

C. Addition and First element at least X

time limit per test: 1 second
memory limit per test: 1024 megabytes
input: standard input
output: standard output

There is an array of n elements, initially filled with zeros. You need to write a data structure that processes two types of queries:

- add v to all elements on the segment from l to $r - 1$,
- find the minimum index j such that $j \geq l$ and $a[j] \geq x$.

Input

The first line contains two numbers n and m ($1 \leq n, m \leq 100000$), the size of the array and the number of operations. The following lines contain the description of the operations. The description of each operation is as follows:

- 1 $l\ r\ v$: add v to all elements on the segment from l to $r - 1$ ($0 \leq i < n, 0 \leq v \leq 10^4$).
- 2 $x\ l$: find the minimum index j such that $j \geq l$ and $a[j] \geq x$ ($0 \leq x \leq 10^9, 0 \leq l < n$). If there is no such element, print -1 .

Indices start from 0.

Output

For each operation of the second type, print the answer for the query.

Example

input	Copy
5 7 1 2 5 3 1 1 3 4 2 3 0 2 5 0 1 4 5 5 2 5 3 2 8 1	
output	Copy
1 2 4 4	

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

