Almost Sorted ☆

Given an array of integers, can you sort an array in *ascending order* using only one of the following operations one time?

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

If either one would work, choose *swap* over *reverse*. For instance, given an array $[2, 3, 5, 4]$ we can swap the 4 and 5, or reverse them. We choose swap.

Input Format

The first line contains a single integer n, the size of arr.
The next line contains n space-separated integers $arr[i]$ where $1 \leq i \leq n$.

Constraints

$2 \leq n \leq 100000$
$0 \leq$arr[i] \le 1000000Allarr[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.
2. 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.
3. 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
```

Explanation 1

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Difficulty	Medium
Max Score	50
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You can either *swap(1, 2)* or *reverse(1, 2)*. You prefer swap.

Sample Input 2

```
3
3 1 2
```

Sample Output 2

```
no
```

Explanation 2

It is impossible to sort by one single operation.

Sample Input 3

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

Sample Output 3

```
yes
reverse 2 5
```

Explanation 3

You can reverse the sub-array *d[2...5] = "5 4 3 2"*, then the array becomes sorted.

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```
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      static void almostSorted(int[] arr) {
10         // Complete this function
11     }
12
13     public static void main(String[] args) {
14         Scanner in = new Scanner(System.in);
15         int n = in.nextInt();
16         int[] arr = new int[n];
17         for(int arr_i = 0; arr_i < n; arr_i++){
18             arr[arr_i] = in.nextInt();
19         }
20         almostSorted(arr);
21         in.close();
22     }
23 }
24
```

Line: 1 Col: 1

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