```
# Name:-Mandlik Viraj Rajendra
# Roll No:- 639
# PRN:-202201040102
# Divsion:-F(F2)
```

```
import numpy as nm
import matplotlib.pyplot as mtp
import pandas as pd
```

```
data_set= pd.read_csv('/content/drive/MyDrive/Colab Notebooks/Salary_Data (3).xls')
data_set
```

	YearsExperience	Salary
0	1.1	39343.0
1	1.3	46205.0
2	1.5	37731.0
3	2.0	43525.0
4	2.2	39891.0
5	2.9	56642.0
6	3.0	60150.0
7	3.2	54445.0
8	3.2	64445.0
9	3.7	57189.0
10	3.9	63218.0
11	4.0	55794.0
12	4.0	56957.0
13	4.1	57081.0
14	4.5	61111.0
15	4.9	67938.0
16	5.1	66029.0
17	5.3	83088.0
18	5.9	81363.0
19	6.0	93940.0
20	6.8	91738.0
21	7.1	98273.0
22	7.9	101302.0
23	8.2	113812.0
24	8.7	109431.0
25	9.0	105582.0
26	9.5	116969.0
27	9.6	112635.0
28	10.3	122391.0
29	10.5	121872.0

```
x= data_set.iloc[:, :-1].values
y= data_set.iloc[:, : 1].values
print(x)
print(y)
```

```
       [ 1.5]
       [ 2. ]
       [ 2.2]
       [ 2.9]
       [ 3. ]
       [ 3.2]
       [ 3.2]
       [ 3.7]
       [ 3.9]
       [ 4. ]
       [ 4. ]
       [ 4.1]
       [ 4.5]
       [ 4.9]
       [ 5.1]
       [ 5.3]
       [ 5.9]
       [ 6. ]
       [ 6.8]
       [ 7.1]
       [ 7.9]
       [ 8.2]
       [ 8.7]
       [ 9. ]
       [ 9.5]
       [ 9.6]
       [10.3]
       [10.5]]
      [[ 1.1]
       [ 1.3]
       [ 1.5]
       [ 2. ]
       [ 2.2]
       [ 2.9]
       [ 3. ]
       [ 3.2]
       [ 3.2]
       [ 3.7]
       [ 3.9]
       [ 4. ]
       [ 4. ]
       [ 4.1]
       [ 4.5]
       [ 4.9]
       [ 5.1]
       [ 5.3]
       [ 5.9]
       [ 6. ]
       [ 6.8]
       [ 7.1]
       [ 7.9]
       [ 8.2]
       [ 8.7]
       [ 9. ]
       [ 9.5]
       [ 9.6]
       [10.3]
       [10.5]]
```

```
# Splitting the dataset into training and test set.
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test= train_test_split(x,y, test_size=1/3,random_state=0)
```

```
print(x_train)
```

```
     [[ 1.5]
      [10.3]
      [ 4.1]
      [ 3.9]
      [ 9.5]
      [ 8.7]
      [ 9.6]
      [ 4. ]
      [ 5.3]
      [ 7.9]]
```

```
print(x_test)
```

```
     [[ 1.5]
      [10.3]
```

- 632.EFC.essay writing.pdf
- 632.SON.experiment 8.pdf
- 632.UHV
- 632._sub _UHV.pdf
- 632.colorimetetry.SON.pdf
- 632_Dis&sub (1).pdf.pdf
- 632_Dis&sub.pdf.pdf
- 632_Namrata_Dolas_CoursePortfolio.gslid…
- 632_assign03.phy.pdf
- 632_sub.AM.pdf
- @Yash MIT
- Activity 04 EDS
- CDE_IA-632 (1).pdf
- CDE_IA-632 (2).pdf
- CDE_IA-632.pdf
- Copy of RollNo_FirstName_LastName_Field…
- Copy of Sales.csv
- DESIGN THINKINHG assign-1.pptx
- DT 2 (1).pptx
- Datasets-20230601.zip
- Design thinking_1.pptx
- ET.Portfolio_632.pdf
- Experiment-06 SON.Chem.pdf
- FEE RECEIPT DEMO.mp4
- Groups for project.xlsx
- IA..04.pdf
- IA.EDS.632
- IMG_7200.heic
- IMG_7201.heic
- IMG_7202.heic
- IMG_7203.heic
- IMG_7204.heic
- IMG_7205.heic
- IMG_7206.heic
- IMG_7207.heic
- IMG_7208.heic
- IMG_7209.heic
- IMG_7210.heic
- IMG_7211.heic
- IMG_7212.heic
- IMG_7213.heic
- IMG_7214.heic
- IMG_7215.heic
- IMG_7216.heic
- IMG_7217.heic
- IMG_7218.heic
- IMG_7219.heic
- IMG_7220.heic
- IMG_7221.heic
- IMG_7222.heic
- IMG_7223.heic
- IMG_7224.heic
- IMG_7225.heic
- IMG_7226.heic
- IMG_7227.heic
- IMG_7228.heic
- IMG_7229.heic
- IMG_7230.heic
- IMG_7231.heic
- IMG_7232.heic
- IMG_7233.heic

```
       [ 4.1]
       [ 3.9]
       [ 9.5]
       [ 8.7]
       [ 9.6]
       [ 4. ]
       [ 5.3]
       [ 7.9]]
```

```
print(y_train)
```

```
     [[ 2.9]
      [ 5.1]
      [ 3.2]
      [ 4.5]
      [ 8.2]
      [ 6.8]
      [ 1.3]
      [10.5]
      [ 3. ]
      [ 2.2]
      [ 5.9]
      [ 6. ]
      [ 3.7]
      [ 3.2]
      [ 9. ]
      [ 2. ]
      [ 1.1]
      [ 7.1]
      [ 4.9]
      [ 4. ]]
```

```
print(y_test)
```

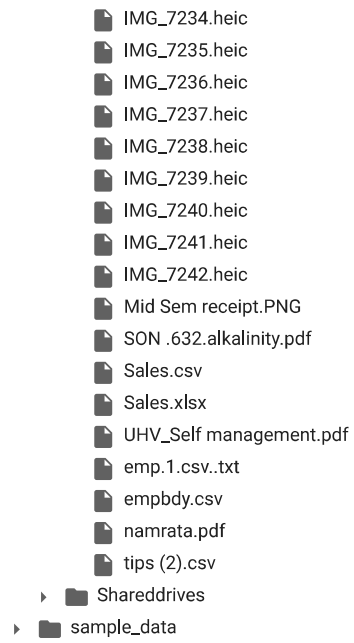
```
     [[ 1.5]
      [10.3]
      [ 4.1]
      [ 3.9]
      [ 9.5]
      [ 8.7]
      [ 9.6]
      [ 4. ]
      [ 5.3]
      [ 7.9]]
```

```
# Fitting the Simple Linear Regression model to the training dataset
from sklearn.linear_model import LinearRegression
regressor= LinearRegression()
regressor.fit(x_train,y_train)
```

```
▾ LinearRegression
LinearRegression()
```

```
# Prediction of Test and Training set result
y_pred= regressor.predict(x_test)
x_pred= regressor.predict(x_train)
print(x_pred)
print(y_pred)
```

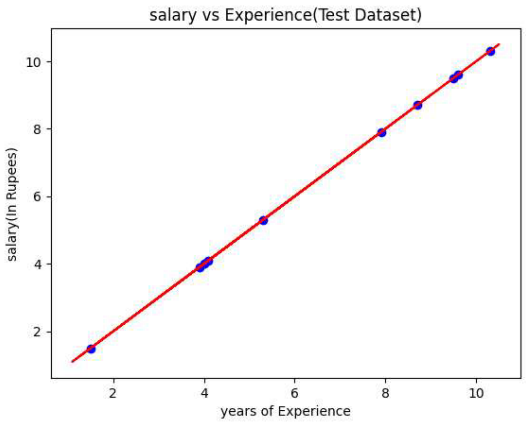
```
     [[ 2.9]
      [ 5.1]
      [ 3.2]
      [ 4.5]
      [ 8.2]
      [ 6.8]
      [ 1.3]
      [10.5]
      [ 3. ]
      [ 2.2]
      [ 5.9]
      [ 6. ]
      [ 3.7]
      [ 3.2]
      [ 9. ]
      [ 2. ]
      [ 1.1]
      [ 7.1]
```



```
        [ 4.9]
        [ 4. ]]
       [[ 1.5]
        [10.3]
        [ 4.1]
        [ 3.9]
        [ 9.5]
        [ 8.7]
        [ 9.6]
        [ 4. ]
        [ 5.3]
        [ 7.9]]
```

```
mtp.scatter(x_train,y_train,color="green")
mtp.plot(x_train,x_pred,color="red")
mtp.title("salary vs Experience(Training Dataset)")
mtp.xlabel("years of Experience")
mtp.ylabel("salary(In Rupees)")
mtp.show()
```


```
# Visualizing the Test set results
mtp.scatter(x_test,y_test,color="blue")
mtp.plot(x_train,x_pred,color="red")
mtp.title("salary vs Experience(Test Dataset)")
mtp.xlabel("years of Experience")
mtp.ylabel("salary(In Rupees)")
mtp.show()
```



Disk 83.54 GB available

✓ 0s completed at 2:59 PM