Problem 509: Fibonacci Number

Problem Information

Difficulty: Easy
Acceptance Rate: 73.56%
Paid Only: No
Tags: Math, Dynamic Programming, Recursion, Memoization

Problem Description

The **Fibonacci numbers** , commonly denoted `F(n)` form a sequence, called the **Fibonacci sequence** , such that each number is the sum of the two preceding ones, starting from `0` and `1`. That is,

F(0) = 0, F(1) = 1 F(n) = F(n - 1) + F(n - 2), for n > 1.

Given `n`, calculate `F(n)`.

Example 1:

Input: n = 2 **Output:** 1 **Explanation:** F(2) = F(1) + F(0) = 1 + 0 = 1.

Example 2:

Input: n = 3 **Output:** 2 **Explanation:** F(3) = F(2) + F(1) = 1 + 1 = 2.

Example 3:

Input: n = 4 **Output:** 3 **Explanation:** F(4) = F(3) + F(2) = 2 + 1 = 3.

Constraints:

* `0 <= n <= 30`

Code Snippets

C++:

```
class Solution {
public:
int fib(int n) {

}
};
```

Java:

```
class Solution {
public int fib(int n) {

}
}
```

Python3:

```
class Solution:
def fib(self, n: int) -> int:
```