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## About the Tutorial

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A chart is a tool you can use in Excel to communicate data graphically. Charts allow your audience to see the meaning behind the numbers, and they make showing comparisons and trends much easier. In this tutorial, you will learn how to insert charts and modify them so they communicate information effectively.

Each of Excel's 12 chart types has different features that make them better suited for specific tasks. Pairing a chart with its correct data style will make the information easier to understand, enhancing the communication within your small business.

## Audience

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Graphs or charts help people understand data quickly. Whether you want to make a comparison, show a relationship or highlight a trend, they help your audience “see” what you are talking about.

Among its many features, Microsoft Excel enables you to incorporate charts, providing a way to add visual appeal to your business reports.

## Prerequisites

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Before you start proceeding with this tutorial, we are assuming that you are already aware of the basics of Microsoft Excel. If you are not well aware of these concepts, then we will suggest you to go through our short tutorials on Excel.

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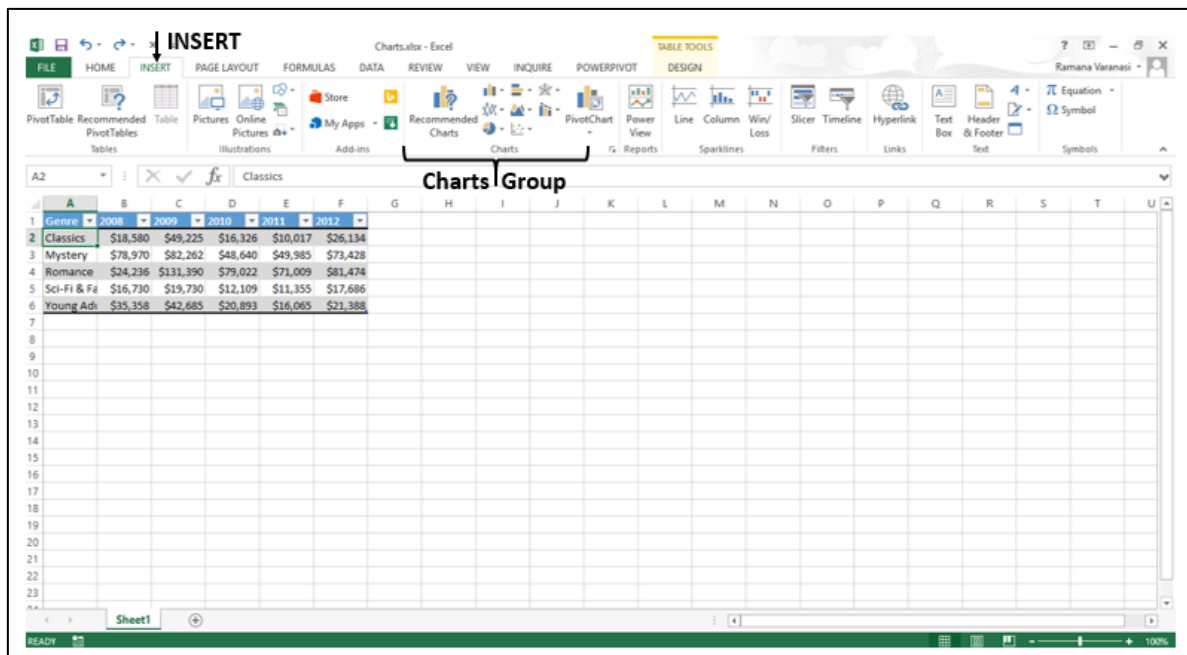
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# 1. Excel Charts – Introduction

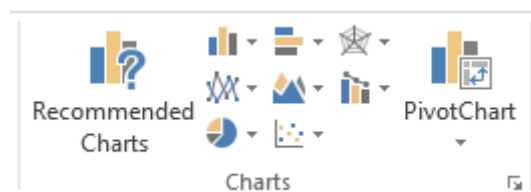
In Microsoft Excel, charts are used to make a graphical representation of any set of data. A chart is a visual representation of data, in which the data is represented by symbols such as bars in a bar chart or lines in a line chart.

## Charts Group

You can find the Charts group under the **INSERT** tab on the Ribbon.



The Charts group on the Ribbon looks as follows-



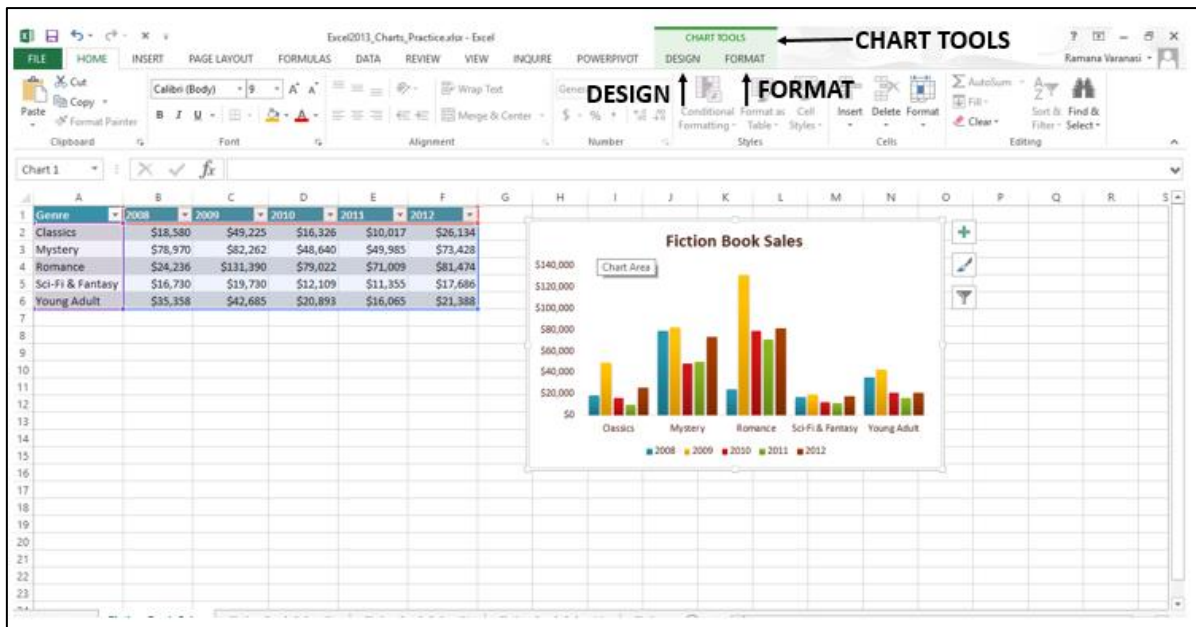
The Charts group is formatted in such a way that-

- Types of charts are displayed.
- The subgroups are clubbed together.
- It helps you find a chart suitable to your data with the button Recommended Charts.

## Chart Tools

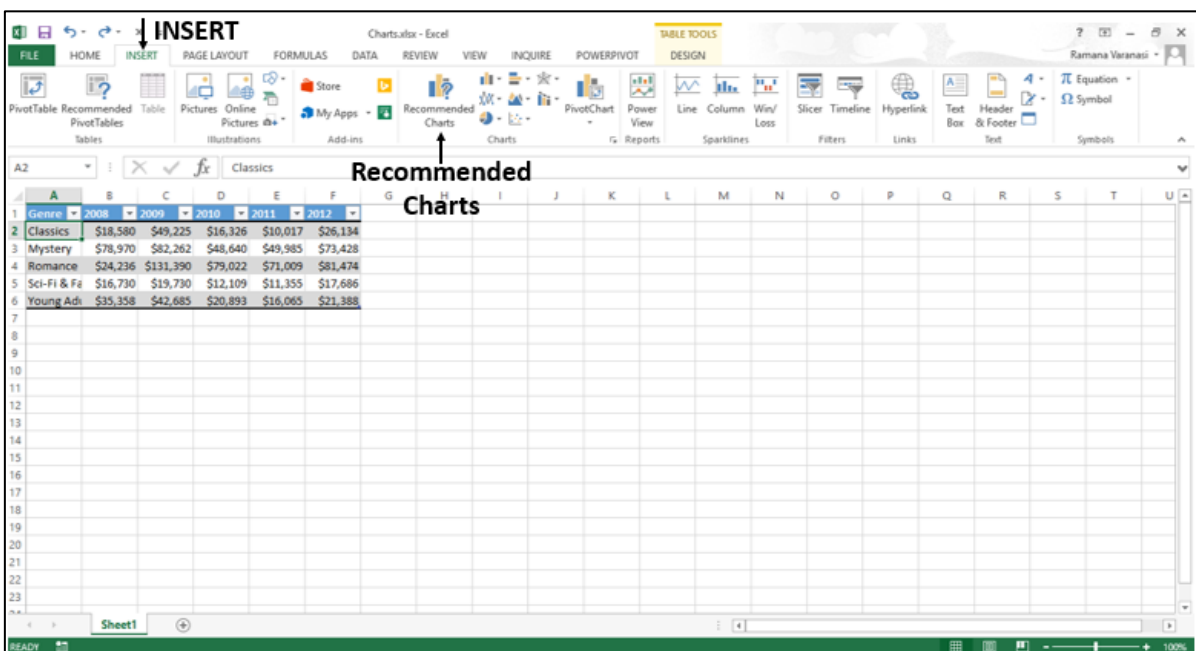
When you click on a chart, a new tab Chart Tools is displayed on the ribbon. There are two tabs under CHART TOOLS-

- DESIGN
- FORMAT



## Recommended Charts

The Recommended Charts command on the Insert tab helps you to create a chart that is just right for your data.





To use Recommended charts-

**Step 1:** Select the data.

**Step 2:** Click **Recommended Charts**.

A window displaying the charts that suit your data will be displayed.

The screenshot shows the Microsoft Excel interface with the 'Recommended Charts' dialog box open. The dialog box displays a 'Clustered Column' chart and a list of recommended chart types. The background shows a spreadsheet with data for book genres from 2008 to 2011.

Genre	2008	2009	2010	2011
Classics	\$18,580	\$49,225	\$16,326	\$10
Mystery	\$78,970	\$82,262	\$48,640	\$49
Romance	\$24,236	\$131,390	\$79,022	\$71
Sci-Fi & Fa	\$16,730	\$19,730	\$12,109	\$11
Young Ad	\$35,358	\$42,685	\$20,893	\$16

The 'Recommended Charts' dialog box shows a 'Clustered Column' chart with the following data series: Classics, Mystery, Romance, Sci-Fi & Fantasy, and Young Adult. The chart title is 'Chart Title' and the y-axis ranges from \$0 to \$140,000. The x-axis shows the years 2008, 2009, 2010, 2011, and 2012. A description below the chart states: 'A clustered column chart is used to compare values across a few categories. Use it when the order of categories is not important.'

# 2. Excel Charts – Creating Charts

In this chapter, we will learn to create charts.

## Creating Charts with Insert Chart

To create charts using the Insert Chart tab, follow the steps given below.

**Step 1:** Select the data.

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

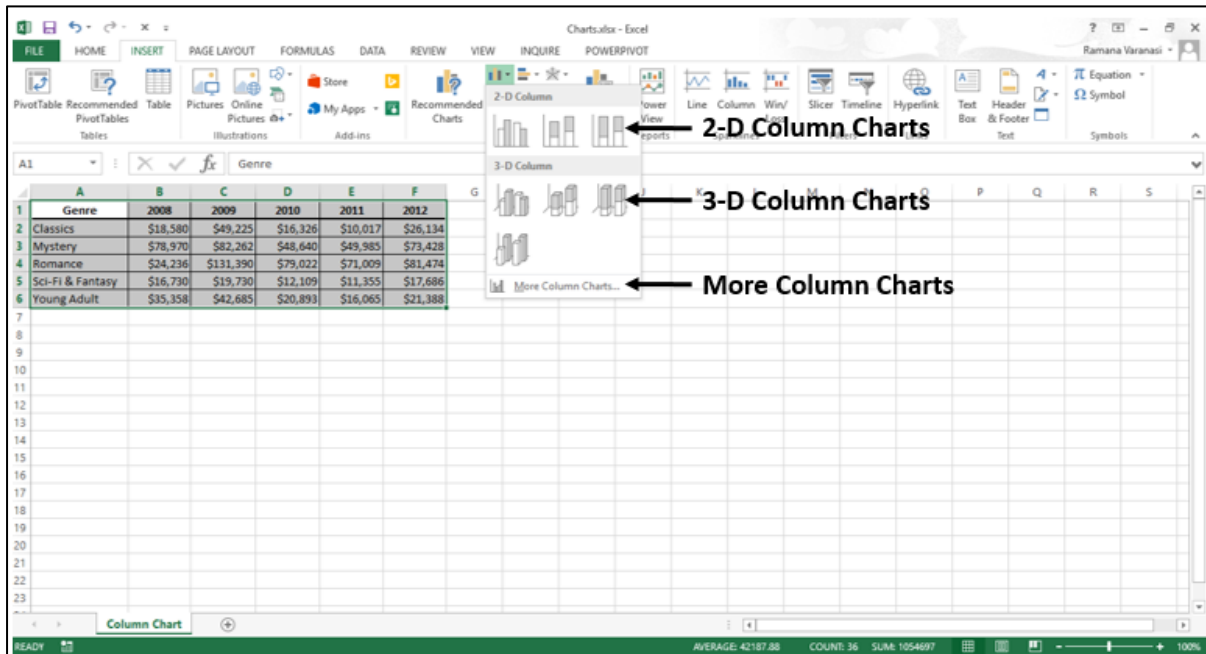
**Step 3:** Click the Insert Column Chart on the Ribbon.

The screenshot shows the Microsoft Excel interface with the 'INSERT' tab selected on the ribbon. The 'Charts' group is expanded, and 'Insert Column Chart' is highlighted. Below the ribbon, a data table is visible with the following content:

Genre	2008	2009	2010	2011	2012
Classics	\$18,580	\$49,225	\$16,326	\$10,017	\$26,134
Mystery	\$78,970	\$82,262	\$48,640	\$49,985	\$73,428
Romance	\$24,236	\$131,390	\$79,022	\$71,009	\$81,474
Sci-Fi & Fantasy	\$16,730	\$19,730	\$12,109	\$11,355	\$17,686
Young Adult	\$35,358	\$42,685	\$20,893	\$16,065	\$21,388

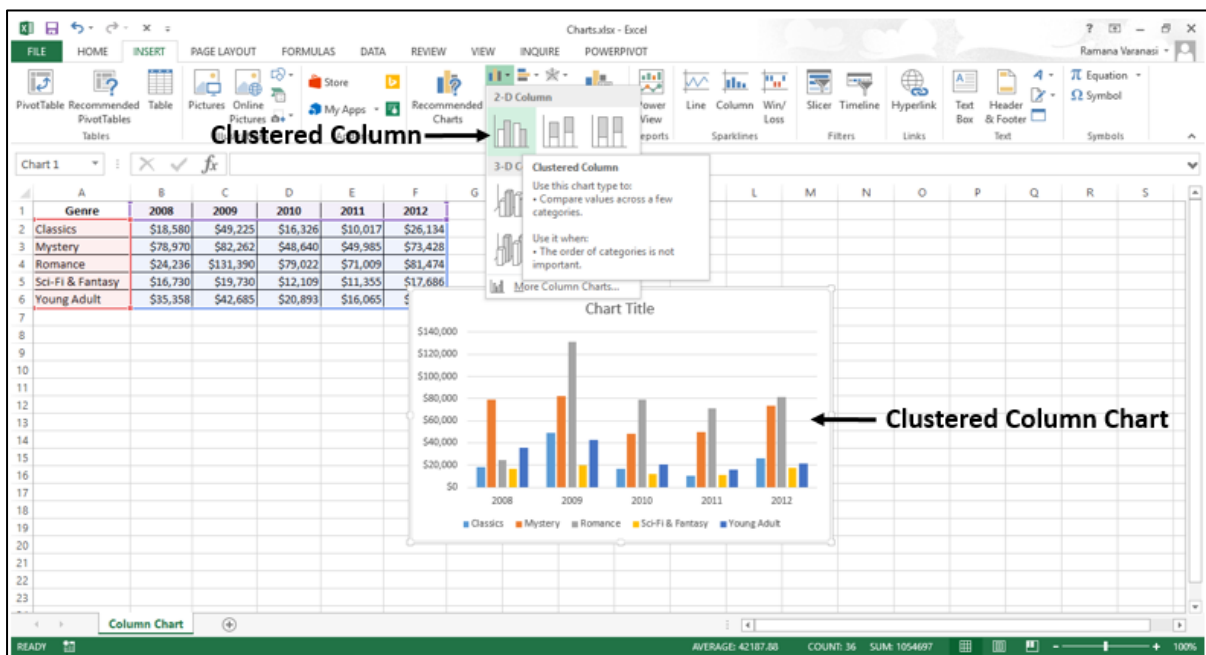
An arrow labeled 'Data' points to the data range in the table. The status bar at the bottom shows 'AVERAGE: 42187.88 COUNT: 36 SUM: 1054697'.

The 2-D column, 3-D Column chart options are displayed. Further, More Column Charts... option is also displayed.

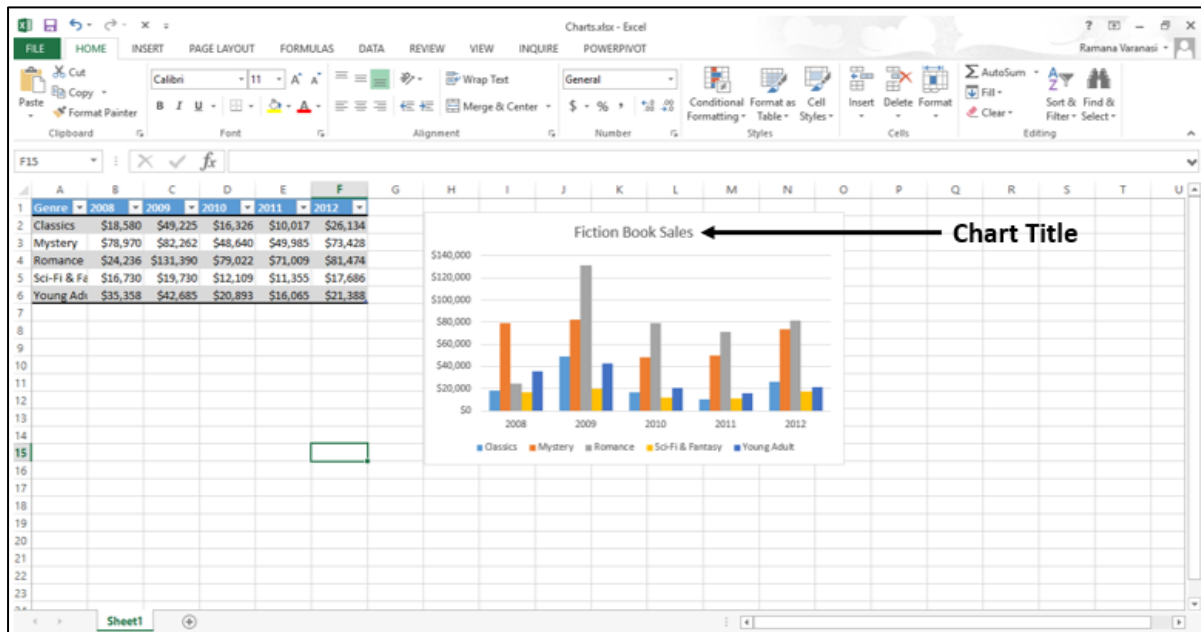


**Step 4:** Move through the Column Chart options to see the previews.

**Step 5:** Click **Clustered Column**. The chart will be displayed in your worksheet.



**Step 6:** Give a meaningful title to the chart by editing **Chart Title**.



## Creating Charts with Recommended Charts

You can use the **Recommended Charts** option if-

- You want to create a chart quickly.
- You are not sure of the chart type that suits your data.
- If the chart type you selected is not working with your data.

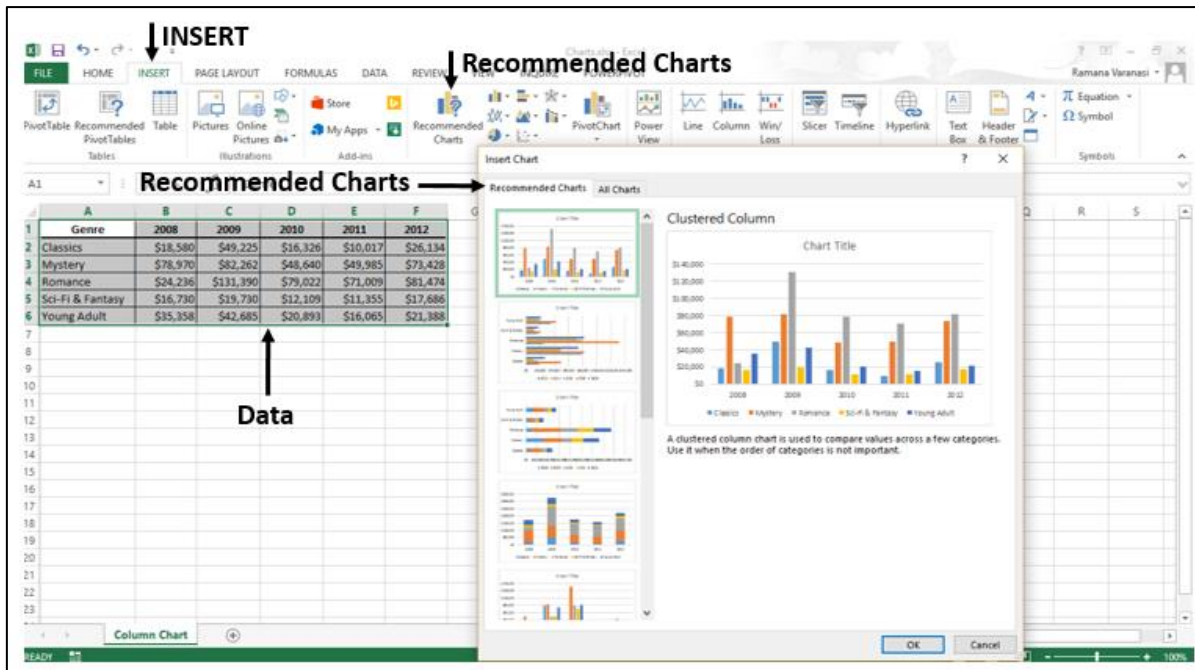
To use the option Recommended Charts, follow the steps given below-

**Step 1:** Select the data.

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

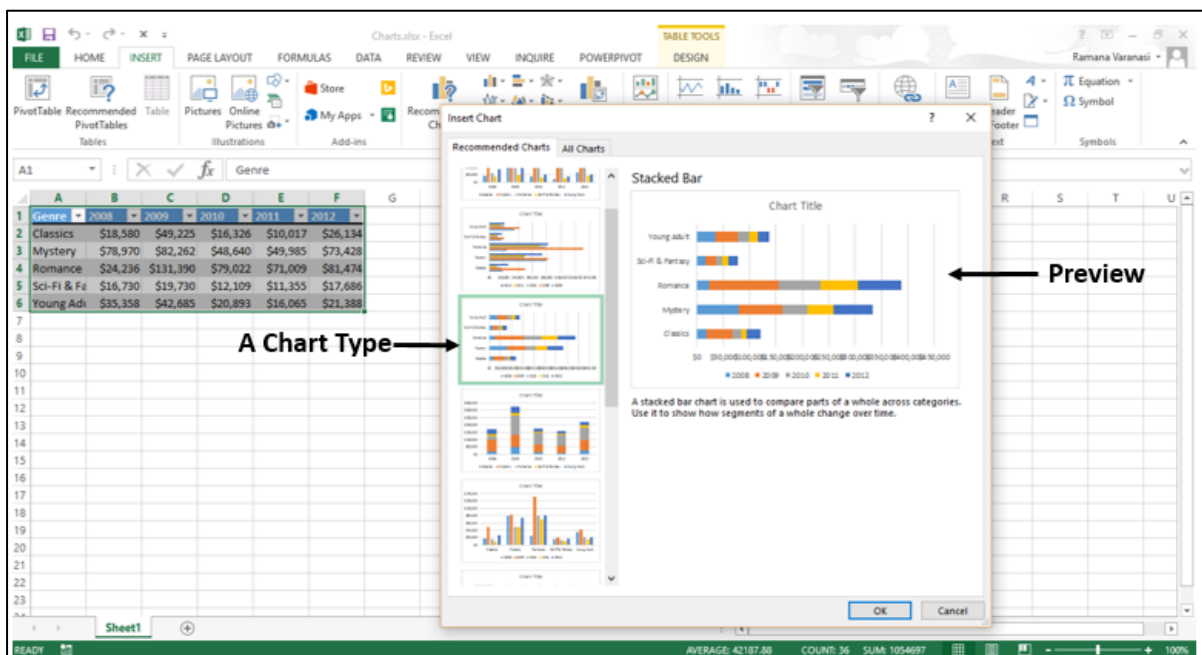
**Step 3:** Click **Recommended Charts**.

A window displaying the charts that suit your data will be displayed, under the tab **Recommended Charts**.

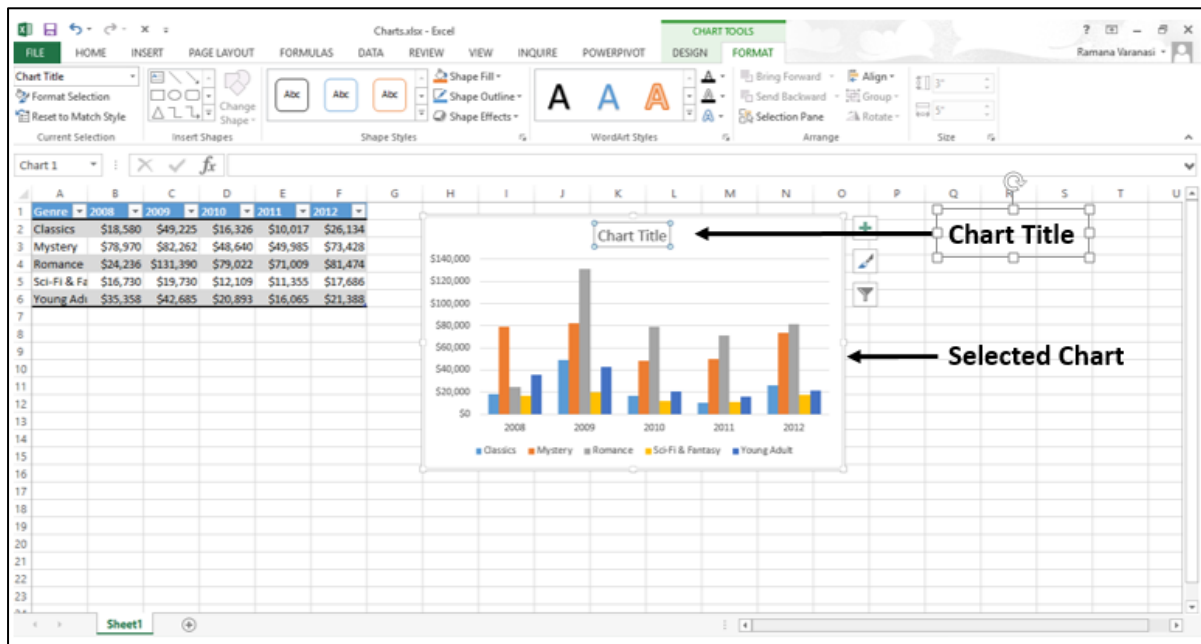


**Step 4:** Browse through the Recommended Charts.

**Step 5:** Click on a chart type to see the preview on the right side.

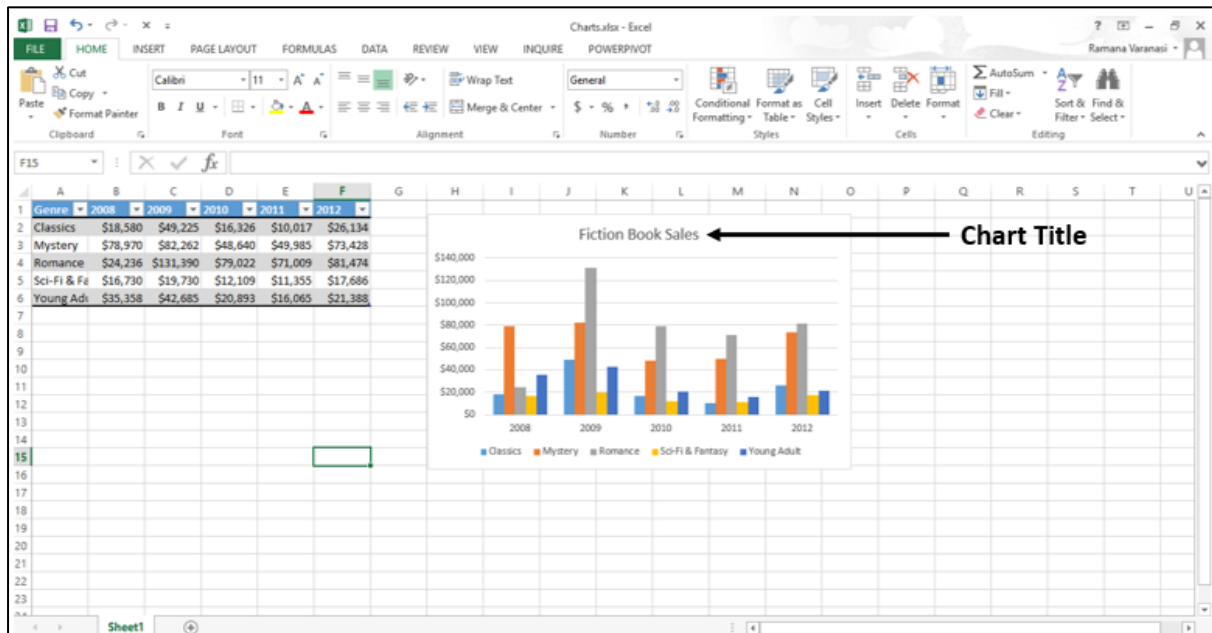


**Step 6:** Select the chart type you like. Click OK. The chart will be displayed in your worksheet.



If you do not see a chart you like, click the All Charts tab to see all the available chart types and pick a chart.


**Step 7:** Give a meaningful title to the chart by editing Chart Title.

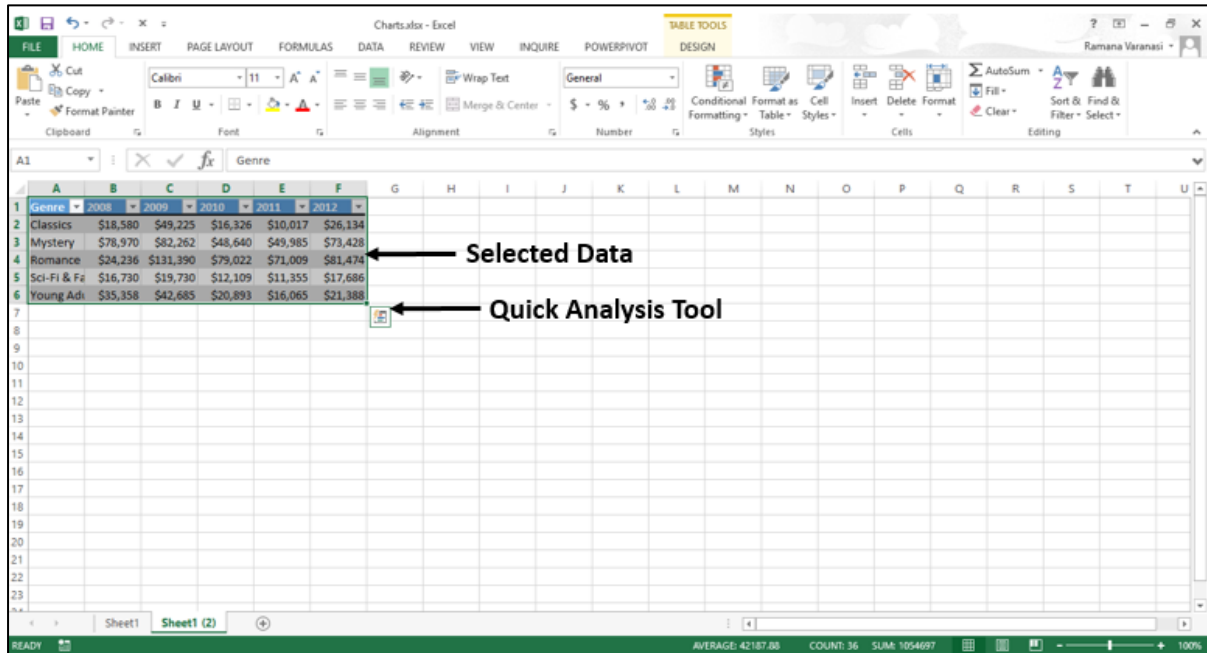


## Creating Charts with Quick Analysis

Follow the steps given to create a chart with Quick Analysis.

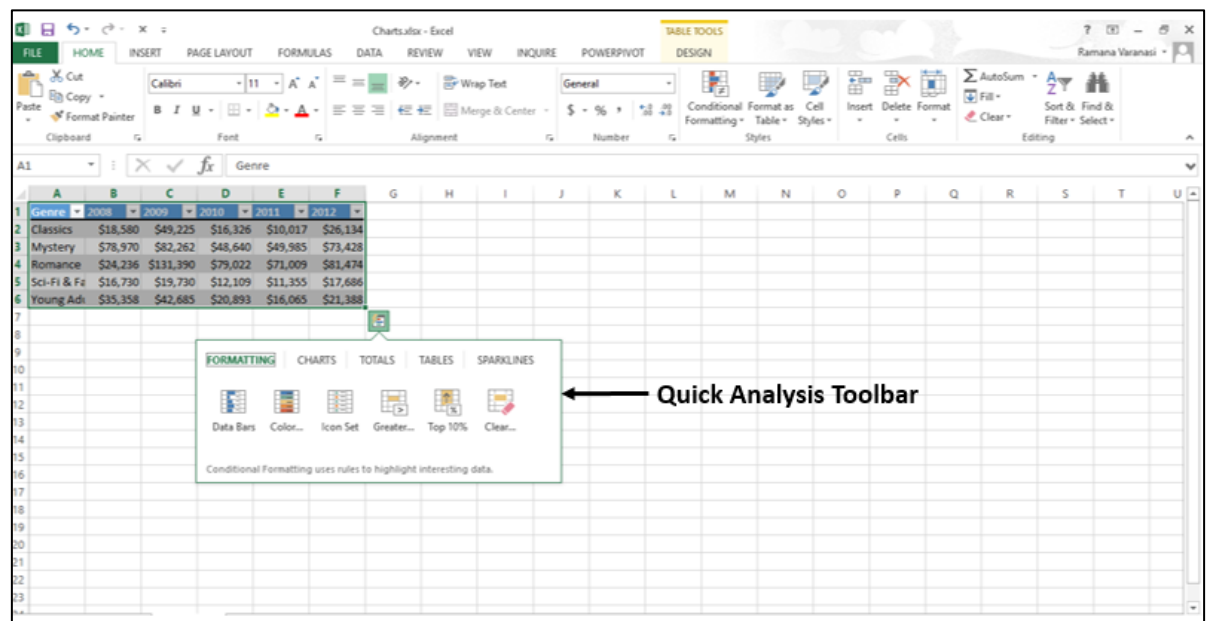
**Step 1:** Select the data.

A Quick Analysis button  appears at the bottom right of your selected data.



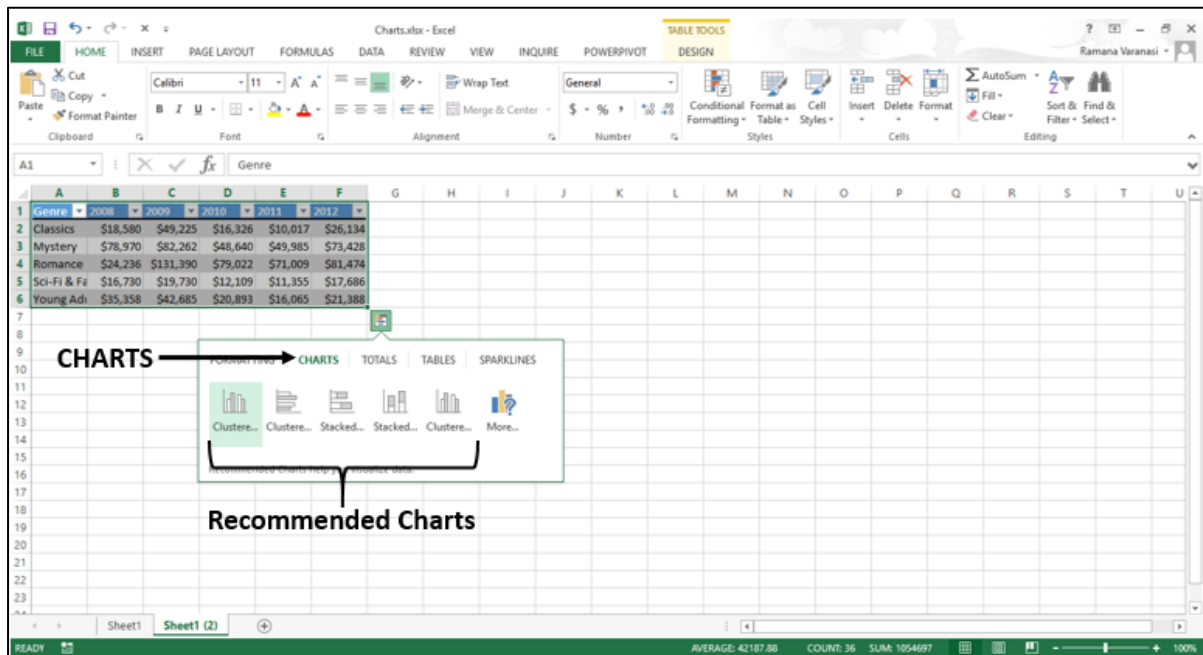
**Step 2:** Click the Quick Analysis  icon.

The Quick Analysis toolbar appears with the options **FORMATTING**, **CHARTS**, **TOTALS**, **TABLES**, **SPARKLINES**.

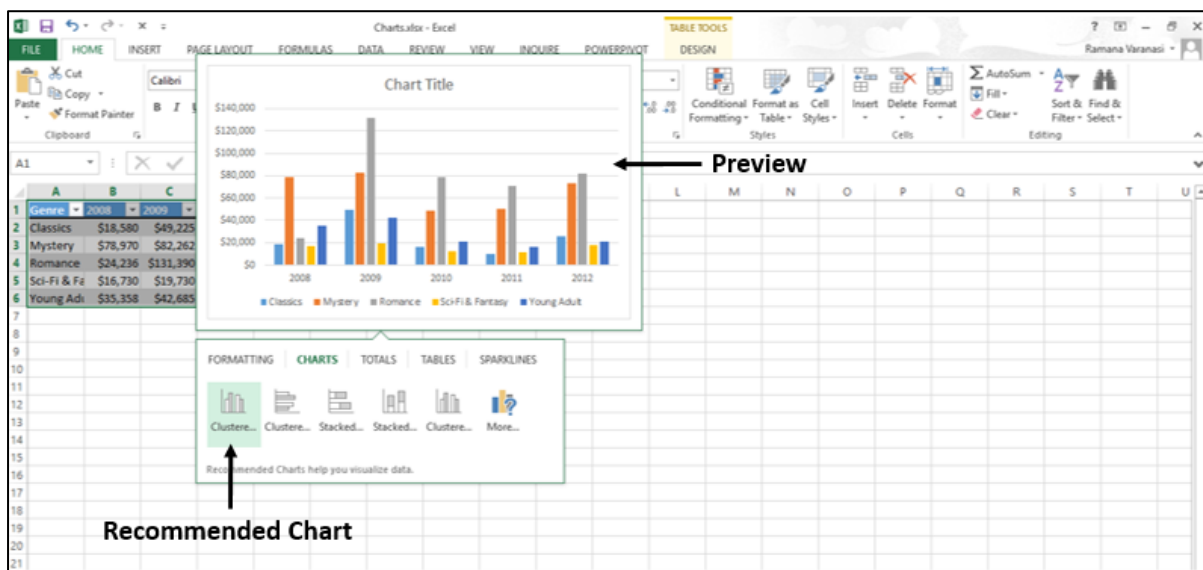


**Step 3:** Click the CHARTS option.

Recommended Charts for your data will be displayed.

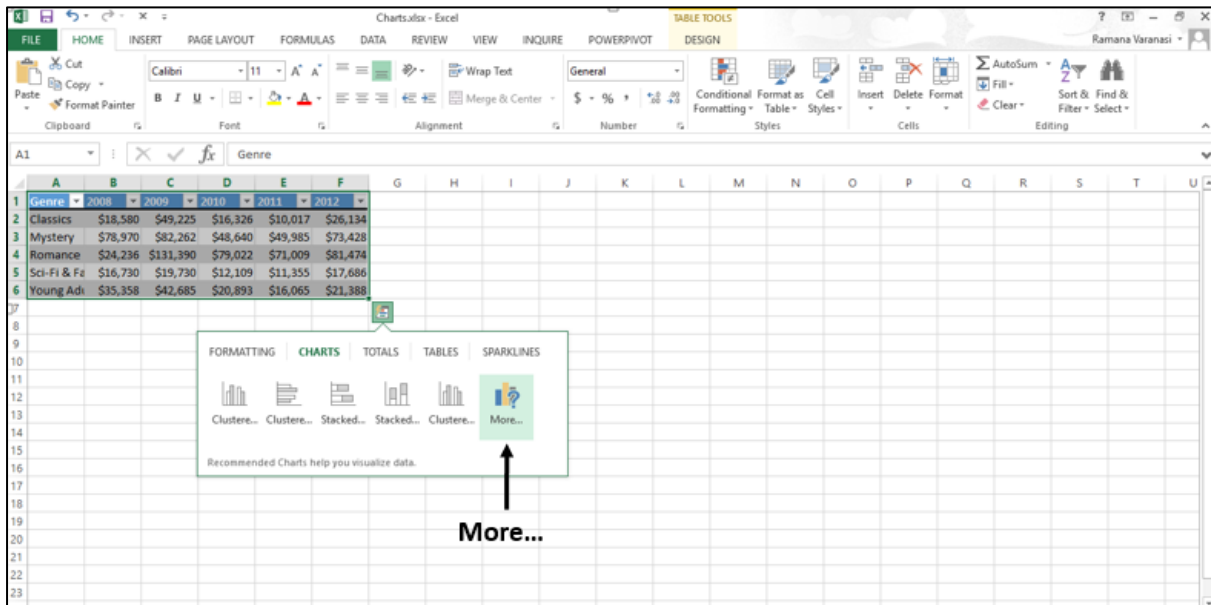


**Step 4:** Point the mouse over the **Recommended Charts**. Previews of the available charts will be shown.

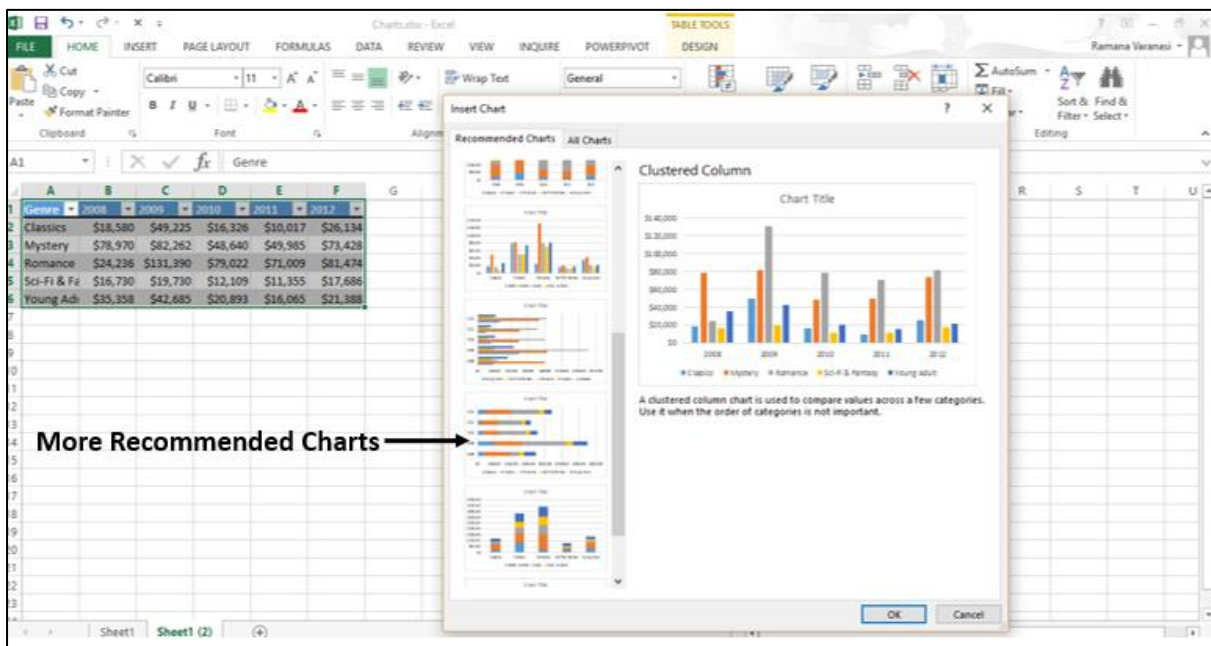




**Step 5: Click More.**

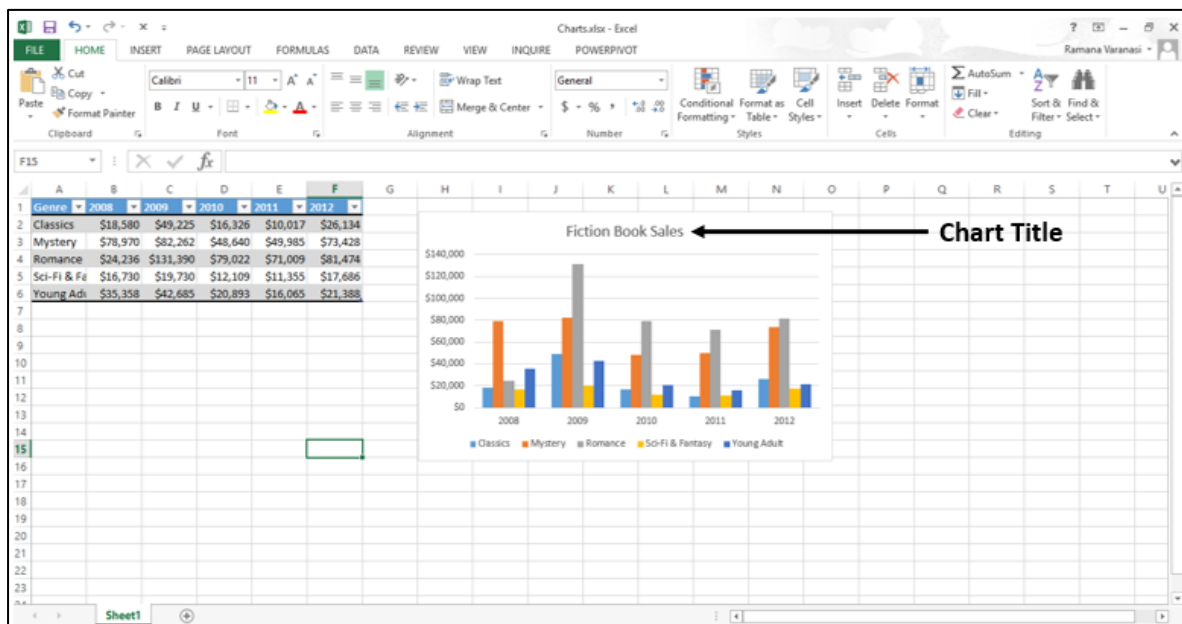


More Recommended Charts will be displayed.



**Step 6:** Select the type of chart you like, click OK. The chart will be displayed in your worksheet.

**Step 7:** Give a meaningful title to the chart by editing **Chart Title**.



# 3. Excel Chart – Types

Excel provides you different types of charts that suit your purpose. Based on the type of data, you can create a chart. You can also change the chart type later.

Excel offers the following major chart types-

- Column Chart
- Line Chart
- Pie Chart
- Doughnut Chart
- Bar Chart
- Area Chart
- XY (Scatter) Chart
- Bubble Chart
- Stock Chart
- Surface Chart
- Radar Chart
- Combo Chart

Each of these chart types have sub-types. In this chapter, you will have an overview of the different chart types and get to know the sub-types for each chart type.

## Column Chart

---

A Column Chart typically displays the categories along the horizontal (category) axis and values along the vertical (value) axis. To create a column chart, arrange the data in columns or rows on the worksheet.

A column chart has the following sub-types-

- Clustered Column.
- Stacked Column.
- 100% Stacked Column.
- 3-D Clustered Column.
- 3-D Stacked Column.
- 3-D 100% Stacked Column.
- 3-D Column.

## Line Chart

---

Line charts can show continuous data over time on an evenly scaled Axis. Therefore, they are ideal for showing trends in data at equal intervals, such as months, quarters or years.

In a Line chart-

- Category data is distributed evenly along the horizontal axis.
- Value data is distributed evenly along the vertical axis.

To create a Line chart, arrange the data in columns or rows on the worksheet.

A Line chart has the following sub-types:

- Line
- Stacked Line
- 100% Stacked Line
- Line with Markers
- Stacked Line with Markers
- 100% Stacked Line with Markers
- 3-D Line

## Pie Chart

---

Pie charts show the size of items in one data series, proportional to the sum of the items. The data points in a pie chart are shown as a percentage of the whole pie. To create a Pie Chart, arrange the data in one column or row on the worksheet.

A Pie Chart has the following sub-types-

- Pie
- 3-D Pie
- Pie of Pie
- Bar of Pie

## Doughnut Chart

---

A Doughnut chart shows the relationship of parts to a whole. It is similar to a Pie Chart with the only difference that a Doughnut Chart can contain more than one data series, whereas, a Pie Chart can contain only one data series.

A Doughnut Chart contains rings and each ring representing one data series. To create a Doughnut Chart, arrange the data in columns or rows on a worksheet.

## Bar Chart

---

Bar Charts illustrate comparisons among individual items. In a Bar Chart, the categories are organized along the vertical axis and the values are organized along the horizontal axis. To create a Bar Chart, arrange the data in columns or rows on the Worksheet.

A Bar Chart has the following sub-types-

- Clustered Bar
- Stacked Bar
- 100% Stacked Bar
- 3-D Clustered Bar
- 3-D Stacked Bar
- 3-D 100% Stacked Bar

## Area Chart

---

Area Charts can be used to plot the change over time and draw attention to the total value across a trend. By showing the sum of the plotted values, an area chart also shows the relationship of parts to a whole. To create an Area Chart, arrange the data in columns or rows on the worksheet.

An Area Chart has the following sub-types-

- Area
- Stacked Area
- 100% Stacked Area
- 3-D Area
- 3-D Stacked Area
- 3-D 100% Stacked Area

## XY (Scatter) Chart

---

XY (Scatter) charts are typically used for showing and comparing numeric values, like scientific, statistical, and engineering data.

A Scatter chart has two Value Axes-

- Horizontal (x) Value Axis
- Vertical (y) Value Axis

It combines x and y values into single data points and displays them in irregular intervals, or clusters. To create a Scatter chart, arrange the data in columns and rows on the worksheet.

Place the x values in one row or column, and then enter the corresponding y values in the adjacent rows or columns.

Consider using a Scatter chart when-

- You want to change the scale of the horizontal axis.
- You want to make that axis a logarithmic scale.

- Values for horizontal axis are not evenly spaced.
- There are many data points on the horizontal axis.
- You want to adjust the independent axis scales of a scatter chart to reveal more information about data that includes pairs or grouped sets of values.
- You want to show similarities between large sets of data instead of differences between data points.
- You want to compare many data points regardless of the time.
  - The more data that you include in a scatter chart, the better the comparisons you can make.

A Scatter chart has the following sub-types-

- Scatter
- Scatter with Smooth Lines and Markers
- Scatter with Smooth Lines
- Scatter with Straight Lines and Markers
- Scatter with Straight Lines

## Bubble Chart

---

A Bubble chart is like a Scatter chart with an additional third column to specify the size of the bubbles it shows to represent the data points in the data series.

A Bubble chart has the following sub-types-

- Bubble
- Bubble with 3-D effect

## Stock Chart

---

As the name implies, Stock charts can show fluctuations in stock prices. However, a Stock chart can also be used to show fluctuations in other data, such as daily rainfall or annual temperatures.

To create a Stock chart, arrange the data in columns or rows in a specific order on the worksheet. For example, to create a simple high-low-close Stock chart, arrange your data with High, Low, and Close entered as Column headings, in that order.

A Stock chart has the following sub-types-

- High-Low-Close
- Open-High-Low-Close
- Volume-High-Low-Close
- Volume-Open-High-Low-Close

## Surface Chart

---

A Surface chart is useful when you want to find the optimum combinations between two sets of data. As in a topographic map, colors and patterns indicate areas that are in the same range of values.

To create a Surface chart-

- Ensure that both the categories and the data series are numeric values.
- Arrange the data in columns or rows on the worksheet.

A Surface chart has the following sub-types-

- 3-D Surface
- Wireframe 3-D Surface
- Contour
- Wireframe Contour

## Radar Chart

---

Radar charts compare the aggregate values of several data series. To create a Radar chart, arrange the data in columns or rows on the worksheet.

A Radar chart has the following sub-types-

- Radar
- Radar with Markers
- Filled Radar

## Combo Chart

---

Combo charts combine two or more chart types to make the data easy to understand, especially when the data is widely varied. It is shown with a secondary axis and is even easier to read. To create a Combo chart, arrange the data in columns and rows on the worksheet.

A Combo chart has the following sub-types-

- Clustered Column – Line
- Clustered Column – Line on Secondary Axis
- Stacked Area – Clustered Column
- Custom Combination

End of ebook preview

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