EYE VISION

FLUTTER APPLICATION

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Problem

The COVID-19 pandemic caused a surge in telemedicine appointments and some patients skipped eye care visits altogether and many people are still avoiding eye exams. Also,a shift to online learning by many schools, children are spending even more time looking at screens.Many people are not aware that they might be suffering from colour vision problem inspite of not being able to recognize few colors. Many people lack knowledge of eye health. Between visits to the eye doctor, some patients can turn to eye health apps. These apps don't replace a comprehensive eye exam by an ophthalmologist but they may help manage ongoing eye conditions and alert when a doctor's input is needed.

PROJECT OBJECTIVE

To develop a mobile application which provides

- Visual acuity test which used the concept of 20/20 vision (which is considered to be a normal vision). Among the various eye charts available we are using snailing eye chart. In this test users will be asked to read the letters from biggest to smallest keeping the device at a distance of 1 feet.
- Color vision test in which we are focusing on providing red-green and blue-violet color vision test. This test is based upon Ishihara test.
- Eye exercises which user can perform frequently to perform which can eye alignment and focusing. Though these exercise can't improve vision fast but can gradually help with focusing issue and eye health. These include palming, blinking and eye movements.
- Lastly, we are also providing some eye health tips for maintaining a good diet to proper posture.

Tools and Technology

- Flutter
- Firebase
- Android Studio
- Figma

Technical Learning

- Firstly we were planning to make a website and had started working on Javascript but later we switched to flutter(cross platform framework) because of various advantages it provides like having the same code base for both ios and android devices.It is also the only frameworks that allow sharing both the UI code the UI itself.
- We focussed upon making the designs as such so that it provides a great user experience. We researched and watched few tutorials on it.
- We learnt how to organise the file structure, work with stateless and stateful widgets and integrating various packages and implementing dependencies from dev package.
- JSON integration and combining models with widgets to complete the user interface of the app
- Learnt firebase for authentication page and coorperating google sign in the login page.

Challenges

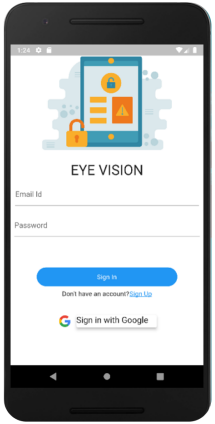
- Google sign in not working because of new updates in fire base.
- We are not able to calculate the final result of visual acuity test.
- Difficulty in implementing backend.

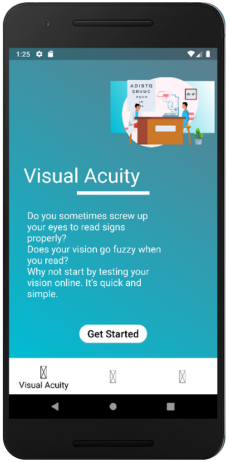
Future Updates

- Integration of Machine Learning.
- Add eye games.
- Create a website.
- Improve the UI of screens.

Splash Screen

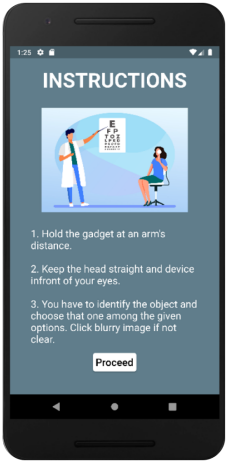
Sign in page, where the user enters his mail id and password to get signed in.

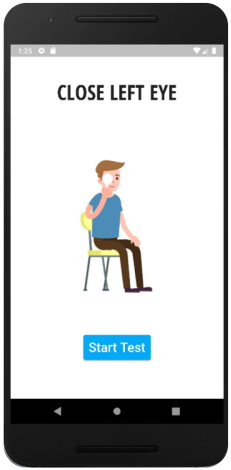




Get Started with Visual Acuity Test...

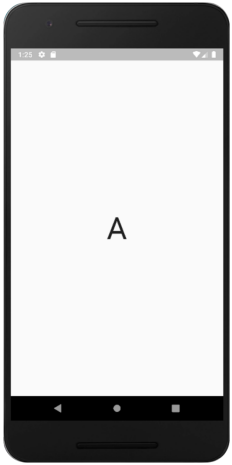
Instructions to continue with the test...

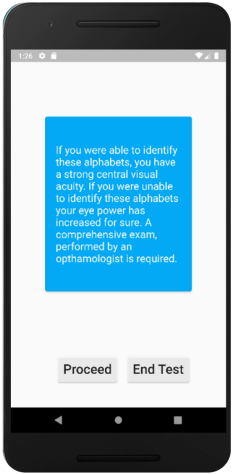




Starting the test for the Right eye

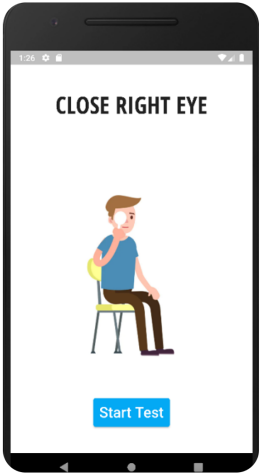
The alphabets pop up

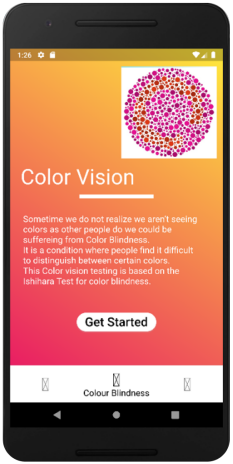




The end of the Right eye test

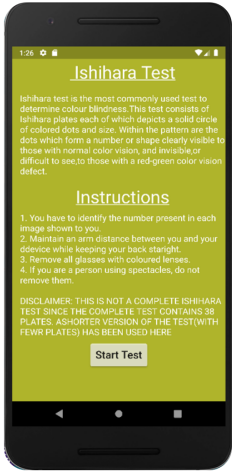
Starting the Left eye test

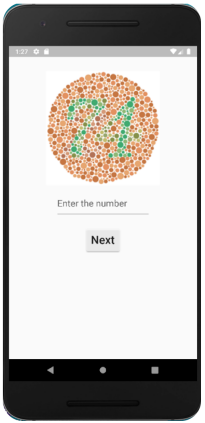




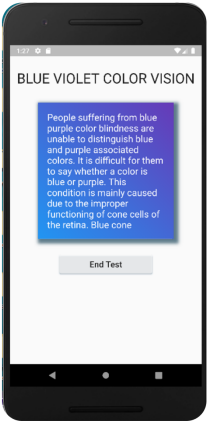
Getting Started with Color Vision Test.

Ishihara Test and the instructions to folow up

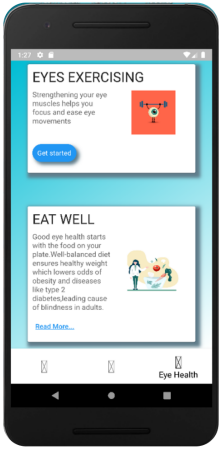




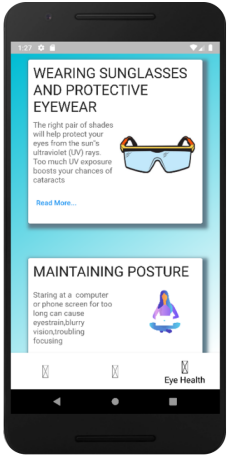
The Ishihara test where the user has to identify the number

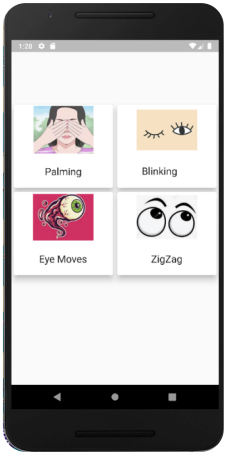


The end of the blue violet color vision test.

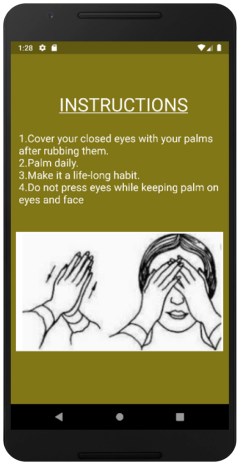


Eye exercises and eye health tips.

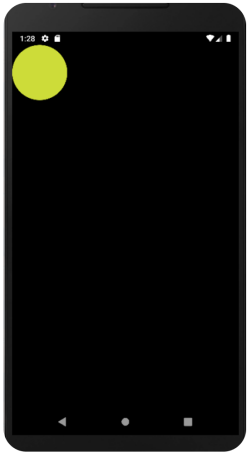




Different Eye exercises that can improve one's eye vision.



Instructions for the palming exercise



Zigzag exercise

Thank You