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Lab Section: 1108

Project 8

**Project Purpose**

The purpose of this project was to write the remaining files that were not provided and implement an ArrayList class along with a NodeList class. The main test driver file was not provided as well this time, so I had to write that along with ArrayList.cpp and NodeList.cpp. The hardest part about this project was figuring out how to test each part of the code in the test driver file. I had to go back and look at the previous projects to see how the functions and constructors were tested. After I saw an example of how those elements were tested it made more sense. One of the main aspects of this project was using the Nodes.

**Difficulties**

While I was writing the ArrayList.cpp file I ran into a few complications. One of them was with the find( ) function. I do not know what I was doing wrong but when I tried to compile it would display undefined symbols. I changed around most of the code and rewrote it, which then made the issue go away. After that was resolved, the next problem I had was the insert after and before functions. It was really hard to tell how to test them in the test driver file as well. I kept getting random compile errors while writing those functions, and after I stopped getting errors it was a while before I could test them as well, as I had to test the other functionality before that point in the test driver. The hardest part about this project was figuring out what to test in the test driver file. Figuring out how to get the destructors to print at the end of the test driver as well was a major problem. It took me an extensive effort to figure out how to test the destructors. After moving on from that portion I really spent the rest of my time attempting to test the assignment operator. I found making the code look nice for the test driver was a new abstract challenge I had not encountered before. Grouping up the output for it to make logical sense required some abstract thinking. One of the test drivers from a previous project had an interesting way of displaying the output. To run this code, be sure all of the files are grouped together, and in the terminal type “make”. The executable is named “proj8”. Type “./proj8” to run the program.