In [1]:
```
import pandas as pd
from sklearn.datasets import load_iris
iris = load_iris()
```

In [2]:
```
dir(iris)
```

Out[2]:
```
['DESCR',
 'data',
 'data_module',
 'feature_names',
 'filename',
 'frame',
 'target',
 'target_names']
```

In [3]:
```
%matplotlib inline
import matplotlib.pyplot as plt
```

In [6]:
```
df=pd.DataFrame(iris.data)
df.head()
```

Out[6]:

	0	1	2	3
0	5.1	3.5	1.4	0.2
1	4.9	3.0	1.4	0.2
2	4.7	3.2	1.3	0.2
3	4.6	3.1	1.5	0.2
4	5.0	3.6	1.4	0.2

In [7]:
```
df.shape
```

Out[7]:
```
(150, 4)
```

In [8]:
```
df['target']=iris.target
```

In [10]:
```
df[0:19]
```

Out[10]:

	0	1	2	3	target
0	5.1	3.5	1.4	0.2	0
1	4.9	3.0	1.4	0.2	0
2	4.7	3.2	1.3	0.2	0
3	4.6	3.1	1.5	0.2	0
4	5.0	3.6	1.4	0.2	0
5	5.4	3.9	1.7	0.4	0
6	4.6	3.4	1.4	0.3	0
7	5.0	3.4	1.5	0.2	0
8	4.4	2.9	1.4	0.2	0
9	4.9	3.1	1.5	0.1	0
10	5.4	3.7	1.5	0.2	0
11	4.8	3.4	1.6	0.2	0
12	4.8	3.0	1.4	0.1	0
13	4.3	3.0	1.1	0.1	0
14	5.8	4.0	1.2	0.2	0
15	5.7	4.4	1.5	0.4	0
16	5.4	3.9	1.3	0.4	0
17	5.1	3.5	1.4	0.3	0
18	5.7	3.8	1.7	0.3	0

In [11]:
```
x=df.drop('target',axis='columns')
y=df.target
```

In [12]:
```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x,y,test_size=0.2)
```

In [13]:
```
from sklearn.ensemble import RandomForestClassifier
model=RandomForestClassifier(n_estimators=10)
model.fit(x_train, y_train)
```

Out[13]:
```
RandomForestClassifier(n_estimators=10)
```

In [14]:
```
model.score(x_test, y_test)
```

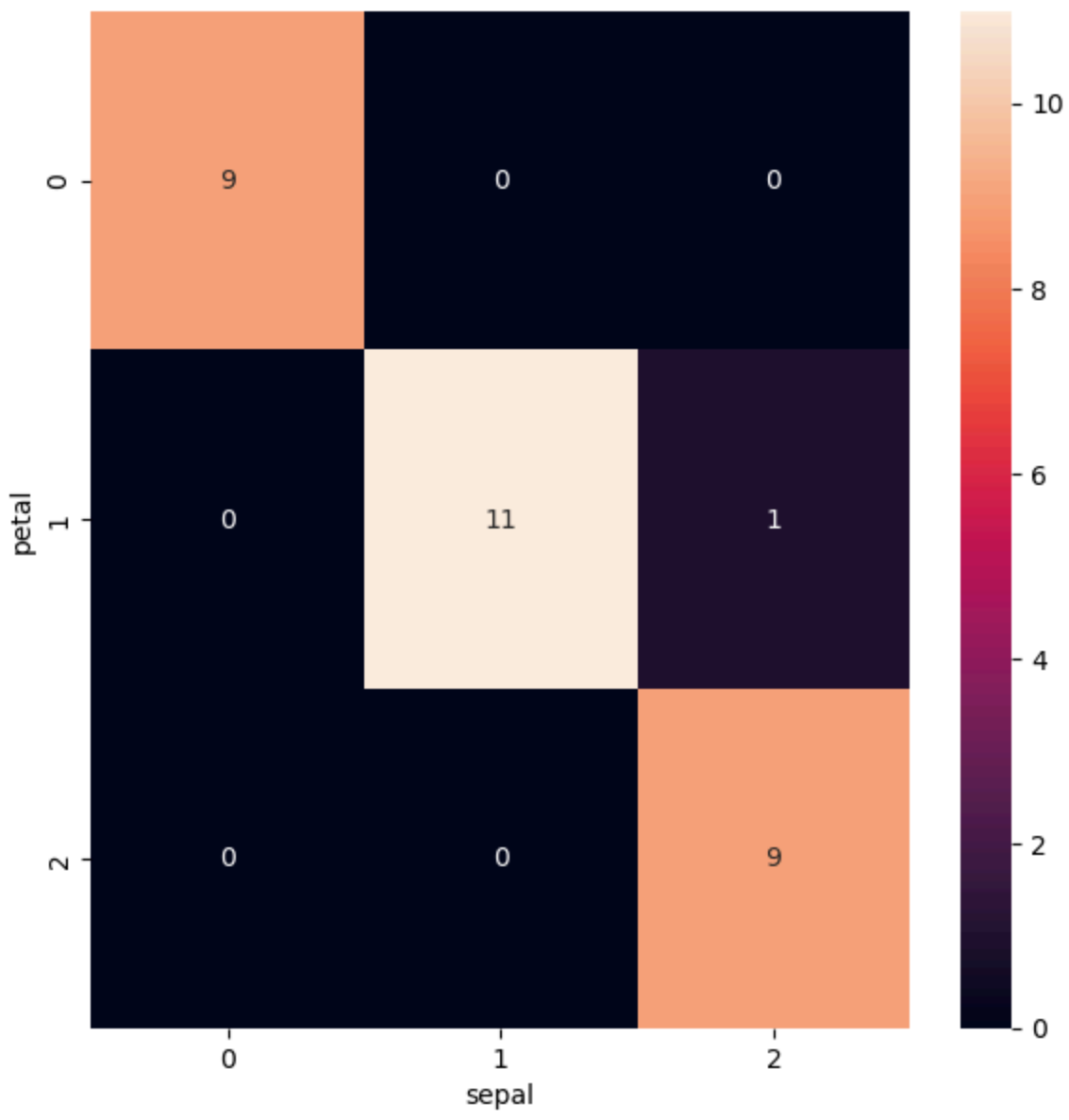
Out[14]:
```
0.9666666666666667
```

In [15]:
```
y_predicted=model.predict(x_test)
```

In [16]:
```
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_predicted)
cm
```

Out[16]:
```
array([[ 9,  0,  0],
       [ 0, 11,  1],
       [ 0,  0,  9]], dtype=int64)
```

In [19]:
```
import seaborn as sn
plt.figure(figsize=(7,7))
sn.heatmap(cm, annot=True)
plt.xlabel('sepal')
plt.ylabel('petal')
plt.show()
```



In [ ]: