







Rank









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Accurate Sorting



by zemen

Problem

Submissions

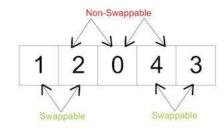
Leaderboard

Discussions

Your submission will run against only preliminary test cases. Full test cases will run at the end of the day.

Consider an unsorted array, $A = a_0, a_1, \dots, a_{n-1}$, of distinct integers from 0 to n-1. We can swap two adjacent elements in A any number of times as long as the absolute difference between these elements is 1.

For example, the diagram below depicts an array where we can swap adjacent elements f 1 and f 2 or f 4 and f 3, but we cannot swap adjacent elements f 2and 0 or 0 and 4:



Answer q queries, where each query consists of some array A. For each query, print Yes on a new line if it's possible to sort the array in ascending order by performing the swap operation defined above; otherwise, print No instead.

Input Format

The first line contains a single integer denoting q. The subsequent lines describe each of the q queries in the following format:

- 1. The first line contains an integer denoting n.
- 2. The second line contains n space-separated integers describing the respective values of a_0, a_1, \dots, a_{n-1} .

Constraints

- $1 \le q \le 10$
- $1 \le n \le 10^5$
- The sum of n over all queries doesn't exceed 10^5 .

Output Format

For each query, print Yes on a new line if it's possible to sort the array; otherwise, print No instead.

Sample Input 0

- 2
- 1 0 3 2
- 2 1 0

Sample Output 0

Yes No

Explanation 0

We perform the following q = 2 queries:

1. The following sequence of swaps will sort the array in ascending order:

$$A = [1, 0, 3, 2] \rightarrow [\mathbf{0}, \mathbf{1}, 3, 2] \rightarrow [0, 1, \mathbf{2}, \mathbf{3}]$$

Because \boldsymbol{A} is now sorted, we print Yes on a new line.

2. Initially, we can perform two possible swaps:

1. $A = [2, 1, 0] \rightarrow [1, 2, 0]$

After performing this swap, no number of additional swaps can move 0 to the front of the array.

2. $A = [2, 1, 0] \rightarrow [2, 0, 1]$

After performing this swap, no number of additional swaps can move 2 to the back of the array.

Because there's no way for us to sort the array, we print No on a new line.

f in

Contest ends in 5 days

Submissions: 4870

Max Score: 25

Difficulty: Easy

Rate This Challenge:

なかかかか

```
Current Buffer (saved locally, editable) & 🗗
                                                                                    Java 8
 1 •
    import java.io.*;
    import java.util.*;
 2
 3
    import java.text.*;
    import java.math.*;
 4
 5
    import java.util.regex.*;
    public class Solution {
 7
 8
 9
         public static boolean checkSorted(int[] a) {
10
11
             for (int i=1; i<a.length; i++) {</pre>
                 if (a[i] < a[i-1])
12
13
                      return false;
14
15
             return true;
16
17
         public static void sortMyNos(int[] a) {
18
19
             for (int i = 1; i<a.length; i++) {</pre>
20
21
                 if ((Math.abs(a[i]-a[i-1]) == 1) \&\& a[i] < a[i-1]) {
22
                      int temp = a[i];
                      a[i] = a[i-1];
23
24
                      a[i-1] = temp;
25
26
27
28
             //check if they're sorted
29
             if (checkSorted(a))
30
                 System.out.println("Yes");
```

```
31
            else
                 System.out.println("No");
32
33
34
35
        public static void main(String[] args) {
36
37
            Scanner in = new Scanner(System.in);
38
            int q = in.nextInt();
39
             for(int a0 = 0; a0 < q; a0++){
40
                 int n = in.nextInt();
41
                 int[] a = new int[n];
                 for(int a_i=0; a_i < n; a_{i++}){
42
43
                     a[a_i] = in.nextInt();
44
                 // Write Your Code Here
45
46
                 sortMyNos(a);
47
48
            }
49
        }
50
51
                                                                                                        Line: 29 Col: 9
```

1 Upload Code as File

☐ Test against custom input

Run Code

Submit Code

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