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**Title** – Implementation of KNN (k-Nearest Neighbor) Algorithm

CODE:-

from sklearn.neighbors import KNeighborsClassifier

from sklearn.datasets import load\_iris

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\_train, X\_test, y\_train, y\_test = train\_test\_split(iris.data, iris.target, test\_size=0.8,random\_state=21)

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

KNN = KNeighborsClassifier(n\_neighbors=3)

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

y\_pred = KNN.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:", accuracy)

print("Precision:", precision)

print("Recall Score:", recall)

print("F1 Score:", f1)

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

print(cm)

OUTPUT:-

