P5 Cycle III: Implementation prototype

PROTOTYPE SKETCH

USERS

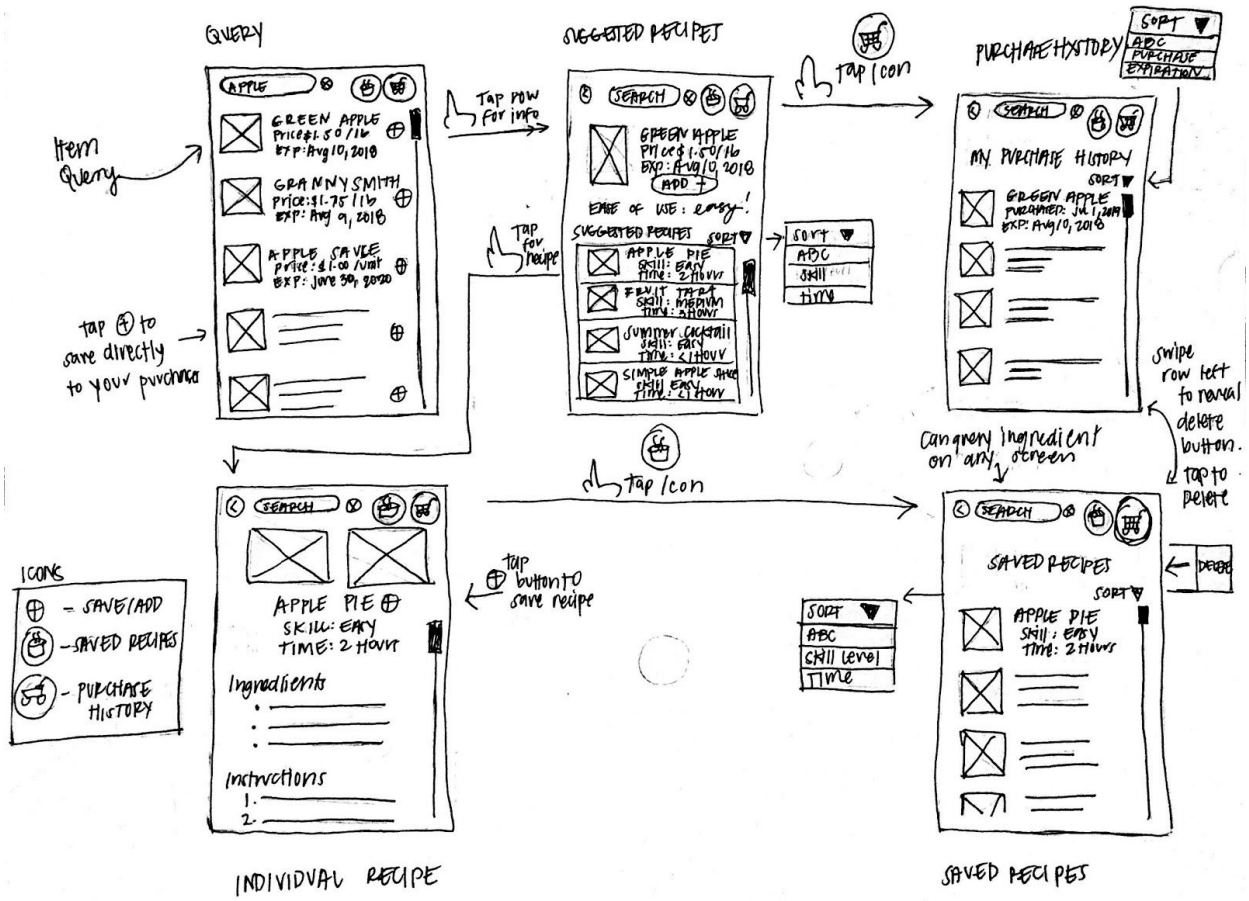
1. 30-40-year-old mom with three kids who uses her phone to write down shopping lists but does not rely on her phone/technology when actually shopping.
2. 50-60 years old man with a family of four. He does not like grocery shopping because he is lazy and overwhelmed by the number of choices at grocery stores. He tends to be forgetful about the things he needs to buy.
3. 25-35 years old woman from France living with a boyfriend. She uses her phone to search for items she needs based on the recipe. Had trouble familiarizing herself with American produce/grocery items.

COMPILED USER NEEDS

1. All of our users need to eat healthily, but they may not be able to when they are busy
2. All need to know the availability of items they are looking for, and the information must be up-to-date and accurate
3. User #3 needs to know how to use a given grocery item/ingredient, as well as the ease and feasibility of using the item, (esp. when she is a busy working professional)
4. All users need stores within close proximity to shop regularly
5. All users need to be able to monitor the freshness of their fridge/pantry items
6. All users need to be able to inspect the freshness of grocery items that they buy; although this is time-consuming, they prefer to inspect in person
7. All users need to have a large enough overall budget/income in order to shop comfortably within a reasonable price point
8. All need to save money by looking for cheap prices, and need prices standardized based on the same unit
9. All need to navigate the store more efficiently without forgetting items they need to buy; coming back to the store just for a forgotten item is a hassle and users prefer to shop less often
10. User #2 needs grocery stores to reduce clutter as a result of the number of choices presented; needs a better way to organize/rank items based on user's priorities
11. Users #1 and #3 need to have a wide selection/variety of items to shop from

12. All users need to have minimal distractions when shopping to be more efficient with their time
13. All users need to know what food their family members would like to eat, but it is a hassle to call their family back and forth while in grocery store
14. User #1 needs to know how to make better purchase decisions, especially when she goes shopping hungry which is when she buys excess food that may be wasted in the end

ROUGH WIREFRAME



Wireframe of query search and saving features of grocery mobile application

<u>Needs addressed</u>: Need 2, 3, 5, 8

1. All need to know the availability of items they are looking for, and the information must be up-to-date and accurate
2. User #3 needs to know how to use a given grocery item/ingredient, as well as the ease and feasibility of using the item, especially when she is a busy working professional
3. All users need to be able to monitor the freshness of their fridge/pantry items

4. All need to save money by looking for cheap prices, and need prices standardized based on the same unit

SUMMARY OF PEER CRITIQUES

For Cycle I, we received two peer critiques. One peer liked our application idea to maintain a diary of grocery trips/perishables with estimated food expirations that the user could monitor. The other peer confirmed this suggestion as well. The feature of showing expiration dates (idea 5) is favored by both peers, and it solves an essential user need (need 5) to reduce food waste and better monitor the food already bought.

We also placed emphasis on the needs of our extreme user (user 3) since the needs of extreme users are often meaningful needs that cannot be uncovered from the average population, while they are also the needs of a wider population. Our extreme user told us that she wished there is a way to know how to use and incorporate a produce item into her diet when she was not familiar with American produce after arriving here from another country. This need is also confirmed by our peers as an important need, and thus we also incorporated idea 3 into our app.

We did not move forth with the Yelp-inspired idea (idea 6) because there are already existing solutions, such as Yelp, that would do a similar job. We also did not pursue the idea of cross-store price comparison because we also considered what our users told us -- they prefer to keep going to a grocery store based on their personal preference and developed familiarity with the store (user #1 said she usually goes to Safeway because of its better layout and her familiarity with the store). Thus, it would not be necessary to compare prices across different stores, as minor price differences will not convince users to switch stores. However, we kept the idea of price comparison by unit since it solves an essential user need, especially for user 2 who spends lots of time comparing prices and wishes for a quick way to compare prices based on the same unit. Therefore, our end result combines idea 3, 5, 7 and it solves user need 2, 3, 5, 8.

PLANNING MODELS

Item	Item name	Short text field
	Price	Floatfield
	Price per ounce	Floatfield
	Purchased date	Datefield
	Expiration date	Datefield
	Skill level	ForeignKey(Skill)
Recipe	Recipe name	Short text field
	Time to cook	Integerfield
	Skill level	ForeignKey(Skill)
	Ingredients (group of items)	ForeignKey(Item)
	Instruction	Long text field
Skill	Skill (for Recipe and Item)	Short text field

Model plan for our Cycle III implementation

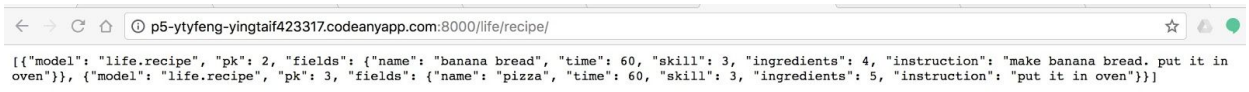
IMPLEMENTATION

Youtube Video: https://www.youtube.com/watch?v=5GklHrQNoGo

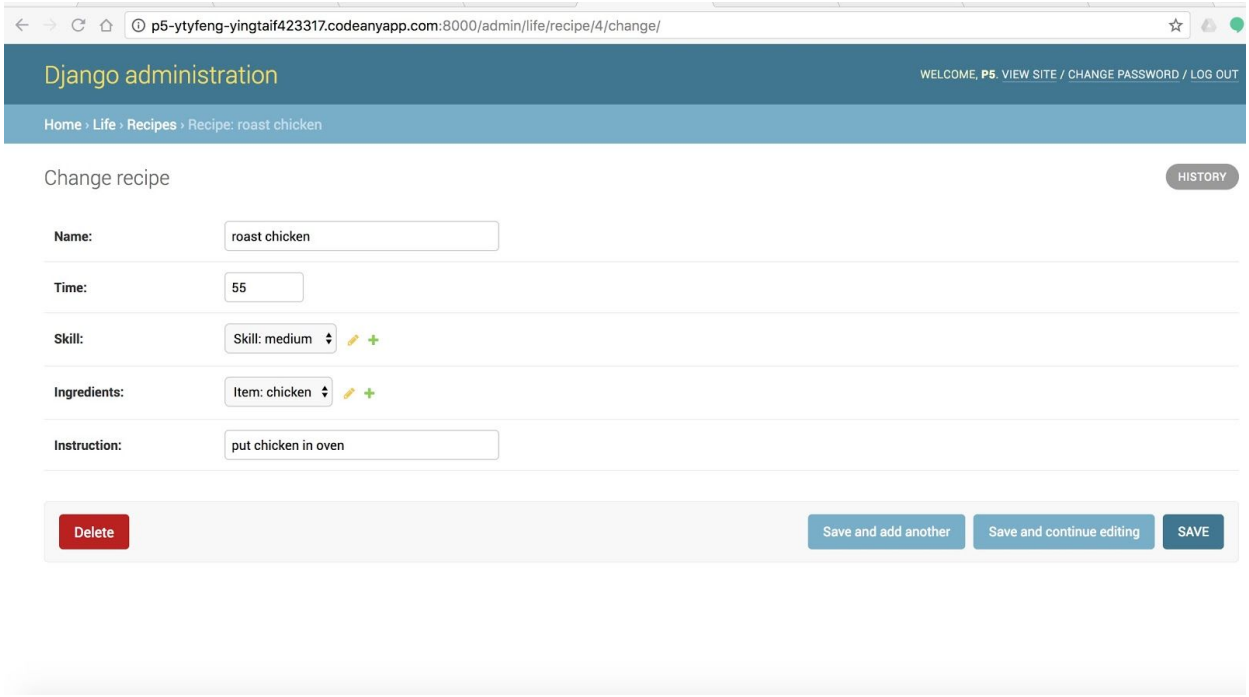
Brief description:
Our implementation prototype allows users to input recipes into the database, so they can plan their meals for the week. It prompts users to think about the time, skill level, ingredients, and instructions needed to make a certain dish, and it also allows users to see the recipes other users have made. It supports the original idea of providing recipes to busy people who may not be familiar with a particular ingredient, and it helps them to plan their meals based on time, skills, and ingredients needed for a recipe. It also accounts the price of each item so it solves the needs of price sensitive users. The feature of showing purchase date and expiration date of each item allows users to keep track of the freshness of the food they already have at home, so they can reduce food waste. We built these components because of our following goals: 1) to reduce food waste by keeping track of expiration dates, 2) to plan out user's meals by detailing the time, skill, and ingredients needed for each recipe, 3) to meet the user needs of price sensitive people by allowing them to compare prices by price per ounce.

To achieve the functionalities we designed in Cycle I, we used a few ForeignKey fields to match each recipe to an ingredient/item, and to match each item and/or recipe to a skill level. We also made three models, Skill, Item, and Recipe, with Item having six properties and Recipe having five properties to make the app more realistic to real life and meet our user needs.

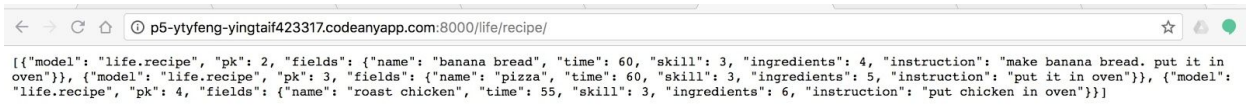
Screenshots:



Pre-user input



User inputting data



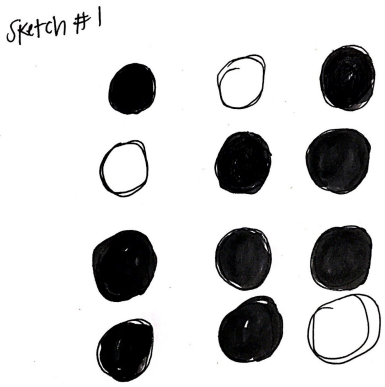
Post-user input

READING RESPONSES AND REFLECTION

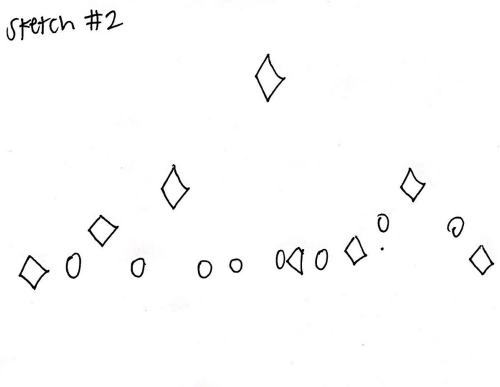
Consider ***Bertin's Original 7 Visual Variables***. Sketch three data visualizations that encode information from our class bubble cursor experiment on Thursday. You should encode your data using one or more visual variables. Describe your design decisions for each data visualization with respect to the visual variables and the data presented. Your resource is the Carpendale reading (link on syllabus).

Documentation

1. **Images of your three sketches**, each with **a description** naming the purpose of your visualization, the data types encoded, and the visual variables used. Describe design decisions using these attributes.

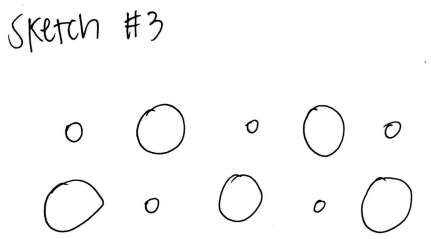


A. ***Value*** -- Darker dots represent hits, lighter dots represent misses. There are more hits than misses, so the representation is much more selective, according to Carpendale. The size of the dots represents the 25px targets.



B. ***Position*** -- The new_expirmentental_results.csv file does not currently represent
an ordered table (alternatively, it is ordered by the newest to oldest data entries, but this is not clear!). Therefore, the entries for different types of cursors appear at

inconsistent times. For a portion of the beginning of the table, the enteries were primarily of the normal cursor, and slowly evened out again. That was the inspiration for sketch #2, where we represented frequency over time by the cursor shapes over time. The normal cursor is represented by the diamond, while the bubble cursor represented by the bubble.



C. ***Size*** -- The most apparent difference between the data is the size of the targets that we were asked to test on. In our last sketch, we represent the two different targets by including a larger circle and a smaller circle, representing 25px and 10px, respectively. The original experiment featured the targets in a grid-like pattern, so we arranged the big and small circles in this way. Additionally, there are an equal number of large and small circles to represent that we tested on the same number of trials (25).

2. ***About Face Chapter 5*** (link on syllabus).

a) Based on your observations, for the most relevant user (to your application) that you observed and/or interviewed suggest 3 goals, one of each goal type in the chapter (e.g., experience, life, end). What in your observations suggests these goals? How does your current prototype support or not support these goals?

The most relevant user to our application is User #3. Three suggested goals are:

- Experience: to be adventurous with food
- Life: Be happy and healthy
- End: Know what's in the food they eat

During our user interviews, User #3 stated that being healthy and her love for cooking motivate her to grocery shop as often as she does. Our current prototype supports the user's goal to be adventurous with food by allowing them to try new recipes. It supports the user's end goal, because recipes outline exact ingredient needs, and thus makes the user confident in what they eat, and ultimately be happier and healthier.

b) We did not create a persona in this project. Instead, we directly generated user needs from our observations. Name at least one similarity and two differences between a persona and the user description you included for Cycle I.

One similarity between a persona and the user descriptions we included for Cycle I is that they both *build consensus and commitment* to the design through depicting our target audience/users through a narrative structure. Our user descriptions also included pictures, much like personas could, that make stakeholders feel more connected to. One difference is that persona's can be used when evaluating designs that have been prototyped (not in a way that replaces user tests, however), while our user descriptions were created before we began brainstorming possible applications to implement. Another difference is that from the reading, personas are determined by the designers to represent specific types of individuals with specific needs. In other words, they're essentially made up, while our user descriptions were based on real people that we observed and interviewed.

LINKS

Codeanywhere Link:
https://codeanywhere.com/s/l/P5mlGAQW5vVCRsPsgCmL2jb76wf4FUVrZTCUhjFTexR8g54CtVefwI87lCh8RuYC
Github: https://github.com/ytyfeng/Meal-Planner
Youtube Video: https://www.youtube.com/watch?v=5GklHrQNoGo
Design Archive: https://www.pinterest.com/pin/734227545475398141/