

# Competition Results

Input file: *standard input*  
Output file: *standard output*  
Time limit: 1 second  
Memory limit: 1024 mebibytes

There are  $n$  runners participating in a race. Each runner is assigned a unique number from 1 to  $n$ . They have arrived at the finish line in some specific order, with no ties. Let us say that runner  $i$  has performed an *upset* of runner  $j$  if  $i$  finished before  $j$  and  $i < j$ .

For each  $i$  from 1 to  $n$ , it is known that runner  $i$  has performed exactly  $a_i$  upsets of other runners. Your task is to restore the competition results: the number of the runner that took first place, the number of the runner that took second place,  $\dots$ , the number of the runner that took the  $n$ -th place. It can be shown that the answer is always unique, assuming that it exists.

## Input

The first line of the input contains an integer  $n$  from 1 to 1000: the number of runners.

The second line contains  $n$  space-delimited integers  $a_1, a_2, \dots, a_n$ , where  $a_i$  is the number of upsets performed by runner  $i$ .

The given data is consistent with some possible results of the competition: for every  $i$ , it is true that  $a_i \leq n - i$ . In particular,  $a_n = 0$ .

## Output

Print  $n$  space-separated integers: the numbers of runners who took first, second,  $\dots$ ,  $n$ -th place.

## Examples

<i>standard input</i>	<i>standard output</i>
5 3 0 2 1 0	3 1 4 5 2
1 0	1
2 0 0	2 1

## Note

Let us check that the answer to the first example is consistent with the given numbers  $a_i$ .

1. Runner 1 has upset runners 2, 4, and 5.
2. Runner 2 took the last place and, therefore, has not outperformed anyone. Hence, runner 2 has performed no upsets.
3. The runner with the number 3 took the first place and, therefore, has upset both runners with larger numbers.
4. The runner with the number 4 has upset a single other runner: runner 5.
5. There are no runners with numbers larger than 5. Therefore, runner 5 has performed no upsets.