**Uncle Grandpa and his hypercar**

Our Grandpa has just bought a hypercar (top speed of 400kph, 0 to 100kph in 1.8s, in see image below)



As a result, he wants to use his hypercar to travel around the country! The country our Grandpa is living in consists of  **cities connected by bi-directional roads**. Each road in the country has a maximum speed limit. Now our Grandpa plans to travel from city to city . Since our Grandpa is driving a hypercar, the speed of the car is not changeable during the trip(that is, the speed can only be set in the beginning). And as you can guess, our Grandpa doesn’t want to break the traffic law, so the initial speed of his car will be set as the lowest speed limit of all the roads on the path that he will go. Please help our Grandpa to fulfill his passion for speed! (By printing out the maximum initial speed for his hypercar).

## Input

The first line contains four integer – the number of cities, the number of bi-directional roads, the start city and the end city.

The next lines, each will consists three integers – represent a bi-directional road connecting city and city with a maximum speed limit of

## Output

A single integer which is the maximum initial speed. In case our Grandpa cannot travel from to , print out

## Examples

|  |  |
| --- | --- |
| Input (hypercar.in) | Output (hypercar1.out) |
| 6 7 1 6  1 2 6  2 3 5  3 6 1  1 3 2  2 4 2  1 4 3  4 6 4 | 3 |

|  |  |
| --- | --- |
| Input (hypercar2.in) | Output (hypercar2.out) |
| 4 2 1 4  1 2 2  3 4 4 | Impossible |

## Explanation:

For the 1st example: The path from to that has the maximum initial speed is (the minimum speed limit of all roads on this path is 3). Another possible path from to is but if our Grandpa chooses this road then his initial speed can only be .

For the 2nd example, there is obviously no path from to no matter what’s the speed limit. So we have to output

## Note:

1. A skeleton file has been given to help you. You should not create a new file or rename the file provided. You should develop your program using this skeleton file.
2. You are free to define your own helper methods and classes (or remove existing ones) if it is suitable but you must put all the new classes, if any, in the same skeleton file provided

## Skeleton File

You can find the skeleton file Hypercar.java in the lab package.