## CMSC204 Assignment 1

Class: CMSC204

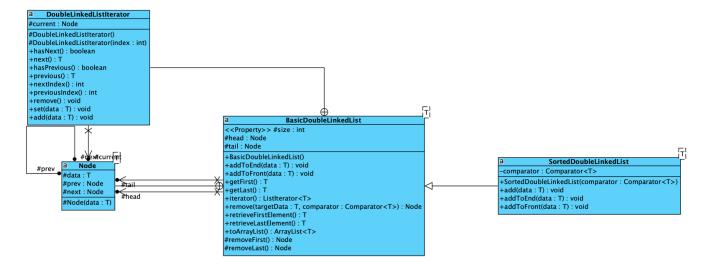
Program: Assignment #3 Instructor: Professor Kuijt Summary of Description:

Assignment is to write a generic double-linked list class with an iterator, and a generic sorted double-linked list class with an iterator that inherits from your generic double-linked list class. GUI for assignment was provided to help visualize linked list.

Due Date: March 5, 2023

Integrity Pledge: I pledge that I have completed the programming assignment independently. I have not copied the code from a student or any source.

## **UML:**

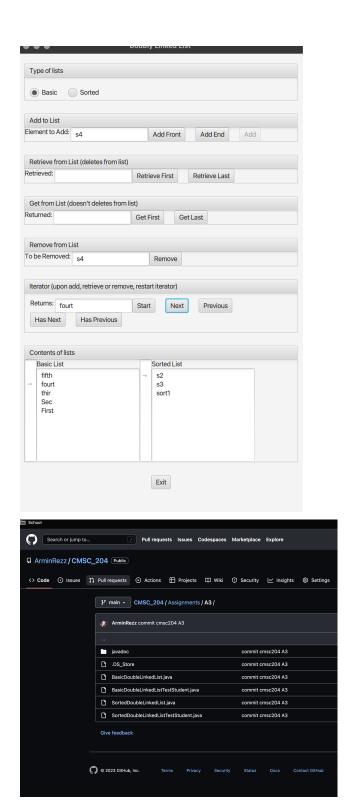


**Screenshots:** 

Adding to basic list: Adding to sorted list:

Doubly Linked List	
Type of lists	Type of lists
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Basic Sorted	Basic Sorted
Add to List	Add to List
Element to Add: neg1 Add Front Add End Add	Element to Add: s4 Add Front Add End Add
Retrieve from List (deletes from list)	Retrieve from List (deletes from list)
Retrieve First Retrieve Last	Retrieve First Retrieve Last
Get from List (doesn't deletes from list)	Get from List (doesn't deletes from list)
Returned: Get First Get Last	Returned: Get First Get Last
Remove from List	Remove from List
To be Removed: Remove	To be Removed: Remove
Iterator (upon add, retrieve or remove, restart iterator)	Iterator (upon add, retrieve or remove, restart iterator)
Returns: Start Next Previous	Sur Harring
Has Next Has Previous	Has Next Has Previous
Contents of lists	Contents of lists
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Removing neg 1 from basic and s4 from sorted Iterator



Lessons Learned:

What have you learned?

Learned how to implement linked lists, specifically a double linked list and a sorted double linked list.

What did you struggle with?

I struggled with some of the functions thinking of how to rearrange the nodes properly. Found that using a whiteboard was quite helpful for quickly visualizing stuff.

What would you do differently on your next project?

Nothing really probably wouldve spent more time optimizing

What parts of this assignment were you successful with, and what parts (if any) were you not successful with?

Successfull with all parts.