Lab 6 Answer Sheet.

Please complete this answer sheet and turn it in before the due date posted in LEARN.

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| Question | Answer |
| 1  (10 pts) | I created a star shape in my graph |
| 2  (10 pts) | In edges tab, all of the node has only one tie. When switch to the edges tab, has 1 or more than 1 tie that connected to a node. |
| 3  (8 pts) | Because Betty has the greatest number of tie that connected to it. |
| 4  (8 pts) | 0.3111 |
| 5  (6 pts) | C(C) = 1/(d(C,A) + d(C,B) + d(C,D) + d(C,E) + d(C,F) + d(C,G) + d(C,H) + d(C,I) + d(C,J))  C(C) = 1 / (2 + 1 + 1 + 3 + 2 + 1 + 1 + 2 + 2)  C(C) = 1/15 C(C) = 0.0667 |
| 6  (6 pts) | C(B) = 1/(d(B,A) + d(B,C) + d(C,D) + d(C,E) + d(C,F) + d(C,G) + d(C,H) + d(C,I) + d(B,J))  C(B) = 1 / (1 + 1 + 1 + 2 + 1 + 1 + 2 + 1 + 3)  C(B) = 1/11 C(B) = 0.0909 |
| 7  (6 pts) | Betty has the greatest centrality Therefore she could get a message out of most quickly. |
| 8  (6 pts) | The visualization properties is use to changing the appeal of the data representation. But the data itself doesn’t change |

Question 9

(10 pts) **Write up a report to discuss your social network (50-200 words)**:

1. The name and a description of the social network that you chose to examine.
2. The layout algorithm used for the graph.
3. Two observations from the social network analysis and visualization.
4. Name: t-mobile

Description:

The graph represents a network of 3,184 Twitter users whose tweets in the requested range contained "t-mobile OR tmobile", or who were replied to or mentioned in those tweets. The network was obtained from the NodeXL Graph Server on Friday, 02 November 2018 at 09:23 UTC.  
  
The requested start date was Friday, 02 November 2018 at 00:01 UTC and the maximum number of days (going backward) was 14.  
  
The maximum number of tweets collected was 5,000.  
  
The tweets in the network were tweeted over the 2-day, 2-hour, 6-minute period from Monday, 29 October 2018 at 19:50 UTC to Wednesday, 31 October 2018 at 21:57 UTC.  
  
Additional tweets that were mentioned in this data set were also collected from prior time periods. These tweets may expand the complete time period of the data.  
  
There is an edge for each "replies-to" relationship in a tweet, an edge for each "mentions" relationship in a tweet, and a self-loop edge for each tweet that is not a "replies-to" or "mentions".

1. The graph is directed.

The graph's vertices were grouped by cluster using the Clauset-Newman-Moore cluster algorithm.

The graph was laid out using the Harel-Koren Fast Multiscale layout algorithm.

1. Observation: There’s four group of data and a group of data that doesn’t connected. The group of data connected to other group of data and some of the data connected to the group of data.

Visualization: It’s like a black hole, sucking all of the data into it.