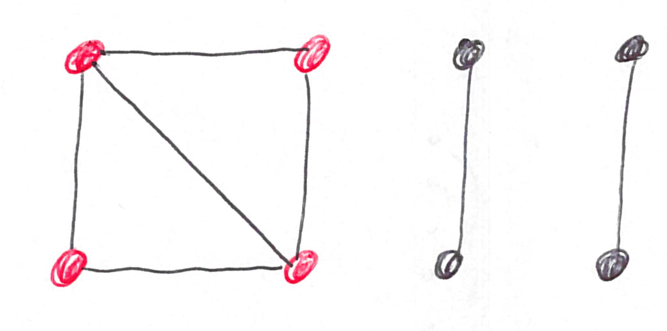
Problem A

A graph H is *sparse* if every subgraph of H has at most as many edges as vertices. So, for example, the following graph



is not sparse: while the graph itself has fewer vertices than edges, its subgraph induced by the red vertices has four vertices and five edges.

Given a graph G with weights on edges, determine the maximum possible sum of weights of edges in a sparse subgraph of G.

Input and output

The first line contains two integers $n, m \leq 1\,000\,000$, the number of vertices and edges of G. The vertices of G are numbered from 1 to n. Each of the following m lines contains three integers u, v, and w, where $1 \leq u < v \leq n$ and $1 \leq d \leq 1\,000$; this indicates G contains an edge between u and v of weight w. You can assume that G contains at most one edge between any two vertices.

Output a single integer: the maximum possible sum of weights of edges in a sparse subgraph of G.

Example

Input:

```
4 5
1 2 1
2 3 2
3 4 3
1 4 4
2 4 5
```

Output:

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14
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