LAB - 12

Problem Statement

You live in a country with n cities and m paths connecting 2 distinct cities. Each path has its respective length and is bi-directional and all the cities are connected. Now you are the chief road planner and want to build roads on some of these paths such that all the cities are reachable from each other using some subset of the roads you build.
You select roads in such a way such that the sum of lengths of the selected roads is maximum so that you can take the maximum amount of money from the government but the number of roads you can select is the minimum possible required to connect any distinct pair of cities , (i.e. all the cities are reachable from each other).

Print the maximum length of roads you can build under the above condition.

Constraints

- 1<=n<=200000
- n-1 <=m<=min((n*(n-1))/2 , 200000)

Input

First line contains 2 space separated integers n and m.
Each of m following lines corresponds to a path which joins city u and city v with length l.

Output

Print the maximum length of roads you can build under the above condition.

Sample Test Case 1:

Input	Output
4 5 1 2 2 1 4 1 3 4 4 1 3 5 3 2 3	12

Explanation : Here we have 4 cities and we can connect each city to all the other cities by selecting roads with index -> 3,4,5.
Road Connecting City 3 and City 4 with length 4.
Road Connecting City 1 and City 3 with length 5.
Road Connecting City 3 and City 2 with length 3 , which add up to be 12.