# **Lab 2 Writing Linked List code**

**Week beginning 25th September 2023**

We have developed code for a singly linked list CP3LinkedList in class. Here you will add further methods to this class.

**Note:** When writing linked list code, it is useful to draw diagrams to understand what is required, in particular for mutator methods

1. Write a method size with the following header that calculates the size of the list. The header is:

public int size()

2. Write a contains() method that checks if the list contains a particular value. What is the header for the method?

3. Do unit testing on CP3LinkedList class.

4.Using CP3LinkedList as a queue:

For a queue (we will cover Queue later in class) will need methods addLast and removeFirst.

We already have removeFirst.

To allow for addLast method you will need to add another property to CP3LinkedList: last of type Node.

Add this property and implement the addLast method.

Consider whether any other methods need to change because of the new property.

5. Then convert CP3LinkedList to a doubly linked list

Do unit testing on the new code you have added.