Microsoft Excel is a spreadsheet developed by Microsoft for Windows, macOS, Android and iOS.

Excel is a powerful tool entrenched in business processes worldwide.

The popular business uses of excel:

* Data entry and Storage.
* Excel can be used for Data Cleaning and preprocessing. It can remove duplicate or incomplete entries.
* Excel has several tools which allow users to create flow charts, which can include texts, pictures and animations.
* Excel can turn out to be very useful tools for Data Analysis. Excel has a tool pivot table which can summarize the whole data.
* Excel can be also used for visualizations. It can create beautiful charts and graphs which can be used for formal reports and presentations.
* Excel has all statistical functions with which we can perform descriptive as well as inferential statistics with excel.

Excel can also be used for time series analysis as well as regression analysis.

Excel is a very powerful tool which can perform almost all functions.

* **EXCEL PROGRAM WINDOW**

**Title bar indicates Book 1 the default name of this excel file**.

**Tab List:**

The tab list which contains tabs like Home, Insert, Page Layout etc.

Each tab has many other functions.

**Buttons:**

We have an office button over here which have options new, Save, Save as and many others.

By clicking on New, we can create a new workbook.

**Cell:**

A1 is the cell name. Where A is the column name and 1 is the row name.

These numbers are the row names and the alphabets are the column names.

**Formula:**

Formula bar where we write all the required formulas.

**Sheets**:

In the workbook we have sheet 1, sheet 2 and sheet 3. Three sheets are by default created in a workbook.

Add new sheets as well by clicking on this icon.

* **Basic Formatting in Excel**

The excel workbook contains 8 columns and 1000 rows.

On the Home tab, we have the option to change the font and the font size.

We want to change the font of the whole sheet.

We can select the complete sheet by clicking on this icon which is at the intersection point of rows and column names.

We can even change the size of fonts.

We can fill colours and even We can change the width of any row or column.

* **Insertion and Deletion in Excel**

There may be cases when you want an additional column or an additional row in between or want to delete a row or a column.

To deal with those cases, you have an option for Inserting a new row or column as well as deleting a row or a column.

To insert a new Column: –

Go to the top area where column names are written or the left-most area where row names are written.

If you want a new column, right click and you will see an option of the “insert”. Click on it and a new column is created.

To insert a new Row: –

Right-click there and click on the insert option and a new row is created.

To delete a column: –

1. Right-click on that column

2. Click the delete option and the column is deleted.

To delete a row: –

1. Right-click on the row which you want to delete.

2. Click the delete option and the row is deleted.

* **Data Types in Excel**

Each column has an associated data type that specifies the type of data the column can hold like Number, Date, Time, Currency etc.

Data type also determines what kind of operations you can do on the column and how much memory it takes to store the values in the column.

There are 11 data types in excel: –

General

Number

Currency

Accounting

Short Date

Long date

Time

Percentage

Fraction

Scientific

Text

All the data types in excel itself from the drop-down menu. This drop-down menu shows all the data types available.

**General**: –

There is no specific format for giving values to the cells. You can give any value in the form of ABC i.e., characters as well as 123 i.e., numbers.

**Number:** –

Select the rows and change their data type to Number and now if you write some numbers. You can clearly see the change in the format. Point 00 appears automatically. This shows these values contain the Number data type.

**Currency**: –

Select rows and change their data type to the currency and now if you write some values in these rows you can see the dollar sign comes automatically and also decimal. This shows the values are of the data type currency.

**Accountancy**: –

Select rows and change their data type to accountancy and then type some values and it seems like it is the same as in the case of currency but it is not.

You can observe the gap between the dollar sign and the values in this case while in the currency case, the gap is very small.

Another difference is, if you type 0 in currency format you get dollar 0.00 but if you type 0 in case of accountancy you are getting dollar with a dash sign. This is the difference between currency and accountancy.

**Short Date**: –

Change the data type to short date and type the date as 4 dash 5. You get the date in this format and the year automatically comes out to be the present year.

And now if you change the data type to long date and type 4 dash 5. You get the date in this format which is quite different from the short date format. Here it clearly shows the month as April.

**Time**: –

If you change the data type to Time and write as 1 colon 34 this results as 1:34:00 AM where 1 is nothing but the hour, 34 is the minutes and 00 is the seconds.

**Percentage:** –

Change the data type to percentage and type 23 it gives the value as 23.00% which means it automatically changes it to percentage format.

**Fraction**: –

Change the data type of the selected cell to fraction and type something in the cell, you get the result in the fraction format.

**Scientific**: –

You change the data type of a row to scientific and type a number here and what you observe you get the number in the scientific format as a result.

**Text:** –

If you select the text data type, you can type the value in the rows in the form of text.