Project #1

Due Dates: Monday, Sept. 21 at 11:59pm

Submit: eLearning

Late Policy: -10 points per hour late

Instructions: This is an individual assignment. Answers should be your own work.

Introduction:

In this project you will add methods to an existing linked list class and

make a stack to solve the balanced symbol problem.

Part 1 (75 points)

Modify the author's "MyLinkedList" class to add the following methods:

15 points each (a-e)

a. swap

receives two index positions as parameters, and swaps the nodes at

these positions by changing the links, provided both positions are

within the current size

b. shift

receives an integer (positive or negative) and shifts the list this

many positions forward (if positive) or backward (if negative).

1,2,3,4 shifted +2 3,4,1,2

1,2,3,4 shifted -1 4,1,2,3

c. erase

receives an index position and number of elements as parameters, and

removes elements beginning at the index position for the number of

elements specified, provided the index position is within the size

and together with the number of elements does not exceed the size

d. insertList

receives another MyLinkedList and an index position as parameters, and

copies the list from the passed list into the list at the specified

position, provided the index position does not exceed the size.

e. main

add code to the main method to demonstrate each of your methods

Part 2 (25 points)

Create a MyStack class that uses an ArrayList to make a stack.

Use your MyStack class to demonstrate the nested symbol algorithm seen

on slide 35 of the chapter 3 slides.

Submit to eLearning:

MyLinkedList.java

MyStack.java