AlgoExpert Quad Layout Swift 12px Sublime Monokai 00:00:00

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

Solution 1

39

```
1\, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
 3 class Program {
       // O(n) time | O(n) space
       func waterArea(heights: [Int]) -> Int {
           var maxes = Array(repeating: 0, count: heights.count)
           var leftMax = 0
 8
9
           for i in 0 ... heights.count \{
10
               let currentHeight = heights[i]
11
               maxes[i] = leftMax
12
13
               leftMax = max(leftMax, currentHeight)
14
15
16
           var rightMax = 0
17
           for i in (0 ..< heights.count).reversed() {</pre>
18
              let currentHeight = heights[i]
19
20
21
               let minMax = min(rightMax, maxes[i])
22
23
               if currentHeight < minMax {</pre>
                   maxes[i] = minMax - currentHeight
24
25
               } else {
26
                   maxes[i] = 0
27
28
29
               rightMax = max(rightMax, currentHeight)
30
31
           return maxes.reduce(0) {
32
33
               x, y in
34
35
               x + y
36
37
38 }
```