```
class Myclass:
  id =5
  name_stu = "student"
  marks = 90
#object 1
p1=Myclass()
print(p1.id)
#object 2
p2=Myclass()
print(p2.name_stu)
print(p2.marks)
```

```
class Employee:
  employee_id=0
  salary=10000

employee1 = Employee()
employee2 = Employee()
employee1.employee_id = 1001
employee2.employee_id = 1002

employee1.salary = 20000
print(employee1.employee_id,employee1.salary)
print(employee2.employee_id,employee2.salary)
```

```
1001 20000
1002 10000
```

```
class Room:
  length = 0.0
  breadth = 0.0
  def calculate_area(self):
    print("Area of Room =",self.length * self.breadth)
  def calculate_perimeter(self):
    print("Perimeter of Room =",2*(self.length+self.breadth))
study_room = Room()
study_room.length = 42.5
study_room.breadth = 30.8
study_room.calculate_area()
study_room.calculate_perimeter()

living_room = Room()
living_room.length = 20
living_room.breadth = 10
living_room.calculate_area()
living_room.calculate_perimeter()
```

```
Area of Room = 1309.0
Perimeter of Room = 146.6
Area of Room = 200
Perimeter of Room = 60
```

```
class MyClass:
   x = 5
   y = 10
   z = 15
   def students(self):
    print ("total students are ", (self.x*self.y*self.z))

p1 = MyClass()
print(p1.x)
```

```
5
```

```
#numpy
#2005
#array - continuous memory
#arr name = [elements]
cars = ['Ford','BMW','Tesla']
print(cars)
print(cars[2])
age =[12,60,89]
print(age[0])
```

```
['Ford', 'BMW', 'Tesla']
Tesla
12
```

```
import numpy as np
arr = np.array([1,2,3,4,5])
print(arr)
two_dim_arr = np.array([[1,2,3],
                        [4,5,6]])
print(two_dim_arr)
print(two_dim_arr[1,1])
#very large amount
toyPrices = np.array([5,8,3,6])
print(toyPrices-2)
```

```
[1 2 3 4 5]
[[1 2 3]
 [4 5 6]]
5
[3 6 1 4]
```

```
toyPrices = [5,8,3,6]
for i in range(len(toyPrices)):
  toyPrices[i] = toyPrices[i]-2
print(toyPrices)
```

```
[3, 6, 1, 4]
```

```
import numpy as np
import pandas as pd
ages = np.array([23,45,67,89])
series1=pd.Series(ages,index=["sony","akil","siri","judo"])
series2=pd.Series(ages,index=["000","1","2","3"])
print(series1)
```

```
sony    23
akil    45
siri    67
judo    89
dtype: int64
```

```
import pandas as pd
dataf = pd.DataFrame([['john',123,'india',34],
                      ['jane',123,'us',4],
                       ['joe',123,'uk',34],
                       ['joeee',123,'swiss',4]],
                       columns=['name','phone','country','age'])
print(dataf)
```

```
     name  phone country  age
0   john    123   india   34
1   jane    123      us    4
2    joe    123      uk   34
3  joeee    123   swiss    4
```

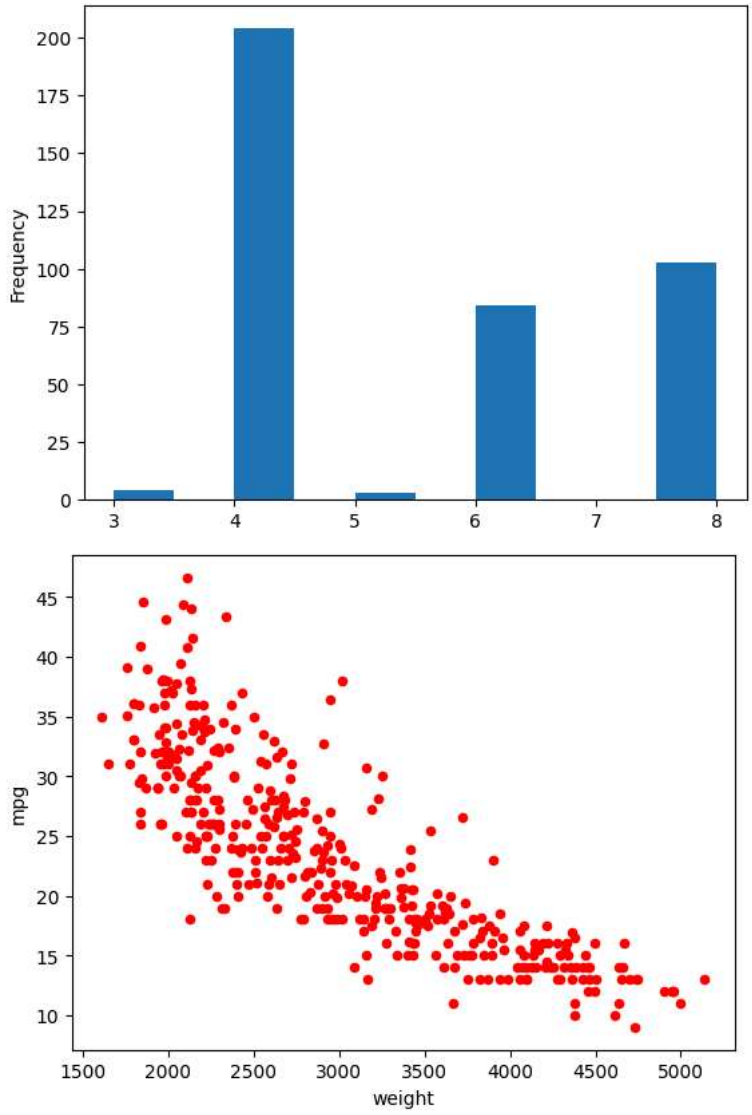
```
import pandas as pd
import numpy as np

df = pd.read_csv('/content/auto-mpg.csv')
# df.head()
# df.describe()
# df.tail()
# df.info()
# df.dropna(inplace=True)
# df.info()
```

```
# df['mpg']
# df[['mpg']]
# df[['mpg','cylinders','model-year','horsepower']]

df.iloc[2,0]
df.iloc[2,-1]
df['cylinders'].plot(kind='hist') #continous .vitals,heartbeat,o2
df.plot(kind='scatter',x='weight',y='mpg',marker='o',color='red')
```

```
<Axes: xlabel='weight', ylabel='mpg'>
```



Start coding or generate with AI.