



**-FOO MY FOOD-**

**CS 30700**  
**Sprint 1 Retrospective**

**Team 29**

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# What Went Well During Sprint 1?

In Sprint 1, we successfully completed the main functional modules, with all user stories passing the predefined acceptance criteria, ensuring the core functionality was correctly implemented. This included the creation of the account page, the basic functionality of the login page, and the initial connection between the backend and the database. We prioritized the core functionalities, such as account creation and login, ensuring that additional features would be gradually expanded once the infrastructure was stable. This rational task planning enabled us to deliver high-quality results within the required timeframe. Despite encountering some technical challenges with data interaction between the backend and frontend, the team quickly resolved them, successfully implementing both data storage and validation processes.

# Completed Stories:

## User Story #1

**As a user, 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.**

|   |  |                            |                           |
|---|--|----------------------------|---------------------------|
| 1 | Setting up a Spring Boot Project and Flutter project   | 3hr                        | Xiuwen Fang               |
| 2 | Create UI for create account page(Learning and programming together)   | 4hr total<br>(2hr/ person) | Xiuwen Fang/<br>Songyu He |
| 3 | Setting up user login account information table in database  | 2hr                        | Xinyi Wu                  |
| 4 | Verify the validity of the password and username entered by the user   | 2hr                        | Xiuwen Fang               |
| 5 | Store email address password and all other information in relation to a unique user.                                 | 2hr                        | Xiuwen Fang               |
| 6 | Implementation of email validation functionality   | 5hr                        | Xiuwen Fang               |
| 7 | Test to ensure that the front-end and back-end connections are smooth and all create account functions work smoothly | 2hr                        | Xiuwen Fang               |

Completed: On iOS and Android platforms, users can enter their email address, username and password through the account creation page. When submitting the information, the system checks that the password meets the requirements, verified by phone that the email and username are not in use, and sends a verification email where the user clicks on a link to activate the account. User information (including encrypted passwords) is securely stored in a database.

## User Story #2

**As a user, I would like to be able to log in for my FOO MY FOOD account via email address.**

|   |   |       |                          |
|---|---|-------|--------------------------|
| 1 | Login page UI   | 3hr   | Xiuwen Fang              |
| 2 | Username and email and password verification  | 5hr   | Xiuwen Fang/<br>Xinyi Wu |
| 3 | The user login status will be set in the database   | 0.5hr | Xiuwen Fang              |
| 4 | Test to ensure that the front-end and back-end connections are smooth and all login functions work smoothly | 2hr   | Xiuwen Fang              |

Completed: Users can log in to their FOO MY FOOD account via email. On iOS and Android platforms, the login page provides fields to enter an email and password. When the user enters and submits the information, the system verifies that the email and password are correct. If the validation is successful, the user is immediately redirected to the homepage and the login status is updated in the database. If the validation fails, the user will receive an alert and be asked to retry.

## User Story #3

**As a user, 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.**

|   |  |                    |                        |
|---|--|--------------------|------------------------|
| 1 | Log out option UI  | 2hr(1h per person) | Xinyi Wu/<br>Songyu He |
| 2 | After logging out the user would return to the initial login page  | 2hr                | Xinyi Wu               |
| 3 | Log out confirmation notice  | 1hr                | Xinyi Wu               |
| 4 | Update the user's logging information in the database for they can view and change their own data in later login | 3hr                | Xinyi Wu               |
| 6 | Testing  | 1hr                | Xinyi Wu               |

Completed: Users can log out from their FOO MY FOOD account with a single click. On iOS and Android platforms, the logout button includes a confirmation step to prevent accidental logouts by presenting a confirmation prompt. Once the user confirms, they are redirected to the initial login page. The system also updates the user's logging information in the database, allowing them to view and modify their data during future logins. The feature has been fully tested to ensure proper functionality and security across platforms.

## User story #4

**As a user, I would like to be able to reset my FOO MY FOOD account's password through a confirmation email with the reset link if I forget it in order to regain access to my account.**

| # | Description  | Estimated Time | Owner      |
|---|--|----------------|------------|
| 1 | Create password recovery UI(including recovery button and dialog box for entering email)                       | 2hr            | Xinyi Guan |
| 2 | Create email verification API (generate password recovery email, verify user identity through unique username) | 2hr            | Xinyi Guan |
| 3 | Create password reset page UI  | 2hr            | Xinyi Guan |
| 4 | Update password instantly in database  | 1hr            | Xinyi Wu   |
| 5 | Test to ensure that a user can reset their password using the link sent to email                               | 2hr            | Xinyi Guan |

Completed: A custom UI and email link can be sent successfully in order to change password, changed password can be stored for future login. Users must enter the correct format of the new password. Users can be correctly informed after validation.

## User story #5

**As a user, I would like to set a new password for my account by answering a security question, without waiting for an email.**

| # | Description   | Estimated Time | Owner      |
|---|---|----------------|------------|
| 1 | Generate a security questions page UI   | 2hr            | Xinyi Guan |
| 2 | Generate a security question and one answer dialog UI                                 | 1hr            | Xinyi Guan |
| 2 | Generate a answer validation page UI  | 1hr            | Xinyi Guan |
| 3 | Generate answer correct/wrong feedback page UI  | 2hr            | Xinyi Guan |
| 4 | Update password and answer in database  | 1hr            | Xinyi Wu   |
| 5 | Test to ensure that a user can reset their password by answering a security question. | 2hr            | Xinyi Guan |

Completed: Created UI for both choose security question and use security question for account validation before reset password. Security questions, answers and new passwords can be stored in the database successfully. Users can be correctly informed after validation.

## User story #6

**As a user, 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.**

| # | Description  | Estimated Time | Owner      |
|---|--|----------------|------------|
| 1 | Create form for users to set profile information (username, email, avatar) | 2hr            | Xinyi Guan |
| 2 | Create user profile page UI  | 3hr            | Xinyi Guan |
| 3 | Validate profile input (e.g., valid email format, unique username)         | 1hr            | Xinyi Guan |
| 4 | Allow users to upload an avatar image                                      | 3hr            | Xinyi Guan |
| 5 | Store profile information in the database                                  | 1hr            | Xinyi Wu   |
| 6 | Test to ensure profile information can be updated and displayed            | 2hr            | Xinyi Guan |

Completed: Created UI for view user profile and profile editing(include first name, last name, email address, username, phone number, avatar). Correctly store all changed valid information for future use. All updates should use valid format. Users can be correctly informed after validation.



## User story #7

**As a user, 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.**

| # | Description   | Estimated Time | Owner                  |
|---|---|----------------|------------------------|
| 1 | Implement functionality to choose an avatar from the gallery.         | 2hr            | Songyu He              |
| 2 | Implement functionality to take a new photo with the camera.          | 2hr            | Songyu He              |
| 3 | Create a preview screen for selected or captured avatar.              | 2hr            | Songyu He              |
| 4 | Implement a confirmation button to save the avatar and update the UI. | 2hr            | Songyu He              |
| 5 | Implement error handling for unsupported formats or large files.      | 2hr            | Songyu He              |
| 6 | Display success notification upon avatar update.                      | 1hr            | Songyu He              |
| 7 | Testing   | 1hr            | Songyu He/<br>Xinyi Wu |

Completed: Users can now choose an avatar from the gallery or take a photo. However, testing the camera functionality is not possible since we are currently on a simulator. The preview screen and confirmation button work as intended, along with proper error handling and success notifications. Comprehensive testing has been conducted for the gallery selection feature.

## User story #8

**As a user, 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.**

| # | Description   | Estimated Time | Owner                  |
|---|---|----------------|------------------------|
| 1 | Create UI for manual ingredient entry.  | 4hr            | Songyu He/Xinyi Guan   |
| 2 | Implement input fields for attributes (image,expiration date etc.)  | 2hr            | Songyu He              |
| 3 | Create a button to save the manually entered ingredient.  | 1hr            | Songyu He              |
| 4 | Implement validation for user-entered ingredients to ensure that duplicates and invalid inputs are handled appropriately.       | 2hr            | Songyu He              |
| 5 | Initialization the whole project database, link database to server, set up and update the inventory parameters in the database. | 8hrs           | Xinyi Wu               |
| 6 | Update the inventory display to include the newly added ingredient.   | 3hr            | Songyu He/Xinyi Guan   |
| 7 | Display success notification upon successful addition.  | 1hr            | Songyu He              |
| 8 | Testing   | 2hr            | Songyu He/<br>Xinyi Wu |

Completed. Users can now manually add ingredients to the inventory through a user-friendly interface. The system includes functional input fields for attributes such as images and expiration dates, along with a save button for adding new ingredients. Validation is in place to prevent duplicates and handle invalid inputs. The project database has been successfully set up and linked to the server, ensuring that inventory updates are reflected accurately. Newly added ingredients appear in the inventory display, and users receive a success notification upon adding an ingredient. All features have been thoroughly tested and are working smoothly.

## User story #9

**As a user, I would like to be able to change the names and quantities of the ingredients in my inventory to ensure that all entries are accurate and up-to-date.**

| # | Description   | Estimated Time | Owner                  |
|---|---|----------------|------------------------|
| 1 | Create UI for displaying inventory items.                 | 3hr            | Songyu He              |
| 2 | Implement an edit option/button next to each ingredient.  | 2hr            | Songyu He              |
| 3 | Display success notification upon successful name change. | 2hr            | Songyu He              |
| 4 | Update the information in database                        | 2hr            | Xinyi Wu               |
| 5 | Testing   | 1hr            | Songyu He/<br>Xinyi Wu |

Completed: Users can now easily change the names and quantities of ingredients in their inventory. A user-friendly interface has been created to display inventory items, and each ingredient includes an edit option for convenient updates. Upon successfully changing an ingredient's name or quantity, users receive a success notification. The updated information is accurately reflected in the database, and all functionalities have been thoroughly tested to ensure a smooth user experience.

## User story #10

**As a user,I would like to set custom expiration dates for my ingredients so that I can take into account personal preferences or storage methods.**

| # | Description   | Estimated Time | Owner                    |
|---|---|----------------|--------------------------|
| 1 | Create UI for displaying inventory items' expiration dates  | 1hr            | Xiuwen Fang              |
| 2 | Collect and update the general expiration period for a part of the provided ingredients, update in database                         | 4hrs           | Xiuwen Fang/<br>Xinyi Wu |
| 3 | Implement an edit option/button next to each inventory items' expiration dates  | 1hr            | Xiuwen Fang              |
| 4 | Display success notification upon successful expiration date  | 1hr            | Xiuwen Fang              |
| 5 | Update the information in database  | 1hr            | Xinyi Wu                 |
| 6 | Test to ensure that users can successfully customize the date, and that all front-end and back-end links and functions run smoothly | 2hr            | Xiuwen Fang/<br>Xinyi Wu |

Completed: Users can now set custom expiration dates for their ingredients based on their personal preferences or storage methods. The UI displays inventory items along with their expiration dates, and users can easily edit these dates through an "Edit" button next to each item. After successfully updating an expiration date, users receive a success notification. The system ensures that these updates are reflected in the database, allowing for future retrieval and modification. Thorough testing has been conducted to verify that all front-end and back-end functions are working seamlessly, ensuring smooth customization of expiration dates across the platform.

# What Did Not Go Well?

We successfully completed all the user stories outlined in our Sprint 1 document; however, we encountered a few challenges along the way that could be addressed and improved in future sprints.

## 1. **Lack of On-Time Communication**

One of the major issues observed is the lack of timely communication between different functions. When communication is delayed or not clear, it leads to misunderstandings, slower progress, and disconnects between different teams or roles. For example, the frontend and backend teams may have mismatched expectations, resulting in rework or unnecessary delays.

## 2. **Bad Timeline Problem**

Another area of improvement is the project's timeline. Creating the UI and backend before building the database can lead to many structural issues down the line. Without the proper foundation, both the frontend and backend teams may build features that later need to be adjusted or entirely redone to accommodate the final database structure.

## 3. **Online Meetings are Not Enough for Writing Code**

While online meetings provide flexibility and convenience, they may not be enough for complex coding tasks that require deep collaboration, brainstorming, or pair programming. Virtual meetings can make it harder to effectively solve problems that arise during development due to the lack of real-time collaboration and spontaneous discussions.

# How Should We Improve?

## **1. Enhancing On-Time Communication**

This can be improved by setting up more structured and frequent communication channels, such as daily standups or weekly sync-up meetings, ensuring that all teams are aligned. Additionally, using collaboration tools like Slack, Discord can help keep everyone in the loop. Establishing clear guidelines on how and when communication should occur will ensure that important information is shared at the right time.

## **2. Improving Timeline Planning**

To improve this, it's crucial to follow a more logical order when planning the development timeline. The database, being the core of most applications, should be built early in the project. This foundation allows both the UI and backend to interact with consistent data structures. Additionally, the use of project management methodologies such as Agile can help ensure that each stage of development is properly planned and executed in manageable sprints, with regular evaluations to catch potential issues early..

## **3. More In-person Meetings for Coding Collaborations**

To improve this, it's recommended to schedule regular in-person meetings, especially for critical phases of the project or when new features are being planned. If in-person meetings are not possible due to geographical or other constraints, tools like live coding platforms (e.g., Visual Studio Live Share) can simulate the benefits of real-time collaboration. This allows teams to code together, solve issues more efficiently, and ensure better code quality without being physically in the same room.

By addressing these areas—improving communication, creating a better project timeline, prioritizing critical features, and incorporating more collaborative coding sessions—the project's overall efficiency and quality will increase significantly.