

Excel 2000 Intermediate User Manual

Ebit Solutions Limited

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Ebit Solutions Limited
www.ebitsolutions.net

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INTRODUCTION

The purpose of this manual is to introduce the more intermediate techniques available in Excel 2000 for users who would like to increase their knowledge of this wonderful spreadsheet programme. These Topics have been chosen for their relevance to work covered by NHHG.

There is now an Excel Advanced course, and a separate manual containing the topics covered on that course.

If you require more detailed instructions, or a wider range of topics, a full set of the Microsoft Office standard User Manuals is available in each office.

HOUSEKEEPING

Files created from Excel 2000 should be stored on the network - this reduces the need to save or backup files onto floppy discs. You can obtain the names of your network drives from your colleagues, or you can request extra drives - in writing - from IT.

It is important that you save to the network drives as backups of information will take place daily. This reduces the likelihood of file loss via machine failure or theft.

Remember to delete old and unwanted files to free up memory on the network.

FORMULAE

INTERMEDIATE FUNCTIONS

You should already be familiar with the SUM function, used to total a range of cells. Here are some other functions that can be useful. In these examples, all the formula act upon the range of cells from B5 to B10 inclusive.

Formula	Result
=SUM(B5:B10)	Calculates the total of the cells in the range
=AVERAGE(B5:B10)	Calculates the average of the cells in the range
=MAX(B5:B10)	Displays the maximum value in the range
=MIN(B5:B10)	Displays the minimum value in the range
=COUNT(B5:B10)	Counts the number of cells that contain numbers in the range
=COUNTBLANK(B5:B10)	Counts the number of blank cells in the range

Apart from the SUM function, there is no toolbar button that can be used to automatically create these formulae. Each formula has to be typed manually into a cell.

☺ TIP

When creating formula, as a shortcut, once you have typed the first opening bracket you can then click and drag through the range of cells you wish the function to act upon. Then type the closing bracket and press [Return].

THE IF FUNCTION

This function can be used to test the contents of a cell and then perform two different actions depending on the result of the test. The function is split into three parts - the condition to test, the action to perform if the test result is true, the action to perform if the test result is false.

i.e. **=IF(Condition to Test, Action if True, Action if False)**

The '**Condition to Test**' tests the contents of a cell. It can test a numerical value or a text string.

The conditional operators used to test the cell contents are:

Operator	Comparison
=	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
<>	Not equal to

Here are some examples of the 'Condition to Test'. These are all testing the contents of cell B5.

B5=B10
 B5="London"
 B5>1000
 B5<SUM(C5:C12)
 B5<>0

The '**Action if True**' and the '**Action if False**' are used to perform a calculation, display a number or display some text.

If text is being tested or displayed, it must be entered into the formula in inverted commas, i.e. "Grove House"

Here are some examples:

=IF(B5>100,B5*D10,B5*D11)	If cell B5 is greater than 100, then B5 is multiplied by D10, otherwise it is multiplied by D11
=IF(D4<0,"Overdrawn","Credit")	If cell D4 is less than zero, then the word Overdrawn is entered, otherwise the word Credit is entered
=IF(B5="London",100,"External")	If cell B5 contains (only) the word London, then the number 100 is entered, otherwise the word External is entered
=IF(SUM(B5:B10)=SUM(E5:E10),"Correct","Error")	If the sum of the cells B5 to B10 is equal to the sum of the cells E5 to E10, then the word Correct is entered, otherwise the word Error is entered

The format must be followed exactly, all commas, brackets and quotation marks must be included for the formula to work

ABSOLUTE CELL REFERENCES

Absolute Referencing is a facility which allows cell references to be **fixed** in a formula, it is particularly relevant when formulae are copied from one location to another - via any of the methods available in Excel.

When copying to repeat formula, if one cell contains a formula to add B3:B7 and you copy that formula across to columns C and D. It will upgrade and produce formulae to total the C and D ranges ie, add C3:C7, D3:D7 etc.

There are times when you **do not want a formula to adapt** when it is copied to another location. It is in these cases that you use an "**Absolute Cell Reference**".

This means that the **reference** for this cell **remains fixed** or "Absolute".

For example, if you are always going to multiply totals by a rate of inflation, which is held in a single cell reference. You will not want the reference to change as you copy the formula, otherwise the formula will not be able to find the rate of inflation, therefore you must fix the location of the inflation cell in the formula using Absolute Referencing.

An Absolute may apply to a single cell reference in a formula, or to all the cell references depending on the function the formula is set to achieve.

INSERTING ABSOLUTE REFERENCES

To confirm an absolute reference the "\$" sign is used. It is inserted in the reference before the column and row numbers e.g. **\$A\$4** and can be inserted **manually [Shift] [4]**, or **automatically** using the **[F4]** key. You can repeat this process independently for each "Absolute" reference in a formula.

For example, the rate of inflation in your formula $=(SUM(B3:B7)*A4)$ is held in cell reference A4 and you want this fixed in the formula no matter where you copy it to.

- Commence your formula and at the point you **type A4** press **[Shift] [4]** to prefix each character with a \$ sign one before the A and one before the 4. E.g. **\$A\$4**
- *or*
- Type the cell reference and press **[F4]**, \$ signs will be added to the reference.

Your formula now shows as $=(SUM(B3:B7)***$A$4**)$

If copied to the "D" column the formula will upgrade to reflect the move becoming $=(SUM(D3:D7)***$A$4**)$ but retaining its integrity in pointing to the inflation cell A4. Thus the new total is calculated but it is affected by the fixed cell.

It is likely that you may only wish only **one** character in a cell reference to be **fixed**.

E.g. A4, B4 and C4 may hold differing rates of projected inflation for 4 financial years.

- The consistent character here is 4. Therefore you would set the \$ sign only before the 4, that will fix the line number and allow the column letter B, C etc. to upgrade. E.g. A\$4, B\$4, C\$4

Absolutes And AutoFill

Absolute references are particularly useful when you are using "AutoFill" to repeat a formula over a range of cells. Always consider the use of Absolutes when copying formulae via AutoFill as this is the function most likely to generate incorrect references in bulk and therefore the majority of problems.

AMENDING OLD FORMULA TO CONTAIN ABSOLUTES

If a formula has been created and you wish to amend the cell references or part of a cell reference to an absolute:

- Locate the **insertion point in the formula bar** at the cell reference and click
- Press [**F4**] **once**, both characters of the cell reference will be amended to an absolute with \$ signs, e.g. \$E\$4
- Press [**F4**] **twice**, the row number of the cell reference will be amended to an absolute with a \$ sign, e.g. E\$4
- Press [**F4**] **3 times** the column letter of the cell reference will be amended to an absolute with a \$ sign, e.g. \$E4
- Press [**F4**] **4 times** and both characters of the cell reference will return to normal, e.g. E4

Alternatively, for a single character it may be easier to simply insert the \$ sign manually before the relevant character.

THE FORMAT PAINTER TOOL

The Format Painter Tool is used to copy formatting from one cell and then to apply that formatting to another cell without changing the cell contents. This works for all formatting - bold, italics, size, font, alignment, number style, border, cell colour, etc.

To Copy And Paste Formatting

- **Select** the **cell** containing the formatting you want to copy
- **Click** on the “**Format Painter**” button



- **Select** the **cells** you want to paste the formatting to

This method allows you to apply the formatting only once.

It is possible to apply the formatting to several different ranges of cells.

To Copy And Paste The Formatting More Than Once

- **Select** the **cell** containing the formatting you want to copy
- **Double click** on the “**Format Painter**” button



- **Select** each range of **cells** you want to paste the formatting to
- **Click** on the “**Format Painter**” button to turn the feature **off**

AUTOFILL

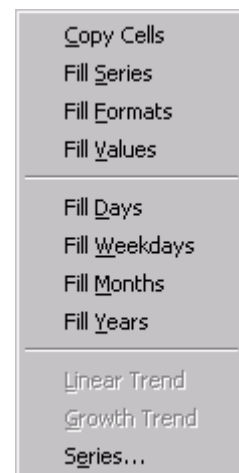
Apart from the standard AutoFill facilities, there are other functions available in the AutoFill set up.

ADDITIONAL FEATURES

- **Click and drag** the area to be AutoFilled with the **RIGHT mouse button**.

When you let go, a selection of other functions will be displayed, the functions offered will vary depending on the contents of the original cell.

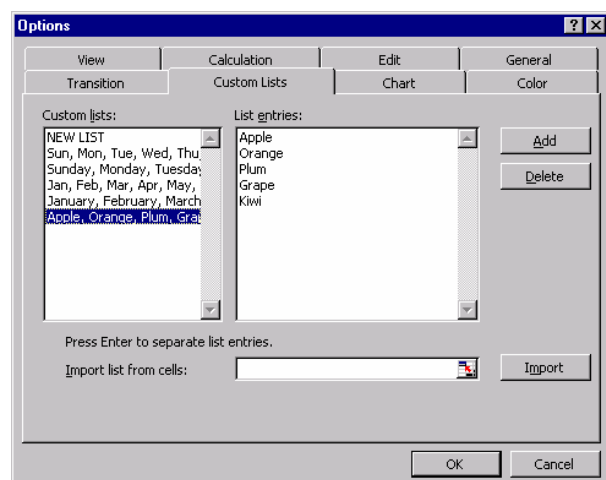
- **“Copy Cells”** replicates **ALL** contents-text and formats
- **“Fill Series”** will **increment by one unit**
- **“Fill Formats”** will **copy the format** but not text
- **“Fill Values”** will **copy the text** but not formats
- **“Fill Days, Weekdays, Months and Years”** are offered as appropriate if the cell holds a Day, Month or Year
- **“Linear Trend”, “Growth Trend” and “Series”**, develop the AutoFill to accommodate a growth factor in selected units. Set up the **first two cells** as the steps of growth then **drag to extend the series**.



CUSTOMISING AUTOFILL SERIES

If you have a specific series you wish to include in the AutoFill you can create custom lists to use on all worksheets.

- In the **“Tools”** menu choose **“Options”**
- Click on the **“Custom Lists”** tab
- Click in the **“List Entries”** box **and type** in the **contents** of your **customised list** pressing **[Return]** after each entry
- Click on the **“Add”** button, then **“OK”**
- **To use** the Custom List, type the **first entry** on the list **into the cell**, then **drag** (in the normal way using the left mouse button). The series will be **expanded across the cells** as it was originally typed into the list.



PASTE SPECIAL

Paste Special allows you to control how data is copied and pasted.

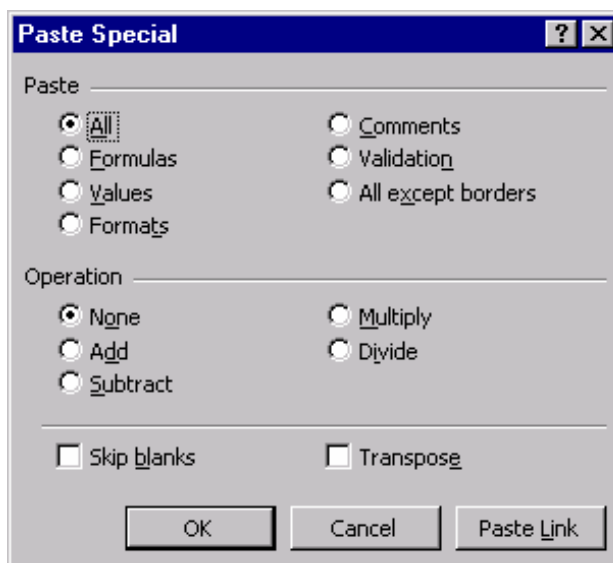
PASTE OPTIONS

The Paste options, in Paste Special, can be used to copy and paste part of the information stored in a cell. A normal 'copy and paste' copies the cell contents and formatting. But with Paste Special you can copy the formatting without the contents, the contents without any formatting, or even just the result of a formula (its value).

To Copy And Paste Part Of The Information In A Cell

- **Select** the **cell(s)** to copy
- Click on the **“Copy”** button
- **Click** on a **cell** to choose the paste area
- In the **“Edit”** menu select **“Paste Special”**

This will bring up the Paste Special dialog box.



In the Paste options:

- Select **Formulas** to paste the contents or formulas without the formatting
- Select **Values** to paste the results of a calculation as a number, not a formula
- Select **Formats** to paste the formatting, but not the cell contents
- Select **Notes** to paste the Notes, but not the cell contents or formatting (See section on adding Notes to cells)
- Click **“OK”**

SKIP BLANKS

The Skip Blanks option is used when you are pasting one set of data over another. If there are blank cells in the copied data, the corresponding cells in the paste range will continue to contain their original data.

PASTE OPERATIONS

Paste Special can also be used to add, subtract, divide or multiply a range of cells by any one number. This is useful if, for example, you need to divide a large range of cells by 100 before you apply the percentage number style to them.

To Use A Paste Operation

- **Select** the cell containing the **number** you wish to add, subtract, multiply by or divide by
- Click on the **“Copy”** button
- **Select** the **cells** you wish to operate on
- In the **“Edit”** menu select **“Paste Special”**

In the Paste Special dialog box

- **Select** an **Operation** - Add, Subtract, Multiply or Divide
- Click **“OK”**

TRANSPOSE

Paste Special also has a transpose feature that allows you to change the way a table of data is arranged.

This is the effect of transposing data:

Original Data

	1996	1997
Rent	£3,650	£3,100
Travel	£220	£245
Loan	£500	£300
Food	£1,500	£1,650

Transposed Data

	Rent	Travel	Loan	Food
1996	£3,650	£220	£500	£1,500
1997	£3,100	£245	£300	£1,650

To Transpose Data

- **Select** the **data**
- Click on the **“Copy”** button
- **Click** on a cell to choose the paste area
- In the **“Edit”** menu select **“Paste Special”**

In the Paste Special dialog box

- Select “**Transpose**”
- Click “**OK**”

COPY AND PASTE TO WORD

The high level of compatibility between Windows applications makes it very easy to incorporate Excel data into a Word document. As a general rule anything that can be selected in any program can be copied and pasted into Word.

To Copy Data To Word

- In Excel, **select** the **cells** you wish to copy
- Click on the “**Copy**” button
- Use the [**Alt**]+[**Tab**] command to move to Word
- Click in the document to **select** the **position** of insertion
- Click on the “**Paste**” button

The data will be inserted as a Word table. You can now use all the Word table features to format the data.

If you need to perform further calculations on the data, you should return to Excel to make the necessary changes. Then copy and paste the data back into Word.

COPYING EXCEL CHARTS INTO WORD

If you have created an Excel chart, you can copy and paste it into a Word document.

- In Excel, **click** once on the **chart** to select it
- Click on the “**Copy**” button
- Use the [**Alt**]+[**Tab**] command to move to Word
- Click in the document to **select** the **position** of insertion

At this point you can use the “Paste” command to copy in the chart. But Excel does not always handle this process very well. It may paste in a piece of the spreadsheet as well as the chart. It is better to paste the chart in as a picture rather than as part of a spreadsheet.

- In the “**Edit**” menu, select “**Paste Special**”
- In the Paste Special dialog box, select “**Picture**”
- Click “**OK**”

To Resize The Chart

- To resize the chart in proportion, click and **drag** on one of the **corner selection handles**

If you wish to edit the chart you should return to Excel, make the necessary changes, then copy and paste the chart back into Word.

USING MULTIPLE SHEETS IN YOUR WORKBOOK

Your Excel 2000 file is a Workbook containing a number of Worksheets.

A default Workbook contains 3 separate Sheets. You can add, delete, copy and move Sheets either inside a Workbook or between Workbooks.

The Worksheet system allows you to store information on separate Sheets rather than spread all over one Sheet. You can then rename each Sheet to make it easy to identify the information it contains. You can also create formulae that link cells across Sheets within a Workbook, or between different Workbooks.

SELECTING A SHEET



- At the bottom of the screen, click on the **tab** representing the **Sheet** you want to move to, the tab of the Sheet will turn white.

If there are a lot of Sheets in the work book and you cannot see all the tabs



Click on the **arrows** to scroll left or right till you can see the tab for the Sheet, then **click** on the **tab**.

RENAMING SHEETS

- **Double click** on the **tab** of the Sheet to be named
- Type in the new name up to 31 characters, then click on **“OK”**

DELETING SHEETS

- Right Click on the **Sheet** tab to be deleted
- Click on **“Edit”** in the menu bar, then click on **“Delete”**

A dialogue box will appear asking you to confirm the delete as any information held will disappear with the Sheet. Click on **“OK”**.

ADDING EXTRA SHEETS

- Click on **“Insert”** in the menu bar, then click on **“Worksheet”**

The new Sheet will be inserted to the left of the Sheet currently selected.

MOVING SHEETS IN A WORKBOOK

You can change the position of Sheets and re-organise your Workbook.

- **Click** on the Sheet tab and drag it across the other Sheet tabs

A black triangle marks the position of the Sheet.

- **Drop** the Sheet between two other Sheet tabs

COPYING A SHEET IN A WORKBOOK

You can replicate a Sheet inside a Workbook.

- Hold down the [**Ctrl**] key and click on the Sheet to be copied. The cursor will acquire a “page” icon on its tip
- **Drag** the icon to drop a copy of the Sheet to another **location** in the Workbook

MOVING AND COPYING SHEETS BETWEEN WORKBOOKS

In order to move or copy between Workbooks it is necessary to have both books open on screen.

- **Open both Workbooks** then click on “**Window**”
- Click on “**Arrange**”, then click on “**Tiled**”, then click “**OK**”

Each book will use approximately half the screen and you will be able to see the tabs for the Sheets at the bottom of the screen.

Moving Sheets Between Workbooks

- **Click** on the **Sheet** tab, the cursor will acquire a “page” icon on its tip
- **Drag** the icon and **drop** the Sheet in the **other Workbook**

Copying Sheets Between Workbooks

- Hold down the [**Ctrl**] key and click on the **Sheet tab**. The cursor will acquire a “page” icon on its tip
- **Drag** the icon and **drop a copy** into the **other Workbook**

WORKING WITH MULTIPLE SHEETS

Normally you work on one Sheet at a time. However Excel 2000 allows you to group multiple Sheets together and work on them simultaneously. You can enter data, edit text, format presentation and create formulae in several Sheets at the same time, saving time and reducing errors.

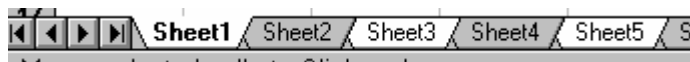
In order to edit Sheets in a group you have to select the tabs for the Sheets.

Once the group is selected, EVERYTHING you do on ANY of the Sheets will happen to ALL THE SELECTED SHEETS in the group

When you have a group of Sheets selected - If you enter data into a cell, it will be entered into the same cell in all the selected Sheets. The formatting you apply to a cell will be applied to the same cell in all the selected sheets. The Page Setup options you select will be applied to all the selected Sheets.

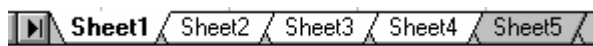
SELECTING MULTIPLE SHEETS

- Press the **[Ctrl]** key and hold it down, then **click on each Sheet in turn**
- The selected Sheet tabs will turn white



SELECTING ADJACENT SHEETS

- Click on the **tab of first Sheet** you want
- Hold down the **[Shift]** key, then click on the **tab of the last Sheet**



SELECTING ALL THE SHEETS IN THE WORKBOOK

- Point the cursor at any tab in the Workbook
- Click with the **“Right Mouse”** button, a menu will appear
- Click on **“Select All Sheets”**

DESELECTING SHEETS IN THE GROUP

- Click on a Sheet that is not included in the group
- *or*
- Click with the **“Right Mouse”** button, a menu will appear

- Click on “**Ungroup Sheets**”

LINKING MULTIPLE WORKSHEETS WITH FORMULAE

It is possible to link both Sheets and whole Workbooks with active formulae, this allows you to summarise information, or build compound formulae across Sheets. Any changes made to the data are reflected immediately in the formulae links.

Links can be constructed to and from any cell on the Worksheet or Workbook.

LINKING TWO SHEETS

- Click on the **cell in the Worksheet** where you wish the **result** to appear
- Type an “=” sign
- Click on the **tab of the Sheet containing the cell** you want **linked**
- Click on the **cell to link** to then press [**Return**]

You will return to the Worksheet containing the result - the two Sheets are now linked, the active cell will have moved to the row below your result cell.

The formula bar will display the name of the Sheet and the cell reference of that Sheet.

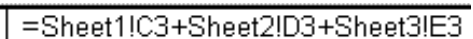


=Sheet1!D3

TO ADD CELLS ACROSS SEVERAL SHEETS

- Click on the **cell in the Worksheet** where you wish the **result** to appear
- Type an “=” sign
- Click on the **tab of the Sheet containing the cell** you want **linked**
- Click on the first **cell** you wish to add
- Type a “+” sign
- Click on the **tab** of the **Sheet** containing the next cell you want linked and click on the **cell** you wish to add
- **Repeat the procedure** for each cell you wish to add, then press [**Return**] to complete the formula

The formula bar will display the names of all the Sheets and their cell references.



=Sheet1!C3+Sheet2!D3+Sheet3!E3

You can also use this method to subtract, divide and multiply cells in different Sheets.

ADDING THE SAME CELL ACROSS SHEETS IN A WORKBOOK

You can use the SUM function to add the same cell across a number of consecutive Sheets.

- Click on the **cell in the Worksheet** where you wish the **result** to appear
- Type **=SUM(**
- Click on the **tab of the first Sheet** you want **linked**
- Hold down the **[Shift]** Key and click on the **tab** of the **last Sheet** you want linked
- Click on the **cell** that you wish to be added across all the Sheets
- Press **[Return]**

You will return to the Worksheet containing the result - the Sheets are now linked, the active cell will have moved to the row below your result cell.

The formula bar will display the range of names of the linked Sheets and the relevant cell reference.

A screenshot of the Excel formula bar showing the formula =SUM(Sheet1:Sheet3!C8). The formula bar is a rectangular box with a thin border, containing the text =SUM(Sheet1:Sheet3!C8). The text is in a standard font and is centered within the bar.

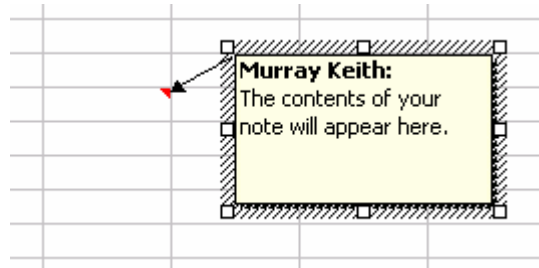
ADDING NOTES TO A CELL

If you have set up a cell with a complicated formula or for a specific purpose, you may wish to explain how or why you have constructed the cell in a particular way. Notes can be added to the cell, to be read by the user of the Worksheet to increase their understanding.

The note is hidden under the cell and must be accessed through the Insert menu. But a small red dot is shown at the top of the cell to tell you a note has been created.

CREATING THE NOTE

- Click on the **cell** to which the note is to be added
- Click on “**Insert**” then click on “**Comment**”, the following comment box will appear.



- **Type** the **text** to be hidden under the cell

The dialogue box will close down, leaving you in the cell. The cell will show a small red tag in the top right corner.



READING THE NOTE

- When you position the white cross over the cell the note will appear

DELETING THE NOTE

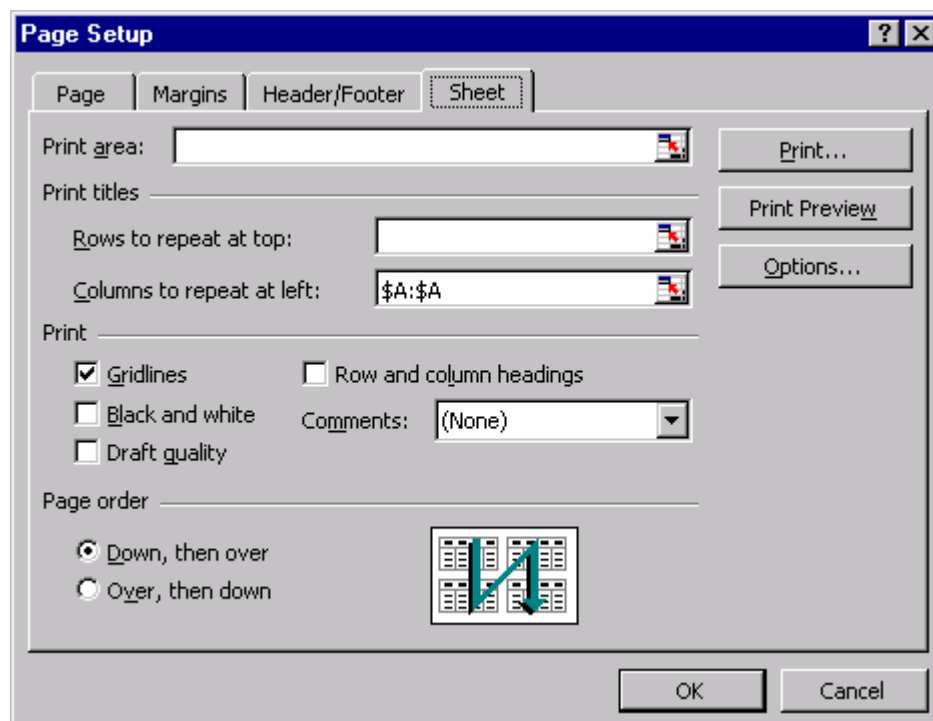
- Right click on cell then choose “**Delete Comment**”

SETTING PRINT TITLES

It is useful to be able to repeat headings across and/or down a series of pages, particularly on a large Worksheet, e.g. a database.

You can set the Sheet to print headings for both the columns and rows of the Worksheet. From inside the Sheet:

- Click on “**File**” in the menu bar, then “**Page Setup**” and select “**Sheet**”
- In the “**Print Titles**” area, click inside the “**Rows To Repeat At Top**” or “**Columns To Repeat At Left**” sections.



- On your **Worksheet**, click on the **rows or columns** to be set as side or heading **titles**. The **reference** will be **entered** in the box.
- Click on “**OK**”

From now on, each time you print, the titles for the columns or rows (or both) will appear on all pages of the document.

If you are selecting a particular area to print, there is no need to include the Print Titles area, it will print automatically.

TEMPLATES

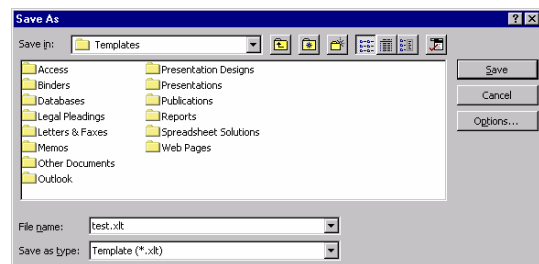
A Template is a mastercopy of a standard Worksheet, it allows you to create a Workbook in a standard individualised or department format which has the same layout in each Sheet, uses the same formulae, has the same style, presentation etc. Templates are stored independently from normal Workbooks, and have a different suffix “.XLT”.

TO CREATE A TEMPLATE

- **Create a new Workbook** in the style and format you wish to have as your standard setup

Go on to Save the Workbook. Within the “Save As” dialogue box name the file then make the following changes:

- Click on the down arrow to the right of the “Save File As Type” box and select “**Template**”. The Workbook will acquire an .XLT extension.
- Change the directory to “**C:\excel\lstart**” or, if you have MS Office “**C:\msoffice\excel\lstart**”
- Click on “**OK**”



You have created your Template and can take copies of it - without affecting the original document - as frequently as you wish.

USING THE TEMPLATE

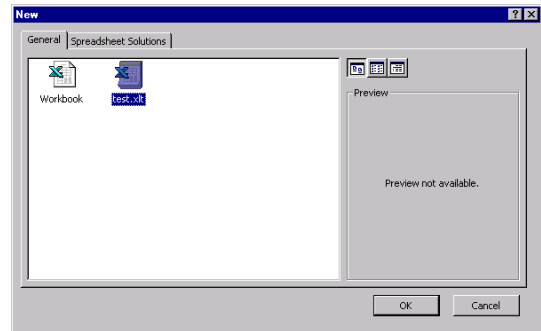
You can use the Template by creating a new Workbook based on the Template. This Workbook is a copy of the template that is treated like a standard new Workbook and will need to be saved with a name, into a drive and directory.

- Click on “**File**” in the menu bar, then click on “**New**”

A dialogue box will appear, displaying your template name(s)

- Click on the **name** of the **template** you want, then click on “**OK**”

A copy of the template will appear on screen, you can work on it and save it in the normal way.



The changes you make here do not affect the actual template.

EDITING TEMPLATES

You may, at some point wish to make changes to your Template(s).

To Open The Template And Edit It

- In the “**File**” menu, choose “**Open**”
- Change the directory to “**C:\program files\msoffice\templates**”
- Select the **name** of Template you want to Edit, then click on “**OK**”

This allows you to open the original Template as opposed to taking a copy. Once you have finished editing, save and close the Template.

For Terminal Server IT will have to alter the Templates

DATABASE FUNCTIONS

A Database is a collection of information arranged in a structured way, which can then be manipulated to extract data or perform calculations. Excel can be used to create and manipulate simple databases. It is particularly appropriate where calculations are involved.

Databases should be set up in one Sheet where the information is arranged in one large block, with no empty rows or columns appearing within the data block. The top row of the block should contain headings describing the data that is stored in each column. Each subsequent row of data then represents a 'Record'.

Extra information that is not a part of the database, can be stored in the same Sheet. But there should always be a gap of at least one empty cell between cells in the data block and any extra information stored in the Sheet.

CREATING A DATABASE

A database is created on a single Sheet

- The **top row** of the block must contain **headings** for each column of data

	A	B	C	D	E	F
1	Name	Surname	House Number	Street Name	Town	Postcode
2						

- Below the headings **type the information** relating to the individuals, companies etc. on whom the database is founded. This is called a 'Record'.

	A	B	C	D	E	F
1	Name	Surname	House Number	Street Name	Town	Postcode
2	Jean	Golding	6	Train Rd	London	SW3 TR1
3						

- You can leave individual cells empty, but you must not leave any completely empty rows or columns in the block of data, otherwise Excel will not act on all your data when you start to use the Excel database features



You can test to see if the data has been set up correctly: Click in a cell in the data and press the shortcut command **[Ctrl]+[Shift]+***. This shortcut selects the current array. The cells that are selected are the only ones that will be acted upon when you start to Sort or Filter your database.

MOVING AND SELECTING IN AN EXCEL DATABASE

There are some keyboard shortcuts for moving around or selecting cells in Excel that are especially useful when working with a database.

MOVING AROUND

Keyboard Command	Result
Ctrl+↓	Moves down to the end of the current data region
Ctrl+↑	Moves up to the end of the current data region
Ctrl+→	Moves right to the end of the current data region
Ctrl+←	Moves left to the end of the current data region
Home	Moves to the beginning of the current row
Ctrl+Home	Moves to cell A1

The Ctrl+Arrow commands will move you to the beginning or end of your data as long as there are no empty cells in the direction you are moving.

SELECTING DATA

The Shift key can be used to extend a selection. Here it is combined with the movement shortcuts to move and select at the same time.

Keyboard Command	Result
Ctrl+Shift+↓	Selects down to the end of the current data region
Ctrl+ Shift+↑	Selects up to the end of the current data region
Ctrl+ Shift+→	Selects right to the end of the current data region
Ctrl+ Shift+←	Selects left to the end of the current data region
Ctrl+Shift+*	Selects the current array (the data block)

The Ctrl+Shift+Arrow commands will select to the beginning or end of your data as long as there are no empty cells in the direction you are selecting.

FORMS

You can build or edit your database by moving around the spreadsheet cells and entering new data or editing the existing cell contents, as you would normally in a spreadsheet. However in large databases it can get quite difficult to locate existing records (rows of data) and add new data.

The Forms feature is designed to help you to maintain your database by generating a 'Form'. The Form displays each row of data in your database as a record, one record at a time.

Using the Form you can add new records, delete records which are no longer applicable, change the details in a record and look for specific records.

To Use Forms

- Click on one **cell** in your data
- Click on "**Data**" in the menu bar
- Click on "**Form**"

The following screen will appear:

The screenshot shows a window titled 'Database' with a blue header bar. On the left, there are several input fields with labels: Name (John), Surname (West), Dept (Short Stay), Status (Contract), JoinDate (01/16/1996), DoB (07/07/1970), Age (28.9), Stay (3.4), Bonus (-), Sick (1), and Salary (18500). On the right side, there are several buttons: 'New', 'Delete', 'Restore', 'Find Prev', 'Find Next', 'Criteria', and 'Close'. At the top right of the window, it says '1 of 21'.

You can use the buttons on the right hand side to maintain the Database:

New	Lets you to add another record to your Database by presenting you with a blank record to complete with new information.
Delete	Will delete the full record displayed at the time.
Restore	Restores a record's original details if changes are made in error.
Find Prev/Next	Will jump you to the previous record or next record .
Criteria	Enables you to look for a record by inserting the text to look for in the relevant field and then clicking on the Find Prev button .

SORTING DATA

The data in your database can be sorted into alphabetical or numerical order.

Sorting data is very easy, but care must be taken to do it the correct way. If data is sorted the wrong way then the whole database can become scrambled.

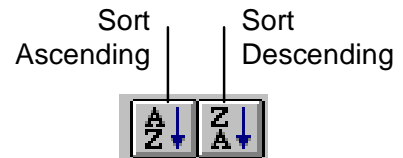
If you have a row of totals at the bottom of your data, you should either delete them before you start sorting data, or insert an extra row above the totals to separate them from the database.

To Sort Data

- Click on any **one cell in the column** you wish to sort by

DO NOT click on the column heading to select the whole column

- Click on the “**Sort Ascending**” button (A to Z) to sort text alphabetically from A to Z, or numbers from the lowest number to the highest



or

- Click on the “**Sort Descending**” button (Z to A) to sort text alphabetically from Z to A, or numbers from the highest number to the lowest

The **whole database** will be sorted on that criteria.

MULTILEVEL SORTING

You can perform a Multilevel sort without having to go through the Data menu (see next section). The trick is to sort each level in reverse.

For example if you have a list of employees that you would like to be sorted by surname and then by first name - Sort by first name first, then sort by surname. Excel does not change the order of data unless it has to, so the order of the first names will stay in the same position for all employees with the same surname.

SORTING THE DATABASE ON MULTIPLE CRITERIA

- Click on any **one cell in the column** you wish to sort by

DO NOT click on the column heading to select the whole column

- In the “**Data**” menu, choose “**Sort**”

This will bring up the Sort dialog box.



- Click on the **down arrow** next to the “**Sort By**” field, a menu will appear
- Click on the **first field name** you wish to sort by, e.g. “surname”, Then select “**Ascending**” or “**Descending**” - usually ascending order (A→Z)

To sort by a second field within the first, e.g. by first name or initial:

- Click on the **down arrow** next to the middle “**Then By**” field and from the menu **select the second field**
- Repeat this action at the lower “**Then By**” field if you wish further **refinement** of the output **by a third field**
- Click “**OK**” to perform the sort

The selection will remain set for future sorts with this Sheet. To change it, either reset or empty the fields.

FILTERING A DATABASE

The Filter feature enables you to display only the rows in a database that contain a certain value, or that meet a set of criteria. You can filter by several different criteria at the same time. Once the data has been filtered you can view it, print it, copy it or even create a graph from it.

Creating A Filter

- Click on any **one cell** in your database
- In the “**Data**” menu in the menu bar, click on “**Filter**”, then “**AutoFilter**”.

Drop down list arrows will appear next to the headings in your database.

	A	B	C	D	E	F	G	H
1	FNAME ↓	LNAME ↓	W ↓	WOR ↓	MA ↓	EX ↓	EX ↓	TEST ↓

- Click on **the drop down arrow** on the field to be used as a filter. A list will appear showing - in alphabetical order - all possible choices held in that column of the database.
- From the list choose your **selection criteria**

As soon as you select a criteria the database will change to reflect your choice. It will display **only** the records containing the selected criteria. All the other rows, that do not satisfy the selected criteria, are hidden from view.

You will notice that the drop down arrow turns blue when data is being filtered by a criteria in that column.

You can repeat this for another selection on a second criteria, so that the data is filtered by two criteria at once. But, if you select two filter criteria that are mutually exclusive then no data will be displayed. E.g. if you choose to display all ‘Female’ staff that have the ‘First Name’ John, the filter will probably not find any data.

To Retrieve All Your Records

- Click on **the drop down arrow** in each field heading that is being filtered, then select the “**(All)**” option at the top of the list
- or
- In the “**Data**” menu, choose “**Filter**”, then click on “**Show All**”

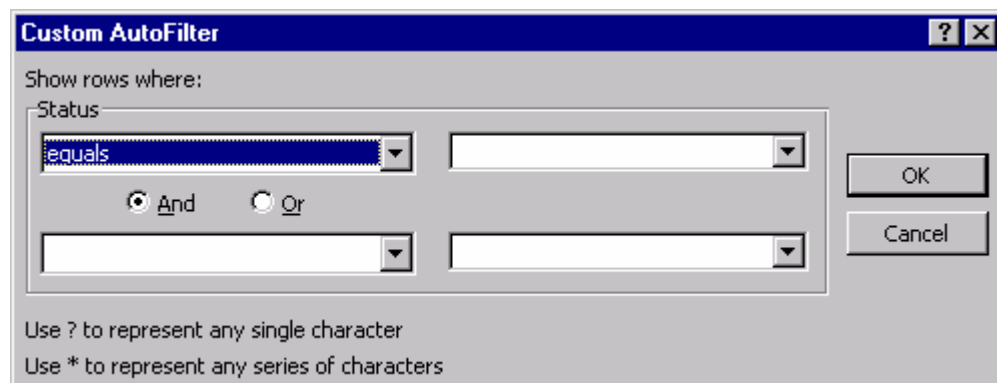
CREATING A CUSTOM FILTER

A normal filter displays all data that is **equal to** the criteria you choose in the drop down list. But if you wish to filter data by a column that contains numbers, you might want to display all data that is greater than, or less than a certain value. The Custom filter option allows you to do this.

To Customise A Filter

- Turn on the AutoFilter feature
- Click on **the drop down arrow** on the field to be used as a filter, and in the drop down list select “**(Custom)**”

This will bring up the Custom AutoFilter dialog box. The two rows of input boxes allow you to set up to two filter criteria on the same field.



- **Select a relationship** in the 1st box
- Enter a **value** in the 2nd box

If you want to create a second criteria, you can add another value and relationship in the second set of input boxes. Then select “**And**” to filter data that satisfy both criteria or select “**Or**” to filter data that satisfy one criteria or the other.

- Click “**OK**” to filter the data

To Remove The AutoFilter

- In the “**Data**” menu choose “**Filter**”, then select “**AutoFilter**”

The filter is switched off.

SUBTOTALLING DATA

Excel databases can be subtotalled to display a subtotal row at each category change in the column you select and a Grand Total row at the bottom of the data.

You can also calculate averages, or run a count for each category in the data.

It is important to sort your list by the column you wish to create the subtotals for, before you create subtotals. Your data must also have column headings in the first row.

To Subtotal Data

- Click on any **one cell** in the data
- In the “**Data**” menu choose “**Subtotals**”

This will bring up the Subtotal dialog box.

- In the “At Each Change In” drop down menu, **select** the **field** that you wish to subtotal by
- In the “Use Function” drop down menu, **choose** the **Function** you would like to apply to category, e.g. Sum, Average, Count
- In the “Add Subtotal To” list **select** the **columns** of data that you would like to apply the selected Function to
- Click “**OK**”

The Subtotal dialog box is shown with the following settings:

- At each change in:** Dept
- Use function:** Sum
- Add subtotal to:** Bonus (unchecked), Sick (unchecked), Salary (checked)
- Replace current subtotals
- Page break between groups
- Summary below data

When Subtotals have been applied to data, you can collapse the data down to display only the subtotal rows, using the grey numbered control boxes to the left of the data.

- Click on box number 1 to display only the Grand Total
- Click on box number 2 to display only the Subtotals
- Click on box number 3 to display all the data

	A	B	C
3	Surname	Dept	Salary
4	Browning	Comms.	£20,000
5	Allen	Comms.	£28,000
6		Comms. Total	£48,000
7	Parker	Fundraising	£21,000
8	Davies	Fundraising	£26,000
9	Plum	Fundraising	£35,000
10		Fundraising Total	£82,000
11	White	IT	£25,500
12	Smith	IT	£33,000
13	Smith	IT	£28,000
14		IT Total	£86,500
15	Astor	Personnel	£10,500
16	Astor	Personnel	£16,000
17	Stone	Personnel	£27,000
18		Personnel Total	£53,500

To Remove Subtotals

- In the “**Data**” menu choose “**Subtotals**”
- In the Subtotals dialog box click on the “**Remove All**” button

AUTOFORMAT

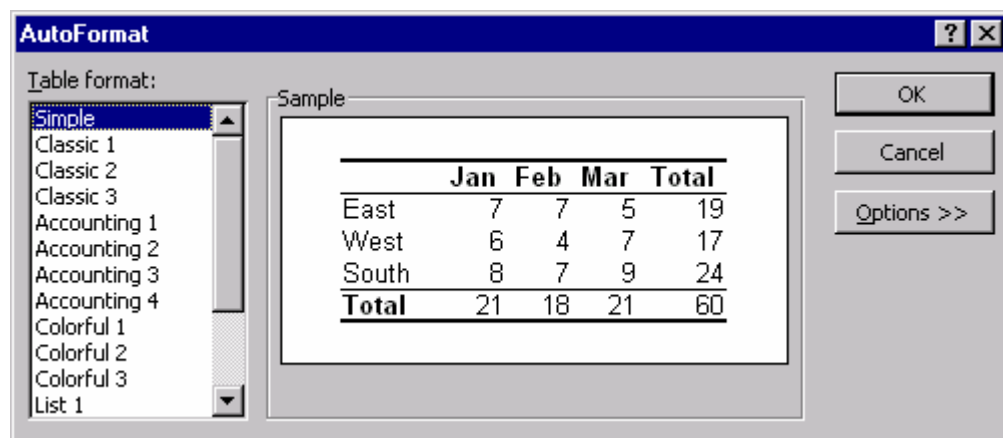
The AutoFormat feature automatically applies a built-in combination of formats to a range of cells or a data table. Microsoft Excel provides a variety of autoformats that apply formats for numbers, alignments, fonts, borders, patterns and shading, column width, and row height.

AutoFormat is especially useful for applying formats to data that has been Subtotalled, as it will apply a different set of formats to all the subtotal rows to differentiate them from the rest of the data.

To Apply Autoformatting

- Click on any **one cell** in the data
- In the “**Format**” menu choose “**AutoFormat**”

This will bring up the AutoFormat dialog box.



- In the list of Table Formats, **select a format**

A Sample of that format style will be appear.

- Click “**OK**”

Deleting Formatting

You can remove formatting from cells without removing the data contained in the cells.

- **Select the cells**

- In the “**Edit**” menu choose “**Clear**”, then select “**Formats**”

SPLITTING THE SCREEN

If you are working on a large spreadsheet you may wish to see different parts of the same sheet at the same time. You can do this by splitting the screen.

You can split the screen into two horizontal segments, two vertical segments or you can apply both splits at once to create four segments.

To Split The Screen Horizontally

Just above the up arrow button at the top of the Vertical scroll bar is a small grey bar. This is the control used to split the screen horizontally.

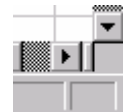


- **Click** on the **grey control** bar and **drag** down the screen

The screen will now be split into two segments, with a grey split line separating both parts. Each segment has its own set of up and down controls on the vertical scroll bar, allowing you to scroll to different parts of the same sheet.

To Split The Screen Vertically

Just after the right arrow button at the end of the Horizontal scroll bar is a small grey bar. This is the control used to split the screen vertically.



- **Click** on the **grey control** bar and **drag** left across the screen

The screen will now be split into two vertical segments. Each segment has its own set of left and right controls on the horizontal scroll bar, allowing you to scroll to different parts of the same sheet.

To Move A Split

- **Click** on the **split line** running across the screen and **drag** up, down, left or right as required

To Delete A Split

- **Double click** on the **split line**

CREATING MULTIPLE CHARTS

It is possible to use the Chart Wizard to create multiple charts without having to create each chart from scratch.

The trick is to create the first chart and format it the way you would like all the charts to look. You then copy the original chart to create the next chart, and then redefine the chart data.

To Create Multiple Charts

- Create the first chart using the Chart Wizard, and size and format it the way you would like all the charts to look
- Click once to **select the chart**
- Click on the “**Copy**” button
- Deselect the chart by clicking on an empty cell where you want to paste the new chart to
- Click on the “**Paste**” button
- **Resize** the copy if necessary

You now need to redefine the data for the new chart.

To Redefine Chart Data

- Click once to **select the new chart**
- Click on the “**Chart Wizard**” button

This will bring up the Chart Wizard dialog box. But this time it contains only two steps. The first step allows you to choose the data range being used by the chart.

- With the Chart Wizard dialog box still showing on the screen, click and drag through the spreadsheet cells to **select the new data**

You may need to move the dialog box out of the way by clicking and dragging on its blue title bar.

- Click on the “**Finish**” button

You can then repeat this process to create each additional chart.



TIP

You can use the Ctrl key to select two separate ranges of cells at the same time. (This can be useful for creating multiple charts, especially multiple pie charts). Select the first range, then hold down the Ctrl key as you select each

subsequent range.