

1. Shortest path distance problem (unweighted/ weighted graphs)
 - a. Given two nodes, compute the shortest-path length for the pair of node.
 - b. Average shortest path for all nodes in graphs.
 - c. Writing pseudo code
2. Node degree & pseudo code
 - a. In degree, out degree problem
 - b. Average degree of nodes in graphs
 - c. Given a degree 'd', writing pseudo function finding nodes that have degree 'd'
3. Centrality measures for undirected/directed graphs & pseudo code
 - a. Degree Centrality, Histogram
 - b. Closeness Centrality
 - c. Betweenness Centrality
4. Link prediction & pseudo code
 - a. Graph distance
 - b. Common neighbors
 - c. Jaccard's coefficient
 - d. Adamic-Adar (AA)
 - e. Preferential attachment (PA)
 - f. SimRank
5. Community Detection & pseudo code
 - a. Find k-clique communities
 - b. Maximum clique