Project 10 Documentation

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The purpose of the program is to create two different storage stacks 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 ArrayQueue 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. Also I knew I didn’t have to worry about allocating memory for the array based queue. 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 LinkedQueue class and its constructors and then the methods. I ran into a little bit of strife in the assignment operator. I fixed this problem because I realized I needed to clear the left hand side object before I could copy over the right hand side. 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 forgot that I needed to delete the left hand side completely before copying over the right hand side. Also I had troubles assigning the values to the linked list queue. This is because I forgot friend classes existed in which another class could have access to another’s private members.