



# Excel 2003 Intermediate

## Best STL

- Courses never cancelled: guaranteed
- Last minute rescheduling
- 24 months access to Microsoft trainers
- 12+ months schedule
- UK wide delivery

[www.microsofttraining.net](http://www.microsofttraining.net)

**E&OE**

Best Training reserves the right to revise this publication and make changes from time to time in its content without notice.

# Your Best STL Learning Tools

Welcome to your Best STL training course.

As part of your training, we provide you with the following tools and resources to support and enhance your learning experience.

Thank you for choosing Best STL.

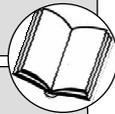
## 1 In-course handbook



To guide you through your training while you are on the course.

Contains unit objectives, exercises and space to write notes.

## 2 Reference material



Available online through your delegate account.

Comprehensive reference material with 100+ pages, containing step-by-step instructions.

## 3 12 months access to Microsoft trainers



Available through online support forum.

Need help? Our team of Microsoft qualified trainers are on hand to offer advice and support.

## 4 Delegate account



Your delegate account gives you access to:

- Reference material
- Course exercise files
- Advice & support forum
- Rewards programme
- Promotions & Newsletters

## 5 Trainer hints and tips



Hints and tips available online from our Microsoft qualified trainers for:

- All MS Office applications
- VBA
- MS Project
- MS Visio
- + more

## 6 Save with Promotions



Save on further training courses you book with Promotions.

- 30% off list price (time limited)
- £50 off list price (blue card discount)

# Contents

<b>Working with large worksheets</b> .....	<b>1</b>
Using freeze panes .....	1
Split window .....	1
Outlining data .....	2
Print titles .....	3
Working in page break preview.....	3
Working with large worksheets Practice Activity.....	4
<b>Working with multiple worksheets and workbooks</b> .....	<b>5</b>
Grouping sheets.....	5
Creating 3-D formulae.....	5
Using the Consolidate feature.....	6
Linking workbooks.....	7
Working with multiple worksheets and workbooks Practice Activity .....	9
<b>Working with dates</b> .....	<b>10</b>
Dates and time in Excel .....	10
Inserting and formatting dates .....	11
Using dates in formulas .....	11
Using date functions.....	11
Working with dates Practice Activity .....	12
<b>Conditional formulas and formatting</b> .....	<b>13</b>
Creating IF functions .....	13
Using conditional formatting.....	14
Conditional formats and formatting Practice Activity .....	16
<b>Working with lists</b> .....	<b>17</b>
What is a list?.....	17
Sorting a list .....	17
Using AutoFilters.....	18
Using advanced filters.....	20
List management Practice Activity .....	22
<b>Documenting and auditing</b> .....	<b>23</b>
Working with comments.....	23
Tracing formula errors.....	24
Applying protection.....	26
Documenting and auditing Practice Activity.....	27
<b>Templates</b> .....	<b>28</b>
What is a template? .....	28
Creating a template from an existing workbook.....	29
Creating a new file from a template .....	29
Modifying a template .....	29
Templates Practice Activity.....	30



© Best STL 2013

[www.microsofttraining.net](http://www.microsofttraining.net)

Tel: 020-8682-4973

## Quick reference: Shortcut keys

Command	Shortcut keys
<b>Related to course topics/units</b>	
Move to next/previous pane when window is split	F6/Shift F6
Move to the next/previous workbook sheet	Ctrl Page Down/Page Up
Group rows/columns	Alt Shift Right Arrow
Ungroup rows/columns	Alt Shift Left Arrow
Display/hide outline symbols	Ctrl 8
Hide selected rows/columns	Ctrl 9/0
Unhide rows/columns within a selection	Ctrl Shift ( or Ctrl Shift )
Edit a comment	Shift F2
Display Insert Function dialogue box	Shift F3
<b>Other general shortcuts</b>	
Absolute/relative/mixed reference	F4
AutoSum	Alt =
Close	Ctrl-W
Copy	Ctrl-C
Cut	Ctrl-X
Show values/formulas	Ctrl-pipe key (below Esc)
Edit cell	F2
Find	Ctrl-F
Formula	=
Move left/right one screen	Alt-PgUp/PgDn
Move to beginning of worksheet	Ctrl-Home
Move to edge of region	Ctrl-Arrow
Move to end of row	End, Enter
Move to end of worksheet	Ctrl-End
New	Ctrl-N
Next worksheet	Ctrl-PgUp
Open	Ctrl-O
Paste	Ctrl-V
Previous worksheet	Ctrl-PgDn
Print	Ctrl-P
Repeat/Redo	Ctrl-Y
Replace	Ctrl-H
Save	Ctrl-S
Select worksheet	Ctrl-A
Spelling and Grammar check	F7
Underline	Ctrl-U
Undo	Ctrl-Z

## Working with large worksheets

This unit focuses on using features of Excel designed to make viewing and printing large spreadsheets manageable.

### Unit objectives

By the end of this unit, you will be able to:

- Set and remove freeze panes
- Split a spreadsheet window
- Create an outline using spreadsheet data
- Set print titles
- Work in page break preview to adjust, add and remove page breaks

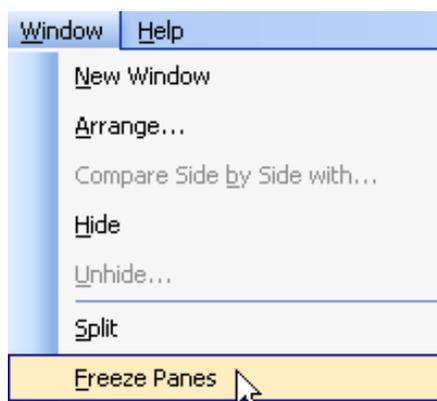
### Using freeze panes

---

Freeze panes keeps columns and/or rows visible on the screen whilst scrolling across or down the spreadsheet.

To set freeze panes:

- Select the cell **below** the rows and to the **right** of the columns that should be visible when scrolling, e.g. to view rows 1 to 4 and columns A and B when scrolling, select cell C5.
- Go to Window-Freeze Panes



To remove freeze panes, go to Window-Unfreeze Panes.

### Split window

---

Introducing a split into the Excel window creates multiple scrollable sections within a single worksheet. It is useful for being able to easily see two different parts of a worksheet that wouldn't normally be able to be viewed simultaneously.

To create a split:

- Select the cell **below** the rows and to the **right** of the columns where the split is to be positioned
- Go to Window-Split.

To remove a split:

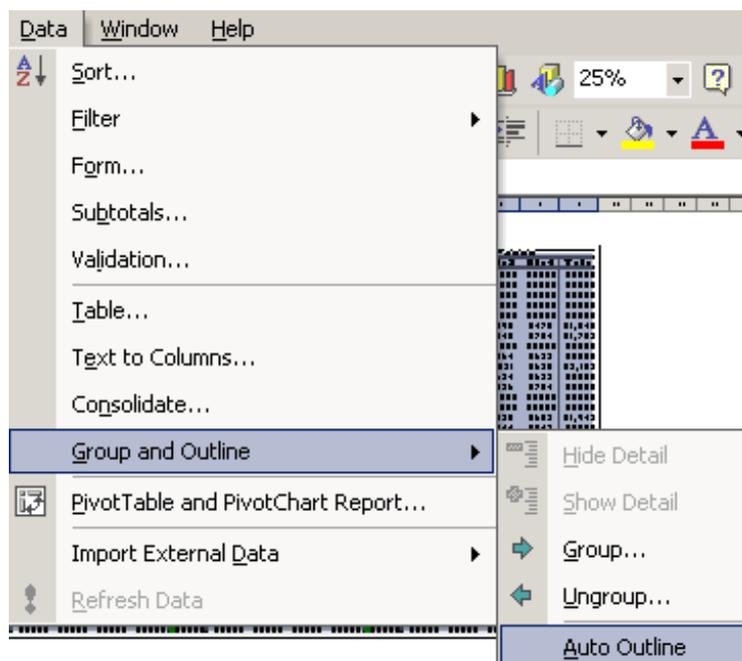
- Double-click any part of the split bar that divides the panes; or
- Go to Window-Remove Split.

## Outlining data

Outlining allows for quick manipulation of data, by way of collapsing or expanding areas of the spreadsheet (called groups).

To create an outline from spreadsheet data:

- Select the data to be included in the outline
- Go to Data-Group and Outline



- Select Auto Outline (Excel will outline the data automatically, if possible) or Group
- Use the outline buttons in the top left corner of the screen to collapse or expand the range of visible data.



To remove the outline:

- Select the data to be removed from the outline
- Go to Data-Group and Outline
- Select Clear Outline or Ungroup.

## ***Print titles***

---

Use Print Titles to have headings from rows or columns repeated at the top or left hand side of each printed page.

To set print titles:

- Go to File-Page Setup
- Select the Sheet tab
- Under Print titles, click next to Rows to repeat at top or Columns to repeat at left
- Click (and drag) over the row(s) or column(s) to be repeated on each page.

## ***Working in page break preview***

---

Page break preview is used to adjust, add or remove page breaks within a worksheet, thereby controlling the printing of data across multiple pages.

Change into page break preview by:

- Selecting View-Page Break Preview; or
- Click the Page Break Preview button from within the Print Preview window.

## **Adjusting page break positions**

In Page Break Preview, page breaks will appear as dashed blue lines.

To adjust the position of page breaks:

- Position the mouse pointer directly over the page break to be adjusted, until the mouse pointer displays as a double-headed arrow.
- Click and drag the page break to its new position.

## **Inserting page breaks**

If additional page breaks are required, they can be inserted from within Page Break Preview.

- If inserting a page break across the spreadsheet, select the row **below** where the page break is to appear.  
If inserting a page break down the spreadsheet, select the column to the **right** of where the page break is to appear.
- Right-click on the appropriate row or column header (as specified above)
- Select Insert Page Break from the shortcut menu.

## **Deleting page breaks**

To remove page breaks that aren't required:

- If deleting a page break across the spreadsheet, select the row **below** the page break to be removed.  
If deleting a page break down the spreadsheet, select the column to the **right** of the page break to be removed.
- Right-click on the appropriate row or column header (as specified above)
- Select Remove Page Break from the shortcut menu.

## ***Working with large worksheets Practice Activity***

---

1. Open the file **Practice working with worksheets**.
2. Resave the file with your own name in front of the current filename, e.g. **John Practice working with worksheets**.
3. On *Sheet 1*, set up the spreadsheet so that the product list in column A and the headings in row 3 are visible when scrolling across and down the spreadsheet.
4. On *Sheet 2*, create a report that shows only the Total purchase, Total sale Units in hand and Total value of stock for each product and region.
5. On *Sheet 3*, create a report that shows only the regional subtotals and grand totals for all purchase, sales and stock information.
6. On *Sheet 4*, set the spreadsheet so that:
  - the information for each region would print on it's own page (i.e. 4 pages in total)
  - the headings from the top of the spreadsheet printing on each page.
7. Save and close the file.

### **Online support forum and knowledge base**



[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)

*Visit our forum to have your questions answered by our Microsoft qualified trainers.*



## Working with multiple worksheets and workbooks

This unit focuses on methods and features for summarising, linking and working across multiple worksheets and workbooks.

### Unit objectives

By the end of this unit, you will be able to:

- Group and ungroup worksheets
- Summarise data across multiple worksheets using 3D formulas and the Consolidate feature
- Create, update, maintain and break links between workbooks.

### Grouping sheets

---

When worksheets are grouped together, the same action or change can be performed on all sheets in the group simultaneously. For example, all sheets in the group can be sent to the printer at the same time by pressing the Print button when viewing one of the sheets within the group.

To create a group:

- Select the sheets to be grouped together
  - If the sheets are adjacent (next to each other), click on the tab of first sheet to be grouped, hold down Shift and click on the tab of the last sheet to be included.
  - If the sheets are non-adjacent, use the Ctrl key instead of Shift.
- Right-click on the tab of the first selected sheet and select Group Sheets.

To ungroup sheets, either:

- Click on a tab for a sheet which is not part of the group; or
- Right-click on a tab for a sheet within the group and select Ungroup Sheets.

### Creating 3-D formulae

---

A reference that refers to the *same cell or cell range* on multiple sheets is called a 3-D reference. By creating a 3D formula, data can be summarised across different sheets within the same workbook.

To create a 3-D formula using a function:

- Select the cell where the formula is to be entered
- Type = (equal sign)
- Type in the function name followed by an open bracketClick on the sheet tab of the first worksheet to be entered into the formula
- Hold down the **Shift** key and click on the sheet tab for the last worksheet to be entered into the formula
- On the sheet you have just selected, highlight the cell or range of cells to be included in the formula
- To complete the formula, and press the **Enter** key

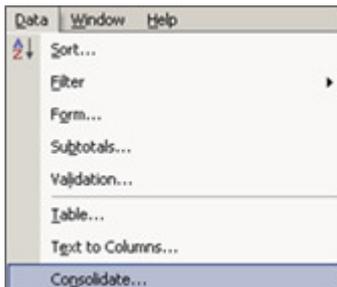
## Using the Consolidate feature

The Consolidate feature can also be used to summarise data from multiple worksheets.

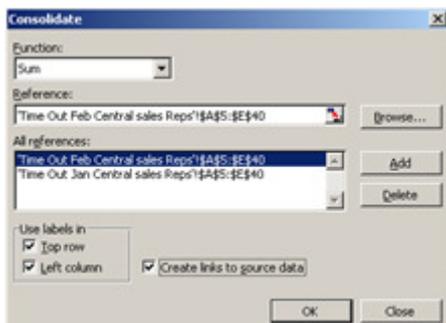
Excel can create a summary spreadsheet using any one of a series of functions (e.g. SUM, AVERAGE), however this relies upon a common factor of row and column headings to bring across data to a different worksheet.

To use the Consolidate feature:

- Go to a blank worksheet
- Select the upper-left cell of the area where you want the consolidated data to appear
- Go to Data-Consolidate



- Choose the function you wish to use in the consolidation
- Use the Reference area to select the ranges you wish to consolidate, including the row and column headings, clicking the Add button after you have selected each range
- Check the tick boxes at the bottom to use the headings from the ranges you have selected
- Check the box to link the selected ranges to the consolidated data if required



## Linking workbooks

Different workbooks can be linked by creating formulas in one workbook that refer to cells in another workbook. The workbook that contains the link is called the *destination* file, and the workbook that contains the data that is linked to is referred to as the *source* file.

Generally links between workbooks are created so that when data in the source file is changed or updated, the data in the destination file can be easily updated.

### What does a link look like?

A link will look slightly different depending on whether the source and destination files are both open or not.

If both files are *open*, then formulas that link to cells in other workbooks will show the name of the source file, the name of the worksheet that the cell or cell range is located in, and then the cell or cell range that is being linked to.

For example:

```
=SUM([Budget.xls]Annual!C10:C25)
```

When the source file is *closed*, any formulas that link to cells in other workbooks will also show where the file is saved on the computer or network.

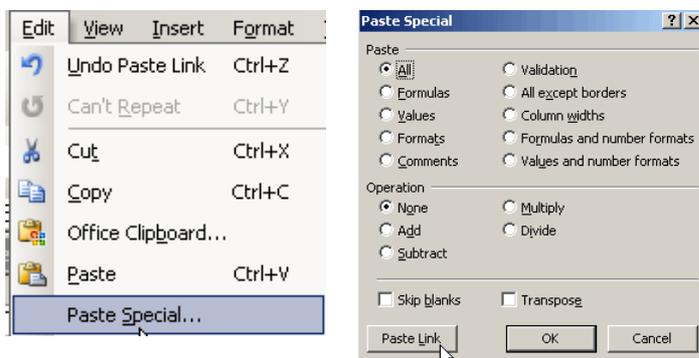
For example:

```
=SUM('C:\Reports\[Budget.xls]Annual!C10:C25)
```

## Linking workbooks using Paste Link

To create a link between workbooks using Paste Special:

- Open both the source file and the destination file
- Select and copy the cell or cell range in the source file
- Select the cell where you want the link to be created in the destination file
- Go to Edit – Paste Special and click the Paste Link button



## Linking workbooks by manually entering a formula

To link workbooks by manually entering a formula into the destination file:

- Open both the source file and the destination file
- Select the cell where the link is to be created in the destination file
- Enter an = (equal sign) into the selected cell
- Switch to the source file
- Select the worksheet then the cell to be linked to
- Finish entering the formula, pressing the Enter key when it is complete

## Updating links

Links will be updated instantly in the destination file if it is open while changes are made to data in the source file.

If the destination file is closed while changes are made to data in the source file, then usually a prompt will appear to update links next time the destination file is opened.



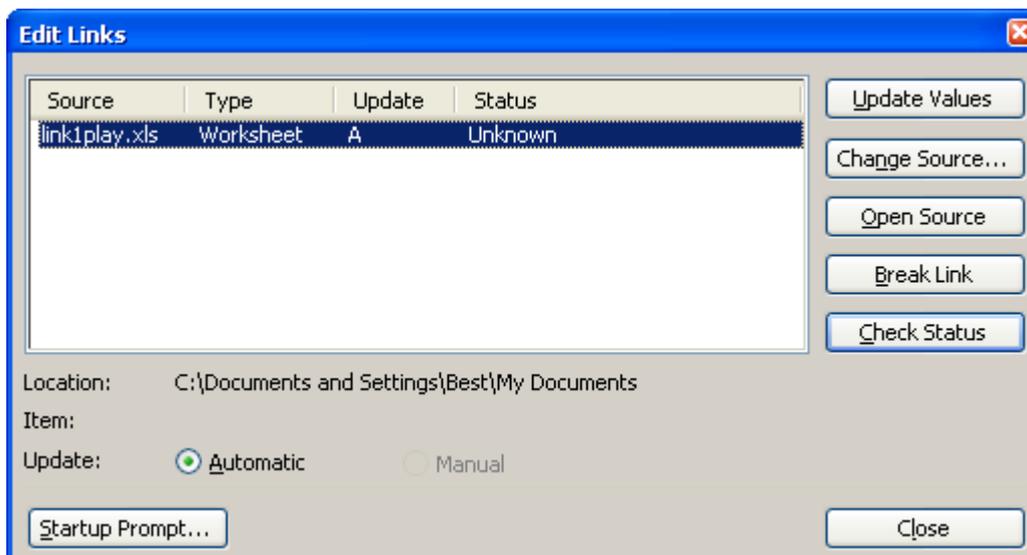
Click Update to update the links in the workbook.

## Managing links

If a source file or worksheet is moved or renamed, Excel will have difficulty in updating links in the destination file when it is opened.

A second prompt will appear on the screen.

Click Update Links to attempt to update the links, and the following will appear:



Select the Source file from the list, and click Change Source to reselect the Source file.

## Working with multiple worksheets and workbooks

### Practice Activity

---

1. Open the file **Practice multiple sheets**.
2. Resave the file with your own name in front of the current filename, e.g. **Anne Practice working with worksheets**.
3. On the *Sales all regions* sheet, create a summary report which shows the total weight of each product sold across all 4 regions. Note that the figures in the summary report *should not update* if changes are made to the regional sheets.
4. Save the file, and keep it open.
5. Open the file **Practice linking**.
6. Resave the file with your own name in front of the current filename, e.g. **Anne Practice linking**.
7. Arrange the two files so that both can be viewed in the Excel window at the same time.

When you have completed steps 8 to 10 (below), you will have a summary report on the *Sales all regions* sheet in the following format:

	Qty Sold(in kg)	Price (per kg)	Total Sales
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			

8. On the *Sales all regions* sheet where you have created the summary report, create a column which displays the price per kg, as shown in the **Your name Practice linking** file.
9. Check that the links work correctly by updating some of the prices in the **Your name Practice linking** file.
10. In an additional column on the *Sales all regions* sheet, create a formula to calculate the total sales for each product using the quantity and price information.
11. Save and close both files.

### Online support forum and knowledge base



[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)

Visit our forum to have your questions answered by our Microsoft qualified trainers.

## Working with dates

This unit focuses on date formatting, date functions and simple date calculations.

### Unit objectives

By the end of this unit, you will be able to:

- Insert and format dates
- Use dates in formulas
- Use date functions

### ***Dates and time in Excel***

---

Though Microsoft Excel displays dates and times as you would expect, it stores them as numbers.

Dates are stored as the number of days since the beginning of the last century (i.e. 1-Jan-1900 is day 1). Note that dates before 1900 are stored as text and cannot be used in calculations.

Times are stored as parts of a day – i.e. 12 noon is stored as 1/2 or 0.5. Both the date and time can therefore be stored as a single number, the fractional part forming the time.

When entering a date into a cell, Excel will accept various different formats (including year/month/day as well as day/month/year). Months can be entered as a number or text - the name in full or in an abbreviated (three-letter) form. Years abbreviated to 2 figures are taken to be between 1930 and 2029 - i.e. 31/12/20 is 31-Dec-2020. In Windows XP, this can be amended if necessary (see later). If the year is omitted, the current year is assumed.

A slash or hyphen (minus sign) can be used to separate the day, month and year. If Excel recognises data as a date it will appear on the right of the cell - if it appears on the left, Excel hasn't recognised it. Data is displayed in a standard date format (with slashes or with hyphens if the month is entered as text). These defaults are those used by the system and can be altered (see later).

Times are entered into a cell by using a colon to separate the hour, minute and second. They also appear right-justified if recognised as valid. Because the time represents the fraction of the day, the hour must always be included. Times can be entered with an am/pm suffix if desired (a space must precede am/pm). Both a date and time (separated by a space) can be entered into a cell.

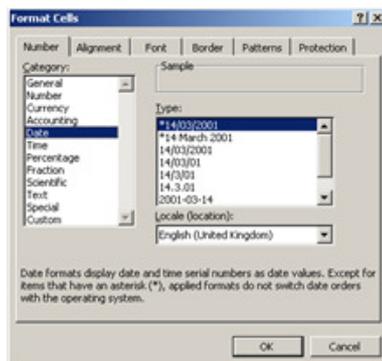
## Inserting and formatting dates

---

Once a date and/or time has been entered into a cell, various format styles can be applied to the data.

To apply a format:

- Select the cell containing the date
- Go to Format-Cells; or right-click and select Format Cells
- On the Number tab set the Category: to Date and select the Type: desired
- Press Enter or click on OK to apply the chosen format



## Using dates in formulas

---

Because dates (and times) are stored as numbers, they can be used in calculations - for example, it's easy to work out the number of days between two dates. Some other tasks involving times and dates are less straightforward (for example, sorting dates into calendar order, irrespective of the year).

## Using date functions

---

There are fourteen date functions in Excel 2003 and more can be added by going to Tools – AddIns and ticking the Analysis ToolPak.



Two common functions are:

- =NOW() gives today's date and time
- =TODAY() gives today's date in date format (e.g. 21/07/2005)



## ***Working with dates Practice Activity***

---

1. Open a new blank workbook and save as **Practice Dates**.
2. Type your date of birth into cell A1.
3. In cell A2, use a function to display today's date.
4. In cell A3, calculate how many days you have lived (a simple subtraction).
5. Format the result in cell A3 to read xxxxx days
6. In cell A6, use a function and format to display the current date and time.
7. Copy the result from cell A6 and use Paste Special to paste the value and then the format into cell A7.
8. In cell A8, use the data from cells A6 and A7 calculate how much time has elapsed between the original calculation (held in A7) and the completion of this particular task.
9. Save the changes you have made to **Practice Dates.xls** and close the file.

## **Online support forum and knowledge base**



[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)

*Visit our forum to have your questions answered by our Microsoft qualified trainers.*

## Conditional formulas and formatting

This unit considers some of the conditional formulas and formatting features to be found in Excel.

### Unit objectives

By the end of this unit, you will be able to:

- Use IF functions to display different outcomes dependant upon a stated condition
- Apply, edit and delete conditional formats.

### Creating IF functions

The IF function allows you to perform calculations based on a set of conditions. The resulting value depends on whether the condition is true or false.

#### IF function syntax

**IF(logical\_test,value\_if\_true,value\_if\_false)**

There are three parts to the IF function:

Function part	Description
Logical_test	Condition to be evaluated by the function
Value_if_true	Value returned if the condition is TRUE
Value_if_false	Value returned if the condition is FALSE

There are two ways of entering the IF function into a spreadsheet:

- Directly into a cell, by manually entering it. An = sign must be entered first, followed by the name of the function, then a left bracket. Each part of the function is separated from the other by a comma , and a right bracket is entered to finish the function off.
- Use the Insert Function button to enter the function using a dialogue box.



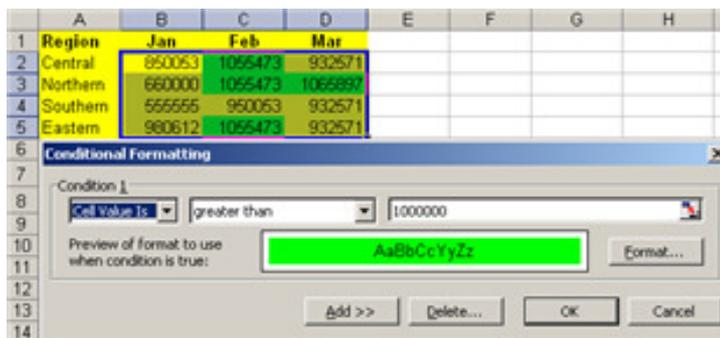
As part of the logical\_test, mathematical operators such as; = equal to, > greater than, < less than, >= greater than or equal to, <= less than or equal to, <> not equal to can be used.

## Using conditional formatting

To analyse data easily, Excel can apply certain formatting to cell values or formula that match a specified condition, or conditions (up to 3). If none of the specified conditions are true, the cells will retain their existing formats.

To use conditional formatting:

- Highlight the cell range to apply conditional formatting to
- Go to Format - Conditional Formatting
- For Condition 1 choose Cell Value Is or Formula Is, select the comparison phrase, and then type a constant value (or select a cell containing that value) or a formula. When entering a formula, start it with an equal sign (=)
- Click the Format button to specify the formatting be applied if Condition 1 is true
- Click OK if only setting one criterion, or click Add to enter additional conditions
- If entering additional conditions, use the Format button below each condition to specify the formatting to be applied if each condition is met
- Click OK when all conditions have been set.



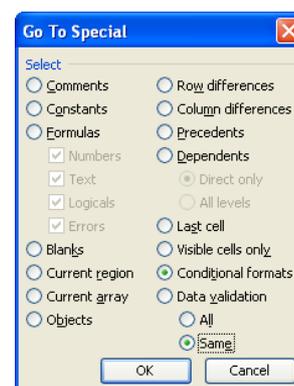
## Identifying cells with conditional formatting

To find cells which have conditional formatting settings identical to the settings of a specific cell:

- Select the specific cell
- On the Edit menu, click Go To.
- Click Special.
- Click Conditional formats

Do one of the following:

- To find cells with any conditional formatting, click All below Data validation, and click OK.
- To find cells with identical conditional formats, click Same below Data validation, and click OK.



## Edit or delete conditional formats

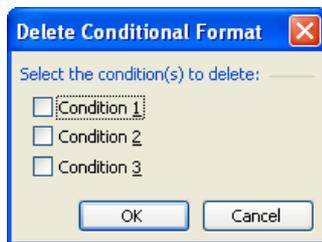
The conditions and formats for conditional formats created can be edited/changed or deleted at any time.

To edit conditional formats:

- Select the cells containing the formats to be edited
- Go to Format – Conditional Formatting
- Change the conditions or formats as desired; then click OK.

To delete conditional formats:

- Select the cells containing the formats to be edited
- Go to Format – Conditional Formatting
- Click the Delete button at the bottom of the Conditional Formatting dialogue box.
- Tick the condition(s) to be deleted, then click OK twice to exit.



## Copying conditional formatting

To copy conditional formats from one cell/area of the spreadsheet to another, highlight the range of cells that has conditional formatting applied then click the Format Painter on the standard toolbar and select the cells to copy the conditional formatting to.

### *Handy hint*

Double click the Format Painter button to apply formatting to more than one cell range, click the button when finished to switch off.

## ***Conditional formats and formatting Practice Activity***

---

1. Open the file **Practice Conditional.xls**.
2. Resave the file with your own name in front of the current filename, e.g. **William Practice Conditional**.
3. Select the *IF function* tab.
4. In column G (Commission), create a formula which displays the amount of commission a salesperson will get paid, depending on their Total Sales amount in column F.

Refer to the information regarding commission payments in cells I3:K5 to help you create the formula.

5. Select the *Conditional* tab.
6. Select the range B6:F40.
7. Apply conditional formatting to the selected range to highlight values of at least £6,500 in blue; and values equal to or less than £5,500 in red.
8. Save and close the file.

## **Online support forum and knowledge base**



[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)

Visit our forum to have your questions answered by our Microsoft qualified trainers.

## Working with lists

This unit focuses on the ability to use lists to manage data.

### Unit objectives

By the end of this unit, you will be able to:

- Sort a list
- Apply simple and advanced filters to a list
- Use the subtotals features on a list

### ***What is a list?***

---

An Excel list consists of columns and rows of data structured in a specific way:

- Each column contains the same category of data in every row in the column (similar to a field in a database)
- Each row in the list contains all of the fields of data for one entity (a person, organization, object, etc.) similar to a record in a database, but called sets of data in Excel's terminology
- The first row of the list must contain a unique name at the top of each column. This first row does not need to be the first row of the worksheet
- The row containing the column headings must be formatted differently from the rest of the list (i.e. bold, larger font, italicized, etc.)
- There can be no blank rows in the list (there can be blank cells in a column, but the entire row cannot be empty)
- Data in a column must be in the same format for every row in the column (i.e. numbers can't be spelled out in one row and entered as digits in the rest of the rows in that column)
- Other data in the worksheet can be located outside the boundaries of the list

### ***Sorting a list***

---

To quickly sort data, use the Sort buttons on the Standard toolbar. When a sort is conducted on fields that have a mixture of data in them, the following order will be used: numbers, text, logical values, error values and, lastly, blanks.

#### **Sorting by one column**

- Select a cell in the column that the data is to be sorted by.
- To sort in ascending order, click on the Sort Ascending button.
- To sort in descending order, click on the Sort Descending button.



#### ***Handy hint***

*Do not* select just the column heading and then sort as this will sort just the data in the selected cells and not the entire table of records.

## Sorting by multiple columns

Select a cell within the list to be sorted.

- Go to Data - Sort
- In the Sort By box, choose the column/row that the primary sort by selecting the appropriate column name from the drop-down list. Also specify whether it is to be sorted into Ascending or Descending order
- If you wish to operate subsequent sorts, use the second and third Then By boxes to select appropriate column names from the drop-down list
- Click OK.



## Using AutoFilters

A filter displays only the rows that contain the values that meet a set of specified criteria.

There are various ways to filter a list:

Filter description	What it does
AutoFilter	To filter the data in place.
Custom filter (under AutoFilter)	Up to 2 and/or criteria i.e. > 12000 and < 20000, can be used.
Advanced filter	Multiple sets of criteria can be used. Data can be filtered in place; or filter results can be extracted from the list.

## Using the AutoFilter feature

- Select a cell in the list to be filtered.
- Go to Data, Filter, AutoFilter. Dropdown arrows appear next to the column headings.
- Click the drop-down arrow above the column and select an item to filter by.

	A	B	C	D
1	Firstnam	Lastname	Address	City
2	Willy	Cruz	1 School St	Sort Ascending
3	Patrice	Queen	1339 Sunset #	Sort Descending
4	Nora	Pulaski	199 Maria Vista	(All)
5	Alan	Foxx	999 Pierhurst N	(Top 10...)
6	Yvonne	Anders	01 E Orange	(Custom...)
7	Caitlin	May	9033 W Putnam	Anaheim
				Bakersfield

- Select additional filter items from other columns, if desired.

The drop-down arrows of filtered fields (columns) and the row number of filtered records (rows) become highlighted in blue.

	A	B	C	D
1	Firstnam	Lastname	Address	City
2	Willy	Cruz	1 School St	Anaheim
6	Yvonne	Anders	01 E Orange	Anaheim
42	Raymond	Dempsey	1339 Sunset #	Anaheim
46	Alonzo	Fine	9033 W Putnam	Anaheim
58	Susie	Smith	3737 S Colonial Ave	Anaheim
62	Lisa	White	993 Western #81	Anaheim

- Choose Select All from the AutoFilter dropdown list to display all records again; or go to Data-Filter-Show All.

## Using AutoFilter to apply a custom filter

To apply a custom filter to a list:

- Select a cell in the list to be filtered.
- Choose Data-Filter-AutoFilter command (if not already applied).
- Click the arrow in the column that contains the data the filter is to be based on and select Custom from the drop-down list.
- Click the arrow next to the first box and select the comparison operator to be used.
- In the box to the right of the operator, type the value/text to be used with the operator.
- If required, select the And or Or options, and repeat the above steps for the second comparison. Click OK.

## Removing AutoFilters

Go to Data-Filter-AutoFilter to remove the AutoFilter dropdown from next to the column headings.

## Using advanced filters

To create an advanced filter:

- Select any cell in the list (database)
- Choose Data-Filter-Advanced Filter
- To filter the current list, ensure that the Filter the list, in-place option is selected in the Action area; alternatively select Copy to another location to display the filter results separately from the current list.
- In the List Range box, select or enter the cell references for the database
- In the Criteria Range box, select or enter the cell references for the criteria range
- If available/required, select a cell in the Copy to box to extract the filter results to (if using the Copy to another location option under Action)
- To ensure that only one record is displayed, if some contain exactly the same data, turn on the Unique Records Only check box
- Click OK. Data in rows not matching the criteria set will be hidden.

	A	B	C	D	E	F
1	Firstname	Lastname	Address	City	Department	Salary
2		<b>Criteria</b>		San Jose ...	Marketing...	
3						
4						
5	Firstname	Lastname	Address			Salary
6	Willy	Cruz	1 School St			12345
7	Patrice	Queen	1339 Sunset #			5432
8	Nora	Pulaski	199 Maria Vista			2345
9	Alan	Foxx	999 Pierhurst N			6789
10	Yvonne	Anders	01 E Orange			21456

**Advanced Filter**

Action

Filter the list, in-place

Copy to another location

List range:

Criteria range:

Copy to:

Unique records only

OK Cancel

## Applying subtotals to a list

Before applying subtotals, sort the list by the column that the subtotal is to be based on.

- Select a cell in the list and go to Data-Subtotals
- In the At Each Change In box, select the name of the column containing the groups to be subtotaled (the name of the column that the list has been sorted by).
- In the Use Function box, select the function to be used to summarise the data
- In the Add Subtotal To box, select the column containing the values to be summarised
- If required, choose Replace Current Subtotals to have new subtotals replace existing calculations
- Choose Page Break Between Groups to create a page break between each unique grouping within the data list.
- Choose Summary Below Data to create a grand subtotal below the data list.
- Click OK.

Firstname	Lastname	Address	City	Department	Salary
Caitlin	May	9033 W Putnam	San Jose	Export	12345
Pete	Rush	1333 Glen Terrace La	Costa Mesa	Export	2345
Felicia	McGee	39 Kendy La	San Francisco	Export	21456
Andrea	Hoffman	93331 Massachusetts			32145
Patrice	Azibad	193 La Jolla			6789
Raymond	Dempsey	1339 Sunset #			12345
Nora	Hodgedon	13 W. Miller			2345
Jan	Miles	01 E Orange			21456
Harold	Wilson	38 Ingalls Ave			5432
Yvonne	Anders	01 E Orange			21456
Felicia	Thomas	38 Ingalls Ave			5432
Sheryl	Ruben	11 E. Manchester			6789
Caitlin	Janes	9 S. James			12345
Lori	Nguyen	3 Blakeley			2345
Jo	Daniels	39 Kendy La			21456
Pete	Hermann	3 Jefferson			5432
Felicia	Madden	999 Pierhurst N			6789
Lisa	White	993 Western #81			12345
George	Como	3737 S Colonial Ave			5432
Nora	Albert	193 La Jolla			6789
Claire	Brewer	819 S 30th #3			12345

**Subtotal** ✖

At each change in:  
 ▼

Use function:  
 ▼

Add subtotal to:  
 City ▲▼  
 Department ▲▼  
 Salary ▲▼

Replace current subtotals  
 Page break between groups  
 Summary below data



## ***List management Practice Activity***

---

1. Open **Practice List.xls**.
2. Resave the file with your own name in front of the current filename, e.g. **Sarah Practice List**.
3. On *Sheet 1*, produce a list of all staff so that they are grouped by City then Department.
4. On *Sheet 2*, produce a list of staff the Sales and Sales Support departments.
5. On *Sheet 3*, produce a list of staff who work in the Finance department that earn at least 50,000.
6. On *Sheet 4*, produce a list showing total salaries and number of staff for each department.
7. On *Sheet 5*, either:
  - Create a separate list showing details of staff members who work in Finance on a salary of over 50,000 and those who work in Human Resources on a salary of over 40,000; with any duplicate records removed.

or

  - Create a separate list with all the duplicate records removed.
8. Save and close the file.

### **Online support forum and knowledge base**



#### **[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)**

*Visit our forum to have your questions answered by our Microsoft qualified trainers.*

## Documenting and auditing

This unit introduces the use of comments and looks at using the Formula Auditing toolbar to trace errors in formulas. Worksheet protection will also be covered.

### Unit objectives

By the end of this unit, you will be able to:

- Work with comments in a spreadsheet
- Trace errors in a formula
- Apply protection to all or part of a worksheet

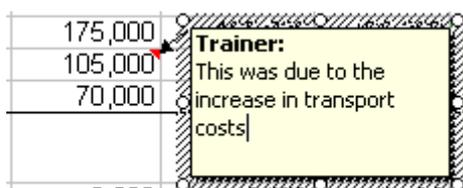
### Working with comments

Comments or notes are used to attach a comment to a cell to inform, remind or explain the content of a cell or range of cells.

### Inserting comments

To insert comments into a worksheet, select the cell you wish to add a comment to. A comment can then be added to the selected cell by:

- Selecting Insert-Comment from the menu or
- Press **Shift + F2** or
- Right-click and select Insert Comment from the menu.



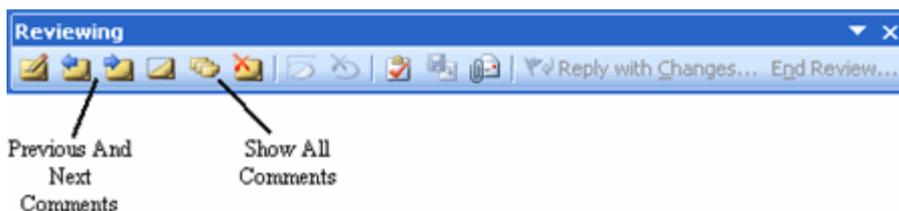
### Viewing comments

It is possible to customise Excel to change how comments are displayed in a worksheet.

The default setting is for the comment to be hidden and for the user to see the comment indicators (red triangles) only. However there are other viewing options:

To change comments views:

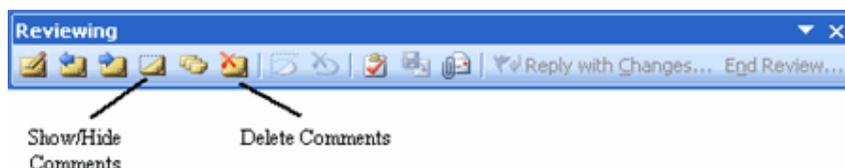
- Use View-Toolbars- to Display the Reviewing Toolbar
- Once the Reviewing Toolbar is visible click the Show All Comments toggle button
- Alternatively use the Previous and Next buttons on the toolbar to move through and view one comment at a time.



## Editing and deleting comments

To edit comments in a worksheet using the Reviewing toolbar:

- Select the cell to which the comment is attached
- Click the Show/Hide comment button
- Click in the text area of the comment and edit as required
- When completed click the Show/Hide button to close the comment



Alternatively:

- Select the cell to which the comment is attached
- Right-click and select Edit Comment from the menu
- Click away from the cell once you have finished editing the comment

To delete comments from a worksheet using the Reviewing toolbar:

- Select the cell to which the comment is attached
- Click the Delete Comment button

Alternatively:

- Select the cell to which the comment is attached
- Right-click and select Delete Comment from the menu

## Tracing formula errors

When working with complex worksheets, especially those worked on by many people it is inevitable that errors will occur. The table below shows some common error values:

#VALUE!	The wrong argument or operand is used
#DIV/0!	A number is divided by zero (0)
#NAME?	Formula contains text Excel doesn't recognize
#REF!	Formula contains an invalid cell reference

## Formula auditing smart tag

When you select a cell containing an error, a smart tag actions menu appears. A tool tip text will also be displayed helping you to identify the cause of the error.

To use the Formula auditing smart tag:

- Click the down arrow on the smart tag
- Select the option to take

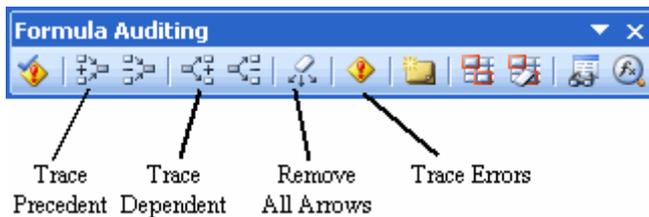
## Trace precedents and trace dependants

A **precedent** is a cell referred to by the formula in the active cell.

A **dependent** is a cell containing a formula that refers to the active cell.

To trace Precedents or Dependents:

- Use View-Toolbars to Display the Formula Auditing Toolbar
- Select the cell that contains the formula being audited
- Click the Trace Precedent or Trace Dependent button on the toolbar



The following diagrams show Trace Precedent and Trace Dependent:

	Qtr1	Qtr2	Qtr3	Qtr4	Total
<b>Sales</b>					
Total sales	150,000	175,000	185,000	165,000	675,000
Cost of sales	96,000	105,000	108,000	105,000	414,000

### Trace Precedent

	Qtr1	Qtr2	Qtr3	Qtr4	Total
<b>Sales</b>					
Total sales	150,000	175,000	185,000	165,000	675,000
Cost of sales	96,000	105,000	108,000	105,000	414,000
Gross profit	54,000	70,000	77,000	60,000	261,000
<b>Expenses</b>					
Fixed expenses	8,450	8,250	8,850	9,600	35,150
Variable expenses	10,200	12,500	11,000	11,200	44,900
Total	18,650	20,750	19,850	20,800	80,050
<b>Net profit</b>	35,350	49,250	57,150	39,200	180,950
<b>Profit %</b>	24%	28%	31%	24%	27%

### Trace Dependent

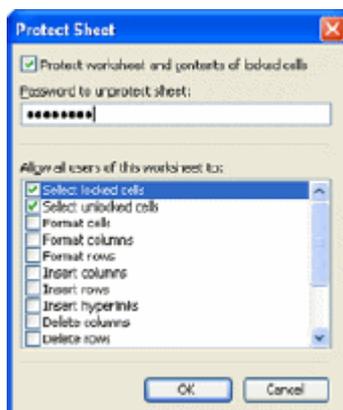
## Applying protection

By default, all cells on a worksheet are locked. This attribute comes into play only when the worksheet is protected. In order to allow particular cells to be changed when the worksheet is protected, these cells must be *unlocked*.

### Protecting a worksheet

To apply protection to a worksheet:

- Use Tools-Protection-Protect Sheet
- Enter a password that would be required to remove protection
- Select an actions that users will be able to perform, even when protection is applied
- Click OK
- Confirm the password if one has been set, and click OK.



### Protecting parts of a worksheet

To apply protection to parts of a worksheet:

- Select the areas of the sheet which are not to be protected (accessed by the user)
- Use Format-Cells-Protection
- Deselect the Locked check box and click OK
- Protect the worksheet as above

### Removing protection

To remove protection:

- Go to Tools-Protection-Unprotect Sheet
- If a password has been set, enter the password and click OK.

Remember to reapply protection to the spreadsheet again when it needs to be protected again.



## ***Documenting and auditing Practice Activity***

---

1. Open the file **Practice Auditing**.
2. Resave the file with your own name in front of the current filename, e.g. **Jane Practice working with worksheets**.
3. Read the comments in the spreadsheet.
4. Using the various formula auditing features available in Excel, establish why the formula errors are occurring, and make corrections as necessary.
5. When the errors have been corrected, delete the comments in the spreadsheet.
6. Set up the spreadsheet so that:
  - Only the number of Units in stock for each product can be amended.
  - A password is required to change any other information in the spreadsheet.
7. Save and close the file.

### **Online support forum and knowledge base**



#### **[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)**

*Visit our forum to have your questions answered by our Microsoft qualified trainers.*

## Templates

This unit focuses on helping to understand how to use inbuilt templates, and modify and create custom templates

### Unit objectives

By the end of this unit, you will be able to:

- Access and use Excel's in-built templates
- Create, modify and use custom templates

### *What is a template?*

Templates are a way to create a new workbook. A template is a special type of Excel file from which a new workbook is generated. Templates are identified by the **.xlt** extension and viewed and worked on the same way as a normal **.xls**.

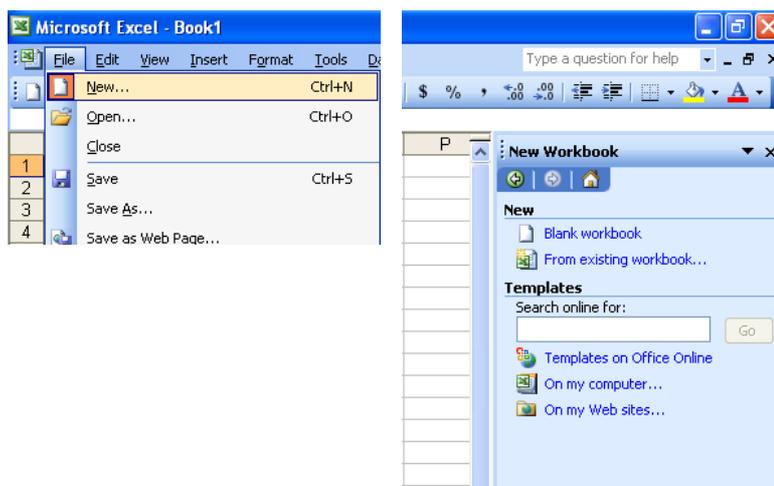
The advantage of templates is that the workbooks created from them, come complete with all formatting and functionality. Templates can be setup and then saved to a network drive so all users who have need of them can have access.

Another advantage is that templates can be based on existing workbooks. This could be a periodic report which has its data cleared out. So the threat of overwriting a historical report that maybe opened to generate a new report is greatly reduced.

### Excel's built-in templates

To access Excel's built in templates:

- Select File, New - this opens up the Task pane for New workbook
- Under the New workbook Task Pane, Templates click on "On my computer....." to open the Templates dialog box
- Select Spreadsheet Solutions tab from Template dialog box.
- Select desired template.
- Save the new workbook as "New name.xlt"



## ***Creating a template from an existing workbook***

---

Built-in templates may not carry all the functionality required; or it may be easier to base a template on an existing workbook.

- Open the workbook to be used as the basis for the template.
- Save the workbook as a template (.xlt) file.
- Delete any data will be entered in uniquely each time a new file is created from the template. For example, if different sales figures are to be entered each month, delete the existing sales figures from the file.
- Make any other modifications that are to be part of the template (e.g. formatting changes).
- Save and close the template; and test it by creating a new workbook from the template.

## ***Creating a new file from a template***

---

To start a new workbook from the template:

- Double-click on the template file in Windows Explorer
- or
- Go to File-New in Excel
  - Click on the From Existing Workbook link within the New Workbook task pane
  - Navigate to and select the template file

New files generated from a template will show the template name followed by a number in Excel's title bar at the top of the Excel window.

Once data has been entered into the file, it can be saved as a **.xls** file.

## ***Modifying a template***

---

To modify a template:

- Go to File-Open in Excel
- Locate and open the template file
- Make the desired changes
- Save and close.



## ***Templates Practice Activity***

---

1. Open the file **Practice Templates.xls**.
2. Modify the file, in preparation for it to be saved as a template.
3. Save the file as a template, with your own name in front of the filename, e.g. **Sam Practice Template**.
4. Close the template file.
5. Create a new file from the template, to test that the template file has been saved using the correct file extension/type; and that the resulting file appears set up in the way you intended.

Make any amendments if necessary; then save and close the file(s).

## **Online support forum and knowledge base**



[www.microsofttraining.net/forum](http://www.microsofttraining.net/forum)

*Visit our forum to have your questions answered by our Microsoft qualified trainers.*