

# Merchant

## Sprint 1 Planning Document

### **Team 4:**

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### **Sprint Overview**

During this sprint, we hope to construct a functional foundation for our software. As developers, we plan to create an environment that is organized and easily workable. By the end of this sprint, we would like to deliver a functioning iOS app which users can sign into. With each stage in the user stories, we will need to perform enough testing to reasonably declare the feature complete. Each feature must function reliably so the rest of the application can be built upon them.

**Scrum Master:** Drew Keirn

**Meeting Plan:** Mondays/Wednesdays/Fridays at 9:30 am

### **Risks and Challenges:**

Each one of us developers are new to Swift and iOS development. We hope that our choices in tech stack integrate well with one another for a smooth development experience. This is also the first time some of us are working on a collaborative software project of this size, so we will have to work hard to make sure our collaborations are integrated correctly.

## Current Sprint Detail

### User Story #1

As a user, I would like to be able to register for a Merchant account with my university email so that I have my user profile and other users are also students.

#	Description	Estimated Time	Owner
1	Creating an express-based backend server for communication with the client-side.	3 Hrs	Aakarshit
2	Create UI sign-in screen with options for "Login" or "Create an account".	2 Hrs	Domenic
3	Create UI for "Create an account".	2 Hrs	Domenic
4	Post the data from the UI to the backend for "Create an account".	1 Hr	Domenic
5	Fetch the status code from the backend and update the front end accordingly for "Create an account".	1 Hr	Domenic
6	Set up the database to store user details.	6 Hrs	Chirayu
7	Create a backend route to hash the password, check if the user already exists, and if not add the user to the DB.	6 Hrs	Aakarshit
8	Debug and test account creation.	3 Hrs	Drew

#### Acceptance Criteria:

- Given the UI for account creation is implemented correctly, when the user views the account creation page, then the sign-in UI should include a university selection drop-down, input text fields for *email address* and *password* and a *Create an account* button.
- Given the backend for user creation is implemented correctly, when a user attempts to create an account, the user's information will be added to the databases provided that the necessary information is unique.

- Given the user enters all valid information, when they create their account, they will be brought to the tab which will contain items they can buy.

## User Story #2

As a user, I would like to be able to verify my user account with a link/OTP sent to my email.

#	Description	Estimated Time	Owner
1	Create UI for entering OTP.	2 Hrs	Domenic
3	Generating a One Time Password in the backend.	2 Hrs	Domenic
4	Setting up the mailing service on the backend using sendgrid API.	1 Hr	Chirayu
5	Send One-Time Password to the user's university email for them to sign in.	2 Hrs	Aakarshit
6	Testing if the OTP is being sent and is working properly.	2 Hrs	Drew

Acceptance Criteria:

- Given that a user is on the OTP page, when they enter the OTP incorrectly 3 times then resend a new OTP to the user's email and have them try again.
- Given that the OTP is entered correctly when the user enters it then take the user to enter other details required for account registry.
- Given that the OTP is correct, when the user finished entering their account details then their account should be created and added to the database.

## User Story #3

As a user, I would like to make my user profile in the app with a distinct username.

#	Description	Estimated Time	Owner
1	Create UI for the User to create a distinct Username and password.	2 Hrs	Domenic
2	Make sure that the username is distinct by querying the database to see if the same username already exists.	2 Hrs	Chirayu

3	Make sure that the password is strong by rating the passwords strength based on the input text.	2 Hrs	Aakarshit
4	Implementing how to handle the JWT tokens on the server-side.	3 Hrs	Aakarshit
5	Implementing how to handle the JWT tokens on the client-side.	3 Hrs	Chirayu
6	Assign username from the text field in the UI to the user object in the database.	2 Hrs	Drew
7	Display username on user profile page.	2 Hrs	Drew
8	Test distinct username creation.	2 Hrs	Drew

**Acceptance Criteria:**

- Given the user enters a username that already exists, when they attempt to register for their account, then the user will be prompted to enter a new username that doesn't already exist.
- Given the user enters a username that is distinct, when they register for their account, then the entered username will be stored in the database with their other account information.
- Given the database is implemented correctly, when the user enters a username, the username field in the database should only be updated if it is distinct.

**User Story #4**

As a user, I would like to be able to log in to my Merchant account by providing my university email and a password I set while registering.

#	Description	Estimated Time	Owner
1	Create UI for Login.	2 Hrs	Domenic
2	Signing JWT on successful authentication in backend and appending a proper payload to it.	3 Hrs	Aakarshit
3	Get authentication from backend.	3 Hrs	Chirayu
4	Test user login process.	1 Hr	Domenic

## Acceptance Criteria:

- Given that a user provides an acceptable unique username, when they create their account then they should see their provided username on their profile page.
- Given that a user provides their correct sign-in information, when they select *Log in*, then they should be taken to the app beyond the sign-in page.
- Given that a user provides incorrect sign-in information, when they select *Log in*, then *incorrect information* should be displayed and they should be asked to re-enter their correct information.

**User Story #5**

As a user, I would like to be able to reset and/or recover my password.

#	Description	Estimated Time	Owner
1	Create UI for reset/ recover my password.	2 Hrs	Domenic
2	If recovery, send a recovery email to the email associated with the account.	1 Hrs	Chirayu
3	If reset, ask for the current and new password. Get authentication from backend and change the password in the database.	4 Hrs	Chirayu
4	Test password reset and recovery.	2 Hrs	Domenic

## Acceptance Criteria:

- Given that a user is on the sign-in page, when they select *Reset/Recover my password* from the sign-in page then they should be taken to a *Reset/Recover my password* page.
- Given that a user has a registered account and is on the *Reset/Recover my password* page, when they enter their email address and select the *Reset/Recover my password* button, then they should receive an OTP in the email.
- Given that a user enters their OTP correctly, when they enter their new password and confirm it then their password should be updated in the database.

## User Story #6

As a user, I would like to be able to update my account settings.

#	Description	Estimated Time	Owner
1	Create a tab which takes the user to the account settings.	1 Hr	Domenic
2	Create UI to allow users to edit account settings.	2 Hrs	Domenic
3	Send the updates to the backend to make changes in the database.	2 Hrs	Domenic
4	Update user's information in database to reflect updated account settings.	2 Hrs	Aakarshit
5	Test updating user account settings.	2 Hrs	Drew

Acceptance Criteria:

- Given that the user is on the "Account" tab, when they click on the "Edit" button, then they should be prompted to update their information.
- Given that the user is on the edit information page, when they click on the "Done" button, they should have their updated information stored in the database.
- Given that the user navigates away from the "Account" tab after updating their settings, when they navigate back to the "Account" tab, then the most recently updated information should be displayed.

## User Story #7

As a user, I would like to add/update a profile picture for my account.

#	Description	Estimated Time	Owner
1	Create UI to show profile picture and change it within user profile page.	2 Hrs	Drew
2	Creating a function for storing pictures in the database. Serving the client request by updating the profile picture after storing it in the data collection.	4 Hrs	Aakarshit
3	Test adding/updating profile picture.	1 Hr	Drew

## Acceptance Criteria:

- Given that a user is signed in, when they choose to upload a profile picture then they should be prompted to either open the camera or select a photo from their camera roll.
- Given that a user selects to open the camera, when they take a picture then they should be prompted to either apply or discard it.
- Given that a user selected to select a photo from their camera roll, then the camera roll should open and they can select an image to upload.

**User Story #8**

As a user, I would like to be able to delete my account so I can no longer participate in the service if I don't want to.

#	Description	Estimated Time	Owner
1	Create UI to give users the option to delete their account.	2 Hrs	Chirayu
2	Delete the users details and items for sale from the database.	4 Hrs	Drew
3	After successful deletion, email the user and take them back to the register screen.	3 Hrs	Chirayu
4	Test deletion of user account.	2 Hrs	Domenic

## Acceptance Criteria:

- Given that a user is signed in, when they navigate to their account settings then they should have a button to delete an account.
- Given that a user is signed in, when they select *Delete your account* then they should be prompted with an *Are you sure?* option.
- Given that a user is signed in, when they confirm account deletion, then their account should be removed from the database.

# Remaining Backlog

## Functional

### 1. Users can setup and manage their account

As a user,

- ~~a. I would like to be able to register for a Merchant account with my university email so that I have my user profile and other users are also students.~~
- ~~b. I should be able to verify my user account with a link/OTP sent to my email.~~
- c. I would like to view and sign or unsign user agreement policies.
- ~~d. I would like to be able to log in to my Merchant account by providing my university email and a password I set while registering.~~
- ~~e. I would like to make my user profile in the app with a distinct username.~~
- ~~f. I would like to be able to reset and/or recover my password.~~
- ~~g. I would like to be able to update my account settings.~~
- ~~h. I would like to add/update a profile picture for my account.~~
- ~~i. I would like to be able to delete my account so I can no longer participate in the service if I don't want to.~~
- j. I would like to report other users, fake users or spam so that they are accountable.
- k. I would like to rate and review other users so that they are accountable.
- l. I would like to view my selling history so that I can keep a track of things that I sold in the past.
- m. If time allows, I would like to make a wish list of the items I want to buy.
- n. If time allows, I would like to get notifications about the items on my wish list.
- o. If time allows, I would like to follow other users.
- p. If time allows, I would like to get notifications if the user I follow post items.
- q. If time allows, I would like to be able to block other users.

### 2. Users can buy goods

As a user,

- a. I would like to view items for sale so that I can find an item that I want to buy.
- b. I would like to be able to express an interest in buying items for sale.
- c. I would like to sort items for sale by price and type so that it is easier for me to search for the item I want to buy.
- d. I would like to be able to search for a specific seller or a specific product so that it is easier for me to look for specific items that I want to buy.
- e. I would like to be able to search for users so that I can interact with a user that I want to buy from.



- f. I would like to chat with a potential seller/ buyer without having to share personal information so that my privacy is secure.
- g. I would like to have the option to share my location with the seller and track his/her/their location (if he/she/they permits) during the time of transaction so that meeting up is easy.
- h. I would like to be able to choose a location for a transaction so that transaction can take place at a specific place.
- i. I would like to view a map for safe locations for a transaction so that transaction happens at a safe place.
- j. I would like to be able to delete a conversation with a buyer after completing a transaction so that I don't have an excessive amount of conversations.
- k. If time allows, I would like to be able to bid for items available for bidding.

### 3. Users can sell goods

#### As a user,

- a. I would like to post items for sale so that I can sell an item that I want to sell.
- b. I would like to upload pictures from my photos or take a picture using my phone camera so that I can showcase the product I want to sell.
- c. I would like to view items that I am selling currently
- d. I would like to be able to remove an item that I put for sale so that buyers no longer ask to purchase an item that I no longer want to sell.
- e. I would like to be able to update details about the product I am selling so that buyers have the most accurate information.
- f. If time allows, I would like to post items for bidding.

## Non-Functional

### Architecture and Performance

#### As a Developer,

- ~~1. I would like to make an iOS app in swift.~~
- ~~2. I would like the backend to be in NodeJS.~~
- ~~3. I would like to have a different front end and back end so that it would allow us to expand the App to other platforms with ease.~~
- 4. I would like to be able to communicate and get data from the database in less than 1 second.
- 5. I would like to post data to the database in less than a second.

#### As a User,

- 1. I would like to be able to post an item in less than 1 minute.

2. I would like to enquire about a listed item in less than 30 seconds.

## Security

### As a developer,

- ~~1. I would like to use JWT tokens for session management and also for making protected backend routes (i.e., they shall work only with valid access tokens generated upon authentication) so that a random person can't simply make requests to our server and have access to all the data.~~
- ~~2. I would like to use NodeJS encryption framework like bcrypt.js in order to hash the user passwords before storing them in the database, so that the sensitive information remains protected and there is no compromise on the security.~~

### As a user,

- ~~1. I would like to have all my information stored in a secure database so that any malicious activity won't compromise my personal data like email, password, etc.~~
2. I would like to make sure that I am dealing with authentic users in a safe environment so that I am not duped when I meet the other person for the final transaction.
3. I would like to have the ability to report users for inappropriate behaviour so that I can ensure that the app provides a safe and secure atmosphere for every user.

## Usability

### As a user,

- a. I would like the application to be easy and intuitive to navigate.
- b. I would like the application to be ready to use upon installation and launch.
- c. I would like the interface to be responsive to my actions.

## Hosting/Deployment

### As an administrator,

- ~~a. I would like the server to support server-client communication.~~
- ~~b. I would like the server to be able to store data in a database.~~

### As a developer,

- ~~a. I would like to access and update the database.~~
- b. I would like to post the application on the App Store so that users can download it easily.

### As a user,

- a. I would like the database to be reliable so that my data is secure.
- b. I would like to download the application from the App Store.

## Scalability

### As a developer,

- a. I would like to add server resources from our provider if traffic increases.
- b. I would like to add new university networks to the application with minimal effort.