Lesson 4 Working with Charts

A chart is a graphical representation of numerical data. You can use charts to make it easier in spot trends, highlight important changes, or compare individual figures. A chart is composed of many elements. **(1)** Some of these elements are displayed by default, others can be added as needed. You can also remove chart elements that you do not want to display. Not all elements appear in every chart type.

NOTE: When you point to a chart element , a Screen Tip displays the name of that element.

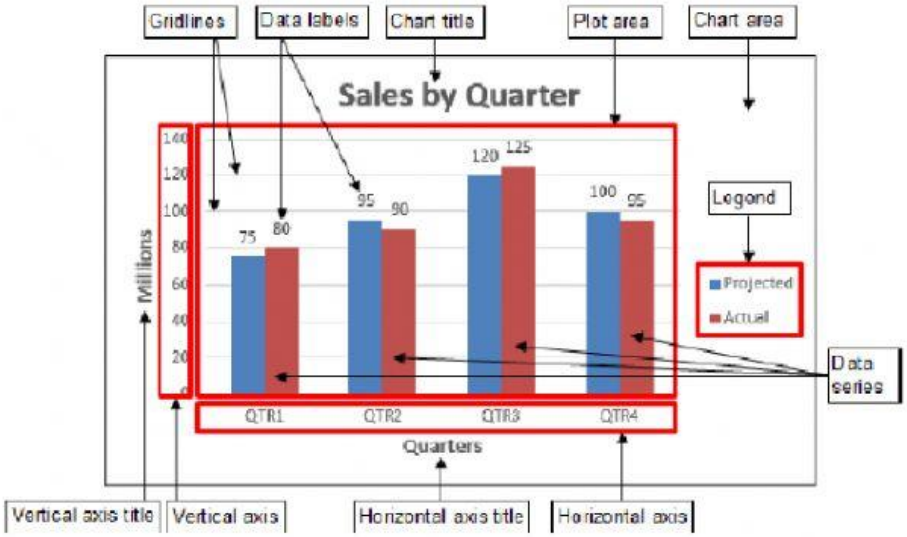

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Table 1 – Chart Elements

Element	Description
Chart area	Consists of the chart border, the background, and all the fonts.
Plot area	Consists of the data series and gridlines.
Chart title	Text that describes the chart.
Axes	The horizontal axis (x-axis) contains the categories being plotted. The vertical axis (y-axis) contains the values being plotted.
Axis titles	The horizontal axis title describes the chart categories. The vertical axis title describes the chart values.
Gridlines	Horizontal or vertical lines in the plot area that make the data easier to read.
Data points	Individual values that are plotted in the chart. Data points are represented by bars, lines, slices, dots, or other markers.
Data labels	Text that displays the exact value represented by each data point.
Data series	A collection of related data points. Each data series in a chart has a unique color or pattern.
Legend	A key that identifies the colors or patterns associated with each data series.

When a chart is selected, the **Chart Tools** contextual tabs *(Design and Formal)* become available on the Ribbon **see 2 & 3**. You can use the commands on the table to change the design, layout and appearance of the chart.

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When a chart is selected, three buttons appear in the upper-right corner of the chart **(4).** These buttons provide quick access to the most common and useful chart customization features:

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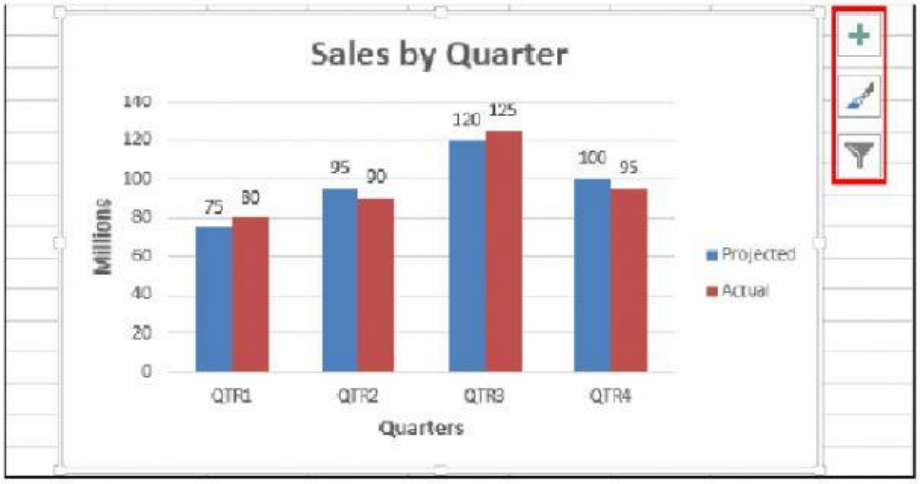
- The **Chart Elements** button allows you to add, remove, or change chart elements.
- The **Chart Styles** button allows you to change the style or color of the chart.
- The **Chart Filters** button allows you to show or hide data in the chart.



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Creating charts

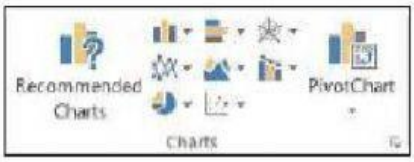
Excel provides a variety of chart types that you can choose from when creating a chart. **(Table 2).** Each chart type has a number of subtypes and is best suited for conveying a different type of information. If you are not sure which type of chart is appropriate for your data, you can use one of the charts recommended by Excel.

Table 2 – Available Chart Types

Chart	Description
Column	Column charts are used to show how data changes over time or to compare values across categories.
Line	Line charts are used to show trends over time.
Pie or Doughnut	Pie charts display the contribution of each value to the total. They can contain only one data series. Like pie charts, doughnut charts show the relationship of parts to a whole. However, they can contain more than one data series.
Bar	Bar charts are similar to column charts, except they display information in horizontal rather than vertical bars.
Area	Area charts are similar to line charts, except the area below the lines is filled with color.
Scatter (X, Y) or Bubble	Scatter charts are typically used to display and compare numeric values such as scientific, statistical, and engineering data. Bubble charts are similar to Scatter charts, except they compare sets of three values instead of two, with the third values determining the sizes of the bubbles.
Stock, Surface, or Radar	Stock charts are most often used to show the fluctuation of stock prices. However, they may also be used for scientific data. Surface charts are used to find optimal combinations between two sets of data. Radar charts are used to compare the aggregate values of several data series.
Combo	Combo charts combine two or more chart types to make the data easier to understand, especially when the data is widely varied.

To create a chart:

1. Select the cells that contain the data you want to include in the chart.
2. On the Insert tab, in the Charts group, click the chart type that you want to use, and then click the decimal chart subtype (Table 2). The chart appears s in the worksheet.



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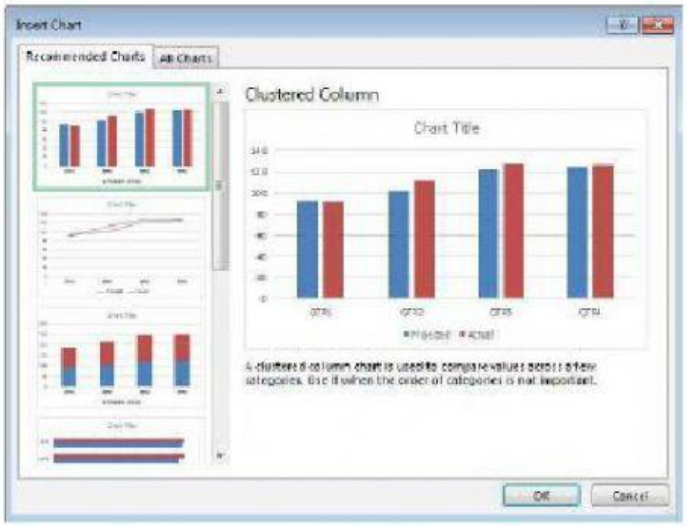
To create a recommended chart:

1. Select the cells that contain the data you want to include in the chart.
2. On the **Insert** tab, in the Charts group, click the **Recommended Charts** button.
3. In the **Insert Chart** dialog box, on the **Recommended Charts** tab, select one of the recommended charts in the left pane, and then click the **OK**. **2**



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Questions.

1. **What is a chart in Excel?**

2. **What are some of the elements in charts name at least 3 and describe them?**

3. How do you create a chart and a recommended chart?

4. Name 3 of the chart types that you can have in Excel and descrbe each one?