Welcome to the final project I decided that I wanted to do a supermarket self-checkout for my final project. Given the liberty of what to do for our final project, I chose this because it will be something I would enjoy making.

I will be implementing topics I have learned in my CSCI 202 class for this program. Two of the topics I will be implementing are Maps and Linked-list. Maps will be used in my program by being the account connected with the user's phone number and the system. The user will implement their number and it will form a connection if their account is in the system it will prompt the user that their account is in the system. It's like a reward system that most stores around have.

Linked-list will play a huge role in my project. The purpose of the linked list in my program is to keep to form a list of the prices that the user has entered into their program. The list will form and then be used at the end to calculate the total of the list that the user has provided.

The program will prompt the user with the welcome screen which will contain general information about the store. The first thing that will be asked at the beginning is if they have an account associated with the market. They will be given the option to either say yes or no. If the user says yes they will be prompt to implement their phone number for the system to look for and validate that phone number if it's in the program. If the user says no they have the option to either continue with the program or create an account with them.

Once the user has passed that part they will be prompt to either end the transaction or continue. From there they will be asked how many items will they be purchasing. The program will ask the user to enter each item’s item name and price.

Finally, when everything is entered the program will do some calculations and display the total amount of the transaction. It will display in a receipt style. Will have the total, tax, subtotal, and the list of the items that were purchased.

Notes:

When running the program there is a thing to know. If you go the way where you want to input the phone number to look up your account use '123456789' for your phone number so it can say that your account was found. In the real world, we would use real phone numbers and have data already collected but this is a final project so we are limited.

References:

//Addition of the values nodes

https://www.geeksforgeeks.org/sum-of-the-nodes-of-a-singly-linked-list/

//Vectors

https://www.tutorialspoint.com/cplusplus-array-of-strings

//Do while loop

https://stackoverflow.com/questions/46913642/i-want-to-keep-the-program-on-running-until-the-user-enter-n-to-exit-the-program

//Time complexity

https://www.geeksforgeeks.org/measure-execution-time-with-high-precision-in-c-c/#:~:text=measure%20execution%20time%20of%20a%20program.,jan%201%201970)%20in%20seconds.&text=Prototype%20%2F%20Syntax%20%3A%20time\_t%20time(time\_t%20\*tloc)%3B

Final Project Assignment

Make a proposal for your final project here, due during Module 10. In the proposal, describe what you intend to do for your project in terms of:

General description of the problem you will be solving Itemized list of use cases List of parameters that will be part of the user interface What structures and algorithms will you be using Cite three sources related to your project Determine what is unique about your project from others Note that you may not submit your final presentation unless your proposal has been approved by your instructor!

Your proposal should be submitted as a Word document giving your name, project title, and four sections for each of the bulleted items listed above. Each section should have one paragraph summarizing the section, followed by text or bullets detailing them. A References section should be at the end that lists any outside sources (such as a particular implementation or problem or code library) you plan on using.

More details on the content of this document will be provided by your instructor.