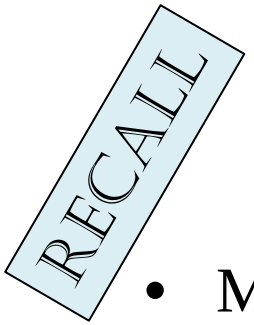
Graded ICA205
Qlist

CS 244



Queue and Singly Linked List

- Main queue operations:
  - enqueue(e): inserts an element at the end of the queue
  - dequeue(): removes and returns the element at the front of the queue
  - front(): returns the element at the front without removing it
  - size(): returns the number of elements stored
  - isEmpty(): returns a Boolean value indicating if there are no elements in the queue

- Singly linked list Operations
  - insertFront(e): inserts an element on the front of the list
  - removeFront(): returns and removes the element at the front of the list
  - insertBack(e): inserts an element on the back of the list
  - removeBack(): returns and removes the element at the end of the list

Graded In-Class Exercise: Qlist

- Describe how to implement a queue using a singly-linked list
  - Based on previous slide
  - Queue operations:
    - enqueue(x), dequeue(), front(), size(), isEmpty()
  - For each operation, give the running time in Big-Oh
  - Submit your word document / powerpoint slide to the appropriate dropbox on D2L