Required modules:

```
from pathlib import Path
import os
import re
from collections import Counter
import nltk
nltk.download('stopwords')
from nltk.corpus import stopwords
import math
import matplotlib.pyplot as plt
from sklearn import metrics
from random import shuffle
Import sys
from sklearn.linear_model import SGDClassifier
from sklearn.model_selection import GridSearchCV
```

Implementation:

Multinomial Naive Bayes:
Run the .py file Multinomial_NB, enter the dataset name as it prompts and the bag of words model is used as the default. The program outputs evaluation metrics and a confusion matrix.

Discrete Naive Bayes:
Run the .py file Discrete_NB, enter the dataset name as it prompts and the Bernoulli model is used as the default. The program outputs evaluation metrics and a confusion matrix.

MCAP Logistic regression:
Run the .py file MCAP_LR, enter the dataset name as it prompts, and then choose between the Bag of Words model and Bernoulli model by giving integer inputs 1 and 2 respectively. The program outputs evaluation metrics and a confusion matrix.

Stochastic Gradient descent Classifier (SGD classifier):
Run the .py file SGDClassifier, enter the dataset name as it prompts, and then choose between the Bag of Words model and Bernoulli model by giving integer inputs 1 and 2 respectively. The program outputs evaluation metrics and a confusion matrix.