

# CS 3035, Fall 2022

## In-Lab Exercise 7

Due: September 14, 2022 (11:59 AM noon)

The following programming exercise has ONLY one part which is compulsory for everyone. Please submit a zip/tar compressed file containing the following:

1. Your program in a text file (.txt) or a C program file (.c).
2. A file with screenshot of your output. Please submit this file as a PDF.

### Recursively generating Fibonacci numbers

In the last lab, we worked on generating a Fibonacci series up to a user specified number “n”, where n is the  $n^{\text{th}}$  Fibonacci number. For example, in the following Fibonacci series:

0      1      1      2      3      5      8      13      21      34

the 10<sup>th</sup> Fibonacci number is 34.

In today’s lab, we will write a *recursive* Fibonacci function fibonacci(n) that generates the  $n^{\text{th}}$  Fibonacci number using recursion. You may write a new program or modify your program from the last lab. Please make sure that you use suitable data types to support a wide range of Fibonacci numbers. Please refer to the last lab write-up to identify the base case and the recursive call for your recursive function.