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**BookXchange** iOS App

CS 307 Sprint 2 Retrospective Document

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Team 11

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**What went well?**

Overall, we think this sprint went very well. We worked efficiently as a team to complete all of our user stories in an efficient manner before the deadline. We integrated new APIs, and successfully created core functionality of our app. We created the functionality for the library and swiping during this sprint. These are two of the most important parts of our app, as it allows the user to add books to be shared and then swipe through them to pick the ones they like. Additionally, we implement a recommendation algorithm, so the user gets more books they will like more often. Hopefully this leads to more matches and engagement within the app. We also made many smaller implementations like limiting book recommendations to users within a certain radius, which required including a new API to work with the user’s zipcodes. We are proud of the work we put in this sprint.

**User Story #1 —**  As a user, I would like to set a preferred radius of distance for other books’ locations for my personal feed.

| # | 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 |

* This user story went well because the team was able to implement a location for the user to enter their preferred radius for book swapping purposes, and then integrate their preference into the books recommended for them in their personal book queue.

**User Story #2 —** 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 |

* This user story went well because the team was able to make separate classes for Book and Library objects, integrate them together, and successfully link them to the backend and the associated databases.

**User Story #3 —** 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 |

* This user story went well because the team was able to get the functionality of the nav bar and we were able to switch between all of the appropriate pages (home, profile, and messages).

**User Story #5 —** 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 |

* This user story went well as all the tasks were completed in that the user was able to click a button that gave them the option to add a book manually into their library. Additionally, the appropriate textfields and popups were present and the user was able to see the book that they added in their library.

**User Story #6 —** 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 |

* This user story went well because the team was able to allow users to enter book information manually and through ISBN with no problems. The book information got displayed both ways and the book was saved within the library.

**User Story #7 –** 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 |

* This user story went well because the team was able to create an ‘Edit Book’ button, link it to each Book in the Library, and successfully create a UI and backend routes to edit a Book’s information easily and accurately.

**User Story #8 —** 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 |

* This user story went well as the team was able to allow users to delete books if desired. Once a user decided to delete a book, it disappeared from their library and they got a message confirming this action.

**User Story #9 —** 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 |

* This user story went well as the team was able to change the status of a book as appropriate and the users were provided with the appropriate UI buttons for each action. This information was successfully stored within the database and ensured that it wouldn’t show up in another user’s feed.

**User Story #10 —** 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 |

* This user story went well as we had cards displayed within the swiper page that had book information on each card with the title and author as well as the book cover. As the user swiped left and right, the cards were seamlessly replaced and the database was updated appropriately based on each swipe (left or right to like or dislike).

**User Story #11 —** 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 |

* This user story went well because when the user clicked to edit their profile, they were given a text field where they could change their zipcode. Additionally, the appropriate popups were shown when they entered an invalid zipcode or when their changes were saved.

**User Story #12 —**  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 |

* This user story went well because the users were shown books in their swiping algorithm that were in line with their genre and distance preferences. As they started swiping, their queue was successfully updated to correlate with the types of books the user indicated they were interested in.

**User Story #13 —** 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 |

* This user story went well as there was a dropdown for users to reset their personal feed algorithm. When a user clicked on this option, their preferences were deleted from the database and they were able to pick new preferences for the books in terms of genres.

**User Story #14 —** 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 |

* This user story went well because the user was given the option to report an option in the settings dropdown. Additionally, when they clicked on that option, they were prompted to enter their complaint, which is then sent to an administrator’s email.

**What went wrong?**

**User Story #4 —** 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 and upload by ISBN | 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 |

* User Story #4 - This user story went well for the most part as the user was able to select an image from their gallery and view the book cover in their library. After they clicked save book, they were redirected to their library and were able to view their newly added book in the library. The only thing the user wasn’t able to do was view a picture from their camera to the library. They were able to take a picture from their phone and view this picture as their book cover, but the image wouldn’t show up in their library.

**How should we improve?**

Overall, we believe the sprint went very well. However, there are some things we are looking to change for sprint 3. In sprint 2 we included two of our largest user stories: swiping UI and the algorithm for the users personal feed. We struggled with timing issues in terms of finishing the UI for this, and required more collaboration for the whole team. This is an important lesson to increase our communication and have multiple team members work on core functionality that combines the work of several other authors. This allows for us to learn what the others created and implement our portion of the work more efficiently.

Furthermore, we need to take better care of determining how we are going to complete a task before beginning coding it. We had several instances of cycling coding and debugging and changing packages for different user stories, when so much time could have been saved by properly researching our implementations prior to coding.