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**BookXchange** iOS App

CS 307 Sprint 1 Planning Document

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Team 11

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**Sprint Overview**

In this sprint we are looking to create basic functionality for creating an account, logging in, setting up a profile, and adding a book/accessing your library of books you are looking to share. We will create this using the Flutter framework for UI, Firebase for user authentication, and MongoDB to store book information.

**Scrum Master:** Sam DeLucia-Green

**Meetings:**

* Tuesdays at 5pm (with Project Coordinator)
* Mondays at 5pm
* Thursdays at 5:30pm

**Risks and Challenges**

Our primary challenge we are looking to overcome is our lack of familiarity with the frameworks we are utilizing. None of us are experienced with Flutter or Firebase, so creating the UI and learning the ins and outs of the systems will be time-consuming.

**Current Sprint Detail**

**User Story #1 —** As a user, I would like to be able to create an account on BookXchange with a unique email, unique phone number, and unique and appropriate username.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for email, phone number, and password entry | 6hrs | Elena |
| 2 | Store entered information | 4hrs | Sam |
| 3 | Check that username and email are unique and appropriate | 2hrs | Sam |
| 4 | Report any Firebase Issues | 3hrs | Sam |

**Acceptance Criteria:**

* Given that the UI for inputting the email and password are properly implemented, when the user opens the app for the first time, they should be presented with required dialogue boxes to input their email, phone number, username, and password
* Given that the user enters and fills out the dialogue boxes to create an account, if the input isn’t valid, i.e. email isn’t a valid email, password isn’t secure, etc., they should be prompted to enter the information again.
* Given that the user enters and fills out the dialogue boxes to create an account, if a user tries to create an account with an existing username or email, they should be presented with a username/email already exists message.
* Given that the user successfully created an account, when they log in, they should be directed to their profile page.

**User Story #2 —** As a user, I would like to be able to create an account through a Google account.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Add Google Icon to UI | 2hrs | Aditi |
| 2 | Include Google login functionality in Firebase | 6hrs | Aditi |
| 3 | Display any Firebase issues with Google account creation | 2hrs | Aditi |

**Acceptance Criteria:**

* Given that the login interface is complete, when the user opens the app for the first time, they should be presented with the option to log in with their google account.
* Given that logging in with Google is implemented properly, when the user clicks the option to log in with their Google account, they should be able to create an account with their Google account and their account should be populated with the requisite information.
* Given that the user fails to login to their Google account, then they will be shown a popup that says that they have entered in the wrong username or password.
* After they log in, they should be directed to their user profile page.
* Given that the user creates an account through their google account, when they log in through the regular log in, they should be given an invalid email/password message.

**User Story #3 —** As a user, I would like to be able to login and manage my BookXchange account.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for login screen and have it as first displayed when the app is opened | 4hrs | Pooja |
| 2 | Ensure there is an account associated with the entered information | 3hrs | Harshini |
| 3 | Notify user of any issues with their account creation | 2hrs | Aditi |

**Acceptance Criteria:**

* Given that the login interface is complete, when the user opens the app for the first time they should be presented with the create account/log in page.
* Given that a user has created an account or logged in using an external account, the user object in the backend must contain the correct information pertaining to that user.
* Given that logging in is implemented properly, when a user enters the correct information, they should be able to successfully log in and be directed to the main page (swiping page).
* Given that logging in is implemented properly, when a user enters any incorrect information, i.e, incorrect password, nonexistent email, etc., they should get an error message and be prompted to re-enter their information or given the option to log in through their Google account.
* Given that logging in through an external account is implemented properly, when a user logs in through their Google account with the correct information, they should be able to successfully log in and be directed to their library.
* Given that logging in through an external account is implemented properly, when a user logs in through their Google account with incorrect information, they should get an error message and be prompted to re-enter their information or given the option to log in regularly.

**User Story #4 —** As a user, I would like to be able to reset my password.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI button to reset password. | 4hrs | Pooja |
| 2 | Send email or text to the user to confirm the password change. | 3hrs | Sam |
| 3 | Ensure the new password is secure. | 2hrs | Sam |
| 4 | Change password associated with user in database. | 2hrs | Harshini |

**Acceptance Criteria:**

* Given that the user tries to reset their password, then they will be sent a confirmation email to create a new password.
* Given that the user receives the confirmation email when they try to change their password, then they should be redirected to a page where they can input a new password.
* Given that the user attempts to create a new password that’s too short or doesn’t have an uppercase letter, lowercase letter, number, or symbol, then the user should be prompted to create a more secure password.
* Given that the user has created a good password when they try to reset it, then their account should be linked to the new password and not the old one.

**User Story #5 —** As a user, I would like a verification email sent to my email account after registering.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for notification of email sent to the user’s email address | 2hr | Sam |
| 2 | Display pop-up for user to enter code in email | 4hr | Sam |
| 3 | Check if code is valid | 2hr | Sam |

**Acceptance Criteria:**

* Given the UI is created properly, the user will be displayed a screen that says the email address the confirmation code has been sent to.
* Given the UI is created properly, the user will receive and open an email from BookXchange in their inbox containing a six digit code.
* Given the user properly enters the six digit code, it is compared to the code sent and verification is either confirmed or denied.
* Given the UI is created properly, the user is shown a screen that displays the status of their confirmation.
* Given the user enters the wrong code, they are asked if they want to receive a new code.

**User Story #8 —** As a user, I would like to be able to delete my account.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Provide option on user profile that allows user to delete their account | 2hrs | Aditi |
| 2 | Erase user information from database | 4hrs | Aditi |
| 3 | Provide user with confirmation of account deletion | 2hrs | Aditi |

**Acceptance Criteria:**

* Given the UI is created properly, the user will be able to access their account settings on their profile via clicking the settings wheel in the upper right hand corner of their profile.
* Given the UI is created properly, the user will be shown a drop down menu, on which will be the option to delete their account.
* Given the user selects the delete account option and the UI is created properly, the user will be asked to confirm that they want to delete their account.
* Given the UI is created properly, the user will be shown a confirmation screen showing that their account has been deleted.
* Given the user confirms, when they try to login, the website will say invalid username/password.

**User Story #51 –** As a user, I would like to be able to enter my information to create a profile page.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for information entry | 4hrs | Harshini |
| 2 | Store the information in Mongo | 2hrs | Harshini |
| 3 | Notify user profile has been successfully generated | 1hrs | Elena |

**Acceptance Criteria:**

* Given the user successfully created an account, they will be routed to create a profile page.
* Given the user wants to enter their personal information, they can enter their username, bio, and zip code.
* Given the user submits their entered information, they will receive a pop-up saying their profile has been created successfully.
* Given the user clicks out of this message, they will be routed to the home page.

**User Story #9 —** As a user, I would like to be able to view my profile with my name and bio.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a UI for the profile page | 6hrs | Elena |
| 2 | Connect the user class with the UI | 3hrs | Elena |
| 3 | Retrieve data from MongoDB | 4hrs | Elena |

**Acceptance Criteria:**

* Given that a user clicks on their profile, they should be able to view their profile page with their name and bio.
* Given the user adds a profile picture, they should be able to view their profile photo.
* Given the user hasn’t added a profile picture, they should be given the option to edit their profile picture.
* Given the user has created their profile, they should be able to navigate to the main page and other sections in the app.

**User Story #10 —**  As a user, I would like to be able to change my profile’s name and bio.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Add edit button to change name and/or bio | 1hr | Aditi |
| 2 | Add save/cancel button to go back to profile page | 1hr | Aditi |
| 3 | Update Firebase database with modified name and bio | 3hrs | Harshini |
| 4 | Display popup stating that changes have been saved | 1hr | Aditi |

**Acceptance Criteria:**

* Given that the user previously had information under their name and bio text fields when they select the option to change their information, then this information will show up and be modifiable.
* Given that changes to the user’s name or bio were saved, then a popup should show that the changes were made successfully.
* Given that the user successfully changed their name or bio, these changes should be reflected when they view their own profile.

**User Story #11 —**  As a user, I would like to be able to pick my preferred genres from the provided options when setting up my account.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for user preferences upon profile creation | 4hrs | Pooja |
| 2 | Provide user with list of possible options for each preference | 2hrs | Harshini |
| 3 | Store user preference data | 2hrs | Harshini |
| 4 | Create pop-up for saved preferences | 1hr | Aditi |

**Acceptance Criteria:**

* Given that the UI is created successfully, the user will be able to access a easy-to-navigate user preferences dashboard
* Given that the user is able to access their dashboard, they will be able to have various options for each preference they might have with their app experience
* Given that a user is selecting preferences, when they select a genre, the UI should provide visual feedback to indicate their choice
* Given that a user has successfully saved their genre preferences, when they have saved their preferences, then a confirmation message will acknowledge these changes.

**User Story #12 —**  As a user, I would like to be able to take a photo with my phone camera to use as my profile photo.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a button to open camera | 2hrs | Elena |
| 2 | Connect the user's mobile camera to the app. | 4hrs | Elena |
| 3 | Save image from camera into Mongo profile section | 2hrs | Pooja |

**Acceptance Criteria:**

* Given that the user selects the camera option when trying to modify their profile picture, then their personal mobile camera should open.
* Given that the camera app successfully opens when the user indicates that they want to add a new profile picture, then a popup should appear indicating that the user trusts the app to access their camera.
* Given that the user allows access to their camera, then they should be able to take a picture and directly upload it as their profile picture.
* Given that the user selects the ‘save changes’ option when they upload a new profile picture, then this picture should be saved to their profile.

**User Story #13 —**  As a user, I would like to be able to upload a profile photo from my gallery.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a UI button for uploading a picture from the user’s personal phone gallery. | 2hrs | Aditi |
| 2 | Connect the app to the user’s photo library. | 4hrs | Harshini |
| 3 | Implement UI buttons and page routing to save/cancel changes. | 3hrs | Aditi |
| 4 | Update the database with the new image. | 3hrs | Harshini |

**Acceptance Criteria:**

* Given that the user selects the image upload option when they want to change their profile picture, then their photo library should open.
* Given that the user tries to upload an image from their gallery, then there should be a popup that prompts them to trust the app.
* Given that the user allows access to their photo library when they try to upload a new profile picture, then they should be able to select any image in their photo library as their new profile picture.
* Given that the user selects the ‘save changes’ option when they upload a new profile picture, then this picture should be saved to their profile.

**User Story #15 —**  As a User, I would like to be able to logout of my account.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for logging out in profile page | 2hrs | Sam |
| 2 | Log user out of firebase session | 1hrs | Sam |
| 3 | Return user to login screen | 1hrs | Sam |

**Acceptance Criteria:**

* Given the user is logged in, the user can access their settings on their profile page.
* Given the user opens settings, they are prompted with a drop-down menu, and one of the items is a logout button.
* Given the user presses the log out button, the firebase session for the user is ended
* Given the user is successfully logged out through firebase, the user is directed back to the login page.

**User Story #16 —** As a user, I would like to be able to invite someone to the app via phone number or email.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create profile UI for inviting someone to the app | 4hrs | Pooja |
| 2 | Prompt user to enter email/phone number | 2hrs | Aditi |
| 3 | Send email/text | 3hrs | Harshini |
| 4 | Provide user with confirmation | 2hrs | Harshini |

**Acceptance Criteria:**

* Given that the user would want to invite someone to the app, they will be able to navigate to a simple page where they will be able to do so.
* Given that the user would want to invite someone to the app, they will be asked to enter their phone number/email to do so.
* Given that the user inputs their information, the app will send an email/text notification based on user preference.
* Given that the email/text goes through on a user’s end, the app will then provide confirmation that their request has gone through and successfully.

**User Story #17 —** As a user, I would like to be able to share my profile on social media.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for share icon on profile page | 2hrs | Pooja |
| 2 | Provide user with list of social medias/messaging for them to share with | 6hrs | Pooja |
| 3 | UI for successfully confirmed sharing | 4hrs | Pooja |

**Acceptance Criteria:**

* Given that the user would like to share their profile on other social media, they will be able to navigate to a share icon on their profile page.
* Given that the UI is created properly this share icon will cause an animated pop-up to open to a selection interface.
* Given that the user would like to share their profile, they should be able to see various forms of social media/messaging applications.
* Given that the user’s profile gets shared successfully onto their social media of choice, the app will be shared to the other person/platform.
* Given the UI is created properly, the user will receive a pop-up that the app has been successfully shared.

**Total Hours Per Person for Sprint 1:**

| # | Team Member | Total Time |
| --- | --- | --- |
| 1 | Sam | 32 hrs |
| 2 | Harshini | 32 hrs |
| 3 | Elena | 33 hrs |
| 4 | Aditi | 31 hrs |
| 5 | Pooja | 30 hrs |
| **Total Team Time:** | | **154 hrs** |

**Remaining Backlog:**

**Functional Requirements**

User account:

1. ~~As a user, I would like to be able to create an account on BookXchange with a unique email, unique phone number, and unique and appropriate username.~~
2. ~~As a user, I would like to be able to create an account through a Google account.~~
3. ~~As a user, I would like to be able to login and manage my BookXchange account.~~
4. ~~As a user, I would like to be able to reset my password.~~
5. ~~As a user, I would like a verification email sent to my email account after registering.~~
6. As a user, I would like a verification text sent to my phone number after registering.
7. As a user, I would like to be able to utilize two-factor authentication (if time allows).
8. ~~As a user, I would like to be able to delete my account.~~

User profile:

1. ~~As a user, I would like to be able to create a profile with my name and bio.~~
2. ~~As a user, I would like to be able to change my profile’s name and bio.~~
3. ~~As a user, I would like to be able to pick my preferred genres from the provided options when setting up my account.~~
4. ~~As a user, I would like to be able to take a photo with my phone camera to use as my profile photo.~~
5. ~~As a user, I would like to be able to upload a profile photo from my gallery.~~
6. ~~As a developer, I would like to retain a database of users’ profiles.~~
7. ~~As a developer, I would like to automatically log out a user who hasn’t been on the app for a while.~~
8. ~~As a user, I would like to be able to invite someone to the app via phone number or email.~~
9. ~~As a user, I would like to be able to share my profile on social media.~~

User library:

1. As a user, I would like to be able to manually upload a picture of my book to my library.
2. As a user, I would like to be able to manually enter the title, author, isbn, and genre of my book to my library.
3. As a user, I would like to be able to scan the UPC on my book and upload its information (if time allows) to my library.
4. As a user, I would like to be able to manually enter the ISBN number of my book and have the book information auto-populate.
5. As a user, I would like to be able to remove books from my library.
6. As a user, I would like to see a visual display of the books in my library.
7. As a user, I would like to be able to edit the information on the books in my library.
8. As a user, I would like to be able to change the status of a book to available or out for loan.

Reporting/managing users:

1. As a user, I would like to be able to report other users who are misusing the app.
2. As a moderator, I would like to be able to delete books posted by users.
3. As a moderator, I would like to be able to delete users.
4. As a user, I would like to be able to give other users a rating based on my interactions with them so that other users can see this rating when they match with that user.
5. As a user, I would like to be able to see other users’ community ratings.
6. As a user, I would like to be able to block other users so their books don’t appear on my swapping page.
7. As a user, I would like to be able to report an issue with the application to the administrators.

Profile interaction features:

1. As a user, I would like to see my most recent messages at the top of the page.
2. As a user, I would like to retain my chat history from people whose books I’ve matched with.
3. As a user, I would like to have a chat feature open up when I’ve matched with another user’s book.
4. As a user, I would like to be able to send and receive messages with users whose book I’ve matched with.
5. As a user, I would like to be able to unmatch with other users’ books.
6. As a developer, I would like to be able to suggest a nearby public location for users whose books have matched to meet up to swap.
7. As a user, I would like to receive a notification when I have matched with someone for a book, when a match has messaged me back, and when I have not been active on the app in a while.
8. As a user, I would like to disable push notifications.
9. As a user, I would like to ‘heart’ other peoples’ messages.
10. As a user, I would like to see the profiles of users whose books I’ve matched with.
11. As a user, I would like to see a visual display of all the books I’ve swapped with.

Swiping feature:

1. As a user, I would like to be able to swipe left (dislike book) and right (like book) on books on my personal feed.
2. As a developer, I would like another book to immediately pop up after the user has swiped on the previous book.
3. As a user, I would like the books on my bookshelf, books relating to my preferred genres and authors, and books whose users are in my general area to influence what types of books appear on my personal feed.
4. As a user, I would like to see an animation on the screen when I match with someone for a book (if time allows).
5. As a user, I would like to set a preferred radius of distance for other books’ locations for my personal feed.
6. As a user, I would like to be able to change my geographic location.
7. As a user, I would like to be able to reset my personal feed algorithm.
8. As a user, I would like to be able to enter my personal information to create my profile.

**Non-Functional Requirements:**

* Response time:

Since users will be potentially swiping through many book suggestions and reaching out to other users, it’s crucial that the response time be fast. Its server-side lag should be less than 300 ms so that users have accurate, up-to-date information about what books are available. Algorithm book recommendations and swiping should have a minimal amount of lag time to make the user experience as smooth as possible. The messaging feature should also have a very short time delay so that users can exchange information in real-time.

* Scalability:

We plan to design the app in a way that allows seamless integration of new features further enhancing the user experience. This will occur without consequence on the functionality of other features or errors on the client side.

* Usability:

The app will be user-friendly so users can easily navigate the interface and be able to easily manage their library, swipe books, message other users, and report concerns. The iOS app will be compatible with all iOS devices and have a seamless UI.

* Security:

Security is essential to the user experience on Book Exchange. The app will not be sharing the locations of users and will make sure that users will have privacy in terms of their profile information. The user’s password will also be stored in a secure manner, utilizing Firebase.