Project Title: Second Hand Car Dealer – MySQL

Objective: Develop a MySQL-based system to manage and analyze the inventory of a second-hand car dealership. The system should provide various insights and data analytics based on the available car records.

Requirements:

1. Data Management:
   - Read Cars Data: Implement functionality to read and import car data into the database.
2. Total Records Analysis:
   - Total Cars: Calculate the total number of car records available in the database.
3. Yearly Car Availability:
   - Available Cars in 2023: Determine the number of cars available for the year 2023.
   - Available Cars in 2020, 2021, 2022: Find out the number of cars available for each of the years 2020, 2021, and 2022.
4. Yearly Summary Report:
   - Total Cars by Year: Provide a summary report that shows the total number of cars available each year.
5. Fuel Type Analysis:
   - Diesel Cars in 2020: Determine the number of diesel cars available in 2020.
   - Petrol Cars in 2020: Determine the number of petrol cars available in 2020.
   - All Fuel Types by Year: Generate a report showing the count of cars for each fuel type (petrol, diesel, CNG) for every year.
6. Inventory Trends:
   - Years with More than 100 Cars: Identify the years where the number of cars exceeds 100.
   - Car Count from 2015 to 2023: Provide a complete list of car counts for each year from 2015 to 2023.
   - Car Details from 2020 to 2023: Provide a complete list of car details for the years 2020 to 2023.

Deliverables:

- A MySQL database with the appropriate schema to store car data.
- SQL queries or scripts to generate the required reports and analyses.
- Documentation of the database schema, queries, and analysis results.

Overview:

The CarsDataset database is designed to manage and analyze the inventory of second-hand cars. It includes details such as the name, year of manufacture, selling price, and various other attributes of the cars.

Table Schema:

table_name	column_name	data_type	character_maximum_length	numeric_precision	numeric_scale
CarsDataset	Name	text			
CarsDataset	year	integer		32	0
CarsDataset	selling_price	integer		32	0
CarsDataset	km_driven	integer		32	0
CarsDataset	fuel	character varying	20		
CarsDataset	seller_type	character varying	20		
CarsDataset	transmission	character varying	20		
CarsDataset	owner	character varying	20		
CarsDataset	mileage	character varying	20		
CarsDataset	engine	character varying	20		
CarsDataset	max_power	character varying	20		
CarsDataset	torque	character varying	50		
CarsDataset	seats	integer		32	0

(13 rows)

Analysis Results:

The dataset contains a total of 8148 car records. There are 6 cars available in 2023. The number of cars available in 2020, 2021, and 2022 are 74, 7, and 7 respectively. There are 20 diesel cars available in 2020. There are 51 petrol cars available in 2020. The total number of cars from 2015 to 2023 is 4137.