

**Department of Computer Science,
Data Structures (CSC212),
Tutorial 6
Priority Queues & Stacks**

Question 1. (Priority Queue)

Add a method to the Priority Queue implementation that receives an integer `pri` as an input. The method should remove all elements with priority equal to `pri`. Return the number of elements removed.

LinkedPQ
- <code>head</code> : <code>Node<T></code> - <code>tail</code> : <code>Node<T></code> - <code>size</code> : <code>int</code>
+ <code>LinkedPQ()</code> + <code>full()</code> : <code>boolean</code> + <code>length()</code> : <code>int</code> + <code>enqueue(e : T, int p)</code> : <code>void</code> + <code>serve()</code> : <code>T</code>

Linked Stack	Array Stack
- <code>top</code> : <code>Node<T></code>	- <code>maxsize</code> : <code>int</code> - <code>top</code> : <code>int</code> - <code>nodes</code> : <code>T[]</code>
+ <code>LinkedStack()</code> + <code>full()</code> : <code>boolean</code> + <code>empty()</code> : <code>boolean</code> + <code>push(e : T)</code> : <code>void</code> + <code>pop()</code> : <code>T</code>	+ <code>ArrayStack(int n)</code> + <code>full()</code> : <code>boolean</code> + <code>empty()</code> : <code>boolean</code> + <code>push(e : T)</code> : <code>void</code> + <code>pop()</code> : <code>T</code>

Question 2. (Stack)

To the test class for ADT Stack add a static method with the following specification.

`boolean findItem (Stack<T> s, T t)`

Precondition/Requires: The stack `s` should not be empty.

Results/Actions: Returns true if `t` is in the stack `s`, otherwise false. The stack `s` is unchanged.