

An Introduction to

Excel 2000 Part 1

Spreadsheet Basics, Editing, and
Functions using Microsoft Excel 2000

Getting Started With Excel

Excel is a spreadsheet package, which allows you to create tables and charts, store numerical and textual information, and work out mathematical functions.

Spreadsheet Terminology

Workbooks are used to keep a collection of **worksheets**, which are related to each other in some way.

A **worksheet** is a grid made up of **rows** and **columns** in which text, figures and formulae can be entered. The rows are numbered 1, 2, 3, etc. The columns are labelled **A, B, C,...** **AA, AB, AC, etc** across to **IV**. You can manipulate, calculate and analyse data.

Cells are the points on a worksheet where the rows and columns meet. Each cell can hold letters, numbers or formulae and is referenced by its column and row identifier, so the cell in the top-left corner of the worksheet is cell **A1**; this is known as the **cell reference**. When a cell is selected, it is known as the '**active cell**'.

| | A | B |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |

Cell A1 is the active cell.

File Specifications

- A **workbook** can contain up to **255 worksheets**.
- Each **worksheet** has **65536 rows** and **256 columns** giving a total of **16,777,216 cells**.
- A single **cell** can hold **32000 characters**.
- You can **undo** the **last 16 actions** by selecting the undo button on the toolbar.

Efficient Working with Excel

Entering Data

Data can be entered into a cell as text, a number, a calculation or a function.

To enter data, click on the cell and then type the information. When you finished typing the contents of a cell, press **Enter** to confirm or **Esc** to cancel.

To edit existing data, click on the cell and edit the contents in the Formula bar above the column headings. Press **Enter** to confirm or **Esc** to cancel the changes.

Selecting Cells

You can select more than one cell at a time which helps when you want to format a number of cells.

To select an adjoining range of cells, position the pointer in the middle of the top-left cell in the range to be selected. Click and hold the left mouse button and drag the pointer to the middle of the bottom-right cell in the range.

To select multiple ranges of cells which are not adjoining, select the first range of cells (as above), then hold down the **Ctrl** key on the keyboard and select the next range of cells. Repeat until all ranges are selected.

Removing Cell Contents

You can remove the contents of a cells without affecting the position of cells around them.

To remove cell contents, select the cell or cells and press the Delete key on the keyboard.

Moving and Copying Cells in Excel

As well as the **cut**, **copy** and **paste** facilities, you can move and copy cells or ranges of cells using the '**drag and drop**' technique:

To move cells using drag and drop:

1. Select the required cell or cells.
2. Position the mouse pointer on the **border** of the selected range (but not the bottom right-hand corner).
3. **Click and hold** the left mouse button and **drag** the selected cells to the destination position, then release the mouse button.

To copy cells using drag and drop:

1. Select the required cell or cells.
2. Position the mouse pointer on the **border** of the selected range (but not the bottom right-hand corner).
3. **Hold down** the **Ctrl** key on the keyboard, then **click and hold** the left mouse button and **drag** the selected cells to the destination position.
4. **Release** the mouse button, then release the **Ctrl** key.

Performing Calculations

When typing calculations the following keyboard keys are used for the basic mathematical symbols:

| | | | |
|---|-------|---|----------|
| + | plus | / | divide |
| - | minus | * | multiply |

The calculation must start with the = sign to tell Excel that you want to perform a calculation. Calculations can contain numbers, cell references of cells containing numbers, mathematical symbols and brackets. Some examples:

=5+7-8 The result of 5 plus 7 minus 8

=B4*0.75 The result of the number in cell B4 multiplied by 0.75

=H12/D2 The result of the number in cell H12 divided by the number in cell D2

=6*(C3-20) The result of the number in cell C3 minus 20 multiplied by 6

A calculation in Excel is called a **formula**.

Using AutoSum Σ

The AutoSum button is a shortcut to a formula for adding together a list of numbers in a range.

For example, to add a range of numbers in cells **F2 to M2** and display the result in cell **N2**:

1. Select cell **N2**.
2. Click on the **AutoSum** button and the range F2 to M2 will be automatically selected (a moving border will appear around the selected cells).
3. Press **Enter** and the result will be displayed in cell N2.

If, when using AutoSum, at step 2 the wrong list of numbers is selected, just manually select the correct list before pressing Enter.

Using Functions f_x

A function is a pre-defined formula that can be used to perform operations on numerical or textual information. Each function has an **argument** (numerical or textual input) and a **result** (output). Some basic functions:

| | |
|----------------|--|
| Sum | Adds a list of numbers in a range |
| Average | Calculates the average number in a range |
| Min | Finds the minimum number in a range |
| Max | Finds the maximum number in a range |

To select a function:

1. Select the cell where the result of the function is to be displayed.
2. Click on the **Function** button on the toolbar.
3. From the **Function Category** list select the category of function.
4. From the **Function Name** list select the function then click **OK**.
5. The function sub-menu will appear. Click and drag this menu so that it does not cover the range of data you want to select.
6. Select the range of data.
7. Click **OK**, and the result of the function will appear in the specified cell.

All formulas are automatically updated when data affecting the result changes.

Using AutoFill

At the bottom-right corner of the active cell or range there is a **fill handle** which is used by the AutoFill facility. This automatically fills in data based on adjacent cells. By dragging the fill handle of a cell, you can copy the contents of that cell to other cells in the same row or column. If the cell contains a number, date, or time period that Excel can extend in a series, the values are incremented instead of copied. For example, if the cell contains "January," you can quickly fill in other cells in a row or column with "February," "March," and so on. You can also AutoFill formulas.

1. Select the **source cell or cells**.
2. Position the pointer over the **fill handle** in the bottom right corner of the active cell so that it changes to a **black cross**.
3. **Click and hold** the mouse, then **drag** downwards or across over the range of cells you want to fill.
4. **Release** the mouse button.

Formatting the Spreadsheet

Changing the Width of a Column

If there is insufficient space in the cell for text, it will appear in the adjacent cells on the same row if they are empty, or it will be truncated if the adjacent cell is not empty.

If a series of hash marks (#####) appears in a cell, it means that the number contained in the cell is too long to fit in the cell with the current column width.

To change the width of a column:

1. **Click and hold** the mouse on the **vertical line** to the right of the column identifier at the top of the column you want to resize.
2. Drag the line to the **right to expand** the column, or **left to shrink** it.

To automatically adjust the column width to fit the widest cell contents in the column, double click on the vertical line.

Inserting and Deleting Rows and Columns

An inserted row will appear above the currently selected cell, an inserted column will appear to the left of the currently selected cell.

To insert a row or column:

1. Click on a cell in the **row below**, or **column to the right** of the position for the new row or column to be inserted.
2. From the **Insert** menu choose **Rows** or **Columns**.

To delete a row or column:

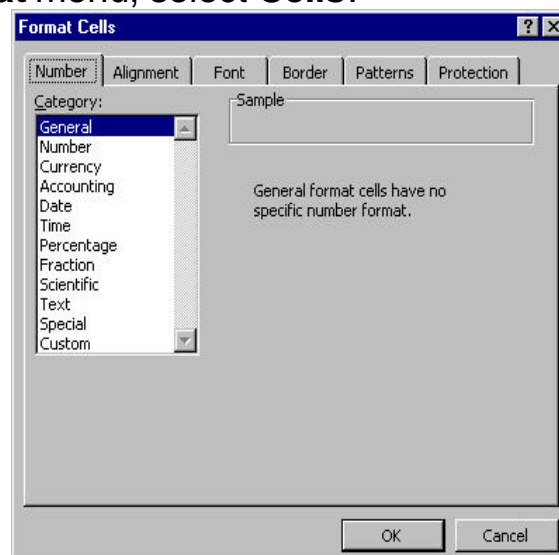
1. Click on **any cell** in the row or column to be deleted.
2. From the **Edit** menu choose **Delete**.
3. Choose **Entire row**, or **Entire column**.
4. Click **OK**.

Formatting Cells

Cell formatting deals with the way cells, and characters within cells, appear. For example, size, colour and alignment of text, cell borders, currency, number of decimal places, date and time formats can be changed. Formatting of cells can be preset before data is typed, or can be amended after data has been entered.

To format cells:

1. Select the cell, cells, rows or columns to be formatted.
2. From the **Format** menu, select **Cells**.



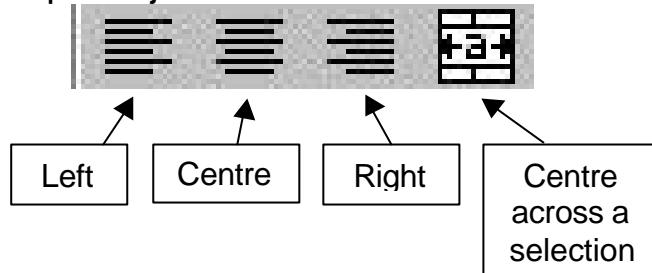
3. Click on the appropriate tab, and choose the formatting option you require.
4. Click **OK**.

Justifying the contents of a cell

When you enter data in Excel, text is left justified and numbers are right justified. You may wish to change the justification to allow the contents of columns to line up neatly.

To justify a cell or range of cells:

1. Highlight the row, column or cells to be justified.
2. Choose the appropriate justification from the toolbar:



Sorting Columns

To sort a single column:

1. Select the column of data to be sorted.
2. Select one of the following buttons from the toolbar:

 Sort ascending  Sort descending

To sort a few associated columns:

1. Select the data in the columns to be sorted.
2. From the **Data** menu, select **Sort**.
3. Specify which **order** to sort the columns.
4. Click **OK**.