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Programming Assignment 1 Commentary

The computational complexities of my linked list's push, insert, delete, edit, and search methods are O(n). These methods traverse every item in my linked list a maximum of one time, and often less than that for all of the methods except for push which must always traverse every element. The readCommand method found in my LineEditor class would normally have a constant runtime, but because I call the function "find" the runtime is actually O(n).

Overall, using a linked list for a line editor is a good idea. The advantage is that unlike an array, deleting elements would not leave gaps in the array and require resorting. Furthermore, when adding new elements you don't run the risk of running out of space and having to double the array. This implementation does have disadvantages however, for example reading from, and editing the individual lines would be a constant time operation in an array instead of the current O(n).

Through this assignment, I learned how to read a user's input in C++. I would have performed further testing through the development phase in order to avoid a large number of errors when I ran the tests at the very end of the initial coding process.