```
import pandas as pd
import nltk
```

```
df=pd.read_csv('/content/IMDB Dataset.csv')
```

```
df.head(5)
```

	review	sentiment
0	One of the other reviewers has mentioned that ...	positive
1	A wonderful little production. <br /><br />The...	positive
2	I thought this was a wonderful way to spend ti...	positive
3	Basically there's a family where a little boy ...	negative
4	Petter Mattei's "Love in the Time of Money" is...	positive

```
import string
from nltk.corpus import stopwords
from sklearn.feature_extraction.text import CountVectorizer,TfidfTransform
from sklearn import svm
```

```
nltk.download('stopwords')
```

```
    [nltk_data] Downloading package stopwords to /root/nltk_data...
    [nltk_data]   Package stopwords is already up-to-date!
    True
```

```
def text_process(mess):
  nopunc=[char for char in mess if char not in string.punctuation]
  nopunc="".join(nopunc)
  return[word for word in nopunc.split() if word.lower() not in stopwords.
```

```
from sklearn.pipeline import Pipeline
from sklearn.naive_bayes import MultinomialNB
pipeline_created1=Pipeline([('bow',CountVectorizer(analyzer=text_process))
                           ('tfidf',TfidfTransformer()),
                           ('classifier',MultinomialNB())
                           ])
```

```
from sklearn.model_selection import train_test_split
msg_train,label_train,msg_test,label_test=train_test_split(df['sentiment']
```

```
pipeline_created1.fit(msg_train,label_train)
```

```
Pipeline(steps=[('bow',
                 CountVectorizer(analyzer=<function text_process at 0x7f17906a03b0>))
                ('tfidf', TfidfTransformer()),
                ('classifier', MultinomialNB())])
```

```
pred=pipeline_created1.predict(msg_test)
```

```
pred
```

```
array(['negative', 'negative', 'negative', ..., 'negative', 'negative',
       'negative'], dtype='<U8')
```

```
label_test
```

```
from sklearn.metrics import classification_report,accuracy_score
print(classification_report(label_test,pred))
print(accuracy_score(label_test,pred))
```