

# **INTRO. INFO RETRIEVAL: CS 734: A6**

Due on Thursday, October 12, 2017

*Dr. Nelson*

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## Problem 1

Write a program that can build a simple inverted index of a set of text documents. Each inverted list will contain the file names of the documents that contain that word. Suppose the file A contains the text “the quick brown fox”, and file B contains “the slow blue fox”. The output of your program would be:

```
% ./your-program A B blue B brown A fox A B quick A slow B the A B
```

### Solution 1:

1. In order to visualize Dr. Nelson’s twitter followers, I used *getFriendsDict('phonedude\_mln')* in Listing 1 to extract Dr. Nelson’s 633 followers and saved the result into *phonedude\_mln.followers.json* file.
2. I used *computeFriendshipLink()* in listing 1 to compute Dr. Nelson’s first 100 followers friendship link. The result of Dr. Nelson’s Friendship link is saved in *phonedude\_mln.followers.array.json* .
3. I considered the first 100 followers from *phonedude\_mln.followers.array.json* in generating Dr. Nelson’s frienship graph and saved the result into *followers.json*

Finally, I used the D3 to create a graph for Dr. Nelson’s twitter followers and his friend’s followers in (*followers.json*) and hosted the graph on github. The graph can be previewd with the link below:

```
http://htmlpreview.github.io/?https://github.com/UdochukwuNweke/cs532-s17/blob/master/A6/followers.html
```

## Problem 2

3. Using D3, create a graph of the Karate club before and after the split.  
Weight the edges with the data from: <http://vlado.fmf.uni-lj.si/pub/networks/data/ucinet/zachary.dat>  
Have the transition from before/after the split occur on a mouse click. This is a toggle, so the graph will go back and forth between connected and disconnected.

### Solution 2:

In order to create a graph for karate club before and after split with D3, I generated two graphs. The first graph *KarateClub.before.json* has all edges connecting Mr. Hi and John A subgraphs. The second graph *KarateClub.after.json* removes the edges connecting Mr. Hi and John A subgraphs.

The graph at the click of a node toggles back and forth between *KarateClub.before.json* (connected) and *KarateClub.after.json* (disconnected)nodes.

```
http://htmlpreview.github.io/?https://github.com/UdochukwuNweke/cs532-s17/blob/master/A6/karateClub.html
```

## References