The University of the West Indies, St. Augustine
COMP 2611 Data Structures
2020/2021 Semester 1
Lab Tutorial Week 1

This tutorial revises the topics of Linked Lists, Stacks and Queues from the COMP 1603 (Programming III) course. These topics form the basis of many of the concepts explored in this course.

Section A: Linked Lists

1. Complete the `createNode()`, `insertHead()`, `printList()`, `insertAtTail()`, `insertAtIndex()`, `deleteAtHead()`, `find()`, `get()`, `getLast()`, `contains()`, `size()` and `reverse()` functions in the `LinkedList.cpp` file to add functionality for a linked list.

2. Discuss recursive solutions to the `contains`, `size` and `printList` functions.

Section B: Stacks

1. Complete the `initStack()`, `push()`, `pop()`, `isEmpty()`, `printStack()` functions located in the `Stack.cpp` file to add functionality for a stack. You can reuse code from your linked list implementations.

2. Discuss how stacks can be implemented using arrays.

Section C: Queues

1. Complete the `initStack()`, `enqueue()`, `dequeue()`, `peek()` functions located in the `Queue.cpp` file to add functionality for a queue. You can reuse code from your linked list implementations.

2. Discuss how queues can be implemented using arrays/circular arrays.