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

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

Solution 1

```
1\, // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
 3 using System;
 4 public class Program {
     // O(n) time | O(n) space
     public static int WaterArea(int[] heights) {
       int[] maxes = new int[heights.Length];
        int leftMax = 0;
        for (int i = 0; i < heights.Length; i++) {</pre>
10
        int height = heights[i];
         maxes[i] = leftMax;
11
         leftMax = Math.Max(leftMax, height);
12
13
        int rightMax = 0;
14
        for (int i = heights.Length - 1; i >= 0; i--) {
15
16
         int height = heights[i];
          int minHeight = Math.Min(rightMax, maxes[i]);
17
18
          if (height < minHeight) {</pre>
19
           maxes[i] = minHeight - height;
20
          } else {
21
           maxes[i] = 0;
22
23
          rightMax = Math.Max(rightMax, height);
24
25
        int total = 0;
26
        for (int i = 0; i < heights.Length; i++) {</pre>
27
         total += maxes[i];
28
29
        return total;
30
31 }
32
```