

## Lab 9

### **This lab is to be completed individually**

This lab is for you to implement LinkedList and ArrayList.

#### **Part 1:**

Implement your own LinkedList.

Then Implement SortedLinkedList as such it inherits all the public and protected methods from your LinkedList. Add employee objects from file "emp.txt".

It overrides one method: add(<E>). This method inserts new objects in the collection using a sorted order. Sort elements based on ID.

You should implement add, remove and is\_full methods in your LinkedList.

#### **Part 2:**

Implement your own ArrayList called CS401ArrayImpl. It should grow by double size when size is exceeded. Initially you will define max size as 10. Then you will increase the size when number of elements are exceeded e.g. when you try to insert 11<sup>th</sup> item.

You have given following files.

CS401ArrayImpl.java

CS401CollectionInterface.java

Complete code in the files.

Then test your program with adding more than 10 elements.

You can add employee objects in ArrayList.