Assignment 1

1. Visualize the network of Zachary's karate club. (GML file is available at http://www-personal.umich.edu/~mejn/netdata/)
2. Select two central vertices. Why do you think they are central?
3. Show the diameter, density, average path length, and clustering coefficient of the (undirected) network.
4. Draw a degree distribution (a histogram of the degrees of vertices) of the network.
5. Select two vertices whose PageRank values are the highest.
6. Divide the network into small groups and answer its modularity.

- Deadline: Dec. 31, 2017(Sun) 20:?? (Japan Standard Time)
- Submit to Tokyo Tech OCW-i

Zachary's karate club

- a social network of friendships between 34 members of a karate club at a US university in the 1970s.
- vertex: member, edge: communication
- During observation, administrator/instructor conflict was developed, and the club broke into two clubs.

Karate club at Tokyo Tech
http://netsu-n.mep.titech.ac.jp/karate/