

Object-Oriented Software Development

Project 5 — Due: Thursday, March 30

Download the program MyLL.java from the course web page. Your assignment is to complete the program by implementing the following methods:

```
public boolean retainAll(Collection c)
public boolean containsAll(Collection c)
public Object [] toArray()
public boolean equals(Object other)
public int hashCode()
public void add(int index, Object ob)
public Object remove(int index)
public Object set(int index, Object ob)
public int indexOf(Object ob)
public int lastIndexOf(Object ob)
public Object getFirst()
public Object getLast()
public Object removeFirst()
public Object removeLast()
public void addFirst(Object ob)
public void addLast(Object ob)
```

Unlike the current version of `get(int index)`, your methods *add*, *remove*, and *set* should search of the list from the end that is closer to the index position you wish to find.

In addition to completing the MyLL class, write a second class that tests your implementation carefully and systematically. Submit both classes and turn in listings of each class and a transcript of the output from running your test program.

Your program will be graded on the correctness, clarity of your code, and the underlying efficiency of your implementation.