Cars Data analysis in SQL

Cars Data analysis is end-to-end MySQL project

Car Dekho is an online platform designed to help users buy and sell cars. It offers detailed information, tools, and resources to facilitate informed vehicle purchases.

✅Steps Covered✅
Second Hand Car Dealer

1. Read Data
2. Where
3. Having
4. Group by year

First Step : Create Database in MYSQL

- CREATE SCHEMA car;
- CREATE DATABASE car;

  Use any one for create database

Second Step: Use this database

- use car;

Q.1 Read Cars data.
Ans:
select * from car_dekho;

Output:

Name	year	selling_price	km_driven	fuel	seller_type	transmission	owner	mileage	engine	max_power	torque	sea
Maruti Alto 800 LXI Opt	2023	410000	10000	Petrol	Individual	Manual	First Owner	19.03 kmpl	999 CC	71.01bhp	96Nm	5
Skoda Slavia 1.0 TSI Ambition	2023	1350000	10000	Petrol	Individual	Manual	First Owner	14.08 kmpl	1956 CC	167.67bhp	350nm	5
BMW 3 Series Gran Limousine 320Ld Luxury Line	2023	5800000	1000	Diesel	Dealer	Automatic	First Owner	18.15 kmpl	998 CC	118.35bhp	172Nm	5
MG ZS EV Exclusive	2023	2650000	10000	Electric	Dealer	Automatic	First Owner	32.52 kmpl	998 CC	58.33bhp	78Nm	5
Tata Punch Adventure	2023	715000	10000	Petrol	Individual	Manual	First Owner	12.15 kmpl	1451 CC	141bhp	250Nm	5
Maruti S-Presso VXi Plus	2023	450000	30171	Petrol	Individual	Manual	First Owner	19.03 kmpl	999 CC	71.01bhp	96Nm	5
Maruti S-Presso LXi	2022	425000	1994	Petrol	Dealer	Manual	First Owner	19.47 kmpl	999 CC	113.98bhp	178Nm	5
Hyundai Creta SX Turbo	2022	1895000	22000	Petrol	Individual	Automatic	First Owner	12.15 kmpl	1997 CC	296.3bhp	400Nm	5

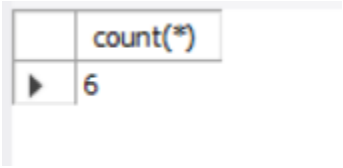
Q.2 Total cars: To get a count of total records.
Ans:
select count(*) from car_dekho;

Output:

	count(*)
▶	7927

Q.3 The manager asked the employee how many car will be available in 2023.
Ans:
select count(*) from car_dekho where year = 2023;

Output:



	count(*)
▶	6

Q.4 The manager asked the employee how many car will be available in 2020, 2021, 2022.
Ans:
select count(*) from car_dekho where year in (2020,2021,2022) group by year;

Output:

	count(*)
▶	74
	7
	7

Q. 5 Clint asked me to print the total of all cars by year. I don't see all the details .
Ans:
select year, count(*) from car_dekho group by year;

Output:

year	count(*)
2007	173
2008	201
2009	231
2010	375
2011	570
2012	621
2013	668
2014	620
2015	775
2016	856
2017	1010
2018	806

Q.6 Client asked to car dealer agent how many diesel cars will be there in 2020.
Ans:
select count(*) from car_dekho where year = 2020 and fuel = "Diesel"

Output:

count(*)
20

Q. 7 Client requested a car dealer agent how many petrol cars will be there be in 2020.
Ans:
select count(*) from car_dekho where year = 2020 and fuel = "petrol"

Output:

count(*)
51

Q.8 The manager told the employe to give a print all the fuel cars (petrol, diesel, and CNG) come by all year.
Ans

```
SELECT
   year,
   SUM(CASE WHEN fuel = 'Petrol' THEN 1 ELSE 0 END) AS petrol_count,
   SUM(CASE WHEN fuel = 'Diesel' THEN 1 ELSE 0 END) AS diesel_count,
   SUM(CASE WHEN fuel = 'CNG' THEN 1 ELSE 0 END) AS cng_count
FROM
```

```
    car_dekho
GROUP BY
    year
ORDER BY
    year;
```

Output:

year	petrol_count	diesel_count	cng_count
1994	1	1	0
1995	1	0	0
1996	2	0	0
2023	4	1	0
2021	5	2	0
2022	5	2	0
2001	6	0	0
1997	9	0	0
1998	9	0	0
1999	11	3	0
2000	12	3	1
2002	16	3	0
2003	27	10	0
2004	41	10	0
2020	51	20	3

Q. 9 Manager said there were more than 100 cars in a given year which year had more than 100 cars.

Ans:

```
select year, count(*) from car_dekho group by year having count(*)>100;
```

Output:

year	count(*)
2006	102
2007	173
2008	201
2009	231
2010	375
2011	570
2012	621
2013	668
2014	620

Q.10 The manager said to the employe all cars count details between 2015 and 2023; we need a complete list..

Ans:

select count(*) from car_dekho where year between 2015 and 2023;

Output:

count(*)
4124

Q.11 The manager said to the employee all cars details between 2015 to 2023 we need complete list .

Ans:

select * from car_dekho where year between 2015 and 2023;

Output:

Name	year	selling_price	km_driven	fuel	seller_type	transmission	owner	mileage	engine	max_power	torque	seats
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5
Honda Amaze V CVT Petrol BSIV	2019	779000	7032	Petrol	Trustmark...	Automatic	First Owner	19.0 kmpl	1199 CC	88.76 bhp	110N...	5