Smallest Window Array Sorting(p38)

locked

Problem Submissions Leaderboard Discussions

Given an integer array **a** of size **N**, find the smallest window in the array which will make the entire array sorted.

For eaxmple -

Input: a = {1,2,3,7,5,6,4,8} Output: 3 6 Explanation: Sort the array from index 3 to 6. (0-based indexing)

Input Format

First line contains an integer N, denoting the size of the array
Next line contains N space-separated integers of a

Constraints

$1 <= N <= 10^5$
-10^9 a_i $<= -10^9$

Output Format

1. It should print the smallest window in the array sorting which will make the entire array sorted

Sample Input 0

```
8
1 3 2 7 5 6 4 8
```

Sample Output 0

```
1 6
```

Submissions: 0
Max Score: 0
Difficulty: Medium

Rate This Challenge:

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Current Buffer (saved locally, editable) C++

```
1 #include <iostream>
2 #include <climits>
```

```cpp
using namespace std;

// Function to find the smallest window in the array sorting which will
// make the entire array sorted
void findSubarray(int arr[], int n)
{
    int leftIndex = -1, rightIndex = -1;

    // traverse from left to right and keep track of maximum so far
    int max_so_far = INT_MIN;
    for (int i = 0; i < n; i++)
    {
        if (max_so_far < arr[i])
            max_so_far = arr[i];

        // find the last position that is less than the maximum so far
        if (arr[i] < max_so_far)
            rightIndex = i;
    }

    // traverse from right to left and keep track of minimum so far
    int min_so_far = INT_MAX;
    for (int i = n - 1; i >= 0; i--)
    {
        if (min_so_far > arr[i])
            min_so_far = arr[i];

        // find the last position that is more than the minimum so far
        if (arr[i] > min_so_far)
            leftIndex = i;
    }

    cout <<  leftIndex << " " << rightIndex;
}

```

```
38 int main()
39 {
40     int n;
41     cin>>n;
42     int arr[n];
43     for(int i=0;i<n;i++)
44         cin>>arr[i];
45
46     findSubarray(arr, n);
47
48     return 0;
49 }
```

Line: 44 Col: 9

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

Testcase 0 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
8
1 3 2 7 5 6 4 8
```

Your Output (stdout)

```
1 6
```

Expected Output

```
1 6
```