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Experiment No.	1

1. Sum of Sales by Product

Objective: Determine the total sales amount for each product.

Steps:

1. Data Import: Load your sales dataset into Power BI. This dataset should include columns for Product and Sales Amount.

2. Create a Visualization:

- Table: Drag the Product field to the Rows and Sales Amount field to the Values in a Table visualization to see the sum of sales per product.

- Bar Chart: Use a Bar Chart visualization with Product on the Axis and Sales Amount in the Values to visually compare sales across different products.

Theory:

- Power BI will aggregate the sales amount for each product using built-in aggregation functions. The visualization will then display these totals, providing insights into which products generate the most revenue.

2. Sum of Sales by Month and Product

Objective: Analyze how sales are distributed across different products over each month.

Steps:

1. Data Import: Ensure your dataset includes a Date field, which should be used to extract the month information.
2. Create a Date Table (if not already present):
 - In Power BI, create a Date Table to facilitate time-based analysis. This table should include Year, Month, and Month Name fields.
3. Create a Visualization:
 - Matrix: Use a Matrix visualization with Product on Rows, Month Name (from the Date Table) on Columns, and Sales Amount in Values. This will provide a cross-tabulated view of sales by month and product.
 - Line Chart: Alternatively, use a Line Chart with Month on the Axis and Sales Amount on the Values, and include Product as a Legend to show sales trends over time for each product.

Theory:

- Power BI aggregates sales data based on the Product and Month fields, allowing you to observe trends and seasonality in sales performance across different products over time.

3. Sum of Sales and Sum of Profit by Month Name

Objective: Compare total sales and profit across different months.

Steps:

1. Data Import: Ensure your dataset includes fields for Sales Amount and Profit, and a Date field to derive the month name.
2. Create a Date Table (if not already present).
3. Create a Visualization:
 - Clustered Column Chart: Use a Clustered Column Chart with Month Name on the Axis, and Sales Amount and Profit as the Values. This will display side-by-side columns for sales and profit each month.
 - Combo Chart: Another approach is using a Combo Chart, where you can plot Sales Amount and Profit with different chart types (e.g., columns for Sales and a line for Profit).

Theory:

- Power BI will aggregate sales and profit figures by month, allowing for a comparative analysis of financial performance over time.

4. Sum of Sales by Country

Objective: Understand how sales are distributed geographically.

Steps:

1. Data Import: Ensure your dataset includes a Country field and Sales Amount.

2. Create a Visualization:

- Map Visualization: Use the Map visualization in Power BI with Country as the location data and Sales Amount as the values. This provides a geographic representation of sales data.

- Bar Chart: Alternatively, use a Bar Chart with Country on the Axis and Sales Amount in the Values to compare total sales across different countries.

Theory:

- Power BI will aggregate sales by country, allowing you to visualize which countries contribute the most to overall sales and identify any geographic trends.

Summary

In Power BI, analyzing sales data involves:

- Importing and preparing data.
- Using aggregations to compute sums.
- Creating visualizations to represent these sums effectively.
- Leveraging Power BI's built-in features, such as date tables and geographical maps, to gain insights from the data.

By applying these steps and theories, you can derive meaningful insights from your sales dataset and support data-driven decision-making in your organization.

Final output -

