Logo

STUDENT REPORT

DETAILS

Name

R SUMANTH SIMHA

Roll Number

3BR23CD073

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 <= len(nums) <= 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)
```

RESULT

5 / 5 Test Cases Passed | 100 %