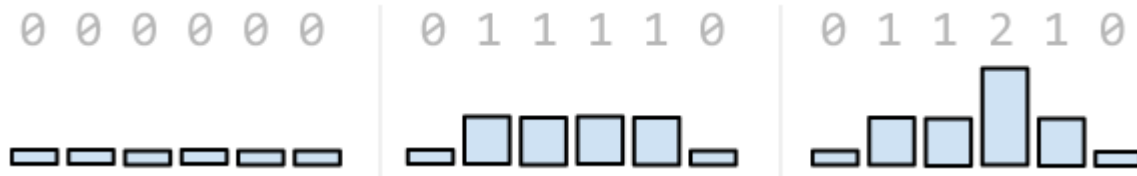


Some people like to pretend that they are a pharaoh. Or a dolphin. Luka is one such person. He has built a relief consisting of a long line of N columns with nonnegative integer heights. The heights of all columns were initially zero. The relief was built in steps, where in each step Luka would select a **contiguous subsequence of columns with equal heights** and raise all columns in the subsequence, **except** the first and last column, by **one**.



Hundreds of years have passed, and **some of the columns** have been **stolen**. Luka's great-great-...-great-grandson is trying to determine the number of possible reliefs that could have been built by Luka such that the remaining columns' heights match the original relief.

INPUT

The first line of input contains the positive integer N ($1 \leq N \leq 10\,000$), the number of columns in Luka's relief.

The second line of input contains N space-separated integers h_i ($-1 \leq h_i \leq 10\,000$), the column heights. A height of -1 represents a stolen column.

OUTPUT

The first and only line of output must contain the required number of possible reliefs modulo $1\,000\,000\,007$.

SAMPLE TESTS

input 3 -1 2 -1	input 3 -1 -1 -1	input 6 -1 -1 -1 2 -1 -1
output 0	output 2	output 3