Import Required Libraries

In [1]:
```
import pandas as pd
import numpy as np
from matplotlib import pyplot as plt
%matplotlib inline
```

In [25]:
```
df = pd.read_csv("https://raw.githubusercontent.com/rajanvikash/Linear_Reg_One_variable/main/per_capita_income.csv")
df.head()
```

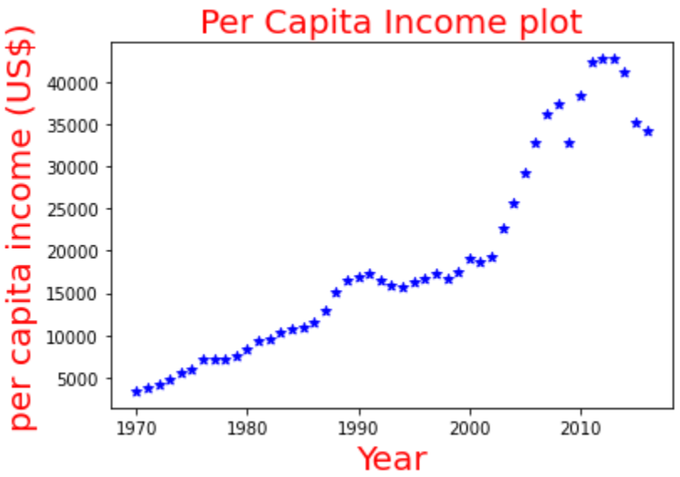
Out[25]:

	year	per capita income (US$)
0	1970	3399.299037
1	1971	3768.297935
2	1972	4251.175484
3	1973	4804.463248
4	1974	5576.514583

Ploting of data for visualization

In [19]:
```
plt.scatter(df.year , df['per capita income (US$)'], marker = '*', c = 'Blue')
plt.xlabel('Year', fontsize = 20 , c = 'Red')
plt.ylabel('per capita income (US$)' , fontsize = 20 ,c = 'Red')
plt.title('Per Capita Income plot', fontsize = 20 , c = 'Red')
```

Out[19]:
```
Text(0.5, 1.0, 'Per Capita Income plot')
```



In [5]:
```
from sklearn.linear_model import LinearRegression
model = LinearRegression()
```

Model fitting

In [15]:
```
model.fit(df[['year']], df['per capita income (US$)'])
```

Out[15]:
```
LinearRegression()
```

Prediction of arbitrary year

In [16]:
```
model.predict([[2030]])
```

```
C:\Users\rajan\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(
```

Out[16]:
```
array([49573.34484664])
```