Project

Automobile Analysis

Real-Time Automobile Data Queries & Insights

Data set from kaggle:

url: https://www.kaggle.com/datasets/tawfikelmetwally/automobile-dataset

By using mysql solve the queries:

1. Get all cars with mileage (mpg) above 30?

Filters all cars with fuel efficiency greater than 30 mpg. Useful for identifying economical
cars

Query:

```
select name,mpg from automobile
where mpg>30;
```

Output:

https://drive.google.com/file/d/1V7aBh7pC1lARNV4TQjvUgNBnt3x6wZyg/view?usp=sharing

2. Find average horsepower for each origin?

It calculates the average engine power by region . Helpful to compare engineering trends by region

Query:

```
select origin, AVG(horsepower) as AVG_Horsepower
from automobile
```

group by origin;

Output:

https://drive.google.com/file/d/1e0o-8W3wnPFeb5CxM3Xw-WvufqKqqWa/view?usp=sharing

3. Count number of cars from each origin?

Query:

select count(*) as cars,origin from automobile
group by origin;

Output:

https://drive.google.com/file/d/1Ek7vCmkoSADoqRKXins4f7U3s7UUyI/view?usp=sharing

4.Find top 5 most fuel-efficient cars?

Ranks the cars by fuel efficiency.Useful for eco-conscious buyers

Query:

select name,mpg

from automobile

order by mpg desc limit 5;

Output:

https://drive.google.com/file/d/1jSHSbm2dUfedwxnUUr2kNFil1LRFneC2/view?usp=sharing

5.List distinct cylinder counts in the dataset?

This query is useful to find variety of engine cylinder types used

Query:

```
select distinct count(cylinders) as Total_cylinders
from automobile;
```

Output:
https://drive.google.com/file/d/1kKi62m1aMbJqUlICTZb1JXt0jBmSOuVj/view?usp=sharing

6.Find average weight by number of cylinders?

This query is useful to find Heavier cars, it shows weight distribution per engine type

Query:

```
select cylinders,avg(weight) as avg_weight
from automobile
group by cylinders
order by cylinders;
```

Output:
https://drive.google.com/file/d/1OK6bMb7UyK6S46QvbaZdS1BasthOjyI/view?usp=sharing

7.Find all cars with acceleration below 10 seconds?

Query:

```
select name as cars, acceleration from automobile
where acceleration<10;
```

Output:
https://drive.google.com/file/d/1wuU0gYlf3dDApGdTUwnWx7RIw-tFfVM/view?usp=sharing

8. Get model years with the highest average mpg?

This query is useful to find which years had the most fuel efficient vehicles on

average

Query:

```
select model_year,avg(mpg) as avg_mpg
from automobile
group by model_year
order by avg_mpg desc
 limit 5;
```

Output:

https://drive.google.com/file/d/12nrBDWZyUr7dM_TXHAFi1p1WOdYUZeJ/view?usp=sharing

9. Find the heaviest car in the dataset?

Query:

```
select name as car , weight from automobile
order by weight desc
limit 1;
```

Output:
https://drive.google.com/file/d/1wCJ4lnVtLbWCWAD5F0hjyXm83Oq-qL0R/view?usp=sharing

10. List cars with horsepower between 100 and 150?

This query is useful to find cars with moderate power- neither too weak nor too strong

Query:

```
select name as car, horsepower from automobile
where horsepower between 100 and 150;
```

Output:

https://drive.google.com/file/d/1pAjT86RH6eYd-Jp-iPnsW1-dXAeXsXnI/view?usp=sharing

11. Show the average mpg by number of cylinders?

This query is useful in understanding how engine size affects fuel efficiency

Query:

```
select avg(mpg) as AVG_mpg,cylinders
from automobile
group by cylinders
order by cylinders;
```

Output:

https://drive.google.com/file/d/1fDsyCLX8hpMwHRqGIObHQPDDsZucPdV/view?usp=sharing

12. Find all cars manufactured in 1975?

Quary:

```
select name as Total_cars, model_year
from   automobile
where model_year = 75;
```

Output:

https://drive.google.com/file/d/1oI1eVntB6Nr0DwiGjQUdrp_stL3UTZh6/view?usp=sharing