**Practical No: 10**

**Aim: Implement K Nearest Neighbour**

**Code:**

from sklearn.datasets import load\_iris

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

from sklearn import metrics

from sklearn.neighbors import KNeighborsClassifier

dataset = load\_iris()

x , y = dataset.data,dataset.target

knn = KNeighborsClassifier(n\_neighbors = 5)

x\_train , x\_test , y\_train , y\_test = train\_test\_split(x,y , test\_size = 0.3,random\_state = 42)

print(f"XTrain: {x\_train}")

print(f"XTest: {x\_test}")

print(f"yTrain: {y\_train}")

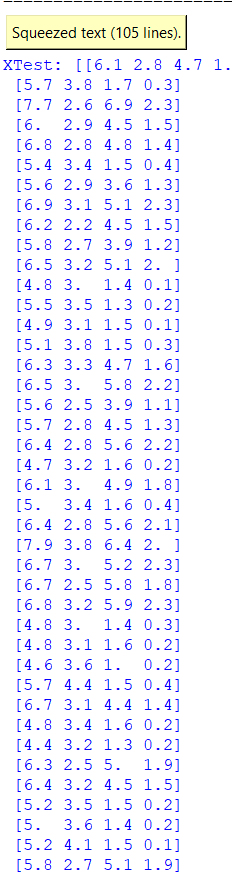
print(f"y test:{y\_test}")

knn.fit(x\_train,y\_train)

y\_pred = knn.predict(x\_test)

print(f"y\_pred:{y\_pred}")

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

print(f"Accuracy :{round(accuracy\*100,2)}%")

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

print("Confusion Matrix")

print(cm)

**Output**:

