

EDS Practical – 4

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Roll no: 360

Batch: C3

File:

Automobile.csv X								
1 to 49 of 49 entries								
name	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year	origin
chevrolet chevelle malibu	18	8	307	130	3504	12	70	usa
buick skylark 320	15	8	350	165	3693	11.5	70	usa
plymouth satellite	18	8	318	150	3436	11	70	usa
amc rebel sst	16	8	304	150	3433	12	70	usa
ford torino	17	8	302	140	3449	10.5	70	usa
ford galaxie 500	15	8	429	198	4341	10	70	usa
chevrolet impala	14	8	454	220	4354	9	70	usa
plymouth fury iii	14	8	440	215	4312	8.5	70	usa
pontiac catalina	14	8	455	225	4425	10	70	usa
amc ambassador dpl	15	8	390	190	3850	8.5	70	usa
dodge challenger se	15	8	383	170	3563	10	70	usa
plymouth 'cuda 340	14	8	340	160	3609	8	70	usa
chevrolet monte carlo	15	8	400	150	3761	9.5	70	usa
buick estate wagon (sw)	14	8	455	225	3086	10	70	usa
toyota corona mark ii	24	4	113	95	2372	15	70	japan
plymouth duster	22	6	198	95	2833	15.5	70	usa
amc hornet	18	6	199	97	2774	15.5	70	usa
ford maverick	21	6	200	85	2587	16	70	usa
datsun pl510	27	4	97	88	2130	14.5	70	japan
volkswagen 1131 deluxe sedan	26	4	97	46	1835	20.5	70	europa
peugeot 504	25	4	110	87	2672	17.5	70	europa
audi 100 ls	24	4	107	90	2430	14.5	70	europa
saab 99e	25	4	104	95	2375	17.5	70	europa
bmw 2002	26	4	121	113	2234	12.5	70	europa
amc gremlin	21	6	199	90	2648	15	70	usa
ford f250	10	8	360	215	4615	14	70	usa
chevy c20	10	8	307	200	4376	15	70	usa

Problem Statements:

1. Total number of cars with lowest weight
2. Total number of cars with highest weight
3. Mean of all cars acceleration
4. Number of cars having 70 model year
5. Number of cars having 12 acceleration
6. Number of cars with 90 horsepower
7. Number of cars with lowest displacement
8. Median of number of cylinders used in cars
9. Number of cars using 6 cylinders
10. Mode of mpg

Code:

```
import pandas as pd

# Read the CSV file
data = pd.read_csv('/content/Automobile.csv')

lowest_weight_count = len(data[data['weight'] == data['weight'].min()])
print("Total number of cars with lowest weight:", lowest_weight_count)

highest_weight_count = len(data[data['weight'] ==
data['weight'].max()])
print("Total number of cars with highest weight:",
highest_weight_count)

mean_acceleration = data['acceleration'].mean()
print("Mean of all cars' acceleration:", mean_acceleration)

model_year_70_count = len(data[data['model_year'] == 70])
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```
print("Number of cars having 70 model year:", model_year_70_count)

acceleration_12_count = len(data[data['acceleration'] == 12])
print("Number of cars having 12 acceleration:", acceleration_12_count)

horsepower_90_count = len(data[data['horsepower'] == 90])
print("Number of cars with 90 horsepower:", horsepower_90_count)

lowest_displacement_count = len(data[data['displacement'] ==
data['displacement'].min()])
print("Number of cars with lowest displacement:",
lowest_displacement_count)

cylinders_median = data['cylinders'].median()
print("Median of number of cylinders used in cars:", cylinders_median)

cylinders_6_count = len(data[data['cylinders'] == 6])
print("Number of cars using 6 cylinders:", cylinders_6_count)

mpg_mode = data['mpg'].mode().values[0]
print("Mode of mpg:", mpg_mode)
```

Output:

```
Total number of cars with lowest weight: 1
Total number of cars with highest weight: 1
Mean of all cars' acceleration: 13.489795918367347
Number of cars having 70 model year: 29
Number of cars having 12 acceleration: 5
Number of cars with 90 horsepower: 3
Number of cars with lowest displacement: 3
Median of number of cylinders used in cars: 8.0
Number of cars using 6 cylinders: 12
Mode of mpg: 14
```