Stage Two

Project Description:

The Grocery Getters mobile application will focus on providing shoppers with a way to optimize their savings and time while getting their groceries by using their phone. The core service will be to create a grocery list that allow users to check what items are on clearance and on sale, then compare them to their regular prices as well as show what the grocery store has in stock by connecting through an API. The app will assist the user by showing the general location of the item they are looking for within the specified store such as the aisle number or section. The primary target users of our app are students and older individuals that like to shop for sale items or move quickly through the store.

List of Stakeholders:

Customers

Customers are the main stakeholders for this app as they will be the primary users in order to keep track of their groceries while simultaneously using the savings features. The user tasks will be mainly determined by how the customers grocery shop and directly influences the relevance of each task. For instance, if we find that more users care more about saving money as opposed to time, then the focus of the mobile app would be to include features that will save grocery shoppers the most money.

Stores

The main grocery stores (e.g. Superstore) are also stakeholders since they will assist in providing the information needed to locate items within the store such as the aisle number or general section. The mobile app will take advantage of the listed sale items for a grocery store as well, so we need the proper price information from each store. In order to create the API, they would have to give us the needed assistance to connect the mobile app with their online inventory system.

User Research Methods/IDEO Cards

Shadowing -

We chose shadowing as it supplies insight into what goes through the customer's mind when going to the grocery store. From start to finish, typically a list is created. This list could be from the start of the week or made up on the spot. At the grocery store, upon walking in, you used to be able to pick up the weekly flyer. Now the stores are using larger price tags to reach out to the customer. The bakery and fresh produce aisle are first as these are common staples in diets. Shoppers who are hungry for deals go through the whole store searching for sales. Through going shopping with mom who must feed a family of five, she tends to have large shopping lists

and move through each aisle in the store. Comparatively, my brother knows what he wants and will circle the store as many times until he gets what he was looking for. It is also noted that people with higher income tend to buy the higher quality goods. This was noted between my brother and mom. My brother would buy the cheaper eggs while my mom would buy the high-quality organic eggs. This was seen with meats and vegetables as well.

Cognitive Task Analysis -

The user interaction with the app both occurs in and out of store. Out of store is when the user is using the features in the app. These features could be inputting their items into the grocery list, comparing sale prices and actual prices or looking at the weekly flyer of sale items. The out of store decisions are made when inputting the items into the grocery list feature. The instore decisions are made when a customer is choosing whether to buy the name brand item or the off-brand item. Differentiating brands in the grocery list app would be tough. Action for the user is following the apps grocery list to finding what they need in the store and using the apps features as intended. Some of the bottlenecks in the functionality would be inventory tracking. A lot of the time, grocery stores track their costs of an average purchasing price basis since they hold so much inventory. Having a number given would be tough. When giving a price for the price comparison, there are many different brands. Take soy sauce for example. There are many different brands of soy sauce and they all go on sale, differentiating which sale is better is hard as there are so many brands and prices to track.

Flow Analysis (See Appendix) -

By analyzing the flow of tasks that a user goes through while getting groceries, we can visualize everything to get a better understanding of what the Grocery Getters app should accomplish to help optimize their shopping experience. Making the initial flow chart was easy as I just listed down what I usually did while grocery shopping and plotted all the logic involved on a graph. After studying the flow chart of a normal customer going out to get groceries, I was able to make another one but this time with Grocery Getters. I discovered that using the app eliminates several problems which customers often encounter such as looking for the item and not finding it. Overall, everything about the flow analysis went well and I do not think I would have done anything differently.

Justification & Reflection on Research -

We chose the shadowing card to give us a closer look at the typical consumer experience when shopping at a grocery store. Through this we can determine the behavior of an average customer and then perform both cognitive task analysis and flow analysis to identify the issues with the current shopping experience and how we could fix that with our mobile application. Cognitive task analysis allowed for us to find potential bottlenecks in the thought process of buying groceries and adding them to a list. With the flow analysis card, we were able to determine the inefficiencies in the grocery shopping process and provided possible solutions

that our app could fix. These three cards complemented each other by how each research method transitioned useful user data to use for the next card.

Both shadowing and flow analysis cards went well as we got to observe real behavior when people go grocery shopping which helped us determine the bottlenecks in the shopping process that our mobile app could alleviate. The only thing we would change here is having a larger variety of people performing the shadowing as grocery shopping can vary for people in different age groups or income levels. Cognitive task analysis was too generic of a research method to give us useful information to inspire ideas for our mobile app. Since the summary of decisions and sensory inputs only came from a few perspectives, it does not fully guarantee that that it covers the general census of grocery consumers.

User Task Descriptions

Must Include:

- User adds items to their grocery list
    - Use items on the list as keywords to search for sale items
    - Can sort the list alphabetically, date added and priority
- Users can search for items on sale using their grocery list
    - App will display sale price and regular price
- Users can connect to the grocery store's inventory system to see total stock for an item
    - User clicks on an item in their list, it will give them a pop-up option to look at the inventory system and see the total quantity for items related to the keyword
    - Users can filter to see items that are sold out

Important:

- Users can search for where items are located in the store
    - User clicks on an item in their list and they have the option to "find in store"
    - Users will be able to see the displayed aisle number or section (e.g. Dairy)
- For each grocery list, users can specify what grocery store they are shopping in so they can connect to the inventory system and see the general locations of items in the store
- Users can choose to price compare to grocery store competitors
    - User clicks on an item and filters items that are on sale, there will be a drop-down box to compare prices with others stores.

Could Include:

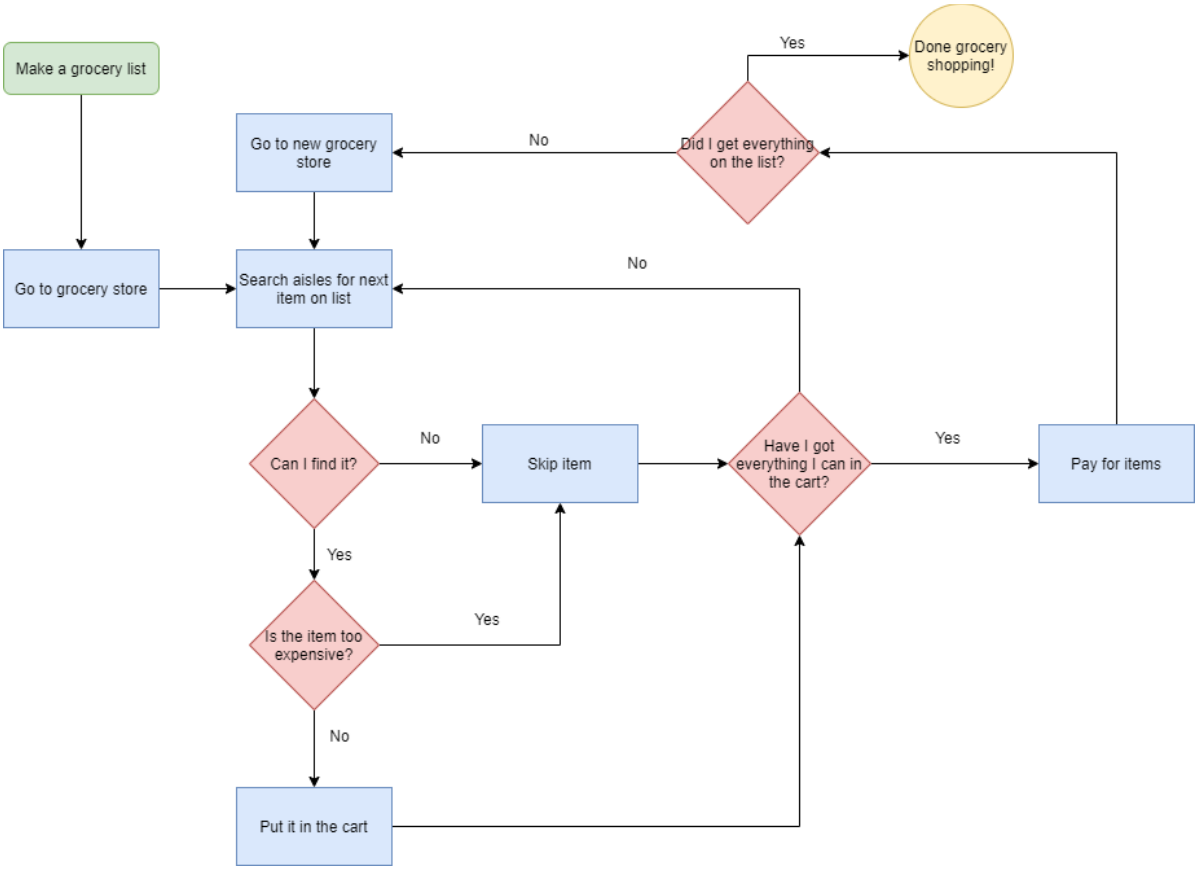
- Users can search and filter for clearance items (quick sale or discontinued products) in the store
    - App will display sale price and clearance price

Appendix for Research: Raw Data

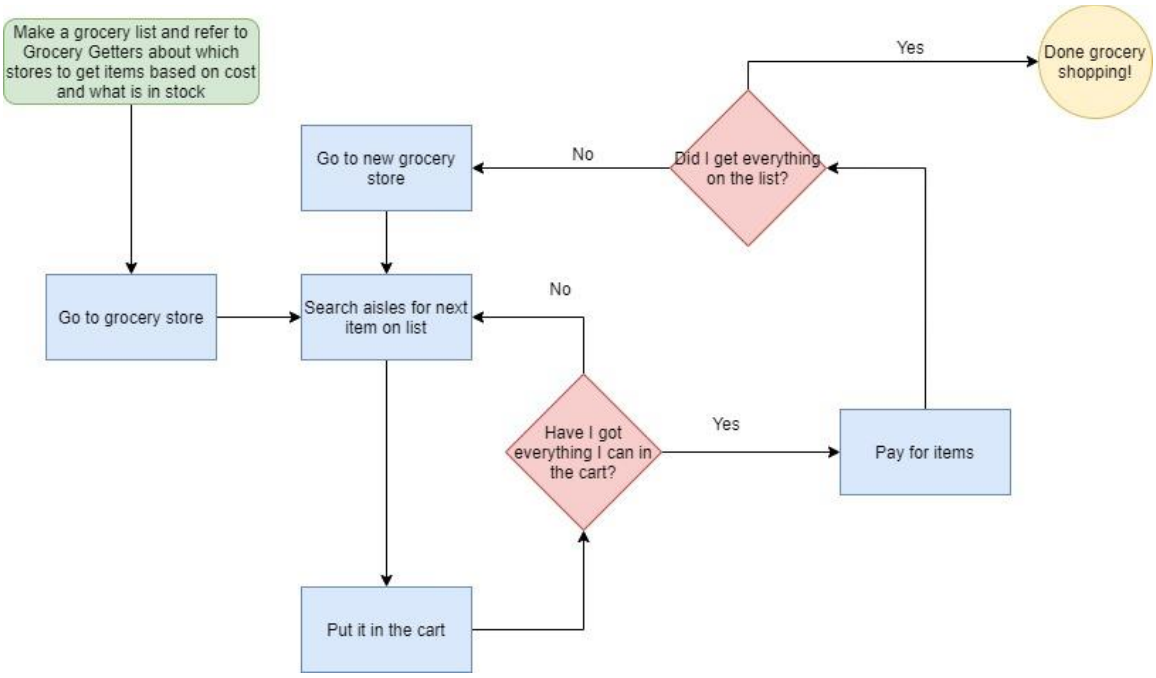
Summary of Matt's findings on shadowing - Shoppers have their own habits to how they move through the store. Younger/ working individuals tend to get what they need then get out. Older individuals, specifically parents who do not work or have more time, scan through all the isles in the grocery store. My mom will buy toilet paper regardless if needed or not if it is on sale.

Flow Analysis Charts

Initial Flow Chart (Without Grocery Getters)



New Flow Chart (With Grocery Getters)



Repository Link: https://github.com/parkercodewong/cpsc481_teamD

Portfolio Link: https://parkercodewong.github.io/cpsc481_teamD/