

552. Student Attendance Record II

Description

An attendance record for a student can be represented as a string where each character signifies whether the student was absent, late, or present on that day. The record only contains the following three characters:

- 'A' : Absent.
- 'L' : Late.
- 'P' : Present.

Any student is eligible for an attendance award if they meet **both** of the following criteria:

- The student was absent ('A') for **strictly** fewer than 2 days **total** .
- The student was **never** late ('L') for 3 or more **consecutive** days.

Given an integer `n` , return *the **number** of possible attendance records of length `n` that make a student eligible for an attendance award. The answer may be very large, so return it **modulo** `109 + 7` .*

Example 1:

Input: `n = 2`
Output: `8`
Explanation: There are 8 records with length 2 that are eligible for an award:
"PP", "AP", "PA", "LP", "PL", "AL", "LA", "LL"
Only "AA" is not eligible because there are 2 absences (there need to be fewer than 2).

Example 2:

Input: `n = 1`
Output: `3`

Example 3:

Input: `n = 10101`
Output: `183236316`

Constraints:

- `1 <= n <= 105`

