Project: Retail Sales Performance Dashboard Analysis (Using Power BI)

Role: Data Analyst

Objective: To analyze comprehensive retail sales data, transforming raw information into actionable insights that drive strategic decisions. This project focuses on key performance indicators (KPIs), temporal trends, geographical sales distribution, and customer behavior, aiming to optimize retail operations and enhance revenue generation directly within Power BI.

Tools:

- **Power BI Desktop:** For data loading, modeling, visualization, and dashboard creation.

Data Source: Your Retail Sales data, consisting of the following CSV files:

- Retail.xlsx - Sales_Customer.csv
- Retail.xlsx - Sales_SalesOrderHeader.csv
- Retail.xlsx - Sales_SalesOrderDetail.csv
- Retail.xlsx - Production_Product.csv
- Retail.xlsx - Production_ProductSubcategory.csv
- Retail.xlsx - Person_Address.csv
- Retail.xlsx - Person_StateProvince.csv

As the Data Analyst, you will first load these CSV files into Power BI Desktop. Crucially, you must then establish the necessary relationships between these tables in the 'Model' view (e.g., linking Sales_Customer to Sales_SalesOrderHeader via CustomerID, Sales_SalesOrderHeader to Sales_SalesOrderDetail via SalesOrderID, and connecting geographical and product tables appropriately).

Your Analytical Tasks & Power BI Implementation:

As the Data Analyst, your primary responsibility is to address the following key questions by building the specified visualizations in Power BI.

1. Create Key Performance Indicators (KPIs) by Using Card Visuals:

- **Task:** Display three prominent card visuals showing:
    - The **total sales revenue** across all orders.
    - The **total number of sales orders** recorded.
    - The **total quantity of products** sold.

2. Total Sales Revenue by Month (Bar Chart):

- **Task:** Create a **Bar Chart** to show the total sales revenue for each month across all years.

3. Sales by Top Ten Customers (Tree Map):

- **Task:** Build a **Tree Map** to visualize the top 10 customers by their total sales revenue, illustrating their proportional contribution.

4. Sales by Country (Map Visual):

- **Task:** Create a **Map Visual** to display how sales revenue is geographically distributed across different countries.

5. Sales by State or Region (Map Visual):

- **Task:** Create a **Map Visual** to display how sales revenue is geographically distributed across states or regions within countries.

6. Total Sales Revenue by Year (Donut Chart):

- **Task:** Use a **Donut Chart** to show the total sales revenue for each year, including the percentage contribution of each year to the overall sales.

7. Top 10 Customer Details Table:

- **Task:** Create a **Table Visual** displaying detailed information for your top 10 customers based on sales revenue. The table should include:
    - Customer Name
    - Customer ID

- Sum of Total Sales

Filters/Slicers for Report Interactivity:

- **Task:** Incorporate interactive **Slicers** into your report for the following dimensions to allow users to filter data dynamically:
  - Month
  - City
  - Country

Reflecting on Your Analysis & Communicating Insights:

Once you have completed all analytical tasks and built your interactive report in Power BI, it's time to reflect on your findings and prepare for stakeholder communication.

From this entire analysis performed in Power BI, what key insights did you learn about the retail sales performance? Based on your observations from these tasks and the interactive report, what critical information would you present to your client, and what actionable recommendations would you make to help them achieve their business objectives?

Concluding Your Project:

After articulating your key findings and client recommendations, you'll summarize your entire project.

To conclude this project, how would you precisely summarize the overarching value and actionable intelligence derived from performing these analytical tasks on the retail sales data within Power BI? What is the core message about the impact of this comprehensive data analysis on the business?