Chaotic Beeju!

Assignment 1
Data Structures
Due date: 10 January, 2019

Problem Statement: There is a lean and small guy named B.Beeju Sharma, who lives in a 2-D world and loves OJ. In the 2-D world, everything is in 2 dimensions only. There are N 2-D rocks present on the ground and each rock has index number "i" and weight "a".

Beeju likes to create chaos with some order. He has an annoying power to displace rocks. So, he devised a new method of sorting.

He wants to rearrange the rocks so that they follow the following property:
$a_i \geq a_{i-1}$, for all even i
$a_i \leq a_{i-1}$, for all odd $i \geq 2$
$i \geq 1$
where a_i is the i^th rock

For example 1, 3, 2, 4 is desired by Beeju but 1, 2, 3, 4 is not.

You need to find the lexicographically smallest such arrangement for Beeju.

Input
First line contains the number of test cases T. Each of these T test cases have 1st line as the number of rocks N. then in the next line there are N space separated numbers denoting w
Output
The lexicographically smallest arrangement as described.
Constraints
$1 \leq T \leq 10$
$1 \leq i \leq 20000$
$1 \leq a \leq 1000000$
Time Limit: 1 sec
Memory Limit: 256 MB

Sample Test Case

Input	Output
3 4 1 2 3 4 5 1 2 3 4 5 5 1 7 3 8 5	1 3 2 4 1 3 2 5 4 1 5 3 8 7