

## Problem H. Longest Increasing Subsequence

Input file: *standard input*  
Output file: *standard output*  
Time limit: 1 second  
Memory limit: 256 mebibytes

Given  $f_1, f_2, \dots, f_n$ , find a permutation  $p_1, p_2, \dots, p_n$  of integers  $1, 2, \dots, n$  such that, for each  $i$ , the length of the longest strictly increasing subsequence ending with  $p_i$  is  $f_i$ .

### Input

The first line contains an integer  $n$  ( $1 \leq n \leq 10^5$ ).

The second line contains  $n$  integers  $f_1, f_2, \dots, f_n$  ( $1 \leq f_i \leq n$ ). It is guaranteed that, for the given input, at least one such permutation  $p_1, p_2, \dots, p_n$  exists.

### Output

On the first line, print  $n$  integers  $p_1, p_2, \dots, p_n$ . These numbers must form a permutation of integers  $1, 2, \dots, n$ . If there are several possible answers, print any one of them.

### Examples

standard input	standard output
7 1 1 1 1 1 1 1	7 6 5 4 3 2 1
7 1 2 3 2 4 4 3	1 3 5 2 7 6 4