```
!ls
```

credential.py __pycache__ sample_data tweets.xls

Get Credentential

- create app, and environment in twitter developer account
- get credentials and save in a file

```
import credential
```

```
!pip3 install oauth2
```

Requirement already satisfied: oauth2 in /usr/local/lib/python3.6/dist-packages (1
Requirement already satisfied: httplib2 in /usr/local/lib/python3.6/dist-packages

```
import oauth2 as oauth
import json
import re
```

Saving...   ✕

```
# credential can be stored as config file, or in a database, or in environemt variable
CONSUMER_API_KEY = credential.consumer_key
API_SECRET_KEY = credential.consumer_secret
ACCESS_TOKEN = credential.access_token
ACCESS_TOKEN_SECRET= credential.access_token_secret
```

Authentication

- Twitter supports OAuth 1.0a, Auth 2.0 Bearer Token, Basic authentication
- In this example Auth 2.0 is used. https://developer.twitter.com/en/docs/basics/authenticatio

```
#create Oauth2 Client
consumer = oauth.Consumer(CONSUMER_API_KEY, API_SECRET_KEY)
access_token = oauth.Token(ACCESS_TOKEN, ACCESS_TOKEN_SECRET)
client = oauth.Client(consumer, access_token)
```

- with standard developer license twitter allow only 100 results in response.(Premium subscri
  30 days or from archive) See: pricing: https://developer.twitter.com/en/pricing

```
#prepare query
query = '%23atamnirbharbharat'
count = 100
```

```
count = 100
lang = "en"
result_type="mixed"
tweet_mode = "extended"
search_endpoint = "https://api.twitter.com/1.1/search/tweets.json?q={}&result_type={}&c


#execute query
response, data = client.request(search_endpoint)


print(data)
```

⊡→ b'{"statuses":[{"created_at":"Mon Jun 08 11:04:17 +0000 2020","id":126994835834227

```
#get tweets from result
tweets = json.loads(data)
tweets_list = []
for tweet in tweets['statuses']:
    tweets_list.append(tweet['full_text'])
    print(tweet['full_text'])
```

⊡→

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#AtamNirbharBharat #MakeInIndia

@DrJitendraSingh @poonam_mahajan @BJYM @RavinderBJPJK @BJP4JnK @IArundev @BJYMinJK
Today, every section of the country, every citizen is being provided the facility
Your government should be assured for you, be confident !
#Opportunities4Youth
#atamnirbharbharat https://t.co/717CQrfX95
RT @krishnaartsvns: Support our country by #goingvocalforlocal support all local b

#KrishnaArts…
Support our country by #goingvocalforlocal support all local businesses out there!

#KrishnaArts #localbusiness #localforvocal #vocalforlocal #localbusiness
#AtamNirbharBharat #LocalBrand https://t.co/qpvKoImVyJ
Today, every section of the country, every citizen is being provided the facility
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#Opportunities4Youth
#atamnirbharbharat https://t.co/hv0ke8bHKJ
Today, every section of the country, every citizen is being provided the facility
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#atamnirbharbharat

via M https://t.co/HNL9prdm39
Today, every section of the country, every citizen is being provided the facility
Your government should be assured for you, be confident !
#Opportunities4Youth
#atamnirbharbharat

via M https://t.co/jRj4nfMxDE
                                    ime Minister of India handled the situation. With th

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#IndiafightCorona

via MyNt https://t.co/OJhYlyCxnV
RT @warrior34811802: There is huge compromise on Make In India , and #AtmanirbharB
@GurukulParents @PMOIndia @DrRPNishank @drdineshbjp @HRDMinistry @Minister_Edu @WH
#Atamnirbharbharat khud padho khud padhao
TEDBF: At $71 million flyaway costs, TEDBF It will be Cheaper then Rafale M and F-
RT @GK78546407: Swadeshi is the only solution #atamnirbharbharat https://t.co/MT9q
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RT @GK78546407: Swadeshi is the only solution #atamnirbharbharat
Swadeshi is the only solution #atamnirbharbharat https://t.co/MT9qXB3rDI
RT @ImPrince_T: AS PM of India said to build a #Atamnirbharbharat. We are working
RT @theSudhirMohan: AS PM of India said to build a #Atamnirbharbharat. We are work
#atamnirbharbharat
#nochina
Join this slogan maximum to maximum and promote to indian product and make India s
RT @consultosian: Customers duty on bambo import by agarbati manufacturer is incre
#atamnirbharbharat 20 lakh crore package. https://t.co/zgqc4Z5eZb
IT professionals crowd the job street https://t.co/5xmRt73hlv via @economictimes

#JobSeekersWednesday #Jobs #IT_company #informationtechnology #organisations #Rest
Gig coders to become a mainstream phenomenon in Indian IT https://t.co/H5R2eAAT5R

#CodersTeach #IndianIT #Mainstream #techelita #Services #gigwork #post_pandemic #t
@TEAMCAIT @praveendel @BCBHARTIA @sumitagarwal_82 @narendramodi @PiyushGoyal @Amit

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Saving... ✕

```python
search_endpoint = "https://api.twitter.com/1.1/search/tweets.json?q={}&result_type={}&c
extended_response, extended_data = client.request(search_endpoint)
#extended list
extended_tweets = json.loads(extended_data)
extended_tweets_list = []
for tweet in extended_tweets['statuses']:
    extended_tweets_list.append(tweet['full_text'])
    print(tweet['full_text'])
```

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```
#undersatnding response:
print(response)
```

> {'cache-control': 'no-cache, no-store, must-revalidate, pre-check=0, post-check=0'

```
print(data)
```

> b'{"statuses":[{"created_at":"Mon Jun 08 11:04:17 +0000 2020","id":126994835834227

▾ get recent tweets

```
# workaround solution, use premium licnesed apps to get more tweets and apply filters.
result type="recent"
```

#nochina
Join this slogan maximum to maximum and promote to indian product and make India s
RT @consultosian: Customers duty on bambo import by agarbati manufacturer is incre
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@TEAMCAIT @praveendel @BCBHARTIA @sumitagarwal_82 @narendramodi @PiyushGoyal @Amit
For all the millennials wondering what people meant by saying " Licence Raj "

Just look around today, you will understand.
#atamnirbharbharat
#COVID19India
#reforms
#IndiaFightsCorona
The patience with which the Prime Minister of India handled the situation. With th
Really Praiseworthy!
#atamnirbharbharat
#IndiafightCorona

via MyNt https://t.co/7bIhQehDuh
There is a lot more coming on your way ✌⚡
We have just started 🎉
Stay tuned for updates
.
.
#AtamNirbharBharat

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#productandservices
#Electronics
#MadeInIndia
#DigitalLifestyle
#BornIndian
#IndianEntrepreneurs
#IndianMarketer https://t.co/xrgRYLQNqv
RT @webexpertrakesh: #RBIsay #NoToPMCBank #YesToYesbank
@RBI #Narendermodi @nsitharaman @FinMinIndia
Thank you for #Atamnirbharbharat. We n…
#atamnirbharbharat by opening arms, ammunition and defence sector to FDI. WOW! htt
RT @VivekrajJayaram: @ahmedabadmirror All that MLA and MP do is make money for the
RT @warrior34811802: There is huge compromise on Make In India , and #AtmanirbharB
India was ruled and enslaved by Britain for 200 years and when one ponders at the
The patience with which the Prime Minister of India handled the situation. With th
Really Praiseworthy!
#atamnirbharbharat
#IndiafightCorona https://t.co/lM7Ch886E0
@ahmedabadmirror All that MLA and MP do is make money for themselves. Children fut
RT @webexpertrakesh: #RBIsay #NoToPMCBank #YesToYesbank
@RBI #Narendermodi @nsitharaman @FinMinIndia
Thank you for #Atamnirbharbharat. We n…
RT @webexpertrakesh: #RBISAYS #NoToPMCBank #YesToYesbank
@RBI #Narendermodi @nsitharaman @FinMinIndia
Thank you for #Atamnirbharbharat. We…

Saving...   ✕

Saving...   ×

Saving... ×

```
tweets_list = tweets_list + extended_tweets_list


print(len(tweets_list))
print(tweets_list)
```

⊳ 200
    ['In this difficult time, PM @narendramodi still enjoys the overwhelming support o

▾ Clean tweets for sentiment Analysis

- remove retweets user names, mentioned user, links, and special charachters except punctuati

```
cleaned_list = []
for tweet in tweets_list:
    clean tweet = re sub("(RT @\w+)|(@\w+)|(https:\/\/t co\/\w+)|([^a-zA-Z0-9\s] \!% ])"
```