



STUDENT REPORT

DETAILS

Name

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EXPERIMENT

Title

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 ($1 \leq \text{len}(\text{nums}) \leq 10^5$)

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_sum = float('-inf')
    current_sum = 0

    for num in nums:
        current_sum += num

        if current_sum > max_sum:
            max_sum = current_sum

        if current_sum < 0:
            current_sum = 0

    return max_sum

# Example usage
if __name__ == "__main__":
    import sys

    n = int(sys.stdin.readline().strip())
    nums = list(map(int, sys.stdin.readline().strip().split()))
    result = max_subarray_sum(nums)
    print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %