Lappeenrannan teknillinen yliopisto
School of Business and Management

Sofware Development Skills

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LEARNING DIARY, 1 MODULE

15.5.2025

I started this Mobile course today. I read general course information and environment setup pages. I did the first module task, “Introduction” module. I watched the video and I did the code example. I also created a new git repository for exercises and pushed my code there.

I learned new ways to write Java code but most of the things in the lecture were already familiar to me. I had already installed Android Studio and Git so I didn’t have to do that again. I have used them before, so the first application wasn’t difficult task to do.

LEARNING DIARY, 2 MODULE

16.5.2025

I did the second module today. I had a problem opening Google in my application. The problem was the current emulator, so I solved it by creating a new emulator which supported Google. Then the program worked correctly and I managed to open Google in my application.

I learned that not all emulators support Google. Other things in the lecture video were pretty familiar to me. I had also some problems with GitHub. I have not figured out, how I can push different programs to the same repository. But I decided to leave that problem to be solved later.

LEARNING DIARY, 3 MODULE

17.5.2025

I did the third module today. I didn't have great problems and programming went well. I have not used ListView before, so that was new. In addition, I have not made lists in string.xml, so that was also new. The main topics in the lecture were familiar after all.

I did the my_listview_detail.xml little bit differently than the lecturer, because I couldn't move the TextView components like the lecturer in the video. I wrote those places to the xml code. It worked correctly, so I think it is ok. I used RelativeLayout like the lecturer, so I don't know why it worked in a different way. Maybe there has been some updates since the video was made.

LEARNING DIARY
19.5.2025

Today I managed to push my exercise application projects to GitHub.

LEARNING DIARY
20.5.2025

I came up with a project idea. Chore application. I planned to make a game about chores. I have noticed that chores are often divided unfairly between

family members. I thought that this kind of application could help families share chores more fairly.

The idea is that users can record their chores and receive a certain amount of points for it. Then there are statistics, where family members can watch, who has done the most chores. Then there could be maybe some instruction, for example how often certain places should be cleaned.

I made some paperprototypes about the user interface and started coding. I just don't know yet how users can share information and how the information can be stored. I have to study some things before I can code more. I coded MainActivity, where the users can transfer to SignUpActivity or LoginActivity.

LEARNING DIARY
22.-24.5.2025

I learned to use Firebase Authentication and Firebase Firestore. I watched Youtube videos about those and read little Firebase docs. Then I started to code SignUpActivity. I created email/password authentication to my application. In addition, I added a family code that when the first family member signs up, one can create a family code. Then one can share it for other family members and they can use the family code in order to join the same family group. Then I built the user interface to SignUpActivity and LoginActivity.

I learned how to hide a password from this Youtube video.

Channel: Android Mate

Video: How to Easily Toggle Password Visibility in Android Studio

Link to the video: https://www.youtube.com/watch?v=4Sx7bA0jHCE

I learned how to use Firebase Authentication from this Youtube video.

Channel: Android KnowLedge

Video: Login and Signup using Firebase Authentication in Android Studio | Java
Link to the video: https://www.youtube.com/watch?v=TStttJRAPhE

LEARNING DIARY
27.5.-30.5.2025

I started to code AddChoresActivity and DocumentActivity.

Firstly, I coded AddChoresActivity, where the user can add chores. The user defines the chore and how many points one should get when one does the chore. Then the user taps the add-button, and the added chore is added to chore-list. The user can see the chore in RecyclerView. Because of the RecyclerView, I also coded classes Chore, ChoreAdapter and ChoreViewHolder. And I made the user interfaces for AddChoresActivity and for the RecyclerView. I had to learn to use Firebase FireStore in order to do the AddChoresActivity functionality.

Secondly, I coded DocumentActivity. Now I had to fetch chore information from FireStore. Then I stored new data to different collection in the FireStore. I also learned to use a spinner. I had not used it before, but I thought that it could be handy, because it shows the user the defined chores. I watched Youtube video about using spinner and learned how to use it. I also made a user interface for DocumentActivity. Because there is Recyclerview, where the user can see recently done chores, I also coded classes DocumentedChore, DocumentedChoreAdapter and DocumentedChoreViewHolder.

I learned how to use spinner from this Youtube video.

Channel: Codes Easy

Video: How to Implement Spinner in Android
Link to the video: https://www.youtube.com/watch?v=4ogzfAipGS8

LEARNING DIARY
4.6.2025/7.6.2025

I started to make AllStatistics fragment. The idea is that users can see who has done most chores. Users can also see how many points and how much time every family member has used chores. I needed a RecyclerView to show this information, so I coded classes AllStatisticsInfo, AllStatisticsAdapter and AllStatisticsViewHolder. In addition, I made user interfaces for activity_statistics and fragment_all_statistics.

LEARNING DIARY
8.6.2025

I coded WeekStatistics fragment. That was not very difficult because I used mainly the same code in AllStatistics fragment. I just added timestamp to DocumentedChores class that I get the weekly results. I had some issues with timezones because first I didn't realized, that I had wrong timezone when I fetched data from Firebase FireStore. However, the weekly results didn't worked properly, and after thinking really long time (well not a really long time but maybe an hour), I realized that I had to create an index in Firebase FireStore. To be honest, I didn't really understand why, but when I clicked the link in logcat, the weekly result started to work.

LEARNING DIARY
9.6.2025

I coded a new feature to AddChoresActivity that users are able to delete defined chores if they want. I also made sure that users cannot give different points for same chore. So now it should not be possible made accidentally duplicates.

LEARNING DIARY
11.6.2025

I coded SettingActivity, which was not really hard. I made loging out method, but I don't know yet what else I could do.

LEARNING DIARY
12.6.2025

I edited the user interface.

LEARNING DIARY
28.6.2025-30.6.2025

Okay, I had a little break from the school stuff. But now I have to code this project that I pass this course. I started to code this project from the beginning, because I wanted to see what have I learned from it. I did little changes to code and tried to make it better. Biggest changes here:

- I improved the error handling. Now the application should not crash to little things like if user does not fill all the gaps etc.
- I removed SettingsActivity. I made just one log out-button, so it did not needed a whole activity.
- I added comments about sources I had used in my project. They are in the beginning of code.
- I created packages for different parts of the application, that the application's structure would be clearer.
- I changed the language of the application English, because I didn't know may I do this course in Finnish.
- I changed class names which were related to fragments. Now they are AllStatistics (fragment), WeekStatistics (fragment), Statistics (class), StatisticsAdapter (class) and StatisticsViewHolder (class).
- I made element id's and user interfaces more compatible.

LEARNING DIARY
5.7.2025

I made the video when the application was running.

LEARNING DIARY
6.7.2025

I pushed Chore App and the videos to GitHub. Now I am proofreading this diary and trying to remove the worst mistakes from the text. Now the project is basically ready to be returned.