

Very Important Edge

Time limit: 3 seconds

You are given a simple connected graph where each edge is assigned a non-negative weight. Recall that a minimum spanning tree of a graph is a connected, acyclic subset of the edges of the graph with minimum total weight. Find an edge which maximizes the minimum spanning tree weight of a given graph if that edge is deleted. It is guaranteed that the input graph remains connected after deleting any one edge.

Input

The first line of input contains two integers n ($3 \leq n \leq 10^5$) and m ($3 \leq m \leq 10^6$), where n is the number of vertices and m is the number of edges in the input graph. The vertices are numbered from 1 to n .

Each of the next m lines contains three integers a, b ($1 \leq a < b \leq n$) and w ($1 \leq w \leq 10^6$). This denotes an edge between vertices a and b with weight w .

Output

Output a single integer, which is the minimum spanning tree weight of the input graph after the right edge is deleted.

Sample Input 1

```
3 3
1 2 1
2 3 2
1 3 2
```

Sample Output 1

```
4
```

Sample Input 2

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

Sample Output 2

```
10
```

Sample Input 3

```
5 7
2 5 8
1 3 19
4 5 9
1 5 15
1 2 14
3 4 16
2 4 15
```

Sample Output 3

```
54
```