Almost Sorted

by PRASHANTB1984

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Given an array with n elements, can you sort this array in *ascending order* using only one of the following operations?

1. Swap two elements.
2. Reverse one sub-segment.

Input Format
The first line contains a single integer, n, which indicates the size of the array.
The next line contains n integers separated by spaces.

```
n
d1 d2 ... dn
```

Constraints
$2 \leq n \leq 100000$
$0 \leq d_i \leq 1000000$
All d_i are distinct.

Output Format
1. If the array is already sorted, output *yes* on the first line. You do not need to output anything else.

1. If you can sort this array using one single operation (from the two permitted operations) then output *yes* on the first line and then:

   a. If you can sort the array by swapping d_l and d_r, output *swap l r* in the second line. l and r are the indices of the elements to be swapped, assuming that the array is indexed from 1 to n.

   b. Else if it is possible to sort the array by reversing the segment $d[l \ldots r]$, output *reverse l r* in the second line. l and r are the indices of the first and last elements of the subsequence to be reversed, assuming that the array is indexed from 1 to n.

   $d[l \ldots r]$ represents the sub-sequence of the array, beginning at index l and ending at index r, both inclusive.

   If an array can be sorted by either swapping or reversing, stick to the swap-based method.

2. If you cannot sort the array in either of the above ways, output *no* in the first line.

Sample Input #1

```
2
4 2
```

Sample Output #1

```
yes
swap 1 2
```

Sample Input #2

```
3
3 1 2
```

Sample Output #2

```
no
```

Sample Input #3

```
6
1 5 4 3 2 6
```

Sample Output #3

```
yes
reverse 2 5
```

Explanation

For #1, you can both *swap(1, 2)* and *reverse(1, 2)*, but if you can sort the array using swap, output swap only.
For #2, it is impossible to sort by one single operation (among those permitted).
For #3, you can reverse the sub-array *d[2...5] = "5 4 3 2"*, then the array becomes sorted.

Submissions:13748

Max Score:50
Difficulty: Medium

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Current Buffer (saved locally, editable) Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code