FINAL PROJECT README

For this project I chose **option 2-Twitter & OMDB**

The project has a set list of movies and analyzes tweets about the main actors within each one. It creates a database that contains tables for twitter users, tweets, and omdb movie entries.

The program has no inputs and is run by the command: **python 206_data_access.py**

Dependencies:

- import omdb
    - pip install omdb
- from emoji import UNICODE_EMOJI
    - pip install emoji
- import tweepy
    - pip install tweepy

Necessary Files:

- twitter_info.py
    - Contains a twitter consumer key, consumer secret, access token and access token secret.

Files Created:

- The program will create 2 files upon runtime
    - final_cache.json
        - A file used to cache all data from API searches to speed up later searches
    - final.db
        - A database that contains the three tables mentioned above.
    - results.txt
        - A file stating the findings from the program

Classes:

The program only contains one class, a Movie class. One Movie instance represents a movie from the OMDB database. The class constructor takes an OMDB movie dictionary to create all the instance variables.

Class Methods:

- main_actor()
    - The method takes no input and does not alter any variables. It returns the first actor within the actors instance variable.
- __str()__

    - The method has no input nor does it alter anything. The method returns the movie in a legible string with title, director, and the year the movie was created.
        - "The Avengers by Josh Whedon made in 2012"

Databases + Tables:

- One Database is created called final.db which contains three tables: Users, Tweets, and Movies.
    - Tweets
        - tweet_id(INTEGER) - the primary key
        - text(TEXT) - the text of the tweet
        - user_id(INTEGER) - the ID of the user who made the tweet
        - time_posted(TIMESTAMP) - The time at which the tweet was made
        - retweets(INTEGER) - How many times
        - movie_id(INTEGER - the ID of the movie it is referencing)
    - Users
        - user_id(TEXT) - the ID of the twitter user
        - screen_name(TEXT) - Screen name of the twitter user
        - num_favs(INTEGER) - overall number of favorites the user has
    - Movies
        - movie_id(TEXT) - the imdb ID of the movie
        - title(TEXT) - Title of the movie
        - director(TEXT) - Director of the movie
        - num_langs(INTEGER) - Languages that the movie is in
        - imdb_rating(REAL) - IMDB rating
        - actor(TEXT) - Lead actor in the movie
        - year(INTEGER) - year the movie was made

Why this project:
I chose this project because I wanted to get more comfortable with API calls. I'll be working with them at my summer internship and thought it would be a great opportunity to develop my skills. They also allow for a great amount of freedom and data manipulation, which is exciting.

Specifics:
- Data gathering functions start on line 88
- Class definition starts on line 42
- Databases are created at line 71
- Databases are loaded at lines 172, 186, and 200
- Data processing occurs at lines 208, 224, 237, 257, and 291

Code successfully running:

Without routing to external file:

```
Connors-MacBook-Pro-2:Final_Project connorjohnston$ python 206_data_access.py
########################################
TWITTER & OMDB SUMMARY
25/04/2017
########################################

Movies:

The Avengers by Joss Whedon made in 2012
Date Night by Shawn Levy made in 2010
Inception by Christopher Nolan made in 2010


##########################################################
STATISTICS ON TWEETS ABOUT EACH MOVIE'S LEADING ACTOR
##########################################################
•There are 558 total different words in the 90 tweets found


•Roughly 74.44% of all tweets contained a link (num links / num tweets)


•18 emojis are used which is 0.002312% of all characters


•The actor Steve Carell has the longest tweets with an average length of 111.4 characters


•The most popular tweet was "RT @filmagraphy: Leonardo DiCaprio photographed by Greg Gorman, 1994. https://t.co/2dDFDhFb1B" with 8306 retweets mentioning Leonardo DiCaprio who was in the movie Inception

Connors-MacBook-Pro-2:Final_Project connorjohnston$
```

With routing to external file:

```
Connors-MacBook-Pro-2:Final_Project connorjohnston$ python 206_data_access.py
Connors-MacBook-Pro-2:Final_Project connorjohnston$ python 206_data_access.py
Connors-MacBook-Pro-2:Final_Project connorjohnston$ python 206_data_access.py
Connors-MacBook-Pro-2:Final_Project connorjohnston$
```