
Ex.no:11

Linear regression

Aim:

To implement linear regression supervised machine learning algorithm.

Description:

1. Import stats for Linear regression through scipy
2. Provide a necessary dataset through Excel file
3. Finally we can obtain the linear regression output through matplotlib

as a graph Program:

```
import matplotlib.pyplot as plt from scipy  
import stats  
import pandas  
  
df=pandas.read_excel( "Linear data (1).xlsx" )  
  
print ( "\nOriginal 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

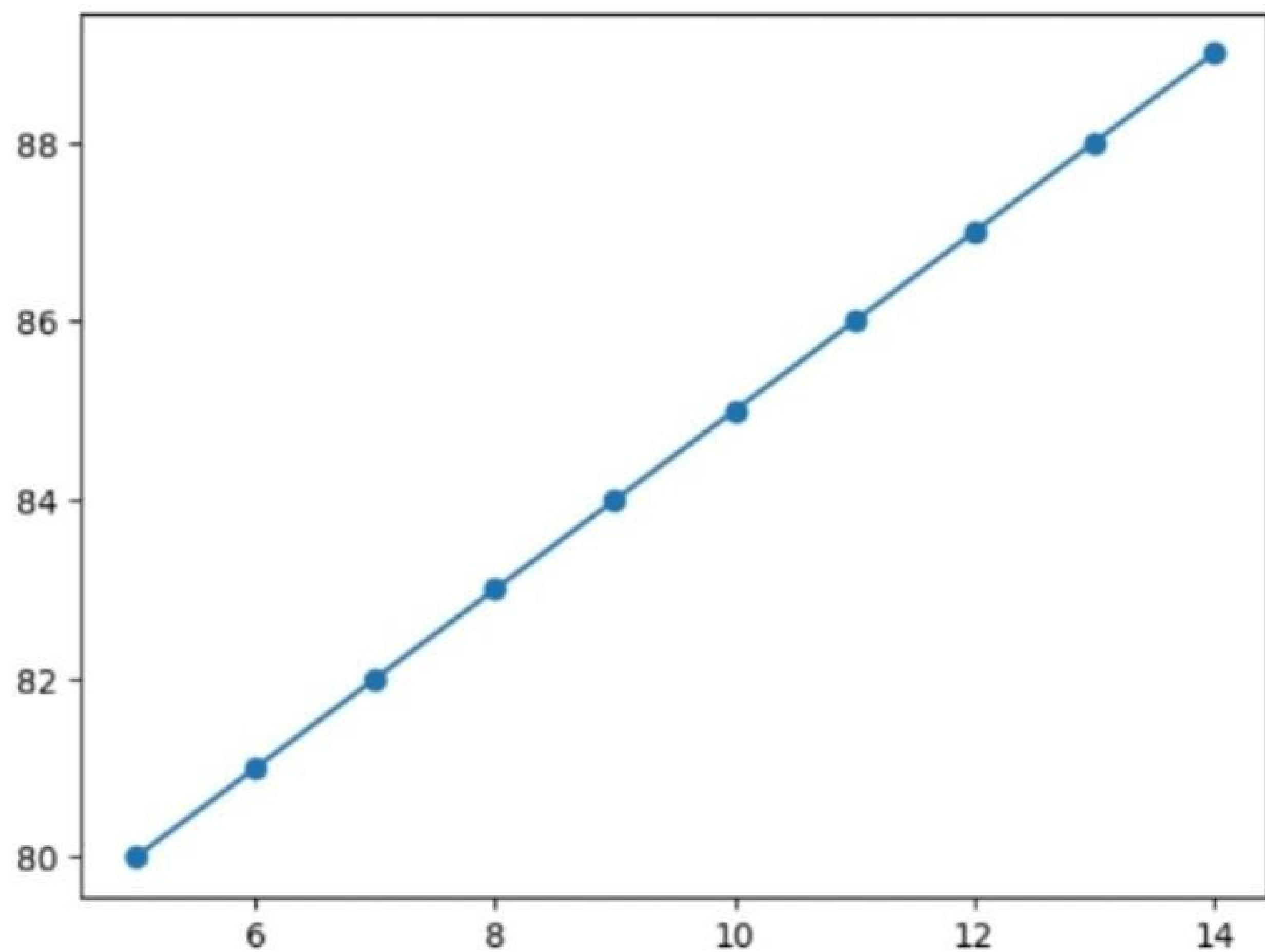
10 86

11 87

12 88

13 89

14 90



Result:

The programs were run successfully