

# Advance Excel for Data Analysis

# CHARTS

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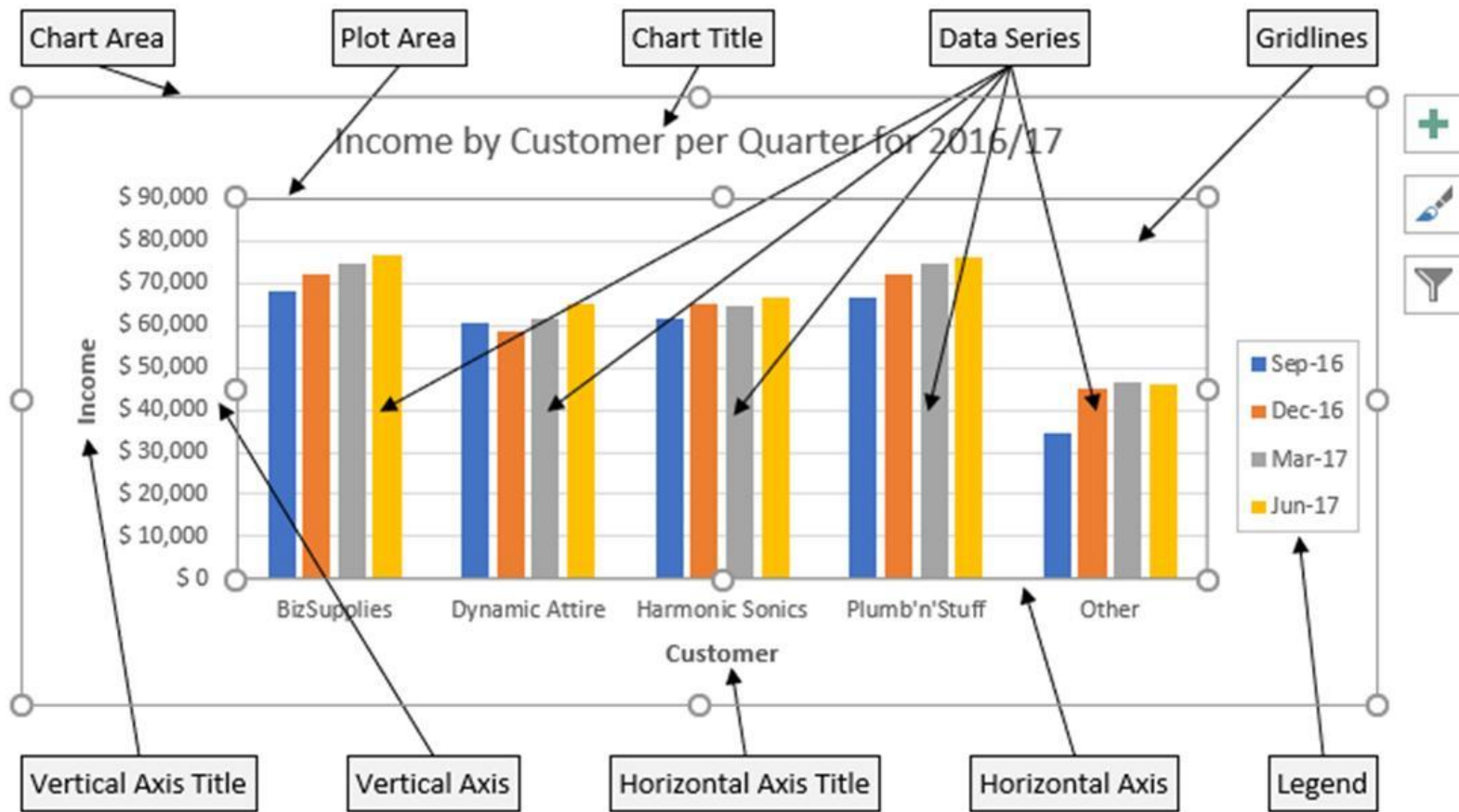
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A chart is a graphical representation of data that allows you to visualize and analyze information more easily. It provides a visual way to interpret and present data trends, comparisons, and relationships.



# CHART ELEMENTS

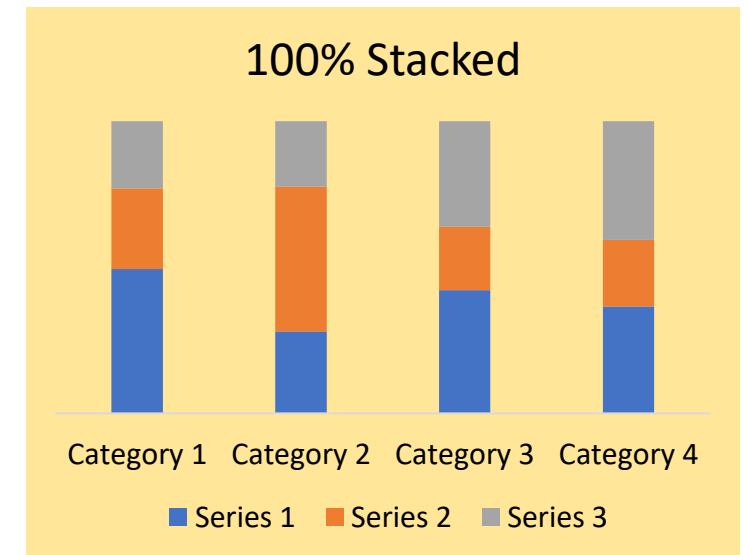
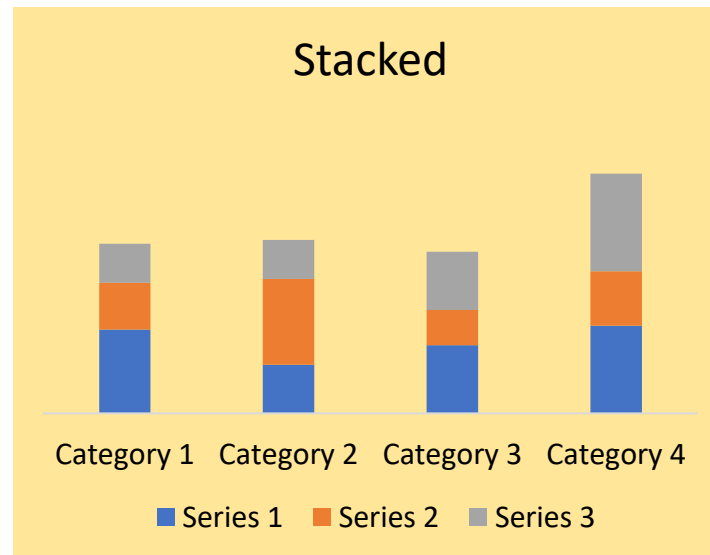
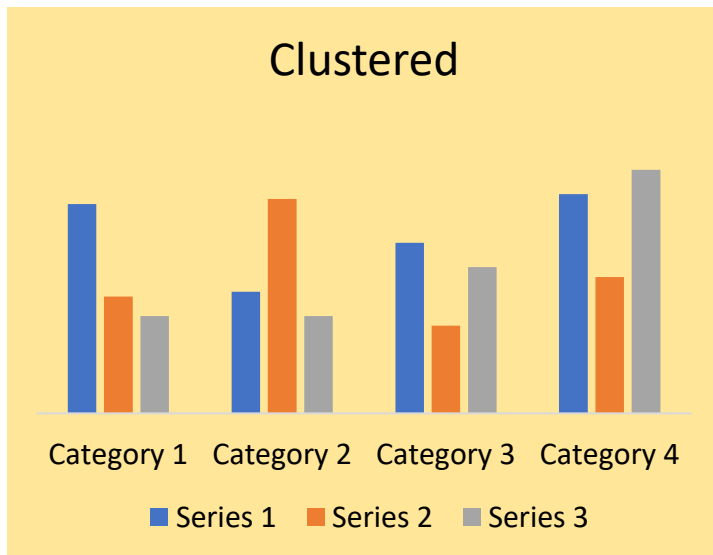
Chart Elements	Uses
Axes	The lines that define the scale and range of values for the chart.
Axis Titles	Labels for the x and y axes of the chart.
Chart Area	The entire chart and all its elements.
Chart Title	A descriptive title that appears above the chart.
Data Labels	Labels that identify the value of each data point in the chart.
Data Points	The individual values that make up a data series and are plotted on the chart.
Data Series	The individual sets of data that are plotted on the chart.
Error Bars	Lines that indicate the range of values that include the true value for each data point.
Gridlines	The horizontal and vertical lines that form a grid in the plot area to aid in reading the chart.
Legend	A box that identifies the data series displayed in the chart.
Plot Area	The area on the chart that displays the data series.
Trendline	A line that shows the general trend of the data.



# CHART ELEMENTS

# TYPES OF CHARTS

- 1. Clustered Chart:** A clustered chart is used to compare values across different categories or groups. In this type of chart, multiple data series are plotted side by side, allowing easy comparison of values within each category. Each data series is represented by a separate column or bar, and the height or length of each column/bar represents the value of the data series.
- 2. Stacked Chart:** A stacked chart is used to display the cumulative total of different data series. In this type of chart, multiple data series are stacked on top of each other to show the total value at each category. The height or length of each segment within a stack represents the contribution of that data series to the total. Stacked charts are useful for comparing the total and relative proportions of different data series.
- 3. 100% Stacked Chart:** A 100% stacked chart is similar to a stacked chart, but the cumulative total is presented as a percentage rather than an absolute value. Each stack in the chart represents 100%, and the height or length of each segment within a stack represents the percentage contribution of that data series to the total. This type of chart is useful when you want to compare the relative proportions of different data series while maintaining consistency in the overall scale.



# TYPES OF CHARTS

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Types of Charts	Definition
Column Chart	Used to compare data across categories using vertical bars.
Line Chart	Used to show trends over time.
Pie Chart	Used to show the proportion of each data point as a slice of a circular pie.
Bar Chart	Used to compare data across categories using horizontal bars.
Area Chart	Used to show trends over time and the cumulative total of data series.
Scatter Chart	Used to show the relationship between two sets of data.
Bubble Chart	Used to show the relationship between three sets of data using the size of bubbles to represent the value of the third variable.
Stock Chart	Used to show the stock price trend over time.
Surface Chart	Used to show trends in three-dimensional data.
Radar Chart	Used to show the distribution of values across multiple data points on a circular grid.

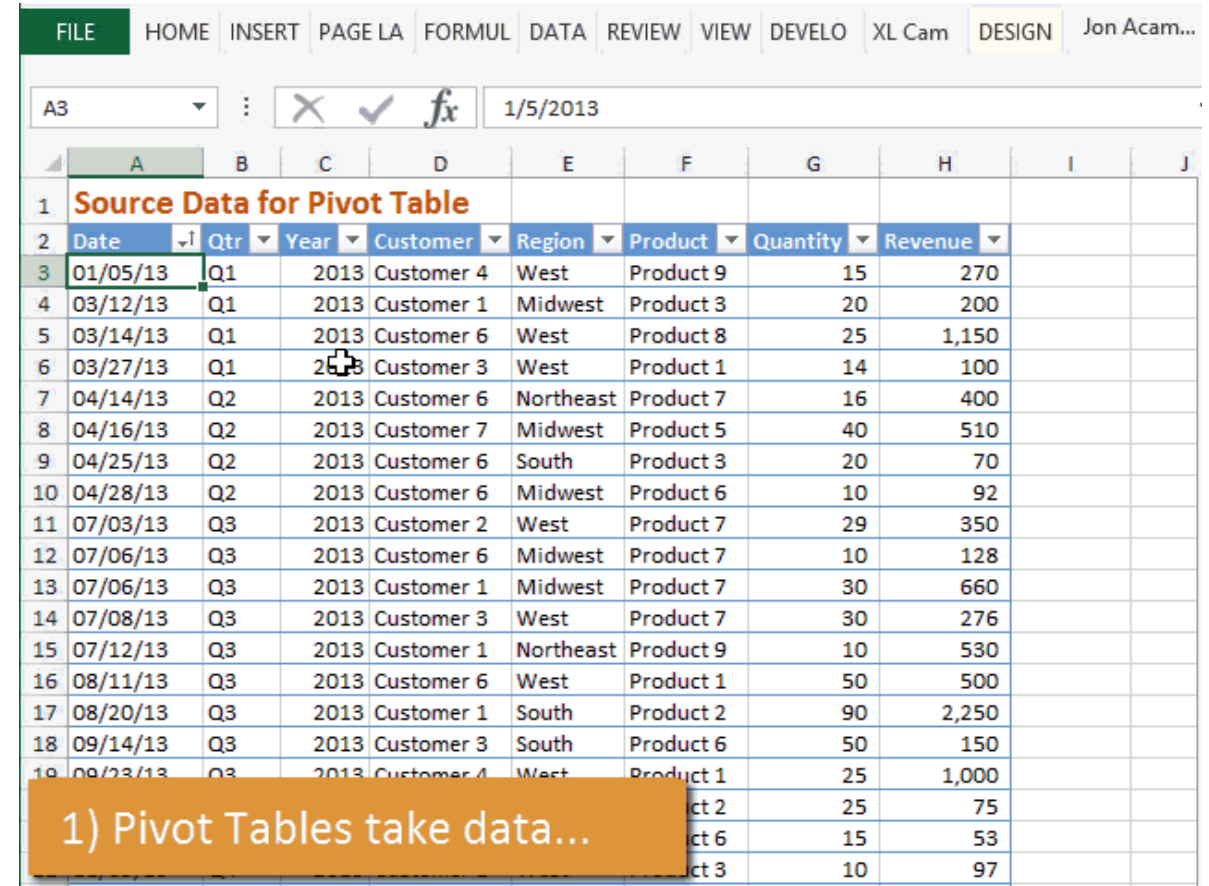
# PIVOT TABLE



# Pivot Table

An Excel *Pivot Table* is a tool to explore and summarize large amounts of data, analyze related totals and present summary reports designed to:

- Present large amounts of data in a user-friendly way.
- Summarize data by categories and subcategories.
- Filter, group, sort and conditionally format different subsets of data so that you can focus on the most relevant information.
- Rotate rows to columns or columns to rows (which is called "pivoting") to view different summaries of the source data.
- Subtotal and aggregate numeric data in the spreadsheet.
- Expand or collapse the levels of data and drill down to see the details behind any total.
- Present concise and attractive online of your data or printed reports.



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	A	B	C	D	E	F	G	H	I	J
1	<b>Source Data for Pivot Table</b>									
2	Date	Qtr	Year	Customer	Region	Product	Quantity	Revenue		
3	01/05/13	Q1	2013	Customer 4	West	Product 9	15	270		
4	03/12/13	Q1	2013	Customer 1	Midwest	Product 3	20	200		
5	03/14/13	Q1	2013	Customer 6	West	Product 8	25	1,150		
6	03/27/13	Q1	2013	Customer 3	West	Product 1	14	100		
7	04/14/13	Q2	2013	Customer 6	Northeast	Product 7	16	400		
8	04/16/13	Q2	2013	Customer 7	Midwest	Product 5	40	510		
9	04/25/13	Q2	2013	Customer 6	South	Product 3	20	70		
10	04/28/13	Q2	2013	Customer 6	Midwest	Product 6	10	92		
11	07/03/13	Q3	2013	Customer 2	West	Product 7	29	350		
12	07/06/13	Q3	2013	Customer 6	Midwest	Product 7	10	128		
13	07/06/13	Q3	2013	Customer 1	Midwest	Product 7	30	660		
14	07/08/13	Q3	2013	Customer 3	West	Product 7	30	276		
15	07/12/13	Q3	2013	Customer 1	Northeast	Product 9	10	530		
16	08/11/13	Q3	2013	Customer 6	West	Product 1	50	500		
17	08/20/13	Q3	2013	Customer 1	South	Product 2	90	2,250		
18	09/14/13	Q3	2013	Customer 3	South	Product 6	50	150		
19	09/23/13	Q3	2013	Customer 4	West	Product 1	25	1,000		
						Product 2	25	75		
						Product 6	15	53		
						Product 3	10	97		

1) Pivot Tables take data...

# Pivot Table

1. Pivot Table
2. Group Items – Text & Dates
3. Multi-level Pivot Table
4. Group Items – Numbers
5. Pivot Chart
6. Slicers
7. Update Pivot Table
8. Calculated Field & Calculated Item
9. Get Pivot Data



Excel Pivot Tables