

# CS2810 OOAIA: A10

Design Deadline: March 16 (Mon) at 16:40 on Moodle

Code Deadline: March 18 (Wed) at 23:55 on Hackerrank

Hackerrank Link: <https://www.hackerrank.com/ooaia-a10-contest>

## Problem Statement

Let there exist a country with  $N$  cities and  $M$  bidirectional roads connecting the cities. Each road is either of the following three types.

- Passenger transportation road (Type 0) - Only lets the passenger vehicles pass through.
- Cargo transportation road (Type 1)- Only lets the cargo vehicles pass through.
- Passenger + cargo transportation road (Type 2)- Lets Both passenger and cargo vehicles pass through.

The cities are numbered from 0 to  $N-1$ .

We need to find the maximum number of roads that can be closed down, and all the cities still remain connected for both passenger and cargo transportation.

## Input Format

$N$   $M$

/// $M$  lines in the following format

<city1> <city2> <roadType>

## Output Format

A single integer denoting the maximum number of roads that can be closed. If the cities cannot be connected, output -1.

## Constraints

$$1 \leq N \leq 10^5$$

$$1 \leq M \leq 10^5$$

## Sample testcases

Input1:

3 7

0 1 0

1 2 0

1 2 1

1 2 0

1 2 0

0 1 2

0 1 0

Output1:

4

Input2:

4 6

0 1 0

0 1 1

1 2 1

2 3 1

0 1 2

1 2 0

Output2:

-1