# NUTRA-CALC CASE STUDY

CREATING A NUTRITION FACTS CALCULATOR FOR AN AUSTRALIAN STEAKHOUSE

KATHLEEN HAGELBERGER
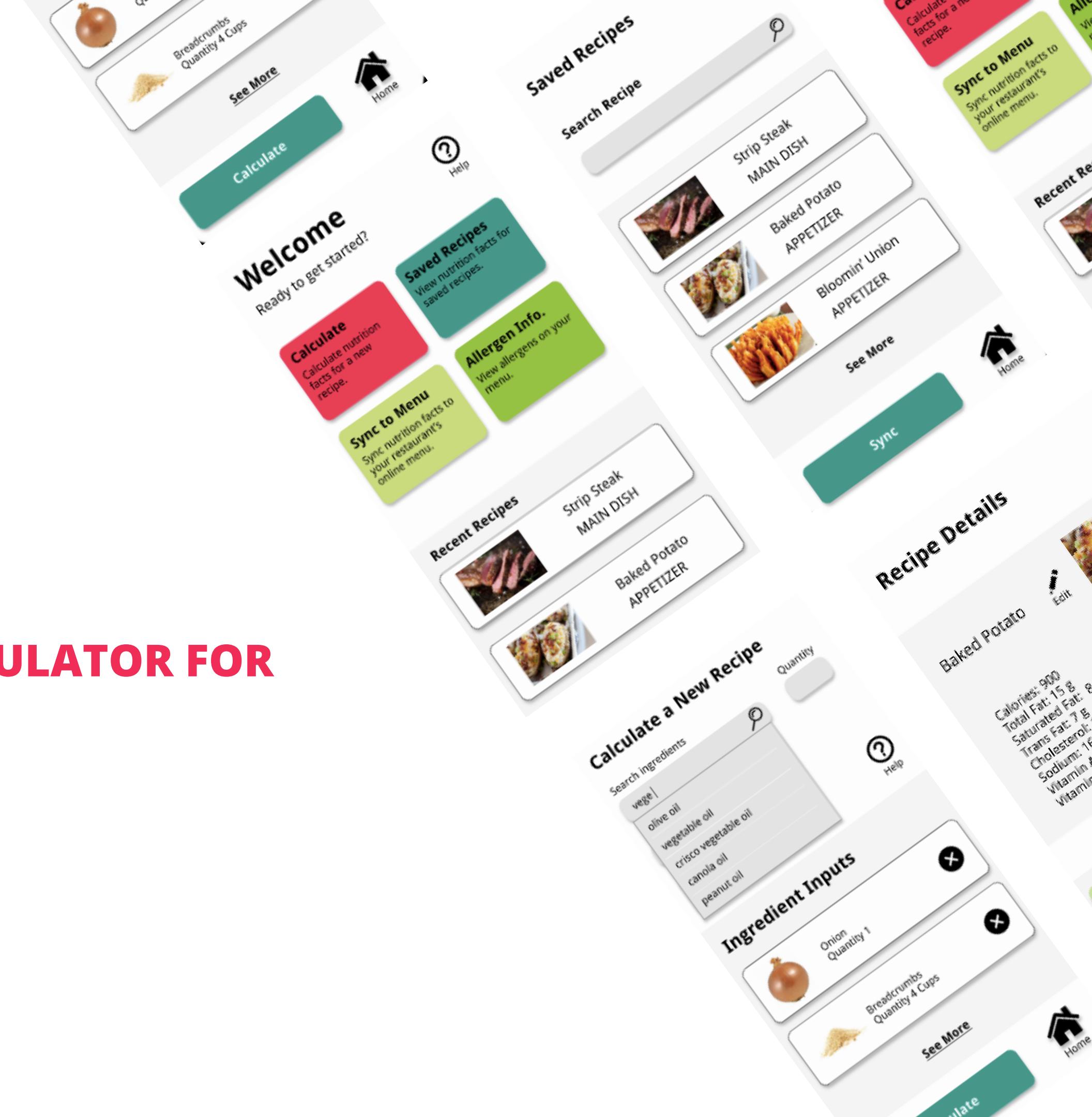
PROJECT OVERVIEW

📱 ## THE PRODUCT

NUTRA-CALC is a nutrition calculator app designed for restaurants to calculate and save the nutrition value of dishes on their menu
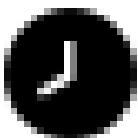
🕐 ## PROJECT DURATION

November 2021 - March 2022 (5 months)

PROJECT OVERVIEW

THE PROBLEM

Restaurant patrons want to know nutrition and allergen information for the foods they're eating, but calculating the nutrition value of a recipe with just a calculator takes too much time for busy chefs. It also can't easily be scaled or adjusted for ingredient substitutes.

THE GOAL

Develop an app that will calculate the nutrition value of a recipe, with the ability to save the information, scale it, and upload it to an online restaurant menu.

PROJECT OVERVIEW
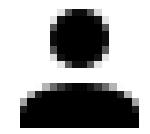
👤 MY ROLE

As a student, I acted as both the Lead UX Designer & Researcher for this project

💻 RESPONSIBILITIES

- User & Competitive Research
- Wireframing
- User Testing
- Low & High Fidelity Prototyping

UNDERSTANDING THE USER

- **USER RESEARCH**
- **PERSONAS**
- **PROBLEM STATEMENTS**
- **USER JOURNEY MAPS**
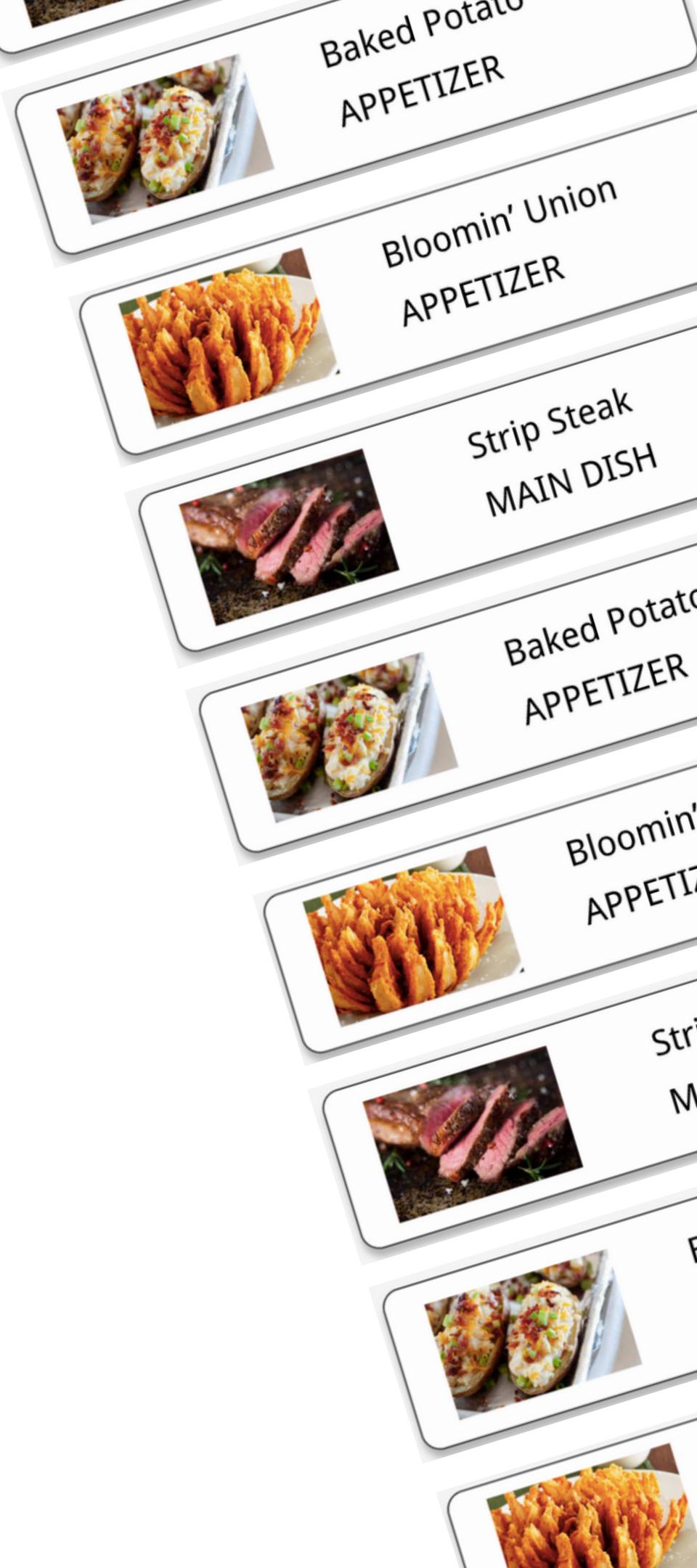
USER RESEARCH SUMMARY

User and competitive research was conducted to better understand why restaurants would want to calculate the nutrition value of their recipes, and how head chefs and other restaurant employees use that nutrition information.

I assumed that valuable nutrition information would be limited to calories, fat, and allergens but through the course of conducting research I learned that information like net price, scalability, and the ability to save nutrition information were also important.

I collected secondary research from direct and indirect competitors like Nutritionix, MenuCalc, MyFitnessPal, and MyNetDiary, as well as primary research in the form of user interviews. In total, five participants (two males, three females between the ages of 23 - 55) were interviewed. Three had experience working in the restaurant industry.

If I were to do the primary research again, I would conduct interviews with users who worked in Australian steakhouse restaurants specifically. I would also interview at least one user with accessibility requirements to gain their perspective.

USER RESEARCH   PAIN POINTS

Limited Time

Head chefs / other restaurant employees have limited time to calculate nutrition information for their recipes.
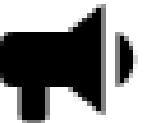
Compliance

In the United States, some states require chain restaurants to put calorie counts on menus. It can be difficult to upload this information manually to the website.

Existing Platforms Look & Feel Outdated

Existing sites that provide this service look outdated, and many do not provide a mobile app option.
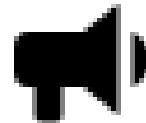
Existing Platforms Are Expensive

Competitors like MenuCalc charge $89 / month for this service which is expensive for smaller restaurants and food trucks.

Allergens

Customers frequently ask about allergen information and restaurant employees need a way for this info. to be easily accessible.

USER RESEARCH   PERSONA

PROBLEM STATEMENT

Darren is a busy head chef at a popular Australian steakhouse who needs a quick and efficient way to calculate the nutrition value of his recipes since calculating health metrics like calories manually takes too long.

Darren

Darren is the busy Head Chef at a popular Australian steakhouse. He is responsible for planning the menu, taking inventory of all ingredients, and ordering the food needed to prepare recipes. In California, it is required by law to provide caloric information on all menus at chain restaurants, and the owner of the steakhouse would like to follow this model for his restaurant. He would also like to start including more healthy options on the menu. Darren needs an easy way to calculate nutrition information so he can make more informed menu decisions.

AGE: 28
EDUCATION: Associates degree in Culinary Arts
HOMETOWN: San Jose, California
FAMILY: Lives with his girlfriend
OCCUPATION: Head Chef

Goals:

- Easily determine nutritional information for different recipes to inform menu decisions
- Make healthy swaps/substitute ingredients quickly & still have access to all the nutritional info.
- Integrate pricing information into the calculator so he can see how much the ingredients would cost to make a dish

Frustrations:

- The steakhouse is short-staffed and Darren doesn't have a lot of time to calculate nutritional info. for every menu item
- If a chef needs to make a swap or substitute an ingredient, they need to calculate the information all over again
- Staff is not able to save nutritional information for every recipe all in one place

"There aren't enough hours in the day!"

USER RESEARCH   USER JOURNEY MAP

This user journey map was created for Darren's persona.

Outlining tasks, as well as the user's feelings during the process made it easier to identify improvement opportunities that could be incorporated into the app's design.

From this user journey map, the ability to save nutrition information, search for common ingredients from a dropdown, and sync nutrition info. with a restaurant's menu were incorporated into the design.

Goal: Easily determine nutritional information for his recipes so he can add that information to his menu.

ACTION	Create a new recipe	Determine the recipe's nutritional value	Find substitutes	Calculate nutritional value for the recipe with substitutes	Add new dish to menu
TASK LIST	A. Determine what kind of dish to make (breakfast, lunch, dinner, etc.) B. List out all the ingredients needed for the recipe C. Order all the ingredients	A. Look up nutritional information online for each ingredient or obtain it from the distributor B. Use a calculator to add up the total calories C. Make note of any allergens D. Write the information down to add to the menu later	A. Research substitutes for different allergens that could be used in the recipe in place of original ingredients B. Test substitutes to see if they taste good in the recipe C. Order the substitution ingredients	A. Look up nutritional information online for the substitutes as well as original ingredients needed in the recipe B. Use a calculator to add up the total calories C. Make note of any allergens D. Write the information down to add to the menu later	A. Add the new dish to the restaurant's paper menu with nutritional, allergen, and pricing information B. Add the new dish and nutritional info to the website/online menu C. Share substitution options with customers D. Advertise the new menu item
FEELING ADJECTIVE	Excited Enthusiastic	Stressed Inpatient	Overwhelmed Positive	Stressed Annoyed	Relieved Hopeful
IMPROVEMENT OPPORTUNITIES	Nutritional information from ordered ingredients could be saved in the app for future use	Search from a database of common ingredients to make the calculation faster Ability to scale calculations automatically based on measurement sizes It would be convenient to be able to save nutritional information for recipes all in one place Feature that enlarges text Voice recognition (hands-free) so calculator could be used during the cooking process	Suggestion feature that provides allergen substitutes in real-time (for example, if using dairy milk an almond milk alternative could be recommended)	Be able to easily swap ingredients from the original recipe without having to recalculate values for every single ingredient to obtain the new nutritional info.	Nutritional information can feed into the restaurant's online menu automatically

STARTING THE DESIGN

- PAPER WIREFRAMES
- DIGITAL WIREFRAMES
- LOW-FIDELITY PROTOTYPES
- USABILITY STUDIES

Baked Potato
APPETIZER

Bloomin' Union
APPETIZER

Strip Steak
MAIN DISH

Baked Potato
APPETIZER

Bloomin'
APPETIZ

Stri
M

STARTING THE DESIGN   PAPER WIREFRAMES

To start, I wanted to outline the home screen to ensure that all the primary features I wanted to include in the app were available from that screen.

These included:
- Nutrition Calculator
- Saved Recipes
- Allergens
- Sync to Menu ability (to sync nutrition info. to restaurant website)

The Refined version of the home screen had four easily accessible buttons for each primary feature, as well as the ability to scroll through recently saved recipes.
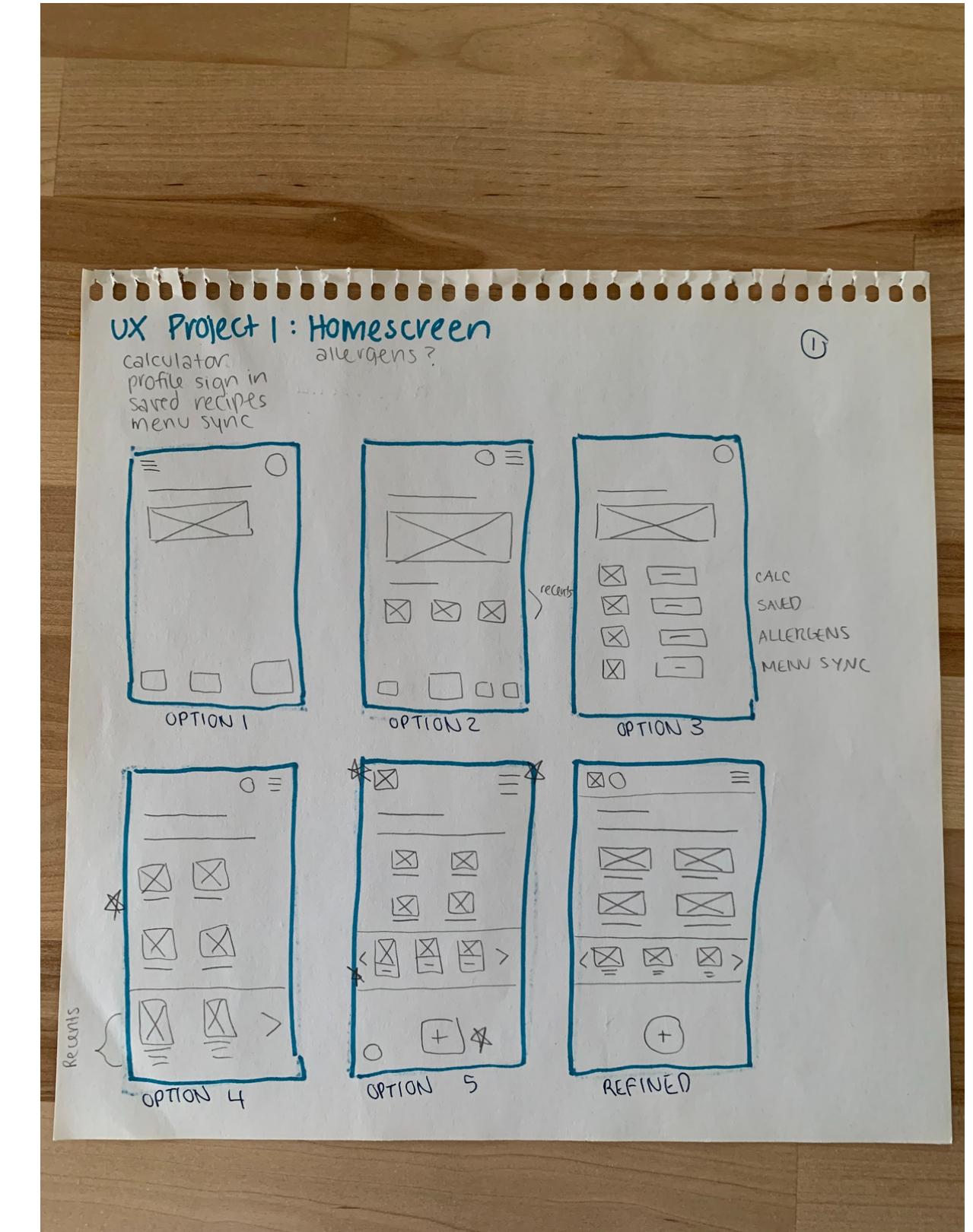
STARTING THE DESIGN   PAPER WIREFRAMES

I also created paper wireframes for each of the primary app features.
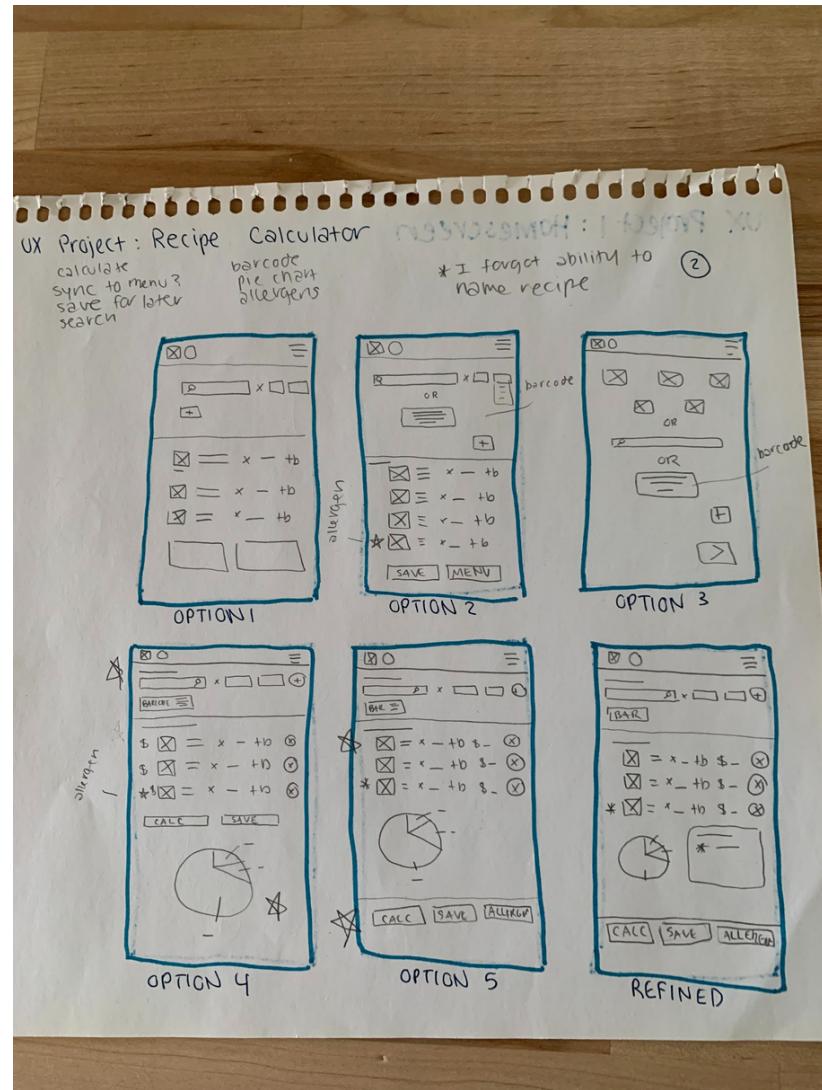
RECIPE CALCULATOR
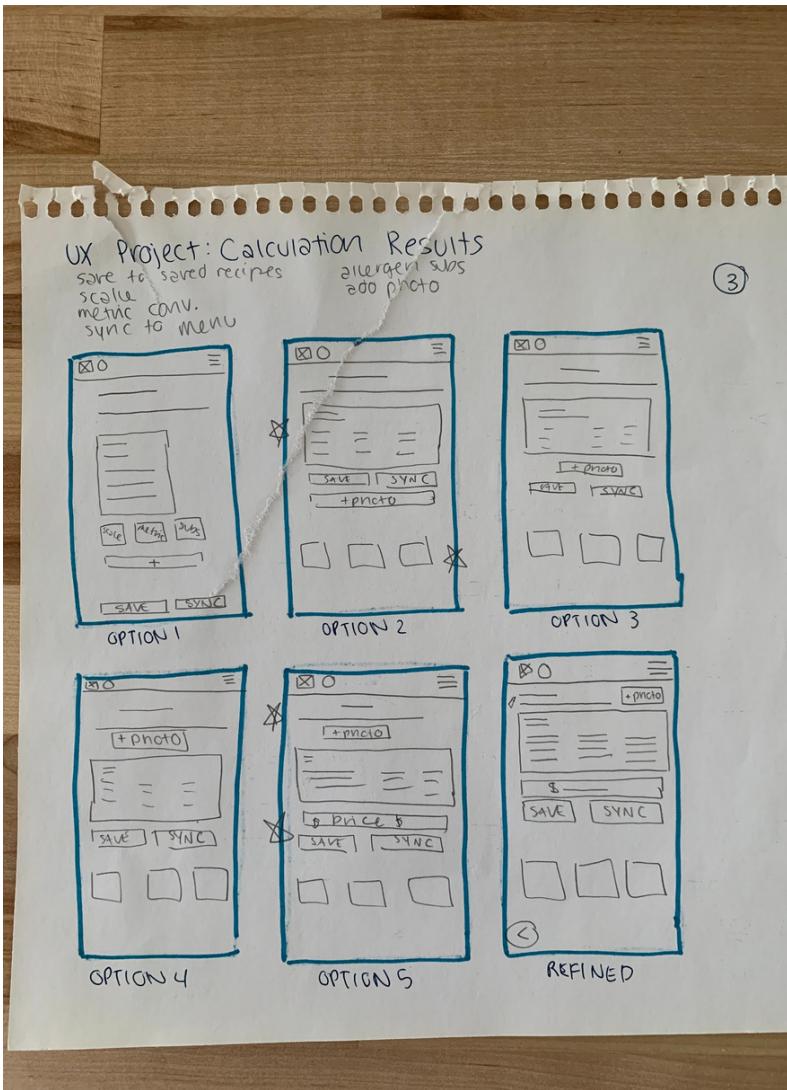
CALCULATION RESULTS
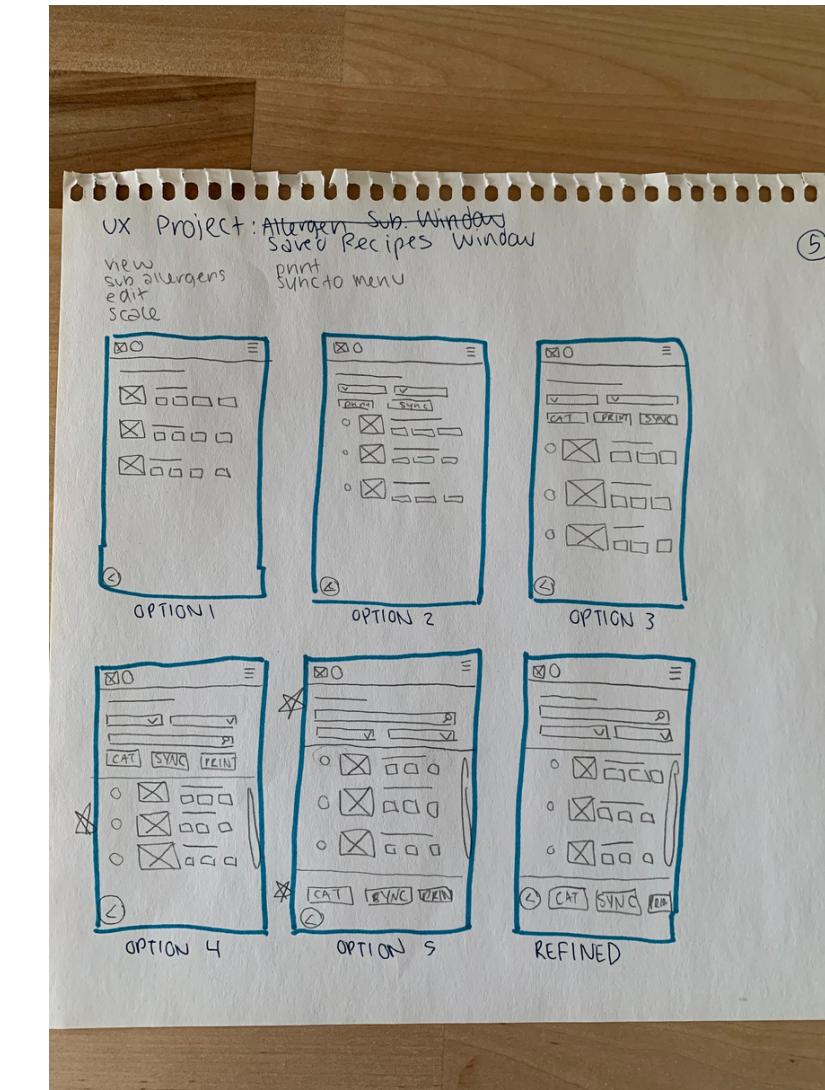
SAVED RECIPES
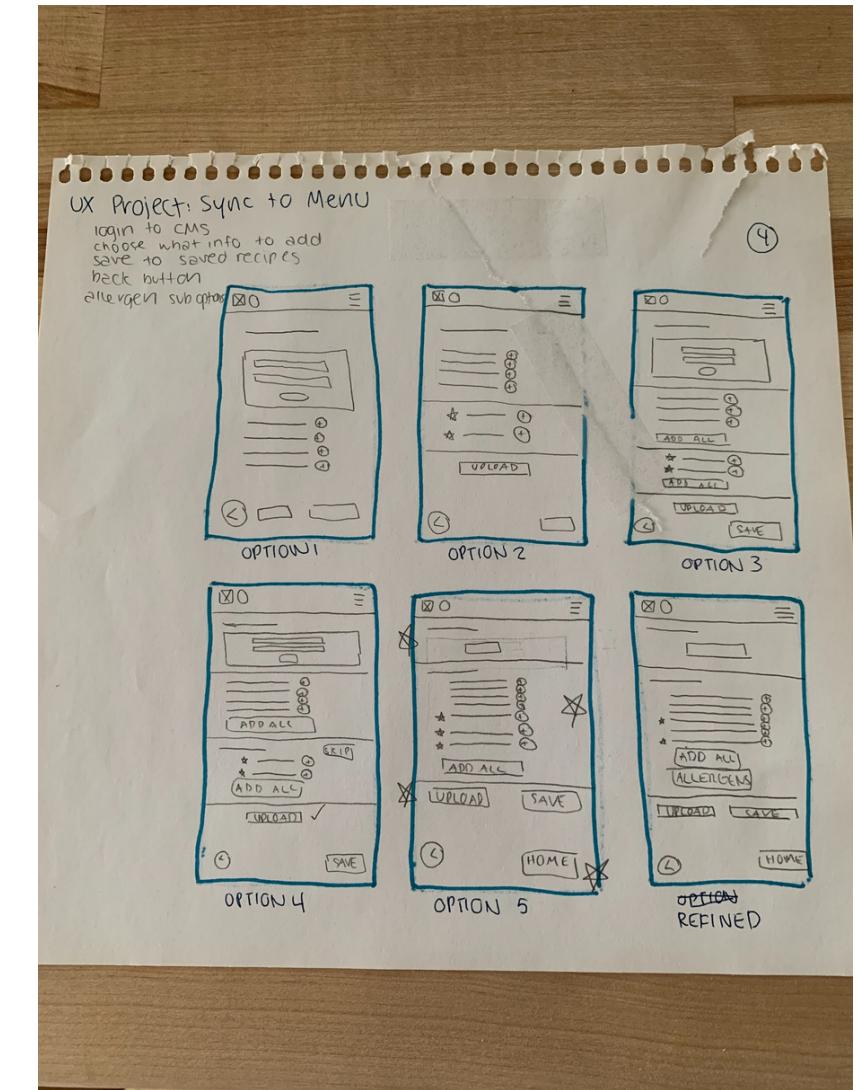
SYNC TO MENU

STARTING THE DESIGN   DIGITAL WIREFRAMES | HOME SCREEN

User profile icon so logged in users can access/update their profile

Clearly labeled buttons for users to access the primary features of the app

Recently saved recipes
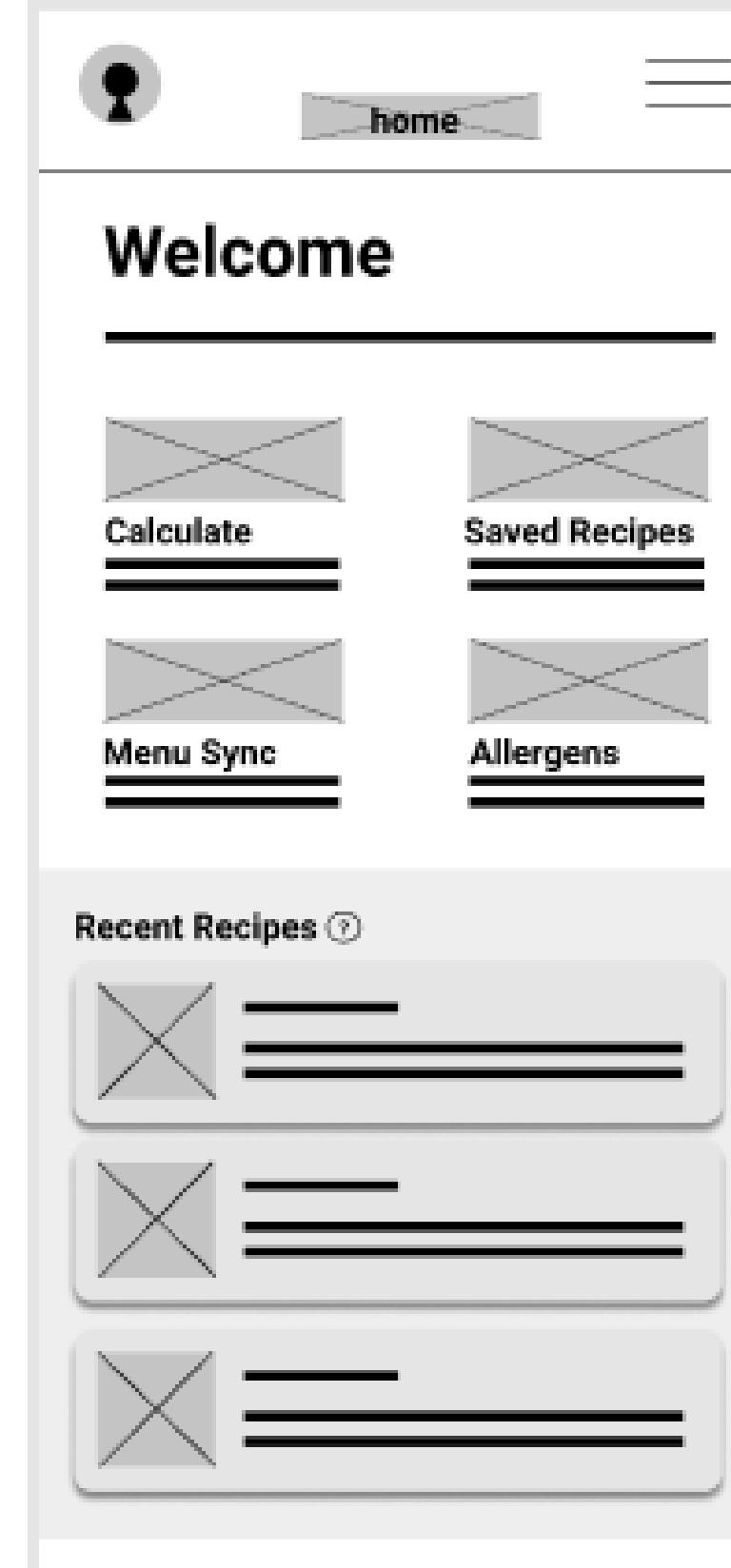
Menu bar and app logo (links back to home screen)

I wanted to make the home screen as simple and straightforward as possible, with easy-to-find buttons to access the primary features

home

Welcome

Calculate

Saved Recipes

Menu Sync

Allergens

Recent Recipes ⑦

STARTING THE DESIGN   DIGITAL WIREFRAMES | CALCULATOR

Calculator with option to either search ingredients or scan ingredient barcode

Added ingredients are here

Calculate button

Ingredient dropdown

This screen was designed to show all ingredients clearly and make it easy to update ingredients. Initial feedback on this screen was that there were too many options / too busy.
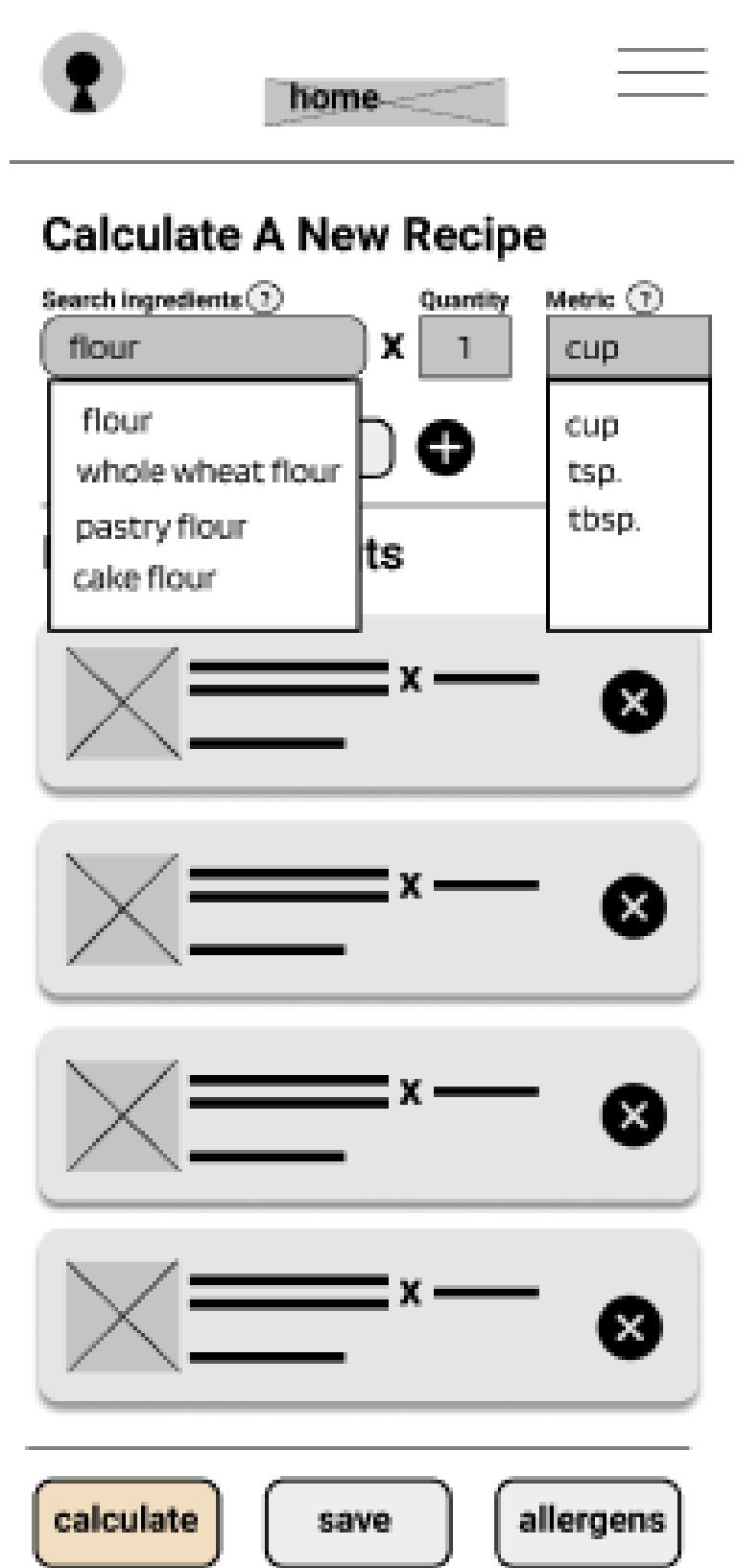
STARTING THE DESIGN DIGITAL WIREFRAMES | RESULTS

The Results screen shows all the nutrition information needed as well as the net price (based on user feedback). I wanted this information at the top since it's part of the main user flow for the app. One user also expressed interest in a pie chart feature to break down fat vs. carbs vs. protein that could be added to the menu which can be seen here.

Edit the recipe name

Nutrition Information is here (calories, fat, vitamins, etc.)

Net price per serving based on ingredient inputs

Chart of fat vs. carbs vs. protein

home

Results   + Add Photo

$

save ⑦   sync ⑦   allergens ⑦

back   scale ⑦   metric ①
                         conversion

Add a photo of the finished dish

Buttons to save the recipe nutrition info., sync it to the menu, or view allergens for this recipe

Buttons to scale the recipe or convert the metrics between the imperial system and metric system

STARTING THE DESIGN DIGITAL WIREFRAMES | SAVED RECIPES & SYNC RECIPE TO RESTAURANT WEBSITE

Filter view by name, most recent, or by type (breakfast, lunch, etc.)

All Saved Recipes

Buttons to re-categorize recipes, sync them, or print the information out

Login to website's CMS to start the upload process

List of all saved recipes here

Buttons to upload recipe to CMS or save it

Buttons to go back to previous screen or home

STARTING THE DESIGN   LOW-FIDELITY PROTOTYPE

LINK TO PROTOTYPE

Main User Flow: Calculate the nutrition value of a recipe and get to the Results screen.
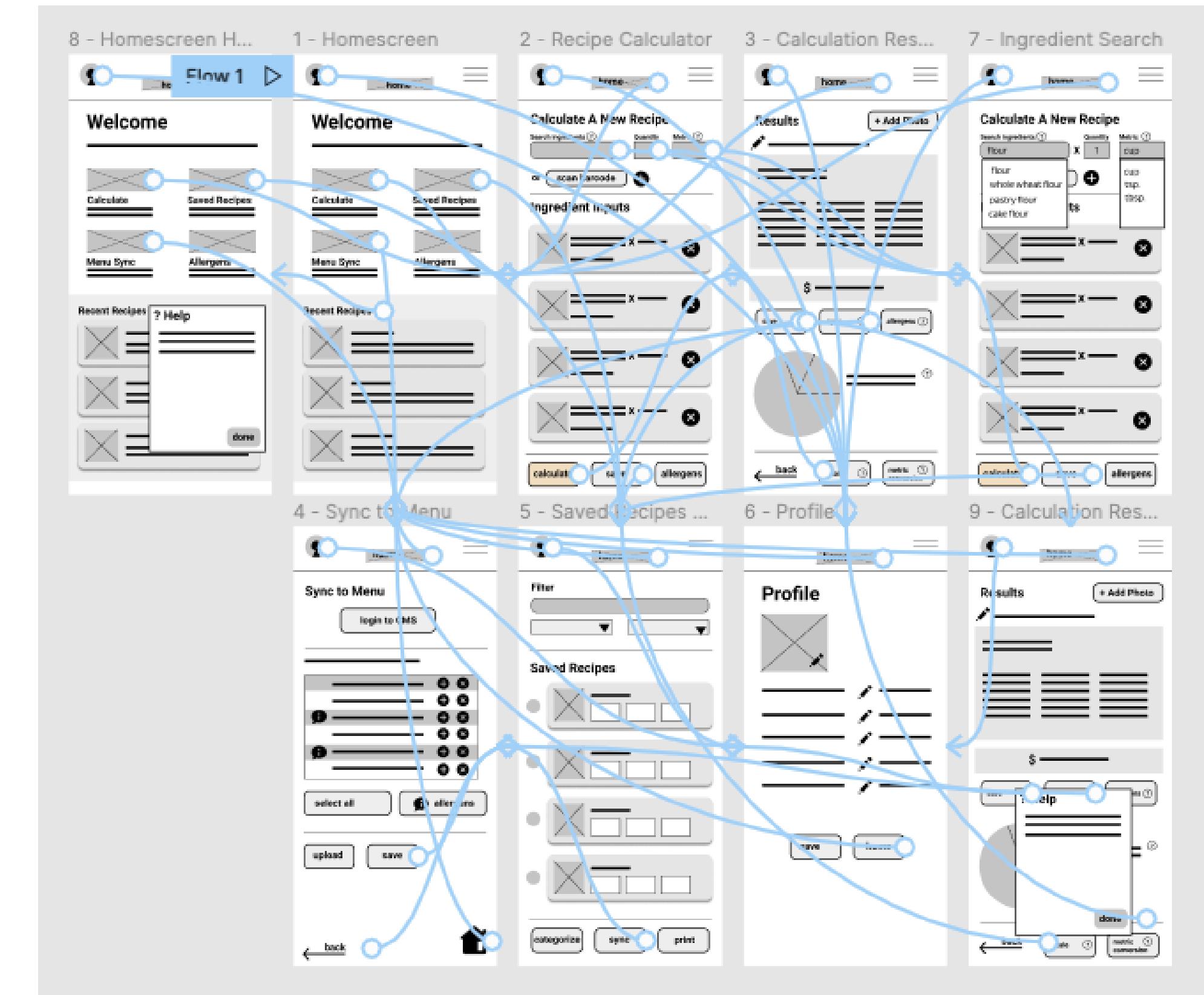
STARTING THE DESIGN   **USABILITY STUDY: PROCESS**

- Conducted a moderated usability study remotely with participants from the United States
  - 5 participants, 2 females and 3 males between the ages of 22 and 55
- Users were asked to calculate a fictional recipe on the low-fidelity prototype

RESEARCH QUESTIONS

- Is there any area of the nutrition calculation process where users get stuck?
- Are there any design changes we can make to improve the calculation process?
- Are there any features missing that users wanted to see?
- Does this app save time for users who need to calculate nutrition facts for their restaurant menus?

STARTING THE DESIGN   USABILITY STUDY: FINDINGS

ROUND 1 FINDINGS
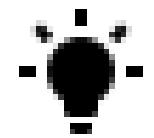
Some users (2 out of 5) were confused about the way ingredient metrics/units were labeled, so for the next iteration I need to provide a help widget next to those sections so users have more guidance.

"What's the difference between quantity and amount?" - Participant D
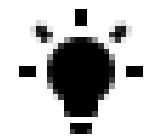
Many users (3 out of 5) asked about an autocomplete feature on the ingredient search bar, this feature should be made available when the designs move to production.
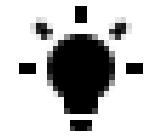
One user was confused about what the Allergens button did on the Results screen. In response, I provided an in-app help feature to give better guidance on what this button (and other buttons) are used for.

ROUND 2 FINDINGS
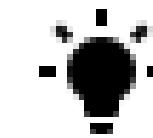
Not enough back buttons, difficult to get back to the previous screen. Back buttons were added.
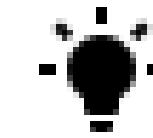
Not all icons were clearly labeled, I added labels to these to make it easier to navigate.
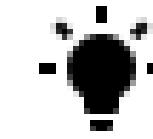
Users felt there were too many buttons, options were simplified to make it easier to navigate.

REFINING THE DESIGN

- **MOCKUPS**
- **HIGH-FIDELITY PROTOTYPES**
- **ACCESSIBILITY**

REFINING THE DESIGN   MOCKUPS | HOME SCREEN

Based on feedback from the usability study, changes were made to make the home screen a little simpler. Instead of adding text beneath primary feature buttons, the text was added to the buttons themselves for clarity.
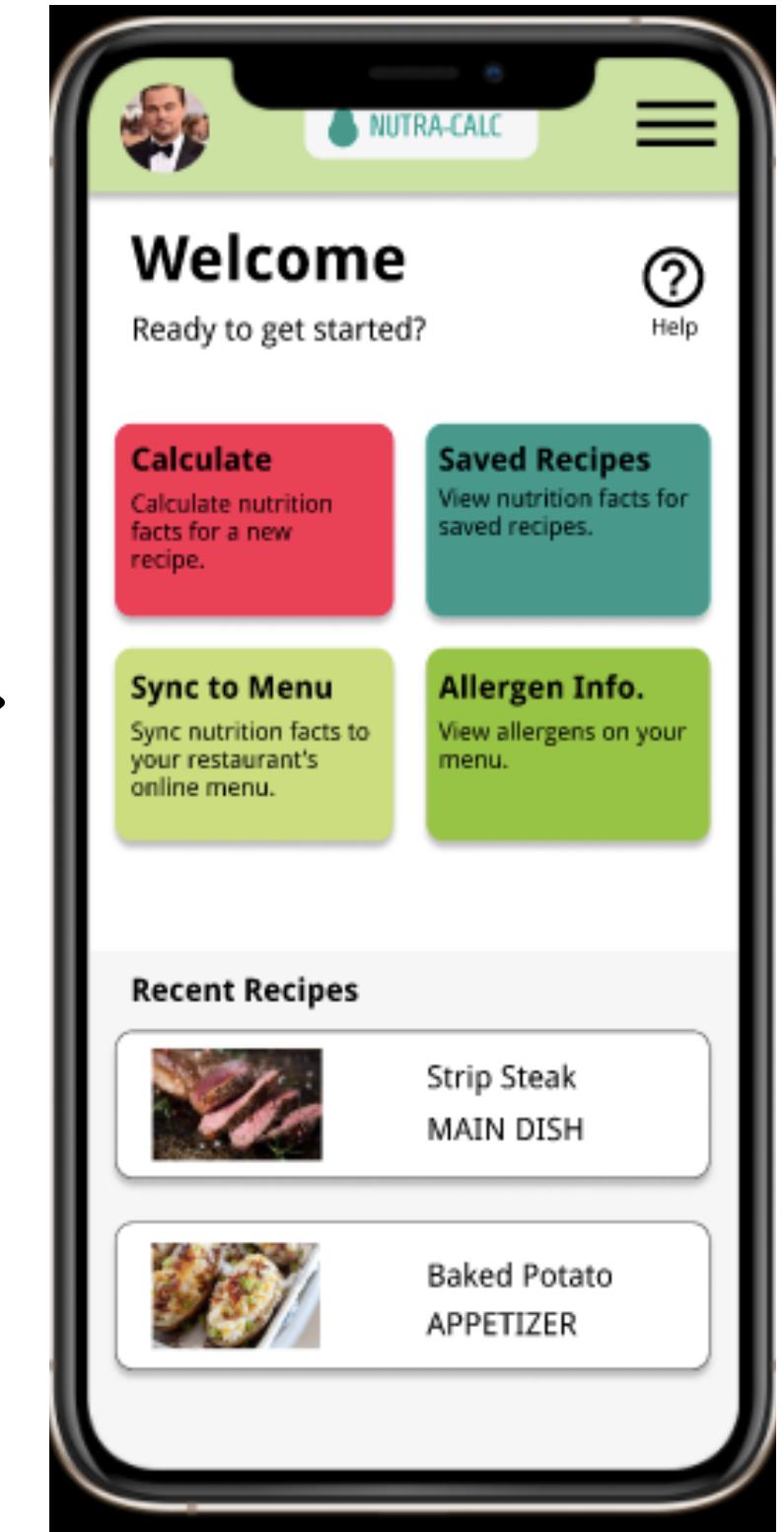
REFINING THE DESIGN   MOCKUPS | CALCULATOR

Allergens and Save buttons were removed, and the calculator section was simplified. In the next iteration the barcode scanner feature can be added back in and designed further.

REFINING THE DESIGN   MOCKUPS | RESULTS

Unnecessary buttons were removed from this screen as was the pie chart (patrons can easily get the nutrition information they need without it). Back buttons and a home button were added for easier navigation.

# REFINING THE DESIGN   MOCKUPS | SAVED RECIPES

Filter was simplified to a search bar and clearer directions were given ("Search Recipe" vs. "Filter").

Only the Sync button is available from the Saved Recipes screen, and a home button was added for easier navigation.

BEFORE USABILITY STUDY
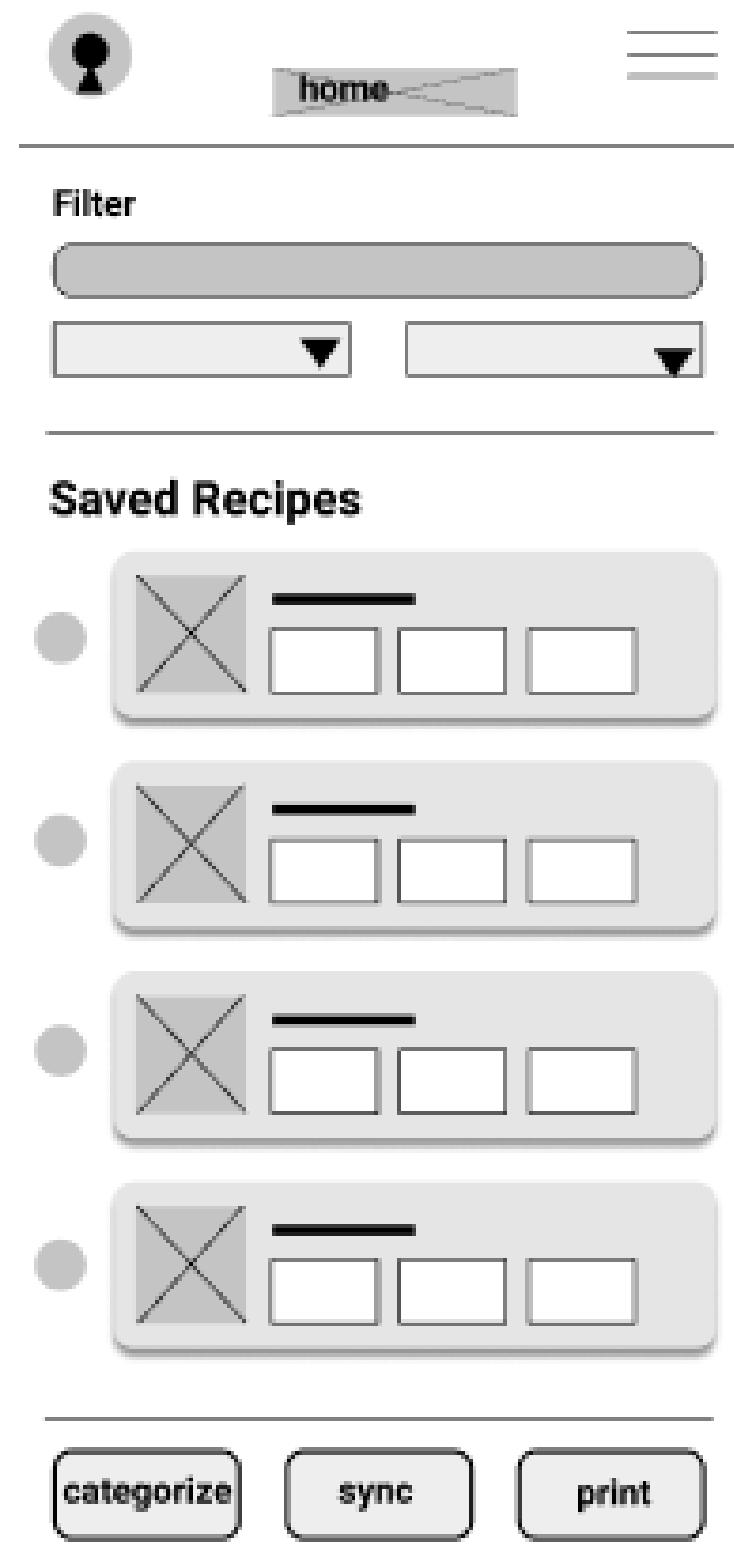
AFTER USABILITY STUDY

REFINING THE DESIGN   MOCKUPS | SYNC TO RESTAURANT WEBSITE

BEFORE USABILITY STUDY

AFTER USABILITY STUDY

List of all recipes was changed to a dropdown for easier navigation, and a note was provided when the user successfully logged into their website's CMS.
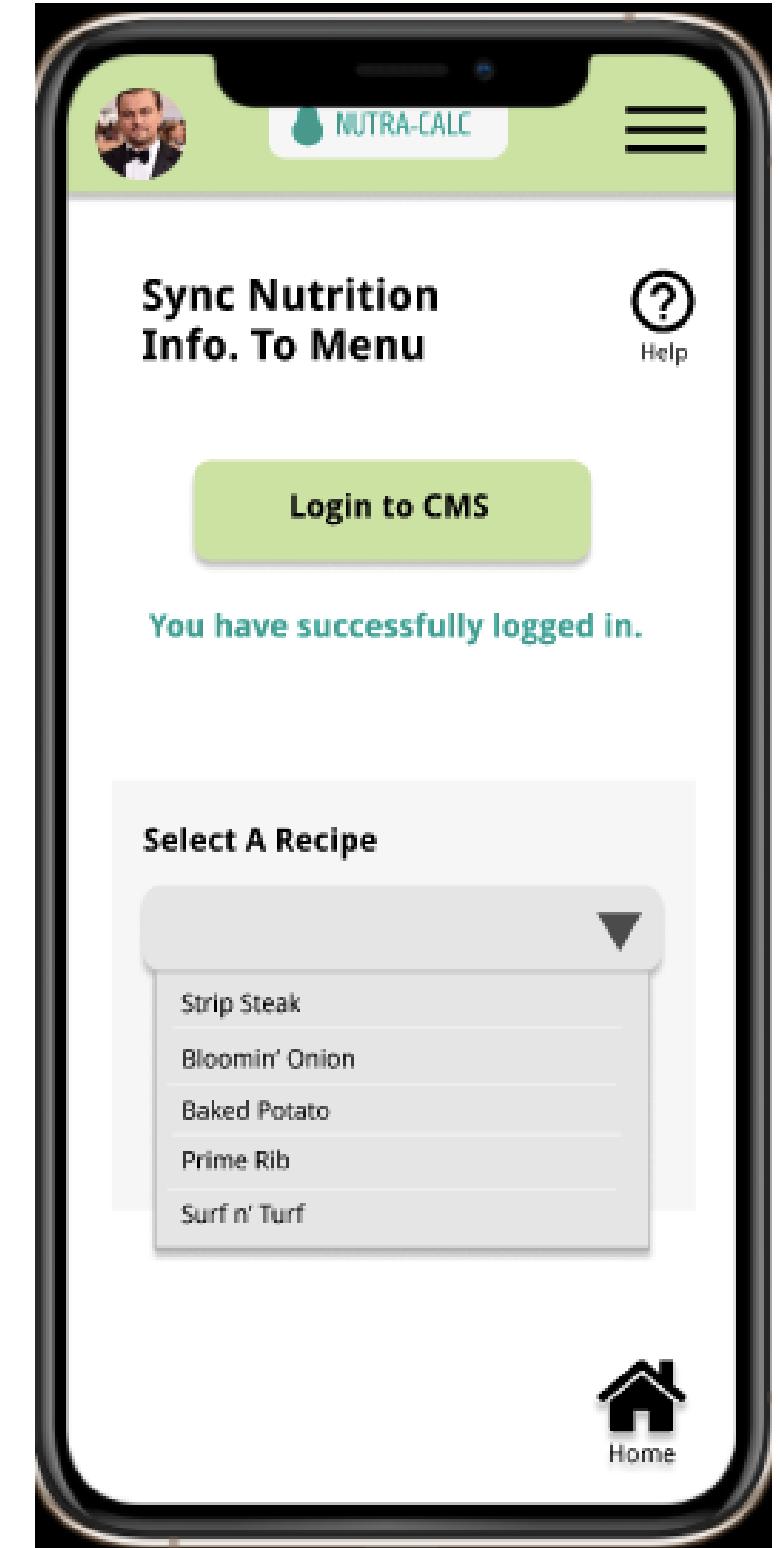
# REFINING THE DESIGN MOCKUPS | ADDITIONAL SCREENS

MENU OPTIONS

PROFILE
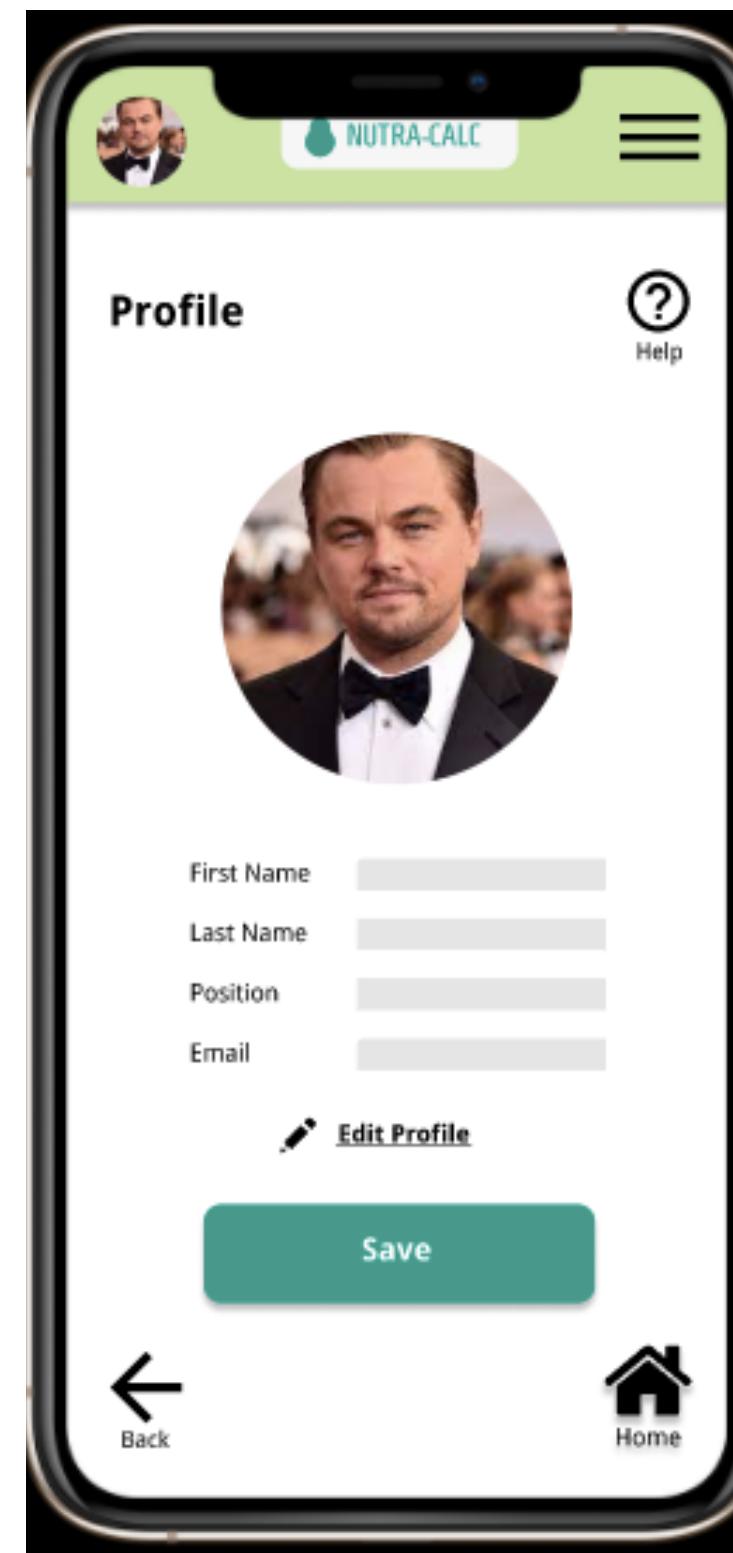
**HELP FEATURE**
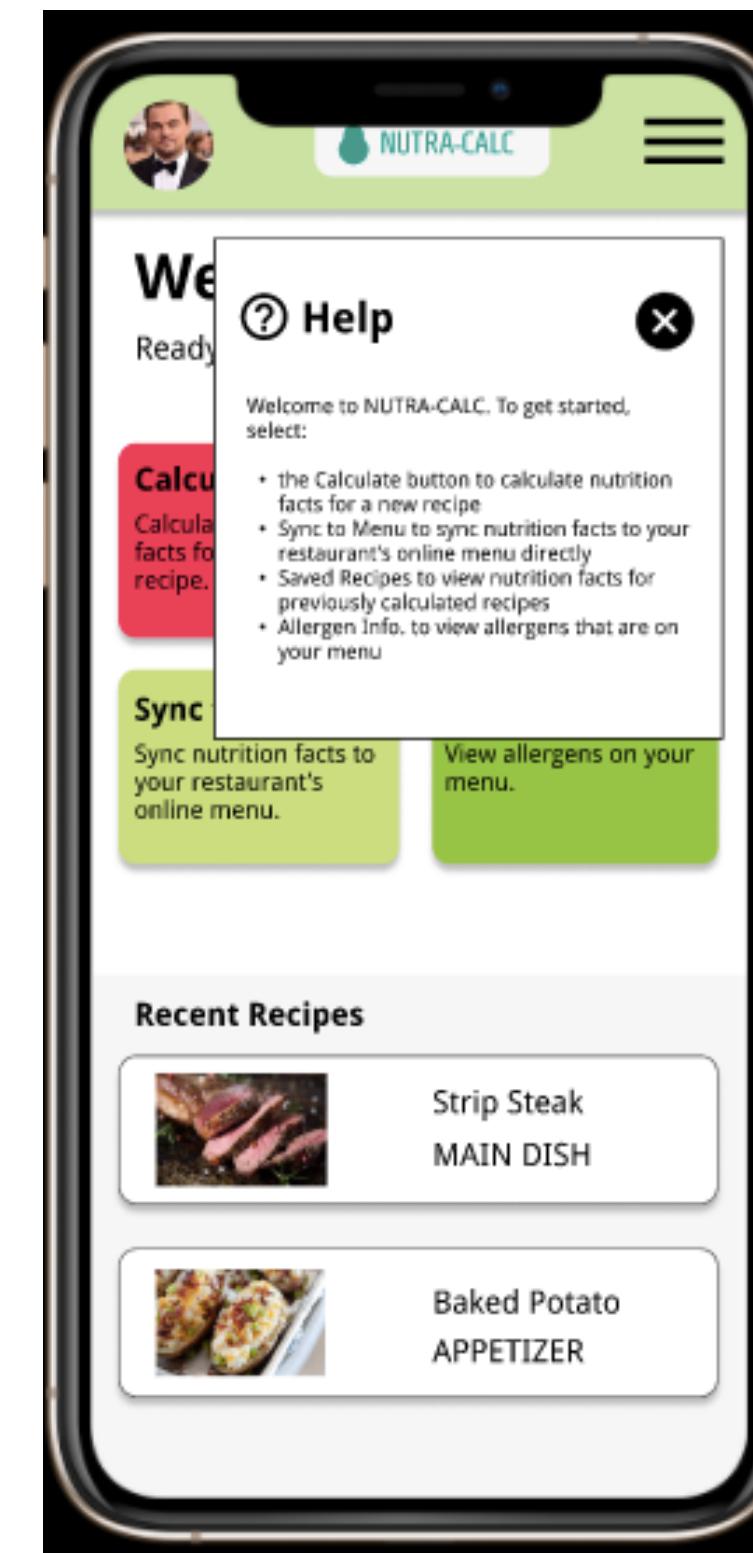
ALLERGENS
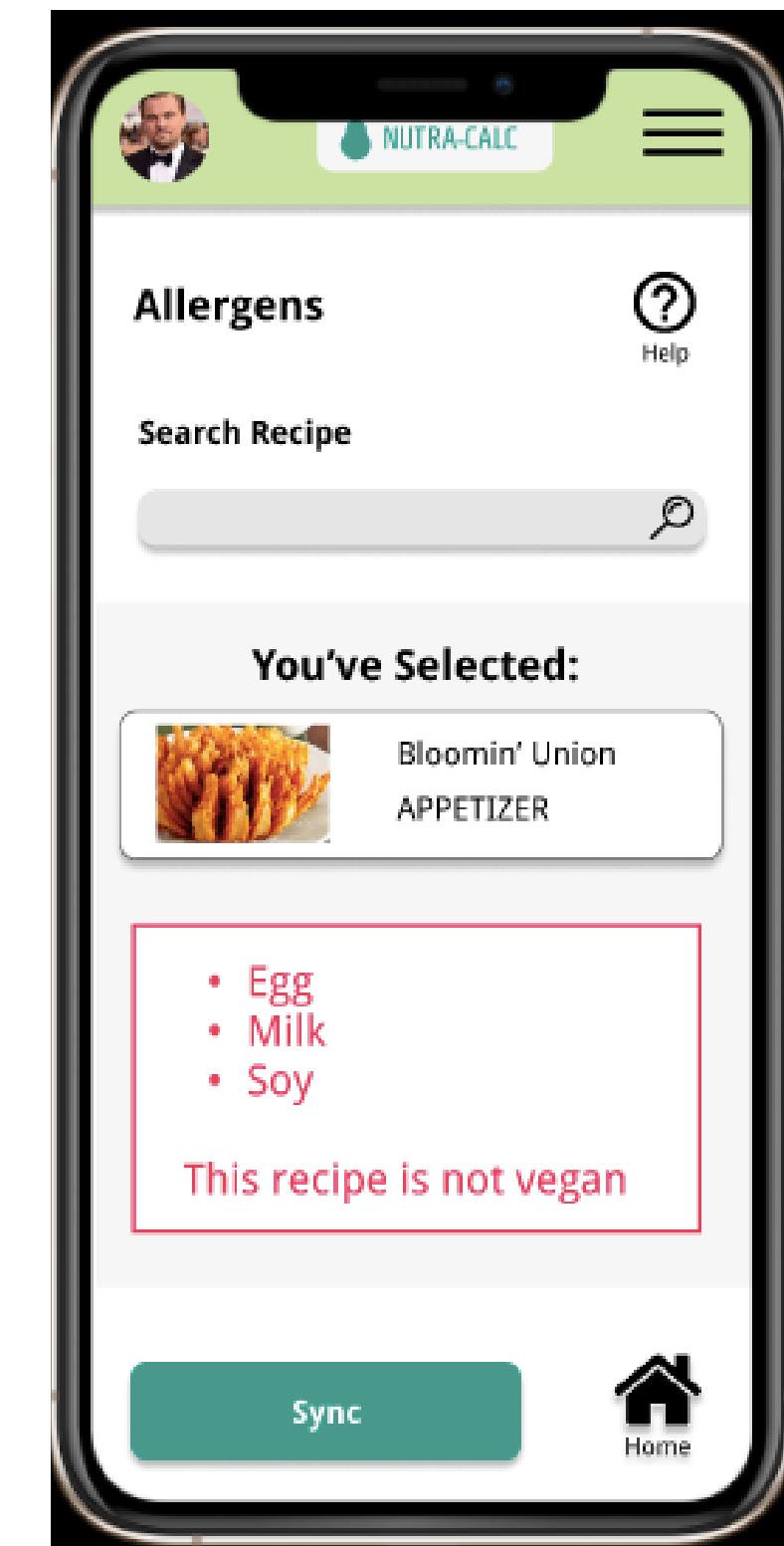
REFINING THE DESIGN HIGH-FIDELITY PROTOTYPES

LINK TO PROTOTYPE
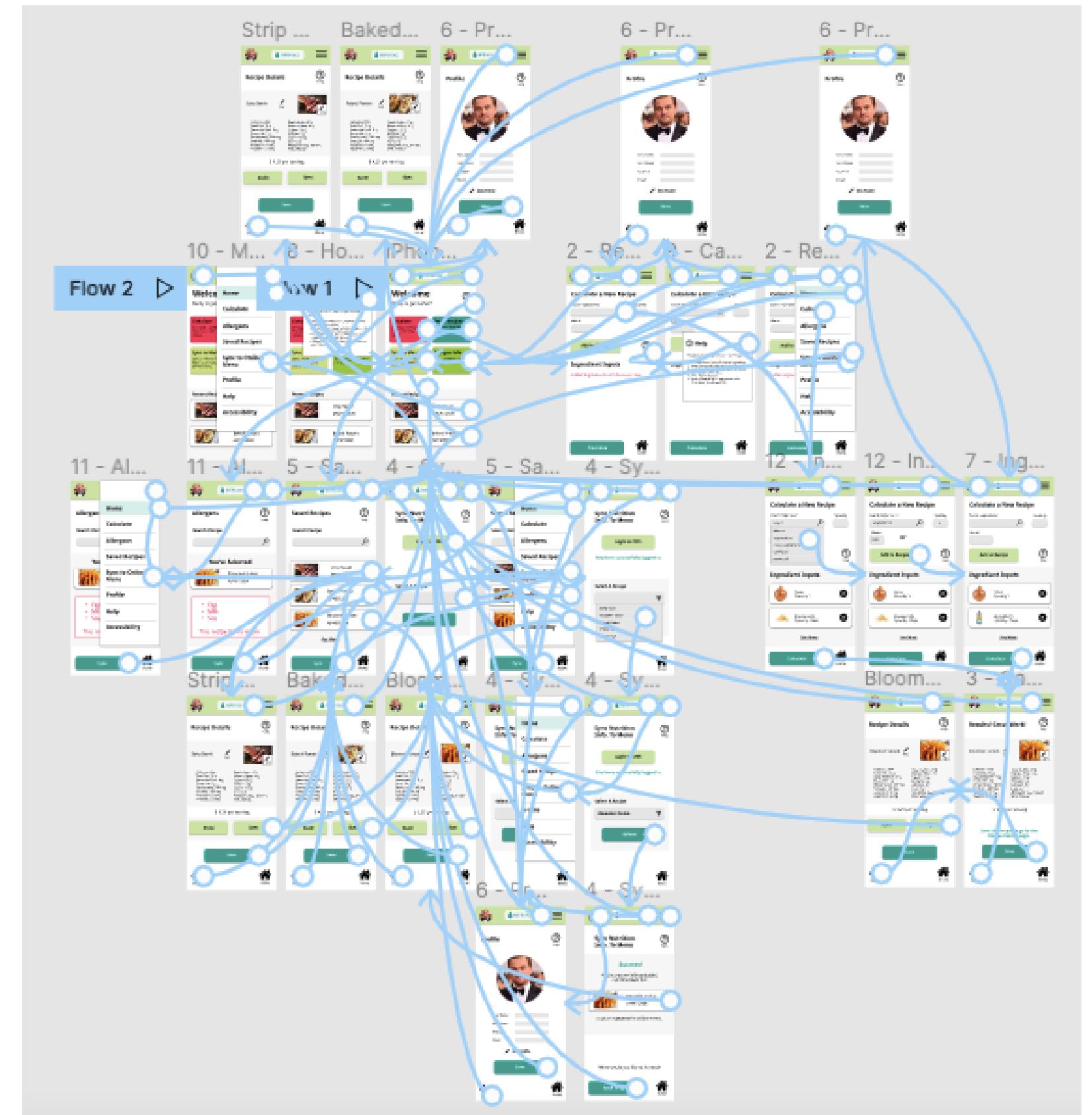
REFINING THE DESIGN ACCESSIBILITY CONSIDERATIONS

Color Contrast

Text and buttons used appropriate color contrast so users with visual impairments/color blindness would be able to view information on the screen and navigate the app.

Accessibility Customization Options From Main Menu

Users could select "Accessibility" from the main menu to access settings to customize the app to their specific needs.
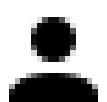
Help Buttons

Users are able to get help on any screen in the app by selecting the help icons, or by selecting "Help" from the main menu.

GOING FORWARD

- **TAKEAWAYS**
- **NEXT STEPS**

TAKEAWAYS

IMPACT

This app was never developed so I do not have conversion information, but users interviewed did feel that the final design saved them time.

"Looking up each ingredient individually would've been a pain." - Participant C

"The nutrition info. is easy, it's way easier than searching for everything individually." - Participant D

WHAT I LEARNED

This was my first UX design and research project, so I learned quite a bit about the process for both. My background is in marketing, and it was difficult to conduct research solely on usability and not try to gather information on marketability/product viability in the marketplace. Overall, I learned that simpler is better and that UX design takes a lot of patience - I should expect to iterate on my designs multiple times based on feedback.

NEXT STEPS
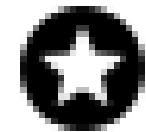
⚙ **1) BUILD OUT THE SCALABILITY FEATURE**

Automatically updating nutrition information based on portion size would be helpful for chefs when changing from lunch to dinner portions, or to kids meal sizes.
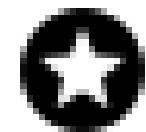
⚙ **2) ADD A BARCODE SCANNER FEATURE TO THE CALCULATOR SCREEN**

This would make it easy for users to scan an ingredient's bar code to add the nutrition info. to the recipe easily. Many calorie tracking apps for consumers have this feature already.
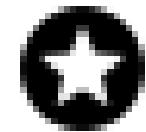
⚙ **3) CREATE ADDITIONAL ACCESSIBILITY FEATURES**

This app could definitely be improved from an accessibility standpoint. Including features like light / dark mode, text enlargement, and ensuring its VoiceOver/screen reader compatible could greatly improve the experience for a variety of users.

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