icon and the ScreenTip appears detailing the location of the hyperlink.

- Click the mouse to follow the link.

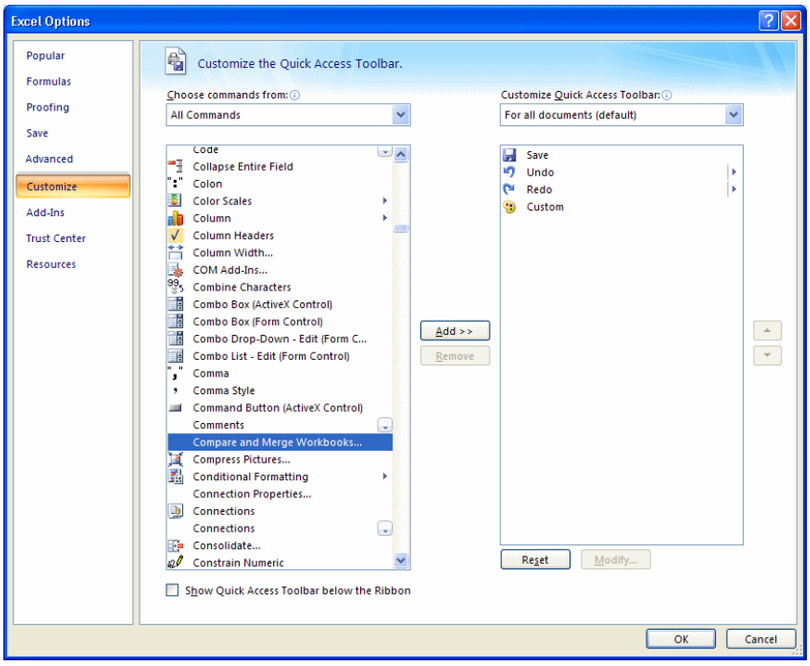
4.1.2 Editing a Hyperlink

To edit a hyperlink, do the following:

- Select the cell containing the hyperlink (ensure that you don't click directly on the hyperlink text or you will open the hyperlink).
- From the **Insert** tab and the **Links** group, select the **Hyperlink** command.

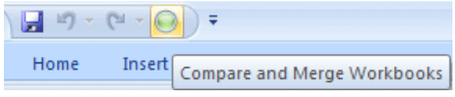
  The **Edit Hyperlink** window opens.
- Edit the existing hyperlink by changing the spreadsheet file and/or location within the spreadsheet or by changing the email address or web address.
- Click **OK**.

- Scroll down the list of commands and select **Compare and Merge Workbooks**.
- Click the **Add >>** button.
- Click **OK**.



The **Compare and Merge Workbooks** button will be displayed on the Quick Access Toolbar.

When the cursor is hovered over the button, a screen tip appears displaying the command name.

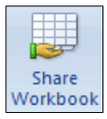


1.3.2 Sharing Workbooks

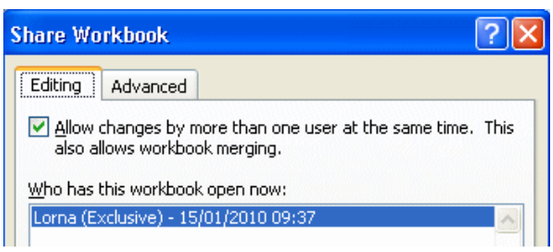
A workbook must be shared and then copies made of the shared workbook before the Compare and Merge Workbooks command can be used. A shared workbook can be worked on by multiple users and the tracked changes can then be compared and merged in one workbook. Shared workbooks should be saved on a shared drive, such as a network drive, where it can be accessed by authorised users. Workbooks containing tables cannot be merged.

To share workbooks, do the following:

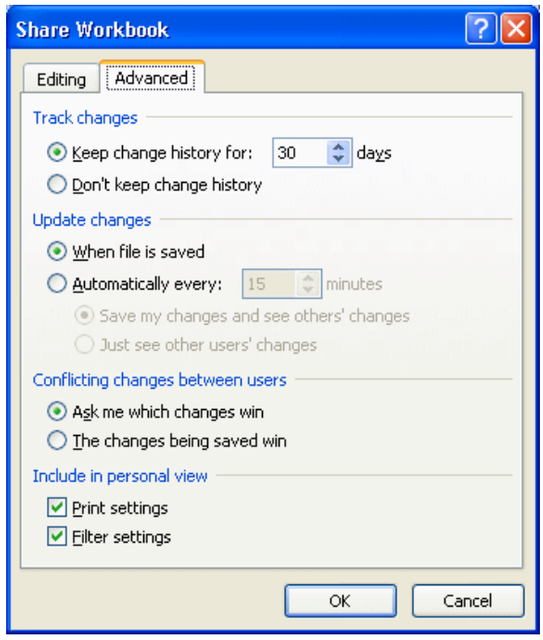
- Open the spreadsheet to be shared.
- From the **Review** tab and the **Changes** group, select the **Share Workbook** command.



  The **Share Workbook** window opens.
- From the **Editing** tab, select the **Allow changes by more than one user at the same time. This also allows workbook merging** tick box.
- The name of the user who has the workbook open will be displayed. If more than one user has the workbook open, all the names will be displayed.



- Select the **Advanced** tab.
- From this window you can choose the following:
  - The number of days that the tracked changes will be displayed.
  - How to update changes: when the file is saved or automatically for a specified number of minutes. If using the latter option, also choose whether to save your own changes in addition to seeing other users' changes or opt to see only other users' changes.
  - How to prioritise conflicting changes between users: ask to be prompted which changes should be prioritised or choose to always prioritise saved changes.
  - Settings to include in personal view: Print settings and/or filter settings.
- Click **OK**.
- Copies of the workbook can now be made by other users, in order to make changes.



To make a copy of a shared workbook, do the following:

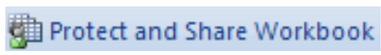
- Select **Save As** from the **Office Button**.
  The **Save As** window opens.
- Choose the stored location from the **Save in:** drop-down menu.
- Enter a name for the copied workbook (it must differ from the original file name).
- Click **Save**.

Protecting and Sharing Workbooks

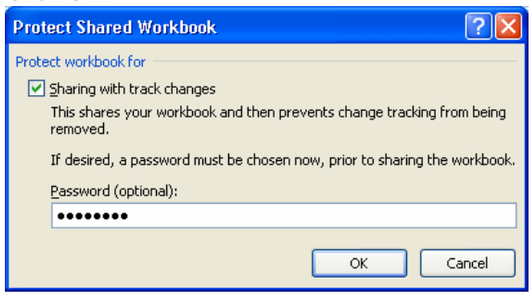
To ensure that tracked changes cannot be turned off by other users of a shared workbook, it can be protected with a password.

To share and protect a workbook, do the following:

- Open the spreadsheet to be shared.
- From the **Review** tab and the **Changes** group, select the **Protect and Share Workbook** command.



  The **Protect Shared Workbook** window opens.
- Select the **Sharing with track changes** tick box.
- If required, enter a password into the **Password (optional)** box.
- Click **OK**.



If a password was entered, the **Confirm Password** window opens.

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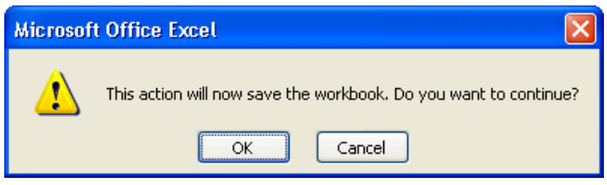
- Re-enter the password to proceed.
- Click **OK**.

A message window opens.

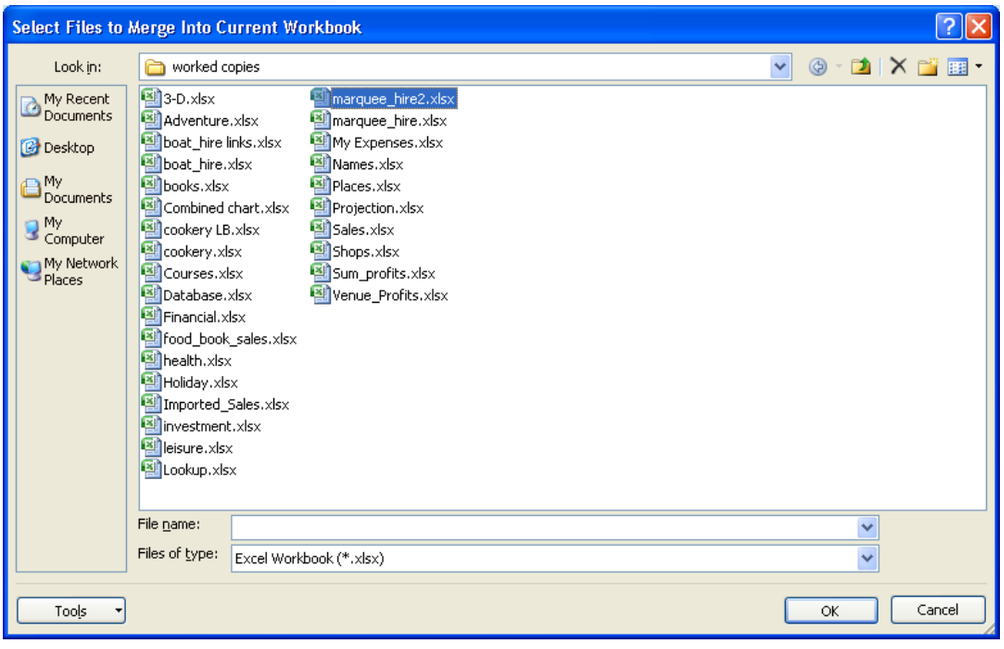


- Click **OK** to continue saving the workbook.

1.3.3 Comparing and Merging Workbooks

To compare changes made between multiple shared workbooks, do the following:

- Open the original shared workbook.
- Select the **Compare and Merge Workbooks** button.
  The **Select Files to Merge into Current Workbook** window opens.
- Select the file location from the **Look in:** drop-down menu.
- Select the file to be merged.
- Click **OK**.



- The changes made in the selected shared workbook will be compared and merged with the current workbook.
- Save the merged workbook.