langkah Import Library

```
import tweepy
from textblob import TextBlob
import pandas as pd
import numpy as np
import re,string
import matplotlib.pyplot as plt
plt.style.use('fivethirtyeight')

from nltk.corpus import stopwords
from wordcloud import WordCloud,STOPWORDS
import csv
```

Kemudian kita masukan API Keynya yang di dapatkan dari twitter

```
Consumer_Key = "ee71LNIhBorkkXStapMD8Xf8a"
Consumer_Secret_Key = "CtimpCO2188bPm8Dx6j5eK43AbWJPnX8BJlIwO6irNJt1w2lmB"
Access_Token = "711763537971044353-ydboIEZFp6rvi7tT8Iqzx0odvr15ygt"
Access_Token_Secret = "YT5tehyL7rNqge2H992GAMHNEfWCcVBjf3J8UjrHq7SrC"

auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(access_token, access_token_secret)
api = tweepy.API(auth, wait_on_rate_limit=True)
```

kita mengambil data dari Uber

```
csvFile = open('Uber.csv','a', encoding='utf-8')
csvWriter = csv.writer(csvFile)
for tweet in tweepy.Cursor(api.search, q= "#Uber",count=2000,
                          lang='en').items(2000):
    print(tweet.text)
    csvWriter.writerow([tweet.text])
```

```
Join to take all our money! Starts Jan 1st but you must weigh in be…
RT @TheInsaneApp: 😲 How Uber Works - Deep Dive into Uber's System Design

👉 For Detailed Explanation, An Article is attached in the comment…
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👉 For Detailed Explanation, An Article is attached in the comment…
@IanRanen #Lyft &amp; #Uber use @checkr for their background checks.

Neither company is responsible for 3rd party ser… https://t.co/KpqWzsjpvF
@AttorneyCrump @NYPDTips How about contacting #uber ?
RT @TheInsaneApp: 😲 How Uber Works - Deep Dive into Uber's System Design

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👉 For Detailed Explanation, An Article is attached in the comment…
California Uber and Lyft drivers brace for shutdown over worker classification | #
RT @TheInsaneApp: 😲 How Uber Works - Deep Dive into Uber's System Design

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RT @TheInsaneApp: 😲 How Uber Works - Deep Dive into Uber's System Design
```

```
df = pd.read_csv("Uber.csv", header=None)
df
```

	0
0	RT @edigital247: 🤣🤣🤣🤣 infact kuku ki me o!!! #...
1	RT @edigital247: 🤣🤣🤣🤣 infact kuku ki me o!!! #...
2	RT @edigital247: 🤣🤣🤣🤣 infact kuku ki me o!!! #...
3	🤣🤣🤣🤣 infact kuku ki me o!!! #uber from Owerri ...
4	🤣🤣🤣🤣 infact kuku ki me o!!! #uber from Owerri ...

KIta bersihkan data kata kita yang tidak penting

2019 Uber Eats avoids landmark ruling on workers' s

```
def praproses(teks):
    teks = re.sub(r'http\S+','',teks)
    teks = hapus_tanda(teks)
    teks = re.sub(r'#([^\s]+)', r'\1', teks) #hapus #tagger
    teks = re.sub('@[A-Za-z0-9]+', '',teks)  #hapus @
    teks = re.sub(r':([^\s]+)', r'\1', teks) #hapus #tagger
    teks = re.sub('RT[\s]+', '',teks)#hapus RT
    teks = re.sub('https?:\/\/\S+', '',teks)#hapus hyperlink
    teks = re.sub(r'\w*\d\w*', '',teks).strip()#hapus angka dan angka yang berada dalam st
    teks = hapus_katadouble(teks)#hapus repetisi karakter
    teks = teks.lower() #ubah jadi lower case
    return teks
def hapus_emoji(teks):
    regrex_pattern = re.compile(pattern = "["
        u"\U0001F600-\U0001F64F"  # emoticons
        u"\U0001F300-\U0001F5FF"  # symbols & pictographs
        u"\U0001F680-\U0001F6FF"  # transport & map symbols
        u"\U0001F1E0-\U0001F1FF"  # flags (iOS)
                           "]+", flags = re.UNICODE)
    return regrex_pattern.sub(r'',teks)
#     teks = to_kbbi(teks)



def hapus_tanda(teks):
    tanda_baca = set(string.punctuation)
    tanda_baca.update(['…'])
    teks = ''.join(ch for ch in teks if ch not in tanda_baca)
    return teks

def hapus_katadouble(s):
    #look for 2 or more repetitions of character and replace with the character itself
    pattern = re.compile(r"(.)\1{1,}", re.DOTALL)
    return pattern.sub(r"\1\1", s)

def kbbi(kata): # penyeragaman kata berdasarkan kbbi
  #kbba = [kamus.strip('\n').strip('\r') for kamus in open('kamus\\kbba.txt')]
  kamus_kata = [kamus.strip('\n').strip('\r') for kamus in open('kbba.txt')]
  #ubah list menjadi dictionary
  dic = {}
  for i in kamus_kata:
    (key, val) = i.split('\t')
    dic[str(key)] = val
  #kbbi cocokan
  final_string = ' '.join(str(dic.get(word, word)) for word in kata).split()
  return final_string

def to_kbbi(teks):
    tek = teks.split()
    tek = kbbi(tek)
    return tek

#Removing the noisy text
def cleanText(text):
    text = remove_stopwords(text)
    text = praproses(text)
    return text

#Removing the stopwords from text
def remove_stopwords(text):
    final_text = []
    for i in text.split():
        if i.strip().lower() not in stop_w:
            final_text.append(i.strip())
    return " ".join(final_text)



# Load stopword Bahasa Indonesia
stopword_id = pd.read_csv('stopword_id.csv', sep='\t', header=None)
stopword_id.columns = ['word']
stop_w = stopword_id['word'].to_list() #diubah ke list
# print('ada' in stop_w) # test periksa kata di dalam list stop_w

# def cleanText(teks):
#     teks = re.sub('@[A-Za-z0-9]+', '',teks)  #hapus @
#     teks = re.sub(r'#([^\s]+)', r'\1', teks) #hapus #tagger
#     teks = re.sub('RT[\s]+', '',teks)#hapus RT
#     teks = re.sub('https?:\/\/\S+', '',teks)#hapus hyperlink
#     teks = teks.lower() #ubah jadi lower case
#     teks = re.sub(r"[-()\"#/@;:<>{}=~|.?,]", "", teks)
#     import string
#     killpunctuation = str.maketrans('', '', string.punctuation)
#     return teks

#Apply function on review column
df[0] = df[0].apply(cleanText)

df
```

	0
0	🤣🤣 infact kuku ki me o uber from owerri to lag...
1	🤣🤣 infact kuku ki me o uber from owerri to lag...
2	🤣🤣 infact kuku ki me o uber from owerri to lag...
3	🤣🤣 infact kuku ki me o uber from owerri to lag...
4	🤣🤣 infact kuku ki me o uber from owerri to lag...
...	...
2019	uber eats avoids landmark ruling on workers’ s...
2020	i’m starting an uber for horsedrawn carriages ...
2022	days since uber received my background check a...

Lakukan untuk melakukan sentiment popularity

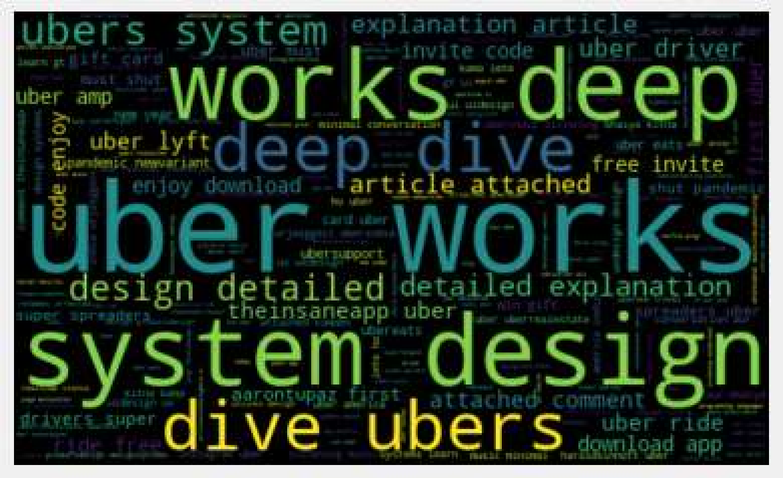
```
def getSubjectivity(text):
    return TextBlob(text).sentiment.subjectivity

def getPolarity(text):
    return TextBlob(text).sentiment.polarity


df['Polarity'] = df[0].apply(getPolarity)
df['Subjectivity'] = df[0].apply(getSubjectivity)

df
```

	0	Polarity	Subjectivity
0	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000
1	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000
2	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000
3	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000
4	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000
...	...	...	...
2019	uber eats avoids landmark ruling on workers’ s...	0.000000	0.000000
2020	i’m starting an uber for horsedrawn carriages ...	-0.187500	0.300000
2021	ruwansubasinghe uber settles employment status...	-0.200000	0.300000
2022	days since uber received my background check a...	-0.250000	0.625000
2023	🔔 uber down 🔗 realtime status 🔁 retweet if yo...	-0.155556	0.288889

2024 rows × 3 columns

Setkah itu kita menampilkan visual dengan dengan wordCLoud

```
allWords =' '.join([twts for twts in df[0]])
wc = WordCloud(width = 500 , height = 300 , random_state=10, max_font_size=110).generate(a
plt.imshow(wc , interpolation = 'bilinear')
plt.axis('off')
plt.show()
```



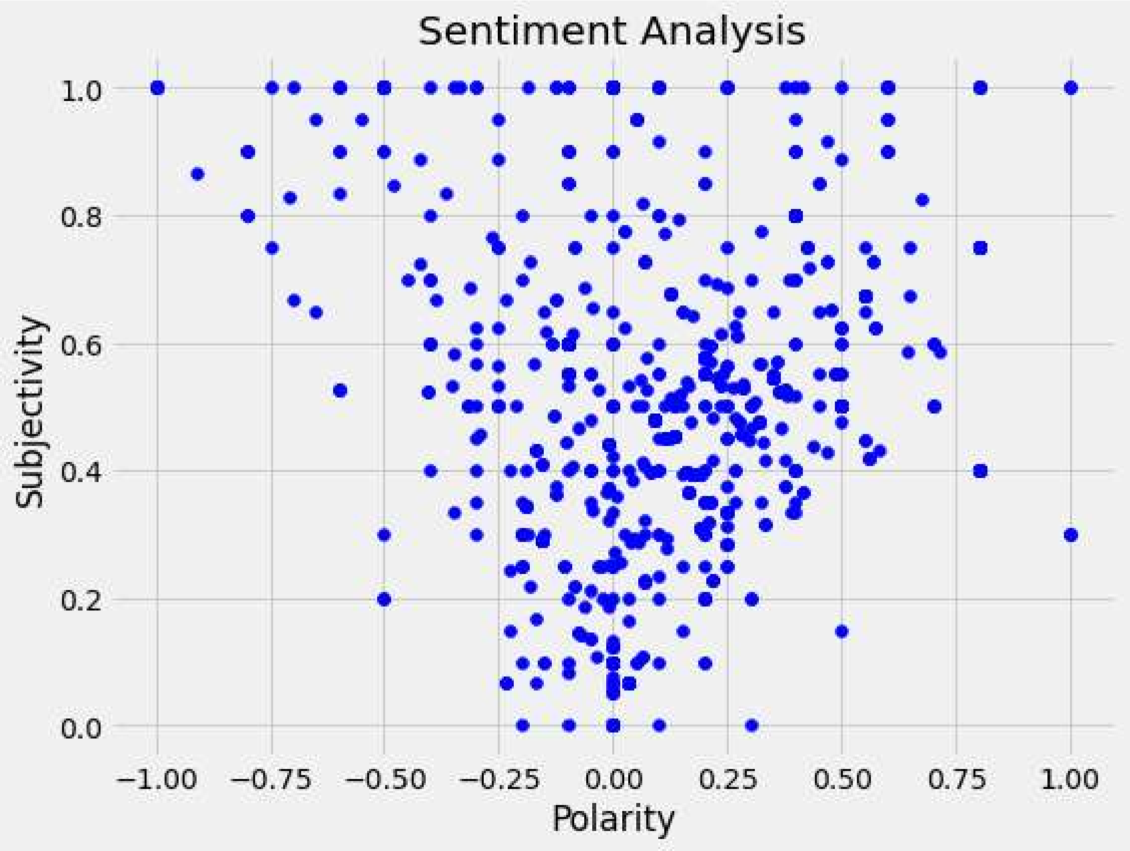
kita perthitungan sentiment

```
#untuk menambahkan sentimen positif, negatif / netral dari polarity yg sudah dihitung
def getAnalysisSentiment(score):
    if score < 0:
        return 'Negative'
    elif score == 0:
        return 'Neutral'
    else:
        return 'Positive'


df['Analysis'] = df['Polarity'].apply(getAnalysisSentiment)

df
```

	0	Polarity	Subjectivity	Analysis
0	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000	Neutral
1	🤣🤣 infact kuku ki me o uber from owerri to lag...	0.000000	0.000000	Neutral

Menampilkan hasil analisis sentiment

```
plt.figure(figsize=(8,6))
for i in range(0, df.shape[0]):
    plt.scatter(df["Polarity"][i], df["Subjectivity"][i], color="Blue")

plt.title('Sentiment Analysis')
plt.xlabel('Polarity')
plt.ylabel('Subjectivity')
plt.show()
```



hasil perhitungan analisis sentiment

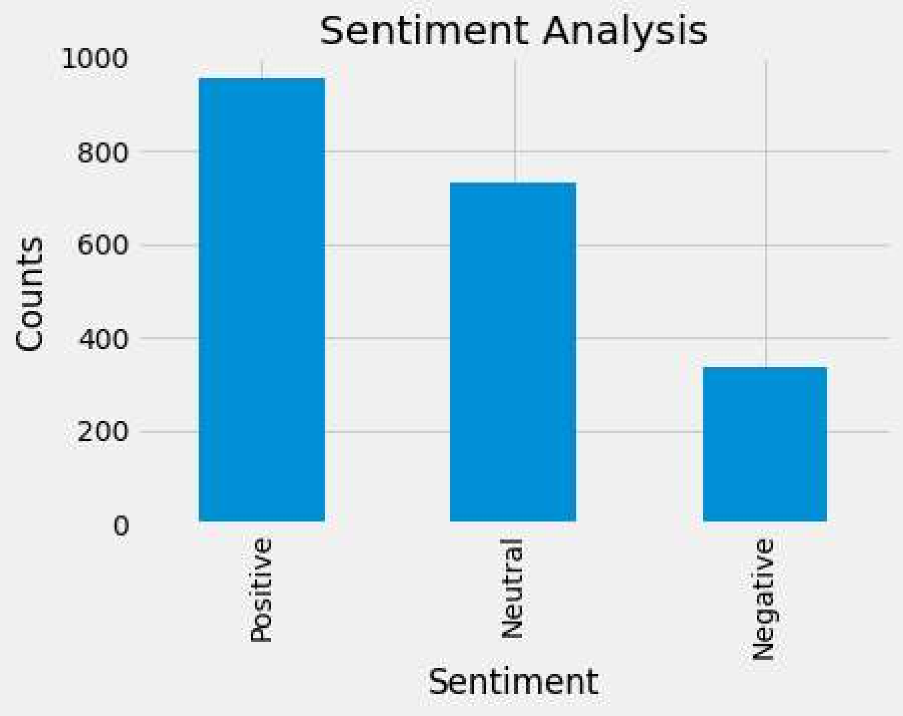
```
df['Analysis'].value_counts()
```

```
Positive    955
Neutral     732
Negative    337
Name: Analysis, dtype: int64
```

```
Menampilakn hasil berdasarkan grafik
```

Menampilakn hasil berdasarkan grafik

```
plt.title('Sentiment Analysis')
plt.xlabel('Sentiment')
plt.ylabel('Counts')
df['Analysis'].value_counts().plot(kind ='bar')
plt.show()
```


Sentiment Analysis
Counts
Positive
Neutral
Negative
Sentiment