# grocerygrab

Your on the go meal planner.

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**Nicholas Yuschak**

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# Chapter 1

## Executive Summary

Our goal was to create an application to assist JMU students who live off-campus with a grocery application to assist their issues in shopping and money management. GroceryGrab's purpose is to find an alternative way for off-campus students to grocery shop that will specifically benefit them. Our application allows the users to create their own account, create a budget range, find meals that will best suit their nutrition needs, and order their items through Instacart. With this application, off-campus students will save money and no longer struggle to buy what they need. After conducting user research, interviews, and usability testings, we were able to create an application that would assist users to find an easy way to find and buy their groceries.

# Chapter 2

## Problem Statement

JMU students living off campus need a way to calculate their weekly/monthly grocery budget so that they can cook healthy meals based on their budget, because users don’t know what groceries to buy and want to find a way to make recipes that are affordable and different.

# Chapter 3

## Related Work

**BigOven**
https://www.bigoven.com/
The design problem this system identifies is making cooking more simple. This system addresses a related problem by creating grocery lists and providing recipes based on a preference. BigOven allows users to discover recipes from thousands of homecooks and share recipes with friends and family. Some good points/principles in this design are offering recipes based on the leftover ingredients in one's refrigerator and sharing grocery lists with people in the same household. Our design will be inspired by some of these features by providing recipes from minimal ingredients. The limitations of this app include the outdated design and lack of convenience for users. Although this app promised to give users a platform to share recipes, many of its current users have complained about app crashes that have made the experience less enjoyable for them.

**AnyList**
https://www.anylist.com/
The design problem this system identifies is creating and sharing lists. This system addresses a related problem by organizing multiple grocery lists and allowing users to stick to their budget by adding prices from local stores to find out where to save money. Some good points/principles in this design are grouping related items together, offering suggestions as you type, browsing recently used items from old lists, and assigning items to stores where one can buy them. We can see our design applying some of these principles to help guide users and help them stay more organized. One deficiency about AnyList is the limitation of features for all of its users. AnyList offers a paid version of its app called AnyList Complete which offers more useful features, including the budget aspect.

**Flipp**
https://flipp.com/home
The design problem this system identifies is helping budget-conscious users save money. This system addresses a related problem by allowing users to save money on grocery shopping. Flipp provides weekly deals and coupons from over 2,000 stores such as Walmart, Food Lion, Kroger, and Martins. From there, users can clip coupons/deals to their app and use it on the go while shopping. Some good points/principles in this design are searching for specific products that have a coupon/deal, staying organized with a digital shopping list, and receiving weekly deals on items. We definitely want to apply the coupon feature to our design because it allows us to help college students to save money and stay on budget. Flipp's purpose is straightforward and clever, however the design on the interface could use some improvements.

**Instacart**
https://www.instacart.com/
The design problem this system identifies is saving time and money on grocery shopping. This system addresses a related problem by making grocery shopping more efficient. The user creates a shopping list by adding items from different stores such as: Aldi, Food Lion, Kroger, and Martins. Then, the user enters their address/zip code to have groceries delivered to their door. The interface is pretty simple, however it requires the user to create an account. This is probably necessary to keep credit card information and other personal details secure. We wanted to either connect our app to a service like instacart, or create a similar in-app service of our own.

**FridgeToTable**
https://fridgetotable.com
The design problem this identifies is the desire to cook recipes which are affordable and different. FridgeToTable uses a very simple interface. The user simply enters ingredients they have in their fridge which they want to get rid of. Additionally, they can filter results based on diets (such as paleo, vegan, etc.) Then, the website generates recipes which use those ingredients. I think this interface is a very effective solution to the design problem. It's very simple, and users with a range of media literacy will be able to use it without confusion. I can see us implementing something like this in our design. However, it's limited to ingredients you already have in your fridge. We want to expand it to use ingredients the user does not yet have.

# Chapter 4 Design Process

## 4.1 Users Research

For our user research, participants were JMU junior and senior undergraduate students living off campus. Due to COVID-19 limitations, participants that were more accessible and within reach were chosen for the process. These participants were either relatives, roommates, or friends. The face-to-face interviews were casual and conducted at participant off campus homes. We interviewed four boys and one girl to gather information for our data.

**Participant #1** was a JMU male junior undergraduate student who majors in Finance. He serves on an executive board at JMU and balances core courses at the same time. Overall, he does not have time to grocery shop and relies on quick meals throughout the week.

**Participant #2** was a JMU male junior undergraduate student who majors in Computer Information Systems. He is involved in student organizations at JMU and likes to workout in his free time. He cooks everyday and enjoys trying out new recipes. However, he is conscious of how much he spends, which prevents him from making quality meals.

**Participant #3** was a JMU male senior undergraduate student who majors in Engineering. He serves on an executive board for the JMU Mozaic Dance Team and balances his major classes at the same time. He mainly orders delivery since he has too much work on his hands. He rarely has the time to go grocery shopping and ends up ordering food as his daily meals.

**Participant #4** was a JMU female senior undergraduate student who is a double major in SMAD and Computer science. Due to her being a double major, she barely has the time to go out shopping for groceries and ends up eating instant/frozen foods or ordering delivery. This makes the budget difficult to buy groceries. She wants to learn new recipes and make home cook meals, but doesn't have the time to learn and prep for the recipes.

**Participant #5** was a Sophomore Male Undergraduate at JMU. He's 19 years old, a biology major, and works part time at a restaurant downtown. It's worth mentioning that he is financially independent from his parents. This means, unlike some students who may receive stipends from parents, he pays for his groceries out of pocket. He had a meal plan last year as a freshman. However, as soon as he moved off campus he cancelled it. He now cooks all his meals himself.

## Interview Questions and Responses:

We asked participants the following questions:
Q1.) What does your process look like when grocery shopping?
Q2.) What is your budget for groceries?
Q3.) Where do you usually shop for groceries in Harrisonburg?
Q4.) How long does it take for you to shop for groceries?
Q5.) What are some difficulties you experience during the grocery shopping process? Be specific.
Q6.) As a college student, what's the hardest part of grocery shopping that doesn't need to be hard?
Q7.) When you started cooking and shopping for yourself, what were your biggest challenges?

## Interview Findings

**Q1.) What does your process look like when grocery shopping?**

Our first question was aimed to give us valuable qualitative data about our participants - to paint a picture of the kind of demographic we were designing this app for. We wanted to know more about our participants' grocery shopping habits, and what a typical trip might look for them. One constant we identified was the making of grocery lists. ⅘ of participants mentioned this action as a part of their process for grocery shopping. However, only ⅗ participants seemed to strictly adhere to their list. One participant said:

*"I don't plan. I usually look at the fridge first, think of the things I need to buy, and I remember it in my head. Once I go to the grocery store, I buy the things I need and sometimes buy things that catch my eyes. I sometimes get distracted, and I don't follow the list. Then I forget the certain items needed."*

Interestingly, the fifth participant placed a big emphasis on consistency and simplicity. He buys the same few items, for the same few meals, at the same store each week. This seems to be a way in which he works around the need for a list. If he buys the same things every week at the same store, it reduces the chance of him forgetting something he needs.

Lastly, participants seemed to have general protocols for price comparison. Store choice seems to be correlated with price. The first participant refers to his list and compares prices of units while he's at the store. The second participant decides the store he's going to visit based on what he needs. This implies he knows the prices at the store beforehand, and this influences his decision. Participant 4 chooses one store for the essentials: Walmart. Similarly, Participant 5 shops exclusively at Aldi because of their low prices, and to keep consistency from week to week.

**Q2.) What is your budget for groceries?**
We had the general knowledge going into our research that people want to save on money on groceries. The cost can add up quickly. However, we presupposed this would be even more true for College students who have to worry about tuition and books on top of all their other costs.

The price range of our respondents ranged from $20-50 on average. This was for food alone. There were two intervening variables for which we did not account. First, this budget could alter from week to week based on lifestyle factors.

For example, if the shopper needs toiletries , cleaning supplies or other items for their apartment, this number can go up quite a bit as these things are rather expensive. Secondly, not all of our respondents shop for themselves. Some seem to split the cost with their roommates, or pick things up for them. This can distort the data, as it accounts for multiple users' needs, not just the one respondent.

**Q3.) Where do you usually shop for groceries in Harrisonburg?**
Unsurprisingly, all five respondents shop at Aldi, citing their great prices as the reason. ⅘ respondents shop at Walmart. It seems this is the place our respondents go for standard things. However, the fifth respondent said he "actively avoids it." Costco and FoodMax were tied for third place. ⅖ of respondents said they go to Costco for bulk orders and frozen goods.

**Q4.) How long does it take for you to shop for groceries?**
Based on our interviewees, the average amount of time spent to shop for groceries is about 40 minutes to an hour. They would mainly spend about 30-40 minutes at the grocery store, and the rest of the time would be spent driving. It seems like the interviewees would shop for their groceries in a timely manner. Since most of our interviewees have a lot of school work to do, they would make their grocery trips quick by shopping at most an hour or less.

**Q5.) What are some difficulties you experience during the grocery shopping process?**

- Difficulties of finding items.
- Sometimes items aren't in stock.
- Find products that have too much or too little bulk.
- Comparing prices to other stores.

**Q6.) As a college student, what's the hardest part of grocery shopping that doesn't need to be hard?**

In an attempt to frame our interview with increasing specificity, this question was intended to encourage participants to give us an insight into their mental model for the grocery app. In other words, instead of randomly brainstorming what we thought would be good in the app, we wanted to get our participants' perspectives. From our interviews. We were able to identify three common pain points amongst our participants:

- People don't have time for shopping (rely on delivery).
- Find a good valued nutritious meal. *Possibly diverse food*.
- If someone is new to cooking, doesn't really know what to make for themselves.

**Q7.) When you started cooking and shopping for yourself, what were your biggest challenges?**

Some features that the interviewees would want to see in a digital solution would be a Video walkthrough, recipe guide with pictures, describing where to buy each ingredient and how much it costs. Finding out what's in stock or not (pretty hard to figure out). They would also like to see a feature when looking for certain ingredients, it could compare them between different stores based on price and value. Another common answer was that the interviewees would like a feature where they can calculate their macros/nutrients when eating the recipe they are given, so that they can track how much they are eating.

# 4.2 Personas

## *Primary Persona*

### David Kim

**Goals**

To be a business analyst for the government. Eating healthy meals while buying ingredients that are affordable and have good value.

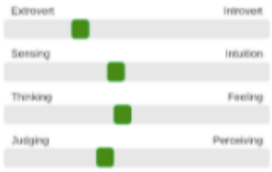
**Frustrations**

- Doesn't have the time to shop and look up new recipes due to work.
- Doesn't have a big budget.
- Not being organized when it comes to buying/making food.
- Doesn't always eat healthy meals, and eats instant/frozen foods at home.

**General info**

| | |
|---|---|
| **Age** | 21 |
| **Location** | Copper Beach Apt. |
| **School** | JMU |
| **Major** | CIS |
| **Nationality** | Korean-American |
| **Year** | Junior |

**Personality**




**Key attitude/behavior to technology**

Always on his electronics for school. Mainly uses his Iphone and computer.

**Background/Profile description**

David is a Korean-American who is from the suburbs and is very active and socializing. He lives with 3 other roommates at his apartment. He usually orders delivery, but sometimes make home cooked meals. He usually eats the same meals, and doesn't have the time to go out and learn new recipes, while figuring out what is the best value of an ingredient he can purchase at certain stores.

**Needs**

- Find a better way to figure out what to eat.
- Look for value in what he buys depending on the price and bulk with his budget.
- He wants to know what's in stock at certain stores.
- Finding good nutritious ingredients in a store for an affordable price.

**Illustrative Quote**

"I want to be able to compare price values for ingredients I need at certain stores."

## *Secondary Persona*

### Michelle Atkins

**Goals**

To be a physical therapist for athletes. Find new recipes to make for her meal weeks.

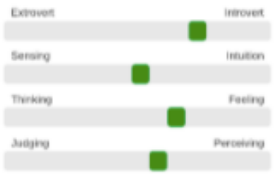
**Frustrations**

- Too busy to shop due to school work
- Doesn't like to go out due to the commute
- Always making the same meal
- Doesn't have a lot of experience with cooking different meals

**General info**

| | |
|---|---|
| **Age** | 22 |
| **Location** | The Pointe |
| **School** | JMU |
| **Major** | Kinesiology |
| **Nationality** | Caucasian |
| **Year** | Senior |

**Personality**




**Key attitude/behavior to technology**

She is an introvert. She is mainly on her computer doing work and doesn't usually go on her phone that much.

**Background/Profile description**

Michelle grew very studious throughout her childhood. She lives at an apartment with two other roommates and she mainly spends her time at home studying and going to UREC. She usually does meal preps to save her some time when she's doing her work. However, she would usually eat the same meal. Her daily meals would be chicken, spinach, and jasmine rice. She has a well balanced meal, but wants to learn new recipes. She has the struggle of knowing what things to buy for certain recipes.

**Needs**

- Learn new recipes for meal preps
- To know where to buy ingredients for certain recipes from multiple stores to choose from
- To find the same types of ingredients that can make different styles of recipes
- To learn new stores to shop from for certain ingredients

**Illustrative Quote**

"I want to know what/where to buy certain items for recipes."

## 4.3 Scenarios

### Primary Persona

**David** is a typical JMU CIS student. “I want to be able to compare price values for ingredients I need at certain stores.”

- He wants to find a better way to figure out what to eat.
- Looks for value on what he is buying, depending on the price and bulk with his budget.

David Kim is a Korean-American, majoring in Computer Information Systems as a junior at James Madison University. His main goal is to be a business analyst for the government. He is a very active student that is involved in many organizations and lives off campus at an apartment living with 3 other roommates. David usually eats at home and sometimes orders delivery when he’s too busy with work. Meals range from making chicken or instant ramen. David sometimes cooks but doesn’t always know what he wants to make. He wants to be able to find a better way to figure out what he wants to eat and eat foods that are healthier and more affordable. The two electronic devices that he most often uses are his iPhone and laptop. He wants to find a way where he can find simple recipes that he would like to make and eat. With that, he doesn’t have a large budget to use for groceries so he wants to find a way where he can find the best value of an item when shopping that can be affordable. If he does happen to find a recipe that he would like to make, he wants to find a way to see if the item is available at his local market, how much it costs, and how it compare with other stores.

## Secondary Persona

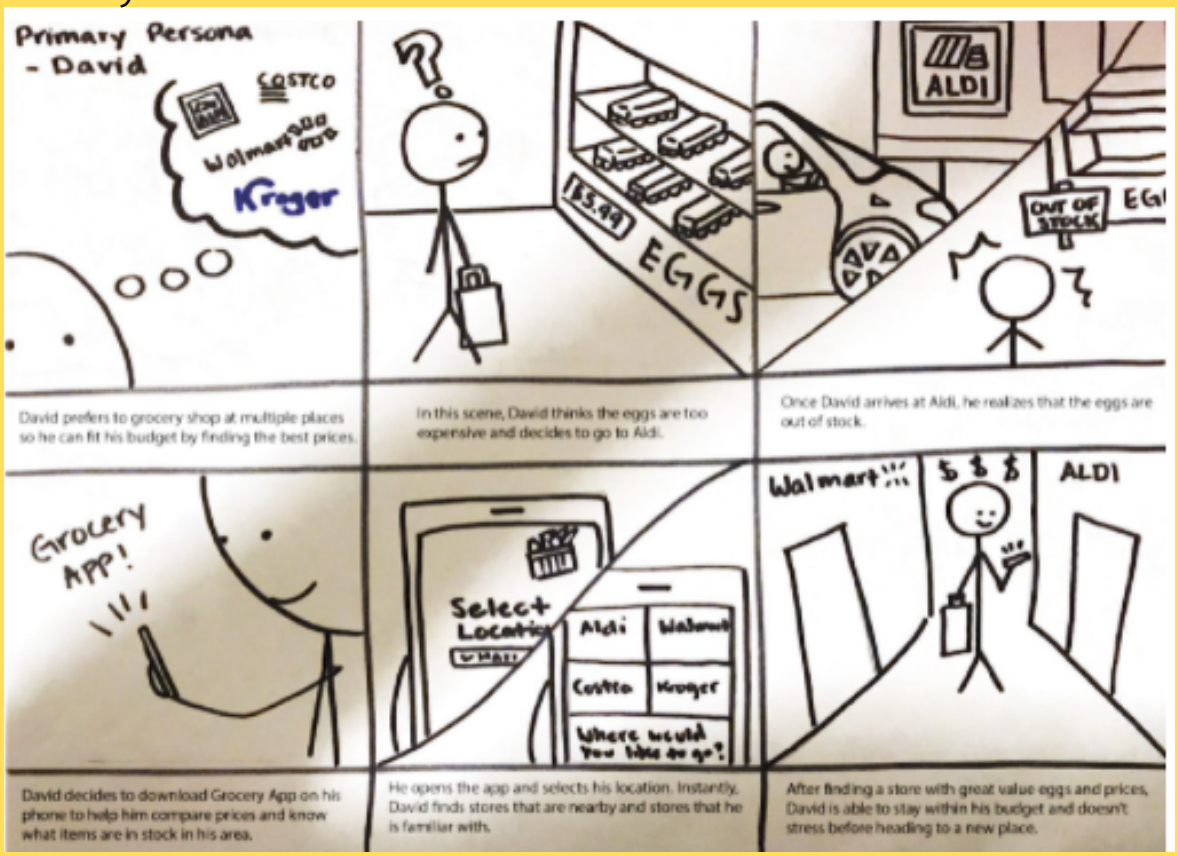
**Michelle** is a Kinesiology major who meals preps, but struggles with finding better and new ways to make new meals with shopping.

- She wants to know where to buy ingredients for certain recipes from multiples stores to choose from
- She wants to learn new recipes for meal preps

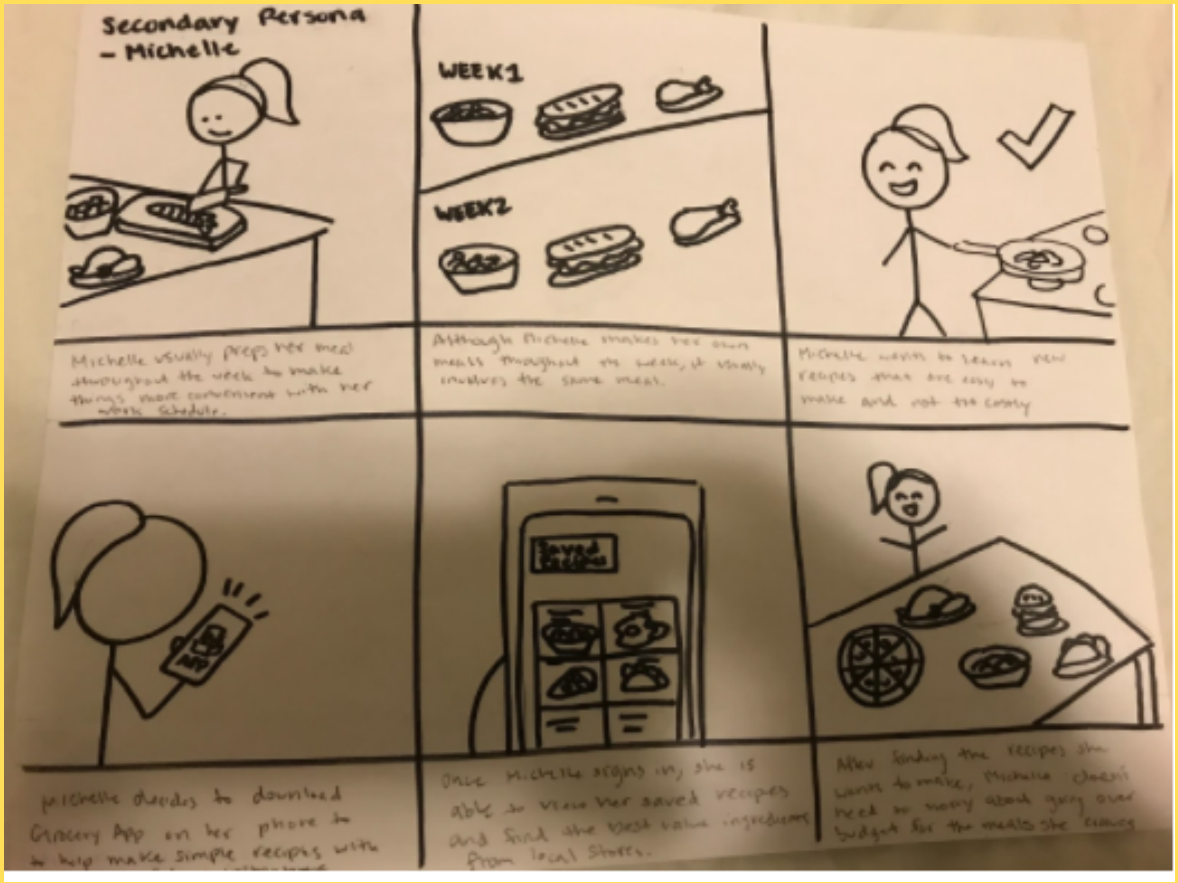
Michelle is a Caucasian who is a senior at James Madison University with a major in Kinesiology. Her main goal is to be a physical therapist for athletes. Michelle mainly eats home cooked meals at her off campus apartment with her two roommates. She usually preps her meal throughout the week to make things more convenient with her work schedule. She mainly spends her time studying and gymming at UREC. Although Michelle makes her own meals throughout the week, it usually involves the same meal, such as chicken, spinach, and jasmine rice. The technology she mainly uses is her computer and sometimes her phone. She would usually type down what she needs on her iPhone ‘notes’ app. Michelle wants to learn new recipes but doesn’t have the time to look up types of recipes that she would be interested in. If she does find a recipe that she wants to make, she would usually shop at Walmart to get all of her ingredients. However, sometimes there would be some issues if she goes to only one store. They would sometimes not have the ingredients that she needs and either come in bulk or be too expensive. She wants to find a better way to know what to buy for a specific recipe and where to find it.

# 4.4 Storyboards

*Primary User*




*Secondary User*



## 4.5 Design Requirements

### Data requirements

- Ability to compute prices and apply coupons
- Ability to make judgements based on budget
- Store and compute demographic information
- JavaScript Framework, like React (?)

### Functional requirements

- Ability to store archived recipes
- Ability to compare prices between stores
- Ability to filter based on specified preferences

### Contextual requirements

- Necessity to cook own meals
- Constant update of weekly/monthly/yearly coupons
- Restricted budget and desire to get best price on goods

### Technical requirements

- Ability to detect location
- Simple system that includes a search bar
- Daily updated that show products from different stores

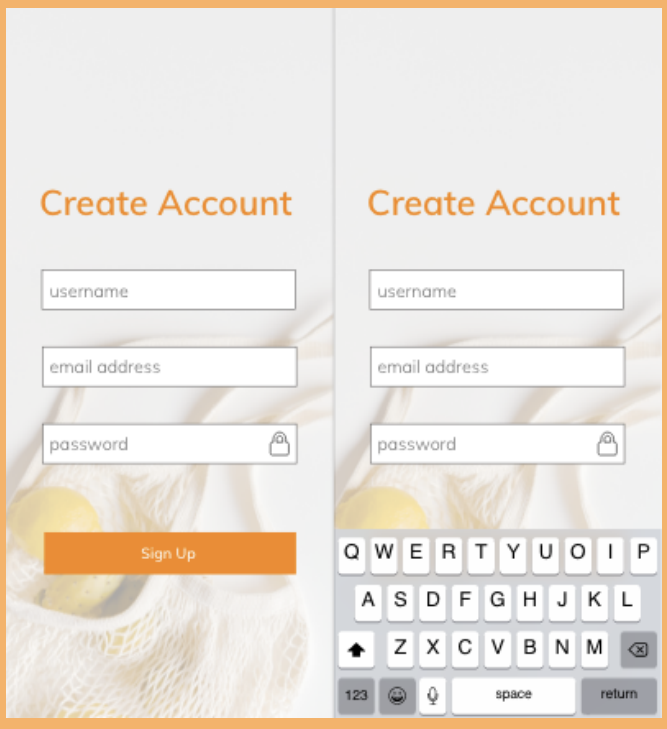
### User requirements

- Simple and uncluttered minimalistic design
- Vibrant colors that are easy to the eye
- Straightforward navigation and functionality

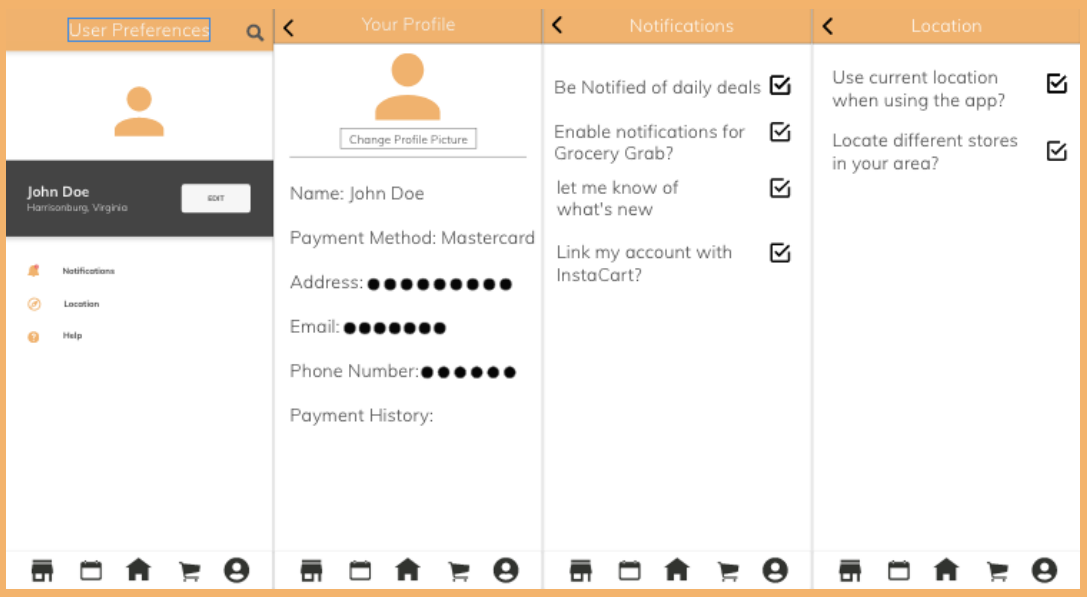
# Chapter 5 Design Solutions

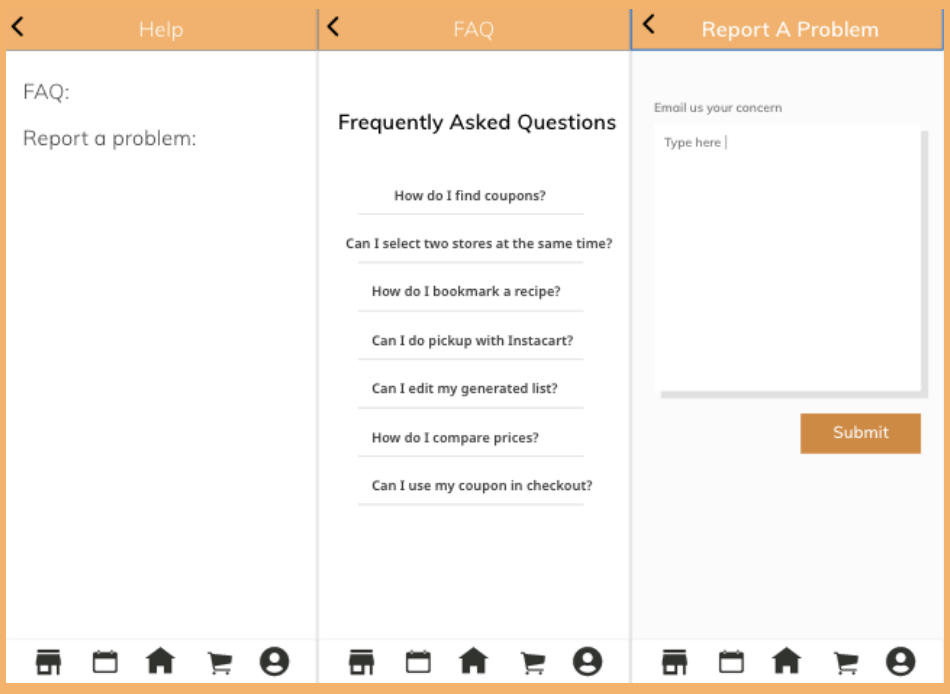
## 5.1 Low Fidelity Prototype and Feedback

*Sign up to create a user profile*

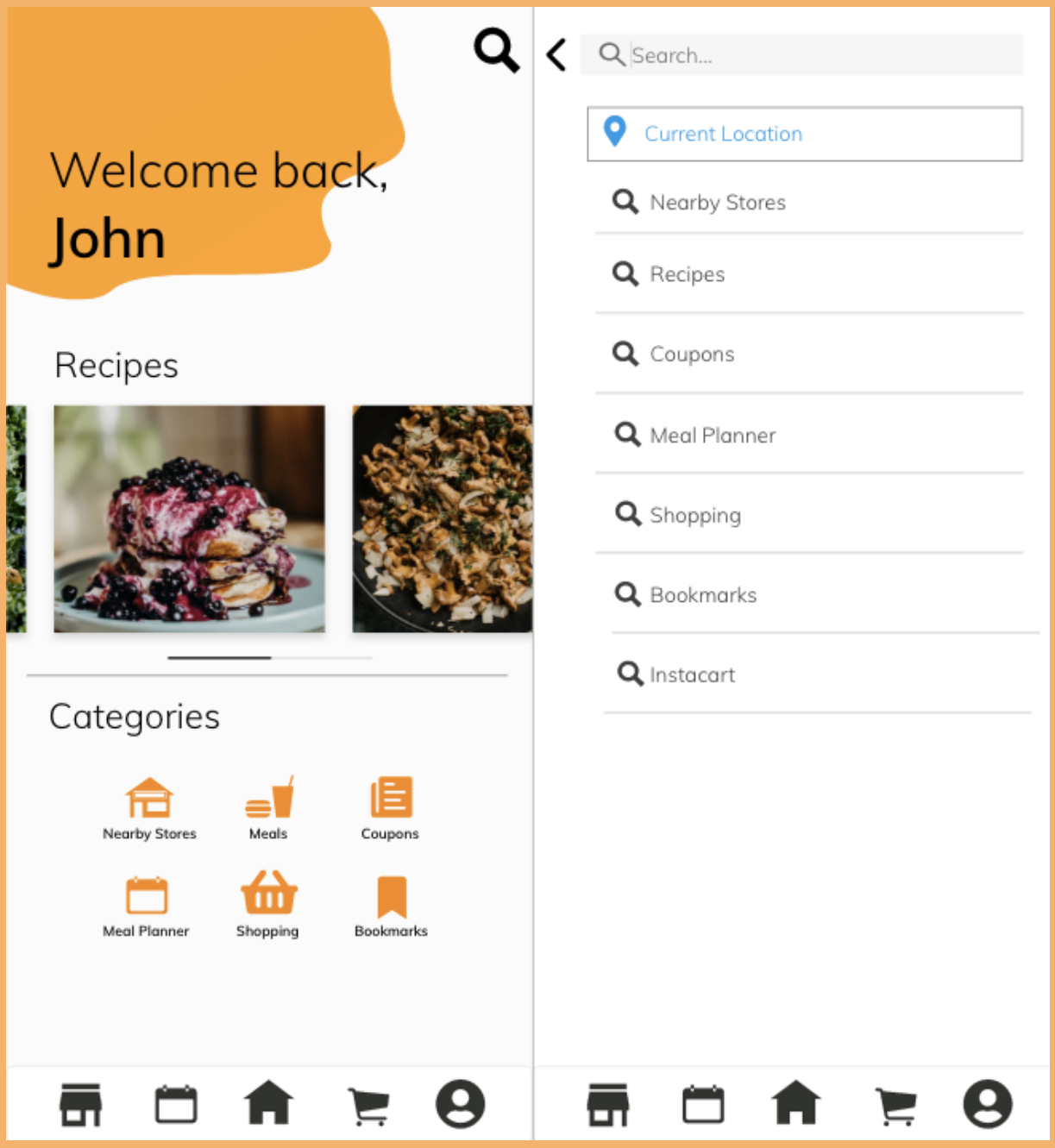



*User profile*

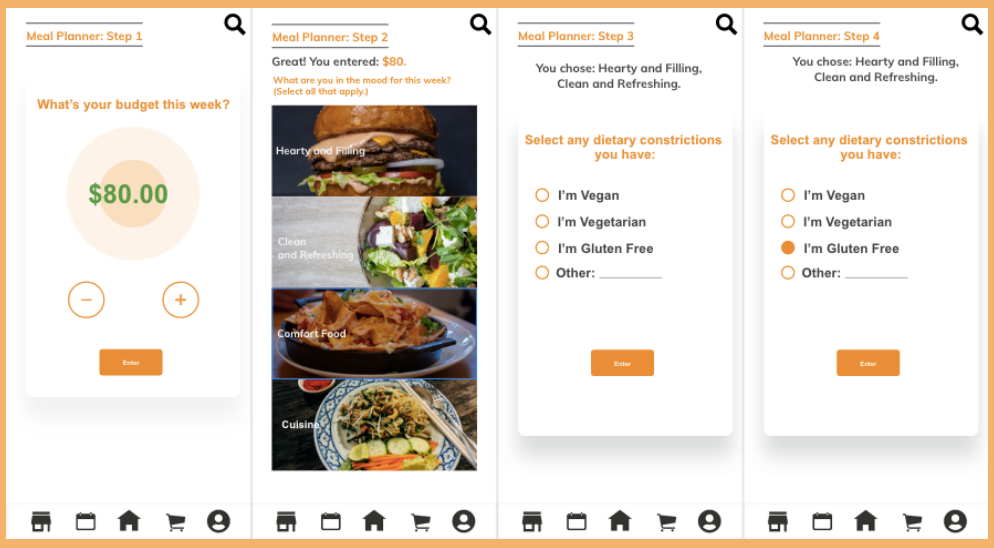


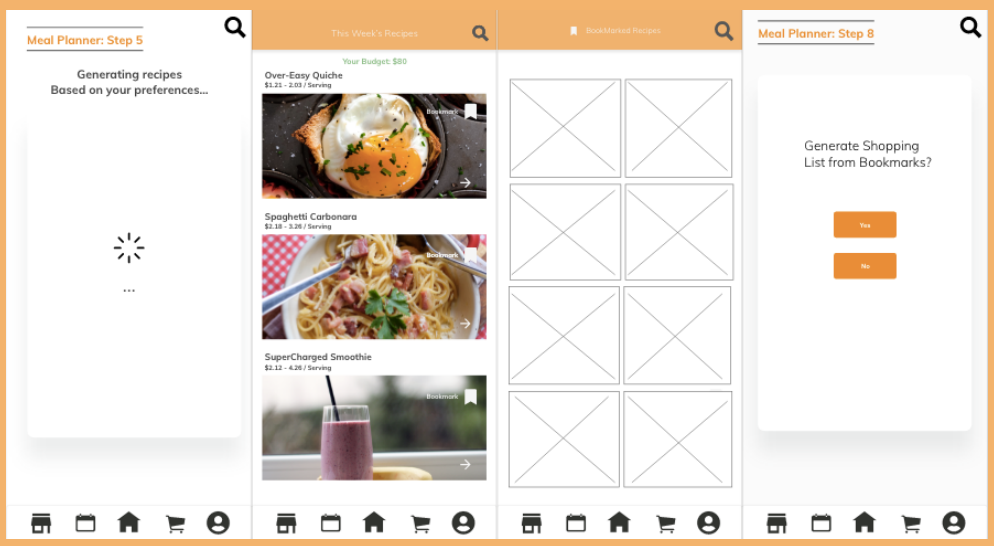



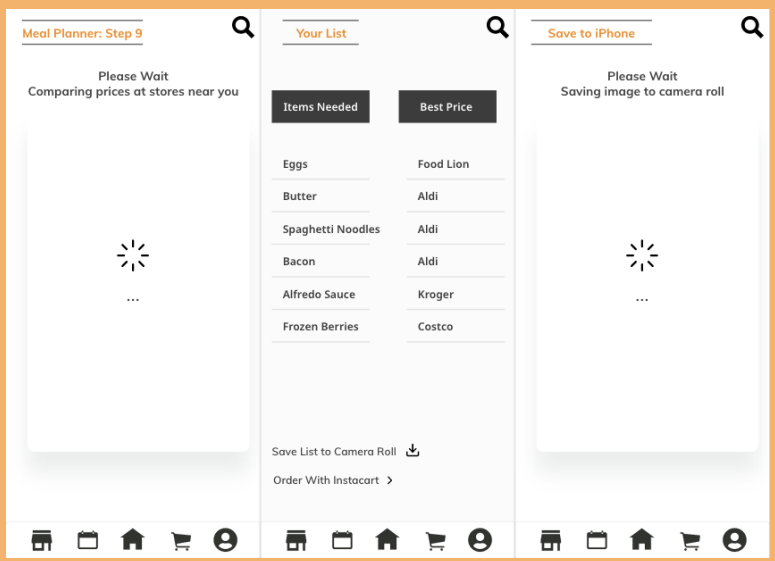
*Home page*


Welcome back,
John
Recipes
Categories
Nearby Stores
Meals
Coupons
Meal Planner
Shopping
Bookmarks
Search...
Current Location
Nearby Stores
Recipes
Coupons
Meal Planner
Shopping
Bookmarks
Instacart

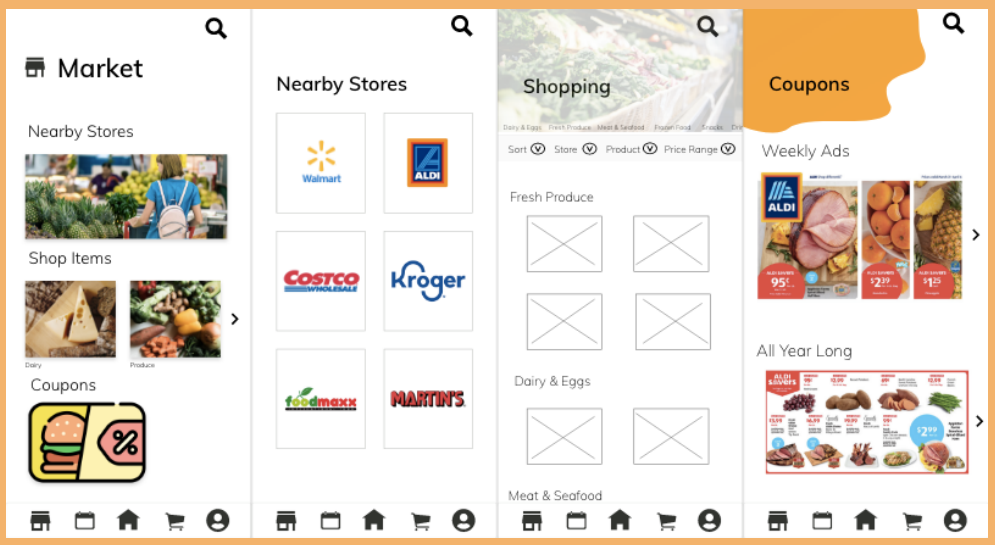
*Creating a budget and finding a meal preference*



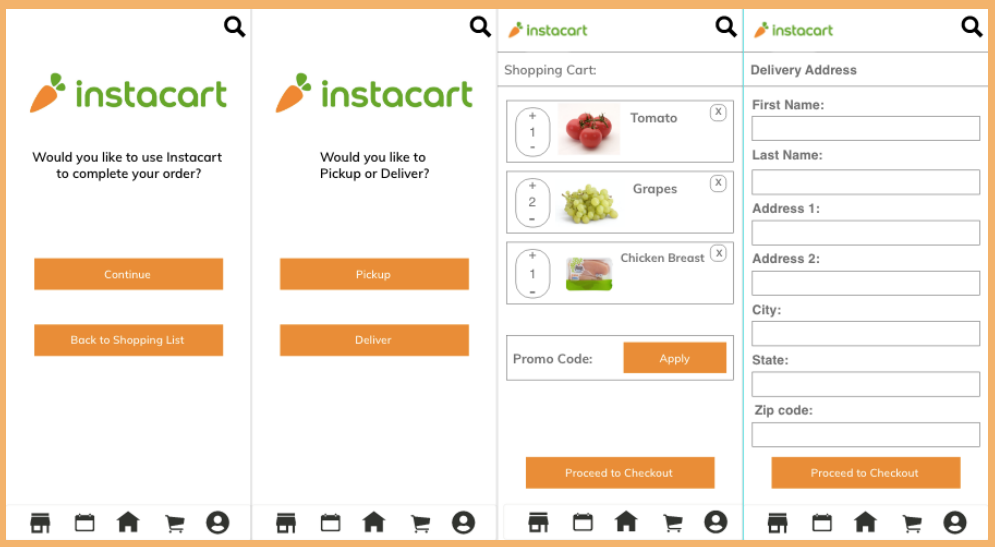



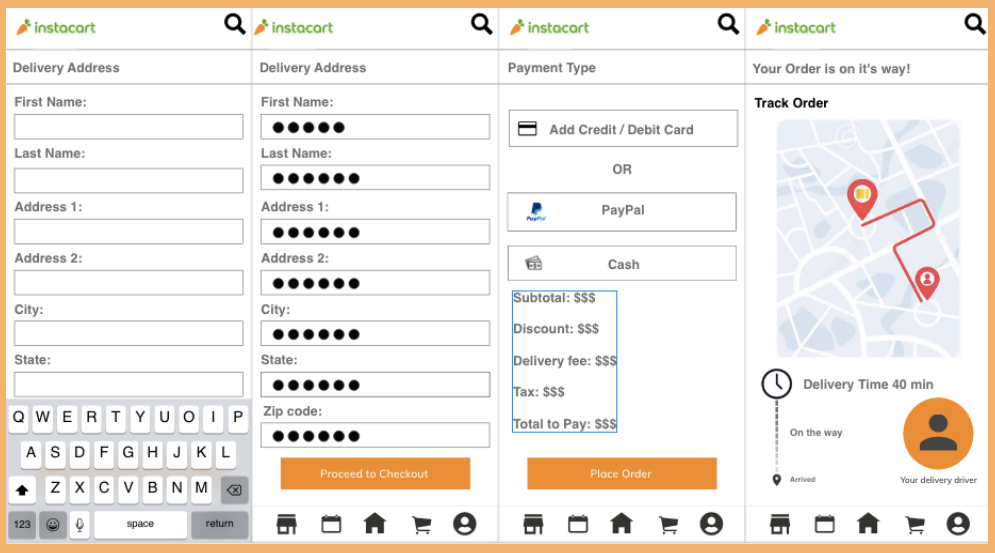



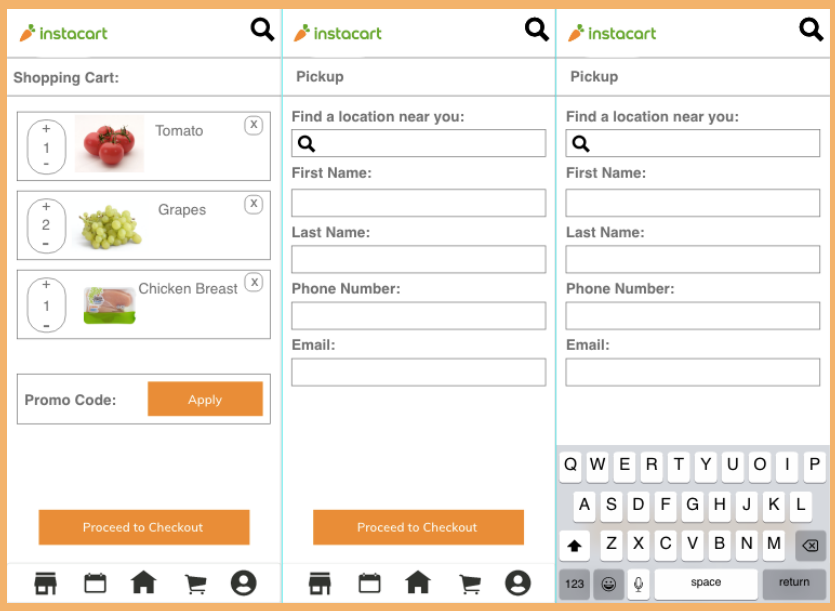
*Market for Shopping*

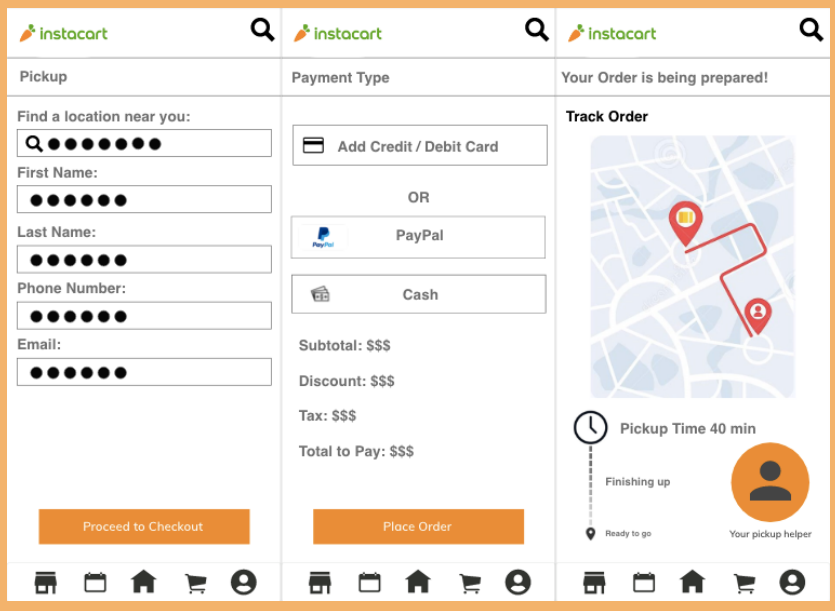



*Ordering delivery or pickup from Instacart*




instacart
Delivery Address
First Name:
Last Name:
Address 1:
Address 2:
City:
State:
Zip code:
Proceed to Checkout
Payment Type
Add Credit / Debit Card
OR
PayPal
Cash
Subtotal: $$$
Discount: $$$
Delivery fee: $$$
Tax: $$$
Total to Pay: $$$
Place Order
Your Order is on it's way!
Track Order
Delivery Time 40 min
On the way
Arrived
Your delivery driver


instacart
Shopping Cart:
Tomato
Grapes
Chicken Breast
Promo Code:
Apply
Proceed to Checkout
Pickup
Find a location near you:
First Name:
Last Name:
Phone Number:
Email:
Proceed to Checkout

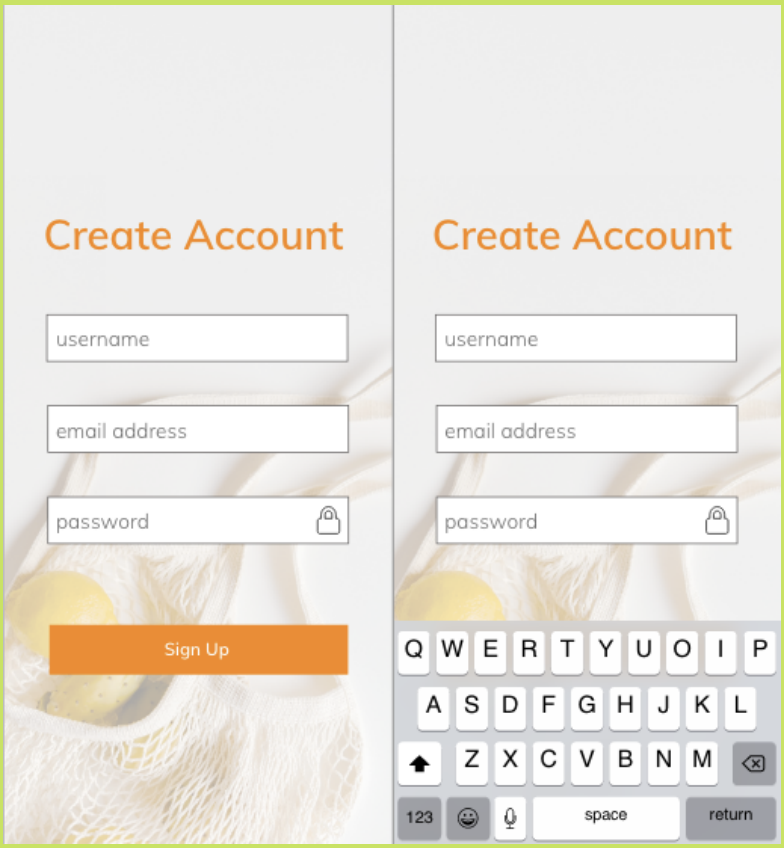

instacart
Pickup
Find a location near you:
First Name:
Last Name:
Phone Number:
Email:
Proceed to Checkout
Payment Type
Add Credit / Debit Card
OR
PayPal
Cash
Subtotal: $$$
Discount: $$$
Tax: $$$
Total to Pay: $$$
Place Order
Your Order is being prepared!
Track Order
Pickup Time 40 min
Finishing up
Ready to go
Your pickup helper

For our low fidelity prototype, we focused on six tasks when creating this application: create a user profile, create a budget that will fit user needs, choose a meal preference that fits user needs, find a store coupon and add it to the bookmark section of the app, shop at Aldi, and track order through the Instacart feature. We had a solid base on what we were planning to create, but we had some issues here and there during our prototype.

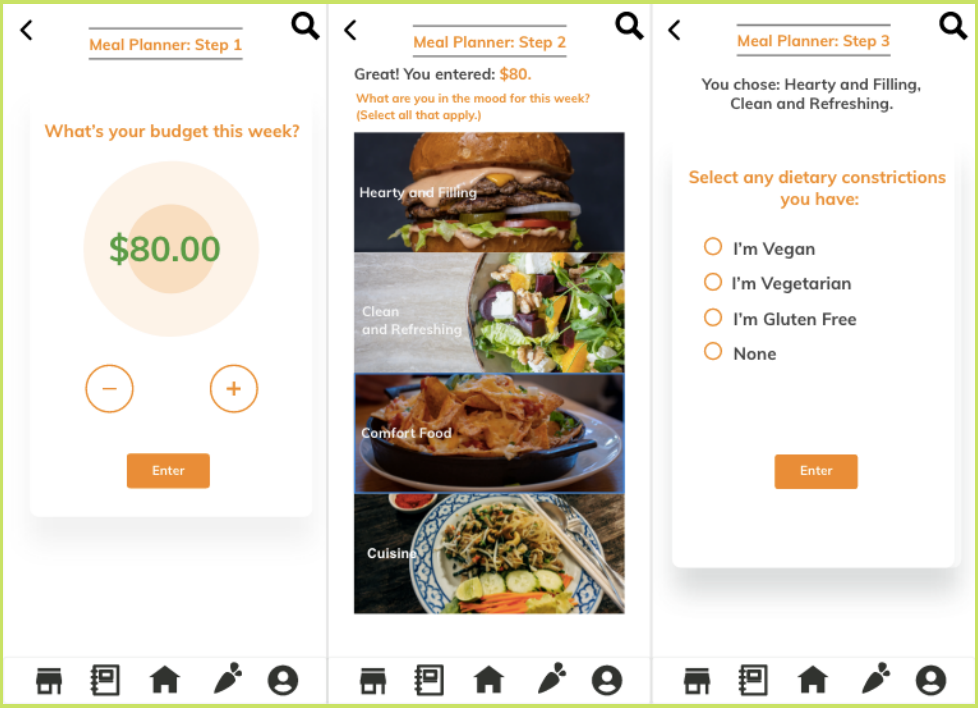
Creating an account was simple and self explanatory for our users. Although our design and images looked the part, our color scheme was very simplistic. We needed to re-edit our design and add some cleaner and more eye opening color schemes. One issue we had was finding a coupon and adding it to the bookmark section of our application. Users were confused on where the market and bookmark sections of the application were. For the high-fidelity prototype, we need ed to make sure that each task was clear and easy to follow for users. Overall, we were satisfied with how our low fidelity prototype turned out, however we still ran into issues that we would need to fix towards our high fidelity prototype.

## 5.2 High Fidelity Prototype and Evaluation

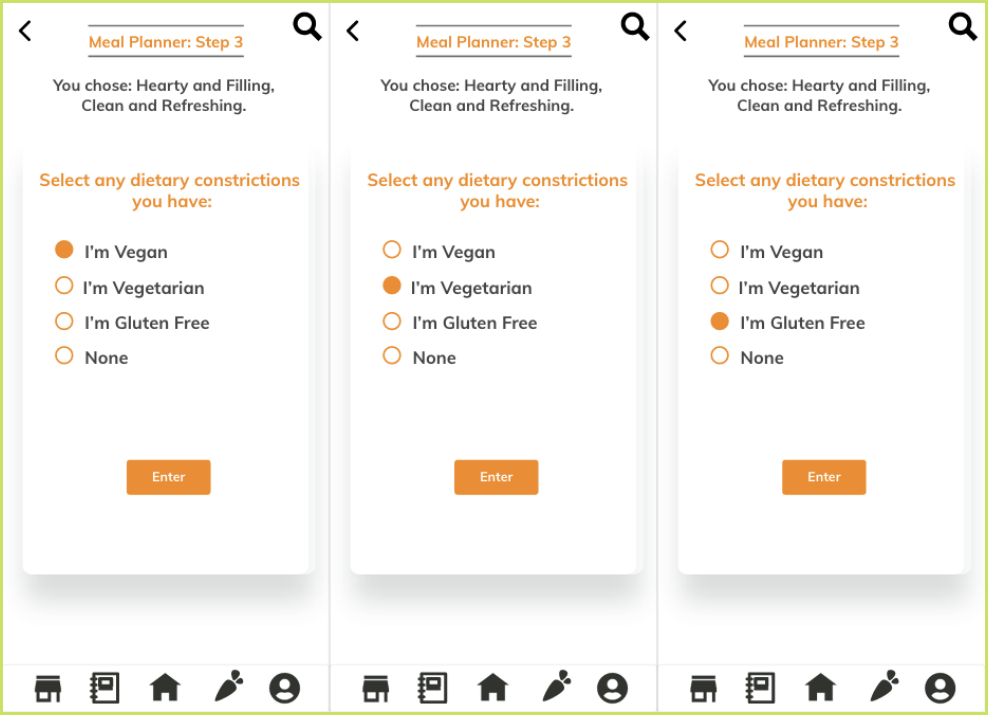
*Task One: Sign up to create a user profile.*

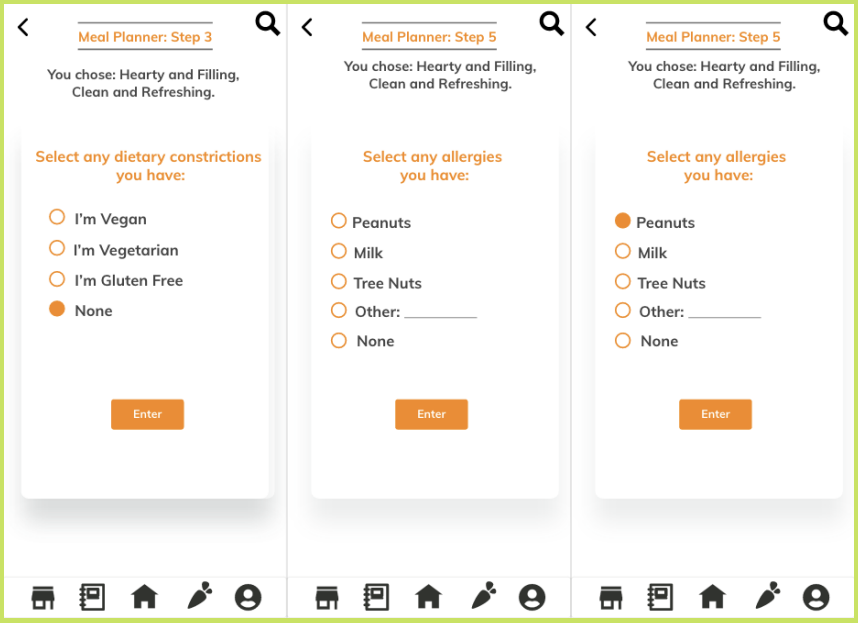



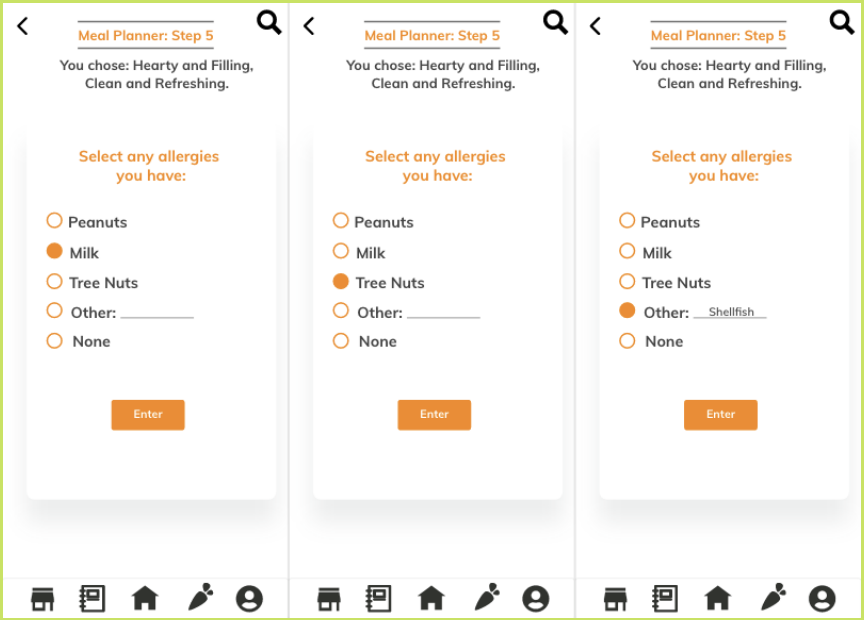
*Task Two: Create a budget that fits the users needs.*

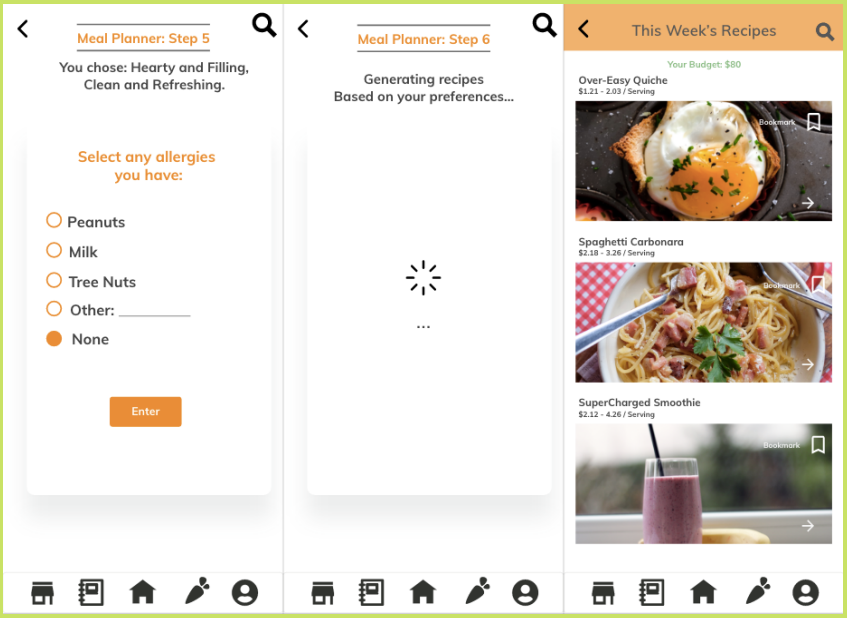


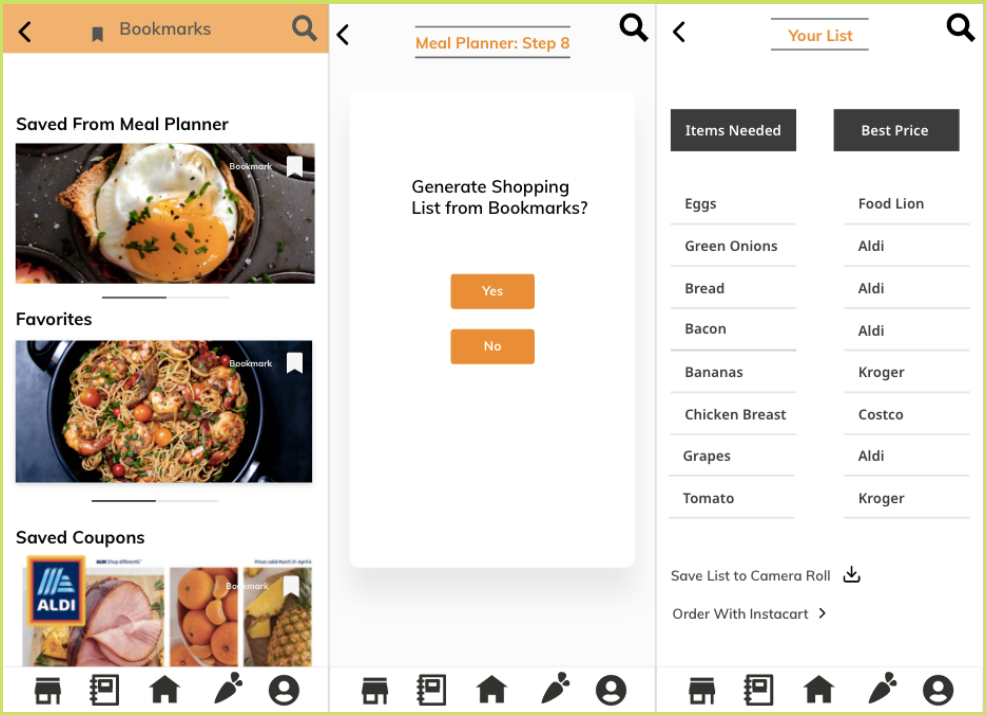

*Task Three: Choose a meal preference that best fit your needs*



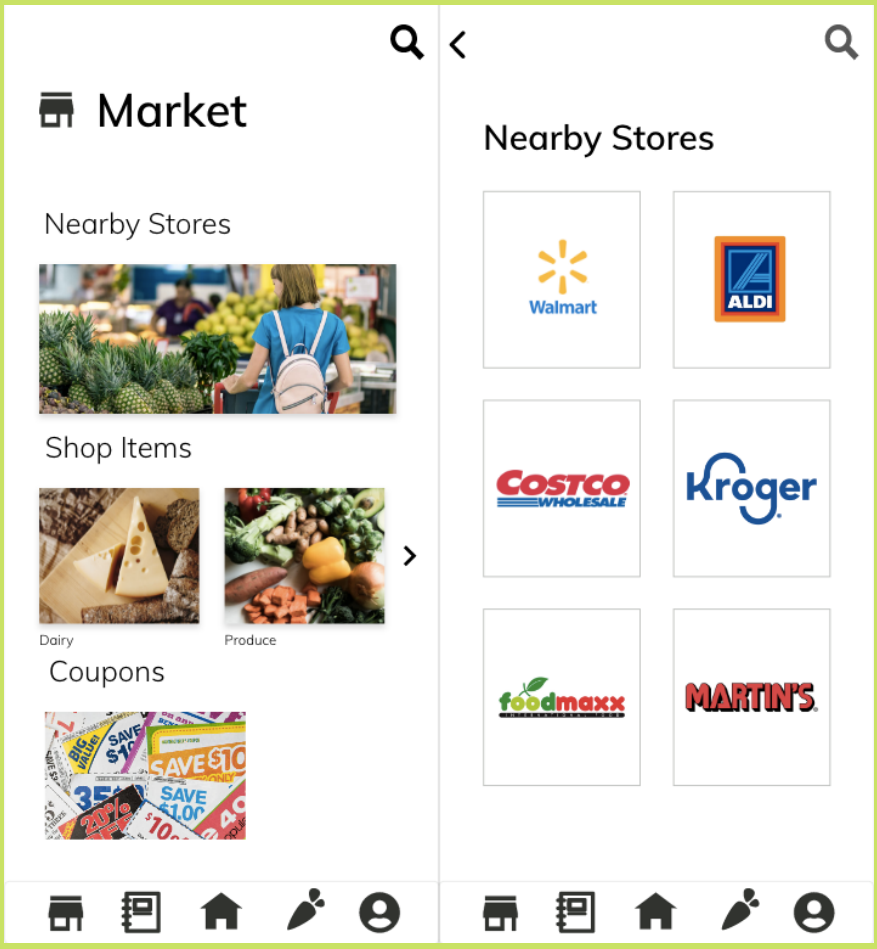

Meal Planner: Step 3
You chose: Hearty and Filling, Clean and Refreshing.
Select any dietary constrictions you have:
I'm Vegan
I'm Vegetarian
I'm Gluten Free
None
Enter
Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: _____
None
Enter
Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: _____
None
Enter


Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: _____
None
Enter
Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: _____
None
Enter
Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: Shellfish
None
Enter

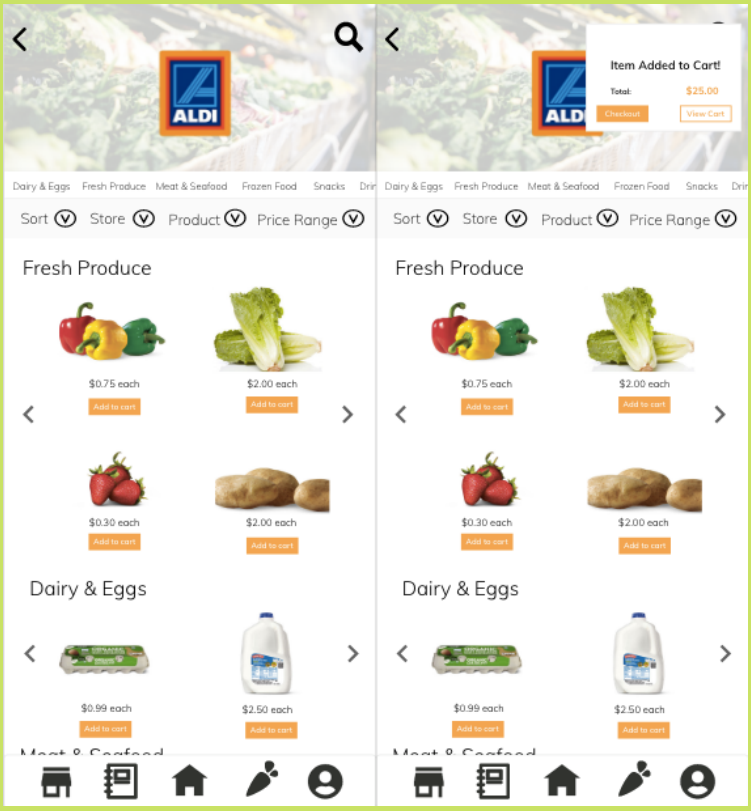

Meal Planner: Step 5
You chose: Hearty and Filling, Clean and Refreshing.
Select any allergies you have:
Peanuts
Milk
Tree Nuts
Other: _____
None
Enter
Meal Planner: Step 6
Generating recipes Based on your preferences...
...
This Week's Recipes
Your Budget: $80
Over-Easy Quiche
$1.21 - 2.03 / Serving
Bookmark
Spaghetti Carbonara
$2.18 - 3.26 / Serving
Bookmark
SuperCharged Smoothie
$2.12 - 4.26 / Serving
Bookmark



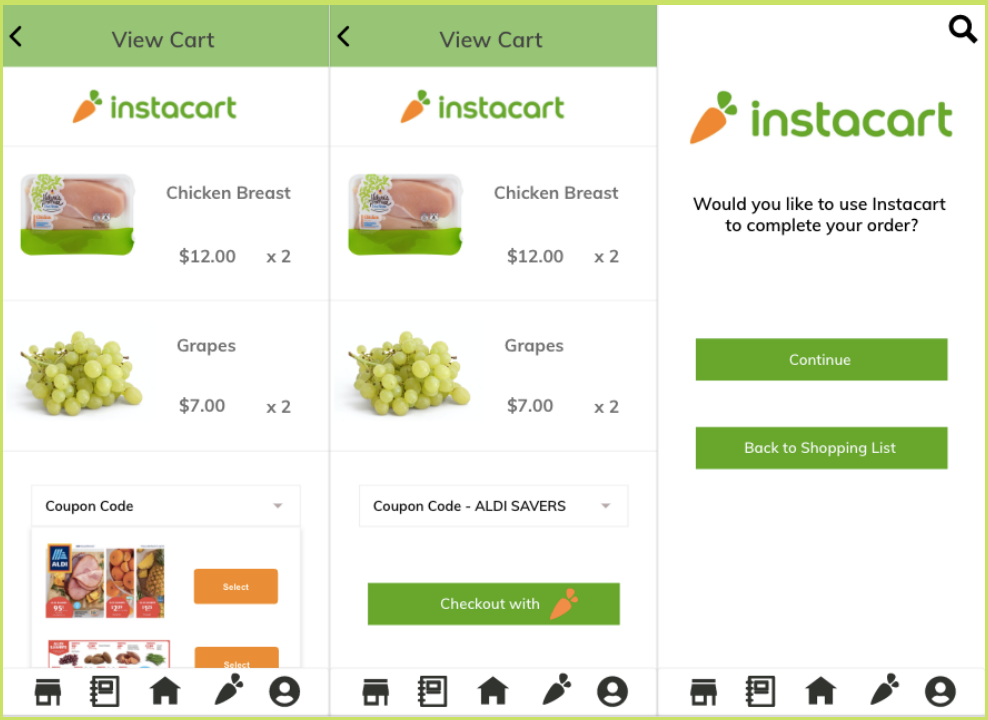

*Task Four: Select Aldi to shop at*

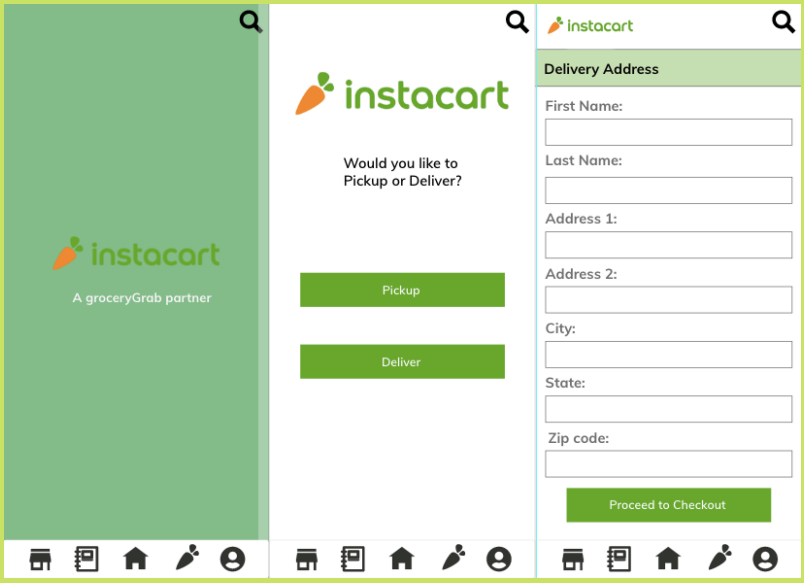


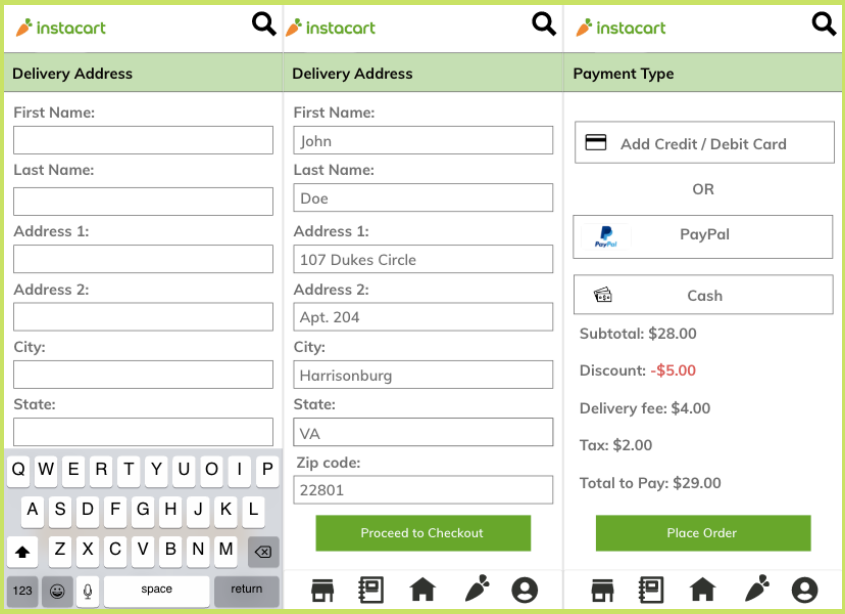
## *Task Five: Add an item to your cart*

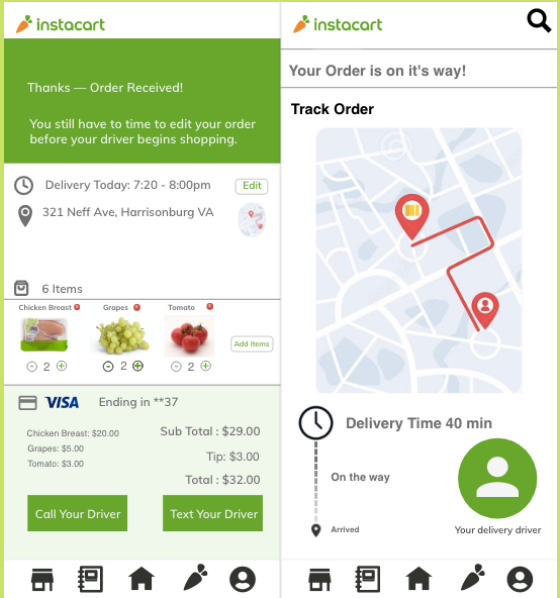



## *Task Six: Place and track order through Instacart*




instacart
A groceryGrab partner
instacart
Would you like to
Pickup or Deliver?
Pickup
Deliver
instacart
Delivery Address
First Name:
Last Name:
Address 1:
Address 2:
City:
State:
Zip code:
Proceed to Checkout


instacart
Delivery Address
First Name:
Last Name:
Address 1:
Address 2:
City:
State:
instacart
Delivery Address
First Name:
John
Last Name:
Doe
Address 1:
107 Dukes Circle
Address 2:
Apt. 204
City:
Harrisonburg
State:
VA
Zip code:
22801
Proceed to Checkout
instacart
Payment Type
Add Credit / Debit Card
OR
PayPal
Cash
Subtotal: $28.00
Discount: -$5.00
Delivery fee: $4.00
Tax: $2.00
Total to Pay: $29.00
Place Order


instacart
Thanks — Order Received!
You still have to time to edit your order before your driver begins shopping.
Delivery Today: 7:20 - 8:00pm
Edit
321 Neff Ave, Harrisonburg VA
6 Items
Chicken Breast
Grapes
Tomato
Add Items
VISA
Ending in **37
Chicken Breast: $20.00
Grapes: $5.00
Tomato: $3.00
Sub Total : $29.00
Tip: $3.00
Total : $32.00
Call Your Driver
Text Your Driver
instacart
Your Order is on it's way!
Track Order
Delivery Time 40 min
On the way
Arrived
Your delivery driver

For our high fidelity prototype, we took into consideration of all the feedback we received. We focused on improving the functionality, design, and navigation of our application. We also updated our shopping feature and improved the color scheme of the Instacart feature. Due to some issues, we decided to remove the feature of comparing items between stores.

Similar to our low-fidelity prototype, the first task was simple for users when creating an account. For tasks two and three, we fixed the budget range feature and added more options to our meal preference feature. With tasks four and five, we enhanced the functionality of the shopping feature. Users will now be able to choose a certain store n their area and add items to their cart. We added specific store items and options to choose from compared from our low fidelity prototype. With task six, we noticed that the artwork and color scheme felt repetitive from the other features, so we decided to add a light green color scheme to give our app a brighter look. Our delivery and pickup features both worked correctly. The user can easily choose which action to approach and use with ease. With these new features and edits, our application is now working more efficiently compared to our first prototype.

## 5.3 Usability Testing and Design Recommendation

### *5.3.1 Participants*

**Participant 1 - Michael Chung**

- Age: 21
- Gender: Male
- Education: JMU engineering major
- Uses technology heavily and has many experiences with all types of applications
- Regularly orders delivery for meals throughout the day.

**Participant 2 - Nicole Escobar**

- Age: 22
- Gender: Female
- Education: JMU nursing major
- Lives off campus from JMU and cooks her own meals under a budget
- Doesn’t use any grocery apps to complete her weekly shopping

**Participant 3 - Ahne Folwaczny**

- Age: 21
- Gender: Female
- Education: JMU kinesiology major
- Very conscious of her budget and likes to try out new recipes
- Has used Instacart once and is looking for an app to accommodate her needs

### *5.3.2 Testing Methods*

1. **Briefing:**
   "The purpose of this application is to assist your weekly grocery shopping routine and create a budget range that fits your needs. The basis of this application will ease your struggles of shopping from living off-campus. I'm going to instruct you to complete six tasks on this app prototype. You're going to need to think out loud and say everything that comes into mind as you complete the task. Feel free to list out any frustrations or difficulties as you do so. Also, I will be here to guide you and let you know when you have completed each task. Do you have any questions?"

2. **Pre-questions:**
- Do you use any grocery apps? Why or why not?
- Have you used Instacart before? Why or why not?

3. **Provide the user with the prototype link**

4. **Explain the tasks that users will be required to complete:**
- Sign up to create a user profile
- Create a budget range that fits your needs
- Choose a meal preference that fits your needs
- Select Aldi to grocery shop at
- Add an item to your cart
- Place and Track order through InstaCart

*Test measures:*
- How long did it take for the participant to complete the required tasks?
- Did the participant encounter any issues that hindered them from completing a certain task?

Post Questions:

- Overall, what's your experience been with the website or app?
- If you could change one thing about the website or app, what would it be? Why?
- How likely are you to refer to this website or app? Why or why not?

*Testing Environment/Method:*

- The users were tested with the facilitator in a virtual zoom meeting.
- The participant engaged the test while sharing their screen with the prototype.
- The users were tested in a quiet room where there were no distractions hindering their testing.

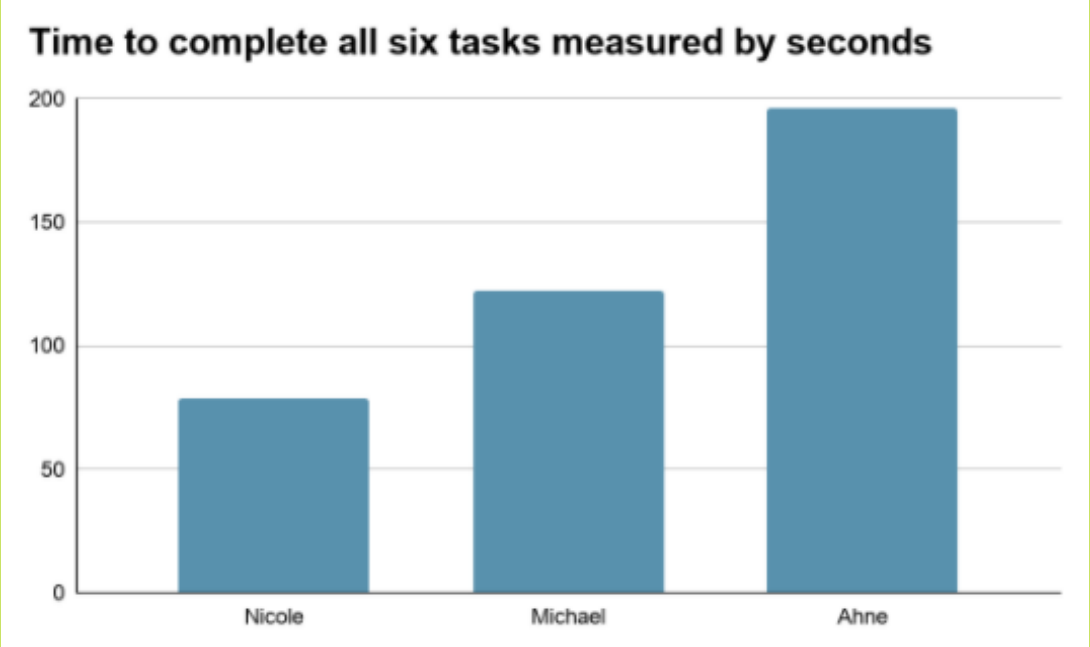
Testing Videos:

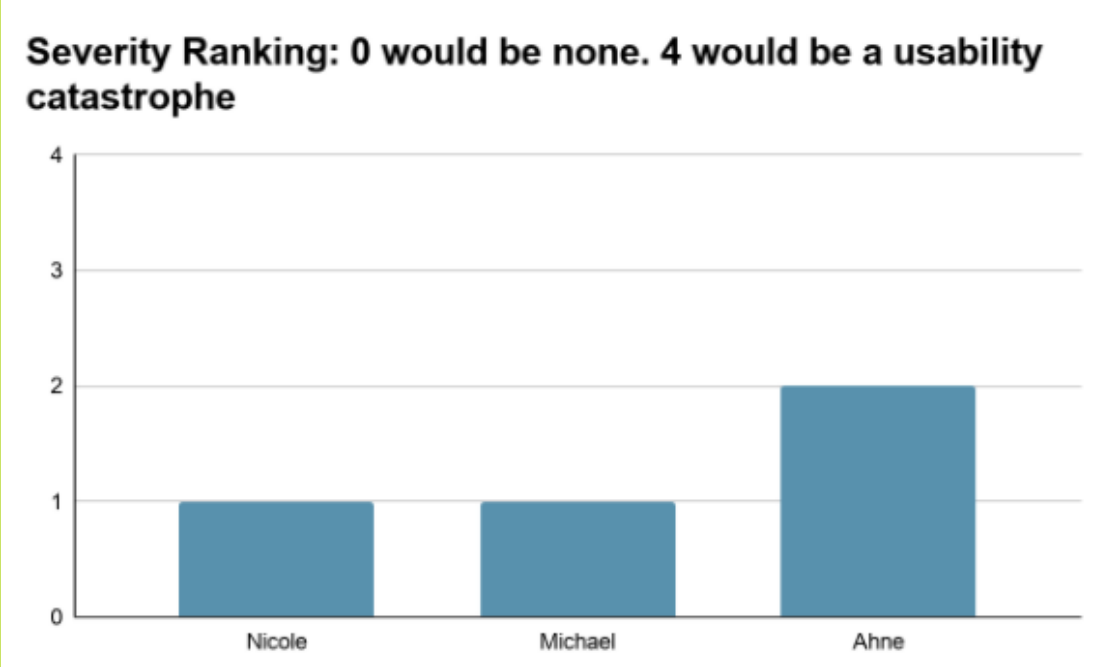
- https://drive.google.com/file/d/1ALOit9OJZk5512OxmSQOh7DPJc44vA8K/view?usp=sharing

- https://drive.google.com/file/d/1oN--t7TkOwiDqMkfhS646mpWOO-MucD7/view?usp=sharing

- https://drive.google.com/file/d/13Rnor_jhNL7-8iHfZGLqpbcMFMLfuG-i/view?usp=sharing

### 5.3.3 Findings and Recommendations



**Each participant completed the six tasks as they were told. For Nicole, it took her 79 seconds to complete all six tasks. Michael took 122 seconds and Ahne took 196 seconds.**

For Nicole, there was one issue in creating a profile, however we fixed that issue afterwards. For the rest of the tasks, Nicole completed each task with ease. Moreover, she described the app as very simple to use, enjoyed the color scheme, but wished it had a bit more color. She shared that some of the texts were a bit small to read.

Michael was hesitant when first approaching the application, but soon knew what to do. For the second task, he had a bit of an issue of navigating and creating a budget range, but soon found it through the icons at the footer of the application. With the rest of the tasks, he completed them with no issues. He enjoyed the application, and mentioned that he enjoyed the wide varieties of features it includes. He recommended that we should add an allergy option when choosing a meal preference. We took that into consideration and added the feature afterwards.

For the last participant, Ahne mentioned that she had used Instacart before. Ahne shared that she stopped using it because she didn't want to pay a membership fee. For the tasks, Ahne explored and navigated the application more than the other participants. Although she completed each task, she seemed to have some difficulty with the second task. In addition, she had a difficult time navigating through the application and finding where to set a budget range. The facilitator had to speak up and assist her on

where to complete the task. From there, she was able to complete the rest of the tasks. Ahne enjoyed the visuals and appreciated how simple the navigation was for the application. Ahne shared that she would recommend this application for other students if she had the ability. Overall, the testing went smoothly with some tiny issues. Although each times were different, tasks were performed as needed and most of the time was involved in exploring the application.

# Chapter 6

## Conclusion

We have created this application to be a user-friendly application that would help off-campus students with their grocery shopping needs. Based on our research, most JMU off-campus students would either order delivery regularly, or wouldn't have time to go grocery shopping due to school work or outside activities. With this application, we planned to relieve that difficulty and make student lives easier when approaching their grocery needs. We made this application to be minimalistic, simple, and easy to navigate through. We gained inspiration from other food/grocery applications in creating the layout of the application. We used simple but bright color schemes, so it would look pleasing to the eye of the users. As a team, our main goal was to make sure this application would assist off-campus students from any sorts of struggles when grocery shopping. After testing and making changes to our functionality and design, we were very pleased with our final product. We hope that this application fulfilled its purpose in helping off-campus students shop for groceries,
GroceryGrab.