#15 days of Coding Challenge
#Day 1
Maximum Subarray
#Leetcode 53
Solution:

```cpp
class Solution {
public:
    int maxSubArray(vector<int>& nums) {
        int max_sum = nums[0];
        int current_sum = nums[0];

        for (int i = 1; i < nums.size(); i++) {
            current_sum = max(nums[i], current_sum + nums[i]);

            max_sum = max(max_sum, current_sum);
        }

        return max_sum;
    }
};
```

Time Complexity:O(n)
Space Complexity:O(1)