DATA ANALYST INTERNSHIP - TASK 3

Task Title: Dashboard Design using Tableau

Objective: Design an interactive business dashboard using Tableau to analyze sales performance and provide actionable insights to business stakeholders.

Dataset: Global Superstore Sales Dataset (Kaggle)

Tool Used: Tableau

Methodology:

1. Imported the Global Superstore dataset into Tableau.
2. Cleaned and transformed data (removed nulls, corrected data types).
3. Chose key KPIs: Total Sales, Total Profit, Profit Margin, Order Quantity, and Sales Growth.
4. Created calculated fields for Profit Margin and Yearly Growth Rate.
5. Designed visuals:
- Sales by Region (Map Chart)
- Sales vs Profit by Category (Bar Chart)
- Monthly Sales Trend (Line Chart)
- Top 10 Customers (Horizontal Bar Chart)
- KPIs (Cards with Total Sales, Profit, Quantity)
6. Added Filters and Parameters for interactivity (Region, Year, Category).
7. Applied consistent color theme (Blue & Orange) and formatted dashboard layout.
8. Published and shared the interactive dashboard.

Key Insights:

- The West region had the highest sales performance, followed by East and Central.
- Office Supplies category generated the highest order volume but lower profit margins.
- Technology products had the highest profit contribution.
- Seasonal trend observed with peak sales during Q4 (October–December).
- Few customers contribute to a large portion of total sales (Pareto effect).

Interview Questions and Answers:

1. What are the key elements of a dashboard?
KPIs, charts, filters, layout, interactivity, and data source connection.

2. What is a KPI?
A Key Performance Indicator (KPI) measures progress toward a business objective, e.g., total sales or profit margin.

3. What are slicers in Power BI / filters in Tableau?
They allow users to interactively filter data, e.g., by region, year, or category.

4. Difference between Power BI and Tableau?
Power BI integrates easily with Microsoft products and is beginner-friendly; Tableau is better for data visualization and interactivity.

5. How do you make a dashboard interactive?
By adding filters, parameters, actions (hover, click), and dynamic visuals.

6. How do you deal with large datasets in dashboards?
Use data extracts, filters, and aggregations to optimize performance.

7. What chart types are best for trend analysis?
Line charts, area charts, and time-series plots.

Conclusion: The Tableau dashboard effectively provides a visual summary of sales performance and helps business stakeholders make data-driven decisions. The project improved understanding of data visualization, KPI design, and dashboard storytelling.