Next Permutation

✔ **Points:** 100 (partial)
🕐 **Time limit:** 1.0s
🗄 **Memory limit:** 32M
✎ **Author:**
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🏷 **Tags**
Arrays, Combinatorics
↕ **Difficulty**
Intermediate

By provided a permutation of unique elements, you task is to print the next permuration

Input

- Read from the standard input
- On the first line there is the number `N` - the number of numbers in the permutation
- On the second line, there are exactly `N` numbers, separated by a space

Output

- Print on the standard output
- On the single line, print the next permutation of the numbers

Sample tests

Input

```
3
1 2 3
```

Copy

Output

```
1 3 2
```

Copy

Input

```
4
4 1 2 3
```

Copy

Output

```
4 1 3 2
```

Copy

Input

Copy

```
5
5 4 3 1 2
```

Output

```
5 4 3 2 1
```
Copy

💬 Comments

There are no comments at the moment.