Understanding Power BI

1) What is Data Visualization?

Data Visualization is a graphical representation of the data. It involves the use of visual such as chart, graphs and maps and dashboard in a way that is easy to understand. It also helps to identify patters, relationship and trends in such a way that will be useful for organization.

2) What is Difference between PowerBi and Tableau?

Both, PowerBi and Tableau famous tool for making dashboards and graphical representations of data. But both have their own merits and demerits.

Company and History:
PowerBI: Power bi was developed by Microsoft and Released in2015.
Tableau: Tableau was developed by independent company and founded in 2003, but later it acquires by “Salesforce”.

Cost and Price:
PowerBi: PowerBi has low price compared to Tableau. It provides the free desktop version, and it is open source. PowerBI charge money for some advanced features.
Tableau: Price of Tableau goes up to $70 and it provides different price options

Easy to Use:
PowerBI: PowerBI is smoothly work with Microsoft products like Excel, Azure and SharePoint. Anyone who have Microsoft ecosystem can use powerBI perfectly.
Tableau: Tableau have drag and drop interface. Tableau have great data exploration features and it praised by user.

Data Connectivity:
PowerBI: PowerBI provides 114 data connectivity like Excel, Azure, SQL Database etc.
Tableau: Tableau provides 84 data connectivity like MySQL, Oracle, PostgreSQL, AWS, google Cloud etc.

Data Analytics:
PoweBI: PowerBI support advance data analytics tools such as Azure Machine learning, Forecasting etc.
Tableau: Tableau have built-in-statistical function and forecasting model.

Collabration:
PowerBI: Microsoft Team, SharePoint

Tableau: Tableau Server

3) What are Steps Involved in connecting to CSV and XLSX File formats in PowerBI?

Launch PowerBI: Open PowerBI Desktop in your Computer.
Get Data: Click on "Get Data" Option in the Home Tab
File Option: In the Get Data Window, click on "More" Option, Then Click on File
Select File Format: There are lot of options. For Connecting CSV file, there is "Test/File" option and for connecting XLSX file there is "Excel Workbook" Option

From These Steps we can connect CSV or XLSX File in Power BI.

4) What are the Different Types of Views in PowerBI?

There are 4 Types of Views in PowerBI:

1) Report View: It is for Dashboarding and Visuals
2) Table View: User can View, edit and manage the data.
3) Model View: User can create and manage the relationships between the tables.
4) DAX Querry View: User can write DAX Querry.

5) Why do we need PowerBI if we already have Excel:

Both PowerBI and Excel can be use for data visualization but powerBI does it better. Excel mainly use for data manipulation whereas PowerBI is specially for Data Visualization. There are Some Reasons that powerBI is more useful than excel in Visualization.

Handling Large Data: PowerBI can handle big data as compare to excel. Excel may be hand after the lakh of rows but powerBI don't.

Data Connectivity: In powerBI user can Import the Data from various sources. There are 144 data connectivity in powerBI and excel don't.

Specialization: PowerBI is Specially for the Visualization. The Quality of Charts and Graphs are better in PowerBI. It gives more features in Visualization compared to Excel. Like Excel PowerBsI also give the option of Data Processing in Power Querry.

Data Modeling: PowerBI offers data modelling capabilities, allowing users to create relationships between different datasets, and also users can use DAX.

Excel have also same data modelling features, but powerBI provides more advantages for managing large data.

Collaboration: PowerBI offers build in Collaboration and sharing features that allows users to publish and share the dashboard and reports with others. Users can also collaborate in real time and word together in data analysis projects.

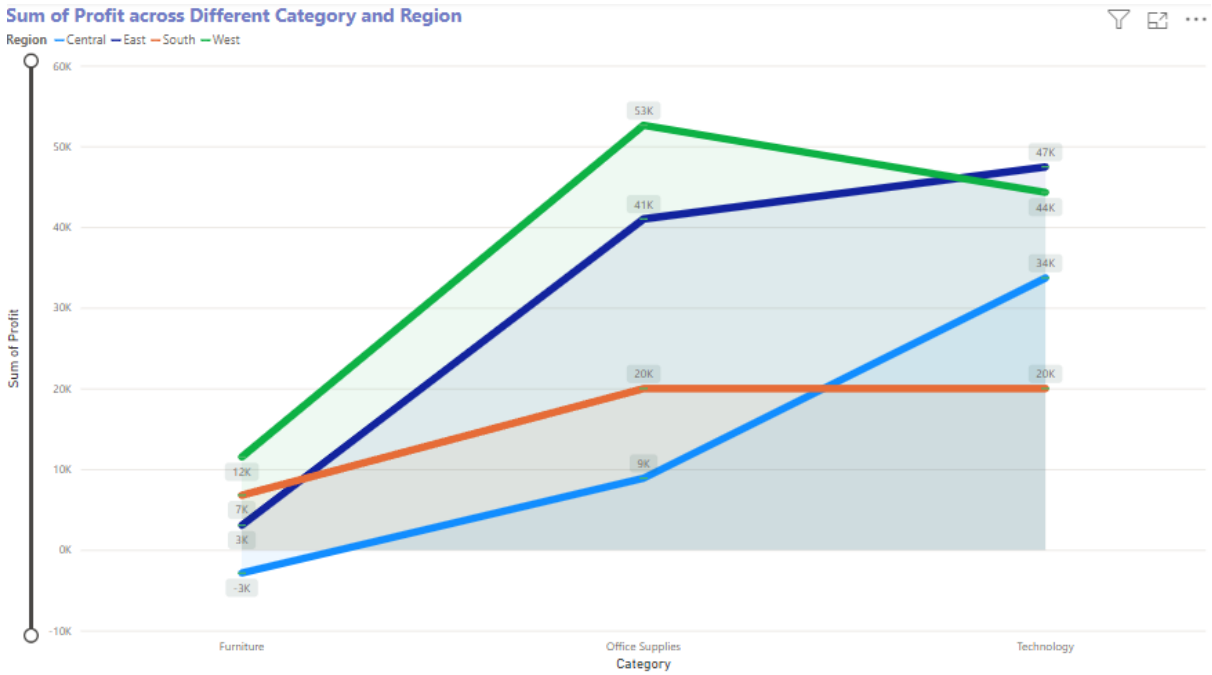
6) What is the difference in Measure and Dimensions?

Measure: Measure is a quantitative value such as Sales, Revenue, Profit, Quantity sold. Measure is the Numerical Values and can be aggregated like sum, average, count etc. Measure is used in visualisation to provide insight into the numerical / qualitative aspects of data.
Examples of Measure are Sum of Profit, Sales Amount, Quantity Sold, etc.

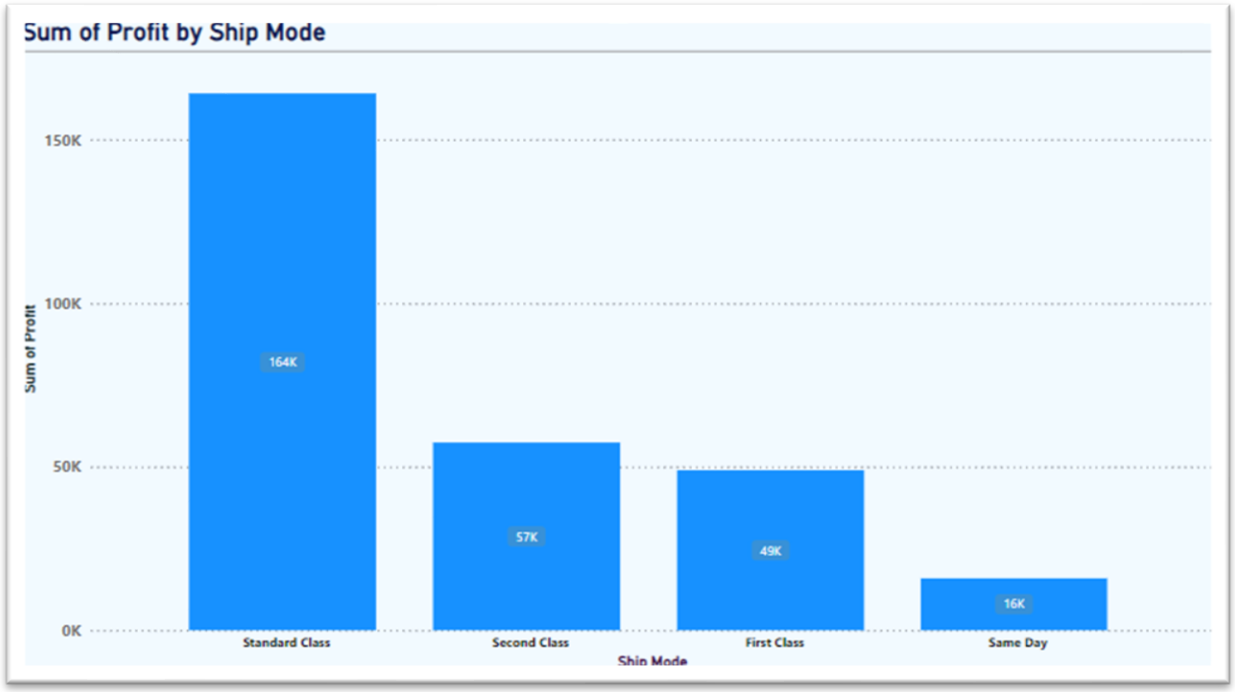
Dimensions: Dimension is the categorical attribute that provide the context of the data, such as Customer Name, Categories, Region, Date etc.
Dimensions are the qualitative attributes that filter or group the data. It Provides the Quality of different aspect.
Examples of Dimensions are Category, Region, Name, City, Brand etc.

SCREENSHOTS OF VISULISATION

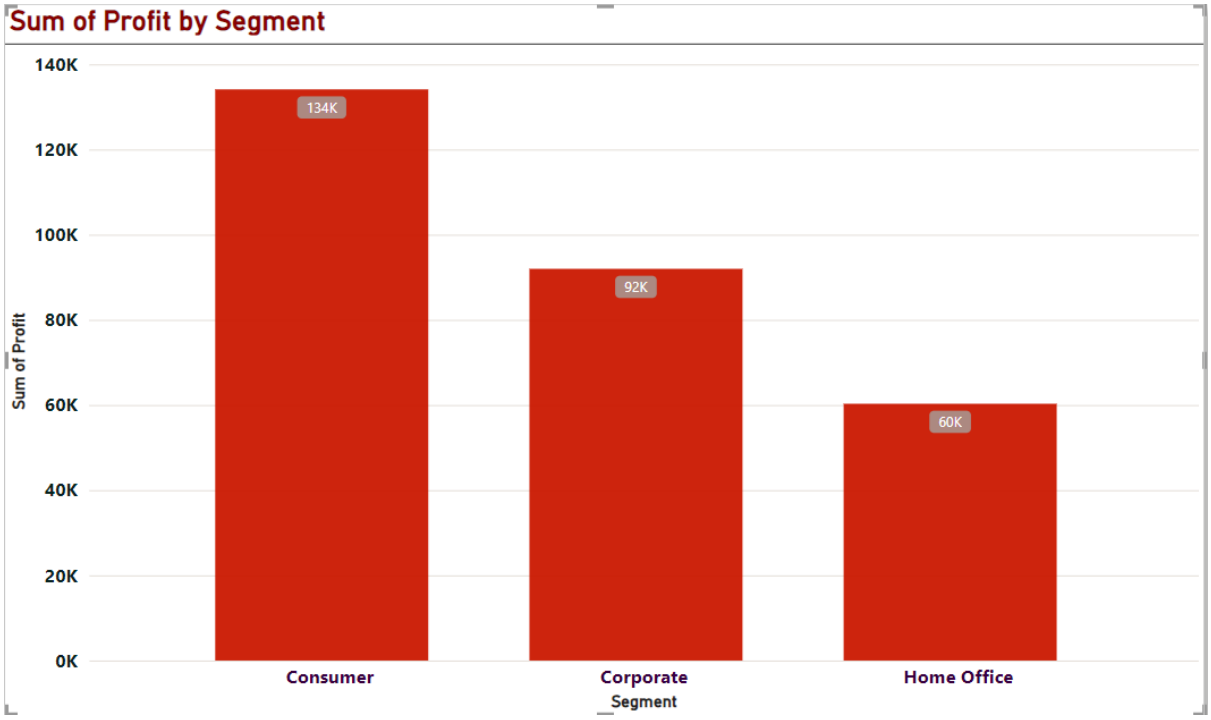
1) **Line Chart:** Sum of Profit across Different Categories and Region



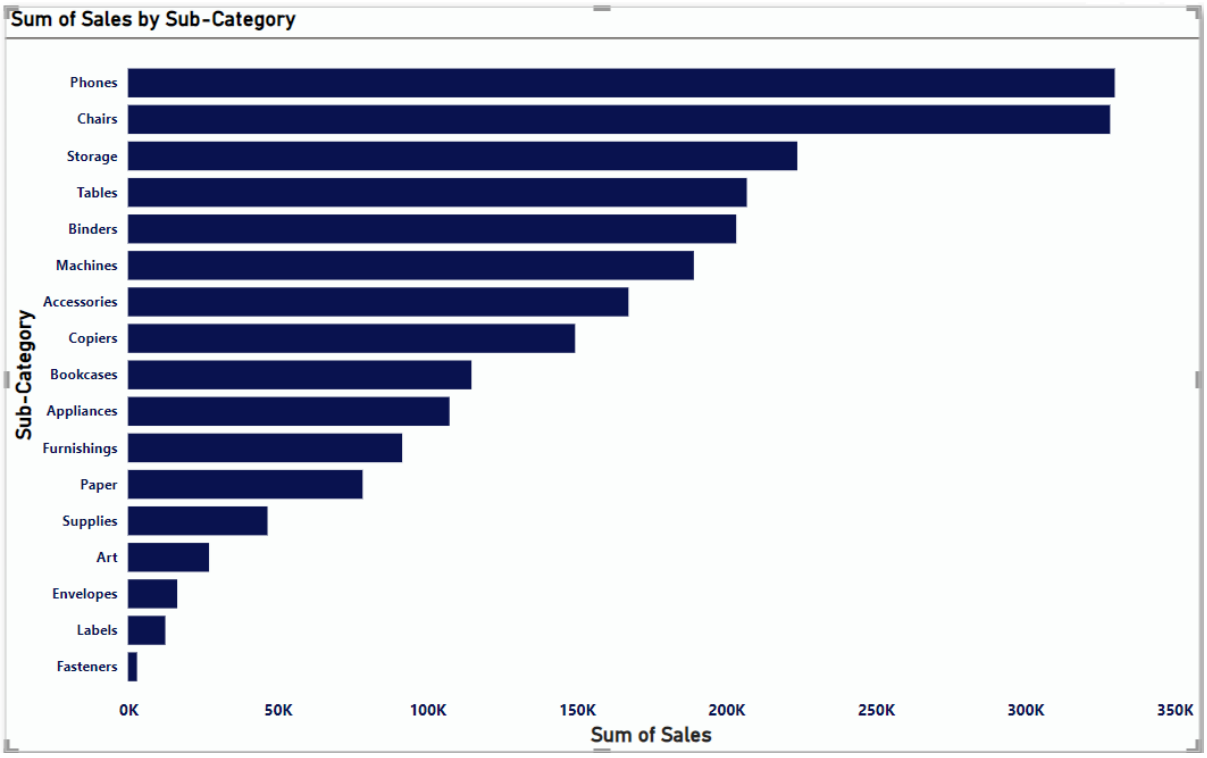
2) **Clustered Column Chart:** Sum of Profit by Ship Mode



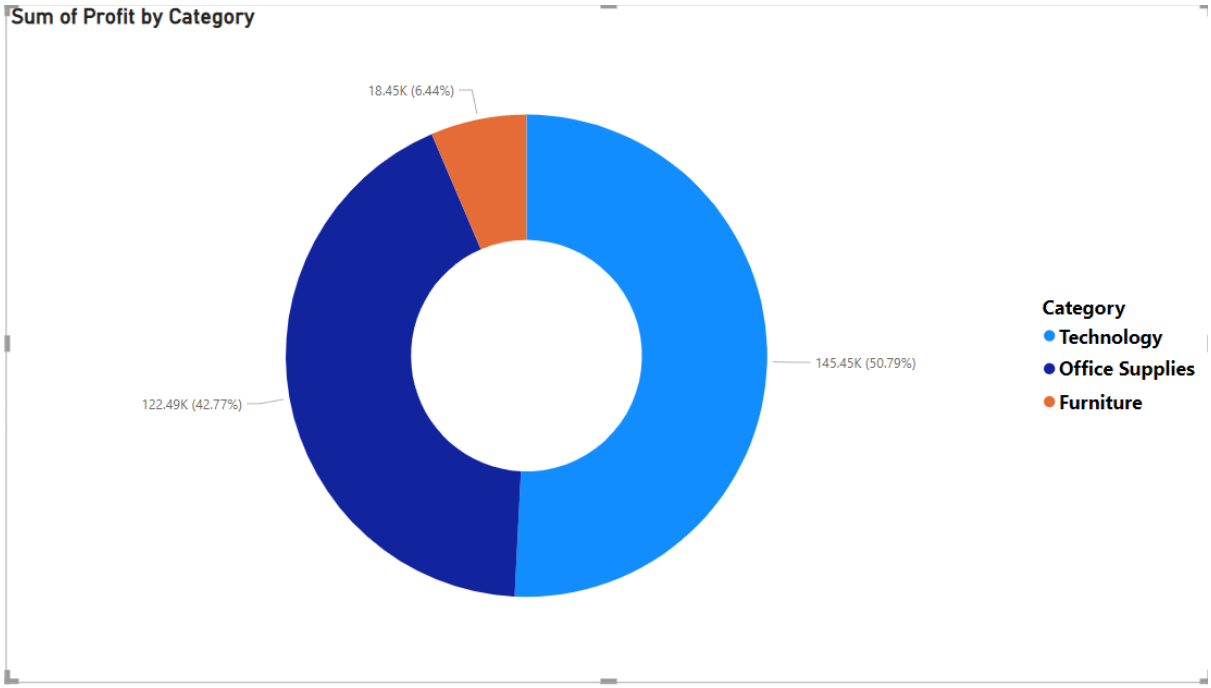
3) **Clustered Column Chart:** Sum of Profit by Segment



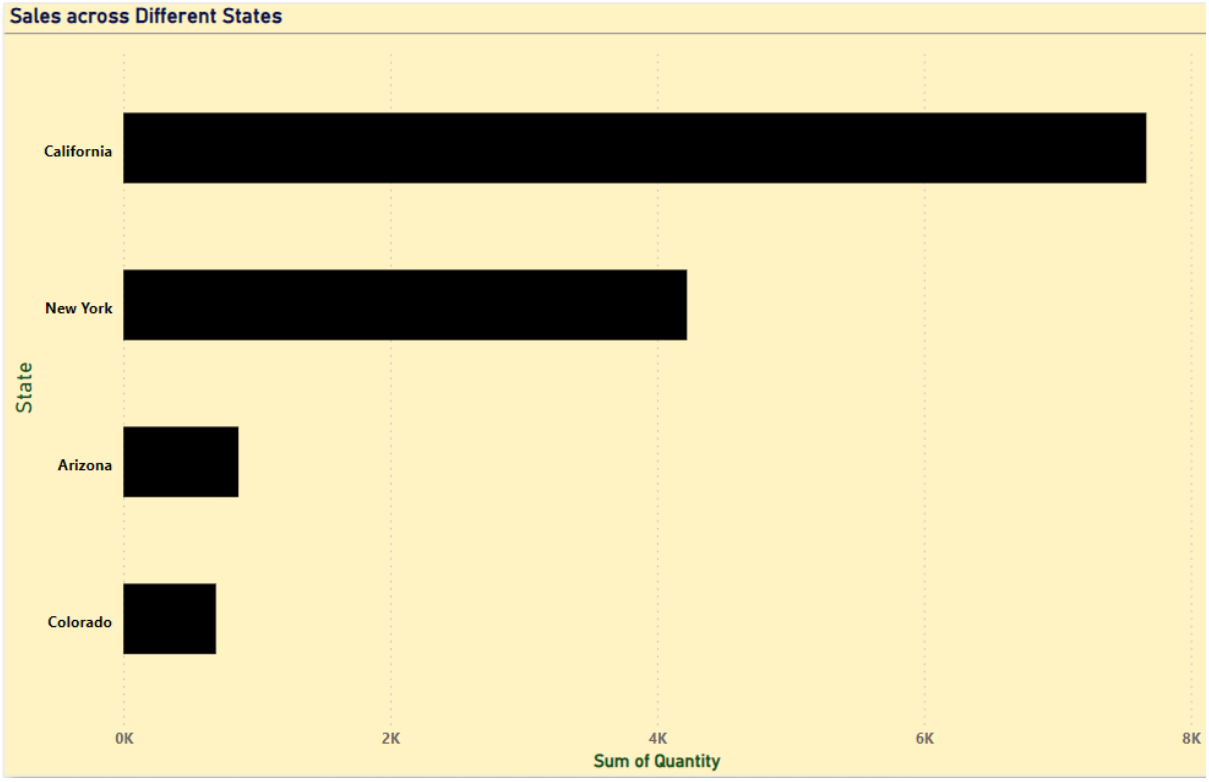
4) **Stacked Bar Chart**: Sum of Sales by Sub-Category



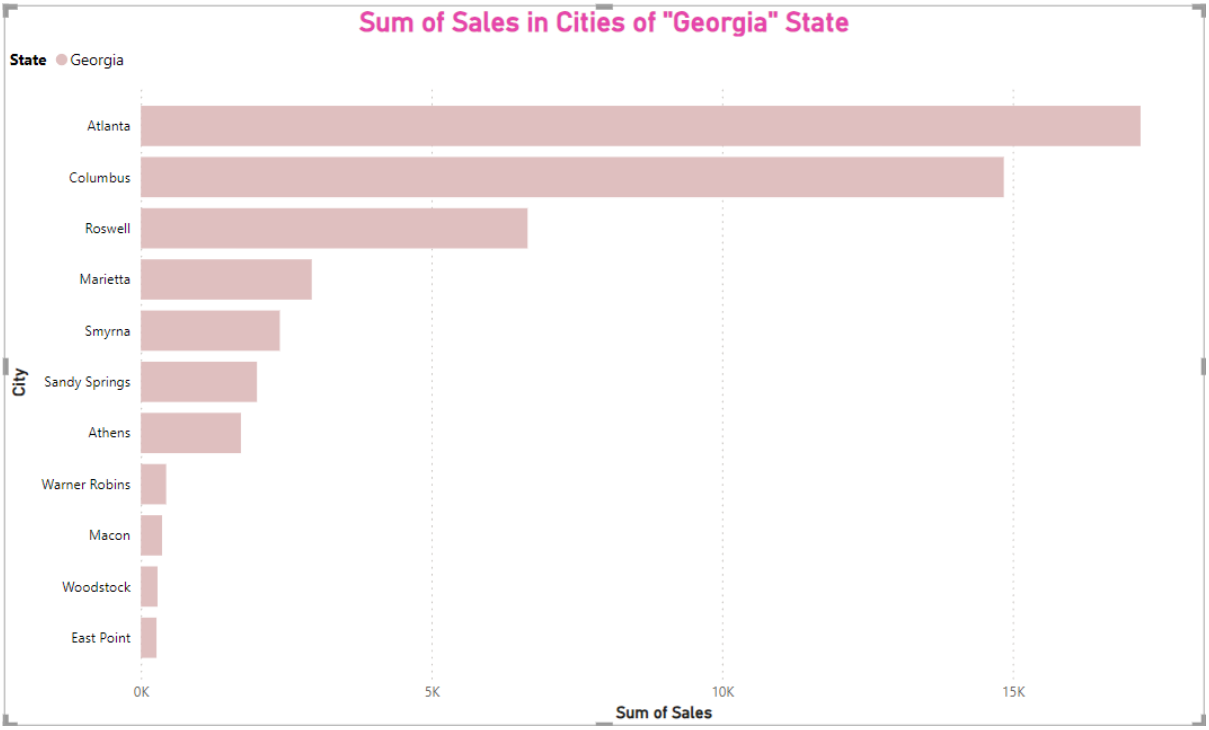
5) **Donut Chart:** Sum of Profit by Category



6) **Stacked Bar Chart:** Sales across Different States



7) **Stacked Bar Chart**: Sum of Sales in Cities of “Georgia” State



DASHBOARD

(Colours may be different from previous Charts.)