

303. Range Sum Query - Immutable

Easy

1761

1578

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Given an integer array `nums` , handle multiple queries of the following type:

1. Calculate the **sum** of the elements of `nums` between indices `left` and `right` **inclusive** where `left <= right` .

Implement the `NumArray` class:

- `NumArray(int[] nums)` Initializes the object with the integer array `nums` .
- `int sumRange(int left, int right)` Returns the **sum** of the elements of `nums` between indices `left` and `right` **inclusive** (i.e. `nums[left] + nums[left + 1] + ... + nums[right]`).

Example 1:

Input

["NumArray", "sumRange", "sumRange", "sumRange"]
[[[-2, 0, 3, -5, 2, -1]], [0, 2], [2, 5], [0, 5]]

Output

[null, 1, -1, -3]

Explanation

NumArray numArray = new NumArray([-2, 0, 3, -5, 2, -1]);
numArray.sumRange(0, 2); // return (-2) + 0 + 3 = 1
numArray.sumRange(2, 5); // return 3 + (-5) + 2 + (-1) = -1
numArray.sumRange(0, 5); // return (-2) + 0 + 3 + (-5) + 2 + (-1) = -3

Constraints:

- $1 \leq \text{nums.length} \leq 10^4$
- $-10^5 \leq \text{nums}[i] \leq 10^5$
- $0 \leq \text{left} \leq \text{right} < \text{nums.length}$
- At most 10^4 calls will be made to `sumRange` .

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```
1 class NumArray {
2
3     int[] nums;
4
5     public NumArray(int[] givenArray) {
6         int length = givenArray.length;
7         nums = givenArray;
8
9         for(int i = 1; i < length; i++){
10             nums[i] += nums[i-1];
11         }
12     }
13
14     public int sumRange(int left, int right) {
15         if(left == 0)
16             return nums[right];
17
18         return nums[right] - nums[left - 1];
19     }
20 }
21
22 /**
23  * Your NumArray object will be instantiated and called as such:
24  * NumArray obj = new NumArray(nums);
25  * int param_1 = obj.sumRange(left,right);
26  */
```

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Runtime: 2 ms

Your input

["NumArray", "sumRange", "sumRange", "sumRange"]
[[[-2, 0, 3, -5, 2, -1]], [0, 2], [2, 5], [0, 5]]

Output

[null, 1, -1, -3]

Diff

Expected

[null, 1, -1, -3]

Console

Use Example Testcases

Run Code

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