In [1]:
```
import numpy as np
import pandas as pd
my_column_names = ['Eleanor', 'Chidi', 'Tahani', 'Jason']
my_data = np.random.randint(low=0, high=101, size=(3,4))

#create a dataframe
df = pd.DataFrame(data=my_data, columns=my_column_names)
print(df)

#print the value in row #1 of the Eleanor column.
print("\nSecond row of the Eleanor column :%d\n" % df ['Eleanor'][1])
#create a second column named Janet whose cotents are the sum
#of two other columns.
df['Janet'] = df['Tahani'] + df ['Jason']
print (df)
```

```
   Eleanor  Chidi  Tahani  Jason
0       68     18      33     70
1       57     46      47     14
2       32     62      51      2

Second row of the Eleanor column :57

   Eleanor  Chidi  Tahani  Jason  Janet
0       68     18      33     70    103
1       57     46      47     14     61
2       32     62      51      2     53
```

In [ ]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.datasets import fetch_openml
```

In [2]:
```
one_dimensional_array = np.array([1.3, 2.6, 3.6, 4.8, 6.2, 7.2, 8.3, 9.5])
print (one_dimensional_array)
```

```
[1.3 2.6 3.6 4.8 6.2 7.2 8.3 9.5]
```

In [3]:
```
two_dimensional_array = np.array([[7,4], [12,8], [3,7]])
print(two_dimensional_array)
```

```
[[ 7  4]
 [12  8]
 [ 3  7]]
```

In [4]:
```
sequence_of_integers = np.arange(10,15)
print(sequence_of_integers)
```

```
[10 11 12 13 14]
```

In [7]:
```
random_integers_between_150_and_300 = random_integers_between_50_and_100 * 3
print(random_integers_between_150_and_300)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
C:\Users\MC22E~1.SUL\AppData\Local\Temp/ipykernel_9800/2608007194.py in <module>
----> 1 random_integers_between_150_and_300 = random_integers_between_50_and_100 * 3
      2 print(random_integers_between_150_and_300)

NameError: name 'random_integers_between_50_and_100' is not defined
```

In [8]:
```
feature = np.arange(6,21)
print(feature)
label = (feature * 2) + 6
print(label)
```

```
[ 6  7  8  9 10 11 12 13 14 15 16 17 18 19 20]
[18 20 22 24 26 28 30 32 34 36 38 40 42 44 46]
```

In [9]:
```
noise = (np.random.random([30]) * 4) - 2
print(noise)
label = label + noise
print(label)
```

```
[ 0.20995474 -0.88206143 -1.08625989  1.40741237 -1.40855165 -0.12670594
 -0.37438052  1.95620331 -0.00425367 -0.89924299 -1.48038458  1.92905654
 -0.5940392  -0.69811843 -0.83087639 -1.79959894 -0.215266    0.75857205
  0.74549386  0.70503653 -1.99009883  0.88410291  0.30081347 -0.88917356
  1.1864453   0.57531603  1.49834284 -1.02237414  1.83798441 -0.72063477]

---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
C:\Users\MC22E~1.SUL\AppData\Local\Temp/ipykernel_9800/1798847441.py in <module>
      1 noise = (np.random.random([30]) * 4) - 2
      2 print(noise)
----> 3 label = label + noise
      4 print(label)

ValueError: operands could not be broadcast together with shapes (15,) (30,)
```

In [10]:
```
dataset = (np.random.random([15]) * 10) - 2
print(dataset)
label = label + dataset
print(label)
```

```
[ 7.23177302  1.80200166  4.02223917 -0.39225971 -0.82527066 -0.70462535
  6.86760888  7.55338727  2.68157325  0.80059108  2.75051298  7.32583184
  4.69838261  0.00981983  4.13959726]
[25.23177302 21.80200166 26.02223917 23.60774029 25.17472934 27.29537465
 36.86760888 39.55338727 36.68157325 36.80059108 40.75051298 47.32583184
 46.69838261 44.00981983 50.13959726]
```

In [ ]: