CLA - 2 Power BI Report Analysis

Introduction

This report provides a detailed breakdown of the Power BI visualizations created based on the dataset provided. It explains the types of visualizations used, the metrics involved, and the insights derived from each representation.

Visualization Overview

1. Sales Trend Analysis (Line Chart)

- **Metrics:** Sum of Sales Amount & Selling Price per Unit
- **Category:** Location & Session ID
- **Concept:**
  - This line chart is designed to visualize the variation of sales amount and selling price across different locations and session IDs.
  - Helps identify which locations and sessions generate the highest revenue.
- **Insights:**
  - Allows tracking of seasonal trends and fluctuations in sales.
  - Highlights peak sales periods and underperforming regions.

2. Customer Purchase Behavior (Bar Chart)

- **Metrics:** Total Sales per Customer
- **Concept:**
  - This bar chart represents the number of purchases per customer.
  - Useful for identifying top customers and customer loyalty patterns.
- **Insights:**
  - Recognizes the most valuable customers for targeted promotions.
  - Determines repeat purchase behavior and potential churn risks.

3. Sales Contribution by Product Category (Treemap)

- **Metrics:** Sales Amount by Product Category
- **Concept:**
  - A treemap is used to show the contribution of each product category to total sales.
  - The larger the area, the greater the sales contribution.
- **Insights:**
  - Helps in identifying best-selling categories.

- ○ Useful for stock management and future product planning.

4. Order Status Breakdown (Pie Chart)

- **Metrics:** Percentage of Orders by Status (Ordered, Delivered, Canceled)
- **Concept:**
  - ○ Pie charts effectively display proportions of different order statuses.
- **Insights:**
  - ○ Helps in understanding order fulfillment efficiency.
  - ○ Identifies potential issues in order processing (e.g., high cancellation rates).

5. Profit vs. Cost Analysis (Clustered Column Chart)

- **Metrics:** Profit, Cost Amount, and Sales Amount
- **Concept:**
  - ○ A clustered column chart is used to compare three financial metrics together.
- **Insights:**
  - ○ Helps in determining which products or regions yield the highest profit margins.
  - ○ Guides pricing strategies based on profit trends.

6. Sales Distribution Across Locations (Map Visualization)

- **Metrics:** Sales Amount by Location
- **Concept:**
  - ○ A map chart displays the geographical distribution of sales.
- **Insights:**
  - ○ Provides a quick view of the best-performing regions.
  - ○ Helps in location-based marketing strategies.

7. Order Type Preference (Stacked Bar Chart)

- **Metrics:** Order Count by Order Type (On Shop, Online, etc.)
- **Concept:**
  - ○ Stacked bar charts help in comparing multiple order types within a single visualization.
- **Insights:**
  - ○ Determines customer preference for shopping modes.
  - ○ Helps in improving both online and in-store experiences.

Conclusion

The Power BI report successfully visualizes key business insights from the dataset. The different visualizations provide a comprehensive understanding of sales trends, customer behavior, and profitability. These insights can be leveraged to optimize business strategies, improve operational efficiency, and maximize revenue.

ScreenShot -