Project 8 Documentation

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The purpose of the program is to create two different dynamic storage containers for a DataType class. An additional purpose to the program is to work with Linked List storage and dynamic memory allocation. The class methods should then output specific debugging statements when called in the main file.

In order to ensure the functionality of my program, I built from the ground up. I started with the ArrayList class since I felt more comfortable with array work versus the Linked List work. I made sure to write the constructors first and test their abilities. I wanted to ensure that the initializer lists were assigning the correct values to be later manipulated Next I implemented the rest of the front and back methods and tested them against the main file. After this I copied the process with the LinkedList class and its constructors and then the methods. I ran into a little bit of strife in the assignment operator. I fixed this problem by trying different ways to test the function. After this I did not have any issues with the remaining functions. I then made the cmake file and decided to assign each class to their own folder in the file structure. This made it easy to link them together manually. I had to change the include statements in the main file to match the file paths of my file structure.

One of the only problems I had with this assignment operator. It had a bad Segmentation fault at the point where the values were supposed to be copied over. I was trying to resize the array before copying it over. But I did not need to do this.

One thing I would like to explore if I had more time was the fact that in the Inheritance sample posted by Christos it had mentioned to declare the constructors in the protected part of the class; however, when I tried to put it in any other place than public there was an error. Because there was no specific note about it in the project instructions, I decided to leave it as is.