



Challenge 3: Calculate the nth Fibonacci Number using Recursion

Test our knowledge by solving a challenge in this lesson.

We'll cover the following ^

- Problem statement
 - Sample input
 - Sample output
- Coding exercise

Problem statement#

In this challenge, your task is to calculate the nth Fibonacci number in the Fibonacci series.

You have to write a recursive function fibonacci. In the function parameter, you will pass the value of type int, and the function will return a value of type int.

int fibonacci (int n);

What is a Fibonacci series?

Fibonacci series starts with 0 and 1. Each number in the Fibonacci series is the sum of its two previous Fibonacci numbers.





```
0, 1, 1, 2, 3, 5, 8, 13, ......

Whereas,

fibonacci (0) = 0
fibonacci (1) = 1
fibonacci (2) = 1
.....

fibonacci (n) = fibonacci (n-1) + fibonacci(n-2)

Fibonacci series
```

Sample input#

```
fibonacci (0);
fibonacci (1);
fibonacci (2);
fibonacci (6);
```

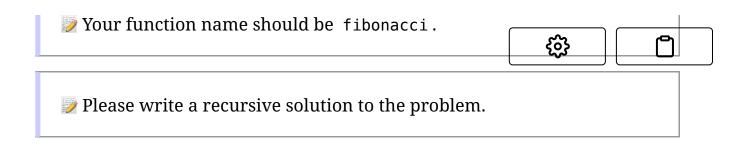
Sample output#

```
fibonacci_number = 0
fibonacci_number = 1
fibonacci_number = 1
fibonacci_number = 8
```

Coding exercise#

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Before diving directly into the solution, try to solve it yourself. Then check if your code passes all the test cases.



Good luck! 👍

```
1 /* Write your recursive function fibonacci here
2 The function should take a value of type int in its input parameters
3 and return int value in the output*/
4
5 int fibonacci(int n) {
6
7 return -1;
8
9 }
```

If you have solved the problem, congratulations!

In case you are stuck, go over the solution review in the next lesson.

