A03 - Linked Structure

30 Possible Points

9/23/2023

Attempt 1

In Progress
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Unlimited Attempts Allowed
9/9/2023 to 9/30/2023

Details

Fundamentals

Assignment: A03

Learning Objectives

- Implement methods on a linked lists including, but not limited to, insert, delete, update, and traverse.

Overview

This assignment helps you build fluency in working with singly-linked structures.
It asks you to pair program with a partner and use a dynamic object visualizer as you implement various list methods. The assignment provided jUnit tests to facilitate code

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Instruction

Connect with your assigned partner and schedule the first pair programming session at least 5 days before the due date.

Assignment Instructions:

1. **Setting Up Your Project:**
   - Create a new Java project named **A03_LinkedStructure** within the package **a03**.
   - Download the file **NumberList.java** (https://slcc.instructure.com/courses/915963/files/149887660?wrap=1) (https://slcc.instructure.com/courses/915963/files/149887660/download?download_frd=1) (https://slcc.instructure.com/courses/915963/files/149887332/download) and add it to the **a03** package.
   - Replace the placeholder ..... in the doc comment with your name.
   - Download a second file **NumberListTest.java** (https://slcc.instructure.com/courses/915963/files/149887661?wrap=1) (https://slcc.instructure.com/courses/915963/files/149887661/download?download_frd=1) , which contains unchangeable jUnit tests for validation.

2. **Implementing Methods:**
   - The **NumberList** class provides some pre-implemented methods.
     Your task is to implement the methods with a // TODO comment.
   - Start by reading the doc comments to understand the required behavior clearly.
   - Collaborate with your partner to create a pseudo-code plan for the method.
   - Replace the // TODO lines with method implementations that match the specifications.
     Work with your partner, alternating between the driver and navigator roles for methods in each of the following categories:
     - **firstElement** and **endsPositive**
     - **average** and **fill**
     - **insert** and **remove**
     - **removeDuplicates** and **rotateRight**.

     Alternating roles encourages hands-on learning helps you build a solid understanding

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It allows you to watch the changes of the linked structure as you debug your code.
- The **dynamic object viewer** (https://www.jgrasp.org/tutorials187/10_Viewers.pdf) from **jGrasp** (https://www.jgrasp.org/) is free and easy to use.
  The website looks dated, but the viewer works great.

4. **Testing Your Code:**
   - Utilize the provided jUnit tests to validate your code's functionality.
   - Note: NumberListTest.java must not be changed.
     Feel free to create additional tests in separate files if desired.

Submission

1. **Attach the file NumberList.java**
2. **Create and embed a Video: (1.5 - 3 min)**
   Follow the **Guidelines for Assignment/CE Recordings** (https://slcc.instructure.com/courses/915963/pages/guidelines-and-expectations) and include the following:

- A title page and a brief introduction
- Show your implementation of class NumberList and the unchanged JUnit tests.
- Run the jUnit tests
- Answer each of the following Team/Collaboration questions:
  A. Did you and your partner pair program?
  B. How often did you meet to work on the assignment?
  C. Clear Communication: Did you communicate as you pair programmed?
  D. Switching Roles: Did you regularly switch roles?
  E. Did you and your partner maintain a positive and respectful attitude?
  F. What was the hardest part?
  G. What is your **pebble distribution** (https://slcc.instructure.com/courses/915963/pages/pebble-distribution) ?

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View Rubric

2420 - A03					
Criteria	**Ratings**				**Pts**
Implementation of 8 methods view longer description	**26 pts** **Full Marks**		**0 pts** **No Marks**		/ 26 pts
Style | Best Practices | Video view longer description	**4 pts** **Full Marks**	**3 pts** **Close** Good job overall. One of the guidelines needs more attention	**2 pts** **Getting There** Multiple guidelines need more attention	**0 pts** **No Marks**	/ 4 pts
					Total Points: 0

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