Sentiment Analysis on "Lockdown"

```python
In [1]: import re
        import tweepy
        from tweepy import OAuthHandler
        from textblob import TextBlob
```

```python
In [2]: class TwitterClient(object):

            #Constructor
            def __init__(self):
                # keys and tokens from the Twitter Dev Console
                consumer_key = 'xxxx'
                consumer_secret = 'xxxx'
                access_token = 'xxxx'
                access_token_secret = 'xxxx'

                # authentication
                try:
                    self.auth = OAuthHandler(consumer_key, consumer_secret)
                    self.auth.set_access_token(access_token, access_token_secret)
                    self.api = tweepy.API(self.auth)
                except:
                    print("Error: Authentication Failed")

            def clean_tweet(self, tweet):
                return ' '.join(re.sub("(@[A-Za-z0-9]+)|([^0-9A-Za-z \t]) |(\w+:\/\/\S+)", " ", tweet).split())

            def get_tweet_sentiment(self, tweet):

                # creating TextBlob object
                analysis = TextBlob(self.clean_tweet(tweet))

                # sentiment analysis
                if analysis.sentiment.polarity > 0:
                    return 'positive'
                elif analysis.sentiment.polarity == 0:
                    return 'neutral'
                else:
                    return 'negative'

            def get_tweets(self, query, count = 10):

                tweets = []

                try:
                    # call twitter api to fetch tweets
                    fetched_tweets = self.api.search(q = query, count = count)

                    # parsing tweets one by one
                    for tweet in fetched_tweets:
                        # empty dictionary to store required params of a tweet
                        parsed_tweet = {}

                        # saving text of tweet
                        parsed_tweet['text'] = tweet.text
                        # saving sentiment of tweet
                        parsed_tweet['sentiment'] = self.get_tweet_sentiment(tweet.text)

                        # appending parsed tweet to tweets list
                        if tweet.retweet_count > 0:
                            # if tweet has retweets, ensure that it is appended only once
                            if parsed_tweet not in tweets:
                                tweets.append(parsed_tweet)
                        else:
                            tweets.append(parsed_tweet)

                    # return parsed tweets
                    return tweets

                except tweepy.TweepError as e:
                    # print error (if any)
                    print("Error : " + str(e))
```

```python
In [3]: def main():
            # creating object of TwitterClient Class
            api = TwitterClient()
            # calling function to get tweets
            tweets = api.get_tweets(query = 'Lockdown', count = 200)

            # picking positive tweets from tweets
            ptweets = [tweet for tweet in tweets if tweet['sentiment'] == 'positive']
            # percentage of positive tweets
            print("Positive tweets percentage: {} %".format(100*len(ptweets)/len(tweets)))
            # picking negative tweets from tweets
            ntweets = [tweet for tweet in tweets if tweet['sentiment'] == 'negative']
            # percentage of negative tweets
            print("Negative tweets percentage: {} %".format(100*len(ntweets)/len(tweets)))
            # percentage of neutral tweets
            print("Neutral tweets percentage: {} % ".format(100*(len(tweets) -(len( ntweets )+len( ptweets)))/len(tweets)))

            # printing first 5 positive tweets
            print("\n\nPositive tweets:")
            for tweet in ptweets[:10]:
                print(tweet['text'])

            # printing first 5 negative tweets
            print("\n\nNegative tweets:")
            for tweet in ntweets[:10]:
                print(tweet['text'])

        if __name__ == "__main__":
            main()
```

```
Positive tweets percentage: 28.88888888888889 %
Negative tweets percentage: 23.33333333333332 %
Neutral tweets percentage: 47.7777777777778 %


Positive tweets:
RT @tedcruz: So, in March, at the start of coronavirus lockdown, I went on Amazon to try to buy toilet paper. I bought the only
kind that w…
RT @DKShrewsbury: Nearly 10,000 potholes and other road defects have been fixed during lockdown in Shropshire as workers take a
dvantage of…
Boris Johnson to fire up UK economy with 'Great Recovery Bill' as Britain eases out of lockdown – The Sun https://t.co/PmA8poQe
YO
RT @TweetXan_: If your first night out after lockdown doesn't end like this you didn't do it right https://t.co/GKsbXnGnKL
RT @DanielJHannan: You want to argue that the risk of outdoor transmission is tiny? Fine. That non-vulnerable people should be
free to take…
RT @mharicoxon: Thanks @DaneBaptweets at @covid comedy son was laughing the most about your "Like my women like' week 9 lockdow
```

n viewpoint
RT @gothykendoll: the first guy i see after lockdown is getting the fattest sloppiest snog ever
RT @bkerrjung: @MKGenest @Enna41067705 The fastest, most peaceful, most effective response would be a general strike. No workin
g no spendin…
RT @scentperfumes: New #competition!

If you want to win £50 to spend on whatever you like from our website?! 😍... Then get involved with…
RT @samirmir: Prime Minister Imran Khan the pioneer of Smart Lockdown , rest of the world followed .
The pride of Pakistan #ImranKhan . #l…

Negative tweets:
RT @SANEEDSAWALL: @AfricaFactsZone Foreigners are the ones doing crime in South Africa.

They even murder the police, they are violent crim…
RT @SaltySeaDog7: I accomplished today what I previously thought was impossible.

Girl at work, lockdown fanatic, mask and glove wearer, b…
RT @SRKUniverse: When you know it's Friday but you can't go out with friends due to lockdown 😊
#StayHomeStaySafe #ShahRukhKhan https://t.co…
RT @Hells4Heroes: IMO if you're too scared to uphold the law, you are not fit to hold the position.

Met feared 'serious disorder' if lockd…
RT @DrRobDavidson: The difference between these protests & anti-lockdown protests of weeks past? Previous protests opposed
the very measure…
RT @ilaiyanambi: From #Demonetization to Lockdown everything announced by Modi is a Failure
#LockdownFailed https://t.co/fzl4LJiOIs
Is your mum dealing with lockdown by cooking excessively, or are you normal ?
RT @RahulGandhi: This is what a failed lockdown looks like. https://t.co/eGXpNL6Zhl
RT @Andy_Gez_: @DawnButlerBrent @MetroUK How many of these idiots will hear the words "I can't breathe" from friends and family
members the…
RT @Linda_Mtoba: Just want to take a second to say thank you to all our cooks & chefs that held it down with the recipes du
ring lockdown
M…

References:

1. https://www.geeksforgeeks.org/extraction-of-tweets-using-tweepy
2. https://youtu.be/1gQ6uG5Ujiw

Done