– FOO MY FOOD –

CS 30700
Sprint 3 Planning Document

Team 29
Xiuwen "Charlie" Fang, Xinyi Guan, Songyu "Hathaway" He, Xinyi Wu

Sprint Overview:

In Sprint 3, Group 29 will continue to develop the FOO MY FOOD app to provide a more personalized, user-friendly experience. This iteration will focus on smart menu recommendations and the ability to save recipes to a phone album. Key updates include allowing users to record the date and frequency of cooking for specific recipes and providing overcooking alerts to encourage users to pay more attention to their cooking habits and utilize ingredients efficiently. In terms of inventory management, a new expiration notification feature will be added to help reduce ingredient waste by allowing users to select a preset number of reminder days or customize reminder times. Recipe recommendations based on existing inventory and ingredients about to expire will provide users with personalized meal suggestions that support sustainability and convenience. In addition, the app will add a new personal home page that showcases a user's favorites folder and personal information to enhance user interaction and personalize the app experience. Meanwhile, a theme color customization feature will allow users to adjust the app's visuals to their personal preferences. To support these features, the back-end will be optimized with data structures to ensure seamless integration between the front-end and back-end. Through dedicated testing and debugging, these improvements are expected to bring a smoother and more consistent user experience across multiple platforms.

Sprint Period:

-   Nov. 5 - Nov. 22

Scrum Master:

-   Xiuwen Fang

Scrum Meeting Plan:

-   Sunday 10:00 A.M.
-   Tuesday 3:30 P.M. with Project Coordinator
-   Wednesday 8:00 P.M.
-   Thursday 10:00 A.M.

Risk and Challenges:

The main risks and challenges faced in this iteration focused on front-end and back-end integration, database optimization, user personalization settings compatibility, real-time notifications, testing and debugging of complex features, and time management. With the increase in functionality, the complexity of front-end and back-end integration increased, especially in data synchronization and real-time, which could lead to the risk of data loss and the need to ensure the accurate delivery of user data. At the same time, the addition of new recipe frequency records and smart recommendation functions requires an expansion of the

database structure, which may not only affect system performance, but also need to prevent data redundancy and query inefficiency. User personalization settings (e.g., theme color and expiration reminder time) increase the system compatibility challenges across different devices and operating systems, and it is critical to ensure consistent user experience. In addition, the expired notification and frequent cooking reminder features rely on the accuracy of time triggers, and how to ensure the real-time and stability of the notification system is a key issue for the team to address. This iteration involves cross-integration of multiple functions. Complex functions such as smart recommendation, recipe recording and reminder system need to be fully tested and debugged to prevent potential functional conflicts or unexpected errors. At the same time, as the execution of some tasks depended on the completion of the predecessor tasks, the team needed to rationalize the timing and prioritization to ensure that the individual tasks progressed according to plan and reduce the possibility of delays.

Current Sprint Detail:

User story #1

As a user, I would like to record the times of cooking a specific dish with the cooking date.

#	Description	Estimated Time	Owner
1	Create UI for allowing users to select different recipes and asking the user if you want to mark it as cooked or not.	1.5hrs	Xinyi Guan
2	Update UI for each recipe that shows each recipe's cooked total times.	1.5 hrs	Xinyi Guan
3	Write APIs in backend and edit frontend according to the setting in backend.	3hrs	Xinyi Guan
4	Connect frontend and backend, make sure information is stored in the database.	2hrs	Xinyi Guan
5	Creating needed table and data structure changes in the database	1hr	Xinyi Wu
6	Test the function to ensure all functions are correct.	2hrs	Xinyi Guan

Acceptance Criteria:
1. Given that a user wants to mark a recipe as cooked, when the user clicks the "select recipe" button, then the user can select the recipes that might be cooked today.
2. Given that this user selected several recipes, then the system will pop up a window that asks this user if he or she wants to mark them as cooked, if yes, the system will record that these recipes has been cooked one more time (total time plus one).
3. Given that this user selected several recipes, then the system will pop up a window that asks this user if he or she wants to mark them as cooked, if yes, the system will record the cooking date according to today's date.
4. Given that this user selected several recipes, then the system will pop up a window that asks this user if he or she wants to mark them as cooked, if no, the system will not record anything.
5. Given that this user opened the recipe detail page, then he or she can see the total cooked time.

User story #2

As a user, I would like to receive a reminder when checking a dish recipe that has been cooked too often, either within a preset or customized period of time.

#	Description	Estimated Time	Owner
1	Create UI for reminders.	2hrs	Xinyi Guan
2	Write APIs for checking total cooking time in backend and edit frontend with respect to the setting in backend.	3hrs	Xinyi Guan
3	Connect frontend and backend, make sure information is stored in the database.	2hrs	Xinyi Guan
4	Creating needed table and data structure changes in the database	1hr	Xinyi Wu
5	Test the function to ensure all items are functional.	2hrs	Xinyi Guan

Acceptance Criteria:
1. Given that the user has marked a dish as cooked at least once within the past 30 days and has not set a customized reminder period, then the system will track the total number of times this dish has been cooked within the past month.
2. Given that there is at least one dish that exceeds a predefined frequency with respect to the default checking period of our system or the checking period that is set by the user(if this user set before), the system will notify this user that this dish has been cooked too frequently.
3. Given that the user has set a customized reminder period for a specific dish, then the system will track the cooking frequency within the specified timeframe.
4. Given that the user received a notification, when there is at least one dish that is cooked too often, then the user can click a button to remove this notification on the screen.

User story #3

As a user, I would like to receive expiration notifications for ingredients either at a preset or customized number of days before expiration.

#	Description	Estimated Time	Owner
1	Create UI for preset/customized number of days setting based on current Recipe detail's UI	1.5hr	Xinyi Guan

2	Create UI for letting user choose to be notified by which type of notification	1.5hr	Xinyi Guan
3	Update notification UI according to user's choice	1hr	Xinyi Guan
4	Write APIs in backend and update frontend according to the backend.	3hrs	Xinyi Guan
5	Connect frontend and backend, make sure information is stored in the database.	2hrs	Xinyi Guan
6	Creating needed table and data structure changes in the database	1hr	Xinyi Wu
7	Test the function to ensure all items are functional.	2hrs	Xinyi Guan

Acceptance Criteria:
1. Given that the user has an ingredient with an expiration date within a preset number of days (3 days), and the user has not set a customized expiration notification period, when the expiration date approaches within this preset period, then the system will send a notification to alert the user of the upcoming expiration.
2. Given that the user has multiple ingredients nearing expiration within the preset notification period, when the user checks their ingredient list, then the system will display expiration warnings for each of these ingredients
3. Given that the user has set a customized number of days before expiration for receiving notifications, when an ingredient's expiration date approaches within this customized period, then the system will send a notification to alert the user according to the specified time frame.
4. Given that the user has ingredients nearing expiration within both the default and customized notification periods, when the user checks their ingredient list, then the system will show expiration warnings based on both default and customized settings, with priority given to the user's customized setting.
5. Given that the user has received an expiration notification for an ingredient, when the user interacts with the notification, then the system will provide an option to dismiss the notification or take further action, such as managing the ingredient.

User story #4

As a user, I would like to get menu suggestions based on what I have at home so I can plan meals without having to buy additional ingredients.

#	Description	Estimated Time	Owner

1	Implement a feature to analyze user's inventory and suggest recipes based on available ingredients	4hrs	Songyu He
2	Design and create a UI to display recipe suggestions in a new page	2hrs	Songyu He
3	Creating a jump to the new page in the recipe page	1.5hr	Songyu He
4	Integrate a filtering option to refine suggestions based on this feature	2hr	Songyu He
5	Update new database columns	1hr	Xinyi Wu
6	Test the recipe suggestion feature for accuracy and relevancy	2hrs	Songyu He

Acceptance Criteria:
1. Given the user views the smart menu page, when they request meal suggestions, then the system should show recipes using only available ingredients.
2. Given the user has selected a recipe, when they view the details, then the recipe should include detailed information.
3. Given the user has no matching ingredients for a recipe, when they check suggestions, then the system should inform them that no recipes are available.
4. Given the user adds or removes items from their inventory, when they request meal suggestions again, then the suggestions should update accordingly.
5. Given the user views recipe suggestions, when they click on a recipe, then they should be able to add it to "My recipes".

User story #5

As a user, I want recipe recommendations and meal plans tailored to my current ingredient preferences

#	Description	Estimated Time	Owner
1	Create a UI to display meal plan	2hrs	Songyu He
2	Create a UI for a search box for users to input their ingredient preferences	1.5hr	Songyu He
3	Implement backend for search box	2hrs	Songyu He
4	Add functionality to give recommendations based on user input	3hrs	Songyu He

5	Update new database columns	1hr	Xinyi Wu
6	Test the entire flow from ingredient input to meal plan output	2hrs	Songyu He

Acceptance Criteria:
1. Given the user inputs their ingredient preferences in the search box, when they request recipe recommendations, then the system should display recipes that match those preferences.
2. Given the user views the recommended recipes, when they select a recipe, then the details should include ingredients, cooking instructions, and nutritional information.
3. Given the user has a set of preferred ingredients, when they request meal plans, then the system should generate a daily meal plan using those ingredients.
4. Given the user updates their ingredient preferences in the search box, when they request new recommendations, then the suggestions should reflect the updated preferences.
5. Given the user is viewing a recipe, when they click on a recipe, then they should have the option to add it to 'My Recipes'.

User story #6

As a user, I want to get suggestions for food chosen based on the ingredients I use frequently in order to make healthier choices in my meal planning.

#	Description	Estimated Time	Owner
1	Create UI elements for filtering based on frequently used ingredients	2hr	Songyu He
2	Implement a feature to track frequently used ingredients	3hrs	Songyu He
3	Integrate a filtering option to refine suggestions based on	1.5hr	Songyu He
4	Update new database columns	1hr	Xinyi Wu
5	Test the complete workflow from ingredient tracking to suggestion output	2hrs	Songyu He

Acceptance Criteria:
1. Given the user frequently uses certain ingredients, when they request recipe suggestions, then the system should display recommendations based on those ingredients.

2. Given the user views the recommended recipes, when they select a recipe, then the details should include ingredients, cooking instructions, and nutritional information.
3. Given the user has a set of frequently used ingredients, when they request meal plans, then the system should generate a daily meal plan using those ingredients.
4. Given the user updates their frequently used ingredients based on their cooking history, when they request new suggestions, then the recommendations should reflect the updated list.

User story #7

As a user, I would like to be able to get a pop-up notification when adding an existing ingredient on the shelf into the shopping list.

#	Description	Estimated Time	Owner
1	Add logic to determine if the added ingredient already exists in the inventory. And binding of shopping lists and food inventory data	2hrs	Xiuwen Fang
2	Create a simple popup component that displays a reminder that an ingredient is in stock.	2hrs	Xiuwen Fang
3	Completes the processing logic after the user clicks confirm or clicks cancel	1hr	Xiuwen Fang
4	Connecting the front and back ends to ensure proper communication and data transfer and display.	2hrs	Xiuwen Fang
5	Perform integration testing and UI testing to verify that the pop-up notification meets expectations. Whether all user actions are handled	1hr	Xiuwen Fang

Acceptance Criteria:
1. Given an ingredient is added to the shopping list, when the ingredient already exists in the inventory, then a pop-up notification is displayed to alert the user of the duplicate item.
2. Given the pop-up notification appears, when the ingredient is already in stock, then the pop-up displays a message with options to "Confirm" or "Cancel" the action.
3. Given the user sees the notification, when the user selects "Confirm," then the ingredient is added to the shopping list.
4. Given the user selects "Confirm," when an ingredient is added to the shopping list, then a success message appears confirming "Added successfully to the shopping list."

5. Given the user sees the notification, when the user selects "Cancel,"then the action is aborted, and the ingredient is not added to the shopping list.

User story #8

I would like to have a personal main page showing my public collection folders and other information.

#	Description	Estimated Time	Owner
1	Create a table in the database for the user's collection folder	1hr	Xinyi Wu
2	Design a personal main page UI to display user avatar, username, list of collection folders. The "Setting" button navigates to the previously modifiable user profile page.	3hrs	Xiuwen Fang
3	Back-end logic for extracting user profiles and displaying images	1hr	Xiuwen Fang
4	Add "star" button to each recipe card in "Smart menus".	1hrs	Xiuwen Fang
5	Design API to Find smart menus that the user has marked as "starred" and store them in the user's favorites folder.	2hrs	Xiuwen Fang
6	Connecting the front and back ends to ensure proper communication and data transfer and display.	2hrs	Xiuwen Fang
7	Test the collection function by clicking "star", test the display of personal homepage and the display of recipes in collection folder	2hrs	Xiuwen Fang

Acceptance Criteria:
1. Given a user accesses the personal main page, when the page loads, then the user avatar, username, and list of public collection folders are displayed correctly.
2. Given a user accesses the personal main page, when a click "Settings" button, navigating to the user profile detail and modification page
3. Given a user views a recipe card in "Smart Menus," when the "star" button is clicked, then the recipe is visually updated to indicate it has been starred.（For example, star will be lit.）
4. Given the user wants to add a recipe to the collection folder, when the "star" button is clicked, then the recipe is stored in the user's collection folder in the database.

5. Given the user wants to view their favorites, when the user accesses the personal main page, then the user can see a list of all starred recipes in the user's collection.

User story #9

I would like to be able to change the theme color from the provided options.

#	Description	Estimated Time	Owner
1	Add column for storing user-selected topics in database	1hr	Xinyi Wu
2	In the profile, add a color options section that shows the available theme color choices	2hrs	Xiuwen Fang
3	Design multiple user-selectable theme colors	1hr	Xiuwen Fang
4	API to process user selections and add or update user selections to the database	2hrs	Xiuwen Fang
5	Testing on all functions	2hrs	Xiuwen Fang

Acceptance Criteria:
1. Given users want to change the theme, when the user accesses the personal main page, A button to "Change Theme Color" can be seen.
2. Given the user accesses the personal main page, when clicking the "Change Theme Color" button, then the available theme color choices are visible and selectable by the user.
3. Given the user is in the color options section, when the user chooses a theme color, then the selected color is applied across the app's UI as the active theme.
4. Given a user selects a new theme color, when the API is called to save the selection, then the selected theme color is added or updated in the database for that user.
5. Given a user successfully changes the theme color, when the theme color is applied,then a confirmation message appears, notifying the user that the theme color has been changed successfully.

User story #10

As a user, I would like to get menu suggestions based on what ingredients are near the expiration dates so I can avoid food wastes.

#	Description	Estimated Time	Owner

#	Description		Owner
1	Backend: building up link between recipe ingredients and user ingredient table	2hrs	Xinyi Wu
2	Backend: fuzzy searching logic on ingredients and recipes	2hrs	Xinyi Wu
3	Backend: sorting on expiration dates ingredients logic	2hrs	Xinyi Wu
4	Frontend: UI on recipe display design page	1hr	Xinyi Wu
5	Frontend: UI on mode changing button and action flow	1hr	Xinyi Wu
6	Testing on the recipe recommendation display based on the order of expiration	2hrs	Xinyi Wu

Acceptance Criteria:
1. Given a user viewing the "smart menu" page, when switching the recommendation mode, then the user should be able to choose the mode of showing recommendations based on the inventory ingredients through a "show least waste" button.
2. Given a user viewing the "smart menu" page, when switching the mode by choosing "show least waste", then the user can choose to view the recipe recommendation based on the order of holding most ingredients near to expiration to farthest in the user's inventory.
3. Given a user viewing the "smart menu" page, when they cancel their choosing on "Show Least Waste" mode, then the system displays all available recipes, regardless of expiration dates in the user's inventory.
4. Given a user updates their inventory by editing their inventories, when they return to the "smart menu" page and select "Show Least Waste", then the recommendations update to reflect the current inventory and expiration dates.
5. Given a user has no ingredients in the inventory for any recipe, when they view recommendations, then the system informs them no recipes are available under "Show Least Waste" mode.

User story #11

As a user, I would like to have a filtering categorized and search feature in the list to help me keep track of my inventory while shopping.

#	Description	Estimated Time	Owner
1	Backend: adding categorization on shopping list items, modification in database	1hr	Xinyi Wu

2	Backend: ingredients in shopping list linked to the user_ingredient table	2hrs	Xinyi Wu
3	Backend: searching logic implementation	2hrs	Xinyi Wu
4	Bakend: categorization logic implementation	1hr	Xinyi Wu
5	Frontend: UI implementation of search box and result display	1hr	Xinyi Wu
6	Frontend: UI implementation of categorization and result display	2hrs	Xinyi Wu
7	Testing on all functions	2hrs	Xinyi Wu

Acceptance Criteria:
1. Given the user opens the shopping list page, when they view the filtering options, then they should see a list of available item categories.
2. Given the user clears the filter, when they return to the all shopping list view, then all ingredients should be displayed, regardless of category.
3. Given the user switches between categories, when they apply a different filter, then the inventory should update to reflect the newly selected category without needing to refresh the page.
4. Given the user is applying filters, when they have selected multiple categories, then the inventory should display ingredients that match any of the selected categories.
5. Given a user is on the shopping list page, when they enter an item in the search box, then the system only displays matching ingredients, filtering the shopping list in real-time.

User story #12

As a user, I would like to save my favorite recipes as pictures into my device gallery.

#	Description	Estimated Time	Owner
1	Backend: picture creation logic and saving into gallery function API implementation	2hrs	Xinyi Wu
2	Backend: system authorization functions implemented	1hr	Xinyi Wu
3	Backend: picture layout design	1hr	Xinyi Wu
4	Frontend: UI on "save to gallery" button on recipe detailed page	1hr	Xiuwen Fang

5	Frontend: pop-up box for confirmation and follow up actions	2hrs	Xiuwen Fang
6	Testing on all functions	1hr	Xiuwen Fang

Acceptance Criteria:
1. Given the user is on the recipe detail page, when they want to save a picture with the recipe information, then they should be able to select and enable the function through an icon.
2. Given the user uses the "save as picture" for the first time, when they agree on a system authorization confirmation, they will no longer need to agree for the later saving requests.
3. Given the user in on the recipe detail page, when they click the "save as picture" button, then a pop-up box would show a confirmation on "You really want to save the recipe?".
4. Given the user is on the confirmation pop-up after selecting "save as picture" on the recipe detail page, when the user clicks "Yes", then the system generates the recipe image and saves it.
5. Given the user is on the confirmation pop-up after selecting "save as picture" on the recipe detail page, when the user clicks "No", then the system dismisses the pop-up and returns to the recipe detail page without saving the image.

Total Working Hours for Sprint3

Member Name	Total Time	Tasks
Charlie Fang	30	Includes inventory duplicate alerts when adding a shopping list, displays personal homepage collection information, and provides customizable theme color switching.UI part of save to gallery
Xinyi Guan	30	Record the times of cooking a specific dish with the cooking date; reminder when checking a dish recipe that has been cooked too often, either within a preset or customized period of time; receive expiration notifications for ingredients either at a preset or customized number of days before expiration.
Hathaway He	30.5	Smart Menu creation and display; enable filters by what I have in home/what I frequently used/what I like
Xinyi Wu	33	Database updates, table linking; Smart Menu recommendations on existing ingredients and expiration conditions; categorizations and searching on shopping list with minor changes in UI; recipe picture generation and saving

Remaining Backlog

Functional Requirements

Account System

As a user:
1. ~~I would like to sign up for a FOO MY FOOD account via email with a unique username on both iOS and Android platform, so that I can easily distinguish my account and access the app through a traditional method.~~
2. ~~I would like to be able to log in for my FOO MY FOOD account via email address.~~
3. ~~I would like to be able to log out of my FOO MY FOOD account at any time to ensure the security of my account and to protect personal information.~~
4. ~~I would like to be able to reset my FOO MY FOOD account's password through a confirmation email with the rest link if I forget it in order to regain access to my account.~~
5. ~~I would like to set a new password for my account by answering a security question, without waiting for an email.~~
6. ~~I would like to be able to set my profile information (e.g., username, email address, avatar) for my FOO MY FOOD account, in order to display my basic information.~~
7. ~~I would like to be able to change my profile to keep my information up to date.~~
8. ~~I would like to be able to select an avatar from the gallery or just take an avatar photo in order to update my profile in real time.~~
9. I would like to be able to set my food and cooking style preferences (e.g. dietary restrictions, preferred cuisine) in my FOO MY FOOD account so that the app can recommend personalized recipes and meal plans based on my preferences.
10. I would like to be able to update my food and cooking style preferences at any time (e.g. adjusting my dietary restrictions or adding new preferred dishes) so that the app can continue to recommend personalized recipes and meal plans based on my latest needs.

Expiration Tracking and Notification

As a user:
11. ~~I would like to add new items into my inventory by selecting preset ingredient options for quick updates.~~
12. ~~I would like to be able to manually enter ingredients to add to inventory in order to enter ingredients that are not in the preset options.~~
13. ~~I would like to be able to see the current inventory of ingredients to have a better idea of what is in my home.(Add a preview page or something)~~
14. ~~I would like to be able to change the names of the ingredients in my inventory in order to update incorrect or outdated entries.~~

15. I would like to be able to modify the quantity of each ingredient in my inventory to accurately reflect the amount of ingredients available.
16. I would like to be able to delete items from my current inventory shelf for recording the immediate consumption.
17. I would like to set custom expiration dates for my ingredients so that I can take into account personal preferences or storage methods.
18. I would like to set food preservation methods (e.g., freezer, pantry) for ingredients.
19. I would like the system to suggest appropriate saving methods and saving times when adding or modifying ingredient information.
20. I would like to receive an automatically updated food status from the app, calculated with the provided preservation methods and starting datesation dates with my Google calendar so that I can receive notification on my device.
21. I would like to synchronize ingredient expiration information with my Google Calendar so that I can receive notification on my device.
22. I would like to synchronize ingredient expiration dates with my Apple calendar so that I can receive notification on my device.
23. I would like to receive an in-app notice of the expiration information.
24. I would like to receive a notice from the calendar of the expiration information.
25. I would like to receive a preview notice of the expiration information.
26. I would like to receive expiration notifications for ingredients either at a preset or customized number of days before expiration.
27. I want to be able to filter ingredients based on different categories to make it easier to manage and view specific ingredient categories in my inventory.
28. I want to be able to receive an automatically categorized inventory shelf after each modification.
29. I would like to be able to change the categorization of an ingredient at any time so that I can manually adjust the categorization if the automatic categorization is inaccurate.
30. I would like to be able to filter and sort current inventory by preset or customized "expiration times".

Smart Menu

As a user:

31. I would like to get menu suggestions based on what I have at home so I can plan meals without having to buy additional ingredients.
32. I would like to get menu suggestions based on what ingredients are near the expiration dates so I can avoid food wastes.
33. I would like to record the times of cooking a specific dish with the cooking date.
34. I would like to receive a reminder when checking a dish recipe that has been cooked too often, either within a preset or customized period of time.
35. I want recipe recommendations and meal plans tailored to my current ingredient preferences
36. I want to categorize recipes with labels like 'Breakfast', 'Vegetarian', etc.

37. I want to be able to create my recipes via text, image or video links and keep accurate records.
38. I would like to be able to edit and delete recipes that I have previously created.
39. I would like to see a calculated nutritional report after selecting specific dish recipes.

Shopping List

As a user:
40. I would like to have an in-app list function to track what I am going to buy soon.
41. As a user, I would like to have a categorized search feature in the list to help me keep track of my inventory while shopping.
42. As a user, I would like to be able to get a pop-up notification when adding an existing ingredient on the shelf into the shopping list.

User Clustering

As a user:
43. I would like to be able to build up a group chat with other users.
44. I would like to be able to add friends through searching email or by searching the username.
45. I would like to be able to upload my created recipe into a group chat.
46. I would like to be able to hit "like" buttons on recipes posted from others publicly.

Other Functions

As a user:
47. I want to track the nutritional value of each item on the shelf and see detailed nutritional info, such as calories, to make healthier meal choices.
48. I would like to have a personal main page showing my public collection folders and other information.
49. I would like to be able to change the theme color from the provided options.

Advanced Features (If Time Available)

As a user,
50. I want the app to automatically recognize the newly purchased items via scanning receipts.
51. I want receipt scanning to generate default shelf life values for ingredients and paired with the added items in my inventory shelf.
52. I would like to be able to modify the scanned items' names to correct the errors created through scanning.
53. I would like to be able to manually edit the shelf life of each ingredient to ensure accuracy and avoid missing important information when scanning.
54. I would like recurring purchases to automatically adjust their expiration dates based on historical data.

55. ~~I would like to save my favorite recipes as pictures into my device gallery.~~
56. I would like to be able to collect favorite recipes posted from others publicly.
57. I would like to be able to share the publicly uploaded recipes from others with friends.
58. I want to generate a shareable link for my inventory so friends can view what I have in stock.
59. I want to be able to share links from other websites to share recipes or cooking tutorials.
60. I want to control permissions on shared links, making them either view-only or editable.
61. I would like to be able to set my "like" and "collected" recipe folders into public or private.
62. I would like to be able to set an expiration date for my shared link so that access to my inventory or recipe is automatically revoked after a certain period.
63. I would like to receive an email or in-app confirmation when my link has been successfully shared so that I know the sharing process was completed.
64. I would like to be able to set customized tags for my recipe or in the collection folder.
65. I would like to be able to customize my preferred language in the app.
66. ~~I want to get suggestions for food chosen based on the ingredients I use frequently in order to make healthier choices in my meal planning.~~

Non-functional Requirements

Architecture and Performance

As a developer:
1. I would like _FOO MY FOOD_ to have a fully separated frontend and backend architecture to reduce compatibility issues and improve efficiency.
2. I would like _FOO MY FOOD_ to use Spring Boot for the backend, enabling scalability with features like database caching and ORM support.
3. I would like the frontend to be developed using Flutter, allowing a cross-platform solution for both iOS and Android.

Security

As a developer:
4. I would like _FOO MY FOOD_ to implement two-factor authentication (2FA) to enhance security for user accounts during login and other sensitive actions.
5. I would like sensitive data stored in the SQLite database to be encrypted using SQLCipher, ensuring data at rest is secure.
6. I would like to implement role-based access control to limit access to sensitive data to only authorized users.

Response Time

As a developer:
7. I would like _FOO MY FOOD_ to complete user actions, such as adding ingredients or searching recipes, within 500 milliseconds to maintain a smooth experience.
8. I would like server-side API calls to return data within 300 milliseconds for simple queries, ensuring quick load times.
9. I would like complex operations to be handled asynchronously, with a response time of no more than 1 second, so the UI remains responsive.
10. I would like the application to scale to handle up to 500 simultaneous requests during peak times while maintaining performance.

Usability

As a developer:
11. I would like to create a visually appealing and functional interface that is easy to navigate for users.
12. I would like the design to balance aesthetics and functionality, making key tasks like searching for recipes or adding ingredients intuitive.
13. I would like smooth transitions and responsive UI elements that enhance the user experience on both Android and iOS.

					Week 1							Week 2							Week 3				
STORY NUMBER	TASK DESCRIPTION	OWNER	START DATE	DUE DATE	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri
					11/4	11/5	11/6	11/7	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20	11/21	11/22
1	record the times of cooking a specific dish with the cooking date.																						
	Create UI for allowing users to select different recipes and asking the user if you want to mark it as cooked or not.	Xinyi Guan	11/4/2024	11/10/2024																			
	Update UI for each recipe that shows each recipe's cooked total times.	Xinyi Guan	11/5/2024	11/10/2024																			
	Write APIs in backend and edit frontend according to the setting in backend.	Xinyi Guan	11/6/2024	11/10/2024																			
	Connect frontend and backend, make sure information is stored in the database.	Xinyi Guan	11/7/2024	11/10/2024																			
	Creating needed table and data structure changes in the database	Xinyi Wu	11/5/2024	11/6/2024																			
	Test the function to ensure all functions are correct.	Xinyi Guan	11/9/2024	11/10/2024																			
2	receive a reminder when checking a dish recipe that has been cooked too often, either within a preset or customized period of time.																						
	Create UI for reminders.	Xinyi Guan	11/4/2024	11/17/2024																			
	Write APIs for checking total cooking time in backend and edit frontend with respect to the setting in backend.	Xinyi Guan	11/5/2024	11/17/2024																			
	Connect frontend and backend, make sure information is stored in the database.	Xinyi Guan	11/6/2024	11/17/2024																			
	Creating needed table and data structure changes in the database	Xinyi Wu	11/5/2024	11/6/2024																			
	Test the function to ensure all items are functional.	Xinyi Guan	11/8/2024	11/17/2024																			
3	receive expiration notifications for ingredients either at a preset or customized number of days before expiration																						
	Create UI for preset/customized number of days setting based on current Recipe detail's UI	Xinyi Guan	11/18/2024	11/22/2024																			
	Create UI for letting user choose to be notified by which type of notification	Xinyi Guan	11/19/2024	11/22/2024																			
	Update notification UI according to user's choice	Xinyi Guan	11/20/2024	11/22/2024																			
	Creating needed table and data structure changes in the database	Xinyi Wu	11/5/2024	11/6/2024																			
	Write APIs in backend and update frontend according to the backend.	Xinyi Guan	11/22/2024	11/22/2024																			
	Connect frontend and backend, make sure information is stored in the database.	Xinyi Guan	11/23/2024	11/22/2024																			
	Test the function to ensure all items are functional.	Xinyi Guan	11/24/2024	11/22/2024																			
4	recipe suggestion based on what I have at home																						
	Design and create a UI to display recipe suggestions in a new page	Songyu He	11/4/2024	11/10/2024																			
	Creating a jump to the new page in the recipe page	Songyu He	11/5/2024	11/10/2024																			
	Implement a feature to analyze user's inventory and suggest recipes based on available ingredients	Songyu He	11/6/2024	11/10/2024																			
	Integrate a filtering option to refine suggestions based on this feature	Songyu He	11/7/2024	11/10/2024																			
	Update new database columns	Xinyi Wu	11/8/2024	11/10/2024																			
	Test the recipe suggestion feature for accuracy and relevancy	Songyu He	11/9/2024	11/10/2024																			
5	recipe suggestion based on what my ingredients preference																						
	Create a UI to display meal plan	Songyu He	11/11/2024	11/17/2024																			
	Create a UI for a search box for users to input their ingredient preferences	Songyu He	11/12/2024	11/17/2024																			
	Implement backend for search box	Songyu He	11/13/2024	11/17/2024																			
	Add functionality to give recommendations based on user input	Songyu He	11/14/2024	11/17/2024																			
	Update new database columns	Xinyi Wu	11/6/2024	11/15/2024																			
	Test the entire flow from ingredient input to meal plan output	Songyu He	11/16/2024	11/17/2024																			
6	recipe suggestion based on what I use frequently																						
	Create UI elements for filtering based on frequently used ingredients	Songyu He	11/18/2024	11/22/2024																			
	Implement a feature to track frequently used ingredients	Songyu He	11/19/2024	11/22/2024																			
	Integrate a filtering option to refine suggestions based on this feature	Songyu He	11/20/2024	11/22/2024																			
	Update new database columns	Xinyi Wu	11/8/2024	11/21/2024																			
	Test the complete workflow from ingredient tracking to suggestion output	Songyu He	11/22/2024	11/22/2024																			
7	pop-up notification when adding an existing ingredient on the shelf into the shopping list.																						
	Add logic to determine if the added ingredient already exists in the inventory.	Xiuwen Fang	11/4/2024	11/5/2024																			
	Create a simple popup component that displays a reminder that an ingredient is in stock	Xiuwen Fang	11/5/2024	11/6/2024																			
	Completes the processing logic after the user clicks confirm or clicks cancel	Xiuwen Fang	11/7/2024	11/8/2024																			
	Connecting the front and back ends to ensure proper communication and data transfer and display.	Xiuwen Fang	11/7/2024	11/8/2024																			
	Perform integration testing and UI testing to verify that the pop-up notification meets expectations.	Xiuwen Fang	11/9/2024	11/10/2024																			
8	personal main page showing my public collection folders and other information.																						
	Create a table in the database for the user's collection folder	Xinyi Wu	11/10/2024	11/12/2024																			
	Design a personal main page	Xiuwen Fang	11/11/2024	11/12/2024																			
	Back-end logic for extracting user profiles and displaying images	Xiuwen Fang	11/13/2024	11/13/2024																			
	Add "star" button to each recipe card in "Smart menus"	Xiuwen Fang	11/13/2024	11/13/2024																			
	Design API to Find smart menus that the user has marked as "starred"	Xiuwen Fang	11/14/2024	11/15/2024																			
	Connecting the front and back ends	Xiuwen Fang	11/16/2024	11/16/2024																			
	Test the collection function	Xiuwen Fang	11/17/2024	11/17/2024																			
9	I would like to be able to change the theme color from the provided options.																						
	Add column for storing user-selected topics in database	Xinyi Wu	11/10/2024	11/11/2024																			
	add a color options section	Xiuwen Fang	11/18/2024	11/19/2024																			
	Design multiple user-selectable theme colors	Xiuwen Fang	11/20/2024	11/20/2024																			
	API to process user selections and add or update user selections to the database	Xiuwen Fang	11/20/2024	11/21/2024																			

	Task	Owner	Start	End
	Testing on all functions	Xiuwen Fang	11/21/2024	11/21/2024
10	**recipe recommandations on user's ingredient expiration**			
	Backend: building up link between recipe ingredients and user ingredient table	Xinyi Wu	11/7/2024	11/12/2024
	Backend: fuzzy searching logic on ingredients and recipes	Xinyi Wu	11/18/2024	11/18/2024
	Backend: sorting on expiration dates ingredients logic	Xinyi Wu	11/18/2024	11/18/2024
	Frontend: UI on recipe display design page	Xinyi Wu	11/18/2024	11/18/2024
	Frontend: UI on mode changing button and action flow	Xinyi Wu	11/18/2024	11/18/2024
	Testing on the recipe recommendation display based on the order of expiration	Xinyi Wu	11/18/2024	11/18/2024
11	**shopping lit categorization and filtering**			
	Backend: adding categorization on shopping list items, modification in database	Xinyi Wu	11/8/2024	11/12/2024
	Backend: ingredients in shopping list linked to the user_ingredient table	Xinyi Wu	11/12/2024	11/14/2024
	Backend: searching logic implementation	Xinyi Wu	11/13/2024	11/15/2024
	Bakend: categorization logic implementation	Xinyi Wu	11/13/2024	11/15/2024
	Frontend: UI implementation of search box and result display	Xinyi Wu	11/14/2024	11/15/2024
	Frontend: UI implementation of categorization and result display	Xinyi Wu	11/14/2024	11/16/2024
	Testing on all functions	Xinyi Wu	11/15/2024	11/16/2024
12	**I would like to save my favorite recipes as pictures into my device gallery.**			
	picture creation and ideal format generation on detailed information or simple information of the recipe	Xinyi Wu	11/18/2024	11/19/2024
	system authorization functions implemented	Xinyi Wu	11/19/2024	11/20/2024
	picture layout design	Xinyi Wu	11/17/2024	11/18/2024
	UI on "save to gallery" button on recipe detailed page	Xiuwen Fang	11/18/2024	11/19/2024
	pop-up box for asking and choosing to store a simple version or a completed version of the recipe in picture	Xiuwen Fang	11/20/2024	11/20/2024
	Testing on all functions	Xiuwen Fang	11/21/2024	11/22/2024