

EXNO:9

DATE:3/11/2024

Reg.no:220701020

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. At the top, the notebook is titled '220701020'. The menu bar includes 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help'. On the right, there are icons for RAM, Disk, Gemini, and a user profile. The left sidebar contains icons for file explorer, search, and other notebook functions. The main code cell contains the following Python code:

```
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'. At the bottom of the notebook, there is a link: 'Colab paid products - Cancel contracts here'.