**Operating systems 2 Lab 11**

Q 1 Run and test the goodcnt.c and the badcnt.c programs. Explain why the badcnt is not giving the correct result.

Q 2 Modify the *Mute2\_lock.c* using semaphores instead of semaphores. ; test you program to ensure it works correctly. ..

Q 3: A queue can be implemented by nodes (and pointer to nodes) or in certain cases could be implemented using arrays: such an implementation is often referred to as a *circular buffer*. Write a program that creates:

a function to *add* a value (integer) to the “head” of the *circular buffer*

a function that *removes* a value from a circular *buffer*.

Displays the values in the circular buffer

**Fully test your program** by taking screen shots of the output to ensure it is working as expected: Ideally you should set up a test plan before performing it.

The main program can use a simple menu to call each function.

Refer: to notes for a description of a circular buffer.: hint : use the *modulus* operator. If buffer has 4 elements then to determine the position where to add or remove an item you may use : *buffer[postion ] = (position + 1) mod 4*. Where *position* is the element of the array before adding/deleting an element.