## DecisionTreeClassifier and RandomForestClassifier

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

dataset = pd.read_csv(r'D:\Samsom - All Data\Naresh IT Institute\New folder\logit classification.csv')

x = dataset.iloc[:, [2, 3]].values
y = dataset.iloc[:, -1].values

# Splitting the dataset into the Training set and Test set
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)

# Feature Scaling
#from sklearn.preprocessing import StandardScaler
#sc = StandardScaler()
#x_train = sc.fit_transform(x_train)
#x_test = sc.transform(x_test)

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

from sklearn.ensemble import RandomForestClassifier
classifier = RandomForestClassifier(n_estimators=27, random_state=0)
```

```
classifier.fit(x_train, y_train)



# Predicting the Test set results
y_pred = classifier.predict(x_test)

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

from sklearn.metrics import accuracy_score
ac = accuracy_score(y_test, y_pred)
print(ac)

from sklearn.metrics import classification_report
cr = classification_report(y_test, y_pred)
cr

bias = classifier.score(x_train, y_train)
print(bias)

variance = classifier.score(x_test, y_test)
print(variance)
```