Fibonacci series generates the subsequent number by adding two previous numbers. Fibonacci series starts from two numbers − **F0 & F1**. The initial values of F0 & F1 can be taken 0, 1 or 1, 1 respectively.

Fibonacci series satisfies the following conditions −

Fn = Fn-1 + Fn-2

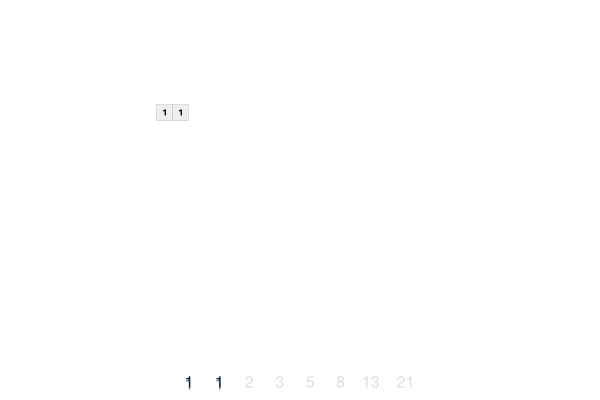
Hence, a Fibonacci series can look like this −

F8 = 0 1 1 2 3 5 8 13

or, this −

F8 = 1 1 2 3 5 8 13 21

For illustration purpose, Fibonacci of F8 is displayed as −



Fibonacci Iterative Algorithm

First we try to draft the iterative algorithm for Fibonacci series.

Procedure Fibonacci(n)

declare f0, f1, fib, loop

set f0 to 0

set f1 to 1

**display f0, f1**

for loop ← 1 to n

fib ← f0 + f1

f0 ← f1

f1 ← fib

**display fib**

end for

end procedure

To know about the implementation of the above algorithm in C programming language, [click here](https://www.tutorialspoint.com/data_structures_algorithms/fibonacci_iterative_program_in_c.htm).

Fibonacci Recursive Algorithm

Let us learn how to create a recursive algorithm Fibonacci series. The base criteria of recursion.

START

Procedure Fibonacci(n)

declare f0, f1, fib, loop

set f0 to 0

set f1 to 1

**display f0, f1**

for loop ← 1 to n

fib ← f0 + f1

f0 ← f1

f1 ← fib

**display fib**

end for

END