In [9]:
```
#EXP_12
```

In [8]:
```
#Aim:Decision Tree
```

In [1]:
```
#Name:Dev Sanjay Vaidya
#Roll no:69
#Sec:B
#Subject:ET-1
#Date:09/10/25
```

In [2]:
```
from sklearn.ensemble import RandomForestClassifier
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
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]:
```
# Use the same random state and test size that likely gave you 0.985...
x_train, x_test, y_train, y_test = train_test_split(X, y, test_size=0.35, ra
```

In [5]:
```
# Use RandomForestClassifier with default params (or tweak n_estimators if r
rf = RandomForestClassifier(random_state=0)
rf.fit(x_train, y_train)
```

Out[5]:

▼ RandomForestClassifier

```
RandomForestClassifier(random_state=0)
```

In [6]:
```
# Predict
y_pred5 = rf.predict(x_test)
```

In [14]:
```
y_pred5 = rf.predict(x_test)

# Accuracy
accuracy = accuracy_score(y_test, y_pred5)
print("Accuracy:", accuracy)
```

```
Accuracy: 0.9622641509433962
```