Graded Lab:	2	Subject:	Data structures and algorithms
Section:	D12	Total Marks	40
Submission Date:	17 April 2023		

Note:

Q1. Write a C++ program that generates the Fibonacci series up to a number entered by the user, and then uses a recursive function to find the nth number in the series. The Fibonacci series starts with 0 and 1, where each subsequent number is the sum of the two preceding numbers. (10)
For example, the series goes like this: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,…..

Q2. Write a recursive function using C++ to determine the GCD (greatest common divisor) of two numbers. For example, the GCD of 12 and 18 is 6. Remember that the GCD is the largest positive integer that divides each of the two numbers without a remainder. (10)

Q2. Write a C++ program that prints all pairs of adjacent elements in a circular queue. For example, given the circular queue {10, 20, 30, 40, 50}, the program should output the pairs (10, 20), (20, 30), (30, 40), (40, 50), and (50, 10). (10)

Q3. Write a C++ program that utilizes a stack data structure to remove pairs of duplicates in the given string 'abbzyzt'. (10)