```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib as plt
```

```
df=sns.load_dataset("iris")
df.head()
```

	sepal_length	sepal_width	petal_length	petal_width	species
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

```
#selecting input and output
X=df.iloc[:,:-1]
Y=df.iloc[:,-1:]
```

```
from sklearn.naive_bayes import GaussianNB
model = GaussianNB().fit(X,Y)
model
```

```
/usr/local/lib/python3.10/dist-packages/sklearn/utils/validation.py:1143: DataConversior
  y = column_or_1d(y, warn=True)
```

▾ GaussianNB

GaussianNB()

```
#train test split and checking accuracy
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,random_state=0)
```

```
#Training the model on training data
from sklearn.naive_bayes import GaussianNB
model = GaussianNB().fit(X_train, Y_train)
model
```

```
/usr/local/lib/python3.10/dist-packages/sklearn/utils/validation.py:1143: DataConversior
  y = column_or_1d(y, warn=True)
```

GaussianNB

```
#making predictions on testing data
Y_pred=model.predict(X_test)
Y_pred
```

```
array(['virginica', 'versicolor', 'setosa', 'virginica', 'setosa',
       'virginica', 'setosa', 'versicolor', 'versicolor', 'versicolor',
       'virginica', 'versicolor', 'versicolor', 'versicolor',
       'versicolor', 'setosa', 'versicolor', 'versicolor', 'setosa',
       'setosa', 'virginica', 'versicolor', 'setosa', 'setosa',
       'virginica', 'setosa', 'setosa', 'versicolor', 'versicolor',
       'setosa'], dtype='<U10')
```