```
#DTC
import pandas as pd
dataset = pd.read_csv('/Users/shridharmankar/Bike.csv')
X = dataset[['Age','Income']]
y = dataset[['Bike']]
print(X)
print(y)

from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.10, random_state = 0)
print(X_train)
print(y_train)
print(X_test)
print(y_test)

from sklearn.tree import DecisionTreeClassifier
classifier = DecisionTreeClassifier()
classifier.fit(X_train, y_train)


classifier.predict(X_test)
classifier.score(X_test,y_test)


from sklearn.datasets import load_iris
from sklearn import tree
iris = load_iris()
iris

X, y = iris.data, iris.target
X

y

from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.30, random_state = 0)

from sklearn.tree import DecisionTreeClassifier
clf = DecisionTreeClassifier()
clf.fit(X_train, y_train)

clf.predict(X_test)

clf.score(X_test,y_test)
```

#RFC

```
import pandas as pd
dataset = pd.read_csv('/Users/shridharmankar/Bike.csv')
X = dataset[['Age','Income']]
y = dataset[['Bike']]
dataset.head(10)



from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.20, random_state = 0)


from sklearn.ensemble import RandomForestClassifier
classifier = RandomForestClassifier()
classifier.fit(X_train, y_train)

y_pred=classifier.predict(X_test)


classifier.score(X_test,y_test)


from sklearn.metrics import confusion_matrix, ConfusionMatrixDisplay
cm=confusion_matrix(y_test, y_pred)
cm

import matplotlib.pyplot as plt


disp = ConfusionMatrixDisplay(confusion_matrix=cm,
                              display_labels=classifier.classes_)
disp.plot()
```