

You are given an array (ARR) of length N, consisting of integers. You have to find the sum of the subarray (including empty subarray) having maximum sum among all subarrays.

A subarray is a contiguous segment of an array. In other words, a subarray can be formed by removing 0 or more integers from the beginning, and 0 or more integers from the end of an array.

Note:

The sum of an empty subarray is 0.

Input Format:

The first line of input contains an integer N, representing the length of the array.

The second line of input contains N single space-separated integers, denoting the elements of the array.

Output Format:

In the only output line, output the maximum subarray sum.

Constraints:

$1 \leq N \leq 10^6$
 $-10^6 \leq A[i] \leq 10^6$

where N is the length of the array.
A[i] represents the numbers present in the array.

Time limit: 1sec

Sample Input 1:

9
1 2 7 -4 3 2 -10 9 1