**Programming Project Report**

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Date: 9/16/22

**Academic Integrity Statement:** I pledge that I have neither given nor received unauthorized help on this programming assignment.

**Problem Statement:**

* Describe the goals of the programming assignment.
* What are the program inputs?
* What are the program outputs?
* What error handling was required?
* This section should be 1-2 paragraphs long.

The goals of this programming were to create a linked list that stores a user’s profile, and how many messages they have sent. The program would accept inputs from the user such as names, phones numbers, etc.. But this project did not require inputs from the user to be handled, instead the demonstration of the linked list could be “hard coded”.

**Design:**

* Describe the design decisions you made.
* What data structures did you use?
* What algorithms did you use?
* What were pros/cons of choices above?
* This section should be 1-2 paragraphs long.

I decided to use what we’ve been learning in class regarding memory management and linked lists. I used linked lists to store class objects. I only used simple arithmetic. Using what we’ve just been taught led to some difficulties as I did not have a full understanding of how it all worked.

**Implementation:**

* Describe your implementation process.
* What sample code did you start with?
* How did you extend or adapt this code?
* What was your development timeline?
* This section should be 1-2 paragraphs long.

I did not start with any sample code. This project took less time than project one, ~4 hours, but only because the final main program could be hardcoded instead of needing to accept inputs from the user and having to deal with getLine() and the whole host of errors that comes along with it.

**Testing:**

* Describe how you tested your program.
* What were the normal inputs you used?
* What were the special cases you tested?
* Did everything work as expected?
* Include sample input/output from your program.

I tested my program with multiple different class objects. And to test my functions with multiple inputs but not needing to accept inputs from the user, I used rand() and srand(), seeded with the time to change inputs each time the function is ran. Evrything mostly worked as expected, but I did have some problems finding what library srand() and rand() were included in. Typescript included.

**Conclusions:**

* Describe the overall result of the assignment.
* Was the programming project a success?
* What would you do same or differently next time?
* How long did the project take to complete?
* This section should be 1 paragraph long.

The result of this project is a new found respect for linked lists, at the beginning of this project I was wondering why anybody would ever use a linked list, but know I see that even though you have to sort through a mess of pointers, they are still better than using arrays. Yes it was a success. I would take the time to actually accept user inputs and handle errors gracefully. It took roughly 4 hours to complete.