

1480. Running sum of 1d array:

Given an array `nums`. We define a running sum of an array as `runningSum[i] = sum(nums[0]...nums[i])`.

Return the running sum of `nums`.

Example 1:

Input: `nums = [1,2,3,4]`

Output: `[1,3,6,10]`

Explanation: Running sum is obtained as follows: `[1, 1+2, 1+2+3, 1+2+3+4]`.

Example 2:

Input: `nums = [1,1,1,1,1]`

Output: `[1,2,3,4,5]`

Explanation: Running sum is obtained as follows: `[1, 1+1, 1+1+1, 1+1+1+1, 1+1+1+1+1]`.

Example 3:

Input: `nums = [3,1,2,10,1]`

Output: `[3,4,6,16,17]`

Constraints:

- `1 <= nums.length <= 1000`
- `10^6 <= nums[i] <= 10^6`

Solution:

time = $O(N)$ and space = $O(N)$

```
class Solution:
    def runningSum(self, nums: List[int]) -> List[int]:
        lst = []
        sum = 0
```

```
for i in nums:
    sum = sum+i
    lst.append(sum)
return lst
```

Optimal: time $O(N)$ and space = $O(1)$

```
class Solution:
    def runningSum(self, nums: list[int]) -> list[int]:
        for i in range(1, len(nums)):
            nums[i] += nums[i - 1]
        return nums
```