

Inventory App for Restaurants

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Project overview



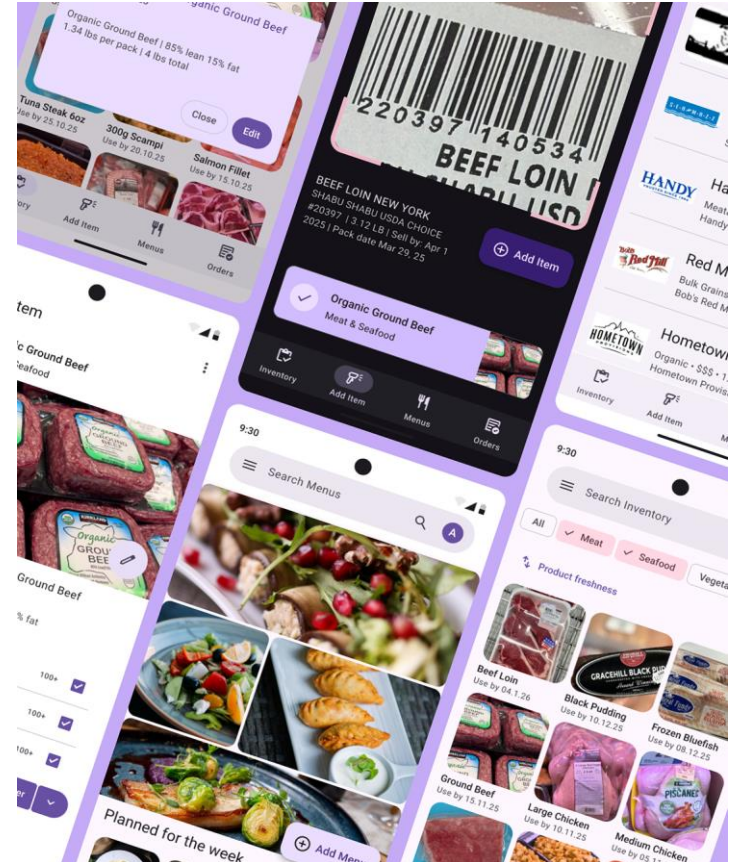
The product:

KitchenView is an Android inventory app that aims to reduce food waste. The typical user is a restaurant owner, between 30 - 60 years old.



Project duration:

June 2024 to August 2024



Project overview



The problem:

Users need a way to track, manage and make the most out of their inventories in a quick and effortless way, often one-handed and in the middle of a rush hour.



The goal:

To give users a simple, customized and intuitive way to manage their food inventory through tracking, organization, and planning.

Project overview



My role:

UX designer in a Design Thinking process, as required by the Google UX Design Professional Certificate.



Responsibilities:

Conducting interviews, paper and digital wireframing, low and high-fidelity mockup design, conducting usability studies, accounting for accessibility, iterating interactive prototypes.

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary



To understand user frustration, needs, and requirements, I conducted user research through interviews, which I then turned into Empathy Maps to better understand the users and their goals.

I used qualitative research because it fit better the project constraints. The goals of the users were formulated as User Stories and included in a User Journey Map.

The users were categorized as Personas, and the main Pain Points were identified.

User research: pain points

1

Time constraints

Users typically had very little time available for the onboarding and understanding new software.

Also tracking during the rush hour was impractical.

2

Near-expiring Issues

Users complained about food loss with near-expiring products, specially fresh products and vegetables.

Also they wanted to get visual reminders for the near-expiring food.

3

Reordering

Automatic purchasing was something that was brought up a lot during interviews.

The users needed some configurable automation for recurring inventory replenishments.

4

Integration

Due to lack of integration with POS software, small items tracking like beverages was updated manually.

Users were frustrated with those time sinks.

Persona: Maialen Azpiri

Problem statement:

Maialen is a restaurant owner who needs a product freshness visualization because she wants to deliver a unique culinary experience to their clients.



Maialen Azpiri

Age: 32

Education: Undergraduate

Hometown: Donostia

Family: Single

Occupation: Restaurant owner

"I want the best product available tracked in a simple and elegant way"

Goals

- Create an innovative and unique culinary experience
- Track freshness, quality and availability of her preferred inventory products.

Frustrations

- She finds difficult to focus on inventory listings in the middle of a demanding workday

She likes good design and luxury experiences. Wants to grow her restaurant rankings. She finds inventory software unappealing and outdated. Speaks fluently Basque, French and Spanish.

Persona: Jaume Malihabadi

Problem statement:

Jaume is a restaurant owner who needs an easy to use tracking app because he has financial overcosts tied to food loss.



Jaume Malihabadi

Age: 58

Education: High School

Hometown: Barcelona

Family: Divorced

Occupation: Restaurant owner

"I need a simple and effective way of tracking my stock levels"

Goals

- Reduce stock level tracking time
- Improve efficiency in his restaurant

Frustrations

- Frustrated about complicated software
- Frustrated about inventory and waste overcosts

Was born in Pakistan and came to Barcelona as a young kid. Worked in his parents' kebab restaurant. Speaks catalan, urdu and english. Eats and smokes too much. Life is hard, but he is a born entrepreneur and loves his business.

User journey map

Persona: Maialen

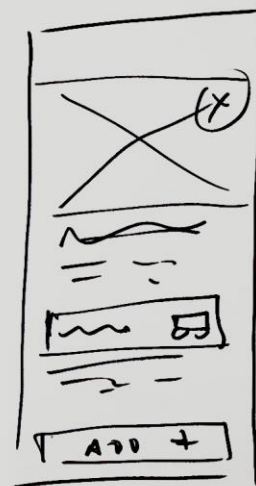
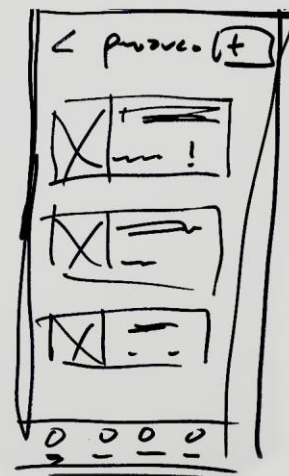
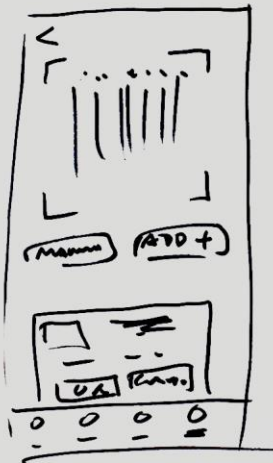
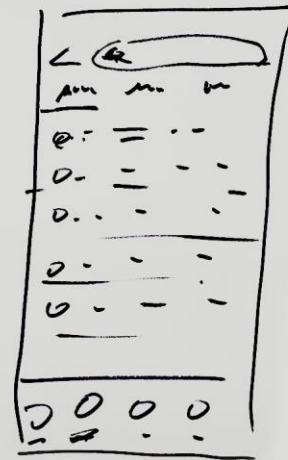
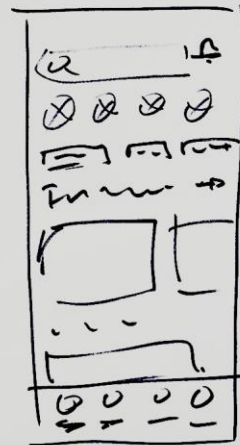
Goal: Track freshness, quality and availability of her preferred inventory products, delivering an exceptional culinary experience.

The User journey map illustrates the process of how Maialen behaves, feels and thinks while she tries to accomplish their goals.

ACTION	Order stock from preferred sources	Input the stock in a excel sheet	Select the best product	Create the menu	Track sold items while open	Reorder to replenish inventory
TASK LIST	Tasks A. Go look for fresh, quality products B. Order them in bulk	Tasks A. Open Excel B. input the products and expiry dates	Tasks A. Look in excel for expiring dates B. Look at stored products for freshness	Tasks A. Create a paper list of best quality products B. Build the menu around them	Tasks A. Manually count menus sold B. Extract data from POS software	Tasks A. Create a list of loss products B. Call vendors to replenish inventory
FEELING ADJECTIVE	• Happy • Excited	• Bored • Tired	• Overwhelmed	• Excited • Anxious	• Alert • Anxious	• Tired • Angry
IMPROVEMENT OPPORTUNITIES	• Esay vendor contact input for reorder, with a star system	• Using a barcode scanner • Auto-fill for known products	• View of near-expiring products • Filter for budget constraints	• View of quality / fresh / preferred items in stock	• Integration with POS • Automated estimation from menus	• Automatic reorder from known vendors

Paper wireframes

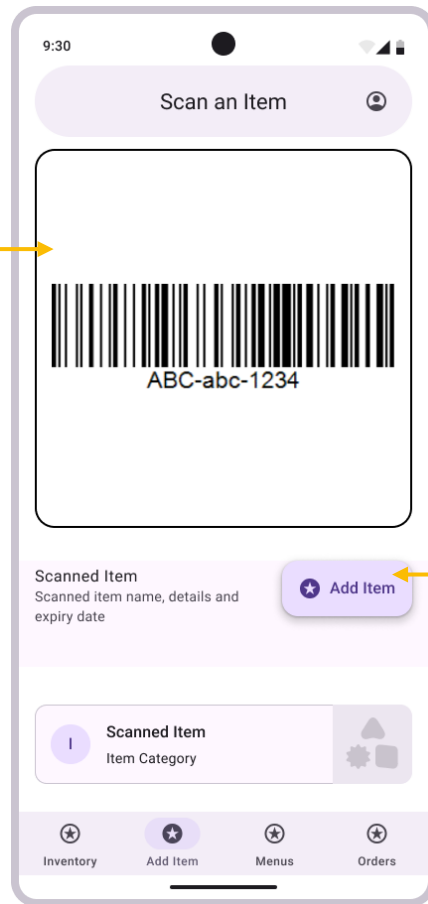
I sketched out paper wireframes for each screen in my app, keeping the user pain points about product addition, inventory sorting and reorder flow in mind.



Digital wireframes

From the user journey map it was clear that it was very important to have a simple barcode scanner, showing the logged-in avatar, details of the item being scanned, and a 'last item scanned' card, for easy review.

A video frame scans automatically the barcodes of the items



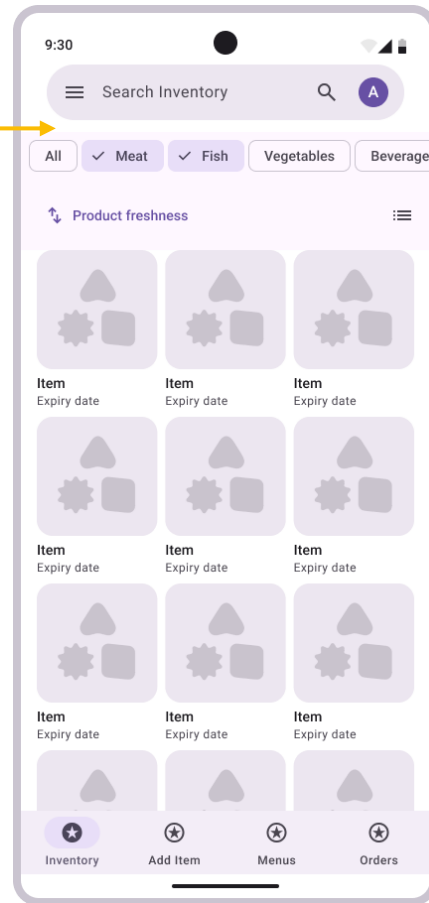
A floating action button allows the user to create a new item without the barcode

Digital wireframes

Selecting the best product available, and reviewing current inventory levels is one of the main features of the app.

Here I added a quick label filter, paired with advanced sorting of the item collection.

The user can search for a product, or use the quick label filter.

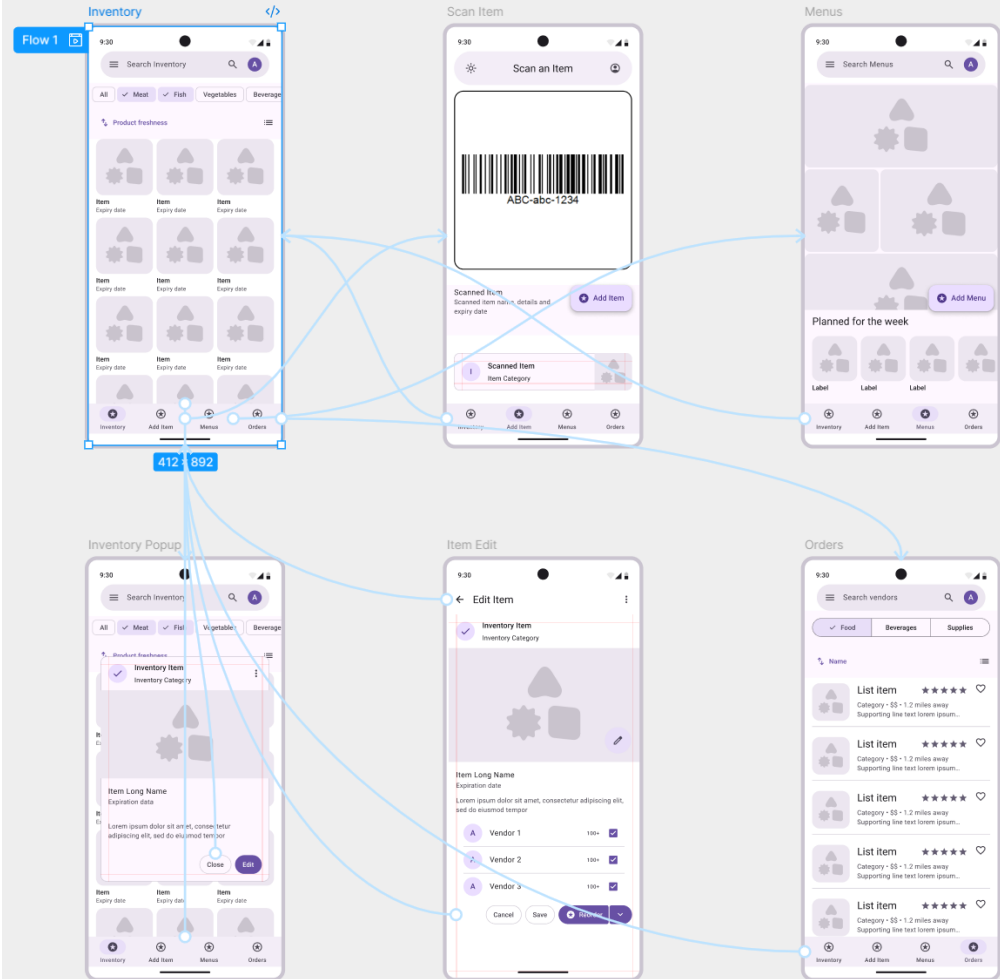


Also they can use a variety of sorting methods, in ascending or descending way.

Low-fidelity prototype

Main flow of the app is guided by a bottom Nav Bar, with four main sections for the inventory input, edit and visualize. Also there are a section for vendor ordering and menu creation.

[Figma Prototype](#)



Usability study: findings

I used my mid-fidelity prototype to conduct usability testing to determine how users perceive and interact with the app by completing three tasks across the different areas of the system.

Round 1 findings

- 1 Users wanted a Near-Expiry alert
- 2 Scanning In low light was a blocker
- 3 The Add Item button wasn't clear

Round 2 findings

- 1 Product Category was hard to find
- 2 Users were confused by filtering
- 3 Adding vendor details wasn't easy

Refining the design

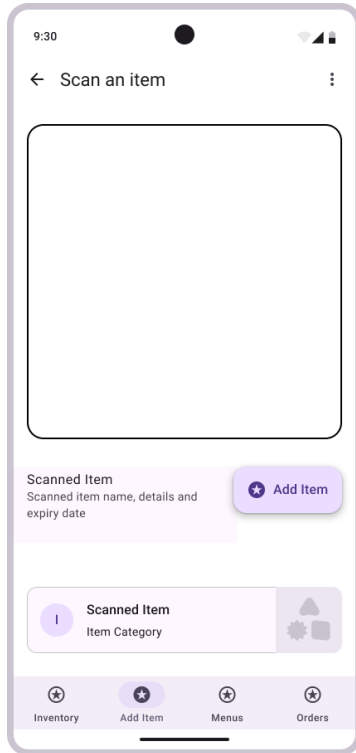
- Mockups
- High-fidelity prototype
- Accessibility

Mockups

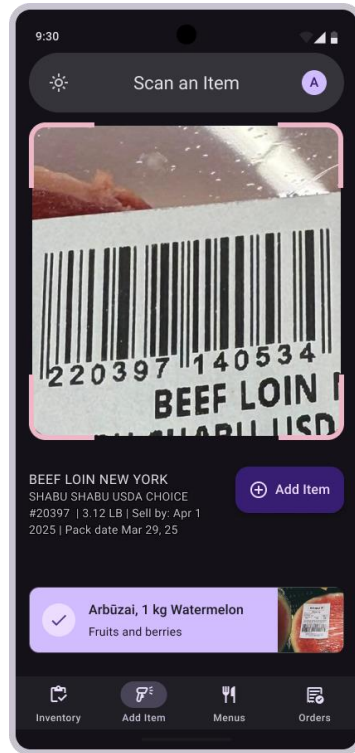
Scanning In low light was a blocker for some users, so I added a Lamp button in the header.

Also a dark color scheme was implemented to get the best contrast with the video frame.

Before usability study



After usability study

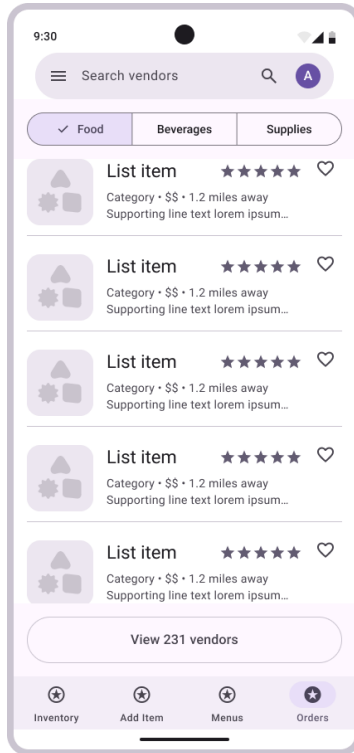


Mockups

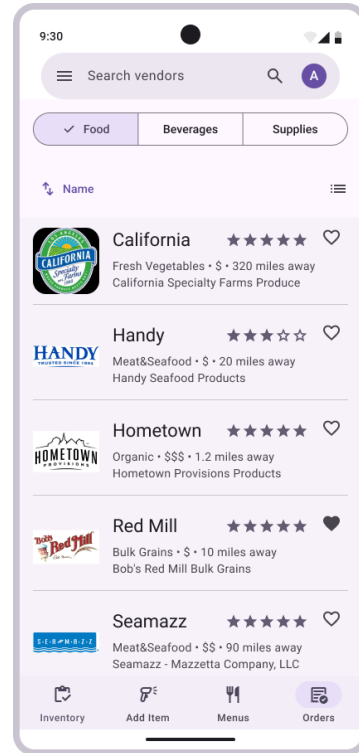
Through the initial usability tests it was clear that the users wanted to filter and sort the entire vendor list as they pleased.

The 'View Vendors' button was removed and a sorting subheader was added.

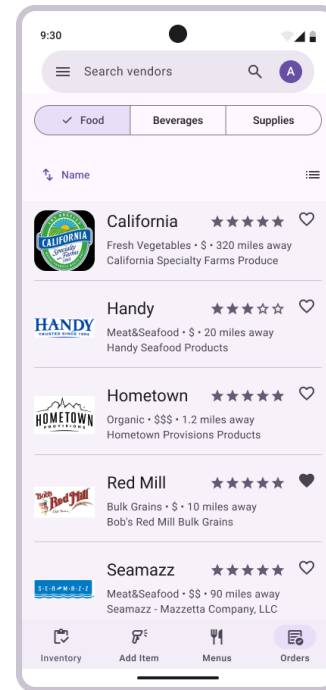
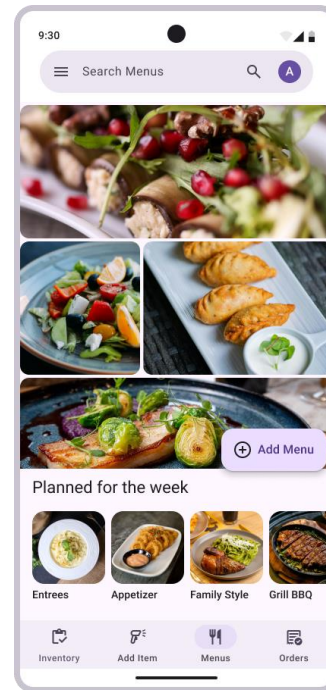
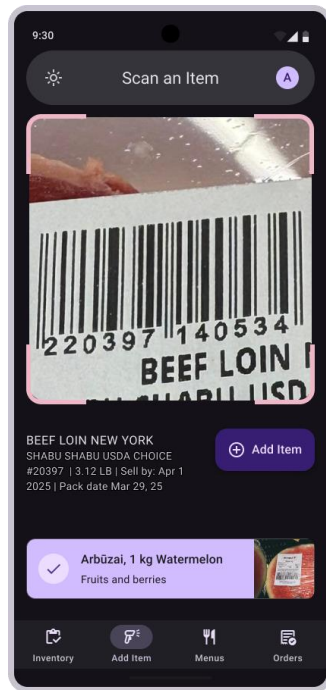
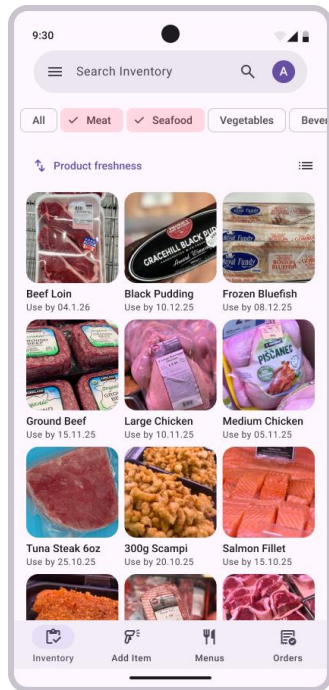
Before usability study



After usability study

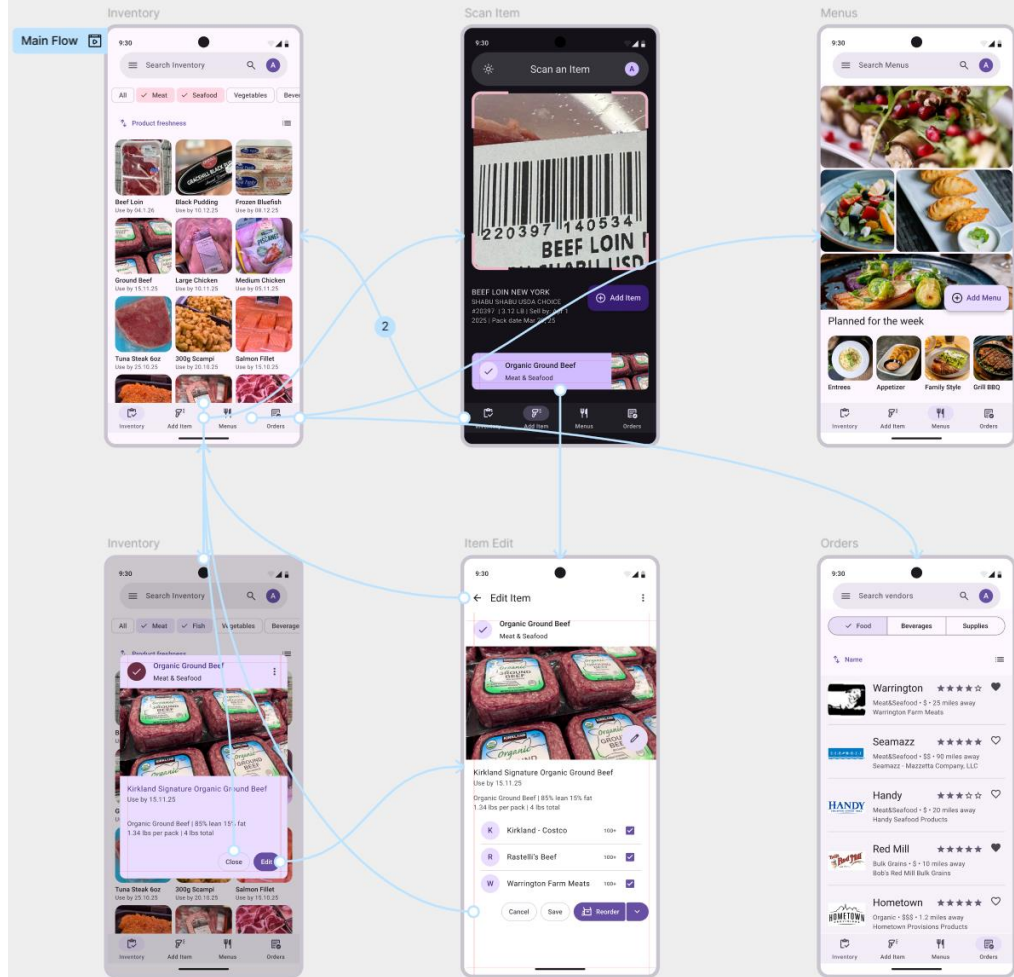


Mockups



High-fidelity prototype

High-fidelity prototype



Accessibility considerations

1

I implemented a text hierarchy throughout the app. This structure creates a map for the screen reader to follow when reading the content.

2

When placing components together in a cluster, I used components that each achieve at least 3:1 contrast between themselves and the background.

3

When I created the color palette, I checked that the primary colors met WCAG AA Compliance before fleshing out the hi-fi designs.

Going forward

- Takeaways
- Next steps

Takeaways



Impact:

Our target users shared that the prototype was intuitive to navigate through, emphasizing the value of thorough testing in the design process.

I plan to iterate more during the sketch or low-fi prototype phase to reduce the need for extensive changes in the hi-fi prototypes.



What I learned:

As a UX I have gained valuable insights and knowledge through the design process. Some of the key things I have learned include:

- Understanding user needs
- Importance of simplicity
- Accessibility considerations
- User feedback

Next steps

1

Conduct follow-up
Usability Testing on the
new app

2

Identify Workflows and
Features that need
improvements

3

Prototype the the New
Flows to use them in a
round of User Tests

Let's connect!



I would appreciate your thoughts and insights on this topic, as feedback is crucial to further enhancing the findings of this study.

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Thank you!