

Team Work in Progress

Final Presentation

A cooking recipe searcher that is customized to you
and the ingredients you already have.

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Medium Fidelity Prototype

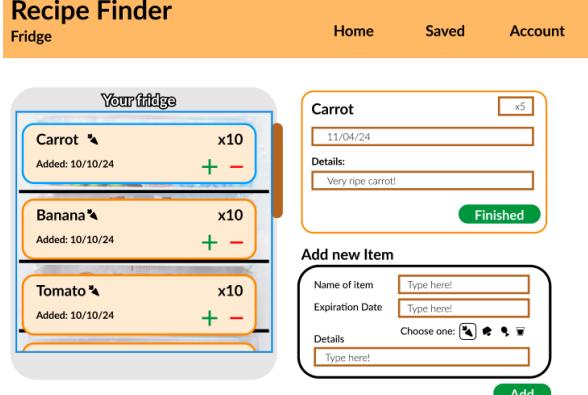
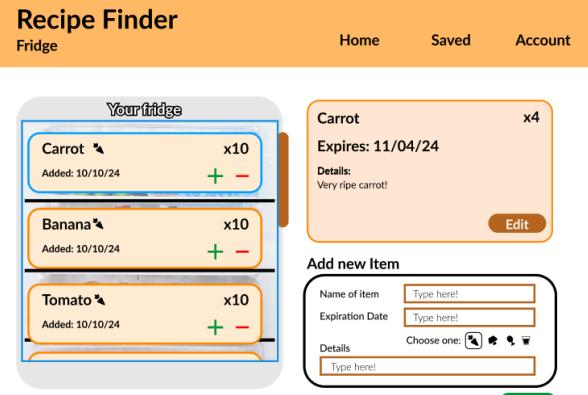
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Additional contributions by: Jeffrey Qin
You can view the file [here](#).

Fridge Page (Flow 1)

The screenshot shows the 'Fridge' section of the Recipe Finder app. On the left, there's a list titled 'Your fridge' containing three entries: 'Carrot x10' (Added: 10/10/24), 'Carrot x10' (Added: 10/10/24), and 'Carrot x10' (Added: 10/10/24). Each entry has a green plus sign and a red minus sign. To the right of this list is a detailed view for a single 'Carrot' item, showing it's x10, expires on 10/20/24, and the details are 'Just a carrot.' Below this is an 'Edit' button. At the bottom right is a form for 'Add new Item' with fields for Name of item (Type here!), Expiration Date (Type here!), Details (Choose one: 🥣, 🥕, 🥑, 🥒), and a green 'Add' button.

Figure 1

Fridge Flow 2	Fridge Flow 3
<p>The screenshot shows the 'Fridge' section of the Recipe Finder app. On the left, there's a list titled 'Your fridge' containing three entries: 'Carrot x10' (Added: 10/10/24), 'Banana x10' (Added: 10/10/24), and 'Tomato x10' (Added: 10/10/24). Each entry has a green plus sign and a red minus sign. To the right of this list is a detailed view for a single 'Carrot' item, showing it's x10, expires on 10/20/24, and the details are 'Just a carrot.' Below this is an 'Edit' button. At the bottom right is a form for 'Add new Item' with fields for Name of item (Type here!), Expiration Date (Type here!), Details (Choose one: 🥣, 🥕, 🥑, 🥒), and a green 'Add' button.</p> <p>Figure 2</p>	<p>The screenshot shows the 'Fridge' section of the Recipe Finder app. On the left, there's a list titled 'Your fridge' containing three entries: 'Carrot x10' (Added: 10/10/24), 'Banana x10' (Added: 10/10/24), and 'Tomato x10' (Added: 10/10/24). Each entry has a green plus sign and a red minus sign. To the right of this list is a detailed view for a single 'Carrot' item, showing it's x10, expires on 10/20/24, and the details are 'Just a carrot.' Below this is an 'Edit' button. At the bottom right is a form for 'Add new Item' with fields for Name of item (Type here!), Expiration Date (Type here!), Details (Choose one: 🥣, 🥕, 🥑, 🥒), and a green 'Add' button. The 'Carrot' item in the list has a small orange box around it, and the 'Edit' button is replaced by a green 'Finished' button.</p> <p>Figure 3</p>

Fridge Flow 4	Fridge Flow 5
 <p>Recipe Finder Fridge</p> <p>Your fridge</p> <ul style="list-style-type: none"> Carrot x10 Added: 10/10/24 + - Banana x10 Added: 10/10/24 + - Tomato x10 Added: 10/10/24 + - <p>Carrot x5 11/04/24 Details: Very ripe carrot! Finished</p> <p>Add new Item</p> <p>Name of item: Type here! Expiration Date: Type here! Details: Type here!</p> <p>Add</p>	 <p>Recipe Finder Fridge</p> <p>Your fridge</p> <ul style="list-style-type: none"> Carrot x10 Added: 10/10/24 + - Banana x10 Added: 10/10/24 + - Tomato x10 Added: 10/10/24 + - <p>Carrot x4 Expires: 11/04/24 Details: Very ripe carrot! Edit</p> <p>Add new Item</p> <p>Name of item: Type here! Expiration Date: Type here! Details: Type here!</p> <p>Add</p>
Figure 4	Figure 5

Figures 1 through 5 show the flow of how the user can interact with the fridge page. Within the fridge page, users can access the ingredients they have in their fridge and can add items or edit items. Additionally, they can quickly remove an item from the fridge by pressing the trash icon in the item card. If they want to quickly modify the amount of an item in the fridge, they can press the minus or plus button to quickly adjust the amount of a particular item.

To add an item, the user adds information about the item they want to add into the “Add new Item” form. In the form, the user inputs the name of the item, the expiration date, the type of food (represented by the icons for each of the food types: meat, vegetables, fungus/herbs, drinks) and the details of the item if they so desire. After filling it out, the user can press the add button where they will see the fridge update with their newest item on top. If an item expires, the fridge will notify the user that one of the items has expired.

Search Function

Search Flow 1	Search Flow 2
<p>Figure 6</p>	<p>Figure 7</p>

In this search function figma prototype, a novel interacting feature is the auto-suggest for ingredient inclusion. As seen in the screenshots above, the user can instantly include ingredients that are already in their fridge. This ensures the user will have a better experience navigating the search bar without constantly referring back to their fridge contents.

Recipe Page

Recipe Page - Ingredient List

Recipe Finder

Fridge Saved Account

Banana Cake

Desert

Vegan

By: Chef Tony



Ingredient List Cooking Instructions

Ingredient List: *amt*

🍌 Banana	20 g
▢ Baking Powder	10 g
▢ Flour	30 g
▢ Sugar	10 g
▢ Ingredient 5	15 g

Warning: It seems you don't have enough of [Ingredient 4] in your fridge.

Figure 8

The recipe page features ingredient awareness where the application will notify the user if they do not have the ingredient or are low in it and a voice guided instructions to assist the user in following the recipe.

Recipe Finder

Fridge

Saved

Account

Banana Cake

Desert

Vegan

By: Chef Tony



Ingredient List

Cooking Instructions

Step One: Chop up the bananas



Tap and hold for voice-guided instructions

Chop the bananas into small pieces and place them in the blender



Figure 9

On the instructions page, the voice guided instructions can be used by tapping and holding the microphone icon for at least a second. The voice guided instructions will verbally guide the user how to follow the recipe.

Functional Prototype

Home Page

Website Home Page

The screenshot shows a web application interface for a recipe search. At the top, there's a navigation bar with tabs for "Home", "Fridge", and "Recipes". Below the navigation is a search bar with the placeholder "Search recipes...". To the right of the search bar is a dropdown menu labeled "Select Category" with "Beef" selected. The main area is titled "Homepage" and displays "Search Results". There are four recipe cards listed:

- Beef and Mustard Pie**
Category: Beef
Tags: Meat, Pie
[Go](#) [Save](#)
- Beef and Oyster pie**
Category: Beef
Tags: Pie
[Go](#) [Save](#)
- Beef Asado**
Category: Beef
Tags: None
[Go](#) [Save](#)
- Beef Caldereta**

Each recipe card includes a small thumbnail image of the dish. The entire page has a light gray background.

Figure 10

The home page allows users to directly search for recipes with the search bar. Additionally, they can use the category or primary ingredient filter to narrow down their choices. In this example screenshot, the user is selecting recipes that use beef as a primary ingredient. After finding a recipe they like, the user can either view the recipe instructions and ingredients, or save the recipe for later. An example of viewing recipe pages will be shown on the recipes page further below.

Fridge Page

Website Fridge Page

The screenshot shows a website interface for a 'Fridge Page'. At the top, there's a header bar with the text 'Recipe Searcher' on the left and 'Home', 'Fridge', and 'Recipes' on the right. Below the header, the title 'Fridge page' is displayed. On the left side, there's a sidebar with the heading 'Your Fridge' containing a list item 'carrot x10' with the note 'Expires: Sun Nov 10 2024' and two buttons: 'Remove' and 'Edit'. To the right of the sidebar is a large red-bordered box labeled 'Item details' which contains fields for 'Item Name' (with placeholder 'E.g. Apple'), 'Amount' (with placeholder 'E.g. 10'), and 'Expiration Date' (with placeholder 'E.g. 10/10/24'). Below these fields is a section titled 'Choose One' with five radio buttons labeled 'Veggie', 'Meat', 'Fish', 'Fruit', and 'Drink'. A green 'Add' button is located at the bottom of this section.

Figure 11

Like the figma prototype, the fridge page in this functional prototype allows users to view their food items, edit them or add new food items to the fridge.

Recipes

Recipe Page - Searching

Recipe Searcher

Home Fridge Recipes

Saved Recipes

BBQ Pork Sloppy Joes

Category: Pork

Tags: None

Go Remove



Bigos (Hunters Stew)

Category: Pork

Tags: None

Go Remove



Hot and Sour Soup

Category: Pork

Tags: Soup

Go Remove



Figure 12

Here, the user can view their saved recipes. In this example, the user saved a few recipes that used beef as its primary ingredient. The user then has the choice to remove recipes or view the recipe details.

Recipe Page - Viewing

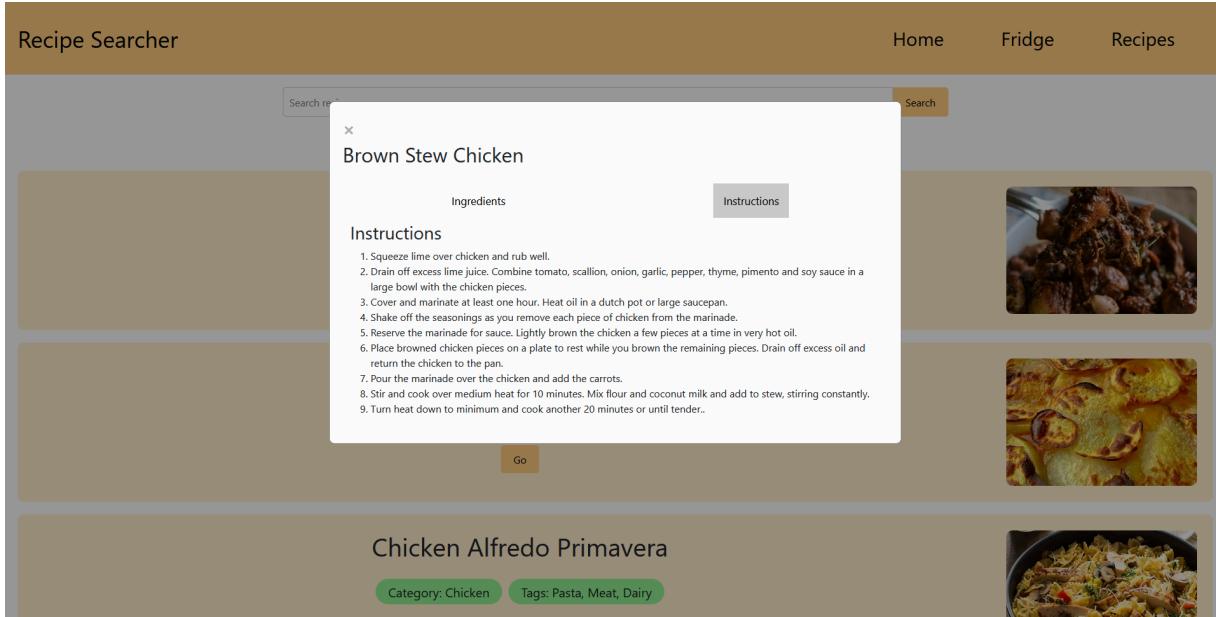


Figure 13

After clicking the go button on a recipe, the user can view the ingredients or the instructions in this pop-up window. Currently there is no voice-guided instructions as we designed out on figma.

User Evaluations

Task List

Task 1: Interacting with the Home Page

Description:

The user must look for any recipe after applying one or more filters.

Machine State:

The user is on the home page.

Successful Completion:

The user successfully views the ingredients and instructions of a recipe after applying filters and searching.

Task 2: Interacting with the Recipes Page

Description:

The user must interact with the saved recipes by adding recipes to their saved recipes page.

Machine State:

The user is on the home page.

Successful Completion:

The user removes recipes from their saved recipes list.

Task 3: Interacting with the Fridge Page

Description:

The user will add and remove ingredients from the fridge.

Machine State:

The user is on the recipes page.

Successful Completion:

The user successfully adds an ingredient. Afterwards, the user successfully removes said ingredient.

Interview #1

- Age
 - 24
- Experience with software interfaces (novice, intermediate, or expert)
 - Expert
- Preferred web browser, computer operating system, and mobile operating system
 - Firefox, Windows 10, Android
- Recruiter
 - Jeffrey Qin

Data Collection

- Task completion results: All tasks completed.
- Errors: Search button does not work as intended. The user did not make any mistakes during the testing period.
- Time per task:
 - Task 1: 21 seconds
 - Task 2: 11 seconds
 - Task 3: 22 seconds

Notes from user reflection:

- Dislikes:
 - “I don’t think the search button is working. When I filled a filter out, the results automatically showed up. When I went to press the search button, I was thrown off by that.”
 - “When I pressed save, there was no confirmation of the recipe saving. Maybe make the button change into ‘already saved’ after I click the save button”
- Likes
 - The user liked the simplistic design of the website, and having three main pages is a sweet spot for him.
 - The user likes the way the recipes were listed on the home screen, but it wasn’t the same way as the recipes page. The styling should be the same.
 - The user liked the attention to detail on the fridge page, and suggested maybe adding the ability to add calories as well.

- The user liked the feedary icon on the top left.
- Suggestions
 - The user suggested adding more filters.
 - “There should be a distinction between favorite and saved recipes”. In the future, we should add saved and favorite recipes in the recipes section.
 - The user suggested adding user accounts for the future, where users can customize things like their profile picture or user name.

Interview #2

- Age
 - 21
- Experience with software interfaces (novice, intermediate, or expert)
 - Expert
- Preferred web browser, computer operating system, and mobile operating system
 - Microsoft Edge, Windows operating system, Android
- Recruiter
 - Ashley

Data Collection

- Task completion results: All the tasks were completed.
- Errors: There was no errors that the user made while evaluation.
- Time per task:
 - 1: 18 seconds
 - 2: 13 seconds
 - 3: 27 seconds

Notes from user reflection:

- Dislikes:
 - There was no pop up message that provides feedback after saving a recipe.
 - “I think there should be a pop up message when you save a recipe, since there was no feedback when I clicked save.”
- Likes
 - The user likes the variety of recipes and the look of the interface.
 - “The website looks nice and there are a good amount of recipes to choose from.”
- Suggestions
 - “It could be cool if there was a filter that showed recipes based off of what ingredients I have in the fridge automatically. It can show what recipes that match the ingredients in my fridge with at least 80% matching.”

Interview #3

- Age
 - 21
- Experience with software interfaces (novice, intermediate, or expert)
 - Intermediate
- Preferred web browser, computer operating system, and mobile operating system
 - Web Browser
- Recruiter
 - Quamin Hua

Data Collection

- Task completion results: All tasks completed
- Errors: Search results show up even without pressing the search button when filling out the filters. Item details don't show up.
- Time per task:
 - Task 1: 16 seconds
 - Task 2: 14 seconds
 - Task 3: 30 seconds

Notes from user reflection:

- Dislikes:
 - The save button does not provide any feedback for saving a recipe
 - The type selections in the fridge page do not seem to work properly (the wrong thing would be selected sometimes).
- Likes
 - Likes the overall layout of the webpage and how simple it is to navigate
 - Likes the concept of the fridge and how it should work
- Suggestions
 - The buttons of the recipe cards are slightly out of place in terms of the whole theme of the app, maybe change them to better match the aesthetic
 - It would be cool if the fridge page looked like an actual fridge
 - The Go button on the recipe cards is a little confusing on what it actually does, so maybe change it to "View" or something

Analysis of Evaluation:

Metrics:

1. Average time per task:
 - a. Task 1: 18.33 seconds
 - b. Task 2: 12.67 seconds
 - c. Task 3: 26.33 seconds
2. Task completion rate per user:
 - a. User 1: 18 seconds
 - b. User 2: 19.33 seconds
 - c. User 3: 20 seconds
3. Average user error per task:
 - a. Task 1: 0%
 - b. Task 2: 0%
 - c. Task 3: 0%

Quantitative Analysis

	User 1	User 2	User 3
Finish task 1	Yes	Yes	Yes
Task 1 time	21	18	16
Finish task 2	Yes	Yes	Yes
Task 2 time	11	13	14
Finish task 3	Yes	Yes	Yes
Task 3 time	22	27	30

Qualitative Analysis

- The simplicity of the app is what our user evaluations seem to like the best.
- Some of the buttons should provide better feedback for inputs.
- Some features seem to not be working properly just yet.