**DATA STRUCTURES MAN 106**

**Practical 4 Spring Semester 2020-21**

1. Write class Queue of integers in non-contiguous memory. Consider two pointers Qfront and Qrear having usual meaning. Include following functions:

Constructor // initialize an empty queue

underflow ( ) //To check if the queue is empty

count ( ) // to return the number of elements in the Queue

add ( ) // to add an item x in the queue.

remove ( ) // to remove and returns an item from the queue.

Write function main ( ) to test the queue.

2. Repeat question 1 for queue of characters and strings.

3. Write a class Cqueue of integers to implement circular queue

1. Write class STACK to implement stack of floating point numbers in non-contiguous memory. Max. Include following functions in the class:

underflow( ) // To check if the stack is empty

push( ) // To insert an item in the stack

pop( ) // To retrieve single item from stack

Write main to invert the list.