

Lappeenranta teknillinen yliopisto
School of Business and Management

Software Development Skills

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**LEARNING DIARY, Anytime-course: Software Development Skills:
Mobile 2021-22 MODULE**

LEARNING DIARY

8.7.2022

I opened the course Moodle for the first time and started off with the most painful part of any coding course aka installing the required software. To my utmost surprise, I got everything working on the first try. I think this is largely due to the fact that I am already familiar with Android Studio as I have previously completed the Object-Oriented Programming module. I chose to use Android Studio for this course, and I created a BitBucket account for version control but honestly I always lose my mind fighting the version control platforms/apps so I'll probably just stick with GitHub since I've been fighting it the longest.

I chose to not touch VS code during this course because I have learned that whenever I try to make VS code work with some language I haven't used it with before, I lose my sanity.

12.7.2022

I started the actual coding on Android Studio. I chose to create a rather simple app for looking up lyrics for different Technical Engineering songs (Teekkarilaulut) and I'm trying to use resources like images, color, and maybe fonts to make the app look nice. My idea is to implement a spinner for university selection and open a view depending on the selection.

I had to look up some things about making commits to Git but I think I got it working now.

I'm thinking of going through the example videos after doing my project because I am already fairly familiar with Android Studio and I'm excited to just get coding my own thing rather than going through the stuff I already know like listViews.

I learned that resource names in Android Studio can't contain capital letters. Interesting.

I did something unholy to my imageViews which made it so that only one image was visible at a time. I went with the ooga booga solution and just deleted and rewrote my code and it started working.

I had a fun time figuring out how to change spinner text color and got it working eventually by just adding some stuff to the `OnItemSelectedListener` method of the `Spinner` class.

Nitpicky thing but what I want my app to do is

1. User selects University from dropdown menu
2. App takes user to the appropriate view
3. User wants to go back to the main view
4. Main view is back in default state

So what I did was just add a command to `OnItemSelectedListener` method of the `Spinner` class, where after the active view changes the spinner gets reset back to its first value “Valitse Yliopisto” and this way the main view is ready for new user input on return.

I was stuck for an hour when I was trying to add a simple `editText` search bar to my Aalto University songbook index list, and I couldn’t understand for the life of me why the search bar wasn’t searching. I ended up noticing that I had initialized the adapter twice and that was causing all my problems.

I had to do some research on how to use text files in Android Studio but it came back to me pretty quickly and I didn’t end up having any problems with it.

I might just turn this project in with only the Aalto University section working and finish it on my own time since it already fills the course project requirements and I do have other courses I probably should stop neglecting.

I ended up changing the structure of my app slightly. I want the user to see the index of the song book of their selected university as the second view of the app and I want to have an `onClickListener` for each song title which will show the wanted lyrics. I think I should use `fragment` for this because it’s plain stupid to make a new activity for each lyric, right?

I realized that was a dumb idea as well and I just went with the initial idea so two views, one to select university, second to display the song book of that university and then I just added a search field (editText) on top of the second view so that the user can search for a song and the scrollview snaps to the result. Works alright.

13.7.2022

I'm done with the app, I'll polish it on my own time but I'm losing my mind with git, and GitHub, and BitBucket, and all these version control things that are just giving me errors like BRUH I swear everyone who says Git is easy to use is lying.

I keep getting error messages about SSH key and user permission denied but I have no clue how I have managed to deny myself from my own repositories. I'm working on my laptop (usually I work on my PC, but I just couldn't be asked to get up from bed) and I'm getting all these errors I've never even seen before in my life although I've been forced to use Github on some other projects and it has worked... fine? I mean as fine as that thing can work.

13.7.2022

I started watching the tutorial videos from Moodle. This first one is super basic stuff but it's still good to hear all these things I think I know already to be said in very simple terms. This is good for me because I'm super bad at paying attention to nitpicky things like naming standards for example so when in this tutorial the guy is saying that it is Java standard to name classes so that each word begins with a capital letter, I really need to remember that so that my code doesn't look so haphazard.

The first task seems to be a simple calculator app so pretty much the same stuff from object-oriented programming course.

16.7.2022

I figured out the search bar problem. It's super logical actually (surprise). I had the search bar inside the scrollview which made it scrollable, but I just had to move the textview above scrollview and on the same level as the scrollview so that it is static. Now that part works. My search-method does not work the way I want it to work, it highlights the words that the

user searches, yes, but it only snaps to the first instance of that search parameter. I'll need to sort that out at some point, but I really need to just turn this course in so that I can do something else rather than just nitpicking my app that isn't even required for this course. I'll bang out the programming tasks from Moodle now and hopefully be able to submit everything today.

I tried to do the calculator app on my own without watching the tutorial and I got everything done and I accidentally did the error that the narrator planted on purpose to the code, but I just got stuck and didn't understand what I was doing wrong. The debugging tutorial was helpful, I've never used the debug option in Android Studio, but I will in the future as it makes it much easier to find the cause for different errors.

I'm moving off to the next tutorial now, it seems to be about moving between two views so shouldn't be too tricky.

I have never passed anything using intent so that was all new and cool. I had to refactor my Gradle to androidX because I kept getting some weird errors but now, I know one more error I guess.

I got the app working and at first I couldn't get Google to open up but then I remembered that when I worked with URL-addresses previously on Android Studio I had to mess around with the manifest.xml in order for the URL-address to be permitted or something and I just added this line of code to the manifest and then everything worked just fine although according to stackoverflow adding this permission gets the app banned from AppStore but we move.

```
<uses-permission  
|   android:name="android.permission.QUERY_ALL_PACKAGES"  
|   tools:ignore="QueryAllPackagesPermission" />
```

I'm starting the last tutorial video about images and something else and after that I think I can submit everything.

I was following the tutorial for the last app and I took some creative liberties with the values added to the strings.xml file which led to an NullPointerException error. I know it means that I'm trying to access an empty array for example but I didn't understand why since I had no errors in my strings.xml file. I did some research and I stumbled upon this on Stackoverflow:

```
<string name="slide_1_title">Joe's Pizza</string>
```

needs to be corrected to:

```
<string name="slide_1_title">Joe\'s Pizza</string>
```

I had typed the word "it's" so the apostrophe was the reason why nothing worked. The more you know.

I completed the last task now and this was by far the most educational because it was the most "complex". I found it really useful to know how to create a listview with a different image linked to each item on the list. I'm done with this course now and I'll just turn everything in for now.