Challenge 3: Calculate the nth Fibonacci Number using Recursion

Let's test our knowledge by solving a challenge in this lesson.

We'll cover the following

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.

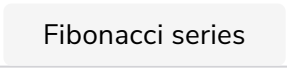
0 , 1 , 1 , 2 , 3 , 5 , 8 , 13 , ...

Whereas,

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

.....

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



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

Before diving directly into the solution, first, try to solve it yourself, and then check if your code passes all the test cases. If you get stuck, you can always see the given solution.

> Your function name should be `fibonacci`.

> Please write a recursive solution to the problem.

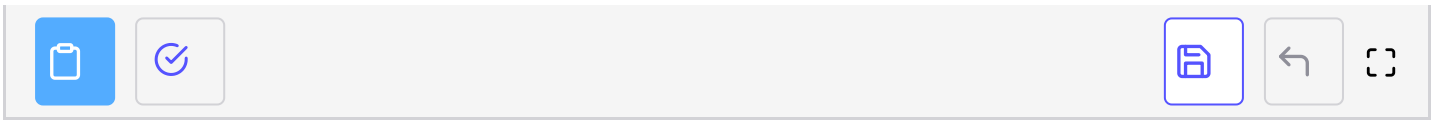
Good Luck! 👍

```
/* Write your recursive function fibonacci here
The function should take a value of type int in its input parameters
and return int value in the output*/

int fibonacci(int n) {

return -1;

}
```



🎉If you have solved the problem, congratulations!

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