CSE310 Data Structure and Algorithm Proj-3 Full

Xiao Liu

ASUID: 1211522751

1. ## Encountered Problems

   There are some problems I encountered during the processing of my code developing. For building the graph, I initially built it with adding edges by inserting the node to the head of the linked list. Therefore, when I started doing the cluster coefficient calculation, I got incorrected answer because for one node, its neighbors should be inserted at the end of the linked list, so that you can get the correct neighbors.

2. ## Bug Report

   One bug I was not able to fix in the first place is by using array to save the 3969*3969 data. I encountered stack overflow. But I was able to fix it by using int** adj-matrix = new int*[3969].

3. ## Interactions

   The interactions I have are all on piazza. I went through everybody's post and have found some helpful advice from them.
   I went to TA Lawrance's office hour to ask why I got the cluster coefficient a bit off than any other students.

4. ## Reference

   https://www.geeksforgeeks.org/depth-first-search-or-dfs-for-a-graph/

   https://www.geeksforgeeks.org/graph-implementation-using-stl-for-competitive-programming-set-1-dfs-of-unweighted-and-undirected/

   https://www.geeksforgeeks.org/linked-list-set-2-inserting-a-node/

   https://www.geeksforgeeks.org/floyd-warshall-algorithm-dp-16/

   https://www.geeksforgeeks.org/clustering-coefficient-graph-theory/