COSC 2671 Social Media and Network Analytics

Tute 8

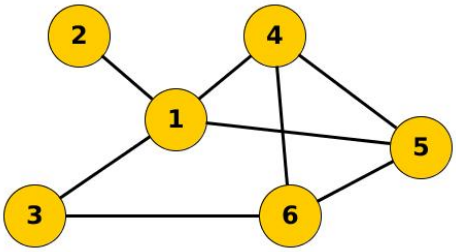
Social Network Analysis

Learning outcomes:

- Revise SNA concepts

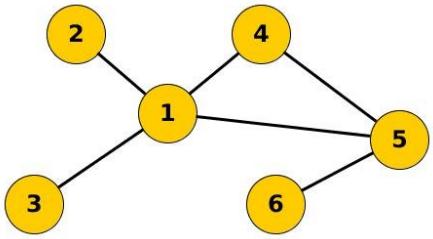
Tutorial Questions

1. Consider the following undirected graph. Compute degree sum normalised degree centrality for nodes 1 and 5.



2. What is the equation governing Eigenvector centrality? Explain what each term in the equation corresponds to in real life. Draw a graph to assist.

3. Compute the betweeness centrality of node 1 and 5 for the following graph.



4. Compute the local clustering coefficient of nodes 1 and 5 for the graph as question 3.

5. For social balance theory, explain why $w_{i,j}w_{j,k}w_{k,i} \geq 0$, and $w_{i,j} = 1$ if positive (friendship) and $w_{i,j} = -1$ if negative (enemy) relations.