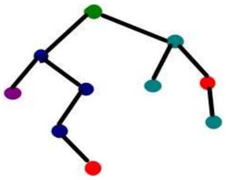
EX.NO: 9 **DATE: 25 - 10 - 2024**

IMPLEMENTATION OF DECISION TREE CLASSIFICATION TECHNIQUES

Decision Tree is one of the most powerful and popular algorithm. Decision-tree algorithm falls under the category of supervised learning algorithms. It works for both continuous as well as categorical output variables.



AIM:

To implement a decision tree classification technique for gender classification using python.

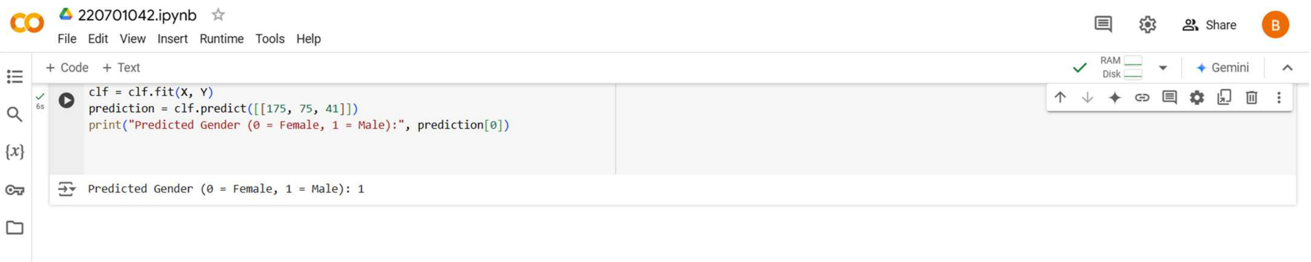
EXPLANATION:

- Import tree from sklearn.
- Call the function DecisionTreeClassifier() from tree
- Assign values for X and Y.
- Call the function predict for Predicting on the basis of given random values for each given feature.
- Display the output.

PROGRAM:

```
from sklearn import tree
X = [[150, 50, 37], [160, 60, 38], [170, 70, 39], [180, 80, 40], [165, 55, 36]]
Y = [0, 0, 1, 1, 0]
clf = tree.DecisionTreeClassifier()
clf = clf.fit(X, Y)
prediction = clf.predict([[175, 75, 41]])
print("Predicted Gender (0 = Female, 1 = Male):", prediction[0])
```

OUTPUT:



```
clf = clf.fit(X, Y)
prediction = clf.predict([[175, 75, 41]])
print("Predicted Gender (0 = Female, 1 = Male):", prediction[0])
```

```
Predicted Gender (0 = Female, 1 = Male): 1
```

RESULT:

Thus, we have successfully implemented a decision tree classification techniques for gender classification.