Programming Assignment 1

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1. Computational Complexity:
    a. insertEnd: (1)
    b. insert: (1)*
    c. delete: (1) *
    d. edit: (1) *
    e. print: (n)
    f. search: (n)
    g. quit: (1)
    *Means it runs at the value of index, but because index is essentially some constant (1 < index < n), it wouldn't necessarily increase as the size of the linked list increases, so calling it (n) would be misleading.
2. Use of linked lists for line editor:
    a. Advantages:
        i. Quick insertion of lines
        ii. Quick deletion of lines
        iii. Quick modification of lines
    b. Disadvantages
        i. More memory usage, because it must store pointers
        ii. Cannot pull single element without traversing all lines before it
        iii. Cannot pull the line before, without going through entire linked list up to line
3. Lessons learned:
    a. Linked lists are very easy and straightforward data structures, so I shouldn't be scared to use them just because I am less familiar with them.
    b. I do feel significantly more comfortable with linked lists now that I understand how they operate, and what is good and bad about their execution.
    c. I am also much more comfortable with strings and receiving input using cin and getline()
    d. If I had to start over I would most likely try character arrays instead of using strings. I used what I was the first thing to come to mind, but now that its done I can't tell if it would have been any faster using char arrays.