**Bitonic Generator Sort**

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Given an array of n distinct numbers, the task is to sort all even-placed numbers in increasing and odd-place numbers in decreasing order. The modified array should contain all sorted even-placed numbers followed by reverse sorted odd-placed numbers.  
Note that the first element is considered as even because of its index 0.

**Input:**  
The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. Each test case contains an integer n denoting the size of the array. The next line contains n space separated integers forming the array.

**Output:**  
Print the modified array which contain all sorted even placed numbers followed by reverse sorted odd placed numbers.

**Constraints:**  
1<=T<=10^5  
1<=n<=10^5  
1<=a[i]<=10^5

**Example:  
Input:**  
2  
8  
0 1 2 3 4 5 6 7  
9  
3 1 2 4 5 9 13 14 12

**Output:**  
0 2 4 6 7 5 3 1  
2 3 5 12 13 14 9 4 1

\*\*For More Examples Use Expected Output\*\*

<http://practice.geeksforgeeks.org/problems/bitonic-generator-sort/0>

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package javaapplication250;

import java.io.\*;

import java.math.\*;

import java.util.\*;

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\*

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public class JavaApplication250 {

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

// TODO code application logic here

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

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

while(t-- > 0) {

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

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

//int[] arr = new int[n];

ArrayList<Integer> pares = new ArrayList();

ArrayList<Integer> impares = new ArrayList();

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

//arr[i] = Integer.parseInt(input[i]);

if(i%2==0) {

pares.add(Integer.parseInt(input[i]));

}else{

impares.add(Integer.parseInt(input[i]));

}

}

Collections.sort(pares);

Collections.sort(impares);

Collections.reverse(impares);

for(int i =0; i<pares.size(); i++) {

System.out.print(pares.get(i) + " ");

}

for(int i =0; i<impares.size(); i++) {

System.out.print(impares.get(i) + " ");

}

System.out.println();

}

}

}