January 2023 CSE 106

Online on Divide and Conquer - B1 & B2

Total Marks: 10 **Time Duration: 30 mins**

Given an array of n numbers, the triplet sum is defined as the summation of **three consecutive numbers** in the array. Write **a divide-and-conquer** algorithm to find the maximum triplet sum of an array.

Input Format

- The first line of input contains an integer n, the size of the array.
- The second line of input contains n integers, representing the array elements.

Output Format

The program should output the maximum triplet sum of the array.

Important Note

1. **You must implement a divide-and-conquer algorithm to solve this problem**.
2. You cannot write any loop (for/while/do-while/ ...) in your algorithm. But you can write a loop to take the input array. You will get zero marks if you write any loop in your algorithm.
3. **The time complexity of your solution should be O(n)**.

Sample IO

Input
9
3 -1 2 10 -12 14 -4 6 -8

Output
16