Lokesh Sankar Ramesh

Farnaz Eivazi

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**UML**

**Diagram

Description automatically generated**

Junit Tests Screenshots

BasicDoubleLinkedList\_GFA\_Test

Graphical user interface, text, application

Description automatically generated

BasicDoubleLinkedListSTUDENT\_Test

Text

Description automatically generated

BasicDoubleLinkedListTest

Text

Description automatically generated

SortedDoubleLinkedList\_GFA\_Test

Graphical user interface, text, application

Description automatically generated

SortedDoubleLinkedListSTUDENT\_Test

A screenshot of a computer

Description automatically generated

SortedDoubleLinkedListTest

Graphical user interface, text

Description automatically generated

**GUI Running**

Graphical user interface, application

Description automatically generated

**Lessons Learned:**

**Throughout the course of Assignment 3, I have garnered a deep fundamental understanding of the doubly linked list implementations, and I believe after doing implementing it myself, I am now able to intuitively understand this data structure even more. Learning from Project 3, I also used the Eclipse debug feature quite a bit for this project and it may have saved me some time. Before this assignment, I had minimal experience with linked list implementations in Java but this assignment has allowed me to develop a good understanding of how they work.**

**There are still some improvements I can make in the future. For one, I should’ve probably planned out my code better before actually doing it. Given it had been quite some time from when I did my UML diagram, I should’ve planned out the logic for many of my Stack and queue methods better beforehand. I found that I made lots of really small mistakes which wasted a lot of debugging time. I could have definitely prevented this.**

**In the future, I hope to spend more time planning out the logic behind each of the methods as well as any other classes I have to ensure I spend less debug time.**