Vehicle Data Analysis Project Documentation

# 1. Objective

The objective of this Power BI project is to analyze vehicle-related data to uncover insights related to vehicle sales, pricing, fuel type distribution, brand performance, and customer trends. The report helps stakeholders make informed decisions regarding marketing strategies, inventory management, and performance optimization.

# 2. Tools and Technologies Used

- Power BI Desktop – for creating interactive dashboards and data visualization.

- DAX (Data Analysis Expressions) – for custom calculations and measures.

- Power Query – for data cleaning and transformation.

- Excel/CSV Dataset – assumed as the data source (you can specify if otherwise).

- Windows OS – for local development environment.

# 3. Dataset Description

The dataset used in the project contains vehicle information with the following assumed fields:  
- Vehicle\_ID  
- Brand  
- Model  
- Year  
- Price  
- Fuel\_Type  
- Transmission  
- Mileage  
- Engine\_Size  
- Sale\_Date  
  
These fields are used to generate visuals like:  
- Sales trends over time  
- Distribution of fuel types  
- Top-performing brands  
- Price distribution by vehicle type

# 4. How to Run the Project

1. Open Power BI Desktop.

2. Click File > Open.

3. Browse to and select the file vehicle.pbix.

4. Allow Power BI to load the report and datasets.

5. Interact with the report using slicers, filters, and visuals.

Note: If the dataset is linked externally (e.g., to Excel), you might need to update the data source path.

# 5. Results Summary

The Power BI dashboard offers the following insights:  
- Top-selling brands are clearly highlighted using bar/column charts.  
- Fuel type trends show a shift or preference in customer choices.  
- Price ranges give a good overview of the vehicle market segmentation.  
- Time-based sales patterns help identify peak months or seasons.  
- Custom filters allow dynamic report slicing by year, brand, and fuel type.

# 6. Installation Guide

1. Download and install Power BI Desktop from the official Microsoft site: https://powerbi.microsoft.com/desktop.

2. Ensure system requirements are met (Windows 10+, 64-bit).

3. Open Power BI and import the .pbix file.

4. If needed, install any additional connectors or enable required previews.