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C. Fibonacci

time limit per test: 0.25 seconds memory limit per test: 256 megabytes

Find the n-th Fibonacci number modulo $10^9 + 7$.

So, you need to find F_n in the sequence defined as $F_0=0$, $F_1=1$ and $F_i=F_{i-1}+F_{i-2}$ for $i\geq 2$.

Input

An integer n ($0 \le n \le 10^{18}$).

Output

Print the answer modulo 100000007.

Evamples

Examples	
input	Сору
3	
output	Сору
2	
input	Сору
6	
output	Сору
8	
input	Сору
50	
output	Сору
586268941	

Note

The first few terms of Fibonacci sequence are $(0,1,1,2,3,5,8,13,\ldots)$. In particular, we have $F_0=0$, $F_3=2$ and $F_6=8$. And for the last sample test:

$$F_{50} = 12586269025 \equiv 586268941 \pmod{10^9 + 7}$$



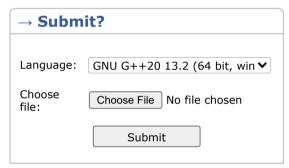
→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you -solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup You can clone this contest to a mashup.

Clone Contest



→ Last submissions		
Submission	Time	Verdict
<u>262934805</u>	May/28/2024 00:20	Accepted
<u>257536452</u>	Apr/21/2024 12:10	Accepted
<u>257536228</u>	Apr/21/2024 12:08	Accepted
<u>252364144</u>	Mar/19/2024 23:57	Wrong answer on test 24
<u>252364069</u>	Mar/19/2024 23:56	Accepted
<u>252363406</u>	Mar/19/2024 23:48	Wrong answer on test 24
<u>252363191</u>	Mar/19/2024 23:46	Accepted
<u>252363155</u>	Mar/19/2024 23:45	Wrong answer on test 24
<u>252363096</u>	Mar/19/2024 23:44	Wrong answer on test 24
<u>252362951</u>	Mar/19/2024 23:43	Wrong answer on test 24

