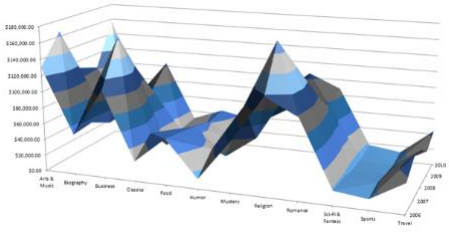
Charts in spreadsheet



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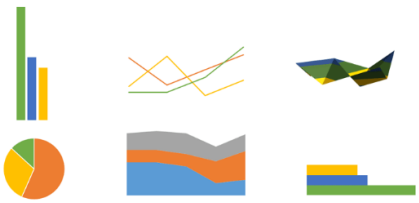
Introduction

In this topic we are going to discuss the following:

- Creating charts in a worksheet.
- Formatting charts.
- Setting pages for print.
- Setting header and footer.
- Changing page orientation.
- Selecting titles to print.
- Importing files into a spreadsheet.
- Linking files.



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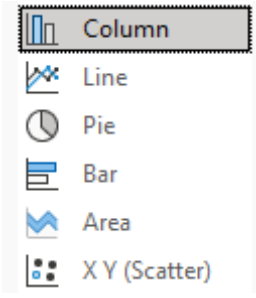
Charts in a spreadsheet

- A chart in a spreadsheet is defined as a **graphical representation** of data that helps to **visualize** information in form of **graphs**.
- Charts convert numerical data from a table into a visual format like bars, lines, and pie slices.
- Charts allow users to easily understand and analyse the following:
  - Data patterns
  - Data Trends
  - Data relationships

- We have the following **common types** of charts in a spreadsheet:
  a. **Bar chart:** this chart is made up of horizontal bars that are used to compare quantities of data.
  b. **Line chart:** this chart display points that are connected by a line to display trends in data.
  c. **Pie chart:** this chat shows the proportion of parts of a whole. Data is represented as slices of a pie.
  d. **Column chart:** this is made up of vertical bars that are used to compare quantities of data.

Charts in a spreadsheet

- We have the following common types of charts in a spreadsheet: **conti..**
  e. **Scatter Plot:** this chart displays data as individual points and it is used to show relationships between two numerical values. This is also called the **X Y chart**.
  f. **Area chart:** this chart is made up of shaded areas under a line to represent that magnitude of the data values.
- The figure on the right shows the common types of charts in spreadsheet.



Common chart types in a spreadsheet

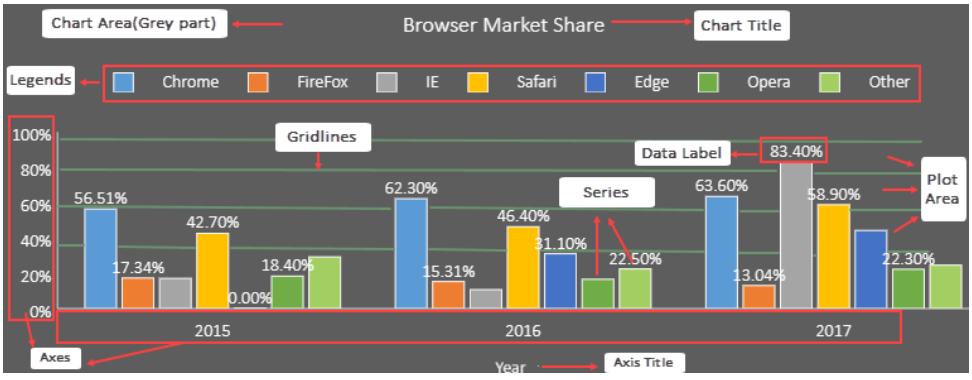
Charts in a spreadsheet

Elements of a chart in a spreadsheet

- The charts in a spreadsheet have the following elements:
  - a. **Title:** describes the main purpose of the chart. It is also called a chart **heading**.
  - b. **Axes:** we have two axes, the **x-axes**(horizontal axis). This represent categories or time interval. The **y-axes**(vertical axis), this represent the quantities or numerical values.
  - c. **Data series:** this shows a set of related data points plotted on the chart.
  - d. **Legend:** Briefly explains what each colour, line or bar represent in a chart.
  - e. **Data labels:** this is an option that displays specific values for each data point on the chart.
  - f. **Gridlines:** these are lines on the chart area that help to align and compare data points with their corresponding values on the axes.

The figure on the next slide illustrate the element described above on a sample chart.

Elements of a chart in a spreadsheet



Benefits of charts in a spreadsheet

Charts in a spreadsheet are very important in the following ways:

a. **Easy understanding:** charts simplify very complex data making it easier to understand.

b. **Easy presentation:** charts makes it easier to present data and convey the message easily.

c. **Visual analysis:** charts allow users to come up with a visual summary of data making it easier to spot trends and patterns.

Steps to follow when creating a char in a spreadsheet.

a. Create a data table for the quantities to be shown on the chart. (Data source).

b. Highlight the data source (table).

c. In the Ribbon, click on the Insert tab, then in the charts group of commands, click on the Recommended chart option.

d. Select the chart type you want form the recommended chart dialog box.

e. Click Ok.

Benefits of charts in a spreadsheet

Example:

- Consider an excel snippet below, use it to answer questions that follow:

	A	B	C	D
1	CODEGIYA SALES -HALF 2024 YEAR			
2				
3	**Month**	**Arduino**	**Rasberry Pie**	**Jumpers**
4	**January**	150	200	180
5	**February**	170	220	190
6	**March**	160	210	200
7	**April**	180	230	210
8	**May**	200	240	220
9	**June**	210	250	230
10				

a. Create a spreadsheet file and save it on the desktop as Codegiya sales.

b. In the spreadsheet file create two worksheets, the first one should be named data and the second one charts.

c. In the data worksheet enter the data as shown on the snippet above.

d. In the charts worksheet create a 3D clustered column chart and Pie chart to visualize the data from the data worksheet.

e. Insert a left footer as your name.

f. Change the page orientation to landscape.

g. Print the document.

Formatting charts in a spreadsheet

- Formatting a chart refers to the process of ***changing the appearance and style*** of a chart.
- Chart formatting is important because it allow the user to:
  a. Make the chart visually appealing.
  b. Make the chart easier to read.
  c. Highlight key information on the chart.
- Below are the areas that should be considered when formatting a chart:
  - ***Chart title, Axes titles and labels, Data Series, Legend (Key), Gridlines, chart style, chart colours (background colours), Borders, and Layout.***

Note

When you insert a chart in a spreadsheet, new tabs will appear (Chart Design, Layout, and Format) in the ribbon, use these tabs to format the chart. ***(this may depend on version of office being used)***

- To format inserted chart quickly, select the chart and use the quick format command on the chart.
- Below is a diagram showing the quick commands on a chart.

Formatting charts in a spreadsheet

From MS Office 2010 and above, use:

- Use the **Plus icon** to add or remove Chart elements such as ***Axes, Axis titles, Chart titles, Data labels, Data tables, Gridlines, and Legend***.
- The **brush icon** to change the ***style*** and ***colours*** of the chart.
- The **Funnel icon** to chooses which data ***series*** and ***categories*** should be visible on your chart.

Example

Using the charts created early, do the following on the clustered column chart:

- Change chart style to style number 9.
- Add 'Codegiya half year sales - 2024' as chart title.
- Add chart titles and put the correct data labels.
- Add all major primary gridlines.
- Move the legend to the right of the chart.