MWC '15 #4 P2: Data Formatting

Time limit: 2.0s **Memory limit:** 256M

Salarios77 deals with large amounts of numbers on a daily basis. To ensure consistency in his storage of special numbers, he likes following a particular format when possible:

- $a_i \geq a_{i-1}$ for all even i (ascending order).
- $a_i \leq a_{i-1}$ for all odd i (descending order).

Given some records of N numbers, determine if it is possible to follow the pattern, and if possible output the pattern.

Input Specification

First line contains N, the amount of numbers provided. The second line consists of N spaced integers, which represent $a_n{}^{\text{th}}$ value.

Output Specification

If it is impossible, output: `IMPOSSIBLE`. If it is possible, output the N integers in order separated by a space.

Sample Input 1

```
4
1 1 1 1
```

Sample Output 1

```
1 1 1 1
```

Sample Input 2

```
4
1 3 3 4
```

Sample Output 2

```
1 4 3 3
```