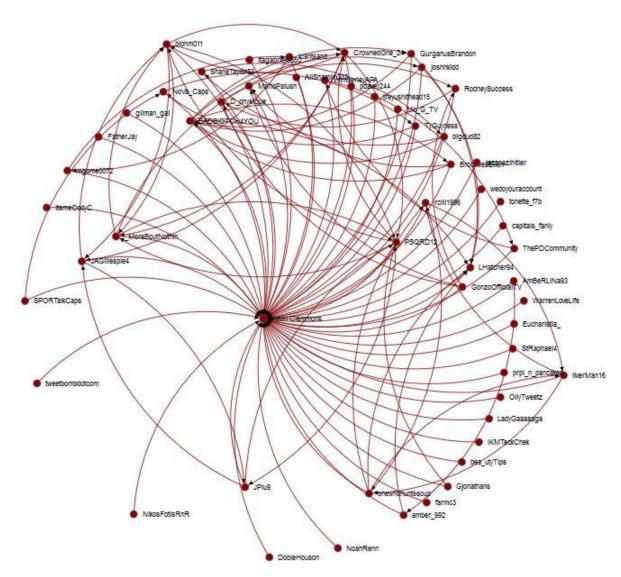
Gabriel Marquez 00978141

Problem 1- In order to solve the issue, we had to select a subject with an optimal amount of followers to ensure a clear, legible graph would be generated with the required number of nodes. So we decided the Kevin Clemmons would be the optimal subject. After using the networkCreator.py to obtain the followers and putting them into force.xml, I used the D3 library in addition to the Htmlgraph.html to generate the following graph.



The following websites were used:

https://github.com/mbostock/d3

Gabriel Marquez 00978141

Part 2

For the second part, the first step was to establish follower gender. In order to do this, get_user_genders.py was used in addition to Htmlgraph.html. The following output and graph were generated.

```
jazznazihitler
```

id: jazznazihitler

screenName: jazznazihitler

gender: unknown

WimberleyAPA

id: WimberleyAPA

screenName: WimberleyAPA

gender: unknown

JPlu9

id: JPlu9

screenName: JPlu9

gender: male

StRaphael4

id: StRaphael4

screenName: StRaphael4

gender: male

joshhkidd

id: joshhkidd

screenName: joshhkidd

gender: male

tweetbombdotcom

id: tweetbombdotcom

screenName: tweetbombdotcom

gender: unknown

D_physique

```
Gabriel Marquez
00978141
       id: D_physique
       screenName: D_physique
       gender: female
tonette_f7b
       id: tonette_f7b
       screenName: tonette_f7b
       gender: unknown
bea_utyTips
       id: bea_utyTips
       screenName: bea_utyTips
       gender: female
JAGillespie4
       id: JAGillespie4
       screenName: JAGillespie4
       gender: male
Gjonathans
       id: Gjonathans
       screenName: Gjonathans
       gender: male
MarioPalush
       id: MarioPalush
       screenName: MarioPalush
       gender: male
LadyGaaaaaga
       id: LadyGaaaaaga
       screenName: LadyGaaaaaga
       gender: female
pdavey244
```

id: pdavey244

Gabriel Marquez 00978141 screenName: pdavey244 gender: unknown GurganusBrandon id: GurganusBrandon screenName: GurganusBrandon gender: male amber_992 id: amber_992 screenName: amber_992 gender: female Mc_G_TV id: Mc_G_TV screenName: Mc_G_TV gender: unknown NoVa_Caps id: NoVa_Caps screenName: NoVa_Caps gender: unknown IKMTeckChek id: IKMTeckChek screenName: IKMTeckChek gender: unknown BADBIOTCH4YOU id: BADBIOTCH4YOU

screenName: BADBIOTCH4YOU

screenName: SPORTalkCaps

gender: None

id: SPORTalkCaps

SPORTalkCaps

```
Gabriel Marquez
00978141
       gender: unknown
KevinClemmons
       id: KevinClemmons
       screenName: KevinClemmons
       gender: male
NoahRenn
       id: NoahRenn
       screenName: NoahRenn
       gender: male
rciii1996
       id: rciii1996
       screenName: rciii1996
       gender: male
blohm011
       id: blohm011
       screenName: blohm011
       gender: unknown
capitals_fanly
       id: capitals_fanly
       screenName: capitals_fanly
       gender: unknown
CrownedOne_24
       id: CrownedOne_24
       screenName: CrownedOne_24
       gender: male
gilman_gal
       id: gilman_gal
       screenName: gilman_gal
```

gender: unknown

Gabriel Marquez 00978141 itagabriela850 id: itagabriela850 screenName: itagabriela850 gender: female treyushithead15 id: treyushithead15 screenName: treyushithead15 gender: male GonzoOfficialTV id: GonzoOfficialTV screenName: GonzoOfficialTV gender: unknown ShaneTaylor83 id: ShaneTaylor83 screenName: ShaneTaylor83 gender: unknown bigdud82 id: bigdud82 screenName: bigdud82 gender: male onewhohuntssoup id: onewhohuntssoup

screenName: onewhohuntssoup

gender: unknown

TyGuyness

id: TyGuyness

screenName: TyGuyness

gender: unknown

RodneySuccess

Gabriel Marquez 00978141 id: RodneySuccess screenName: RodneySuccess gender: male wedoyouraccount id: wedoyouraccount screenName: wedoyouraccount gender: unknown ThePDCommunity id: ThePDCommunity screenName: ThePDCommunity gender: male PSQRD12 id: PSQRD12 screenName: PSQRD12 gender: male OllyTweetz id: OllyTweetz screenName: OllyTweetz gender: unknown NikosFotisRnR id: NikosFotisRnR screenName: NikosFotisRnR gender: unknown AliShamim333 id: AliShamim333

screenName: AliShamim333

gender: female

farmc3

id: farmc3

Gabriel Marquez 00978141 screenName: farmc3 gender: unknown LHatcher94 id: LHatcher94 screenName: LHatcher94 gender: male liverMan16 id: liverMan16 screenName: liverMan16 gender: male _MoreBoutNothin id: _MoreBoutNothin screenName: _MoreBoutNothin gender: unknown FatherJay id: FatherJay screenName: FatherJay gender: unknown mgome0072 id: mgome0072 screenName: mgome0072 gender: unknown icantsand id: icantsand

screenName: icantsand

gender: unknown

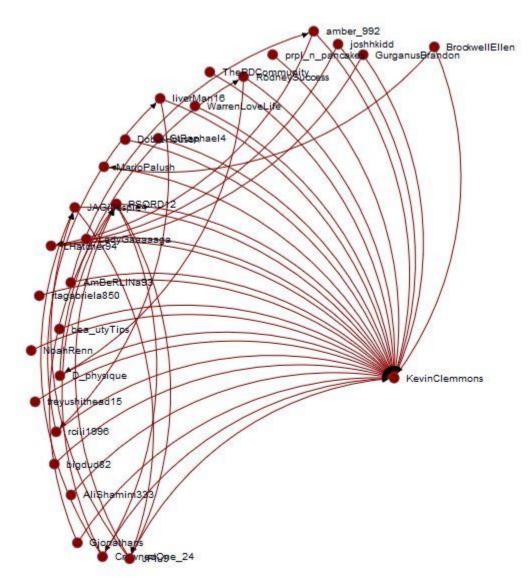
AmBeRLiNa93

id: AmBeRLiNa93

screenName: AmBeRLiNa93

```
Gabriel Marquez
00978141
       gender: female
WarrenLoveLife
       id: WarrenLoveLife
       screenName: WarrenLoveLife
       gender: male
prpl_n_pancakes
       id: prpl_n_pancakes
       screenName: prpl_n_pancakes
       gender: male
Eucharistia_
       id: Eucharistia_
       screenName: Eucharistia_
       gender: unknown
itsmeCodyC
       id: itsmeCodyC
       screenName: itsmeCodyC
       gender: unknown
BrockwellEllen
       id: BrockwellEllen
       screenName: BrockwellEllen
       gender: female
DobieHouson
       id: DobieHouson
       screenName: DobieHouson
```

gender: male



The following data was generated concerning the potential homophily.

JPlu9 & Jared Pluciniczak & male \ \ \hline

StRaphael4 & St Raphael & male \ \ \hline

joshhkidd & Joshua Reynolds & male \ \ \hline

D_physique & Dynasty For Life Rec & female \ \ \hline

bea_utyTips & Beauty Tips & female \ \ \hline

JAGillespie & Justin Gillespie & male \ \ \hline

Gjonathans & Jonathan Gustafsson & male \ \ \hline

MarioPalush & MARIO & male \ \ \hline

```
Gabriel Marquez
00978141
```

LadyGaaaaaga & Lady Gaga & female \ \ \hline

GurganusBrandon & Brandon Gurganus & male \ \ \hline

amber_992 & Amber Schakel & female \ \ \hline

KevinClemmons & Kevin Clemmons & male \ \ \hline

NoahRenn & Noah Renn & male \ \ \hline

rciii1996 & Robert RCIII Croson & male \ \ \hline

CrownedOne_24 & Steven & male \ \ \hline

itagabriela850 & gabriela & female \ \ \hline

treyushithead15 & trey peters & male \ \ \hline

bigdud82 & Mike Dudley & male \ \ \hline

RodneySuccess & Rodney Pickett II & male \ \ \hline

ThePDCommunity & Kevin McCarthy & male \ \ \hline

PSQRD12 & Paul Porter & male \ \ \hline

AliShamim333 & Shamim & female \ \ \hline

LHatcher94 & luke & male \ \ \hline

liverMan16 & Eric Liverman & male \ \ \hline

AmBeRLiNa93 & Amber Schakel & female \ \ \hline

WarrenLoveLife & Warren Happy ♥ & male \ \ \hline

prpl n pancakes & Daniel Pancake & male \ \ \hline

BrockwellEllen & Ellen brockwell & female \ \ \hline

DobieHouson & dobie houson & male \ \ \hline

- 1 Female to Female
- 32 Male to Male
- 12 Female to Male
- 45 Edges total

$$Q = 32 / 45 = 0.7111$$

$$R = 1 / 45 = 0.2666$$

2 * PQ = 0.0315 < 0.2666

Gabriel Marquez 00978141

Due to this calculation, there is not a gender homophily within the network.