M.Nilofer Sultana,

AP17110010058.

1.Loading the iris data set

In [1]:
```
from sklearn import datasets
iris=datasets.load_iris()
X=iris.data
Y=iris.target
```

2.Spliting dataset to train and test

In [20]:
```
from sklearn.model_selection import train_test_split
X_train,X_test,Y_train,Y_test=train_test_split(X,Y,test_size=0.6)
```

3.Decision Tree Classifier

In [21]:
```
from sklearn import tree
from sklearn import metrics
clf=tree.DecisionTreeClassifier()
clf=clf.fit(X_train,Y_train)
Y_pred=clf.predict(X_test)
print("Accuracy:", metrics.accuracy_score(Y_test,Y_pred))
```

```
Accuracy: 0.9555555555555556
```

4. Confusion Matrix

In [29]:
```
from sklearn.metrics import confusion_matrix

print("Accuracy:", metrics.accuracy_score(Y_test,Y_pred))
confusion_matrix(Y_test,Y_pred)
```

```
Accuracy: 0.9555555555555556
```

Out[29]:
```
array([[32,  0,  0],
       [ 0, 27,  1],
       [ 0,  3, 27]])
```

5. Random Tree Classifier's confusion matrix

In [30]:
```
from sklearn.ensemble import RandomForestClassifier
clf=RandomForestClassifier(n_estimators=100)
clf=clf.fit(X_train,Y_train)
Y_pred=clf.predict(X_test)
print("Accuracy:", metrics.accuracy_score(Y_test,Y_pred))
confusion_matrix(Y_test,Y_pred)
```

```
Accuracy: 0.9555555555555556
```

Out[30]:
```
array([[32,  0,  0],
       [ 0, 27,  1],
       [ 0,  3, 27]])
```

In [ ]:
```
```