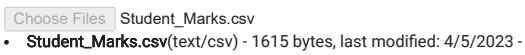
Import Library

```
import pandas as pd
from sklearn.linear_model import LinearRegression
```

Load Dataset from local directory

```
from google.colab import files
uploaded = files.upload()
```



- Student_Marks.csv(text/csv) - 1615 bytes, last modified: 4/5/2023 - 100% done

```
Saving Student_Marks.csv to Student_Marks.csv
```

Load Dataset

```
dataset = pd.read_csv('Student_Marks.csv')
```

Load Summarize

```
print(dataset.shape)
print(dataset.head(5))
```

```
(100, 3)
   number_courses  time_study   Marks
0               3       4.508  19.202
1               4       0.096   7.734
2               4       3.133  13.811
3               6       7.909  53.018
4               8       7.811  55.299
```

Finding & Removing NA values from our Features X

```
dataset.columns[dataset.isna().any()]
```

```
Index([], dtype='object')
```

```
dataset.time_study = dataset.time_study.fillna(dataset.time_study.mean())
```

Segregate Dataset into X & Y

```
X = dataset.iloc[:, :-1].values
print(X.shape)
X
```

```
[5.   , 6.379],
[8.   , 5.985],
[7.   , 7.451],
[3.   , 0.805],
[7.   , 7.957],
[8.   , 2.262],
[4.   , 7.41 ],
[5.   , 3.197],
[8.   , 1.982],
[8.   , 6.201],
[7.   , 4.067],
[3.   , 1.033],
[5.   , 1.803],
[7.   , 6.376],
[7.   , 4.182],
[8.   , 2.73 ],
[4.   , 5.027],
[8.   , 6.471],
[8.   , 3.919],
[6.   , 3.561],
[3.   , 0.301],
[4.   , 7.163],
[7.   , 0.309],
[3.   , 6.335]])
```

```
Y = dataset.iloc[:, -1].values
Y
```

```
array([19.202,  7.734, 13.811, 53.018, 55.299, 17.822, 29.889, 17.264,
       20.348, 30.862, 42.036, 12.132, 24.318, 17.672, 11.397, 19.466,
       30.548, 38.49 , 50.986, 25.133, 22.073, 35.939, 12.209, 28.043,
       16.517,  6.623, 12.647, 26.532,  9.333,  8.837, 24.172,  8.1  ,
       15.038, 39.965, 17.171, 43.978, 13.119, 46.453, 41.358, 51.142,
        7.336, 15.725, 19.771, 10.429,  9.742,  8.924, 16.703, 22.701,
       26.882, 19.106, 40.602, 22.184,  7.892, 36.653, 53.158, 18.238,
       53.359, 51.583, 31.236, 51.343, 10.522, 10.844, 19.59 , 21.379,
       12.591, 13.562, 27.569,  6.185,  8.92 , 21.4  , 16.606, 13.416,
       20.398,  7.014, 39.952,  6.217, 36.746, 38.278, 49.544,  6.349,
       54.321, 17.705, 44.099, 16.106, 16.461, 39.957, 23.149,  6.053,
       11.253, 40.024, 24.394, 19.564, 23.916, 42.426, 24.451, 19.128,
        5.609, 41.444, 12.027, 32.357])
```

Training Dataset using Linear Regression

```
model = LinearRegression()
model.fit(X, Y)
```

```
▾ LinearRegression
LinearRegression()
```

Prediction

```
a=[[1,3]]
PredictmodelResult = model.predict(a)
print(PredictmodelResult)
```

```
[10.60524087]
```

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