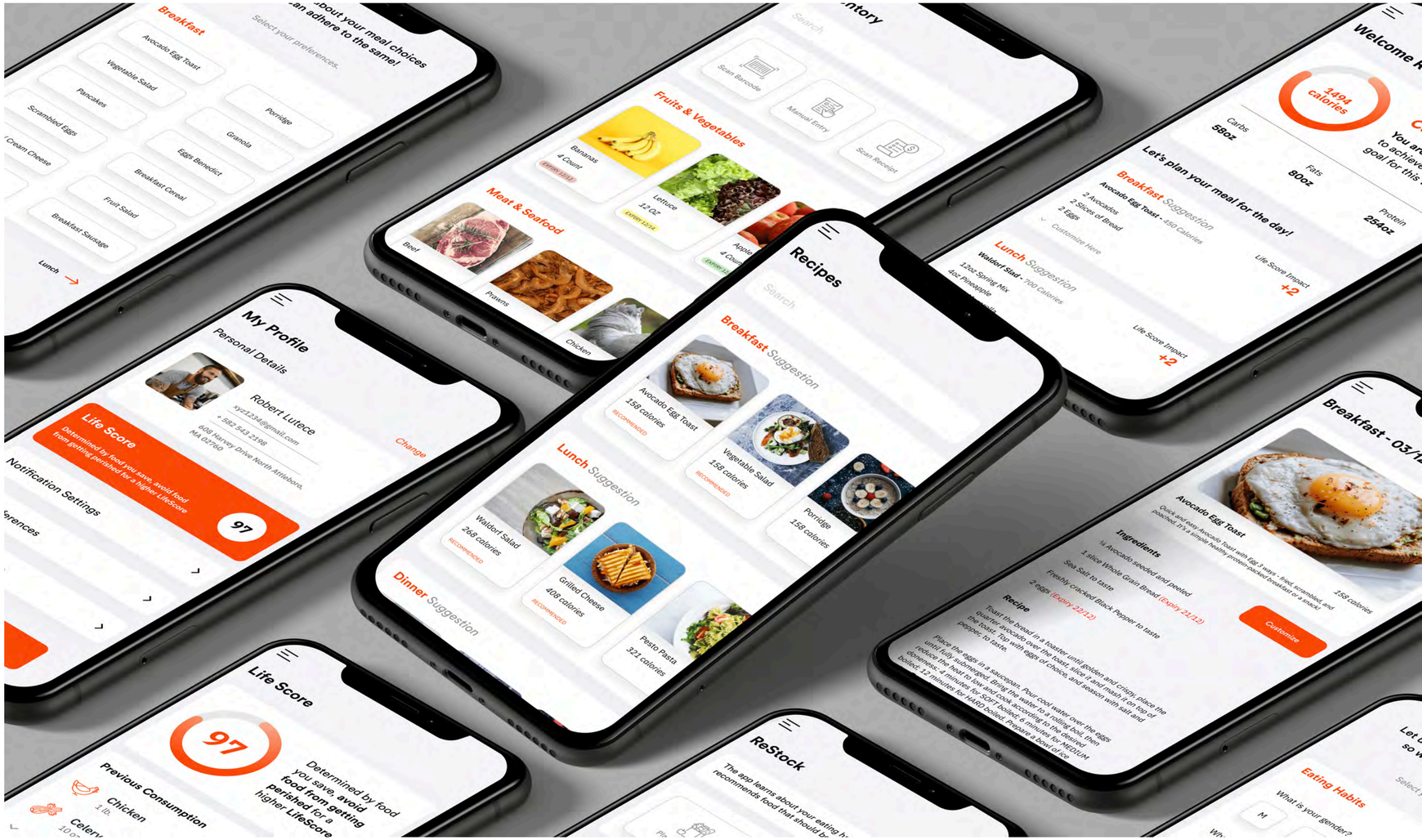
Frima

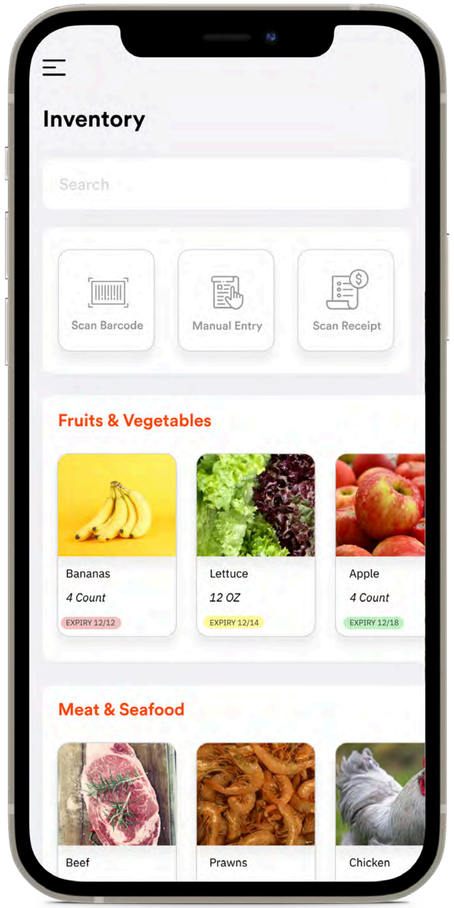
Food Wastage Management
Application Case Study



What is Frima?

Frima is a food wastage management application that helps users manage their inventory and help reduce food wastage.

- User Based Recipe Suggestions
- Expiry Date Reminders
- Automatic Receipt Inputs to maintain an updated inventory.



The Team

2 UX Designers

Myself

My Role in the project was to **participate in all activities end to end**, from developing the prompt to the end visual design deliverable, with a focus on **interactive design & facilitating design research**.

Toolkit

Figma - UI Design/Wireframes/Prototyping

Miro - Affinity Mapping

Google Forms/Zoom - Interviews

Google Docs - Notes/Project Management

My Role

- Developing the prompt
- User Interviews
- Affinity Mapping
- Developing a Feature Set
- Information Architecture
- Personas
- User Flows
- Creating a Visual Language
- User Interface Design
- Usability Testing
- Presentation Deck

Brief

Help users manage their **grocery inventory and avoid throwing away food**.

Apply an **evidence based methodology** that involves end users throughout the design process in order to design a solution that is **easier to use, learn and remember**. To solve this problem we have designed a solution which relies **heavily on automation of this process**, which we believe will increase the user's retention rate and make the experience enjoyable.

Primary & Secondary Research

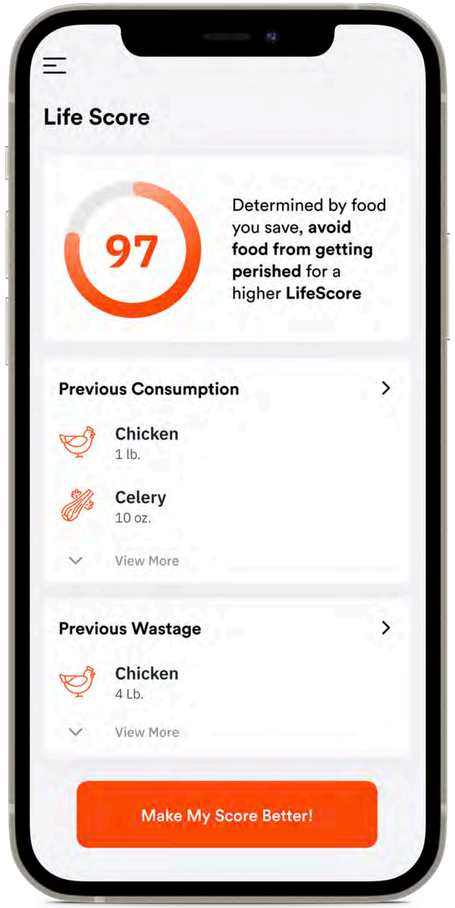
Interviews

Affinity Mapping

Goals

Our goal is to make the process of managing inventory more accessible and welcoming, making the user feel like they are making a change by reducing food wastage.

The worry, which is more of a challenge is to make the user use the app frequently, regularly and update data accurately through an **in app incentivization feature.**



Stakeholders

Grocery Store Chains : This is from where we generate out inventory data for the end-user.

App Distribution Platform : Such as the iOS App Store, the platform moderates content and functionality.

End User : Average Joe, a little tech savvy, cares about the community.

Solution Overview

Accomplishing long term goals for individuals who struggle with inventory management for their groceries through a better implementation of user-focused recipe suggestions, automated expiration date notifications, and automated receipt scans.

Our focus is on creating prototype for mobile devices but the end product will be widely available on a myriad of platforms to increase the outreach of the system.

Long Term Goals?

Help the user inclucate the good practices into a habit as a long term goal.

Contextual Inquiry

Contextual inquiry helped us understand the in-depth thought processes of users and the underlying structure of their activities

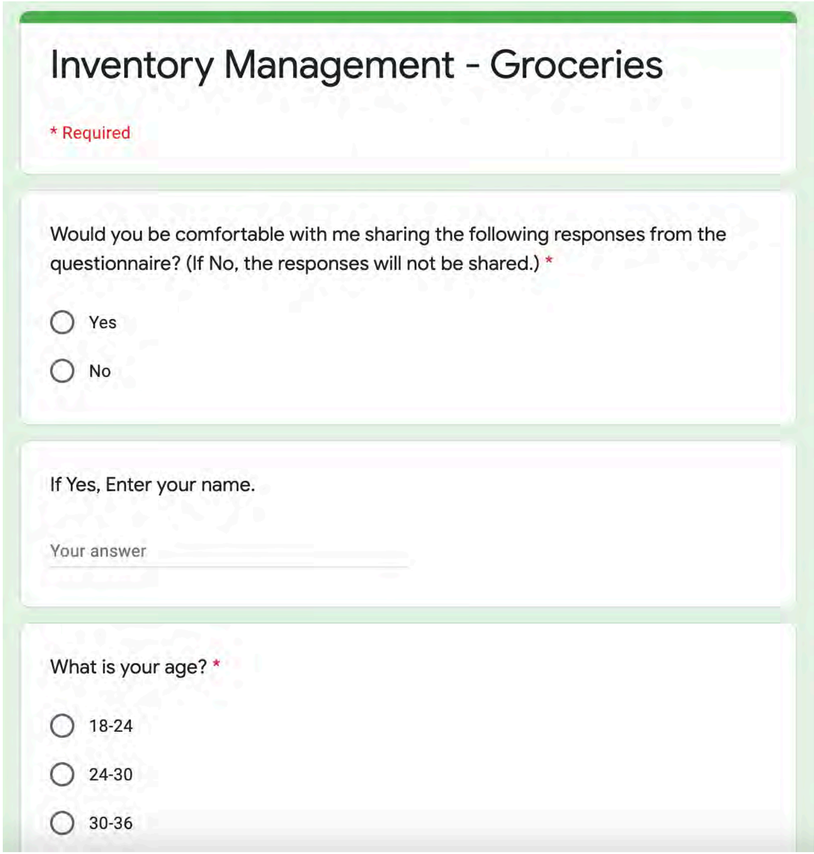
- Interviews
- Affinity Mapping
- Interpretation

Interviews

Given the diverse situations each of the team member was in due to COVID-19, the interviews were a collection of **In-person interviews, Online Voice Calls and Google Forms**.

The interviews were aimed at understanding users expectations from an app like this and what they think is the biggest hurdle that will keep them from using such an app regularly.

There were 16 interviews in total used for affinity mapping.



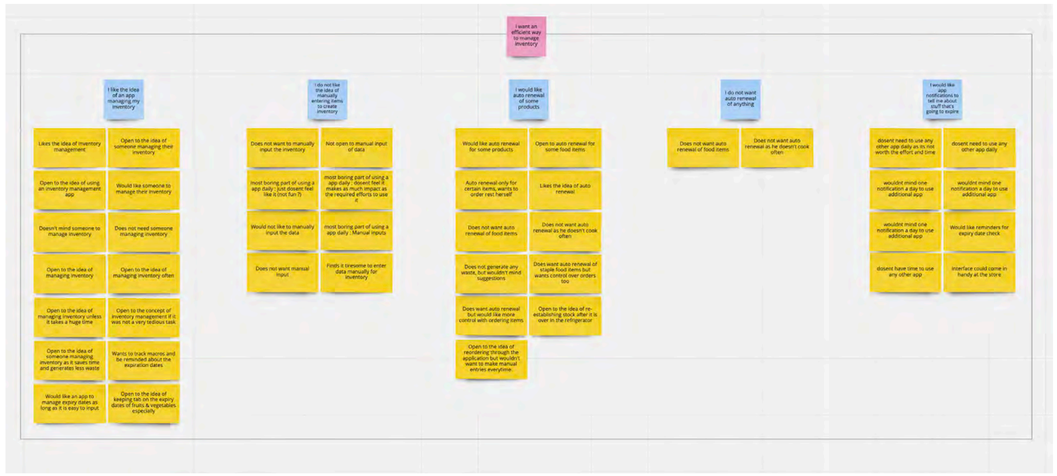
Demographic

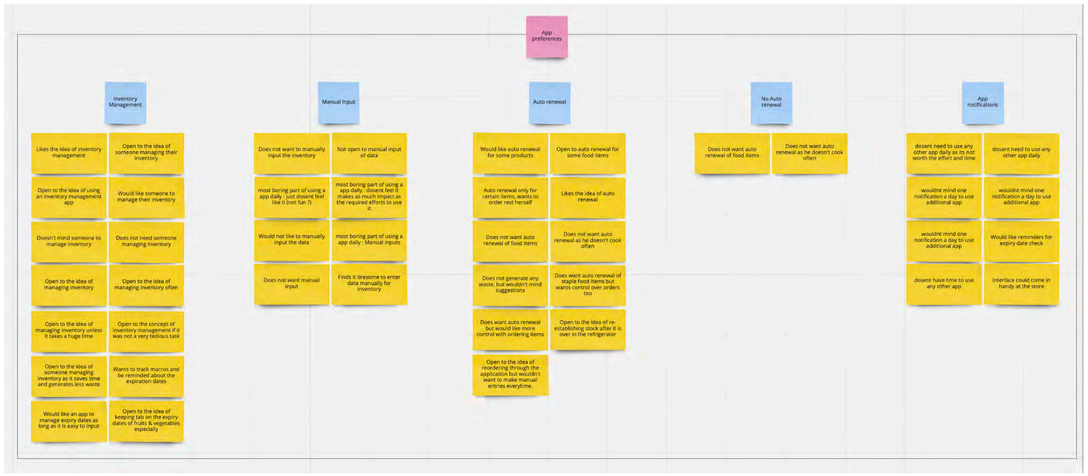
We interviewed individuals between the age of 19 to ~45, from three different countries (US, India, France). Majority of them were graduate or under graduate students.

Affinity Mapping

The affinity diagram essentially helped us bring the issues and insights across all users together into a wall sized hierarchial diagram. Affinity Notes ascted as the voice of the users and the issues it revealed became the basis for our solution.

We followed **Rapid Contextual Design guide by Holtzblatt, Wendell, and Wood** and executed it in digital form using Miro. Around 275 cards were considered for the affinity mapping process.





Interpretation

The users have a **difficult time remembering the expiry dates** as there are multiple perishables in the refrigerator always.

Most of the people tend to express **disappointment about having to eat at home** every day because of the **repeating recipes** which lead to them throwing away items from their inventory.

It is a tedious task to **manually input every grocery item** every time for an app to determine the grocery supplies.

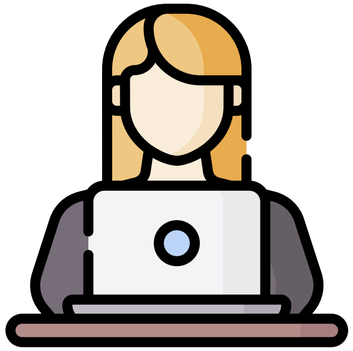
Defining our Primary Users

Students

Try new recipes at home rather than eating outside which helps them keep a track of their expenses.

Single Living Individuals

To be reminded of expiry dates of grocery items as they often tend to forget to ideally manage their inventory.



Working Individuals

With their hectic schedule they would require help in managing their eating habits and manage their inventory through an automated process.

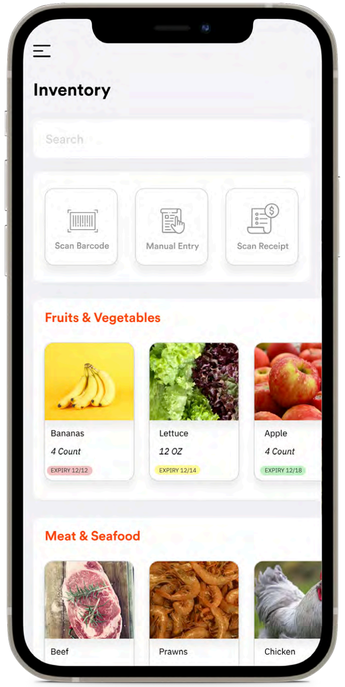
Developing the Feature Set

Based on the insights gathered through our Affinity Mapping process, we concluded on our exact problem set for which we developed a feature set to help user avoid the problems we encountered through the interview and affinity mapping process.

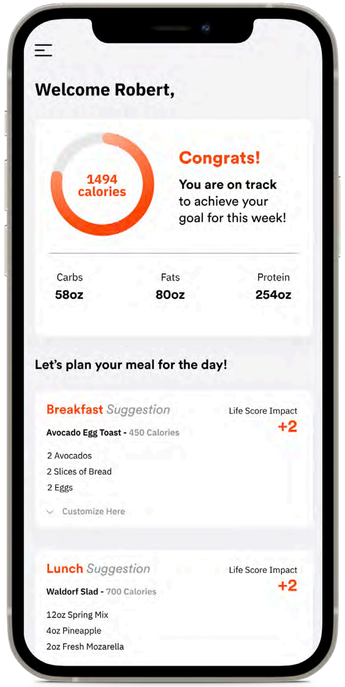
From the interviews, we envisioned that the users would need help in **remembering expiry dates of products, a seamless inventory input, and recipe suggestions based upon their ideal course meal** which would help them alleviate the problems that they majorly outlined to create a seamless experience.

Developing the Feature Set

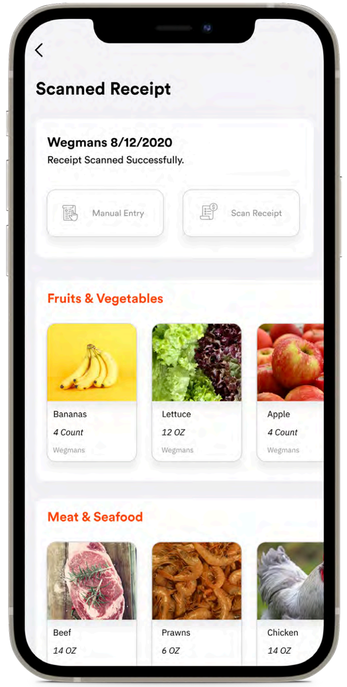
Inventory Organizer to help the users track the expiry dates of easily perishable grocery items.



Recipe Suggestions to help the users avoid redundancy with the same old recipes and adjusting to the available inventory.



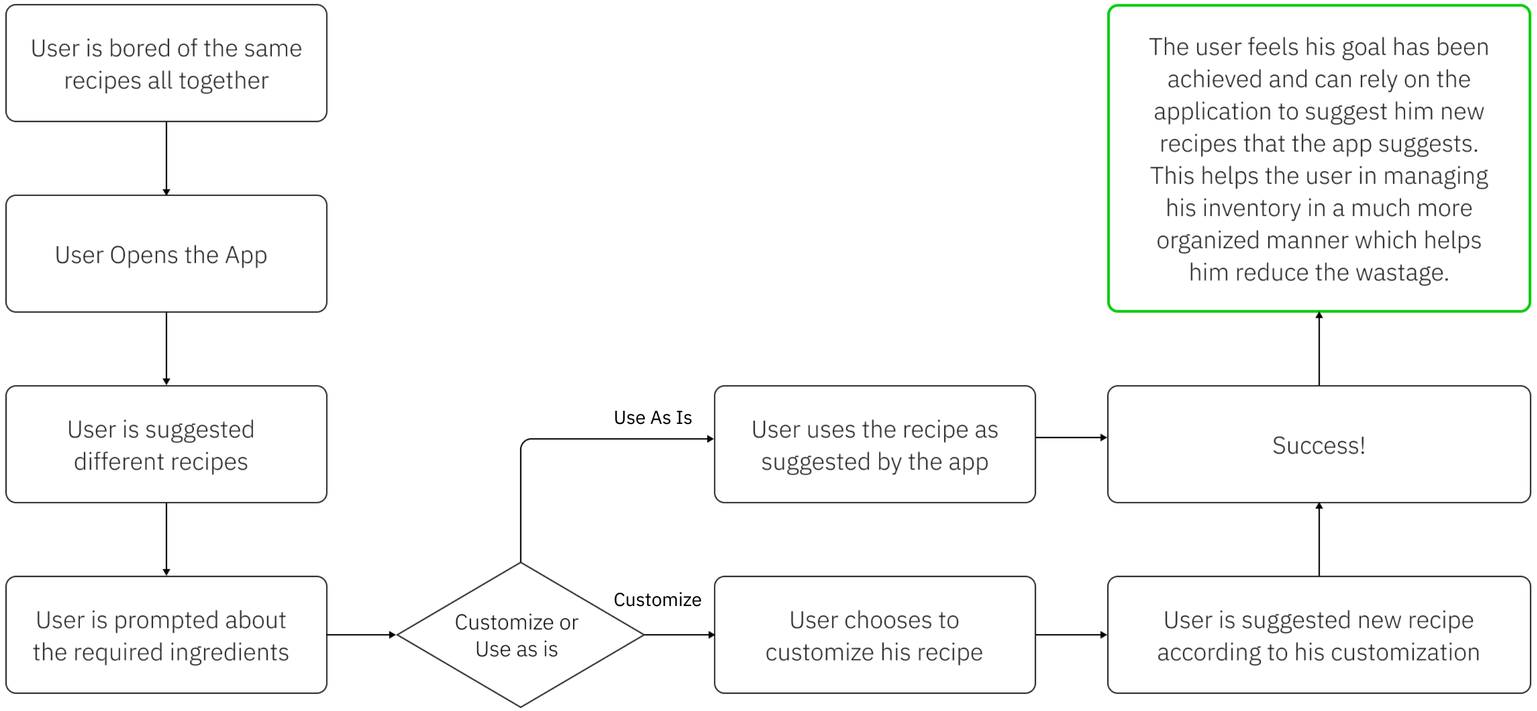
Automatic Receipt Input to maintain a fresh list to help the application understand and suggest expiry dates/new recipes.



User Flows

I put myself in the shoes of each of the above individuals to understand the exact pain points. Post that I intended to base my solution by merging all 3 user flows into an all-around application that would satisfy the needs of the specifically targeted users with Information Architecture.

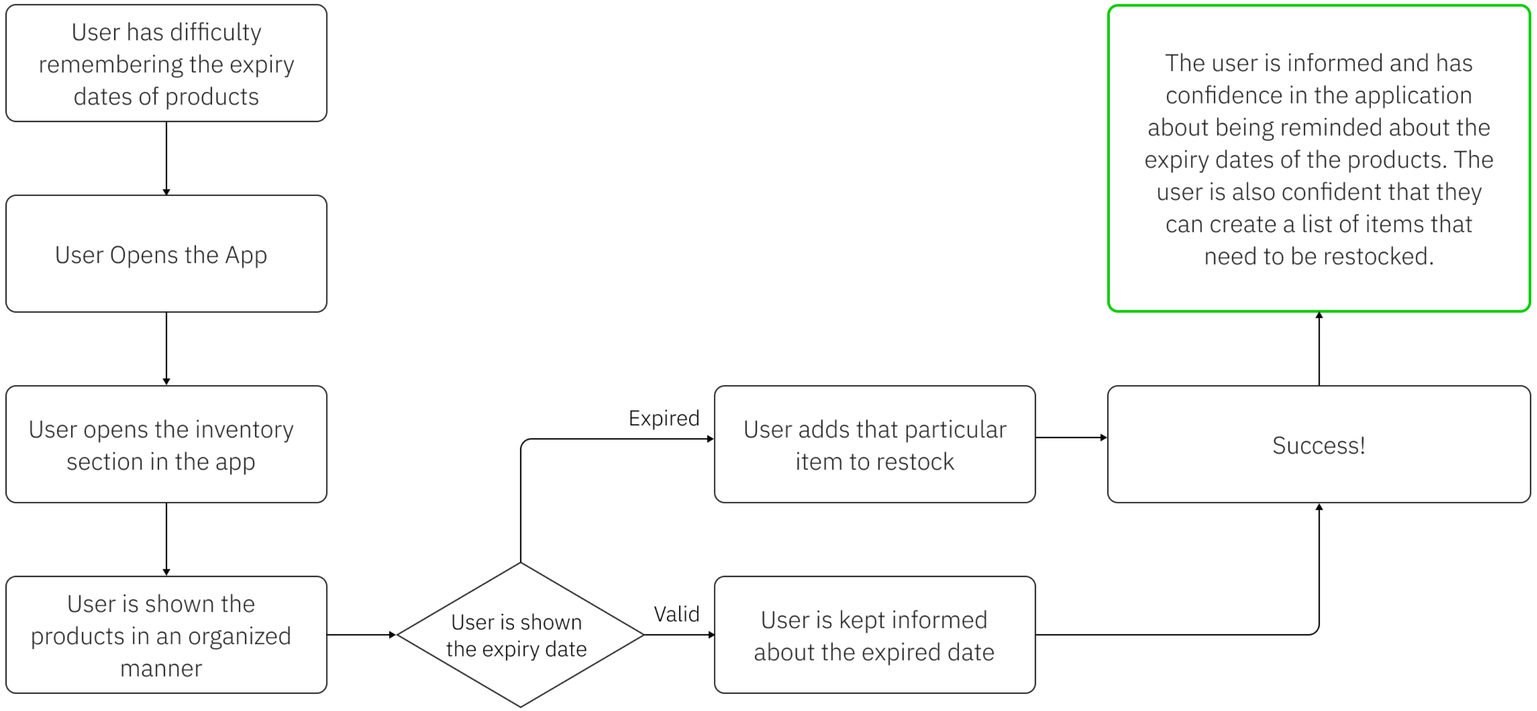
User Flow 1



Students

- Recipe Suggestions
- Customization
- Expiry Date based recipes

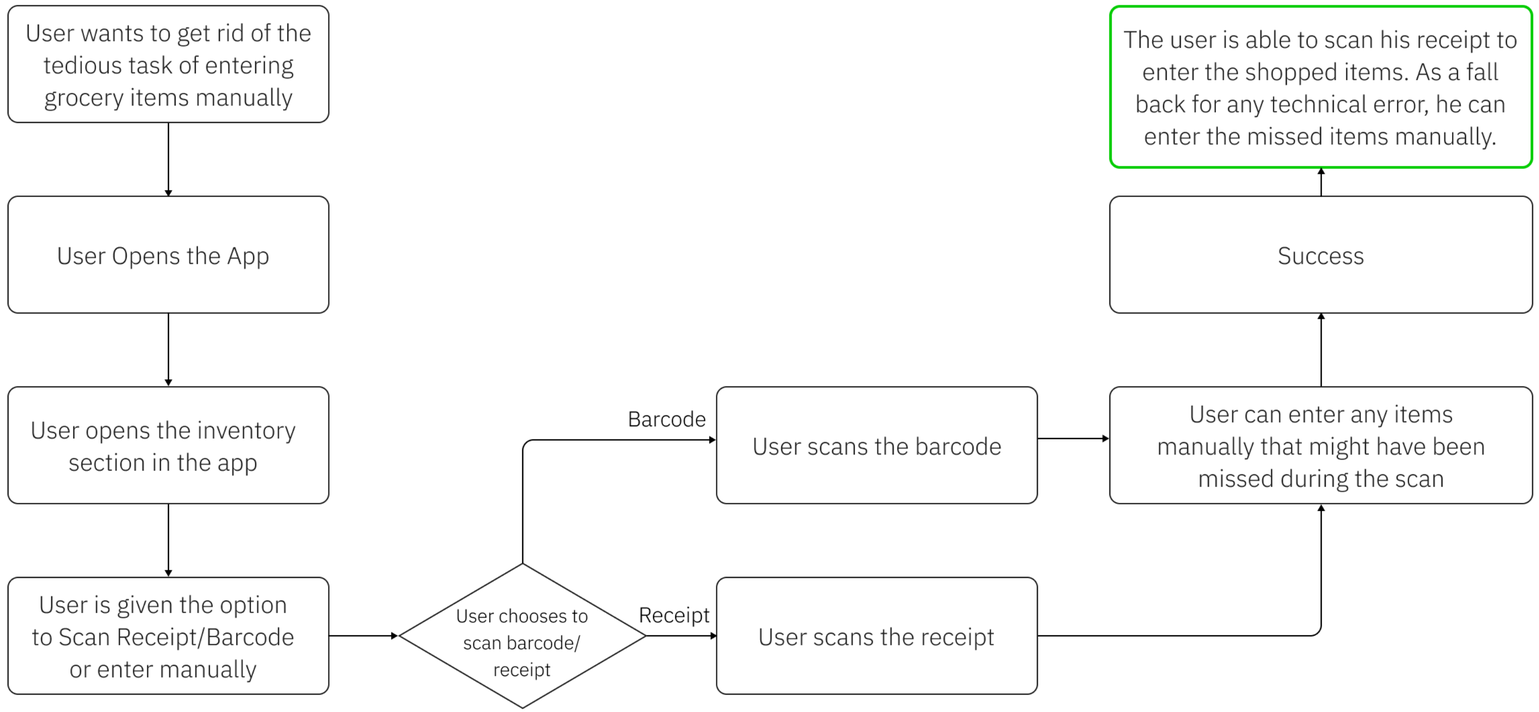
User Flow 2



Single Living Individuals

- Expiration Date Reminders
- Restock whenever utilized

User Flow 3

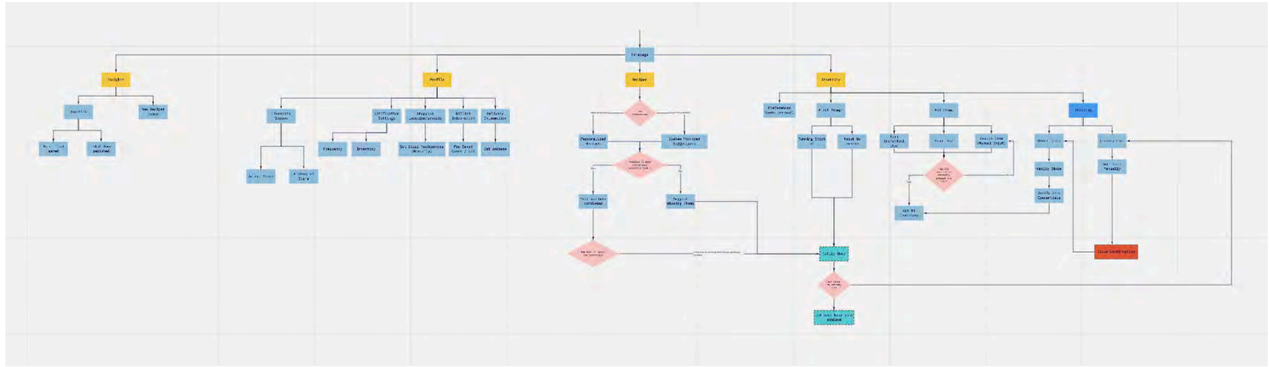


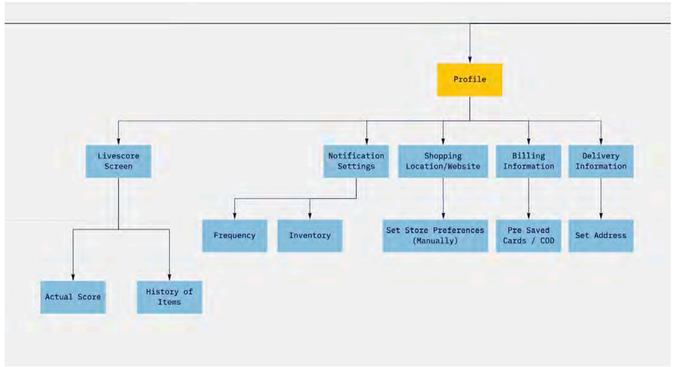
Working Individuals

- Scan Barcode for receipt entry
- Option to enter Items manually

Information Architecture

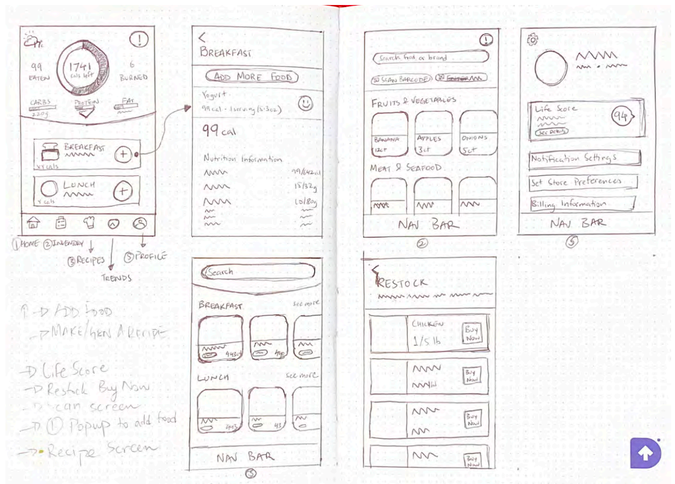
The goal of IA was to create an easy experience that is engaging and instils a lasting impression on the user through the navigation controls and the ease of understanding of the application hierarchy.

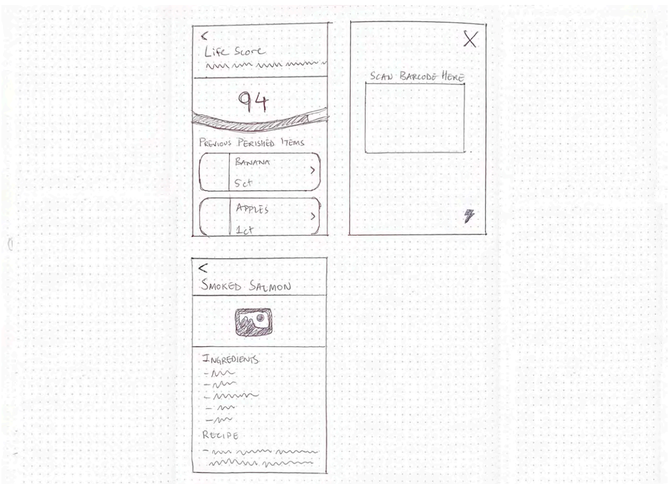




Wireframing

Wireframing was an important step in the process which helped us to visualize the solution as a rough sketch. The most important thing which it led me to was the UX writing for the scenario which was much easier to translate for the real experience the app would provide.





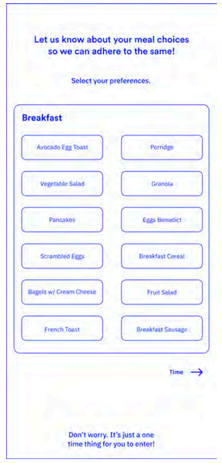
Initial Wireframes

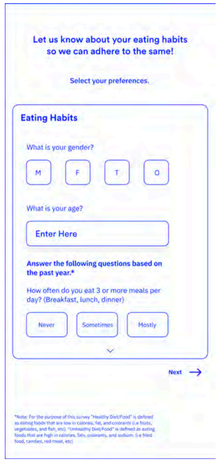
Lo-Fi Paper Prototype Testing

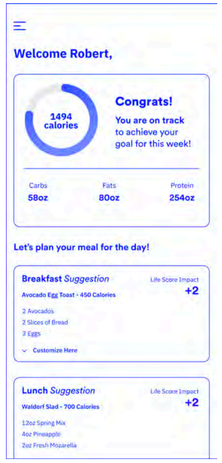
Approaching the same people we conducted the contextual inquiry with, we intended to evaluate if the users could help achieve certain tasks which we envisioned in the paper prototype with the UX Writing included.

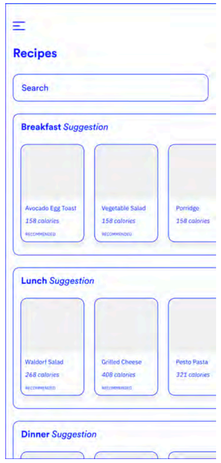
- Users did not understand the working of the Life Score feature.
- Users wanted to customize the recipes.
- They had trouble finding the button to restock utilized items.
- They wanted to make changes to the list after scanning the receipt.

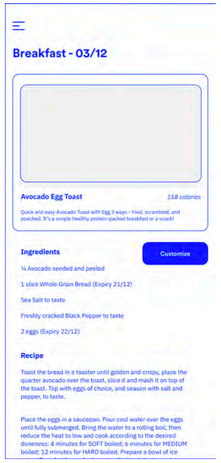
Wireframing

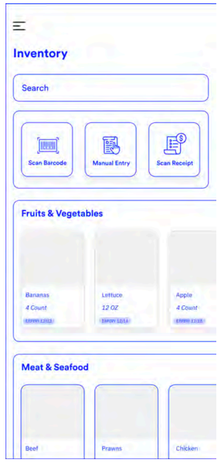


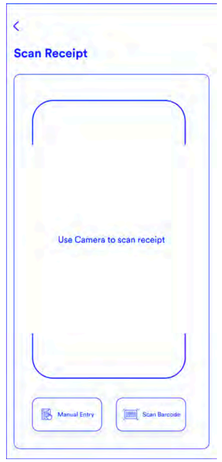


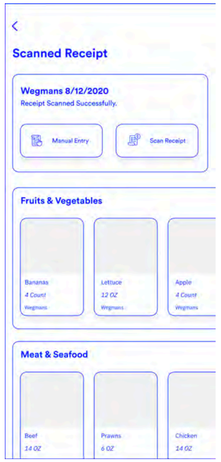


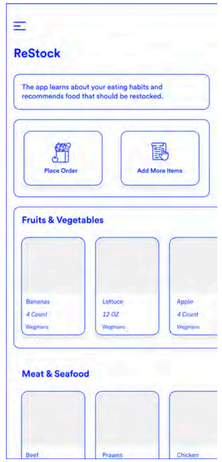


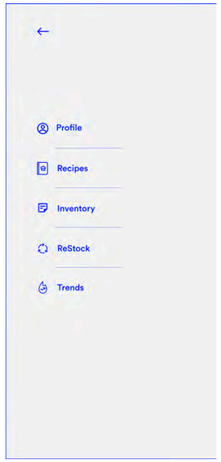


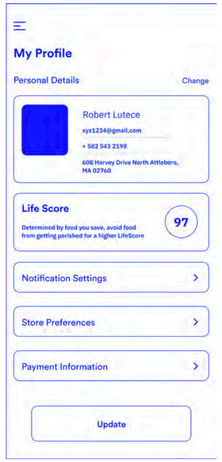


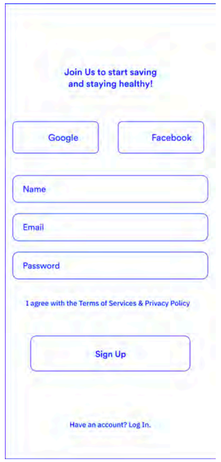




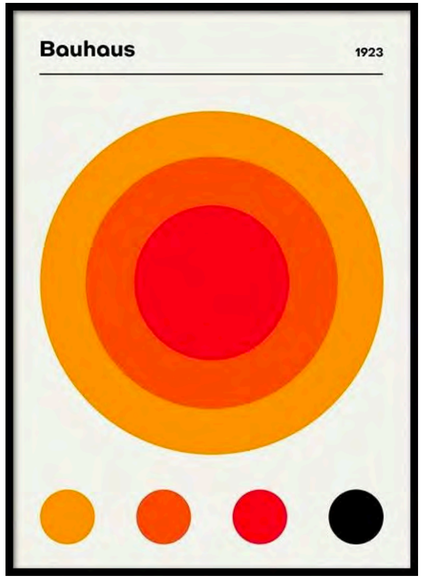


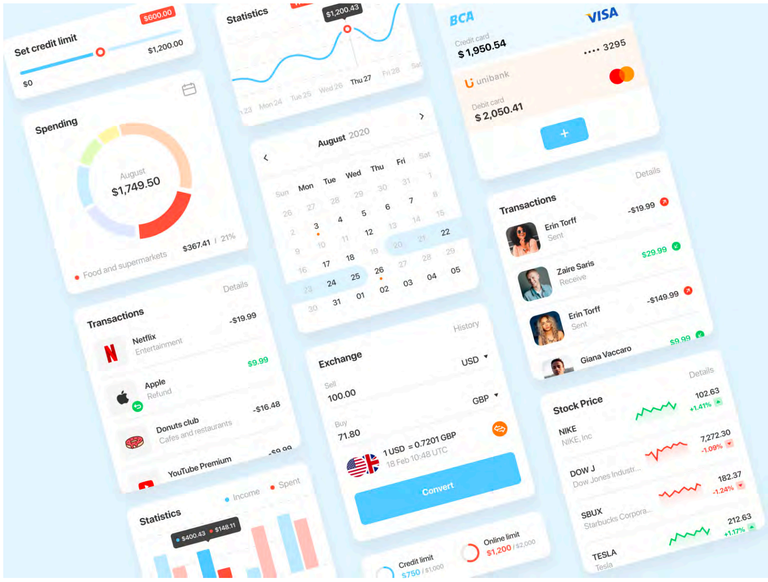


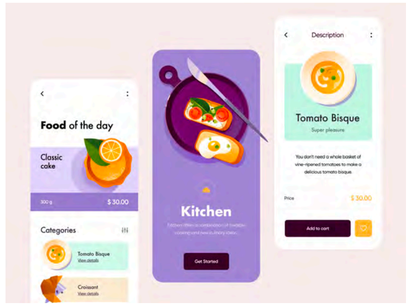


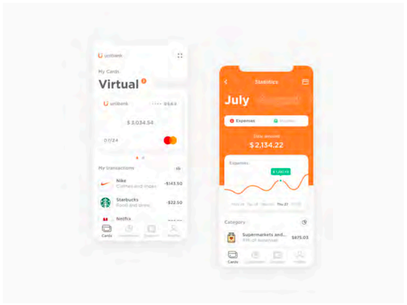


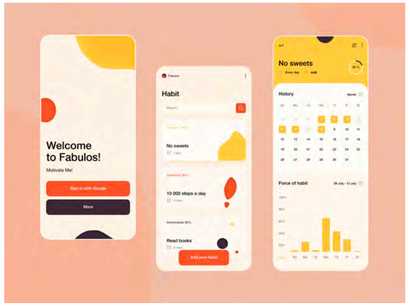
Visual Inspirations

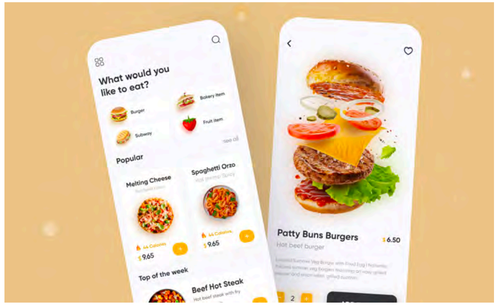




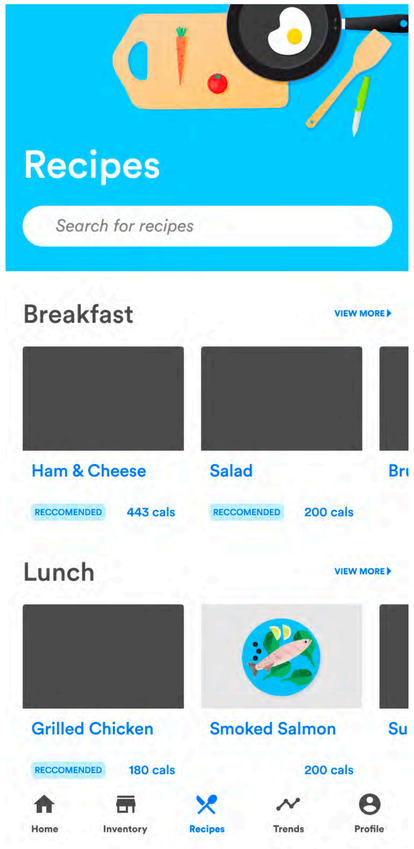


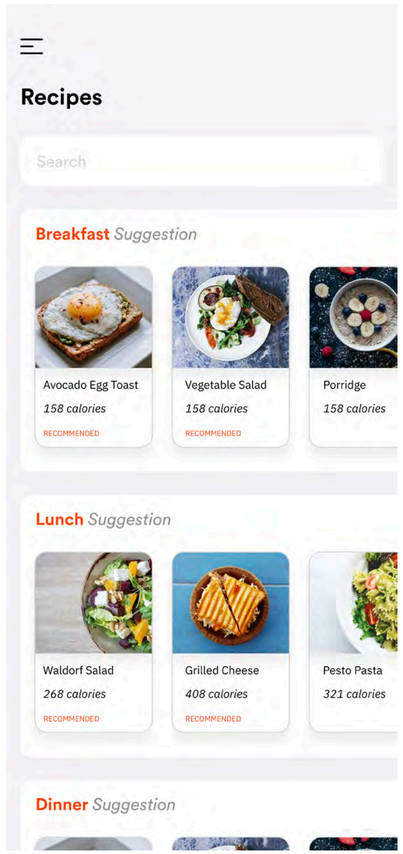






UI Design Iterations

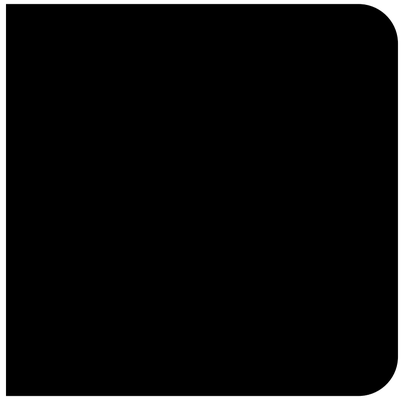




UI Design Color Palette

#FA4A0C

#F5F5F8



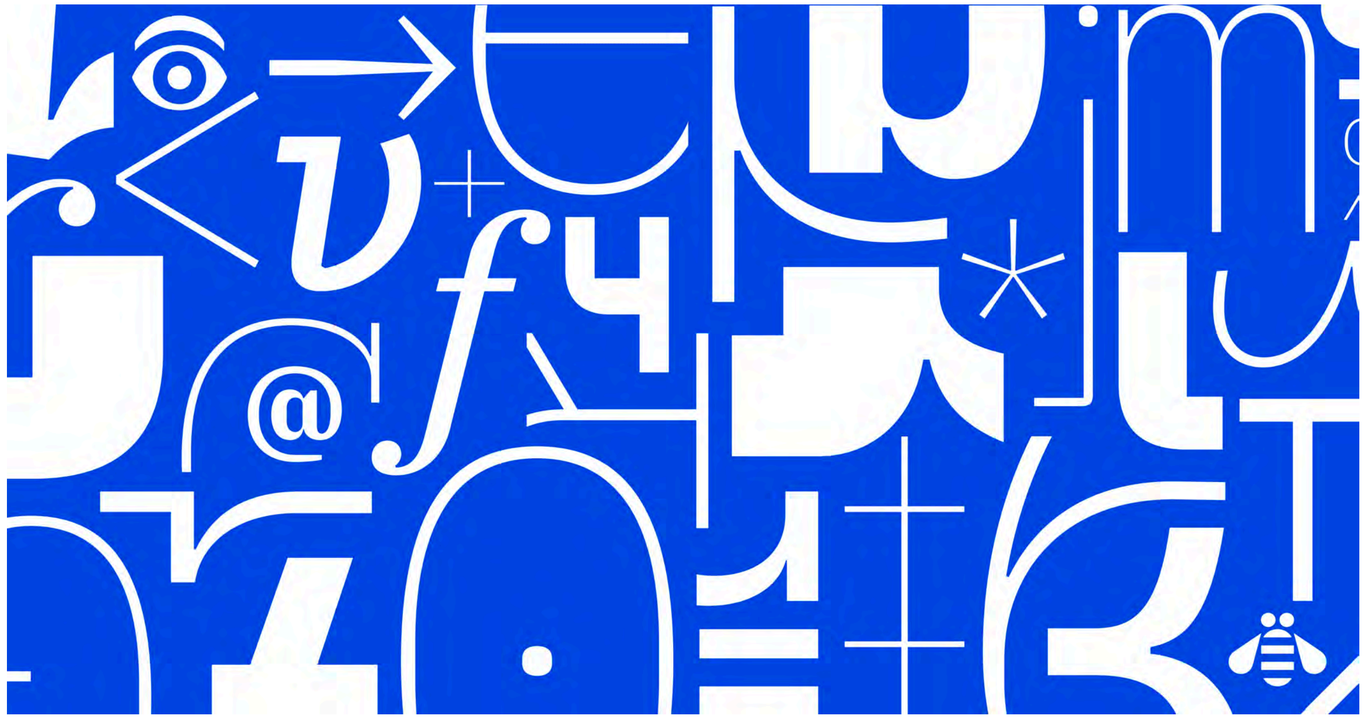
#000000

Orange is associated with meanings of **enthusiasm, success, encouragement, change, determination**. Additionally, we used black for the text and and included a great deal of white & grey to give a calm and clean appearance along with a good contrast for the visual elements.

Typography

IBM Plex Sans

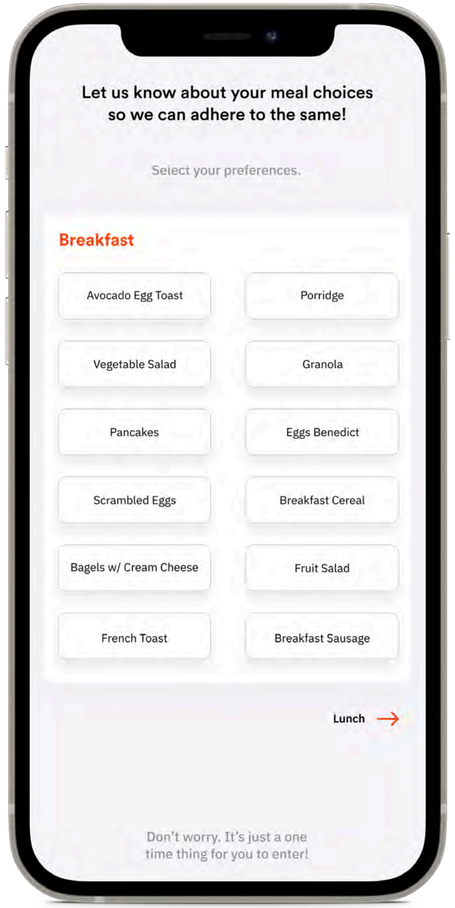
IBM Plex Sans is a neutral, yet friendly Grotesque style typeface that includes a Sans, Sans Condensed, Mono, and Serif and has excellent legibility in print, web and mobile interfaces. Plex's three designs work well independently, and even better together. The unexpectedly expressive nature of the italics give you even more options for your designs.



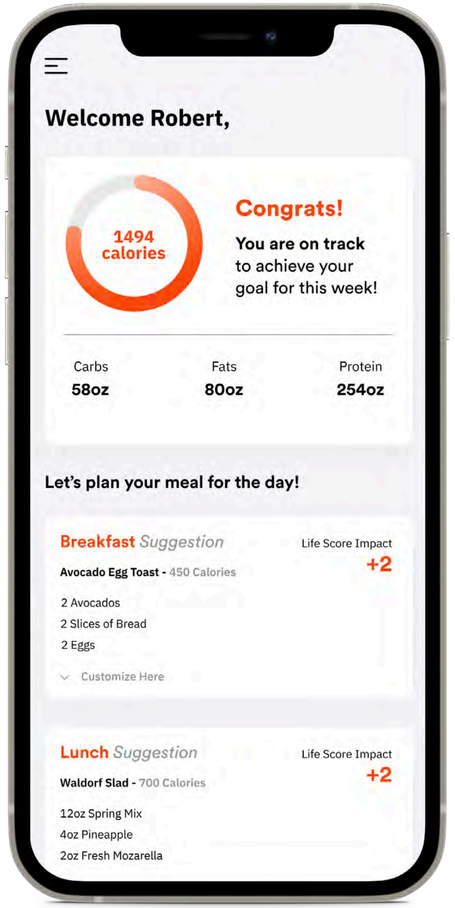
Final Solution(s)

Redundancy in the same recipes being cooked everyday makes the user want to eat outside.

Understanding the eating habits of the user to suggest new recipes based on the available inventory to avoid redundancy.



Understanding the users eating habits to gain knowledge about the user in terms of his preferences to suggest applicable recipes.

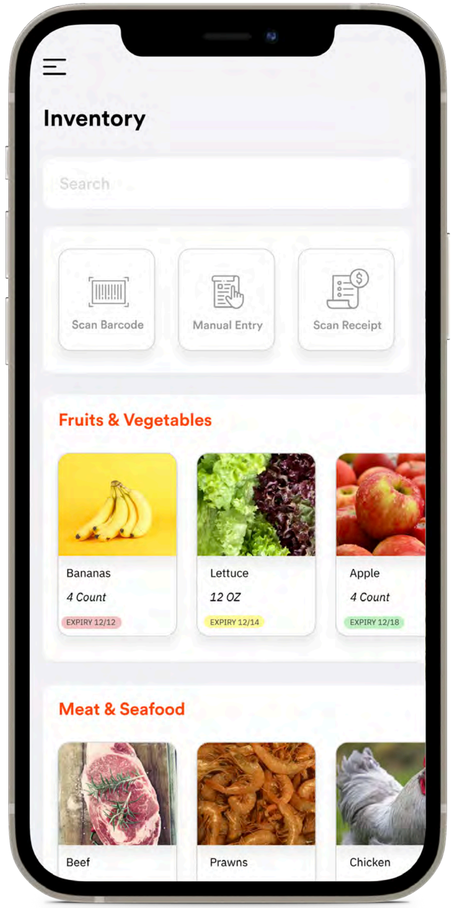


Helping users with recipe suggestions based on the available inventory and their preferences.

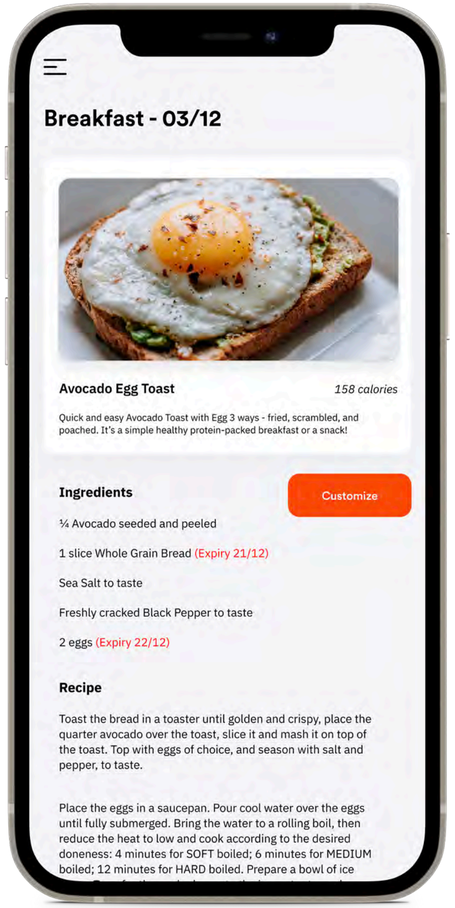
Final Solution(s)

Keeping track of expiry dates of grocery items is a difficult task.

Expiry Date Notifications and prompting perishable items to be used in new recipes.



Every item will be labeled with an expiry date.

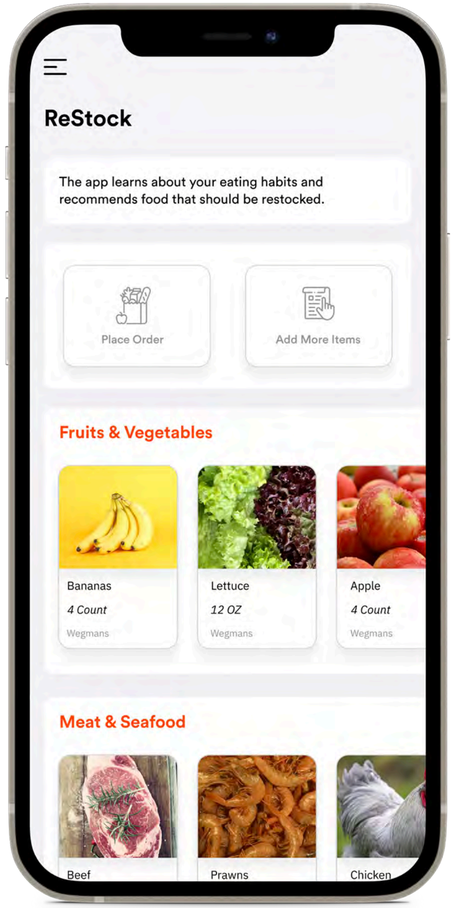


Prioritizing recipes based on items that will expire soon

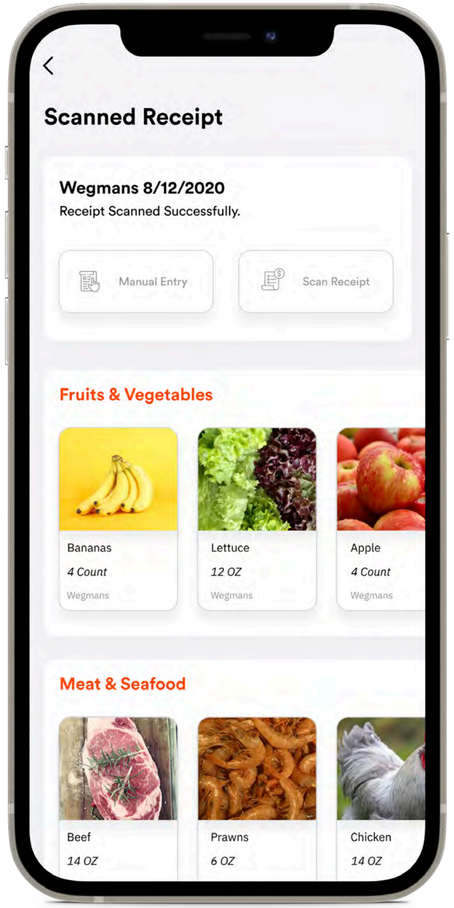
Final Solution(s)

Entering Grocery lists manually is a tedious task.

Allow users to scan receipts to enter purchased items.



Restock list populates when the item is consumed or has been thrown away.



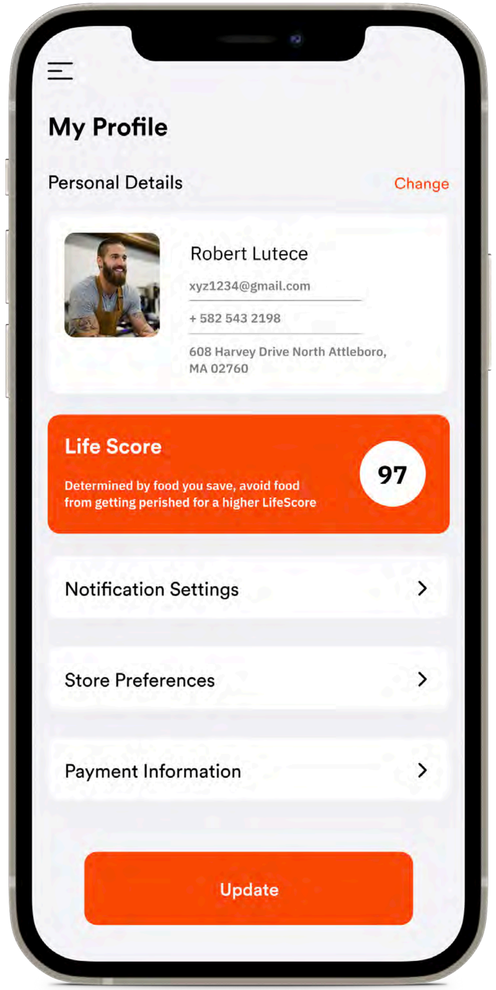
Allow manual entry as a fall back in case the receipt scans misses any items.

Life Score (In App Incentivization Feature)

People often like to see how they are performing in a particular domain. This can greatly improve the user experience and encourage users to continue using the application, invest more time carrying out tasks.

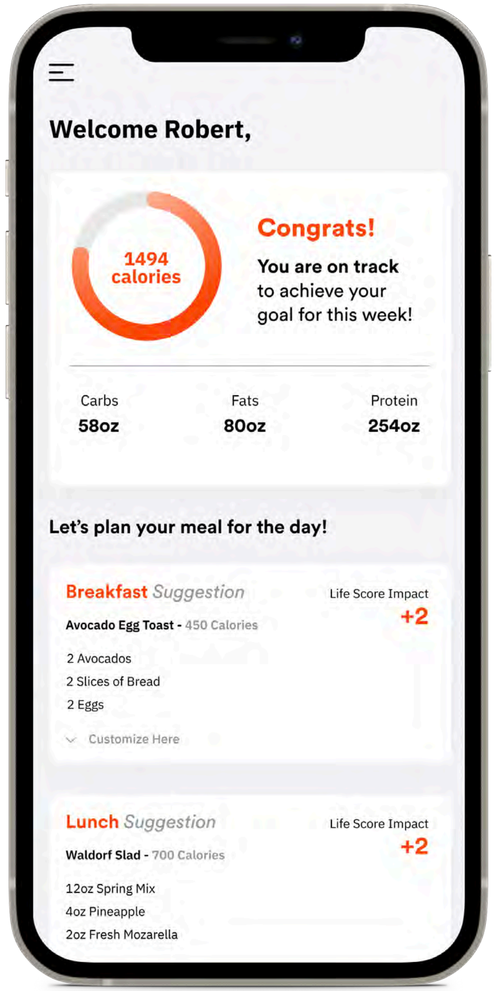
Life Score provides an opportunity for the user to be incentivized through managing his waste based on the support the application provides. The amount of wastage that the user is forced to throw alongside how many of the groceries have been fully utilized is used to determine the score. The score helps the user incentivize in terms of grocery coupons or any other relatable reward. This helps the user in being more focused on the task at hand which is reducing waste.

Life Score



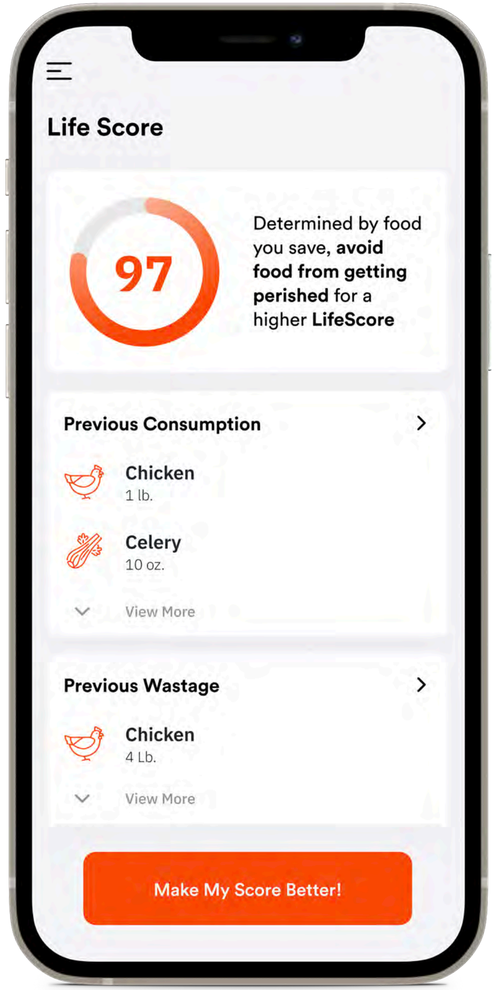
Life Score

An explanation of how the Life Score would be calculated for the users is shown so as to keep the user informed about the same.



Affect on Life Score

Each and every meal suggestion also notifies the user how much the Life Score would be impacted.



What helps it?

Allowing the user to track how much wastage has the application recorded, how much consumption was done helps in keeping the score higher!

Revisiting The Project

Sketch out screens and integrate user feedback into the present userflows in a much more detailed manner.

Expand Life Score Integration and define the incentivization screens in detail.

Usability Evaluation would reveal many more pain points in the application which we intend to work with the end users to resolve.

Branding

Integrating the Restock feature for the user to directly place an order for online grocery shopping.

Thankyou!