Solution Review: Calculating the first 'n' Fibonacci numbers

In this review, the solution of the challenge '' Calculating the First 'n' Fibonacci Numbers" from the previous lesson is provided.

> **We'll cover the following** ^
>
> - Solution
> - Explanation

Solution

```java
class HelloWorld {
    public static void main( String args[] ) {
        String fib = "";
        int n = 6;
        int first = 0, second = 1, fibonacci = 0;
        System.out.println("Fibonacci Series upto " + n + " Terms ");

        for (int c = 0; c < n; c++) {
            if (c <= 1) {
                fibonacci = c;
                fib += String.valueOf(fibonacci) + " ";
            } else {
                fibonacci = first + second;
                first = second;
                second = fibonacci;
                fib += String.valueOf(fibonacci) + " ";
            }
            System.out.println(fibonacci + " ");
        }
    }
}
```

Explanation

Fibonacci is famous and simplest of the series that you have learned to calculate along with the implementation of loops. In the fibonacci series, each number is the sum of the previous two numbers. Therefore, to find the next number, you must

- `int first = 0, second = 1, fibonacci = 0;` Declare variables to store the second last, last and the recently calculated *fibonacci* number. Since the first two fibonacci numbers are 0 and 1. Therefore, we have set the `first` and `second` to **0** and **1** respectively.

- `for (int c = 0; c < n; c++)` since we have to calculate the `n` fibonacci numbers. Therefore, the loop will iterate from **0 to n-1**

- `if (c <= 1)` Boundary Check to restrict extra calculations. If `c` is less than equal to 1, it will simply set the `fibonacci` to `n` as the first two numbers are 0 and 1, respectively.

- `fibonacci = first + second;` For `c >= 2`, we will apply the series formula, as the current number is equal to the sum of the previous two elements.

- `first = second; second = fibonacci;` Update the first and second values for the next iteration.

Let's solve another mind-crunching exercise in the next lesson.