面试题：变态跳台阶

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题目描述

一只青蛙一次可以跳上1级台阶，也可以跳上2级……它也可以跳上n级。求该青蛙跳上一个n级的台阶总共有多少种跳法。

解题思路

这个可以用数学来解释

F(n) = F（n-1）+F(n-2)+…+F(1)

F(n-1) = F（n-2）+F(n-3)+…+F(1)

两个式子相减，很容易得出F(n)=2F(n-1)

Java

```java
public class Solution {
    public int JumpFloorII(int target) {
        int result = 0;
        if(target == 0){
            result = 0;
        }else if(target == 1){
            result =1;
        }else{
            result = 2 * JumpFloorII(target - 1);
        }
        return result;
    }
}
```

C++

```cpp
class Solution {
public:
    int jumpFloorII(int number) {
        if(number == 1 || number == 2){
            return number;
        }
        int jumpFloorII = 0;
        int FirstElem = 1;
        int SecondElem = 2;
        for(int i = 3;i <= number;i++){
```

```
11            jumpFloorII = 2 * SecondElem;
12            SecondElem = jumpFloorII;
13        }
14        return jumpFloorII;
15    }
16 };
```