

In [22]:

```
import pandas as pd
import numpy as np
import sklearn
from sklearn.model_selection import train_test_split
from sklearn.metrics import confusion_matrix, accuracy_score
from sklearn.svm import SVC
```

In [23]:

```
data=pd.read_csv('iris.csv')
```

In [24]:

```
data.head()
```

Out[24]:

	sepal.length	sepal.width	petal.length	petal.width	variety
0	5.1	3.5	1.4	0.2	Setosa
1	4.9	3.0	1.4	0.2	Setosa
2	4.7	3.2	1.3	0.2	Setosa
3	4.6	3.1	1.5	0.2	Setosa
4	5.0	3.6	1.4	0.2	Setosa

In [25]:

```
x=data.iloc[:, :-4]
y=data.iloc[:, -1]
```

In [26]:

```
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=.20)
```

In [27]:

```
classifier=SVC(kernel='linear')
```

In [28]:

```
classifier.fit(x_train,y_train)
```

Out[28]:

```
SVC(kernel='linear')
```

In [29]:

```
y_pred=classifier.predict(x_test)
```

In [30]:

```
y_pred
```

Out[30]:

```
array(['Virginica', 'Setosa', 'Virginica', 'Setosa', 'Virginica',  
      'Setosa', 'Setosa', 'Setosa', 'Virginica', 'Virginica',  
      'Virginica', 'Setosa', 'Virginica', 'Virginica', 'Setosa',  
      'Versicolor', 'Virginica', 'Versicolor', 'Virginica', 'Virginica',  
      'Setosa', 'Versicolor', 'Setosa', 'Virginica', 'Versicolor',  
      'Setosa', 'Versicolor', 'Virginica', 'Setosa', 'Virginica'],  
      dtype=object)
```

In [31]:

```
cm=confusion_matrix(y_test,y_pred)
```

In [32]:

```
cm
```

Out[32]:

```
array([[ 9,  0,  0],  
       [ 1,  5,  2],  
       [ 1,  0, 12]], dtype=int64)
```

In [33]:

```
ac=accuracy_score(y_test,y_pred)  
ac
```

Out[33]:

```
0.8666666666666667
```

In [ ]: