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**Title** – **Naive Bayes**

**CODE:-**

from sklearn.datasets import load\_iris

from sklearn.naive\_bayes import GaussianNB

from sklearn import metrics

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

from sklearn.metrics import accuracy\_score

from sklearn.metrics import f1\_score,precision\_score,recall\_score,confusion\_matrix

iris = load\_iris()

X = iris.data

y = iris.target

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.9, random\_state=20)

print(X\_train, X\_test, y\_train, y\_test)

gaussiannb = GaussianNB()

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

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

accuracy = accuracy\_score(y\_test, y\_pred)

precision = precision\_score(y\_test, y\_pred, average='weighted')

recall = recall\_score(y\_test, y\_pred, average='weighted')

f1 = f1\_score(y\_test, y\_pred, average='weighted')

print("Accuracy in percentage:", accuracy\*100)

print("Precision in percentage:", precision\*100)

print("Recall Score in percentage:", recall\*100)

print("F1 Score in percentage:", f1\*100)

cm=confusion\_matrix(y\_test, y\_pred)

print(cm)

**Output:-**

