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**BookXchange** iOS App

CS 307 Sprint 1 Retrospective Document

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Team 11

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**What went well?**

The group was able to learn new programming frameworks and languages (Flutter, Dart, MongoDB, Firebase, Python, Flask) and successfully integrate their work together into the beginnings of a fully functional app. The user stories for Sprint #1 revolved around user registration, login, authentication, and account creation and viewing. As such, the team was able to work together well to build the skeleton of the app before adding UI for login and registration, as well as account creation, viewing, and editing. The team was able to efficiently schedule the deployment of each task by having many weekly meetings both as a team and with the project coordinator.

**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 |

* This user story went well as we had all of the acceptance criterias met and made it so users will be able to seamlessly create an account on BookXchange.

**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 |

* This user story went well because we were successfully able to implement the UI for the Google button as well as the functionality for it because users were able to login by pressing the button and were also shown errors if they were not able to login.

**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 |

* This user story went well as the UI for the login screen was successfully displayed and we were able to check that the user’s credentials existed within our database and log them in if they did exist or give an error message when they did not.

**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 |

* This user story went well as we were able to have a forgot password button that led to an email link being sent to the user. The user would then be prompted to change their password and we demonstrated that the new password was updated in the database as they log in with their new credentials.

**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 |

* This user story went well because the user was able to click on a “Delete Account” button that presented them with a confirmation popup and then logged the user out once they confirmed that they wanted to delete their account.

**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 |

* This user story went well as we were able to make the UI for a create profile page where a user can enter their name, bio, zip code, and their profile picture when a user logs in and gives the user confirmation that their profile has been successfully generated when they click create profile.

**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 |

* This user story went well as we were able to make the UI for the profile page where the user is able to see their name and bio. When the user edits the profile page, they are able to see the updated name and bio on their profile. There is also a button to edit the profile page and share the app and their profile.

**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 |

* This user story went well because the user had the option to both edit their name and bio and had a save and cancel button. If they pressed the save button, then their information was saved and the popup was triggered, but if they clicked the save button, then the user was redirected to the profile page.

**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 |

* This user story was completed successfully because we were able to create the UI for user preferences as they were presented with a list of genres and once they saved their information they were shown a popup and their genre preferences are stored in the database.

**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 |

* This user story was done successfully because the user is able to click a button that opens the user’s camera and then saves that information into a Python folder as it was better to store it there rather than Mongo after some further research.

**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 |

* This user story went well because the user was able to click a button that connected them to their photo library and were able to choose a picture to set as their profile picture. Additionally, they were routed back to the edit profile page and were able to save the new updated photo into the database.

**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 |

* This user story went mostly well as we were able to create a sharing method to invite someone to the app through email or phone number (text message). However the last acceptance criteria did not make much sense as we realized later that the user themselves is able to see if their invite went through and do not need a popup to confirm this.

**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 |

* This user story went mostly well as we were able to create a sharing method to share a profile via different social media and messaging applications . However the last acceptance criteria did not make much sense as we realized later that the user themselves is able to see if their share went through and do not need a popup to confirm this.

**What went wrong?**

**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 |

User Story #5 - Overall, I would say we did not do the best job of planning out each user story that we could. For User Story 5 specifically, we based many of the acceptance criteria on a 6-digit-code the user would receive to verify their account. However, in practice we found it simpler and more secure to just use a single link sent to their inbox, which is what we decided to implement.

**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 |

User Story #9 - While the user is able to see their updated name and bio when they view their profile, they are not able to see their updated profile picture even though it is updated in the database.

**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 |

User Story #15 - The original plan for this user story was to log an active user out of their account after a certain number of days. However, upon beginning implementation we realized we did not have a basic logout button user story, so decided to switch this user story to be that. We luckily made this decision in time to inform the grader of our change and all was well, however this is another example of poor planning.

Generally - Like we had discussed earlier, we had an issue regarding having well thought out acceptance criteria, this is mostly through a lack of research on the best implementation of the user-stories, not necessarily because the user stories themselves were bad. Additionally, we did run a little low on time in the last few days of the sprint.

**How should we improve?**

The first and most important thing we are going to do to improve in Sprint 2 is plan out our implementation of each user story better. We are still confident in the quality of our user-stories from the backlog but prior to determining steps to implement each user story, and acceptance criteria for them, we need to be sure of how we are going to implement them within our frameworks. There are many different ways to accomplish the tasks we have set out to complete, but we need to analyze the methods and select a specific one prior to committing to a certain implementation.

The second thing we plan on doing to improve for Sprint 2 is getting ahead on our user stories earlier in the sprint. We spent most of our first weeks of Sprint 1 researching and learning all of the frameworks we are using since none of us had ever used them before. This put us behind in terms of implementing some of our more complex user stories that required transferring data across different frameworks/languages. Additionally, in the final stretch of Sprint 1 progress slowed significantly due to midterm exams in other classes, so we were not able to put as much effort in when we needed to. So, looking into Sprint 2, not only are we now familiar with our frameworks and can concentrate solely on creating the user-stories, we are also done with most of our midterm exams. Additionally, throughout this process we have grown as a team and have been communicating more frequently in order to create the best app possible.