Problem K. Drifting

- Time Limit: 2 sec

Problem Statement

You are given a weighted directed graph of N vertices and M edges, with vertices numbered 1 to N and edges numbered 1 to M. The i-th $(1 \leq i \leq M)$ edge connects from vertex u_i to vertex v_i $(u_i < v_i)$, and the weight of the edge is w_i.

Also, K triplets of integers are given. The i-th $(1 \leq i \leq K)$ triplet is (a_i, b_i, c_i) $(a_i < b_i < c_i)$.

You start at vertex 1 and move to vertex N by repeatedly moving along an edge.

In addition, for all i $(1 \leq i \leq K)$, if you move from vertex a_i to vertex b_i directly, we must next move to a vertex **other than** vertex c_i.

Judge whether it is possible to reach vertex N. If it is possible to reach, also calculate the minimum sum of the weights of the edges you pass through.

Input

$$
\begin{aligned}
&N\ M\\
&u_1\ v_1\ w_1\\
&u_2\ v_2\ w_2\\
&\vdots\\
&u_M\ v_M\ w_M\\
&K\\
&a_1\ b_1\ c_1\\
&a_2\ b_2\ c_2\\
&\vdots\\
&a_K\ b_K\ c_K
\end{aligned}
$$

The input satisfies the following constraints.

- All inputs consist of integers.
- $3 \leq N \leq 2 \times 10^5$
- $0 \leq M \leq 2 \times 10^5$
- $1 \leq u_i < v_i \leq N$ $(1 \leq i \leq M)$
- $i \neq j \Rightarrow (u_i, v_i) \neq (u_j, v_j)$ $(1 \leq i, j \leq M)$
- $1 \leq w_i \leq 10^9$ $(1 \leq i \leq M)$
- $0 \leq K \leq 2 \times 10^5$
- $1 \leq a_i < b_i < c_i \leq N$ $(1 \leq i \leq K)$

Output

If you cannot reach vertex N, output -1. Otherwise, output the minimum sum of the weights of the edges you pass through.

Sample Input 1	Sample Output 1
4 4 1 2 1 1 3 2 2 4 2 3 4 2 1 1 2 4	4

Sample Input 2

```
7 8
1 2 5
1 3 2
2 4 1
3 4 1
4 5 6
4 6 2
5 7 1
6 7 1
2
2 4 5
3 4 6
```

Sample Output 2

```
9
```

Sample Input 3

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

Sample Output 3

```
-1
```

In Sample Input 1, the best move is $1 \to 3 \to 4$.

In Sample Input 2, the best move is $1 \to 2 \to 4 \to 6 \to 7$.