Implementation-of-SVM-For-Spam-Mail-Detection

AIM:

To write a program to implement the SVM For Spam Mail Detection.

Equipments Required:

1. Hardware – PCs
2. Anaconda – Python 3.7 Installation / Jupyter notebook

Algorithm

1.Import the necessary python packages using import statements.
2.Read the given csv file using read_csv() method and print the number of contents to be displayed using df.head().
3.Split the dataset using train_test_split.
4.Calculate Y_Pred and accuracy.
5.Print all the outputs.
6.End the Program.

Program:

```
/*
Program to implement the SVM For Spam Mail Detection..
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*/
import pandas as pd
data= pd.read_csv("spam.csv",encoding='windows-1252')

data.head()

data.info()

data.isnull().sum()

x=data["v1"].values
y=data["v2"].values

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_

from sklearn.feature_extraction.text import CountVectorizer
cv=CountVectorizer()

x_train = cv.fit_transform(x_train)
x_test= cv.transform(x_test)
```

```
from sklearn.svm import SVC
svc=SVC()
svc.fit(x_train , y_train)
y_pred=svc.predict(x_test)
y_pred

from sklearn import metrics
accuracy= metrics.accuracy_score(y_test, y_pred)
accuracy
```

Output:

data_head():

	v1	v2	Unnamed: 2	Unnamed: 3	Unnamed: 4
0	ham	Go until jurong point, crazy.. Available only ...	NaN	NaN	NaN
1	ham	Ok lar... Joking wif u oni...	NaN	NaN	NaN
2	spam	Free entry in 2 a wkly comp to win FA Cup fina...	NaN	NaN	NaN
3	ham	U dun say so early hor... U c already then say...	NaN	NaN	NaN
4	ham	Nah I don't think he goes to usf, he lives aro...	NaN	NaN	NaN

data.isnull().sum():

```
v1              0
v2              0
Unnamed: 2    5522
Unnamed: 3    5560
Unnamed: 4    5566
dtype: int64
```

accuracy:

```
0.003587443946188341
```

Y_Pred:

```
array(["Sorry, I'll call later", "Sorry, I'll call later",
       "Sorry, I'll call later", ..., "Sorry, I'll call later",
       "Sorry, I'll call later", "Sorry, I'll call later"], dtype=object)
```

Result:

Thus the program to implement the SVM For Spam Mail Detection is written and verified using python programming.