

Tiles

Time limit: 1 sec.

Memory limit: 512MB

Description

Junhee loves patterns. When crossing a road, he steps on white paint and black tarmac on a crosswalk with some pattern.

Looking at a number of long narrow corridors in ASTU, he imagines how beautiful they would be with some patterns. Simply, he considers corridors are divided into 2 by n. Jihun majoring in industrial design is annoyed by Junhee because he keeps showing him his drawing of corridor with 1 by 2 block. So, Jihun decided to ask for your help.

Find the number of ways Junhee can fill a 2 by n corridor with 1 by 2 rectangles. For example, if $n=5$, there are 8 possible ways.

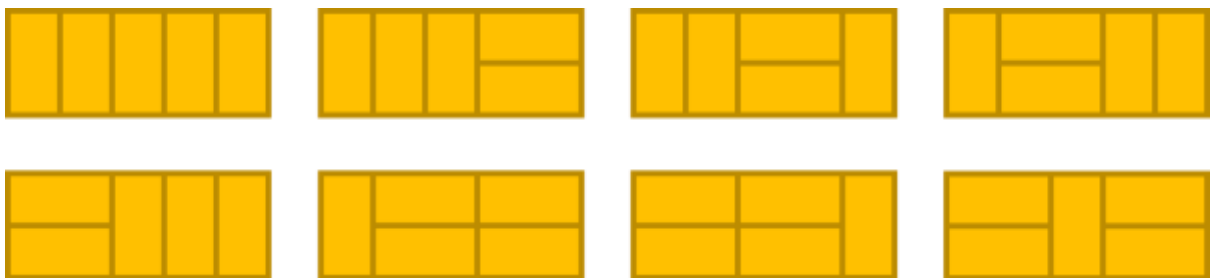


Figure 1) An example of $n=5$ corridor

The number can increase rapidly as n gets larger, so print the answer modulo 1,000,000,007.

Input

The first line of the input contains a single integer n . ($1 \leq n \leq 10^8$)

Output

In the first line, Print the answer modulo 1,000,000,007 as a single integer.

Sample I/O

Input(s)	Output(s)
5	8