Problem A: Traveling

Time Limit: 1 Sec Memory Limit: 128 MB
Submit: 948 Solved: 183
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Description

Yuki is a playful girl and she enjoys traveling.

One day, she is planning to play in the *Disneyland*. The resort is so large that she cannot find the shortest path between two sights immediately, so she wants to ask for your help.

Specifically, there are n sights and m roads in the *Disneyland*. Each road, with a certain distance, connects two sights. The sights are numbered from 1 to n and the roads are all **bidirectional**, that is the road from sight u to sight v **can** be passed from sight v to u. You are asked to find the **shortest** distance between sight S and sight T.

Input

The first line contains two integers: n and m ($1 \le n \le 1\,000,\ 1 \le m \le 5\,000$) — the number of sights and roads in *Disneyland*.

Each of the next m lines contains three space-separated integers: u, v and w ($1 \le u,\ v \le n,\ 1 \le w \le 10^5$), meaning that there is a bidirectional road from sight u to sight v with distance w.

The last line contains two integers: S and T ($1 \le S,\ T \le n$) — the origin and destination.

Output

Print the result — the shortest distance between sight S and sight T.

If there are no paths from sight S to sight T, print -1 instead.

Sample Input

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

Sample Output

```
2
```

HINT

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