

SkillCourt

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PROBLEM

The SkillCourt app allows players to train their skills in soccer by kicking the ball and aiming it at multiple LED pads in the goal. The app keeps track of how many times the pad was successfully hit, keeping a point score for the user. Our main problem was that the website fails to run for some unknown reason.

CURRENT SYSTEM

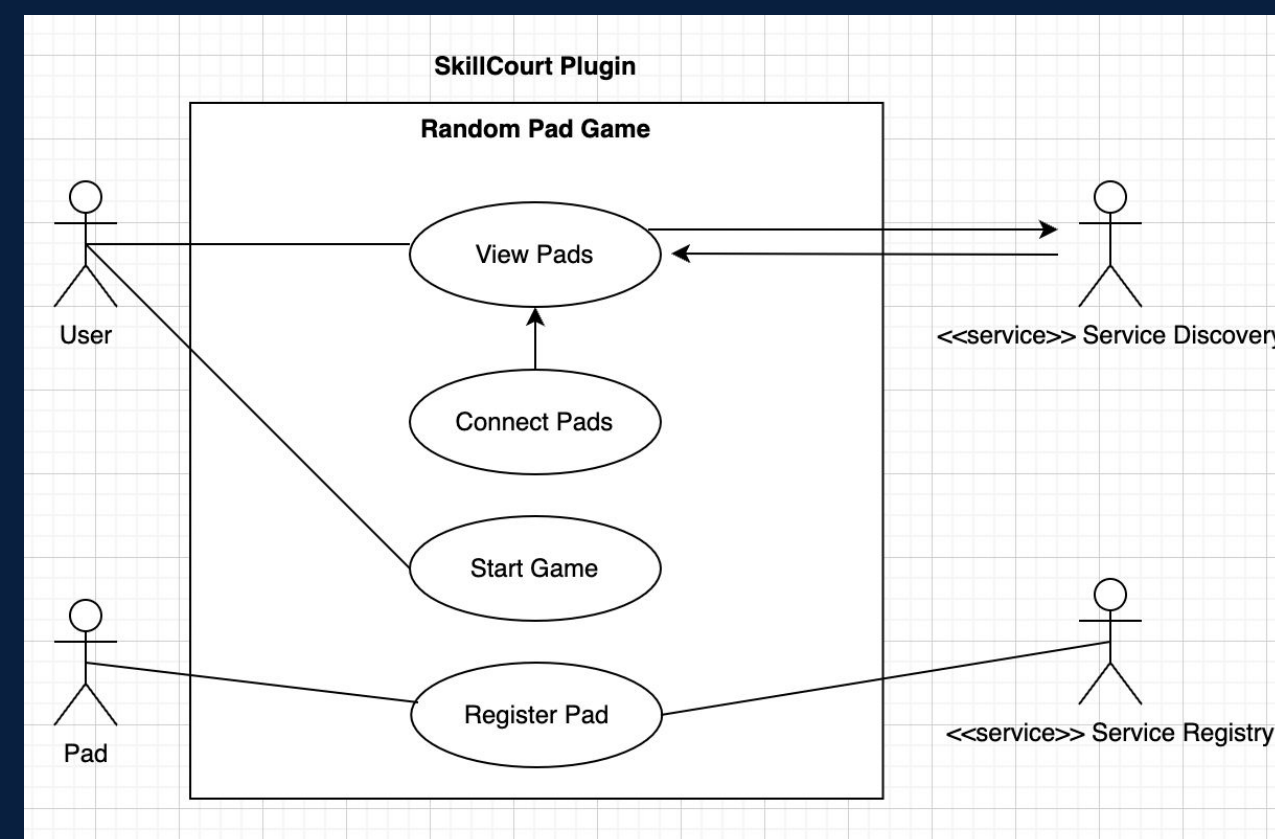
The current app can connect to multiple pads and allows the user to set the game length (in seconds), pad light up time (defines how long the pad will be lit up for), and the pad interval time (defines the time between a pad turning off and the next one lighting up).

REQUIREMENTS

- In order to run the mobile app for this project, the following is necessary:
- Android Studio (for windows) or XCode (for MacOS)
- git
- git-flow-avh or another git-flow plugin for Git.
- A proper emulator for Android or iOS
- Flutter SDK along with Dart
- Java JRE version 1.8 or greater
- Python 3 (for the pad emulator)

OBJECT DESIGN

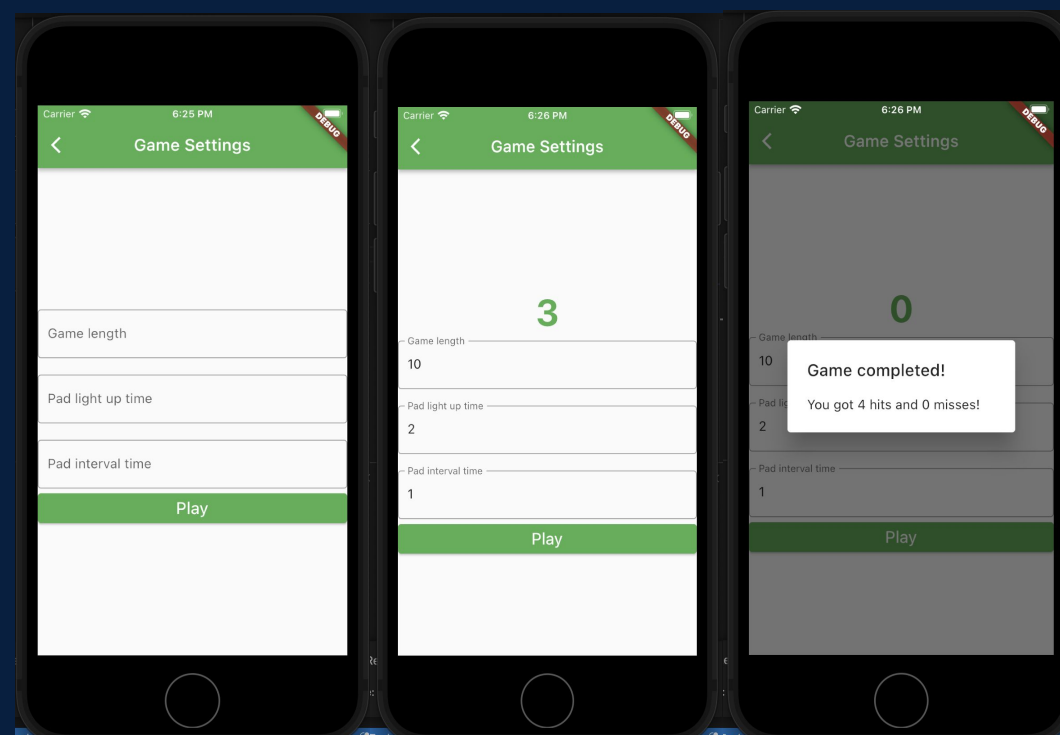
Figure 1: Use Case Diagram for SkillCourt Pad Plugin



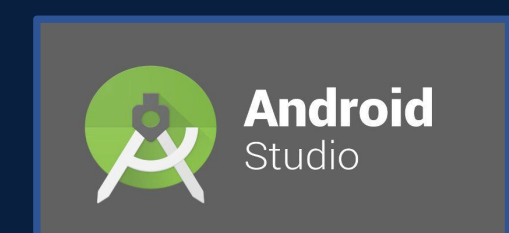
SYSTEM DESIGN

The app uses network service discovery. Once the pads are registered on the LAN, the app connects to said pads. When the pads are connected, the user can start the game where before they start shooting the ball to the pads, they define the game length, the pad light up time, and the pad interval time. Once the set time for the game is done, the point score for the user is displayed. These point scores are, however, stored in-memory.

SCREENSHOTS



IMPLEMENTATION



SUMMARY

My contribution to the project was collaborating with the lead of the group, Yasaar Kadery, on developing the randomized algorithm for the randomized game and the UI for the app. Once the logic was changed so that the game could take several pads, I developed the pad interval time feature, which defines how much time there will be between a pad turning off and the next one lighting up. In addition, once we got the game logic set up, we decided to focus on the UI and the appearance of the app, as well as added a timer on the screen so that the user can see the countdown of the game. After finishing the main features of the mobile app, we were then tasked to connect the website with the app. However, for some unknown reason we could not get the website to run, hence inhibiting us from going further with the project. Another problem I specifically ran into was trying to set up and run the website on my mac. To run the website on a mac, one needs a virtual machine specifically Virtualbox (as instructed in the github for this project), however virtualbox is not compatible with the processor my machine has (M1 chip). The last portion of the project consisted of the whole team trying to figure out how to run the website, unfortunately, most of us could not get it running.

ACKNOWLEDGEMENT

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