CSE 105 January 2024
Assignment on MST
(10 Marks)

Implement Kruskal's algorithm using union-find to identify the MST of a given graph.

Input / Output:

You **must** read the inputs from a file named `input.txt` and print your outputs to `output.txt`. You can assume that both the input and output files will reside in the same folder as your solution file.

The first line of the input will contain two integers, the number of nodes n = |V| and the number of edges m = |E| in the undirected graph G = (V, E). The following m lines each contain three integers corresponding to each edge. These integers indicate the edge's weight and the corresponding edge's two endpoints. Your output only contains the weight of the minimum spanning tree (i.e., summation of edges included in the MST).

Sample Input	Sample Output
9 14 7 2 3 2 8 2 9 3 4 2 6 5 1 7 6 4 0 1 8 1 2 10 5 4 4 2 5 6 8 6 14 3 5 7 7 8 11 1 7 8 0 7	37

Submission Guidelines:

Note: Follow these guidelines **strictly** otherwise, you will not get any points. There will not be any partial credits if your code doesn't run/ doesn't follow submission guidelines/ doesn't follow the input-output format/ doesn't read from or write to the desired files.

- Only submit one file on Moodle. Your file should be named as `2205xxx.cpp`.
- Submission Deadline **(Strict): December 18th, 2024 23:59 PM**
- Do not submit any other type of files. You don't need to zip your solution, either.
- Please do not plagiarize from online or offline resources.

Note:

- The grade of this assignment will only be added to the CT marks of Part 3.
- The total marks obtained in the last two CTs will not be above 40 in any situation.