Lappeenrannan teknillinen yliopisto

School of Business and Management

Sofware Development Skills

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

**LEARNING DIARY**

I went through the course overview and all the other tabs. I understand what the course is all about, and what is needed to complete the course. As said in the course goal; “This course aims to give you an edge in the job market by providing tools for creating unique projects and to help you find your passion as a software developer.” I’m using Android Studio, as it’s my main code editor. Before starting to watch the course videos, I refreshed myself with Git. Git took me some time to understand it again. Now as all the basics are done, I am ready to start with the course.  
  
I started up with watching the introduction video. I have some experience with Android Studio, so set-upping a project in Android Studio and get it rolling was easy. Even if I was familiar with Android Studio, I wasn’t aware of the auto import settings. Cool! As the video is 5 years old now, not everything was in the same place in Android Studio. I got the calculation done, with the instructions. I tried to do it all without instructions, but I couldn’t.

I wasn’t too familiar with the debugging. So, I made an obvious error to the program and started to debug. I find the debugging tool in Android Studio extremely powerful. I could instantly see where the issue was, so I fixed it, and everything was good again.

The second lesson intro was straight forward also. I learned the four main elements to Android Development: Activity, Intent, IntentService and BroadcastReceivers. Firstly, I changed the background color to a bit darker color. I am not a UI dev, and I know that it looks a bit odd, but it’s a bit calmer to my eyes. I knew how to change the background color.

So far, I have made a landing page (the first page) where is a button for the calculator page. I was intending to add an exit program button, but after doing some research, I learned that the Android architecture does not like forcing to quit the app, it’s considered bad practice, so I removed the quit button. So, currently I have two pages, as intended.

In the video, there was instructions on how to access different websites through a button. I checked it out and tried it, but I don’t really need it on my app, as everything will be done inside.

I wanted my simple calculator to have some ‘nice’ functions. So, I added a radio group of four in the very top, from where you can choose whether to add, subtract, multiply or divide the given numbers. The method on how to do it wasn’t on top of my mind, but with some research I managed to complete it, and it looks good. I had some issues on making the buttons horizontal, but it got also solved with a simple search.

After the radio group was added, I really wanted to solve myself how to make each function work. So, if you choose “add” the program would actually add the two given numbers, and same with subtract. From almost every other programming language I know, you compare the “if” statement as following; if (operation == “add”) {…} but I totally forgot that in Java it actually works like this; if(operation.equals(“add”)){…}, one new thing to learn / remember again, nice! Now the operations are done, and it works like charm. The program now also tells you which operation you chose, just as an confirmation in the bottom of the screen. Remembering to save the app every now and then, and our journey continues.

After checking up on my program, I noticed that you could only calculate integers. I updated it so you could use decimals too. After implementing the decimals, I had to make the program to round the decimals to two numbers. It took some time, but I got it working.

Found a way to commit all the changes to GitHub via Android Studio. It’s extremely easy and simple, I love it.

The next subject in the list is ListView. This is a new thing for me, and I am interested to see what it’s about. Following the start of the video (Part 3) wasn’t too hard. It took me some extra time, as I wanted to really understand what’s going on. I think the video presenter could’ve explained the methods a little bit better, but it’s fine. My idea for the ListView is to show the user 3 math operators, that could be bought and added to the calculator. I chose them, as I wanted the app to be consistent. It would be funny if all of a sudden there would be some vegetables in the list view to buy. Configuring the ListActivity file (where all the magic happens with the lists) was a bit confusing. I managed to make my own version of it done by following the instructions.

The newer Android Studio was a bit different with creating new Listeners. I kept the new variables, as they are defined properly (for example position and id instead of i and j). Next in the list, I created images for my “products”. I used a non-copyright background, made each product an own color and added a text, and a square root image to one of them. Now comes the image importation to the app. We must make sure that the images aren’t too big, and we must tell the program what image to show when pressing each of the product. The image scaling was a though process. I don’t fully understand every single with confidence, but I understand what’s the idea behind it.

Everything is now done. The app looks good, and I am very interested on continuing to develop the app further in a later time. I really want to add the “virtual shop” and make it work as I want. I think this is a perfect starting point to make it happen.

All in all, I was satisfied with the result. The app is not quite similar as in the lecture videos, there are quite a few changes. I find mobile development being quite interesting.

Some notes during the course:

* The videos were quite old. Everything worked, but just having the video modernized would be cool and appreciated.
* The app base is ready. I am planning to change and add the looks of it and functions soon.