Use Case: Retail Industry insights using power bi

Business Context:

A growing industrial company, NovaTech Industries, operates in the manufacturing and retail sectors. NovaTech seeks to gain deeper insights into its sales performance and customer engagement across various regions and industries. With a diverse range of products, the company is focusing on understanding how different product categories are performing and identifying key customers contributing to its revenue.

Objective:

The aim of this use case is to leverage Power BI to analyze sales trends, customer engagement, and product performance. By developing dynamic dashboards, NovaTech wants to optimize decision-making processes, improve sales performance, and strengthen customer relationships.

Dataset Overview:

NovaTech's dataset consists of three primary tables:

1. CustomerData:

• CustomerID: Unique identifier for each customer.
• CustomerName: Full name of the customer.
• ContactInfo: Email address or contact information for each customer.
• Region: The region where the customer is located.
• Industry: Industry to which the customer belongs (e.g., Healthcare, Retail, Manufacturing).

2. ProductData:

• ProductID: Unique identifier for each product.
• ProductName: Name of the product.
• Category: Product category (e.g., Machinery, Tools, Electronics).
• Description: Brief description of the product.
• UnitCost: Cost per unit of the product.

3. SalesData:

• ProductID: Foreign key linking to ProductData.
• SalesAmount: Total sales amount for each transaction.
• SaleDate: Date of the transaction.
• Region: The region where the sale occurred.

• CustomerID: Foreign key linking to CustomerData.
• ProductCategory: Category of the product sold.
• Quantity: Quantity of products sold in the transaction.
• UnitPrice: Price per unit of the product sold.

Power BI Tasks and Functions:

1. Data Cleaning and Transformation with Power Query:
• Import Data: Import the provided dataset (CustomerData, ProductData, and SalesData) into Power BI using Power Query.
• Data Cleanup: Identify and remove any duplicate entries, correct inconsistencies, and handle missing values in the dataset.
• Transformations: Standardize text fields, convert the "SaleDate" field to date format, and perform arithmetic operations.

2. Calculated Columns and Measures using DAX:
• Profit Margin: Calculate profit margin using the formula (UnitPrice - UnitCost) * Quantity.
• Customer Engagement Score: Calculate a score based on the number of sales and total sales amount.
• Measures: Calculate Sales Growth Rate, Average Sales Per Transaction, and Customer Lifetime Value (CLV).

3. Key Performance Indicators (KPIs):
• Top 10 Customers by Revenue.
• Product Category Performance.
• Regional Sales Analysis.

4. Advanced Visualizations:
• Customer Segmentation by industry.
• Sales Trends by Region and Product Category.
• Top Products by Sales.
• Heat Map of Sales by Region and Product Category.

5. Drill-Through Functionality:
Enable drill-through options on customer-level and product-level reports for detailed analysis.

6. Dynamic Reporting with Slicers and Filters:
Add slicers to filter reports based on Date Range, Region, and Product Category.

7. Custom Tooltips and Interactions:
Add custom tooltips to provide contextual information when users hover over visuals.

8. Bookmarks for Dashboard Views:

Create bookmarks for different report views and user roles.

Expected Outcomes:

By implementing the above tasks and functions in Power BI, NovaTech Industries will achieve the following outcomes:
• Improved Sales Visibility.
• Optimized Decision Making.
• Enhanced Customer Engagement.
• Actionable Insights.

Save the power bi file ,csv file and reports or images file in the desktop with in a folder and switch off the virtual machine