Department of Computer Science,
Data Structures (CSC212),
Tutorial 5
Double Linked List & Queues

Question 1. (Double Linked List)
Add a new operation/method to the Double Linked List implementations with the following specification.

boolean isReverse (DoubleLinkedList l)

Precondition/Requires: The list l should not be empty.

Results/Actions: Returns true if the list l's items are in reverse order of the items in the object, otherwise false. The list l is unchanged.

Double Linked List
+ head : Node<T> + current : Node<T>
+ DoubleLinkedList() + empty() : boolean + last() : Boolean + first() : Boolean + full() : boolean + findFirst() : void + findNext() : void + findPrevious() : void + retrieve() : T + update(T val) : void + insert(T val) : void + remove() : void

Linked Queue	Array Queue
- head : Node<T> - tail : Node<T> - size : int	- maxsize : int - size : int - head : int - tail : int - nodes : T[]
+ ArrayQueue() + full() : boolean + length() : int + enqueue(e : T) : void + serve() : T	+ ArrayQueue(n : int) + full() : boolean + length() : int + enqueue(e : T) : void + serve() : T

Question 2. (Queue)
To the test class for ADT Queue add a static method with the following specification.

boolean finditem (Queue q, Type t)

Precondition/Requires: The queue q should not be empty.

Results/Actions: Returns true if t is in the queue q, otherwise false. The queue q is unchanged.