**Example - 1**

import numpy as np

import pandas as pd

from sklearn import datasets

from sklearn import metrics

from sklearn.naive\_bayes import GaussianNB

from sklearn.preprocessing import LabelEncoder

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

from sklearn.metrics import accuracy\_score

play\_tennis = pd.read\_csv("E:\\Latha\\LathaSKPIMCS\\Machine Learning\\Class\\Practical\\Algorithms\\All\_Algorithms\PlayTennis.csv")

play\_tennis.head()

number = LabelEncoder()

play\_tennis['Outlook'] = number.fit\_transform(play\_tennis['Outlook'])

play\_tennis['Temperature'] = number.fit\_transform(play\_tennis['Temperature'])

play\_tennis['Humidity'] = number.fit\_transform(play\_tennis['Humidity'])

play\_tennis['Wind'] = number.fit\_transform(play\_tennis['Wind'])

play\_tennis['Play Tennis'] = number.fit\_transform(play\_tennis['Play Tennis'])

play\_tennis

#define the features and the target variables

#features = play\_tennis.iloc[:, :-1].values

#target = play\_tennis.iloc[:, -1].values

#features

#target

#define the features and the target variables

features = ["Outlook", "Temperature", "Humidity", "Wind"]

target = "Play Tennis"

features\_train, features\_test, target\_train, target\_test = train\_test\_split(play\_tennis[features],play\_tennis[target],test\_size = 0.33,random\_state = 54)

model = GaussianNB()

model.fit(features\_train, target\_train)

pred = model.predict(features\_test)

accuracy = accuracy\_score(target\_test, pred)

print(accuracy)

print (model.predict([[1,2,0,1]]))

print(model.predict([[2,0,0,0]]))

print(model.predict([[0,0,0,1]]))