EX.NO :13

DATE :

IMPLEMENTATION OF DECISION TREE CLASSIFICATION TECHNIQUES

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 to predict for Predicting on the basis of given random values for each given feature.
- Display the output.

SOURCE CODE:

```
from sklearn import tree
#Using DecisionTree classifier for prediction
clf = tree.DecisionTreeClassifier()

#Here the array contains three values which are height, weight, and shoe size
X = [[181, 80, 91], [182, 90, 92], [183, 100, 92], [184, 200, 93], [185, 300, 94], [186, 400, 95], [187, 500, 96], [189, 600, 97], [190, 700, 98], [191, 800, 99], [192, 900, 100], [193, 1000, 101]]
Y = ['male', 'male', 'female', 'male' , 'female', 'male', 'female' , 'male' , 'female', 'male' , 'female' , 'male' ]
clf = clf.fit(X, Y)

#Predicting on the basis of given random values for each given feature
predictionf = clf.predict([[181, 80, 91]])
predictionm = clf.predict([[183, 100, 92]])

#Printing final prediction
print(predictionf)
print(predictionm)
```

OUTPUT:

['male']
['female']

RESULT:

Thus the program to implement a decision tree classification technique for gender classification using Python is successfully executed.