

## STUDENT REPORT

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# DETAILS Nar

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### Roll Number

3BR23CD086

#### **EXPERIMEN**

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#### Title

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SUB ARRAY WITH MAX SUM

#### Description

You are given a list of integers, and your task is to find the subarray with the maximum sum. Write a function or method to solve this problem efficiently and return the maximum sum.

Input:

n: the no of elements in the array

nums (List of integers): A list of integers (1  $\leq$  len(nums)  $\leq$  10^5)

Sample input:

8

-1 2 3 10 -4 7 2 -5

Sample output:

20

Explanation:

The max subarry sum is 20. The subarray is [2,3,10,-4,7,2]

#### **Source Code:**

```
def max_subarray_sum(nums):
    max_so_far = nums[0]
    curr_max = nums[0]
    for num in nums[1:]:
        curr_max = max(num, curr_max + num)
        max_so_far = max(max_so_far, curr_max)
    return max_so_far
n = int(input())
nums = list(map(int, input().split()))
max_sum = max_subarray_sum(nums)
print(max_sum)
```

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3BR23CD086-sub array with max sum

**RESULT** 

5 / 5 Test Cases Passed | 100 %

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