Sardar Vallabhbhai National Institute of Technology, Surat Department of Artificial Intelligence Data Structure (AI102) B.Tech I - II Semester

Assignment-8

Note: Input should be taken from the user

Question 1: Implement a priority queue using a linked list. The queue has the following basic operations:

- enqueue() Insert an element in the queue.
- **dequeue()** Remove the element from the queue.
- peek() Return the element at the front node of the queue
- **isFull()** Validates if the queue is full or not.
- **isEmpty()** Checks if the queue is empty.

Question 2: Implement a Circular queue using a linked list. The queue has the following basic operations:

- enqueue() Insert an element in the queue.
- **dequeue()** Remove the element from the queue.
- **peek()** Return the element at the front node of the queue
- **isFull()** Validates if the queue is full or not.
- **isEmpty()** Checks if the queue is empty.