

CS 111 Lab 8: array-based Lists

20 points

Goal: To test your understanding of array based Lists

Implement the array-based list

We will only be working with lists of integers you will need to create an array-based List, this will be gone over in class, and you can reuse any code taught in lab or class. Follow the interface provided. Some of the methods are already implemented. You have to implement `remove()`, `replace()`, `contains()`, `getLength()`, `scaleByN()` and `removeDuplicates()`.

- **scaleByN**

This method will take the numbers within the list and scale it by itself, this means that if the array-based list looks something like this `[1,2,0,-2,5]` , after running this code the list should look like this `[1,2,2,5,5,5,5]`. Implement this method for the array-based implementation of list. It will remove negatives and 0's.

- **removeDuplicates**

This method will remove all duplicates from the list, if the list looks like this initially `[1,2,3,1,2,3,5,4,3,0]` the list should then look like `[1,2,3,5,4,0]` after running the code. You may see how an iterator may be helpful for the completion of this task for the array-based implementation of the list.

Additional requirements:

- Name included at the top of your code
- Commented code
- Clean readable code (1 pt.)