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TE IT Batch T3

Roll No:- 8018

Assignment - 8

- **Aim :-** Perform the following data visualization operations using Tableau on Super Store data set.
  1. 1D (Linear) Data visualization
  2. 2D (Planar) Data Visualization
  3. 3D (Volumetric) Data Visualization
  4. Temporal Data Visualization
  5. Multidimensional Data visualization
  6. Tree/Hierarchical Data visualization
  7. Network Data visualization

- **Theory:-**

Q.1. What is visualization? Explain its importance.

—▢→ Data visualization has 2 terms; data & means information & visualization means pictorial representation or graphical representation; so the data visualization term is defined as the pictorial representation of some information so that the user can analyze the data quickly.

Data visualization means presenting raw data through graphical representations that allow viewers, business analysts & executives to explore the data & uncover deep insights. This visual format enables one to make quick & effective decisions.

Importance of data visualization:-

① Helps decision makers understand how the business data is being interpreted to determine business decisions.

② Leads the target audience to focus on business insights to discover areas that require attentation.

③ Visualizing business data helps to manage growth & converts trends into business strategies by making sense of information.

④ Reveals previously unnoticed key points about the data sources to help decision makers compose data analysis reports.

Q.2. What is Tableau? Explain its Features.

→ Tableau is a business intelligence (BI) software tool. It supports interactive visualization of data.

It provides faster visualization because it has an in-memory data engine which helps to speed up the visualization

It is a free tool used for data visualization with the

help of graphics which merge a graphical interface with traditional elements of BI tools (like connection with other information management systems like databases & spreadsheets).

Features of Tableau :-

① Quick & easy data acquisition - This tool can work with different graphics like fever, bars, stacked bars, pie etc.

② Publication of interactive graphics - This tool merges variety of data sources in a single view.

③ It has 3 main products to process large scale datasets Tableau desktop, Tableau Server & Tableau Public.

④ It can connect with advanced data sources (like Hadoop, Oracle databases, Microsoft SQL server etc.)

Q.3. Explain the various tableau softwares available.

→ Tableau softwares include Tableau Server, Tableau DeskTop, Tableau Reader & so on.

① Tableau DeskTop :-

This product allows 1 to code & modify the reports. Starting from creating reports & charts to combining them to form a dashboard, all this is done in Tableau desktop. It has 2 types ① Tableau Desktop Personal ② Tableau Desktop Professional

② Tableau Reader:-

It is a tool that allows 1 to view visualizations & workbooks generated by using Tableau Public or Tableau Desktop. Since anyone getting the workbook can view it using Tableau Reader, there is no security.
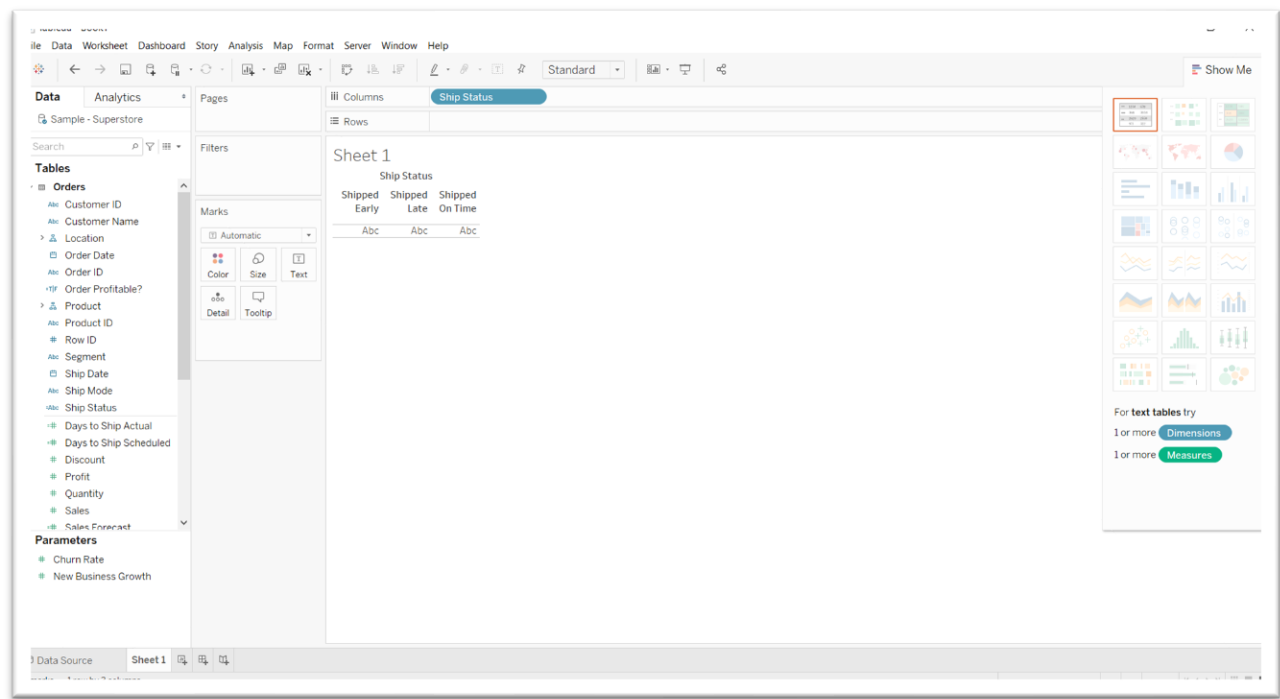
③ Tableau Server:-

This is mainly used to share visualizations & workbooks which get generated in the Tableau Desktop application throughout the organization. The work will becomes accessible once it is uploaded on the respective servers.
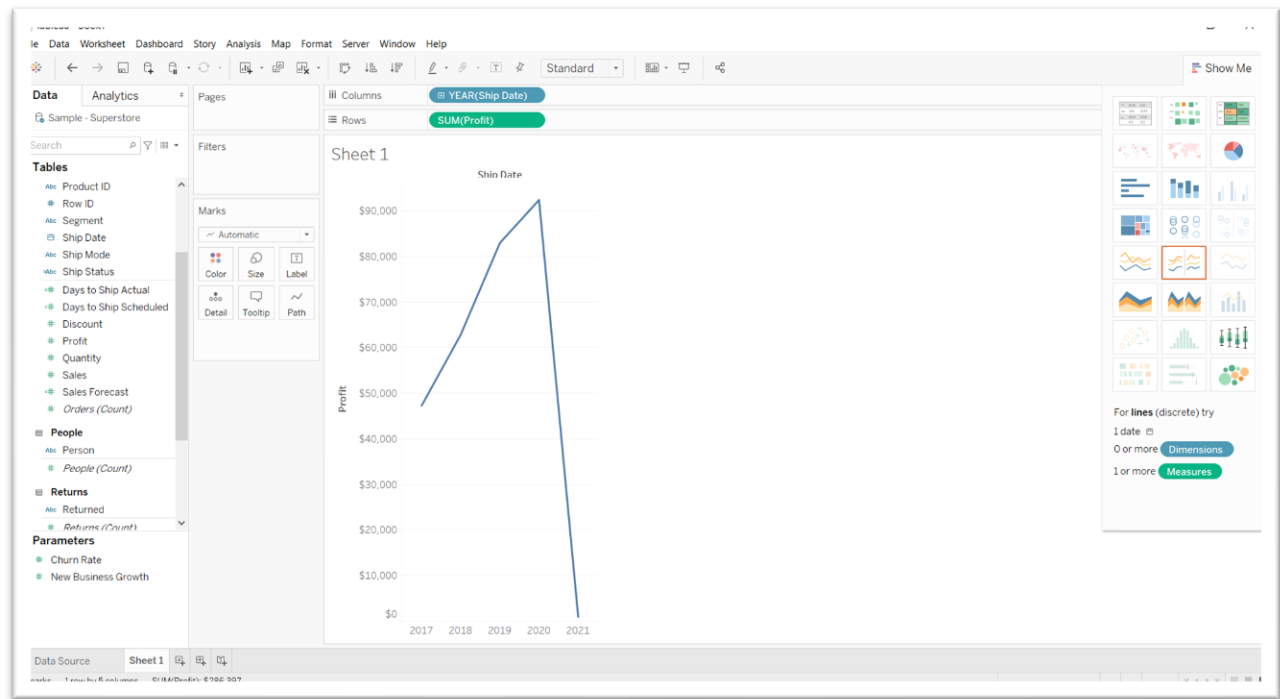
④ Tableau Online:-

It is a sharing tool. It has similar usage as Tableau Server but data is saved on servers which are provided in cloud maintained by the Tableau group.

- Conclusion:- Thus we have successfully performed data visualization operations using Tableau on Super Store data set.
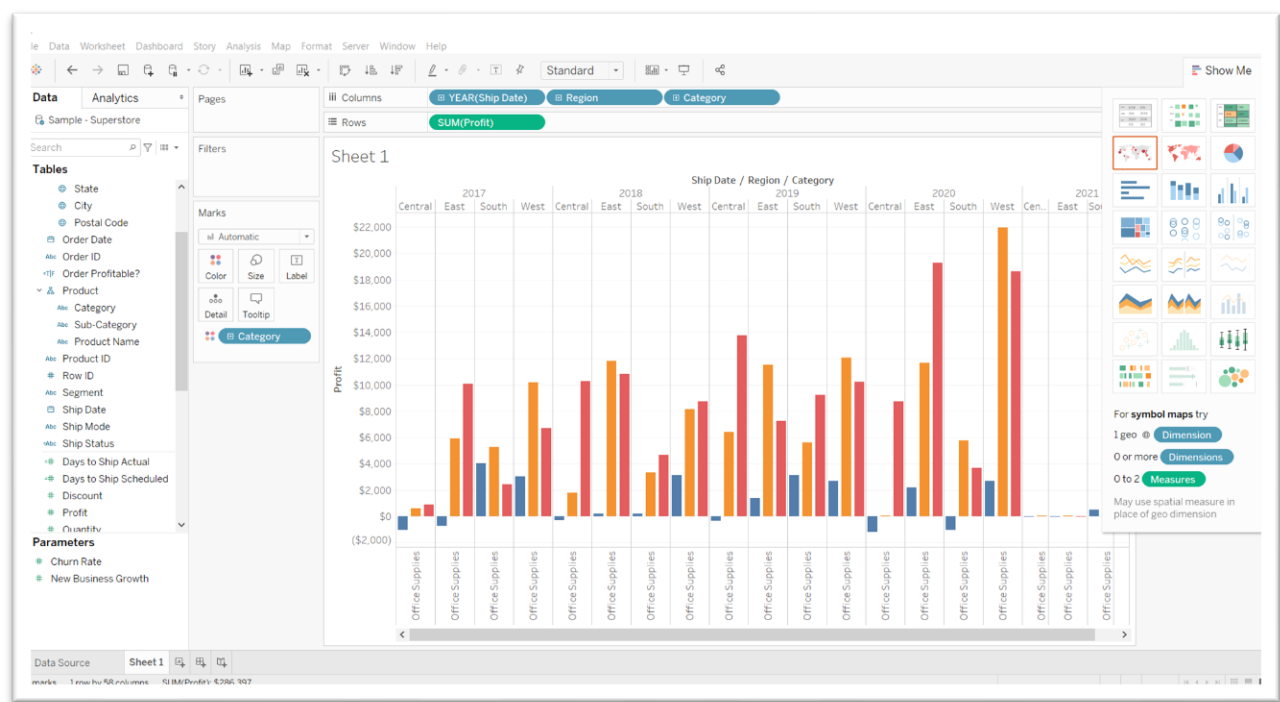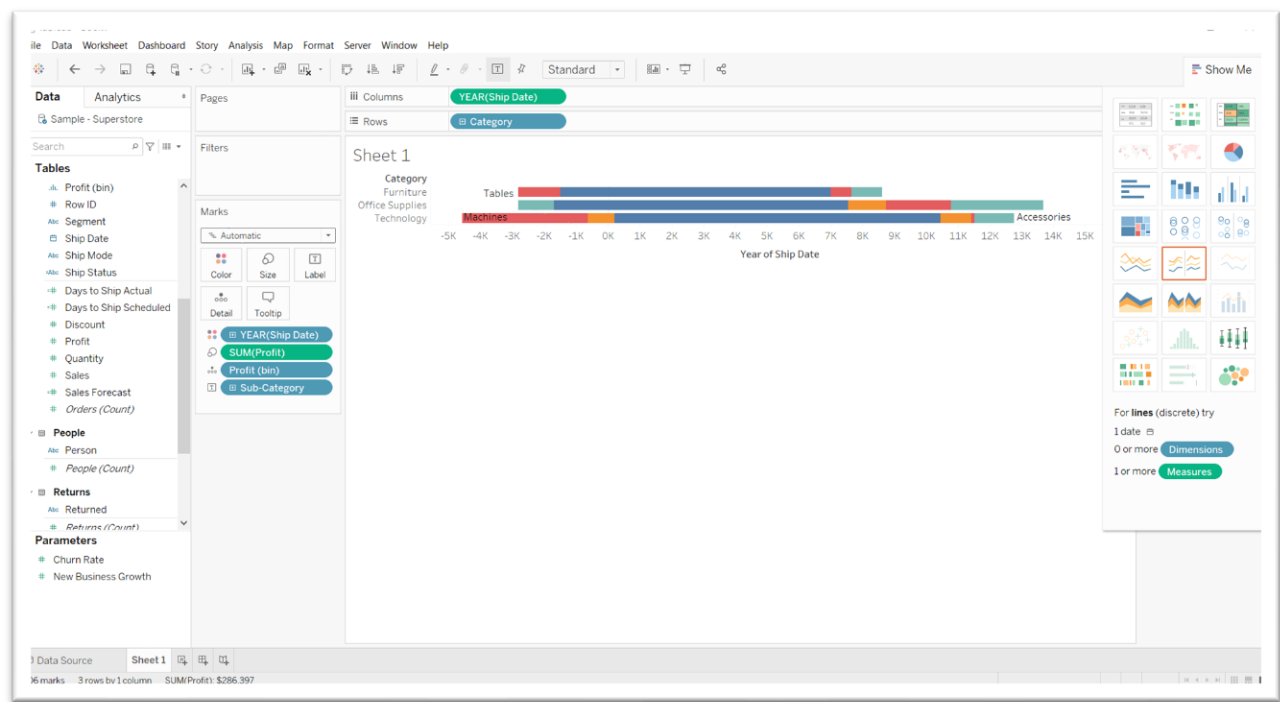
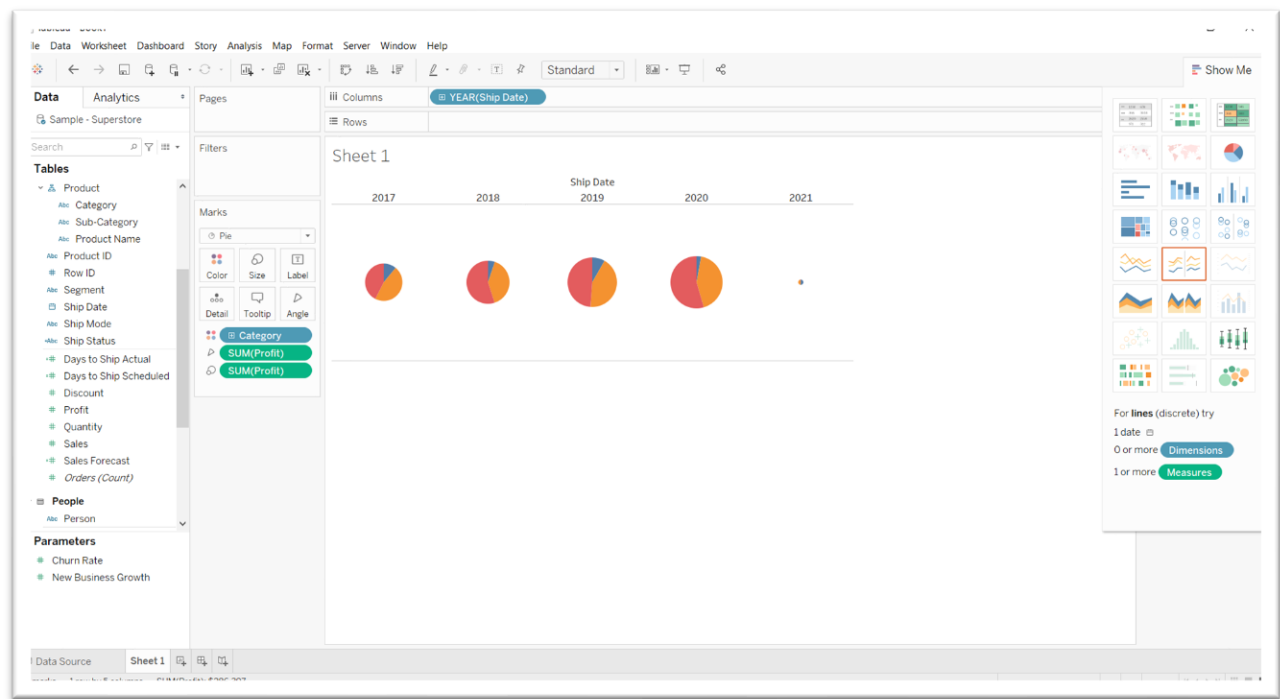# 1D (Linear) Data visualization

2D (Planar) Data Visualization

3D (Volumetric) Data Visualization

Temporal Data Visualization

Multidimensional Data Visualization

Tree/ Hierarchical Data visualization