

面试题10：斐波那契数列

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题目描述

大家都知道斐波那契数列，现在要求输入一个整数n，请你输出斐波那契数列的第n项（从0开始，第0项为0）。 $n \leq 39$

C++

```
1 class Solution {
2 public:
3     int Fibonacci(int n) {
4         int result[2] = {0,1};
5         if(n < 2)
6             return result[n];
7
8         int fibNMinusOne = 1;
9         int fibNMinusTwo = 0;
10        int fibN = 0;
11        for(unsigned int i = 2; i <= n; ++i){
12            fibN = fibNMinusOne + fibNMinusTwo;
13
14            fibNMinusTwo = fibNMinusOne;
15            fibNMinusOne = fibN;
```

```
16         }
17
18         return fibN;
19     }
20 };
```

Java

```
1 public class Solution {
2     public int Fibonacci(int n) {
3         if(n == 0 || n == 1)
4             return n;
5         int fibNMinusOne = 1;
6         int fibNMinusTwo = 0;
7         int fibN = 0;
8         for( int i = 2; i <= n; i++){
9             fibN = fibNMinusOne + fibNMinusTwo;
10            fibNMinusTwo = fibNMinusOne;
11            fibNMinusOne = fibN;
12        }
13        return fibN;
14    }
15 }
```