Luke Deratzou and Matthew Malone

Group 21

CS 4518

Project 1 Writeup

Our design rational for the project is following the Model View Controller design pattern. We separated the code into these three parts to help with both scalability of the project and readability of the code. Specifically, we implemented the model in classes like MainViewModel to store the data, views in the form of the UI created in XML files, and then connected the two via the controller functions, like the button press event listeners, via the MainActivity function. Other than that, we followed typical good coding practices, such as having descriptive, meaningful variable names and abstraction practices regarding functions.

Overall, we both learned a lot from this initial project, as we were both novices to not only Android programming, but also app development in general. First, while we both have a Java background through past CS courses, we have never used Kotlin before. Thus, we went through the beginning Kotlin exercises and also learned through both experience and reading the book to write the code. Another thing that we learned about was Model View Controller, which we did not have much experience with until this class. Using that design pattern to make our code more organized, scalable, and readable has helped make the whole coding process a lot smoother.

Throughout developing this first project, we learned more about the process of developing an Android app from scratch. Notably, writing UIs by using an XML file was a big learning experience for both of us. Also, coding to different orientations of displays was a challenge that we solved. Finally, to implement the extra feature, we looked into the documentation of Android Studio and Kotlin to implement a sound effect whenever the user scores. Overall, this project was a big learning experience, as it was our first exposure to the world of Android programming. We learned a lot about the process and feel very prepared to tackle the next programming assignment in this class.

Below are some screenshots from the basketball app, showing off its features.

A picture containing funnel chart

Description automatically generated

Home screen on a Pixel 2

Diagram

Description automatically generated

Result of pressing +3 points, and +2 points and two free throws, on a Pixel 2