220701077

EXP NO: 11 - IMPLEMENTATION OF DECISION TREE CLASSIFICATION

AIM:

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

ALGORITHM:

1) Import the DecisionTreeClassifier from sklearn.tree.

2) Initialize the classifier clf as an instance of DecisionTreeClassifier

3) Define feature data x (height, weight, shoe, size) and labels y

4) Fit the classifier clf to the data x and y using clf.fit(x,y

5) Use clf.predict() to make gender predictions for given feature sets

6) Print the predictions.

CODE:

```
from sklearn import tree
clf = tree.DecisionTreeClassifier()
X=
x = [[180, 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]]

y = ['male', 'male', 'female', 'male', 'female', 'male', 'female',
     'male', 'male', 'female', 'male']

clf = clf.fit(X,y)
```

```
predictionf = clf.predict([[181, 80, 91]])
predictionm = clf.predict([[183, 100, 92]])
print(predictionf)
print(predictionm)
```

OUTPUT:

```
['male']
['female']
```

RESULT:

Thus the implementation of decision tree classification technique for gender classification is successfully executed.