PROGRAMNO:3

AIM :PROGRAM TO IMPLEMENT KNN CLASSIFICATION USING ANY STANDARD DATA SET AVAILABLE IN THE PUBLIC DOMAIN AND FIND THE ACCURACY OF THE ALGORITHM

PROGRAM

```
from sklearn.neighbors import KNeighborsClassifier
from sklearn.model_selection import train_test_split
from sklearn.datasets import  load_iris
irisData=load_iris()
x=irisData.data
y=irisData.target
x_train,x_test,y_train,y_test=train_test_split(
    x,y,test_size=0.1,random_state=45
)
Knn=KNeighborsClassifier(n_neighbors=2)
Knn.fit(x_train,y_train)
print(Knn.predict(x_test))
```

OUTPUT

```
C:\Users\mca\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/mca/PycharmProjects/pythonProject/knn1.py
[0 0 2 0 0 0 0 2 2 2 0 2 2 2 1]

Process finished with exit code 0
```

accuracy

```
from sklearn.neighbors import KNeighborsClassifier
from sklearn.model_selection import train_test_split
from sklearn.datasets import  load_iris
from sklearn.metrics import accuracy_score
irisData=load_iris()
x=irisData.data
y=irisData.target
x_train,x_test,y_train,y_test=train_test_split(
    x,y,test_size=0.7,random_state=47
)
Knn=KNeighborsClassifier(n_neighbors=5)
Knn.fit(x_train,y_train)
print(Knn.predict(x_test))
w=Knn.predict(x_test)
z=accuracy_score(y_test,w)
print(z)
```

output

```
C:\Users\mca\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/mca/PycharmProjects/pythonProject/knn1.py
[0 0 1 0 0 2 1 2 1 0 2 0 1 2 2 2 1 0 0 0 2 1 2 2 2 2 1 2 0 0 2 1 2 0 2 0 0
 0 2 0 1 0 2 0 2 0 2 0 2 2 0 1 2 1 0 0 1 2 2 0 0 0 1 1 0 0 2 2 1 0 1 2 2 2
 0 1 0 1 0 2 2 2 1 2 2 1 2 2 2 0 2 0 1 0 2 1 1 1 0 2 1 1 1 2 1]
0.9714285714285714

Process finished with exit code 0
```