PRACTICAL-7

Subject Name: Machine Learning Lab

Subject\_Code: **CAP858**

Uic Department

Q.7) Write a program for Support Vector Machine using python.

Ans:

Import numpy as np

Import matplotlib.pyplot as plt

Import pandas as pd

Df=pd.read\_csv(‘data.csv’)

Df.head(10)

From sklearn.model selection import train\_test\_split

X=Df[[“grade1”,”grade2”]]

Y=Df[“label”]

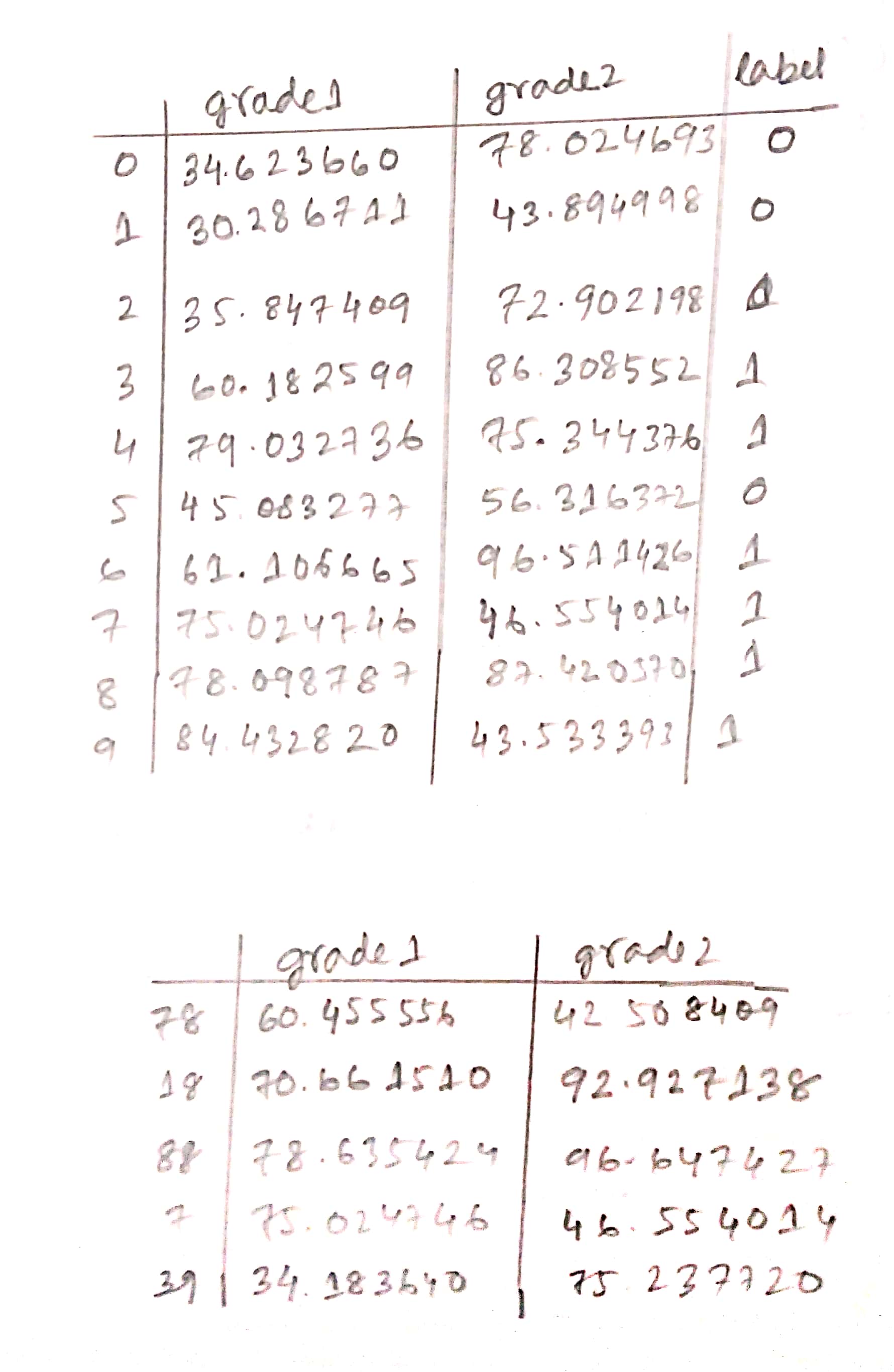
X\_train,X\_test ,Y\_train,Y\_test= train\_test\_split(X,Y,test\_size=0.35, random\_state=4)

Print(X\_train\_shape)

Print(Y\_train\_shape)

X\_train.head()

**Output:**

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From sklearn import svm

Model =svm.svc(gamma=’scale’)

Model.fit(X\_train,Y\_train)

Score=Model.score(X\_test,Y\_test)

Print(“prediction accuracy:”,score,”%”)

F=np.array([60,6,60.9]).reshape(1,-1)

Print (f)

Res =Model.predict(F)

Res

YP=Model.predict(X\_test)

plt.plot(X-train[‘garde1’],Y\_train,’o’,color=’blue’)

plt.plot(X-test[‘garde1’],YP,’.’,color=’r’)

plt.legend([‘training values’,’predicted values’])

Output:

