**DATA STRUCTURES MAN 106**

**Practical 3 Spring Semester 2020-21**

1. Write class Queue of integers in contiguous memory [ An array Q of size Max]. Include following functions:

Constructor // initialize Qfront = Max-1, Qrear = Max-1

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

overflow ( ) //To check if the queue is full

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

add ( ) and remove ( ) // add ( ) to add an item x, remove( ) to remove and returns an item

Write function main ( ) to test the queue. Give an example to show the underflow and overflow simultaneously.

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

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

1. Write a class Deque to implement deque of integers. Test the class in main.