Charts and graphs are used to make information clear and easier to understand. A good picture is worth a thousand numbers. Spreadsheet offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more.

## Types of Charts in Spreadsheet

Spreadsheet provides wide variety of charts to express the data more meaningfully. Following are the most widely used charts.

Column Chart : In the column chart, categories are displayed horizontally and values vertically. Column chart works well when we want to compare data sets between each other.
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Line Chart : The line chart shows data changes for a certain period of time. In other words, the line chart is good for determining trends.


Pie Chart : The pie chart contains only one data series. A series of data in a pie chart is displayed as a percentage of the total.


Bar Chart : The bar chart is similar to the column chart, with the difference being that the data series are displayed horizontally and not vertically. Similar to the column chart, in the bar chart we can compare one or more data series.


Area Chart : Area charts emphasize the size of changes in time and allow you to focus on the sum of the whole trend. By using the area chart, you can display data that represents the gain in time, in order to emphasize the amount of profits.


Scatter Chart (XY Chart): This type of chart is often used to show the relations hip between two variables. The Scatter charts are commonly used for scientific and financial data.

Bubble Chart: This chart shows the data in the form of bubbles, which will help to identify the data size easily.


Radar Chart / Net Chart: This chart shows the data in the form of a


Stock Chart: This chart is used to demonstrate the fluctuations in security market with respect to stock market price.


Column and Line Chart: It shows different sets of data in the form of column and line at a time (Minimum 2 sets of data required).


Exploded pie Chart: Exploded pie chart is the kind of pie chart in which one or several slices are separated from the other. It is useful because it makes the
 highlighted portion more visible.

Donut Chart: A Donut or Doughnut chart is a pie chart, with two exceptions: It has a hole in the middle and it can display more than one series of data. Doughnut charts display data in rings, where each ring represents a data series. The first data series is displayed in the centre of the chart.


Exploded Donut Chart: It is a Donut chart with all slices exploded. It shows the outer sectors already separated from the remaining Donut.


## Steps to Create Charts

1. Enter the data in a spreadsheet with columnheaders and row headers.
2. Select the data including column headers and rowheaders if necessary.
3. Insert - Chart - Chart Type - Next.

| 4 | A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Sales figures for 4 months |  |  |  |  |
| 2 | Products | Jan | Feb | Mar | Apr |
| 3 | Washing Powder | 125000 | 200000 | 160000 | 21000 |
| 4 | Bath Soap | 85000 | 90000 | 120000 | 100000 |
| 5 | Washing Soap | 38000 | 42000 | 40000 | 50000 |

4. Data Range - Tick the options First row as label and First column as label.
5. Click on Finish.

## Elements of a Chart



- Chart Area - Entire area of the chart, which includes labels, data, axis etc.
- Plot Area - It is the area in which the actual data is plotted.
- Data Point - A symbol that represents the data, it may be a bar, pie, line, bubble etc.
- Data Series - A group of data points.
- Axis - A line that serves as a major reference for plotting data. X -axis, Y -axis and Z -axis.
- Tick Mark - A small line intersecting an axis.
- Grid lines - Optional lines extending from tick marks across the plot area.
- Chart Text - A label or title added to the chart. Eg. Chart Title, Vertical Axis Title, Horizontal Axis Title etc.
- Legend - They are the indicators of data items. It is shown in the form of colours or symbols.

Editing Chart - To make changes in the chart - Double click the chart - Make changes by using Insert tab and Format tab. Titles, Legend, Data labels, Grid lines etc. are available on Insert tab. Title, Legend etc. can be formatted by using format tab.

Resizing the Chart - To resize the chart - Click on the chart - Drag the handles on the boarder.

Moving the Chart - To move the chart from one location to another - Drag the chart by mouse. Copy, Cut and Paste functions can also be used for the same.

## 2D-3D Charts

The term 2D and 3D are used to indicate dimensions. 2D stands for Two-Dimensional, whereas 3D stands for Three-Dimensional. 2D represents an object in just two dimensions in $X$ and $Y$ axes, while 3D represents it in three dimensions in $\mathrm{X}, \mathrm{Y}$ and Z axes.


2D Chart


3D Chart

## Advantages of using Graphs and Charts

1. Visually appealing
2. Easy to read the data
3. Quick analysis and interpretation of data with a little time
4. To know the trends easily
5. To grasp the data quickly
6. A large volume of information can be exhibited through charts easily *

