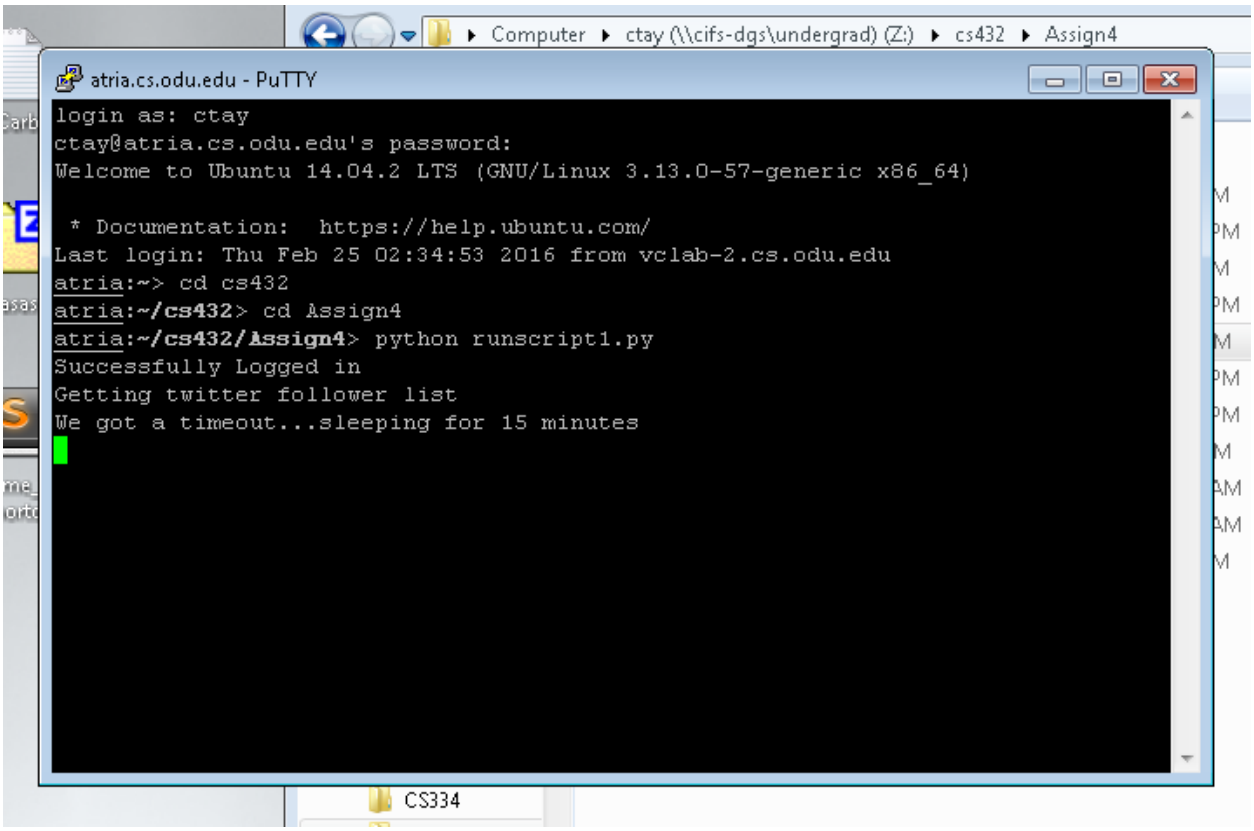
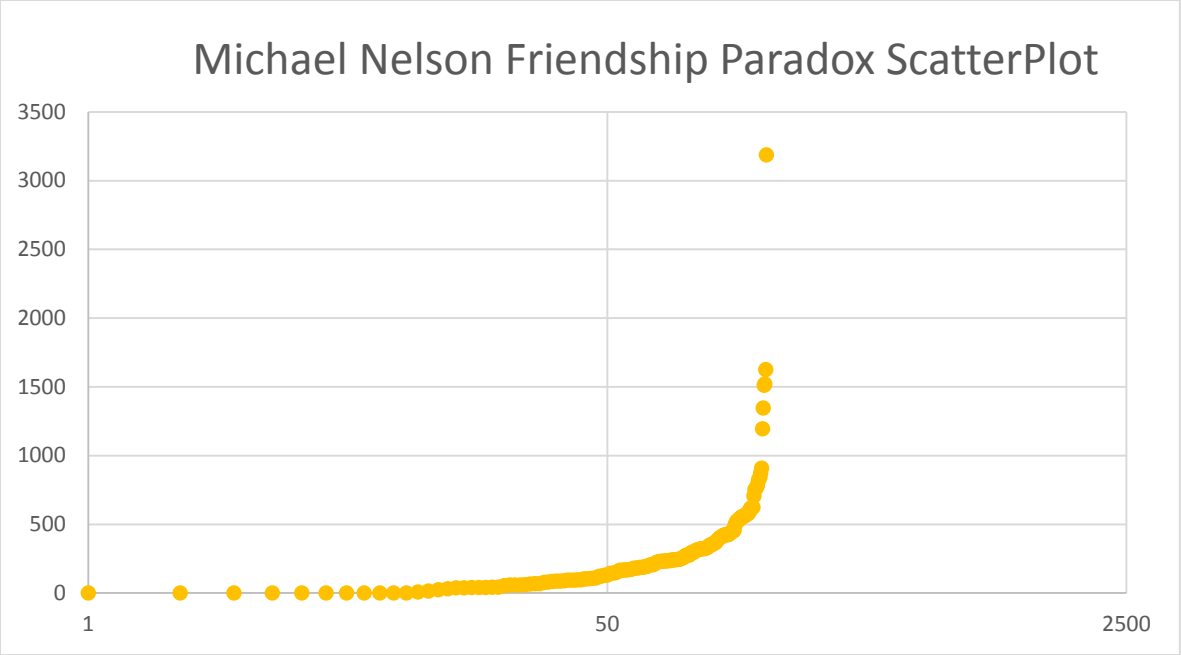
Part 1:

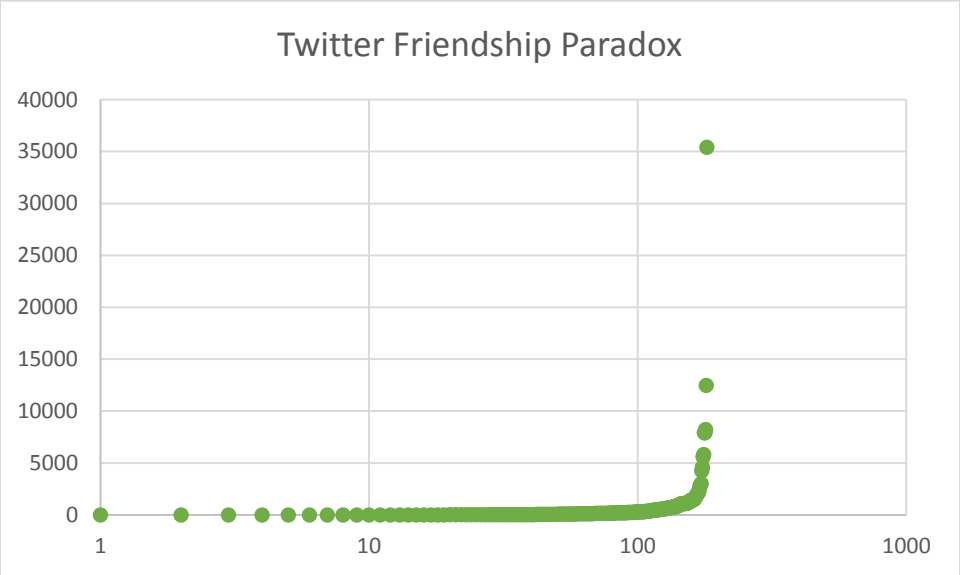
For both part 1 and 2, I used a parser to be able to pull out your friends on Facebook and then later ran a code that allowed it to pull out how many friends all of your friends have, with that information I used excel to be able to make a scatter plot, and later with excel again I used its tools to be able to find the mean median and mode.

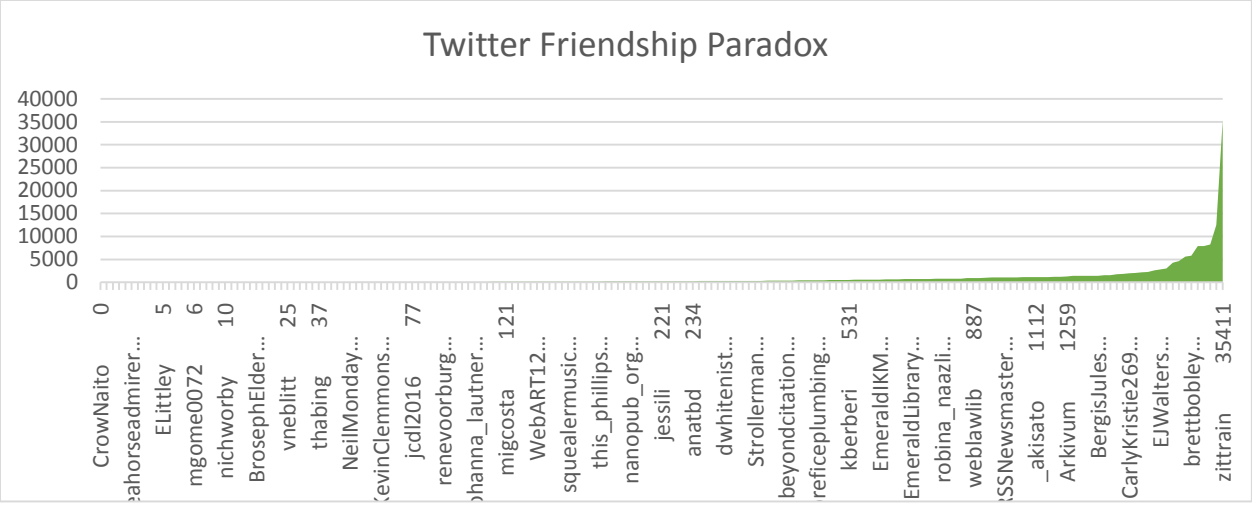




Part 2:

For this section I used the same thing I used for the first section, the only difference was that it was used for twitter and how many followers you have.





Mean: 944

Median: 221

Standard Deviation: 98.0255068847

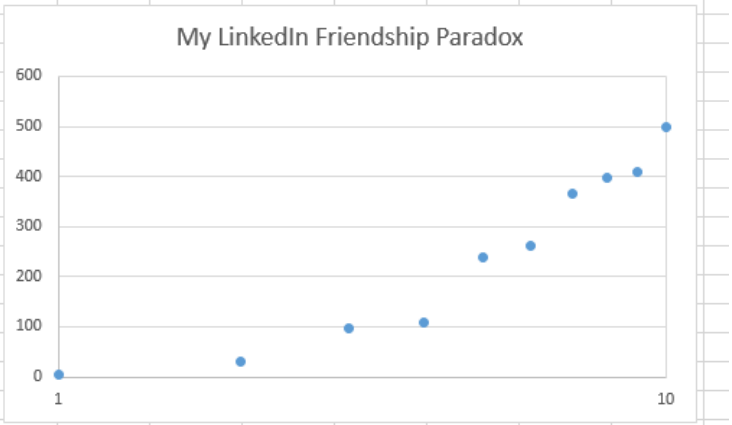
The friendship paradox proved correct for Michael Nelsons twitter and Facebook friends because he scored in the 50th percentile on the graphs; which shows that for your twitter and Facebook, you indeed do have less friends than the people you are friends with.

Part 3:

On my LinkedIn account I extracted my connections by going to my networks, also by using your graph XML which you provided I simply switched my connections information; which weren't as many, with the information of your connections. After that I used the parser in which I used for both Part 1 and 2, to be able to get the solution posted on the bottom. For me the friendship paradox also applies to me being that all of my connections have more connections than I do.

```
IOError: [Errno 2] No such file or directory: 'linkedinextra.graphml'
atria:~/cs432/Assign4> python linkinin1.py
{
    "Jennifer_Bress_627833a7": {
        "shared_connection_count_count": "4",
        "connection_count": "96",
        "uid": "627833a7",
        "name": "Jennifer Bress",
        "Label": "Jennifer Bress"
    },
    "Anthony_McCann_94817567": {
        "shared_connection_count_count": "31",
        "connection_count": "4",
        "uid": "94817567",
        "name": "Anthony McCann",
        "Label": "Anthony McCann"
    },
    "Stephanie_Sakyi_6889395a": {
        "shared_connection_count_count": "12",
        "connection_count": "500+",
        "uid": "6889395a",
        "name": "Joshua Wiredu",
        "Label": "Stephanie Sakyi"
    },
    "Esther_Sakyi_1a9b4378": {
        "shared_connection_count_count": "8",
        "connection_count": "30",
        "uid": "1a9b4378",
        "name": "Esther Sakyi",
        "Label": "Esther Sakyi"
    },
    "Kevin_Taylor_Sakyi_46924364": {
        "shared_connection_count_count": "1",
        "connection_count": "409",
        "uid": "46924364",
        "name": "Kevin Taylor Sakyi",
        "Label": "Kevin Taylor Sakyi"
    },
    "Emanuela_Kusi_31b86865": {
        "shared_connection_count_count": "20",
        "connection_count": "384",
        "uid": "31b86865",
        "name": "Emanuela Kusi",
        "Label": "Emanuela Kusi"
    },
    "Anusha_Iyer_8841bb5": {
        "shared_connection_count": "13",
        "connection_count": "263",
        "uid": "8841bb5",
        "name": "Anusha Iyer",
        "Label": "Anusha Iyer"
    },
    "Chandran_Iyer_549a783": {
        "shared_connection_count_count": "13",
        "connection_count": "366",
```

Anthony McCann	4
Esther Sakyi	30
Jennifer Bress	96
Alexander Baiden	108
Mabel Annobil	239
Anusha Iyer	263
Chandran Iyer	366
Emanuela Kusi	398
Kevin Taylor Sakyi	409
Stephanie Sakyi	500
Mean=	241.3
Median=	251
STD=	174.9



In order to get the mean median and standard deviation I entered the names of my connection with the amount of connections they had and used the tools on excel to find the figures for mean, median and standard deviation; also used the same method for part 1 and 2.