**Experiment No.:**

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**Roll No:39**

**Batch:**

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**Aim**

Implement Naive Bayes Algorithm using play golf data set

**Questions**

Naive Bayes Algorithm

**Program and Output**

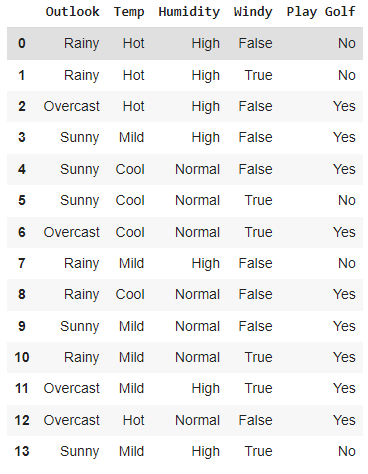
import pandas as pd

import numpy as np

from sklearn import preprocessing

data= pd.read\_csv('golf-dataset.csv')

data



label\_encoder = preprocessing.LabelEncoder()

data['Outlook']= label\_encoder.fit\_transform(data['Outlook'])

data['Temp']= label\_encoder.fit\_transform(data['Temp'])

data['Humidity']= label\_encoder.fit\_transform(data['Humidity'])

data['Windy']= label\_encoder.fit\_transform(data['Windy'])

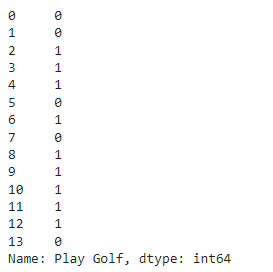
data['Play Golf']= label\_encoder.fit\_transform(data['Play Golf'])



X=data.drop('Play Golf', axis=1)

Y=data['Play Golf']

Y



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

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, Y, test\_size=0.1, random\_state=42)

from sklearn.naive\_bayes import GaussianNB

gnb = GaussianNB()

gnb.fit(X\_train, y\_train)

y\_pred = gnb.predict(X\_test)

from sklearn import metrics

print("Gaussian Naive Bayes model accuracy(in %):", metrics.accuracy\_score(y\_test, y\_pred)\*100)



Confusion matrix:

from sklearn import metrics

confusion\_matrix = metrics.confusion\_matrix(Y, Y)

confusion\_matrix

