8. Sequence

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Given an array a consisting of n integers, on which you are to perform m operations of two types.
Given two integers x, y, replace the number of index x with number y. That is $a_x := y$.
Given one integer x, print the number of consecutive subsequences of a, whose minimum value equals to a_x.
It's guaranteed that there are no duplicated value in array a at any moment.

Input requirements:

The first line contains two intergers $n, m (1 \le n, m \le 10^5)$, where n is the size of the array and m is the number of operations to perform.
The second line contains n integer, the i^{th} integer is $a_i (1 \le a_i \le 2^{31} - 1)$.
Then, m lines follow, describing m operation you are to perform in order.
Each line start with an integer $opt \in [1,2]$, meaning the type of operation to perform.
If $opt = 1$, two integers $x, y (1 \le x \le n, 1 \le y \le 2^{31} - 1)$ follows, mentioned above.
If $opt = 2$, one integer $x (1 \le x \le n)$ follows, mentioned above.

Output requirements:

For each operation of type 2, print one integer on one line as the answer.

Sample input:

```
10 5
8 3 6 2 10 9 5 7 1 4
2 2
1 9 11
1 5 12
2 4
1 8 18
```

Sample output:

```
4
28
```