



Problem: P4

Description

Let $F(n)$ be the number of sequences (A_1, A_2, \dots, A_n) , each element can be $\{0, 1, 2\}$ containing no two consecutive 00 and no consecutive 11. Given a positive integer n , compute $F(n)$.

Input

Line 1: contains a positive integer n ($1 \leq n \leq 1000$)

Output

Write $F(n)$ modulo 10^9+7

Example

Input

2

Output

7

Input

3

Output

17

Source code

C++ 17

```
1 //C++
2 #include <bits/stdc++.h>
3
4 int main()
5 {
6
7 }
```

SUBMIT CODE

Or

C++ 17

Select file

SUBMIT

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Bài nộp

Tìm kiếm

ID

Bài tập

[172714](#)

COUNT_SEQ_0_1_2_NO_00_11

5 hàng



1-1 của 1

