

Makes Your
Shopping Easier



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The Problem

Seniors are facing multiple challenges
during the shopping process

Potential size of target audience

60%

of adults over age 65 live with a physical disability that limits their participation in daily life activities such as shopping.

Potential size of target audience

50%

of seniors find the direction and signage on the market hard to read, which makes them take more time to find what they want.

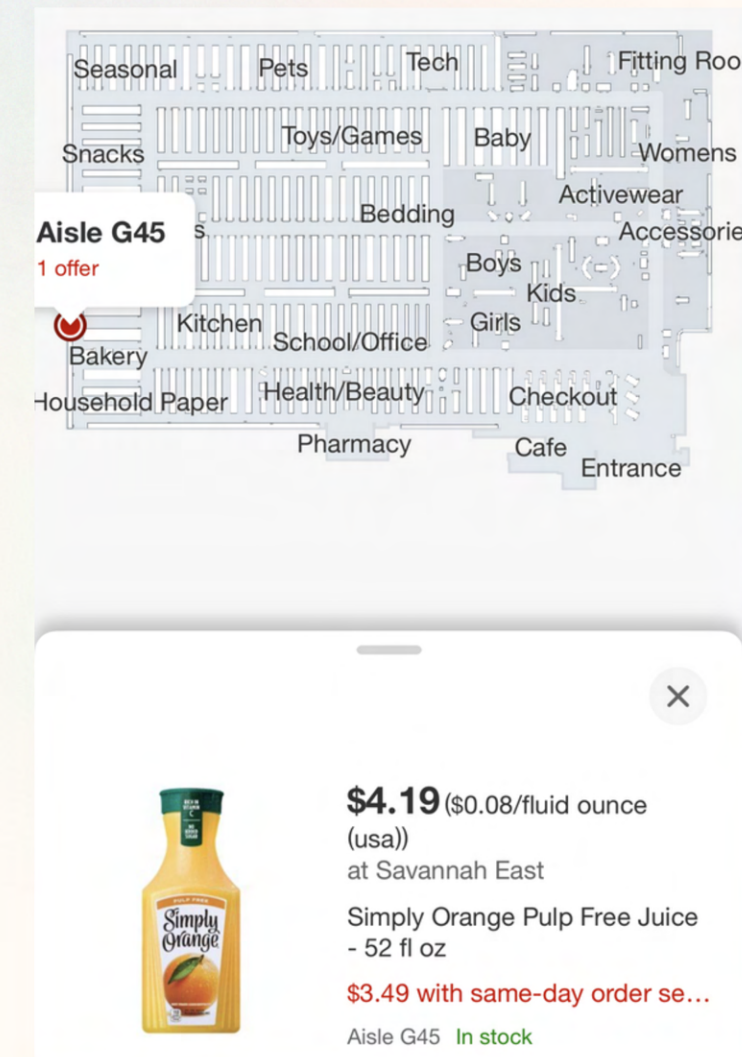
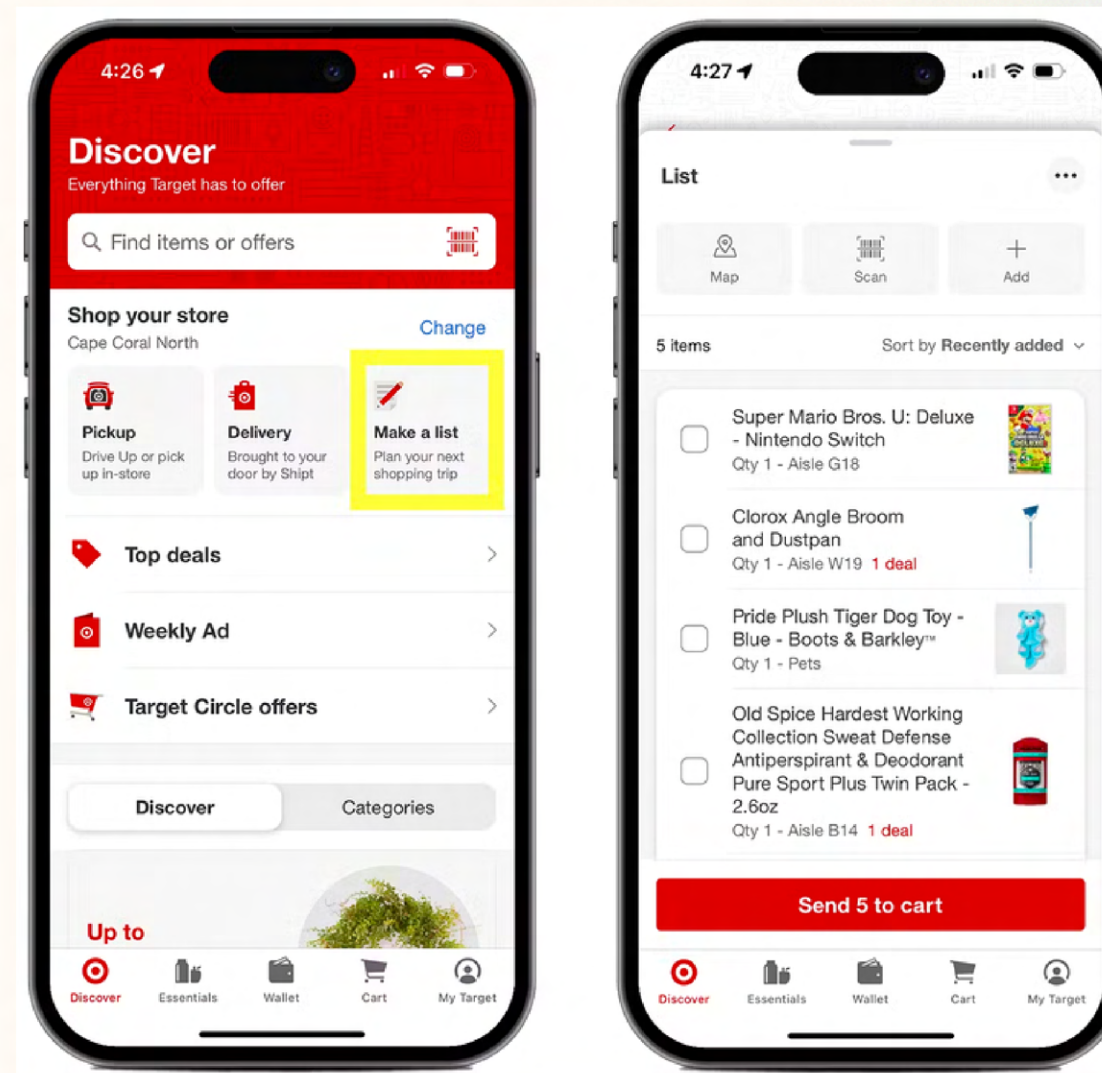
Competitor Analysis

Strength

- Shopping lists
- Delivery or Pick up
- Items Location Map

Weaknesses

- Hard to see item location on map
- Icons and font size are too small on screen
- No direction guide



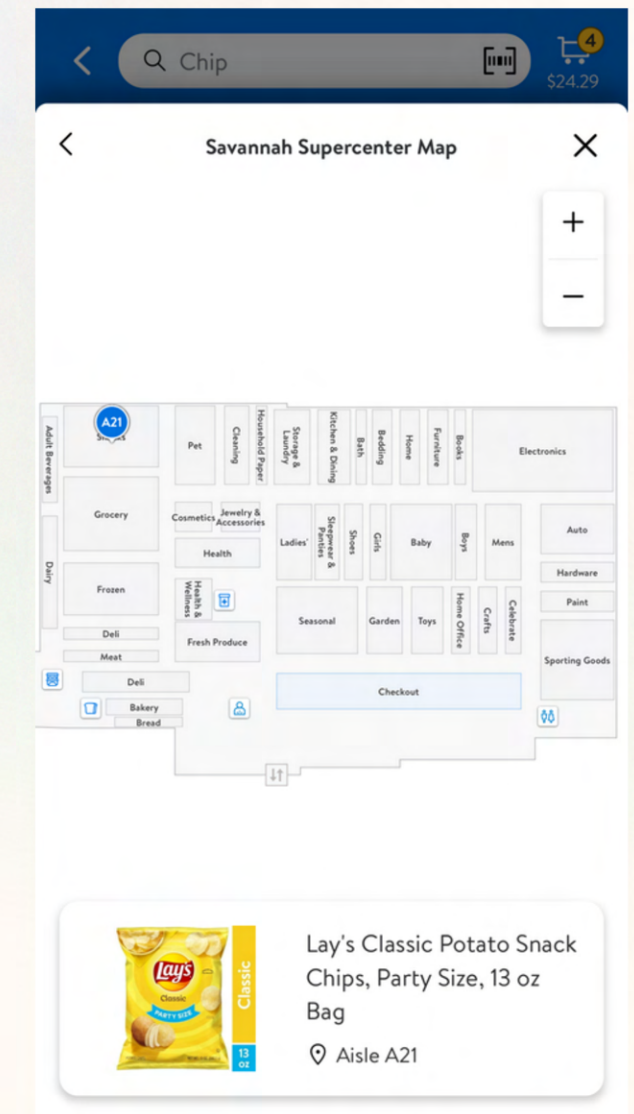
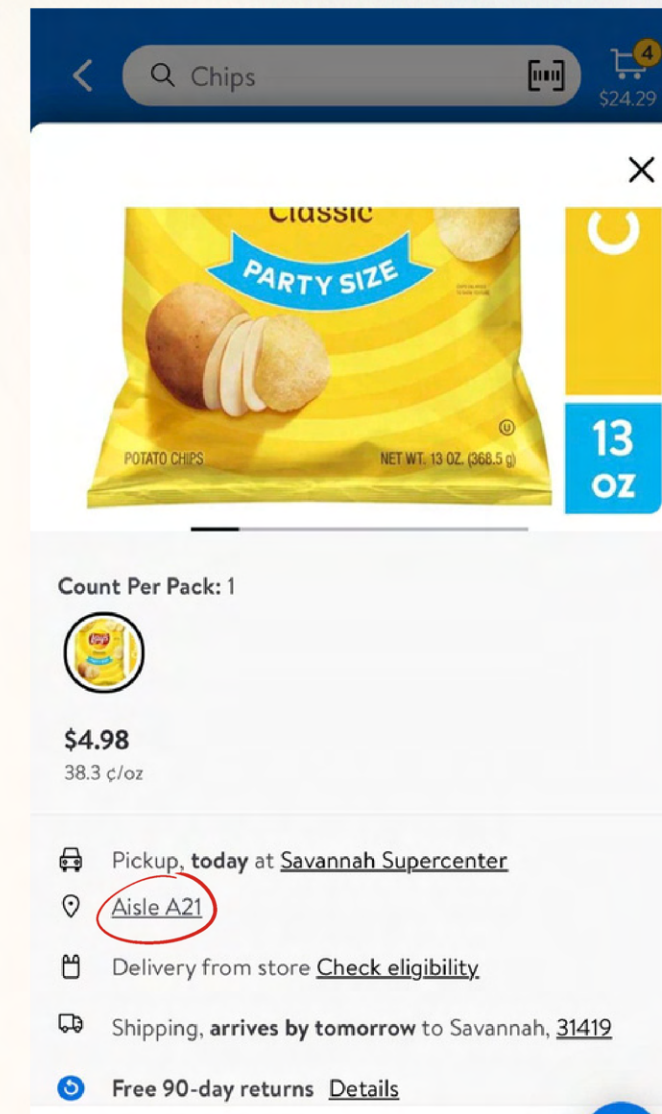
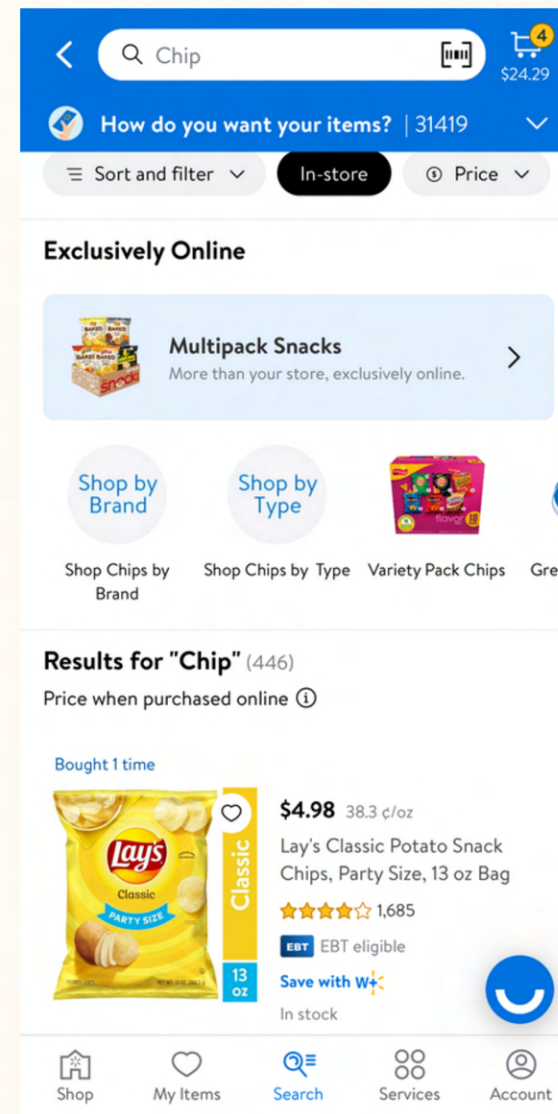
Competitor Analysis

Strength

- Extensive Product Selection
- Aisle Location Map

Weaknesses

- Interface Complexity
- Hard to find items location map
- No direction guide



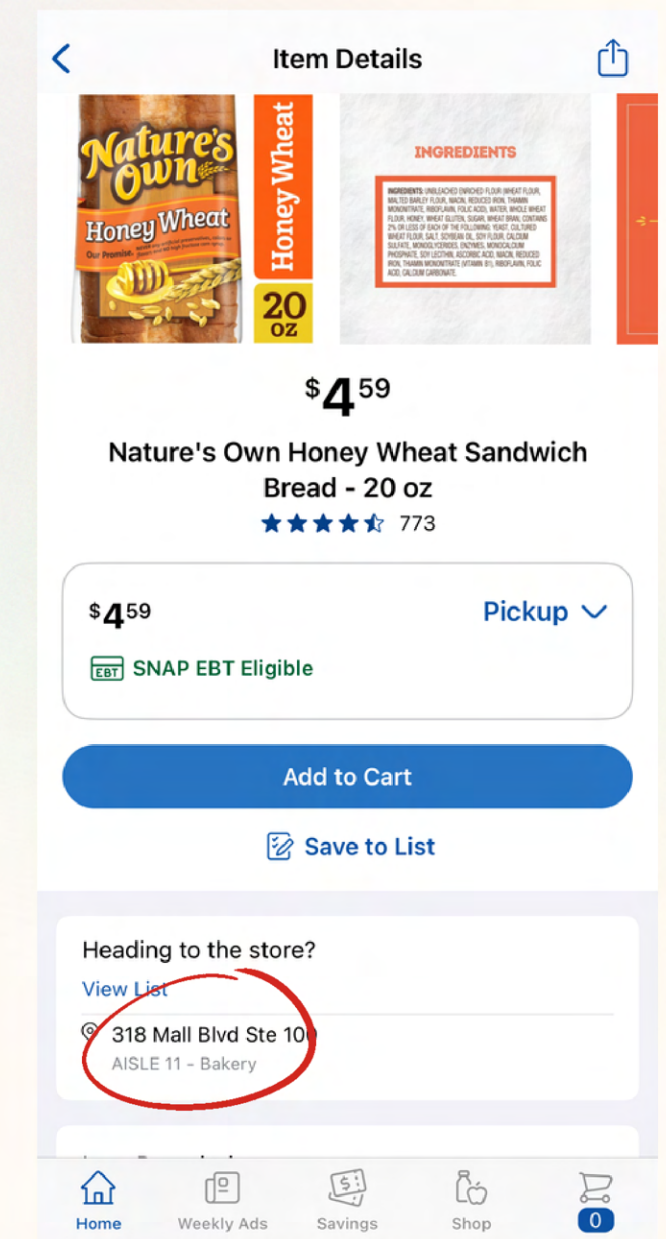
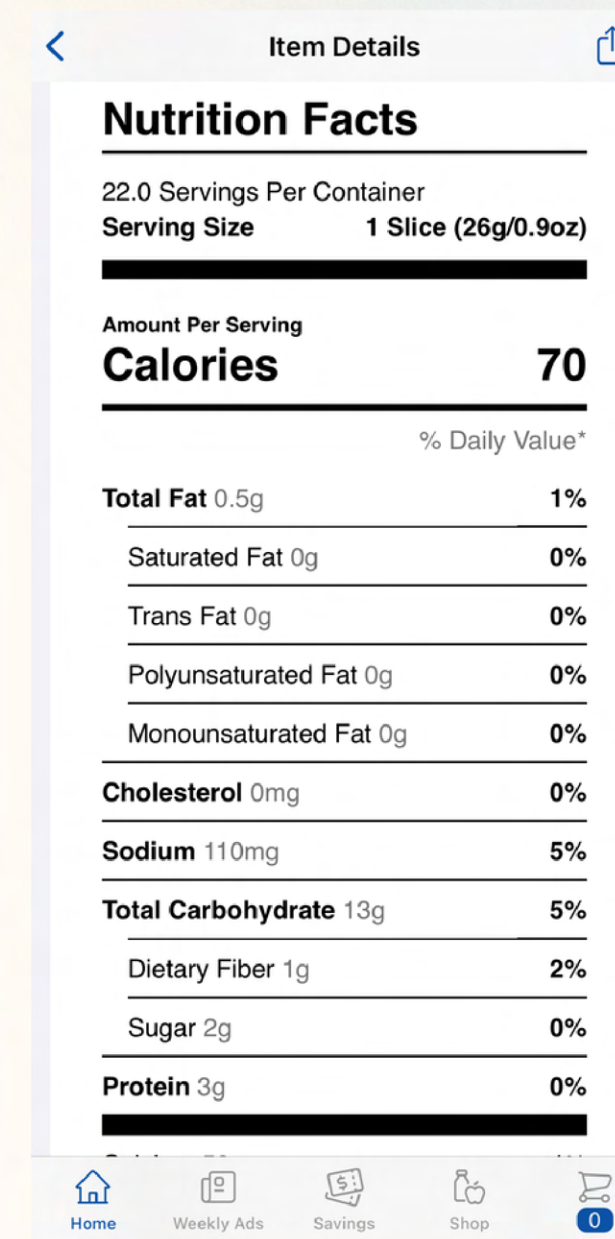
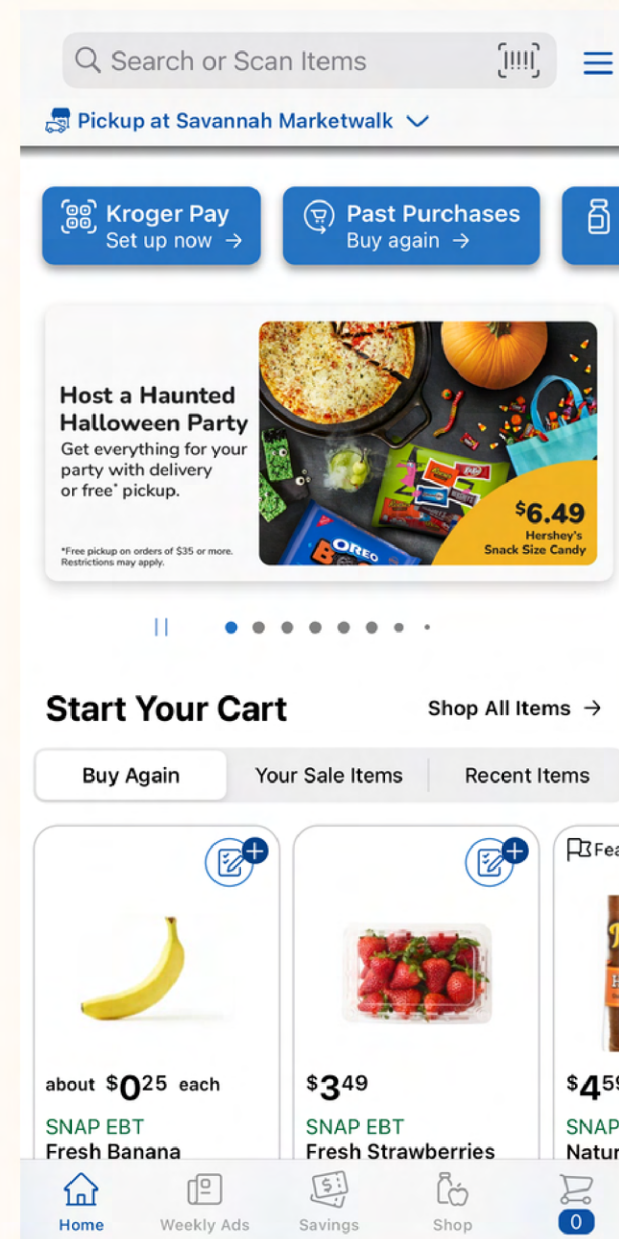
Competitor Analysis

Strength

- Detailed Nutrition Label
- Item Scanning

Weaknesses

- No guide map for finding items
- Overwhelming nutrition label



Opportunity

- More intuitive items wayfinding guide
- More simplified interface

Research Methods



In Person
Interviews



Online Surveys



Shadowing

What we received



341
data
points

What we learned

- Over **80%** of the respondents said they would **read the label** before purchase
- Over **40%** of the respondents said they find variety of brands **confusing**
- Over **60%** of the respondents hope to get the item and leave the store **as quickly as possible**



- **ALL** the interviewees have problems with label reading

Personas



**Needs AI assistant
Annie**

74 years old
senior lady



Frugal Tomas

65 years old
senior man



**Finding Solution
Fiona**

80 years old
senior lady

Needs AI Assistant Annie

Main Concerns & Needs

- Wants to be more confident about the products she purchases
- Don't want to stay in the market too long

Ideal Features

- Label simplifier that tell Annie whether the product is good for her and her health
- AR direct feature helps Annie find specific items



Frugal Tomas

Main Concern & Need

- Wants to know where he can find better prices
- Find shopping with lots of people annoying

Ideal Feature

- Online price comparison for different stores and brands
- Foot traffic recorder that indicates if a store is busy or not busy



Finding Solutions Fiona

Main Concern & Need

- Finds store signage and labels hard to read
- Can't type or write very well on screen

Ideal Feature

- Easy access voice input feature
- AI voice assistant



Key Insights

- Seniors want an APP that is easy to use and can support them during the shopping process
- Find what seniors need as efficient as possible
- Saving time and money on shopping
- Humanized shopping experience achieved by design

Conclusion

We must create an AI-driven app to support elderly shoppers.

Strategy

Users:

- Easy-to-use Platform
- Supportive Services and Care
- Efficient experience
- Intuitive user interface

Company:

- Commissions from partnerships with local grocery stores
- Governments Grants
- Premium Membership for customized healthy diet plan

Strategy

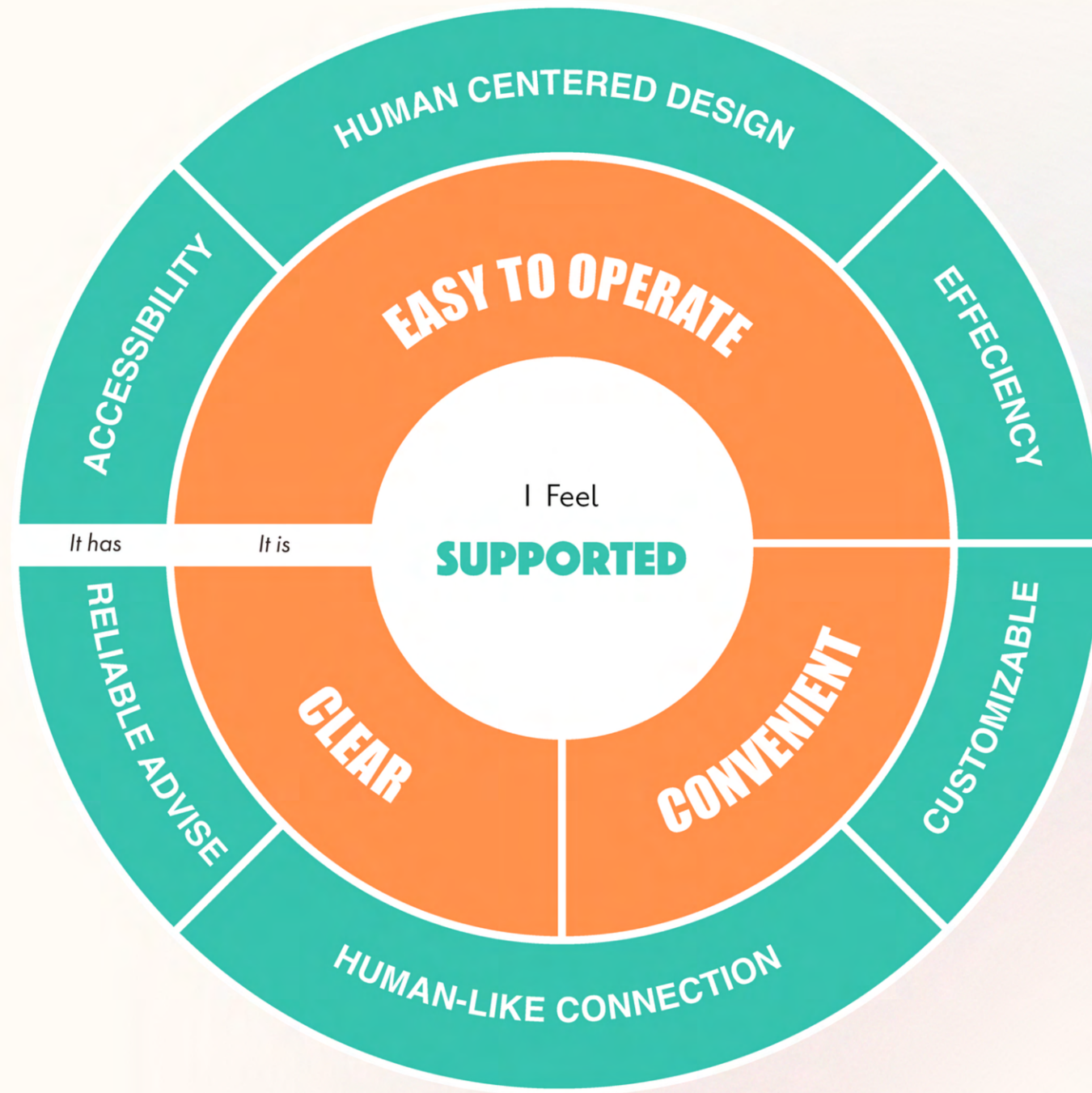
Users:

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Company:

- Commissions from partnerships with local grocery stores
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- Premium Membership for customized healthy diet plan

Design Criteria



- Easy to operate Interface
- Clear and Reliable Advice
- Convenient Services

Brand Identity



The logo is designed into the shape of a shopping cart, and the name SHOPPAL is in the cart that match with the getting product idea.


Style Tile

Essence

Supportive, Effeicient, and Clear.

Typography

Walmart

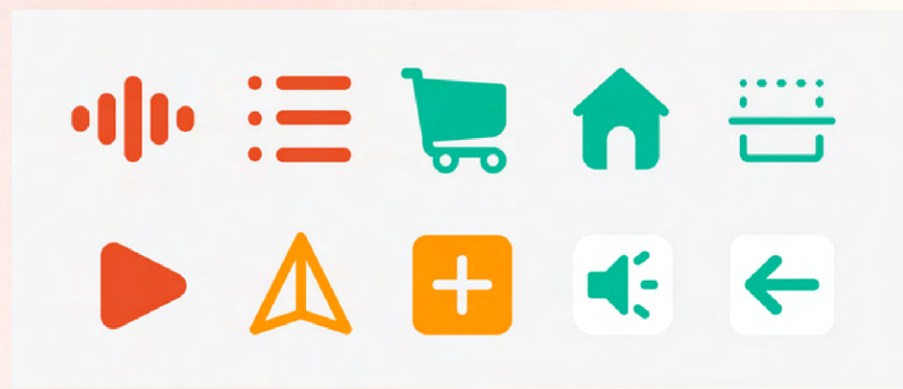
Hi, I'm Pal. Good to see you new user. Shall I start a shopping list for you? 

I'd like to get some low calorie chocolate for my grandson

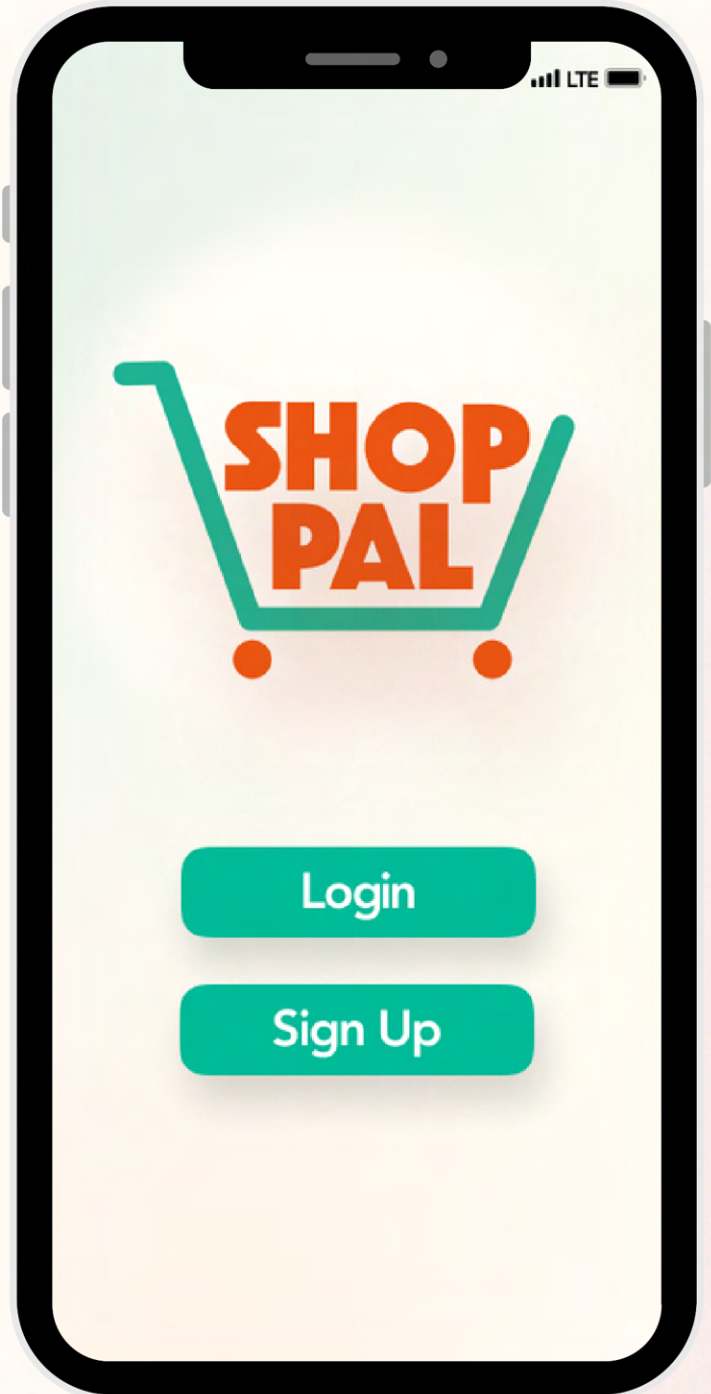
Color Pallette



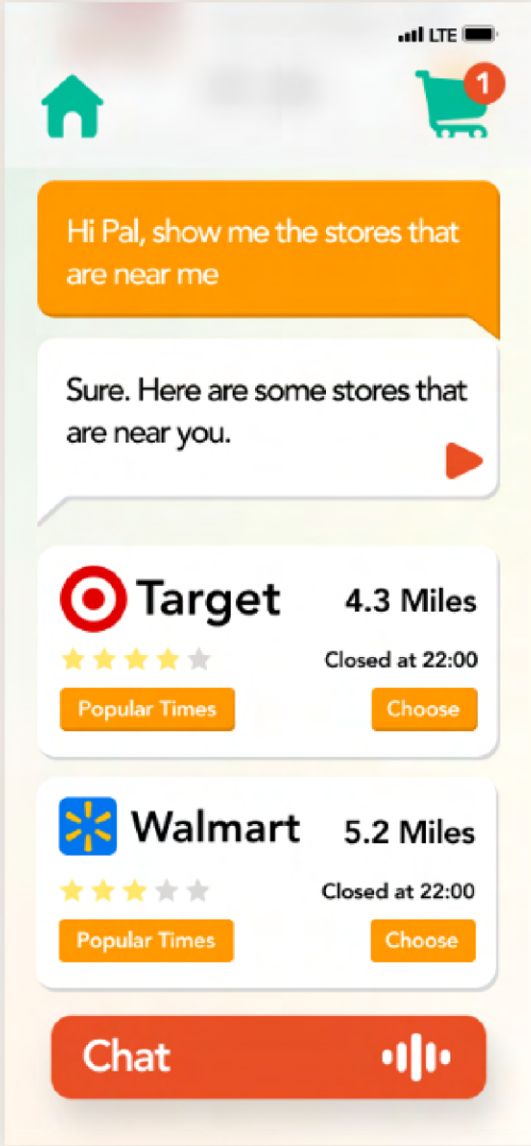
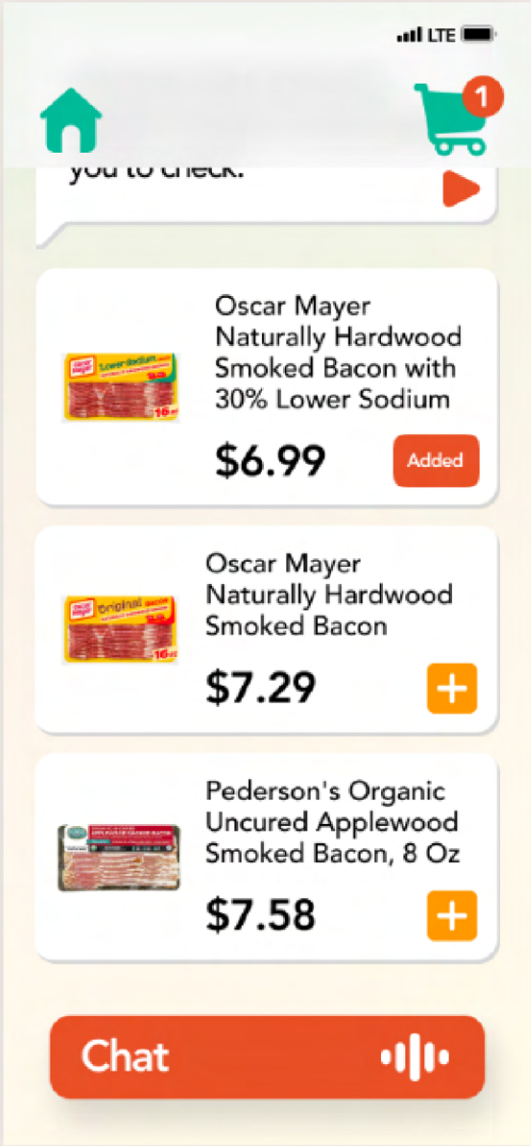
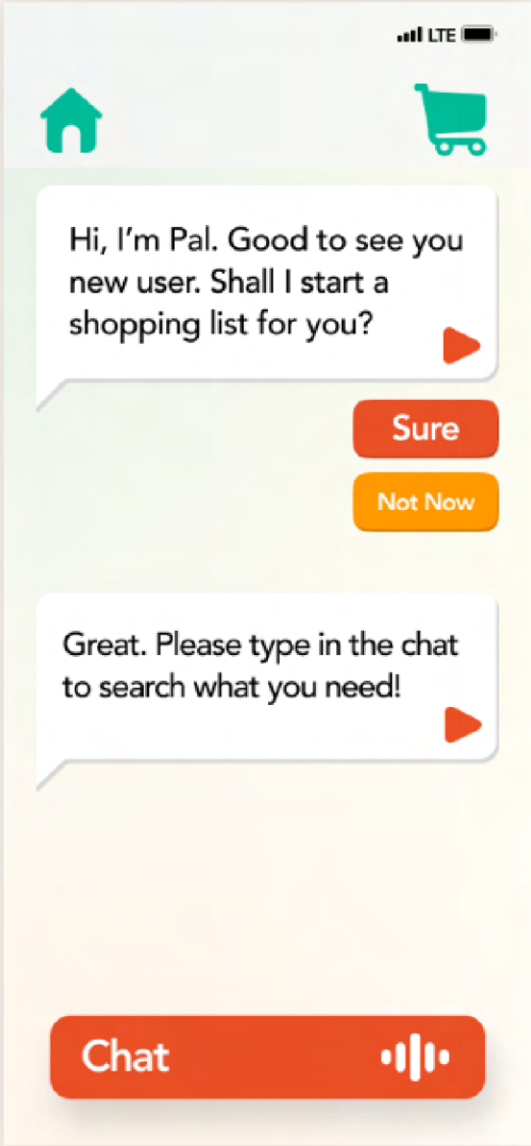
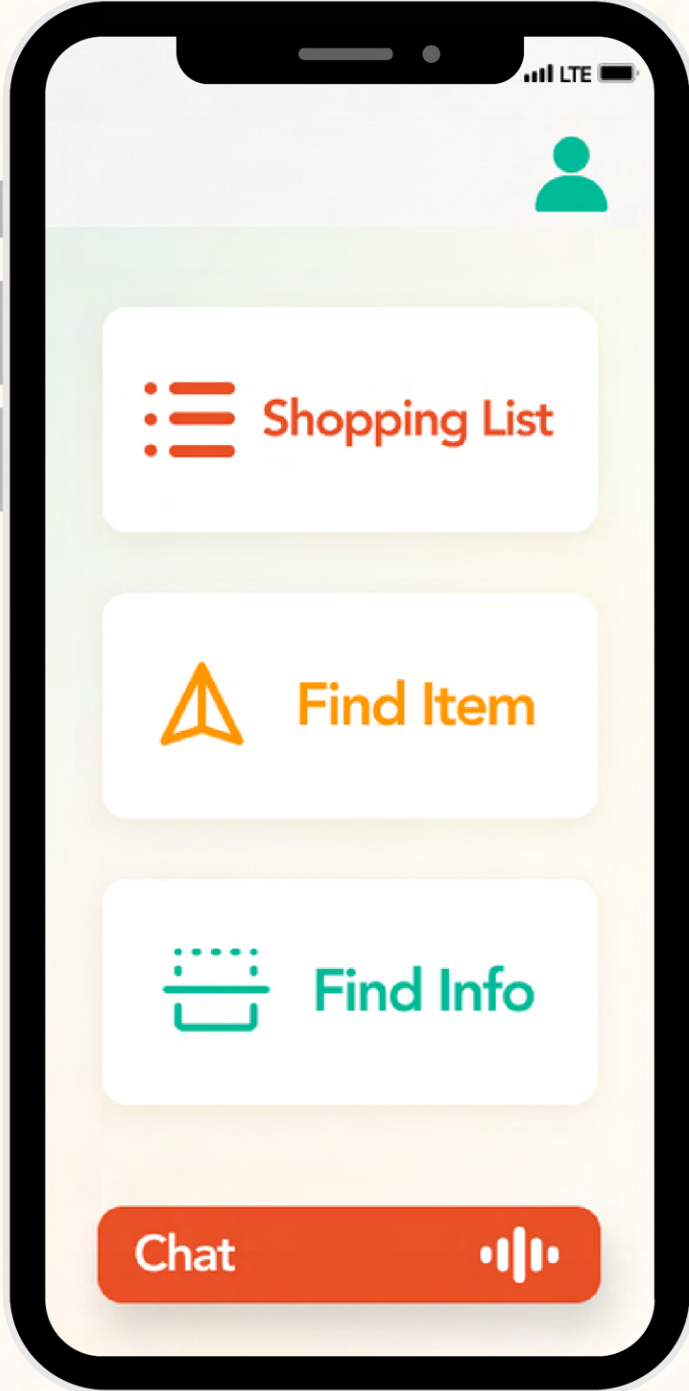
Icons



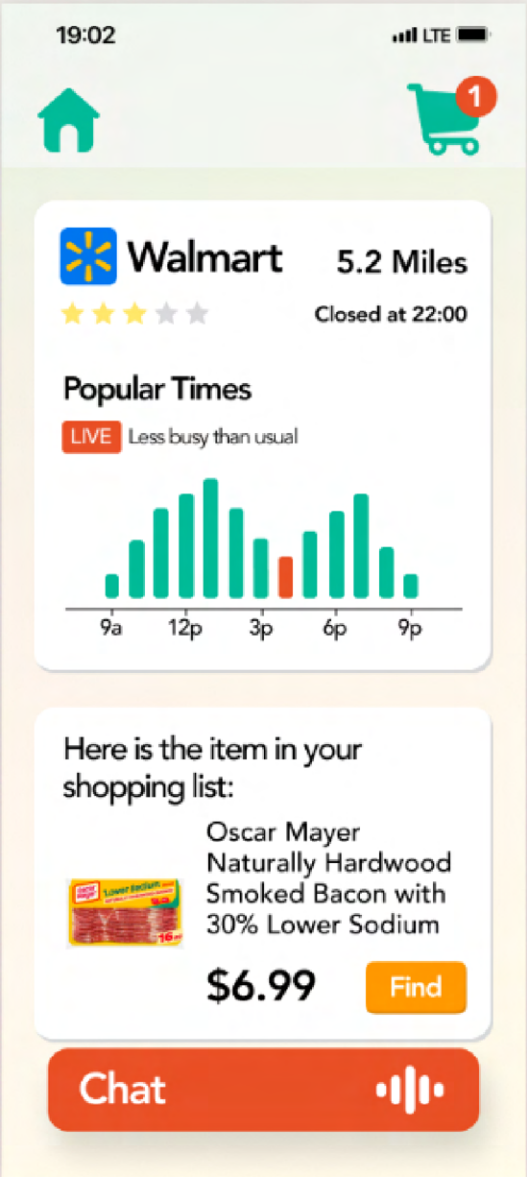
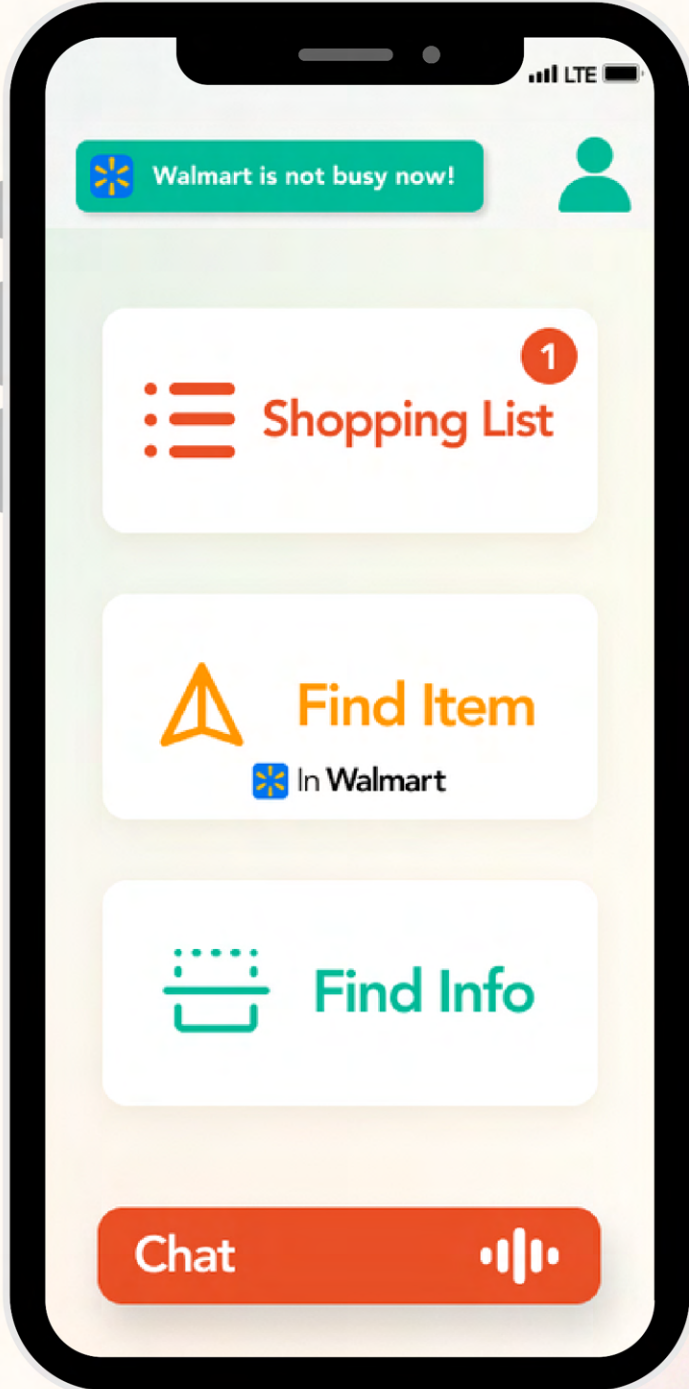
Onboarding

This is the login screen. It features a green back arrow in the top left corner. The text 'Welcome back my friend!' is centered. Below it are two white input fields: 'Username' and 'Password'. A 'Forgot Password?' link is positioned to the right of the password field. At the bottom, there is an orange 'Login' button and a blue 'Skip' link.This is the registration screen. It features a green back arrow in the top left corner. The text 'Let's get started!' is centered. Below it are five white input fields: 'Username', 'Email Address', 'Phone', 'Password', and 'Confirm Password'. At the bottom, there is an orange 'Continue' button.This is a survey screen. It features a green back arrow in the top left corner. The text 'Do you have any concerns?' is centered. Below it are four buttons: 'Product Quality' (orange), 'Health' (white), 'Budget' (white), and 'Complete' (orange).

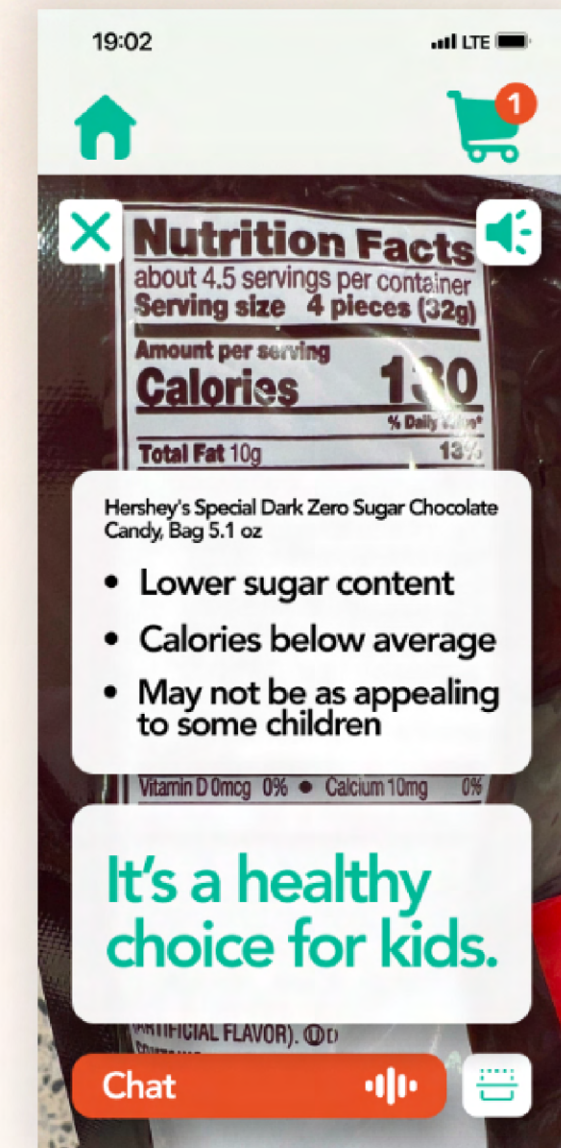
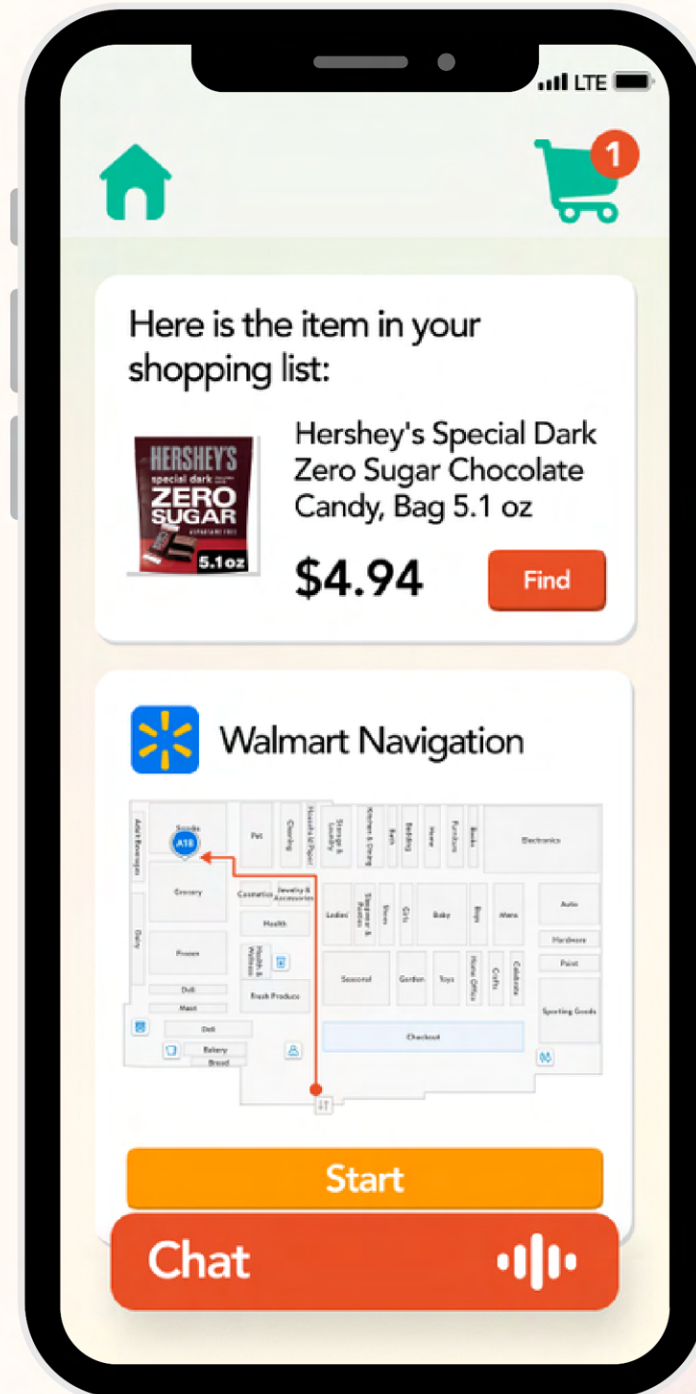
Shopping List



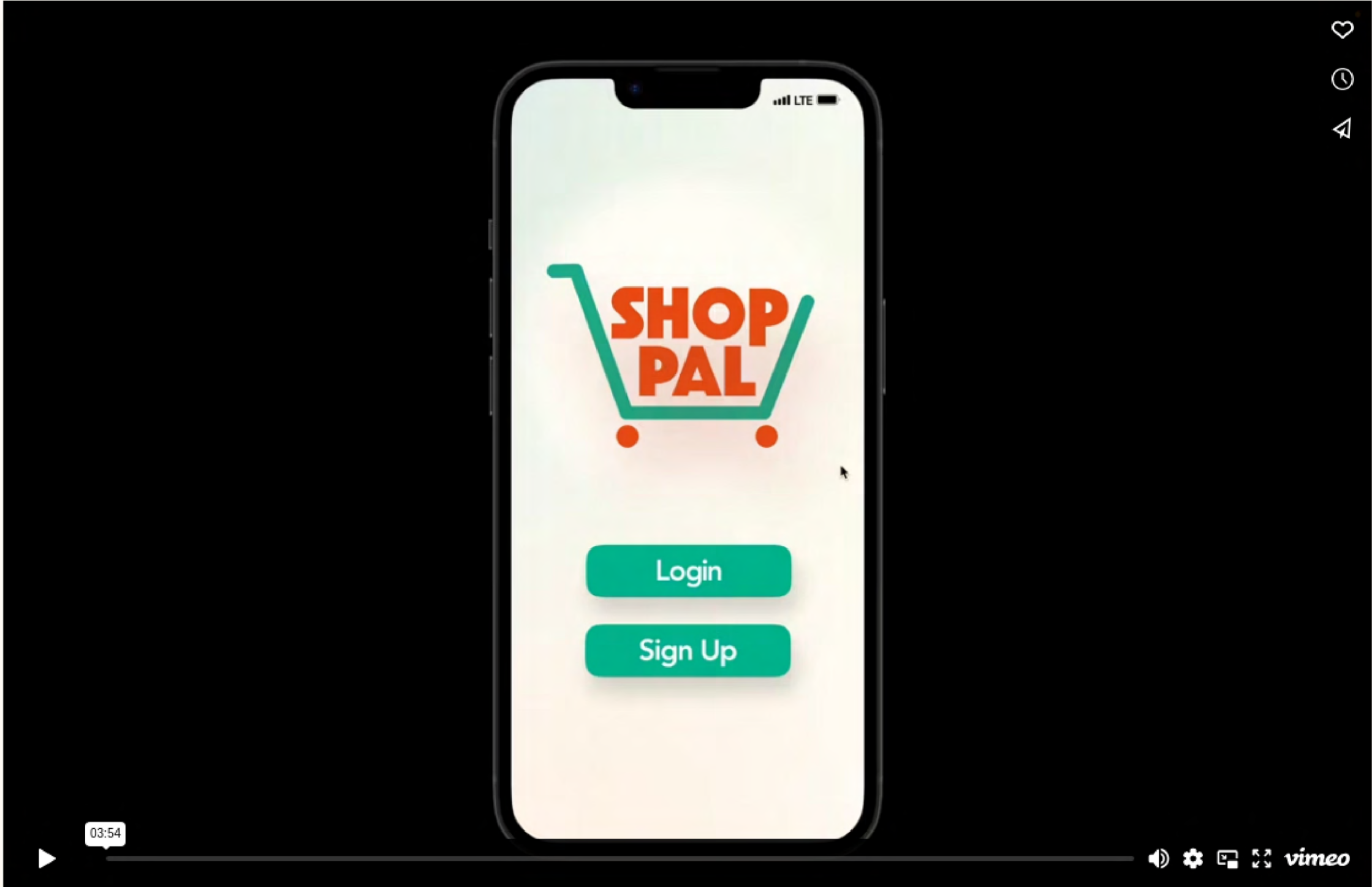
Find Item



Find Info



Walk Through Video



Marketing Video



Summary

What audiences are facing



Problem:

- Label is hard to read
- Can't find specific items
- Confuse about too many brands
- Wants to shop more efficiently



What do audience need



Solution:

- AI driven App that improve user experience
- Supportive Service and Care
- Easy to use platform
- Intuitive interface

Thank you!

Appendix

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App Concept Cards



Benefits

- Anthropomorphic service and care achieved by the specialty of AI due to the diverse needs and conditions of grocery users
- Private and customized assistance fits targeted need according to users' personal conditions and habits
- Completely different items tracking guide system offers more reasonable visualization different from normal map tracking thanks to AR



Features

- Provide pre-shopping list with desired items reminder to avoid items forgetting
- Provide intuitive items wayfinding route guide through AR and audio to help users track small items they need
- Approachable label visualization for elderly to conveniently have best choice according to habits, health, age, etc.
- Include customized brands comparing suggestions according to users' consuming habits
- Super simple and approachable interface with large fonts size, obvious icons design, simple logic of system

Secondary Research

Market / Audience

Seniors are facing multiple challenges during the shopping process

- 60% of adults over age 65 live with a physical disability that limits their participation in daily life activities such as shopping.
- 50% of seniors find the direction and signage on the market hard to read, which makes them take more time to find what they want.

Key Insights

- Seniors want an App that is easy to use and can support them during the shopping process
- Find what seniors need as efficient as possible
- Saving time and money on shopping
- Humanized shopping experience achieved by design

Primary Research

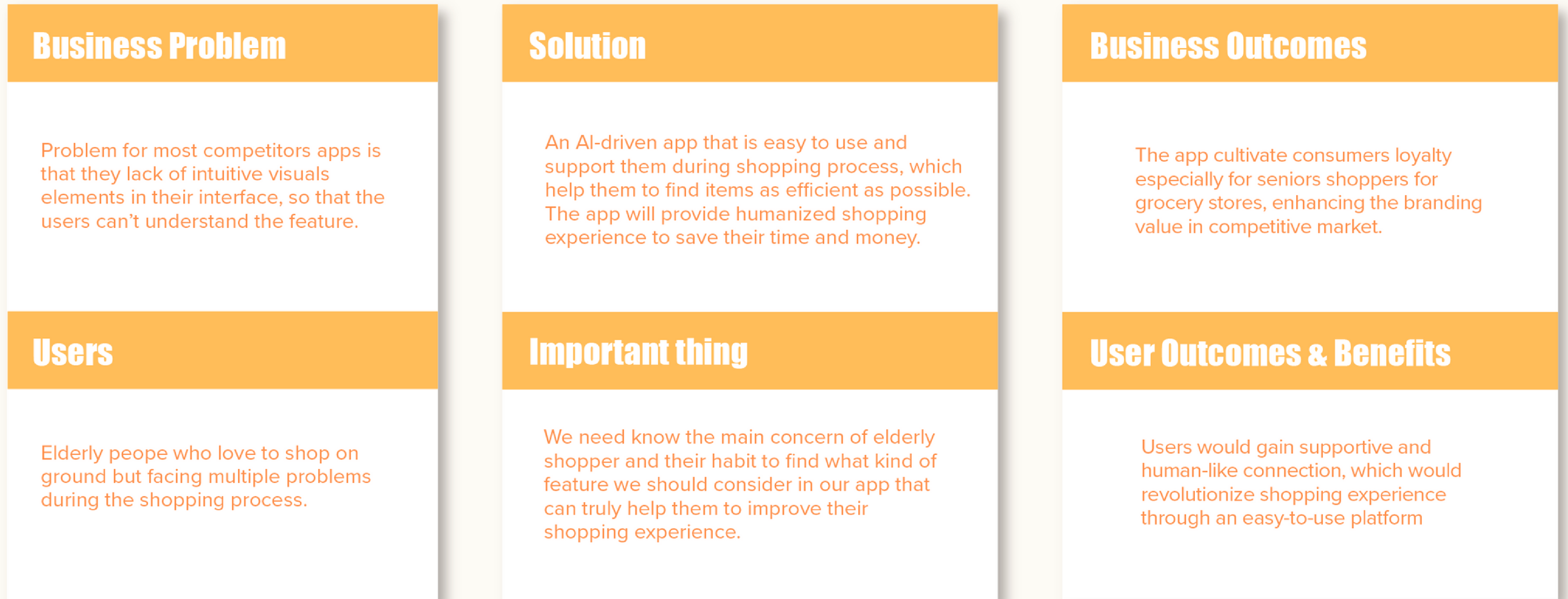
Interview Questions Example

- Please describe to me your recent grocery shopping experience by using shopping app. Please describe pros or cons. What's so great about it / What's so terrible about it. (Ask to elaborate.)
- What was the best shopping experience with shopping app you ever had? Which retail/grocery store have you ever been to?
- What emotions do you associate with shopping? Why?
- How do you feel when you hear "Shopping Assistant App"?
- If you had a chance to change anything about the shopping experience, what would you change and why?

Survey Questions Example

- Do you have troubles when you go shopping in the grocery store? If yes, what common troubles you have?
- Have you ever used a shopping assistant app? If yes, how much do you like it?
- Do you use a shopping list as a guide before shopping? If yes, physically or digitally?
- Do you think the signage (direction, identification, sort signs, etc.) in the grocery store is clear enough?
- Do you think "find items on map" function in shopping app is useful?

Lean UX Canvas



Persona

Need AI Assistant Annie



Background

Annie is a 74 years old senior lady, who live in Philadelphia with her husband. She prefer to buy product in the local store so she can see and feel the stuff. She do not want to stay in the market for too long, she just want to get what she need and leave, but she also find it annoying if the store is out of stock.

Annie will check the label carefully before put the product in her cart. She find reading the label a problem because label is too small and she can't see the words without her glasses. The label contain too many informations and always makes her confused.

During the shopping process, Annie feels confused, exhausted and usually need an assistant to help her clarify the product she bought.

Lifestyle

Annie think shopping is for experience, not prices, so she willing to spend money to buy products that have better quality and organic food. She care her family and diet more than anything.

TIME WILLING TO SPEND IN STORE

TIME IT SPEND WITH READING LABEL

MONEY WILLING TO SPEND IN STORE

Main Concern

- Annie is confused, she want to be more confident about the product she purchased
- Annie don't want to stay in the store for too long, she want to find the item as quickly as possible

Ideal Feature

- The tool or feature that can simplify the label and tells her the ingredient inside the product she bought
- The clarify feature that can show her whether the store have the product on shelf or not.

Persona

Frugal Tomas



Background

Tomas is a 65 years old senior man, who live in California with his family. His family is not rich, so he is currently saving money for his two grand kids. He prefer to compare prices before buying the product. He is willing to stay in the store for a long time just to find the product that have great price.

Tomas is a stong healthy senior who still have lots of physical strength, he usually will check the label but doesn't read it in detail. The most annoying thing for Tomas is that he does not enjoy the environment where the store is too crowded, he usually will prefer to buy product in the night because there is no much people in the store.

Tomas does not care too much about brands or quality of the product, what he want is basic human need.

Lifestyle

Tomas do zero food waste and only shop for the basic needs in his daily life, if he cannot find the product he need in the store, he will turn away and leave.

TIME WILLING TO SPEND IN STORE

TIME IT SPEND WITH READING LABEL

MONEY WILLING TO SPEND IN STORE

Main Concern

- Tomas love to compare price, but he also want to know if he can get a better price in a different store
- Tomas love to stay in store for a long time, but he find that shopping with bunch of people very annoying and noisy.

Ideal Feature

- The feature that can tell him when is time that store does not have too many customers.
- The price comparison feature that can show him which store has the better price for the same item.

Persona



Finding Solution Fiona

Background

Fiona is an 80 years old senior lady, who live in Florida. She loves doing shopping all by herself, but she has several issues with reading and can't write properly. Most of time she will need someone to help in order to complete the shopping.

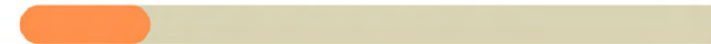
Fiona find the signage system not so useful to help her locate some specific product, and because she can't see so well, it usually take her a long time to find the item. She find online app useful, but still have some trouble using the app because of the messy UI and the reason that she can't type properly.

Fiona usually will go to store 2-3 times a week, and she is having issue about spending too many time on finding items, she want to leave the store as quickly as possible.

Lifestyle

Kelly do zero food waste and only shop for the basic needs in his daily life, if he cannot find the product he need in the store, he will turn away and leave.

TIME WILLING TO SPEND IN STORE



TIME IT SPEND WITH READING LABEL



MONEY WILLING TO SPEND IN STORE



Main Concern

- Fiona find the it difficult to read the label and signage system in the store, it will take her lots of time or ask someon to solve this problem
- Fiona find the search feature in app useful but she sometimes still confuse about the UI, and she can't type very well.

Ideal Feature

- A feature that can give direction and lead her to the product, then give her a simplified version of the label that is easy to understand.
- The simple but effective UI, and a voice chat feature which she can just say what she want without type it in.

User Journey Map



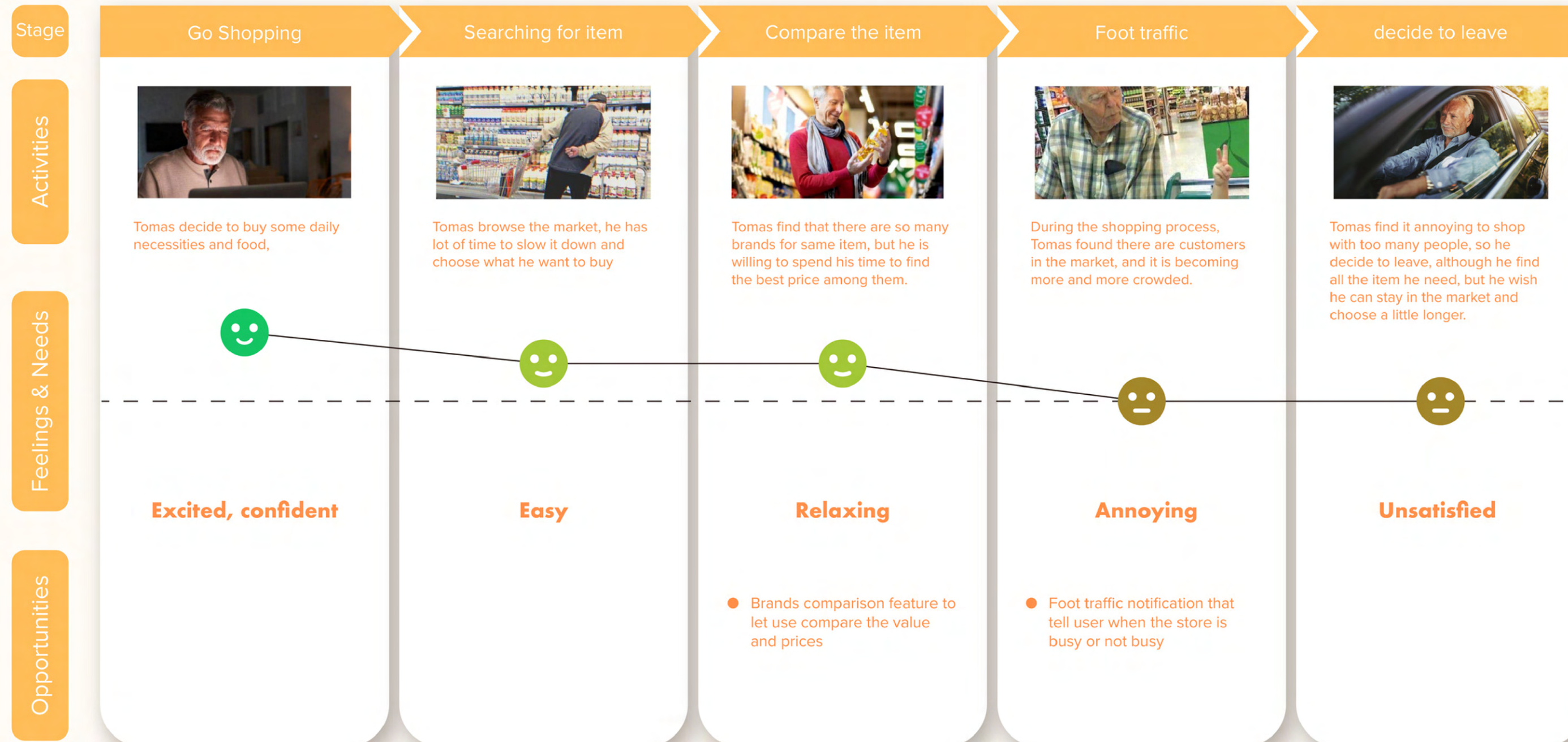
An **UNSATISFIED** Shopping experience of Need AI Assitant Annie



User Journey Map



An **ANNOYING** Shopping experience of Frugal Tomas



User Journey Map



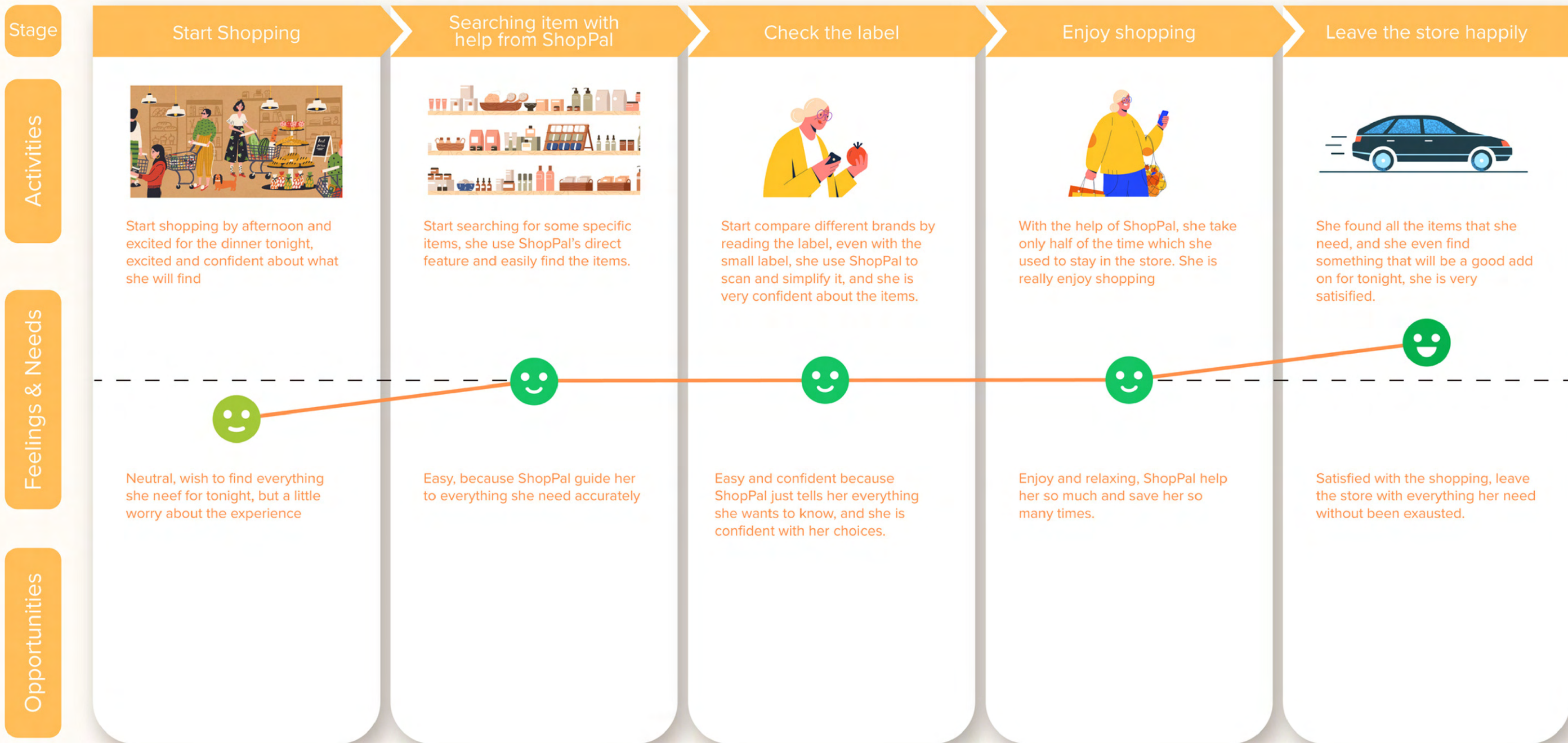
An **DIZZYING** Shopping experience of Finding Solution Fiona



Optimal User Journey Map



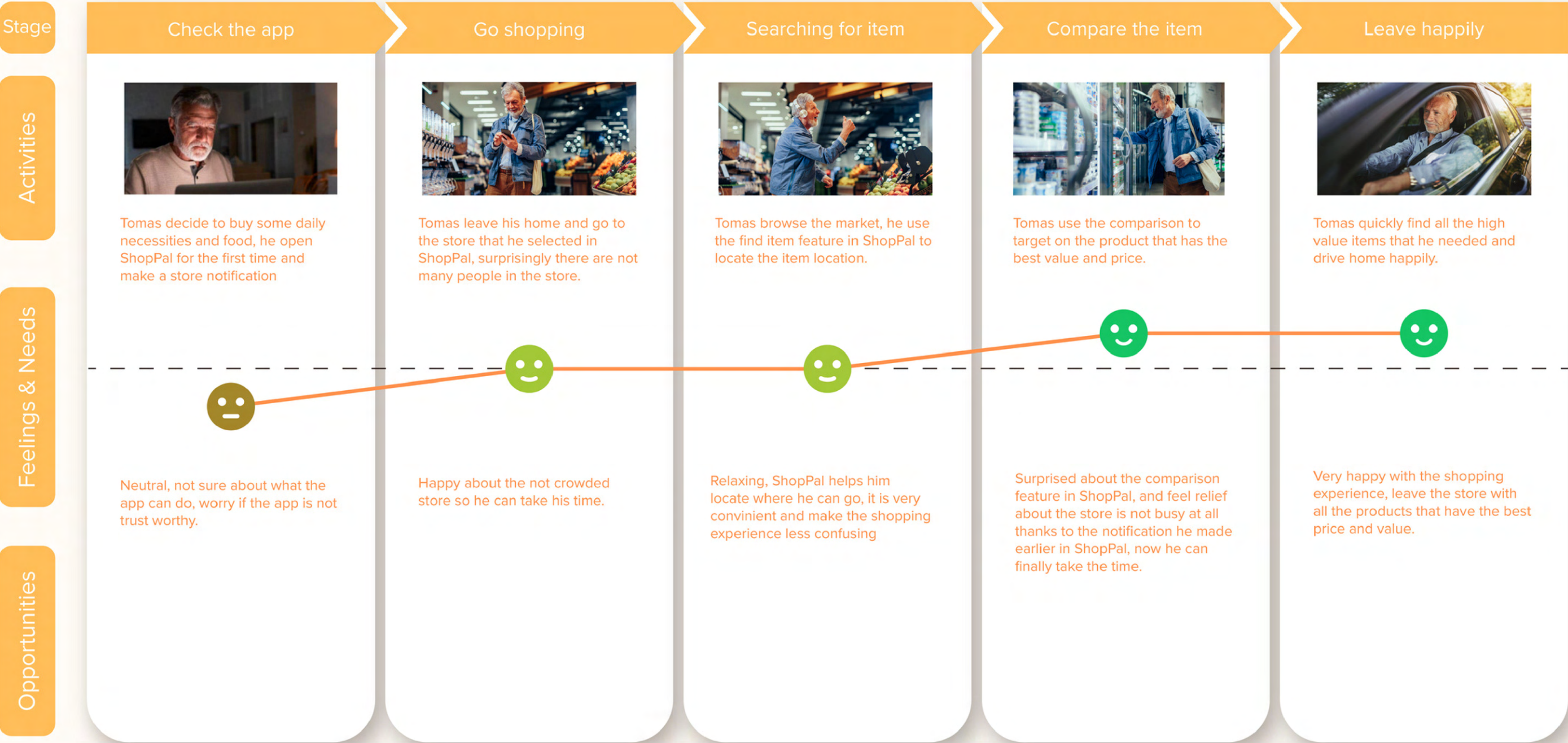
An **SATISFIED** Shopping experience of Need AI Assitant Annie



Optimal User Journey Map



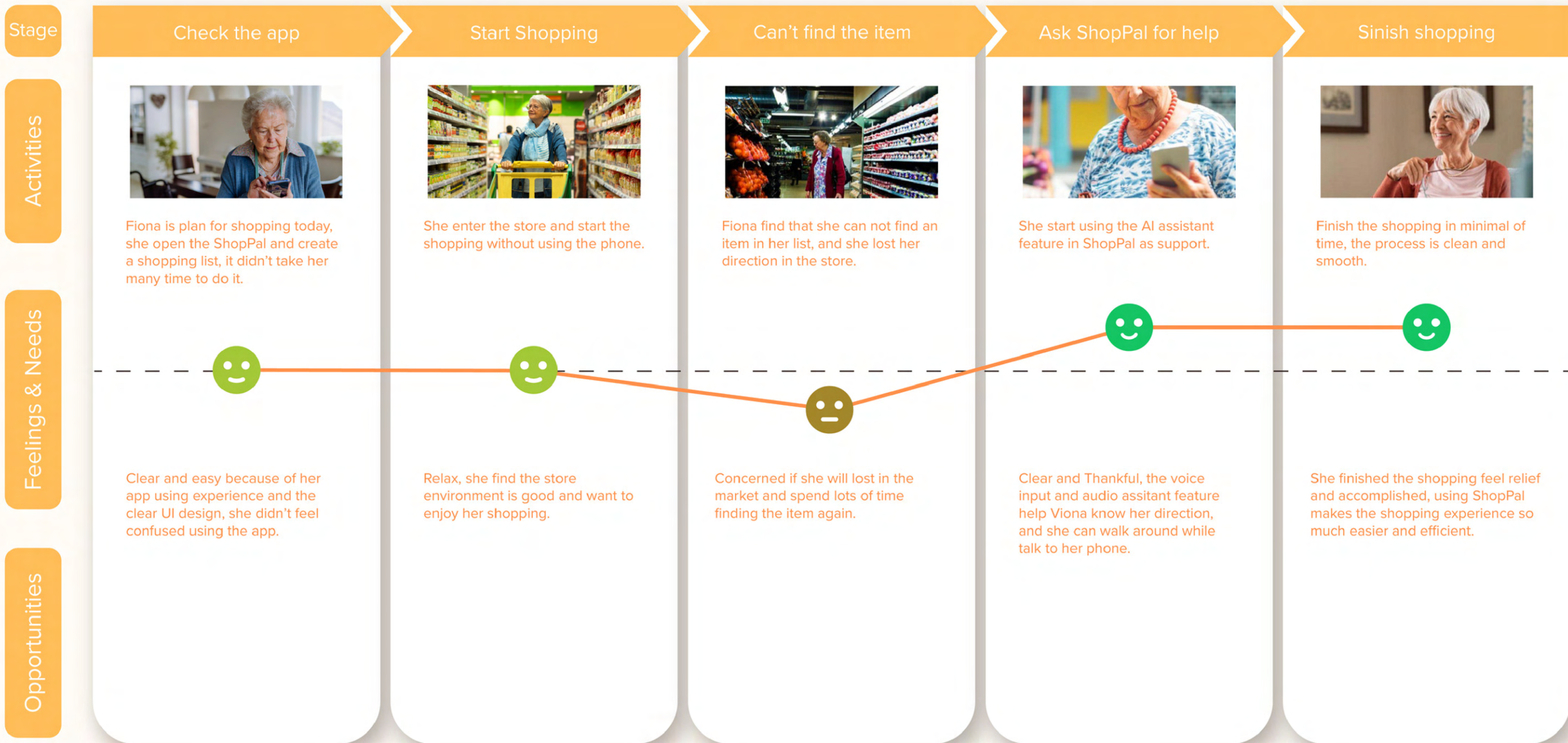
An **RELAXING** Shopping experience of Frugal Tomas



Optimal User Journey Map



An **EASY** Shopping experience of Finding Solution Fiona



Scope

Defining Scope

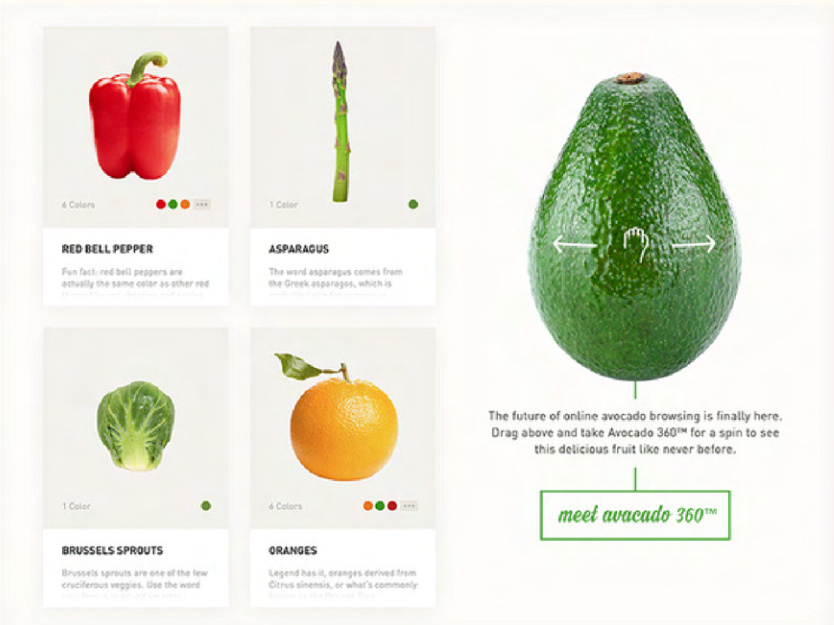
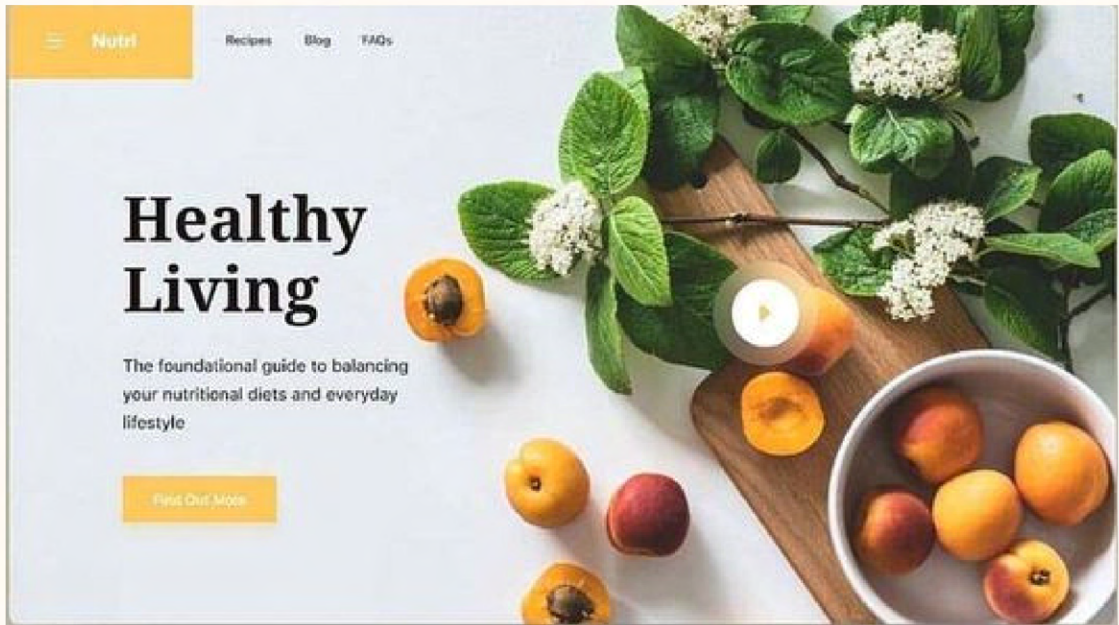
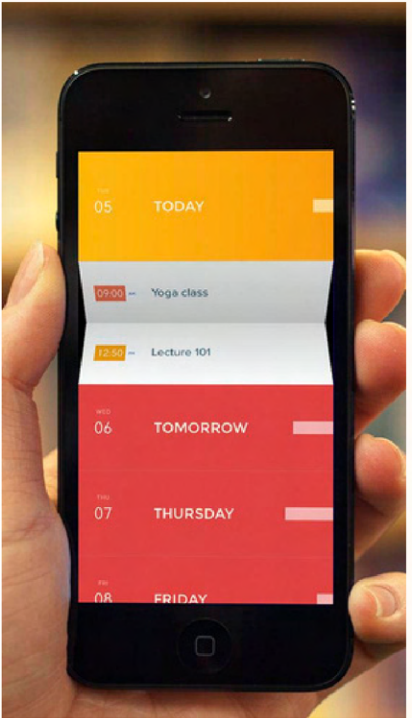
Scope

- Provide **pre-shopping list with desired items reminder** to avoid items forgetting
- Provide **intuitive items wayfinding route guide** through AR to help users track small items they need
- Approachable label visualization** for elderly to conveniently have best choice according to habits, health, age, etc.
- Include **customized brands comparing suggestions** according to users' consuming habits
- Super simple and approachable interface** with large fonts size, obvious icons design, simple logic of system

Differentiating Focus

- Anthropomorphic service and care achieved by specialty of AI due to the diverse needs and conditions from grocery users
- Private and customized assistance fits targeted need according to users' personal conditions and habits
- Completely different items tracking guide system offers more reasonable visualization different from normal map tracking thanks to AR

Moodboard



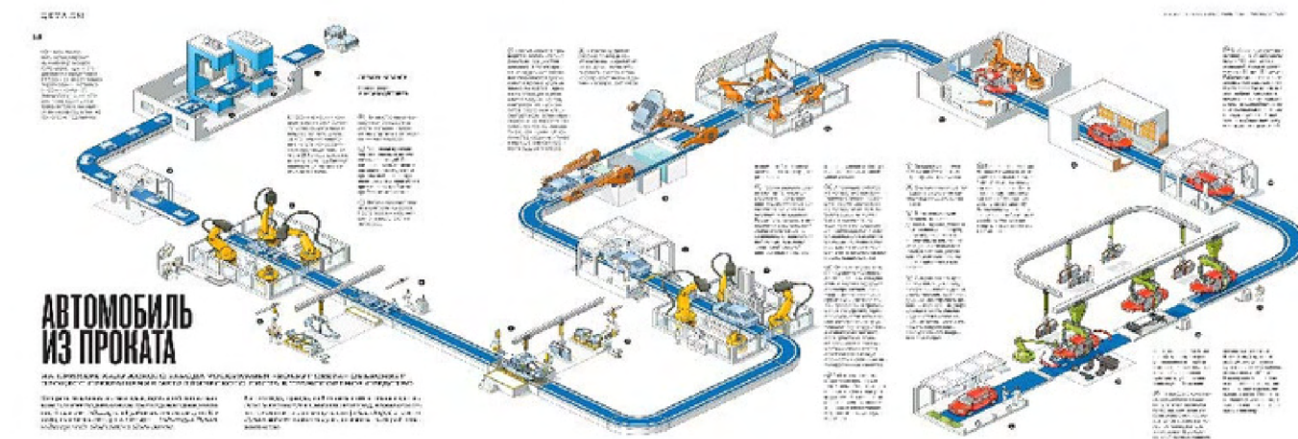
Moodboard

MOODBOARD-1

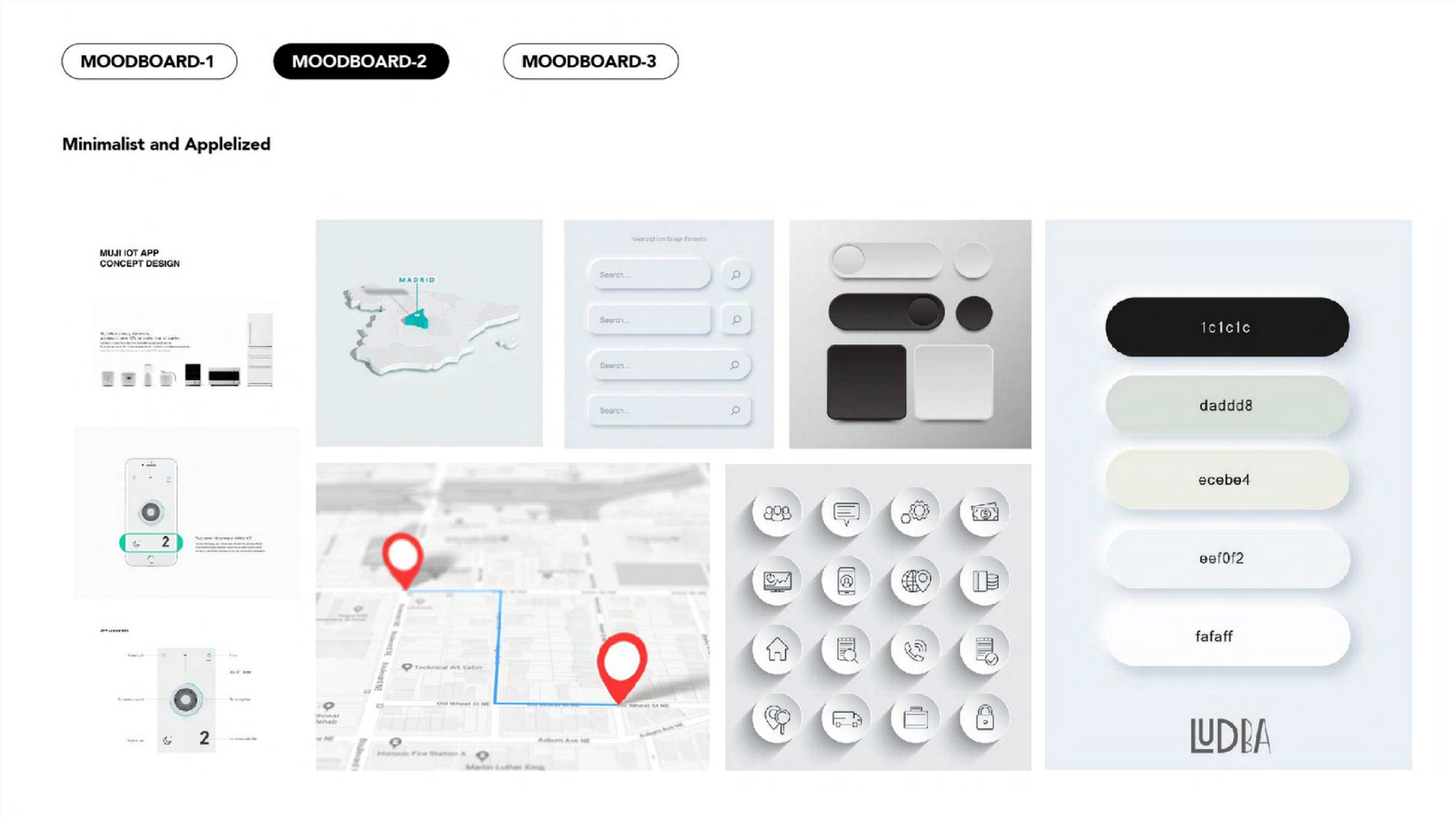
MOODBOARD-2

MOODBOARD-3

Vintage, handwritten and playful



Moodboard



Logo variations



Style Tile

Essence

Supportive, Effeicient, and Clear

Typography

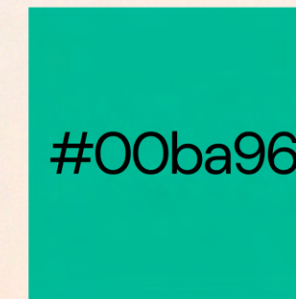
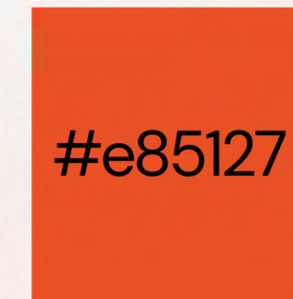
Walmart

Hi, I'm Pal. Good to see you new user. Shall I start a shopping list for you?

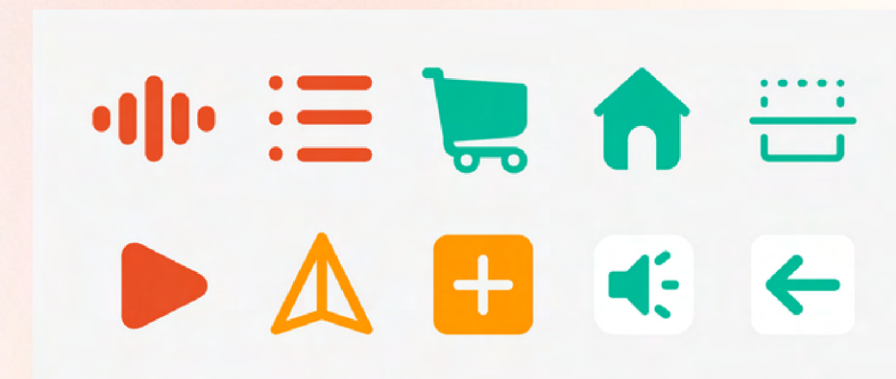


I'd like to get some low calorie chocolate for my grandson

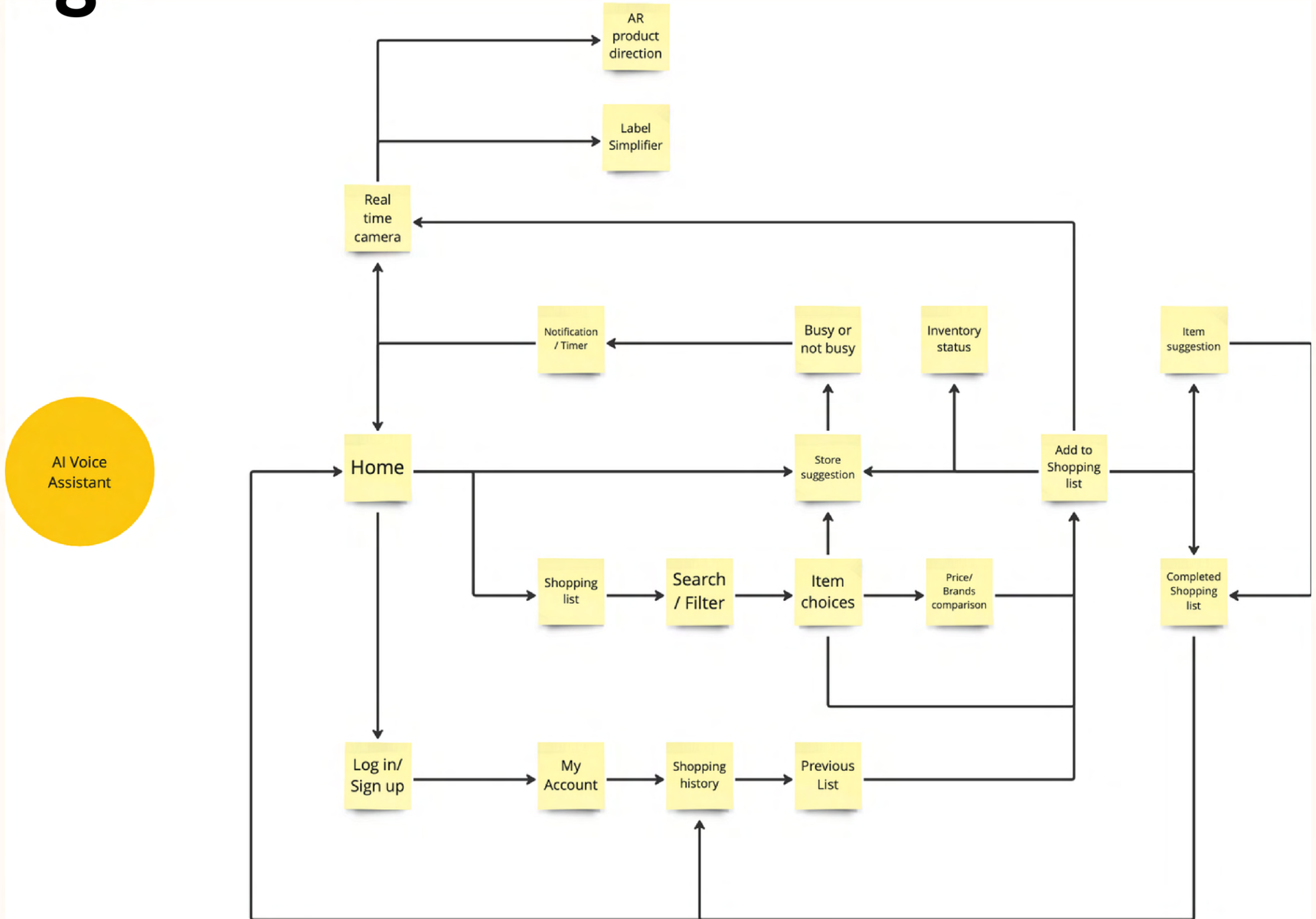
Color Pallete



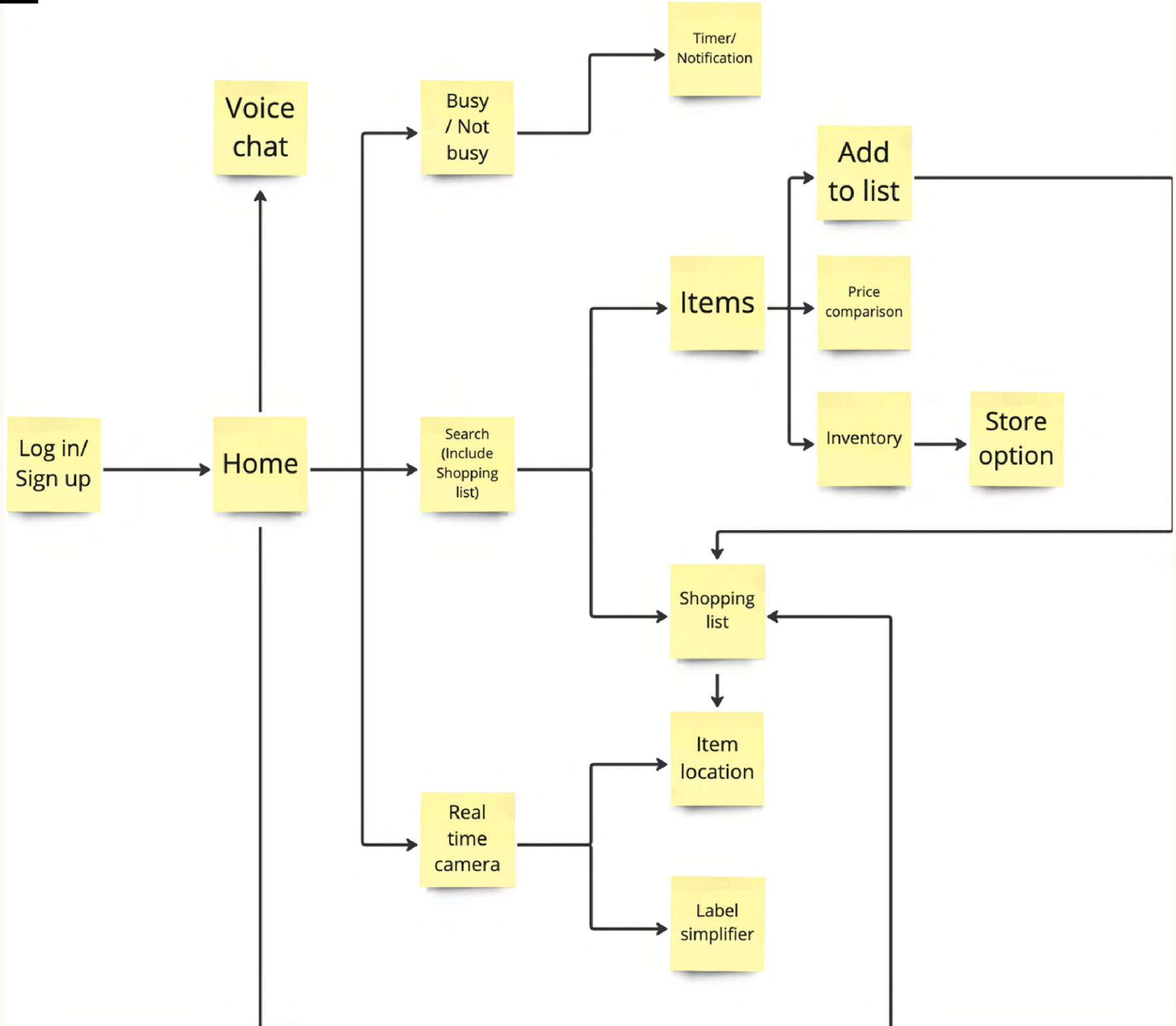
Icons



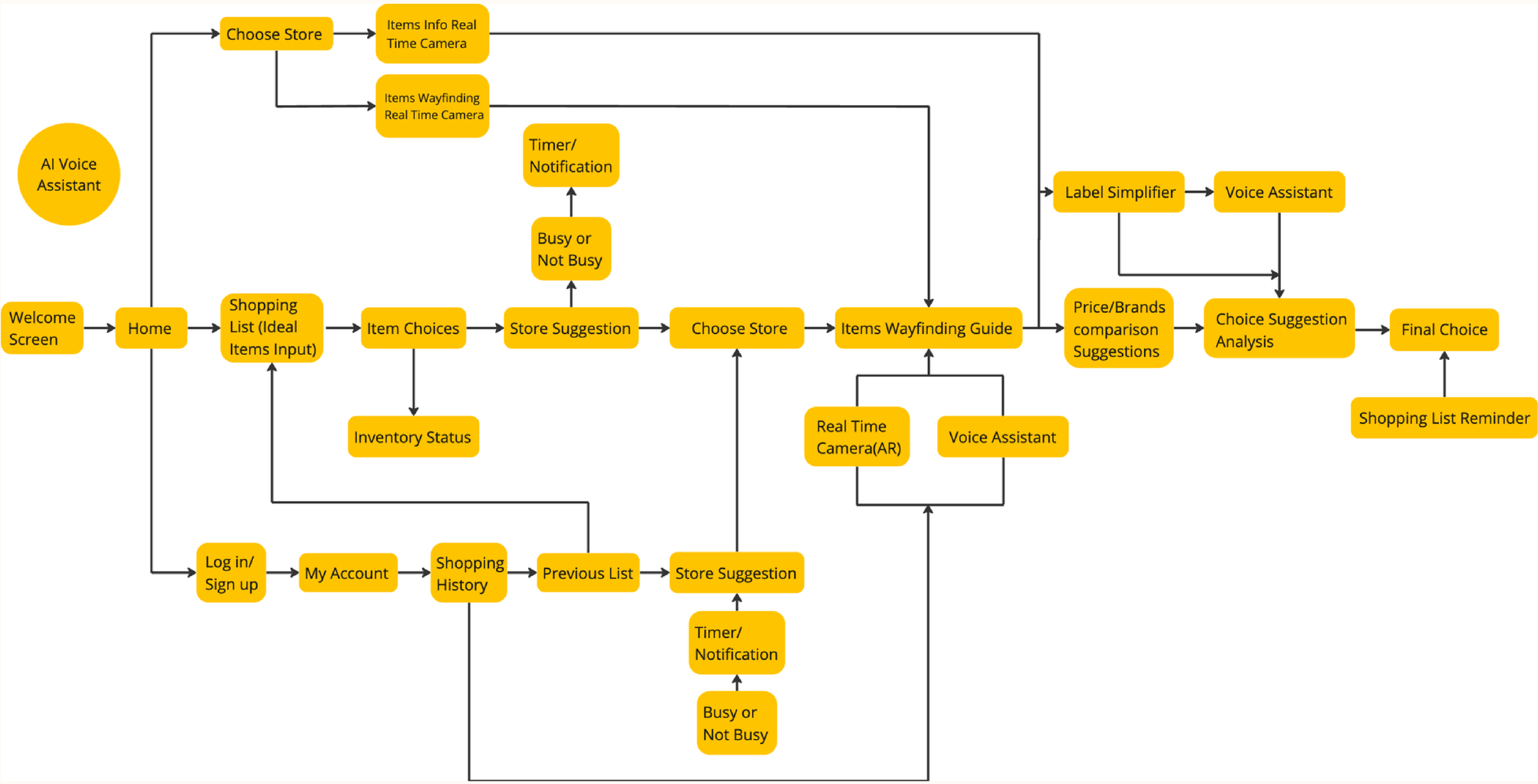
Card Sorting1



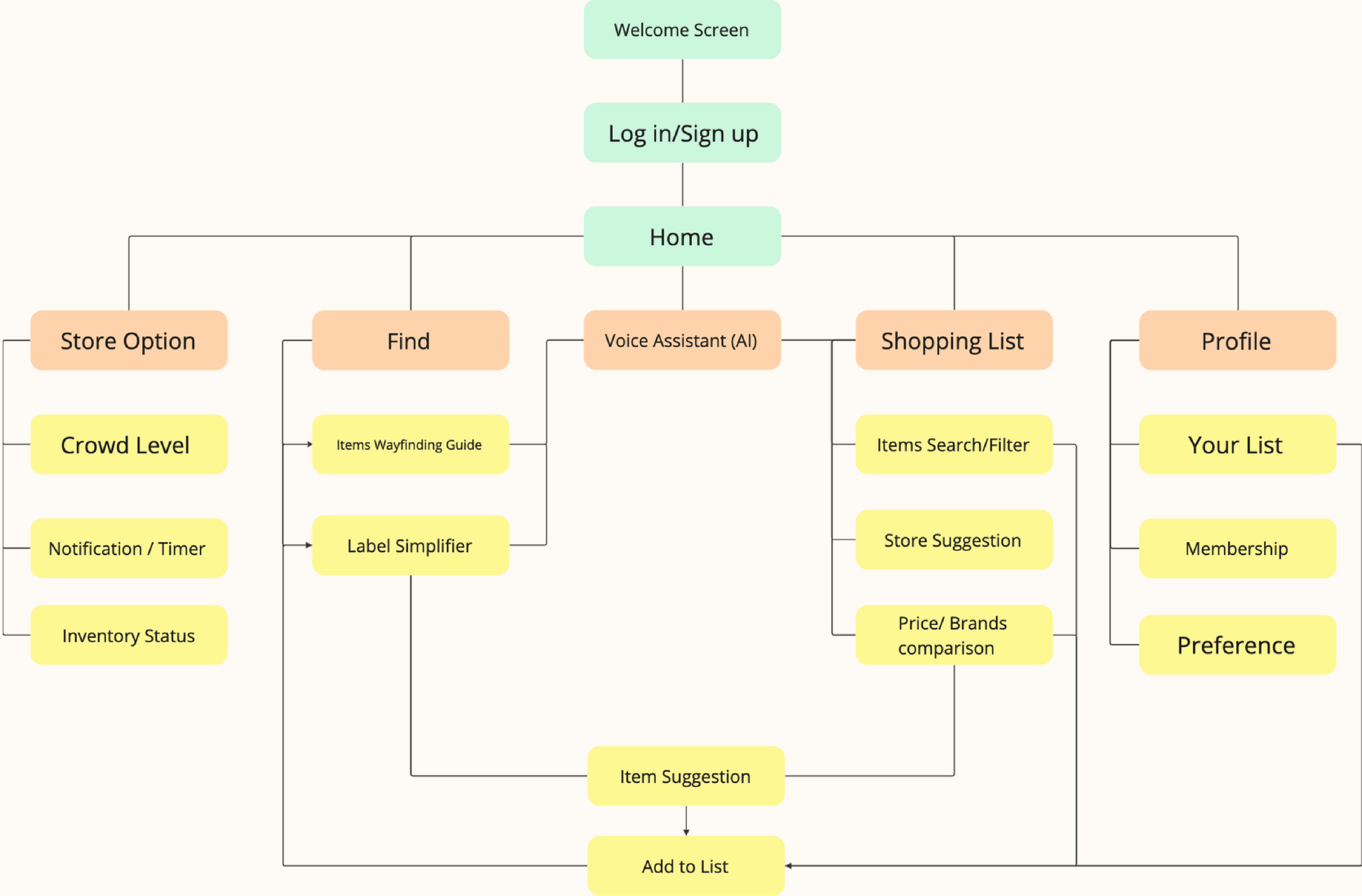
Card Sorting 2



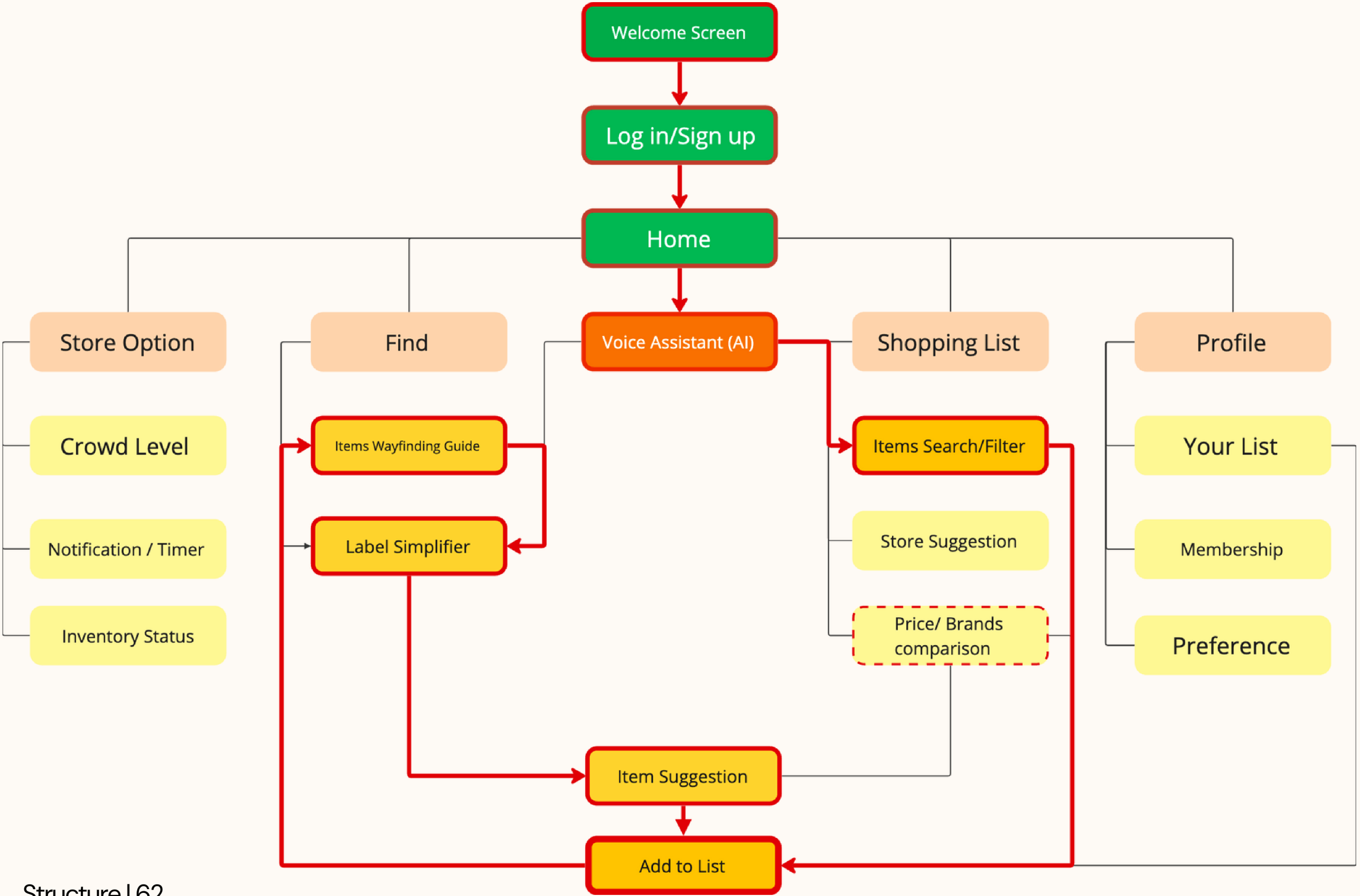
Card Sorting 3



The Structure



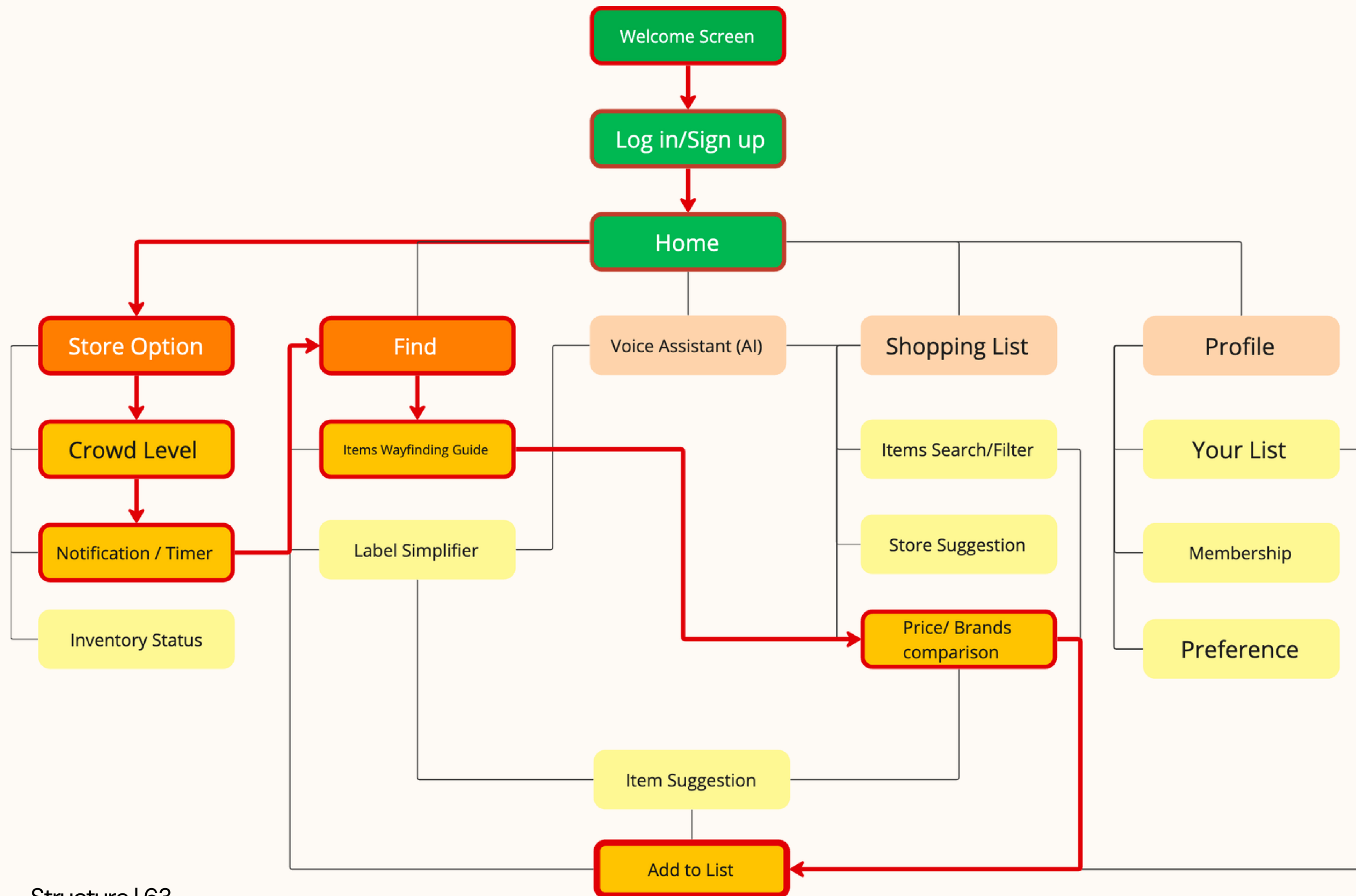
Needs AI Assistant Annie's Flow Chart



Annie would like to use voice assistant to find specific items and know whether the product is good for her health

- She opens the app and skips log in.
- From home screen, she clicks on voice assistant.
- She tells Pal she needs to find a flavored seltzer, and also the store she would go.
- Pal lists several kinds of seltzer.
- She adds one of them to the list and clicks on find it in store.
- The items wayfinding guide pops out, and she finds the seltzer she chose with the navigation guide
- She uses label simplifier to see if it's good for diabetes, but it says not recommended.
- She asks assistant if there is another option. The item suggestion says the another brand is good for diabetics through brand comparison.
- She adds it to her list ultimately.

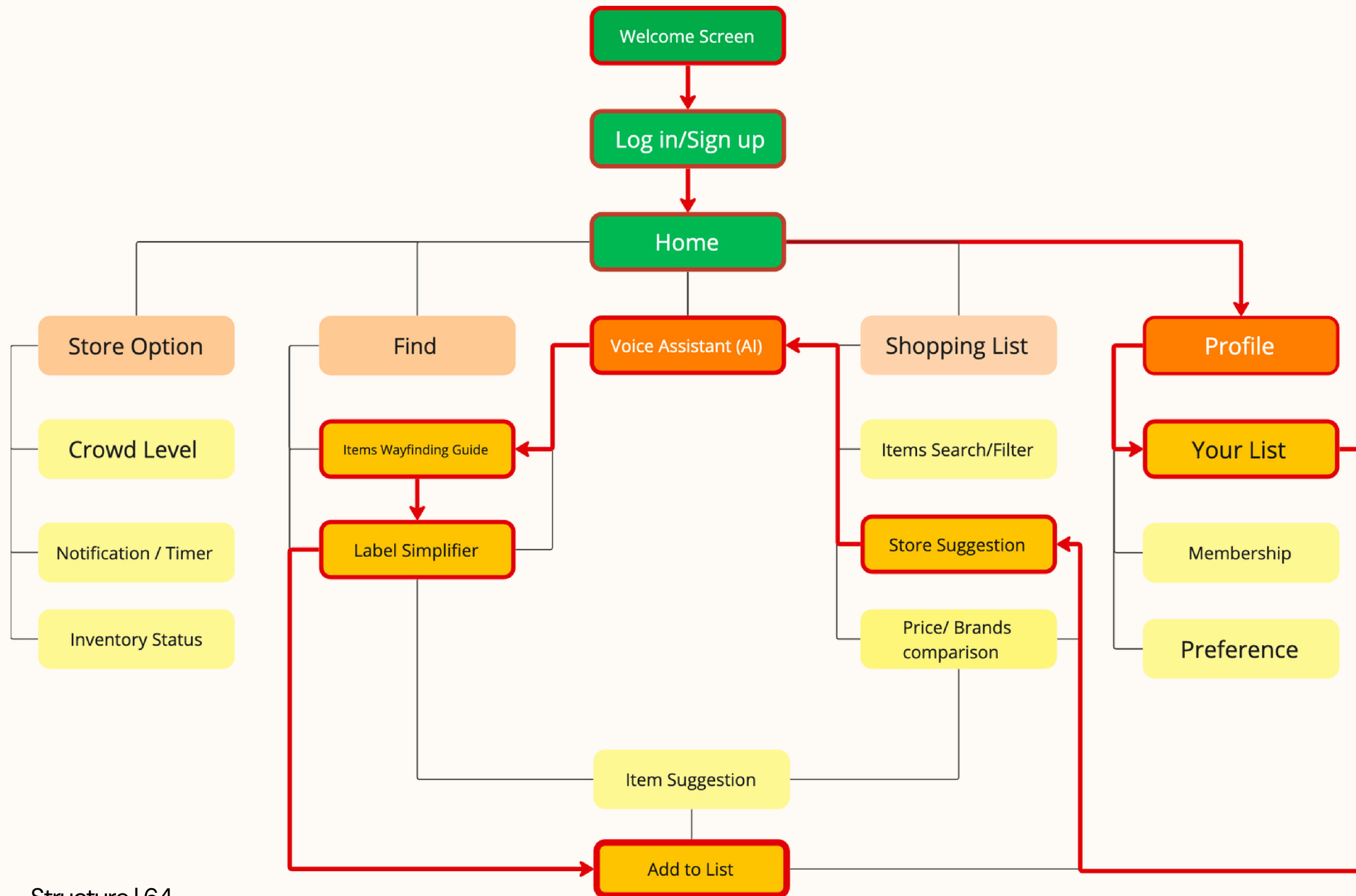
Frugal Tomas's Flow Chart



He cares about price and doesn't want to shop with too many people.

- Let's see how Frugal Tomas uses shopPal.
- He cares about price and doesn't want to shop with too many people.
- He skips login and navigates to store option.
- The crowd level shows that the Publix is busy now.
- He sets a notification to remind him when it's not crowded.
- He opens the wayfinding guide to direct him to the cereal area.
- The price comparison suggests one brand that is the best valued.
- He adds it to his list

Finding Solutions Fiona's Flow Chart



Fiona is concerned about her healthy diet. She'd like to get some necessities through voice assistant.

- She logs into apps and picks her profile.
- Then she gets into previous list but the necessity is out of stock in Publix where she was used to go.
- The Pal says that Target has the items she wants.
- The wayfinding guide directs her to specific shelf and label simplifier helps her choose the best product.
- She adds it to her list ultimately.

Lo-fi Wireframes

Welcome Page



Login



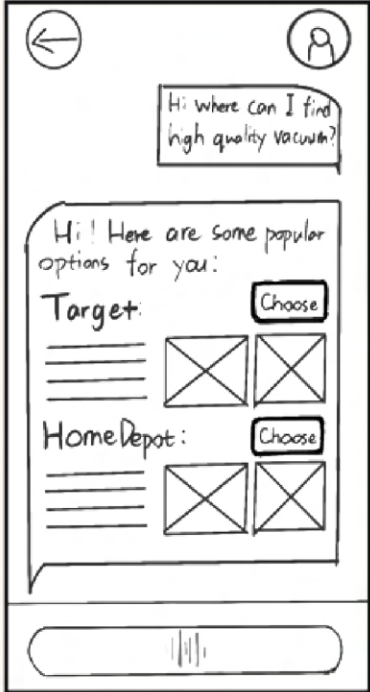
Preference



Home



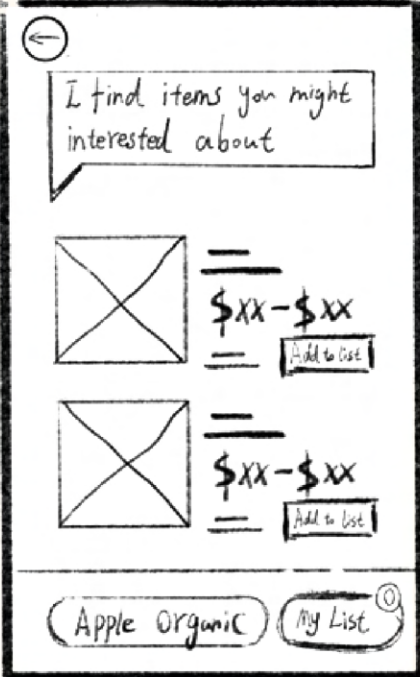
Store Options



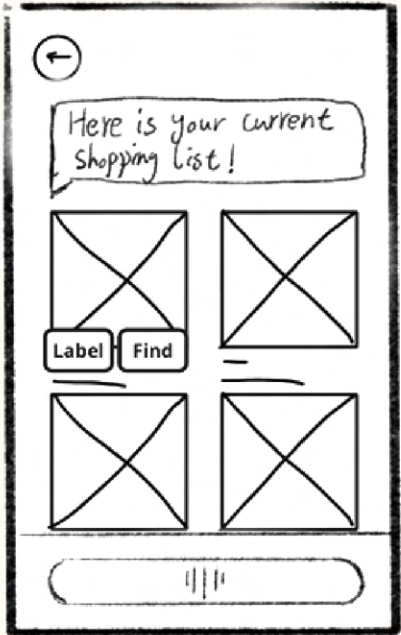
Shopping list (start)



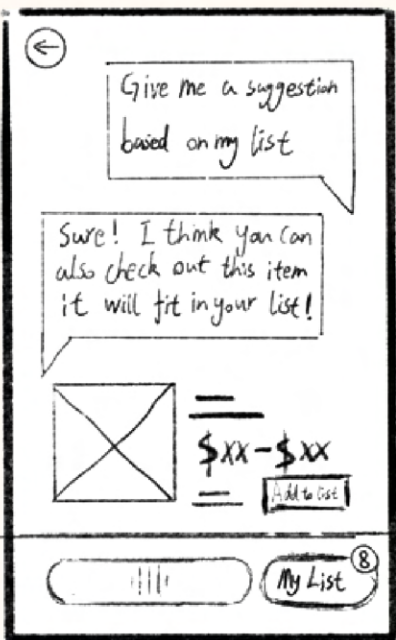
Items Search



Shopping List(after)



Item Suggestion



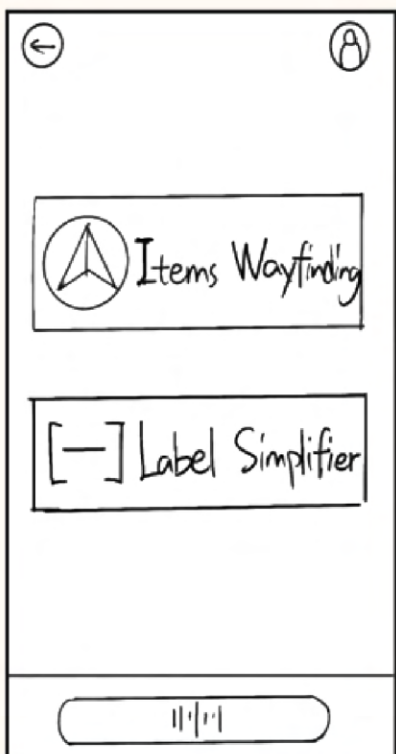
Store Suggestion



Store Suggestion



Find



Items Wayfinding

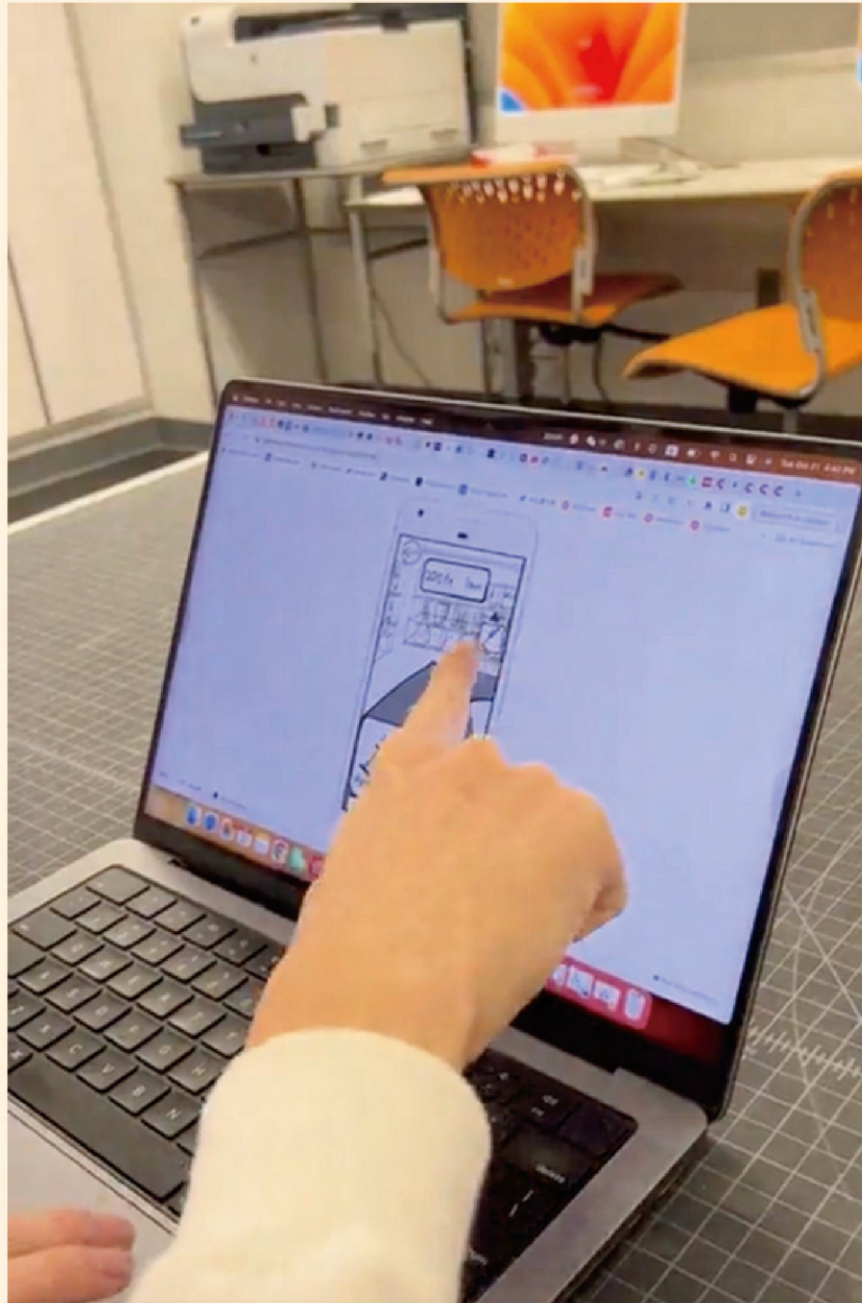


Label Simplifier



Lo-fi Wireframes User Test

Lo-fi Prototype Test with Professor Jane Zash



Feedback and Suggestions

We go through the whole process from login to search and gave us some helpful feedback to improve the app and suggestions.

- Prof. Zash is satisfied with the crowd level feature under the store section and she thinks that's really useful.
- She thinks that's great to have wayfinding feature because she doesn't have to stop and look for person to ask them where it is.
- She suggests we can replace the pop-out window with magnifier feature in label simplifier.
- She suggests the buy-again feature from Amazon app can be added into ShopPal.
- She thinks if she wants a specific item, she will first search the items' names and choose the one she thinks is the best (price, crowd level, or store distance orientation). So she thinks we can put the store distance as well, and we can add an option for searching products in your favorite store because some customers are still store-oriented (Do they have a favorite store? or not).
- She thinks option is the most essential thing for the app. You always be able to get there to another page.
- She thinks we can research more apps such like online shopping apps to get inspirations.

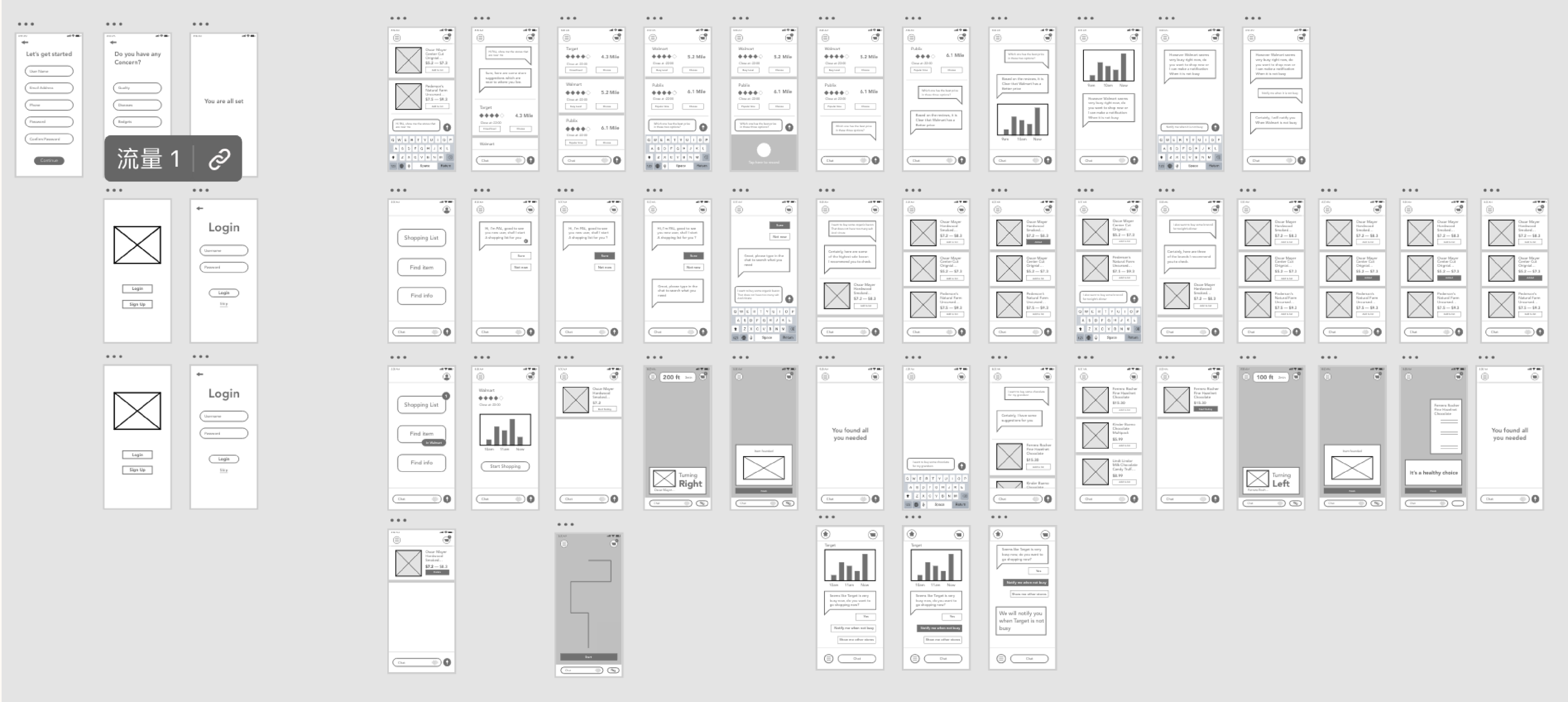


Lo-fi testing.Mp4

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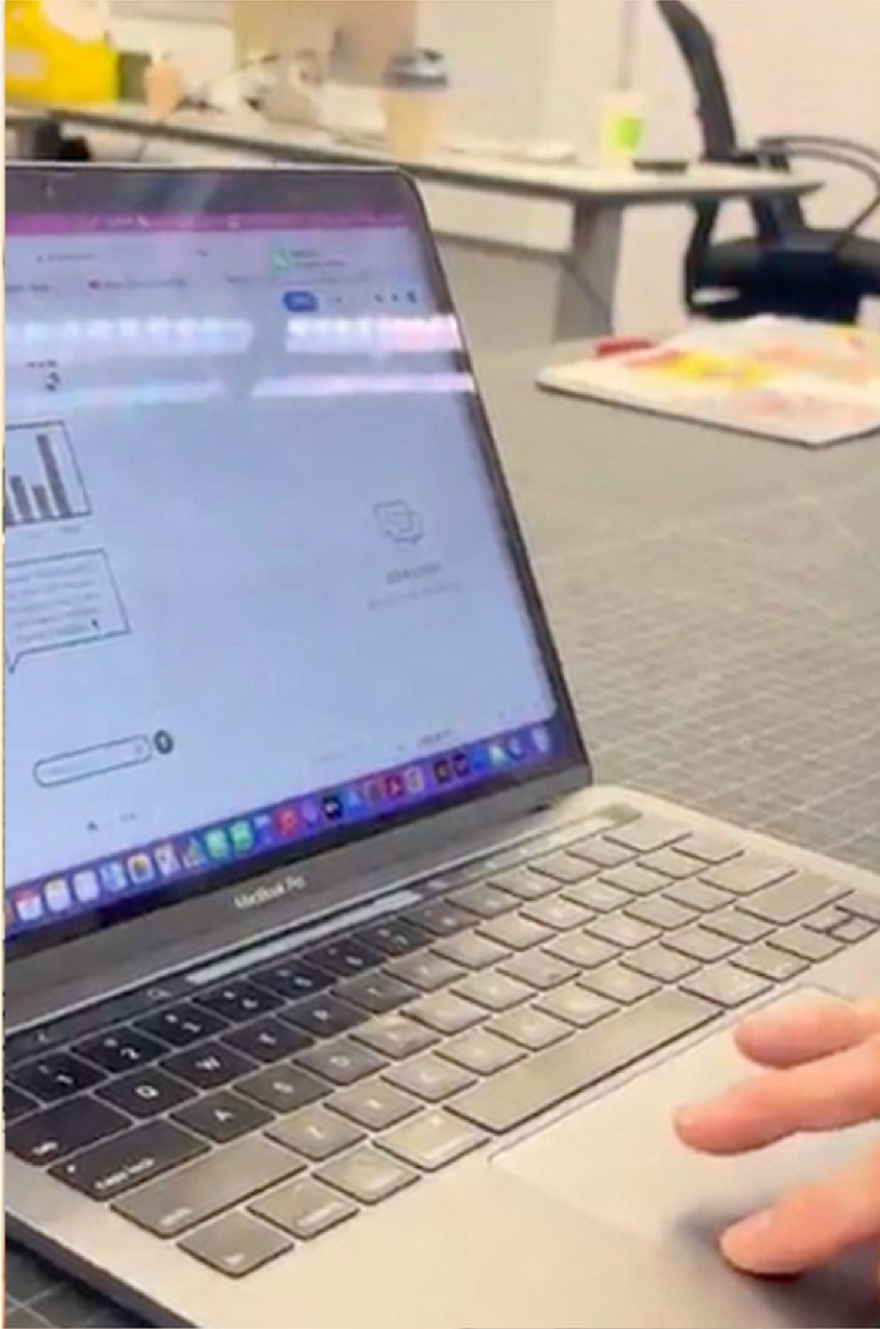
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Mid-fi Wireframes



Mid-fi Wireframes User Test

Mid-fi Prototype Test with Professor Jane Zash



Feedback and Suggestions

We finished our Mid-fi prototype test and contacted Professor Jane Zash to take our test.

- Firstly, she gave some advice on fixing the word use issues for the preference page. For the first option button, she thought we can change the word “quality” into “healthy food” or “organic food”.
- For the shopping list page, she pointed out that there is no go-back button so it's necessary to consider add it.
- She asked if there is a list for one item store by store or if it's a full list for multiple stores. We explained that firstly there is a filter which can choose the nearest store automatically, then it will screen which one is the best choice depending on other reasons such as price or popular times.
- She gave the idea that when users hover over the button, there can be something pop out. We think that would be a pretty constructive suggestion for our hi-fi version.
- Overall, she thought there was a complete shopping experience with ShopPal. She suggested that her only concern would be missing the go-back button. Otherwise, users can't go back to previous pages.

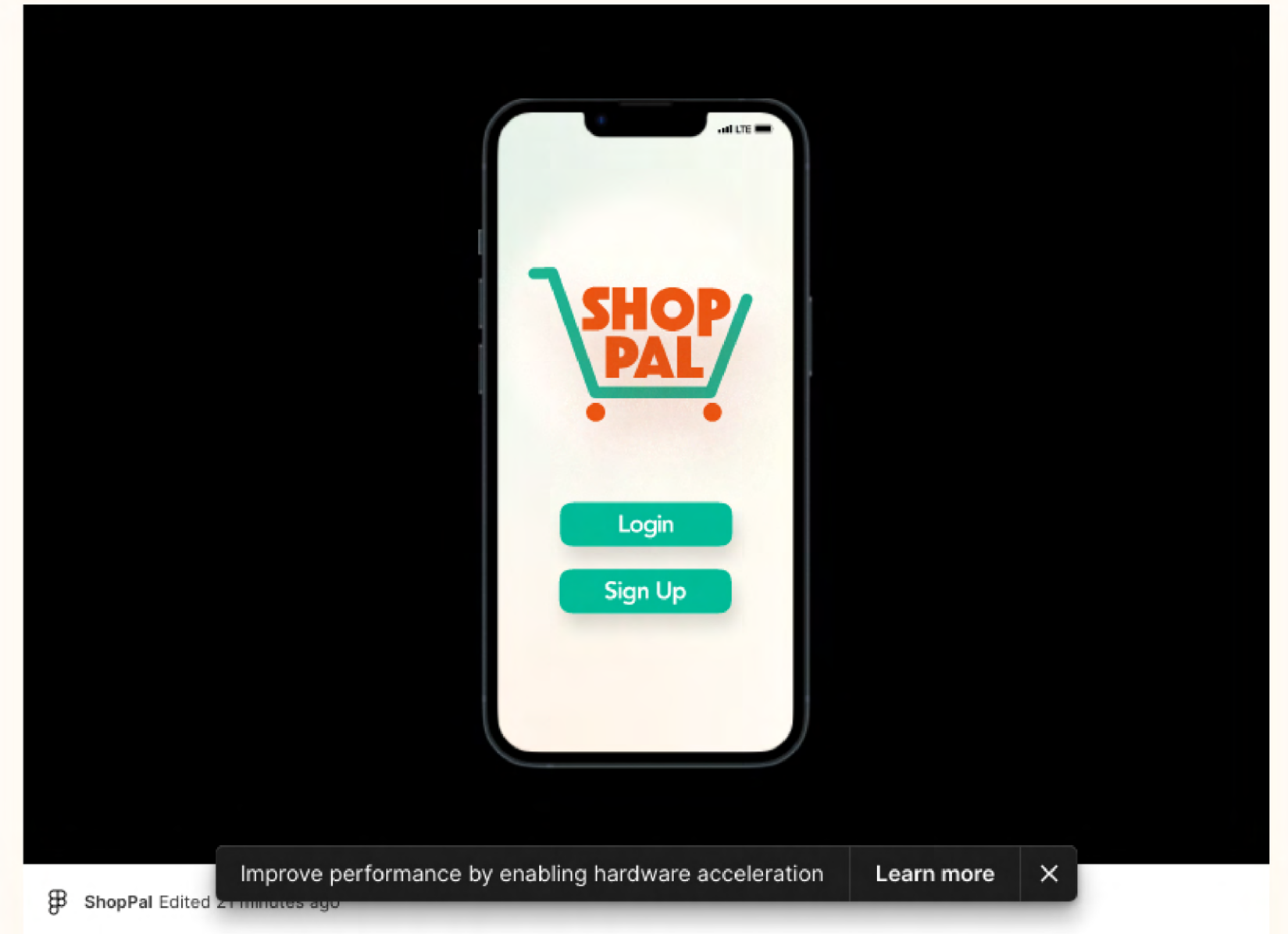
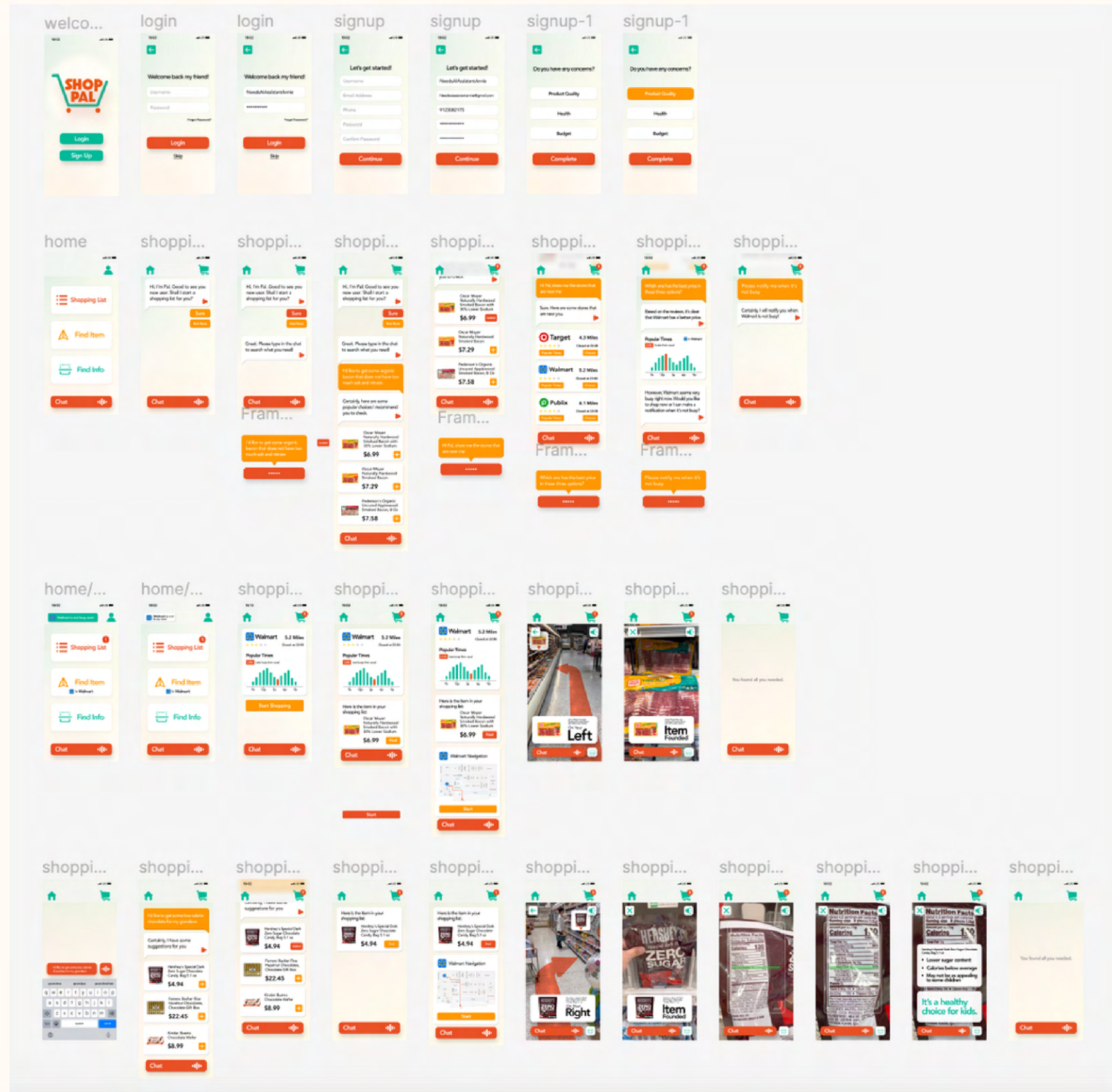


Mid-fi testing.mov

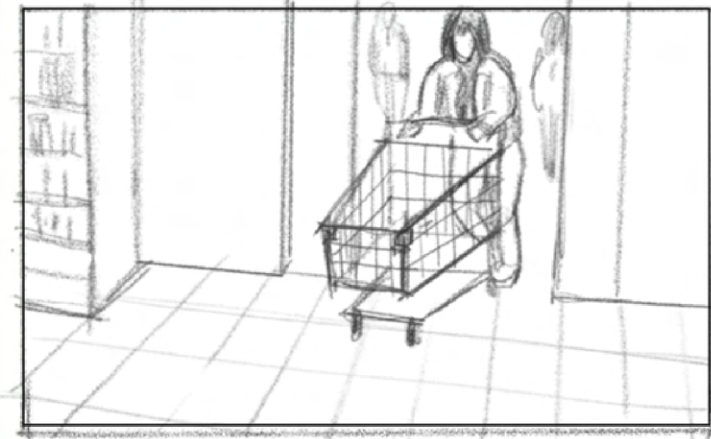
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Hi-fi Wireframes



Marketing Video Storyboard and Script



A senior pushed a shopping cart into a grocery store. She'd like to grab some seltzer for her friends' party.



She can't know the exact position of the flavored seltzer she want through rough signage



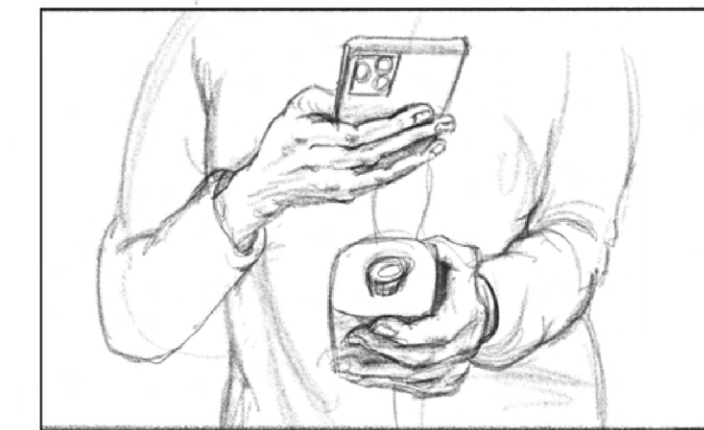
She struggled to find the shelf where seltzers are



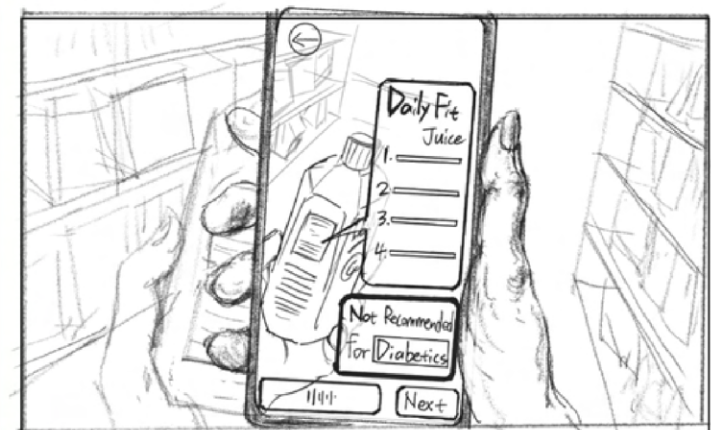
She takes off the glass but still hard to understand the redundant info on the label



She compares the two brands over and over again, but still can't figure out which one fit her best



She opens the label simplifier feature on ShopPal and scans the label



The label simplifier analyzes the info and offers the best choice for her



Ultimately, she put the most satisfied product into her cart



(Logo animation)