Chapter 09 :   Spreadsheet Software

9.0   Overview

9.1   Features of Spreadsheet Software

Q :   09-01-01   :   Describe Basic Features of Spreadsheet Software ?

Answer :

Basic Features of Spreadsheet Software

A Spreadsheet program is a software tool for entering, calculating, manipulating and analyzing sets of numbers. The specialty of spreadsheet software is working with numbers. This can hold large amount of data arranged in rows and columns. It can manipulate numbers and present information in numerous ways. Like Word Processors, the Spreadsheet software also varies significantly e.g. LOTUS 123, Quatro Pro and MS Excel etc. But all of them have following basic features :

The spreadsheet is a grid of rows and columns. Each row is assigned a number and each column a letter. The intersection of a row and a column forms a cell. Each cell has a reference number that is formed by combining the column number and row number e.g. A1, G18 etc. A cell contains labels or values. A label is a text entry such as "Gross Salary" whereas a value can be a number, a date, a formula or a formula's result.

Formulae : Formulas are used to express mathematical relationships between cells.

Functions : Functions are used to perform certain tasks.

Commands : Commands are used to manipulate the worksheet or its contents.

Text Manipulation : Some simple text manipulation can also be performed.

Print : Allows you to send a document to a printer to get a hardcopy.

9.4   Basics of Worksheet

Q :   09-04-01   :   Describe Common Forms of Data Entered in a Cell ?

Answer :

Common Forms of Data Entered in a Cell

The data entered in a cell can take variety of forms but the most common of these are :

Labels (Simple Text) : Labels are used to identify a value or a series of values. Labels are helpful in making the worksheet meaningful. It is important to note that formulas can be applied only on values; these cannot be applied on labels.

Values (Numbers) : Values are just numbers that you enter in different cells of a worksheet. These can be whole numbers, decimals, negative numbers, currency and other types of values including scientific notations.

Formulas : Working with Formulas is the most powerful feature of a spreadsheet. Formula can be calculated on the basis of values or formulas in other cells. Formulas can involve basic arithmetic operators. More complex formulas can even evaluate logical conditions and perform certain calculations on the basis of the result of the evaluation. Conditions may evaluate to true or false.

Q :   09-04-02   :   Describe Cell References and Ranges ?

Answer :

Cell References and Ranges

A cell reference tells formula to look up the contents of the referenced cell. This increases the flexibility of the formula. The change in the contents of the referenced cell is quickly reflected to the

result of the formula being calculated on the basis o this cell. The cell is referred to by its address such as AC5 and Y10 etc. The range is referenced as D5:Z5 (all cells from D5 to Z5).

Q : 09-04-03 : Describe Relative and Absolute Cell Referencing ?

Answer :

Relative and Absolute Cell Referencing

Relative Cell Referencing : Calling cells by just their addresses (such as "A1") is called relative referencing. When a formula contains relative referencing and it is copied from one cell to another, the spreadsheet does not create an exact copy of the formula. It will change cell addresses relative to the row and column they are moved to. If a simple addition formula in cell C1 i.e. =(Al+B1) is copied to cell C2 the formula would change to =(A2+B2) to reflect the new row.

Absolute Cell Referencing : To prevent this change, cells must he called by absolute referencing. This is accomplished by placing dollar signs "$" within the cell addresses in the formula. Like entering in C1, =(A1+B1). If the value of cell should be the sum of cells Al and B1. Both the column and row of both cells are absolute and will not change when copied to C2.

Q : 09-04-04 : Explain Named Ranges of Cells in MS Excel ?

Answer :

Named Ranges of Cells

Range names are names that you define to represent a cell or cell range on a worksheet. These range names can further be used in formulas instead of cell addresses or ranges. They also make it easier to use, maintain, and understand the formulas in the worksheet. e.g. the formula =C10 * 100 / C8 calculates the percentage of marks. After giving names to cells, this can be expressed as = Marks_Obtained * 100 / Total_Marks.

Defining Range Names

To define a name for a cell or range of cells select Insert from the menu bar. The following dialog box will appear.

Figure 9.2: Range names

We can give names to cells or cell ranges instead of using their address. After assigning names to cells or cell ranges you can use these names in formulas instead of the addresses.