

Homework 3 (10pt.)

Submission instruction:

Submit one single pdf file for this homework including both coding problems and analysis problems.

For coding problems, copy and paste your codes. Report your results.

For analysis problems, either type or hand-write and scan.

Question 1 (3 pt.) MST: Write codes for Prim's algorithm.

Version 1: use adjacency matrix to present graph and use unsorted array for priority queue Q.

Version 2: use adjacency lists to present graph and use heap for priority queue Q.

Question 2 (7 pt.) Write codes for Johnsen's algorithm using unsorted array for priority Q. This algorithm involves Dijkstra's and Bellman-Ford algorithms, so you need to write and test codes for those two algorithms first.