Trapping Rain Water

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Total Question Solution

Accepted: **47108** Total Submissions: **156088** Difficulty: **Hard**

Given *n* non-negative integers representing an elevation map where the width of each bar is 1, compute how much water it is able to trap after raining.

For example,

Given `[0,1,0,2,1,0,1,3,2,1,2,1]`, return `6`.

The above elevation map is represented by array [0,1,0,2,1,0,1,3,2,1,2,1]. In this case, 6 units of rain water (blue section) are being trapped. **Thanks Marcos** for contributing this image!

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Python

```
1  class Solution(object):
2      def trap(self, height):
3          """
4          :type height: List[int]
5          :rtype: int
6          """
7          stack = [-1]
8          rightmax=0;
9          for i in range(len(height)-1,-1,-1):
10             if rightmax < height[i]:
11                 stack.append(i)
12                 rightmax = height[i]
13         leftmax=0
```

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```
14          sum=0
15          for i in range(0,len(height)):
16              if i == stack[len(stack)-1]:stack.pop()
17              if stack[len(stack)-1] == -1:rightmax=-1;
18              else:rightmax = height[stack[len(stack)-1]]
19              if height[i] < leftmax and height[i] < rightmax:
20                  sum+=min(leftmax,rightmax) - height[i]
21              leftmax = max(leftmax,height[i])
22          return sum
```

Custom Testcase ☑

[0,1,0,2,1,0,1,3,2,1,2,1]

One line for one parameter.

Run Code | Submit Solution

Run Code Status: Finished

Run Code Result: ✖

Your input

[0,1,0,2,1,0,1,3,2,1,2,1]

Your answer

6

Expected answer

6

Submission Result: Accepted (/submissions/detail/39828630/)

More Details ❯ (/submissions/detail/39828630/)

Next challenges: (M) Product of Array Except Self (/problems/product-of-array-except-self/)

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