- **MEDIUM**
- **Max Score: 40 Points**
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Climbing Stairs

You are climbing a staircase. It takes `n` steps to reach the top.

Each time you can either climb 1 or 2 steps. Your task is to print the number of distinct ways you can climb to the top.

Input Format

The only line of input contains an integer `n`.

Output Format

The only line of output contains an integer denoting the distinct ways can you climb to the top.

Example 1

Input

2

Output

2

Explanation

There are two ways to climb to the top.

1. 1 step + 1 step
2. 2 steps

Example 2

Input

3

Output

3

Explanation

There are three ways to climb to the top.

1. 1 step + 1 step + 1 step
2. 1 step + 2 steps
3. 2 steps + 1 step

Constraints

1 <= n <= 45

My code

// n java

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

public class Main
{
    public static void main (String[] args) throws
java.lang.Exception
    {
        //your code here
    Scanner s=new Scanner(System.in);
    int n=s.nextInt();
    int sum=0;
    if(n==1) sum=1;
    if(n==2) sum=2;
    int a=1,b=2;
    for (int i=3;i<=n;i++)
      {
        sum=a+b;
        a=b;
        b=sum;
      }
    System.out.print(sum);
      }
}
```