Ex.no:11   Linear regression

Aim:

　　To implement linear regression supervised machine learning algorithm .

Description:

1. Import stats for Linear regression throughscipy
2. Providea necessary dataset through Excel file
3. Finally we canobtainthelinear regression output through matplotlib as

agraph Program:

import matplotlib.pyplot as plt from scipy

import stats

import pandas

df=pandas.read_excel("Linear data (1).xlsx")

print ("\n Original Dataframe\n", df)

slope,intercept,r,p,std_err=stats.linregress(df["x"],df["y"]) def myfunc(x):

　　return slope*x+intercept

mymodel=list(map(myfunc,df["x"]))

plt.scatter(df["x"],df["y"])

plt.plot(df["x"],mymodel)

plt.show()

Output :

Original Dataframe

X   y

5 81
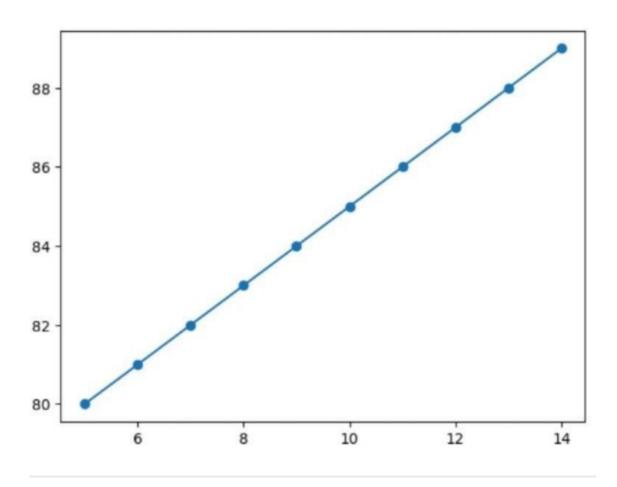
6 82

7 83

8 84

9 85

10 86

11 87

12 88

13 89

14 90

Result:
 The programs were run successfully