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Roll - 2023

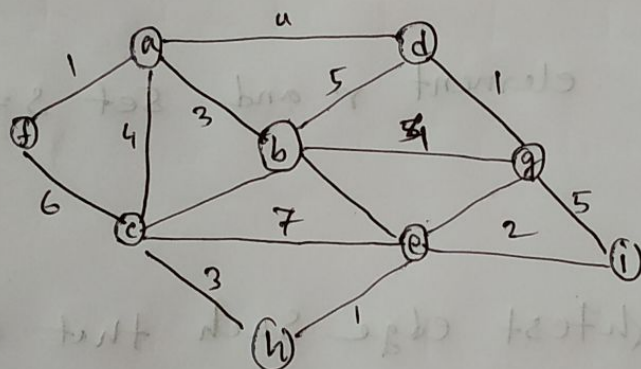
ICT-2401-Data Structure

Date - 18.02.21

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Answer to the question no-1

Applying Kruskal's and Prim's algorithm to find the MST



Below are the steps for finding MST using Kruskal's algorithm.

1. Sort all the edges in non-decreasing order of their weight
2. Pick the smallest edge. Check if it forms a cycle with the spanning tree formed so far.

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if cycle is not formed include this edge
Else discard it.

3. Repeat step 2 until there are $(v-1)$ edges
in the spanning tree.

Prim's algorithm

1. choose any element r and set $S = \{r\}$
and $A = \emptyset$.

2. Find a lightest edge such that one
endpoint is in S and the other is in
 V/S . Add this edge to A and its endpoint
to S .

3. if $V/S = \emptyset$ then stop and output the minimum
spanning tree (S, A) otherwise go to
step 1.