

**Problem 1:**

Given a sequence of non-negative integers, find the next lexicographic permutation of the sequence.

***Input format:***

$n$  (*number of elements in the sequence*)

$a_1$

$a_2$

.. (*elements of the sequence*)

..

$a_n$

***Output format:***

$A_1$

$A_2$

..

..

$A_n$

**Example 1:*****Input:***

5

4

3

9

7

5

***Output:***

4

5

3

7

9

**Example 2:**

***Input:***

3

1

2

3

***Output:***

1

3

2

**Example 3:**

***Input:***

3

3

2

1

***Output:***

-1 (as, the input does not have a next lexicographic permutation).