Fibonacci Series Java

What it does:

This simple program is designed to give the amount of numbers the user requests from the Fibonacci Series using recursion and a simple for loop.

How it does it:

To begin, there should be a main method, as well as a recursion method. The numbers will start the same way every time, so in the Fibonacci class, there should 3 static integer variables called number1, number2, and number3, and number1 should always be initialized at 0 and number2 should always be initialized at 1, because those will always be the first 2 numbers you start with.

How it works:

Recursion method:

In the main method, the user will be prompted how many numbers they want. That number will be stored in a Scanner labeled “response.” The response will be passed through originally and subtracted by 1 for every time the method is called. However, to start, the main method will pass response-2 through the recursion method, because the first 2 numbers have already been given. If the response is still greater than 0, meaning there’s still numbers left to be given, the method will run until there are no more numbers to print.

Normal for loop:

Similar to the recursion method, the for loop will run until i equals the response of the user.

Tests:

After running the first test, I realized that the numbers needed to basically move along with the series. number1 needs to equal number2 and number 2 needs to equal number3 after run.

After running the next tests, I realized that the for loop needed to be initialized at 2 as well as the recursion method.

After running a couple more tests, I made the number variables static and universal.

How to use it:

Take the .java file and place it into an IDE (Visual Studio, Eclipse, etc.), and click run. In the console it will ask how many numbers you want. Enter the number in the console, press enter, and it will do both the for loop and the recursion method.