B. z-sort

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

A student of z-school found a kind of sorting called z-sort. The array a with n elements are z-sorted if two conditions hold:

1. $a_i \geq a_{i-1}$ for all even i,
2. $a_i \leq a_{i-1}$ for all odd $i > 1$.

For example the arrays `[1,2,1,2]` and `[1,1,1,1]` are z-sorted while the array `[1,2,3,4]` isn't z-sorted.

Can you make the array z-sorted?

Input

The first line contains a single integer n $(1 \leq n \leq 1000)$ — the number of elements in the array a.

The second line contains n integers a_i $(1 \leq a_i \leq 10^9)$ — the elements of the array a.

Output

If it's possible to make the array a z-sorted print n space separated integers a_i — the elements after z-sort. Otherwise print the only word "`Impossible`".

Examples

input	Copy
4 1 2 2 1	

output	Copy
1 2 1 2	

input	Copy
5 1 3 2 2 5	

output	Copy
1 5 2 3 2	