**Write a program to implement Linear Regression (LR) algorithm in python**

CODE:

import numpy as np

import matplotlib.pyplot as plt

import pandas as pd

dataset = pd.read\_csv('C:/Users/prith/Desktop/MACHINE LEARNING/Salary\_Data.csv')

X = dataset.iloc[:, :-1].values

y = dataset.iloc[:, -1].values

dataset.head()

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

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

from sklearn.linear\_model import LinearRegression

regressor = LinearRegression()

regressor.fit(X\_train, y\_train)

LinearRegression(copy\_X=True, fit\_intercept=True, n\_jobs=None)

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

pd.DataFrame(data={'Actuals': y\_test, 'Predictions': y\_pred})

#Visualising the Training set results Here scatter plot is used to visualize the 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()

OUTPUT:

