

Florida International University

Fall 2023 Capstone 2 Project

Skillcourt

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PROBLEM

The SkillCourt mobile app grappled with challenges arising from incomplete development and UI implementation errors, including redundant code and unexpected behavior. Routing issues from buttons to pages also appeared but more notably, the UI element code demanded abstraction to enhance codebase usability. Addressing navigation methods was crucial for an improved user experience and overall performance. Key features that needed implementation included a color picker screen on both the home and settings pages, an FAQ page, a brightness page, and the ability to send signals to software connecting user input to the LED pad's code.

SUMMARY

My role in this project was pivotal in making the Skillcourt mobile application seem less vacant in its User Experience features. Through assistance with the team captain who had a proficient understanding of Google's Flutter / the programming language Dart, I was able to learn on the process to build working features such as the color picker, FAQ page, and brightness page and route them successfully via the home page and settings page. Both of these were built from the ground up as the groundwork laid by previous teams was purely design and so I believe we made good progress given our time frame. The user now has a better means of interaction with the purpose of the Skillcourt Hardware which is to train their soccer skills via LED pads.

VERIFICATION

Verifying the process involved referring to the Figma website that had the designs which we based the app's new UI feature's on. I was able to implement the Color Picker feature following the request of the designer where the user selects the color of the grid with the overlay of a soccer ball, the chosen color produces a useable color value. Also, I was able to implement the Brightness Page feature where users can slide to their preferred % brightness of their LED pads.

REFERENCES

Flutter:

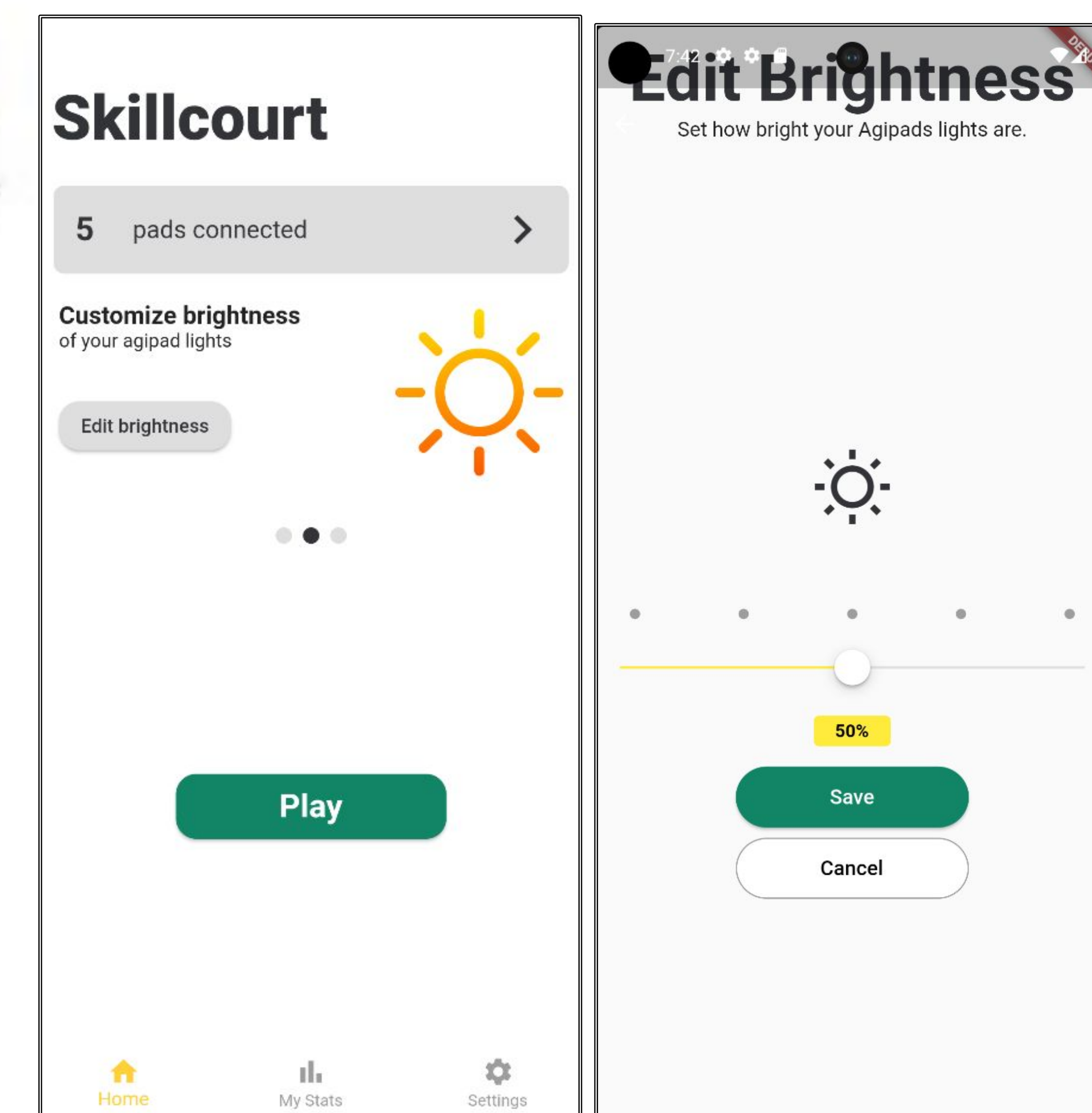
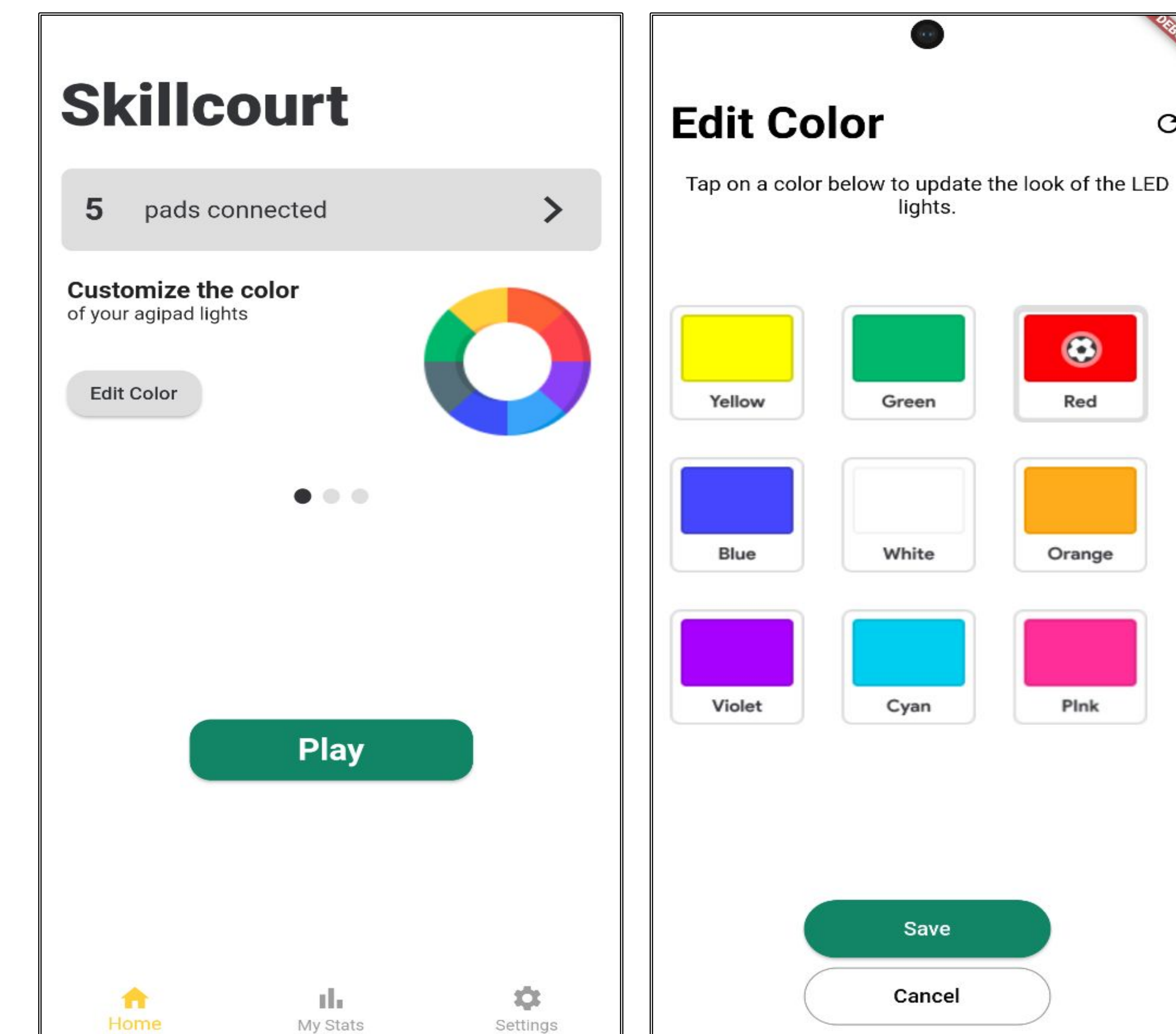
- <https://api.flutter.dev/flutter/cupertino/CupertinoSlider-class.html>
- <https://docs.flutter.dev/cookbook>
- [The pubspec file](https://pubspec.dart.dev/) | Dart,
- <https://dart.dev/tools/pub/pubspec>
- [Run apps on the Android Emulator](https://developer.android.com/studio/run/android-studio) | Android Studio | Android Developers
- <https://developer.android.com/studio/run/emulator>

IMPLEMENTATION

Implementing the features assigned to me was relatively easy given that we had the Figma designs to borrow our buttons and text from and maintain that simple yet professional design language. Challenges may have been coming up with the idea to use an array to store the slider brightness images as the user increases their % brightness the sun rays expand. As well as use of the cupertino slider included in the flutter UX library. Little details of this type create larger impressions of quality for the product.

CURRENT SYSTEM

Our current system is a Dart application using flutter to facilitate easy responsiveness across platforms as well as efficient building of UI components. Testing was done using mobile phone emulators that used Android OS.



REQUIREMENTS

Flutter
Dart
GitHub
Android Studio
Android VM
Android Tool Chain

