In [2]:

```
import pandas as pd
from sklearnex import patch_sklearn #for speed up CPU
#from daal4py.oneapi import sycl_context #for speed up GPU
patch_sklearn()
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score,confusion_matrix
```

```
Intel(R) Extension for Scikit-learn* enabled (https://github.com/intel/sciki
t-learn-intelex)
```

In [3]:

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

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 [6]:

```
x=iris.iloc[:, :-1]
y=iris.iloc[:,-1]
#print(x)
#print(y)
```

In [7]:

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

In [8]:

```
logr=LogisticRegression()
logr.fit(x_train,y_train)
```

```
C:\Users\Sparrow\anaconda3\envs\Tgpu\lib\site-packages\daal4py\sklearn\linea
r_model\_logistic_path_0_22.py:889: ConvergenceWarning: lbfgs failed to conv
erge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
    https://scikit-learn.org/stable/modules/preprocessing.html (https://scik
it-learn.org/stable/modules/preprocessing.html)
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-regre
ssion (https://scikit-learn.org/stable/modules/linear_model.html#logistic-re
gression)
  n_iter_i = _check_optimize_result(
```

Out[8]:

```
LogisticRegression()
```

In [10]:

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

In [11]:

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

Out[11]:

```
1.0
```

In [12]:

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

Out[12]:

```
array([[16,  0,  0],
       [ 0, 16,  0],
       [ 0,  0, 13]], dtype=int64)
```

In [ ]: