

Technical Design and Architecture

Sprint 2: Project Design (User stories/Flow diagram, Wireframes, UI/UX, ERD, Usability Test plan)

User Stories:

What it is: User stories are simple, short descriptions of a feature told from the perspective of the end user.

Purpose: They describe what the user wants and why they want it.

Stories: (add or remove)

“As a user I would like to have an easy place to list shopping ingredients to make it easier while in store”

“As a user I would love to see recipes with the ingredients in my list to see how much of an ingredient i need”

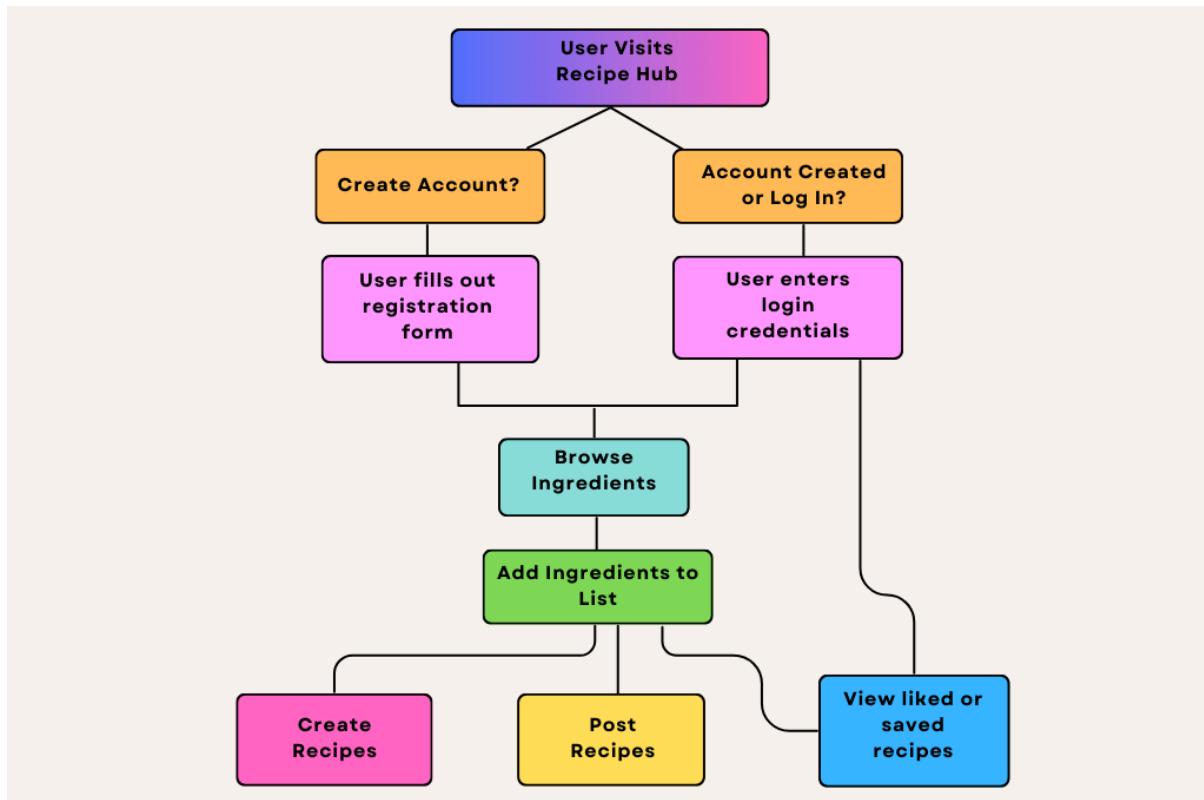
“As a user I would love to see recipes that others would like to share”

“As a user I would love to post my recipes for others to use”

“As a user I would like to have an easy to sign into interface”

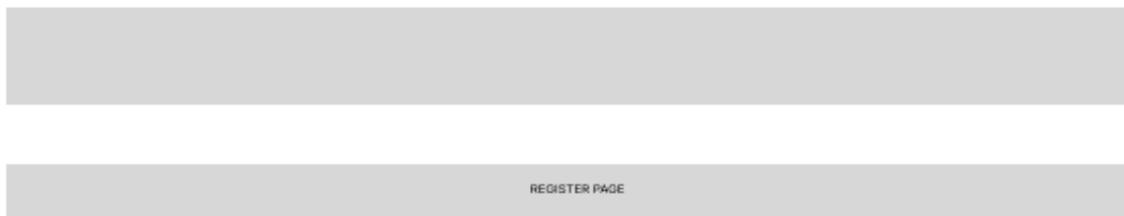
“As a user I want to be able to contact the developers directly if any issues arise during web use”

Sprint 2 Flow Diagram:



WireFrames:

Mock drawings of what we wanted the UI to look like. Having these drawn out really helped in creating functions that we will be using to satisfy user stories.



A wireframe of a registration form. It consists of five stacked input fields with labels above them: "Insert name", "Insert username", "Insert email", "Insert password", and "Insert password confirmation". Below these fields is a single button labeled "sign up".





LOGIN PAGE

insert username
Insert password
sign in

A form consisting of three stacked input fields and one button. The first field is labeled "insert username", the second is labeled "Insert password", and the third is a button labeled "sign in".



LIST PAGE

PAGE 1 PAGE 2 PAGE 3 PAGE 4

Search, Notification, and Account buttons

Search Feature

This section shows a header with "LIST PAGE" and three small black circular icons. Below it is a horizontal navigation bar with four buttons labeled "PAGE 1", "PAGE 2", "PAGE 3", and "PAGE 4". To the right is a group of three small circular icons labeled "Search, Notification, and Account buttons". Below the navigation is a "Search Feature" button. The entire area is surrounded by a dark gray border.

LIST INGREDIENTS

add item 1
add item 2
add item 3
add item 4

CLEAR LIST BUTTON

This section shows a box titled "LIST INGREDIENTS" containing four "add item" buttons. Below the buttons is a "CLEAR LIST BUTTON". The entire area is surrounded by a dark gray border.

LIST OF SIMILAR RECIPES

add item 1
add item 2
add item 3
add item 4

SEE ALL RECIPE BUTTON

This section shows a box titled "LIST OF SIMILAR RECIPES" containing four "add item" buttons. Below the buttons is a "SEE ALL RECIPE BUTTON". The entire area is surrounded by a dark gray border.



POST PAGE

PAGE 1 | PAGE 2 | PAGE 3 | PAGE 4 | Search, Notification, and Account buttons

Search Feature

Insert Ingredients List

INSERT RECIPE IMAGE

INSERT WHOLE RECIPE

Like, Comment, Share

Bookmark/Save



Large Placeholder Area

ACCOUNT PAGE

PAGE 1 | PAGE 2 | PAGE 3 | PAGE 4

username posts likes log out change password

Insert profile image

your posts

insert post insert post

saved posts

insert post

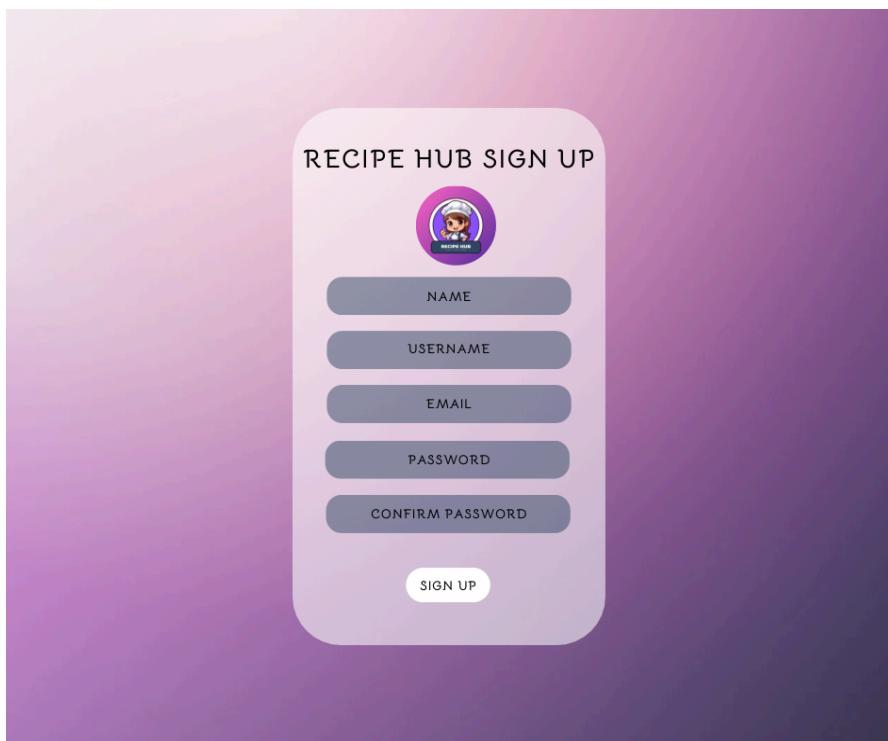
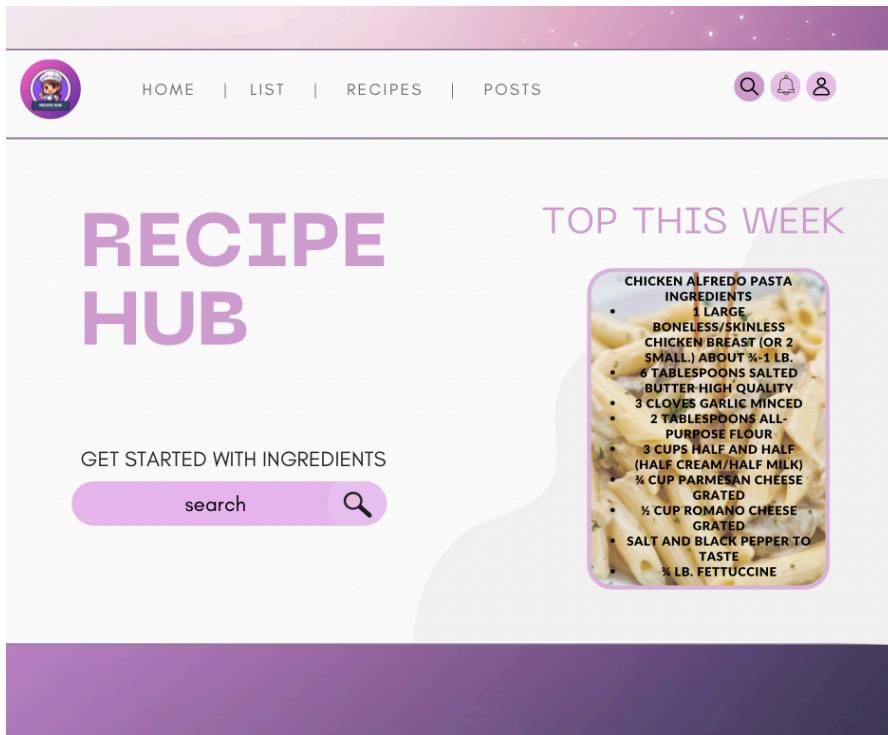


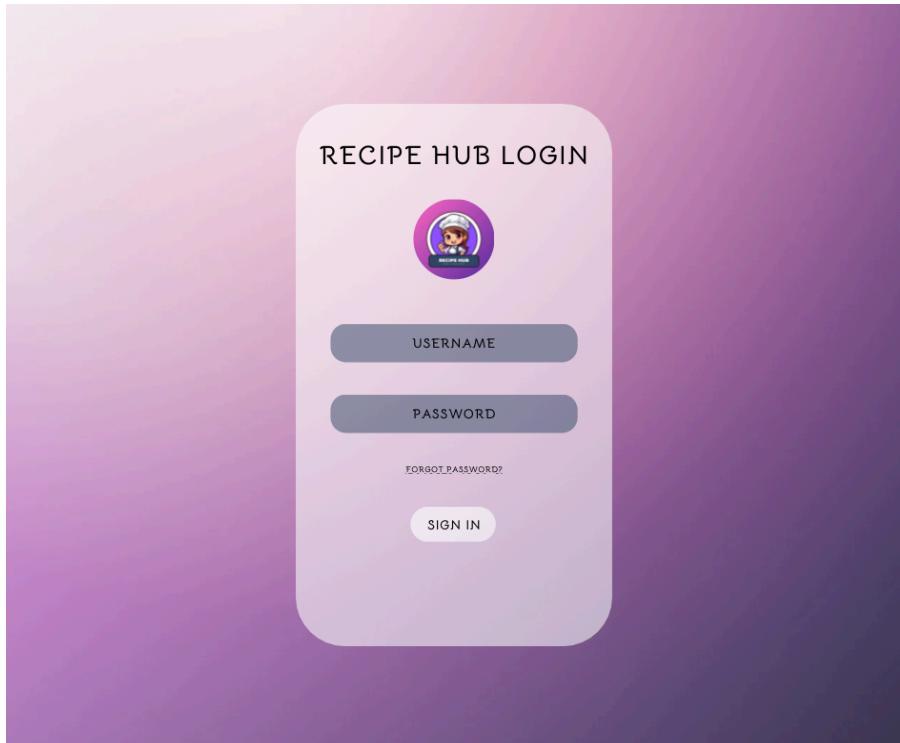
Logo Ideas:

Here are some logo ideas we came up with, ultimately going for a purple color scheme.



UI/UX Design:





HOME | LIST | RECIPES | POSTS

search

ADD POST +

USERNAME

CHICKEN ALFREDO PASTA

INGREDIENTS

- 1 LARGE BONELESS CHICKEN BREAST (OR 2 SMALL) ABOUT 1-1.5 LB.
- 6 TABLESPOONS BUTTER HIGH QUALITY
- 2 TABLESPOONS GARLIC POWDER
- 3 CUPS HALF AND HALF (HALF MILK, HALF CREAM)
- 1/2 CUP PARMESAN CHEESE GRATED
- 1/2 CUP ROMANO CHEESE GRATED
- SALT AND PEPPER TO TASTE
- .5 LB. FETTUCCINE

MEASURE OUT INGREDIENTS BEFORE BEGINNING. THEN BEGIN HEATING A POT OF WATER TO BOIL THE PASTA. CUT THE CHICKEN IN HALF LENGTHWISE TO CREATE 2-3 THINNER SLICES. PAT DRY AND SEASON WITH SALT AND PEPPER. MELT 3 TABLESPOONS BUTTER IN A SKILLET OVER HIGH HEAT AND ADD THE CHICKEN. SEAR ON EACH SIDE FOR ABOUT 4-5 MINUTES. LET IT COOK FOR ANOTHER 2-3 MINUTES UNTIL THE CHICKEN IS COOKED THROUGH. THEN CUT INTO STRIPS. LEAVE MOST OF THE CHICKEN REMNANTS (FRESH MEAT) IN THE SKILLET. ADD THE FETTUCCINE TO THE BOILING WATER AND BOIL THE PASTA ACCORDING TO PACKAGE INSTRUCTIONS. THEN DRAIN. PREPARE THE SAUCE BY MELTING THE REST OF THE BUTTER IN THE SAME SKILLET. WHISK IN THE FLOUR AND COOK FOR 3-5 MINUTES, STIRRING CONTINUOUSLY. ADD THE MILK AND WHISK UNTIL THE SAUCE IS THICKENED. COOK OVER LOW HEAT UNTIL THE SAUCE IS THICKENED. ADD THE PARMESAN AND ROMANO CHEESES. COOK OVER LOW HEAT FOR ANOTHER 2-3 MINUTES. TASTE AND ADJUST SPICES IF NEEDED. ADD THE CHICKEN BACK TO THE SAUCE AND IT WILL CONTINUE TO THICKEN. ADD THE CHICKEN BACK TO THE SAUCE AND IT WILL CONTINUE TO THICKEN. GARNISH WITH CHOPPED PARSLEY AND SERVE.

Like Comment Share

The top navigation bar includes a user icon, links for HOME, LIST, RECIPES, and POSTS, and three circular icons for search, notifications, and profile.

RECIPE HUB

search

LIST

CLEAR

RECIPES

SEE ALL

The top navigation bar includes a user icon, links for HOME, LIST, RECIPES, and POSTS, and three circular icons for search, notifications, and profile.

USERNAME: el_sole

POSTS: 2

LIKES: 24

LOG OUT

CHANGE PASSWORD

POSTS

SAVED

BUSINESS RULES:

Each USER can have one grocery LIST.

Each LIST must be created by one USER.

Each ITEM can be added to a LIST.

Each LIST can have multiple ITEMS.

Each USER can create multiple posts.

Each POST must be associated with one USER.

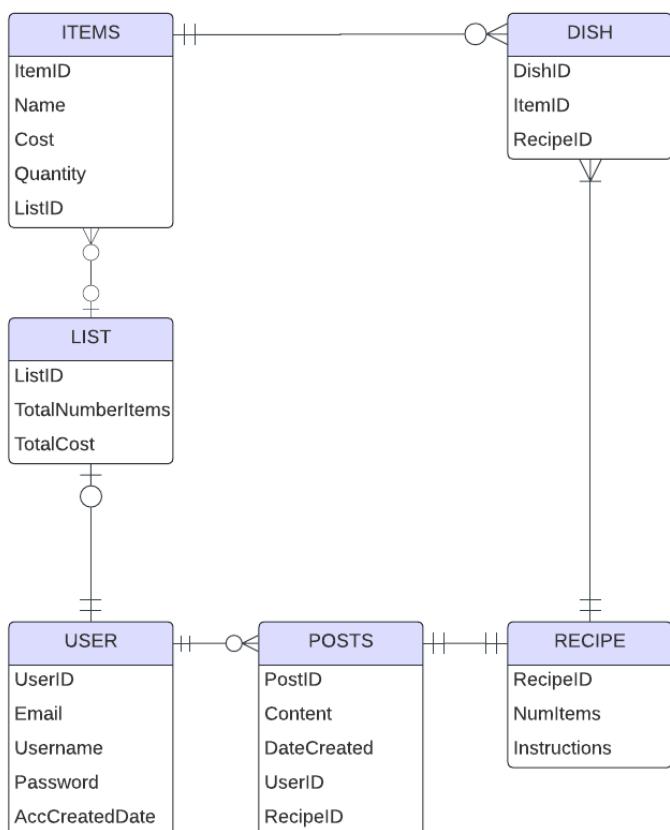
Each POST can include one RECIPE.

Each RECIPE can come from one POST.

Each RECIPE can have many ITEMS.

Each ITEM can be apart of many RECIPES.

ERD:



Usability Test Plan:

What it is: A usability test plan outlines how you'll conduct testing to determine if users can successfully interact with a product.

Purpose: Helps identify any issues or friction points in the user interface before full deployment.

Example: A plan that involves selecting users to perform certain tasks in the application, like registering an account or completing a purchase.

Use in Design: Ensures that the product meets the user's needs and is intuitive to use before going live.

1. Navigation

- Is the website navigation intuitive for busy people on the go (College students)?
- Can users easily find the grocery list and recipe recommendation features?
- Are all links and buttons clearly labeled and functional?
- Is it easy to switch between the list maker, recipes, and recipe creator features?

2. Readability

- Is the text easy to read, with appropriate font sizes and contrast, especially on mobile devices (Important)?
- Are the fonts, colors, and other elements like logos consistent across all pages?
- Is the language simple and relatable?
- Are recipe recommendations clearly displayed and easy to understand?

3. Accessibility

- Are alternative text descriptions provided for images (recipe pictures)?
- Is there an option to increase text size or adjust contrast for visually impaired users?
- Night mode?

4. Error Handling

- Are error messages clear and helpful?
- Can users easily fix errors, such as adding a wrong item to the list?
- Are there any bugs or errors that limit the capabilities of the website?

5. Performance

- Can the website be used across various devices, like smartphones (which college students may primarily use)?
- Is it functional across common browsers (like Chrome, Safari)?
- Are there any crashes, or lag when switching between the list and recipe features?
- Is it an optimal design for mobile use?

6. User Control

- Do users feel in control of their actions on the website , like easily adding or removing items from their grocery list?
- Is the interface responsive (like when they add an item, does it appear immediately)?
- Can users easily find recipe recommendations and save or edit those without any problem?

7. User Flow and UX

- Is the process of creating a grocery list straightforward and logical?
- Is the switch from creating a grocery list to generating recipe recommendations smooth and intuitive?
- Can users complete tasks (like creating a list, finding a recipe, or saving a recipe) without too many steps?
- Is there any frustration or confusion when trying to perform tasks?

8. Self-Help and Documentation

- Is there a "How it works" section for explaining the key features?
- Is there help for new users (like a quick tutorial or walkthrough for first-time users)?

9. Budget-Friendly Recipe Focus

- Are the recipe recommendations that are budget-friendly marked budget friendly (for college students)?
- Are recipes categorized by price, ingredients , or preparation time?
- Are recipes possible with everyday household items (cookware)?

Lamp stack setup

Apache install

```
Enabling module authz_host.  
Enabling module authn_core.  
Enabling module authn_basic.  
Enabling module access_compat.  
Enabling module authn_file.  
Enabling module authn_user.  
Enabling module alias.  
Enabling module dir.  
Enabling module autoindex.  
Enabling module env.  
Enabling module mime.  
Enabling module negotiation.  
Enabling module setenvif.  
Enabling module filter.  
Enabling module deflate.  
Enabling module status.  
Enabling module reqtimeout.  
Enabling conf charset.  
Enabling conf localized-error-pages.  
Enabling conf other-ghosts-access-log.  
Enabling conf security.  
Enabling conf serve-cgi-bin.  
Enabling site 000-default.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib  
/systemd/system/apache2.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.  
service → /lib/systemd/system/apache-htcacheclean.service. I  
Processing triggers for man-db (2.11.2-2) ...  
Processing triggers for libc-bin (2.36-9+rpt2+deb12u8) ...  
pi@raspberrypi:~ $ sudo ufw enable  
Firewall is active and enabled on system startup  
pi@raspberrypi:~ $ sudo ufw allow http  
Rule added  
Rule added (v6)  
pi@raspberrypi:~ $
```

