



**INFORMATION SYSTEMS SERVICES**

**Introductory Exercises In  
Microsoft Excel XP**

***This document contains a  
series of exercises which  
give an introduction to the  
Excel XP spreadsheet  
program.***

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**TUT 103**

**50p**

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## Acknowledgements

This document was based on the *Introduction to Excel 4.0 – A Self Teaching Guide* produced by Carol Everett, Computer Services, Anglia University. Thanks are given for the permission to use their material

## Format Conventions

In this document the following format conventions are used:

Commands that you must type in are shown in <b>bold Courier</b> font.	<b>WIN31</b>
Menu items are given in a <b>Bold, Arial</b> font.	<b>Windows Applications</b>
Keys that you press are enclosed in angle brackets.	<b>&lt;Enter&gt;</b>

## Feedback

If you notice any mistakes in this document please contact the Information Officer. Email should be sent to the address [info-officer@leeds.ac.uk](mailto:info-officer@leeds.ac.uk)

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# Introduction

## About Excel

The aim of this document is to enable you to gain an insight into using the Excel spreadsheet. Excel is the oldest spreadsheet program to use a *Graphical User Interface* method of working, and therefore its interface is one of the most advanced. Its strength lies in its ease of use for new users and its speed of use for experienced users. For most tasks there are at least two ways of doing the same job, and with some tasks there are more. This enables you to choose the method of working which suits you best – either for ease of remembering how to accomplish a task or for speed when you are more experienced.

Spreadsheets are used for a wide variety of tasks from the simple presentation of tables of numbers to complex simulations of scientific processes and computer-based training materials. Excel has the greatest range of mathematical and scientific functions of any spreadsheet on the market and it is widely used for teaching. Furthermore, many companies have produced add-ins that seamlessly provide even more functionality for Excel. In particular we have a Statistics add-in for Excel called Astute® that provides Excel with a comprehensive selection of parametric and non-parametric statistical routines.

The scope of this document is to introduce you to the Excel user interface, to enable you to enter data, format data, set up simple calculations and produce simple graphs. There are other documents available to enable you to perform more complex formatting operations, use formulae more powerfully and refine your graphs.

The lessons have been designed in such a way that you are advised to complete a lesson and its exercise **before** proceeding to the next one.

## Requirements

It is assumed that you already know how to login to the Novell network and run the Microsoft Windows operating system. No prior knowledge of spreadsheets in general, or Excel in particular, is assumed, but it is advised that you use this document alongside the *Getting Started With Microsoft Excel XP* (BEG 17) document available from the Help Desk. If you are completely new to spreadsheets then you are also advised to read the *Overview of Spreadsheets* (OVE 4) document, also available from the Help Desk.

## Documentation

If you require further information on the facilities in Excel the following documents are also available:

- Formatting Data in Microsoft Excel 2000 (TUT 104)
- Writing Formulae with Microsoft Excel 2000 (TUT 105)
- Charting in Microsoft Excel 2000 (TUT 106)

The features in Excel XP and Excel 2000 are very similar.

# Task 1 The Excel Screen

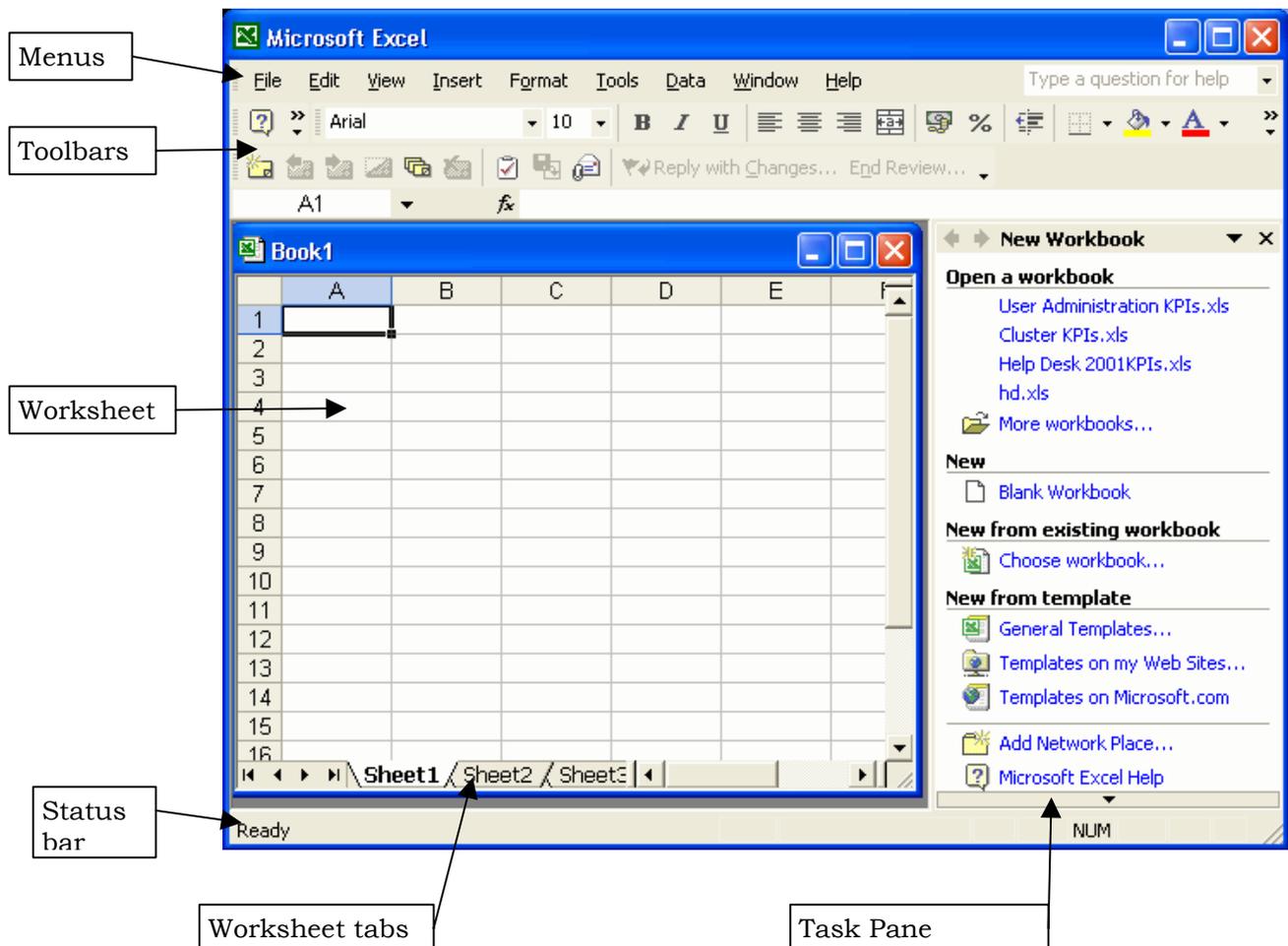
**Objective** To run Excel for Windows and identify the parts of the Excel screen, and know how to use them effectively.

**Instructions** You will learn the parts of the Excel screen by observation and try out some common Excel tasks.

**Comment** This document assumes you are using a PC in an ISS Cluster and have logged on to Windows.

**Activity 1.1** Run Excel from the **Start** menu (under **Programs, MS Office XP**) or by clicking on its icon on the desktop.

**Activity 1.2** Familiarise yourself with the Excel worksheet window.



The Task Pane on the right of the screen is a new feature in Office XP. It gives you easy access to common tasks, and changes as you perform new tasks. In the example above the Task Pane shows recently used Excel documents and provides options for creating a

new document from a template. Other Task Panes which may appear include Search, Clipboard and Clip Art.

If you cannot see the Task Pane click on the View menu and choose Task Pane. To close the Task Pane click on the close box at the top of the pane.



**Activity 1.3** In the worksheet, the *columns* are labelled by letters and the *rows* by numbers. At the intersection of a row with a column is a box called a *cell*. Cells are referenced by both their *column label* and their *row number*.

Click on the cell D7 using the mouse (Column D, Row 7). A black box appears around the cell. This is called the *cell highlight* and its presence denotes a *selected range*. Move the mouse slowly over the black border. Notice that the cursor changes from a thick white crosshair  when over the main part of the cell to a white arrow  when it is over the black border, and a black crosshair  when it is over the little black box in the bottom right hand corner of the cell highlight.

**Activity 1.4**



Now look at the *formula bar*. This has three areas. The left-hand area will have the text D7 in it. Excel can only edit the contents of one cell at a time, even when more than one cell is selected. The editable cell is called the *active cell*. It is always highlighted and its reference will be displayed in the left-hand area of the formula bar.

The right-hand area of the formula bar will display the contents of the active cell and in here the contents can be changed. The middle area of the formula bar is used when the cell is being edited.

## Worksheets and Workbooks

A Workbook is an Excel file that can contain one or more worksheets. You can move between different worksheets in a workbook by clicking on the tabs at the bottom of the workbook window. If you have more than one workbook open, you can move between the workbooks using the Window menu.

# Task 2 Entering Data

**Objective** To understand the different types of data and to enter data correctly.

**Instructions** You will start entering data into the spreadsheet using the keyboard.

**Comments** You are Sales Manager of VINO plc. You have the sales figures for three of your four sales reps for three quarters, and you want to record this data.

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**Activity 2.1** First you must enter the two titles. Click on cell A1. Notice that the left-hand section of the formula bar displays the cell reference A1. Now type:

VINO plc

Notice that the text appears in the cell and also in the right hand section of the formula bar. Also the middle section of the formula bar changes to display two buttons. These are:



<Cancel> button. Clicking on this cancels the edits in the cell.



<Confirm> button. Clicking on this returns you to the sheet with the cell edited.

Click on the <Confirm> button to complete the entry. Now click on cell A3 and type:

(Figures in 000's)

Click on the <Confirm> button.

**Activity 2.2** Now enter the column labels for the table – **Sally, Ann** and **Ray** in cells A7, A8 and A9 respectively. When you have typed the text you can confirm the entry by pressing <Enter> instead of clicking the <Confirm> button.

**Activity 2.3** Now enter the row labels for the table – **Q1, Q2** and **Q3** in cells B6, C6 and D6 respectively. When you have typed the text you can confirm the entry by pressing the right cursor → key. This confirms the entry and moves you on to the next cell in one operation.

**Activity 2.4** Now enter the values **40, 57, 52**, etc. so that your sheet looks like the one shown below.

	A	B	C	D	E
1	VINO plc				
2					
3	(Figures in 000's)				
4					
5					
6		Q1	Q2	Q3	Q4
7	SALLY	40	57	52	
8	ANN	50	69	69	
9	RAY	55	75	73	
10					

# Task 3 Editing Data

**Objective** To edit existing data.

**Instructions** You will edit the data in the spreadsheet using the keyboard and mouse.

**Comments** There has been an error with Ray's sales figures and you want to put the correct data in the worksheet.

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**Activity 3.1** For the first quarter, Ray sold £58,000 of goods, not £55,000. Click on the cell B9 and type:

58

The contents of cell B9 are deleted and completely replaced by the new typing. If you had done this by accident then at this point you could click the **<Cancel>** box to undo the edits. You want to confirm the entry, so click the **<Confirm>** button or press **<Enter>**.

**Activity 3.2** For the third quarter, Ray sold £71,000 of goods, not £73,000. Click on the cell D9, but this time press the function key **<F2>**. In the cell you will notice that at the end of the figure 73 there is a flashing I-beam cursor, , indicating that the text in the cell is ready for editing.

Press the **<Backspace>** key once and type **1**, then confirm the cell edits.

**Activity 3.3** The title is incorrect. It needs to be changed to **Sales for VINO plc (1995/6)**. To do this, click on A1 and then move the cursor to the Formula Bar. As the cursor goes over the editing section of the formula bar its shape changes to an I-beam. Position this just to the left of the word **VINO** and click the mouse button once. The flashing cursor appears to the left of the word **VINO**. Type:

**Sales for**

The text is inserted in front of the word **VINO**. Now use the mouse to click at the end of the cell entry and type:

**(1995/6)**

Confirm the edits in the cell.

**Activity 3.4** Now move the mouse cursor over the cell A8 containing the name Ann. Click the mouse button twice quickly. You will notice that a flashing I-beam cursor now appears within the cell at the point you clicked. If the cell highlight suddenly jumps onto either Ray or Sally it means you've clicked twice on the border by mistake. In that case try again, clicking in the centre of the cell.

When you have the flashing I-beam cursor, move it to the end of the word Ann and type an extra **e** so that her name reads **Anne**. Confirm the edits in the cell.

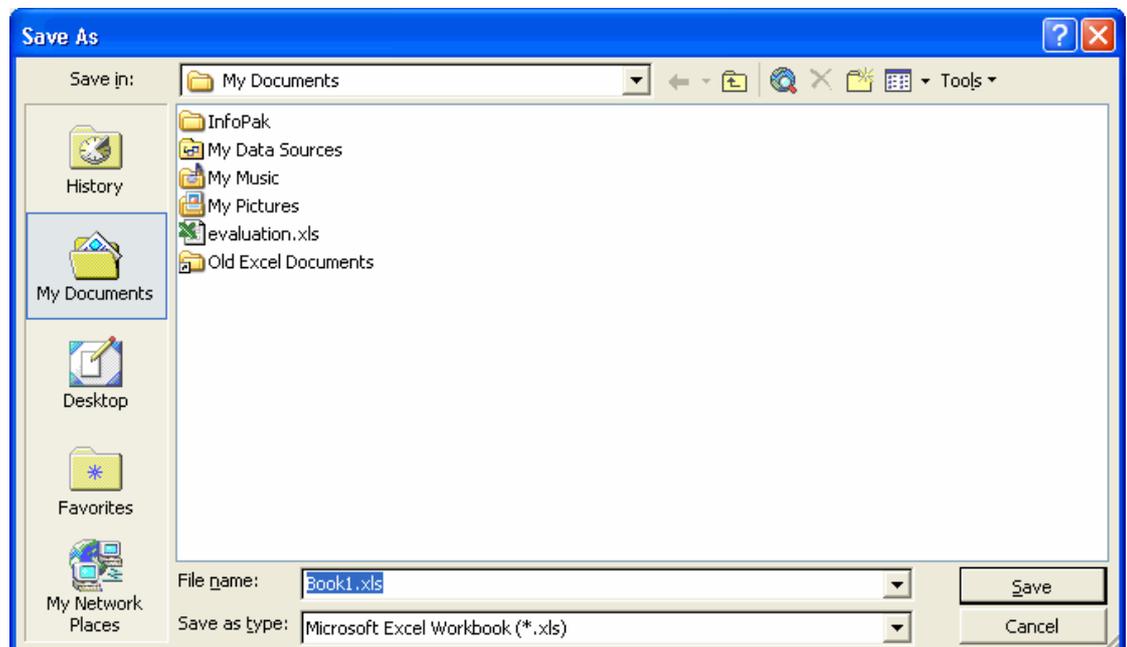
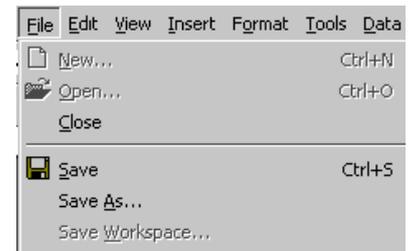
# Task 4 Saving A File

**Objective** To let you save your workbooks so that you can edit them again later.

**Instructions** You will use the **Save As...** command from the **File** menu.

**Comments** Most workbooks need to be worked on several times. To do this you must be able to save a workbook and give it an identifiable name.

**Activity 4.1** Click on the **File** menu once to display the list of options. Now click on the **Save As...** option. The three dots after the command indicate that a dialog box will appear when this command is selected. The **Save As** dialog box is displayed as shown below:



Choose the location you want to save your file in from the **Save in:** box. You should normally save files onto your **M:** drive

Type in a filename. It is a good idea if filenames are meaningful and helpful, e.g. "ACCTS90", "REPORT1" rather than "FRED". When finished click **<Save>**.

# Task 5 Creating A New File

**Objective** To enable you to manage your worksheets.

**Instructions** You will use the **Window** menu and various commands from the **File** menu.

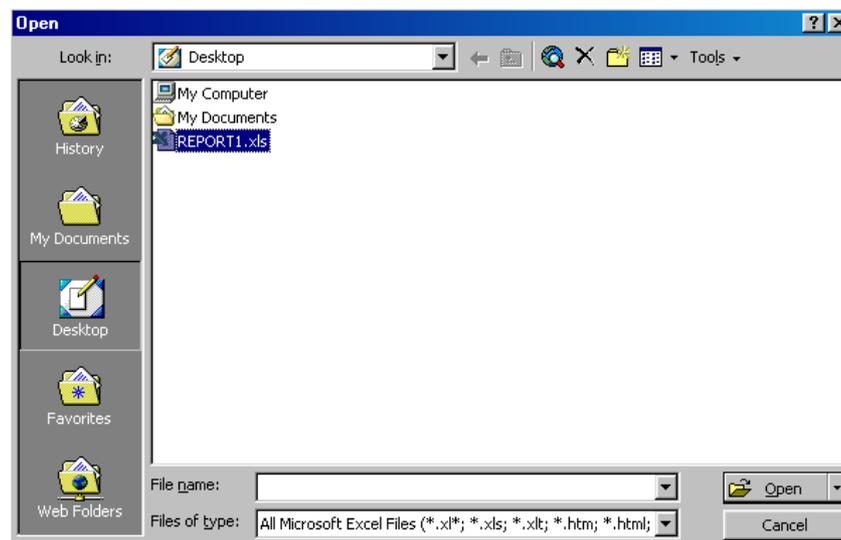
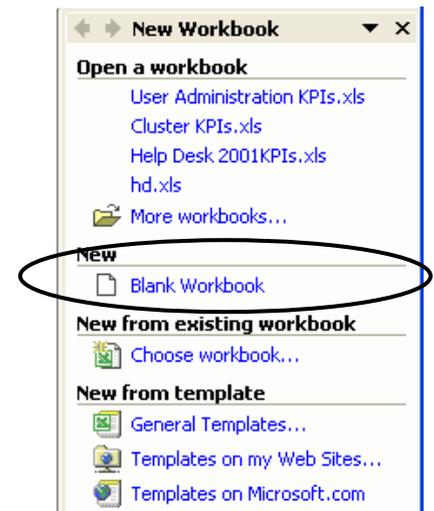
**Comments** Once you have saved a workbook you must be able to open it again and create new workbooks.

**Activity 5.1** From the file menu choose the **Close** command. The Workbook you have just saved will close and the centre of the Excel window should be blank.

**Activity 5.2** Click on **Blank Workbook** in the **New Workbook Task Pane**. A new blank workbook opens in the Excel window, and the New Workbook Task Pane closes.

**Activity 5.3** You are looking ahead to the next financial year and you want to create a worksheet in readiness. Enter the title: **Sales for Vino plc (1996/7)** into cell A1 and confirm.

**Activity 5.4** Return to the **File** menu again and select the **Open** command. The dialog box shown will appear:



Select the file you have just saved (in the example this would be the file **REPORT1.xls**) with the mouse and then click **<Open>**. The file will load back into Excel..

**Activity 5.5** Select the **Window** menu. The currently-open workbooks will be numbered 1, 2, 3 etc at the bottom of the menu. Choose the

appropriate numbered option to switch to the workbook you have just created.

If you want to see all your open workbooks on the screen at the same time (for example, for copying data from one to another) then use the **Window Arrange...** command. Only one workbook can be active at any one time – and that workbook will have its title bar highlighted. To work on another workbook viewed on your screen, click on it, or use the **Window** menu.

# Task 6 Editing A Worksheet

**Objective** To edit the worksheet by copying and moving the data.

**Instructions** You will add extra data to the worksheet, use the **Edit** and **Insert** commands and move a range of cells.

**Comments** The sales reps have produced their figures for the last quarter plus the missing figures for the fourth rep. You want to enter them into the spreadsheet, along with the Year Target figures for each rep.

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**Activity 6.1** Retrieve the spreadsheet you originally created by selecting it from the **Window** menu. Enter the fourth rep's label – **John** – and sales figures in row 10.

Q1	44	Q2	59	Q3	38
----	----	----	----	----	----

**Activity 6.2** Now enter the figures for the last quarter as follows:

Sally	65	Anne	90	Ray	82	John	70
-------	----	------	----	-----	----	------	----

**Activity 6.3** For each of the reps, you would like to enter his/her Year Target figures. These can be entered in column B, with a heading **Target**.

Move the cursor over the column label at the top of the B column and click the left mouse button once. The entire column should be highlighted. Note that the cell at the top of the column, B1, is white, indicating that it is the *active cell* in the *highlighted range*.

Now go to the **Insert** menu and select the command **Columns**. A blank column is inserted and the contents of all the other columns are shifted one column to the right.

Label the column with the title **Target** in cell B6, and enter the target figures as given below:

Sally	250,	Anne	220,	Ray	250,	John	200
-------	------	------	------	-----	------	------	-----

**Activity 6.4** Management have come back to you asking for the target figures to be placed after the Q4 figures. Move the cursor over cell B6, click and hold down the left mouse button. With the button still held, move the cursor down until it is over cell B10. The black border highlight extends across the cells as the cursor moves across them. Now release the mouse button. The process of moving the mouse whilst holding the button down is called *dragging the mouse*.

The cells are highlighted black with the black border around them. A rectangular group of cells like this is called a *range*, so you have now selected a range of cells.

Move the mouse over the black border until it changes to the white arrow . Click and hold the left mouse button. Now drag the mouse over to column G. You will notice that a 'ghost' highlight border follows the cursor. Position this ghost box over the range G6 to G10, and release the mouse button. The data in the selected range is moved to the new location.

**Activity 6.5** Select column B, and choose **Delete** from the **Edit** menu to remove the column again.



# Task 7 Formatting Data

**Objective** To understand the different types of formatting for values, alignment types and to improve the look of labels.

**Instructions** You will learn the parts of the Excel screen by observation and try out some common Excel tasks.

**Activity 7.1** The title needs to stand out from the data. Select cell A1, containing the title. Now click on the following buttons in the toolbar:



Makes the text bold.



Select the text size. Click on the down arrow and choose size 12.

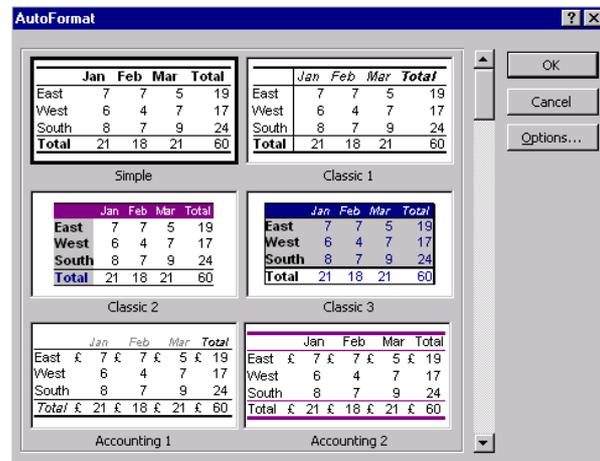
**Activity 7.2** Now select the range A1:F1 by holding down the **<Shift>** key, and clicking on the cell F1. All the cells in between A1 and F1 are all selected. The columns A to F contain the table you are working with, and you want to centre the title across that table. Click on the **Merge and Center** button  in the formatting toolbar, and the title will centre itself across the columns.

**Activity 7.3** Now align the labels Q1, Q2, etc with the data below them. The data is aligned right, so select the range B6:F6 and click on the **Align Right** button  on the second toolbar. Your spreadsheet will look like the one shown right:

	A	B	C	D	E	F
1	<b>Sales for VINO plc (1995/6)</b>					
2						
3	(Figures in 000's)					
4						
5						
6		Q1	Q2	Q3	Q4	Target
7	SALLY	40	57	52	65	250
8	ANNE	50	69	69	90	220
9	RAY	53	75	71	82	250
10	JOHN	44	59	38	70	200
11						

**Activity 7.4** Select the data range A6 to F10 by either clicking in cell A6 and dragging the mouse down to F10, or else using the **<Shift-Click>** procedure. Select the **Autoformat** command from the **Format** menu. This brings up a dialog box containing a gallery of possible formats.

Select one you like and click on **<OK>**. If you like the results, save the file. If not, go to the **Edit** menu and select **Undo**.



# Task 8 Using Formulae

**Objective** To enter a formula and use the **Autosum** function.

**Instructions** You will widen a column using the mouse and enter formulae from the keyboard.

**Comments** As Sales Manager, you need to know how well or badly your sales team has done for the financial year 1995/6. You want to establish:

- 1) the total sales figure for each rep;
- 2) the actual total sales and the target total sales.

**Activity 8.1** Insert a blank column in front of the column containing the Target data (column F) by selecting the cells F2 to F10 and using **Insert, Columns**. In F6 enter the label **Actual Sales** and confirm the entry. The label will not fit in the column width, so you must widen the column. Move the cursor to the column labels. Now move the cursor across the labels: notice that the cursor changes from a crosshair to a vertical line with arrows . Move the cursor in between the labels for the F and G columns so that the cursor changes form. Click and drag the mouse to the right. A dotted line appears under the cursor, indicating the new column width. When this looks big enough release the mouse button. The column adopts the new width.

**Activity 8.2** F7 will contain Sally's actual total sales – click on this cell. The formula for Sally's total sales will be the sum of the four quarters, i.e.  $B7+C7+D7+E7$ . Click on F7 and type:  $=B7+C7+D7+E7$  Confirm the entry in the cell. Excel adds up all the contents of the cells B7 to E7 and displays the result in F7. Note that the formula bar still contains the formula, so if you need to edit it you can.

**Activity 8.3** An easier way to add up a collection of cells, especially if they are all together, is to select F7 again and then click on the **AutoSum** button,  in the top toolbar. This pastes in the **SUM** function and the active dotted box indicates the range of cells to be summed. Press **<Enter>** to accept the suggested range. The result is displayed in F7, but the formula bar will contain the formula  $=SUM(B7:E7)$ .

**Activity 8.4** You will copy the formula in F7 to cells F8, F9 and F10 so the totals for the other sales reps are calculated. Select cell F7 so that the cell is highlighted. Move the cursor over the little black box in the bottom right-hand corner so that the cursor changes shape to a black crosshair . Now click and drag the mouse button so that a ghost highlight covers the range F7:F10. Release the mouse button and the formula is copied down the range. The formula changes to take account of the row it is in. The formula in row 7 is  $=SUM(B7:E7)$  but the formula in row 8 is  $=SUM(B8:E8)$ .



**Note** The bottom border on cell F10 may have vanished as the cell formats were copied as well, so you may want to redo your **Autoformat** command.

**Activity 8.5** Using the **Autosum** technique, sum up the reps' totals in F7 to F10, and put the result in F12. Enter an appropriate label in A12. Copy the formula to column G for the Target Sales.

# Task 9 Creating A Chart

- Objective** To understand what is meant by an *embedded chart*, and to use the *ChartWizard*.
- Instructions** You will create a chart by choosing options and filling in dialog boxes presented to you by the *Excel Chart Wizard*.
- Comments** A chart is a graphic representation of worksheet data. There are 14 different types of chart: nine 2-dimensional and six 3-dimensional types, including the bar, line, pie, and scatter types. The objective of the chart is to present graphically a comparison of the sales reps' performance over the year.
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**Activity 9.1** You are going to use the input data that was entered initially, i.e. B7 to E10. The column and row labels will also be required to identify the data. The data range for the chart therefore is A6 to E10. Select the range A6:E10 with the mouse and click on the **Chart Wizard** tool,  in the toolbar.

### **Using the Chart Wizard**

The Chart Wizard breaks down the operation of creating a chart into four simple steps. If you need more information, click on the **Help** button.

**Step 1** Which chart type do you require? Click on **Column** under **Chart type:** and choose **Clustered Column** under **Chart sub-type:** (the chart type can be easily changed later if necessary). Click on the **<Next>** button.

**Step 2** Make sure that the correct data range has been selected. The **Data Range** box should display **=Sheet1!\$A\$6:\$E\$10** and an active dotted box appears around the selected area. Click on the **<Next>** button.

**Step 3** Annotating the chart. Do you want a legend (key), and titles? Click in the **Chart title** box and type **VINO Sales Figures (1995/6)**. Click in the **Category (X) axis:** option, and type the text **Quarterly sales**. Click on the **Legend** tab and make sure the **Show legend** box is checked. Click on the **<Next>** button.

**Step 4** Chart Location. Choose **As object in:** to insert your chart into your worksheet. Click on **<Finish>**.

**Activity 9.2** The chart is placed in the worksheet. Click on the chart to make sure it is selected, (black selection boxes appear around the edge of the chart – make sure the whole chart is selected), hold the left mouse button down and drag your mouse – your chart will move with it. Move the chart to a suitable place in the worksheet and release your mouse button. Click anywhere else on the worksheet to deselect the chart.

# Task 10 Printing

**Objective** To control the printing options.

**Instructions** You will use the **Page Setup**, **Print Preview** and **Print** commands from the **File** menu.

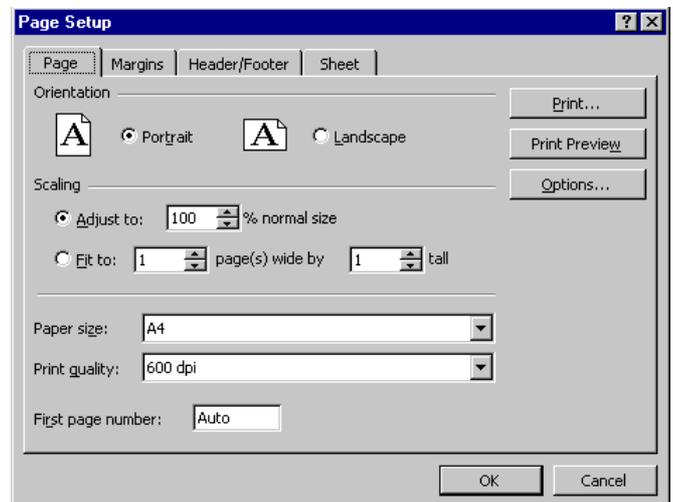
**Comments** Having undertaken all this work to create your spreadsheet, you will want to take away a printed copy.

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**Activity 10.1** Before printing, you will need to ensure that Excel is ‘talking’ the right printer language and attached to the correct printer queue. To do this you should consult the document *Getting Started with Microsoft Windows NT* (BEG 18). You will also need some Printer Credits allocated to your account.

**Activity 10.2** Once the right printer has been selected, you will probably want to check how your page is set up. Select the **Page Setup...** command from the **File** menu. The dialog box shown below will be displayed:

Click on the **Margins** tab at the top of the box. From that screen, under **Center on page**, check the **Horizontally** and **Vertically** boxes. Then click **<OK>**.



**Activity 10.3** You will now preview the spreadsheet on screen. Previewing your spreadsheet before committing it to the printer saves you time, effort and money, so it is recommended. As a precaution, you also are advised to save your work beforehand.

From the **File** menu choose the **Print Preview** command. The screen will display a preview of the printout. To examine the worksheet more closely, click on the **<Zoom>** button and scroll around the window. When you are satisfied with the **Preview**, click on the **<Print>** button. The spreadsheet window will reappear with a dialog box checking that you are sending the print to the right place, how much of the sheet you want printed and how many copies. You only need to accept the defaults, so click **<OK>** and a small dialog box appears giving the progress of the printing. Wait until this disappears before continuing with your work.

# Task 11 Finishing Excel

**Objective** To quit Excel.

**Instructions** You will use the **Exit** command from the **File** menu.

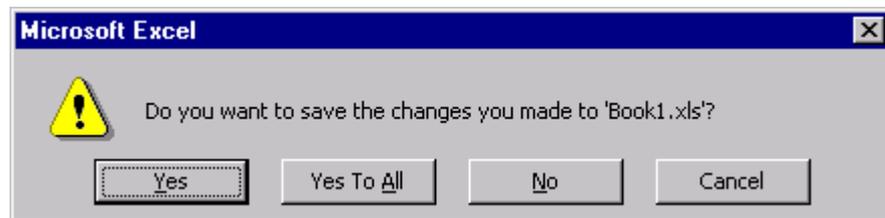
**Comments** You should always quit any computer program when you have finished your session. Never switch off the computer when Excel is still running unless absolutely necessary as this may corrupt your spreadsheet files. Also never leave a computer whilst you are still logged on to it as others may use your Novell account and they could potentially damage your files.

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**Activity 11.1** Select the **Exit** option from the **File** menu.

**Activity 11.2** Excel will ask you if you want to save your document before it lets you quit, so the following dialog box will appear:



Click either **<Yes>** or **<No>** depending on whether you want the changes saved. Once you have done that Excel will quit. If you click on **<Cancel>** you will return to your unsaved spreadsheet and can continue working.