Utilizing a debugger became vital to the success of the implementation of this program. With a large amount of objects housed in separate arrays, being able to track an incrementally step through what was happening within the program was needed to see which object was being changed at that moment and what values were being changed.

With operator overloading being prominent within this assignment, being able to see the value of the data being used in arithmetic operations before and after the operation was helpful in determining if the operators were acting as intended. Using print statements to accomplish this would have been less than ideal, as there were dozens of operators that needed to be implemented. Using GDB enhanced my ability to find and diagnose the problem within one operator and the enabled me to not have to repeat the same mistakes in other similar operators.

This assignment also utilized Valgrind more than any previous assignment. With two different data structures within the program, as well as multiple arrays of objects, the risk of a memory leak was high. Utilizing Valgrind I was able to locate the source of several memory leaks within my array of doubly linked lists and fix them.