**Project Title: Car Services Data Analysis Using Power BI and MS SQL Server**

**1. Introduction**

This project focuses on gaining practical experience in data analytics by integrating ETL processes using MS SQL Server and building an interactive dashboard in Power BI. The project leverages real-world-style CSV datasets covering car details, insurance, owners, sales, and service history.

**2. Technologies Used**

* **Power BI** – For interactive data visualization
* **MS SQL Server** – For data storage and transformation
* **SQL** – For querying and creating master data tables
* **CSV Files** – As the primary data source

**3. Domain**

**Data Analytics** – with a focus on automotive service and sales data insights.

**4. Objective**

To develop hands-on proficiency in the use of Power BI and MS SQL Server by carrying out the following:

* Ingest and clean data from multiple CSV sources
* Create a consolidated master table using SQL
* Build insightful Power BI dashboards for decision-making

**5. Data Sources and ETL Process**

**Datasets Used:**

* Car\_Data.csv
* Insurance\_Data.csv
* Owners\_Data.csv
* Sales\_Data.csv
* Service\_History.csv

**ETL Steps:**

* **Extract**: Load CSV files into SQL Server tables
* **Transform**: Clean and merge data using SQL queries
* **Load**: Create a comprehensive Master\_Table using a SQL script (file : SQLQueryForMATER\_TABLE.sql)

**6. Modules/Components**

* **CSV Ingestion**
* **SQL-based Master Table Creation**
* **Dashboard Development in Power BI**
  + Filters by Brand, Year, City, Owner Type, etc.
  + Sales trends and patterns
  + Insurance status overview
  + Service history insights

**7. Results**

A fully functional **Power BI dashboard** (Car Services Dashboard.pbix) was created, offering:

* Dynamic visualizations
* Key performance indicators
* Comprehensive data filtering
* Easy interpretation of sales and service metrics

**8. Conclusion**

This project successfully demonstrated the integration of SQL Server and Power BI for end-to-end data analytics. It helped in understanding ETL concepts, SQL-based data wrangling, and visual storytelling using dashboards.

**9. Future Scope**

* Integration with live database or API for real-time updates.
* Use of Power BI Service for web publishing.
* Advanced analytics using DAX and ML models.

**10.Your Role**

* Designed the database schema and wrote SQL queries for the master table.
* Developed the complete Power BI dashboard with KPIs (Key Performance Indicators) and slicers.
* Documented the process and derived actionable insights from the visualizations.