```
[2]: import pandas as pd
     import numpy as np
     import os
     import sys
[4]: df = pd.read_csv("User_Data.csv")
[6]: df
            User ID Gender Age EstimatedSalary Purchased
[6]:
       0 15624510
                      Male
                                         19000
                                                       0
       1 15810944
                      Male
                                         20000
                                                       0
       2 15668575 Female
                            26
                                         43000
                                                       0
       3 15603246 Female
                             27
                                         57000
                                                       0
       4 15804002
                      Male
                            19
                                         76000
                                                       0
     395 15691863 Female
                            46
                                         41000
                                                        1
     396 15706071
                             51
                                         23000
                      Male
     397 15654296 Female
                            50
                                         20000
                                                        1
     398 15755018
                      Male
                            36
                                         33000
                                                       0
     399 15594041 Female
                                         36000
                                                        1
    400 rows × 5 columns
[8]: x = df.iloc[:, [2,3]].values
     y = df.iloc[:, 4].values
```

```
[10]: from sklearn.model_selection import train_test_split
       x\_train, \ x\_test, \ y\_train, \ y\_test = train\_test\_split(x, \ y, \ test\_size=0.25, \ random\_state=0) 
[11]: #feature scaling
      from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
      x_train = sc.fit_transform(x_train)
      x_test = sc.transform(x_test)
[14]: #fitting the classifier to the training set
      from sklearn.tree import DecisionTreeClassifier
      classifier = DecisionTreeClassifier(criterion='entropy', random_state=0)
[16]: classifier.fit(x_train, y_train)
[16]:
                          DecisionTreeClassifier
     DecisionTreeClassifier(criterion='entropy', random_state=0)
[18]: y_pred = classifier.predict(x_test)
[20]: from sklearn.metrics import confusion_matrix
      cm = confusion_matrix(y_test, y_pred)
      print(cm)
      [[62 6]
[ 3 29]]
```