Build the linear regression model using scikit learn in boston data to predict 'Price' based on other dependent variable.

In [1]:
```
import numpy as np
import pandas as pd
import scipy.stats as stats
import matplotlib.pyplot as plt
import sklearn
```

In [2]:
```
from sklearn.datasets import load_boston
boston = load_boston()
bos = pd.DataFrame(boston.data)
```

In [3]:
```
bos.shape
```

Out[3]:
```
(506, 13)
```

In [4]:
```
bos.head()
```

Out[4]:

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0.00632	18.0	2.31	0.0	0.538	6.575	65.2	4.0900	1.0	296.0	15.3	396.90	4.98
1	0.02731	0.0	7.07	0.0	0.469	6.421	78.9	4.9671	2.0	242.0	17.8	396.90	9.14
2	0.02729	0.0	7.07	0.0	0.469	7.185	61.1	4.9671	2.0	242.0	17.8	392.83	4.03
3	0.03237	0.0	2.18	0.0	0.458	6.998	45.8	6.0622	3.0	222.0	18.7	394.63	2.94
4	0.06905	0.0	2.18	0.0	0.458	7.147	54.2	6.0622	3.0	222.0	18.7	396.90	5.33

In [5]:
```
X = bos.drop([12],axis=1)
X.head()
```

Out[5]:

	0	1	2	3	4	5	6	7	8	9	10	11
0	0.00632	18.0	2.31	0.0	0.538	6.575	65.2	4.0900	1.0	296.0	15.3	396.90
1	0.02731	0.0	7.07	0.0	0.469	6.421	78.9	4.9671	2.0	242.0	17.8	396.90
2	0.02729	0.0	7.07	0.0	0.469	7.185	61.1	4.9671	2.0	242.0	17.8	392.83
3	0.03237	0.0	2.18	0.0	0.458	6.998	45.8	6.0622	3.0	222.0	18.7	394.63
4	0.06905	0.0	2.18	0.0	0.458	7.147	54.2	6.0622	3.0	222.0	18.7	396.90

In [6]:
```
Y = bos[12]
Y.head()
```

Out[6]:
```
0    4.98
1    9.14
2    4.03
3    2.94
4    5.33
Name: 12, dtype: float64
```

In [7]:
```
from sklearn.model_selection import train_test_split
train_x , test_x ,train_y , test_y = train_test_split(X,Y, test_size = .25 , rand
```

In [*]:
```
from sklearn.linear_model import LinearRegression
Obj = LinearRegression()
Obj.fit(train_x,train_y)
y_pred = Obj.predict(test_x)
```

In [*]:
```
train_x.shape
```

In [*]:
```
from sklearn.metrics import r2_score
result = r2_score(y_pred , test_y)
print("Accuracy of this model is :-", result)
```

In [*]:
```
#print(Obj.predict([[0.06905,0.0 , 2.18 , 0.0 , 0.458 , 7.147 , 54.2 , 6.0622 , 3
```

In [ ]:
```

```