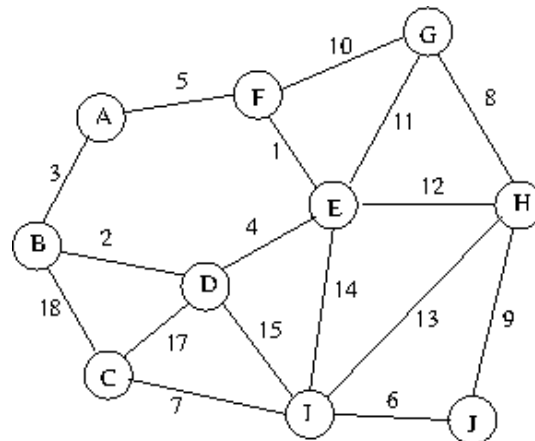


**Exercise 1** Find the minimum spanning tree in the following network. Report the edges that belong to the minimum spanning tree as well as the graph of the union-find data structure; connect the root of the tree with the smallest height to the root of the tree with largest height and, in case of a tie, choose as root the node with the smallest label.



**Figure 1** – Graph 1

**Exercise 2** Read the problem *Jocas is Stretching the Cable* in EA2022\_PL in Mooshak and solve it as a Minimum Spanning Tree Problem.