

EXNO:9

ROLLNO:220701902

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()

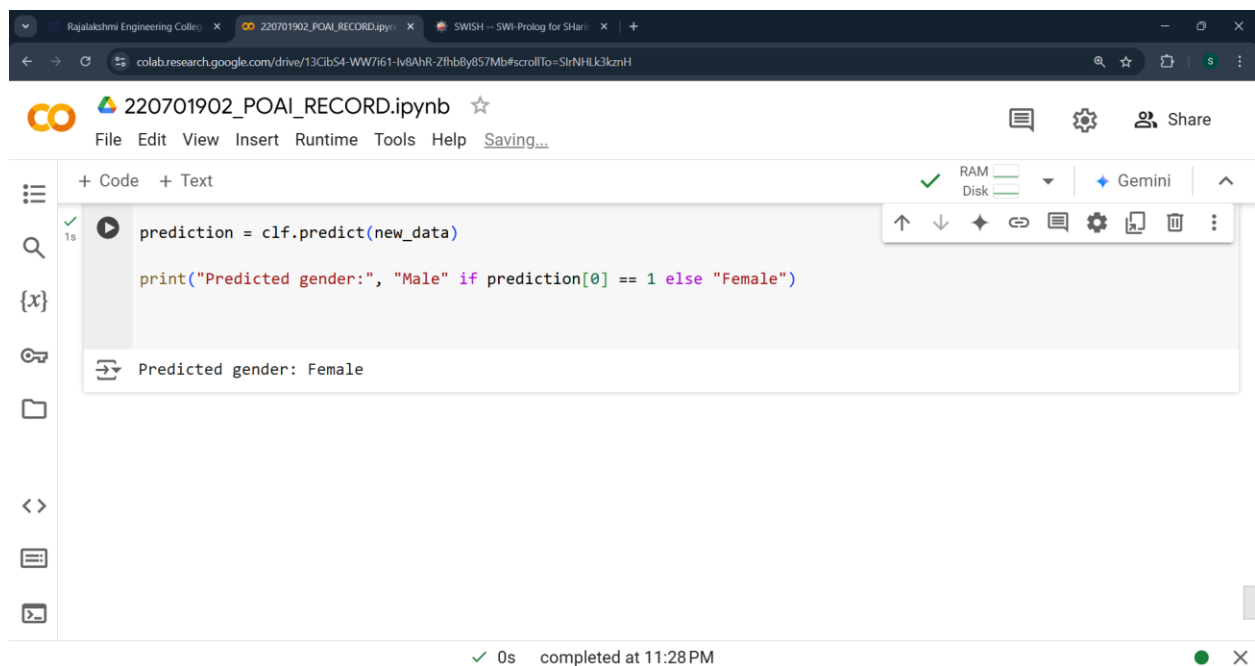
clf.fit(X, Y)

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 shows a Google Colab notebook interface. The browser address bar displays the URL: `colab.research.google.com/drive/13GbS4-WW7i61-lv8AhR-ZfhbBy857Mb#scrollTo=SlrNHLk3kznH`. The notebook title is `220701902_POAI_RECORD.ipynb`. The code editor shows the following code:

```
prediction = clf.predict(new_data)

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

The output cell shows the result: `Predicted gender: Female`. The status bar at the bottom indicates the execution was successful: `✓ 0s completed at 11:28 PM`.