**#Simple Linear Regression**

***# Importing the libraries***

import matplotlib.pyplot as plt  
import pandas as pd

from sklearn.model\_selection import train\_test\_split

***# Importing the dataset***

dataset = pd.read\_csv('/SimpleLinearRegression.csv')  
X = dataset.iloc[:, :-1].values  
y = dataset.iloc[:, -1].values

***# Splitting the dataset into the Training set and Test set***

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size = 1/3, random\_state = 0)

***# Fitting Simple Linear Regression to the Training set***

from sklearn.linear\_model import LinearRegression

regressor = LinearRegression()  
model=regressor.fit(X\_train, y\_train)

r\_sq = model.score(X\_train, y\_train)

print('coefficient of determination:', r\_sq)

print('intercept:', model.intercept\_)

print('slope:', model.coef\_)

***# Predicting the Test set results***

y\_pred = model.predict(X\_test)

***# Visualising the Training set results***

plt.scatter(X\_train, y\_train, color = 'red')  
plt.plot(X\_train, regressor.predict(X\_train), color = 'blue')  
plt.title('Salary vs Experience (Training set)')  
plt.xlabel('Years of Experience')  
plt.ylabel('Salary')  
plt.show()

***# Visualising the Test set results***

plt.scatter(X\_test, y\_test, color = 'red')  
plt.plot(X\_train, regressor.predict(X\_train), color = 'blue')  
plt.title('Salary vs Experience (Test set)')  
plt.xlabel('Years of Experience')  
plt.ylabel('Salary')  
plt.show()