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) | My graph looks most similar to a kite after my changes. |
| 2  (10 pts) | All of the names associated with each node were placed on the graph. |
| 3  (8 pts) | Betty is the largest because her central degree is the largest. |
| 4  (8 pts) | Density= .3111 |
| 5  (6 pts) | C(C) = 1/(d(C,A) + d(C,B) + d(C,H)+ d(C,D) + d(C,E) + d(C,F) + d(C,G) + d(C,I) + d(C,J)= 1/( 2+2+1+1+3+2+1+2)= 1/15= 0.0667 |
| 6  (6 pts) | C(B) = 1/(d(B,A) + d(B,C)  + d(B,D) + d(B,E) + d(B,F) + d(B,G) + d(B,H) + d(B,I) + d(B,J)= 1/(1+1+1+2+1+1+2+1+3)=1/13=0.0769 |
| 7  (6 pts) | Betty, since her closeness centrality is greater than Connor’s |
| 8  (6 pts) | After applying a background color, changing the edge color, and the node color, size, and opacity, it can be seen that depending on the data input under the visual characteristics, the graph would 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.

I chose to examine the ASPCA NodeXL, visualizing their social media activity. In this graph, each node represents an individual on social media referencing or speaking about the ASPCA or using a variety of key words, like “animal” “pet” “dog” “cat” or a number of others, in their social media posts. The Fruchterman-Reingold layout algorithm was used to lay out the graph and the vertices were grouped by cluster using the Clauset-Newman-Moore cluster algorithm. From visual observation, it can be seen that there is one major user, who connects to about 8 other slightly smaller, but similarly sized users. Next, these 8 users connect to 10 more slightly smaller users, who in turn link to a much larger web of small connections, most involving only 2 or 3 users.