Exotic Plants

Time Limit: 1 second
Memory Limit: 256 MB

1 Problem Description

Spohtil is on a quest for Lithops in South Africa with his magic portal. Lithops, being a family of very lovely succulents, live in clusters across the exotic savanna of South Africa.

There are N Lithops habitats. Spohtil is a lazy Lithops collector and he will only travel between habitats on routes that he thinks are easy to walk through. Therefore, he has crafted a list of M bi-directional easy routes, each connecting two Lithops habitats with a certain distance.

Besides walking on foot, Spohtil can also choose to use his dear magic portal, which can teleport him to another habitat instantly. However, as the portal is almost worn out, it can be used at most K times before total breakdown and cannot be used between habitats that have no easy route directly connecting them.

Today, Spohtil woke up in his camp in habitat S, excited to hear from his friend 600ssyf that his favourite Lithops species had bloomed in habitat T. Driven by his laziness and obsession with Lithops, he wants to know the minimum distance he has to cover on foot to reach habitat T. Your task is to write a program to help him since he is a bad programmer :)

2 Input Format

- The first line of input will contain three integers, N, M and K.
- The second line of input will contain two integers, S and T.
- The next M lines will contain three integers each, u_i, v_i and w_i, describing an easy route connecting habitats u_i and v_i, with distance w_i.

3 Output Format

- The output should contain one line with one integer, the minimum distance Spohtil has to cover on foot.

4 Sample Input

```
5 6 1
0 4
0 1 5
1 2 5
2 3 5
3 4 5
2 3 3
0 2 100
```

5 Sample Output

```
8
```

It is optimal to first teleport from habitat 0 to habitat 2, then walk 3 unit distances to habitat 3, and finally reach habitat 4 by walking another 5 unit distances. The total walking distance is 8.

6 Subtasks

The maximum execution time on each instance is 1.0s. For all subtasks, the input will satisfy the following bounds:

- $2 \leq N \leq 10^4$
- $1 \leq M \leq 5 \times 10^4$
- $0 \leq K \leq 10$
- $0 \leq S, T < N$
- $0 \leq u_i, v_i < N$ and $u_i \neq v_i$ for all $0 \leq i < M$
- $0 \leq w_i \leq 10^3$ for all $0 \leq i < M$

It is guaranteed that there exists at least one path from S to T.

Subtask	**Score**	**Additional Constraints**
1	1	$K = 0$
2	99	-
3	0	Sample Testcase