

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2Solution 3

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 package main
4
5 // O(n) time | O(n) space - where in is the length of the input array
6 func MinRewards(scores []int) int {
7     rewards := make([]int, len(scores))
8     fill(rewards, 1)
9     localMinIdxs := getLocalMinIdxs(scores)
10    for _, localMinIdx := range localMinIdxs {
11        expandFromLocalMinIdx(localMinIdx, scores, rewards)
12    }
13    return sum(rewards)
14 }
15
16 func getLocalMinIdxs(arr []int) []int {
17     localMinIdxs := []int{}
18     if len(arr) == 1 {
19         localMinIdxs = append(localMinIdxs, 0)
20         return localMinIdxs
21     }
22     for i := 0; i < len(arr); i++ {
23         if i == 0 && arr[i] < arr[i+1] {
24             localMinIdxs = append(localMinIdxs, i)
25         }
26         if i == len(arr)-1 && arr[i] < arr[i-1] {
27             localMinIdxs = append(localMinIdxs, i)
28         }
29         if i == 0 || i == len(arr)-1 {
30             continue
31         }
32         if arr[i] < arr[i+1] && arr[i] < arr[i-1] {
33             localMinIdxs = append(localMinIdxs, i)
34         }
35     }
36     return localMinIdxs
37 }
38
39 func expandFromLocalMinIdx(localMinIdx int, scores, rewards []int) {
40     leftIdx := localMinIdx - 1
41     for leftIdx >= 0 && scores[leftIdx] > scores[leftIdx+1] {
42         rewards[leftIdx] = max(rewards[leftIdx], rewards[leftIdx+1]+1)
43         leftIdx--
44     }
45     rightIdx := localMinIdx + 1
46     for rightIdx < len(scores) && scores[rightIdx] > scores[rightIdx-1] {
47         rewards[rightIdx] = rewards[rightIdx-1] + 1
48         rightIdx++
49     }
50 }
51
52 func fill(arr []int, val int) {
53     for i := range arr {
54         arr[i] = val
55     }
56 }
57
58 func sum(arr []int) int {
59     sum := 0
60     for i := range arr {
61         sum += arr[i]
62     }
63     return sum
64 }
65
66 func max(i, j int) int {
67     if i > j {
68         return i
69     }
70     return j
71 }
72
```