In [45]:
```
import os
import numpy as np
import pandas as pd
%matplotlib inline
import matplotlib.pyplot as plt
import seaborn as sns
```

In [46]:
```
from sklearn.datasets import load_iris
iris=load_iris()
```

In [47]:
```
iris.target_names
```

Out[47]:
```
array(['setosa', 'versicolor', 'virginica'], dtype='<U10')
```

In [48]:
```
targets=(iris.target--0).astype(np.int8)
print (targets)
```

```
[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
 2 2]
```

In [49]:
```
#training the datasets
from sklearn.model_selection import train_test_split
```

In [50]:
```
train_data, test_data, train_label,test_label=train_test_split(iris.data,target
```

In [51]:
```
from sklearn.linear_model import Perceptron
```

In [60]:
```
p=Perceptron(random_state=42, max_iter=20, tol=0.001)
```

In [61]:
```
p.fit(train_data,train_label)
```

```
C:\Users\User\anaconda3\Lib\site-packages\sklearn\linear_model\_stochastic_gr
adient.py:713: ConvergenceWarning: Maximum number of iteration reached before
convergence. Consider increasing max_iter to improve the fit.
  warnings.warn(
```

Out[61]:
```
Perceptron(max_iter=10, random_state=42)
```

In a Jupyter environment, please rerun this cell to show the HTML representation or trust the notebook.
On GitHub, the HTML representation is unable to render, please try loading this page with nbviewer.org.

In [62]:
```
#Prediction
prediction_test=p.predict(test_data)
```

In [78]:
```
from sklearn.metrics import accuracy_score
score=p.score(test_data,test_label)
print(score)
```

```
0.5666666666666667
```

In [76]:
```
from sklearn.metrics import confusion_matrix
cm=confusion_matrix(prediction,test_label)
print(cm)
```

```
[[11  7  0]
 [ 0  0  0]
 [ 0  6  6]]
```

In [80]:
```
p.classes_.tolist()
```

Out[80]:
```
[0, 1, 2]
```