

In [39]:

```
import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.naive_bayes import GaussianNB
from sklearn.metrics import accuracy_score, confusion_matrix
```

In [3]:

```
data=pd.read_csv('Iris.csv')
data.head(5)
```

Out[3]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa

In [23]:

```
x=data.iloc[:, :3].values
y=data['Species'].values
```

In [43]:

```
#x
#y
```

In [32]:

```
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.3,random_state=13)
```

In [33]:

```
print(x_train.shape,x_test.shape,y_train.shape,y_test.shape)
```

```
(105, 3) (45, 3) (105,) (45,)
```

In [34]:

```
sc=StandardScaler()
x_train=sc.fit_transform(x_train)
x_test=sc.transform(x_test)
```

In [37]:



```
gnb=GaussianNB()  
gnb.fit(x_train,y_train)
```

Out[37]:

GaussianNB()

In [38]:



```
y_predict=gnb.predict(x_test)
```

In [40]:



```
accuracy_score(y_test,y_predict)
```

Out[40]:

0.9777777777777777

In [41]:



```
confusion_matrix(y_test,y_predict)
```

Out[41]:

```
array([[14,  0,  0],  
       [ 0, 12,  0],  
       [ 0,  1, 18]], dtype=int64)
```

In []:

