LESSON-37
GRAPHS AND CHARTS

SUMMARY

Graphs and Charts are pictorial representation of data, which has at least two-dimensional relationship. Graphs, has two axes X and Y. X axis is usually horizontal while Y axis is vertical. Graphs/ Charts allow you to present information contained in the worksheet in a graphic format. Excel offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more.

Create a Chart

- Select the **cells** that contain the data you want to use in the chart
- Click the **Insert** tab on the Ribbon
- Click the type of **Chart** you want to create

Modify a Chart

- Click the **Chart** and **Drag** it to another location on the same worksheet, or
- Click the **Move Chart** button on the **Design** tab
- Choose the desired location (either a new sheet or a current sheet in the workbook)

Chart Tools

The Chart Tools appear on the Ribbon when you click on the chart. The tools are located on three tabs: Design, Layout, and Format.

Copy a Chart to Word

- Select the **chart**
- Click **Copy** on the **Home** tab
- Go to the **Word** document where you want the chart located
- Click **Paste** on the **Home** tab

ELEMENTS OF A CHART/GRAPH

1. **The chart area :** The entire chart including all elements.
2. **The plot area:** In a 2-D chart, the area is bounded by the X and Y axis. In a 3- D chart, the area is bounded by the three (X, Y and Z) axis.
3. **The data points:** Individual values plotted in a chart and represented by bars, columns, lines, pie or various other shapes are called **data markers**. Data markers of the same colour constitute a **data series**. The data series are related **data points** that are plotted in the chart/ graph. Each data series in a chart is shown in a unique colour or pattern or both. Its identification is given by the legend. There may be more than one data series in a chart/graph.
4. **The horizontal (category) and vertical (value) axis :** The x-axis is usually the horizontal line which contains categories (independent values or categories) and y- axis is usually the verticals which contains data (dependent values).
5. **The legend :** It is an identifier of a piece of information shown in the chart/graph. The legends are assigned to the data series or different

categories in a chart

6. **A chart and axes titles :** Descriptive text for chart title and axis title.

7. **A data label :** This provides additional information about a data marker to identify the details of data point in a data series. Some of the elements are displayed by default when we prepare the chart/graph; others can be added as needed. It is also possible to change the format or display of the chart/graph as desired.

FORMATTING OF A CHART

- Click anywhere in the chart. This will display the **Chart Tools**, adding the **Design,Layout**, and **Format** tabs.

- On the **Design** tab, in the **Data** group, click the arrow the **Switch Row/Column** box.

CHANGING THE FORMAT OF A SELECTED CHARTELEMENT

1. Click anywhere in the chart. This will display the **Chart Tools**, adding the **Design,Layout**, and **Format** tabs

2. On the **Format** tab, in the **Current Selection** group, click the arrow next to the **Chart Elements** box, and then select the chart element which requires to format.

3. On the **Format** tab, in the **Current Selecti1on** group, click the **Format Selection.**

ADVANTAGES IN USING GRAPHS/CHARTS

Help to Explore

Many times we would like to see if there is a relationship between variables. Suppose that we wanted to determine if there is a relationship between: a country's GNP and the infant mortality rate, between age and between genders. It may be quicker and easier to create a chart immediately to see the possible relationship of variables to one another, rather than paging through raw data.

Help to Present

We want to provide information in as little time as possible. Graphing plays a key role. It seems that there is no longer any time to sit and read a newspaper in order to find out what is going on. However, newspapers, such as The Economics Times and India Today magazines (which were early users of charting techniques), seem to understand this phenomena and provide graphs to convey and sum up ideas that they are making in their articles.

Help to Convince

The same way that a graph can be used to present and explore different characteristics of data, it can also be used to convince. Graphs have the ability to take large amounts of information and make them into exhibitions that are easily used to persuade.