Leetcode Problem 1. (Easy)

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. In how many distinct ways can you climb to the top?

**Example 1:**

**Input:** n = 2

**Output:** 2

**Explanation:** There are two ways to climb to the top.

1. 1 step + 1 step

2. 2 steps

**Example 2:**

**Input:** n = 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

Link: <https://leetcode.com/problems/climbing-stairs/>

class Solution {

public int climbStairs(int n) {

if (n == 1) {

return 1;

}

int[] dp = new int[n + 1];

dp[0] = 1;

dp[1] = 1;

for (int i = 2; i <= n; i++) {

dp[i] = dp[i - 1] + dp[i - 2];

}

return dp[n];

}

}

