

# ShoppY

Low-fi Prototyping & Pilot Usability Testing  
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## 1. Introduction

### Mission Statement / Value Proposition:

*Fewer choices, better products.*

### Problem / Solution Overview:

The problem with conventional shopping is the amount of time it takes. The solution is to create an app that gets rid of the obstacles to convenience and quality, by automating parts of the process.

In store shopping costs the time of transportation, collecting items from the shelves and waiting in for check out. Although online shopping do not need driving to the store and waiting for checkout, we always spend a lot of time in putting items in the cart, especially making choices between similar products, reading comments, finding add-on items for free shipping et al.

## 2. Sketches

### 2.1. Concept Sketches

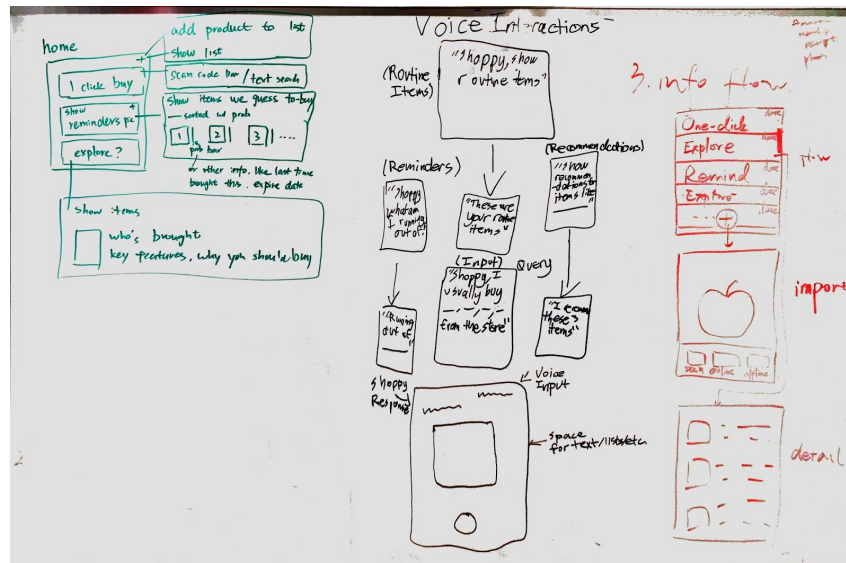


Figure 1. Left column: conventional interface with buttons and several separated interfaces; Middle column: conversational interface; Right column: information flow interface

## 2.2. UI Sketches

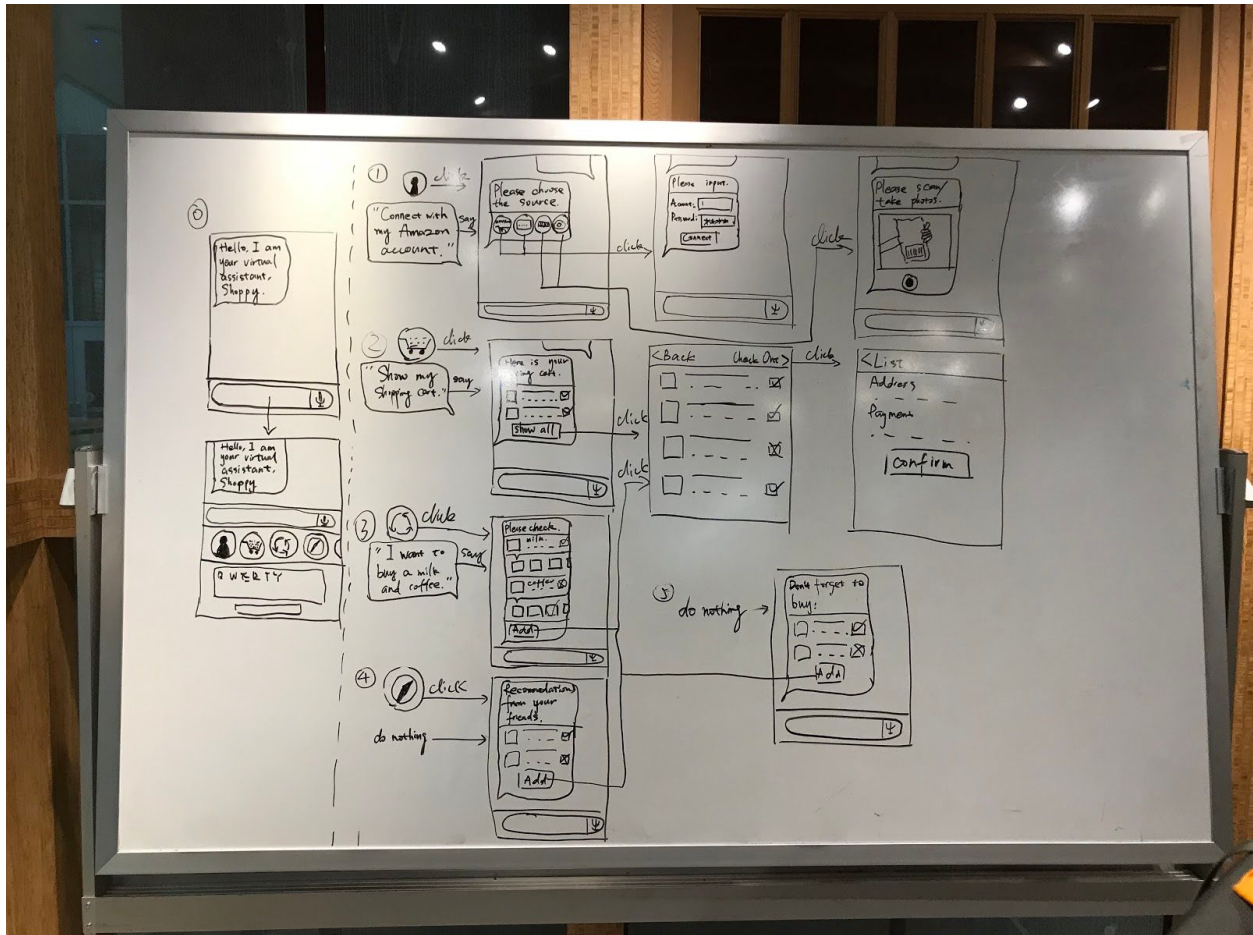


Figure 2. UI sketch for conversational interface

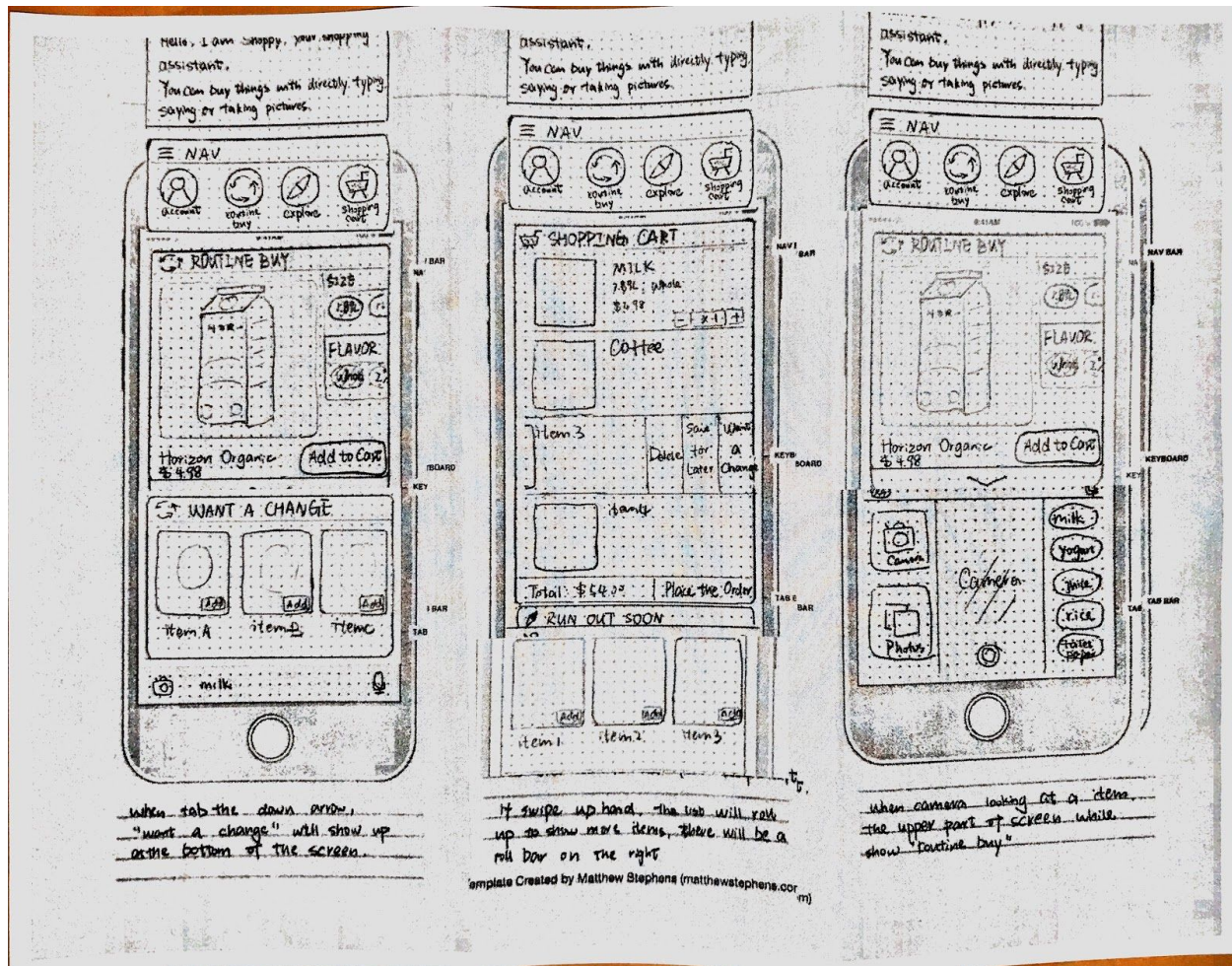


Figure 3. UI sketch for card interface

## Card Interface

### Pros:

- Works well regardless of noise from other sources
- Faster to communicate information through text

### Cons:

- Cluttered screen with a lot of information on it
- No chatting history

## Conversational Interface

### Pros:

- Hands Free
- Intuitive to use

### Cons:

- Less effective in loud environments
- Takes longer to talk than to type (For most people)



### 3. Selected Interface Design (Task Flows)

We selected the card interface design.

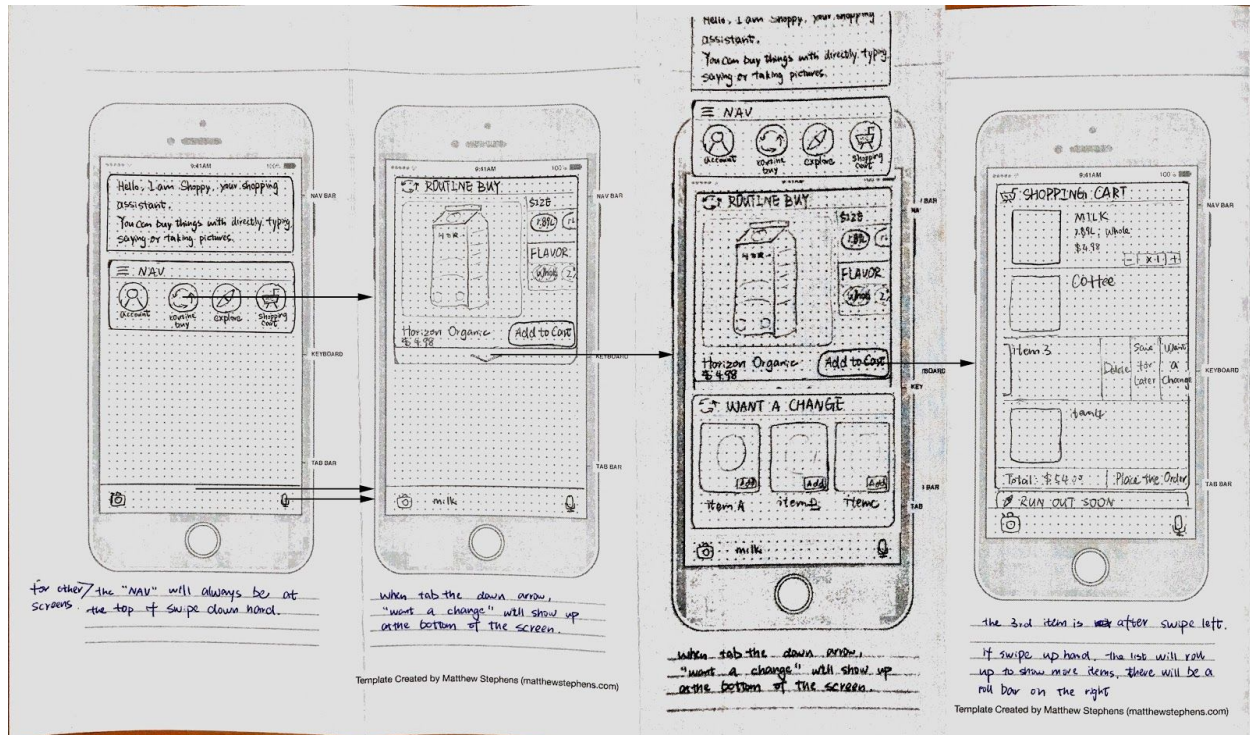


Figure 4. Task 1: Routine products and alternatives

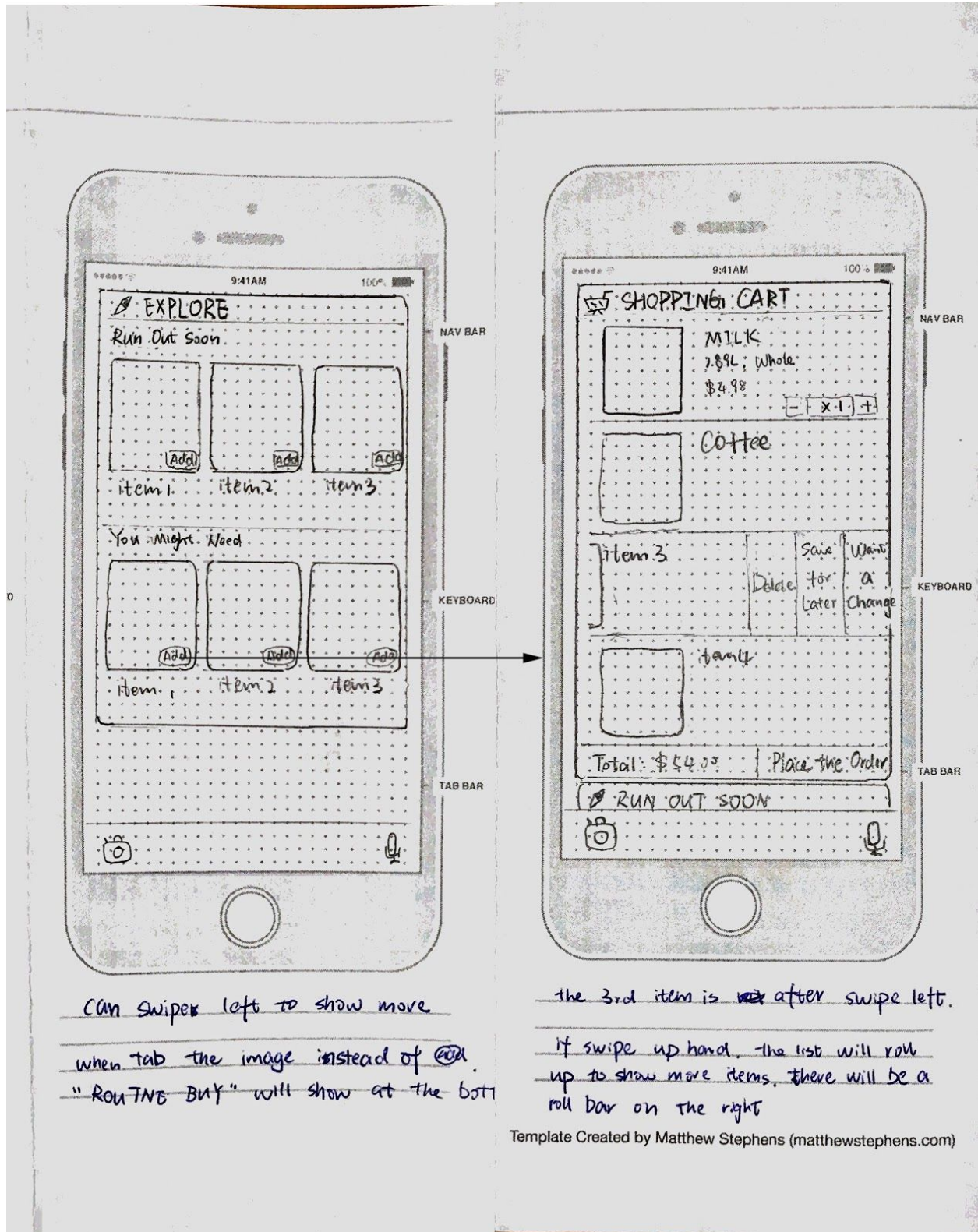


Figure 5. Task 2: Recommend new products



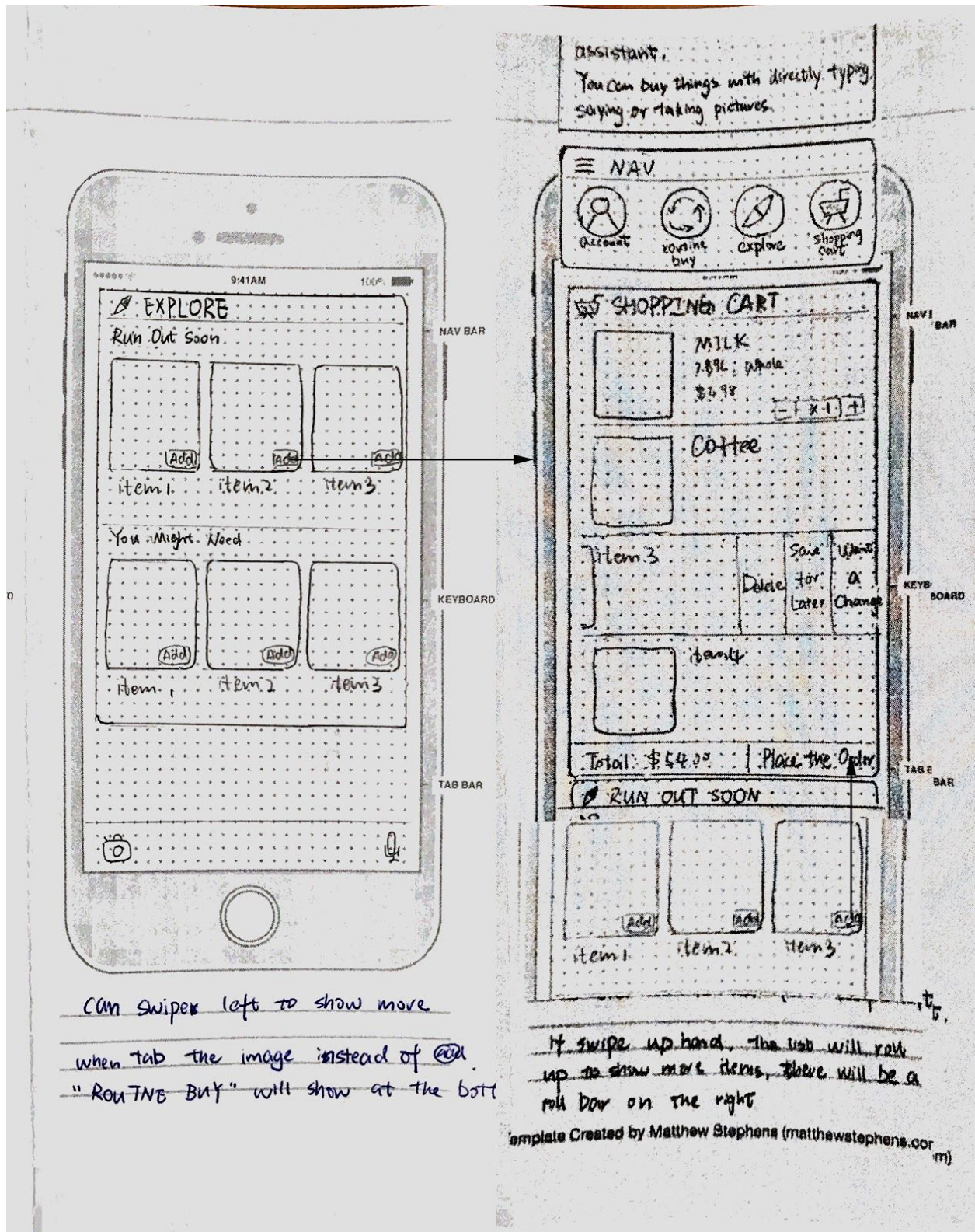


Figure 6. Task 3: Remind products which may run out

## 4. Prototype description

We choose the card interface. The basic elements of this interface are cards. Different types of cards provide different function. All cards stack together. Each time when users trigger a card, it will be at the bottom of the screen.

Our prototype is constructed of several different screens on pieces of paper. Arrows show the user how he/she moves from one screen to the next. The user must use touch input to move through visual screens, but speech input can be used to fill in textboxes. On application start, the user is presented with an initial screen, containing basic information and a navigation bar. The user can use touch input to move to other screens in the application by touching different icons on the navigation bar. For example, touching the “Routine Buy” or “Explore” icons will take you to those screens.

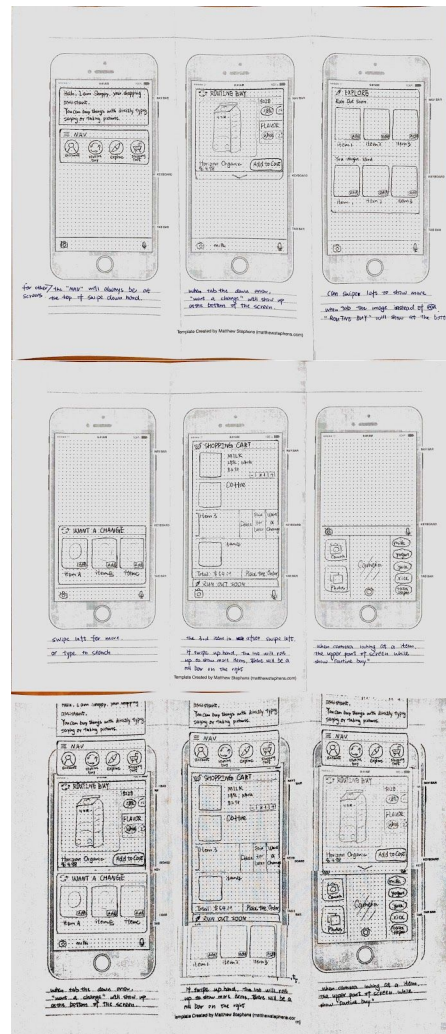


Figure 7. Low-fi prototype

## 5. Method

### 5.1. Participants

#### Participant 1

- Demographics
  - Male; middle age (35+); Korean; visiting Stanford
- How recruited
  - The man was visiting Stanford with his girlfriend. We met him at Main Quad. We asked if he wanted to try our app prototype and give some feedbacks. We considered him as a person who was not young and not quite familiar with modern app interface.
- Compensated
  - None

#### Participant 2

- Demographics
  - Female; young (25+); Stanford PhD student in communication
- How recruited
  - The woman sat close to the Oval and was waiting for a bus. We asked if she wanted to try our app prototype and give some feedbacks. We considered her as a person who had much experience with digital interface.
- Compensated
  - None

#### Participant 3

- Demographics
  - Male; young (20+); professional designer
- How recruited
  - A friend introduced this designer to us. He was glad to try our prototype and give feedbacks.
- Compensated
  - None

### 5.2. Environment

Participant 1: The participant and our team stood and talked to each other at Main Quad.

Participant 2: The participant sat a chair close to the Oval. Our team stood and talked with her.

Participant 3: The participant and our team sit around a table on the outside of Bytes Cafe.



### 5.3. Tasks

Task 1: The first task is buying a routine product and choosing an alternative item if the user wants. It is a complex task.

Task 2: The second task is being recommended and buying some items if the user wants. It is a moderate task.

Task 3: The third task is being noticed running-out items and buying some items if the user wants. It is a simple task.

### 5.4. Procedure

Our test procedure was first introducing the app's name and slogan, describing 3 task, showing overall interfaces and then briefly introducing each part in the interfaces. After these, we let the participant try the 3 tasks.

For the task 1, during the test, we let the participant buy milk, showed the participant several alternatives and let him place the order.

For the task 2, during the test, we (virtually) gave the participant a pushed notification, showed several new items in the app interface and let the participant buy some items if the participant wanted.

For the task 3, during the test, we showed the reminder in the placing order interface and let the participant buy some items if the participant wanted.

### 5.5. Test Measures

- Whether successfully achieved each task or not
- Time for each task
- Whether discovered the designed interaction method
- Interests expressed
- Conflicts

### 5.6. Team Member Roles

James: the facilitator

Yolanda: the observer

Hao: the computer

## 6. Result

Participant 1:

Task 1

- Thought that the homepage was hard to understand at first. Stared at the page for a minute before doing anything. (3)
- Used the microphone button and say "I want to buy milk" (0)
- Did not realize that you could click the arrow below routine items if you wanted to change items (3)
- Initially could not find out how to place his order (4)
- Did not notice "run out soon" below the shopping cart (2)

Task 2

- Clicked the home button instead of exploring shopping options (4)

Task 3

- Was not at all interested in the "run out soon" button (2)
- Did not understand what "run out soon" button meant. Asked if it meant "items that will be out of stock soon" (4)

Participant 2:

Task 1

- Quickly clicked the "routine buy" icon and entered the next interface (0)
- Confused about why add to shopping cart both adds the item and takes the user to the shopping cart (2)

Task 2

- Explored items, but did not realize that swiping left would bring new items onto the screen. (3)

Task 3

- Noticed the run out soon menu and was interested(0)
- Said "cool" when swiping up on the run out soon menu revealed more information (0)

Participant 3:

Task 1

- Mentioned it was like the notification center in iOS (0)
- Said there were too much words in the initial interface (1)
- Said the navigation bar should be fixed somewhere (3)
- Then clicked the microphone button and say "I want to buy milk" (0)
- Confused about why the item showed was the routine product for him (2)
- Unsatisfied about that there was only one routine product (3)
- Thought it should show pull-down menu of product detail, rather than pop-out card of alternative items after clicking the arrow (4)

- Thought it should be “change” buttons rather than “add” buttons in the “want a change” card (3)
- Thought it was necessary to have a chatting interface with chatting histories, for continuing unfinished tasks (2)

#### Task 2

- Confused with “run out”: out of stock? (3)
- Swiped left and right, and thought it was confusing to have swipe interaction at two perpendicular directions (2)
- Disappointed after a force touch on the button (2)
- Confused about whether the items would show again if he didn’t make a purchase this time (1)
- Wanted a to-buy-list (2)

#### Task 3

- There was no item detail page! (4)

## 7. Discussion

Here are some potential improvements for our low-fi prototype.

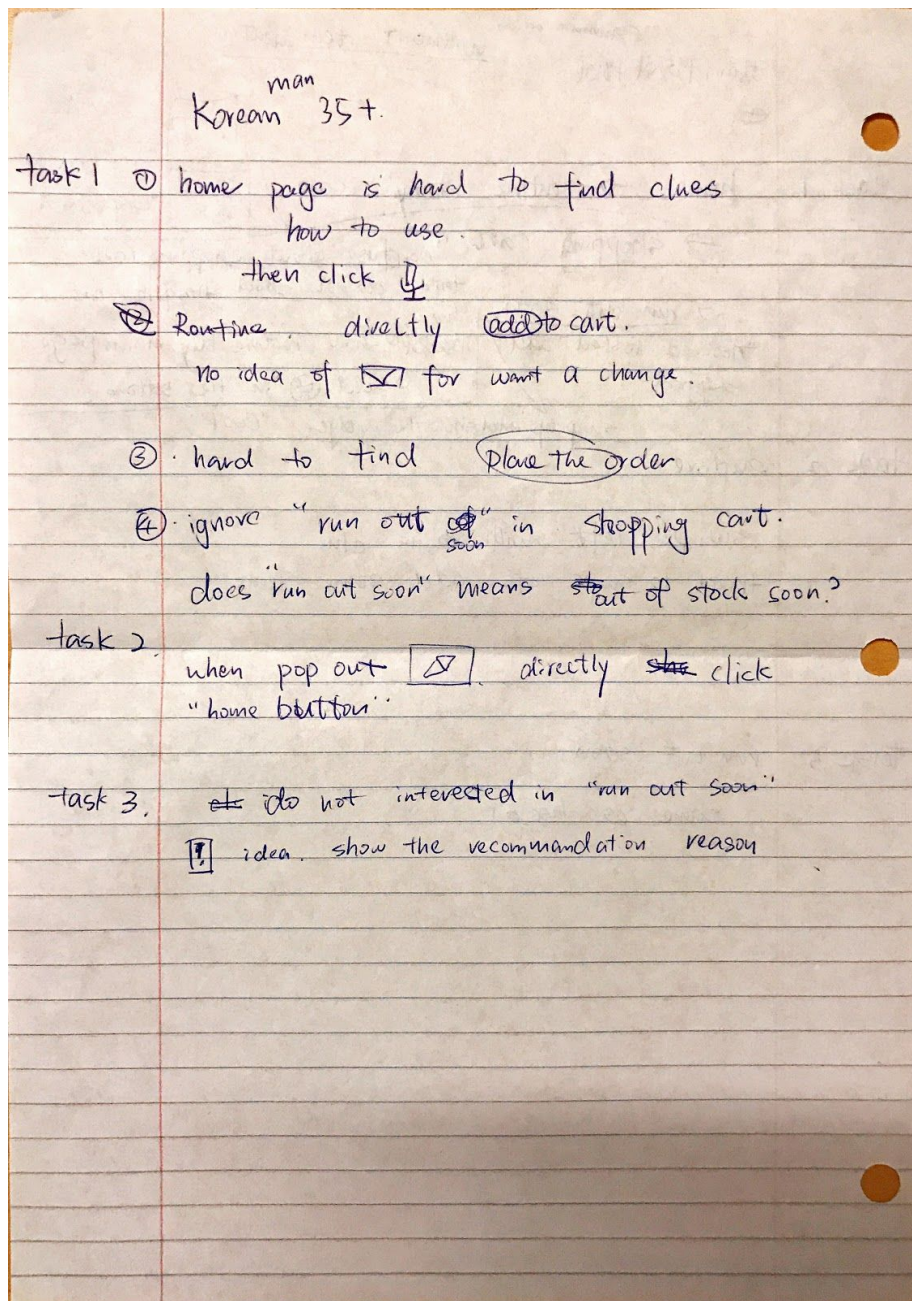
- Initial Interface & Overall
  - Need some guide interfaces when users use the app for the first time
  - More concise conversation
  - Create more interfaces for importing user data
  - Maybe it is better to keep history
  - Create a product detail interface
  - Create a to-buy-list
- “Navigation” card
  - Should be fixed to the bottom of the screen since user uses it all the time
- “Routine Buy” card
  - Show more routine products in one card
- “Want a change” card
  - Remove the arrow, and make the way to open “want a change” more explicit
  - The buttons should be “change” rather than “add”
- “Explore” card
  - Show the reasons why we recommend each item, e.g., shopping history, friend recommendation, highest review score, etc.
  - Show hint about left and right swiping. Maybe show 3.5 items or arrows.
  - Swipe the card rather than the horizontal list
- “Run Out Soon” card
  - New phrase for “run out soon” that makes it clear that it is the person running out of items and not the store
  - Maybe put the “run out soon” card between shopping cart and the “place the order” button
- “Shopping Cart” card



- Add a shopping cart button somewhere. Clicking the "add" buttons on items shouldn't open the shopping card card.
- Make the way to place order more explicit

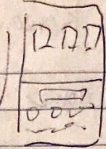
## 8. Appendices

Test notes:



communication  
Stanford Phil

without item input.

task 1. home. → routine buy icon  keyboard  
→ shopping cart "confuse about shopping cart"  
think: do not show shopping cart  
→ run out soon. here.  
"noticed. looked. add" instead @ show routine buy main page  
skipped" @ add in the bottom  
swipe up and show the wedge. "Cool"

task 2. explore

swipe left with no clue  
tried to swipe left. add some items

task 3. run out soon.

same as task 1!