**Practical\_8**

**Aim- Implementation of Naïve Bayes Algorithm on Jupiter Notebook using Python.**

**Step 1-**

dir(iris)

**Step-2 -**

iris.data

Step-3

iris.target

**Step-4**

iris.filename

**Solution**- 'C:\\programdata\\Anaconda3\\lib\\site-packages\\sklearn\\datasets\\data\\iris.csv'

df = pd.read\_csv('C:\\programdata\\Anaconda3\\lib\\site-packages\\sklearn\\datasets\\data\\iris.csv')

**Step-6**

load the iris dataset

from sklearn.datasets import load\_iris

iris = load\_iris()

# store the feature matrix (X) and response vector (y)

X = iris.data

y = iris.target

# splitting X and y into training and testing sets

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

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.4, random\_state=1)

# training the model on training set

from sklearn.naive\_bayes import GaussianNB

model = GaussianNB()

model.fit(X\_train, y\_train)

**Step-7**

# making predictions on the testing set

y\_pred = model.predict(X\_test)

# comparing actual response values (y\_test) with predicted response values (y\_pred)

from sklearn.metrics import accuracy\_score

print(f'Gaussian Naive Bayes model accuracy(in %):={accuracy\_score(y\_test, y\_pred)\*100} %')

res = model.predict([[6.5,3.0,5.2,2.0]])

print(f'Result = {iris.target\_names[res[0]]}')

**Result:-**

Gaussian Naive Bayes model accuracy(in %):=95.0 %

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