



DEEPAKSAKTHI V K-312321205037@stjosephsengg



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0



162



36303



Valid Till: 31-May-2025



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LACS-PST-S660

ProgramID- 11166

CodeVita



SkillRack

### Uncertain Steps

Codu is trying to go down stairs from his building to ground floor. He can go 3 ways.

- 1) Walk 1 step at a time.
- 2) Extend his legs and go 2 steps at a time.
- 3) Jump down 3 steps at a time.

Given **N** steps, calculate the number of possible ways **W** to reach the ground floor, provided he can jump 3 steps. That is, he can jump down 3 steps only once, but at any time, if he wishes, while walking down the stairs.

**Note:** As the number of ways W can be huge, print W modulo **1000000007**.

### Boundary Condition(s):

$1 \leq N \leq 10^6$

### Input Format:

The first line contains N.

### Output Format:

The first line contains W.

### Example Input/Output 1:

Input:

4

Output:

7

Explanation:

The 7 possible ways are given below.

1, 1, 1, 1

1, 1, 2

1, 2, 1

2, 1, 1

2, 2

1, 3

3, 1

### Example Input/Output 2:

Input:

5

Output:

13

**Max Execution Time Limit: 1000 millisecs**



Ambiance

Java ( 12.0) ▼

```
1 import java.util.*;
2 public class Hello {
3
4     public static void main(String[] args) {
5         Scanner z=new Scanner(System.in);
6         int n=z.nextInt();
7
8         long[] without3steps = new long[n+1];
9         long[] with3steps = new long[n+1];
10        if(n>1)
11        {
12            without_three_calculation(without3steps);
13            with_three_cal(with3steps,without3steps);
14
15            System.out.println(with3steps[n]%1000000007
16                                );
17        }
18        else
```

```
18         System.out.println(1);
19
20     }
21
22     public static void with_three_cal(long[] a
23         ,long[] b)
24     {
25         int step_count=0;
26         int index = 0;
27         int len = a.length;
28         while(step_count++<3)
29         {
30             a[index] = b[index];
31             index++;
32         }
33         for(int i=index;i<len;i++)
34         {
35             a[i] = a[i-1] + a[i-2] + b[i-3];
36         }
37     }
38
39
40     public static void without_three_calculation
41         (long[] a)
42     {
43         a[0] = 1; // only one way 0->1
44         a[1] = 1; // 0->1->1 || 0->2
45         int len = a.length;
46         for(int i=2;i<len;i++)
47         {
48             a[i]=a[i-1]+a[i-2];
49         }
50     }
51 }
```

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Code did not pass the execution

### 11 Private (Hidden) Test Cases Failed.

5 Passed

11 Failed

Save

Run

☐ Run with a custom test case (Input/Output)