

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

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.

```
def max_subarray_sum(nums):
```

```
    if not nums:
```

```
        return 0
```

```
    current_max = global_max = nums[0]
```

```
    for num in nums[1:]:
```

```
        current_max = max(num, current_max + num)
```

```
        global_max = max(global_max, current_max)
```

```
    return global_max
```

```
nums = [-2, 1, -3, 4, -1, 2, 1, -5, 4]
```

```
print(max_subarray_sum(nums))
```

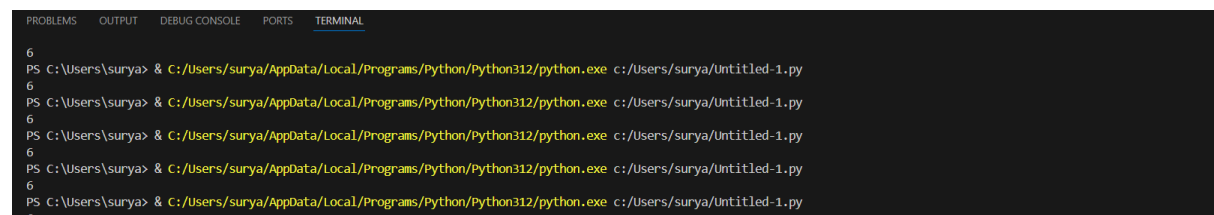
INPUT:

-2,1,-3,4,-1,2,1,-5,4

TIME COMPLEXITY:

$O(n)$

OUTPUT:



```
PROBLEMS OUTPUT DEBUG CONSOLE PORTS TERMINAL
6
PS C:\Users\surya> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Untitled-1.py
6
PS C:\Users\surya> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Untitled-1.py
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PS C:\Users\surya> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Untitled-1.py
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PS C:\Users\surya> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Untitled-1.py
6
```