DATA620 - Week II Part II - Kelly, Raphael, Michael, Vivian & Blandon

For this week's assignment we've selected a data set that contains the network of American football games between Division IA colleges during regular season Fall 2000, as compiledby M. Girvan and M. Newman.

The network is an undirected data set, which means that we cannot distinguish in vs. our ties between nodes. Therefore our measure of an ego's power would simply be their overall degree centrality as measured by the overall number of ties, divided by n-1.

Our data set supplies us with a node ID/Label as well as a value. The value in this case is categorical and represents the conference that an a node belongs to:

0 = Atlantic Coast
1 = Big East
2 = Big Ten
3 = Big Twelve
4 = Conference USA
5 = Independents
6 = Mid-American
7 = Mountain West
8 = Pacific Ten
9 = Southeastern
10 = Sun Belt
11 = Western Athletic.

Each node in our network represents a team, and the team with the most ties has had the most interaction with out nodes, meaning they've probably played the most - which would indicate not being eliminated or championship. The node/team with the highest degree centrality probably is the most winningest team.

We would then apply our categorical data to each node, and this would give is the conference each note belonged to. We could then determine using measures of a statistical significance if the conference one belongs to is a determinant of centrality, and by extension winningest.