

SkillCourt

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CONFLICT

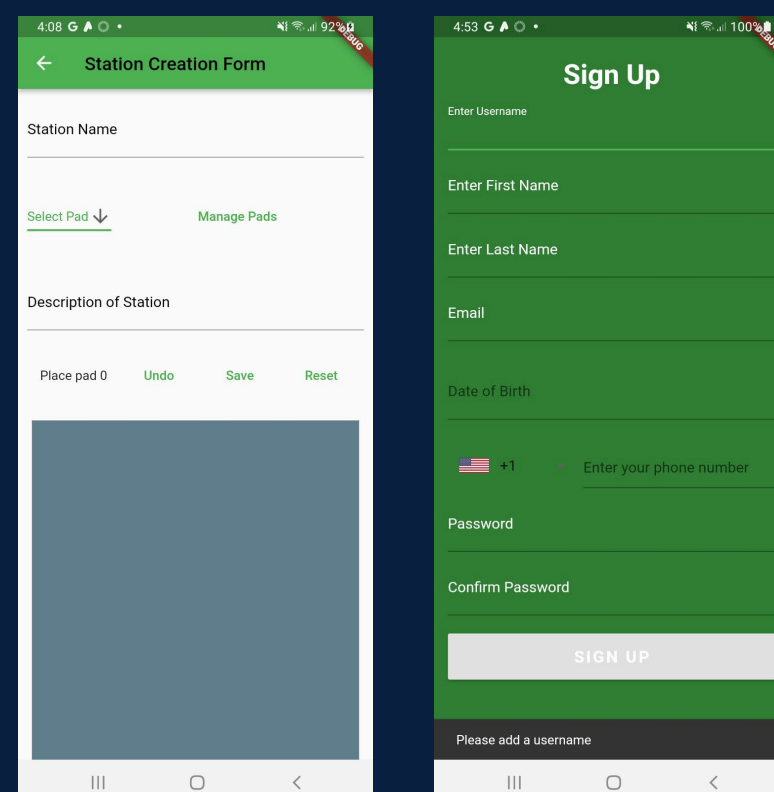
There is a struggle among soccer players to remember their game statistics. Human mistakes are prone to occur when someone else keeps track of them. Therefore, SkillCourt exists! Currently, there are several issues to be addressed:

- Neither an iOS nor Android version of the app exists at the moment.
- Connection problems with application plugins are present with the pads.
- We are unable to connect to the pads with Flutter.

SYSTEM DESIGN

The technology is currently being implemented into Flutter to create an Android and iOS application. In addition, the pads needed to be able to be connected and disconnected. Using the application, the pads can be placed anywhere in the field.

SCREENSHOTS



ACKNOWLEDGEMENT

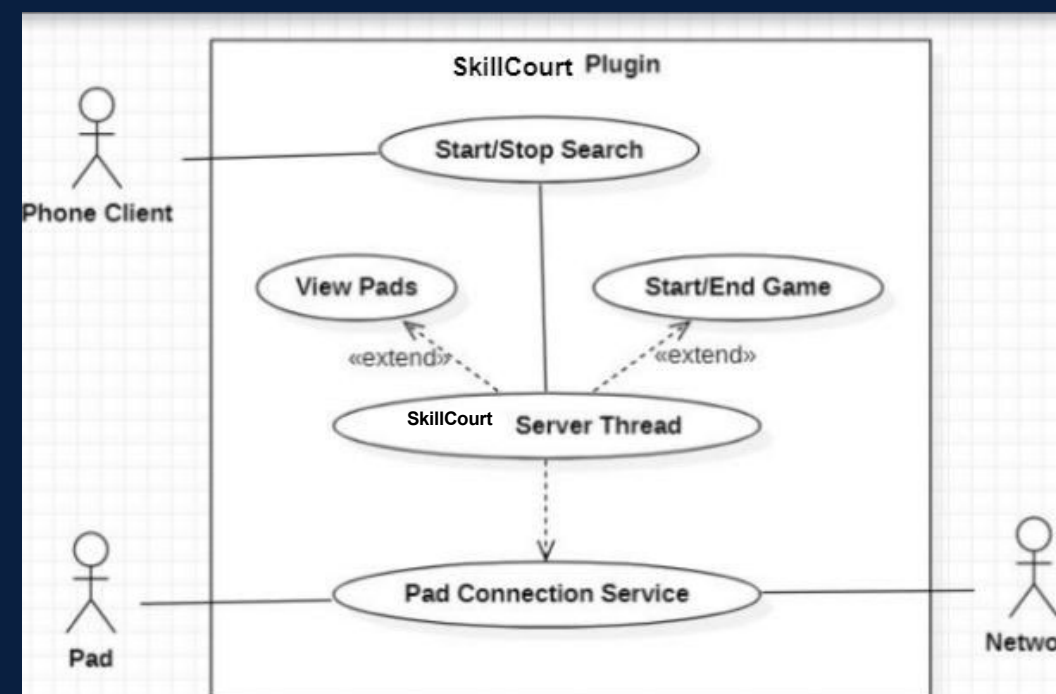
The material presented in this poster is based upon the work supported by Guðmundur Traustason. We thank the product owner and Joseph Quinn for the assistance and mentorship that we received throughout the course

CURRENT SYSTEM

Currently, both Android and iOS users can access SkillCourt's Android and iOS apps, which are created in Flutter. When the player strikes an LED panel with the soccer ball, it lights up and communicates with an app. By capturing data based on hits, the pads send it to the app. Using Ubuntu and Docker, there is a reactJS website based on Ubuntu.

OBJECT DESIGN

Figure 1: Use Case Diagram for SkillCourt Pad Pugin



SYNOPSIS

I contributed to this project by collaborating with my team member Rene Garcia in testing JWT authentication and checking that successful logins are being displayed by the GraphQL API. Once this was done, we integrated the new Isolate 'threading' system into the `agineek-app` application. There were multiple issues with docker containers on the admin side with regards to synchronizing GraphQL with the client-side. Numerous attempts and a new laptop later, docker build webapp and docker-compose up still yielded errors. In the end, I updated existing forms with error messages and hints. In the application, error messages and instructions for resolving incorrect data were scarce. Lack of time prevented me from investigating the other registration pages. I also wanted to make sure some of the other registration pages were authenticated.. A revised name and branding for SkillCourt were added to the website which refers to Agineek. Using GraphQL and the client side, our team implemented server synchronization after conducting research on how to achieve it. As a result, we had to create a test that would help us store JWT data and send it to the GraphQL API using the mobile application. Following the mobile team's testing of the JWT authentication, we confirmed that the GraphQL API displayed successful logins. The mobile application also needed to have a way to add new users. A code would be sent to the pad emulator by one button, and another code would be sent simultaneously by multiple buttons in the mobile app. The website and mobile application were also explored as ways of connecting and communicating with the server. In order to communicate with both the website and mobile app simultaneously, the server had to be configured apropos. I also reviewed authentication and encryption methods

CONDITIONS

It is necessary to have a proper working environment in order to complete this project. To accomplish this, you will need::

- The following software should be installed on your computer:
- Java Runtime Environment of version 1.8 or higher
- If you are using Git, use the git-flow-avh plugin or another git-flow plugin.
- Software Development Kit for Flutter
- If you are developing for iOS or Android, you will need Android Studio or XCode.
- The emulator uses Python 3 (for the pad)
- Docker Desktop
- Ubuntu
- Run in production (or production-like) requires:
- Android 9 (or later) or iOS 9 devices.
- Sensors embedded in multiple physical pads.
- A soccer ball.

IMPLEMENTATION

This application will support Android and iOS devices. Plugins for Flutter have been used to transfer data between Android and iOS implementations.

