Problem 1: Twitter data collection
Python on mac book
Required module -> tweepy

```
● ● ●                    📁 Desktop — -bash — 80×24
 Last login: Sun Sep  9 19:09:15 on console
[dhcp-10-11-207-87:~ sayedkhan$ cd Desktop                              ]
 dhcp-10-11-207-87:Desktop sayedkhan$ python scraper.py█
```

After collecting tweet data, it will raise exception and exit program automatically. I have already collected many tweets based on "Trump". This python will check the existing file Trump.txt for appending data. If it does not get it, it will create a file name Trump.txt.

```
● ● ●                    📁 Desktop — -bash — 80×24
 found 100 tweets
 count = 35
 found 100 tweets
 found 100 tweets
 found 100 tweets
 found 100 tweets
 found 100 tweets
 count = 36
 found 100 tweets
 found 100 tweets
 found 100 tweets
 found 100 tweets
 found 100 tweets
 count = 37
 exception raised, waiting 1 minutes
 (until: 2018-09-09 19:19:37.710318 )
 count = 38
 exception raised, waiting 1 minutes
 (until: 2018-09-09 19:19:37.839644 )
 count = 39
 exception raised, waiting 1 minutes
 (until: 2018-09-09 19:19:38.011097 )
 exiting
 dhcp-10-11-207-87:Desktop sayedkhan$ █
```

Problem 2   Tweet sentiment calculation

$ python tweet_sentiment.py AFINN-111.txt Trump.txt

```
count = 35
found 100 tweets
found 100 tweets
found 100 tweets
found 100 tweets
found 100 tweets
count = 36
found 100 tweets
found 100 tweets
found 100 tweets
found 100 tweets
found 100 tweets
count = 37
exception raised, waiting 1 minutes
(until: 2018-09-09 19:19:37.710318 )
count = 38
exception raised, waiting 1 minutes
(until: 2018-09-09 19:19:37.839644 )
count = 39
exception raised, waiting 1 minutes
(until: 2018-09-09 19:19:38.011097 )
exiting
dhcp-10-11-207-87:Desktop sayedkhan$ python tweet_sentiment.py AFINN-111.txt Tru
mp.txt
```

```
-2
0
0
0
-3
-3
-1
-2
0
0
2
-1
0
0
-2
0
0
1
0
0
0
-3
-1
dhcp-10-11-207-87:Desktop sayedkhan$
```

Problem 3   Term sentiment calculation

$ python tweet_sentiment.py AFINN-111.txt Trump.txt

```
● ● ●                           📁 Desktop — -bash — 80×24
0
0
0
-3
-3
-1
-2
0
0
2
-1
0
0
-2
0
0
1
0
0
0
-3
-1
dhcp-10-11-207-87:Desktop sayedkhan$ python term_sentiment.py AFINN-111.txt Trum
p.txt▯
```

```
● ● ●                           📁 Desktop — -bash — 80×24
b'RT' -1
b'@NatashaBertrand:' -1
b'My' -1
b'story' -1
b'from' -1
b'last' -1
b'week,' -1
b'about' -1
b'Trump\xe2\x80\x99s' -1
b'Trump\xe2\x80\x99s' -1
b'on' -1
b'FBI' -1
b'and' -1
b'DOJ' -1
b'officials' -1
b'with' -1
b'expertise' -1
b'in' -1
b'organized' -1
b'crime,' -1
b'is' -1
b'quoted' -1
b'i\xe2\x80\xa6' -1
dhcp-10-11-207-87:Desktop sayedkhan$ ▯
```

Problem 4   Term frequency

$python frequency.py Trump.txt

```
●●●                  🗀 Desktop — -bash — 80×24

b'RT' -1
b'@NatashaBertrand:' -1
b'My' -1
b'story' -1
b'from' -1
b'last' -1
b'week,' -1
b'about' -1
b'Trump\xe2\x80\x99s' -1
b'Trump\xe2\x80\x99s' -1
b'on' -1
b'FBI' -1
b'and' -1
b'DOJ' -1
b'officials' -1
b'with' -1
b'expertise' -1
b'in' -1
b'organized' -1
b'crime,' -1
b'is' -1
b'quoted' -1
b'i\xe2\x80\xa6' -1
dhcp-10-11-207-87:Desktop sayedkhan$ ▯
```

```
●●●                  🗀 Desktop — -bash — 80×24

b'o' 0.050000
b'f' 0.021429
b'm' 0.021429
b'l' 0.014286
b'w' 0.014286
b'k' 0.014286
b',' 0.014286
b'b' 0.007143
b'u' 0.021429
b'p' 0.014286
b'\xe2\x80\x99' 0.007143
b'c' 0.021429
b'F' 0.007143
b'I' 0.007143
b'D' 0.007143
b'O' 0.007143
b'J' 0.007143
b'i' 0.064286
b'x' 0.007143
b'g' 0.007143
b'z' 0.007143
b'q' 0.007143
b'\xe2\x80\xa6' 0.007143
dhcp-10-11-207-87:Desktop sayedkhan$ ▯
```

Problem 5   Happiest State

$python happiest_state.py AFINN-111.txt Trump.txt

```
b'f'  0.021429
b'm'  0.021429
b'l'  0.014286
b'w'  0.014286
b'k'  0.014286
b','  0.014286
b'b'  0.007143
b'u'  0.021429
b'p'  0.014286
b'\xe2\x80\x99'  0.007143
b'c'  0.021429
b'F'  0.007143
b'I'  0.007143
b'D'  0.007143
b'O'  0.007143
b'J'  0.007143
b'i'  0.064286
b'x'  0.007143
b'g'  0.007143
b'z'  0.007143
b'q'  0.007143
b'\xe2\x80\xa6'  0.007143
dhcp-10-11-207-87:Desktop sayedkhan$ python happiest_state.py AFINN-111.txtTrump
.txt
[dhcp-10-11-207-87:Desktop sayedkhan$ python happiest_state.py AFINN-111.txt Trum]
p.txt
NJ
dhcp-10-11-207-87:Desktop sayedkhan$
```

Problem 6   Top Ten hashtag

$python top_ten.py Trump.txt

```
IndexError: list index out of range
dhcp-10-11-207-87:Desktop sayedkhan$ python happiest_state.py AFINN-111.txt Trum]
p.txt
NJ
dhcp-10-11-207-87:Desktop sayedkhan$ python top_ten.py Trump.txt
```

```
[dhcp-10-11-207-87:Desktop sayedkhan$ python top_ten.py Trump.txt
Trump 659.0
Obama 548.0
Democrat 387.0
DeepState 351.0
MAGA 339.0
Obamagate 247.0
AW 233.0
Kavanaugh 126.0
RussianCollusion 82.0
FoxNews 77.0
dhcp-10-11-207-87:Desktop sayedkhan$
```