```
pip install tweepy
```

```
Requirement already satisfied: tweepy in c:\users\ssses\anaconda3\lib\site-packages (4.0.0a0)
Requirement already satisfied: requests-oauthlib<2,>=1.0.0 in c:\users\ssses\anaconda3\lib\site-packages (from tweepy) (1.3.0)
Requirement already satisfied: requests<3,>=2.11.1 in c:\users\ssses\anaconda3\lib\site-packages (from tweepy) (2.24.0)
Requirement already satisfied: oauthlib>=3.0.0 in c:\users\ssses\anaconda3\lib\site-packages (from requests-oauthlib<2,>=1.0.0->tweepy) (3.1.1)Note: you may need to restart th

Requirement already satisfied: chardet<4,>=3.0.2 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy) (3.0.4)
Requirement already satisfied: idna<3,>=2.5 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy) (2.10)
Requirement already satisfied: urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy) (1.25.11)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy) (2020.6.20)
```

```
pip install --upgrade git+https://github.com/tweepy/tweepy@master
```

```
Collecting git+https://github.com/tweepy/tweepy@master
  Cloning https://github.com/tweepy/tweepy (to revision master) to c:\users\ssses\appdata\local\temp\pip-req-build-w_clv8hx
Requirement already satisfied, skipping upgrade: requests<3,>=2.11.1 in c:\users\ssses\anaconda3\lib\site-packages (from tweepy==4.0.0a0) (2.24.0)
Requirement already satisfied, skipping upgrade: requests_oauthlib<2,>=1.0.0 in c:\users\ssses\anaconda3\lib\site-packages (from tweepy==4.0.0a0) (1.3.0)
Requirement already satisfied, skipping upgrade: chardet<4,>=3.0.2 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy==4.0.0a0) (3.0.4)
Requirement already satisfied, skipping upgrade: urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy==4.0.0
Requirement already satisfied, skipping upgrade: certifi>=2017.4.17 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy==4.0.0a0) (2020.6.20)
Requirement already satisfied, skipping upgrade: idna<3,>=2.5 in c:\users\ssses\anaconda3\lib\site-packages (from requests<3,>=2.11.1->tweepy==4.0.0a0) (2.10)
Requirement already satisfied, skipping upgrade: oauthlib>=3.0.0 in c:\users\ssses\anaconda3\lib\site-packages (from requests_oauthlib<2,>=1.0.0->tweepy==4.0.0a0) (3.1.1)
Building wheels for collected packages: tweepy
  Building wheel for tweepy (setup.py): startedNote: you may need to restart the kernel to use updated packages.
  Building wheel for tweepy (setup.py): finished with status 'done'
  Created wheel for tweepy: filename=tweepy-4.0.0a0-py2.py3-none-any.whl size=59177 sha256=152c4f0b58221c6571d0d4ddbc140415006caab04a32e0b91e083fd73ec199f9

  Stored in directory: C:\Users\ssses\AppData\Local\Temp\pip-ephem-wheel-cache-6xpgvpqv\wheels\c7\6a\e1\37bca985a001c53f862a6c6bc2167067fb652571c1f67cff21
Successfully built tweepy
Installing collected packages: tweepy
  Attempting uninstall: tweepy
    Found existing installation: tweepy 4.0.0a0
    Uninstalling tweepy-4.0.0a0:
      Successfully uninstalled tweepy-4.0.0a0
Successfully installed tweepy-4.0.0a0
```

```
pip install psycopg2
```

```
Requirement already satisfied: psycopg2 in c:\users\ssses\anaconda3\lib\site-packages (2.9.1)
Note: you may need to restart the kernel to use updated packages.
```

```
pip install python-dateutil
```

```
Requirement already satisfied: python-dateutil in c:\users\ssses\anaconda3\lib\site-packages (2.8.1)
Requirement already satisfied: six>=1.5 in c:\users\ssses\anaconda3\lib\site-packages (from python-dateutil) (1.15.0)
Note: you may need to restart the kernel to use updated packages.
```

```
pip install nbconvert[test]
```

● ✕

```
Requirement already satisfied: entrypoints>=0.2.2 in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (0.3)
Requirement already satisfied: mistune<2,>=0.8.1 in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (0.8.4)
Requirement already satisfied: defusedxml in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (0.6.0)
Requirement already satisfied: nbformat>=4.4 in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (5.0.8)
Requirement already satisfied: nbclient<0.6.0,>=0.5.0 in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (0.5.1)
Requirement already satisfied: jupyter-core in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (4.6.3)
Collecting pytest-dependency; extra == "test"
  Downloading pytest-dependency-0.5.1.tar.gz (27 kB)
Collecting pytest-cov; extra == "test"
  Downloading pytest_cov-2.12.1-py2.py3-none-any.whl (20 kB)
Requirement already satisfied: ipykernel; extra == "test" in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (5.3.4)
Requirement already satisfied: pytest; extra == "test" in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (0.0.0)
Requirement already satisfied: ipywidgets>=7; extra == "test" in c:\users\ssses\anaconda3\lib\site-packages (from nbconvert[test]) (7.5.1)
Collecting pyppeteer==0.2.2; extra == "test"
  Downloading pyppeteer-0.2.2-py3-none-any.whl (145 kB)
Requirement already satisfied: webencodings in c:\users\ssses\anaconda3\lib\site-packages (from bleach->nbconvert[test]) (0.5.1)
Requirement already satisfied: six>=1.9.0 in c:\users\ssses\anaconda3\lib\site-packages (from bleach->nbconvert[test]) (1.15.0)
Requirement already satisfied: packaging in c:\users\ssses\anaconda3\lib\site-packages (from bleach->nbconvert[test]) (20.4)
Requirement already satisfied: ipython-genutils in c:\users\ssses\anaconda3\lib\site-packages (from traitlets>=4.2->nbconvert[test]) (0.2.0)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\ssses\anaconda3\lib\site-packages (from jinja2>=2.4->nbconvert[test]) (1.1.1)
Requirement already satisfied: jsonschema!=2.5.0,>=2.4 in c:\users\ssses\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert[test]) (3.2.0)
Requirement already satisfied: async-generator in c:\users\ssses\anaconda3\lib\site-packages (from nbclient<0.6.0,>=0.5.0->nbconvert[test]) (1.10)
Requirement already satisfied: jupyter-client>=6.1.5 in c:\users\ssses\anaconda3\lib\site-packages (from nbclient<0.6.0,>=0.5.0->nbconvert[test]) (6.1.7)
Requirement already satisfied: nest-asyncio in c:\users\ssses\anaconda3\lib\site-packages (from nbclient<0.6.0,>=0.5.0->nbconvert[test]) (1.4.2)
Requirement already satisfied: pywin32>=1.0; sys_platform == "win32" in c:\users\ssses\anaconda3\lib\site-packages (from jupyter-core->nbconvert[test]) (227)
Collecting coverage>=5.2.1
  Downloading coverage-5.5-cp38-cp38-win_amd64.whl (211 kB)
Requirement already satisfied: toml in c:\users\ssses\anaconda3\lib\site-packages (from pytest-cov; extra == "test"->nbconvert[test]) (0.10.1)
Requirement already satisfied: tornado>=4.2 in c:\users\ssses\anaconda3\lib\site-packages (from ipykernel; extra == "test"->nbconvert[test]) (6.0.4)
Requirement already satisfied: ipython>=5.0.0 in c:\users\ssses\anaconda3\lib\site-packages (from ipykernel; extra == "test"->nbconvert[test]) (7.19.0)
Requirement already satisfied: attrs>=17.4.0 in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (20.3.0)
Requirement already satisfied: iniconfig in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (1.1.1)
Requirement already satisfied: pluggy<1.0,>=0.12 in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (0.13.1)
Requirement already satisfied: py>=1.8.2 in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (1.9.0)
Requirement already satisfied: atomicwrites>=1.0 in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (1.4.0)
Requirement already satisfied: colorama in c:\users\ssses\anaconda3\lib\site-packages (from pytest; extra == "test"->nbconvert[test]) (0.4.4)
Requirement already satisfied: widgetsnbextension~=3.5.0 in c:\users\ssses\anaconda3\lib\site-packages (from ipywidgets>=7; extra == "test"->nbconvert[test]) (3.5.1)
Collecting pyee<8.0.0,>=7.0.1
  Downloading pyee-7.0.4-py2.py3-none-any.whl (12 kB)
Collecting appdirs<2.0.0,>=1.4.3
  Downloading appdirs-1.4.4-py2.py3-none-any.whl (9.6 kB)
Collecting websockets<9.0,>=8.1
  Downloading websockets-8.1-cp38-cp38-win_amd64.whl (66 kB)
Requirement already satisfied: urllib3<2.0.0,>=1.25.8 in c:\users\ssses\anaconda3\lib\site-packages (from pyppeteer==0.2.2; extra == "test"->nbconvert[test]) (1.25.11)
Requirement already satisfied: tqdm<5.0.0,>=4.42.1 in c:\users\ssses\anaconda3\lib\site-packages (from pyppeteer==0.2.2; extra == "test"->nbconvert[test]) (4.50.2)
Requirement already satisfied: pyparsing>=2.0.2 in c:\users\ssses\anaconda3\lib\site-packages (from packaging->bleach->nbconvert[test]) (2.4.7)
Requirement already satisfied: pyrsistent>=0.14.0 in c:\users\ssses\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert[test]) (0.17.3)
```

```
        C:\Users\ssses\anaconda3\python.exe -m pip install [options] <archive url/path> ...

    no such option: --allow-chromium-download
```

```python
# Dependencies and Setup
import tweepy as tw
from datetime import datetime,timedelta
from dateutil.relativedelta import relativedelta
import csv
import pandas as pd
import numpy as np
from api_keys import consumer_key,consumer_secret,access_token,access_secret,env_name


import os
from sqlalchemy.ext.automap import automap_base
from sqlalchemy.orm import Session
from sqlalchemy import create_engine, func


# AWS SQL
url_base = 'postgresql://root:9tckay8Bv^9e@database-2.cfzewqbxonfb.us-east-2.rds.amazonaws.com:5432/postgres'
print(url_base)
engine = create_engine(url_base)
```

```
    postgresql://root:9tckay8Bv^9e@database-2.cfzewqbxonfb.us-east-2.rds.amazonaws.com:5432/postgres
```

Getting tweets

```python
# Authenticate Bearer token
#auth = tw.AppAuthHandler(consumer_key, consumer_secret)

#Authenticate with OAuth
auth = tw.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(access_token, access_secret)

api = tw.API(auth, wait_on_rate_limit=True)
```

```
date_since_06 = '202004100000'
date_until_06 = '202004152359'
date_since_07 = '202008310000'
date_until_07 = '202009042359'
date_since_08 = '202009300000'
date_until_08 = '202010042359'
date_since_09 = '202011100000'
date_until_09 = '202011152359'
date_since_10 = '202011130000'
date_until_10 = '202011182359'
date_since_11 = '202104100000'
date_until_11 = '202104152359'
date_since_12 = '202103170000'
date_until_12 = '202103222359'
date_since_13 = '202106240000'
date_until_13 = '202106292359'
date_since_14 = '202107250000'
date_until_14 = '202107302359'
date_since_15 = '202108180000'
date_until_15 = '202108232359'


date_since_16 = '202105280000'
date_until_16 = '202106012359'
date_since_17 = '202106270000'
date_until_17 = '202107012359'
date_since_18 = '202107180000'
date_until_18 = '202107232359'

date_since_19 = '201106170000'
date_until_19 = '201106222359'
date_since_20 = '201206170000'
```

```
        tweet_list = []
        tweet_text = ''
        for tweet in tweets:
            if tweet.truncated:
                tweet_text = tweet.extended_tweet['full_text']
            else:
                tweet_text = tweet.text

            tweet_list.append(['',tweet.id, tweet_text, tweet.user.id, tweet.user.screen_name,tweet.created_at,
                               tweet.favorite_count, tweet.retweet_count,tweet.user.verified,tweet.user.location,
                               tweet.user.friends_count, tweet.user.followers_count])
# Create dataframe
        df = pd.DataFrame(tweet_list, columns=['key_word','id', 'tweet','user_id','user_name','date',
                                               'like','retweet','verified','location',
                                               'friends','followers'])

        return df
```

Call functions to create 23 dataframes df_01-df_23 according with selected dates We called the function one by one, in order to save requests to the TWITTER API and save cost. -Every request has 500 tweets if there are more tweets more requests are used. -The search exclude retweets in order to take advantage of requests limits. -Aditionally we created a cvs for every search to protect our information

| 99 | 745449112485519361 | Me urge llegar a mi casa , acostarme y ver net... | 829964834 | Kepg07 | 2016-06-22 02:51:32+00:00 | 1 | 0 | False | Monterrey | 178 | 419 |

100 rows × 12 columns

```
# Export to csv
df_04.to_csv('df_04.csv')


df_05 = get_tweets(date_since_05, date_until_05)


df_05['tweet'].size
```

```
    697
```

```
# Export to csv
```

```
df_09.to_csv('df_09.csv')

df_10 = get_tweets(date_since_10, date_until_10)

df_10['tweet'].size
```