

## C. Sequential Sequence

time limit per test: 3 seconds  
memory limit per test: 512 megabytes

"This time, I want to connect not just the people around me, but the whole world," *Kiwi* once had a small dream about linking.

If she applies that dream to a certain sequence  $s_1, s_2, \dots s_n$ , then a criterion *sequential* emerges:

- 1. Let  $s'$  be a copy of  $s$ , then sort  $s'$  in ascending order;
- 2. If  $s'_i - s'_{i-1} = 1$  satisfies for all  $i \in [2, n]$ , then we call the sequence  $s$  *sequential*.

One day, she is given a sequence  $a$  of length  $n$ , and her mission is to process  $q$  queries. Each query is one of the following types:

- 1  $x\ y$ : change  $a_x$  to  $y$ , i.e.,  $a_x := y$ ;
- 2  $l\ r$ : check whether the continuous subsequence  $a_l, a_{l+1}, \dots, a_r$  is *sequential*.

Because of too many deadlines, *Kiwi* asked you to help her with the mission.

### Input

There are multiple test cases. The first line of the input contains a single integer  $t$  ( $1 \leq t \leq 100$ ), denoting the number of test cases. For each test case:

The first line contains two integers  $n, q$  ( $1 \leq n, q \leq 10^5$ ), denoting the length of  $a$  and the number of queries.

The second line contains  $n$  integers  $a_i$  ( $1 \leq a_i \leq 10^5$ ).

For the following  $q$  lines, the  $i$ -th line contains three integers, denoting the  $i$ -th query. Each query is one of the following types:

- 1  $x_i\ y_i$  ( $1 \leq x_i \leq n, 1 \leq y_i \leq 10^5$ );
- 2  $l_i\ r_i$  ( $1 \leq l_i \leq r_i \leq n$ ).

It's guaranteed that the sum of  $n$  and the sum of  $q$  over all test cases doesn't exceed  $2 \times 10^5$ .

### Output

For each query of type 2, output YES if the sequence is *sequential*. Otherwise, output NO.

You may print each letter in any case (Yes, yes, Yes will all be recognized as a positive answer, No, no, nO will all be recognized as a negative answer).

### Example

input	Copy
2 5 7 1 1 1 2 1 2 3 5 1 5 3 1 2 4 2 2 5 2 1 5 1 1 5 2 1 5 3 6 11 12 13 2 1 1 2 1 2 2 1 3 1 2 14 2 2 3 2 1 2	
output	Copy
NO YES NO YES YES YES YES YES NO	

### Note

For the first sample test case, there are 7 queries:

- 1. Check the subsequence 1, 2, 1. After sorting,  $s' = [1, 1, 2]$ . Absolutely,  $s_2 - s_1 = 0$ , so the subsequence is not *sequential*;
- 2. Change  $a_5$  to 3. After that, the sequence became: 1, 1, 1, 2, 3;
- 3. Change  $a_2$  to 4. After that, the sequence became: 1, 4, 1, 2, 3;
- 4. Check the subsequence 4, 1, 2, 3. The subsequence satisfies the criterion, and it is *sequential*;
- 5. ...

2025 Fujian Normal University Programming Contest

Finished

Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

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

Choose file: Choose File No file chosen

Submit

→ Last submissions		
Submission	Time	Verdict
<a href="#">320811802</a>	May/22/2025 20:31	Accepted
<a href="#">320811143</a>	May/22/2025 20:26	Accepted
<a href="#">320807261</a>	May/22/2025 19:55	Time limit exceeded on test 5
<a href="#">320807040</a>	May/22/2025 19:53	Time limit exceeded on test 5
<a href="#">320805050</a>	May/22/2025 19:37	Wrong answer on test 3
<a href="#">320804618</a>	May/22/2025 19:33	Wrong answer on test 2
<a href="#">320789284</a>	May/22/2025 17:29	Wrong answer on test 3
<a href="#">320789121</a>	May/22/2025 17:28	Wrong answer on test 3
<a href="#">320788049</a>	May/22/2025 17:20	Wrong answer on test 3
<a href="#">320787821</a>	May/22/2025 17:18	Time limit exceeded on test 6

→ Contest materials

Statements (PDF) (en)

Tutorial (PDF) (zh)

Tutorial Full (PDF) (zh)