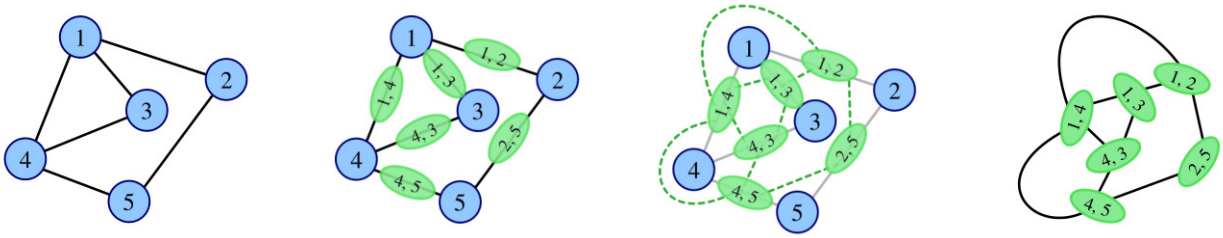
Problem H. Line Graph Matching

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

In the mathematical discipline of graph theory, the line graph of a simple undirected weighted graph G is another simple undirected weighted graph $L(G)$ that represents the adjacency between every two edges in G.

Precisely speaking, for an undirected weighted graph G without loops or multiple edges, its line graph $L(G)$ is an undirected weighted graph such that:

- Each vertex of $L(G)$ represents an edge of G;
- Two vertices of $L(G)$ are adjacent if and only if their corresponding edges share a common endpoint in G, and the weight of such edge between this two vertices is the sum of the weights of their corresponding edges.



A maximum weighted matching in a simple undirected weighted graph is defined as a set of edges where no two edges share a common vertex and the sum of the weights of the edges in the set is maximized.

Given a simple undirected weighted connected graph G, your task is to find the sum of the weights of the edges in the maximum weighted matching of $L(G)$.

Input

The first line contains two integers n ($3 \le n \le 10^5$) and m ($n-1 \le m \le \min(\frac{n(n-1)}{2}, 2 \times 10^5)$), indicating the number of vertices and edges in the given graph G.

Then follow m lines, the i-th of which contains three integers u, v ($1 \le u, v \le n$) and w ($1 \le w \le 10^9$), indicating that the i-th edge in the graph G has a weight of w and connects the u-th and the v-th vertices. It is guaranteed that the graph G is connected and contains no loops and no multiple edges.

Output

Output a line containing a single integer, indicating the sum of the weights of the edges in the maximum weighted matching of $L(G)$.

Examples

standard input	standard output
5 6 1 2 1 1 3 2 1 4 3 4 3 4 4 5 5 2 5 6	21
6 5 1 2 4 2 3 1 3 4 3 4 5 2 5 6 5	12
5 5 1 2 1 2 3 2 3 4 3 4 5 4 5 1 5	14