DMOPC '17 Contest 4 P4 - Cops and Robbers

Time limit: 1.0s **Memory limit:** 256M

In the beautiful capital of Dmojistan, there are N banks and a single policeman. The banks are numbered from 1 to N. You managed to find the policeman's schedule for the next N days. It turns out that on the i^{th} day, he will be protecting bank a_i.

Armed with this information, you are planning to rob all N banks in the next N days. You will rob bank b_i on the i^{th} day. A robbery will be successful if the cop is not protecting that bank on that day (that is, $a_i \neq b_i$).

Before you can start robbing, you need to determine a sequence b which will work. Output a sequence b which will rob all N banks or -1 if it is not possible to rob all N banks. The sequence should be N integers from 1 to N.

Any valid sequence will be accepted.

Constraints

$1 \leq a_i \leq N$

Subtask 1 [50%]

$1 \leq N \leq 10^3$

Subtask 2 [50%]

$1 \leq N \leq 10^6$

Input Specification

The first line will contain N.
The next line will contain N space-separated integers $a_1, a_2, \ldots, a_N$.

Output Specification

Output a valid sequence b if it is possible or -1 if it is not. The sequence b should be N integers from 1 to N.

Sample Input

```
5
2 1 1 1 1
```

Sample Output

```
1 2 3 4 5
```