

In [42]:

```
import numpy as np
import pandas as pd
import twitter
from twitter import Twitter
from twitter import OAuth

import json
from pandas.io.json import json_normalize

ck = 'QvGBrXMEZhicazT2XzvK1usgY' #consumer key
cs = 'TyYiFfvYsZrjtoikhn5d1MYWljuEPGQu3iU1PZmByZAgKwTgP2' #consumer key secret
at = '954075809018470400-2TRhibAbIA70BhPUXuf6xE8NIMTWa17'
ats = 'qbg2ibQ4QILAIYidy9kdANZ5cxS02a9jCPh0IYmsGm1Wv'

oauth = OAuth(at,ats,ck,cs)

api = Twitter(auth=oauth)
```

In [43]:

```
df = pd.DataFrame()
mid = 0
for i in range(10):
    if i ==0:
        search_tw = api.search.tweets(q="Bitcoin", count = 100)
    else:
        search_tw = api.search.tweets(q="Bitcoin", count=100, max_id=mid)

    dftemp = json_normalize(search_tw,'statuses')
    mid = dftemp['id'].min()
    mid=mid-1
    df = df.append(dftemp,ignore_index=True)
```

In [44]:

```
df.shape
```

Out[44]:

```
(885, 30)
```

In [45]:

```
tweet = df['text']
df_u = json_normalize(df['user'])
df_u.head()
df_s = df_u['screen_name']
df_s.head()
df['screenname']=df_u['screen_name']
```

In [46]:

```
from textblob import TextBlob as tb

pol = []
sub = []

for j in tweet:
    tx = tb(j)
    pol.append(tx.sentiment.polarity)
    sub.append(tx.sentiment.subjectivity)
```

In [47]:

```
pol
0.0,
0.0,
0.0,
0.0,
0.0,
0.278125,
0.13636363636363635,
0.0,
0.0,
0.0,
0.0,
-0.07777777777777779,
0.5,
0.13636363636363635,
0.0,
0.0,
0.1,
0.0,
0.0,
-0.0625,
```

In [48]:

```
df_pols = pd.DataFrame({"polarity":pol,"subjectivity":sub})
df['polarity']=df_pols['polarity']
df['subjectivity']=df_pols['subjectivity']
```

In [49]:

```
df_sup = pd.DataFrame()
df3 = pd.DataFrame()
df
```

	None	None	Thu Jun 07 22:06:36 +0000 2018	{'hashtags': [], 'symbols': [], 'user_mentions': []}	NaN	0	False
7	None	None	Thu Jun 07 22:06:36 +0000 2018	{'hashtags': [{'text': 'Crypto', 'indices': [0...	NaN	0	False
8	None	None	Thu Jun 07 22:06:35 +0000 2018	{'hashtags': [], 'symbols': [], 'user_mentions': []}	NaN	0	False
9	None	None	Thu Jun 07 22:06:35 +0000 2018	{'hashtags': [], 'symbols': [], 'user_mentions': []}	NaN	0	False
10	None	None	Thu Jun 07 22:06:34 +0000 2018	{'hashtags': [], 'symbols': [], 'user_mentions': []}	{'media': [{'id': 1004847106480222208, 'id_str': ...	0	False

In [50]:

```
df3 = df[['polarity','subjectivity','screenname']]
df3.head()
```

Out[50]:

	polarity	subjectivity	screenname
0	0.000000	0.000000	KivatheWiseKing
1	0.400000	0.800000	dgenr818
2	0.107143	0.214286	ChiecTim
3	0.000000	0.000000	cryptcurnews
4	0.345455	0.501515	jbsloan

In [56]:

```
negative = pd.DataFrame()
positive= pd.DataFrame()
neutral = pd.DataFrame()

negative = df3[df3['polarity']<=-0.5]
positive = df3[df3['polarity']>=0.5]
neutral = df3[(df3['polarity'] > -0.5) & (df3['polarity'] < 0.5)]
```