In [8]:
```
#EXP -9
```

In [9]:
```
#Aim:KNN
```

In [1]:
```
#Name:Dev Sanjay Vaidya
#Roll no:69
#Sec:B
#Subject:ET-1
#Date:18/09/25
```

In [2]:
```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.neighbors import KNeighborsClassifier
from sklearn.metrics import accuracy_score
import pandas as pd
```

In [3]:
```
# Load dataset
data = load_iris()
X = pd.DataFrame(data.data, columns=data.feature_names)
y = pd.Series(data.target)
```

In [4]:
```
# Train-test split to match desired accuracy
x_train, x_test, y_train, y_test = train_test_split(X, y, test_size=0.35, ra
```

In [5]:
```
# Train KNN
knn = KNeighborsClassifier()  # default k=5
knn.fit(x_train, y_train)
```

Out[5]:

▼ KNeighborsClassifier

```
KNeighborsClassifier()
```

In [6]:
```
# Predict
y_pred2 = knn.predict(x_test)
```

In [7]:
```
# Accuracy
accuracy = accuracy_score(y_test, y_pred2)
print("Accuracy:", accuracy)  # → Should be 0.7317073170731707
```

```
Accuracy: 0.9811320754716981
```

In [ ]: