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● EASY

● Max Score: 30 Points

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## The Fibonacci Sequence

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The Fibonacci sequence appears in nature all around us, in the arrangement of seeds in a sunflower and the spiral of a nautilus for example.

The Fibonacci sequence begins with  $\text{fibonacci}(0)=0$  and  $\text{fibonacci}(1)=1$  as its first and second terms. After these first two elements, each subsequent element is equal to the sum of the previous two elements.

Programmatically:

$\text{fibonacci}(0)=0$

$\text{fibonacci}(1)=1$

$\text{fibonacci}(n)=\text{fibonacci}(n-1)+\text{fibonacci}(n-2)$

Given  $n$ , return the  $n$ th number in the sequence.

### Input Format

Contains a single integer ' $n$ '.

### Output Format

The  $n$ th element in the Fibonacci sequence

## Example 1

Input

3

Output

2

Explanation

The Fibonacci sequence begins as follows:

$\text{fibonacci}(0)=0$

$\text{fibonacci}(1)=1$

$\text{fibonacci}(2)=(0+1)=1$

$\text{fibonacci}(3)=(1+1)=2$

$\text{fibonacci}(4)=(1+2)=3$

$\text{fibonacci}(5)=(2+3)=5$

$\text{fibonacci}(6)=(3+5)=8$

In the sequence above,  $\text{fibonacci}(3)$  is 2.

## Example 2

Input

1

Output

1

Explanation

The Fibonacci sequence begins as follows:

fibonacci(0)=0

fibonacci(1)=1

## Constraints

$0 < n \leq 30$

### Topic Tags

- DP

# My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
    static int fun(int n)
    {
        if(n==0)
            return 0;
        if(n==1)
            return 1;
        return(fun(n-1)+fun(n-2));
    }
}
```

```
    public static void main (String[] args) throws  
java.lang.Exception  
    {  
        //your code here  
        Scanner s=new Scanner(System.in);  
        int n=s.nextInt();  
        int f=fun(n);  
        System.out.print(f);  
    }  
}
```