# INTRODUCTION TO EXCEL

Microsoft Excel is a software program produced by Microsoft that allows users to organize, format and calculate data with formulas using a spreadsheet system. This software is part of the Microsoft Office suite and is compatible with other applications in the Office suite.

Excel is a commercial spreadsheet application produced and distributed by Microsoft for Microsoft Windows and Mac OS. It features the ability to perform basic calculations, use graphing tools, create pivot tables and create macros.

Excel has the same basic features as all spreadsheet applications, which use a collection of cells arranged into rows and columns to organize and manipulate data. They can also display data as charts, histograms and line graphs.

Excel permits users to arrange data so as to view various factors from different perspectives. Visual Basic is used for applications in Excel, allowing users to create a variety of complex numerical methods. Programmers are given an option to code directly using the Visual Basic Editor, including Windows for writing code, debugging and code module organization.

## WHAT IS SPREADSHEET?

A spreadsheet is primarily designed to provide a digital form of the paper-based worksheet. Spreadsheets work through spreadsheet application software. The rows and columns within the spreadsheet contain cells that are filled with data to create unique operations. A typical spreadsheet program can have multiple functions such as:

Numerous rows and columns for data and values storage

Support for mathematical formulas and calculations

Data sorting and analysis

Multiple worksheets and their interlinking

Integration and visualization of data in the form of graphs and charts

## WORKSHEET

A worksheet is a collection of rows and columns. When a row and a

column meet, they form a cell. Cells are used to record data. Each cell is uniquely identified using a cell address. Columns are usually labeled with letters while rows are usually numbers. Each cell can contain a number, text or formula. A cell can also reference another cell in the same worksheet, the same workbook or a different workbook. In Excel 2010, the maximum size of a worksheet is 1,048,576 rows by 16,384 columns.

## WORKBOOK

A workbook is an Excel file that contains one or more worksheets. Each of the workbook's worksheets is in separate tabs on the bottom of the Excel window. By default, a new Excel workbook will contain three worksheets. You can switch between worksheets by clicking on the worksheet's tab on the bottom of the Excel window.

## SHEETS

A sheet is a single page that contains its own collection of cells to help you

organize your data. There can be many sheets in your Excel document and you can see the sheets listed as tabs along the bottom of your document. In this example, we have three sheets in our spreadsheet - Sheet1, Sheet2, and Sheet3.Each sheet has its own name and you can switch between the sheets by clicking on the name of the sheet you want to view. In the example above, we have selected Sheet3.Traditionally when you create a new Excel document, three sheets (Sheet1, Sheet2, and Sheet3) are created in the spreadsheet and Excel automatically selects Sheet1.

## CELL

In Microsoft Excel, a cell is a rectangular box that occurs at the intersection of a vertical column and a horizontal row in a worksheet. Vertical columns are numbered with alphabetic values such as A, B, C. Horizontal rows are numbered with numeric values such as 1, 2, 3. Each cell has its own set of coordinates or position in the worksheet such as A1, A2, or M16. In the example above, we are positioned on cell A1 which is the intersection of column A and row A cell can only store 1 piece of data at a time. You can store data in a cell such as a formula, text value, numeric value, or date value.

## ROWS

In Microsoft Excel, a row runs horizontally in the grid layout of a worksheet.

Horizontal rows are numbered with numeric values such as 1, 2, 3. Each row in the worksheet has its own row number which is used as part of a cell reference such as A1, A2, or M16. You can select an entire row by clicking on the row heading (i.e.: the number running along the left side of the grid layout). In the example above, we have selected row 3.

## COLUMNS

A column runs vertically in the grid layout of a worksheet. Vertical columns are numbered with alphabetic values such as A, B, C. Each column in the worksheet has its own column number which is used as part of a cell reference such as A1, A2, or M16. You can select an entire column by clicking on the column heading (i.e.: the letters running along the top of the grid layout). In the example above, we have selected column B.

## CELL ADDRESS

Each cell has a name or a cell address. The cell address consists of the column letter and row number. For example, the first cell is in first column and first row. First column name is A and first row number is 1. Therefore, the first cell address is A1.

# FORMULAS

It is simply a statement made up of „operands‟ and „operators‟. It helps to calculate and display results from data entered into its cells. Formulas can be simple arithmetical formulas or complicated formulas involving conditional statements and nested functions. A formula always starts with an equal sign (=), which can be followed by numbers, math operators (like a + or - sign for addition or subtraction), and built-in Excel functions, which can really expand the power of a formula.