

```
fwick@DELG01CW-4CAE0F:~$ ollama run codellama
```

```
pulling manifest
```

```
pulling 3a43f93b78ec... 100% 3.8 GB
```

```
pulling 8c17c2ebb0ea... 100% 7.0 KB
```

```
pulling 590d74a5569b... 100% 4.8 KB
```

```
pulling 2e0493f67d0c... 100% 59 B
```

```
pulling 7f6a57943a88... 100% 120 B
```

```
pulling 316526ac7323... 100% 529 B
```

```
verifying sha256 digest
```

```
writing manifest
```

```
removing any unused layers
```

```
success
```

```
>>> You are an expert programmer that writes simple, concise code and explanations. Write a python function to generate ... the nth fibonacci number.
```

```
def fibonacci(n):  
    if n <= 1:  
        return n  
    else:  
        return fibonacci(n-1) + fibonacci(n-2)
```

```
Explanation:
```

The Fibonacci sequence is a series of numbers in which each number is the sum of the two preceding numbers, starting from 0 and 1. To calculate the nth Fibonacci number, we can use a recursive formula that states that the nth Fibonacci number is equal to the (n-1)st Fibonacci number plus the (n-2)nd Fibonacci number.

This function takes an integer `n` as input and returns the nth Fibonacci number. The function first checks if `n` is less than or equal to 1, in which case it simply returns `n`. If `n` is greater than 1, it calculates the (n-1)st and (n-2)nd Fibonacci numbers using recursive calls to itself, and then returns their sum.

For example, if we call this function with `n=5`, it will calculate the 5th Fibonacci number as follows:

```
fibonacci(5) = fibonacci(4) + fibonacci(3)  
              = (fibonacci(3) + fibonacci(2)) + (fibonacci(2) + fibonacci(1))  
              = (1 + 1) + (1 + 0)  
              = 3
```

Therefore, `fibonacci(5)` returns the value `3`, which is the 5th Fibonacci number.

```
>>> Send a message (/? for help)
```