

**EXNO:9**

**ROLLNO:220701044**

## **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()

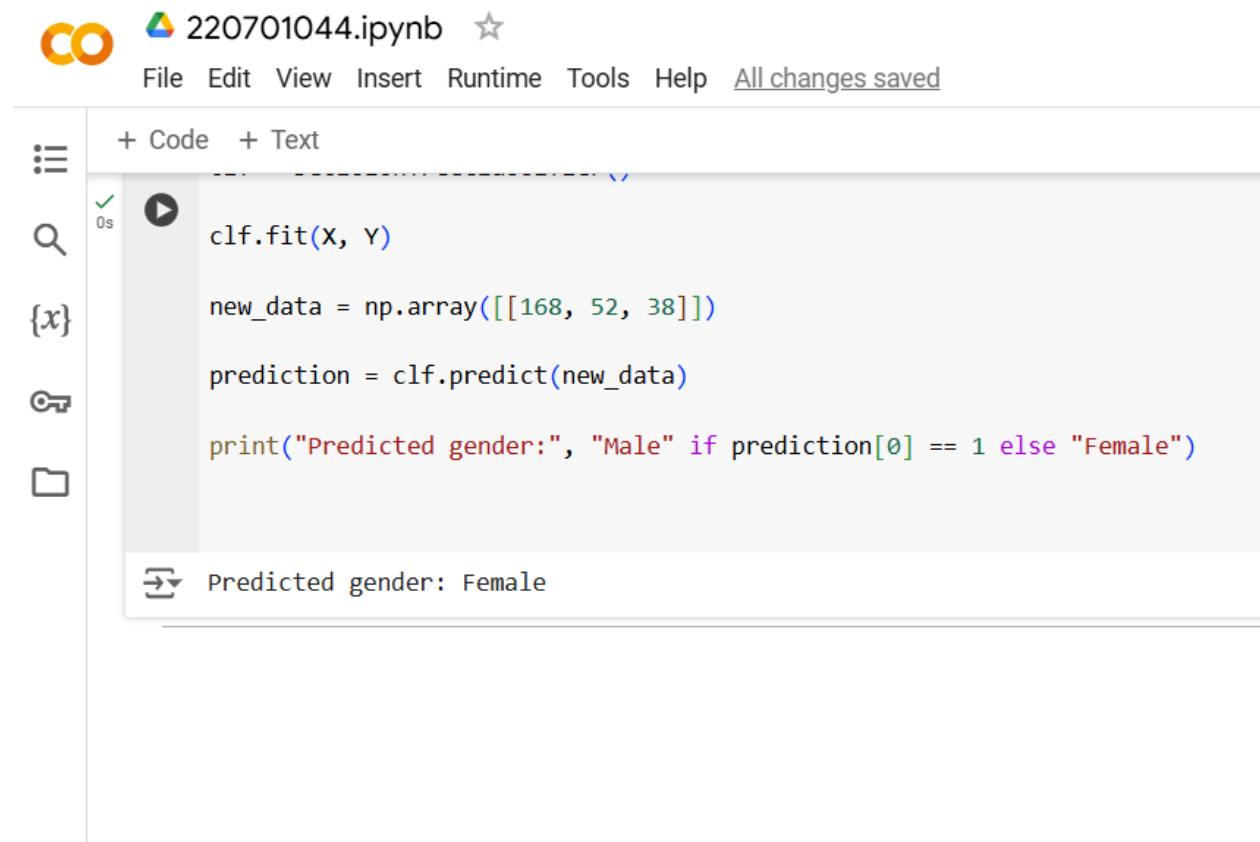
clf.fit(X, Y)

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

prediction = clf.predict(new_data)

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

## OUTPUT:



The screenshot displays a Jupyter Notebook interface. At the top, the notebook is titled "220701044.ipynb" with a star icon. Below the title is a menu bar with options: File, Edit, View, Insert, Runtime, Tools, Help, and a link for "All changes saved". The left sidebar contains icons for a menu, search, variables (showing an empty set {x}), a key icon, and a folder icon. The main area shows a code cell with the following Python code:

```
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")
```

Below the code cell, the output is displayed: "Predicted gender: Female".