

# No fights allowed!

There are N students in a class. You are required to find how many distinct ways are there to create a queue from them to visit the museum.

But the problem is some of students in the class cannot stay adjacent to each other, so they are needed to keep apart.

## Input Format

The first line contains a single integer N

The second line contain N integers representing each student. Students with same integer values are the students who cannot stay adjacent.

## Constraints

- $1 \leq N \leq 750$
- The values of the array are between 1 and N

## Output Format

The output should contain a single value representing the number of distinct arrays that can be obtained modulo  $10^9 + 7$

## Sample Input 0

```
4
1 1 2 3
```

## Sample Output 0

```
6
```