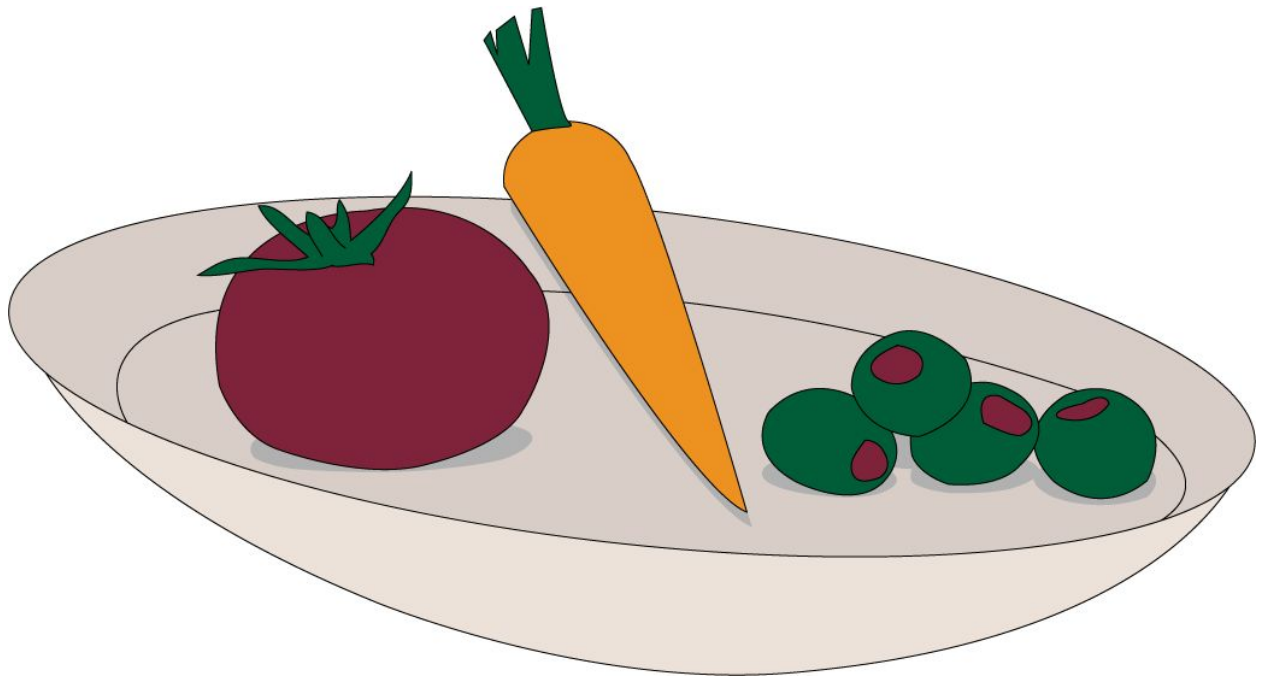


## Arielle Shander's 2018 Springboard UX Design

Online portfolio available at: [arielleshander.com/ux-design/](http://arielleshander.com/ux-design/)



## Step 1: Defining a Problem

**Problem:** Many Americans don't eat enough fruit and vegetables. According to [a 2015 report from the CDC](#), only about 12 percent of American adults eat enough fruit, and less than 10 percent eat enough vegetables. The recommended amount [varies slightly depending on characteristics such as age, gender, and physical activity](#) but averages around 2 cups of fruit and 2.5 to 3 cups of vegetables (about 5 servings total).

**Solving the problem:** An app that...

- Provides basic suggestions on what salad combinations tend to taste good and are healthy (base of dark leafy greens, a source of complete/high-quality protein, salad dressing with no added sugars, a little bit of dried or fresh fruit for sweetness, limited amounts of higher-calorie toppings such as nuts and cheese, etc.).
- Has a predefined list of vegetables and other salad ingredients along with a "randomize" feature to create unique mixes and encourage experimentation. May include photos of ingredients if deemed useful through user research.
- Allows users to remove veggies they don't like (or don't have) from the list and focus on experimenting with ingredient combinations they do like (or have).
- Eliminates the paralyzing decision of "What should I make for lunch/dinner?!"

**Validating the design:**

- Survey people who are interested in increasing their vegetable and/or salad consumption.
- Make a mockup app (paper or digital) and ask people to imagine using it during their salad/meal-prepping process. For example, I could have the participant "enter" the amount of vegetables they want and "click" the randomize button. I could then hand them sticky notes or cards that I (or they) pick out of a hat. Afterward, they may actually make the salad or let me know if they hypothetically would.

**Target audience:** Health-conscious people who...

- Want to implement more vegetables into their diet.
- Want to eat more salads or do salad meal preps but aren't sure what to make.
- Are wary of traditional salads and want to experiment with different combinations of ingredients to see if they'll come up with something they like.
- Need to make a grocery list of vegetables for the week but aren't sure what to get.

## Step 2: Survey and Interviews

In my survey, tentatively titled “Salad Decider App,” I uncovered a wealth of information on people’s salad-consuming habits. I limited the survey to seven questions that I felt would be a good starting point to gain insight into the topic, and I made sure to include a combination of open-ended and multiple-choice questions. I aimed for a minimum of 20 respondents and managed to collect 25 responses in five days. These were my survey questions:

In an average week, how often do you eat salads? \*

- ☐ Very often - at least once a day.
- ☐ Pretty often - about 4 to 6 times a week.
- ☐ Occasionally - about 1 to 3 times a week.
- ☐ Rarely - less than once a week.

Do you want to increase your consumption of vegetables? Why or why not? \*

Your answer \_\_\_\_\_

How often do you use apps on your phone? \*

- ☐ Every day.
- ☐ Fairly often - 4 to 6 times a week.
- ☐ Occasionally - 1 to 3 times a week.
- ☐ Rarely or never - less than once a week or not at all.

How do you prepare your grocery list before shopping? \*

- ☐ I or someone else in my household prepares a grocery list.
- ☐ No one in my household prepares one, but I would like to start shopping with a list.
- ☐ I have no interest in preparing a list before shopping.
- ☐ Other: \_\_\_\_\_

How would you feel about adding unfamiliar and/or exotic ingredients – including vegetables, fruits, herbs, and other toppings – to a salad? Check all that apply. \*

- ☐ I don't have strict limits on how much time or money I'd like to spend on new ingredients.
- ☐ I'm willing to try new ingredients as long as they're easily available.
- ☐ I'm willing to try new ingredients as long as the price isn't too high.
- ☐ I prefer to stick to traditional and/or familiar ingredients.
- ☐ Other: \_\_\_\_\_

How closely do you follow serving sizes when making meals? Choose the answer that describes you most accurately. \*

- ☐ I often weigh my ingredients with a scale or measuring cups.
- ☐ I estimate the amount with visual comparisons (e.g., 3 oz. of lean meat is around the size of a deck of cards).
- ☐ I very loosely estimate serving sizes (e.g., scoop one big heaping of mashed potatoes but avoid going for seconds).
- ☐ I don't follow or check serving sizes at all.
- ☐ Other: \_\_\_\_\_

Do you add sources of protein (e.g., eggs, chicken, fish, tofu, etc.) to your salads? Why or why not? \*

Your answer \_\_\_\_\_

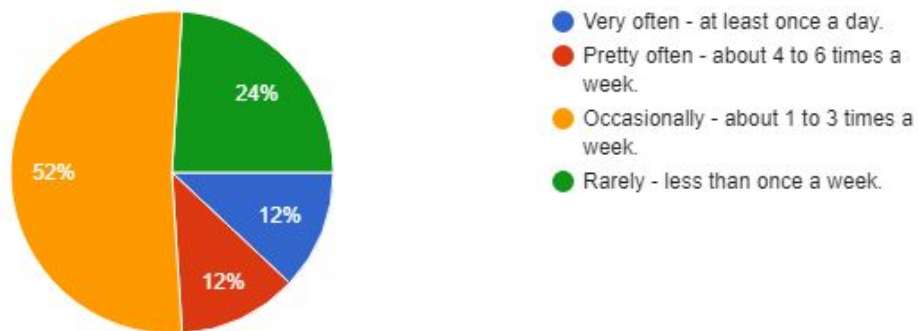
Overall, my survey’s results reflected my [CDC-supported](#) hypothesis regarding the lack of vegetables and fruits in the average American’s diet. Although it’s possible that people are meeting a portion of their vegetable intake via other means (hiding spinach in a smoothie, for instance), 22 out of 25 total respondents opined that they wanted to munch on more veggies in some capacity. Additionally, only three specified that they ate other veggie dishes.

Why am I focusing on salads, though? Well, salads are easy to prepare, and many of the ingredients can be eaten raw, which minimizes prep time and effort. If someone can buy the ingredients, mix them together, and either eat it right then and there or pack it for a meal to be enjoyed later, then that’s a simple solution to the problem! Just about anyone can make a salad!

Here are the results of my survey:

## In an average week, how often do you eat salads?

25 responses



Just over half of the respondents said they ate salads only one to three times a week. Nearly a quarter ate salads less than once a week. 12% ate salads about four to six times a week, and another 12% ate salads at least once a day.

### Question 2: Do you want to increase your consumption of vegetables? Why or why not?

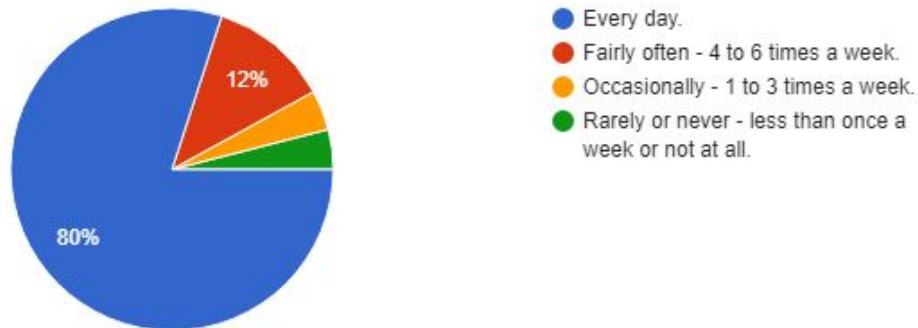
I consider this to be the most important question because of its open-endedness. It is a necessary question to understand people's thoughts, feelings, motivations, goals, and frustrations on the topic.

Only three respondents indicated that they felt satisfied with their current vegetable intake. These statements included: "I already eat enough vegetables," "I am vegetarian! I eat lots of veggies -- just not always salads," and "I feel my diet is rich in vegetables -- salads are just not what I specifically consume." One respondent wrote, "Yes, because I want to stay healthy. I do eat a lot of veggies, though -- just not in a salad form," which could indicate either a desire to increase general vegetable consumption or a consideration to implement salads.

The other 21 respondents wanted to increase their vegetable consumption for reasons mostly relating to general health (15), to meet recommended nutritional needs (2), to lose weight (2), and even to reach their goal of consuming only plant-based foods (1). One individual wrote that they were indifferent to the topic but that it "wouldn't hurt to eat healthier."

## How often do you use apps on your phone?

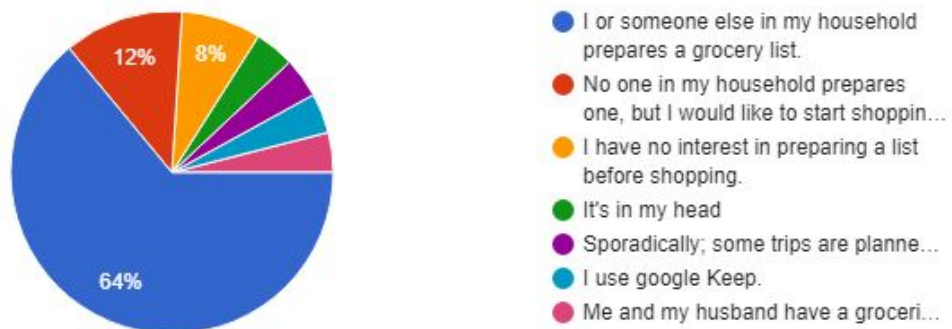
25 responses



At a whopping 80%, the vast majority of respondents used apps on their phone every day, and 12% still used apps four to six times a week.

## How do you prepare your grocery list before shopping?

25 responses

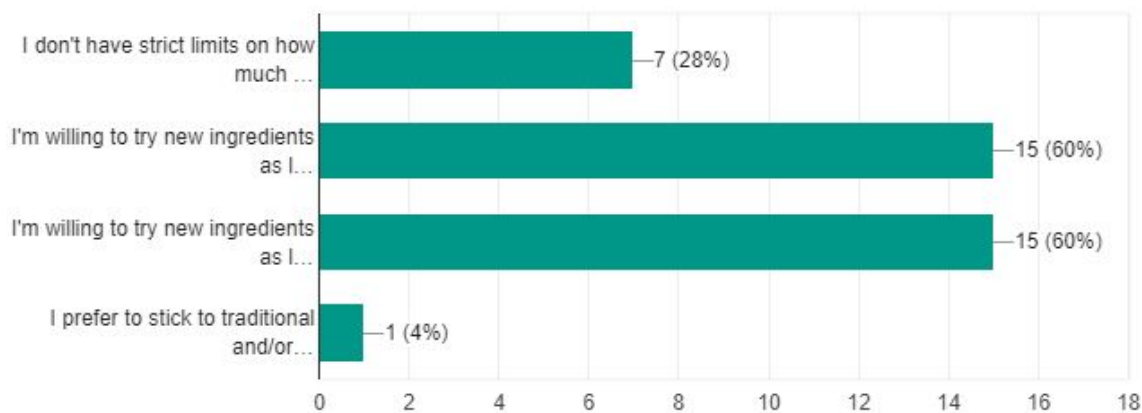


64% of people said that they or someone in their household prepared a grocery list. Four individuals chose to specify their grocery list strategy, including: "It's in my head," "Sporadically; some trips are planned, and some are a combination," "I use Google Keep," and "My husband and I have a groceries reminder on our phone. We ask Siri to add ingredients to the list." Since these responses are related to the first choice, I consider the percentage of people who prepare a grocery list to be closer to 67% to 68% (the range is from taking into account the individual who uses a list sporadically).

Furthermore, 12% did not currently use a grocery list but expressed interest in using one, and only 8% had no interest in using a list at all.

How would you feel about adding unfamiliar and/or exotic ingredients -- including vegetables, fruits, herbs, and ...ings -- to a salad? Check all that apply.

25 responses

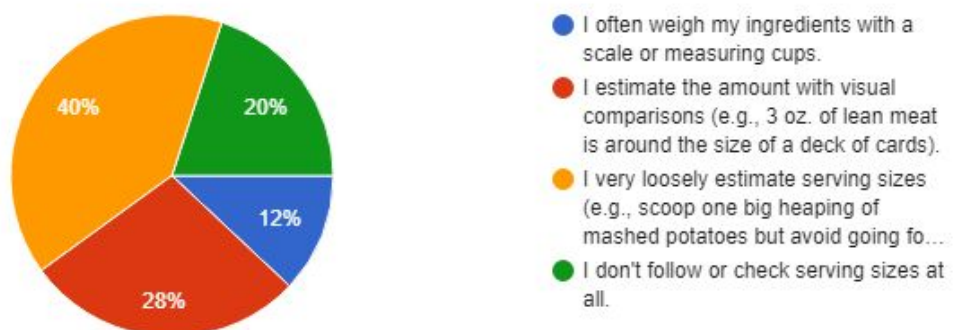


28% of respondents had no strict limits on obtaining and buying salad ingredients, though most had limitations on availability and price. <Specify split>.

Only one individual preferred to stick to traditional and/or familiar ingredients.

How closely do you follow serving sizes when making meals? Choose the answer that describes you most accurately.

25 responses



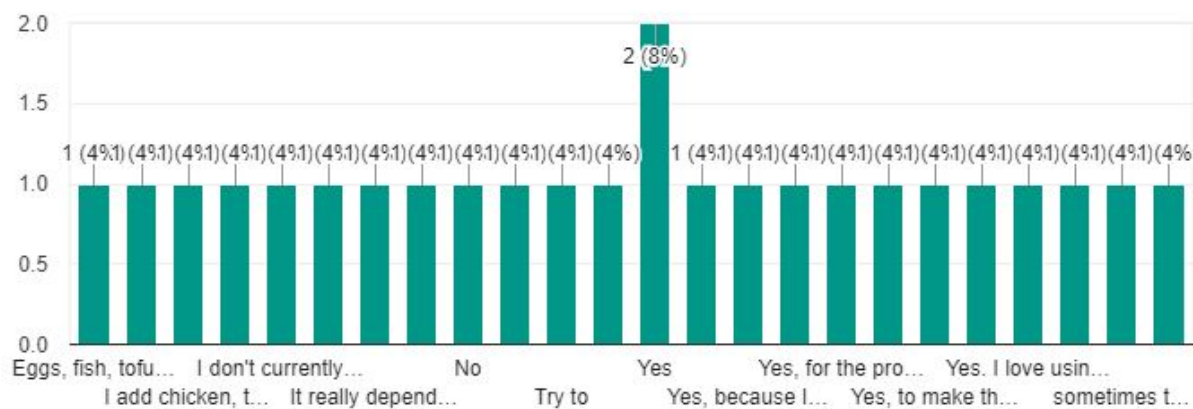
40% of respondents generally did not follow predefined guidelines on serving sizes; instead, they avoided what they believed to be too much food in one sitting (the example I provided was "scoop one big heaping of mashed potatoes but avoid going for seconds"). At 28%, a sizeable

number of respondents eyeballed their portions, which can be a convenient and less stressful method of portion control.

Additionally, a minority of 12% often weighed or measured with scales or cups, while 20% did not follow or check servings sizes at all. Though eating copious amounts of vegetables is often perfectly healthy due to their filling nature and (usually) low calories, there are some ingredients that should be eaten in smaller quantities, such as salad dressings, nuts, and dried fruit. I kept this in mind when asking my interviewees on the degree of guidance they would prefer in a salad-prepping app.

### Do you add sources of protein (e.g., eggs, chicken, fish, tofu, etc.) to your salads? Why or why not?

25 responses



Protein was a priority for almost every respondent; only one or two individuals expressed indifference toward the macronutrient. While some of the responses didn't provide a "why?" (about seven answers provided few or no specifics) I was still able to pick up on patterns and use that information to determine people's reasons for including (or omitting) protein with salads.

Six respondents added protein for general health benefits and nutritional requirements, seven included it to make the meal more filling, two indicated that they enjoyed the taste, and two chose to add protein based on convenience (one didn't like having to cook anything when eating a salad, and the other added it if the salad was the meal and not just a side).

While protein is objectively crucial for health, the responses also expressed that it improves the overall appeal of a salad. These findings have validated my thoughts on the value of adding a protein category to the app.

## **Interview**

After collecting the data, I selected three participants to interview based off of their shared attributes. All three were in their late twenties, occasionally or rarely ate salads, had a desire to improve their eating habits, kept a grocery list in their household, were willing to try new ingredients within their budget, and usually added some sort of protein to their salads.

I penned 10 questions and listened to their thoughts and feelings on the topic of salad for about 15 minutes, requesting stories and asking follow-up questions between planned questions for details as necessary. I had selected them based on their similarities, but I was surprised by the number and degree of differences. While they had the same basic goal (to eat more nutritious foods and to get to a healthy weight), their needs and frustrations varied.

These were the main questions I asked:

- 1. Can you tell me about your current diet?**
- 2. What is preventing you from eating more vegetables?**
- 3. What do you like most about salad?**
- 4. Is there a certain topping or ingredient that you like most?**
- 5. Do you use any apps on your phone that you feel have encouraged you to make an improvement in your lifestyle?**
- 6. Do you ever make homemade salad dressing? If not, are you interested in making a homemade salad dressing?**
- 7. If you were to use a salad-prepping app, what degree of guidance would you be looking for?**
- 8. How important is budget for you when buying salad ingredients?**
- 9. Are you familiar with the term “complete protein?”**
- 10. What would be likely to motivate you to maintain a regular salad-eating habit?**

Out of respect for my interviewees' privacy, I will hereby be referring to each individual as A, B, and C.

Interviewees A and B were similar in many regards. They were both trying to get healthier and lose weight. They already enjoyed a variety of vegetables and other salad ingredients, but their



main obstacle was convenience. They both mentioned that prepping them in advance in containers might help them with portion control and encourage them to make salads a regular part of their diet.

Interviewee C was almost on the other end of the spectrum. Unlike A and B, she enjoyed meal prep but not the salad itself. She could tolerate some vegetables but had many that she strongly disliked. She felt she needed a lot more guidance on what ingredients to use in a salad.

Here is a more in-depth look on each interviewee based on their responses:

**Interviewee A:**

- Follows a low-carb diet; focuses on consuming protein and fat in place of carbs. Eats a lot of meat and chicken. Avoids rice, bread, and other high-carb foods because it affects his ability to lose weight.
- Enjoys most vegetables and favors dark leafy greens, such as spinach, broccoli and artichoke. Preferred source of protein in a salad is chicken. Favorite toppings are cheeses, including feta, parmesan, and blue cheese.
- Estimates that he hasn't made a salad in about six months, though sometimes buys premade and restaurant salads.
- Values the importance of veggies within a healthy diet but has a lack of desire or motivation to make salads himself. Doesn't enjoy the process of picking out salad ingredients and feels it requires more intuition than eating something convenient, like a protein bar or chicken leg. Would be interested in an app that generates ingredients for a recipe to help with the salad prep process.
- Doesn't recall using any apps that have encouraged him to improve his lifestyle. Claims that a calorie tracker could be useful but dislikes tracking apps due to the amount of information that needs to be input manually. Logging meals and calories every day does not appeal to him.
- Generally uses vinegar-based dressings and even hot sauce in some cases. Shows a slight interest in making his own vinegar-based or blue cheese dressing. Believes it would entice him to eat salads at home more often.
- Not looking for a high level of guidance within an app but expressed interest in the idea of a separate Help & Tips section that contains general health facts/tips (e.g., spinach's anti-cancer benefits). Not a fan of serving sizes but wants to improve portion control. Claims an app with suggestions on how much of each ingredient to include in a tupperware container for meal prepping would make salad prep more convenient.
- Has a budget but is not very strict about it. Buys avocados but would not purchase very expensive items (e.g., caviar).
- Was not familiar with the term "complete protein" but already feels confident in his protein source choices. Not looking for guidance on what protein to choose.
- Seeing weight loss results would be the likeliest factor to motivate him to maintain a regular salad-eating habit.

**Interviewee B:**

- Says her biggest problem is consistency and is trying to eat healthy foods on a more frequent basis. Doesn't eat meat but does eat fish and other seafood (pescetarian).
- Ensuring she has ingredients on hand affects her meal choices. Tries to have a side of vegetables for dinner. Tries to have vegetables with her meal when she eats at restaurants. Sometimes ends up eating something less healthy on the go, like pizza.
- Made a salad last week. Used spinach, kale, peppers, wasabi peas, and dressing. Chops and preps ingredients herself.
- Likes how salad doesn't make her feel overly full or bloated.
- Enjoys many types of salads. Typically orders a garden salad at a restaurant. Doesn't order any salads with meat but will sometimes have salmon -- though she notes salmon can be expensive, so she often just orders a vegetable salad.
- Lists some of her favorite vegetables as peppers, carrots, and tomatoes.
- Enjoys a variety of toppings, like fruit and nuts. Has been recently adding wasabi peas and likes spicy ingredients.
- The app that has helped her lifestyle the most is an app that connects to her scale, though she stopped using it out of fear of the scale going up. Wants to start using it again now that she has more time to focus on healthy eating and exercising. Feels the app holds her accountable for her weight and any improvements. Doesn't feel confident about tracking health and fitness but can tell if she's above or below her average weight and if she's eating healthy.
- Last made a salad dressing for a kale salad during the holidays but says it didn't turn out that well. Usually just buys one at the store. Interested in trying to make one again if she had a recipe that she heard was good. Usually selects balsamic vinaigrettes and also would try less traditional dressings, such as tzatziki sauce and hummus.
- Would like moderate guidance in a salad-prepping app, such as calorie counts.
- Eyeballs serving sizes. Tries to not use too much dressing.
- Expressed interest in a Health & Tips section that contains advice for how to make salads taste their best, general health tips, and preparation (e.g., cutting onions).
- Budget is important. Won't buy ingredients that are too expensive just for a salad. Once made a tomato and avocado salad and found the avocado to be too expensive to buy that frequently.
- Had heard of the term "complete protein." Understood the concept of combining two incomplete proteins to get the equivalent of a complete protein. Acknowledges that she needs to be better at consuming complete proteins because she doesn't eat meat. Tries to incorporate protein through meat substitutes, cereals, etc. Would like suggestions on protein sources to include in salads to add variety.
- Reminders, notifications, and logging salads she ate would be the likeliest factor to motivate her to maintain a regular salad-eating habit. Feels it would hold her accountable. Also feels that meal prepping salads into containers to be ready in advance may help her make healthier choices on the go or when busy.

### Interviewee C:

- She doesn't follow a strict type of diet but is trying to lose weight by restricting calories and avoiding excess sugar and carbs.
- Eats oatmeal for breakfast, acknowledging the importance of fiber. Also eats pre-portioned calorie packs such as almonds and walnuts, bananas, and apples. Dinner varies, but she often ends up making what she already has in the house, such as mac and cheese or quesadillas, out of convenience. She's too tired to make much else after she gets home from work.
- Has never liked the taste of vegetables. It was never a huge part of her diet and has had some mediocre or negative experiences with them. Thinks of vegetables as soggy and tasteless. Tolerates some vegetables, such as cucumbers and celery. Hates spinach and mushrooms and doesn't like tomatoes. However, she is a big fruit person.
- Though she doesn't enjoy eating salads, she does like preparing them for others. She sometimes helps her grandmother prep a large salad for parties. Likes food prep in general, including chopping vegetables and baking.
- Thinks of an ideal salad as light, specifying ingredients like lettuce and carrots. Notes that cheese would make the salad too heavy for her. Has to avoid garlic and onion due to intolerance. Seemed interested in trying to add walnuts as a topping. Said that her issue with toppings is that "it always feels like there's not enough, which probably defeats the purpose of it being a topping."
- Previously used MyFitnessPal but stopped using it because it doesn't have entries for a lot of the exercises she does and a lot of the foods she eats. Switched to tracking calories eaten and burned with Google Docs.
- Has never made a homemade salad dressing but has saved recipes for some as a potential dressing for the next big gathering. Would like to try the least complicated one and is open to suggestions. Would probably go for a vinaigrette since it seems like the lightest option. Likes hummus (sans garlic) and believes using an alternative topping/dressing might help her enjoy salads more.
- Would want intense guidance in a salad-prepping app. Comfortable with cooking but is unsure of what to use in a salad. Feels that serving sizes would be helpful to have. Would like to see general health facts/tips as well as how to make salads more flavorful with making them healthier.
- Keeps a very strict budget. Needs to stay on top of bills and keeps costs down when buying groceries or specialized ingredients. Might splurge on a name-brand version if the generic version isn't as good. Might treat herself to a smaller-portion item that wouldn't add up to an excessive cost.
- Was not familiar with the term "complete protein." Would want an app to let her know if a protein is complete or not. Says it would be helpful to have suggestions on what proteins to include because she tries not to eat meat and doesn't know about good sources of proteins other than eggs and peanut butter.
- Being able to track improvements in her food and health would help motivate her to maintain a regular salad-eating habit. Seeing quantifiable, measurable outcomes to track (e.g., "You've had this many grams of protein!") would help.

## Step 3: Heuristic Analysis

I conducted a heuristic analysis by testing one competing site and two competing mobile apps and analyzing them with three of the ten [Nielsen Norman Group's 10 heuristic principles](#). I chose the following three based on what was most relevant to the goals of my project:

**Aesthetic and minimalist design:** Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

**Why?** Making a lifestyle change is stressful enough! I'm aiming to keep my app as user-friendly and easy to understand and navigate as possible. If the app is pleasant to use, the user will be more compelled to maintain their new healthy eating habits.

**Match between system and the real world:** The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

**Why?** I don't want to overwhelm users with nutrition jargon! There may be some exotic ingredient names that pop up via the Randomize feature (ever hear of a jicama?) but the app will not deviate from applying general, user-friendly language in core areas, such as the menu buttons.

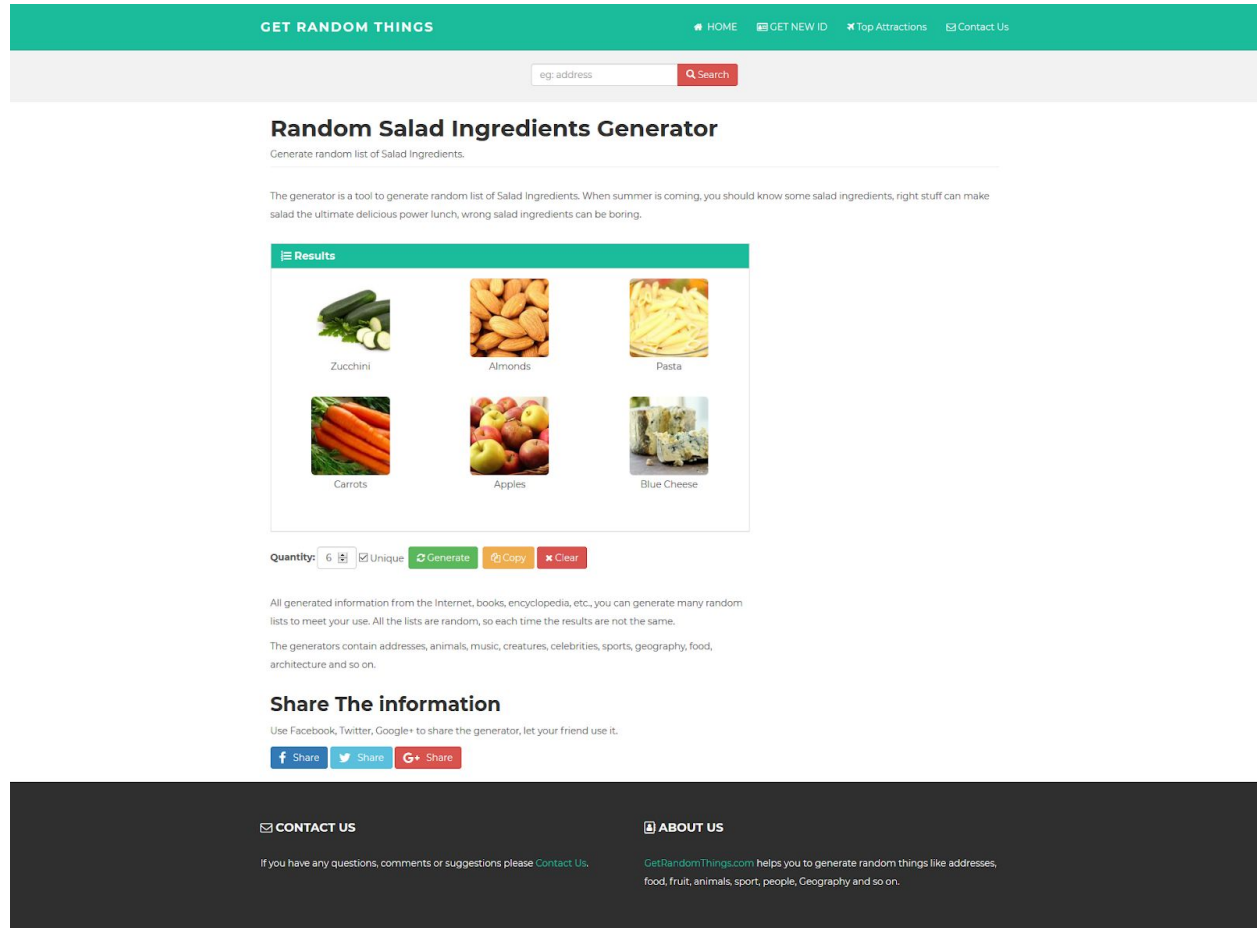
**Help and documentation:** Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

**Why?** Some topics may need some extra explanation. I am planning to offer a Tips section or a small Help dialogue pop-up for those who want to explore extra health benefits offered within the app. For instance, "complete protein" refers to eating one source of protein (example: egg) or a combination of different proteins (example: legumes together with whole grains) to consume all 20 essential amino acids. This concept is not mandatory to understand but is ideal for advanced users who want to delve deeper into the topic.

## Competitors:

### Random Salad Ingredients Generator (via Get Random Things):

<https://www.getrandomthings.com/list-salad-ingredients.php>





**Aesthetic and minimalist design:** This is a very simple, clean site design that has a small handful of functions (as a random generator, it doesn't really need many). The user can see and use every feature without even having to scroll down.

**Match between system and the real world:** Though the wording for some of the actions make sense, others are not immediately clear. Quantity, Generate and Clear were straightforward, but I didn't understand what the "Copy" function was until I experimented with it. Apparently, it highlights all of the text and photos in the Results area, which then allows you to drag the content to a document.


On a similar note, I didn't know what their definition of "Unique" was. When I unchecked the box and generated another list, I got spray cheese/cheese in a can as well as bulgur. When I

checked the box again, I got rucola in one of my results, which I'm sure would be a unique ingredient by most people's standards.


 Results




Spray Cheese/Cheese In A Can




Parsley




Avocado



Mustard



Bulgur



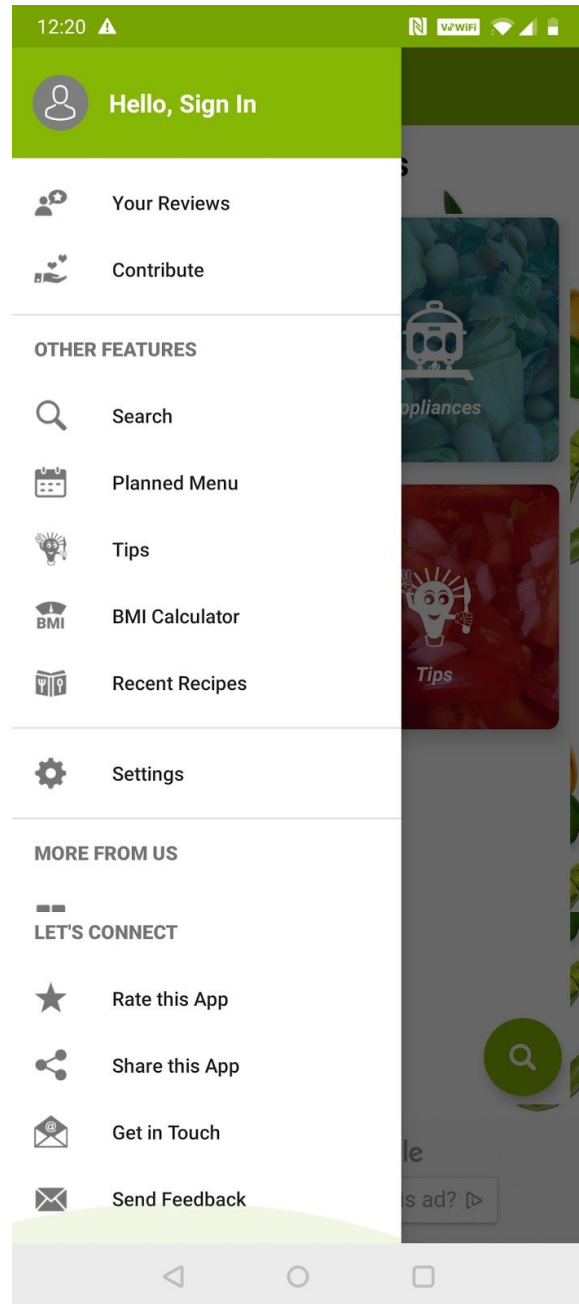
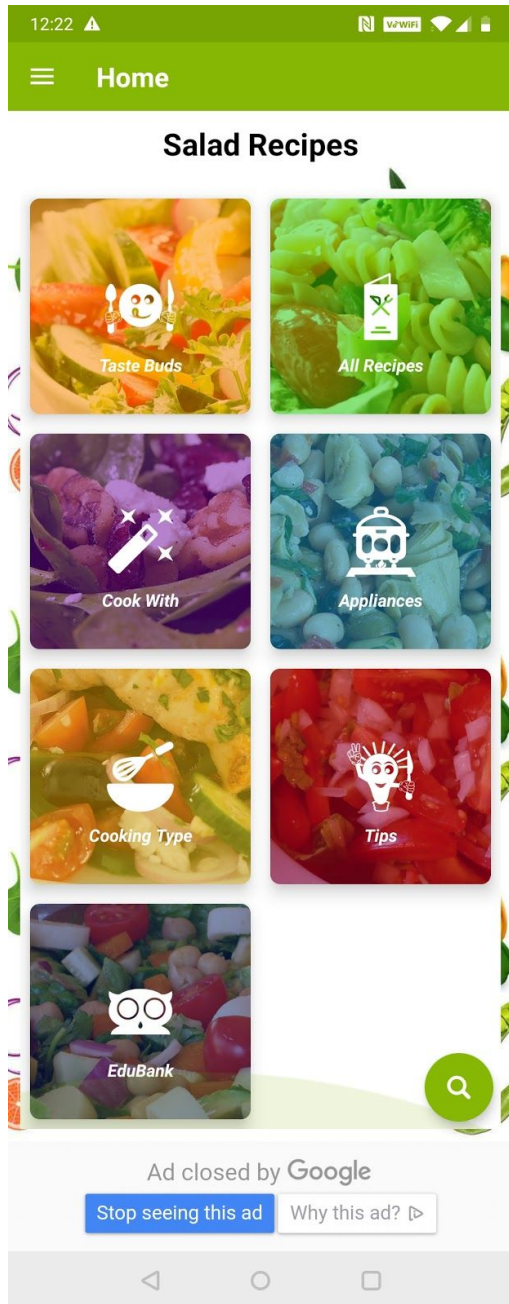
Extra Virgin Olive Oil

Quantity:  ☐ Unique [Generate](#) [Copy](#) [Clear](#)

Finally, the strangely worded “GET NEW ID” and “Top Attractions” link buttons at the top baffled me. I thought “GET NEW ID” had something to do with registering or signing in, but it actually leads to the creator’s other site.

**Help and documentation:** About Us and Contact Us were the only sources of help or documentation I could find, but the site’s feature is so basic that it doesn’t need much explanation.

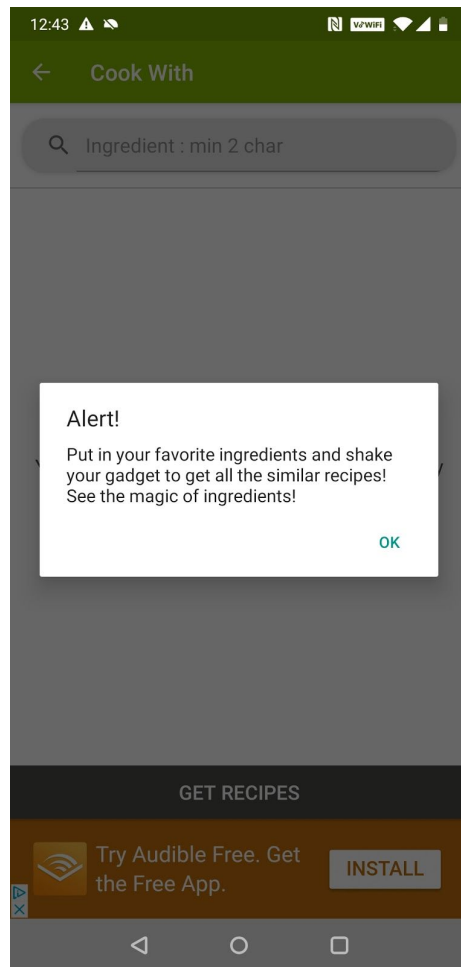
**Salad Recipes: Healthy Foods with Nutrition & Tips:**  
<https://play.google.com/store/apps/details?id=com.ma.cc.salad>



**Aesthetic and minimalist design:** There's so much crammed into both the main menu and the hamburger menu. It's absolutely overwhelming, and it feels like the information is competing with itself. There are so many features, and categories that navigating the app becomes a cumbersome experience. The BMI calculator, for instance, is extraneous and adds bloat.



**Match between system and the real world:** In addition to the unnecessarily high quantity of the information, the wording is also confusing. What are “Taste Buds,” “Cook With” and “EduBank?” It turns out that “Taste Buds” refers to different flavors (sour, spicy, tangy, etc.), but I couldn’t decipher it without digging into the menus. Searching for and reading recipes should not be so complicated.

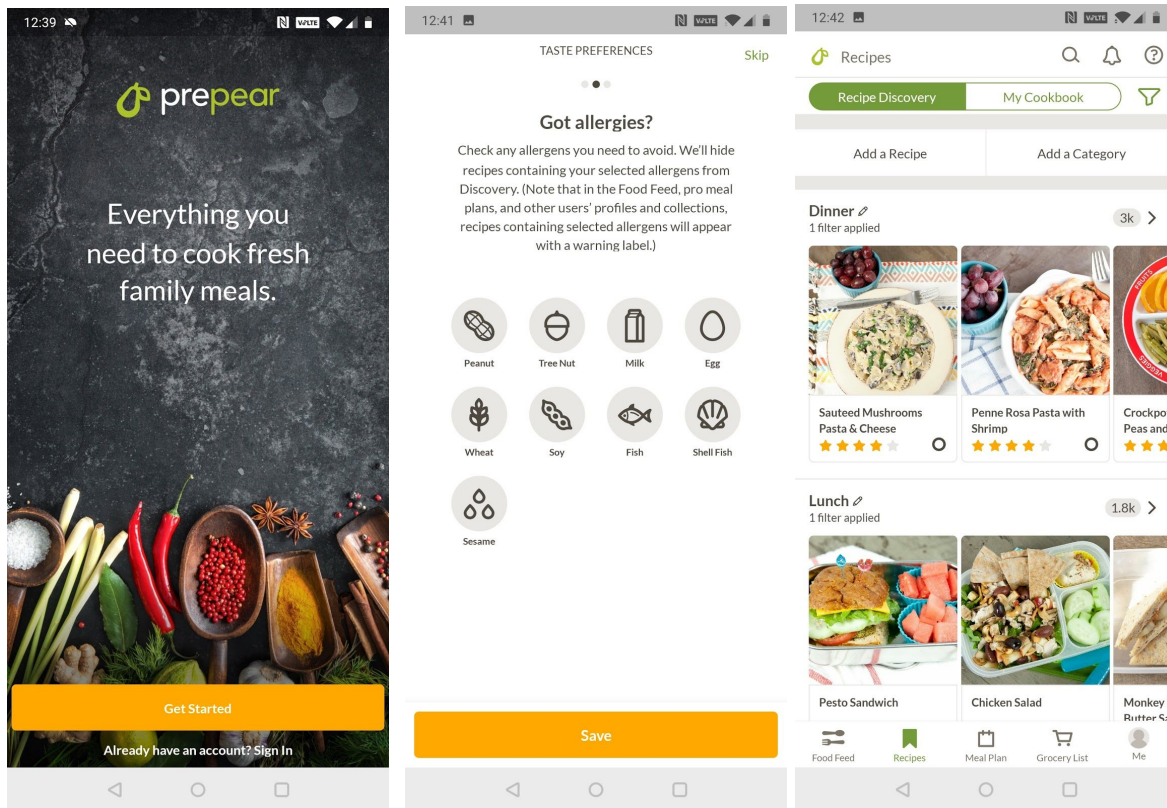


**Help and documentation:** As seen in the screenshot to the left, the “Alert!” is jarring, especially when we take into account the information overload of all the other content. Also, when I tried to shake the device after adding a minimum of two ingredients, nothing happened. The actual help/documentation section, called Tips, presented another deluge of tacked-on information and categories.



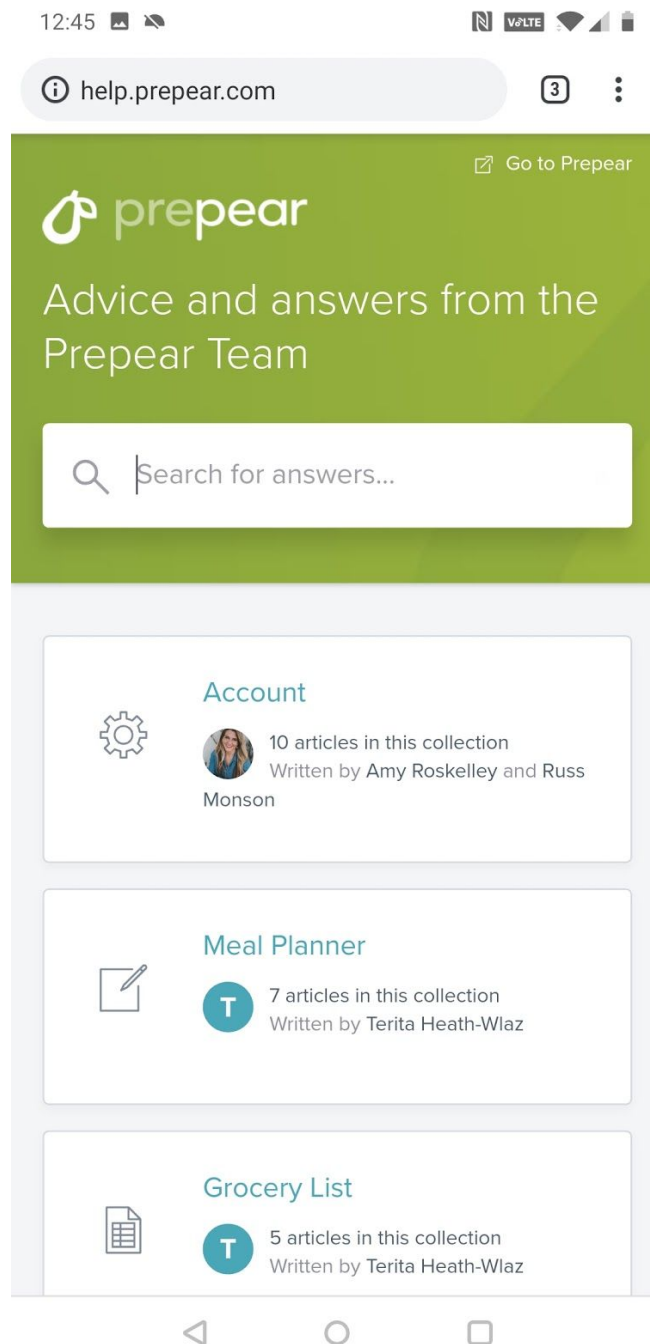
## Prepear - Meal Planner, Grocery List, & Recipes:

<https://play.google.com/store/apps/details?id=com.prepear.android>



**Aesthetic and minimalist design:** At first glance, Prepear is pretty minimalistic. It welcomes the user with a large, appealing image and asks them to sign in. After creating an account, the user is asked to specify allergies and preferred diet (vegetarian, low-carb, low calorie, etc.) to filter out anything the user may not be able to eat. Finally, the user is directed to the main page, which has suggested recipes sorted into categories. The bottom bar has other buttons that lead to important sections, which allows the user to set meal plans, make a grocery list, and even check what meals friends have been eating. While the app has more features than I'm planning to add (my app is focused solely on salads), I felt inspired by Prepear's design.

**Match between system and the real world:** Prepear uses plain language in its food categories, which I appreciated. Unlike the previous app I analyzed, categories consisted of terms like "Dinner," "Sides," "Salads," and "Appetizers."



**Help and documentation:** If the user clicks on the question mark button on the top right of the app, they will be sent to Prepear's help section of their website. Since it's a fairly complex app, it makes sense that they have a Q&A section along with the ability to contact the team via social media or Intercom.

## Step 4: Persona and Empathy Map

To empathize with users, it is helpful to create a persona. A persona is a fictitious person who represents and summarizes the research data collected from multiple people who share similar traits and needs. Based on my interviewees' answers, I decided to combine A and B into one persona while creating a separate one for C.

Furthermore, I created an empathy map for each persona to organize my users' goals, thoughts, feelings, actions, and the pains and gains of using an app to solve their problem and reach their goal.

### Salad-Savoring Simon



"I like salads! I just don't feel like making them..."

Simon is in his late twenties. He uses apps on his phone every day. To his knowledge, he has no major health issues but is trying to lose weight. He often relies on eating convenient foods like pizza due to his busy work schedule. He already enjoys a variety of vegetables, but he needs motivation to plan and prep salads. He understands and values the nutritional content of vegetables and wants to commit to a healthier eating plan. He is very open-minded about trying new ingredients and desires a moderate amount of guidance when prepping salads.

#### Needs:

- Motivation to eat more salads in place of less healthy but more convenient foods.
- Guidance on salad prep and ingredient combinations.

#### Behaviors:

- Eats salads when readily available.
- Frequently chooses convenient foods (premade, takeout, etc.) on the go and when busy.

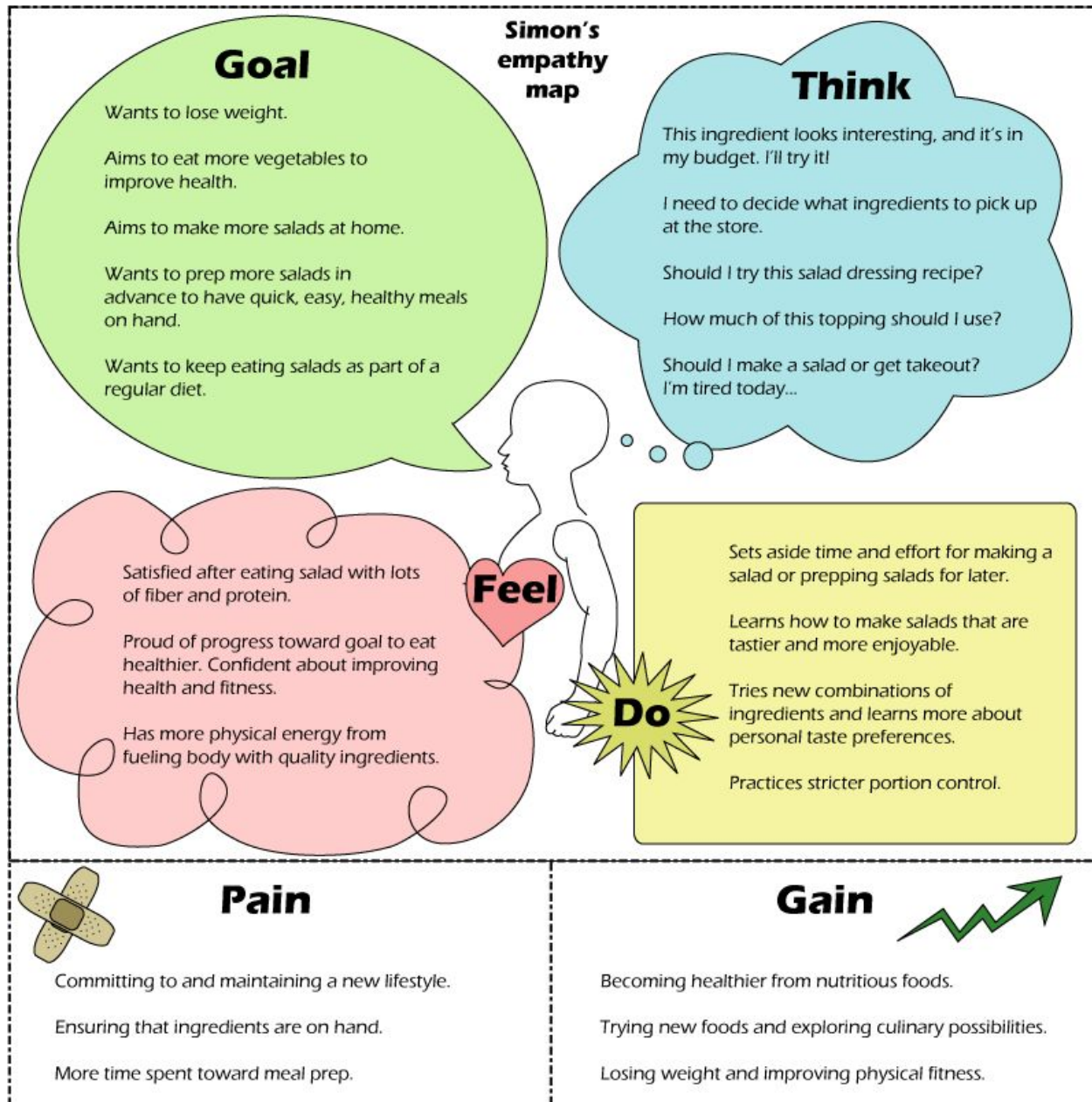
#### Goals:

- Lose weight.
- Eat quality ingredients to become healthier.

#### Frustrations:

- Not knowledgeable about salad prep.
- Forming a salad-eating habit as a lifestyle change.







## Veggie-Avoidant Violet



"I don't like a lot of vegetables, but I need to eat more of them..."

Violet is in her late twenties. She uses apps on her phone every day. To her knowledge, she has no major health issues but is trying to lose weight. She is averse to many types of vegetables, but she wants to implement more salads in her diet for weight loss and overall health. She enjoys cooking and meal prep, but she is intimidated by making salads. She doesn't feel confident about choosing ingredients that will suit her palate, and she isn't sure how to pick a proper protein source. She has a strict grocery budget. She desires a high amount of guidance when prepping salads.

### Needs:

- Motivation to eat more salads in place of less healthy but more convenient foods.
- Guidance on salad prep, ingredient combinations, and protein.
- Stick to strict grocery budget.

### Behaviors:

- Preps salads for others but not herself.
- Frequently chooses convenient foods but also tracks calories.

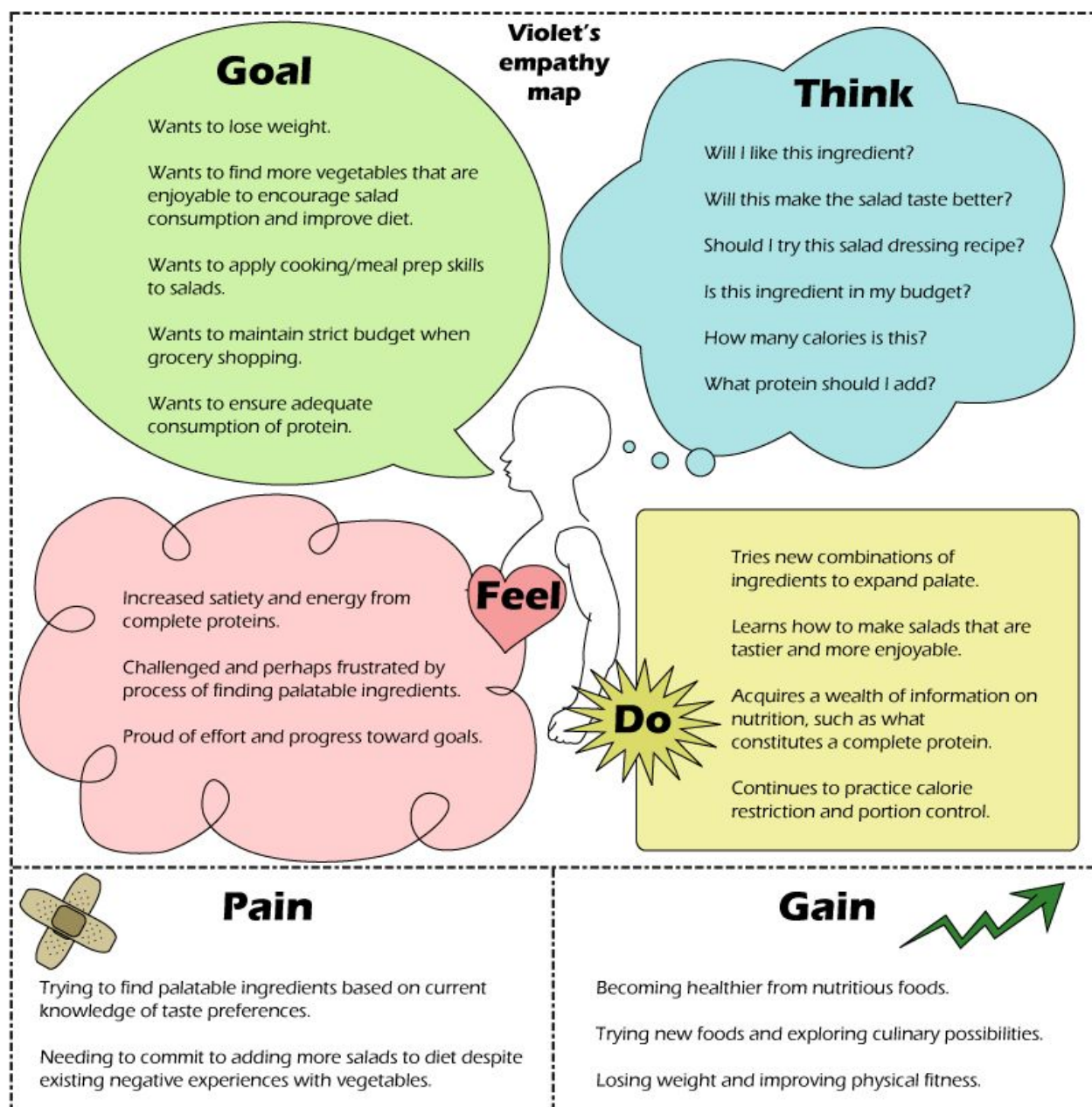
### Goals:

- Lose weight.
- Eat quality ingredients to become healthier.

### Frustrations:

- Not confident about salad prep.
- Finding salad ingredients she'll enjoy.





## Step 5: MVP and User Stories

I'm a fan of minimizing bloat whenever possible. From the get-go, I planned for SaladDecider to be a very lightweight app with only the necessary features (extras can always be added later, anyway). I focused on what the user would want from three key features.

Feature	User Stories	Implementation
Ingredient randomizer	As a user, I want the app to generate an interesting combination of salad ingredients so that I can explore new culinary possibilities.	Include a "Generate" button that creates a random combination of salad ingredients.
	As a user, I want to be able to have the app regenerate individually selected ingredients so that I can keep the ones I want without resetting the entire list.	Allow users to delete individual ingredient suggestions while keeping others on the list.
	As a user, I want to be able to select the quantity of ingredients so I can choose the amount I want in my salad.	Allow users to increase and decrease the quantity of ingredients.
	As a user, I want to be able to select, add, or remove an ingredient category so I can customize my salad the way I prefer.	Add separate categories for vegetables, toppings, dressings, and protein.
	As a user, I want to ensure that I'm not eating too many calories so that I don't overeat.	Provide calorie counts with appropriate serving sizes (e.g., only 1 tbsp of dressing).
	As a user, I don't want to get bored eating salads so that I can be motivated to keep eating them.	Include a variety of traditional and exotic vegetables, a plethora of toppings (nuts, seeds, cheese, etc.), and even other ingredients they may not have considered adding to a salad (hummus, tzatziki sauce, salsa, etc.).
Grocery list	As a user, I want to save the app's generated list so I can reference it when shopping.	Add a Grocery List section.

	As a user, I want to save a salad I liked so I can remember what to buy and how to make it again.	Include a button that saves the salad to a Favorites section.
Help & Tips section	As a user, I want to learn basic nutrition facts so I can understand the benefits of certain ingredients and be inspired to eat them.	Include interesting nutrition facts that grab users' attention and get them motivated to consume wholesome foods.
	As a user, I want to learn about complete proteins so I can ensure that I am meeting my protein requirements.	Offer a clear, concise definition of "complete protein" and have the Protein category only display complete proteins (incomplete proteins, like walnuts, will just be listed as toppings).
	As a user, I want to know how to make my salads as healthy as possible so that I'm benefiting from eating them.	Include a short paragraph that emphasizes serving sizes, the importance of dark leafy greens, aiming to make a salad colorful, and other useful tips.
	As a user, I want to make salads that taste good so that I'll be motivated to keep eating them.	Give a few examples of simple, light homemade salad and salad dressing recipes. Suggest alternative ingredients they may not have thought to try (tzatziki sauce, hummus, salsa, etc). Assure them that it's okay to add heavier toppings (nuts, cheese, etc.) as long as it's in small amounts.
	As a user, I want guidance without receiving too much information at once so that I don't get overwhelmed.	Organize into sections. Prioritize the most important information. Keep explanations concise.



## Step 6: Card Sort and Sitemap

I decided to hold an online open card sort via OptimalWorkshop for my SaladDecider app. My goal was to perform a basic evaluation of people's level of agreement of information labeling organization. The advantage of holding an open card sort is that you can quickly and easily gather participants. The disadvantage is that some may not embody the qualities of the personas and may lack familiarity with the project. To have a frame of reference, I asked one of my interviewees (one half of the "Simon" persona) to participate in the card sort along with seven people who had little to no familiarity with the app.

There was a lot of agreement on how to categorize the content of the app's main feature, the Salad Generator. Titles included Salad Maker, Salad Parts, Make Salad, Build a New Salad, Random Salad Maker, Create My Salad, Random Salad Maker, and Make a Salad. This convinced me to swap out the word "Generator" for something more user-friendly, like "Maker," which is a word that was suggested by five of the eight participants.

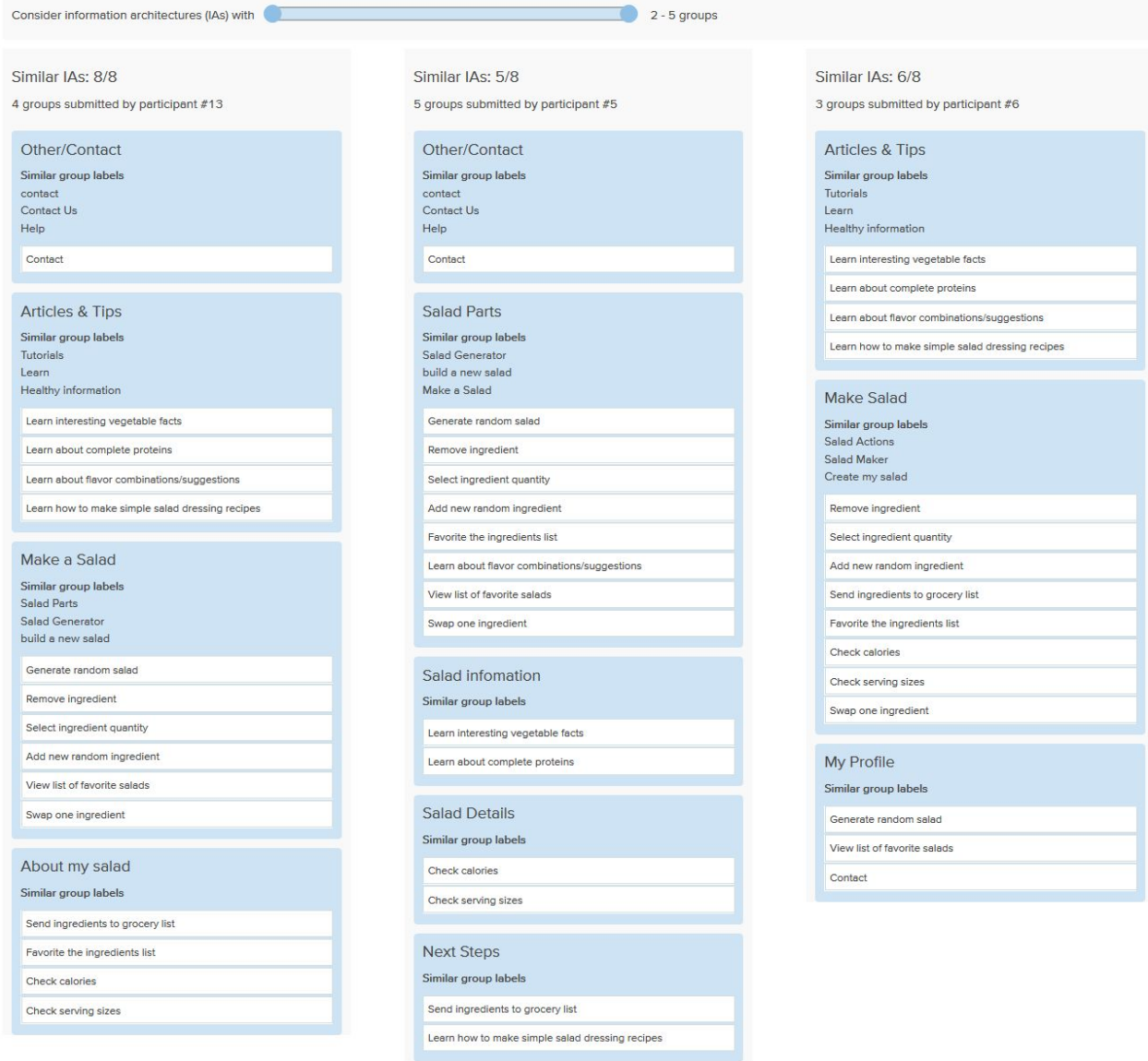
In the "Help & Tips" category, participants' labels included "Salad Fact Checker," "Salad Information," "Articles & Tips," "Learn More," "Tutorials" (twice), "Learn," and "Healthy Information." A solid compromise for this category name would be Help & Info. Although "Learn" was also used twice, I believe that "Info" is a more generally applicable word, relates more to the word "Help," and will fit more cleanly within a UI button.

There were some small disagreements when sorting a handful of cards, which is to be expected. The main disagreement was on where "Contact" should go. I envisioned it as being within Help & Info, but about half of the participants labeled it as a separate category (I must also note that one participant put Contact within a category they labeled "Help"). Since all participants kept the number of categories to five or fewer, I think it would be ideal to keep Contact within Help & Tips and see if it can be easily located during usability testing.

SaladDecider's sorters generally sorted the cards quite accurately and selected some terminology that encouraged me to reevaluate my title choices. Using this information, I will be tweaking and improving the content to make my app as user-friendly as possible.

Here are the Participant-centric Analysis (PCA) and similarity matrix for SaladDecider:

Participant-centric analysis

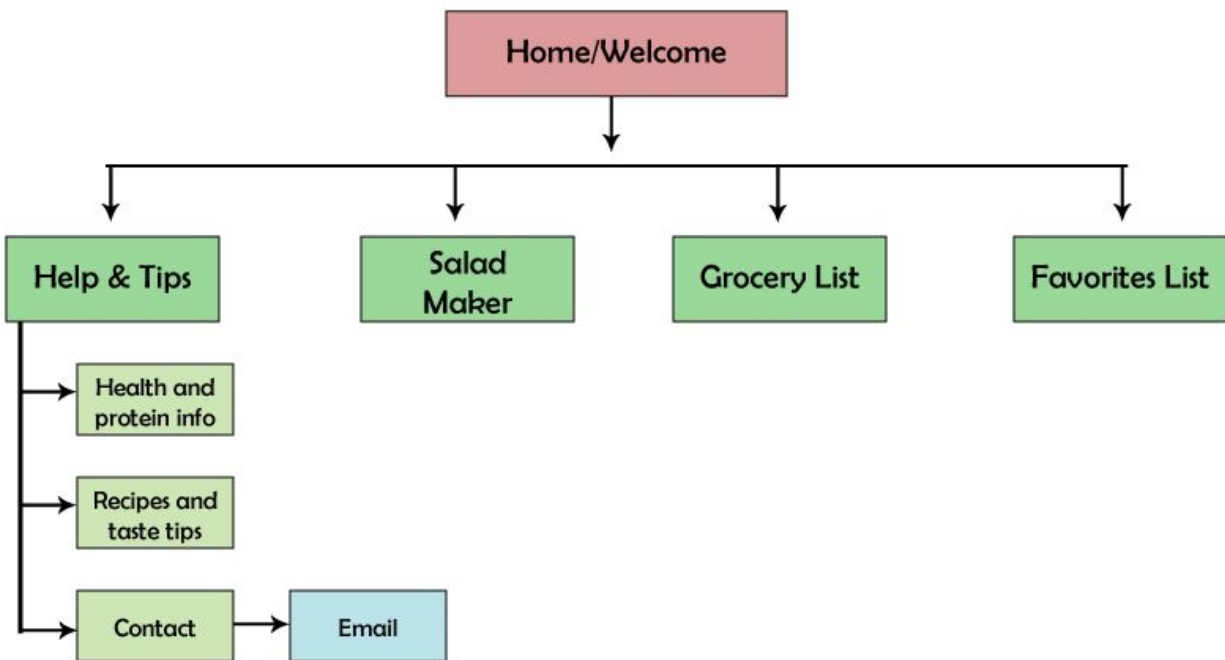


# Similarity matrix

Select ingredient quantity														
100	Swap one ingredient													
100	100	Remove ingredient												
87	87	87	Add new random ingredient											
75	75	75	87	Generate random salad										
50	50	50	50	62	View list of favorite salads									
75	75	75	62	50	50	Favorite the ingredients list								
62	62	62	50	37	25	75	Send ingredients to grocery list							
50	50	50	37	25	12	62	62	Check calories						
37	37	37	25	12	12	50	50	87	Check serving sizes					
0	0	0	0	0	0	0	0	25	25	Learn interesting vegetable facts				
0	0	0	0	0	0	0	0	25	25	100	Learn about complete proteins			
0	0	0	0	0	0	0	12	12	12	75	75	Learn how to make simple salad dressing recipes		
25	25	25	25	25	12	12	0	0	0	62	62	75	Learn about flavor combinations/suggestions	
0	0	0	0	12	12	0	0	0	0	12	12	25	25	Contact

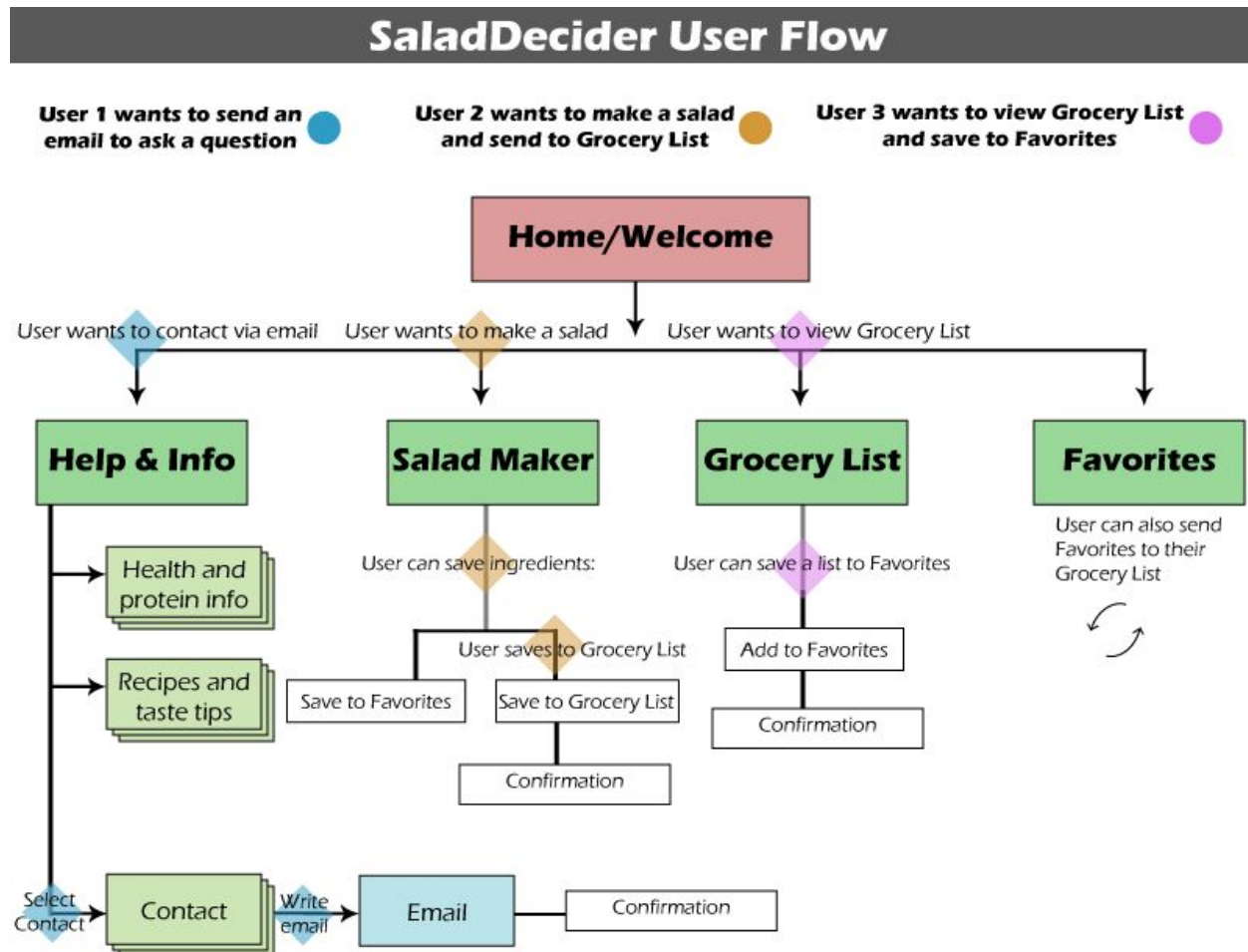
This is my sitemap. Due to the lightweight nature of my app, the individual number of pages are limited and only contain the necessary tools for users to generate random salad ingredients, favorite a list, add a set of ingredients to a grocery list, and read about topics such as complete proteins and basic recipes.

## SaladDecider sitemap



## Step 7: User Flows

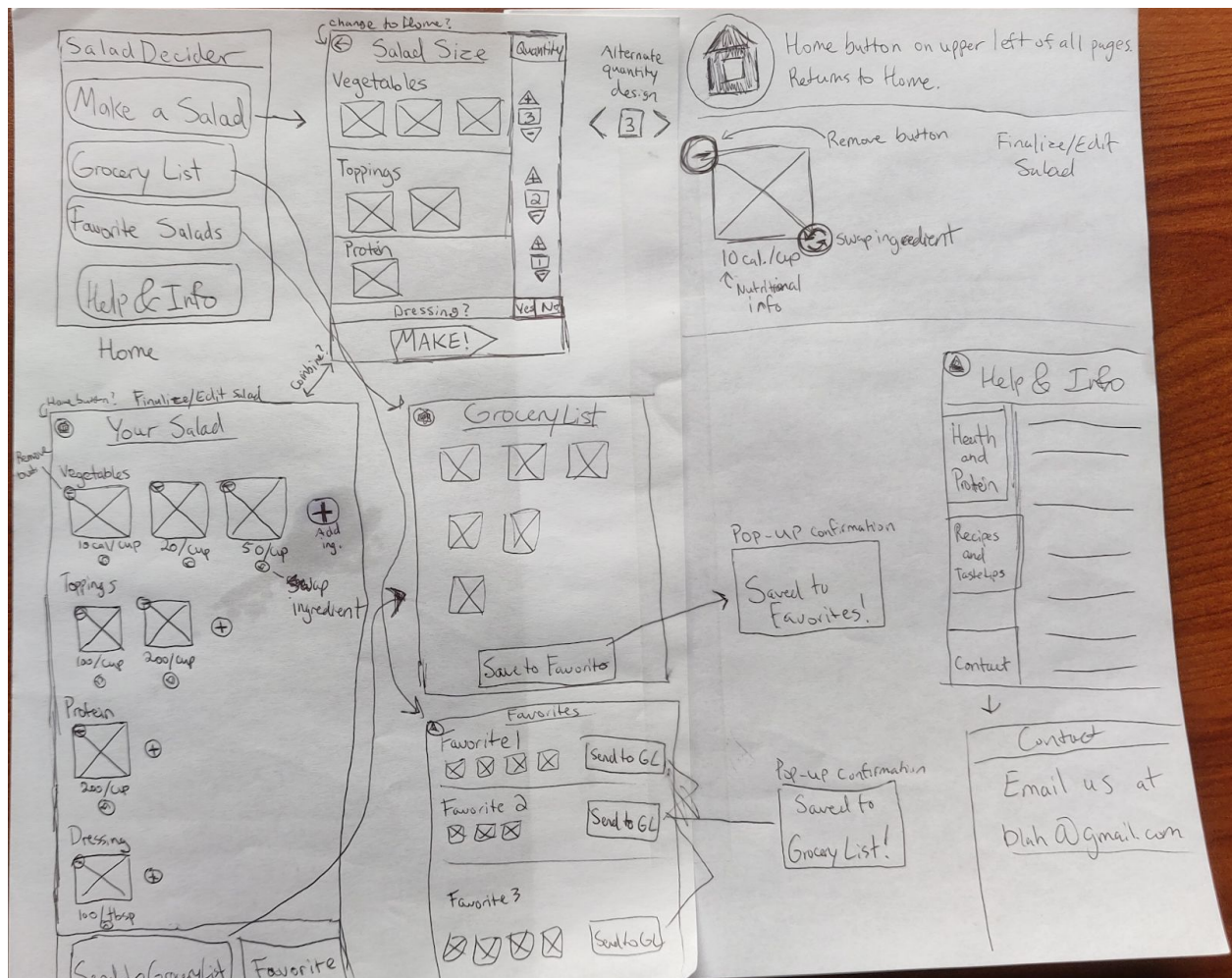
SaladDecider's user flow highlights three hypothetical users who want to complete different tasks.



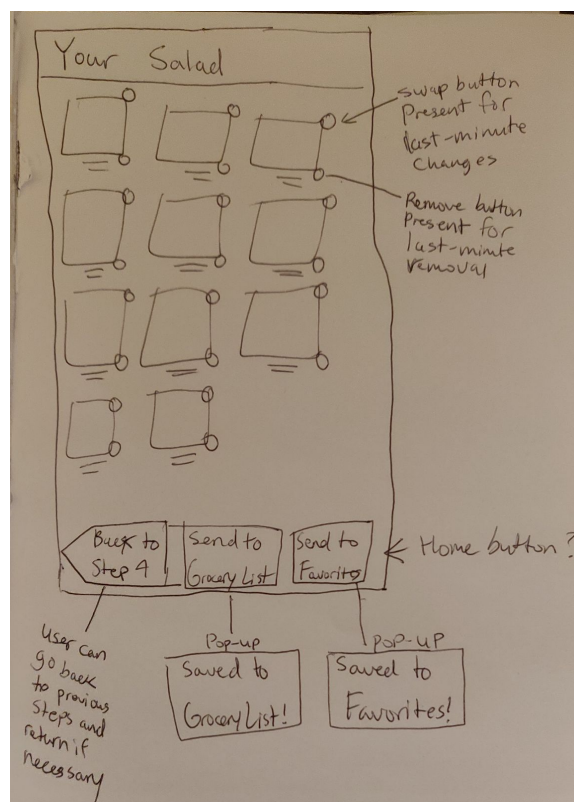
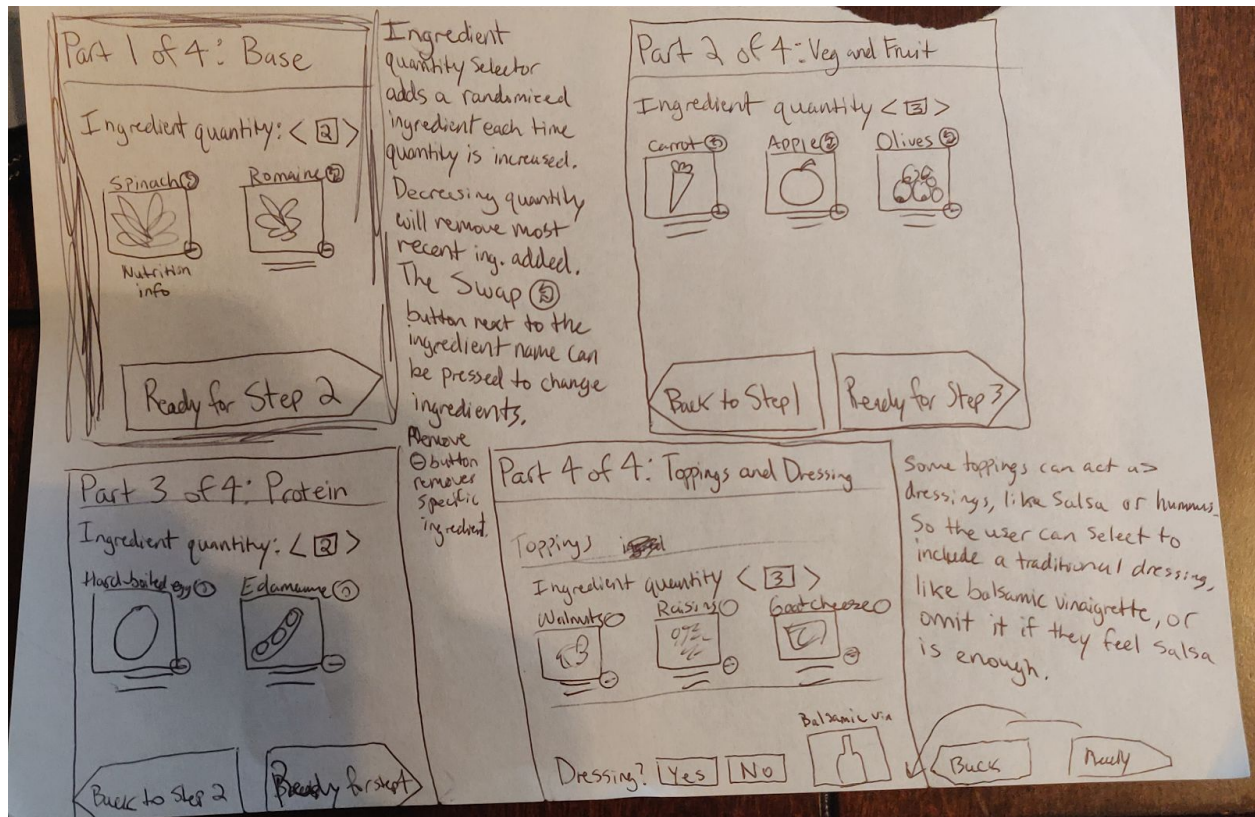
## Step 8: Sketches and Wireframes

After sketching several wireframe drafts on paper, I eventually drew one that I felt represented something that was fairly close to the layout of the upcoming prototype. My mentor suggested I break the salad-making stage down into multiple screens with additional categories that take more user needs and preferences into account (allergies, diet, etc.). At this point of the always-evolving, iterative UX process, it often becomes apparent that there are more gaps to be filled.

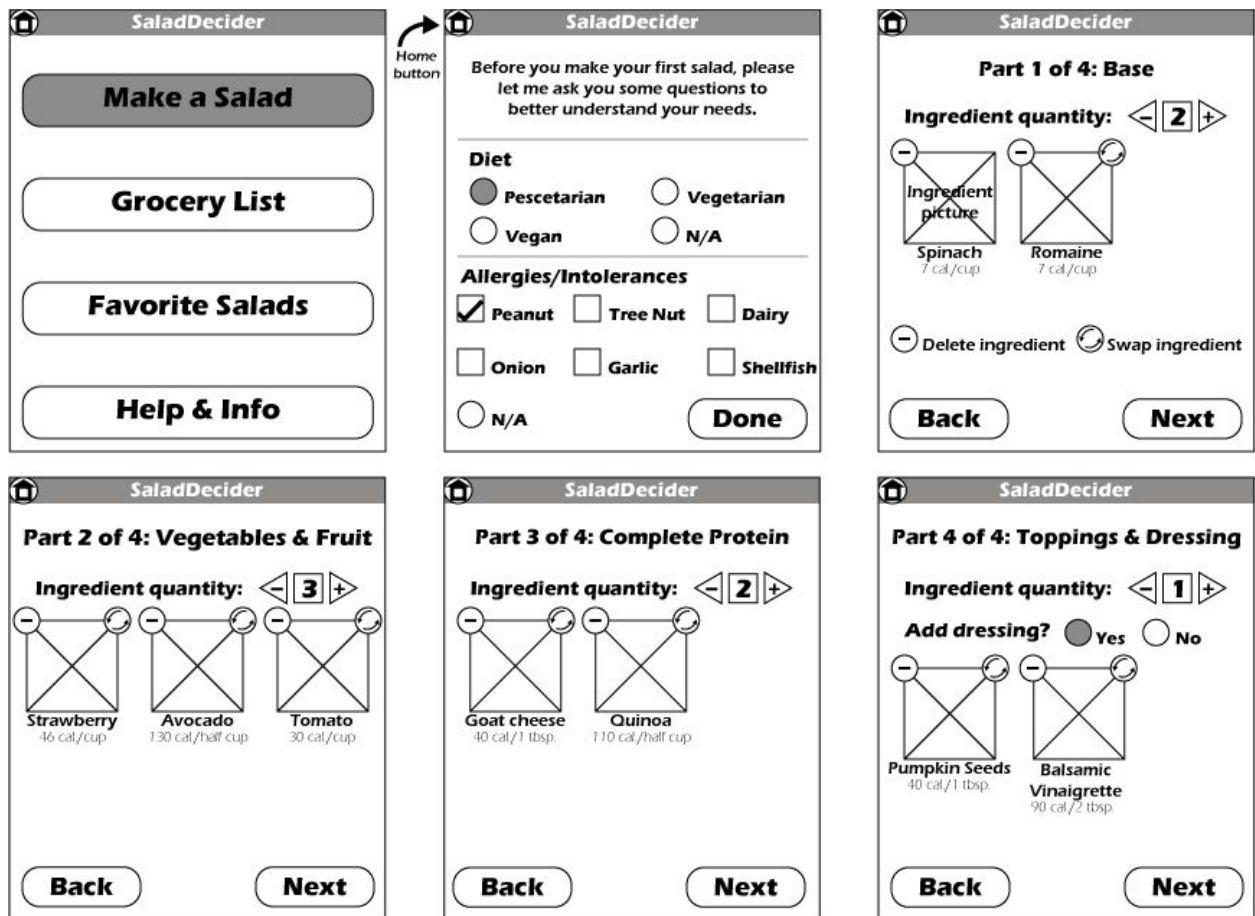
These three sketches show a visual draft of the process of making a salad with the app. The first was one I did on my own to collect feedback from my mentor. The next two were made to iterate on suggestions regarding the steps of the salad-making process and breaking it down into more manageable chunks for the user.



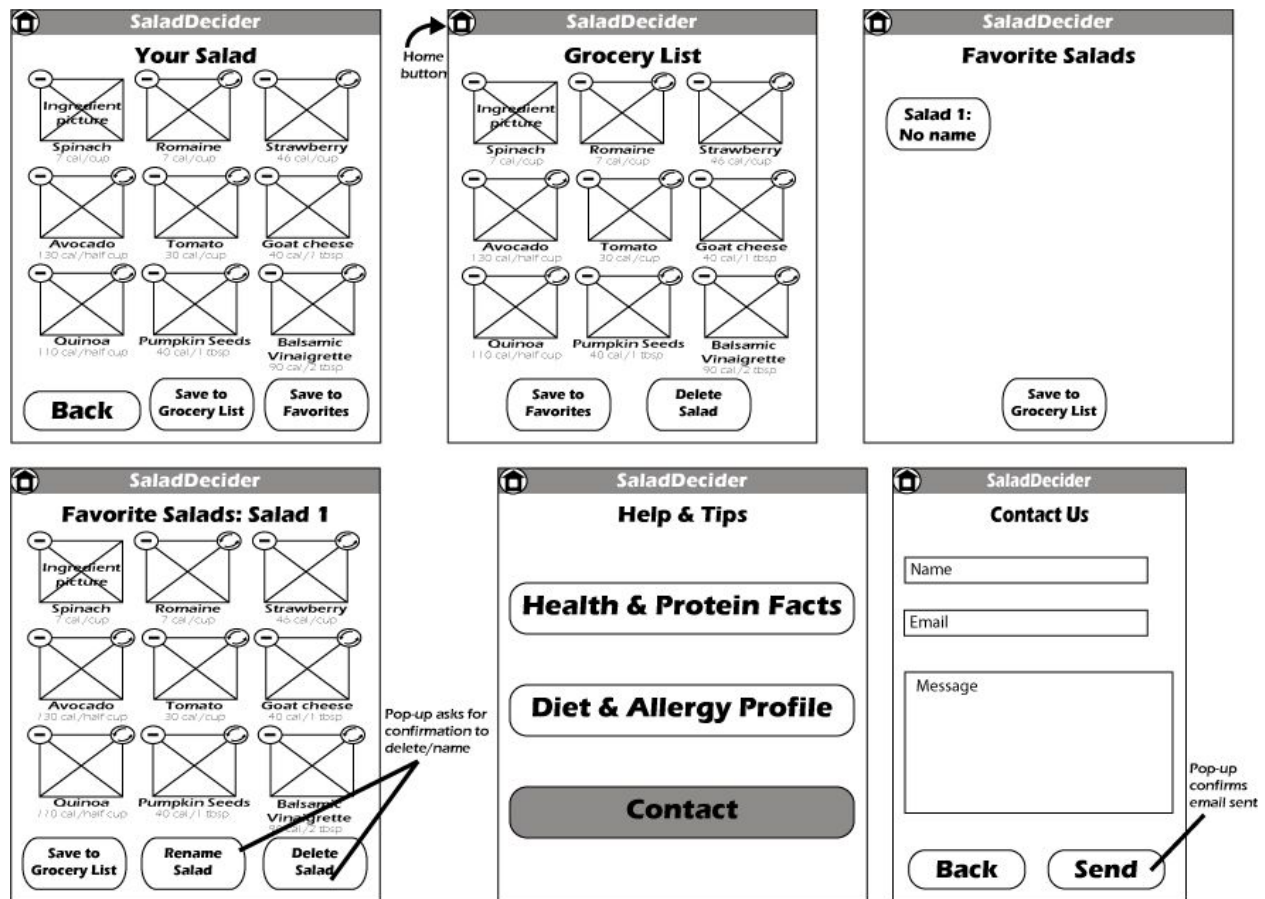




After I finished my sketches, I made wireframes in Illustrator:





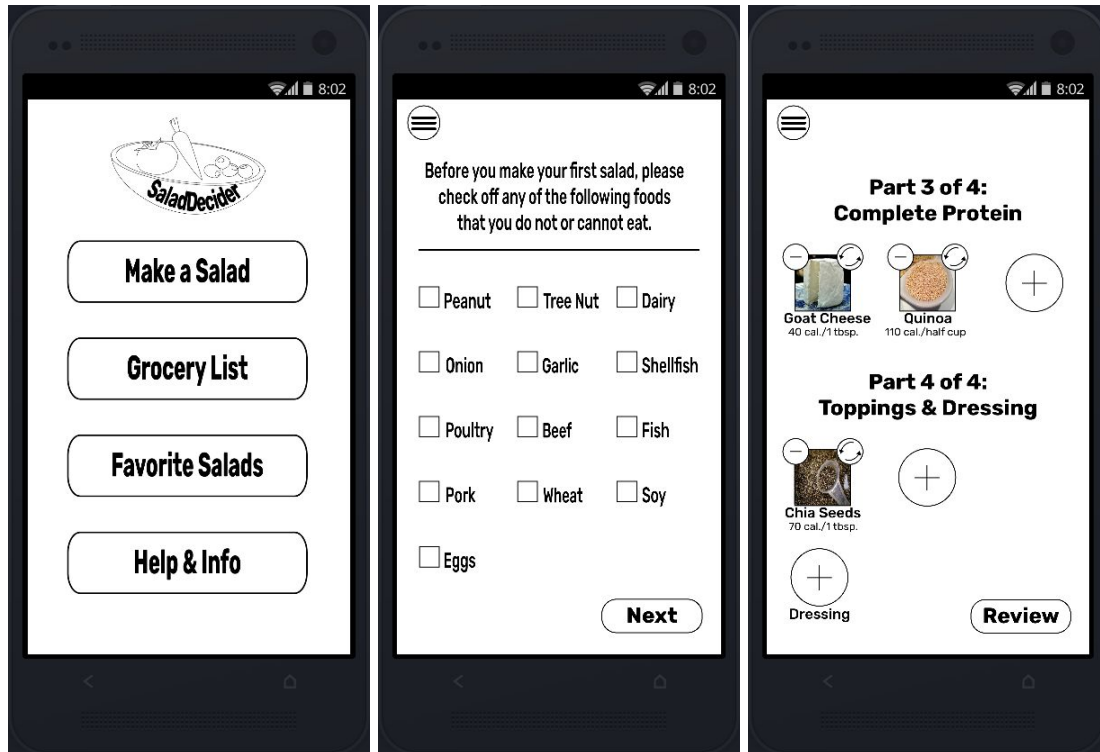


I encountered most of my challenges toward the middle and end of the wireframing process, which was when I began to realize just how many pieces and features were forgotten or absent. I would make a wireframe for a screen, realize something was missing. There were some features I hadn't previously considered (for example, an option to delete or rename a favorite salad), and then I had to add UI elements for them.

The problem is that I began adding more and more wireframes to account for every possible interaction, including those that weren't related to tasks outlined in the user flows. I stopped at two pages of wireframe screens since I didn't want to lose focus and subject myself to feature creep. I wanted a solid representation of my project, but in some instances, my attention was drifting further away from the core prototype features.

When bringing the wireframes into InVision, I ended up reworking the wireframes further. I needed to alter some layouts to ensure they would fit properly within the prototype screens. My mentor also suggested looking into adding columns for improved UI and organizational purposes during the prototype phase. I chose a three-column layout, which I felt would fit especially well for the salad-maker screens.

## Step 9: Prototype



The prototype was created in InVision using the wireframes I designed in Illustrator. The interactive prototype can be tried here: <https://invis.io/V4OXNP9GSYR>

Since it was my first time putting together an InVision prototype, it was challenging to figure out how to test the features in a way that came across as natural and not too guided. I designed multiple screens that would switch one visual element after completing a task (for example, clicking the Change Ingredient button on Tomato would exchange the current screen with one that had Avocado in its place). Of course, the interactivity is limited since the prototype needs to follow a certain order of tasks, but it served the purpose of demoing SaladDecider's main features.

## Step 10: Visual Design

After completing the prototype, I created a style guide to define the visual identity of SaladDecider. It was difficult to decide on what combination of colors to pick, but I ended up selecting bold colors based on different vegetables.

### Color Palette

I chose a split-complementary color scheme consisting of a leafy green (#015D38), a carrot-like orange (#C46B00), and a beet-like red-purple (#7F233A).



### Typography

I was searching for a clean, round font and discovered Rubik. It also has several different weights, though I stuck to Bold, Medium, and Regular. Most importantly, it's easy to read at any size.

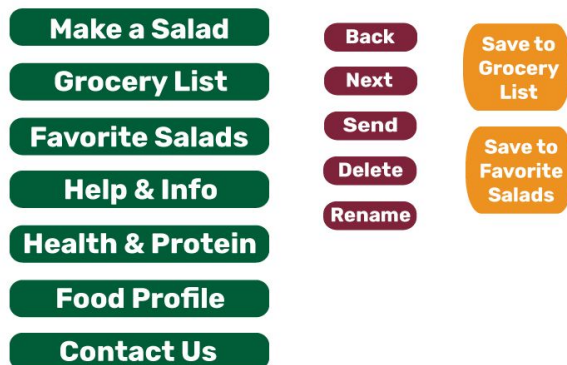
**H1 (Home buttons): Rubik Bold 34pt**

**H2 (headings, CTA buttons): Rubik Bold 24pt**

**Body 1 (Profile text, ingredient title): Rubik Medium 16pt**

**Body 2 (Help & Info text): Rubik Regular 14pt**

### Call to Action Buttons



## Step 11: Research Evaluation

### Tasks:

- Make a salad (add, change, and delete an ingredient).
- Save to Grocery List when salad is complete.
- Save Grocery List contents to Favorite Salads list.
- Locate the Contact form using the navigation menu to send a question via email.

### Summary:

I performed one in-person usability test and two remote usability tests with the use of Skype and join.me. All participants commented that they found the app to be clear, uncluttered, and easy to navigate. There were almost no issues with the salad-making process consisting of adding, changing, and deleting ingredients, and one participant in particular blazed through all the tasks. The biggest pain point was the action of adding a dressing, which initially confused two participants due to two add-ingredient buttons existing closely in the same space.

Saving the salad to the Grocery List and Favorite Salads sections was also straightforward. I was concerned if the participants would understand the icons in the hamburger menu, but while there was some brief hesitation from two participants, they all managed to figure out the location of the contact form (the form is located under Help & Info, which is represented by a question mark). I believe that the Grocery List icon should be altered to avoid confusion since it's currently a list, which looks like a form.

Two participants mentioned that they would like an option to select from a handful of ingredients via a pop-up list when adding an ingredient to reduce the degree of randomization. One also suggested for the hamburger menu to show all sub-menus, such as Contact Us, when hovering over the main icon.

Overall, the feedback was very positive. Based on the participants' comments, I would iterate on the action of adding a dressing and update the Grocery List icon. I would also consider adding an option to limit but not eliminate randomization by providing a handful of randomly selected ingredients to choose from. An expanded menu is another possibility.

### Observation Notes:

#### Participant A:

- Liked that the home screen icons were large and that there wasn't any clutter or unnecessary information.
- Immediately figured out how to add and remove an ingredient.

- When asked to change an ingredient, he clicked the delete button first before correcting himself and selecting the change button.
- Experienced a bit of confusion on the final section where I asked him to add a dressing. There were two big add buttons, one of which was unlabeled and one of which said “Dressing” underneath it. Once again, he realized what to click immediately after his previous action.
- Enjoyed the process of making a salad but commented that he would like an option to choose an ingredient from a list as opposed to the choices being completely randomized.
- Had no trouble saving salad to Grocery List or Favorite Salads list.
- Noticed the hamburger menu when I asked him to navigate to the Contact form to send an email, though he clicked the Home and Grocery List icons before clicking the Help & Info icon, which contains the Contact Us section. Found the Send button quickly.
- Suggested that the icons’ meanings might be clearer if there were a sub-menu that appears when hovering over the icons (for example, the question mark for Help & Info displaying the Health & Protein Facts, Food Preferences, and Contact Us buttons underneath).

#### Participant B:

- Liked the logo at the top and the clear buttons on the home screen.
- Said the Food Preferences screen that precedes the salad maker was smart.
- Immediately understood how to add, change, and delete an ingredient, as well as how to add a dressing.
- Said she enjoyed the process of making a salad.
- Asked if the salad maker started with any ingredients, though I explained that it was due to the number of screens that would need to be made for the prototype.
- Had no trouble saving salad to Grocery List or Favorite Salads list.
- Hovered over the hamburger menu options for a few seconds but then selected the correct icon the first time. Found the Send button quickly.
- Felt the Contact section was useful and important for feedback. Also noted that she found the Health & Protein Facts section interesting.
- Said she felt it was easy to navigate.
- Overall, very enthusiastic about app concept.

#### Participant C:

- Grocery List grabbed her attention because she likes making lists.
- Immediately understood how to add an ingredient. Initially, she clicked the delete button instead of the change button when attempting to change an ingredient, though she claimed it was only because of the wording of “change” that confused her; she didn’t know if it meant she should hit the delete button and then hit the add button to change the ingredient. Deleting an ingredient gave her no trouble.
- Experienced a bit of confusion on the final section where I asked her to add a dressing due to there being two buttons for adding ingredients.

- Said she enjoyed the overall process of making a salad but didn't have a lot to compare it to since she doesn't make salads often.
- Similarly to participant A, she suggested that an option to choose an ingredient from a list as opposed to the choices being completely randomized could be useful.
- Had no trouble saving salad to Grocery List or Favorite Salads list.
- When asked to send an email via the Contact form, she quickly located the hamburger menu and only hesitated and hovered on on the Grocery List icon momentarily due to the fact that a form could look like a list. However, shortly after, she determined that the Help & Info button was the correct one to select. Found the send button quickly.
- Liked the minimalistic design and found it easy to navigate. Like Participant A, she mentioned that she liked the lack of clutter.

### **Test plan:**

#### **Early prep:**

- Finalize wireframes and InVision prototype. Ensure basic layout and functionality are intact to share minimum viable product to user.
- Ensure user flow tasks can be completed within prototype.
- Recruit three participants and ensure they are able to test the prototype either in-person or remotely.

#### **Before conducting test:**

- If remote, ask for their consent to record screenshare. Let them know screenshare will not be shared with uninvolved individuals or companies.
- If in-person, remove distractions from computer (unnecessary open programs, etc.).
- Ask if they need anything (water, etc.) and let them know they can stop or take a break at any point in time.

#### **After test:**

- Stop screen recorder and/or voice recorder and save recording.
- Thank participant for their time.

#### **Script:**

Hello. My name is Arielle, and I'm going to be sharing a prototype project with you today. It's an app called SaladDecider, and it helps users make salads by suggesting ingredients at random to create interesting combinations of flavor.

There is no right or wrong way to test this prototype. My goal for this test is to determine how to improve and iterate upon it. I will be guiding you through this usability test by asking you to

complete certain tasks. There is no time limit, so please take as much time as you need to perform the tasks or even just to explore the screens. You may take a break at any point.

I encourage you to think out loud as you explore the prototype. I am open to any comments -- positive or negative -- so please be honest about your thoughts and opinions. Ask any questions that come to mind, and I'll do my best to answer them.

Please pretend that you just downloaded SaladDecider for your mobile device and are curious to see if it will help make your salad-prepping process more pleasant.

1. This is the Home screen. Is there anything that immediately grabs your attention?
  2. Now go ahead and make a salad. Please check off the box for peanuts and proceed to the next screen.
  3. Now you're ready to start making a salad! You can scroll around and explore this screen if you'd like, but I am going to guide you through the process. In "Part 1 of 4: Base," add an ingredient to that section.
  4. Now that you have an ingredient for your base, please direct your attention to the next category, Vegetables & Fruit. Change the tomato to another ingredient.
  5. Look at Complete Protein and remove the quinoa.
  6. Finally, add a dressing in the Toppings & Dressing section.
- Q. How did the process of making a salad feel?
- Q. Is there anything else you would want to be able to do to?
7. Now that you've got a good combination of ingredients, you can proceed to the next step by reviewing what you've put together.
  8. Please save your salad to the Grocery List.
  9. Now go ahead and save the contents from your Grocery List to your Favorite Salads list for future reference.
  10. Finally, please send an email by navigating to the Contact form. (Note: Requires use of menu button. Let user experiment and see if they can find it before stepping in.)
  11. Pretend that you've already filled out this form and send it.

You finished the last task. Thank you for your time! If you have any questions or comments, please share them.