

Stanley Zheng  
Due Nov 7<sup>th</sup> 2013  
Assignment 7

1. 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.

## Approach

### 1. Weight the Edges

From the matrix, discover the weight of the edges between the vertices. The known is there are 32 nodes and the the matrix lookup produces the weight count which can be used to determine edge betweenness and cohesion.

The data could then be visualized as per assignment 6, as two distinct communities or even further breakdown.

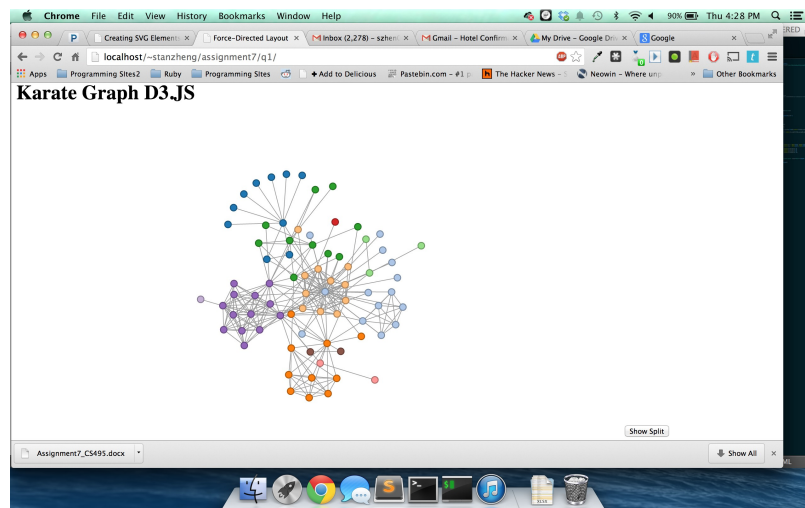
## Method

To massage this data from a matrix -> json -> d3.js -> \_\_ -> profit? I required the dataset to be broken into json. Using the python scripts, we create two separate graphs.

From @mbostock example gallery, this prime force graph can be found.

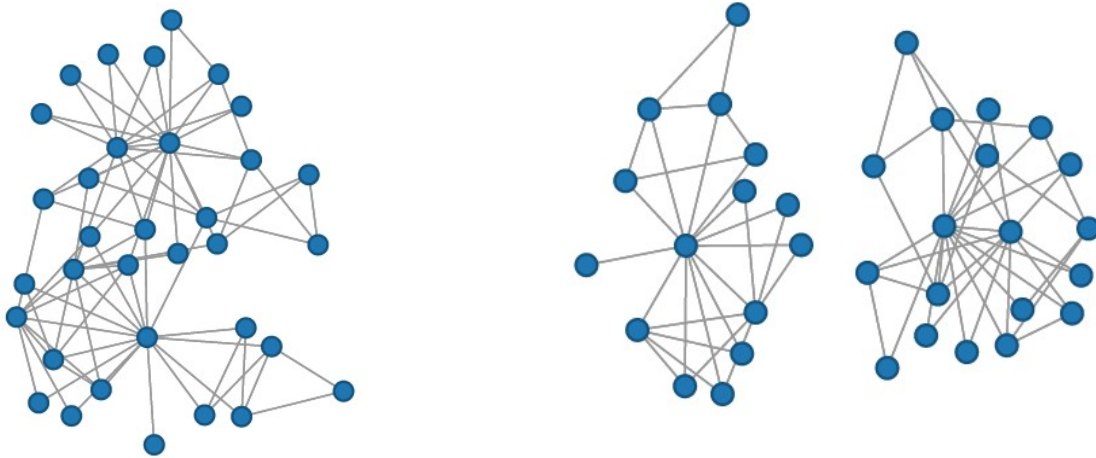
<http://bl.ocks.org/mbostock/1129492> Upon closer examination, the dataset type matched a simpler method to display the nodes

Thanks @mbostock - raw at <https://gist.github.com/mbostock/1129492>



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Before Split → After Split  
Button Press



On the split graph, the left side, I believe is Mr Hi. The right side is John; I believe the weaker and less distinct nodes were grouped with the second group of John's. Both implementations use the same graph code that is linking nodes to nodes.

Most of the heavy lifting is done by the created json file. Assuming more time in the future, it would be color coded to better reflect the different factions and have key.