Q1 - Merge Sort Algorithm

This page is used for checking the format and correctness.

Input Format

For every two lines.
The first line contains one integer N(0 ~ 1000).
The second line contains N unsorted integer(-10000 ~ 10000).
End if the N equals to 0.

Constraints

Please implement with C++.
std::sort is not allowed.

Output Format

For each line, print out the sorted N numbers.

Sample Input 0

```
5
7 -1 -2 4 9
7
8 4 5 -10 3 4 -6
0
```

Sample Output 0

```
-2 -1 4 7 9
-10 -6 3 4 4 5 8
```