AlgoExpert Quad Layout C# 12px Sublime Monokai 00:00:00

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

Solution 1 Solution 2 Solution 3

```
// Copyright © 2020 AlgoExpert, LLC. All rights reserved.

using System;
using System.Linq;
using System.Collections.Generic;

// O(n) time | O(n) space - where in is the length of the input array
public class Program {
  public static int MinRewards(int[] scores) {
    int[] rewards = new int[scores.Length];
    Array.Fill(rewards, 1);
    List<int> localMinIdxs = getLocalMinIdxs(scores);
    foreach (int localMinIdx in localMinIdxs) {
      expandFromLocalMinIdx(localMinIdx, scores, rewards);
    }
    return rewards.Sum();
  }

  public static List<int> getLocalMinIdxs(int[] array) {
    List<int> localMinIdxs = new List<int>();
    if (array.Length == 1) {
      localMinIdxs.Add(0);
      return localMinIdxs;
    }
    for (int i = 0; i < array.Length; i++) {
      if (i == 0 && array[i] < array[i + 1]) localMinIdxs.Add(i);
      if (i == array.Length - 1 && array[i] < array[i - 1]) localMinIdxs.Add(i);
      if (i == 0 || i == array.Length - 1) continue;
      if (array[i] < array[i + 1] && array[i] < array[i - 1]) localMinIdxs.Add(i);
    }
    return localMinIdxs;
  }

  public static void expandFromLocalMinIdx(int localMinIdx, int[] scores, int[] rewards) {
    int leftIdx = localMinIdx - 1;
    while (leftIdx >= 0 && scores[leftIdx] > scores[leftIdx + 1]) {
      rewards[leftIdx] = Math.Max(rewards[leftIdx], rewards[leftIdx + 1] + 1);
      leftIdx--;
    }
    int rightIdx = localMinIdx + 1;
    while (rightIdx < scores.Length && scores[rightIdx] > scores[rightIdx - 1]) {
      rewards[rightIdx] = rewards[rightIdx - 1] + 1;
      rightIdx++;
    }
  }
}

```