Climbing Stairs

Try to solve the Climbing Stairs problem.

We'll cover the following

Statement

You are climbing a staircase. It takes n steps to reach the top. Each time, you can either climb 1 or 2 steps. In how many distinct ways can you climb to the top?

Constraints:

- $1 \leq n \leq 45$

Examples

Sample example 1

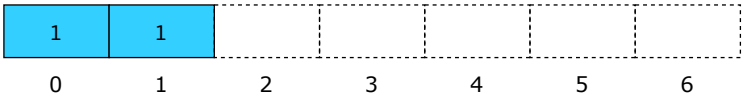
Input

`n = 6`

We can reach the i^{th} step in one of two ways:

1. Taking a single step from the $(i-1)^{th}$ step.
2. Taking a step of 2 from the $(i-2)^{th}$ step.

Output



So, the total number of ways to reach the i^{th} step is equal to the sum of ways of reaching the $(i-1)^{th}$ step and ways of reaching the $(i-2)^{th}$ step.

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Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Climbing Stairs

1 What is the correct number of ways to climb to the top if n = 2?

A) 1

B) 3

C) 2

Submit Answer

Question 1 of 2
0 attempted

Reset Quiz

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

> **Note:** As an additional challenge, we have intentionally hidden the solution to this puzzle.

Drag and drop the cards to rearrange them in the correct sequence.

Find the number of ways to climb 2 stairs.

Find the number of ways to climb (n-2) stairs.

Find the number of ways to climb 3 stairs.

Find the number of ways to climb 5 stairs.

Find the number of ways to climb n stairs.

Find the number of ways to climb (n-1) stairs.

Reset Submit

Try it yourself

Implement your solution in the following coding playground.

> **Note:** We have left the solution to this challenge as an exercise for you. You may try to translate the

Java

usercode > main.java

```
1  import java.util.*;
2  public class Main{
3      public static int climbStairs(int n) {
4
5          // Your code will replace the placeholder return statement.
6
7          return 0;
8      }
9  }
```

Powered by AI Submit

Test Cases Results

Case 1 Case 2 Case 3

Input #1

5

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Solution: Word Break II

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Cyclic Sort: Introduction

Mark as Completed