

[I2A] - Sorting

Time: 1 sec / Memory: 256 MB

Problem Statement

Sort n given integers in non-decreasing order.

Input

The first line contains the integer n , where $1 \leq n \leq 10^5$.

The Second line contains n integers separated by spaces. Each integer x_i satisfies $-10^9 \leq x_i \leq 10^9$.

Output

Output the n integers in non-decreasing order, separated a space.

Example

Input:

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

Output:

```
1 1 3 4 5
```