

Team HealthLit

Mobile and Web Applications



Meet the Team Members!



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Developer



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Introduction



- High proportion of parents commit dosing errors
- Encompassed by health literacy
- Our client is Dr. Olivia Lindly
 - She is a professor and researcher at NAU studying child and maternal health
 - Wants to improve life for families in rural and indigenous communities



Dr. Olivia Lindly

Client

Problem Statement

- Dr Lindly noticed problems
 - Parents read info but quickly forget
 - Parents discard info
 - Info not widely available (rural/indigenous)
 - Info hard to understand
- About $\frac{1}{3}$ of 200,000 medication errors involve children

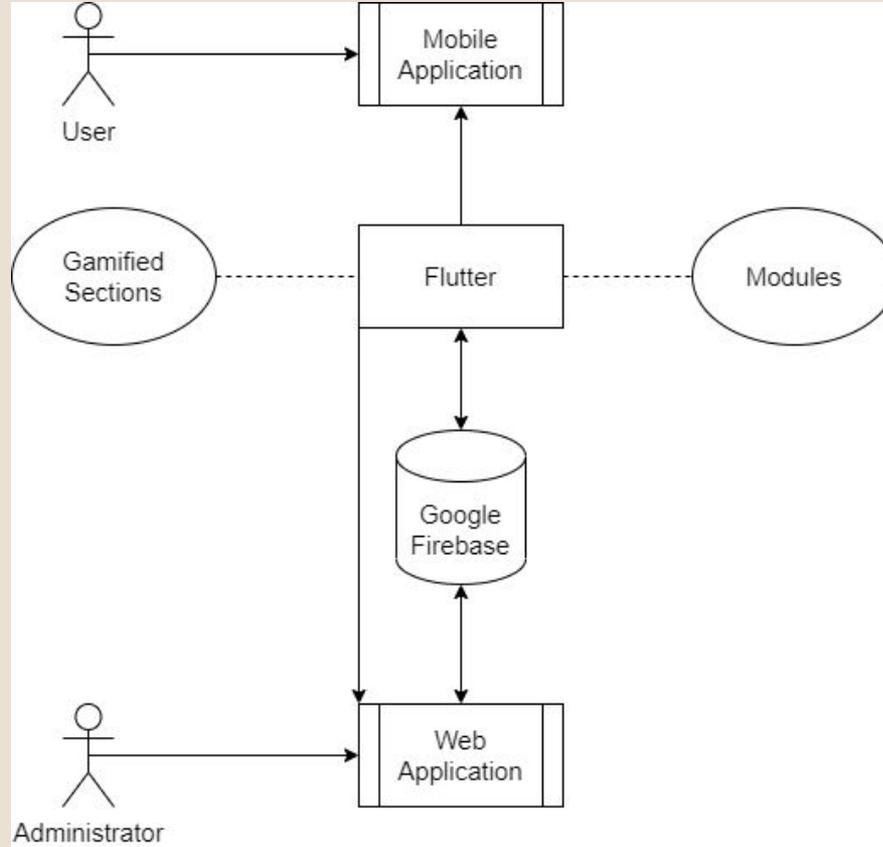
Solution Overview

- **Mobile application**
 - Allows users to log in and insert credentials
 - NVS (Newest Vital Sign) tests
 - Health literacy modules
 - Gamified sections
- **Web application**
 - Administrative portal
 - Module creation
 - Display user data

Requirements Overview

- App should be interactive and informative by letting the app users get the information from web portal to their phones.
- Gamification should be able to provide statistics that can be seen on the web portal
- App should be easy to use for any type of users
- Web Portal is able to see user's information and use of the app

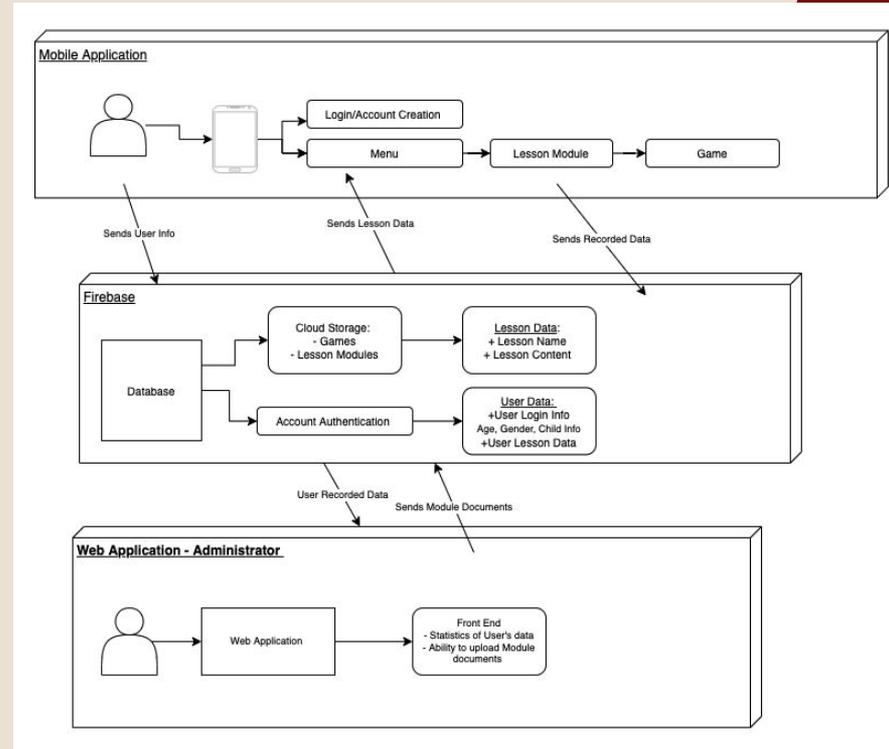
Implementation Overview



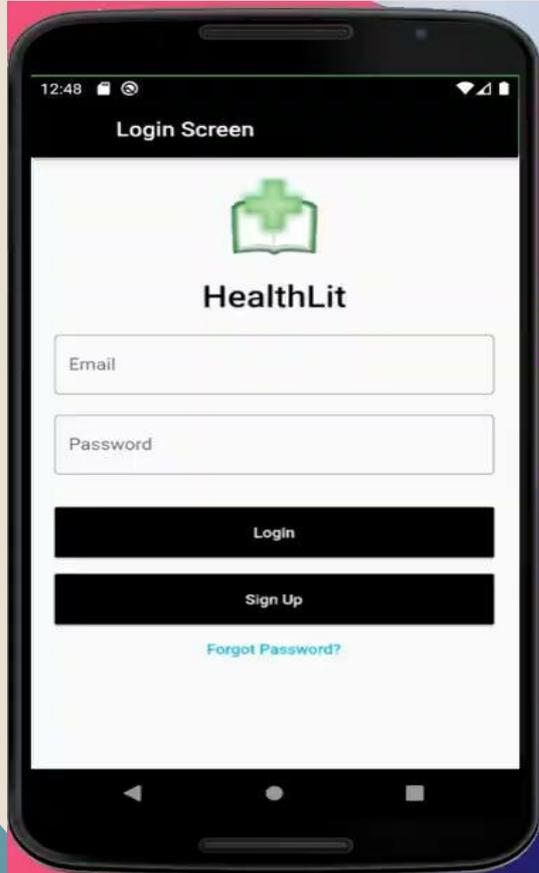
Implementation Details

Three Main Components:

- **Mobile Application (Flutter)** - for parents to increase their health literacy
- **Web Application (Flutter)** - to see app statistics and administrative upload of module documents
- **Back end (Google Firebase)** - database to glue components together

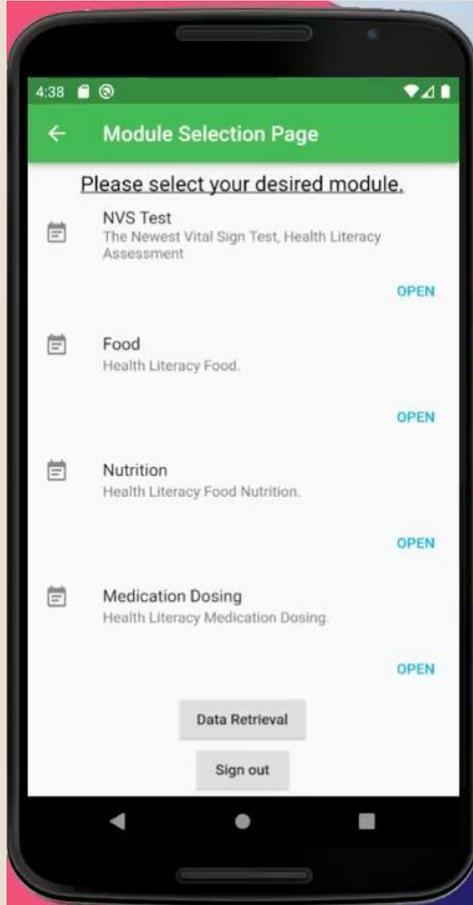


Demo Video: Login



- **Account Login:** demonstration of Login Screen, users can log in with their email and their password
- Users also have the ability to create a new account and create a new password.

Demo Video: Module Selection



- **Module functionality** - Show that the user can interact properly with the various modules and gamified sections
- **Retrieve PDF version of modules from database.**

Demo Video: Web Application



- **Upload Module**
Show that the admin can Upload PDFs for Modules to the Database
- **User Information**
Can access and filter User Information from the Database

Challenges and Resolutions

- **Challenge:** Web Application Issues

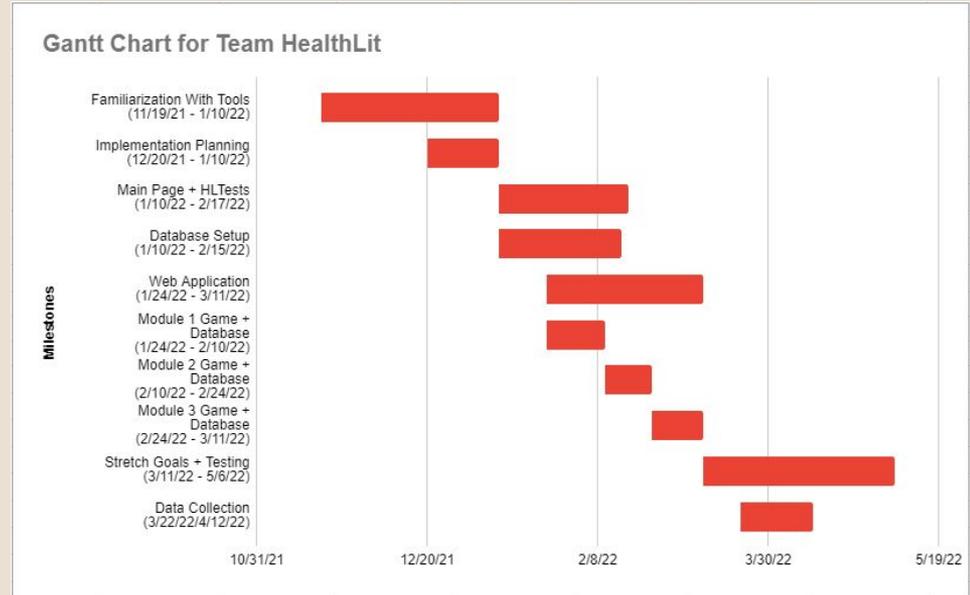
- Firebase Connection
- PHP and Javascript
- **Resolution:** Flutter

- **Risks**

- Database Security
- **Resolution:**
Information Access

Schedule

- Mobile Application Architecture
- Mobile Application Modules
- Web Portal Architecture
- Final Touches, Stretch Goals, and Testing



Testing Process

Three Main Components:

- Unit Testing
 - Modules & Games
 - Account Management
 - Web Portal
- Integration Testing
 - User Information
 - Game Statistics
- Usability testing
 - Naive Users

Future Plans

- Mobile Application:
 - Social media login
 - Account user editing
 - Multi-language support
- Web Application
 - Expand statistical analysis
 - User and module management

Conclusion

- Parents tend to have low health literacy
- Our team is helping Dr. Lindly remedy this issue
- Done this through development of the HealthLit project
- Project is finished, but still has room for improvements and iterations
- Hope that this project will help parents of young children care for them properly

Thanks

Do you have any questions?

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<https://ceias.nau.edu/capstone/projects/CS/2022/HealthLit/>

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