TABLEAU ASSIGNMENT

Question 1: What is Tableau? Explain its importance in Business Intelligence and how it helps in data-driven decision-making.

Answer:

Tableau is a powerful data visualization and Business Intelligence (BI) tool used to analyze raw data and convert it into meaningful insights using charts, graphs, and dashboards. It allows users to connect to different data sources such as Excel, databases, and cloud platforms, and explore data in an interactive way.

In Business Intelligence, Tableau is important because it helps organizations understand trends, patterns, and performance quickly. Instead of relying on lengthy reports, decision-makers can visually see what is happening in the business. This supports data-driven decision-making, as managers can base their decisions on real data rather than assumptions, leading to better planning, efficiency, and profitability.

Question 2: Explain the role of the following Tableau components:

a) Data Pane

The Data Pane is the section on the left side of Tableau where all the data fields are displayed. It contains dimensions, measures, and parameters from the connected data source. Users drag fields from the Data Pane into rows, columns, or filters to build visualizations.

b) Worksheet

A Worksheet is the basic working area in Tableau where individual charts or visualizations are created. Each worksheet focuses on a specific analysis, such as sales by region or profit by category.

c) Dashboard

A Dashboard is a collection of multiple worksheets displayed on a single screen. It provides a consolidated view of data and allows users to interact with multiple visuals at once, making it useful for overall performance analysis.

d) Story

A Story is a sequence of worksheets or dashboards arranged to tell a data-driven narrative. It helps present insights step by step, making it easier to explain findings to stakeholders.

Question 3: What is the difference between Dimensions and Measures in Tableau? Provide examples of each.

Answer:

Dimensions are qualitative or categorical fields used to classify or segment data. They usually contain text or discrete values and help in grouping data.

Examples of Dimensions: Region ,Product Category ,Customer Name, Order Date

Measures are quantitative fields that contain numerical values and are used for calculations. They are usually aggregated using functions like SUM, AVG, or COUNT.

Examples of Measures: Sales ,Profit ,Quantity ,Revenue

Question 4: Define and explain the purpose of Filters, Parameters, and Sets in Tableau.

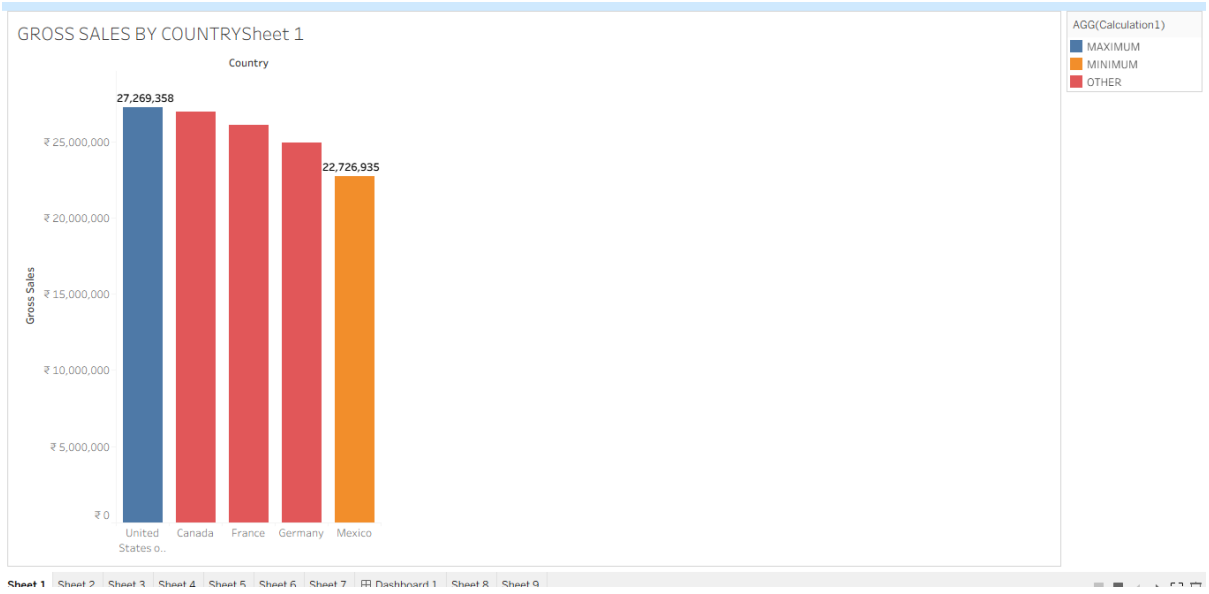
Answer:

Filters are used to limit the data shown in a visualization. They allow users to focus on specific values, such as showing sales for only one region or a particular year.

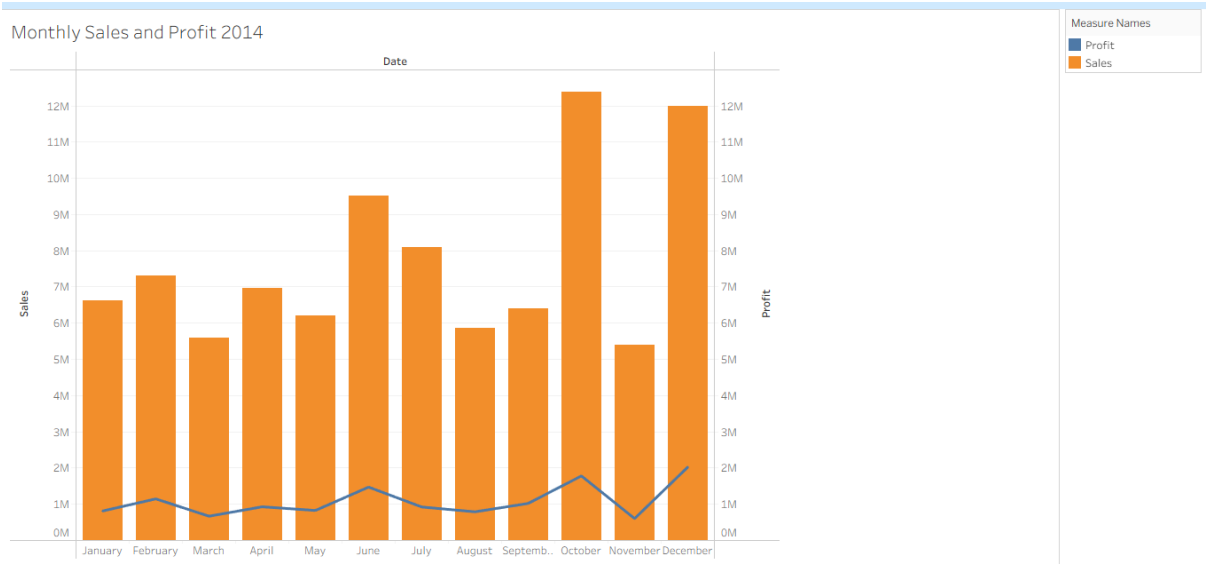
Parameters are dynamic input values that allow users to control calculations or views. They are not directly linked to the data but let users change values interactively, such as selecting a year or threshold.

Sets are custom groupings of data created based on conditions or manual selection. They are used to compare subsets of data, such as top 10 customers versus others.

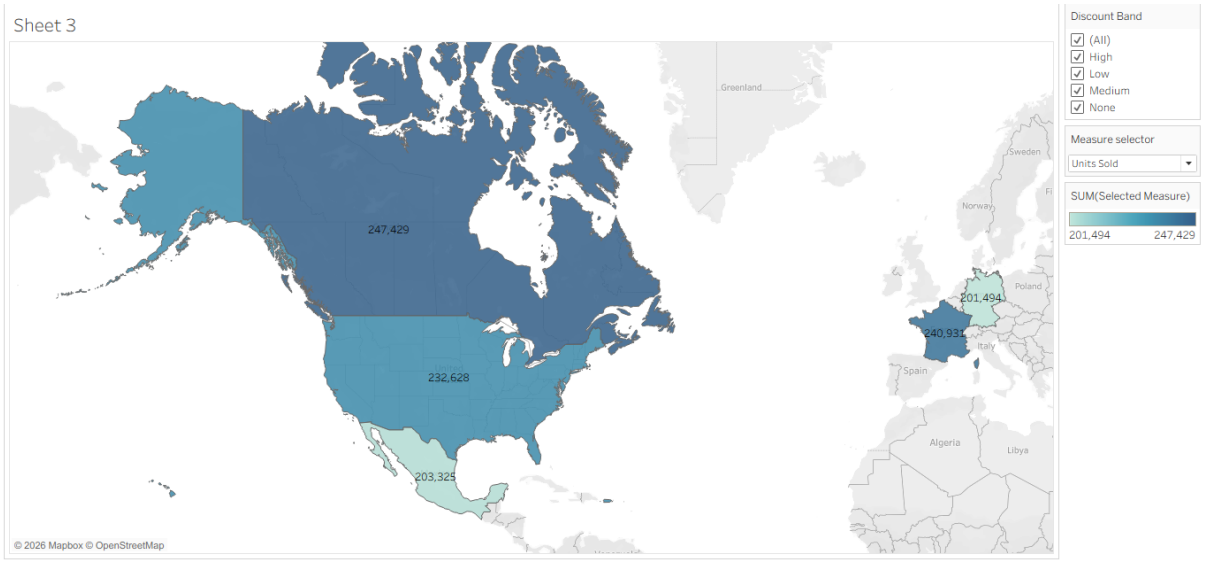
Question 5 : Create a bar chart showing Gross Sales by Country. ● 🖇 Dataset Link:Global_sales_dataset ● Sort the countries in descending order of sales ● Highlight or annotate the bar that represents the maximum and minimum Gross Sales. ● Add data labels and format the chart for presentation.



Question 6 : Using Tableau, create a dual-axis chart that displays: ● 🖇 Dataset Link:Global_sales_dataset ● Monthly Sales as bars ● Monthly Profit as a line ● Filter the data to include only records from the year 2014 ● Ensure both axes are synchronized and properly labeled ● Add an appropriate chart title, and format the chart for clear visual presentation ● Paste a screenshot of the final chart in your submission

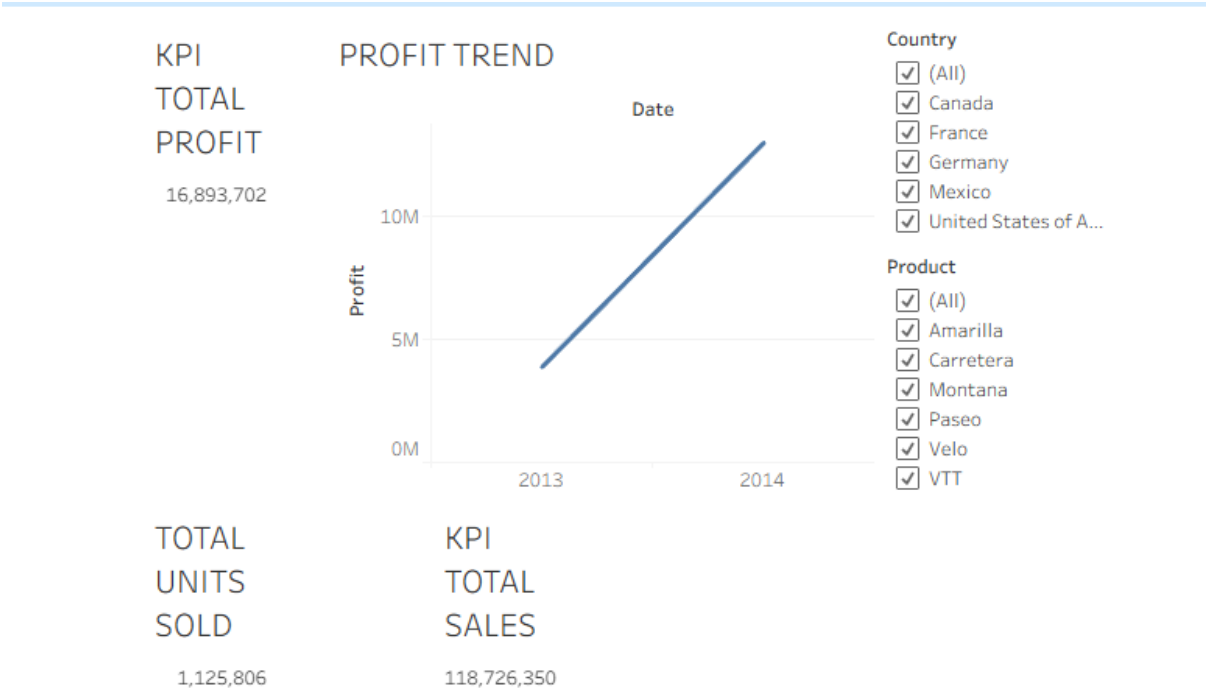


Question 7 : Create a filled map showing total Units Sold by Country. ● 🖇 Dataset Link:Global_sales_dataset ● Add a parameter to allow users to switch between Units Sold and Profit. ● Use the Discount Band as a filter in your visualization.



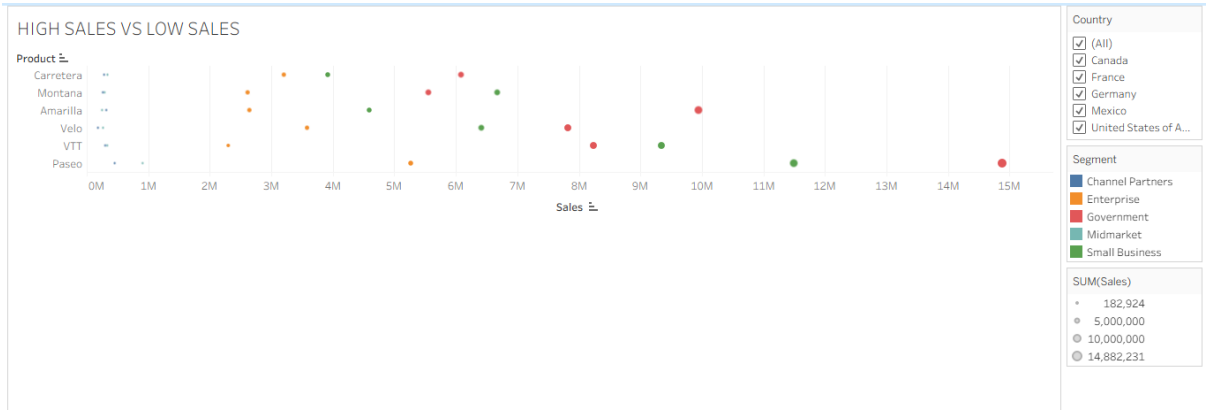
Question 8 : Create a dashboard that includes: ● 🖇 Dataset Link:Global_sales_dataset ● KPI tiles for Total Sales, Total Profit, and Total Units Sold ● A line chart for Profit trend over time ● Filters for Product and Country Ensure your dashboard is interactive and visually appealing.

Answer :



Question 9 : Your goal is to identify products that generate low profit despite high sales volume. ● 🖇️ Dataset Link:Global_sales_dataset ● Use scatter plot or highlight table to identify such products. ● Add filters for Country and Segment. ● Write two business insights based on your chart.

Answer :



Insight 1

Several products show high sales volume but generate very low or negative profit, indicating possible issues such as heavy discounting, high production costs, or inefficient pricing strategies.

Insight 2

The concentration of low-profit, high-sales products varies by country and segment, suggesting that profitability challenges are market-specific and require targeted pricing or cost optimization strategies rather than a one-size-fits-all approach.