3.D)Implementation of Decision Tree

AIM:

To implement a Decision Tree classifier that can learn from labeled data and predict the label of new examples using a tree structure based on feature values.

CODE:

```
from sklearn import tree
X = [
   [150, 40],
   [160, 55],
   [170, 65],
   [155, 48],
   [180, 70],
   [165, 50]
]
y = [0, 0, 1, 0, 1, 1]
model = tree.DecisionTreeClassifier()

model.fit(X, y)

prediction = model.predict([[158, 52]])

if prediction[0] == 0:
   print("Predicted: Girl")
else:
   print("Predicted: Boy")
```

OUTPUT:

Predicted: Girl

RESULT:

The code is executed as expected and the output have been verified successfully.