

### HW3 Implementation of Prim's algorithm with the help of min-heap

Due: Oct. 2 (Wednesday) at 11:59pm

Use the same graph data structure and file format as in HW3 to implement Prim's algorithm. You are required to include a min-heap structure in your code.

Your program output should be a sequence of edges with weight.

2 5 8 //an edge from node 2 to node 5 with a weight of 8. 5 2 8 is also alright.

3 1 7

4 3 5

7 9 5

4 2 3

...

The overall cost of the minimum spanning tree is 63.

Remember that file format for HW2 is for directed graph.

For each edge  $n_1 n_2 w$  in file, create two edge  $n_1 n_2 w$  and  $n_2 n_1 w$ .