

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 package main
4
5 import "math"
6
7 // O(n) time | O(1) space
8 func SubarraySort(array []int) []int {
9     minOutOfOrder, maxOutOfOrder := math.MaxInt32, math.MinInt32
10    for i, num := range array {
11        if isOutOfOrder(i, num, array) {
12            minOutOfOrder = min(minOutOfOrder, num)
13            maxOutOfOrder = max(maxOutOfOrder, num)
14        }
15    }
16    if minOutOfOrder == math.MaxInt32 {
17        return []int{-1, -1}
18    }
19    subarrayLeft := 0
20    for minOutOfOrder >= array[subarrayLeft] {
21        subarrayLeft += 1
22    }
23    subarrayRight := len(array) - 1
24    for maxOutOfOrder <= array[subarrayRight] {
25        subarrayRight -= 1
26    }
27    return []int{subarrayLeft, subarrayRight}
28 }
29
30 func isOutOfOrder(i int, num int, array []int) bool {
31     if i == 0 {
32         return num > array[i+1]
33     }
34     if i == len(array)-1 {
35         return num < array[i-1]
36     }
37     return num > array[i+1] || num < array[i-1]
38 }
39
40 func min(a, b int) int {
41     if a < b {
42         return a
43     }
44     return b
45 }
46
47 func max(a, b int) int {
48     if a < b {
49         return b
50     }
51     return a
52 }
53
```