

Lappeenranta teknillinen yliopisto  
School of Business and Management

Software Development Skills

**Laura María Camino Yuste, 001800199**

**LEARNING DIARY, MOBILE MODULE**

## LEARNING DIARY

4.9.2023

I checked all the information available in Moodle to get a better understanding about the course. I downloaded everything that I needed and started brainstorming, trying to come up with an idea to create an interesting mobile app project.

5.9.2023

I have started watching the tutorials to get a better understanding about the process of creating a mobile application.

I have also search for more resources on my own since this is my first time working on a mobile app.

I haven't set up the GitHub repository yet because I prefer to start by doing small projects to better understand each of the tools I am using (Mainly android Studio) and because I haven't decided in what subject do I want to focus to create my new app.

For now I have the following ideas:

- A ToDo list app
- A notes app (With colors to organize them)
- A retro pong game (Preferably, with an AI to play with or 2-users game play option)

8.9.2023

I have finished the first tutorial. It took me while since I had a few problems with the installation of devices to test the project.

Thanks to the first tutorial I learn:

- How to create an Android application project
- How to create and work with TextViews
- How to create and work with Buttons
- How to send information from the view to the back and process it
- How to give a value to a TextView based on a BackEnd operation
- How to align element relatives to the sides of the device

Next week, I plan to finish all tutorials and set up the GitHub repository. I prefer to be taking it step by step to make sure I fully understand the basics of what I am doing.

12.09.2023

Today, I finished the second tutorial:

- I learn what activities and Intents are and how do they work.
- I learn how to change from one screen to another.
- I learn how to create new activities and related them.
- I learn how to try and access another app in the device, for example a browser.
- I learn more about how to work with the different options to personalize the TextViews
- I learn how to change a TextView information depending of a value coming from the backEnd

I plan on keep learning slowly. I have finally decided to do a game for my final project. I was inclined to do either a retro pòng or a snakes game. I will decide it after watching the final tutorial.

Once I have finished them, I'll set up the repository and I will start working seriously on the final project, though, I may need to ask a few questions to be sure that my approach is the right one.

15.09.2023

I have finished all tutorials. Beside watching them I have also search for more resources online to improve my learning.

Now that I have finished all exercises in the tutorials, I want to start searching for information regarding my project, though, I first want to make sure that my proposal is accepted.

22.09.2023

I have already set up the GitHub repository and uploaded the exercises from the tutorials.

This week have been full of works and assignments so I could not really advance on the project, I wish I had had at least time to start it.

I have decided to recreate a retro pong game with a basic screen with two bottoms, one to start the game and one to see the game instructions.

My main idea is to do a simple game against a very basic AI, though I would like to try and make it better by adding a DB which shows your previous records. The idea would be to ask for a name at the beginning of the game and then keep a basic ranking with the numbers of consecutive wins. It is very ambitious considering the time and resources I have right now. But who knows? Maybe I can create a very dynamic and fun app!

For now, I will focus on doing a very basic Pong game and once I have it, I'll decide whether or to make more complete or not.

16.10.2023

### **ITS FINISH!**

Today I decided to finish the project once and for all. Today I was coding for 5 hours straight until I finally make a functional 2D Pong game. Here is what I have done:

- I designed a pretty simple interface using Android basic figures to create the ball and racquets. This way it was easier for me to control them, making them adapt to the playfield.
- I create a basic AI which responds using basic probability when the ball is close to its side.
- I create a simple state control system to know when the game has been paused for any reason, when the player has win or lose a round...
- I create a simple physics and collision control system to make the ball react and adapt its speed and direction in case it touches one of the racquets or one of the walls.
- I create a simple automatically update score system to keep track of the points.

To archive all of that I have used several YouTube tutorials as well as the official documentation of Android Studio. Here is a resume of all I have learned today:

1. I've learned how to use Android default figures to create and dimension objects.
2. I've learned how to update almost immediately the information which is displayed in the screen.
3. I've learned more about activities and Intents in Android.
4. I've learned how to successfully send information from one class to another.
5. I've learned how to work with Threads in Android
6. I've learned how to work with messages and Bundles in Android.

7. I've learned how to use different components.

Once I have finished the code, I tested it several times, searching for errors.

Finally, I refactor it and added comments to every method to clarify what they are and how they work. I have prepared the Readme, recorded the video and uploaded everything to the GitHub repository.

All in all, I am very happy with the result, the game works perfectly and I have learned a lot about how to develop an Android application.