D. Long Path

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

One day, little Vasya found himself in a maze consisting of $(n+1)$ rooms, numbered from 1 to $(n+1)$. Initially, Vasya is at the first room and to get out of the maze, he needs to get to the $(n+1)$-th one.

The maze is organized as follows. Each room of the maze has two one-way portals. Let's consider room number i $(1 \le i \le n)$, someone can use the first portal to move from it to room number $(i+1)$, also someone can use the second portal to move from it to room number p_i, where $1 \le p_i \le i$.

In order not to get lost, Vasya decided to act as follows.

- Each time Vasya enters some room, he paints a cross on its ceiling. Initially, Vasya paints a cross at the ceiling of room 1.
- Let's assume that Vasya is in room i and has already painted a cross on its ceiling. Then, if the ceiling now contains an odd number of crosses, Vasya uses the second portal (it leads to room p_i), otherwise Vasya uses the first portal.

Help Vasya determine the number of times he needs to use portals to get to room $(n+1)$ in the end.

Input

The first line contains integer n $(1 \le n \le 10^3)$ — the number of rooms. The second line contains n integers p_i $(1 \le p_i \le i)$. Each p_i denotes the number of the room, that someone can reach, if he will use the second portal in the i-th room.

Output

Print a single number — the number of portal moves the boy needs to go out of the maze. As the number can be rather large, print it modulo 1000000007 (10^9+7).

Examples

input
2 1 2
output
4

input
4 1 1 2 3
output
20

input
5 1 1 1 1 1
output
62