

1. Most Expensive Car Brands

- Identify the top 5 car brands with the highest average price.
- Shows your ability to filter, group, and rank data using aggregation functions.

2. Most Listed Car Models

- Find the most frequently listed car models in the dataset.
- Demonstrates proficiency in using GROUP BY and COUNT() to analyze trends.

3. Average Price by Fuel Type

- Calculate the average price for each fuel type (e.g., Petrol, Diesel, Electric).
- Showcases aggregation and categorical data analysis.

4. Price Distribution Over Car Age

- Analyze how car prices vary based on their age (current year - manufacturing year).
- Demonstrates the ability to work with date-based calculations and trends.

5. Transmission Type & Pricing

- Compare the average price of manual vs. automatic cars.
- Highlights the ability to analyze the impact of categorical factors on pricing.

6. Most Common Manufacturing Years

- Identify the top 3 most frequently occurring manufacturing years in the dataset.
- Demonstrates ranking and filtering using ORDER BY, GROUP BY, and COUNT().

7. Most Popular Car Brands by Listings

- Identify the top 5 car brands with the highest number of listings.
- Demonstrates proficiency in using GROUP BY and COUNT() to analyze market trends.

8. Price Variation by Car Age

- Calculate the average price of cars based on their age (current year - manufacturing year).
- Helps analyze depreciation trends in resale values.

9. Ranking Cars by Price Within Each Brand

- Rank cars by price within each brand using window functions (RANK()).
- Demonstrates knowledge of advanced SQL functions for ranking and partitioning.

10. Outlier Detection in Car Prices

- Identify cars priced significantly higher or lower than the average price.
- Showcases statistical analysis using standard deviation or percentiles.

11. Cars Listed for Sale Each Year

- Count how many cars were listed for sale each year.

- Shows ability to work with date fields and time-series analysis.

12. Most Commonly Sold Car Brands in a Given Year

- Identify the most listed car brands for a particular year (e.g., 2023).
- Highlights filtering and grouping by year for trend analysis.

13. Percentage of Cars Above the Average Price

- Calculate what percentage of listed cars are priced above the overall average.
- Demonstrates proficiency with aggregate functions and conditional logic.

14. Depreciation Analysis

- Compare the average price of cars by manufacturing year to see how value decreases over time.
- Shows trend analysis and numerical calculations in SQL.

15. Price Distribution Analysis

- Analyze the distribution of car prices using percentile-based grouping (e.g., budget, mid-range, luxury).
- Demonstrates statistical analysis and the ability to segment data for better insights.