

Platelist: lo-fi prototype report

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1 Introduction

Platelist lets you:

- keep a ``platelist'' of recipes you like, like a music playlist of songs
- plan your meals for the week from that list
- order the ingredients you need for the week

making it easy and quick to cook for yourself.

2 Mission statement

Our goal is to motivate people to cook for themselves by removing inconvenient and time-consuming barriers to cooking.

3 Roles

- Manager: Wen Sun
- Design: Gene Oetomo
- Development: Omar Rizwan
- User testing: Kyle Qian
- Documentation: Omar Rizwan

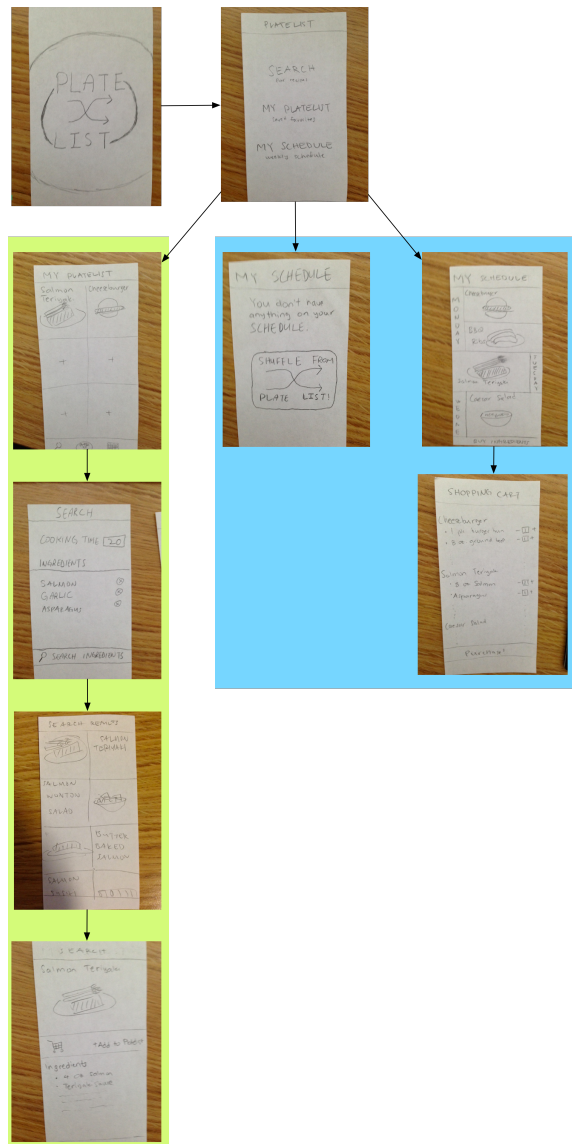


Figure 1: Overview of prototype

4 Prototype description

An overview of the paths in our lo-fi paper prototype is seen in Figure 1. At the top are the splash screen and the home screen. Below, in green on the left (and larger in Figure 6) are the platelist creation and meal search scenario (tasks 1 and 2). On the

right, in blue (and larger in Figure 7), we show the weekly meal planning scenario (task 3).

5 Method

5.1 Participants

5.1.1 Participant #1

M.F. (male, 20) is a student who wants to cook more to save money. He was recruited through Kyle for being someone who almost perfectly fits our target demographic. M.F. says that he currently isn't motivated to cook because the time it takes to prepare just about offsets the money saved.

5.1.2 Participant #2

S.T. (female, 24) is a graduate student living off campus who was recruited as a co-worker of Kyle. Due to a very busy work/school schedule and very expensive Palo Alto food, S.T. dislikes having to plan for meals on a weekly basis. She seemed very excited about the meal-planning aspect of Platelist.

5.1.3 Participant #3

E.D. (male, 21) is a student who lives in Oak Creek. He was recruited through Gene, who went to Oak Creek to look for people to interview. He cooks every day and goes to Safeway almost every day to get groceries. When we told him about the week-planning function in Platelist, he said this is exactly what he needs.

5.2 Environment

5.2.1 Participant #1

M.F. was interviewed in his dorm room.

5.2.2 Participant #2

S.T. was interviewed in her apartment in Palo Alto.

5.2.3 Participant #3

E.D. was interviewed in his apartment in Oak Creek.

5.3 Tasks

5.3.1 Simple task: create a platelist

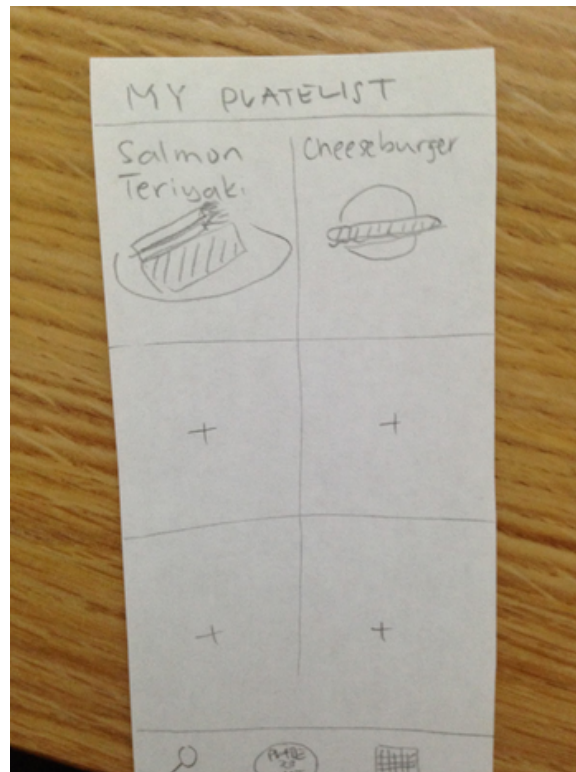


Figure 2: Platelist view screen for task 1

Creating a Platelist is simply making lists of foods grouped however the user wants (Figure 2). Much like playlists in Spotify/iTunes, these Platelists can be organized by themes like occasion, meal times, food types, or they could just be large aggregated collections of foods the user likes. You can keep track of your favorite foods, and over time create a profile that generalizes your taste (pun intended) in foods. It's much easier than writing down every recipe you've ever liked and storing it in a book. Or looking up similar recipes to your person favorites, when you can have an app that simply recommends you some recipes you might like.

Platelist is like a music playlist, except instead of songs we have recipes for meals. Each item on the platelist is a recipe.

5.3.2 Moderate task: search for meals to add to a platelist

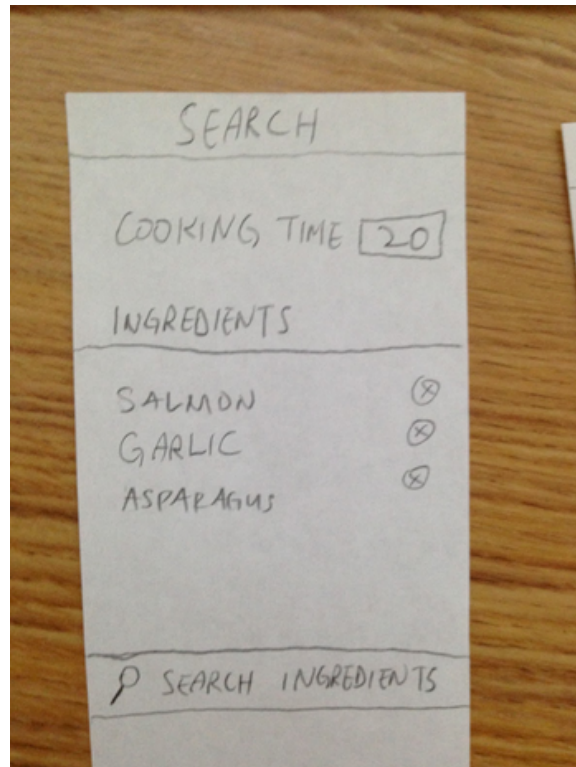


Figure 3: Meal search screen for task 2

Our app allows users to search for foods (Figure 3) under a variety of different parameters such as prep time, ingredients, prep difficulty, and serving sizes. As we see later, this turned out to be one of the more complex tasks to accomplish, contrary to what we originally thought.

Next, where do you get the items that you put on the platelist. Where do people find recipes? Do they type them in by hand? Is there a big database?

5.3.3 Complex task: make a meal plan for the week and buy ingredients

Finally, the user should be able to take meals from their platelist and construct a meal plan for the week (Figure 4). We envision the user sitting down on Sunday and planning out their whole week, figuring out what they're having for breakfast, lunch, and dinner for the next seven days.



Figure 4: Week planning screen for task 3

Once the user has planned that out, Platelist has all the information it needs to order groceries with one click, so we include that in the task.

Although these tasks are not particularly difficult in the app, we decided that it should be our complex task for two reasons:

1. the manual alternative is very time-consuming and tiresome (going to grocery store a few times, looking up recipes)
2. 'shuffling' meals as a mechanic is very abstract and its function may not be obvious without further explanation from us to the prototype users

5.4 Procedure

Our experimental method was heavily geared towards finding out how quickly people understood the concept with as little explanation as possible. Thus, we deliberately chose to go with the whole 'Spotify/iTunes' parallel to briefly explain what

Platelists are and what ‘shuffling’ refers to. We also made sure to ask about the user’s smartphone experience. Since this will most likely be a strictly mobile application, keeping the user’s smartphone literacy in mind can help control for a lot of variables.

Our procedure went in this order:

1. Briefly explain app idea and concept.
2. Ask the user about their smartphone experience.
3. Define terms and show the user the screens and sequences in the demo (tasks 1, 2, 3).
4. Let the user perform the three tasks on the paper simulation. We printed out each page of our prototype, watched where the user tried to tap, and gave immediate feedback. We also tried to pay attention to more subtle aspects such as where they looked and where they hesitated to tap.
5. Note any difficulties.

6 Results

We found that people mostly understood the concept, but only after some amount of explanation directly from us. Not every part of the food/music parallel came to the user intuitively. With that said, we found that the shuffle logo did help somewhat to convey our idea to our users.

One of the most common themes we found was user autonomy. How much control do we give to the user? How many options should they have when searching? Some people liked that we included so many different search parameters to choose from. Others were confused as to whether this was more of a cooking, recipe-focused app, or a more food and meal-planning focused app. For the meal planning portion, people were also divided on whether they’d want the meals to be planned time-wise or more generally. In other words, should dinner be set at a specific time, or should the user just fill in premade fields for breakfast, lunch, and dinner each day?

Finally, some of our testers wanted the app to simply be more food-based. Essentially, instead of searching for ingredients, they want to just search general things like hamburgers, sandwiches, or salads. In particular, one of our testers wanted the option to simply add quick foods like Hot Pockets to their schedule on a given day.

7 Discussion

Moving forward, there are several elements we must reconsider. Some of the changes will be inherent to the move from lo-fi to med/hi-fi (for example, users had trouble identifying clickable areas on paper, but they may afford clicking better in a higher-fidelity prototype), but some of them are more fundamental design choices that we'll need to make given the results of our lo-fi testing.

For instance, our testers noted that we need to make all features of the app readily available and visible--in particular, the online ingredients/grocery ordering function was tucked away. Such an important part of our app should be more prominently displayed, or else users may not even realize it's there.

Next, we need some way to better convey the general purpose and flow of the app to users. In general, conveyance seems to be a major source of confusion moving forward -- especially since we're still on our lo-fi prototype, which relies more on user intuition and self-explanatory app functions. Our concept, as it currently stands, is a bit abstract, which threw some users off at the start.

When users navigate the final product, they obviously won't have us to explain to them the underlying philosophy/concept of the app, so the app needs to be able to achieve adequate conveyance on its own. While things like the shuffle logo help to do this already, there are other things we can add to future higher fidelity prototypes like prompts and text bubbles that can help lead the user from the beginning. We are also considering eliminating the splash screen and creating a higher-information home screen which lets the user quickly look at their meal plan for the week or do something else useful without clicking. That screen would likely also what the app does more obvious to users.

Last, we need to resolve this issue of user autonomy. While the idea of searching by just foods and perhaps not ingredients seems popular, such a fundamental change in our concept would affect many other aspects of our project, such as target audience and stated purpose. Another related change would be adding fast premade options so your meal plan for the week can be more comprehensive (if you don't intend to cook for every meal). We should also make the search feature more like the search people expect, based on some kind of text search field.

8 Appendices

8.1 Forms

See Figure 5 for consent form.

Consent Form

The Platelist application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of Platelist. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers (Kyle Qian, Wen Sun, Gene Oetomo, Omar Rizwan) or with Professor James Landay, the instructor of CS 147:

James A. Landay
CS Department
Stanford University
650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the Platelist experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time

Name _____

Participant Number _____

Date _____

Signature _____

Witness name _____

Witness signature _____

Figure 5: Consent form given to participants

8.2 Demo script

This app has three certain functions that make cooking prep easier for everyday people.

The first function is to be able to keep track of your favorite recipes. Just like a spotify playlist, you can add your favorite recipes to this list, so if you ever want to revisit a recipe, it can be easily accessed and nicely stored on this app. We provide a database of a bunch of recipes, and you just select one if you like it. The second function is to search for meals. One problem people usually have when they look

up meals, is that sometimes they only have certain items in their refrigerator. Or, they want to make foods with certain ingredients in them. We provide an advanced search function, where instead of looking for relevance, you can input the ingredients that you want to be in your meal, and it searches our database for the most ingredient matches for you.

The third function is one that we think people have the most trouble doing: deciding what to eat. With a click of a simple button, Platelist will create a meal plan for you to follow for the whole week. This way, you don't have to decide every day what you want to eat, then go out and buy groceries. It takes your favorite foods (on your platelist) and not only arranges them into your weekly schedule, but it also looks for other foods that you might like, based off your platelist choices. It works the same way that Spotify suggests songs that fit your taste. Furthermore, you can add recipe ingredients to a shopping cart and have it delivered to you. This way, you only have to do groceries once, since you know every ingredient you want for the week. Or, if you don't want to get it delivered, you still have a grocery list that will last you the week.

8.3 Raw data

Severity ratings are in parentheses after each incident item.

8.3.1 Participant 1

- Task 1: create a platelist
 - tried to click logo (1)
 - 'too little context' (3)
 - search for recipes or go to platelist? both? (2)
 - my platelist design currently only supports one platelist, so creating it seems redundant (3)
- Task 2: search for meals to add to a platelist
 - how to switch parameters? (1)
 - is there a way to just search for foods (2)
 - customization good, but sometimes lack of choices works (3)
- Task 3: make a meal plan for the week and buy ingredients
 - big button is good (0)
 - concept is 'fun' (0)

8.3.2 Participant 2

- Task 1: create a platelist
 - liked the logo -- encapsulates idea well (0)
 - not immediately obvious how beginning 3 options on home screen relate to each other (2)
 - `search for recipes': is this cooking app or planning or both? (2)
- Task 2: search for meals to add to a platelist
 - liked having many options (0)
 - but sometimes you just want to look for specific food (2)
 - hot pockets? fast food options? (3)
 - confused as to how the app knows how ingredients combine (3)
- Task 3: make a meal plan for the week and buy ingredients
 - do I get to choose where to put meals, or does it have to be a shuffle? (3)
 - time-wise or mealtime-wise for meal planning for a day? (3)
 - concept does make intuitive sense due to vocab (0)
- General
 - needs more context and help balloons (1)
 - target audience may be misguided -- more for cooks or for lazy meal planning? (2)
 - not immediately obvious what all the features are (e.g. ordering online) (3)

8.3.3 Participant 3

- Task 1: create platelist
 - this part was pretty easy for him to figure out (0)
 - simply clicked the add to platelist button (0)
 - he recommended a way for us to edit the recipe, so that we don't have to follow it exactly (1)
 - this way you can make your own editions of the recipe (1)
- Task 2: search for meals

- didn't really understand the feature of the advanced search at first (3)
 - thought that clicking the "search" from the homepage would just pop up a text field for him to type things in
 - didn't understand what the search page was for (2)
 - I had to explain to him the difference between a regular name-based search versus our ingredient search (3)
 - we should probably make a regular text box search the default (the way E.D. thought it was) and make the advanced search another button to go to instead (2)
 - navigation was an issue (3)
 - asked about a back button, and asked which button to press if he wants to go back to the results page, versus going back to the beginning of the search (3)
- Task 3: make a meal plan for the week and buy ingredients
 - thought it was pretty simple to make a meal plan for the week (0)
 - we had navigation buttons on this screen, so he figured that out really easily (0)
 - likes the function that one button can organize the entire week (0)
 - we should expand the design on the shopping cart system (1)
 - asked how to add something to the shopping cart. shopping cart icon didn't stand out enough for him to intuitively find it (1)

8.4 Extra figures

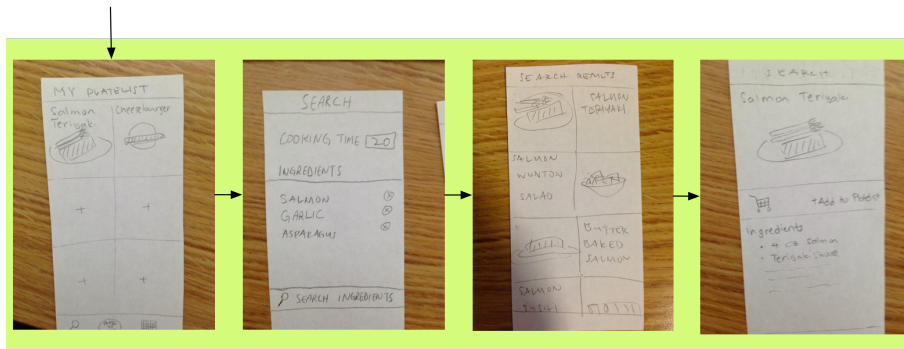


Figure 6: Tasks 1 and 2: platelist creation and meal search flows

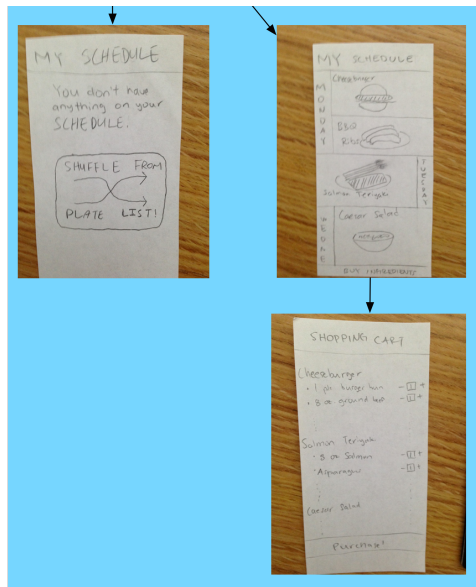


Figure 7: Task 3: meal planning flow