

Dataset:

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

Here is the breakdown of data set columns

Column name	Description
Name	Name of the car
mpg	Miles per gallon
cylinder	Number of engine cylinders
displacement	Engine size in cubic inches
horsepower	Engine power output
weight	Weight of the car
acceleration	Time Taken to go from 0 to 60 kmph
Model year	Year of the car(last two digits)
origin	Country of origin(usa,europe,japan)

1.Get all cars with mileage above 30 mpg

useful for identifying economical cars

select name,mpg

from automobile

where mpg>30;



Result Grid |   Filter Rows:

	name	mpg
▶	toyota corolla 1200	31
	datsum 1200	35
	datsum b210	31
	toyota corolla 1200	32
	toyota corona	31
	datsum 710	32
	fiat x1.9	31
	honda civic cvcc	33
	honda civic	33
	datsum b-210	32
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2. Find average horse power for each origin

It calculate the average engine horse power by region. Helpful to compare engineering trends I region



```
select Origin, avg(horsepower) as avg_horsepower from automobile group by Origin;
```

Result Grid |   Filter Rows:

	Origin	avg_horsepower
▶	usa	119.0490
	japan	79.8354
	europa	80.5588

3. Count the number of cars from each origin

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



Result Grid |   Filter 1

	origin	total_cars
▶	usa	245
	japan	79
	europa	68

4. Find the top 5 most fuel-efficient cars

This query is useful to rank the cars by fuel efficiency. Useful for eco-conscious buyers

```
select name, mpg from automobile order by mpg desc limit 5;
```

Result Grid |   Filter Rows:

	name	mpg
▶	mazda glc	47
	honda civic 1500 gl	45
	vw rabbit c (diesel)	44
	vw pickup	44
	vw dasher (diesel)	43

5. List distinct cylinder counts in the dataset

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

```
select distinct cylinders from automobile;
```

Result Grid |  

	cylinders
▶	8
	4
	6
	3
	5

6. Find the average weight by number of cylinders

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

select cylinders, avg(weight) from automobile group by cylinders;

Result Grid |   Filter Row

	cylinders	avg(weight)
▶	8	4114.7184
	4	2305.1106
	6	3202.1205
	3	2398.5000
	5	3103.3333

7. Find all cars with acceleration below 10 seconds



select name, acceleration from automobile where acceleration < 10;

Result Grid |   Filter Rows:

	name	acceleration
▶	chevrolet impala	9
	plymouth fury iii	8.5
	amc ambassador dpl	8.5
	plymouth 'cuda 340	8
	chevrolet monte carlo	9.5
	pontiac grand prix	9.5

8. Get model years with the highest average mpg



select model_year, avg(mpg) from automobile group by model_year;

Result Grid   Filter Rows:		
	model_year	avg(mpg)
▶	70	17.6897
	71	21.1111
	72	18.7143
	73	17.1000
	74	22.7692
	75	20.2667
	76	21.7353
	77	23.6786
	78	24.1111
	79	25.1724

Result 11 ×

9. Find the heaviest car in the dataset



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

Result Grid   Filter Rows: <input type="text"/>		
	name	weight
▶	pontiac safari (sw)	5140

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

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

Result Grid   Filter Rows: <input type="text"/>		
	name	horsepower
▶	chevrolet chevelle malibu	130
	plymouth satellite	150
	amc rebel sst	150
	ford torino	140
	chevrolet monte carlo	150
	bmw 2002	113
	amc gremlin	100
	plymouth satellite custom	105
	chevrolet chevelle malibu	100
	amc matador	100

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11. Show the average mpg by number of cylinders

select cylinders, avg(mpg) from automobile group by cylinders;

Result Grid   Filter Row

	cylinders	avg(mpg)
▶	8	15.0194
	4	29.3166
	6	20.0482
	3	20.7500
	5	27.0000

12. Find all cars manufactured in 1975

select name,model_year from automobile where model_year=75;

Result Grid   Filter Rows:

	name	model_year
▶	plymouth valiant custom	75
	chevrolet nova	75
	mercury monarch	75
	ford maverick	75
	pontiac catalina	75
	chevrolet bel air	75
	plymouth grand fury	75
	ford ltd	75
	buick century	75
	chevrolet chevelle malibu	75

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