```
import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.svm import SVC
from sklearn.neighbors import KNeighborsClassifier
from sklearn import metrics

df = pd.read_csv('emails.csv')
df

df.isnull().any()

df.drop(columns='Email No.', inplace=True)
df
df.columns
df.Prediction.unique()
df['Prediction'] = df['Prediction'].replace({0:'Not spam', 1:'Spam'})
X = df.drop(columns='Prediction',axis = 1)
Y = df['Prediction']
X.columns
Y.head()
x_train, x_test, y_train, y_test = train_test_split(X, Y, test_size=0.2, random_state=1)
KN = KNeighborsClassifier
knn = KN(n_neighbors=7)
knn.fit(x_train, y_train)
y_pred = knn.predict(x_test)
print("Prediction: \n")
print(y_pred)
```

 # Accuracy

M = metrics.accuracy_score(y_test,y_pred)

print("KNN accuracy: ", M)

C = metrics.confusion_matrix(y_test,y_pred)

print("Confusion matrix: ", C)

SVM Classifier

In [18]:

model = SVC(C = 1) *# cost C = 1*

model.fit(x_train, y_train)

y_pred = model.predict(x_test) *# predict*

kc = metrics.confusion_matrix(y_test, y_pred)

print("SVM accuracy: ", kc)