EX.NO : 13

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 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 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 above python code is executed successfully and output is verified.