Grant Azure, Antonio Diaz, Peter Hu, Hieu Trung Le
Assignment 2f, Design Check-in

Our designs address different tasks that could be encountered before, during and after the grocery shopping experience. Those tasks are:

1. Make Shopping List

Before each shopping trips, shoppers often plan the trip in various way. They notice items running low, ask others to check for low items, and then plan:

- On paper: shopping list is compiled using shared notepad or post-it note.
- Text messaging: last minutes arrangement can be communicated by text messaging or telecommunication

2. Going to the Grocery Store

Shoppers have to decide what store they want to go to based on their preferences, deals, and proximity. On the date of the trip, shoppers often have to make decision about which mode of transportation to use to reach the shopping destination.

3. Shopping at the grocery store

Shoppers at the store often communicate with housemates who are not with them. To locate desired item, shoppers have to navigate the store efficiently. Shoppers have to compare similar items before deciding on what they purchase and marking items off their list.

4. Paying for Groceries

Shoppers often pay for grocery using their credit, debit or EBT cards. They often scan their customer loyalty card, scan each item's barcode, select payment method and pay, and get a printed receipt.

5. Going back and Storing Groceries

Shopper often returns home using the same mode of transportation they use to get the store. Once get home, they often put food items in the fridge, on the shelf with label or desired location that have been arranged ahead of time.

6. Managing money

Shopping is often done in one person's budget. Reimbursement is necessary and often difficult due to the unavailability or unwillingness of household member.

Design #1

This design covers 4 specific tasks of grocery shopping: Making shopping list, going to grocery store, paying for grocery and managing money. The high level idea of this design is

- First, to demonstrate that the app will notify the shopper about the promotion at local store and allow him (and others) to plan the trio
- Second, to show that the app assists the shopper with finding mode of transportation
- Third, to show that the app allows him to compile his shopping list, make payment store and capture the shopping receipt
- And last, to help him request reimbursement from other house member

Task 1: Creating List - Figure 1-A
The shopper will receive a promotion for an item. He can then add that item to his personal list, or to a household list and choose to notify housemates of the change.

Task 2: Choose a Transportation Method - Figure 1-B
The app provides the shopper with some modes of transportation to a store he selects. He can choose his method of transportation here.

Task 3: Paying for Groceries
After he's done with the shopping, the app allows him to use his phone to pay for all the items. He can sync his payment info with the store's payment system and complete the transaction, receiving an electronic receipt.

Task 4: Reimbursement/ Money Management - Figure 1-D
The shopper can now assign who owes him for each item, or what the communal grocery cost is. Upon receiving the request for funds, his roommates can send him the funds through the app.

Figure 1-A: Sale Notification and List Creation

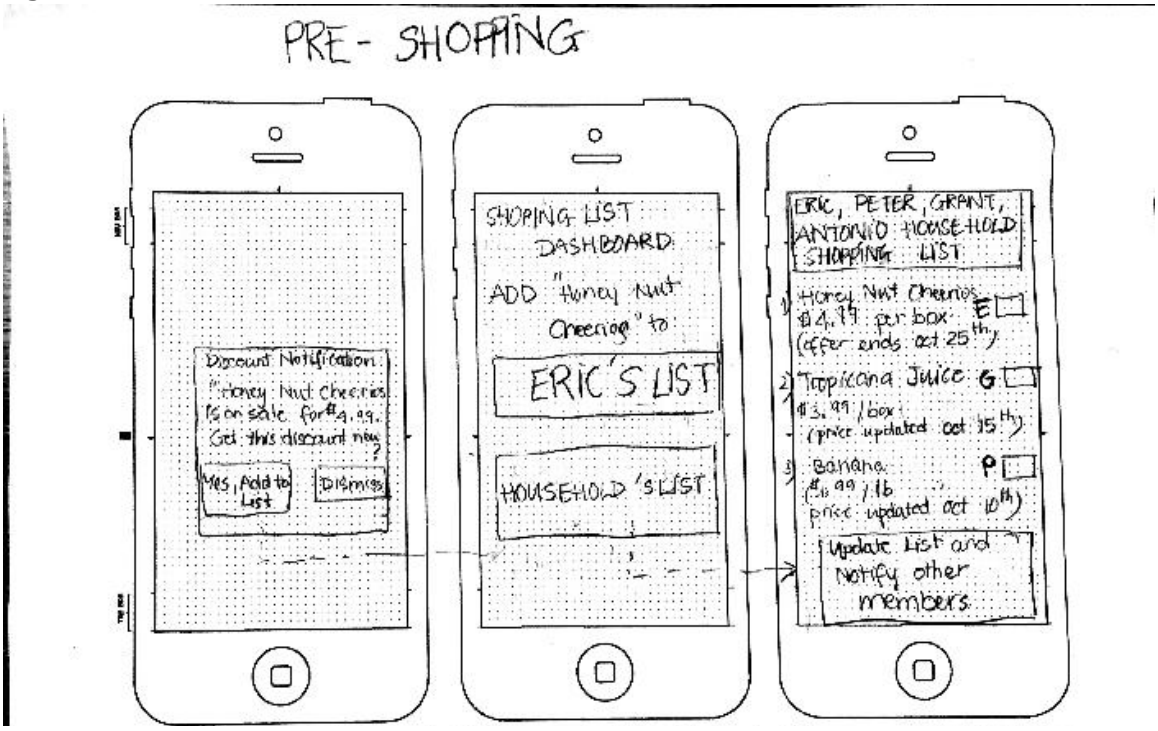


Figure 1-B: Choosing a Transportation Method

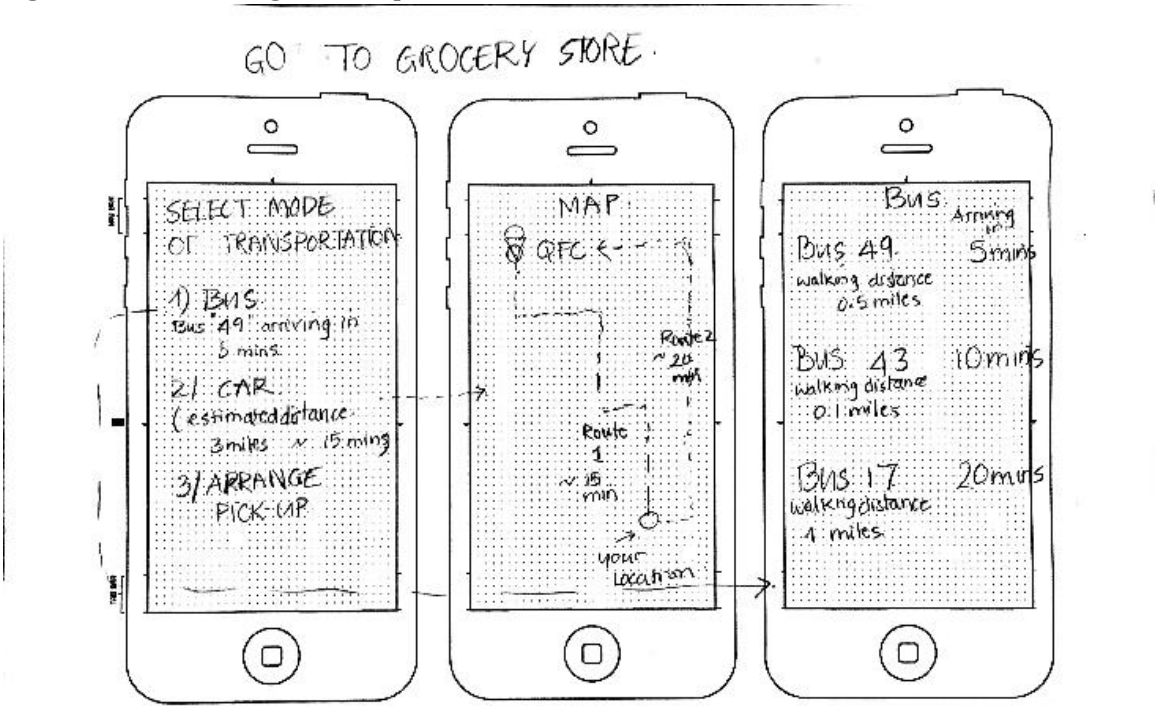


Figure 1-C: Payment

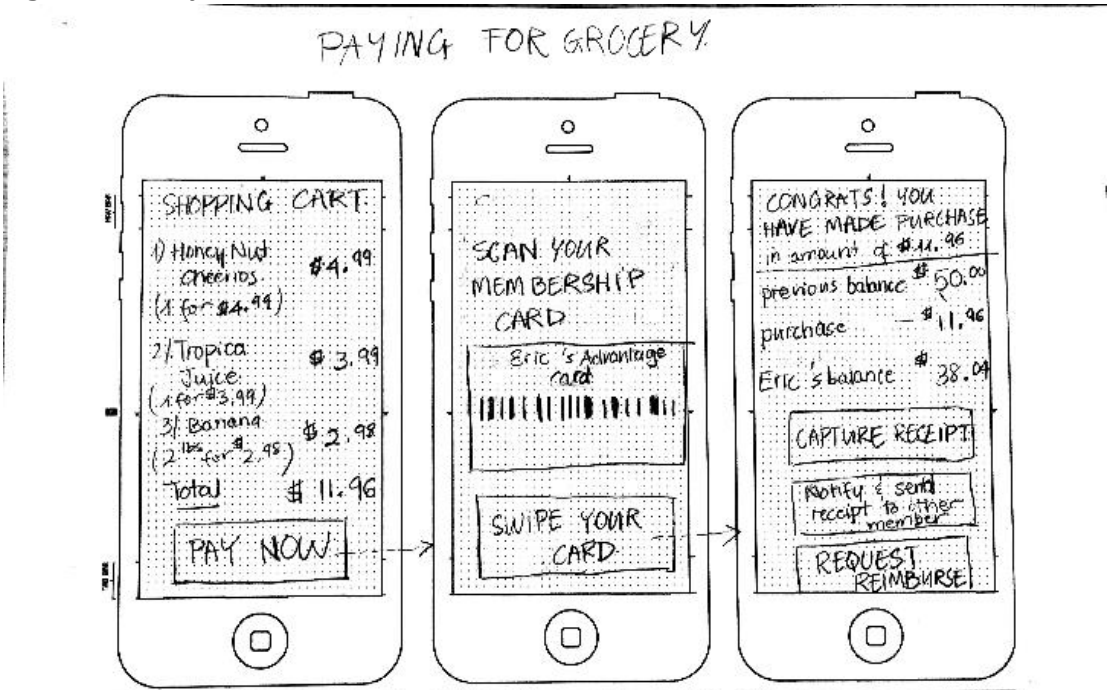
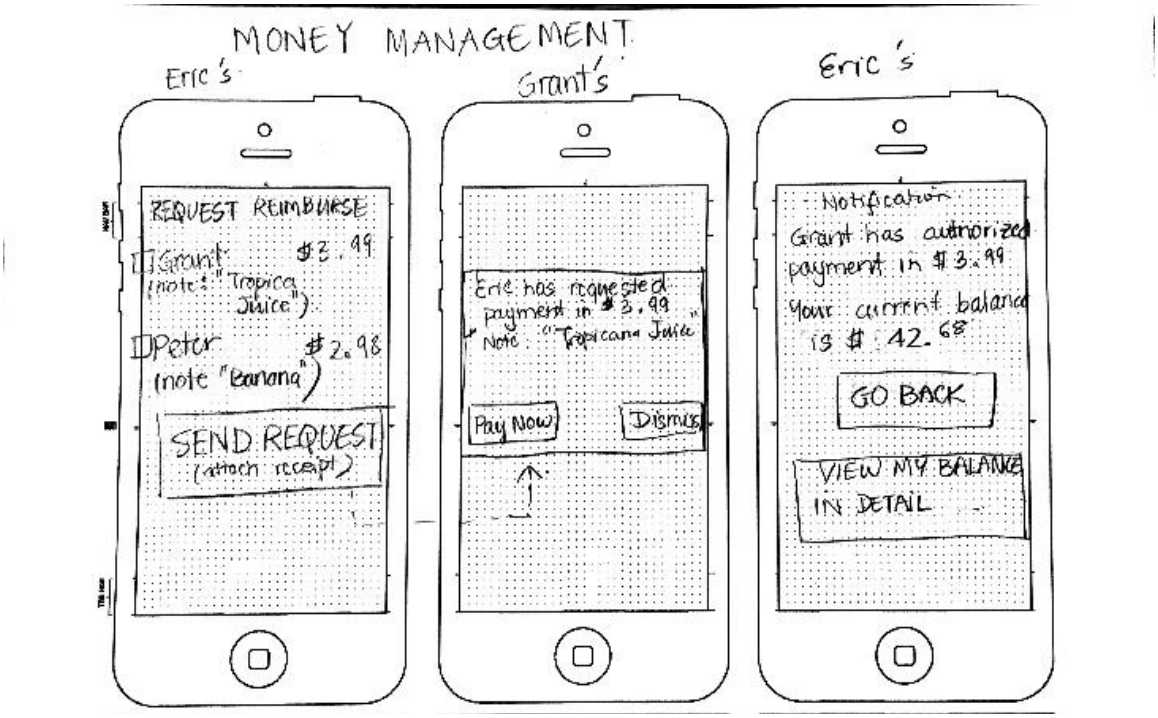


Figure 1-D: Money Management



Design 2

- The high-level idea of the design

The design isolates the main modes of shopping with four home screen tiles: House Shopping List, Individual Shopping List, Current Trip, and Past Trips. This covers the three phases of shopping we uncovered in out contextual inquiries: pre-shopping, in-shopping, and post-shopping. This design utilizes in-app messages from member to member to communicate shopping needs and synchronizes data/lists between all household members' phones.

- How to complete each the four sketched tasks:

1. Notice what's running out - Figure 2-A

When someone notices that an item is running out in the house, they can add it to the in-app shopping list and mark as communal or individual. In Figure 2-A, a shopper can view an overall shopping list for the house or lists for individuals.

2. Shopping at the grocery store - Figure 2-B

When someone goes to the store, they can swipe to the "current trip" screen (figure 2-B) and check into their store. They can notify their housemates that they are shopping with the push of a button, open their shopping list to mark off items during the trip, and mark the trip as complete when they are done to enter post-shopping mode.

3. Storing Items - Figure 2-C

After someone has returned from the store, the app knows what items were marked off during the trip. They can view these items in a storage screen (Figure 2-C) and drag personalized storage labels such as "closet" onto them for reference.

4. Managing Money - Figure 2-D

After someone has completed their trip, they can take a picture of the receipt and get the trip amount. The cost for other house members is calculated, with or without deductions for personal items. Then the shopper can send customized reimbursement reminders to the house and track who has paid or not.

Figure 2-A: Figuring out what's needed

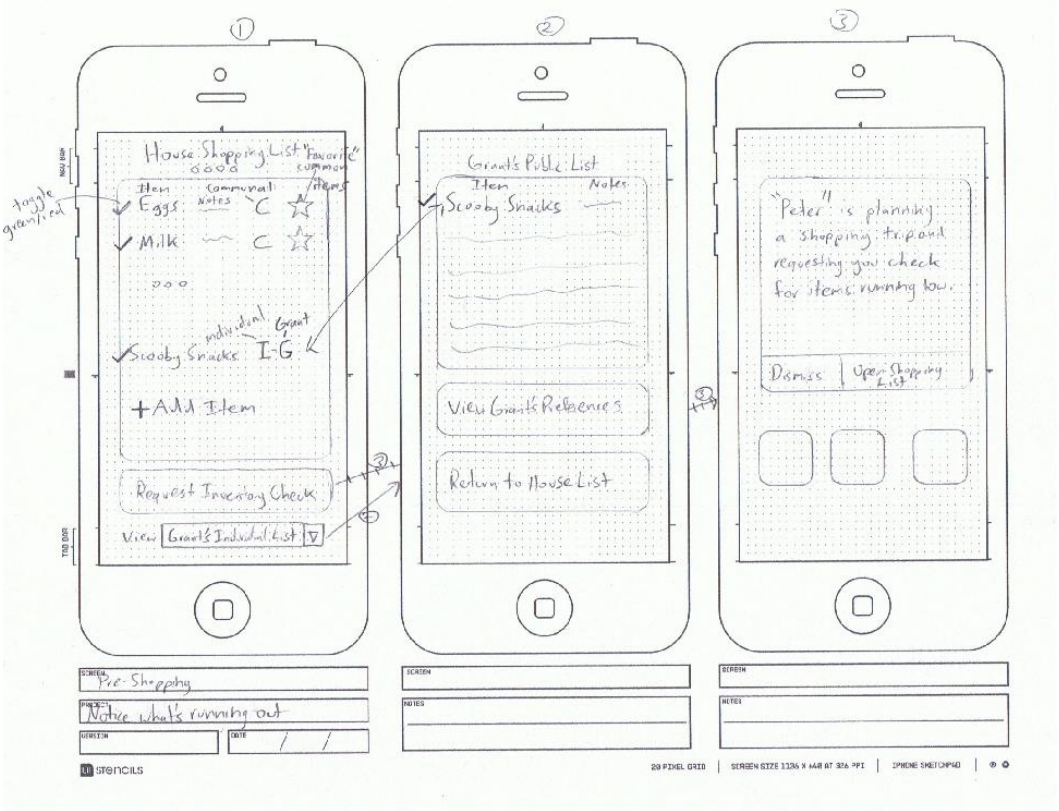


Figure 2-B: Shopping At The Grocery Store

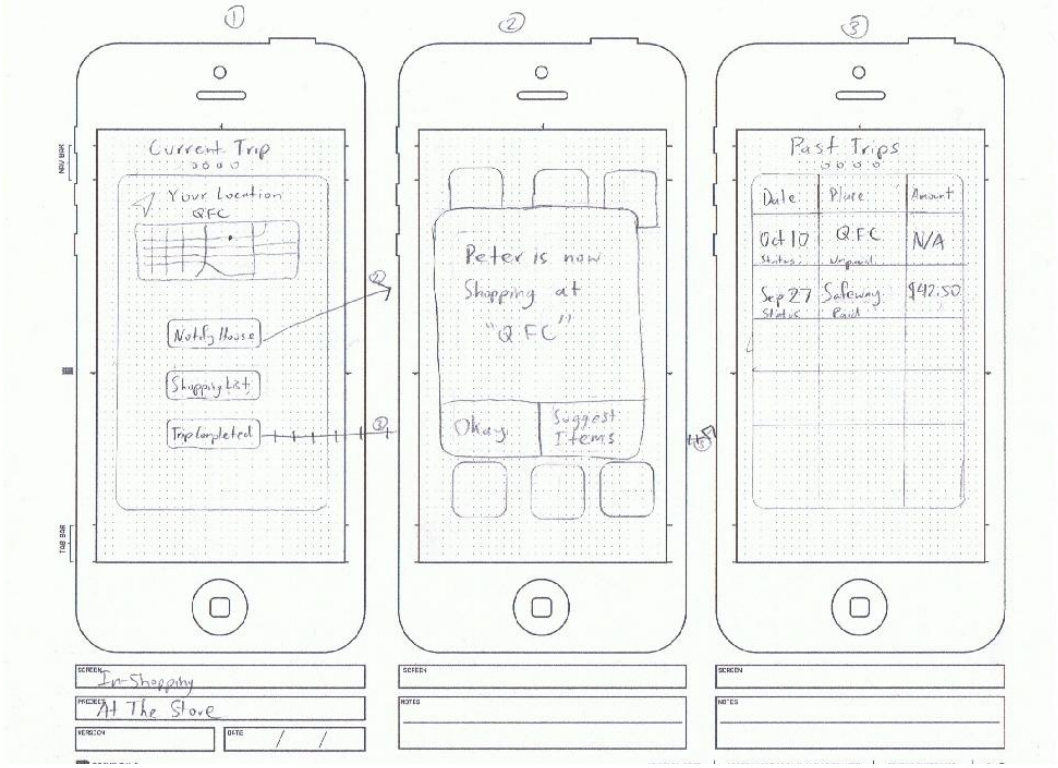


Figure 2-C: Storing Groceries

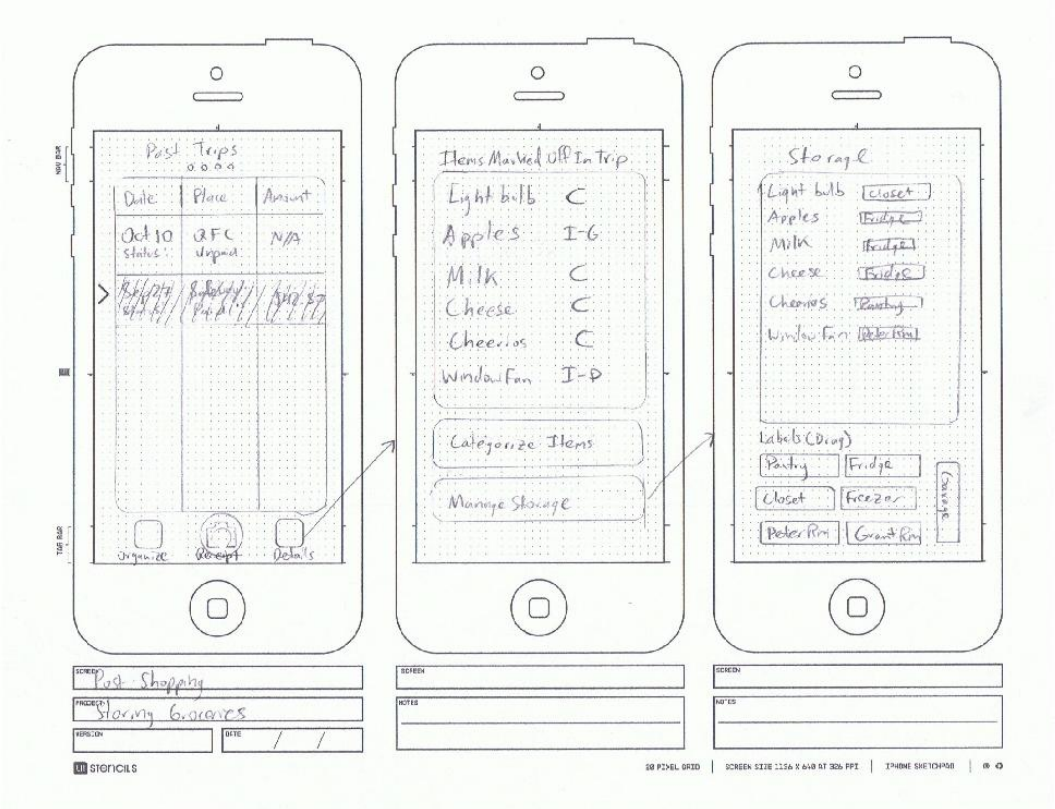
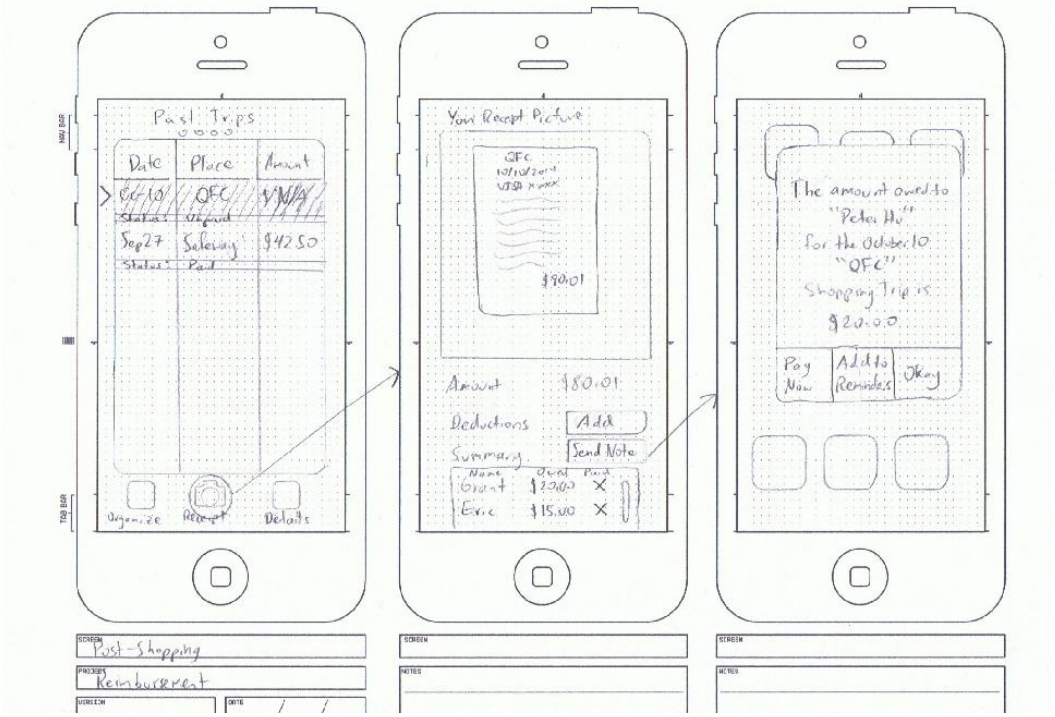


Figure 2-D: Managing Money/Reimbursement



Design 3

The high-level idea for this design is that sensors in your kitchen, pantry, and fridge detect what groceries are currently inside. The sensors then can detect the lack of certain items, learning item preferences over time. There is a control panel for your kitchen, either built into an appliance, mounted on a wall, or could even be a desktop or mobile application. The control panel software maintains a master list that is pushed to housemate's phones. From there, housemates can assign themselves 'grocery tasks' (i.e. a subset of the master list they are responsible for). After the housemates buys the groceries, the sensor array can indicate which storage areas are open for those items, using lights or something to indicate open areas.

Task 1 - Detecting needed items - Figure 3-A
The sensors detect what's in the kitchen, the control panel will learn grocery preferences and decide which items might be needed. This might require some initial input.

Task 2 - Forming list - Figure 3-A
After the sensors detect a grocery deficiency, the control panel will push a notification to house members asking if it needs to go on the list. The house member accepts or declines and then the item is added or discarded to the list.

Task 3 - Grocery Assignment (subtask of Going to the Store) - Figure 3-B
House members can now form 'grocery shopping tasks' by selecting which items they will buy from the master list. New grocery tasks are pushed to other housemates to keep them aware of what is being bought.

Task 4 - Storing Groceries - Figure 3-D
As the sensors can detect grocery deficiencies, they can detect which of a house's storage areas are open for groceries. This information is outputted in a way that makes it easy for someone to know which areas are open before they look through the areas (computer visualization, lights built into kitchen/pantry/fridge, or something else).

Figure 3-A: Sensors and Listing

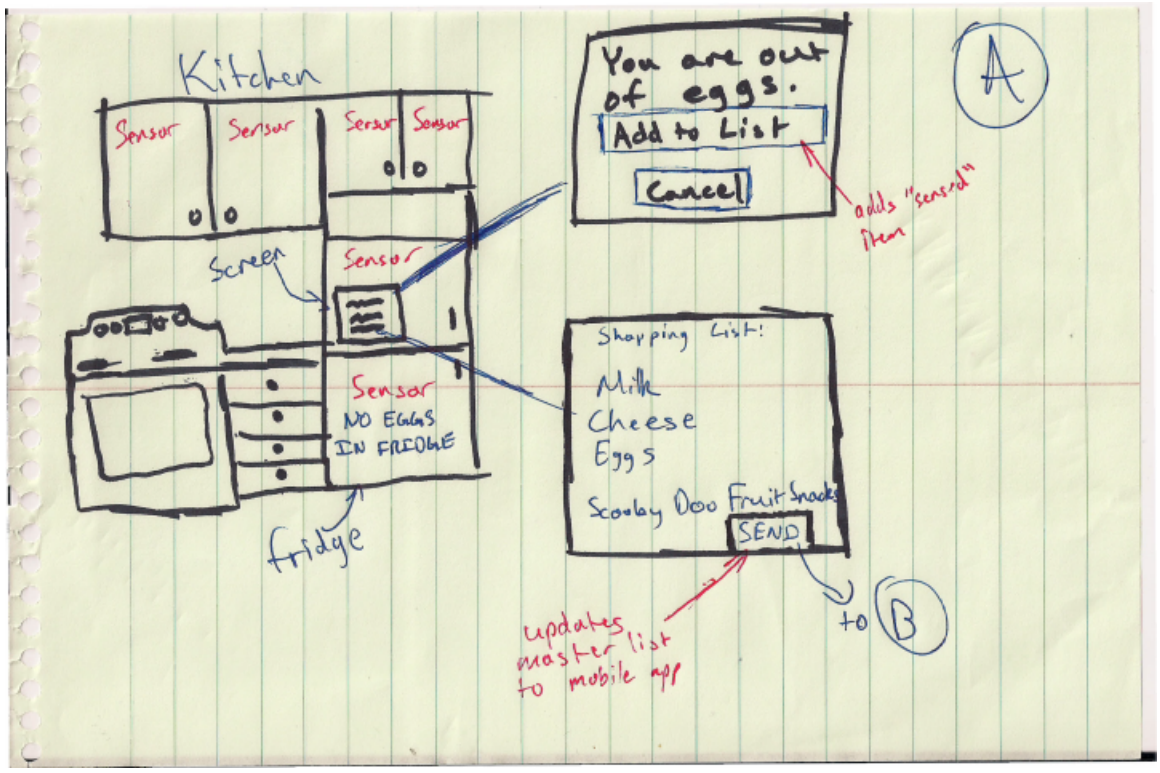


Figure 3-B: Task Assignment

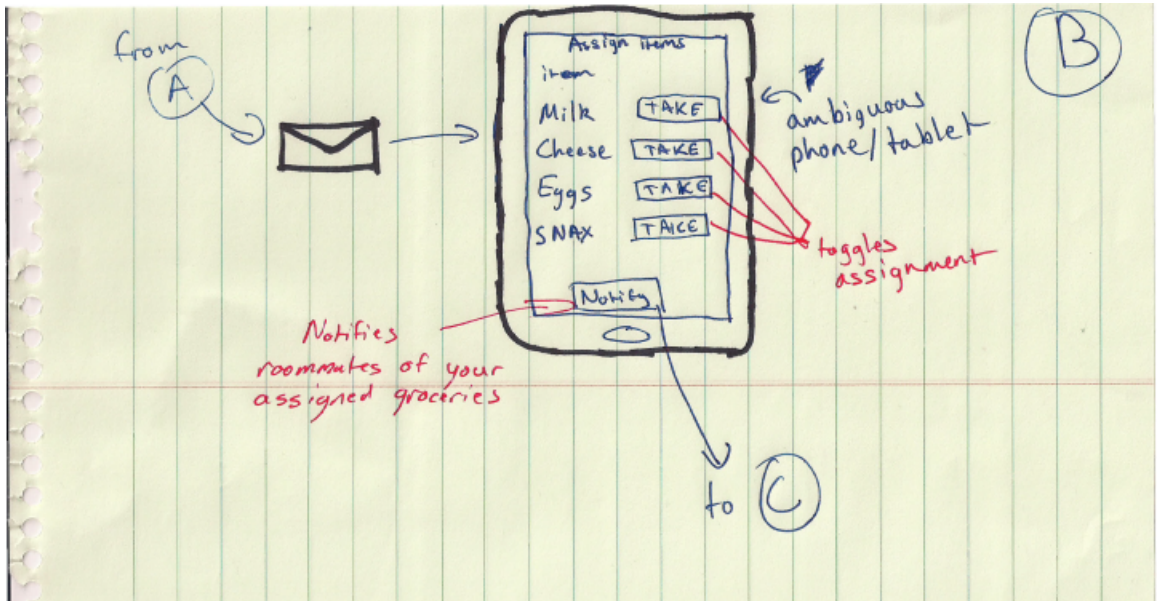
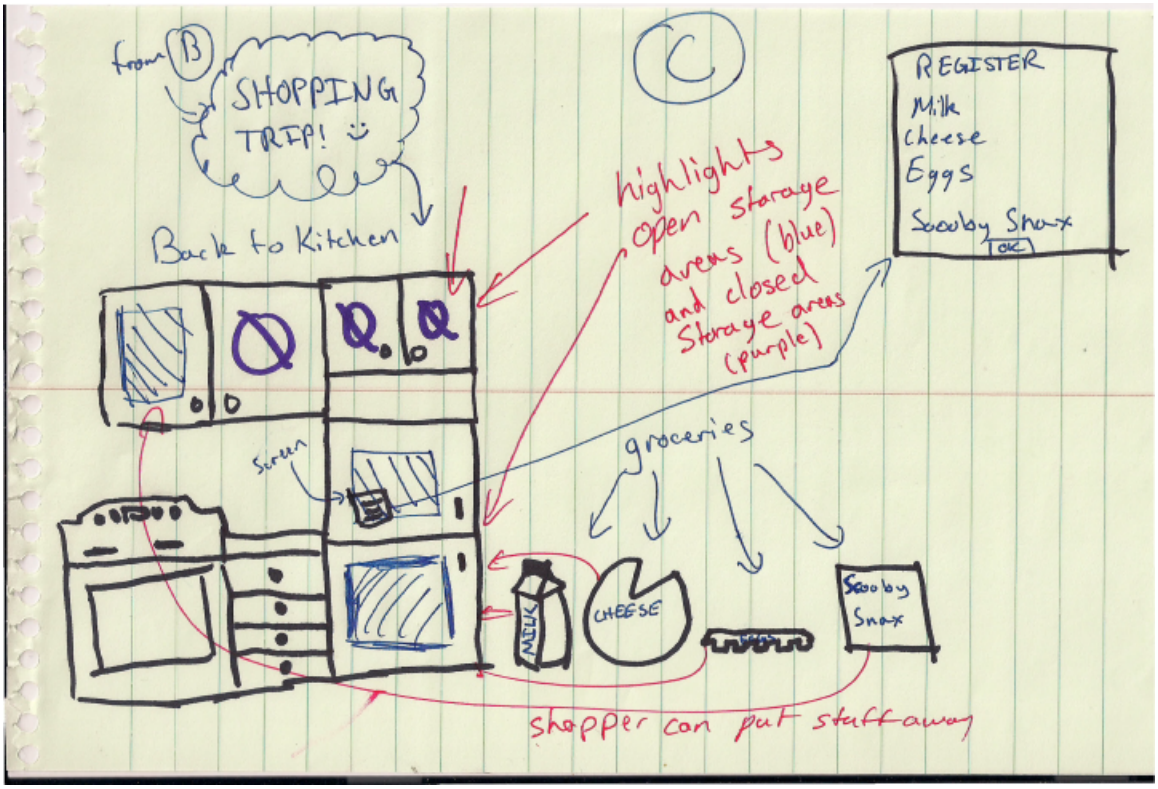



Figure 3-C: Storage