

CSE 208

Online MST

Date: 01/06/2022

A1/A2

Implement Reverse Delete Algorithm to find MST

In Reverse Delete algorithm, we sort all edges in decreasing order of their weights. After sorting, we one by one pick edges in decreasing order. We include current picked edge in MST if excluding current edge causes disconnection in current graph. The main idea is delete edge if its deletion does not lead to disconnection of graph. In case of same weight edges, we can pick any edge of the same weight edges.

Input: The first line of input contains $|V|$ $|E|$ of the given graph. The next $|E|$ line of input contains $u \ v \ w$, where edge from vertex u to vertex v has weight w .

9 14

0 1 4

0 7 8

1 2 8

1 7 11

2 3 7

2 8 2

2 5 4

3 4 9

3 5 14

4 5 10

5 6 2

6 7 1

6 8 6

7 8 7

Output:

Edges in MST

(3, 4)

(0, 7)

(2, 3)

(2, 5)

(0, 1)

(5, 6)

(2, 8)

(6, 7)

Total weight of MST is 37