Trip (`trip`)

Time limit:	1.0 seconds
Memory limit:	256 MiB

Frank, after having learnt programming, thinks he deserves a holiday. Having read all about the statistical dangers of traveling by car, he decides to fly. There are n cities with airports, numbered from 1 to n. If there is a flight between cities a and b, the cost is $c_{a,b}$ dollars, but not all pairs of cities are connected by flights.

Frank wants to leave from city 1 to go to city n and may need to take a number of legs to get there. He wants to save as much as possible (look at the example test cases for further explanation). Frank ask you to please help him figure out the cheapest way to reach his destination.

Scoring

Your program will be tested on several test cases, gathered in subtasks. To get the maximum score assigned to a subtask, your program needs to solve correctly all the tests related to it.

- **Subtask 1** [**0 points**]: the example tests shown below.
- **Subtask 2** [**50 points**]: $n \leq 1\,000$, the price of each flight is 1.
- **Subtask 3** [**30 points**]: $n \leq 1\,000$.
- **Subtask 4** [**20 points**]: no limitations.

Input/output's Format

Your program will have to read the following data from standard console input:

- Row 1: contains the integers n and m, respectively the number of cities and of available flights between them.
- the following m rows: each contain three integers a, b and $c_{a,b}$, where a is the origin, b the destination and $c_{a,b}$ the cost of the flight between a and b.

Your program will have to print on the console the following:

- One single integer: the minimum cost of the flight. In the case in which the destination isn't reachable, print `-1`.

Constraints

- $1 \leq n \leq 100\,000$
- $1 \leq m \leq 100\,000$
- $1 \leq c_i \leq 1\,000\,000$
- $1 \leq a_i, b_i \leq n$

Examples

stdin	stdout
3 4 1 2 2 2 3 5 2 3 11 1 3 9	7
5 6 1 2 1 2 4 1 2 3 1 4 3 1 1 4 1 3 5 1	3

Explanation

- In the **first example test case**, the sequence of flights $(1, 2)$, and $(2, 3)$ is the cheapest.
- In the **second example test case**, either $(1, 2)$, $(2, 3)$, and $(3, 5)$, or $(1, 4)$, $(4, 3)$, and $(3, 5)$ would do.