Work Area 9: ICT skills

2.18 Using Spreadsheets to produce simple routine sheets

LO034 Demonstrate the ability to use a spreadsheet safely and securely to enter, edit and organise numerical and other data including simple formulas to meet the routine requirements of the office.

Module Details

Work Area Code:	9
Work area title:	ICT skills
Unit Code:	2.18
Unit Title:	Using Spreadsheets to produce simple routine sheets
Learning Outcomes Ids:	LO034
Learning Outcomes titles:	• Demonstrate the ability to use a spreadsheet safely and securely to enter, edit and organise numerical and other data including simple formulas to meet the routine requirements of the office.
Recommended Duration:	6 hours
Trainer:	

- **A spreadsheet is a computer application that simulates a paper accounting worksheet.**
  - It displays multiple cells usually in a two-dimensional matrix or grid consisting of rows and columns.
  - Each cell contains alphanumeric text, numeric values or formulas.
  - A formula defines how the content of that cell is to be calculated from the contents of any other cell (or combination of cells), each time a cell is updated.
  - Spreadsheets are frequently used for financial information, because of their ability to re-calculate the entire sheet automatically after a change to a single cell is made.
  - A pseudo third dimension to the matrix is sometimes applied as another layer, or layers/sheets, of two-dimensional data.

- Excel is a computerized spreadsheet, which is an important business tool that helps you report and analyze information.

- Excel stores spreadsheets in documents called workbooks.

- Each workbook is made of individual worksheets, or sheets.

- Because all sorts of calculations can be made in the Excel spreadsheet, it is much more flexible than a paper spreadsheet.

- The Excel window has some basic components, such as an Active cell, Column headings, a Formula bar, a Name box, the mouse pointer, Row headings, Sheet tabs, a Task Pane, Tab scrolling buttons and the Ribbon with the Tabs (Group).

- Microsoft Excel automatically opens a blank spreadsheet when you start the program.

- Start →All Programs → Microsoft Office → Microsoft Office Excel 2007
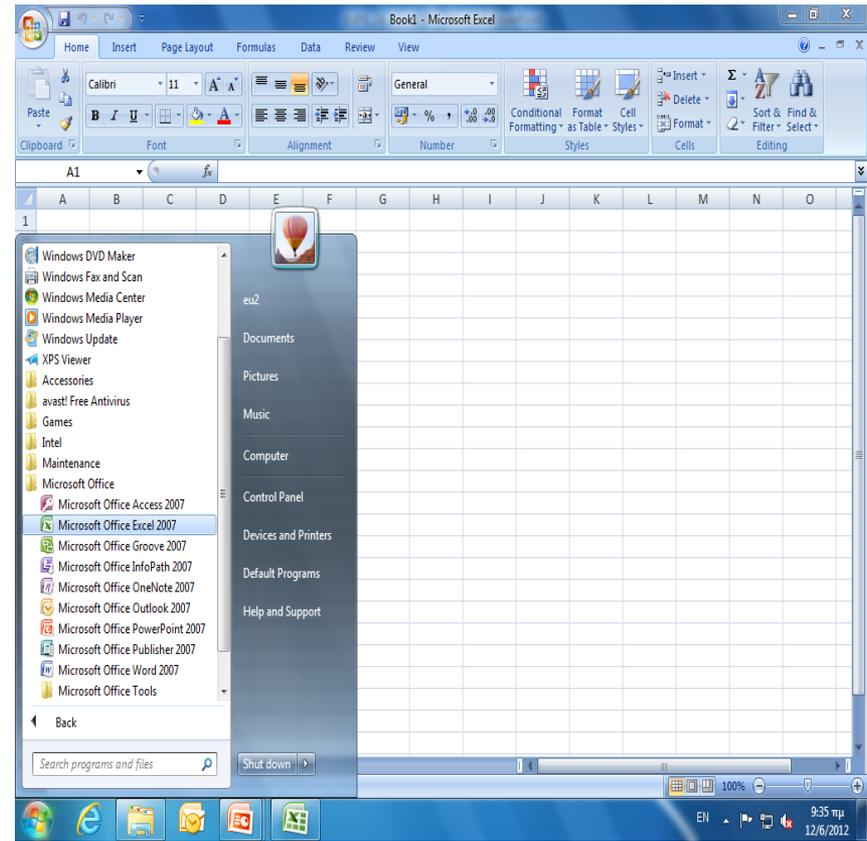
Microsoft Excel Environment
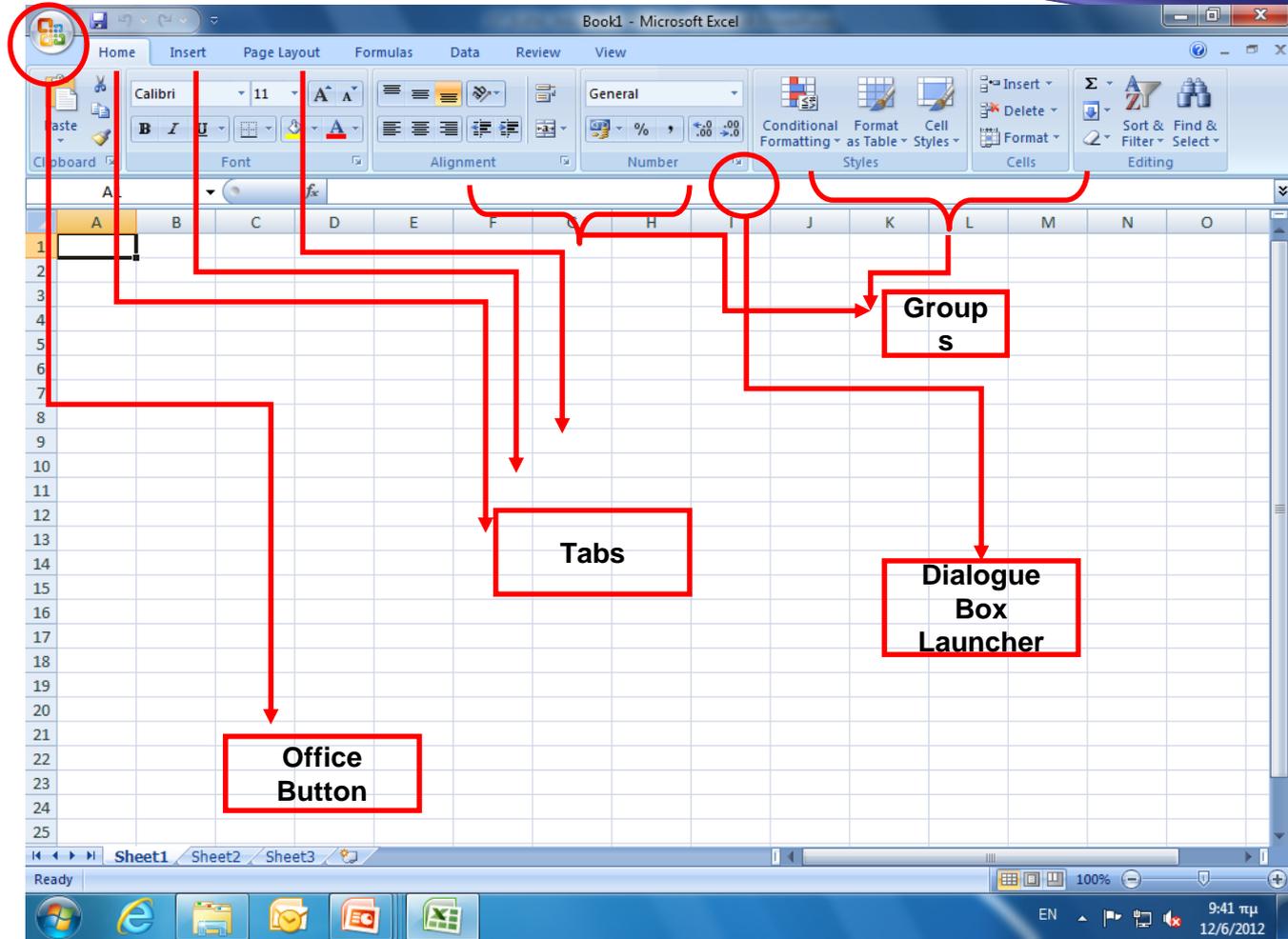
Groups

Tabs

Dialogue Box Launcher

Office Button

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- **To Create a New, Blank Workbook:**
  - Click the **Microsoft Office Button**.
  - Select **New**. The New Workbook dialog box appears.
  - Select **Blank Workbook** under the **Blank and recent** section. It will be highlighted by default.
  - Click **Create**. A new, blank workbook appears in the Excel window.
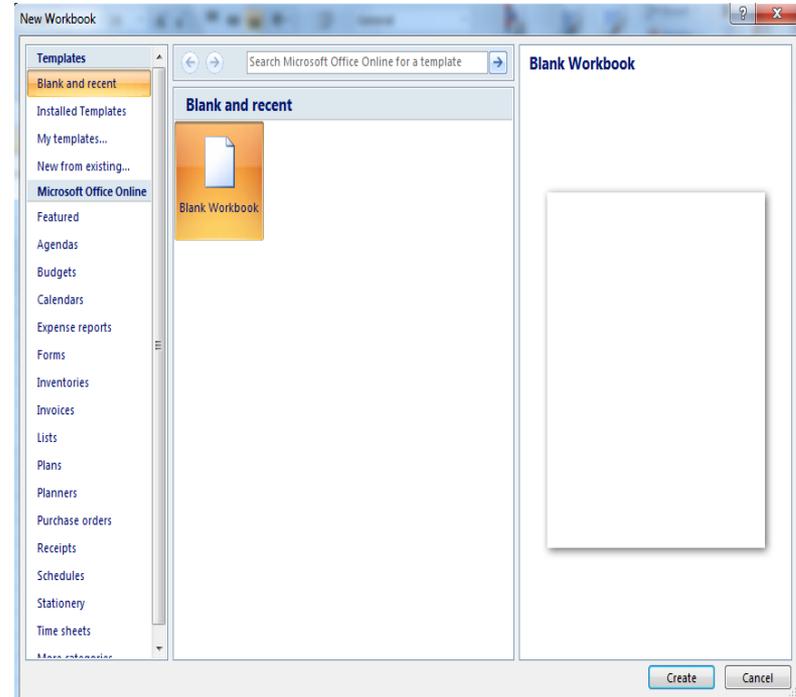
- When you set up calculations in a worksheet, if an entry is changed in a cell, the spreadsheet will automatically update any calculated values that were based on that entry.

- When you open Excel, by default it will open a blank workbook with three blank worksheets.

- When you save a workbook, you have a Save As option that can save the spreadsheet to earlier versions of Excel or to Quattro Pro, Lotus 123 formats, dBase formats, and even to a comma or tab-delimited text file.

EUROPEAN PERSONAL ASSISTANT LEVEL 2

- A workbook consists of three spreadsheets. Each spreadsheet consists of 16,384 columns and 1,048,576 rows. The size of the worksheet is predefined, therefore a worksheet will always have the same number of rows and columns with another worksheet. However, the size of the workbook is not predefined, therefore one can add any number of new spreadsheets.
  - To navigate within a workbook, you can use the arrow keys, PageUp, PageDown, or the Ctrl key in combination with the arrow keys to make larger movements.
  - The most direct means of navigation is with your mouse.
  - Scroll bars are provided, which work the same way in all Windows applications.

- To move to other Worksheets, you can:
  – Click their tab with the mouse
  – Use the Ctrl key with the Page Up and Page Down keys to move sequentially up or down through the worksheets

- If you are familiar with Microsoft Access, you will find the tab scrolling buttons for moving between worksheets to be similar to record browsing on an Access form or datasheet.

- Office Button
- Save or Save As
- Name the file (XXX.xls)
- Save
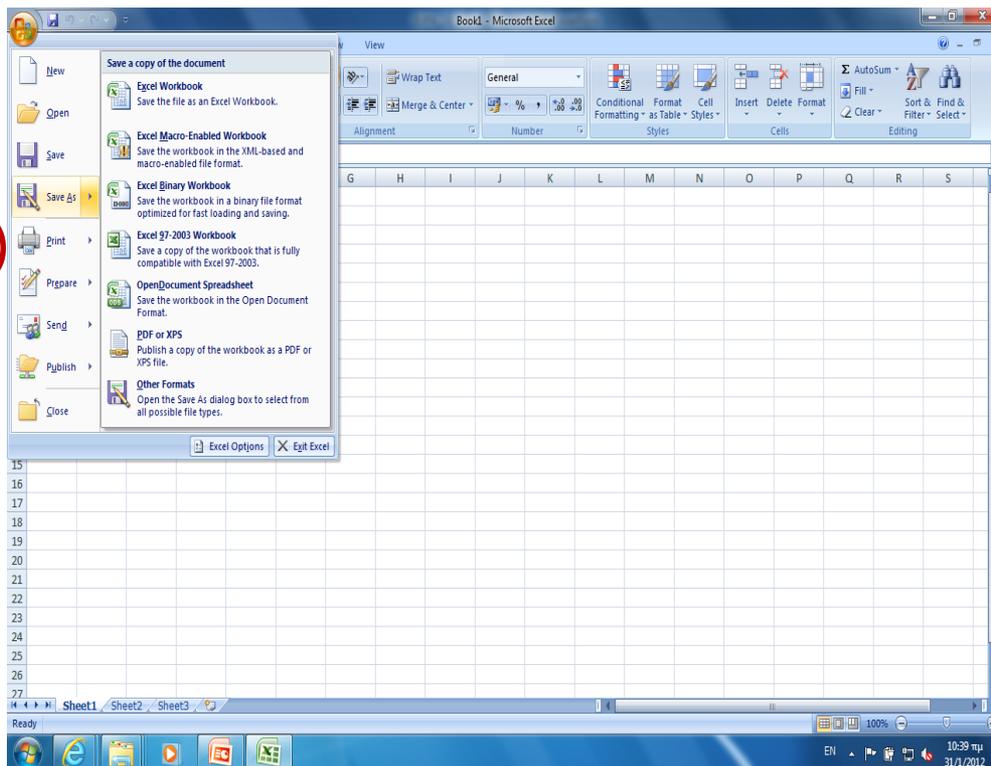
- **Save** will save your current state

- **Save as** will allow you to change parameters
  - Therefore, if you had a spreadsheet or a picture open, **save** would save it in its current state, but **save as** would allow you to change its name or, in the case of a picture, it would allow you to transfer it into another file type (ABC instead of abc, for example)

- **Worksheets are much like pages within a book; you pass through them like you flip the pages of a book.**

- **There are several ways to move, copy and work with worksheets.**
  - Right click on the sheet tab and choose Move or Copy. Select a new position in the workbook for the worksheet or click the Create a copy checkbox and Excel will paste a copy of that worksheet in the workbook.
  - The same shortcut menu for the sheet tab also gives you the option to insert, delete or rename a worksheet.
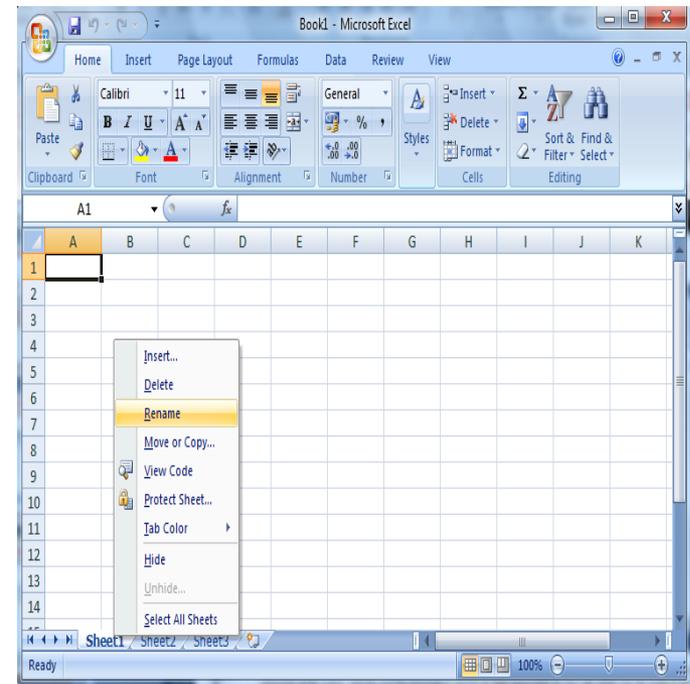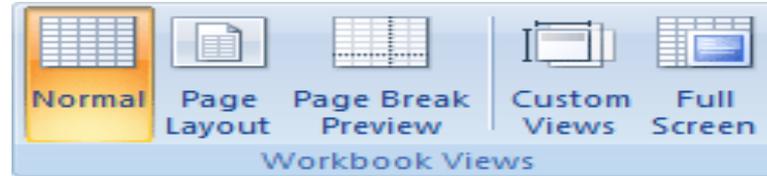
- **Normal** - View the document in Normal view.

- **Page Layout** - View the document as it will appear on the printed page. Use this view to see where pages begin and end, and to view any headers or footers on the page.

- **Page Break Preview** - View a preview of where pages will break when this document is printed.

- **Custom Views** - Save a set of display and print settings as a custom view. Once you have saved the current view, you can apply it to the document by selecting it from the list of available custom views.

- **Full Screen** - View the document in full screen mode.

• **Price:**

Can be a date: 6/9/95, or a time: 3:24 a.m.

• **Text:**

– Text with numbers. E.g. 16, Imvrou Str.

• **Formula:**

The best part of the excel sheets. Formulas are entries which form an equation calculating the value to display.
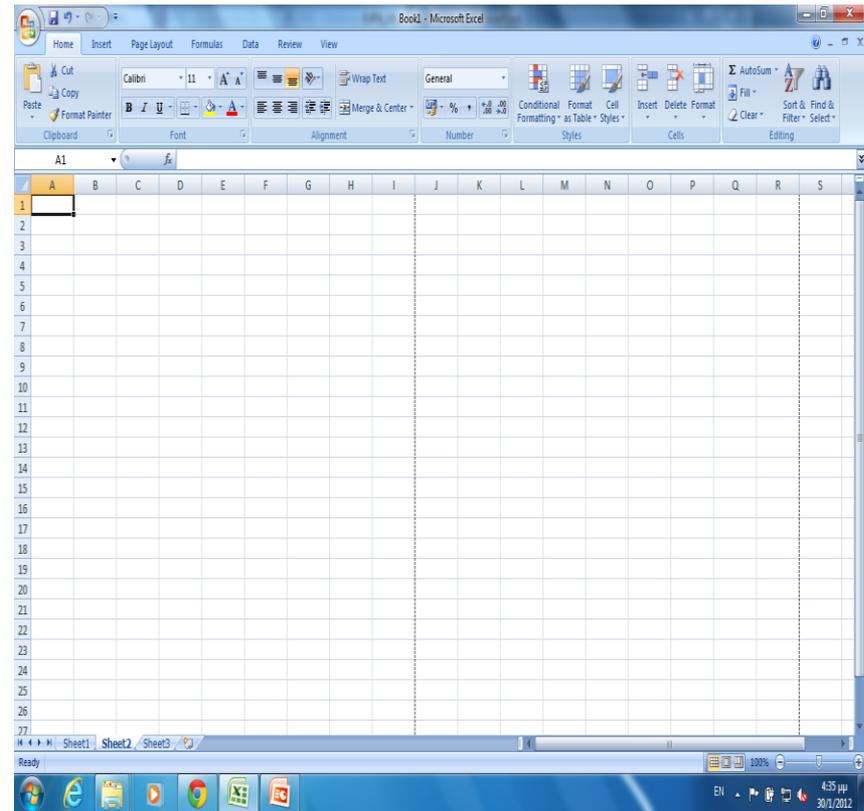
- Put your mouse into the cell and press the F2 Button

- Double click the cell and press the Delete Button

- Use the undo and redo buttons for your last action in the document
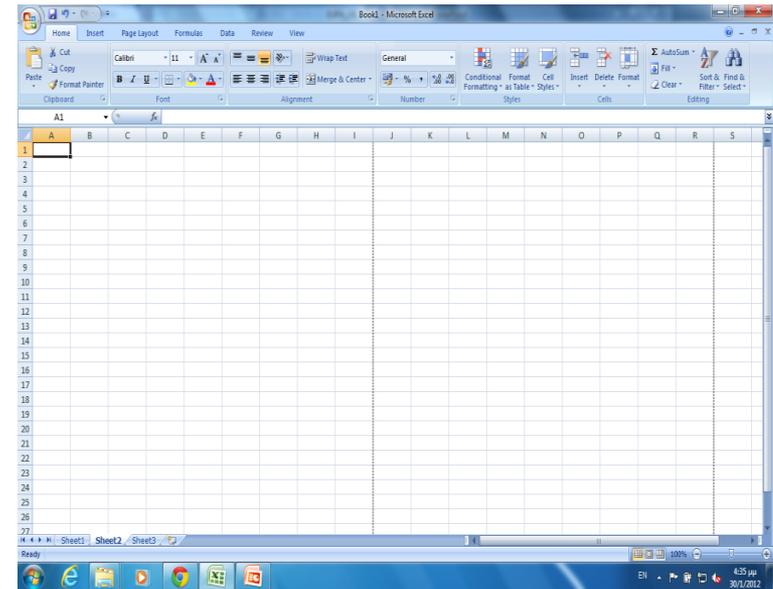
- To undo an action, do one or more of the following:
- Click **Undo** on the Quick Access Toolbar.
- To redo an action that you undid, click **Redo** on the Quick Access Toolbar.

Quick Access Toolbar
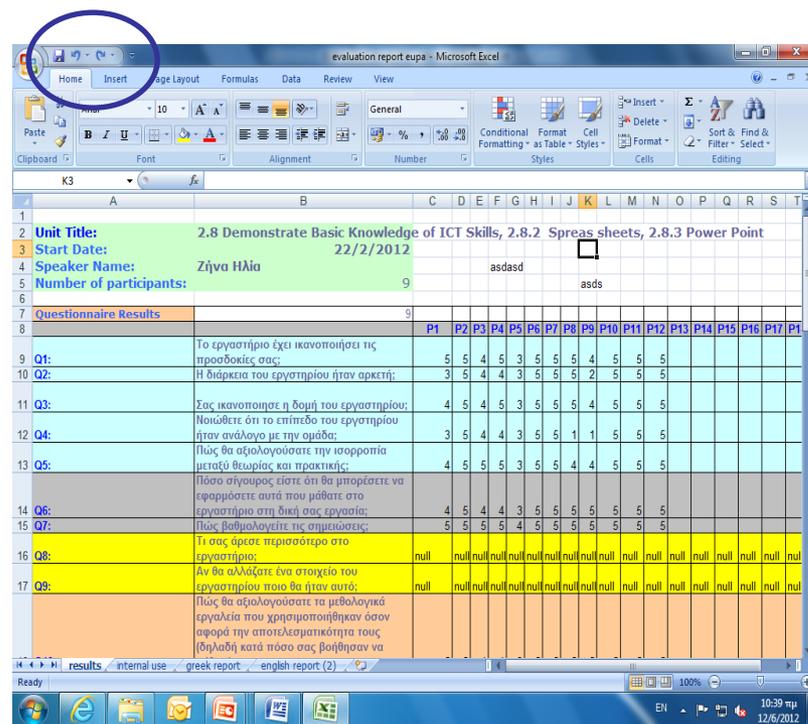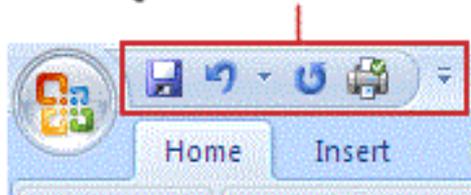
- **Value:** A number representing a quantity of some kind: sales, weight, competition grades and so on. Value may also be a date like 6/9/95 or time like 3:24.

- **Text:** A series of characters and numbers. The address 16 Imvrou Street is a text, regardless of the fact that it starts with a number.

- **Formulas/ Formulas:** These make electronic sheets different. If these were not used, then the use of a word processor would make no difference.

By default, numbers are aligned on the right side of a cell, whilst text aligns on the left.

- When you create a workbook, and then save it as an Excel file, you can share it with your colleagues and reuse it more than once.
  - Click the **Microsoft Office Button**, and then click **Save as**.
  - In the File name box, type a file name, or do nothing to accept the suggested file name.
  - In the Save as type list, click Excel Template, and then click **Save**.

- ## Opening a workbook

  – To open an Excel workbook, take the standard route - click the Office button and choose Open.

- ## Closing a workbook

  – To close an Excel workbook, save your file and use one of these techniques:

  – Click the Office button and choose Close on the drop-down list. The Excel program remains open although the workbook is closed.

  – Click the Close button marked with an X in the upper-right corner of the Excel window. Clicking the X button closes Excel as well as your workbook.

- **If you have added lists of custom data to the fill handle, this tip explains how easy it is to add that data to your spreadsheet.**

  1. Click on the cell where you want the list to start.
  2. Type in the first name in the list.
  3. Press the **ENTER** key on the keyboard.
  4. Click on the cell containing the first name in the list.
  5. Click and hold down the mouse pointer on the fill handle in the bottom right corner of the active cell.
  6. Drag the fill handle to autofill as many cells as needed.
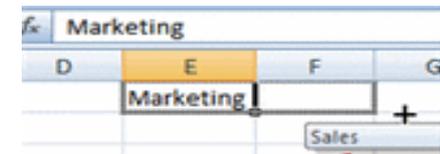
Adding lists of data with the Fill Handle

- To format characters, you can use the tools of the group **Font** located on the **Home Tab**.

- Using these tools, you may format the whole of your table, or only one cell, to change its appearance.

Click on the arrow found on the lower right corner of the group **Font** on the Home tab. A list of various fonts appears.

Size

Bold

Italics

Underline

Borders

Fill Color

Color Font
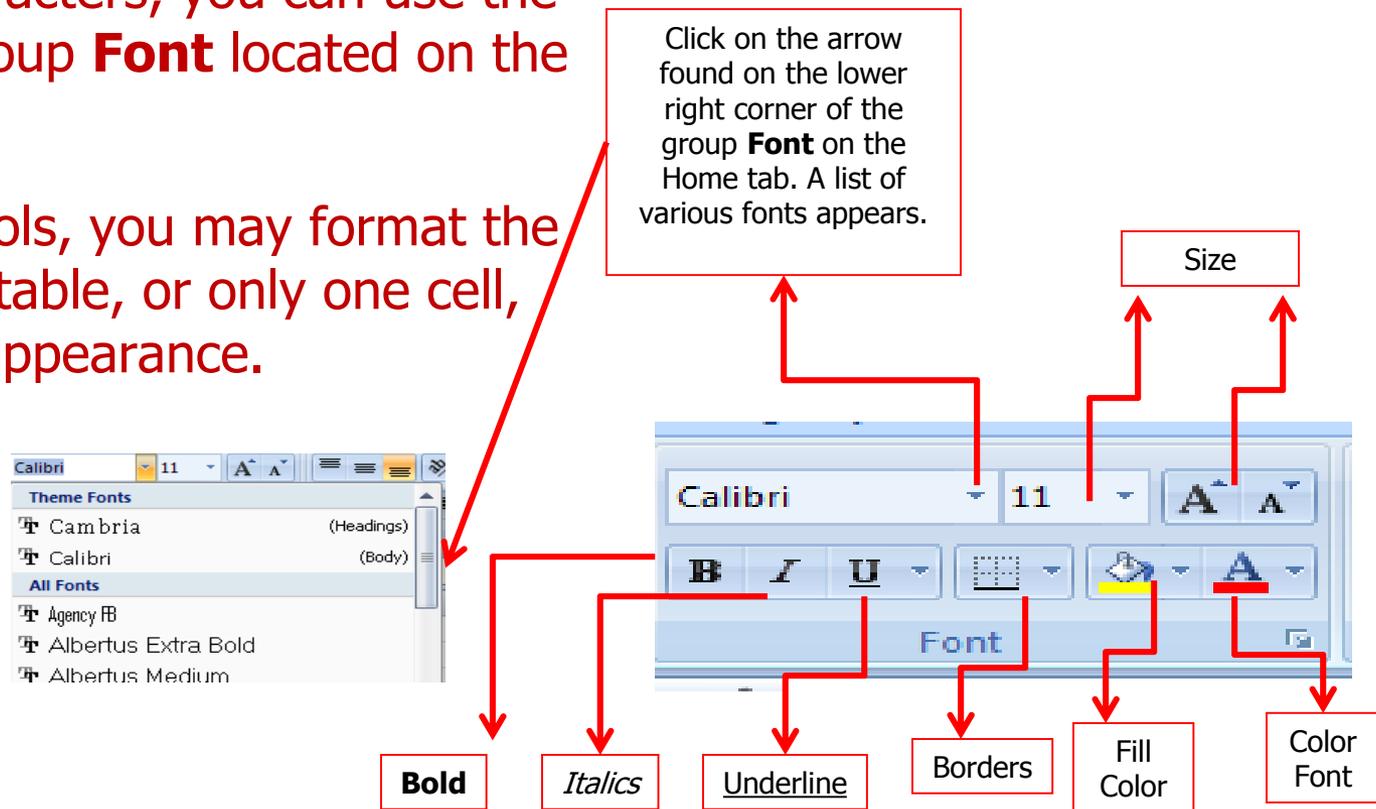
- Formatting is the process of changing the appearance of your workbook.

- A properly formatted workbook can be easier to read, appear more professional, and help draw attention to important points.

  - The Home Tab is the fastest way to format your worksheet.
  - With groups on this tab, you can apply a comma format, adjust the number of decimal places in a number, apply Currency and Percent formats and even quickly copy formats.
  - If you select a cell or range, right click on the cell and then click the Format Cells and the dialog box opens.

indicates category of formatting currently applied to the active cell

options related to the selected category appear here
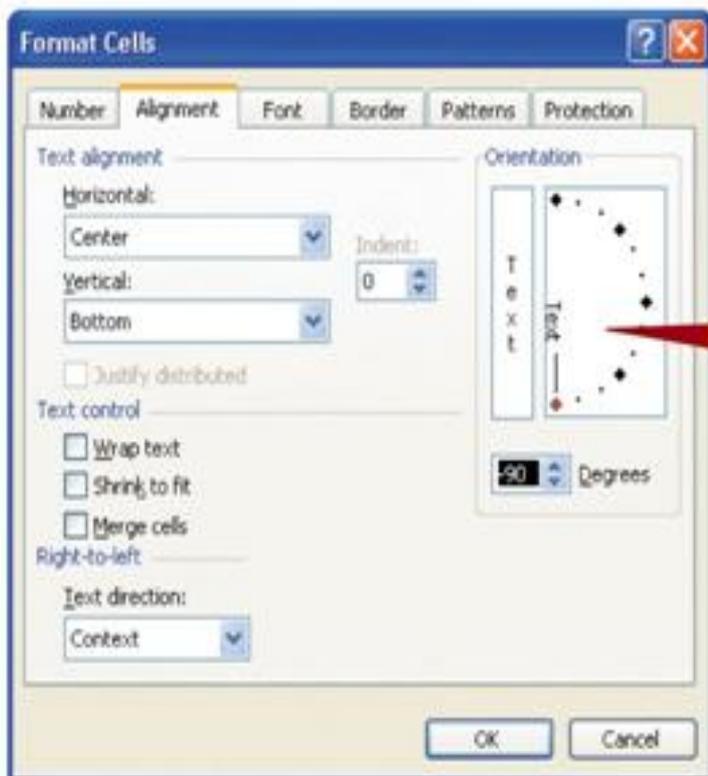
By rotating the orientation of the text...

...you can display text vertically within a cell.

line style options

click to specify line color
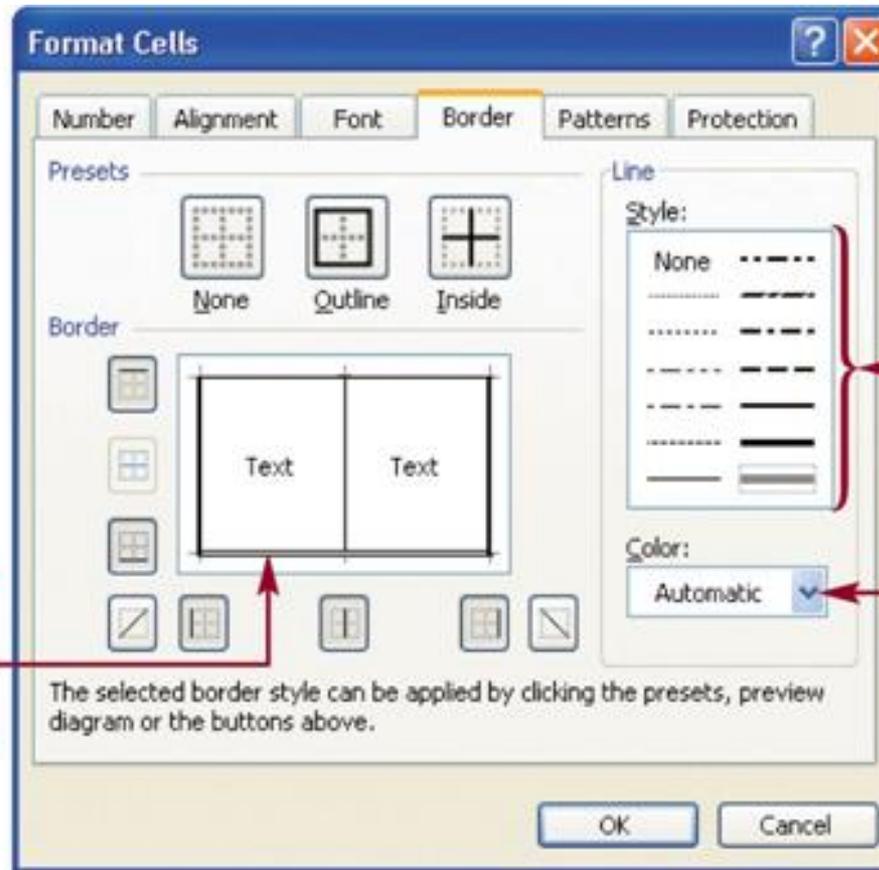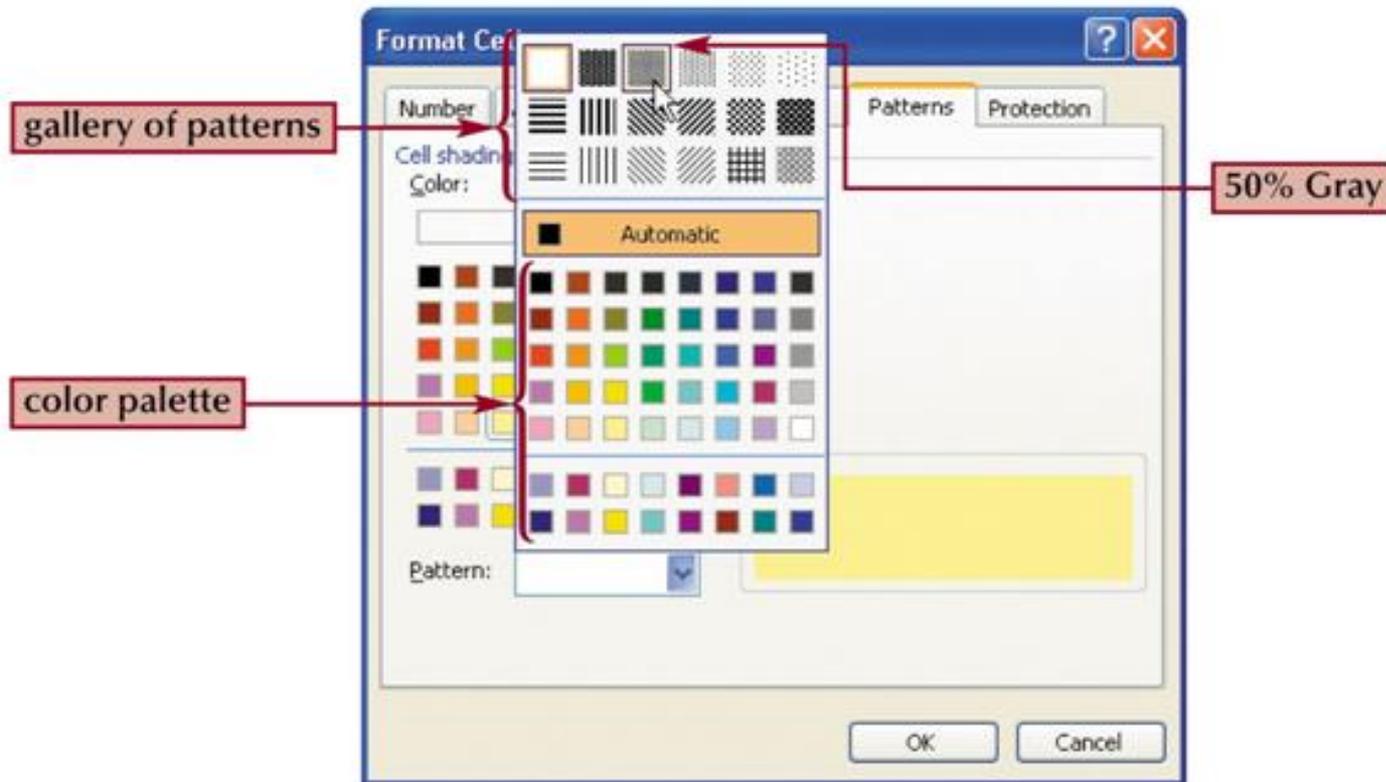
preview of the placement of the double-line border

- In Excel there are hundreds of functions which can be used. These functions can be formulas used to carry out some operations. These formulas already exist in the program.

  – For instance, the function **Average (C22:C26)** calculates the average value of the values located in cells C22:C26. All you have to do to be able to use the formula, is define the area in which the values are located. If you were to create the formula for the average value, however, you would type "=(C22+C23+C24+C25=C26)/5". It is obvious that using the existing formula is much easier than creating the formula.
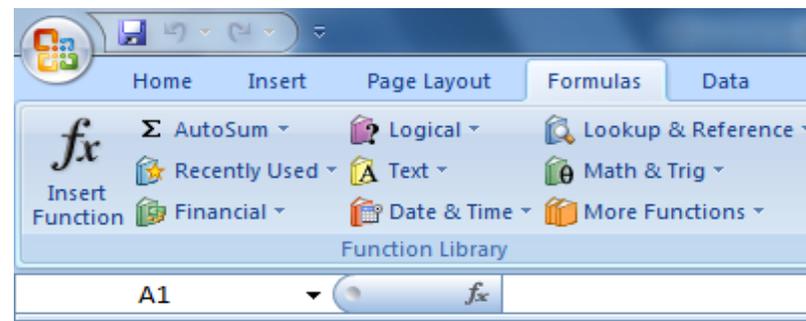
- There are also other functions which only give information, like the current date, time and so on.

- In addition, there are functions which act like small programs like the functions of min, max, lookup, and so on. These functions cannot be replaced by any other formula.
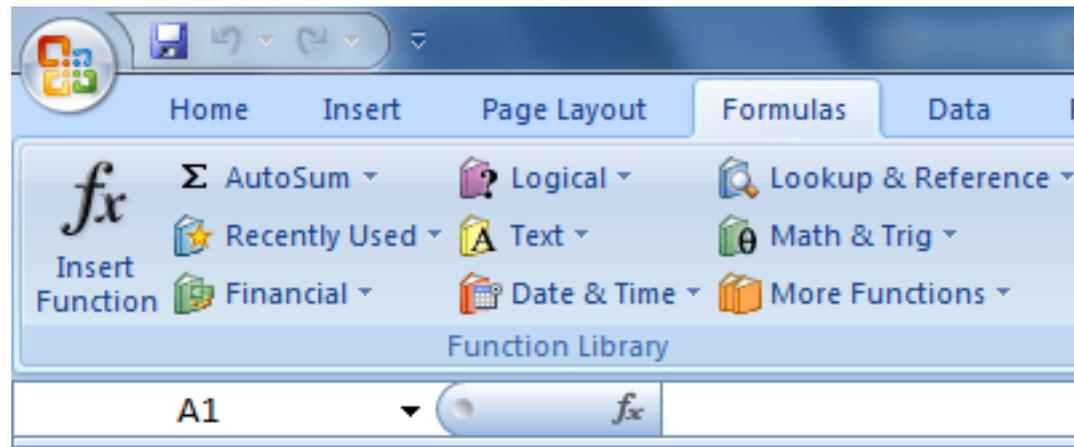
- A worksheet may contain various relationships, like differences between numbers and changes in numbers according to year. A visual picture of these relationships may be more effective in order to understand them, therefore the use of charts is one of the most dynamic tools MS Excel 2007 has to offer.
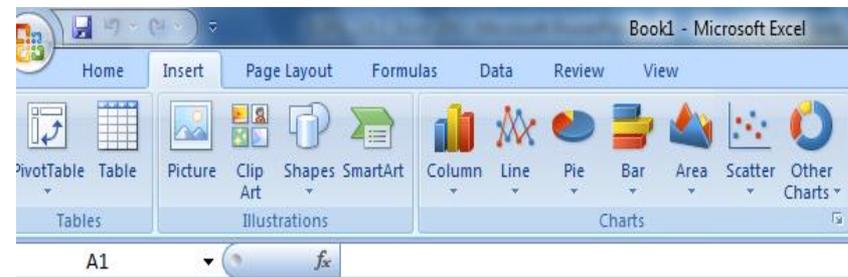
ADVANTAGES AND DISADVANTAGES OF USING TEMPLATES

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Methodological tool

Practice the creation of spreadsheets with formulas

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- Describe the functionality of a spreadsheet and list situations where it is useful.

- Identify the functionalities of a spreadsheet that are necessary for the production or amendment of simple spreadsheets

- Describe why one can use templates and list the advantages of using templates

- List simple formulas that can be used to sum, average, count, min, max.

- Describe the procedure for developing a very simple chart from a ready made table

- Describe how you can develop your own formula using spreadsheets

- A spreadsheet is a computer application that simulates a paper accounting worksheet.

- When you set up calculations in a worksheet, if an entry is changed in a cell, the spreadsheet will automatically update any calculated values that were based on that entry.

- In Excel there are hundreds of functions which can be used. These functions can be formulas used to carry out some operations. These formulas already exist in the program.

Well Done!

You have completed this unit