
Excel Assignment 1

1. What is Excel? Why do we use Excel?

Excel is a spreadsheet program from Microsoft and a component of its Office product group for business applications. Microsoft Excel enables users to format, organize and calculate data in a spreadsheet.

Excel is used to store, analyze, and report on large amounts of data. It is often used by accounting teams for financial analysis, but can be used by any professional to manage long and unwieldy datasets. Examples of Excel applications include balance sheets, budgets, or editorial calendars.

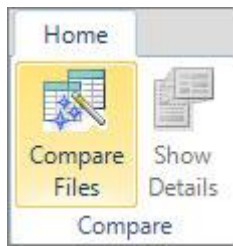
2. List all the versions of Microsoft excel. Compare excel software provided from multiple vendors.


If other people can edit your workbook, you might open it and wonder "Who changed this? And what did they do?" Microsoft Spreadsheet Compare can answer these questions by finding these changes and highlighting them for you.

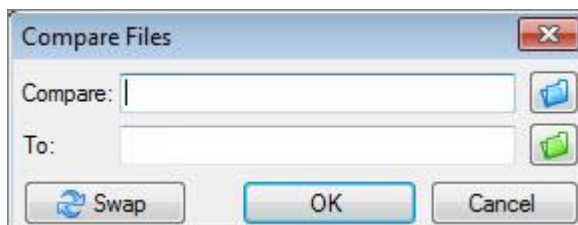
Important: Spreadsheet Compare is only available with Office Professional Plus 2013, Office Professional Plus 2016, Office Professional Plus 2019, or Microsoft 365 Apps for enterprise.


1. Open Spreadsheet Compare.
2. In the lower-left pane, choose the options you want included in the workbook comparison, such as formulas, cell formatting, or macros. Or, just **Select All**.

3. On the **Home** tab, choose **Compare Files**.



4. In the **Compare Files** dialog box, in the **Compare** row, browse  to the earlier version of your workbook. In addition to files saved on your computer or on a network, you can enter a web address to a site where your workbooks are saved.



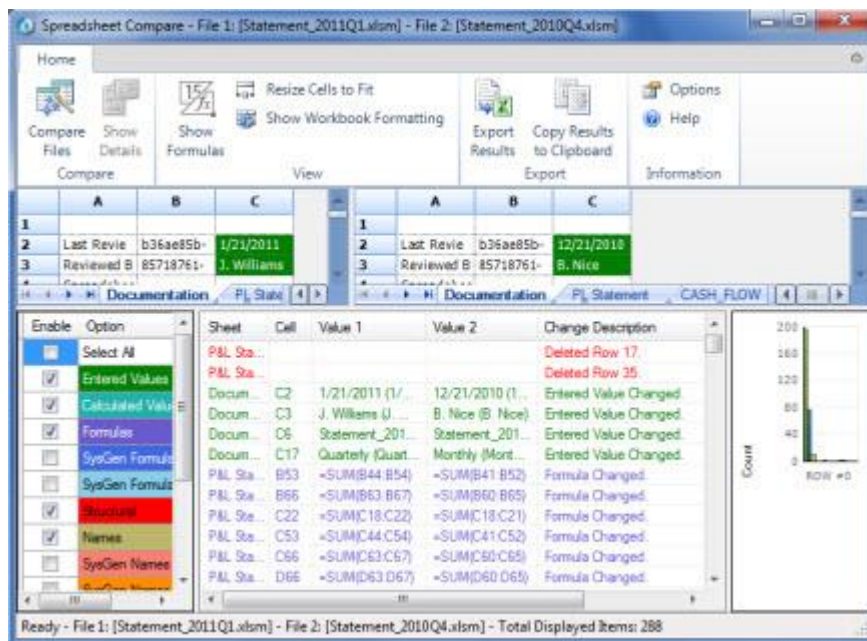
5. In the **Compare Files** dialog box, in the **To** row, browse  to the version you want to compare that earlier version against.

Note: You can compare two files with the same name if they're saved in different folders.

6. Choose **OK** to run the comparison.

Note: If you get an "Unable to open workbook" message, this might mean a workbook is password protected. Click **OK** and then enter the password. Learn more about [how passwords and Spreadsheet Compare work together](#).

The results of the comparison appear in a two-pane grid. The workbook on the left corresponds to the "Compare" file you chose and the workbook on the right corresponds to the "To" file. Details appear in a pane below the two grids. Changes are highlighted by color, depending on the kind of change.



3. How to create bar charts in excel, demonstrated with practical examples.

Bar charts in Excel are useful in representing the single data on the horizontal bar. They represent the values in horizontal bars. Categories are displayed on the Y-axis in these charts, and values are shown on the X-axis. To create or make a bar chart, a user needs at least two variables, i.e., independent and dependent variables.

For example, we can potentially turn any Excel data into a stacked bar graph that can display comparisons between categories of data, ranking, part-to-whole, deviation, or distribution. It compares parts of a whole with the ability to break down. We can also use the clustered bar chart to represent more than one data series in clustered horizontal columns when the data is complex and difficult to understand. In addition, we can also use a 3D bar chart to provide the title to the chart and define labels and values to create the chart more understandable.

Independent Variable: This does not change concerning any other variable.

Dependent Variable: This change concerning the independent variable.

Mainly there are three types of bar charts in Excel.

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1. **Stacked Bar Chart:** It is also referred the segmented chart. It represents all the dependent variables by stacking them together and on top of other variables.
 2. **Clustered Bar Chart:** This chart groups all the dependent variables together to display in a graph format. A clustered chart with two dependent variables is the double graph.
 3. **3D Bar Chart:** This chart represents all the dependent variables in 3D representation.



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Examples to Create Various Types of Bar Charts in Excel

You can download this Bar Chart Excel Template here – [Bar Chart Excel Template](#)

Example #1 – Stacked Bar Chart

This example illustrates how to create a stacked bar graph in simple steps.

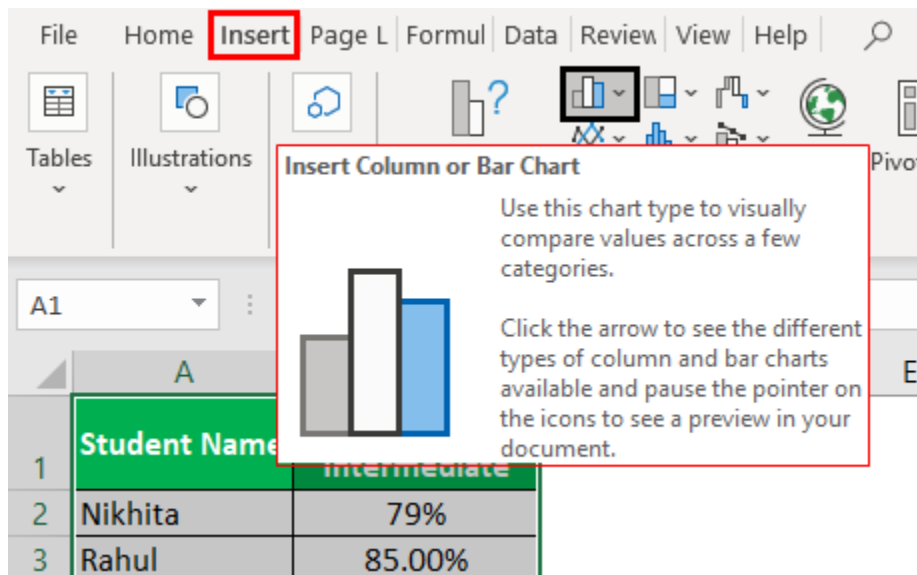
1. **First, we must enter the data into the Excel sheets in the table format, as shown in the figure.**

	A	B	C
1	Student Name	Percentage in Intermediate	
2	Nikhita	79%	
3	Rahul	85.00%	
4	Raj	89.00%	
5	Nirmal	91.00%	
6	Saurav	97.00%	
7	Aditi	80%	
8	Aakash	95%	
9	Rajaneesh	94%	
10			

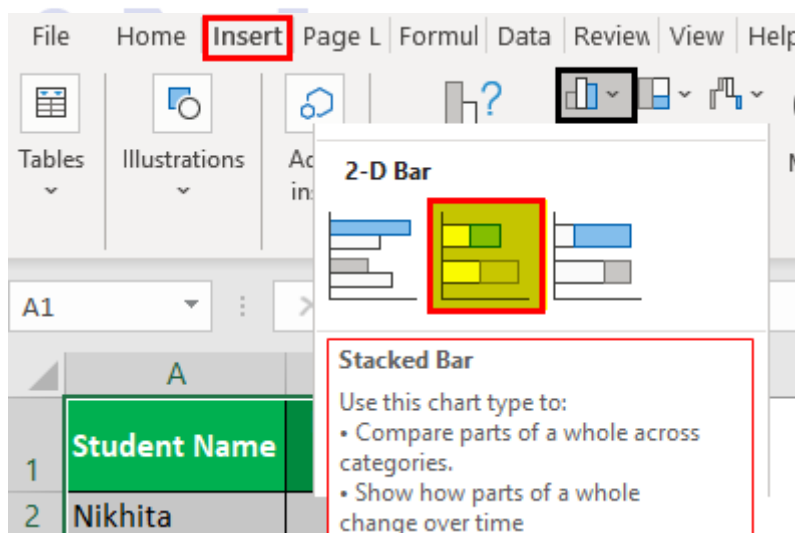
2. **Then, select the entire table by clicking and dragging or placing the cursor anywhere in the table and press “CTRL+A” to select the whole table.**

	A	B	C
1	Student Name	Percentage in Intermediate	
2	Nikhita	79%	
3	Rahul	85.00%	
4	Raj	89.00%	
5	Nirmal	91.00%	
6	Saurav	97.00%	
7	Aditi	80%	
8	Aakash	95%	
9	Rajaneesh	94%	
10			

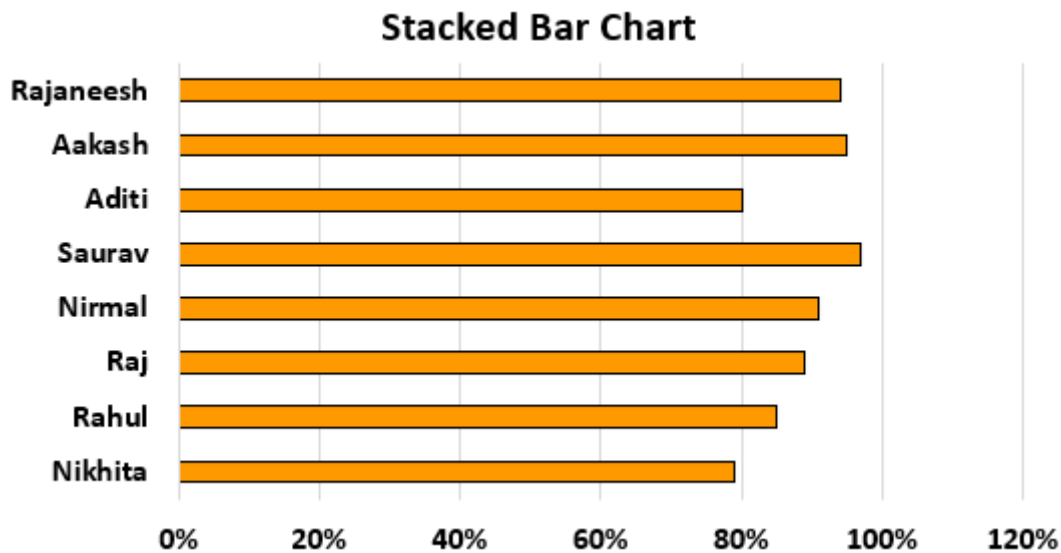
3. **Next, we will go to the “Insert” tab and move the cursor to the insert bar chart option.**



4. Under the 2D bar chart, we select the stacked bar chart, as shown in the figure below.

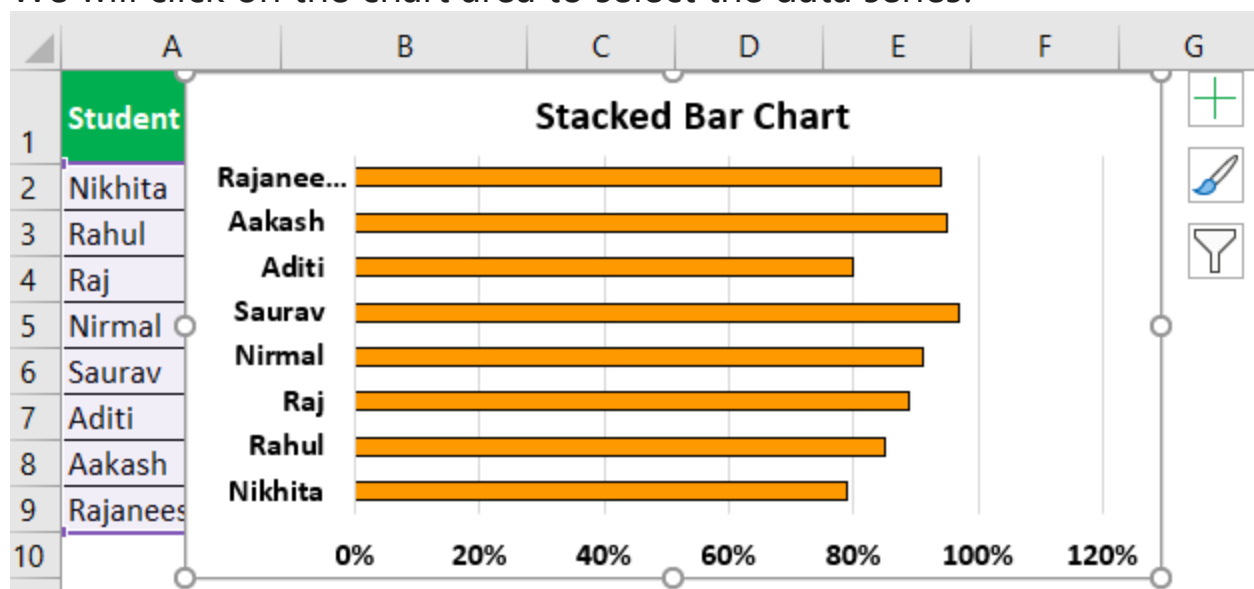


5. We may see the stacked bar chart as shown below.

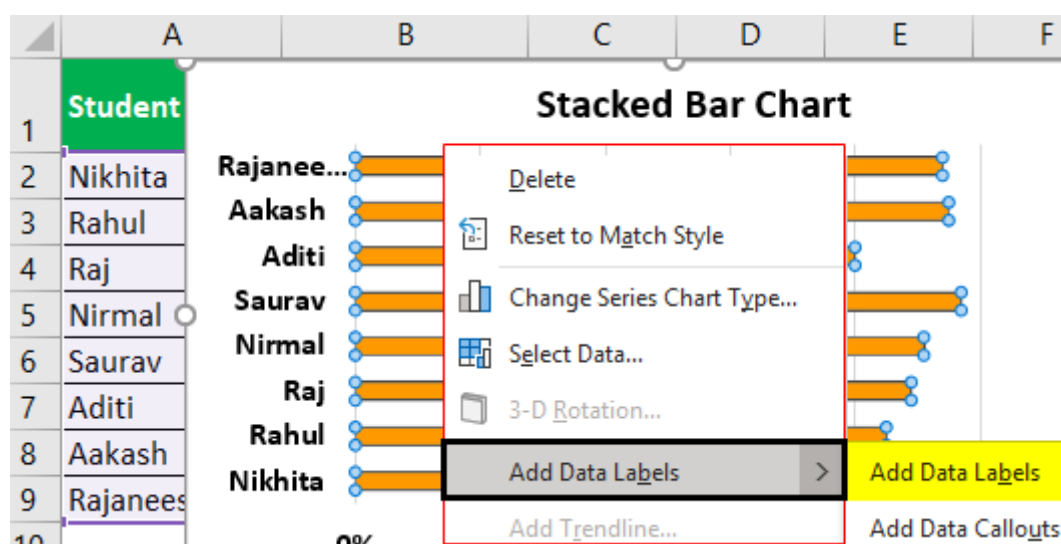


6. We will add “Data Labels” to the data series in the plotted area.

We will click on the chart area to select the data series.



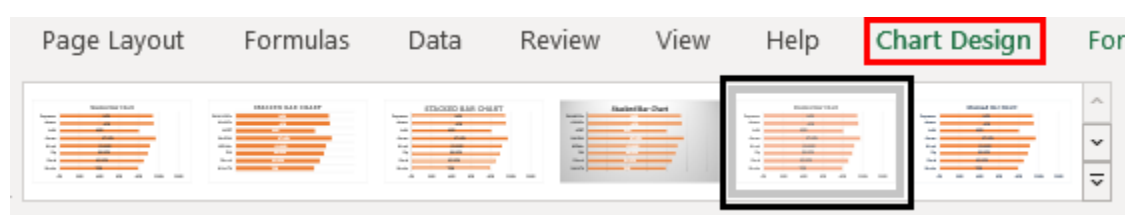
7. Now, as shown in the screenshot, we will right-click on the data series and choose the add data labels to add the data label option.



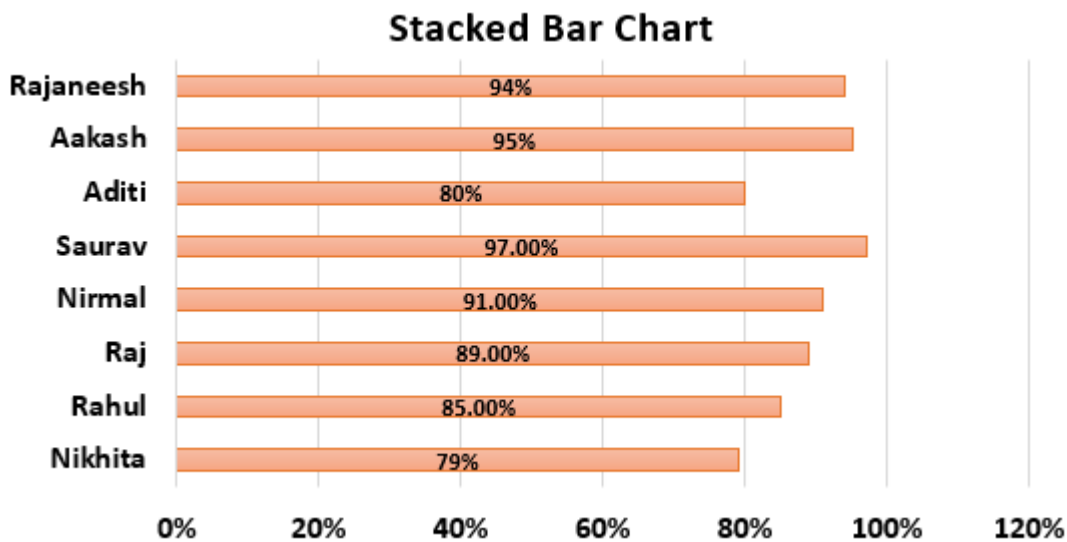
8. We can move the bar chart to the desired place in the worksheet. Then, we can click on the edge and drag it with the mouse.

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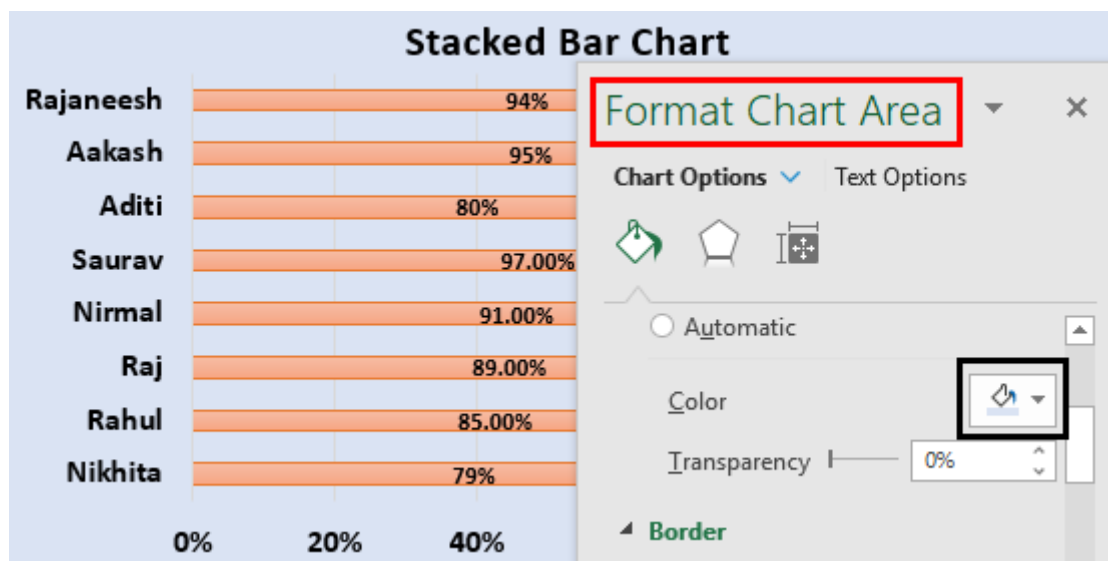
9. We can change the design of the bar chart utilizing the various options available, including changing color, changing the chart type, and moving the chart from one sheet to another sheet.



We get the following stacked bar chart.



We can use the “Format Chart Area” to change color, transparency, dash type, cap type, and join type.



Example #2 – Clustered Bar Chart

This example illustrates how to [create a clustered bar chart](#) in simple steps.

- **Step 1:** As shown in the figure, we must enter the data into the Excel sheets in the [excel table format](#), as shown in the figure.

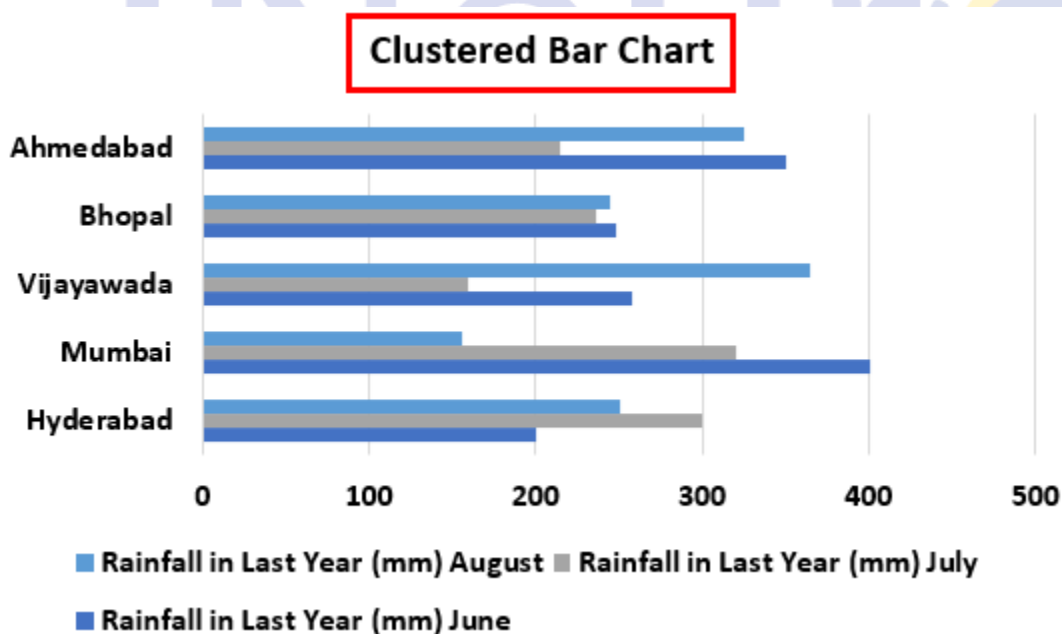
	A	B	C	D	E
1	Rainfall in Last Year (mm)				
2	City	June	July	August	
3	Hyderabad	200	300	250	
4	Mumbai	400	320	156	
5	Vijayawada	258	159	364	
6	Bhopal	248	236	245	
7	Ahmedabad	350	214	325	
8					

- **Step 2:** We need to select the entire table by clicking and dragging or placing the cursor anywhere in the table and pressing **"CTRL+A"** to choose the whole table.

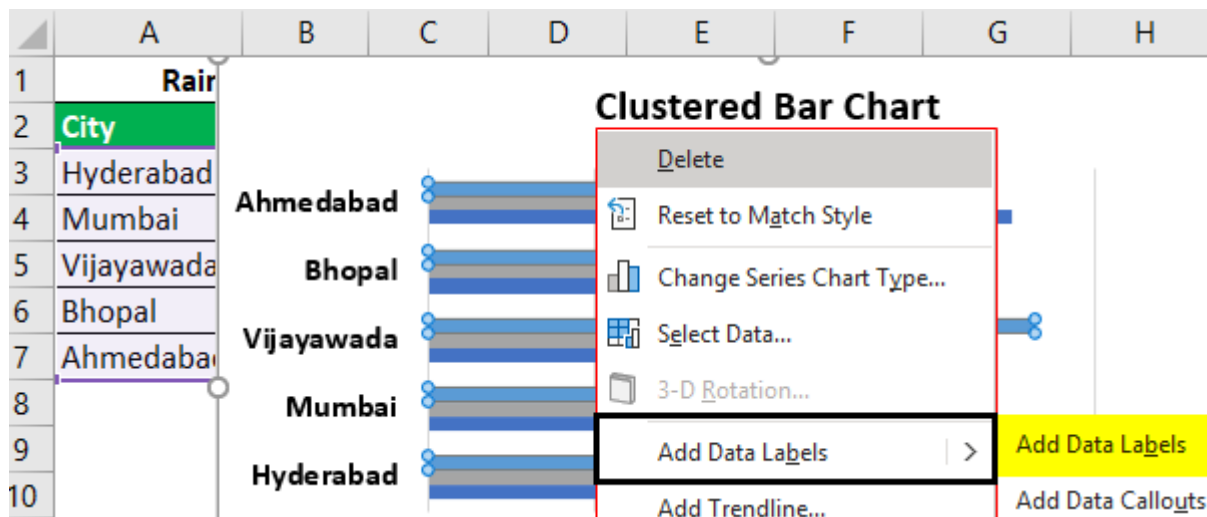


- **Step 3:** We will go to the "Insert" tab and move the cursor to the insert bar chart option. Then, under the "2D Bar Chart," select the clustered bar chart shown in the figure below.

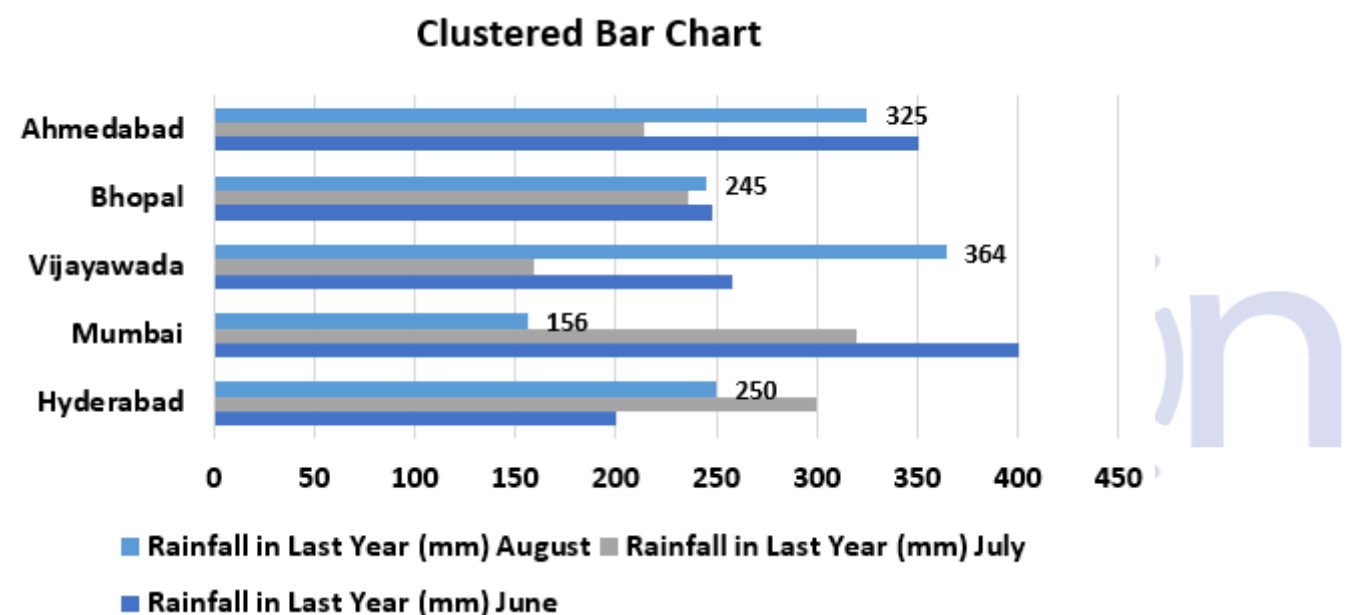
- **Step 4:** Next, we will add a suitable title to the chart, as shown in the figure.



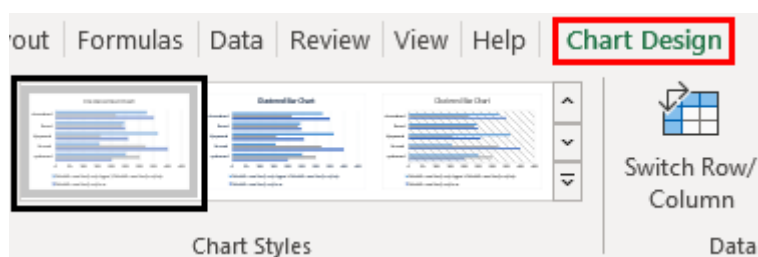
- **Step 5:** Now, we will right-click on the data series and choose the add data labels to add the data label option, as shown in the screenshot.



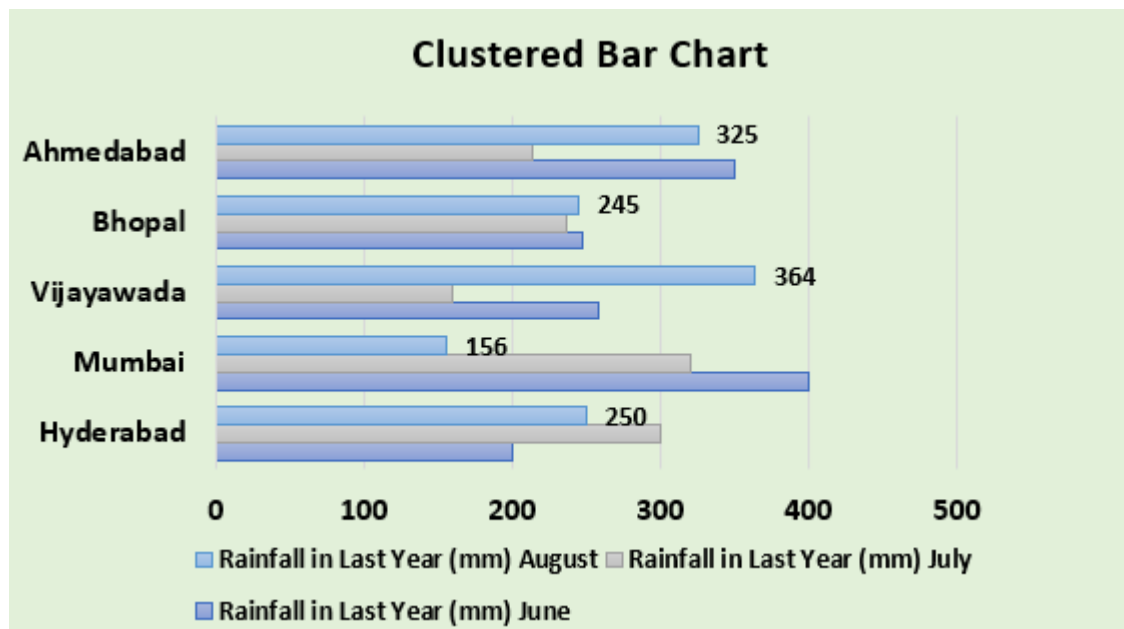
The data is added to the plotted chart, as shown in the figure.



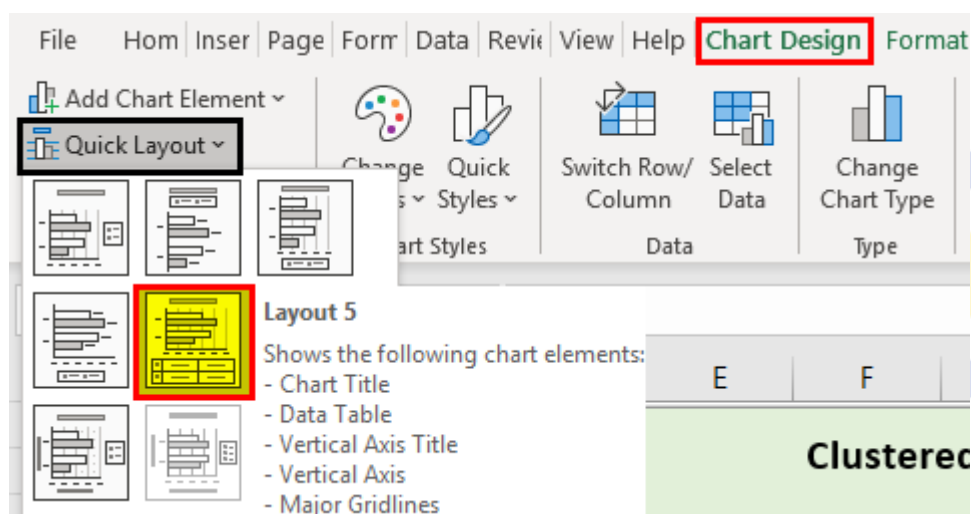
- Step 6:** We will now apply to format to change the design of the charts using the "Design" and "Format" tabs of the chart, as shown in the figure.



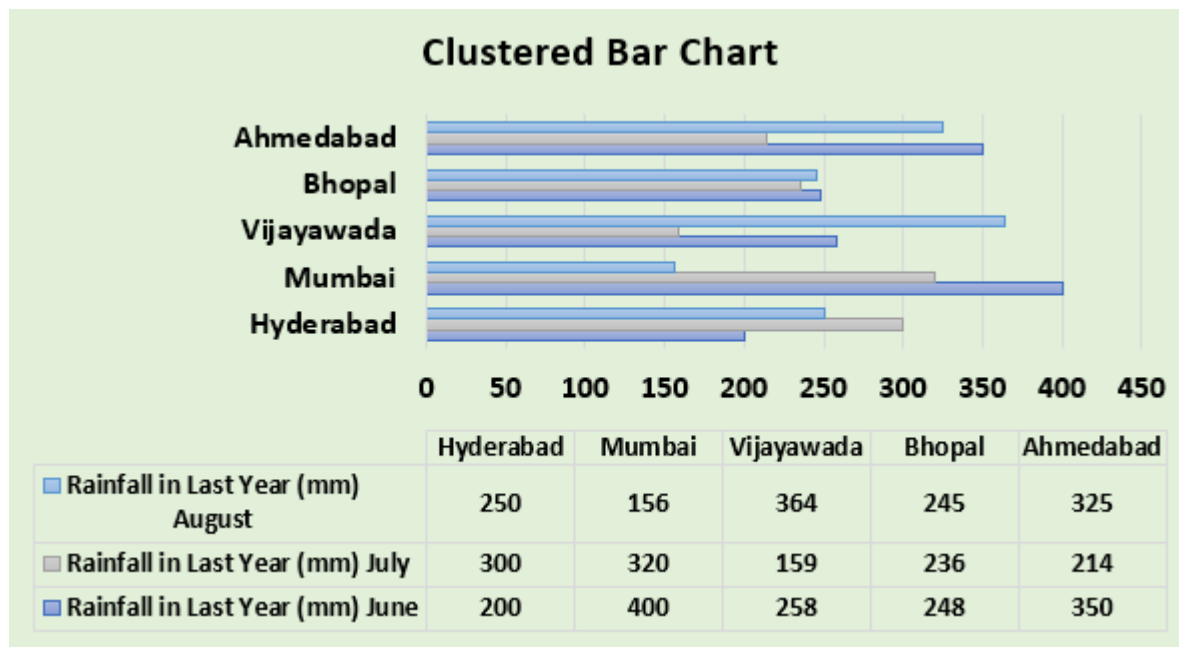
As a result, we can get the following chart.



We can also change the chart's layout using the "Quick Layout" feature.



Therefore, we will get the following clustered bar chart.



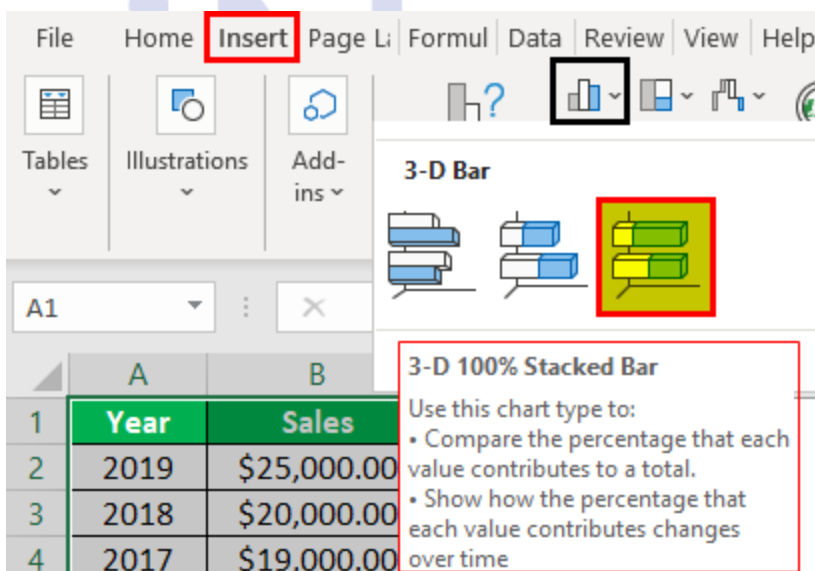
Example #3 – 3D Bar Chart

This example illustrates creating a 3D bar chart in Excel in simple steps.

- **Step 1:** First, we must enter the data into the Excel sheets in the table format, as shown in the figure.

- **Step 2:** We will now select the whole table by clicking and dragging or placing the cursor anywhere in the table and pressing **“CTRL+A”** to choose the table completely.

- **Step 3:** Next, we will go to the "Insert" tab and move the cursor to the insert bar chart option. Under the "3D Bar Chart," select the 100% stacked bar chart, as shown in the figure below.

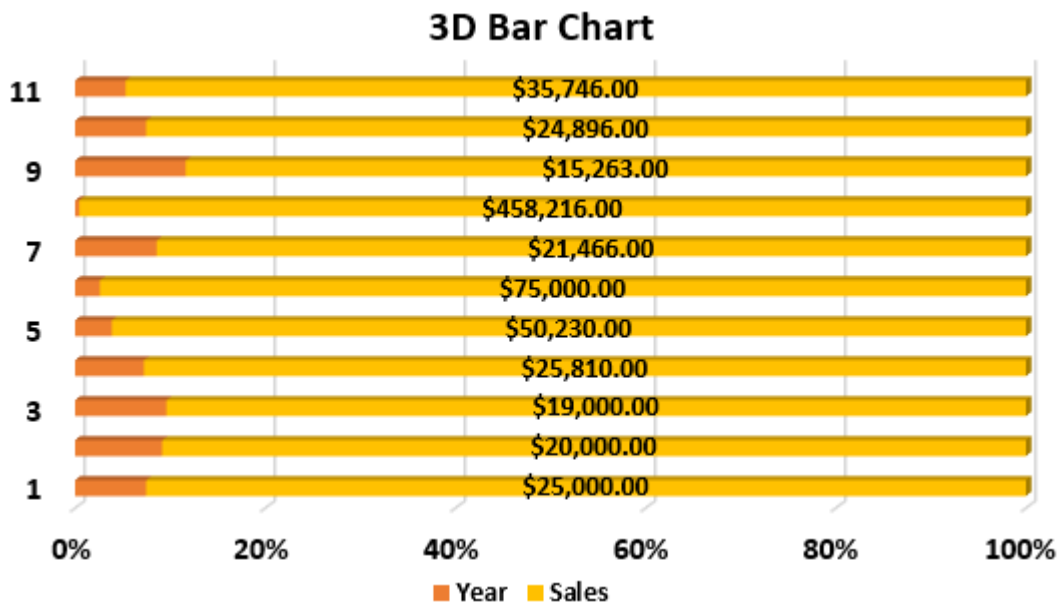


- **Step 4:** Now will add a suitable title to the chart, as shown in the figure.

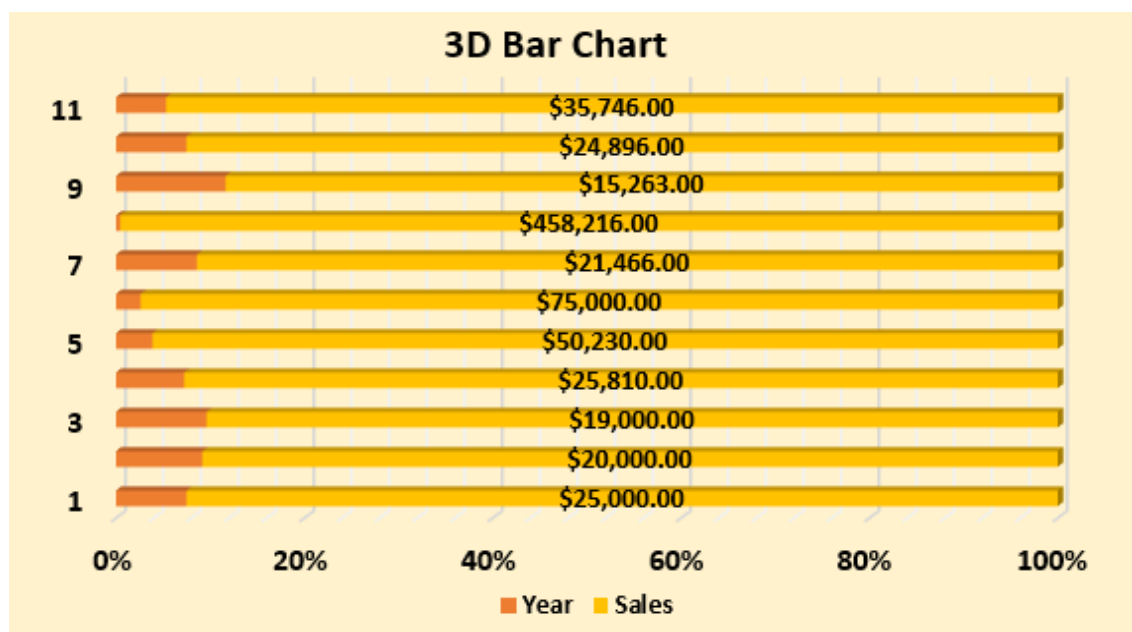
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- **Step 5:** We will now right-click on the data series and choose the “Add Data Labels” to add the data label option, as shown in the screenshot.



The data is added to the plotted chart, as shown in the figure.



We will now apply the required formatting and design to the chart using the format chart area. As a result, we will get the following 3D bar chart.



4. Create an analytics dashboard in python and present your findings.

[Introduction](#)

[1. Creating Individual Plot](#)

- a. [1.1 Scatter Plot showing relationship between 2 features color-encoded by target\(malignant/benign\).](#)
- b. [1.2. Bar chart showing average feature value by target\(malignant/benign\).](#)

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- c. [1.3. Histogram showing distribution of a single feature.](#)

[2. Merging Plots into Single Figure](#)

[3. Creating First Dashboard](#)

[4. Organizing Components of Dashboard](#)

[5. Recreating Dashboard with Individual Components](#)

[6. How to keep a server running indefinitely?](#)

[References](#)

5. How to connect Excel with the databases.

You can connect Excel to a database and then import data and create tables and charts based on values in the database. In this tutorial you will set up the connection between Excel and a database table, save the file that stores data and the connection information for Excel, and then create a pivot chart from the database values.

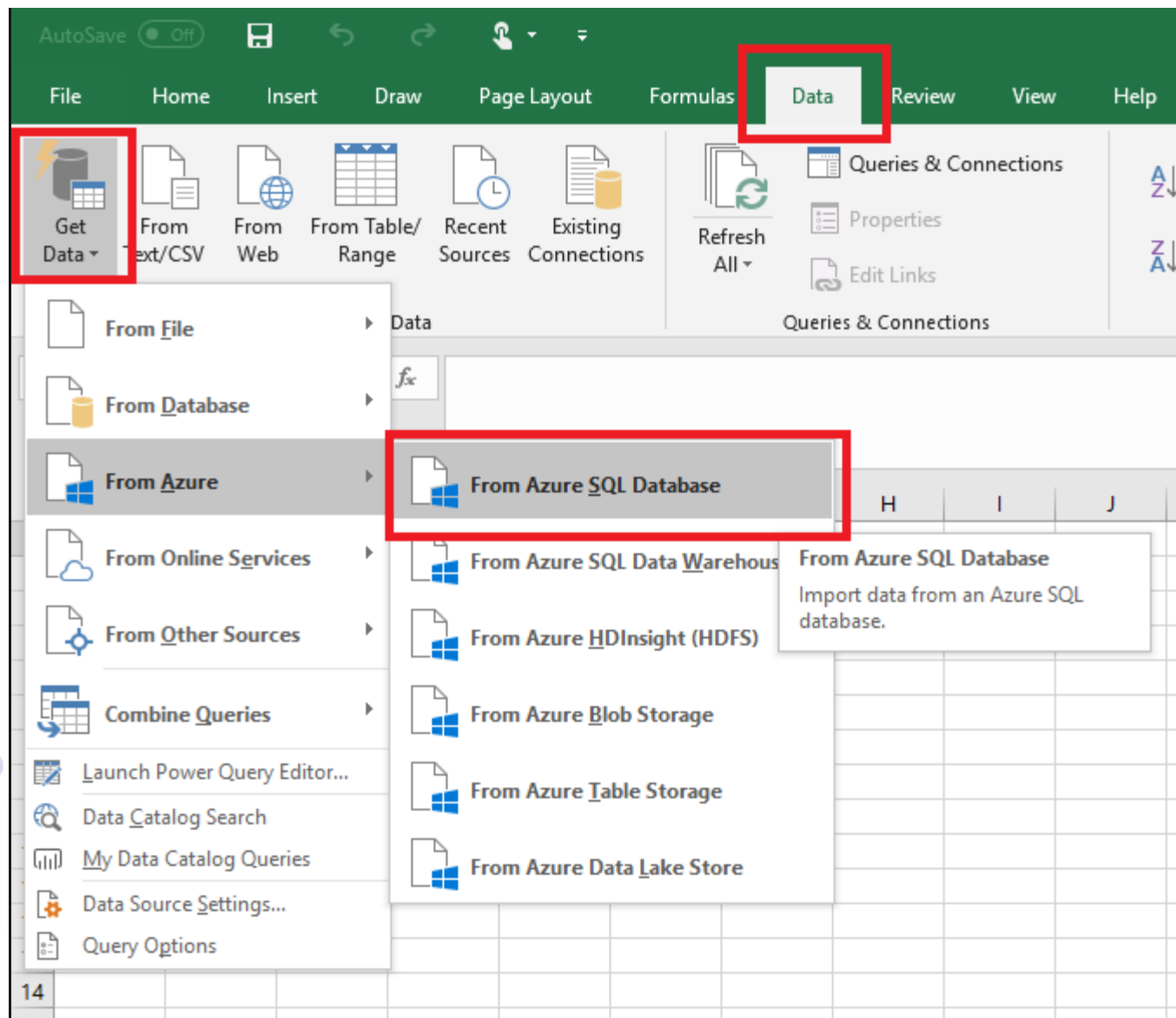
You'll need to create a database before you get started. If you don't have one, see [Create a database in Azure SQL Database](#) and [Create server-level IP firewall](#) to get a database with sample data up and running in a few minutes.

In this article, you'll import sample data into Excel from that article, but you can follow similar steps with your own data.

You'll also need a copy of Excel. This article uses [Microsoft Excel 2016](#).

Connect Excel and load data

1. To connect Excel to a database in SQL Database, open Excel and then create a new workbook or open an existing Excel workbook.
 2. In the menu bar at the top of the page, select the **Data** tab, select **Get Data**, select From Azure, and then select **From Azure SQL Database**.
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3. In the **SQL Server database** dialog box, type the **Server name** you want to connect to in the form `<servername>.database.windows.net`. For example, `msfttestserver.database.windows.net`. Optionally, enter in the name of your database. Select **OK** to open the credentials window.

SQL Server database

Server ⓘ
msfttestserver.database.windows.net

Database (optional)
TestSQLDB

▸ Advanced options

OK Cancel

4. In the **SQL Server database** dialog box, select **Database** on the left side, and then enter in your **User Name** and **Password** for the server you want to connect to. Select **Connect** to open the **Navigator**.

SQL Server database

msfttestserver.database.windows.net;TestSQLDB

User name
msfttestadmin

Password
●●●●●●●●●●●●●●●●

Select which level to apply these settings to
msfttestserver.database.windows.net ▼

Back Connect Cancel

Tip

Depending on your network environment, you may not be able to connect or you may lose the connection if the server doesn't allow traffic from your client IP address. Go to the [Azure portal](#), click SQL servers, click your server, click firewall under settings and add your client IP address. See [How to configure firewall settings](#) for details.

5. In the **Navigator**, select the database you want to work with from the list, select the tables or views you want to work with (we chose **vGetAllCategories**), and then select **Load** to move the data from your database to your Excel spreadsheet.

The screenshot shows the Navigator tool interface. On the left, the 'Navigator' pane displays a tree view of databases and tables. The database 'TestSQLDB [19]' is selected, and the table 'SalesLT.vGetAllCategories' is highlighted with a red box. Below the tree view, there are buttons for 'Select Related Tables', 'Load', 'Clean Data', and 'Ca'. The 'Load' button is highlighted with a red box. On the right, the 'SalesLT.vGetAllCategories' table is displayed with the following data:

ParentProductCategoryName	ProductCategoryName	ProductCategoryID
Accessories	Bike Racks	30
Accessories	Bike Stands	31
Accessories	Bottles and Cages	32
Accessories	Cleaners	33
Accessories	Fenders	34
Accessories	Helmets	35
Accessories	Hydration Packs	36
Accessories	Lights	37
Accessories	Locks	38
Accessories	Panniers	39
Accessories	Pumps	40
Accessories	Tires and Tubes	41
Clothing	Bib-Shorts	22
Clothing	Caps	23
Clothing	Gloves	24
Clothing	Jerseys	25
Clothing	Shorts	26
Clothing	Socks	27
Clothing	Tights	28
Clothing	Vests	29
Components	Handlebars	8
Components	Bottom Brackets	9
Components	Brakes	10
Components	Chains	11