In [1]:
```
#practical no 4
```

In [2]:
```
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#Roll no: 09
#Sec:A
#Subject:Data Science and Statistics
#Date:2/07/2023
```

In [3]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
```

In [4]:
```
 import os
```

In [5]:
```
os.getcwd()
```

Out[5]:
```
'C:\\Users\\cmahl\\project notebook'
```

In [6]:
```
os.chdir("C:\\Users\\cmahl\\Desktop")
```

In [9]:
```
data=pd.read_csv("Salary.csv")
data.head(10)
```

Out[9]:

	Unnamed: 0	YearsExperience	Salary
0	0	1.2	39344.0
1	1	1.4	46206.0
2	2	1.6	37732.0
3	3	2.1	43526.0
4	4	2.3	39892.0
5	5	3.0	56643.0
6	6	3.1	60151.0
7	7	3.3	54446.0
8	8	3.3	64446.0
9	9	3.8	57190.0

In [10]:
```
a=[10,20,30,40]
type(a)
```

Out[10]:
```
list
```

In [11]:
```
 len(a)
```

Out[11]:
```
4
```

In [12]:
```
a[0]
```

Out[12]:
```
10
```

In [13]:
```
a[2]
```

Out[13]:
```
30
```

In [14]:
```
a[-2]
```

Out[14]:
```
30
```

In [15]:
```
a[1:3]
```

Out[15]:
```
[20, 30]
```

In [16]:
```
data.tail()
```

Out[16]:

	Unnamed: 0	YearsExperience	Salary
25	25	9.1	105583.0
26	26	9.6	116970.0
27	27	9.7	112636.0
28	28	10.4	122392.0
29	29	10.6	121873.0

In [17]:
```
data.head()
```

Out[17]:

	Unnamed: 0	YearsExperience	Salary
0	0	1.2	39344.0
1	1	1.4	46206.0
2	2	1.6	37732.0
3	3	2.1	43526.0
4	4	2.3	39892.0

In [19]:
```
data.head(30)
```

Out[19]:

	Unnamed: 0	YearsExperience	Salary
0	0	1.2	39344.0
1	1	1.4	46206.0
2	2	1.6	37732.0
3	3	2.1	43526.0
4	4	2.3	39892.0
5	5	3.0	56643.0
6	6	3.1	60151.0
7	7	3.3	54446.0
8	8	3.3	64446.0
9	9	3.8	57190.0
10	10	4.0	63219.0
11	11	4.1	55795.0
12	12	4.1	56958.0
13	13	4.2	57082.0
14	14	4.6	61112.0
15	15	5.0	67939.0
16	16	5.2	66030.0
17	17	5.4	83089.0
18	18	6.0	81364.0
19	19	6.1	93941.0
20	20	6.9	91739.0
21	21	7.2	98274.0
22	22	8.0	101303.0
23	23	8.3	113813.0

24	24	8.8	109432.0
25	25	9.1	105583.0
26	26	9.6	116970.0
27	27	9.7	112636.0
28	28	10.4	122392.0
29	29	10.6	121873.0

In [20]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 30 entries, 0 to 29
Data columns (total 3 columns):
 #   Column           Non-Null Count  Dtype  
---  ------           --------------  -----  
 0   Unnamed: 0       30 non-null     int64  
 1   YearsExperience  30 non-null     float64
 2   Salary           30 non-null     float64
dtypes: float64(2), int64(1)
memory usage: 848.0 bytes
```

In [21]:
```
data.describe()
```

Out[21]:

	Unnamed: 0	YearsExperience	Salary
count	30.000000	30.000000	30.000000
mean	14.500000	5.413333	76004.000000
std	8.803408	2.837888	27414.429785
min	0.000000	1.200000	37732.000000
25%	7.250000	3.300000	56721.750000
50%	14.500000	4.800000	65238.000000
75%	21.750000	7.800000	100545.750000
max	29.000000	10.600000	122392.000000

In [22]:
```
data.shape
```

Out[22]:
```
(30, 3)
```

In [23]:
```
data.size
```

Out[23]:
```
90
```

In [24]:
```
data.ndim
```

Out[24]:
```
2
```

In [25]:
```
data.isnull()
```

Out[25]:

	Unnamed: 0	YearsExperience	Salary
0	False	False	False
1	False	False	False
2	False	False	False
3	False	False	False
4	False	False	False
5	False	False	False
6	False	False	False

7	False	False	False
8	False	False	False
9	False	False	False
10	False	False	False
11	False	False	False
12	False	False	False
13	False	False	False
14	False	False	False
15	False	False	False
16	False	False	False
17	False	False	False
18	False	False	False
19	False	False	False
20	False	False	False
21	False	False	False
22	False	False	False
23	False	False	False
24	False	False	False
25	False	False	False
26	False	False	False
27	False	False	False
28	False	False	False
29	False	False	False

In [26]:
```
data.isnull().sum()
```

Out[26]:
```
Unnamed: 0          0
YearsExperience     0
Salary              0
dtype: int64
```