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**BookXchange** iOS App

CS 307 Sprint 2 Planning Document

October 15th, 2023

Team 11

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**Sprint Overview**

**Scrum Master:** Pooja Mathi

**Meetings:**

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

**Risks and Challenges**

We are more familiar with the frameworks after this last sprint, but our user stories are getting more complicated and will take more effort to implement this time. There is also a lot of dependencies across user stories so it might be difficult to integrate everything.

**Current Sprint Detail**

**User Story #18 —** As a user, I would like to be able to easily navigate to the different parts of the app.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for nav bar that takes user between three main pages (profile, swiping, messages) | 2 hrs | Elena |
| 2 | Allow the user to view their profile if they click on the profile button. | 0.5 hrs | Elena |
| 3 | Allow the user to see the main messages page if they click on the messages button. | 1 hr | Sam |
| 4 | Allow the user to see the view swiping page if they click the swiping button. | 2 hr | Sam |
| 5 | Testing | 0.5 hrs | Elena |

**Acceptance Criteria:**

* Given the user wants to view their profile page, when they click the profile button on the nav bar, they should be able to view their profile page.
* Given the user wants to view the main page/ swiping page, when they click the main button on the nav bar, they should be able to view the swiping page.
* Given the user wants to view their chats, when they click the chat button on the nav bar, they should be able to view their chats.
* Given that the user is on one of the main pages (profile, swiping, or chats), they should always be able to see the nav bar
* Given that the user is not on one of the main pages (e.g. edit profile, a specific chat), they should not always be able to see the nav bar.

**User Story #19 —** As a user, I would like to be able to upload a picture of my book to my library.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI to allow for adding a book to a user’s library with options to manually upload, upload by ISBN, and upload by UPC | 3 hrs | Harshini |
| 2 | Allow for user to upload a picture for their book through camera roll or photo gallery | 3 hrs | Harshini |
| 3 | When saving book details, the user should be able to see their book with the updated picture in their library | 6 hrs | Harshini |
| 4 | Testing | 0.5 hrs | Harshini |

**Acceptance Criteria:**

* Given the user wants to add a book to their library, they should be able to see options to manually enter a book, enter via ISBN, and enter via UPC.
* Given the user clicks any of the options to add a book, they should be given an option to open their camera.
* Given the user clicks any of the options to add a book, they should be given an option to use a picture from their gallery.
* Given the user clicks open camera, they should be able to take a picture from their camera and view the picture for their cover book.
* Given the user chooses to take a picture from the gallery, they should be able to choose a picture from their gallery and view the picture for their cover book.

**User Story #21 —** As a user, I would like to be able to manually enter the title, author, isbn, and genre of my book to my library.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create button on user’s profile to add a new Book to their Library. | 1 hr | Elena |
| 2 | Create UI screen for adding a new Book in the user’s Library. | 1 hr | Aditi |
| 3 | Add text fields/dropdown to take in the title, author, ISBN, and genre of the new Book. | 3 hr | Aditi |
| 4 | Create a Book object with the appropriate attributes and save it to the user’s Library. | 3 hrs | Elena |
| 5 | Provide user with confirmation of Book creation. | 1 hr | Aditi |
| 6 | Display the Book in the Library portion of the user profile. | 5 hrs | Aditi |
| 7 | Testing | 0.5 hrs | Aditi |

**Acceptance Criteria:**

* Given that the UI is implemented correctly, when the user opens up their user profile and scrolls to their Library, they should be presented with an option to add a new Book to their library.
* Given that the user selects the option to manually enter information when adding a new Book, they should be directed to a Book Creation screen.
* Given that the user fills out all the text fields and drop down associated with a new Book, a pop up should be displayed asking the user to confirm the book creation.
* Given that the user fills out all the information successfully, then a popup should be displayed confirming the success.
* Given that the user clicks out of this message, the new Book should be displayed in their Library.

**User Story #22 —** 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.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for user to decide whether to manually enter Book information or use the ISBN lookup option | 4 hrs | Harshini |
| 2 | Create UI for user to enter ISBN of a book | 2 hrs | Harshini |
| 3 | Send ISBN to API and get book information | 6 hrs | Harshini |
| 4 | Display book information and allow user to save book to their library | 5 hrs | Harshini |
| 5 | Testing | 0.5 hrs | Harshini |

**Acceptance Criteria:**

* Given that the user wants to add a book to their library, when they click the option add a book via ISBN, they should be take to a page where they can enter the ISBN.
* Given the user clicks find book on the entered ISBN, when the user enters an invalid ISBN or an ISBN that doesn’t exist, they should get a Book Not Found message and be suggested to enter the book manually.
* Given the user clicks find book on the entered ISBN, when the user enters a valid ISBN that does exist, they should be directed to a page with the book information of the book with that ISBN.
* Given the user is directed to a page with the book information of the book with the ISBN they entered, when they click on add book, they should get a confirmation message that their book has been added.
* Given the user adds the book, when they view their library, they should be able to see the added book.

**User Story #23 —** As a user, I would like to be able to remove books from my library.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a button for user to delete a Book. | 0.5 hrs | Elena |
| 2 | Erase Book information from user Library. | 3 hrs | Elena |
| 3 | Provide user with confirmation of Book deletion. | 2 hrs | Elena |
| 4 | Testing | 0.5 hrs | Elena |

**Acceptance Criteria:**

* Given the user has books in the library and wishes to remove one, when the click on their book then they will be presented with a button to delete this book.
* Given the user presses the delete book button, they will be prompted to confirm that they want to delete this book from their library.
* Given the user presses the confirm deletion button, the book is then removed from their library and the user can no longer see it.
* Given the user pressed the confirm deletion button, the book is then removed from all user’s book swiping queues.
* Given the user pressed the confirm deletion button, the user is notified that their book has been successfully deleted.

**User Story #24 —** As a user, I would like to see a visual display of the books in my library.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create Library class with appropriate methods and attributes. | 6 hrs | Elena |
| 2 | Create Book class with appropriate methods and attributes | 4 hrs | Elena |
| 3 | Link Library, Book, and User classes. | 3 hrs | Elena |
| 4 | Configure Book to display book cover picture, title, and author. | 4 hrs | Elena |
| 5 | Show Books in grid layout under Library section in User profile | 4.5 hrs | Pooja |
| 6 | Testing | 0.5 hrs | Elena |

**Acceptance Criteria:**

* Given the user is on the profile page, they should be able to see their library.
* Given the user is able to view their library, they should be able to see the books that are in their library with their cover picture, title, and author.
* Given the user is in the library section, they should be able to edit books in their library.
* Given the user is in the library section, they should be able to add books to their library.
* Given the user has no books in their library, they should see a No Books message in their library.

**User Story #25 –** As a user, I would like to be able to edit the information on the books in my library.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a button to edit Book information. | 1 hr | Aditi |
| 2 | Create a UI screen for editing Book information. | 4 hrs | Aditi |
| 3 | Provide user with option to cancel or save their changes. | 1 hr | Aditi |
| 4 | Change the information associated with the Book in the backend. | 4 hrs | Elena |
| 5 | Provide user with confirmation of Book editing success. | 1 hr | Aditi |
| 6 | Display the changes in the Book in the Library portion of the user profile. | 4 hrs | Aditi |
| 7 | Testing | 0.5 hrs | Elena |

**Acceptance Criteria:**

* Given that the UI is implemented correctly, when the user opens up their user profile and scrolls to their Library, they should be presented with an option to edit their library.
* Given that the user selects the option to edit their Library, the option to either edit or delete each Book should be displayed.
* Given that the user selects the option to edit their Book, they should be directed to a Book Editing screen.
* Given that the user makes changes to the Book, a pop up should be displayed asking the user to confirm the changes.
* Given that the user clicks confirm and fills out all the information successfully, then a popup should be displayed confirming the success.
* Given that the user selects cancel, no changes will be made and the user will be directed back to the Library section.
* Given that the user clicks out of this message, the changed Book should be displayed in their Library.

**User Story #26 —** As a user, I would like to be able to change the status of a book to available or out for loan.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a UI that indicates that a book is available or out for loan | 2 hrs | Aditi |
| 2 | Create a button that allows the user to change the status of the book | 1 hr | Aditi |
| 3 | Store this status in the database | 1 hr | Aditi |
| 4 | Testing | 0.5 hrs | Aditi |

**Acceptance Criteria:**

* Given that a user wants to change the status of a book, they should be able to access a section in their library that allows them to do so
* Given that a user can access this section of their library, they will be able to click a button that gives them a drop down of options
* Given the user opens this drop down menu, two options will be visible and clickable: “available” and “out for loan.”
* Given that a user wants to change the status, their choice should be clearly indicated by the UI
* Given that a user successfully changes the status of a book, this change should reflect so other users may easily see if a book is available or out for loan

**User Story #44 —** As a user, I would like to be able to swipe left (dislike book) and right (like book) on books on my personal feed.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for feed on home page | 4 hrs | Pooja |
| 2 | Create “cards” that will have different books displayed on each | 3.5 hrs | Pooja |
| 3 | Remove book from User’s queue in the database | 3 hrs | Pooja |
| 4 | Integrate swiping feature with cards | 4 hrs | Pooja |
| 5 | Provide user with information about each book as it pops up | 2 hrs | Pooja |
| 6 | Ensure that each card will disappear and get repopulated with each swipe | 3 hrs | Pooja |
| 7 | Testing | 0.5 hrs | Pooja |

**Acceptance Criteria:**

* Given that the user wants to be able to start being able to swap, they can navigate to the home page where they will be able to see their feed of books on cards
* Given that the user navigates is on the home page, they should already see a card populated with a book and its information
* Given that the user swipes right, the book they swiped right on is then removed from the users queue.
* Given that a user tries to swipe, they will be able to see each card go left and right as they “dislike” or “like” a book
* Given that a user tries to swipe on a book, they will be able to see another book immediately pop up after the user has swiped on the previous book.
* Given that the card has been replaced for the user, they should have no trouble with swiping the new cards

**User Story #46 —**  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.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create a generalized algorithm for determining which books are most like the user’s initial preferences | 4 hrs | Sam |
| 2 | Determine weights of each category preference and its impact on the order of books presented to user | 2 hrs | Sam |
| 3 | Ensure the user’s “book queue” is updated after each swipe | 4 hrs | Sam |
| 4 | Testing | 0.5 hrs | Sam |

**Acceptance Criteria:**

* Given the user begins swiping on books on the app, when the user swipes left or right, then their swipe is recorded and the genre, author, and other attributes of the book are also recorded.
* Given that this information is recorded properly, the back-end notes down their change in preferences and uses it to change how “similar” the available books are to the users preferences.
* Given that this change occurs successfully, when the user goes back to swiping then the user gets books influenced by that previous swipe.
* Given that the algorithm is implemented properly, as the user continues to swipe, the algorithm will continue to update for each additional swipe.
* Given the user swipes through all of the available books, when they continue to swipe, they will then begin to see books previously swiped left on.

**User Story #48 —**  As a user, I would like to set a preferred radius of distance for other books’ locations for my personal feed.

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| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Add text field to Create Profile that allows user to set radius | 1 hr | Aditi |
| 2 | Create error message if input radius is negative, a non-number, or greater than 100. | 3 hrs | Pooja |
| 3 | Integrate radius with swiping algorithm. | 3 hrs | Pooja |
| 4 | Testing | 0.5 hrs | Pooja |

**Acceptance Criteria:**

* Given that the user has successfully registered their account information, they should be presented with the option to input their preferred radius into the account creation screen.
* Given that the user tries to enter a negative number or a non-number, they should be presented with an error message.
* Given that the user tries to enter a number larger than 100, they should be presented with an error message.
* Given that the user successfully enters their preferred radius, this number will be taken into their swiping algorithm.
* Given that the user successfully enters their preferred radius, it should be displayed on their user profile page.

**User Story #49 —** As a user, I would like to be able to change my geographic location.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Add text field for zip code in the edit profile page | 2 hrs | Aditi |
| 2 | Update Mongo database with modified zip code | 1 hr | Aditi |
| 3 | Add error popup for invalid zip code | 2 hrs | Aditi |
| 4 | Display a popup stating that changes have been saved | 1 hr | Aditi |
| 5 | Testing | 0.5 hrs | Aditi |

**Acceptance Criteria:**

* Given that the user previously entered information for their zip code, when they select the option to change their information, then this information will show up and be modifiable.
* Given that the user tries to update their zip code, when they enter an invalid zip code that is too long, then the user should not be able to type more than 5 numbers.
* Given that the user tries to update their zip code, when they enter an invalid zip code that does not exist, then an error popup will prompt them to enter a valid zip code.
* Given that the user tries to update their zip code, when they enter non-numeric characters, then the user will not be able to type those characters as they will not show up.
* Given that changes to the user’s zip code are saved, then a popup should show that the changes were made successfully.

**User Story #50 —** As a user, I would like to be able to reset my personal feed algorithm.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI for users to be able to reset their personal feed algorithm. | 2 hrs | Harshini |
| 2 | Delete all user preference data associated with the use. | 3 hrs | Harshini |
| 3 | Create UI to allow for picking new preferences for books. | 2 hrs | Harshini |
| 4 | Testing | 0.5 hrs | Harshini |

**Acceptance Criteria:**

* Given the user wishes to reset their personal book feed, when they click the settings wheel they will be prompted with a dropdown menu.
* Given the user successfully opens this dropdown menu, then they will be presented with an option to reset their algorithm.
* Given the user clicks this button, when they go back to their swiping page, then their personal feed is entirely reset.
* Given the user clicks this button, after they have clicked it, then they are redirected to input their personal preferences.
* Given the user selects their genre preferences, when they go back to their swiping algorithm, then these preferences will have an impact on the order of books they see.

**User Story #32 —**As a user, I would like to be able to report an issue with the application to the administrators.

| # | Description | Estimated Time | Owner |
| --- | --- | --- | --- |
| 1 | Create UI option on settings dropdown | 1 hr | Sam |
| 2 | Provide UI for user to enter complaint | 3 hrs | Sam |
| 3 | Send email to administrators regarding complaint | 2 hrs | Sam |
| 4 | Testing | 0.5 hrs | Sam |

**Acceptance Criteria:**

* Given that the user wants to report a complaint, when they select the settings option on their screen then they will see a dropdown menu.
* Given the user successfully opens the dropdown menu, when they see the options they can then select “Report an issue.”
* Given the user clicks to report an issue, they will be prompted to enter information regarding the issue they are reporting.
* Given the user fills out the information text fields, when they go to submit the report then the information will be saved appropriately.
* Given the user wants to submit their completed report, when they click the “Submit” button then an email will be sent to the administrators.

**Total Hours Per Person for Sprint 2:**

| # | Team Member | Total Time |
| --- | --- | --- |
| 1 | Sam | 31.5hrs |
| 2 | Harshini | 37.5 hrs |
| 3 | Elena | 31.5 hrs |
| 4 | Aditi | 33.5hrs |
| 5 | Pooja | 31.5 hrs |
| **Total Team Time:** | | **164 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.