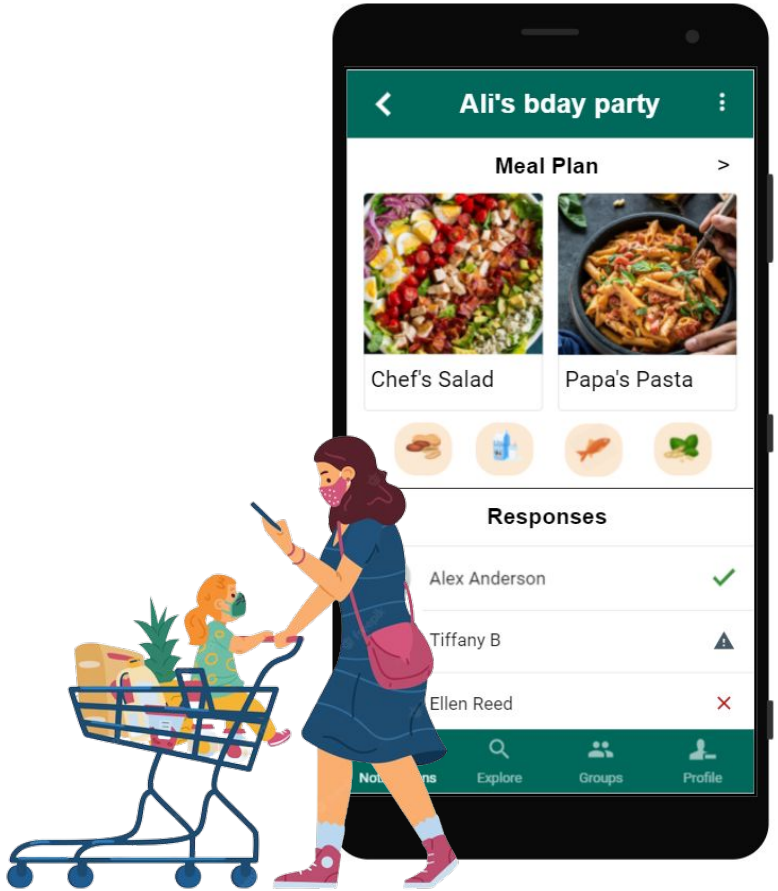
peanuts

the allergy monitoring app

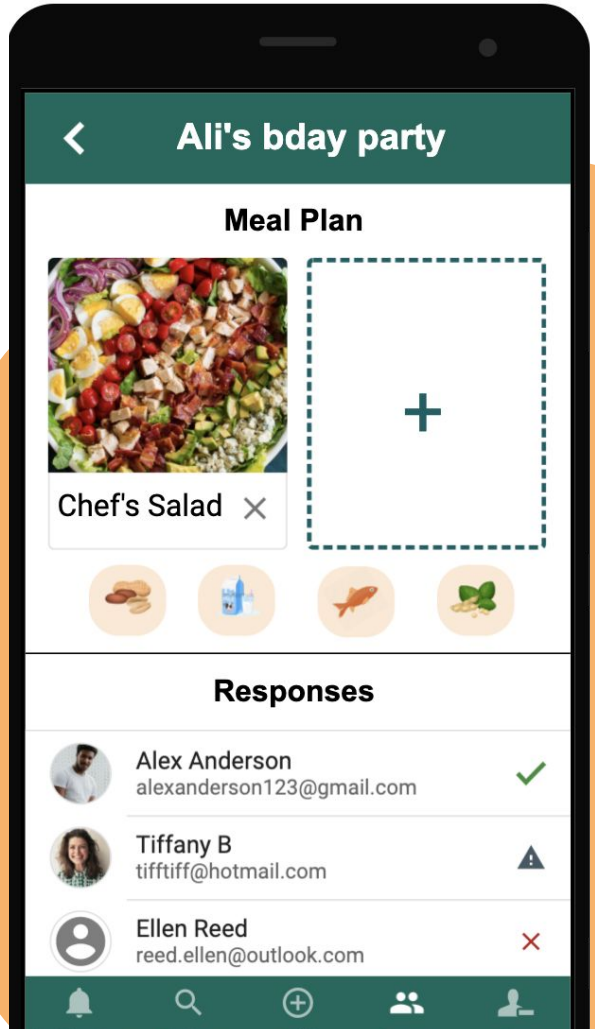


Event Planning

Create groups with the appropriate participants for events planning

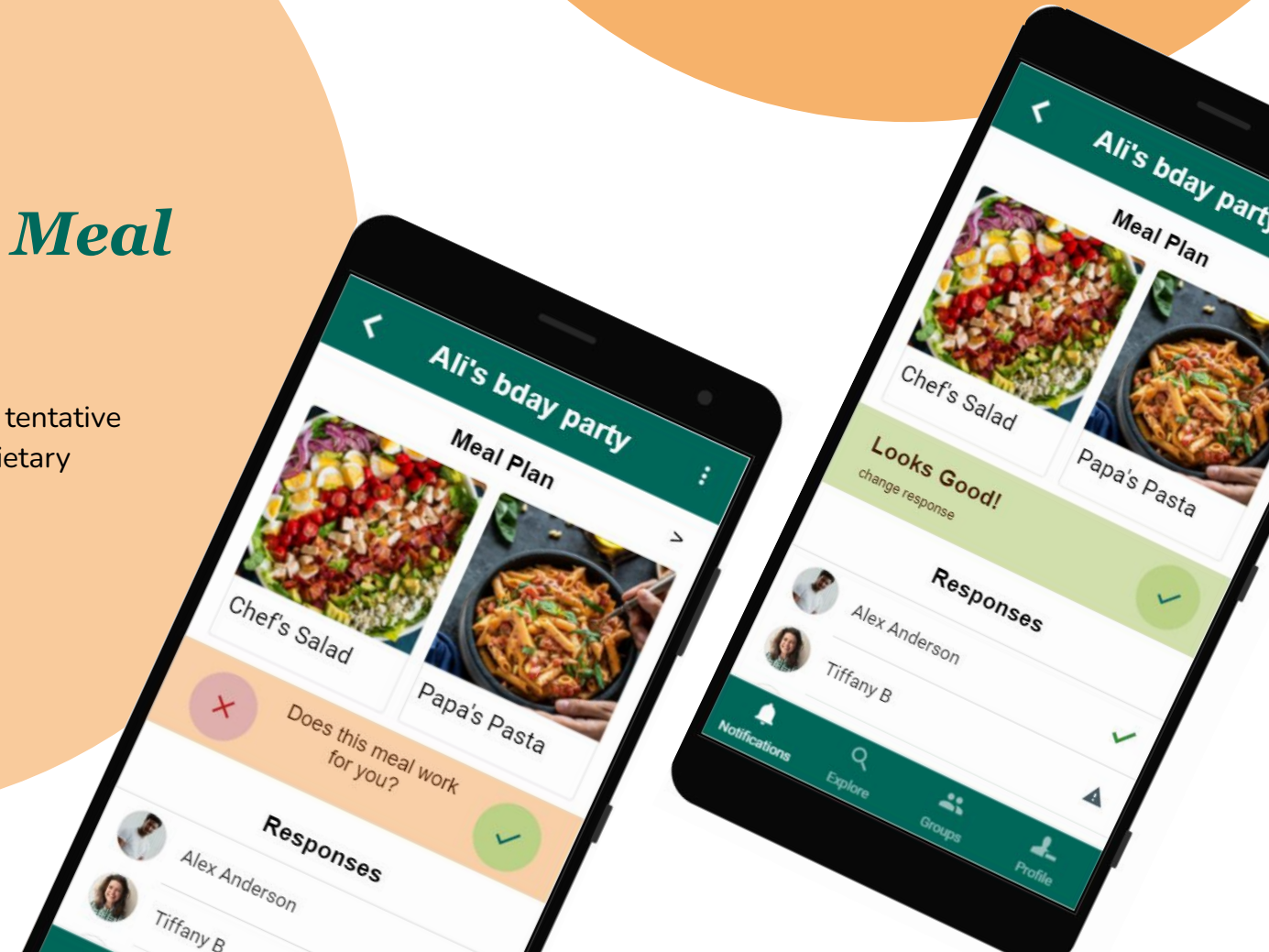
See combined dietary restrictions of group

Warns of who might have difficulties with planned meals



Respond to Meal Plans

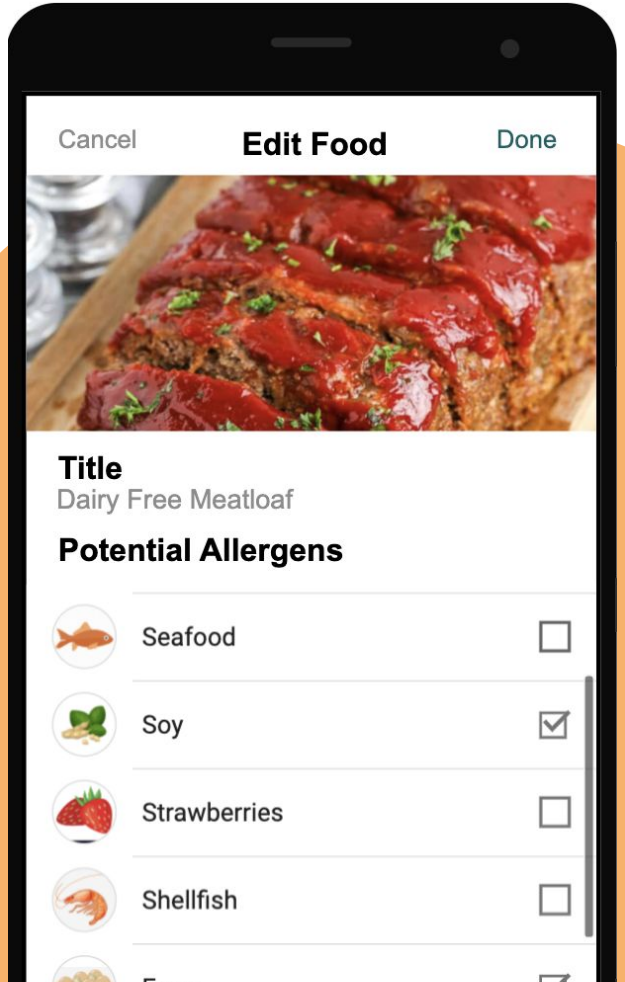
Group members respond to tentative menu plan based on their dietary restrictions

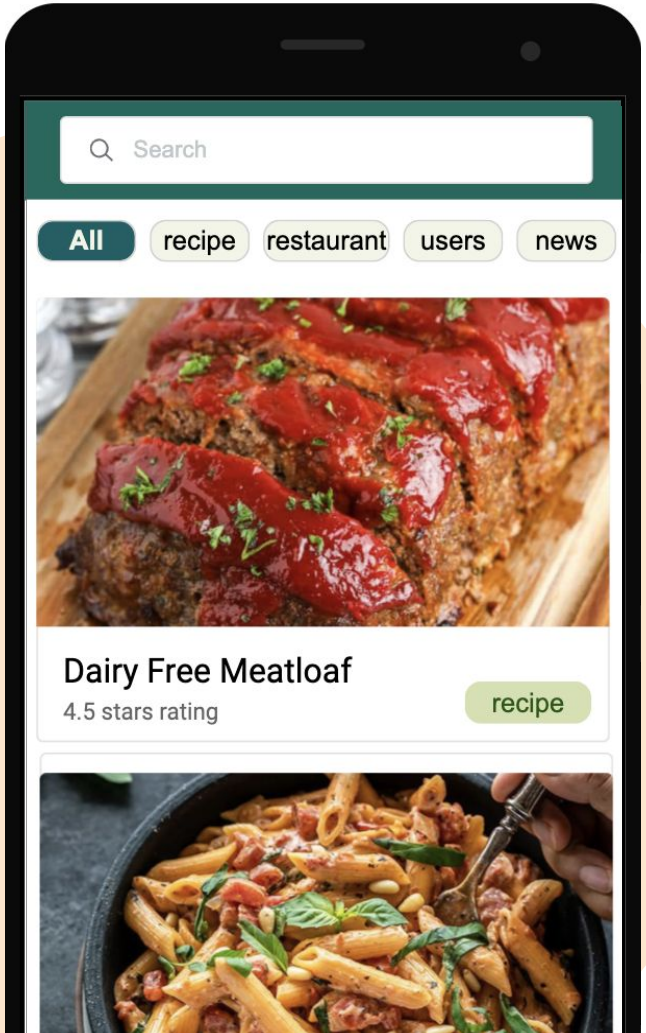


Document Food Allergens

Create and record different Foods

Mark the common allergens/ restrictions of food items





Find Meals

Share recipes, restaurants, and news

Group by item type

PROJECT OVERVIEW

meal planning is not inclusive to different dietary restrictions

Due to different religious, health, and lifestyle habits, it's not uncommon to find people with different dietary restrictions. However, **people rarely track** their own restrictions and rely on their memory to remember what others can or cannot eat.

As we transition out of the pandemic, people are more eager to eat with one another again as a way to reconnect and socialize, but often fall short in remembering to take in account of each other's restrictions.

This leads to both the host and participant to feel bad after making plans, sparking the question—**how can we better account for different restrictions?**

Timeline:

3 months (02/2022 - 05/2022)

Role:

Product Designer

Android Developer

Team:

Jeanie Fung, Thomas Yu,

James Yu, and Kayla Laufer

Context:

Student project as part of UI & Mobile

Application class

RESEARCH

53% of participants reported struggling with their dietary restriction at least once a week

In total, we surveyed over 50 participants and conducted 12 user interviews to get a more in-depth understanding of the problem. Below are some of the research questions we used to find any trends on the difficulties people faced, which was then used to facilitate the brainstorming session.

RESEARCH QUESTIONS:

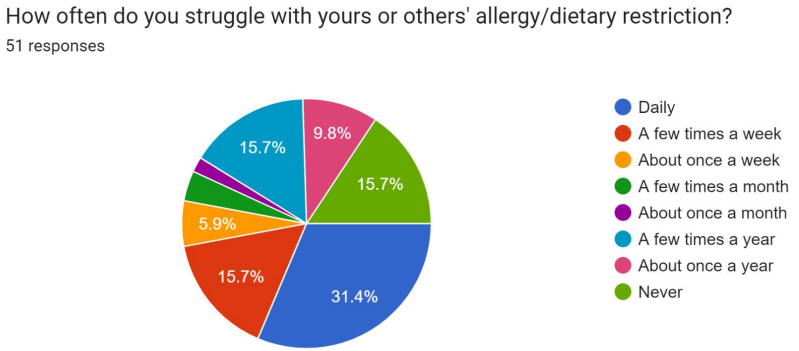
- Tell me about a time where you **struggled** planning/attending an event due to dietary restrictions?
- What **difficulties** do you face while finding an alternative food?
- Are there other situations where you've faced difficulties with your/other's dietary restrictions?
- How do you determine if a new food/restaurant is **safe to eat**?

MAIN INSIGHTS

Almost 70% of our interviewees found themselves needing to discuss their restrictions with others monthly

The specific pain points that were noted are:

- Social eating / Finding restaurants
  - People would just bring their own food
- Understanding ingredient lists
  - Labels don’t use the common names of ingredients
  - Labels miss non-ingredient allergens (cross contamination)
- Not all meals come with an ingredient list



COMPETITIVE ANALYSIS

there was a gap in the market

Mealime Meal Plans

Foodvisor

Food Allergy & Symptom Tracker

While keeping our insights in mind, we did note that rather than creating an entirely new app, another option is to integrate new features within an existing app that people use to plan meals to aid the process. However, given the context of this class, we tried our hand at creating an app from scratch.

To start, I analyzed some common apps designed for meal planning and allergy tracking to see how competitors addressed the current problem. However, I noticed that while most of them did one or the other, **none** of them focused on both shared meals and accounting for people's restrictions. This gap in the market became an opportunity for us to design our own solution.

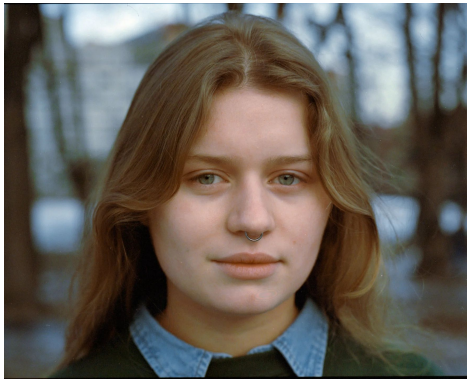
how might we...

With the feedback we received from our user research, I converted our initial research questions into something more actionable.

As we begin brainstorming, I wanted to figure out **how might we...**

- make understanding ingredient lists more **accessible**?
- enable people to safely and **inclusively** share meals?

Additionally, in order to understand the different intended use cases of our app, we came up with a couple of user stories, including the following:



Emma is a university student who has a severe peanut allergy and varying allergic reactions to other nuts.

Her community isn't very allergy aware so she is responsible for her own safety when it comes to food.

When going out with friends or trying new snacks, Emma uses peanuts™ to keep track of the foods she is able to eat and check if there are certain foods that will trigger a reaction.

DESIGN

constraints and requirements

Since a key part of this project was also to physically develop the product on Android Studios, we we forced to ditched the usual LoFi iteration and jumped straight into a more HiFi variation due to time constraints. However, before we did so, we brainstormed a couple of **functional** and **design elements** to include in our end project.

Functional Elements:

- Must have allergy profiles for users (includes login)
- Get updates on new data about the user's allergy
- Form groups with the profiles
- Profiles can be shared
- Be able to track edible foods and foods to avoid on your profile
- Restaurant/food suggestions, can be companies/brands

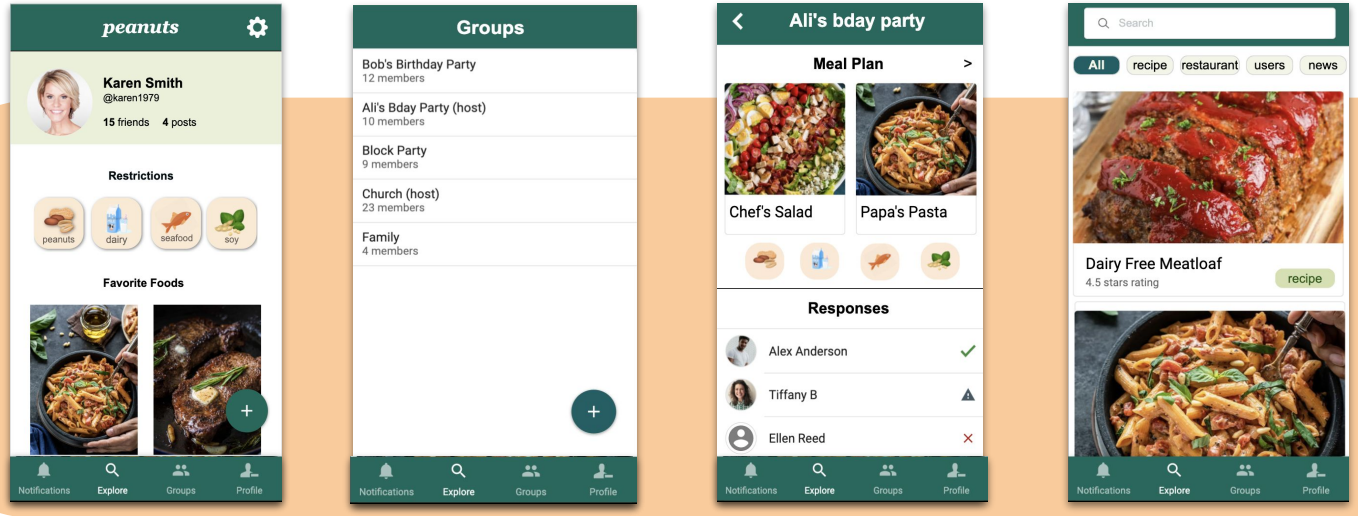
Design Elements:

- Pages
  - Profile
  - Group
  - Search / Explore
  - Notifications
  - Login/ sign-up
- Bottom Navigation Bar
- Settings button top right of profile page
- Login for first time users + returning users
- Details about allergies on profile
- Dark green color theme
- Picture grid views

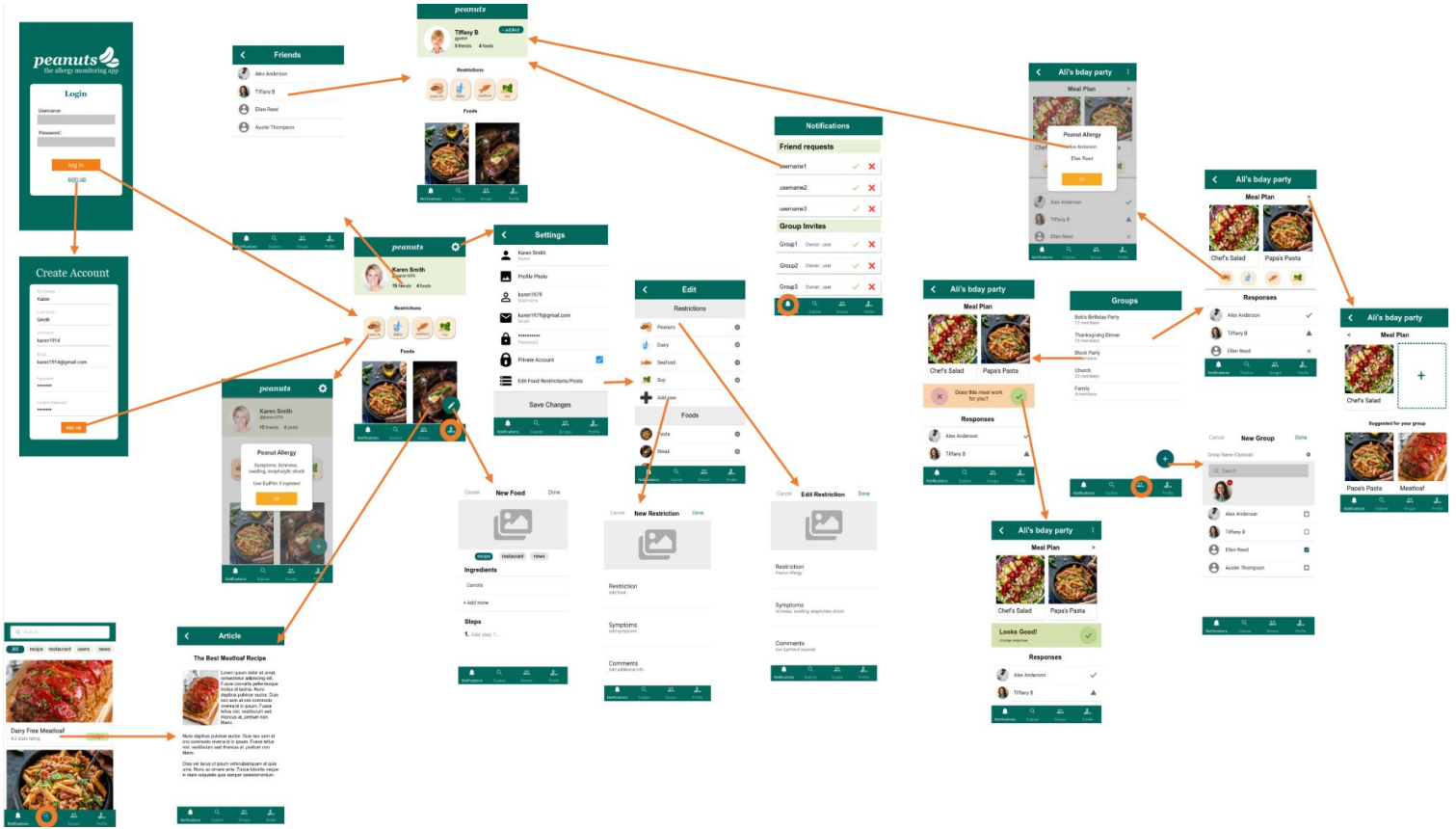
social media look and feel

Unlike competitor meal-planning apps, we opted to create an app that mimic the look and feel of a typical social media platform due the **social nature** of event and meal planning.

Green was used as the main color since it's often associated with *health* and *trust*. It also compliments the red color that's typically found in food items.



INITIAL WIREFRAME



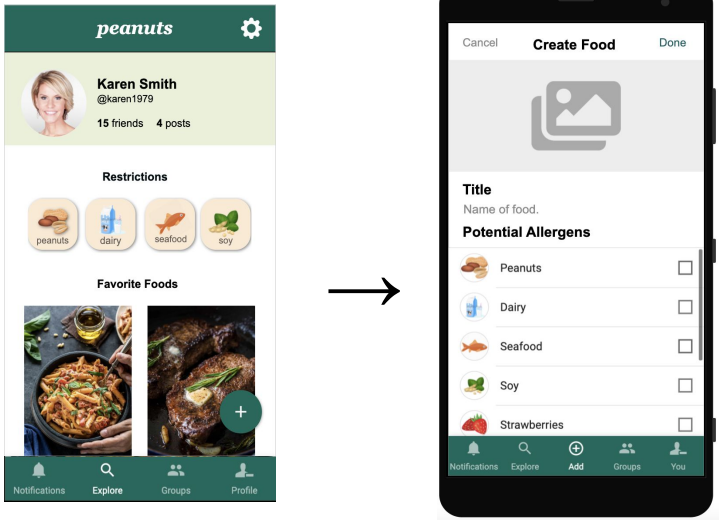
TESTING + IMPROVEMENTS

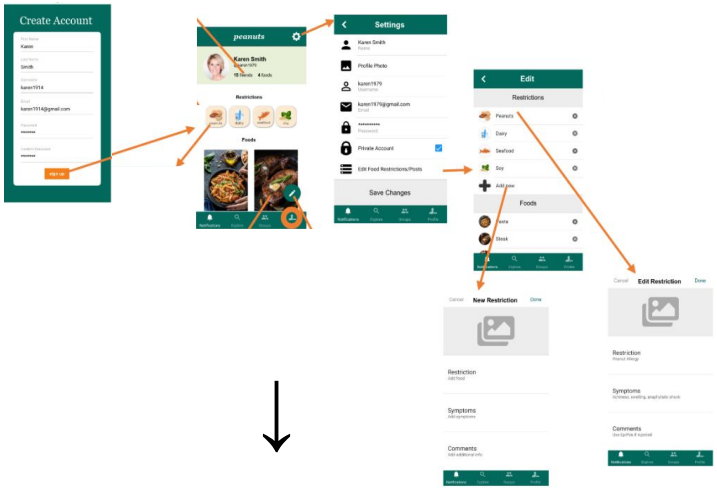
3 major improvements

Based on feedback from peers and our mentors, we iterated through the design with three major improvements:

1. add button in bottom navigation

- Original had a Floating Action Button for creating new food items
- Based on feedback, moved the Add button to the bottom navigation for better access



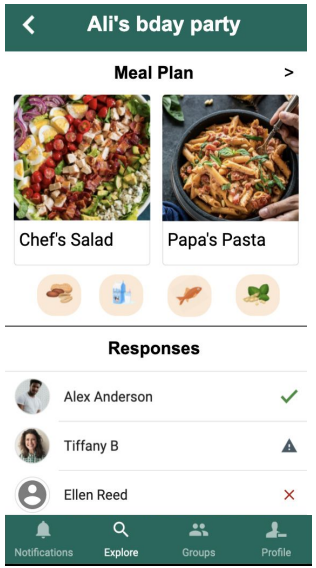


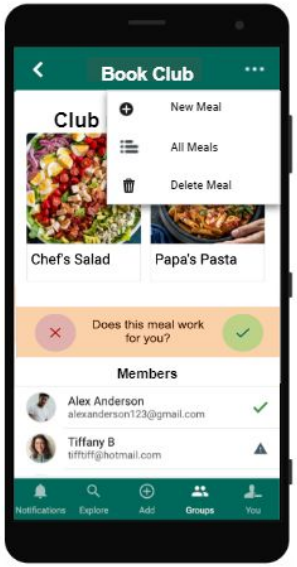
2. streamlined new account creation

- The initial flow to the Add Restrictions screen was too convoluted
  - Original: Create Account → Profile → Settings → Edit Restrictions → Add Restrictions
  - Improved: Create Account → Edit Restrictions → Profile
- Add Restrictions screen was simplified into a checklist, **decreasing clicks required** and increasing ease of usage

3. reusable groups

- Original required creating a new group for each meal plan
- Based on feedback from peers, repeat meals with the same group was accounted for





DEVELOPMENT

key android features

The app was developed using Java on Android Studio and made use of Google's Firebase database for data storage. The app also made use of other key android developmental features as listed below:

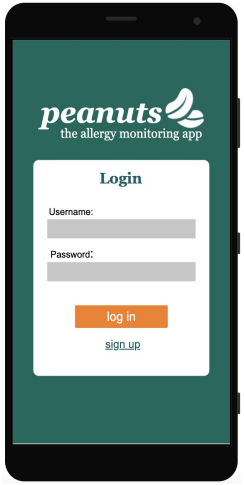
Cloud-base Database

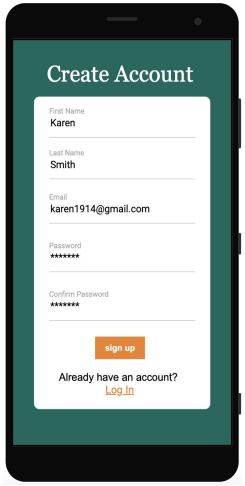
Storing Images

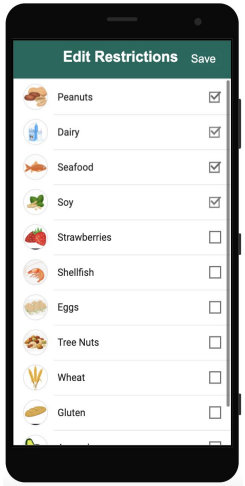
Search functionality

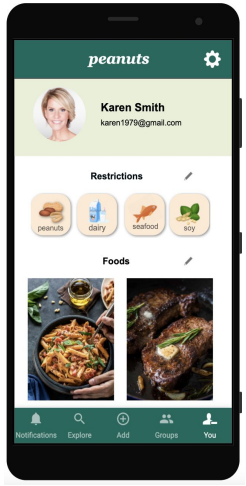
FINAL PRODUCT

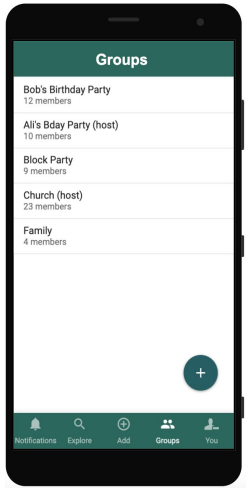
the final designs

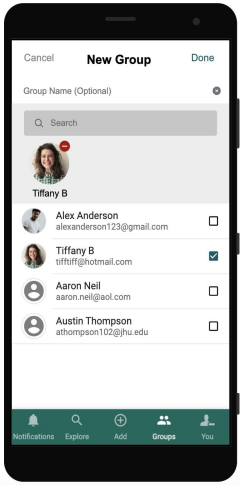

peanuts
the allergy monitoring app
Login
Username:
Password:
log in
sign up

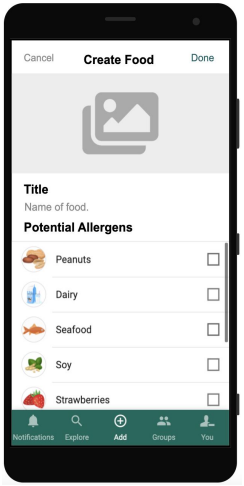

Create Account
First Name
Karen
Last Name
Smith
Email
karen1914@gmail.com
Password
Confirm Password
sign up
Already have an account?
Log In

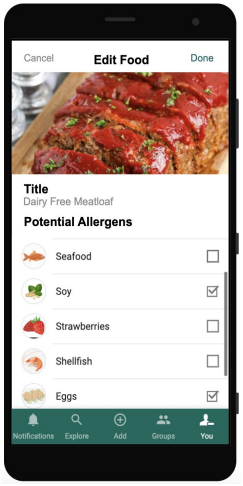

Edit Restrictions
Save
Peanuts
Dairy
Seafood
Soy
Strawberries
Shellfish
Eggs
Tree Nuts
Wheat
Gluten

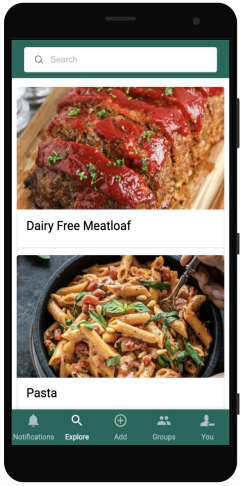

peanuts
Karen Smith
karen1979@gmail.com
Restrictions
Foods
Notifications
Explore
Add
Groups
You

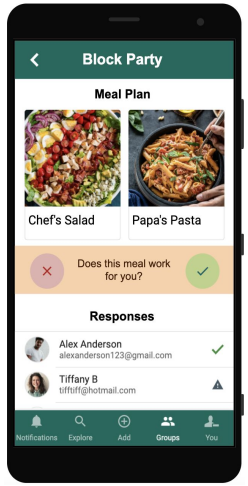

Groups
Bob's Birthday Party
12 members
Ali's Bday Party (host)
10 members
Block Party
9 members
Church (host)
23 members
Family
4 members

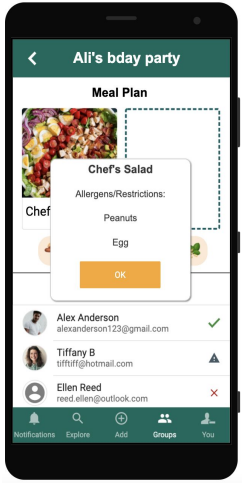

Cancel
New Group
Done
Group Name (Optional)
Search
Tiffany B
Alex Anderson
alexanderson123@gmail.com
Tiffany B
tifftiff@hotmail.com
Aaron Neil
aaron.neil@aol.com
Austin Thompson
athompson102@jhu.edu

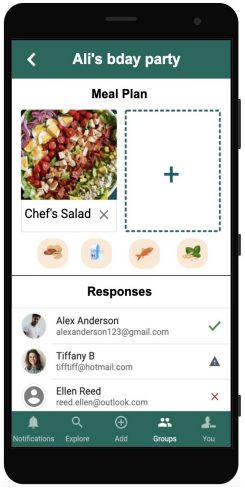

Cancel
Create Food
Done
Title
Name of food.
Potential Allergens
Peanuts
Dairy
Seafood
Soy
Strawberries


Cancel
Edit Food
Done
Title
Dairy Free Meatloaf
Potential Allergens
Seafood
Soy
Strawberries
Shellfish
Eggs


Search
Dairy Free Meatloaf
Pasta


Block Party
Meal Plan
Chef's Salad
Papa's Pasta
Does this meal work for you?
Responses
Alex Anderson
alexanderson123@gmail.com
Tiffany B
tifftiff@hotmail.com


Ali's bday party
Meal Plan
Chef's Salad
Allergens/Restrictions:
Peanuts
Egg
OK
Alex Anderson
alexanderson123@gmail.com
Tiffany B
tifftiff@hotmail.com
Ellen Reed
reed.ellen@outlook.com


Ali's bday party
Meal Plan
Chef's Salad
Responses
Alex Anderson
alexanderson123@gmail.com
Tiffany B
tifftiff@hotmail.com
Ellen Reed
reed.ellen@outlook.com

CONCLUSIONS + LESSON LEARNED

A change in perspective

This project was very unique to me as I was able to view it both from the side as a researcher and a developer. It's definitely shaped my perspective in the UX process, questioning not just how a user may perceive it, but also as a developer and how they would implement the design. Some of my key takeaways are:

1. **Components are your best friend.** Creating reusable components are not just great in making sure the overall app is consistent, but it also makes things a lot easier for developers. It's quicker to develop and also decreases the likelihood of bugs.
2. **Less is more, sometimes including user control.** Initially, the idea was to allow user to create their own restriction types to give them more control and customizability. However, with feedback from our mentor, we realized that this might cause more complications than control. How could we account for users who listed their allergen as "Peanut" vs "Penuts" vs "peanuts"? Instead, we removed some of that customizability in order to ensure a better experience overall.
3. **Iterate, iterate, iterate.** There were a lot of logistical things that I failed to take into account in the beginning brainstorming process and was not obvious even after our first few feedback sessions. For example, we didn't realize until later that in addition to notifications for group invites, it's also important to notify the user if their group had changed the menu in case the new menu no longer works for them. I'm not sure if these realizations came as a result of digging my hands into the code or just having a lot of time to sit and think about the design, but one thing's for sure: iteration is key when ironing out these details.