In [1]:
```
import pandas as pd
```

In [2]:
```
df  = pd.read_csv("Boston.csv")
```

In [3]:
```
df
```

Out[3]:

	Unnamed: 0	crim	zn	indus	chas	nox	rm	age	dis	rad	tax	ptratio	b
0	1	0.00632	18.0	2.31	0	0.538	6.575	65.2	4.0900	1	296	15.3	39
1	2	0.02731	0.0	7.07	0	0.469	6.421	78.9	4.9671	2	242	17.8	39
2	3	0.02729	0.0	7.07	0	0.469	7.185	61.1	4.9671	2	242	17.8	39
3	4	0.03237	0.0	2.18	0	0.458	6.998	45.8	6.0622	3	222	18.7	39
4	5	0.06905	0.0	2.18	0	0.458	7.147	54.2	6.0622	3	222	18.7	39
...	...	...	...	...	...	...	...	...	...	...	...	...	
501	502	0.06263	0.0	11.93	0	0.573	6.593	69.1	2.4786	1	273	21.0	39
502	503	0.04527	0.0	11.93	0	0.573	6.120	76.7	2.2875	1	273	21.0	39
503	504	0.06076	0.0	11.93	0	0.573	6.976	91.0	2.1675	1	273	21.0	39
504	505	0.10959	0.0	11.93	0	0.573	6.794	89.3	2.3889	1	273	21.0	39
505	506	0.04741	0.0	11.93	0	0.573	6.030	80.8	2.5050	1	273	21.0	39

506 rows × 15 columns

In [4]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 506 entries, 0 to 505
Data columns (total 15 columns):
 #   Column      Non-Null Count  Dtype  
---  ------      --------------  -----  
 0   Unnamed: 0  506 non-null    int64  
 1   crim        506 non-null    float64
 2   zn          506 non-null    float64
 3   indus       506 non-null    float64
 4   chas        506 non-null    int64  
 5   nox         506 non-null    float64
 6   rm          506 non-null    float64
 7   age         506 non-null    float64
 8   dis         506 non-null    float64
 9   rad         506 non-null    int64  
 10  tax         506 non-null    int64  
 11  ptratio     506 non-null    float64
 12  black       506 non-null    float64
 13  lstat       506 non-null    float64
 14  medv        506 non-null    float64
dtypes: float64(11), int64(4)
memory usage: 59.4 KB
```

In [5]:
```
df.isnull().sum()
```

Out[5]:
```
Unnamed: 0    0
crim          0
zn            0
indus         0
chas          0
nox           0
rm            0
age           0
dis           0
rad           0
tax           0
ptratio       0
black         0
lstat         0
medv          0
dtype: int64
```

In [6]:
```
from sklearn.model_selection import train_test_split
x = df.drop(['medv','Unnamed: 0'],axis = 1)
y = df['medv']
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size = .2 ,rando
```

In [7]:
```
from sklearn.linear_model import Ridge, Lasso,ElasticNet
from sklearn.metrics import r2_score
from sklearn.preprocessing import StandardScaler
```

In [8]:
```
scaler = StandardScaler()
X_train_scaled = scaler.fit_transform(x_train)
X_test_scaled = scaler.transform(x_test)
```

In [9]:
```
model = ElasticNet( alpha = 1,l1_ratio=0.9)
model.fit(X_train_scaled,y_train)
y_pred = model.predict(X_test_scaled)
```

In [10]:
```
r2_score(y_test,y_pred)
```

Out[10]:
```
0.6944475351851749
```