Using Spreadsheet

4.0 Introduction

Spreadsheet is used to do work with data for which we need to do mathematical calculations, create charts, graphs, etc. Microsoft Excel is the electronic spreadsheet program that we will learn in this chapter.

4.1 Objectives

In this chapter we will learn to:

- Start Microsoft Excel 2003 and understand its components
- Save, edit and print a worksheet
- Populate a data series
- Use functions

4.2 Elements of Electronic Spreadsheet

Most of the Excel screen is devoted to the display of the spreadsheet. A spreadsheet is made of intersecting rows and columns. The intersection of a row and column is a rectangular area called a cell.

4.2.1 Opening Spreadsheet

Excel displays a new workbook when it is opened. All the cells are empty in default spreadsheet of this new workbook. A cell is active when the border is highlighted. When you enter information, the information is stored in the active cell.

4.2.2 Addressing of Cells

As told earlier, a cell is made by intersection of a row and a column. Each row has a number associated with it and each column has an alphabet associated with it. So the cell formed by intersection of a row and a column has both the number (of the row) and alphabet (of the column) as cell address. E.g., a cell formed by intersection of column D and row 32 has the cell address D32. When a cell is selected, its address is shown in the address box.

4.2.3 Printing of Spreadsheet

4.2.3.1 Print All Pages

To print a worksheet, follow these steps:

> Click on File →Print to open the "Print" dialog box.
> Click 'All' from 'Print Range' and Click 'Active Sheet' radio.
> Now click 'OK' Button.

4.2.3.2 Print Selected Pages

To print selected pages of a worksheet, follow these steps:

> Click on File →Print to open the "Print" dialog box.

Click 'Pages' and type start page number into 'From' and end page number in 'To' box from 'Print Range.'
Click 'Active Sheet' radio.
Now click 'OK' Button.

4.2.4 Saving Workbook

To save a worksheet, follow these steps:
1. Click on File →Save to open the "Save" dialog box.
2. Type filename in the 'File Name' box.
3. Click on 'Save' button.

4.3 Manipulation of Cells

4.3.1 Entering Text, Numbers and Dates

To enter text, follow these steps:

1. Select a cell by clicking on it, and enter 'Excel is fun' without quotes.
2. Observe that your text is displayed in two areas. Text is displayed in the active cell within the workbook and it is also displayed in the formula bar. The formula bar is activated as soon as you begin typing in a cell.

To enter number, follow these steps:

1. Select a cell by clicking on it.
2. Enter 789.
3. Observe that your number is displayed in two areas. Number is displayed in the active cell within the workbook and it is also displayed in the formula bar.

To enter Date, follow these steps:

1. Select a cell by clicking on it.
2. Enter 29/09/2010 using format dd/mm/yyyy. The default date format is mm/dd/yyyy.

4.3.2 Creating Text, Number and Date Series

Creating Text Series
To create a text series, follow these steps:

1. Select any blank cell from worksheet and type any alphanumeric value.
2. Choose 'Fill' option from Edit menu.
3. Choose Series from Fill sub menu and appear 'Series' dialogue box.
4. Type step value of series into 'Step Value' box and type last value of list into 'Stop Value' box.
5. Click on 'OK' button.

Creating Number Series
 To create a number series, follow these steps:

1. Select any blank cell from worksheet and type any number.
2. Choose 'Fill' option from Edit menu.

3. Choose Series from Fill sub menu and appear 'Series' dialogue box.
4. Type step value of series into 'Step Value' box and type last value of list into 'Stop Value' box.
5. Click on 'OK' button.

Creating Date Series

To create a date series, follow these steps:

1. Select any blank cell from worksheet and type any date.
2. Choose 'Fill' option from Edit menu.
3. Choose Series from Fill sub menu and appear 'Series' dialogue box.
4. Type step value of series into 'Step Value' box and type last date of list into 'Stop Value' box.
5. Click on 'OK' button.

4.3.3 Editing Worksheet Data

If you want to edit the data you entered into a cell, follow these steps:

1. Select desired cell and double click on cell or press F2 key
2. Now type the changed data.
3. Click on Enter button.

4.3.4 Insert and Deleting Rows and Column

To insert a column, follow these steps:

1. Highlight column **A** by clicking the column heading.
2. Choose Columns from the Insert menu.
3. Column A should be a blank column now.

To insert a row, follow these steps:

1. Highlight row **1** by clicking in the Row number.
2. Choose Rows from the Insert menu.
3. Column 1 should be a blank row now.

To delete a column, follow these steps:

1. Highlight column **A** by clicking in the column heading.
2. Choose Delete from the Edit menu.
3. Column A should be removed now and Column B changed to A.

To delete a row, follow these steps:

1. Highlight Row 2 by clicking in the Row number.
2. Choose Delete from the Edit menu.
3. Row2 should be removed now and Row 3 changed to Row 2.

4.3.5 Changing Cell Height and Width

To change cell width of column D, follow these steps:

1. Position the pointer between the column headings for column D and column E.

2. The pointer should change shape to show a double arrow as you position the pointer between the two column headings. When the pointer changes shape, you can change the width of the column by dragging to the right or left.
3. Press the mouse button and drag to the right until the desired width is reached.

The cell height can be changed by repeating the above steps with rows.

4.4 Formulae and Functions

4.4.1 Using Formulae
Formula is used to do mathematical calculations on a set of data. Functions are used to form all or part of a formula. A typical formula in excel looks like this:

=function name(range of cells)

The formula always starts with an equal to sign, otherwise excel takes it as simple text value. Function name is the name of the mathematical or logical functions that you are using. The function is applied to values entered in cells. Range of cells defines that set of cells where those values are entered.

4.4.2 Functions
Some of the common functions of Excel are explained below in brief:

- SUM() – This function adds the given numbers
- MIN() – This function finds the smallest number of a given set of numbers
- MAX() – This function finds the biggest number of a given set of numbers
- AVERAGE() – This function finds the average of a given set of numbers
- COUNT() – This function counts the number of cells containing numeric value in the given range of cells
- COUNTIF() – This function counts the number of cells in the given range of cells depending on a stated criterion