implement randomforest algorithm on 'iris.csv' dataset and find the
accuracy_score,confusion_matrix

In [1]:
```python
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.preprocessing import LabelEncoder
```

In [4]:
```python
dat=pd.read_csv('iris.data.csv')
```

In [5]:
```python
dat['Iris-setosa'].value_counts()
```

Out[5]:
```
Iris-versicolor    50
Iris-virginica     50
Iris-setosa        49
Name: Iris-setosa, dtype: int64
```

In [6]:
```python
lr=LabelEncoder()
dat['Iris-setosa']=lr.fit_transform(dat['Iris-setosa'])
dat
```

Out[6]:

	5.1	3.5	1.4	0.2	Iris-setosa
0	4.9	3.0	1.4	0.2	0
1	4.7	3.2	1.3	0.2	0
2	4.6	3.1	1.5	0.2	0
3	5.0	3.6	1.4	0.2	0
4	5.4	3.9	1.7	0.4	0
...	...	...	...	...	...
144	6.7	3.0	5.2	2.3	2
145	6.3	2.5	5.0	1.9	2
146	6.5	3.0	5.2	2.0	2
147	6.2	3.4	5.4	2.3	2
148	5.9	3.0	5.1	1.8	2

149 rows × 5 columns

In [7]:
```python
x=dat.drop('Iris-setosa',axis=1)
y=dat.iloc[:,4]
```

In [8]:
```python
xtrain,xtest,ytrain,ytest=train_test_split(x,y,test_size=0.2)
```

In [9]:
```python
model=RandomForestClassifier()
model.fit(xtrain,ytrain)
```

Out[9]:
▾ RandomForestClassifier

RandomForestClassifier()

In [10]:
```python
pred=model.predict(xtest)
```

In [11]:
```python
import sklearn.metrics as mc
mc.confusion_matrix(ytest,pred)
```

Out[11]:
```
array([[10,  0,  0],
       [ 0, 12,  0],
       [ 0,  1,  7]], dtype=int64)
```

In [12]:
```python
mc.accuracy_score(ytest,pred)
```

Out[12]: 0.9666666666666667