

# Building allowance

Last week a new street in Bitland was constructed. You, as the city's building manager, are now responsible for a very important task. You have to decide on which plots along the street it is allowed to build new buildings. In order to this, you want to calculate first the number of possible ways of assigning free plots to buildings with the restriction that **no 2 consecutive plots exist on which it is allowed to build** - you want to give the inhabitants the feeling that they have more free room. The street is divided into **N** sections. Each section corresponds to 2 plots, one on each side of the street. Find the number of possible assignments subject to the given restriction modulo **1,000,000,007**.

## Input

In the first line you're given **N** ( $N \leq 2^{31} - 1$ ).

## Output

In the first and only line output the result modulo **1,000,000,007**.

## Example

**Input:**

3

**Output:**

25

## Example explanation:

If we just look at the one street side and mark B as a plot where building is allowed and F as a free plot, we have: BFB, FBF, FFB, BFF, FFF.

Since the same number exists on the other side, we have  $5 \cdot 5 = 25$  combinations.

## Scoring

By solving this problem you score 10 points.