Assignment 2c

COMP 2526 Object-Oriented Programming with Java

Due no later than 23:59 PM on Sunday 3 December 2017

1 Purpose

Explore IO streaming and the linked list data structure. Modify assignment 2b to use your linked list.

2 Description

Implement a simple generic doubly linked list that can be used with a for-each loop. Use your linked list in at least one place in your A2b code. Demonstrate that your doubly linked list works, that it can be used with a for-each loop, and that it has an iterator.

3 Requirements

Construct a simple doubly linked list that uses generics. Your list must include:

1. public void addToFront(E e) throws CouldNotAddException
2. public E removeFromFront() throws CouldNotRemoveException
3. public void addToEnd(E e) throws CouldNotAddException
4. public E removeFromEnd() throws CouldNotRemoveException
5. public Iterator<E>iterator() (you will need to implement the Iterable interface)
6. an Iterator which implements the Iterator<E>interface (your Iterator must be implemented as an anonymous inner class).

You will need to define the specified Exceptions. Add the ability to save the state of your A2b via Serialization. You may add a menu or a button to start the open/save dialog box. Provide thorough tests for your code.

Milestone 1 (5% of mark): Create your doubly linked list class and implement the addToFront() method, generics not necessary, in lab during week of November 20 - 24.

Milestone 2 (5% of mark): Complete your doubly linked list class, with generics, in lab during week of November 27 - December 1.

4 Marking Guidelines

20%	Doubly Linked List
20%	Iterator/For-each
30%	Serialization (saving and loading)
10%	Milestones (5% each)
20%	Comments and style (use Checkstyle)