In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as snb
```

In [2]:
```
iris=pd.read_csv('C://Users/Gopi/Desktop/machine learning/csv files/iris.csv')
```

In [3]:
```
iris_setosa = iris.iloc[0:50,0:5]
iris_versicolor = iris.iloc[50:100,0:5]
iris_vergenica = iris.iloc[100:150,0:5]
```

In [4]:
```
df1 = pd.DataFrame(iris_setosa.iloc[0:25,0:5])
df2 = pd.DataFrame(iris_versicolor.iloc[0:25,0:5])
df3 = pd.DataFrame(iris_vergenica.iloc[0:25,0:5])
```

In [5]:
```
iris_train = pd.concat([df1,df2,df3])
X_train = iris_train.iloc[:,0:4]
y_train = iris_train.iloc[:,4]
```

In [6]:
```
df1 = pd.DataFrame(iris_setosa.iloc[25:50,0:5])
df2 = pd.DataFrame(iris_versicolor.iloc[25:50,0:5])
df3 = pd.DataFrame(iris_vergenica.iloc[25:50,0:5])
```

In [7]:
```
iris_test= pd.concat([df1,df2,df3])
X_test = iris_test.iloc[:,0:4]
y_test = iris_test.iloc[:,4]
```

In [23]:
```
from sklearn.svm import SVC
classifier = SVC(kernel = 'linear', random_state = 0)
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)

from sklearn.metrics import confusion_matrix,accuracy_score
cm = confusion_matrix(y_test, y_pred)
print(cm)
Accuracy_Score1 = accuracy_score(y_test, y_pred)
Accuracy_Score1
```

```
[[25  0  0]
 [ 0 24  1]
 [ 0  3 22]]
```

Out[23]: 0.9466666666666667

In [24]:
```
from sklearn.svm import SVC
classifier = SVC (kernel = 'rbf', random_state = 0)
classifier.fit(X_train, y_train)
y_pred = classifier.predict(X_test)

from sklearn.metrics import confusion_matrix,accuracy_score,classification_report
cm = confusion_matrix(y_test, y_pred)
print(cm)
Accuracy_Score2 = accuracy_score(y_test, y_pred)
Accuracy_Score2
```

```
[[25  0  0]
 [ 0 24  1]
 [ 0  4 21]]
```

```
C:\Users\Gopi\Anaconda3\lib\site-packages\sklearn\svm\base.py:193: FutureWarning: The default va
lue of gamma will change from 'auto' to 'scale' in version 0.22 to account better for unscaled f
eatures. Set gamma explicitly to 'auto' or 'scale' to avoid this warning.
  "avoid this warning.", FutureWarning)
```

Out[24]: 0.9333333333333333