

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

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## D. First element at least X - 2

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

In this task, you need to add to the segment tree the operation of finding for the given x and l the minimum index j such that  $j \geq l$  and  $a[j] \geq x$ .

## Input

The first line contains two integers n and m ( $1 \le n, m \le 100000$ ), the size of the array and the number of operations. The next line contains n numbers  $a_i$ , the initial state of the array ( $0 \le a_i \le 10^9$ ). The following lines contain the description of the operations. The description of each operation is as follows:

- 1 i v: change the item with index i to v ( $0 \le i < n$ ,  $0 \le v \le 10^9$ ).
- 2 x l: find the minimum index j such that  $j \ge l$  and  $a[j] \ge x$  ( $0 \le x \le 10^9$ ,  $0 \le l < n$ ). 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	Сору
5 7	
1 3 2 4 3	
2 3 0	
2 3 2	
1 2 5	
2 4 1	
2 5 4	
1 3 7	
2 6 1	
output	Сору
1	
3	
2	
-1	
3	

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