

Lappeenranta teknillinen yliopisto
School of Business and Management

Software Development Skills

Natalia Rodriguez Redondo, 002532110

LEARNING DIARY, MOBILE MODULE

LEARNING DIARY

Period: March 20 – May 11

March 20 – Setting Up the Environment

I began by setting up Android Studio, installing the required SDKs, and configuring an emulator. I created a new empty project and made sure it ran correctly.

March 21 – Course Videos and Review

I watched the two mandatory course videos. Although I already had some experience with Android Studio, they helped refresh key concepts. The only downside was that the interface shown in the videos was a bit outdated. The second video explained how to add a second activity, but I chose to work with fragments instead, as they are more comfortable for me and better suited to the app structure I had in mind.

March 23 – Navigation Structure and Book Class

I started implementing the main activity and set up a bottom navigation bar with three screens. This allowed me to organize the app into three main areas from the start. I also created the base Book class to define the core data model of the app.

March 24 – Room Database Integration

I implemented the database using Room, making sure it was persistent and properly structured. I set up the entity for Book, the DAO interfaces, and the database instance. This was my first time working with Room in depth, and it was interesting to see how it all connected to the UI.

March 26–27 – Library Screen

I built the first screen (the library view) where users can see a list of saved books. Initially, it only showed the title and author using a RecyclerView. It felt like a reward to finally display data pulled from Room in a clean list.

April 1–4 – Add Book Screen

Next, I worked on the second screen , adding a book. I created a form to input book details. I ran into a few issues, especially making the form reset properly and navigating back to the book list after submission. After some trial and error, I got it working smoothly.

April 7 – Book Details and Navigation

I added the ability to click on a book from the list to view more details. This required creating a new fragment called DetailedBookFragment. From here, users could see the full book info. I also added a button to edit the book, which opened a form similar to the add screen.

April 9–10 – Deleting Books with Confirmation

In the edit screen, I added a delete button. When pressed, it showed a confirmation dialog ("Are you sure?"). At first, deleting a book caused a crash because the app tried to go back to the now-deleted book's detail view. I fixed this by changing the navigation flow: after deleting, it now goes back to the book list. If a book is edited, the user returns to the detail view instead.

April 12– Language

I realized that the app was in "Spanglish". So I explored how to add language support and implemented a language selector in the Settings fragment (the third screen). The default language is English, but I added Spanish and Finnish as options. The Finnish version was translated using ChatGPT - I don't speak the language, but I thought it would be a fun extra touch.

April 15 – Data Reset

Initially, the Settings screen only had the language selector, but I also added a button to delete all app data. Surprisingly, this feature was easy to implement and useful during testing.

April 17–22 – Reading Sessions (New Entity)

I tackled what I thought would be the hardest part: adding reading sessions. I created a new entity Session, linked to each book with a foreign key. I updated the book detail view to

show sessions and added options to create and edit them. These were tied to the corresponding book via its ID.

April 23–26 – Editing Sessions and RecyclerView Issues

Editing sessions turned out to be trickier than expected. The main issue was that after editing a session, the RecyclerView didn't update, and sometimes the app crashed. After debugging, I learned more about `notifyDataSetChanged()` and fragment state management, and I finally got it working.

April 29– UI Enhancements and Cover Images

To improve the visual design, I added support for book cover images using the Glide library. This made the book list more visually appealing and professional.

May 7–10 – Final Polish

I cleaned up unused code, reviewed translations, adjusted colors, and made minor UI tweaks for consistency. I also tested navigation paths to make sure the app behaved correctly after adding, editing, or deleting content.

May 10–11 – Export and Wrap-up

In the final stretch, I built and exported the .apk file for testing. I reviewed the full app flow one last time, tested language changes, data operations, and verified that the sessions were displayed correctly. I also documented some known issues, like the occasional crash on screen rotation in the library screen - I identified the problem but didn't have time to fully fix it.

Final Reflection

This project helped me get more comfortable with Android development. Even though I had used Android Studio before, working on BookDiary made me understand better how things like Room, fragments, and app navigation actually fit together.

There were definitely some frustrating parts but, figuring out how to solve them taught me a lot.

I know the app still has a few rough edges, but I'm happy with how it turned out. It has multiple screens, local storage, supports more than one language, and feels like a "real" app. I also had fun adding little touches like the Finnish translation. Overall, it was a useful and rewarding experience.

AI Use Statement

I used ChatGPT in a limited way during the development of this project. Specifically, I used it to:

- Correct the grammar and phrasing of this learning diary.
- Translate parts of the app's interface into Finnish.
- Help identify and understand specific coding errors I encountered.

All ideas, code, app structure, and decisions are entirely my own. This project is something I've been wanting to build for a long time as a personal goal, and I developed it independently from start to finish.