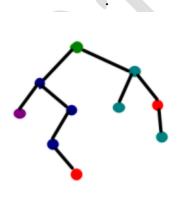
EXNO:9

ROLLNO:220701038

IMPLEMENTATION OF DECISION TREE CLASSIFICATION TECHNIQUES

AIM: To implement a decision tree classification technique for gender classification using python



CODE:

```
from sklearn.tree import DecisionTreeClassifier
import numpy as np

X = np.array([
    [170, 65, 42],
    [180, 75, 44],
    [160, 50, 38],
    [175, 70, 43],
    [165, 55, 39],
    [185, 80, 45]
```

```
])

Y = np.array([0, 1, 0, 1, 0, 1])

clf = DecisionTreeClassifier()

clf.fit(X, Y)

new_data = np.array([[168, 52, 38]])

prediction = clf.predict(new_data)

print("Predicted gender:", "Male" if prediction[0] == 1 else "Female")
```

OUTPUT:

```
△ 220701038-DECISION TREE CLASSIFICATION TECHNIQUES 🔯
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                                                                                                                    ↑ ↓ ♦ 🖨 📮 🗓 📋 🗄
Q \bigvee_{S_8} from sklearn.tree import DecisionTreeClassifier
            import numpy as np
{x}
            X = np.array([
                [170, 65, 42],
©<del>...</del>
                 [180, 75, 44],
                [160, 50, 38],
[175, 70, 43],
[165, 55, 39],
[185, 80, 45]
            Y = np.array([0, 1, 0, 1, 0, 1])
            clf = DecisionTreeClassifier()
            clf.fit(X, Y)
            new_data = np.array([[168, 52, 38]])
            prediction = clf.predict(new_data)
            print("Predicted gender:", "Male" if prediction[0] == 1 else "Female")
        → Predicted gender: Female
```