1955. Count Number of Special Subsequences

Description

A sequence is **special** if it consists of a **positive** number of 0 s, followed by a **positive** number of 1 s, then a **positive** number of 2 s.

- For example, [0,1,2] and [0,0,1,1,1,2] are special.
- In contrast, [2,1,0], [1], and [0,1,2,0] are not special.

Given an array nums (consisting of only integers 0, 1, and 2), return the number of different subsequences that are special. Since the answer may be very large, return it modulo 10 9 + 7.

A **subsequence** of an array is a sequence that can be derived from the array by deleting some or no elements without changing the order of the remaining elements. Two subsequences are **different** if the **set of indices** chosen are different.

Example 1:

```
Input: nums = [0,1,2,2]
Output: 3
Explanation: The special subsequences are bolded [0, 1, 2, 2], [0, 1, 2, 2], and [0, 1, 2, 2].
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Example 2:

```
Input: nums = [2,2,0,0]
Output: 0
Explanation: There are no special subsequences in [2,2,0,0].
```

Example 3:

```
Input: nums = [0,1,2,0,1,2]
Output: 7
Explanation: The special subsequences are bolded:
- [ 0 , 1 , 2 ,0,1,2]
- [ 0 , 1 ,2,0,1, 2 ]
- [ 0 , 1 , 2 ,0,1, 2 ]
- [ 0 , 1 ,2,0, 1 , 2 ]
- [ 0 , 1 ,2,0, 1 , 2 ]
- [ 0 ,1,2,0, 1 , 2 ]
- [ 0 ,1,2,0, 1 , 2 ]
- [ 0 ,1,2,0, 1 , 2 ]
- [ 0 ,1,2,0, 1 , 2 ]
```

Constraints:

- 1 <= nums.length <= 10^{5}
- 0 <= nums[i] <= 2