**POWER BI PROJECT**

**INTRODUCTION:**

Power BI is a powerful business intelligence tool developed by Microsoft that allows users to visualize, analyze , and share insights from data. In today’s data-driven world, organizations rely on clear and interactive reports to make better decisions. Power BI makes it possible to transform raw data into visually appealing dashboards that provide actionable insights.

**WHAT IS POWER BI?**

Power BI is a data visualization and business analytics tool that connects to various data sources and helps users create interactive reports and dashboards. It combines data preparation, visualization, and sharing in one platform. Supply Chain Performance & Optimization DashboardThis may include:

* **Data Connectivity** – Importing or connecting live data from sources like Excel, SQL, or cloud platforms.
* **Data Transformation** – Cleaning, shaping, and modeling data using Power Query and DAX.
* **Data Visualization** – Creating interactive charts, graphs, maps, and KPI cards.
* **Dashboard Creation** – Building user-friendly dashboards that highlight key business metrics.
* **Data Sharing** – Publishing reports to the Power BI Service for collaboration and decision-making.

**WHAT IS POWER QUERY EDITOR?**

Power Query Editor is a data transformation tool in Power BI (also available in Excel). It allows users to connect, clean, and shape data before loading it into Power BI for analysis and visualization.

It provides an easy-to-use interface with point-and-click options as well as an underlying M language (Power Query Formula Language) for advanced transformations.

Key Features of Power Query Editor:

* **Data Import** – Connect to multiple sources like Excel, SQL, Web APIs, CSV, etc.
* **Data Cleaning** – Remove duplicates, handle missing values, filter out irrelevant rows, and correct errors.
* **Data Transformation** – Split columns, merge tables, pivot/unpivot, change data types, and create custom columns.
* **Data Shaping** – Reorganize data structures to make them analysis-ready.
* **Applied Steps** – Every transformation is recorded as a step, making the process transparent and reversible.
* **Automation** – Once defined, the same query can be refreshed automatically with updated data.

**“BUSINESS SALES ANALYTICS DASHBOARD”**

**INTRODUCTION TO THE BUSINESS SALES DATASET**

The dataset represents a comprehensive overview of Business sales operations, covering the flow of products from manufacturing to customer delivery. It contains 700 records with 16 attributes, combining data on sales. Notable columns include: Segment, Country, Product, Discount Band, Units Sold, Manufacturing, Price, Sale Price, Gross Sales....

This dataset was sourced from the Kaggle website, making it publicly available for data analytics, business intelligence, and academic projects.

**COLUMN DETAILS –BUSINESS SALES DATASET**

1. **Segment** – Customer market segment (e.g., Government, Midmarket).
2. **Country** – Country where the sale occurred.
3. **Product** – Name of the sold product.
4. **Discount Band** – Discount category (e.g., High, Medium, Low).
5. **Units Sold** – Number of product units sold.
6. **Manufacturing Price** – Cost to produce one unit.
7. **Sale Price** – Standard selling price per unit.
8. **Gross Sales** – Total before discounts (Units Sold × Sale Price).
9. **Discounts** – Total deduction amount.
10. **Sales** – Net revenue after discount.
11. **COGS** – Cost of goods sold.
12. **Profit** – Earnings after costs ([ \text{Sales} - \text{COGS} ]).
13. **Date** – Transaction date.
14. **Month Number** – Month in numeric form.
15. **Month Name** – Full name of the month.
16. **Year** – Year of transaction.

**DATA CLEANING & PREPARATION NOTE**

The dataset was directly imported into Power BI from Kaggle. Normally, in Business

Sales analytics, the Power Query Editor is used to clean and preprocess the dataset (e.g.,

handling missing values, removing duplicates, renaming columns, fixing data types).

However, in this case:

* The dataset contained no missing values.
* There were no duplicates.
* Column data types were correctly assigned (numeric, categorical, etc.).
* Values were already in a clean and consistent format.

**DASHBOARD :**

