Lab Test 1

CSE 4304 (SWE A)

Total Time: 60 minutes

Q1: Complete the missing part of the provided code in “task1\_incomplete.c” file to implement the functionalities of a queue using an array. (60)

Q2: Using the stack code provided in the file “task2\_incomplete.c” solve the following problem: (40)

**Problem description:**

Given a string containing only lowercase alphabets, your goal to reduce the string to its shortest form by removing two consecutive letters if they match. Perform this operation repetitively on reduced string until no more characters can be removed.

Print the final string if nothing left print “Empty String”.

Algorithm:  
 1. Traverse through the input.

2. If current element from the input match the top element of the stack, then pop it.

3. Else push the current element.

4. After finishing iterating through the elements:

If nothing left on the stack, print “Empty String”

Else print the content of the stack from bottom to top.