**Assignment 4**

For this assignment, you will add a bit more functionality to the LinkedList we did in class, and then use it for the Club class you had in Assignment 3. Here are the details.

1. Add the following methods to the class LinkedList (we had in class) specified as follows:
   1. *public int addLast(T item)*  -- The method adds item at the end of the current list.
   2. *public void removeSecond()* -- The method specifically removes the second item of the current list (precondition: the list has at least two items).
   3. *public List<T> retrieveEveryOtherItem()* – The method retrieves every other item starting from the first, and saves them in the returned list.
2. Re-implement the class *Club* by extendingLinkedList above, and add the method: getLargestPercentageMembershipIncreaseSince(int year), and method toString().

*class Club extends LinkedList<Membership>{*

*public int getLargestPercentageMembershipIncreaseSince(int year) { /\*you implement\*/ }*

*public String toString(){ /\* you implement \*/ }*

*//Feel free to add what you think you need….*

*}*

**Note:**

1. The *Membership* class is basically the same except that you need to override “equals” method.
2. For testing, provide a test table for the tests you used for testing the methods you added to LinkedList. The tests for the class Club you used in Assignment 3 should still be good.