

Usability Study Report for CanYouCookIt app

Author: Katerina Bosko and Anshul Mathew

Application scope

Application description:

CanYouCookIt helps you to find the matching recipes based on the list of ingredients you have at home.

Users - Target audience:

- Students:
 - Being a college student myself, I understand the pains of learning how to cook coming from a background with no experience in cooking. This app will provide some structure, guidance and serve as a good starting point for any student
- Cooking Enthusiasts:
 - This app will also appeal to people who are genuinely interested in cooking by providing them the necessary info to get started and also match recipes based on what ingredients they already have
- Chefs:
 - The app allows chefs to discover dishes from international cuisines that they are not familiar with

Data description: (what data is stored and displayed)

We have not implemented the authentication, so no PII (personally identifiable information) is stored. The data that is stored is whatever the ingredients the users add to their inventory and whatever the recipes they either create themselves (including optional images) and/or they choose to save from the search results.

Main tasks - use cases: (specific, measurable, concrete)

- T1: Add ingredients on inventory page
- T2: Search for a recipe based on this ingredients
- T3: Add recipes to your recipes collection
- T4: Check your recipes collection
- T5: Add new custom recipe
- T6: Update the custom recipe
- T7: Delete recipes
- T8: Delete Ingredients

Experiment

See Appendix for the script that was used when conducting usability studies.

Preparation

Introduction

- Welcome participants
- Ask for consent to record
- Ask to think out loud
- Remind them that they aren't being evaluated, and that they can leave at any time
- Ask participant to think like the target audience

Prepare demographics questions (offer option to refuse to answer any of the questions. Only include relevant questions for the target audience)

Prepare recording setup (audio, video and screen)

Prepare Script of the tasks to be read to participants:

- Script for intuitiveness (initial approach)
- Script for T1
- Script for T2
- Script for T3
- ...

Prepare Post questionnaire Likert Scales

- How effective was the application for T1
- How intuitive/easy to use was the application for T1
- How effective was the application for T2
- How intuitive/easy to use was the application for T2
- How effective was the application for T3
- How intuitive/easy to use was the application for T3
- ...
- How effective was the application overall
- How intuitive/easy to use was the application overall
- Any final comments suggestions of improvement

Experiment Notes Katerina

Participant 1

Demographics answers:

- Male
- Age: 35-40
- Cooks from time to time; would be interested in searching for recipes online

Detailed notes:

- **Initial approach:**
 - Didn't answer the question directly, just described what he saw:

"I like the color of it and with this icon I can understand what this site is about. The title helps me a lot. And now I see there's a lot of explanation about how to use this app. I guess this is very helpful." - 3:10-3:35
 - Noticed the footer and thought "Created with ❤" is very funny
- **T1: Add ingredients on inventory page**
 - Started adding new ingredients even before the task was announced
 - Completed this task very fast - 5:50
- **T2: Search for a recipe based on the ingredients**
 - Pointed out that there are keywords "Add Item to search" - 6:10
 - Completed this task very fast
 - Understood the search results correctly (i.e. the recipes returned are based on ingredients chosen)
 - Noticed that for some recipes "No instructions are provided" - 8:00
- **T3: Add recipes to your recipes collection**
 - Figured out that you need to press "+" button
 - Confused about where it is being added to - 08:10
- **T4: Check your recipes collection**
 - Confused where to look for the added recipes, started browsing different links - 8:40
- **T5: Add new custom recipe**
 - Completed the task pretty fast
 - Noticed the logical error "No ingredients provided" (which was the result of leaving one of the input fields in ingredients list blank) - 9:30
- **T6: Update the custom recipe**
 - Figured out how to complete this task pretty fast - 10:20
 - Confused about not being able to remove ingredients (esp. the one that said "No ingredients provided" - 10:40

- Attempted to delete an ingredient by removing the text, but the action results into “No ingredients provided” - 11:00
- **T7: Delete recipes**
 - Completed the task very fast
- **Extra:**
 - When answering “How easy was it to add recipes to your collection?”, commented “*Was not clear about where it added to*”
 - When answering “How easy was it to update the custom recipe?”, commented “*probably need to improve removing of ingredients*”
 - When answering “How intuitive/easy was it to use app overall?”, commented “*Yeah, it's pretty good. I had only one trouble finding my recipes. But it's still possible because you have a nice app up there*”
 - “*The page is great and I like it. It was pretty easy to use it*” - 15:00

Post-test questionnaire results (Likert scales):

- | | |
|---|---|
| ● T1: Add ingredients on inventory page | 5 |
| ● T2: Search for a recipe based on this ingredients | 5 |
| ● T3: Add recipes to your recipes collection | 4 |
| ● T4: Check your recipes collection | 5 |
| ● T5: Add new custom recipe | 5 |
| ● T6: Update the custom recipe | 3 |
| ● T7: Delete recipes | 5 |
| ● How intuitive/easy was it to use the app overall? | 4 |

Any other suggestions on how we can improve the app?

Please add possibility to removing ingredients, make it clear where my favorite recipes are

Participant 2

Demographics answers:

- Male
- Age: 25-30
- Cooks at home basic stuff, is interested in searching for recipes online

Detailed notes:

- **Initial approach:**
 - Guessed the app is about cooking based on the app's name "CanYouCookIt"
"Maybe you want to tell somebody how to cook something" - 2:25 min
- **T1: Add ingredients on inventory page**
 - Was surprised at first that you need to add new ingredients by clicking first on dropdown items and then "Add" button, figured out this very fast - 5:10 min
- **T2: Search for a recipe based on the ingredients**
 - Didn't understand the question at first, after rephrasing completed the task very confidently and fast - 6:50 min
 - Understood the search results correctly (i.e. the recipes returned are based on ingredients chosen)
- **T3: Add recipes to your recipes collection**
 - Was totally confused about "+" button in Search results page - 8:00 min
 - Tried navigating back, which led to Home page which confused even more
- **T4: Check your recipes collection**
 - Navigated to Recipes page after a hint - 8:25
- **T5: Add new custom recipe**
 - Clicked on "+" button immediately before a task was given (probably in continuation from T4, since both buttons look as "+")
 - Started typing ingredients through a comma - 9:00 min
 - Was surprised to discover that you need to type ingredients in each input form separately - 10:00 min
- **T6: Update the custom recipe**
 - Noticed immediately the tooltip "Double click to edit" and was able to complete the task pretty fast - 13:00 min
- **T7: Delete recipes**
 - Explained that you need to select first and then hit the delete button
 - Asked for confirmation before deleting
 - Completed this task very fast - 13:20
- **Extra:**
 - *"I like your app, it's a really good app"* - 17:20

Post-test questionnaire results (Likert scales):

- T1: Add ingredients on inventory page 5
- T2: Search for a recipe based on this ingredients 5
- T3: Add recipes to your recipes collection 5
- T4: Check your recipes collection 5
- T5: Add new custom recipe 5
- T6: Update the custom recipe 4
- T7: Delete recipes 5
- How intuitive/easy was it to use the app overall? 4

Any other suggestions on how we can improve the app?

Updating ingredients should include adding and deleting new items to the custom recipe

Participant 3

Demographics answers

- Female
- Age: 35-40
- Would like to learn more how to cook from different recipes

Detailed notes

- **Initial approach:**
 - Figured out what the app is about by reading the provided info - 2:45
 - *"Your description here, the first sentence actually, made me think that's matching recipes based on the ingredients. (...) Your keywords that just clicked right away. (...) It's a really good description for your app."* - 03:27
- **T1: Add ingredients on inventory page**
 - Was confused about adding ingredients (tried adding tomatoes but add button is disabled unless you choose from dropdown) - 04:50
 - Because of confusion, started adding other ingredients to the search and search for recipes
 - Figured out how to add an ingredient on the second try - 5:50
- **T2: Search for a recipe based on the ingredients**
 - Completed the task very fast (but see notes for T1)
 - Understood the search results correctly (i.e. the recipes returned are based on ingredients chosen)
- **T3: Add recipes to your recipes collection**
 - Completed the task very fast - 07:10
- **T4: Check your recipes collection**
 - Completed the task very fast - 07:30
- **T5: Add new custom recipe**
 - Figured out how to do the task very fast - 7:50
 - Started typing ingredients through a comma - 8:20
 - Was surprised to discover that you need to type ingredients in each input form separately - 8:30
 - "Do you do just ingredient by ingredient? Or can you add them as a batch?" - 8:40
- **T6: Update the custom recipe**
 - Was confused at first how to do it, started looking for a clickable button - 9:20
 - Noticed after some time the tooltip "Double click to edit" and completed the task - 9:40
- **T7: Delete recipes**
 - Completed the task very fast - 10:00
 - Asked for confirmation before deleting

- **Extra:**
 - “It was pretty easy. Now I’m hungry and want to eat” - 12:20

Post-test questionnaire results (Likert scales):

- T1: Add ingredients on inventory page 5
- T2: Search for a recipe based on this ingredients 5
- T3: Add recipes to your recipes collection 5
- T4: Check your recipes collection 5
- T5: Add new custom recipe 5
- T6: Update the custom recipe 5
- T7: Delete recipes 5
- How intuitive/easy was it to use the app overall? 5

Any other suggestions on how we can improve the app?

Add a secondary option to update custom recipes via a new button by the Delete button

Experiment Notes Anshul

Participant 1

Demographics answers:

- Male
- Age: 26
- Doesn't Know how to cook; would be interested in searching for recipes online and learning

Detailed notes:

- **Initial approach:**
 - User notices the page name and relates it to cooking.
 - Proceeds to notice the empty add ingredients text box.
 - Initially sees the find recipes button is not sure how to use it
 - I did feel that he was nervous during the entire process and could have potentially affected his experience of the app
- **T1: Add ingredients on inventory page**
 - Understands that he needs to add item to search
 - Confirms that it has been added
 - Mentions it was quite easy
- **T2: Search for a recipe based on the ingredients**
 - Completed the task very fast
 - Proceeds to explore search results
 - Understood the search results correctly (i.e. the recipes returned are based on ingredients chosen)
 - Understands that Its a recipe application
 - Proceeds to explain what he thinks of the app
- **T8: Delete ingredients on inventory page**
 - Strongly agrees that deleting an item is easy
- **T3: Add recipes to your recipes collection**
 - He didn't quite notice that there is a recipes tab where he could view saved recipes
 - Slightly confused about the recipes page but later seemed to figured it out
 - Plus button wasn't easy to recognize
- **T4: Check your recipes collection**
 - Seemed surprised that a recipe was added , possibly because UI did not provide any feedback
 - The process was easy
- **T7: Delete recipes**
 - Everyone recognizes trash can as universal concept for deletion, so did he
 - Again no feedback was provided to user that it was deleted so he had to scroll to get a confirmation that in fact it was deleted

Post-test questionnaire results (Likert scales):

- | | |
|---|---|
| ● T1: Add ingredients on inventory page | 5 |
| ● T2: Search for a recipe based on this ingredients | 5 |
| ● T3: Add recipes to your recipes collection | 4 |
| ● T4: Check your recipes collection | 5 |
| ● T7: Delete ingredients | 4 |
| ● T8: Delete ingredients | 5 |
| ● How intuitive/easy was it to use the app overall? | 4 |

Any other suggestions on how we can improve the app?

Please add a note in the inventory page saying that only if we have ingredients in it we should be able to search for recipes.

Make the Plus button more prominent

Participant 2

Demographics answers:

- Male
- Age: 21
- Cooks from time to time; would be interested in searching for recipes online ,Student

Detailed notes:

- **Initial approach:**
 - Goes to the about page to understand it better
 - Quickly picks up on the theme of the website
 - Mentions that the colour scheme is quite easy on the eye
 - Hovers over the add button immediately
 - Understands that the first step is to add ingredient before searching for recipes
- **T1: Add ingredients on inventory page**
 - Faced very little resistance to adding items in the inventory
 - Adds more ingredients to get comfortable with the ui
- **T8: Delete ingredients on inventory page**
 - Conveys that deleting ingredients is a straightforward process and proceeds to delete items
- **T2: Search for a recipe based on the ingredients**
 - Completed the task very fast
 - Mentions he doesn't like italian food
 - Executing task was not difficult , however he did not seem happy with the results
 - Finds out a japanese dish that he wants to add after exploring the page

- **T3: Add recipes to your recipes collection**
 - Mentioned that he would either write it down or copy the text from the page
 - Participant seemed like he did not know that there was a mechanism by which he could perform the save action from the UI
 - He felt mostly neutral on the process
 - Participant did mention that there was no feedback provided from the UI that the recipe has been added
 - Later discovers the plus button
- **T4: Check your recipes collection**
 - Not directly obvious as to how to check the recipe is what I got from the user
- **T7: Delete recipes**
 - Mentions it's not complicated
- **T8: Delete ingredients**
 - Mentions it's not complicated

Post-test questionnaire results (Likert scales):

- | | |
|---|---|
| ● T1: Add ingredients on inventory page | 5 |
| ● T2: Search for a recipe based on this ingredients | 4 |
| ● T3: Add recipes to your recipes collection | 4 |
| ● T4: Check your recipes collection | 5 |
| ● T7: Delete recipes | 2 |
| ● T8: Delete ingredient | 5 |
| ● How intuitive/easy was it to use the app overall? | 4 |

Any other suggestions on how we can improve the app?

Please improve the quality of search results. He does admit that the number ingredients and the spread of the ingredients chosen could potentially affect the quality of the search

Participant 3

Demographics answers:

- Male
- Age: 21
- Cooks from rarely; would be interested in searching for recipes online ,Student

Detailed notes:

- **Initial approach:**
 - Having more familiarity with computer systems in general , he was able pick up on the utility of the website just by looking at the keywords on the screen very quickly
 - He seemed very relaxed about the experience as compared to previous participants
 - Discovers the suggestions tab from the add
- **T1: Add ingredients on inventory page**
 - Faced very little resistance to adding items in the inventory
 - Mention it self explanatory reason
- **T8: Delete ingredients on inventory page**
 - Faced very little resistance to deleting items in the inventory
 - Highlights that it was done in one click
 - Performed the action in record time as compared to other users
- **T2: Search for a recipe based on the ingredients**
 - Completed the task very fast
 - Understood the search results correctly (i.e. the recipes returned are based on ingredients chosen)
 - I did feel however that the participant was not happy with the quality of the search results
- **T3: Add recipes to your recipes collection**
 - Showed relatively moderate to high confidence adding the recipe
 - Participant did mention that there was no feedback provided from the UI that the recipe has been added
- **T4: Check your recipes collection**
 - He mentions that some feedback must be provided from UI for checking recipe collection after it has been added
 - However, Just checking whether the recipe has been added as an individual task seemed straightforward and he showed little resistance to accessing his recipes collection
- **T7: Delete recipes**
 - Mentions that the trash can button is a universal button for delete
 - Asked for confirmation before deleting
 - Shows low resistance
 - Suggests providing more feedback from the ui perhaps in the form of a tooltip

Any other suggestions on how we can improve the app?

- The search bar doesn't seem to be responsive when the words are capitalized
- The suggestions provided by the add ingredients search bar don't seem to have organization (perhaps he meant the alignment was not proper)
- Points out that it would be easier for the user to have ingredients presented as pages and rather not an infinite scroll

Post-test questionnaire results (Likert scales):

- T1: Add ingredients on inventory page 5
- T2: Search for a recipe based on this ingredients 5
- T3: Add recipes to your recipes collection 4
- T4: Check your recipes collection 5
- T7: Delete recipes 4
- T8: Delete ingredient 5
- How intuitive/easy was it to use the app overall? 4

Summary of Responses - Katerina's participants:

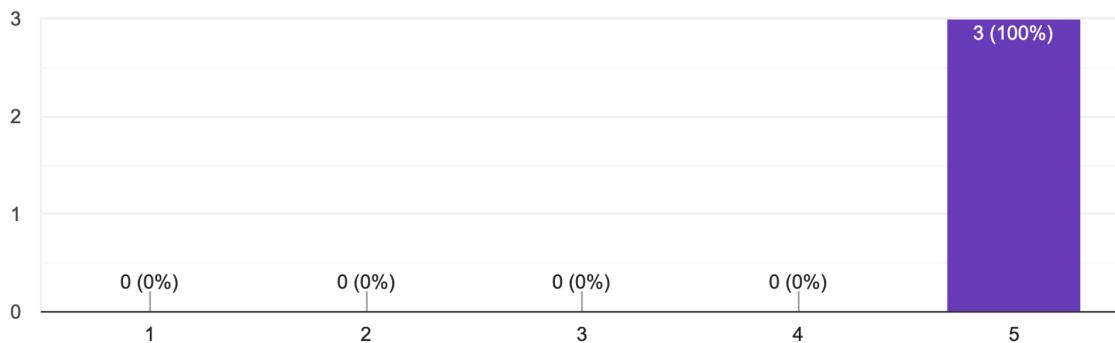
All 3 participants were able to perform all tasks and there were no major stumbling blocks. We also got predominantly positive feedback with minor issues to improve. The participants said that they liked our app and it was pretty easy to complete (most) tasks. The most confusion resulted from updating the recipes. It was also not clear how to navigate to the recipes collection after adding new recipes from the search.

Below is the breakdown of the answers on the Likert scale:

- 1 - meaning "not easy at all"
- 3 - meaning "neutral"
- 5 - meaning "very easy"

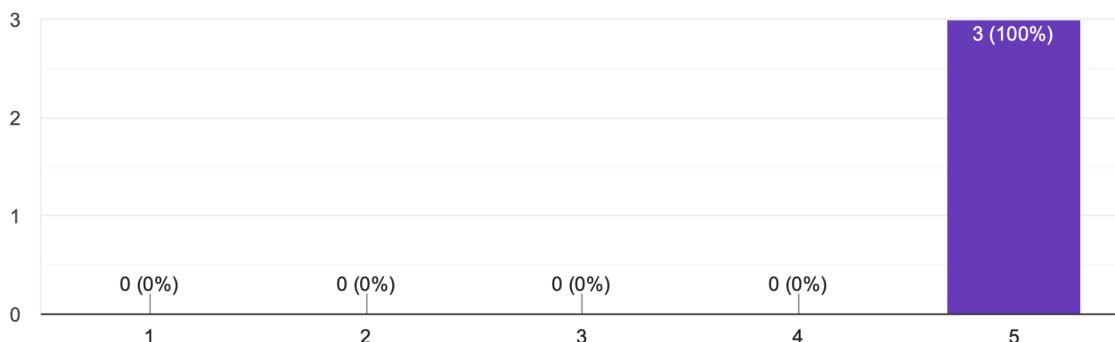
How easy was it to add ingredients?

3 responses



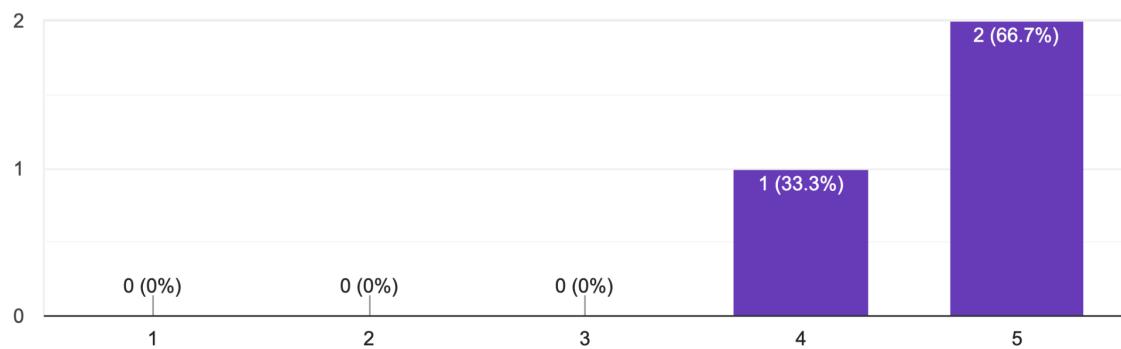
How easy was it to search for a recipe?

3 responses



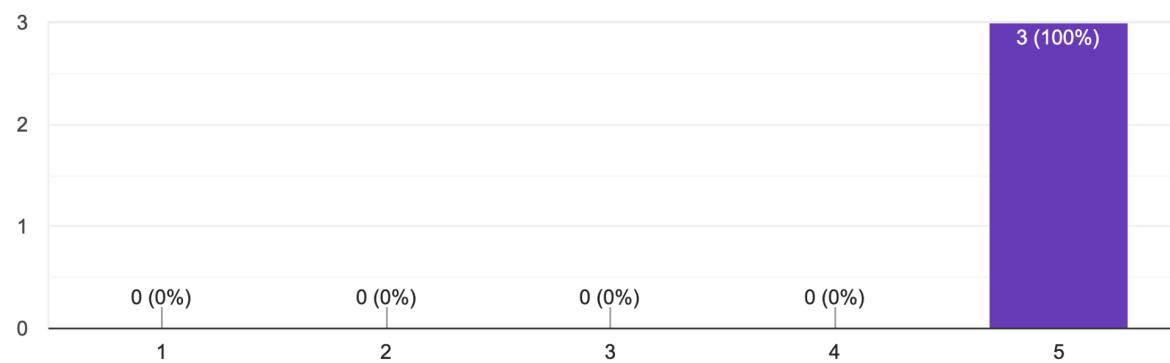
How easy was it to add recipes to your collection?

3 responses



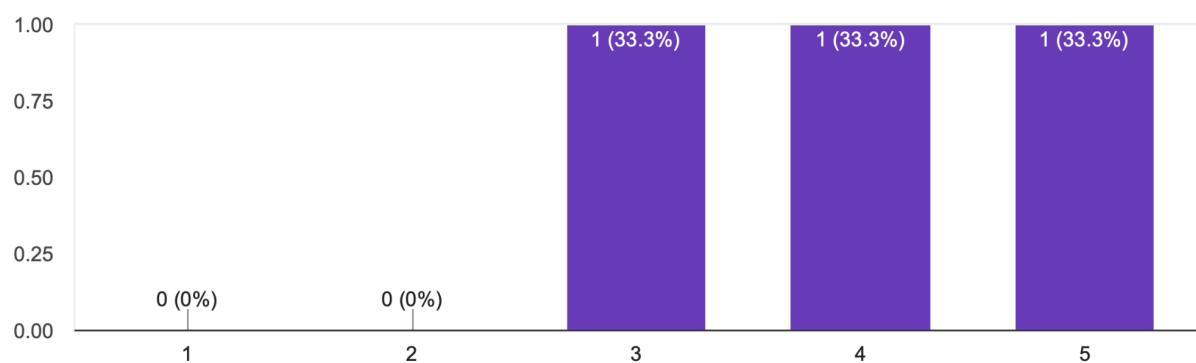
How easy was it to add new custom recipe?

3 responses



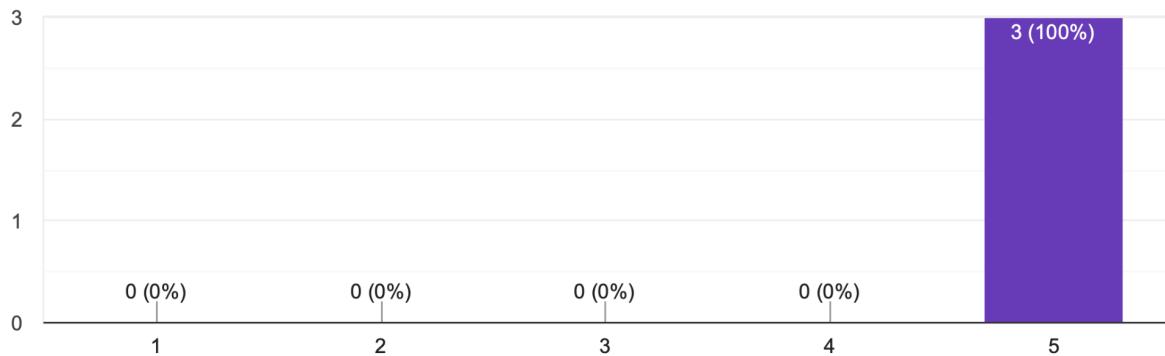
How easy was it to update the custom recipe?

3 responses



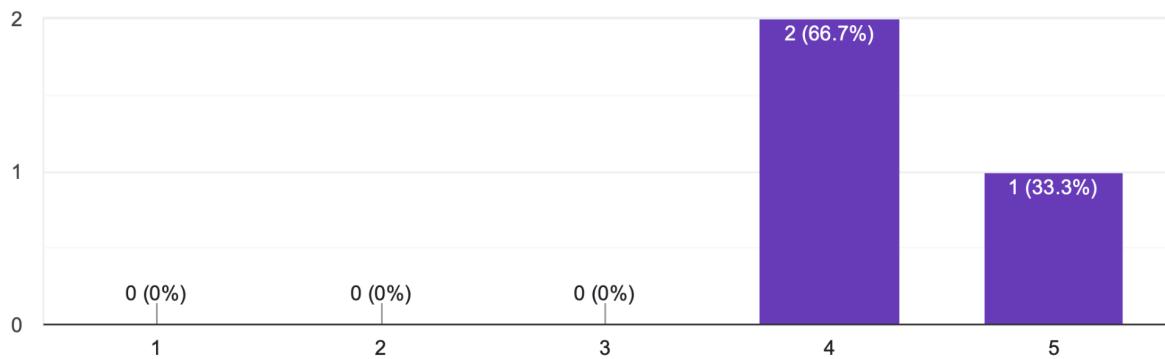
How easy was it to delete the recipes?

3 responses



How intuitive/easy was it to use the app overall?

3 responses



Any other suggestions how we can improve the app?

3 responses

Please add possibility to removing ingredients, make it clear where my favorite recipes are.

Updating ingredients should include adding and deleting new items to the custom recipe

Add a secondary option to update custom recipes via a new button by the Delete button

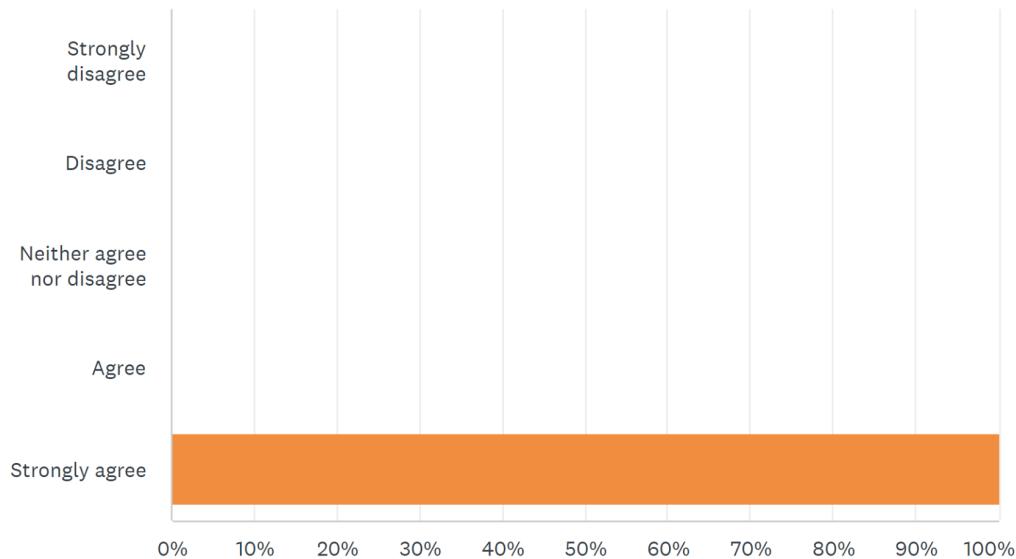
Surveymonkey Response Info - Anshul's participants

Note Main tasks - use cases: (specific, measurable, concrete)

- T1: Add ingredients on inventory page
- T2: Search for a recipe based on this ingredients
- T3: Add recipes to your recipes collection
- T4: Check your recipes collection
- T5: Add new custom recipe
- T6: Update the custom recipe
- T7: Delete recipes
- T8: Delete ingredients

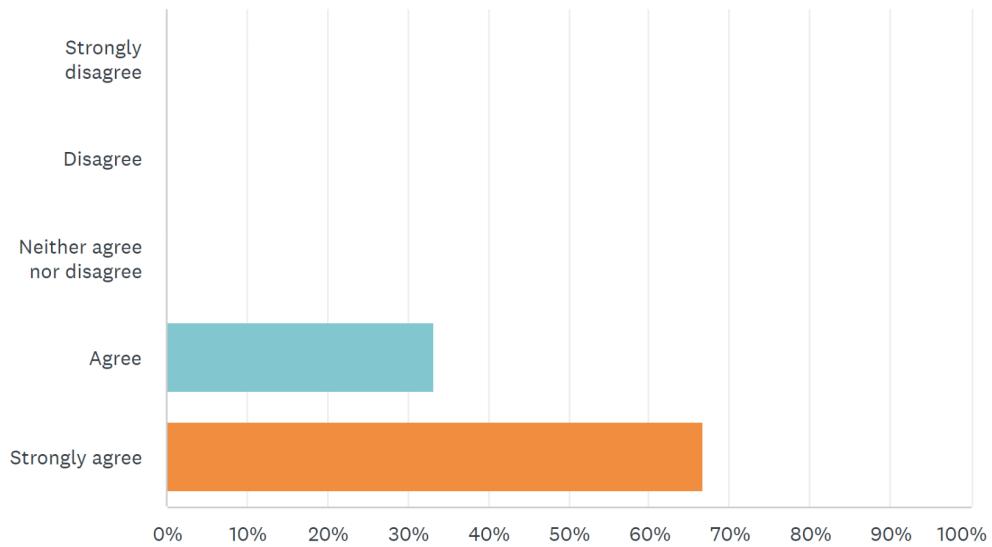
Was the application intuitive/easy to use for T1?

Answered: 3 Skipped: 0



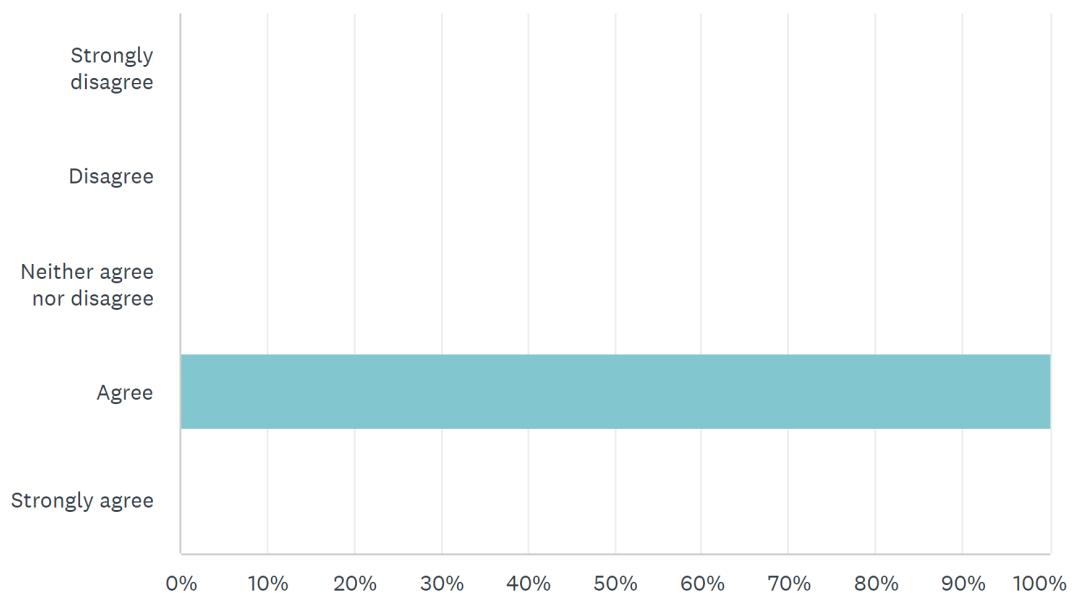
Was the application intuitive/easy to use for T2?

Answered: 3 Skipped: 0



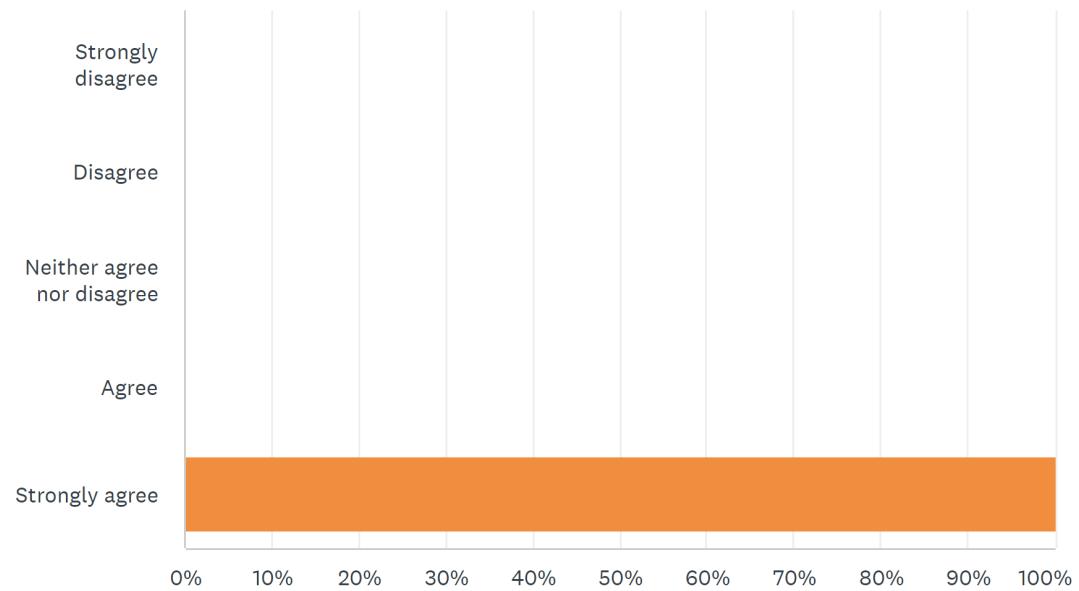
Was the application intuitive/easy to use for T3?

Answered: 3 Skipped: 0



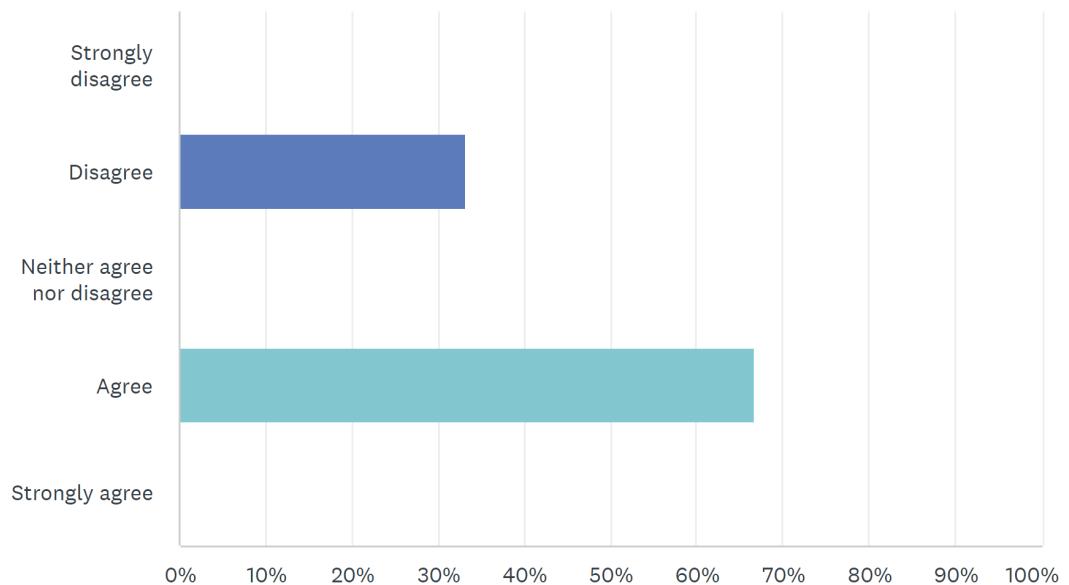
Was the application intuitive/easy to use for T4?

Answered: 3 Skipped: 0



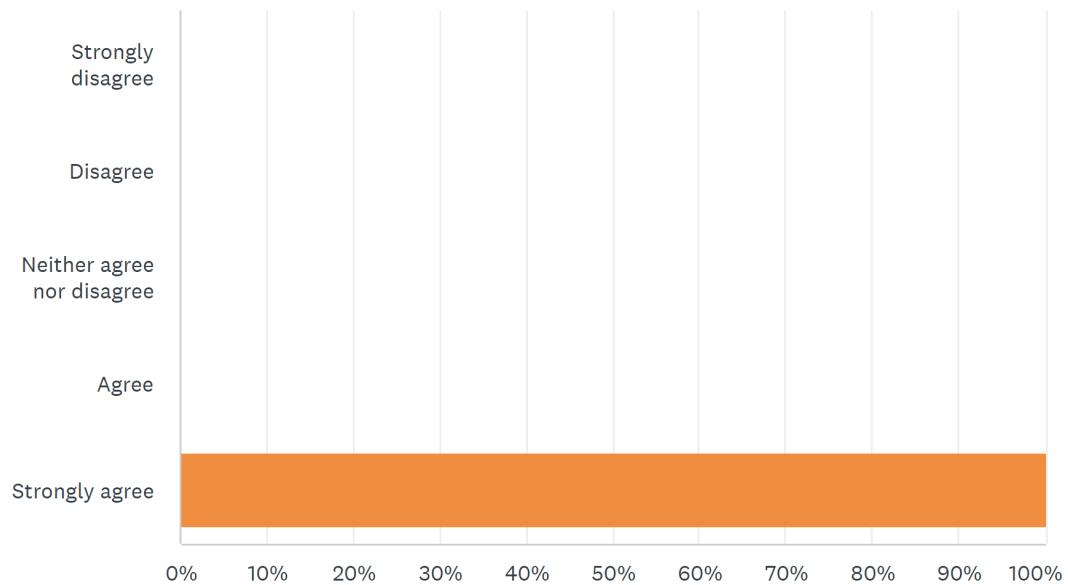
Was the application intuitive/easy to use for T7?

Answered: 3 Skipped: 0



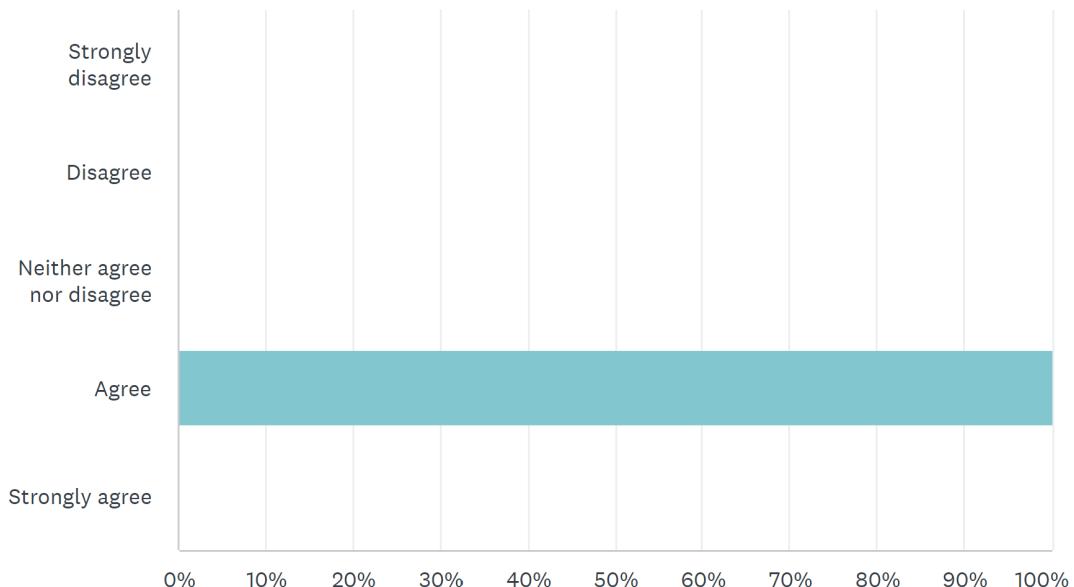
Was the application intuitive/easy to use for T8?

Answered: 3 Skipped: 0



Was the application intuitive/easy to use overall?

Answered: 3 Skipped: 0



Prioritized list of issues and corresponding changes:

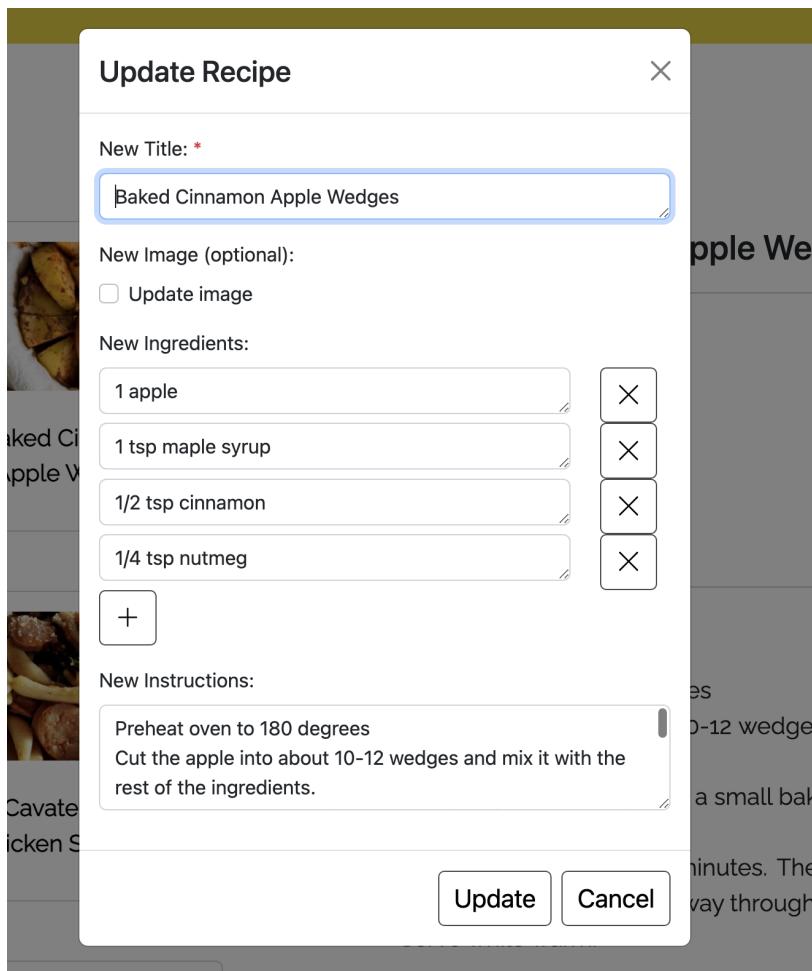
Summarize the most crucial issues and changes proposed

Issue #1: Updating ingredients should include remove/add option

Change: **New Feature:** Add an Update Recipe Modal that will update recipe details

Priority: (**Must**, Could, Should, Would)

Was it implemented? **Yes.** How?



NEW FEATURE

Issue #2: Unclear how to start updating the recipe despite the tooltip

Change: Add a secondary option to update recipes via a new button next to Delete button -> this button should open an Update Recipe Modal

Priority: (Must, Could, Should, Would)

Was it implemented? Yes. How?

The screenshot shows the 'My Recipes' section with three cards: 'Simit (Turkish Circular Bread)', 'Old-Fashioned Potato Salad', and 'Hasselback Potatoes'. The 'Hasselback Potatoes' card is selected, displaying its details. The title is 'Hasselback Potatoes' with a trash icon. The ingredients list includes: 2 tablespoons breadcrumbs, melted butter, 2 tablespoons grated Parmesan cheese, 6 medium potatoes, peeled, and 1 teaspoon salt. The instructions section starts with 'Preheat oven to 400. Slice each potato crosswise at 1/8-inch intervals, cutting to within 1/4 inch of the bottom. Be careful not to cut all the way through.' Below the instructions is a note: 'Arrange potatoes in a buttered roasting pan. Drizzle 2 tablespoons melted butter evenly over potatoes, and sprinkle with breadcrumbs. Bake at 425 for 25 minutes. Sprinkle with salt. Drizzle with remaining melted butter.'

BEFORE

This screenshot is identical to the one above, showing the 'My Recipes' section and the detailed view of the 'Hasselback Potatoes' recipe. The only difference is the text color: the 'Ingredients' and 'Instructions' sections are in blue, while the rest of the text is black.

AFTER

Issue #3: Unclear where the recipes are saved to once they are added from the Search page

Change: Add new button with tooltip “Check saved recipes” in SearchPage to navigate to MyRecipes Page

Priority: (**Must**, Could, Should, Would)

Was it implemented? How?

The screenshot shows the search results page with a yellow header. The search term 'Hasselback' has been entered. Below the header, there are four recipe cards: 'Curry Leaves Potato Chips', 'Gluten Free Vegan Gnocchi', 'Hasselback Potatoes' (which is highlighted with a red border), and 'Old-Fashioned Potato Salad'. On the right, the 'Hasselback Potatoes' card is expanded. It includes a title, a '+' button, an ingredients section with a bulleted list, and an instructions section with a paragraph of text.

BEFORE

This screenshot shows the same search results page as the previous one, but with a modification. The 'Hasselback Potatoes' recipe card now features a 'Check saved recipes' button with a tooltip above it. The rest of the interface remains identical to the 'BEFORE' version.

AFTER

Issue #4: Unclear what different “+” buttons do

Change: Add tooltips to buttons to eliminate guessing

Priority: (Must, Could, **Should**, Would)

Was it implemented? Yes. How?



Issue #5: 2 participants started typing the ingredients separated by commas and only later found out they need to add ingredients one by one via “+” button

Change: Add default values like “enter ingredient #1”, “enter ingredient #2”

Priority: (Must, Could, Should, **Would**)

Was it implemented? Yes. How?

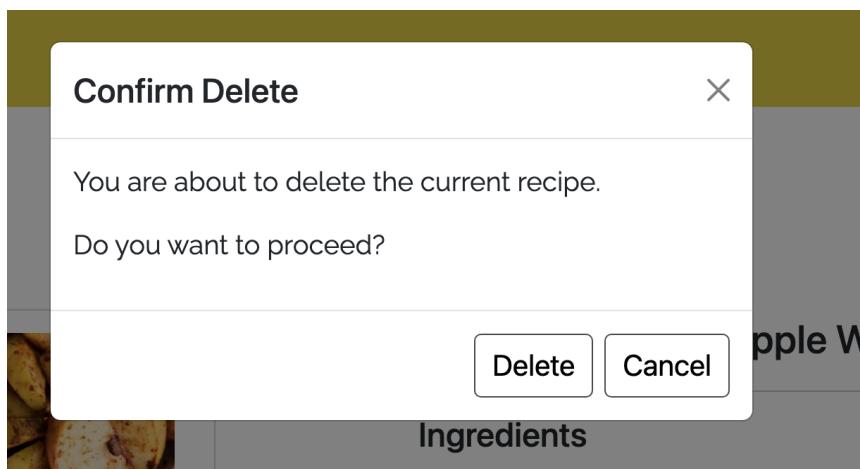
The image shows a comparison between two versions of a 'Create New Recipe' form, labeled 'BEFORE' and 'AFTER'. Both versions have a similar layout: a title input field, an optional image file selection, an ingredients input field with a '+' and 'X' button, and an instructions input field. In the 'BEFORE' version, the ingredients input field is empty. In the 'AFTER' version, the ingredients input field contains the placeholder text 'enter ingredient #1'.

Issue #6: 2 participants asked for confirmation before deletion

Change: **New Feature:** Add a dialog window to confirm deletion

Priority: (Must, Could, Should, Would)

Was it implemented? **Yes.** How?

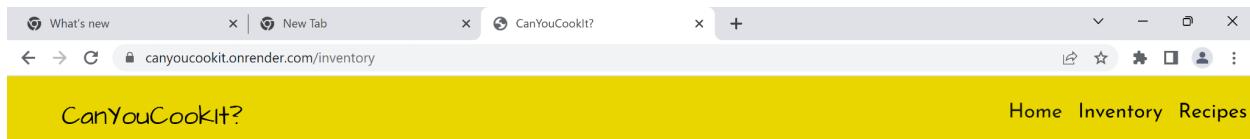


NEW FEATURE

Issue #7: Unclear as to when to start finding recipes (whether to proceed with an empty list or not)

Change: Add a note mentioning that we must first and and select at least one ingredient to be included in the search before finding recipes

Priority: (Must, Could, Should, Would)**Was it implemented?** **Yes.** A box was added to provide some context and information on how to use the buttons



Inventory

Add Ingredient

My Ingredients

Ingredient	Add Item to search	Delete

Find Recipes!

Created with ❤ by Katerina Bosko & Anshul Mathew

BEFORE



Home Inventory MyRecipes About

Inventory

Add Ingredient

Enter ingredient



My Ingredients

Your ingredients will show up here once you have added ingredients to your inventory. You can add ingredients by typing into the search bar, selecting one of the ingredients from the prompt and then hit +Add button to include it in your inventory. Select ingredients you want to include and then Find recipes based on them!

AFTER

Issue #8: When using capital letters the search doesn't provide any suggestions and the user is unable to add ingredients

Change: Passed lower case entered value to perform the query against the database.

Suggestions are now provided even with capital case input.

Priority: (Must, Could, Should, Won't)

Was it implemented? Yes. By converting to lowercase when making the query against db

The screenshot shows a browser window with the URL canyoucookit.onrender.com/inventory. The page has a yellow header with the logo and navigation links. Below the header is a search bar with the placeholder "Enter ingredient". A blue "+Add" button is positioned next to the search bar. The main content area is titled "My Ingredients" and contains a message: "Your ingredients will show up here once you have added ingredients to your inventory. You can add ingredients by typing into the search bar, selecting one of the ingredients from the prompt and then hit +Add button to include it in your inventory. Select ingredients you want to include and then Find recipes based on them!".

Inventory

Add Ingredient

Milk



My Ingredients



paneer

Add item to
search Delete



egg whites

Add item to
search Delete

BEFORE

The screenshot shows a web browser window with the title bar "Copy of P4 - CanYouCookIt - Usability" and the tab "CanYouCookIt?". The URL in the address bar is "localhost:3000/inventory". The page has a yellow header with the logo "CanYouCookIt?" and navigation links "Home", "Inventory", "MyRecipes", and "About". Below the header, the word "Inventory" is displayed. A section titled "Add Ingredient" contains a search input field with "Milk" typed in, a blue "+Add" button, and a dropdown menu listing "milk" and "milk chocolate chips". A note at the bottom of the dropdown says: "... up here once you have added ingredients to your inventory. You can add ingredients by typing into the search bar, selecting one of the ingredients from the prompt and then hit +Add button to include it in your inventory. Select ingredients you want to include and then Find recipes based on them!". At the bottom of the page, a footer note says "Created with ❤️ by Katerina Bosko & Anshul Mathew".

AFTER

Issue #9: The arrangement of the suggestions from the search should be arranged properly and not disrupt the flow of the page and keep the flow natural

Change: A cleaner well formatted dropdown menu with a natural overflow was designed and built to keep the design more visually appealing

Priority: (**Must**, Could, Should, Won't)

Was it implemented? Yes. By altering Z index & improving the dropdown option's CSS

The screenshot shows a web browser window with the title bar "northeastern.shah" and the tab "CanYouCookIt?". The URL in the address bar is "canyoucookit.onrender.com/inventory". The page has a yellow header with the logo "CanYouCookIt?" and navigation links "Home", "Inventory", and "Recipes". Below the header, the word "Inventory" is displayed. A section titled "Add Ingredient" contains a search input field with "toma" typed in, a blue "+Add" button, and a dropdown menu listing suggestions: "tomatillos", "tomato puree", "tomato juice", "tomato sauce", "tomato paste", "tomatoes", and "tomato soup".

BEFORE

The screenshot shows a web browser window with the title bar "Copy of P4 - CanYouCookIt - Usability" and the tab "CanYouCookIt?". The URL is "localhost:3000/inventory". The page has a yellow header with the logo and navigation links: Home, Inventory, MyRecipes, About. Below the header, the word "Inventory" is displayed. A search bar contains the text "toma". A list of ingredients is shown, with "tomatillos" being the first item. To the right of the list is a text box containing a message about ingredient addition and a note that it was created by Katerina Bosko & Anshul Mathew.

AFTER

Issue #10: The inventory page of ingredients should not be arbitrarily long and must have a limit of the number of items displayed per page as the user might have to scroll a large amount to keep track of the different ingredients available

Change: A paginated view of the inventory was developed to mitigate the above issue

Priority: (Must, Could, Should, Won't)

Was it implemented? Yes. By paginating the Db based on which page the user is currently in

The screenshot shows a web browser window with the title bar "northeastern.shah" and the tab "CanYouCookIt?". The URL is "canyoucookit.onrender.com/inventory". The page displays a long list of ingredients with small thumbnail images. The ingredients listed are: chicken thighs, chile garlic sauce, spicy brown mustard, and mayonnaise. At the bottom of the list is a green button labeled "Find Recipes!".

BEFORE

The screenshot shows a web browser window titled "Copy of P4 - CanYouCookIt - Usability" with the URL "localhost:3000/inventory#myIngredients". At the top, there is a search bar labeled "Enter ingredient" and a "+" button. Below the search bar, the title "My Ingredients" is displayed. A table lists two ingredients:

Image	Ingredient	Add Item to search	Delete
	tomato paste	<input type="checkbox"/>	
	milk chocolate chips	<input type="checkbox"/>	

At the bottom left is a "Find Recipes" button, and at the bottom center is a pagination control with "Previous", "1", "2", and "Next" buttons.

AFTER

Issue #11: Updating ingredients should include remove/add option **Improving Search Results**

Change: New Feature: Add an Update Recipe Modal that will update recipe details

Priority: (Must, Could, Should, **Won't**)

Was it implemented? No. Why?

The search results are provided using an external api call to the Spoonacular API. This part is not within the scope of our control in this project as the Spoonacular API's are private and are only modifiable by their team

APPENDIX

Script for the usability study

Preparation:

Enable screen sharing

Hi [name]. Welcome to the usability study.

First of all, I'd like to let you know that this session will be recorded, so I'd like to ask if you have any issues with that and if I can get your consent for being recorded with both audio and video.

Thanks, [name]

Thank you so much for participating in this usability study.

My name is [Katerina Bosko/Anshul Mathew] and I am one of the developers of the CanYouCookIt app for my Web Development class at the Northeastern University. I will provide you with the link to the app shortly and ask you a couple of questions.

Remember that these questions are testing the application and no way testing you. There are no wrong answers. So please feel free to speak out your mind. Your honest feedback is crucial for helping us improve the application.

So, it's very important that you speak out loud your thought process. Just say whatever is on your mind. And I'd reiterate once again – this is not a test.

So let's get started. Could you please share your screen?

Ok, thank you.

I will give you the link to the app through the chat on Zoom.

<https://canyoucookit.onrender.com/>

Can you provide your first impression – anything that comes to your mind.

What do you think this website is doing?

I will give you 30 seconds to look around and ask again the same question - what this app is about. So please browse through now.

Now that you browsed a little bit do you have an idea what this app is for?

Now that we established that it's a recipe application. I'd like to ask you whether you cook or would like to learn cooking?

Ok, great! Would you search for recipes online?

This app is about finding recipes based on ingredients that you have in your refrigerator. You can add ingredients and then search for recipes, you can also add your own recipes that you find elsewhere. So now think about food ingredients that you have at home and try adding some of them using this app.

Now that you have some , why don't you try deleting some of them as well?

Now try searching for recipes based on the ingredients that you entered. How would you do this?

Browse through recipes and try adding the ones you liked to your recipe collection. How would you do this?

Can you now check your new recipes collection?

Now if you wanted to add new recipes, how would you do this?

Try updating some information about your new recipe

Finally, if you wanted to delete a recipe, how would you do it?

Thank you!

Now I'm going to share with you a Google form where I will ask you to rate how easy or difficult was it to perform different tasks.

<https://forms.gle/pZsiWsgQqv51Z1Wo7>

Where 1 is not easy at all and 5 is very easy. 3 is just neutral and 2 and 4 are just in the middle – so somewhat difficult for 2 and somewhat easy for 4.

How easy was it to add ingredients?

How easy was it to delete ingredients?

How easy was it to search for a recipe?

How easy was it to add recipes to your recipes collection?

How easy was it to check your recipes collection?

How easy was it to add new custom recipe?

How easy was it to update the custom recipe?

How easy was it to delete the recipes?

How intuitive/easy was it to use the app overall?

Any final comments or improvements