Vehicle Sales Dashboard – Project Report

1. Cover Page

Title: Vehicle Sales Dashboard Project
Prepared By: [Your Name]
Tool Used: Microsoft Excel (Pivot Tables, Charts, Dashboarding)
Dataset: Historical car sales transactions (brands, models, sales price, states, profit/loss, etc.)

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2. Abstract

This project analyzes vehicle sales data to identify patterns, profitability, brand performance, and customer demographics. By using Excel for data cleaning, pivot tables, and dashboarding, the project provides insights into top-performing brands, sales trends, customer age groups, and geographical distribution of sales. The outcome is an interactive dashboard for quick decision-making in the automobile market.

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3. Objectives

- Clean and structure raw vehicle sales data for analysis.
- Identify **top-selling brands and models**.
- Compare **Market Price vs Selling Price** to calculate Profit/Loss.
- Understand **sales distribution by state, year, and customer age group**.
- Create a **dashboard for decision-makers** to view key metrics at a glance.

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4. Problem Statement

Vehicle dealerships and manufacturers face challenges in understanding sales performance, brand competition, and profitability. Without clear visualization, decision-making becomes

complex. This project aims to solve that by providing an **Excel-based analytical dashboard** that highlights profit trends, top sellers, and regional performance.

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5. Dataset Overview

The dataset includes vehicle transaction details:

- **Year / Make / Model / Variant**
- **Body Type & Transmission**
- **VIN / Chassis Number**
- **State** (location of sale)
- **Odometer Reading (Km Driven)**
- **Color / Interior**
- **Seller Name**
- **Market Price & Selling Price**
- **Profit/Loss**
- **Sale Date & Year**
- **Vehicle Age in Years**

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6. Data Cleaning Steps

- Removed duplicates and invalid VIN numbers.
- Standardized text fields (brand names, color, transmission).
- Converted **sale dates** into standard `YYYY-MM-DD` format.
- Calculated **Profit/Loss = Selling Price – Market Price**.
- Derived new fields:

- Vehicle Age
- Sales Year
- Profit/Loss category

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7. Key Analyses & Visuals

Using Pivot Tables & Charts, the following insights were derived:

1. **Top 7 Brands by Sales** (Pivot Table & Bar Chart)
    - Identified market leaders and laggards.
2. **Profitability by Brand** (Bar/Column Chart)
    - Showed which brands consistently generated profits.
3. **Sales by Customer Age Group** (Pie/Bar Chart)
    - Revealed demographic patterns.
4. **Sales by State** (Map/Bar Chart)
    - Highlighted regional strongholds.
5. **Yearly Sales Trend** (Line Chart)
    - Showed growth or decline over time.
6. **Dashboard Page**
    - Combined all KPIs (Top Brands, Profits, State-wise sales, Yearly Trends) into a single interactive view.

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8. Insights from the Dashboard

- **BMW & Audi** showed strong premium segment sales with high profits.
- Some brands sold below market price, leading to **losses**.

- Sales were higher among **mid-age groups** (30–50 years).
- **California** led sales volume among states.
- Sales peaked in **2014–2015**.

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9. Recommendations

- Focus marketing efforts on **top-performing states**.
- Promote **profitable brands/models** while reducing stock of underperforming ones.
- Offer targeted financing or promotions for **younger buyers** to expand the market.
- Improve pricing strategies where frequent **losses** are observed.

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10. Conclusion

The Excel Vehicle Sales Dashboard successfully transforms raw data into **actionable insights**. By identifying profitable brands, sales hotspots, and customer demographics, the dashboard can support **better sales strategy, inventory management, and profit optimization** for vehicle dealerships.