X. Kareem

time limit per test: 1 second

memory limit per test: 256 megabytes

Given an array a of n elements. Calculate the following.

$$\sum_{i=1}^{n} \sum_{j=i}^{n} \max\left(\left(\sum_{k=i}^{j} a_k\right), 0\right)$$

Input

The first line of input contains an integer n ($1 \le n \le 10^5$)— the number of elements in the array.

The second line contains n space separated integers $a_1, a_2, .., a_n$ ($-10^9 \le a_i \le 10^9$)— elements of the array.

Output

Print the answer $modulo$ $10^9 + 7$.

Examples

input	Copy
5 1 2 3 4 5	

output	Copy
105	

input	Copy
3 3 -2 -2	

output	Copy
4	

ICPC Assiut Ramadan Marathons

Private

Participant

⭐

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→ **Group Contests** ⌄

- Ramadan Marathon 2024
- Ramadan Marathon 2023
- Ramadan Marathon 2021
- Ramadan Marathon Juniors 2020
- Ramadan Marathon Newcomers 2020
- Ramadan Marathon Newcomers 2019
- Ramadan Marathon Juniors 2019
- Ramadan Kareem - Marathon 2017

Ramadan Marathon 2024

Finished

Practice

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→ **Virtual participation** ⌄

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ **Submit?**

Language: [GNU G++20 13.2 (64 bit, win ▾]

Choose file: [Choose File] No file chosen

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