Kruskal (MST): Really Special Subtree

https://www.hackerrank.com/contests/practice-9-sda/challenges/kruskalmstrsub

Given an undirected weighted connected graph, find the Really Special SubTree in it. The Really Special SubTree is defined as a subgraph consisting of all the nodes in the graph and:

- There is only one exclusive path from a node to every other node.
- The subgraph is of minimum overall weight (sum of all edges) among all such subgraphs.
- No cycles are formed.

To create the Really Special SubTree, always pick the edge with smallest weight. Determine if including it will create a cycle. If so, ignore the edge. If there are edges of equal weight available:

- Choose the edge that minimizes the sum $u + v + wt$ where u and v are vertices and wt is the edge weight.
- If there is still a collision, choose any of them.

Print the overall weight of the tree formed using the rules.

For example, given the following edges:

u	v	wt
1	2	2
2	3	3
3	1	5

First choose $1 \rightarrow 2$ at weight 2. Next choose $2 \rightarrow 3$ at weight 3. All nodes are connected without cycles for a total weight of $3 + 2 = 5$.

Function Description

Complete the $kruskals$ function in the editor below. It should return an integer that represents the total weight of the subtree formed.

$kruskals$ has the following parameters:

- g_nodes: an integer that represents the number of nodes in the tree
- g_from: an array of integers that represent beginning edge node numbers
- g_to: an array of integers that represent ending edge node numbers
- g_weight: an array of integers that represent the weights of each edge

Input Format

The first line has two space-separated integers g_nodes and g_edges, the number of nodes and edges in the graph.

The next g_edges lines each consist of three space-separated integers g_from, g_to and g_weight, where g_from and g_to denote the two nodes between which the **undirected** edge exists and $g_weight$denotes the weight of that edge.

Constraints

- $2 \leq g\_nodes \leq 3000$
- $1 \leq g\_edges \leq \frac{N \times (N-1)}{2}$
- $1 \leq g\_from, g\_to \leq N$
- $0 \leq g\_weight \leq 10^5$

Note: If there are edges between the same pair of nodes with different weights, they are to be considered as is, like multiple edges.

Output Format
Print a single integer denoting the total weight of the Really Special SubTree.