

25. Given an integer array nums, find the subarray with the largest sum, and return its sum.

Example 1:

Input: nums = [-2,1,-3,4,-1,2,1,-5,4]

Output: 6

Explanation: The subarray [4,-1,2,1] has the largest sum 6.

PROGRAM:

```
def maxSubArray(nums):  
    max_sum = nums[0]  
    current_sum = nums[0]  
    for num in nums[1:]:  
        current_sum = max(num, current_sum + num)  
        max_sum = max(max_sum, current_sum)  
    return max_sum  
  
nums = [-2,1,-3,4,-1,2,1,-5,4]  
print(maxSubArray(nums))
```

OUTPUT: 

TIME COMPLEXITY: $O(n)$