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A7: User Testing & Redesign

Testing Protocol & Documentation

Hi, _____. My name is _____, and I'm going to be walking you through our application today.

Before we begin, I'm going to cover through some starting procedures and information regarding our task.

As a part of our class assignment, we're asking people to try using a website that we're working on so we can see whether it works as intended. The Session shouldn't take more than 5 minutes and we will be providing you with some starting steps.

The first thing that I want to make clear is that we are testing the site functionality, not the user. You don't have to worry about doing anything "wrong", in face, it'll give us some better insight as to where we should direct our design. You don't have to worry about hurting our feelings; we're only interested in improving our website and user experience, so don't be afraid to be honest.

As you use the site, I'm going to encourage you to think out loud as much as possible: to guide your steps and reasoning as well as what you you're trying to do. Tracing the thought processes is especially important to us as we try to backtrace how our site is being used.

While we are testing, another team member will be recording notable actions and taking notes in a notebook.

If at any point you have questions, please don't hesitate to ask. Do you have any questions so far? . . .
Great, then let's get started.

If you would, I'm going to ask you to sign a simple Participant Consent Form attached to the back. It just says that we have your permission to record your actions and that you reserve the right to leave at any time if you feel uncomfortable.The recording will only be seen by the people working on the project and your identity will remain anonymous.

Before we get starting on our tasks, we're going to present you with some questions based in our needfinding exercise to help set the environment for our procedure. Our website is designed to help users like you improve your cooking and meal preparation, and we would like to first get a general understanding of your current cooking and meal preparation background.

1. Tell me a little about yourself
   a. Age
   b. Ethnicity
   c. Gender
   d. Hometown
2. What is your go-to food (the food that you eat the most regularly)
3. How much do you usually spend on food in a week
4. Do you cook? How Often?
5. Describe a normal day of eating breakfast/lunch/dinner

OK. thank you for answering

Before we begin our task evaluation, we're going to ask you to login and to take a look at our page and tell us what you think about it. Any insights from form to color scheme; scroll if you would like, but try not to click through any pages once you have logged in.

*For testing purposes, we have created an account for you with username "cse170" and password "cogs120".

You(The Participant) will act as a new user and be given three tasks.

- Hand the participants the scenarios, after reading it outloud
- Allow the user to proceed until we don't feel like it's producing any value or the user becomes very frustrated
- Repeat for each task

Task 1:

Find cooking recipes based on what ingredients you currently have in your kitchen.
Imagine you have leftover kale in the fridge and you want to know how you can make use of the leftover kale.

Task 2:

Once you have found a solution for your leftover Kale, try looking around to see if there's any other ways to use your leftover Kale, while saving the solutions you like.

Task 3:

You have used up the remaining Kale in your kitchen. In fact, you have used up all ingredients in your kitchen, and have realized that you no longer want to save anything that you found with this website. Try adjusting your kitchen to fit this scenario.

(During Testing) → Testers record what the user says, paying particular attention to comments the user makes about functionality, user flow, any errors encountered, if the user seems to be navigating through the app well or if the user has some difficulty figuring out what to do, as well as possibly some aesthetic commentary.>

Thank you, that was very helpful! One last question, on a scale of 1-10, how much would you see yourself using this website, given that there was a significantly larger database to choose from.

Do you have any questions for us now? Otherwise, we're done! Thank you again for your help!

Field Notes

User 1: Danny

1. Go to food: Panda Express
2. How much do you usually spend a week: $100 (but "too much")
3. Breakfast - 2 eggs or 3
   Lunch - if get to school early then eat Panda Express
   Dinner - if I stay late, Panda or Burger King
4. I cook as much as possible. Once I am on campus I am too lazy to do anything

Need to fix the clicking out of nav bar to close functionality

quantity of ingredients

being able to unfavorite individual recipes versus having to have to click into the recipe
more space away from logout to prevent accidental logout. or a popup confirmation

make the 'add' button bigger

make it so that no need to go back to kitchen to delete ingredients from recipe lookup

color code what is necessary in the recipe,
color code what i have versus dont have

an overall recipe lookup. (aka dont need to have to input ingredients for
things to show up on recipe lookup)

Final Note: will definitely use it over just googling

User 2: MEGHNA

1. Go to food: Quesadilla
2. A lot of money
3. NO.
4. don't really eat breakfast → lunch at 4PM → dinner at 9PM
Lights the orange

Adding ingredients: "So this is the add button?"
Confused about what to do after entering ingredients.
Make the Plus sign super big to make it more intuitive
Notices that there are ingredients that we didn't put into kitchen.

Make the empty kitchen button a different color.
Needs back button on recipe lookup or directly delete from recipes

Final Note: Could possibly use it. Not good at cooking. I have a lot of leftover eggs.
Have core ingredients laying around that Idk what to use it with.

Simpler recipe.

User 3: Benedict

1. Scrambled egg
2. $80 to $100 a week
3. Yes, maybe 1 every 3 days
4. Breakfast - sometimes scrambled eggs
   Buy something at school (Croutons, or from PC)
   Sometimes skip dinner, but if I don't maybe bake a chicken

What does this do-click on pic of recipe

OR conditional
very user friendly
but maybe depending on the person, use an AND condition in which recipes
show ONLY what you can make.

Remove short description from favorites recipe card

Last question: Most useful thing would be. If I ONLY have these ingredients,
it's a lot harder to satisfy.

Final Note: 4/10 to use, could definitely try it out though

Breakdowns
More readability → our concept model needs to match the mental model of the user → more color coordination and layout flow

**More freedom** → have more options to perform actions in the page rather than multiple re-directs

Photos
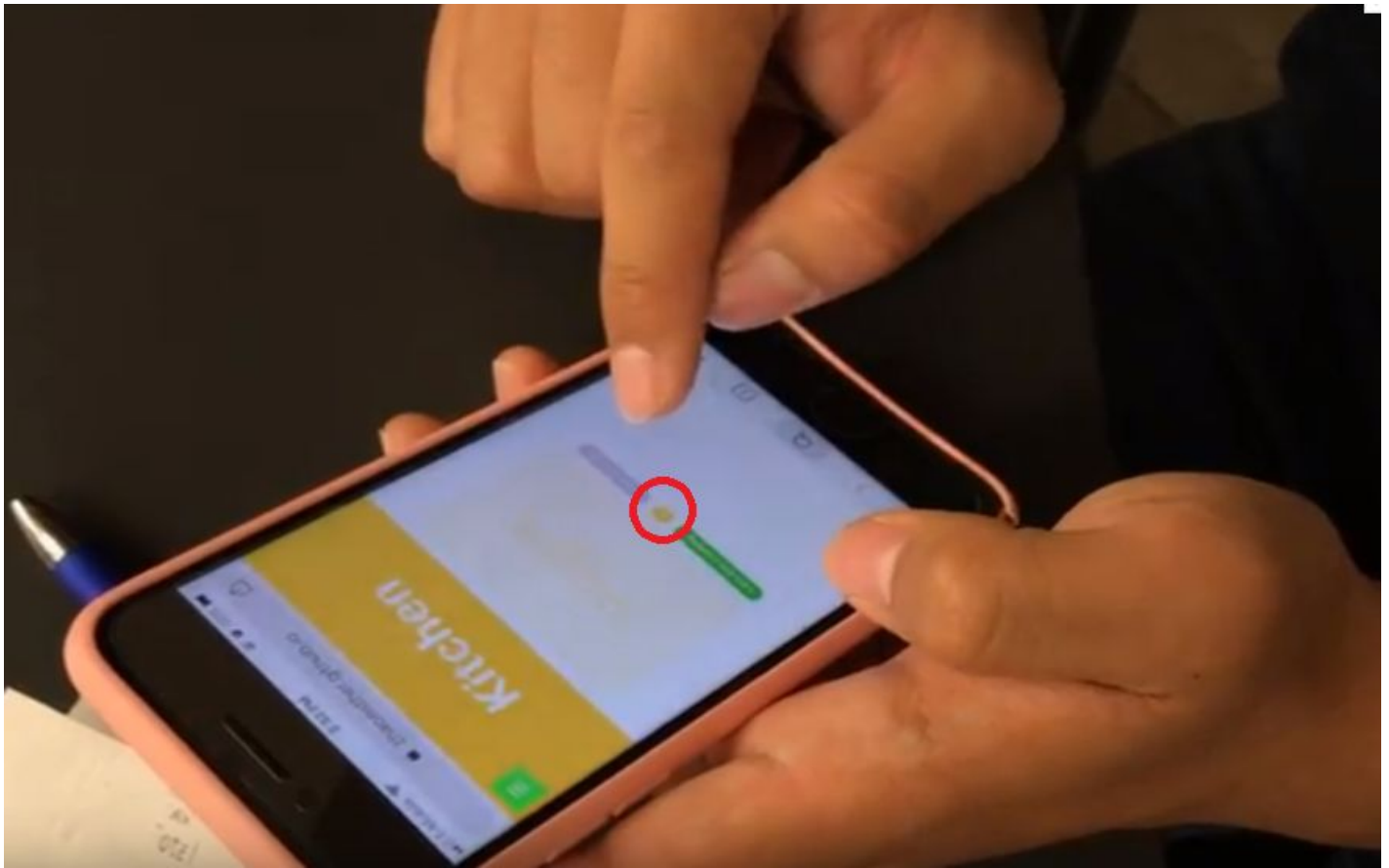
Add button could be bigger → this person had a hard time figuring out how to actually add ingredients to the kitchen, and he felt it was off that the other two buttons weren't useful until something was added
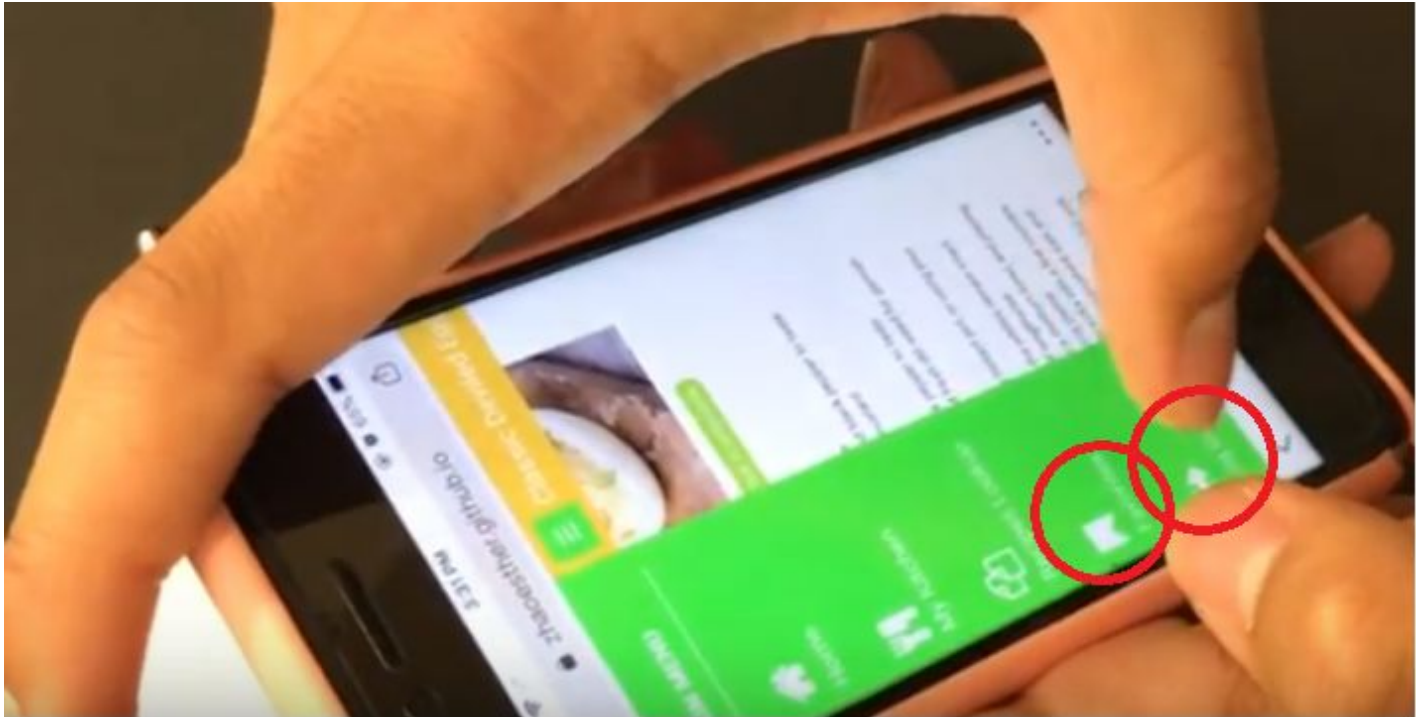
OH SHOOT! Didn't mean to click that → this person accidentally logged out without a warning when trying to click through to the favorites
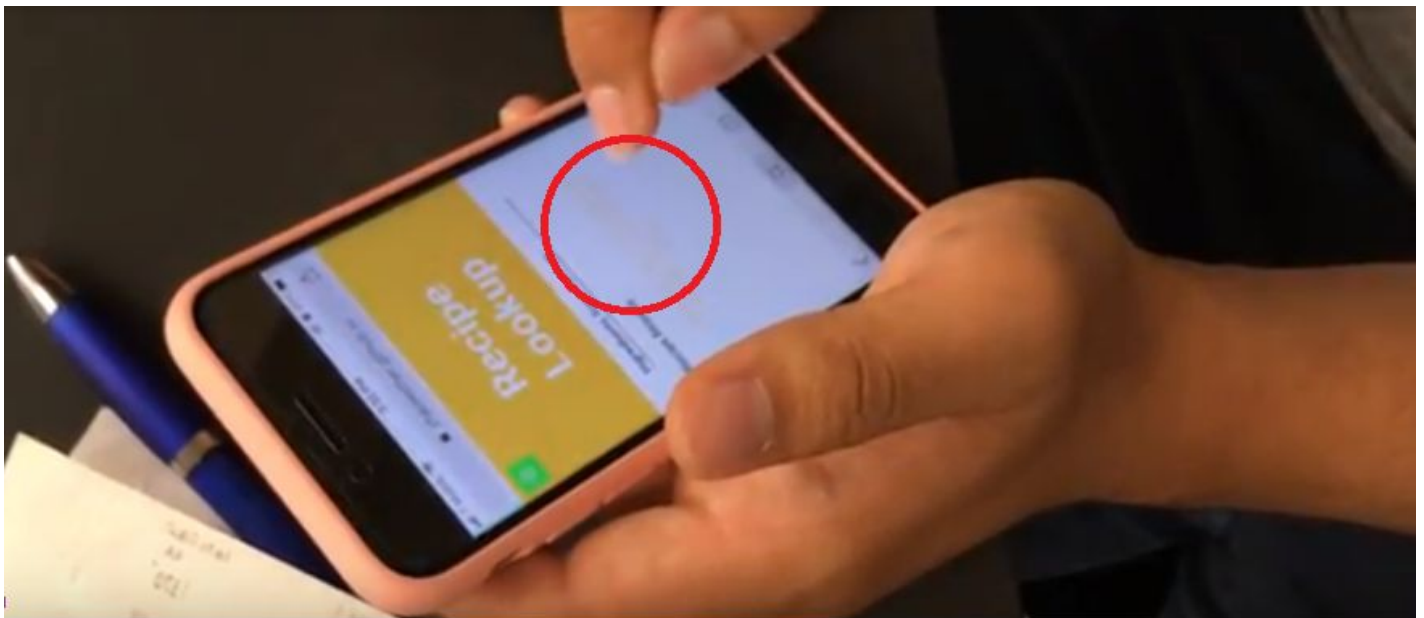
You could click back to the Kitchen? → this user suggested that it would be helpful if there was a direct link back to the kitchen if they did not list any ingredients → but we did have a button but it blended it with the explanation text and wasn't even considered for clicking
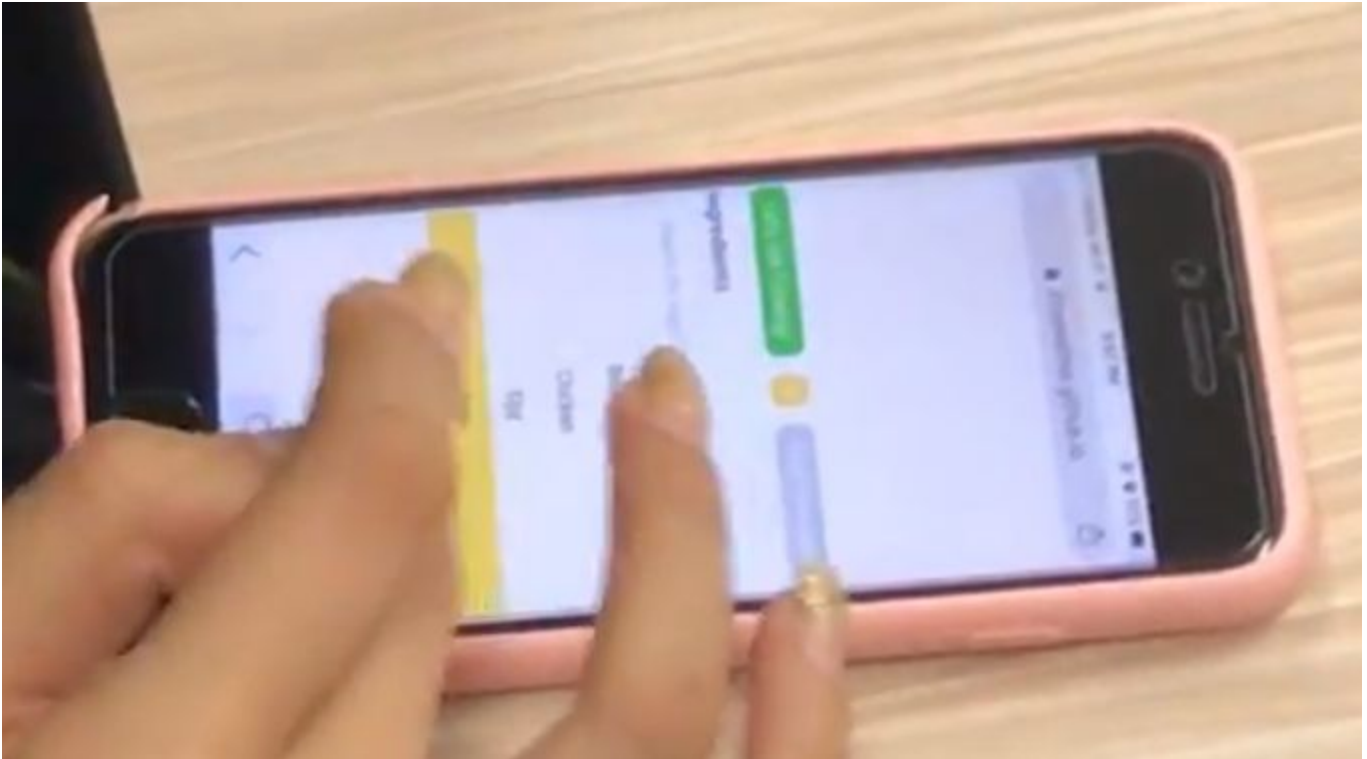
What do I do next? → the app auto-zoomed on itself and blocked out a lot of key features; the user didn't see feedback that her clicking had any effect
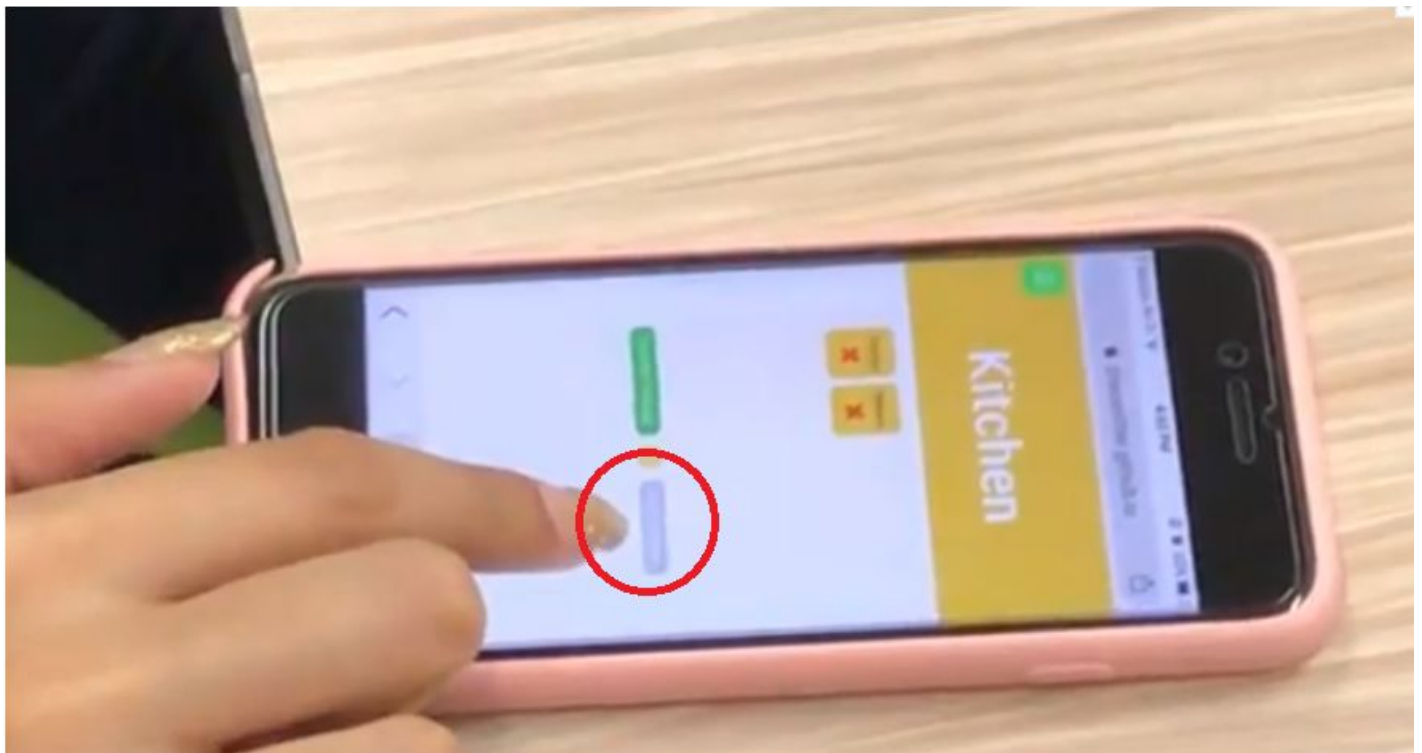
Oh you could click this? → the user wondered why the button was greyed out; usually indicates that an action was inactive or non-functional → color coding on buttons and layout could be better indicated
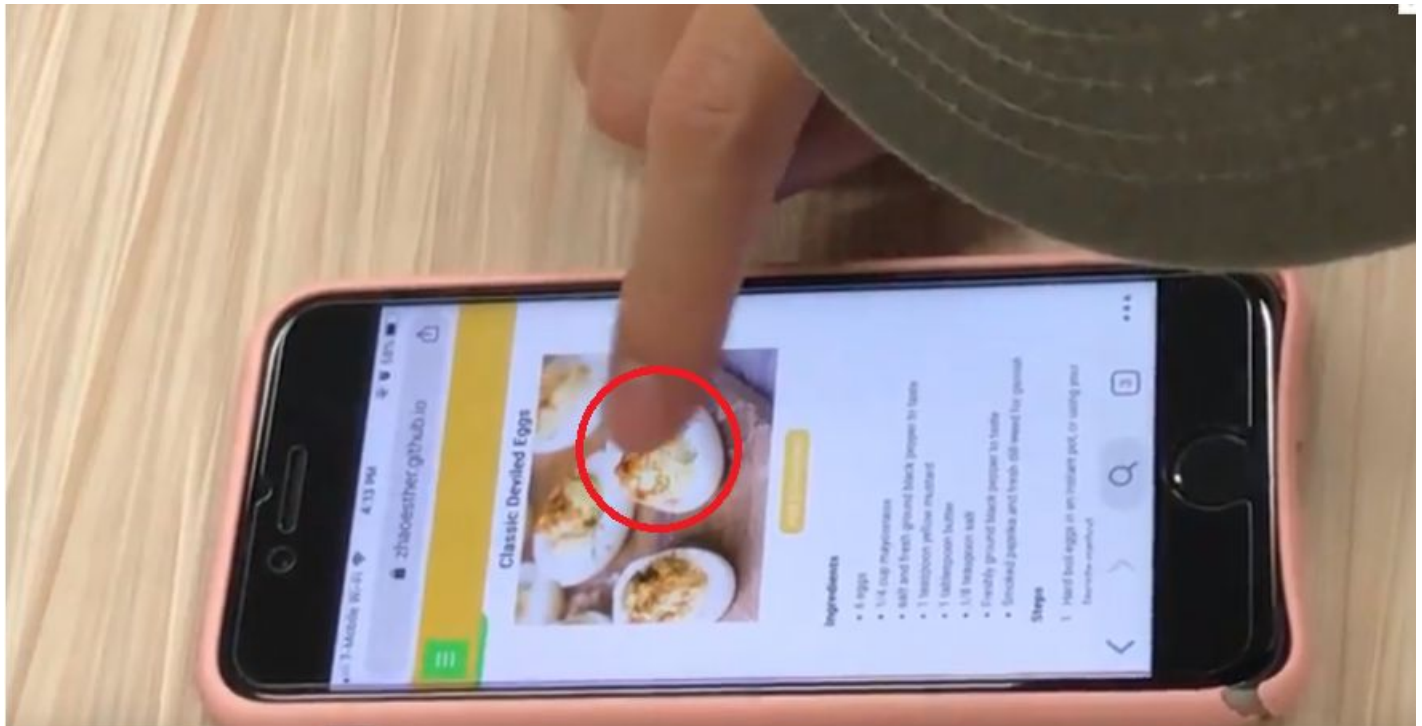
Furiously taps on image → most of our app had images that were clickable, when seeing the task for adding to favorites, the user kept tapping the image to try to favorite (like one would do for instagram)
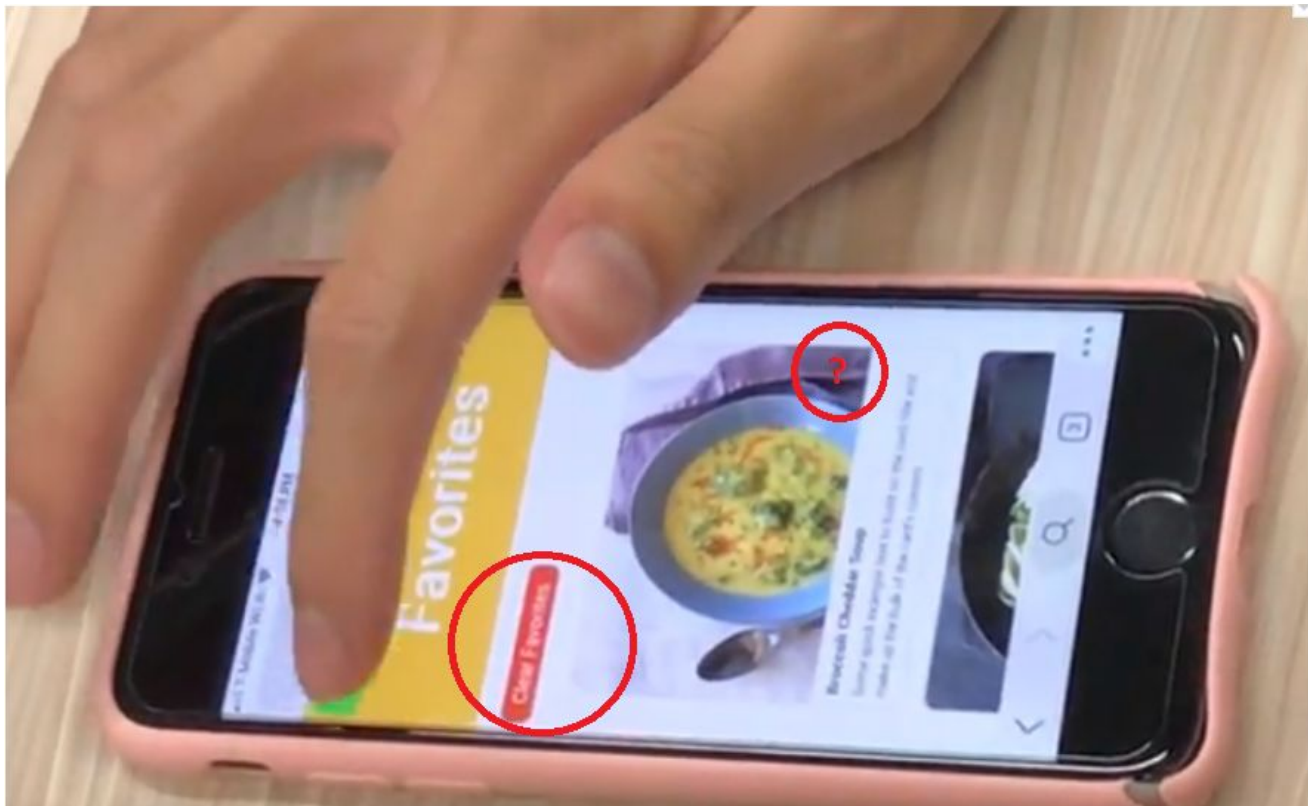
Is there an option to just remove one? → Our user tested the limit of our favorites tab, and wanted to see if he could just remove one and was wondering if there was a way to remove one option while in the favorites tab rather than removing all or clicking back to the recipe page
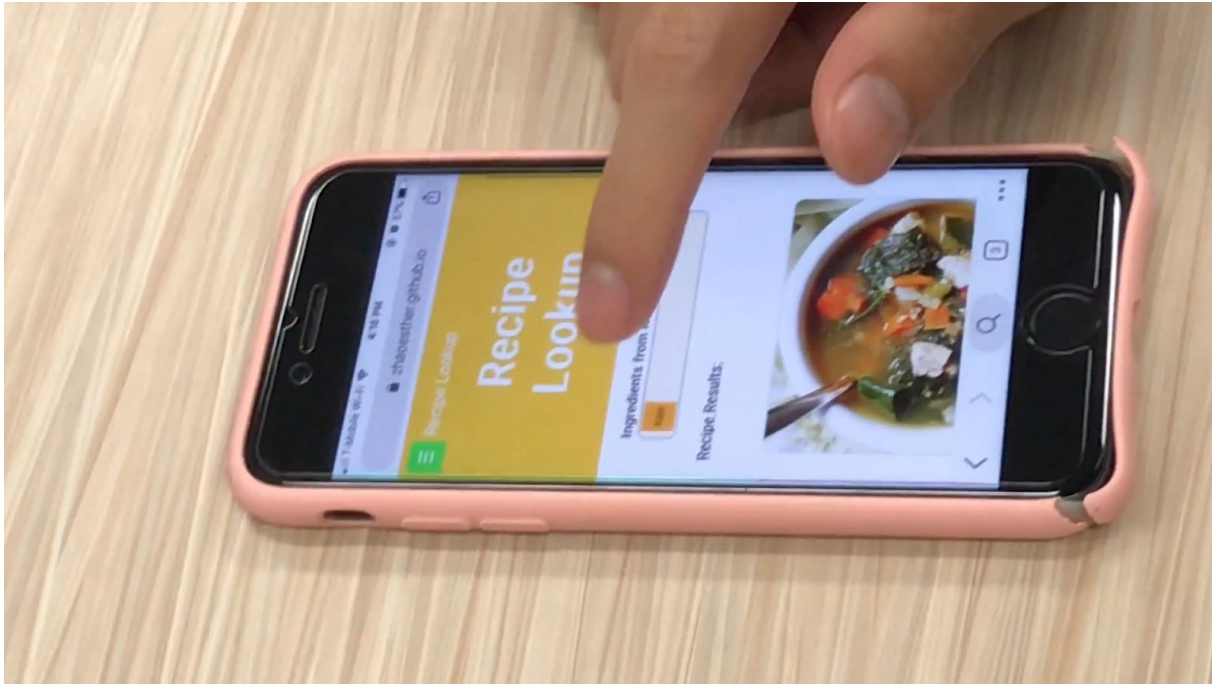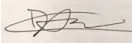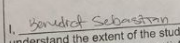
Can I delete these ingredients here? → Our user was wondering if he could modify his kitchen directly within Recipe Lookup, and found that he was redirected to the kitchen.
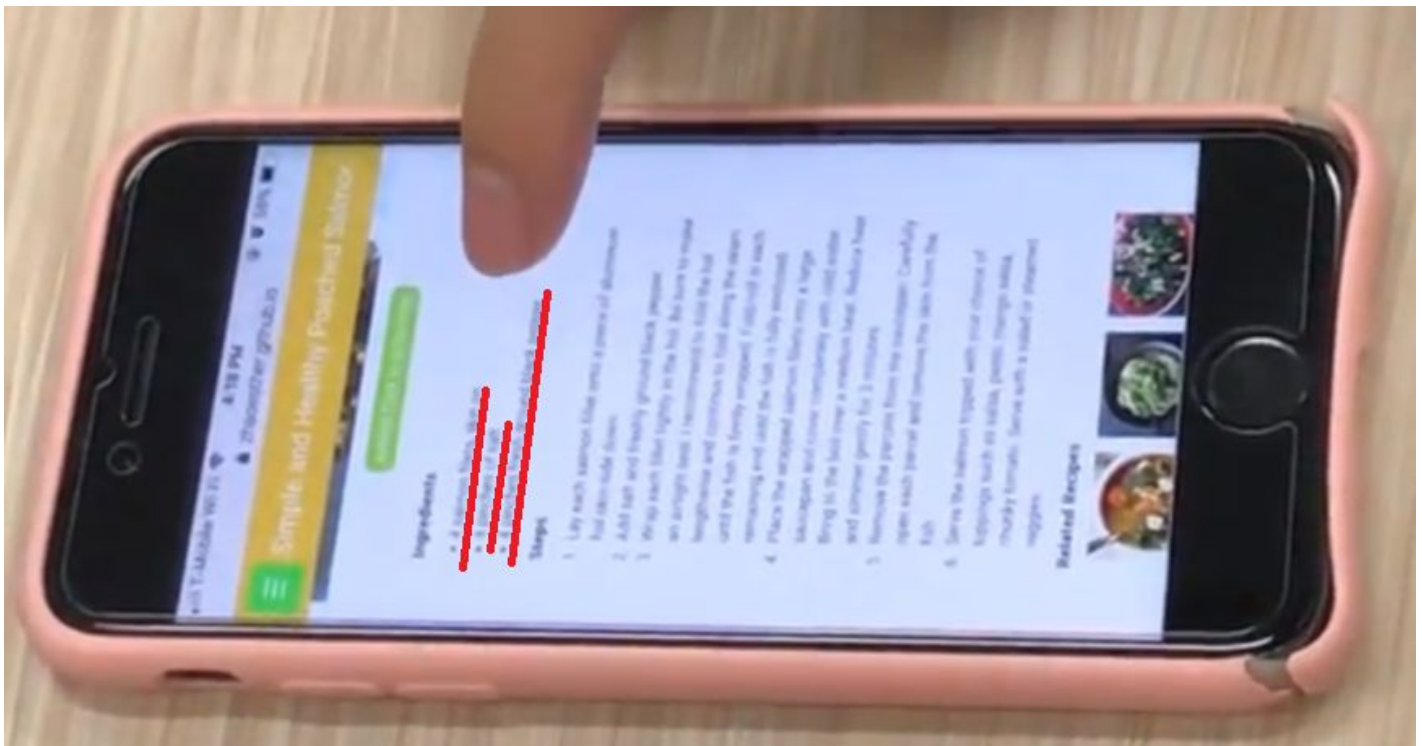
Oh, what if I don't have these ingredients? → our user was concerned that some of the recipe pages we had prepared included recipes in the search that had ingredients that he did no have/look up for, so he would like an indicator

Signed Consent Forms

Planned Changes

Changes done in this Iteration:
- Added alert logout confirmation before logging out to prevent accidental logging out when misclicking (user 1 did this)
- Overhaul of Kitchen button layout/size/style. Add button is too small, and empty kitchen is badly stylized/formatted
- Fixed favorites so that removing a recipe from favorites actually does remove the favorites
- Prevent ingredients from being entered in more than once. An alert box pops up to inform the user that he or she has already entered the ingredient.
- Added margin below related recipes so its not cut off
- Removed short description from recipe card; unnecessary, and was left there with example as remnant from the card template used.
- Implemented major redesign: deleting items within recipe lookup page instead of redirecting to kitchen and having the recipes lookup page update in realtime after refresh.
- Added icons to indicate the ability to delete those items; demonstrate clearly that the user can delete items from the kitchen/ingredient box in recipe lookup

Changes to do in next Iteration:
- Shorten the add message in kitchen; too often people were skipping over it and clicking the lets get cooking button immediately for some reason
- Make the picture in the recipes look more like a picture without any interaction effects.
- Uniform stylistic changes across entire page
- Complete formatting and fix the ingredients in common with kitchen within recipes section. Potentially change to needed ingredients vs ingredients in common

We felt that due to the scope of the project and the difficulty in implementation, we will not be directly making note of the ingredient in common with kitchen and making some noticeable difference in the ingredients list itself. Rather, we will continue with the approach of having a separate section to tell users what ingredients are in common with the recipe.

A6 Prototype (pre testing)

Best viewed in iPhone 6/7/8
Username: cse170
Password: cogs120
Repo: https://github.com/zhaoesther/JEA-KitchenA7
Link: https://zhaoesther.github.io/JEA-KitchenA7/index.html
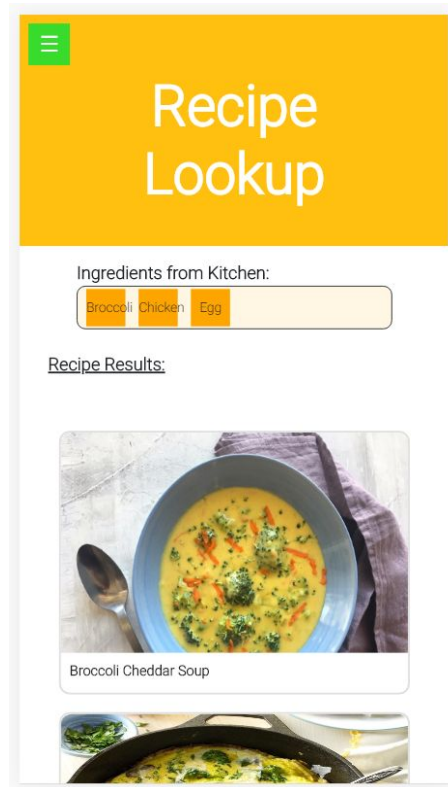
Previously looked like buttons that can be clicked on, but actually are not buttons (entire panel links to kitchen), yet users felt inclined to click on them because they felt that it would be intuitive to remove items from the kitchen via the Recipe Lookup page.

A7 Prototype (post testing with redesign)

Repo: https://github.com/zhaoesther/JEA-KitchenA7-Comparative

Link:https://zhaoesther.github.io/JEA-KitchenA7-Comparative/index.html
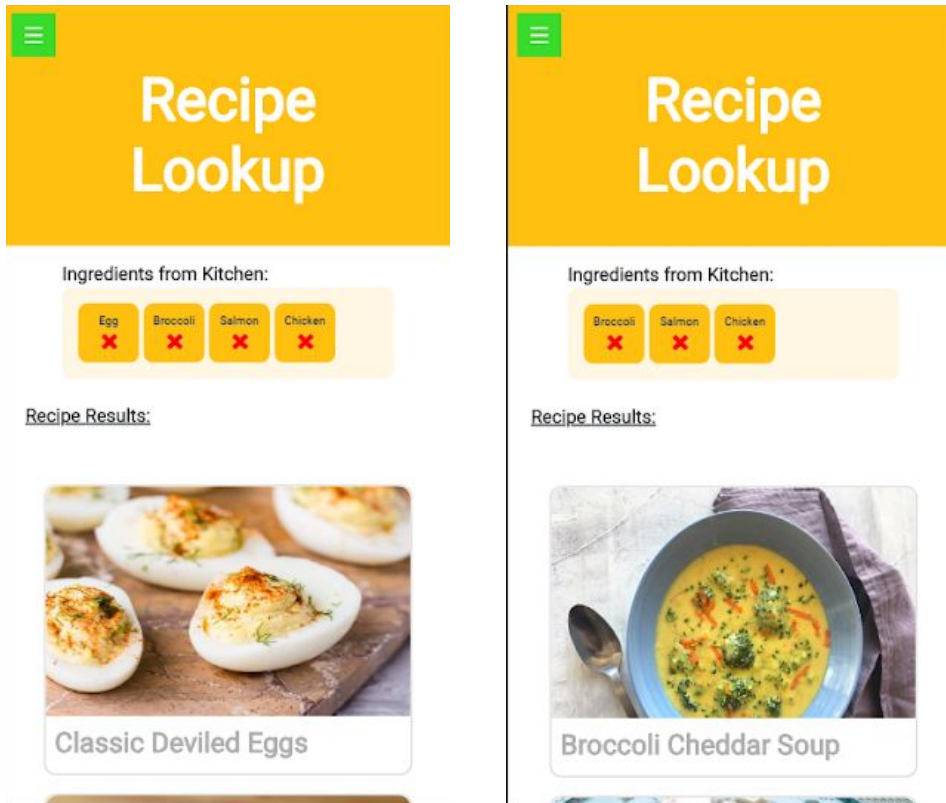
Now, the user can have some access to the kitchen while being in the Recipe Lookup page. The user can have the flexibility to remove items from the Kitchen space, and the Recipe Lookup page will update in real time according to what the remaining ingredients are.

Comparative Evaluation Plans

Our user testing phase yielded an interesting result in the Recipes Lookup page, where when people wanted to delete items from their kitchen when on the recipe lookup page, they clicked the icons of the kitchen, expecting to delete these icons. However, they were instead redirected back to Kitchen, where they had to delete items there. We will utilize A/B testing to ensure that the now added change to delete ingredients directly from the recipe lookup page will improve the user flow and increase efficiency and productivity while using our mobile web site. We also added icons to the ingredients and changed the style to be consistent with the ingredients as seen in the kitchen, to prompt users to know that they could easily delete items directly.

The "A" version will be the original version where ingredients were unformatted and clicking the ingredients panel would redirect to the kitchen. The "B" version will be the updated stylized version with the ability to delete items from the recipe lookup page. We plan to measure results from the A/B testing by recording user responses (scale of 1-10 as well as qualitative verbal responses) to a series of queries regarding the ease and/or comfort of use regarding the direct deletion feature of our site, and the number of times the navbar was used to navigate to the kitchen from recipe lookup, while also asking about various other features of our site to mask the true intent of the measurement questions and reduce demand characteristic confounds.

Hopefully the results of the test will be that users in general found that using version "B" has a slightly better experience in the ease/comfort of use in deleting ingredients from their kitchen storage area. If this is found to be true, then we may also add additional features and shortcuts to help users navigate from page to page or perform different tasks without having to frequently open the navbar. Our primary focus would then be to crush bugs and improve speed and efficiency of our site while improving stylistic elements including aesthetics and readability. If the results are inconclusive, we may still continue to work towards improving speed, comfort, and efficiency, but the changes made would probably be more on the aesthetic side rather than more functionality shortcuts.

Development Plan (CURRENT)

A7: User Testing and Redesign						
Week 8/9	**MUST TASKS**					
	- Read over and make changes to usability script and/or task list if necessary	11/18		5 min	5 min	All
	- test with 1 user	11/20		10 min	10 min	All
	- Use feedback to take note of how we can improve UI design and aesthetic wise (size of things, colors, position of components)	11/21		15 min	10 min	All
	- examine breakdowns, taking notes to refer back to later for write-up	11/21		25 min	30 min	All
	- Facilitate user testing by being the one to explain and moderate the test session	11/21		10 min	10 min	Anderson
	- Test with 2 or more users using our prototype	11/22		30 min	30 min	All
	- Identify residual minor bugs from last week's wrap up of major coding & fix them	11/26		30 min	45 min	Esther
	- Identify more major bugs that require more time to debug and fix	11/26		1 hour	1.5 min	Esther
	- Decide on overall color scheme of the app, stylistic choices	11/26		15 min	20 min	All
	- Write up a list of changes we plan to implement for the final stretch	11/26		40 min	1 hr	All
	- Implement redesign by adding delete indicators and recipe reloads in real time	11/26		1 hr	1 hr	Jonathan
	- Add functionality to let the user know what ingredients they have within a recipe	11/26		30 min	1 hr	Esther
	STRETCH GOALS					
	- Polish aesthetic details with CSS	11/26		1 hr		
	- Use styling to make things more intuitive, such as green for having the ingredient and red for not having the ingredient in every recipe page	11/26		1 hr		

A8: A/B Testing and Finalize					
Week 10	**MUST TASKS**				
	-Perform user testing on at least 9 participants total as a team	12/3		3 hr	All
	-Watch for how users interact differently with the different prototypes	12/3		1 hr	All
	-Determine a methodical way to randomize the order that each user sees each page	12/3		15 min	All
	Analyze quantitative and qualitative data gathered from user testing	12/4		40 min	All
	Compile list of revisions to be made based off of results from test data, including ones that may not eventually be implemented.	12/4		40 min	All
	Polish aesthics using CSS. Make sure resolution adjusts well on different mobile devices	12/5		1.5 hr	All
	Brand the app with official app name	12/6		10 min	All
	Film a 1.5 minute demo video showing the app being used in action with voice narration	12/7		15 min	All
	Edit and publish the video in a link	12/7		25 min	Esther
	STRETCH GOALS				
	Brand the app with a logo and incorporate the graphic into the app	12/7		1 hr	

Development Plan (BEFORE)

DEVELOPMENTAL PLAN							
Week #	To Do	Deadline	Status	Time Estimated	Time Actual	Who is Responsible	Comments
A4: A Skeleton and a Plan							
Week 5	**MUST TASKS**						
	Set up GitHub repository for version control and add teammates for collaboration. Have teammates clone the repo	10/30		10 minutes	5 minutes	Esther	
	Write up Developmental Plan spreadsheet for plan of implementation for the remaining weeks including time estimations and deadlines	10/31		1 hr	1.5 hr	All	
	Review heuristic evaluations from last week to solidify app core functionality and fix any violations of heuristics mentioned	10/31		20 minutes	20 min	All	
	Create wireframe mockup of the home/landing screen using Figma	11/1		30 minutes	1 hour	All	Assume user has already logged in
	Create wireframe mockup of the Kitchen space, displaying layout of ingredients area, add ingredients button, and Find recipes button	11/1		30 minutes	1 hour	Anderson	
	Code up HTML skeleton of links and buttons for each page, leading to dummy placeholder pages for now: - 'Find Recipes' button - 'Favorites' and 'Recents' button - 'My Kitchen' button that leads back to home page - links to placeholder recipe pages	11/1		45 minutes	15 minute	All	
	Code up and flesh out home screen details and functionality using HTML/CSS/JavaScript	11/1		2 hour	3 hours	Jonathan	
	Code up and flesh out kitchen selection page using HTML/CSS/JavaScript	11/1		2 hour	2 hours	Esther	
	Set up GitHub pages to publicly host the application	11/1		5 min	5 min	Esther	
	STRETCH GOALS						
	Compile a list of common cooking ingredients to hardcode into the ingredient query database	11/2		30 minutes			
	Start brainstorming potential app name	11/3		30 minutes	5 mins	All	

A5: Core Implementation

Week 6	MUST TASKS						
	- Review our Point of View and summarize POV and thinking about the inspirations we are using to develop our app in one paragraph	11/4		20 min	15 min	Jonathan	
	- Review and update developmental plan based on previous week's progress	11/4		15 min	10 min	All	
	- Create Navigation System (toolbar/back/home)	11/5		30 min	2 hrs	Jonathan	
	- Create Fridge/Pantry (Kitchen) space	11/6		1 hour	30 min	Jonathan	
	- Implement pop-up slider for user input of ingredients	11/7		45 minutes	40 min	Esther	
	- Implement matching ingredient suggestions based on what user has typed	11/7		30 minutes	35 min	Esther	
	- Implement deleting ingredients/ clearing kitchen space functionality	11/7		30 minutes	2 hours	Jonathan	
	- Trash button interaction/selection reset	11/7		20 min	5 min	Esther	
	- Add Kitchen ingredients list when searching for recipes	11/7		40 min	30 min	Anderson	
	- Create detailed recipe steps page for a couple recipes (hardcode)	11/8		20 min	10 min	Anderson	
	- Create detailed ingredients page for a couple recipes (hardcode)	11/8		20 min	20 min	Anderson	
	- Have related recipes from chosen recipe	11/8		20 min	10 min	Anderson	
	- Create (fake) login feature (name, password) that, upon submit, will lead to the home page	11/9		25 min	35 min	Esther	
	- Create logout button that will lead to the login page	11/9		5 min	5 min	Esther	
	STRETCH GOALS						
	- Create icons for common ingredients (on going)				10 min	Jonathan	
	- Implement favorites recipes				2 hour	Jonathan	
	- Initial User Guide						
	- Add way for users to submit their own recipes/modifications						
	- Create simple graphics for ingredients				1 hour	Esther	

A6: Ready for Testing

Week 7	MUST TASKS						
	- Implement working login system	11/12		2 hour	1 hour	Esther	
	- Use Google Device mode to test mobile web app dimensions	11/12		15 min	10 min	Anderson	
	- Test our app on our own iPhone 6/7/8	11/12		15 min	5 min	All	
	-Implement URLSearchParams for querying specified recipe	11/14		45 min	2 hour	Esther	
	- Implement Local storage for storing favorites/recipe details/recipes/etc.	11/13		2 hour	7 hours	Jonathan	
	- Complete commenting functionality	11/13		2 hour			Moved to stretch goals
	- Add quantity feature allowing users to quantify amount of ingredient in Kitchen	11/7		30 min			Moved to stretch goals
	-Complete Related Recipes Function template	11/13		45 min	1.5 hour	Anderson	
	- Complete favorites	11/14		45 min	2 hour	Jonathan	
	- develop a usability script for user testing	11/14		1 hour	1 hour	Anderson	
	- create tasks for the user to perform in user testing	11/15		15 min	10 min	Anderson	
	- create a recipe search algorithm	11/15		1 hour			Moved to stretch goals
	-Write a 2-sentence description of a task that we'd like the TA to try when grading this assignment	11/15		5 min	5 min	Esther	
	-Update ingredients list when searching for recipes	11/15		1 hour	1 hour	Jonathan	
	-Emptying Feature for Recipes/Kitchen/Favorites	11/15		30 min	45 min	Jonathan	
	-Handlebar Functionality and created templates	11/15		2 hour	5 hour	All	
	STRETCH GOALS						
	- Being polishing graphics and aesthetics using CSS/Bootstrap					All	
	- Commenting						
	- create a recipe search algorithm						
	- Add quantity feature allowing users to quantify amount of ingredient in Kitchen						

A7: User Testing and Redesign							
Week 8/9	**MUST TASKS**						
	- make changes to usability script and/or task list if necessary	11/18				All	
	- test with 1 user	11/20				All	
	- Use feedback to improve UI	11/21				All	
	- examine breakdowns	11/21				All	
	- identify pain points	11/21				All	
	- Test with 2 or more users	11/22				All	
	STRETCH GOALS						

A8: A/B Testing and Finalize							
Week 10	**MUST TASKS**						
	Set up A/B test with Google Analytics	11/25				All	
	Recruit at least 20 online users	11/26				All	
	Allow a minimum of 24 hours to receive data back from Google Analytics	11/27				All	
	Analyze A/B test data	11/29				All	
	Compile list of revisions to be made based off of results from test data	11/29				All	
	Polish aesthics	11/29				All	
	Brand the app - come up with an app name	11/29				All	
	STRETCH GOALS						