**CSIII: Programming Patterns**

**Lab 3 Assignment: Templated List**

The project is due in one week: by the beginning of the next lab. Make sure to include your name in comments of the source files.

Modify “list.h” and “uselist.cpp” as follows. Create a new templated class Collection that contains this list as a dynamically allocated member, i.e, the list contains a pointer to the first element. You are not allowed to use STL containers. The class has to implement the following methods:

* addItem(): takes an item as the argument and adds it to the collection, does not check for duplicates.
* removeItem(): takes an item as the argument and removes all instances of this item from the collection.
* lastItem(): returns the last item added to the collection.
* printCollection(): prints all items in the collection. The printout does not have to be in order.

Make sure that your templated list operates correctly with “lab3.cpp”.

Templated member functions could be coded inline or outside. However, either way, they have to be in the header file.

You do not have to implement the big three functions (copy constructor, destructor, overloaded assignment). But if you do, you have to implement all three.

**Milestone**. Collection that successfully implements addItem().