

CS 535 Object-Oriented Programming and Design  
Fall Semester, 2010  
Assignment 3  
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Due Sept 17 23:55

You will be turning in this assignment electronically to your class source code repository. In class on Sept 14 I will hand out accounts for the repository. In order to submit your assignment create a package called "Assignment3" and put all your classes from this assignment in that package.

1. Create a Counter class. When a Counter class is created it needs its count to be initialized to 0 (zero). Add the following methods to the class.

count - an instance method that returns the number of times increase has been called on the receiver.

increase - an instance method that increases the count of the counter.

masterCount - a class method that returns the number of times increase has been called on all Counter objects.

So we will have:

```
l a b l
a := Counter new.
b := Counter new.
a increase.
a increase.
b increase.
a count. "returns 2"
b count. "returns 1"
Counter masterCount. "returns 3"
```

2. Create a DoublyLinkedList class. The linked list class needs at least the following methods:

addLast: anObject - adds the argument to the end of the list. anObject is what is added to a node and the node is added at the end of the list.

addFirst: anObject - adds the argument to the front of the list. anObject is what is added to a node and the node is added at the front of the list.

add: anObject - adds the argument to the front of the list. anObject is what is added to a node and the node is added at the front of the list.

size - returns the number of elements in the list.

at: anInteger - returns the element at the anInteger location in the list. The first element in the list has index 1. If anInteger is out of range the method should throw an exception.

How to Turn in your Assignment

To be added later