—------------Import Important Libraries—---------------

```
import pandas as pd
import numpy as np
from sklearn.preprocessing import StandardScaler
from sklearn import svm
from sklearn.svm import SVC
from sklearn.model_selection import train_test_split,cross_val_score
from sklearn.metrics import confusion_matrix,accuracy_score
from sklearn.model_selection import GridSearchCV
from sklearn.metrics import classification_report
from sklearn.feature_extraction.text import CountVectorizer, TfidfVectorizer
```

—-----------Read Train—-----------------------

```
data1 = pd.read_csv('Downloads/SalaryData_Train(1).csv')
data1
```

	age	workclass	education	educationno	maritalstatus	occupation	relationship	race	sex	capitalgain	capitalloss	hoursperweek	native	Salary
0	39	State-gov	Bachelors	13	Never-married	Adm-clerical	Not-in-family	White	Male	2174	0	40	United-States	<=50K
1	50	Self-emp-not-inc	Bachelors	13	Married-civ-spouse	Exec-managerial	Husband	White	Male	0	0	13	United-States	<=50K
2	38	Private	HS-grad	9	Divorced	Handlers-cleaners	Not-in-family	White	Male	0	0	40	United-States	<=50K
3	53	Private	11th	7	Married-civ-spouse	Handlers-cleaners	Husband	Black	Male	0	0	40	United-States	<=50K
4	28	Private	Bachelors	13	Married-civ-spouse	Prof-specialty	Wife	Black	Female	0	0	40	Cuba	<=50K
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30156	27	Private	Assoc-acdm	12	Married-civ-spouse	Tech-support	Wife	White	Female	0	0	38	United-States	<=50K
30157	40	Private	HS-grad	9	Married-civ-spouse	Machine-op-inspct	Husband	White	Male	0	0	40	United-States	>50K
30158	58	Private	HS-grad	9	Widowed	Adm-clerical	Unmarried	White	Female	0	0	40	United-States	<=50K
30159	22	Private	HS-grad	9	Never-married	Adm-clerical	Own-child	White	Male	0	0	20	United-States	<=50K

—------------Read Test—-------------------

```
data2 = pd.read_csv('Downloads/SalaryData_Test(1).csv')
data2
```

	age	workclass	education	educationno	maritalstatus	occupation	relationship	race	sex	capitalgain	capitalloss	hoursperweek	native	Salary
0	25	Private	11th	7	Never-married	Machine-op-inspct	Own-child	Black	Male	0	0	40	United-States	<=50K
1	38	Private	HS-grad	9	Married-civ-spouse	Farming-fishing	Husband	White	Male	0	0	50	United-States	<=50K
2	28	Local-gov	Assoc-acdm	12	Married-civ-spouse	Protective-serv	Husband	White	Male	0	0	40	United-States	>50K
3	44	Private	Some-college	10	Married-civ-spouse	Machine-op-inspct	Husband	Black	Male	7688	0	40	United-States	>50K
4	34	Private	10th	6	Never-married	Other-service	Not-in-family	White	Male	0	0	30	United-States	<=50K
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15055	33	Private	Bachelors	13	Never-married	Prof-specialty	Own-child	White	Male	0	0	40	United-States	<=50K
15056	39	Private	Bachelors	13	Divorced	Prof-specialty	Not-in-family	White	Female	0	0	36	United-States	<=50K
15057	38	Private	Bachelors	13	Married-civ-spouse	Prof-specialty	Husband	White	Male	0	0	50	United-States	<=50K
15058	44	Private	Bachelors	13	Divorced	Adm-clerical	Own-child	Asian-Pac-Islander	Male	5455	0	40	United-States	<=50K

—————----Select columns—————---------------
columns = ['workclass','education','maritalstatus','occupation','relationship','race','sex','native']

—————-------Define SVM—————--------------
```
from sklearn import preprocessing
data3 = preprocessing.LabelEncoder()
for i in columns:
    data1[i] = data3.fit_transform(data1[i])
    data2[i] = data3.fit_transform(data2[i])
```

—————------Define Train Test—————--------------
```
x_train = data1.iloc[0:500,0:13]
y_train = data1.iloc[0:500,13]
x_test = data2.iloc[0:300,0:13]
y_test = data2.iloc[0:300,13]
```

—————------Find Accuracy—————--------------
```
model = SVC(kernel = 'linear')
model.fit(x_train,y_train)
predict = model.predict(x_train)
ppredict = model.predict(x_test)
accuracy = np.mean(predict==y_train)
accuracy1 = np.mean(ppredict==y_test)
```

—————------Accuracy of Train—————------------

```
print('Accuracy of Train',accuracy)
```

Accuracy of Train 0.818

—————------Accuracy of Test—————------------
```
print('Accuracy of Test',accuracy1)
```

```
print('Accuracy of Test',accuracy1)
```