



Charts in MS Excel 2010

In this chapter, you will learn about :

- Introduction to Charts
- Different types of Charts
- Components of Charts
- Creating a Chart
- Moving a Chart
- Resizing a Chart
- Changing the type, layout and data of a Chart
- Inserting Spark line
- Saving the Chart

INTRODUCTION TO CHARTS

Charts are the pictorial representation of a worksheet that makes it easier for user to comprehend the data. Charts help to make instant decisions based on comparison of numbers. It helps you to analyze and evaluate the worksheet conveniently. It also holds the interest of the audience if the data is present in graphical or pictorial form, which is easier to read and understand.

TYPES OF CHARTS

MS Excel supports many types of charts. Each type of chart has a specific application. The chart type you select will depend on the type of data you are using and the purpose of the chart. Here are some commonly used charts in Excel :

- **Column Chart** : The column chart is one of the most commonly used chart type and is used to show the changes in data over a period of time or illustrate comparisons among items. They are ideal for showing the variations in the value of an item over time.
- **Bar Graph** : A bar graph illustrates comparison among individual items. Categories are organized vertically and values horizontally to place more focus on comparing values than on items.
- **Line Chart** : Line charts are mainly used to plan changes in data over time. It shows trends in data at equal intervals. The best example of this chart type can be the weekly change in temperature.
- **Area Chart** : An area chart displays the magnitude of change over time. It also shows the relationship of parts to a whole by displaying the sum of a plotted value.
- **Pie Chart** : The pie charts are very useful. When you wish to emphasize on a significant element in the data they are very effective way to represent the different parts of a whole or the percentages of a total. Pie charts highlight how each value in data series relates proportionally to the whole.
- **Scatter Chart** : The scatter chart and line chart are almost similar but the scatter chart is displayed with a scribble in line whereas the line chart uses connected line to display data.

- Radar Chart : A radar chart plots data in concentric circles. Each data series has its own value arising from the centre point. Lines connect all values in the same series.
- 3D Surface Chart : It shows the three dimensional view of data. A topographic map is an example of this type of chart.
- Stock Chart : It is ideal for tracking stock market activity.

COMPONENTS OF CHARTS

There are various components of a chart. These are :

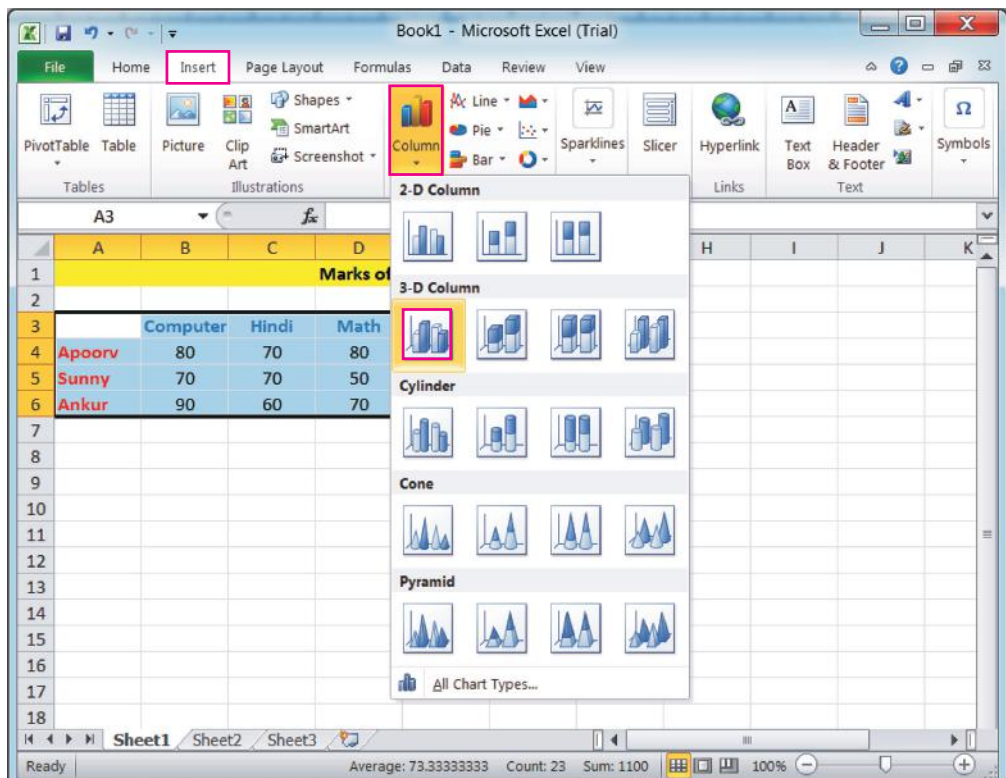
- X-axis : The x-axis is horizontal axis of the chart also known as category axis.
- Y-axis : The y-axis is vertical axis of the chart also known as value axis. The value of each data series is plotted on this axis.
- Data Series : It is a group of data from which a chart is derived.
- Chart Area : It is the area where chart components are enclosed.
- Plot Area : The area of the chart where the actual chart is plotted.
- Chart Title : The text at the top of the chart that helps the user to understand what the chart represents.
- Axis Title : These are the titles given to the two axis i.e. X-axis and Y- axis of the chart.
- Gridlines : The gridlines are the horizontal and vertical lines on the plot area, which are inserted in the chart to enhance its legibility.
- Legend : A legend is to the right of the plot area that identifies each data series. Each series can be uniquely identified by assigning a unique colour or pattern to it.
- Data Label : This is a text or label that provides additional information about data points.

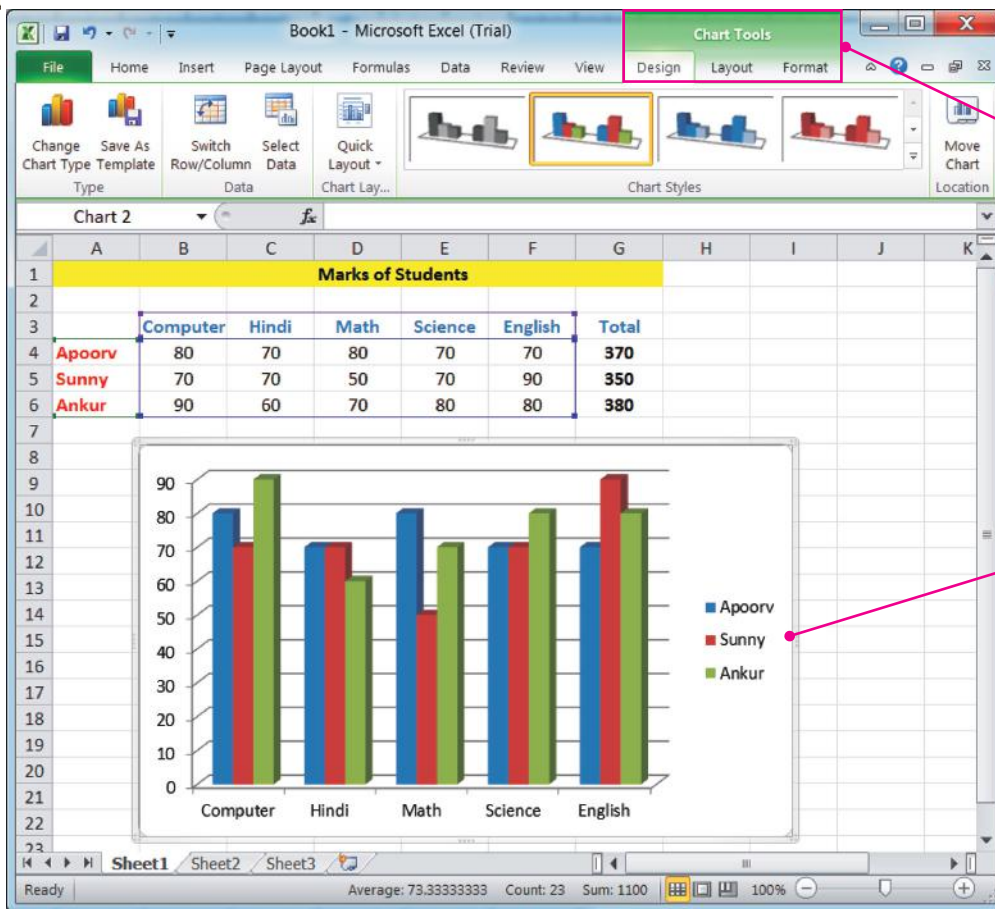
CREATING A CHART

After learning about the different types of charts and their components, let us now learn how to create them in Excel. To create a chart, follow these steps :

Step 1: Select the range of data that you want on chart.

Step 2: Click on **Insert** tab on the ribbon.





Excel displays three chart tabs (Design, Layout, Format) for working with the chart.

Excel immediately creates a chart, places it on the worksheet.

Step 3: Click on **chart type** from the Charts group.


Step 4: Click on **chart style**.

MOVING A CHART

After creating a chart it can be moved anywhere within a worksheet.

Step 1: Click on an empty area of the chart.

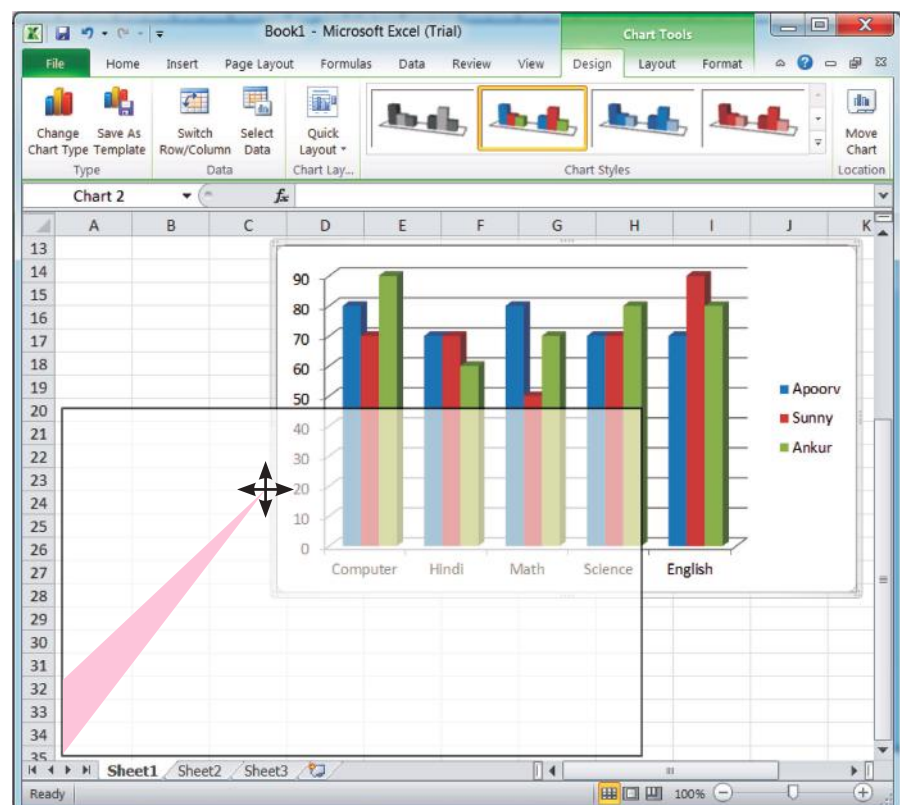
Excel selects the chart and surrounds it with handles.

Step 2: Move the mouse over the edge of the chart. The mouse pointer changes to .

Step 3: Click and drag the chart to a new location on the worksheet.

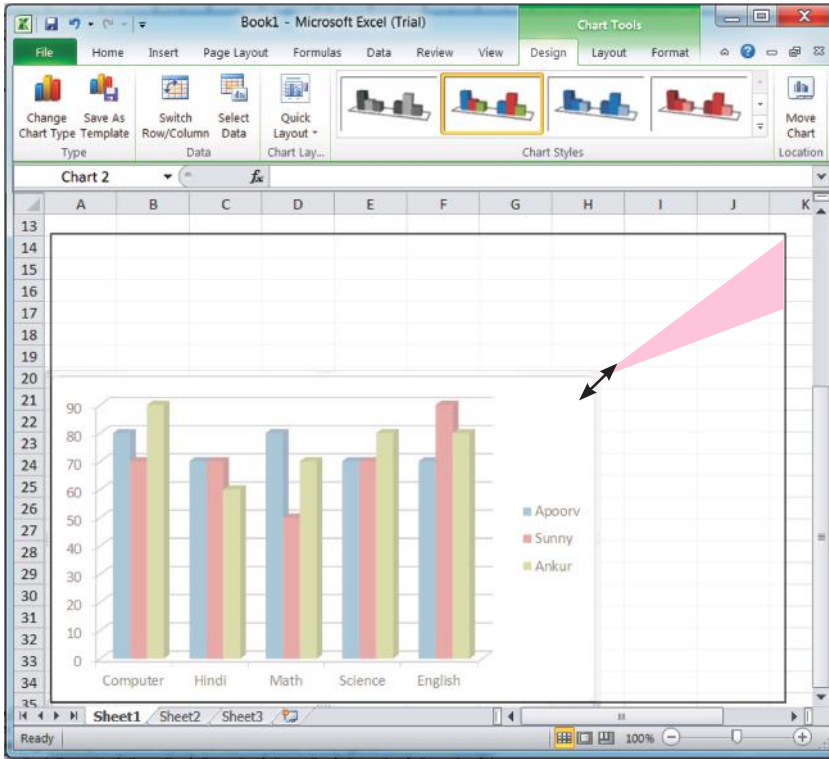
A dimmed, gray border represents the chart as you move it on the worksheet.

Step 4: Release the mouse button. Excel moves the chart.



RESIZING A CHART

You can change the size of the chart in a worksheet.



Step 1 : Click on an empty area of the chart.

Excel selects the chart and surrounds it with handles.

Step 2 : Move mouse over the handle of the chart.

The mouse pointer changes to

Step 3 : Click and drag a handle to resize the chart.

A shaded border represents the chart as you resize it on the worksheet.

Step 4 : Release the mouse button.

Excel resizes the chart.

CHANGING THE TYPE OF THE CHART

After creating a chart, you can change the chart type to present your data more effectively.

Step 1 : Click on an empty area of the chart.

Step 2 : Click on Design tab on the ribbon.

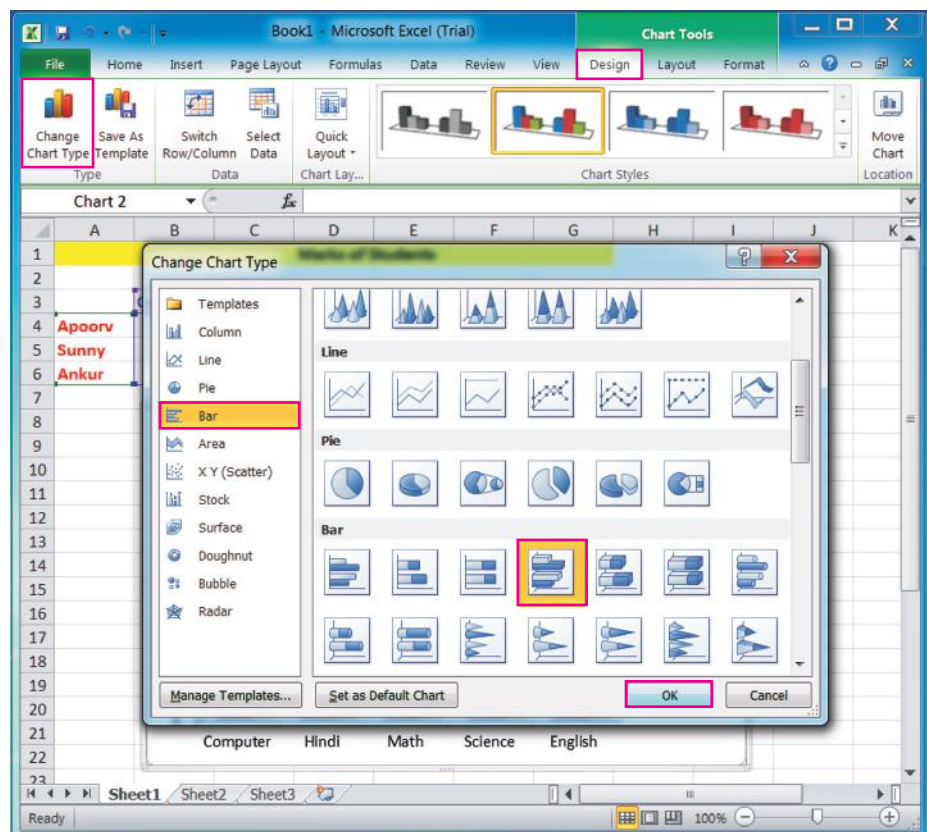
Step 3 : Click on Change Chart Type button.

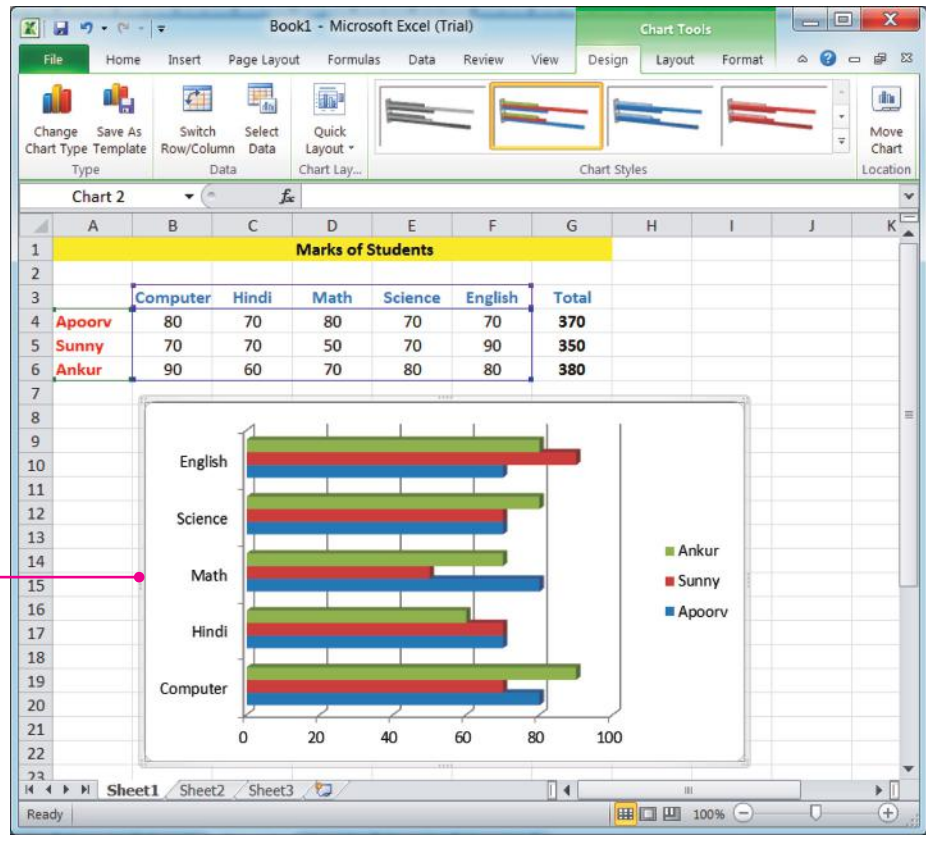
The Change Chart Type dialog box appears.

Step 4 : Click on the new chart type.

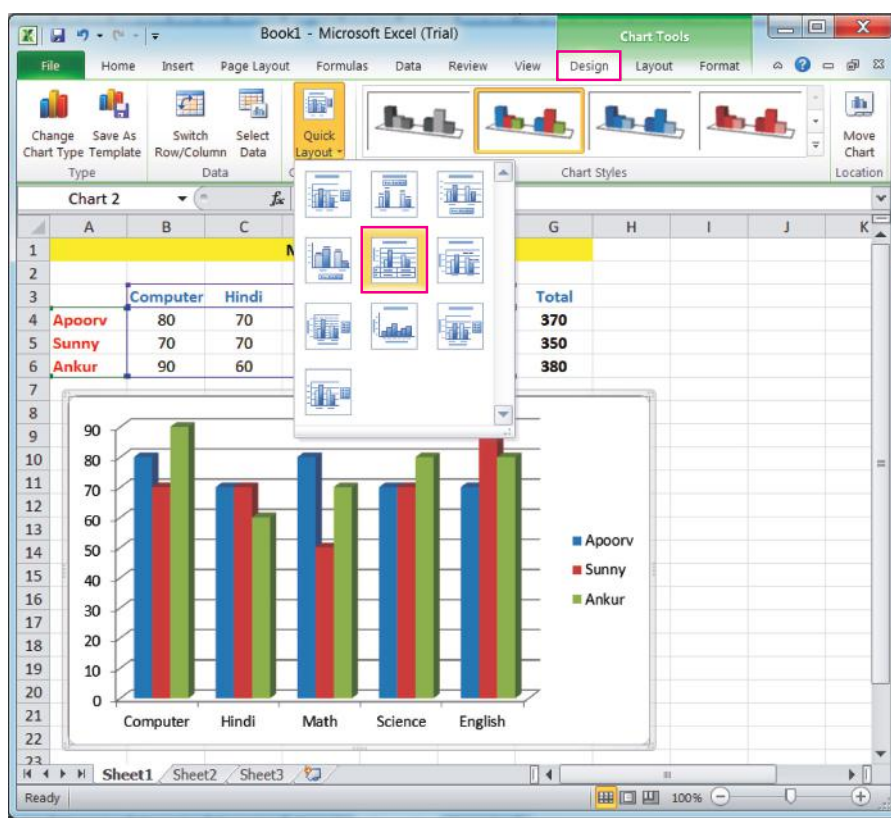
Step 5 : Click on the chart style.

Step 6 : Click on OK.





Excel changes the chart to the chart type that you have selected.



Changing the layout of Chart

You can change the chart layout to check how chart elements are positioned.

- Step 1 :** Click on an empty area of the chart.
- Step 2 :** Click on Design tab on the Ribbon.
- Step 3 :** Click on Quick Layout from the Chart Layout group.

Changing the Chart Title

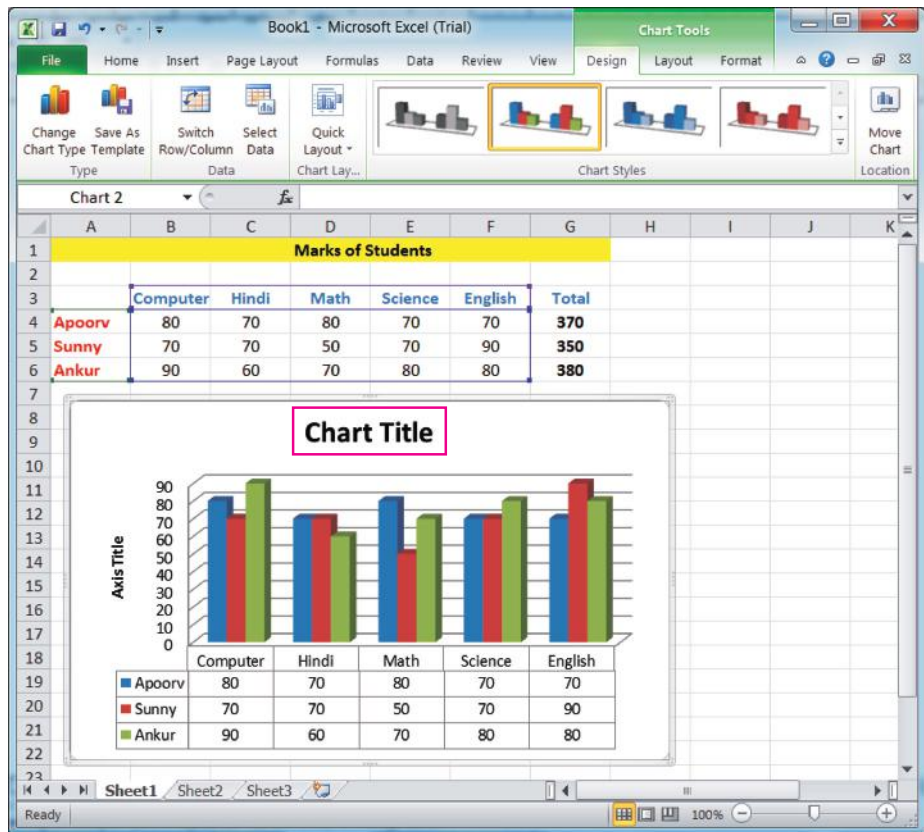
Step 1: Click the title you want to change.

A box appears around the title.

Step 2: Type the new title.

Step 3: Press the **Enter** key to add the title to the chart.

The chart displays the new title.



Excel applies new layout to the existing chart.

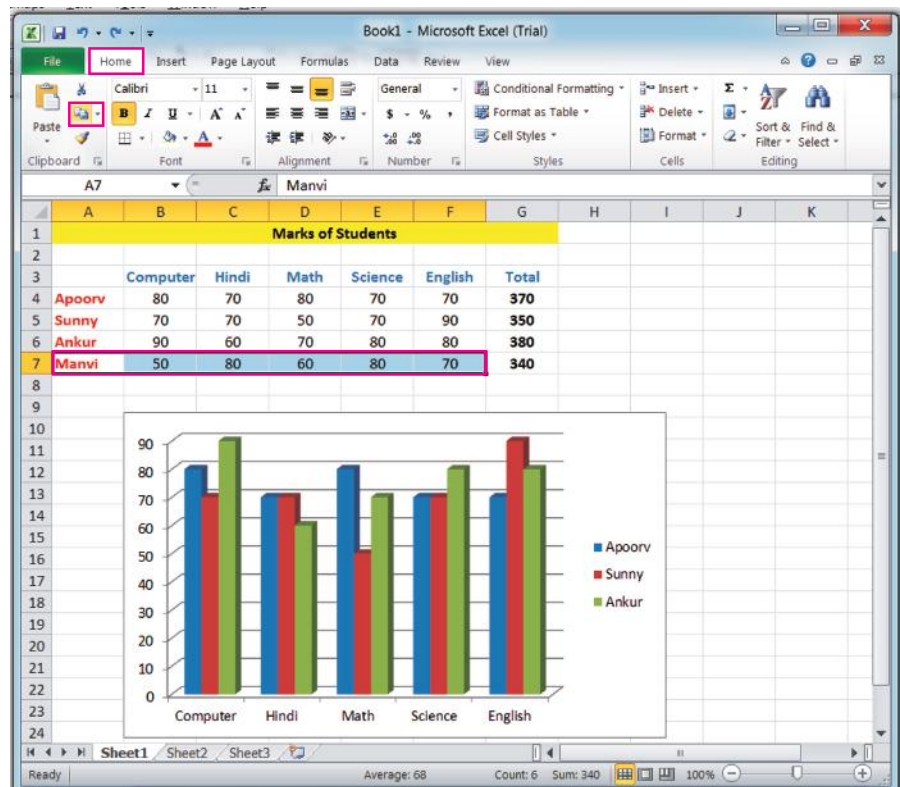
ADDING DATA TO A CHART

You can add new data to the chart after creating a chart.

Adding Data to a Chart

Step 1: Select the **cells** containing the data you want to add to the chart, including the row or column labels.

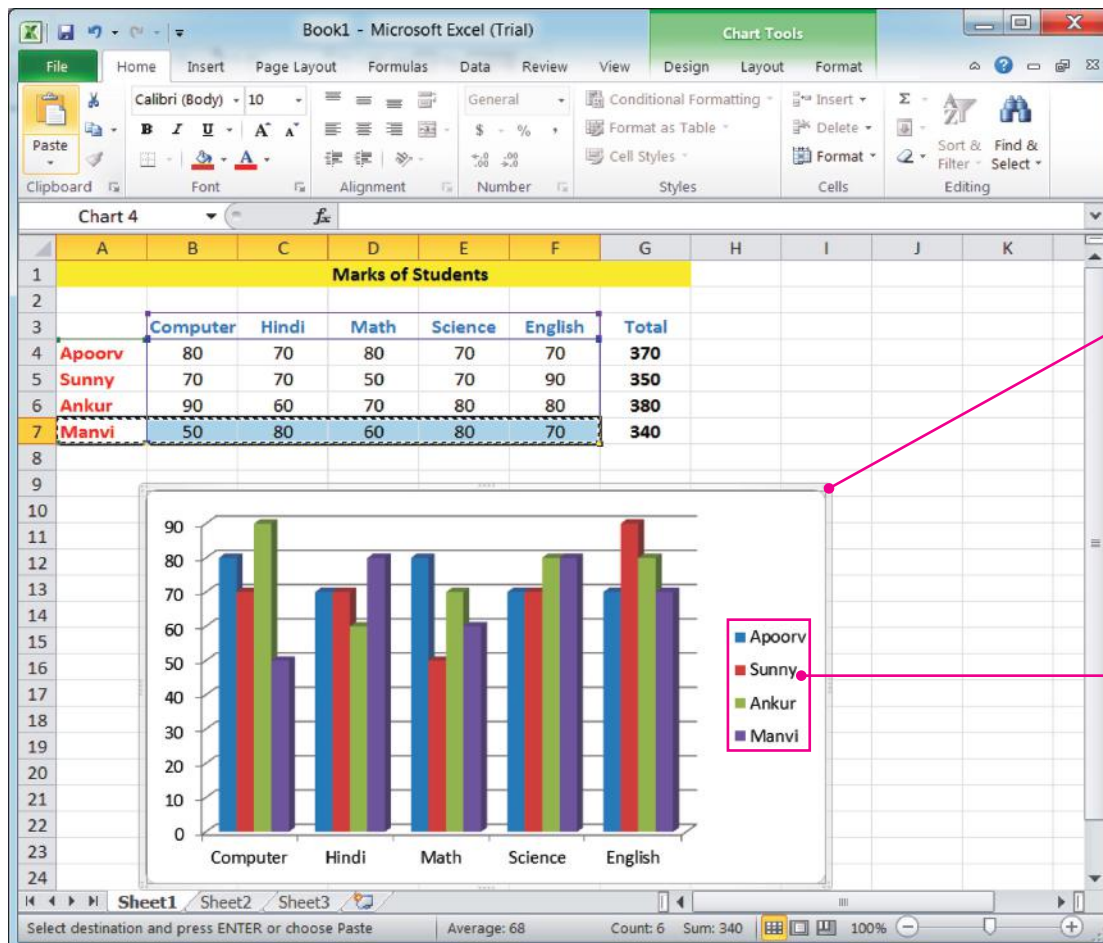
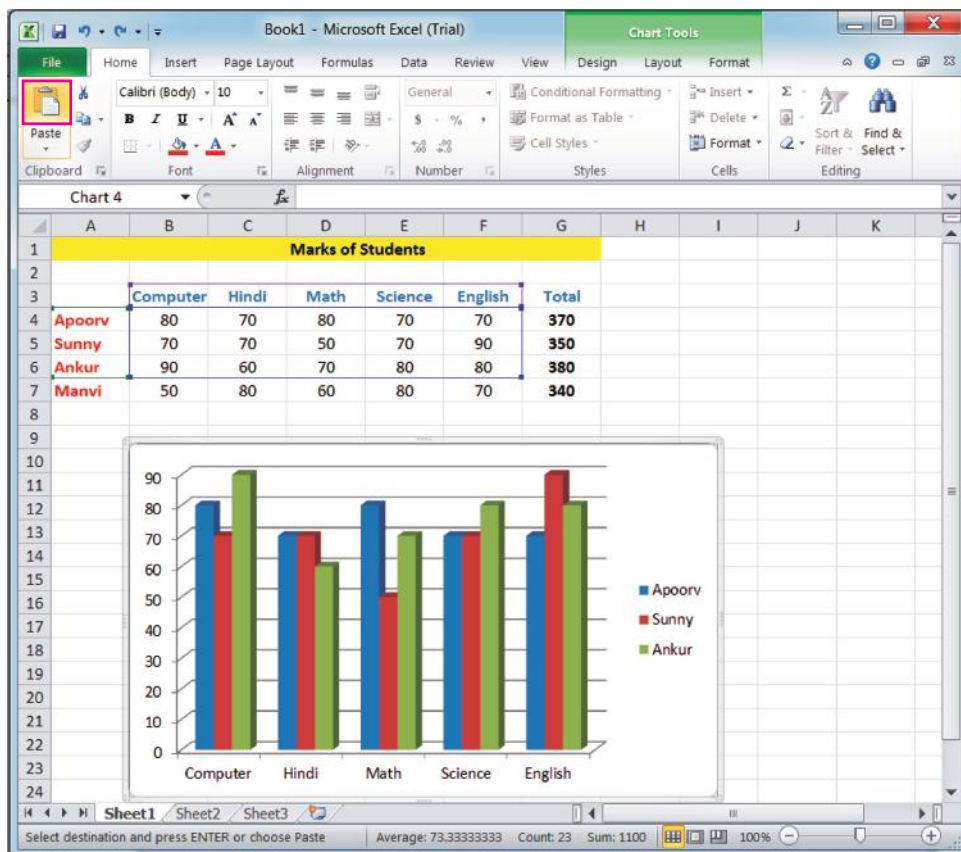
Step 2: Click on **Home** tab.



Step 3: Click on **Copy** button to copy the data.

Step 4: Click on the **chart** you want to add the data to.

Step 5: Click on **Paste** button to add the data to the chart.



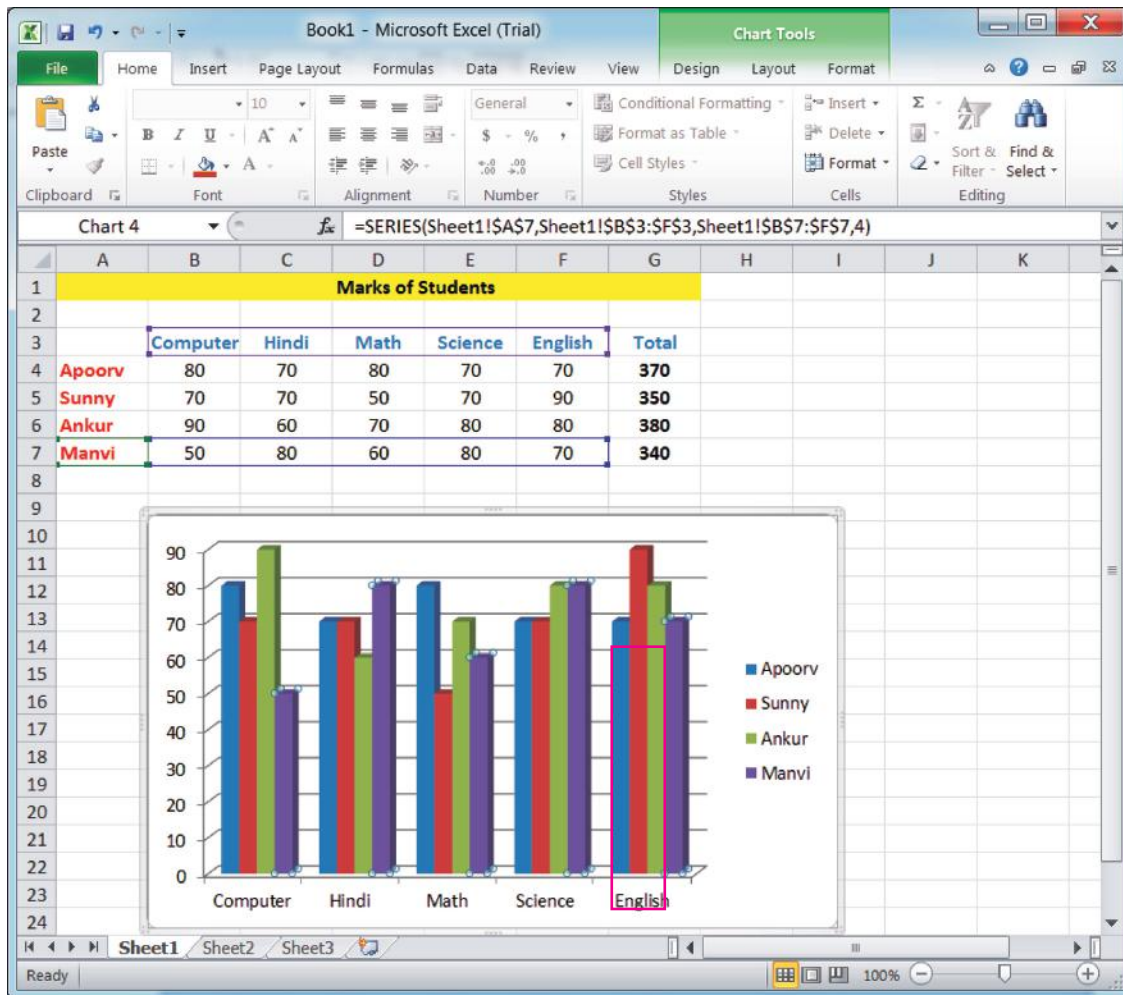
The new data appears in the chart.

When you add data to a chart, Excel automatically updates the chart legend.

Deleting Data from a Chart

Step 1: Click the data you want to remove from the chart.

Step 2: Press the Delete key to delete the data from the chart.



INSERTING SPARKLINE

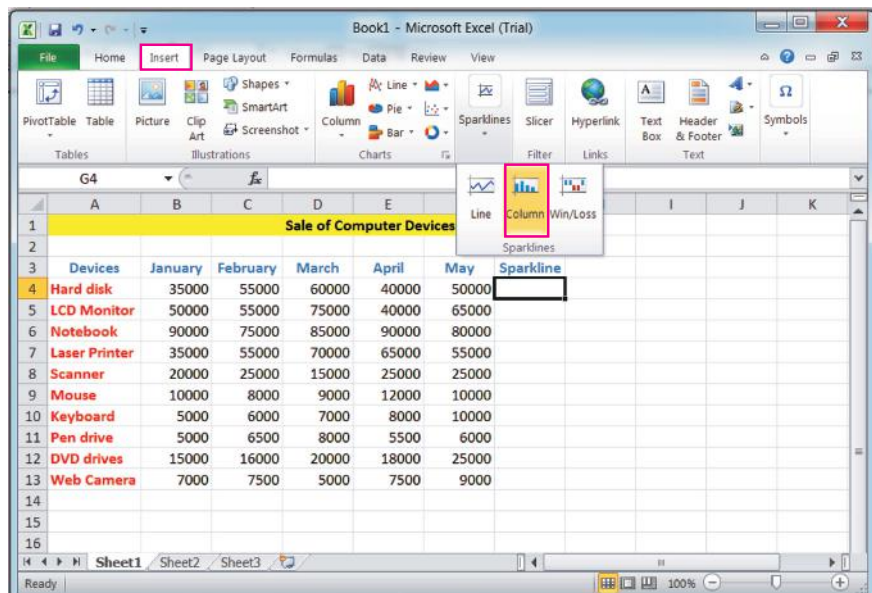
Sparkline is the new feature in Excel 2010. It is a small-sized chart that can fit in a single cell.

You can create a sparkline very easily.

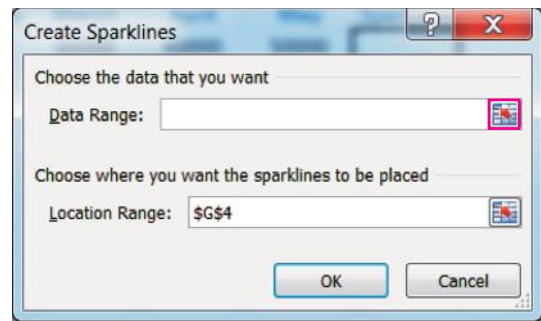
Step 1: Click on the cell where you want the sparklines to appear.

Step 2: Click on the Insert tab.

Step 3: Click on Column under the Sparklines group.

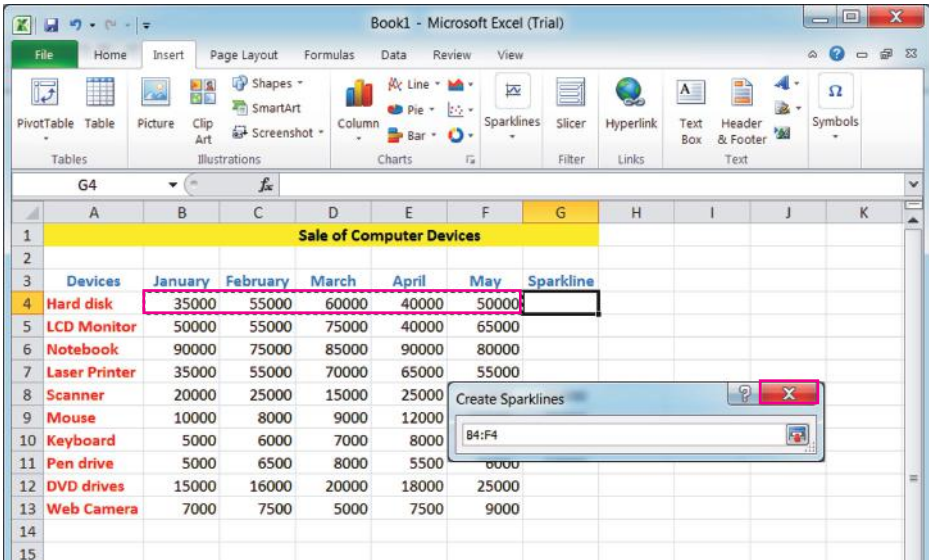


Create Sparklines dialog box will appear.



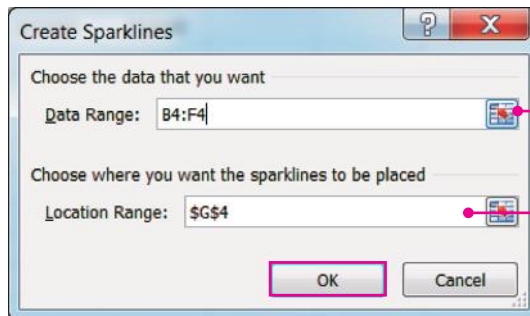
Step 4: Click on this icon to select the range of cells that will be the source of the data for the charts.

Step 5: Select a range.



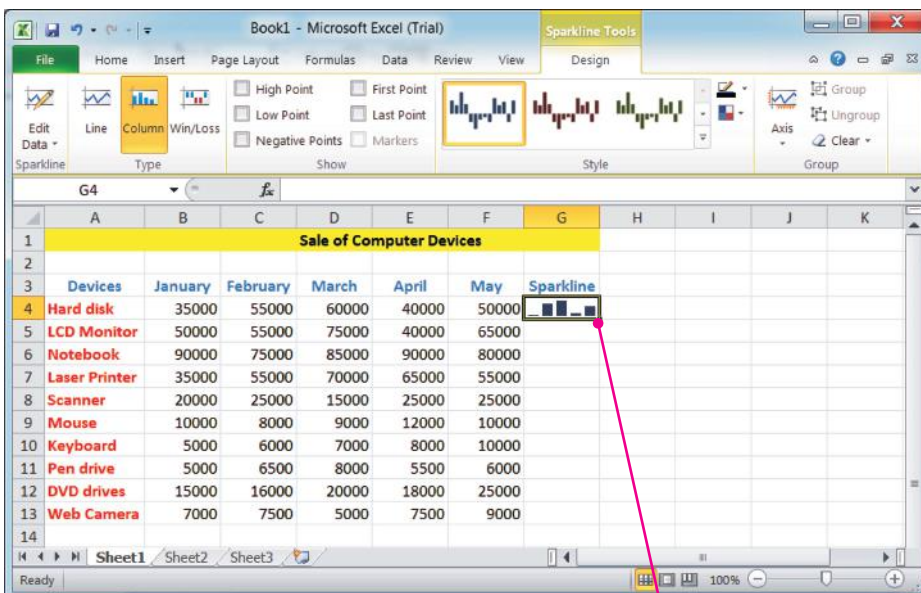
Step 6: Click on Close.

Click on OK.



Data range appears here.

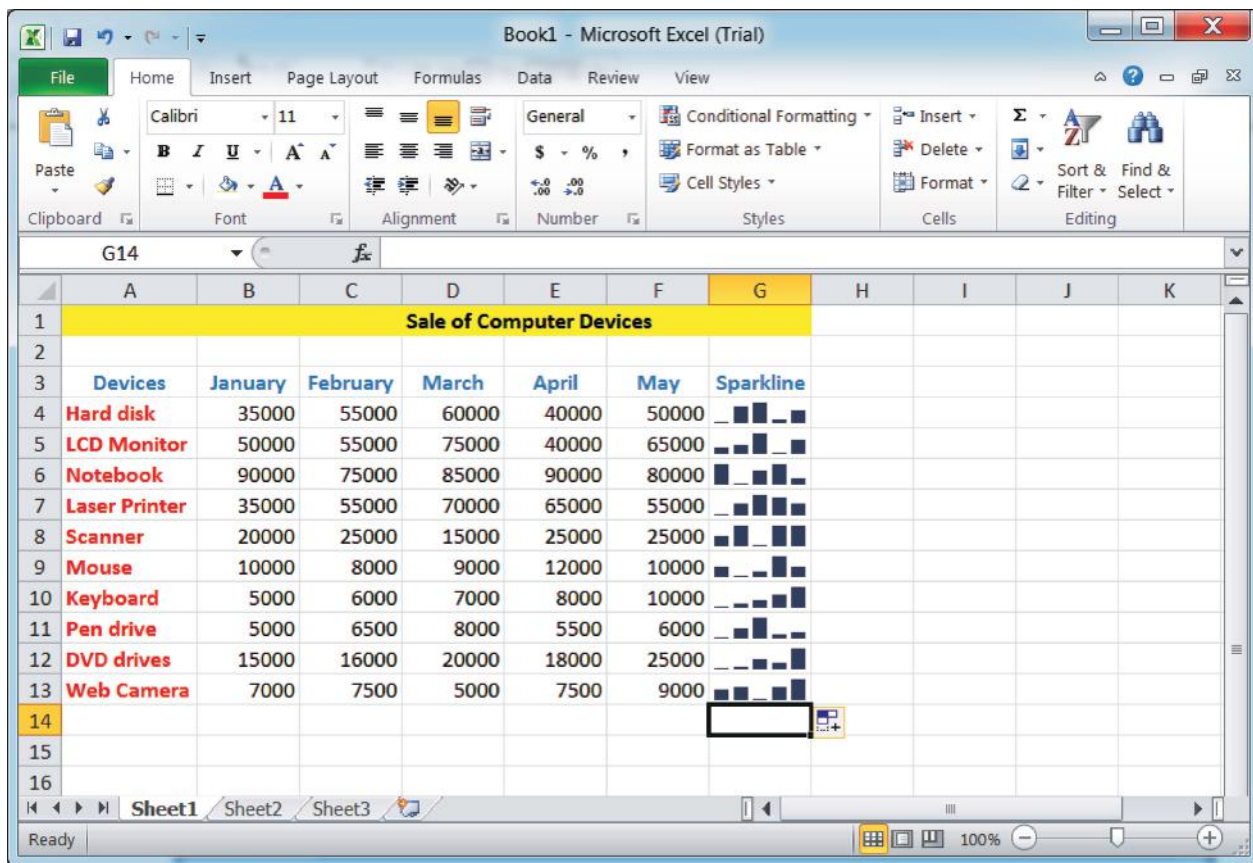
This area displays the address of that cell which you have selected in first step 1. In this cell sparklines will appear.



Sparklines appears in the selected cell.

With proper use of sparklines. Data analysis is quicker and more direct to the point.

The **Design** tools appear on the **Sparklines Tools** tab.



You can edit or format the sparklines by using these tools.

SAVING THE CHART

In MS Excel the chart can be saved in two ways :

- Embedded Chart : It is a chart object that is placed on a worksheet and saved with that worksheet when the workbook is saved.
- Chart sheet : It is a sheet in a workbook that contains only a chart. It is beneficial when you want to view a chart separately from workbook data.

Points to Remember

- Chart helps you to analyze and evaluate the worksheet conveniently.
- There are different types of charts like Column Chart, Bar Chart, Line Chart, Pie Chart, Area Chart, Scatter Chart, etc.
- A chart consists of following components: data, x-axis, y-axis, axis labels, chart title, legend, data labels, gridlines.
- Column charts are used to display changes in data over a period of time.
- Bar charts are used to compare individual items.
- Line charts display trends over time or categories.
- Pie chart displays the contribution of each value to a total.
- The chart wizard provides the quickest and easiest way to create a chart.



EXERCISE



A. Tick (✓) the correct option :

- A chart used to show the changes in data over a period of time :
(a) bar (b) area (c) column
- A chart similar to line chart :
(a) Pie chart (b) Bar chart (c) Scatter chart
- A chart that illustrates comparison among individual items :
(a) Scatter (b) Bar (c) Area
- A chart that plots data in concentric circle :
(a) Raddar (b) Pie (c) 3D Surface
- The area of the chart where actual chart is plotted :
(a) Chart area (b) Plot area (c) Legend
- The vertical axis of a chart :
(a) y-axis (b) x-axis (c) z-axis
- The plot area that identifies each data series :
(a) Gridlines (b) Legend (c) Data labels
- The text that provides additional information about data point :
(a) Chart title (b) Axis title (c) Data label

B. Fill in the blanks :

- _____ charts are ideal for showing the variations in the value of an item over time.
- In bar graph the categories are organised _____ and values _____.
- _____ chart shows trends in data at equal intervals.
- An area chart displays the _____ of change over time.
- The _____ is horizontal axis of the chart.
- _____ is a group of data from which a chart is derived.

C. Match the following :

- | | |
|----------------|--|
| 1. X-axis | a. Line that runs vertically and horizontally |
| 2. Y-axis | b. Area of the chart where actual chart is plotted |
| 3. Chart title | c. Group of data from which a chart is derived |
| 4. Chart area | d. The vertical axis |
| 5. Plot area | e. The text at the top |
| 6. Data series | f. The horizontal axis |



D. Answer the following Questions :

1. Draw and explain any three types of charts.
2. Explain the different components of a chart.
3. Define sparkline.
4. How do you change the Chart Title?
5. What do you understand by chart? How are they helpful?
6. What is the difference between scatter chart and line chart?
7. Differentiate between embedded chart and chart sheet.
8. How do you delete data from a chart?

E. Write the steps to :

- Create a chart
- Resizing a chart
- Insert sparkline



ACTIVITY

- Create the worksheet given below :

Marks			
Name	English	Maths	Computer
Suresh	75	80	60
Praveen	80	70	80
Kamal	85	75	75
Pankaj	70	80	90

- Create a sparklines chart showing the marks for three subjects.
- Create a pie chart showing the marks of Pankaj for three years.