### Wave Array

Given a **sorted** array **arr[]** of distinct integers. Sort the array into a wave-like array(In Place).  
In other words, arrange the elements into a sequence such that arr[1] >= arr[2] <= arr[3] >= arr[4] <= arr[5].....

If there are multiple solutions, find the lexicographically smallest one.

**Note:**The given array is sorted in ascending order, and you don't need to return anything to make changes in the original array itself.

**Example 1:**

**Input:**

n = 5

arr[] = {1,2,3,4,5}

**Output:** 2 1 4 3 5

**Explanation:** Array elements after

sorting it in wave form are

2 1 4 3 5.

**Example 2:**

**Input:**

n = 6

arr[] = {2,4,7,8,9,10}

**Output:** 4 2 8 7 10 9

**Explanation:** Array elements after

sorting it in wave form are

4 2 8 7 10 9.

**Expected Time Complexity:**O(n).  
**Expected Auxiliary Space:**O(1).

**Constraints:**  
1 ≤ n ≤ 106  
0 ≤ arr[i] ≤107

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### Java Code

//{ Driver Code Starts

import java.io.\*;

import java.util.\*;

import java.util.Arrays;

class IntArray

{

public static int[] input(BufferedReader br, int n) throws IOException

{

String[] s = br.readLine().trim().split(" ");

int[] a = new int[n];

for(int i = 0; i < n; i++)

a[i] = Integer.parseInt(s[i]);

return a;

}

public static void print(int[] a)

{

for(int e : a)

System.out.print(e + " ");

System.out.println();

}

public static void print(ArrayList<Integer> a)

{

for(int e : a)

System.out.print(e + " ");

System.out.println();

}

}

class CodingMaxima {

public static void main(String[] args) throws IOException {

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int t;

t = Integer.parseInt(br.readLine());

while(t-- > 0){

int n;

n = Integer.parseInt(br.readLine());

int[] a = IntArray.input(br, n);

Solution obj = new Solution();

obj.convertToWave(n, a);

StringBuffer sb=new StringBuffer("");

for(int i : a){

sb.append(i+" ");

}

System.out.println(sb.toString());

}

}

}

class Solution {

public static void convertToWave(int n, int[] a) {

// code here

for(int i=0;i<n-1;i=i+2){

int temp=a[i];

a[i]=a[i+1];

a[i+1]=temp;

}

}

}