Experiment No. 6 Aim:- To implement Naive Bayes classification algorithm using python Code :

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[2] weather =['Sunny', 'Sunny', 'Overcast', 'Rainy', 'Rainy', 'Rainy', 'Overcast', 'Sunny', 'Sunny', 'Rainy', 'Sunny', 'Overcast', 'Overcast', 'Rainy']

temp =['Hot', 'Hot', 'Hot', 'Mild', 'Cool', 'Cool', 'Cool', 'Mild', 'Cool', 'Mild', 'Mild', 'Mild', 'Hot', 'Mild']

play =['No', 'No', 'Yes', 'Yes', 'Yes', 'No', 'Yes', 'No', 'Yes', 'Yes', 'Yes', 'Yes', 'Yes', 'No']

[5] from sklearn import preprocessing

• le = preprocessing.LabelEncoder()

weather_encoded=le.fit_transform(weather)

print(weather_encoded)


[7] temp_encoded=le.fit_transform(temp)

label=le.fit_transform(play)

print("Temp:", temp_encoded)

print("Play:", label)


[8] #Combinig weather and temp into a single list of tuples.

features = zip(weather_encoded, temp_encoded)

X=weather_encoded

Y=temp_encoded

#print(features)

print(list(zip(X, Y)))

features=list(zip(X, Y))

#print([i for i in zip(X, Y)])


#Import Gaussian Naive Bayes model

from sklearn.naive_bayes import GaussianNB#Create a Gaussian Classifier

model = GaussianNB()# Train the model using the training sets

model.fit(features, label) #Predict Output

predicted = model.predict([[0,2]]) # 0:Overcast, 2:Mild

print("Predicted Value:", predicted)
```