



STUDENT REPORT

DETAILS

Name

MOHAMMED MUSADDIQ K

Roll Number

3BR23EE065

EXPERIMENT

Title

FELLIS FUNCTION

Description

Morris Fellis has come up with a new function called Fellis function Morris defines the function as follows:

$$f(0)=1$$

$$f(1)=1$$

$$f(N)=f(N-1)+7*f(N-2)+(N/4) \text{ modulo } 10^9+7$$

Given an integer N, your task is to help Morris find and return an Integer value of $f(N)$, after performing Fellis Function.

Note: Here the division operator is integer division operator ie, it divides two numbers and returns the integer part of the result

Input Specification:

Input1: An integer value N, representing the Fellis Function value.

Sample Input:

8

Sample Output:

6713

Source Code:

```
def fel(n,memo={}):  
    if n==0 or n==1:  
        return 1  
    if n in memo:  
        return memo[n]  
    res=(fel(n-1,memo)+7*fel(n-2,memo)+n//4)%(10**9+7)  
    memo[n]=res  
    return res  
n=int(input())  
print(fel(n))
```

RESULT

3BR

E065

23EE

3BR
R23L

E065
5 3B

23EE
EE06

3BR23
R2