

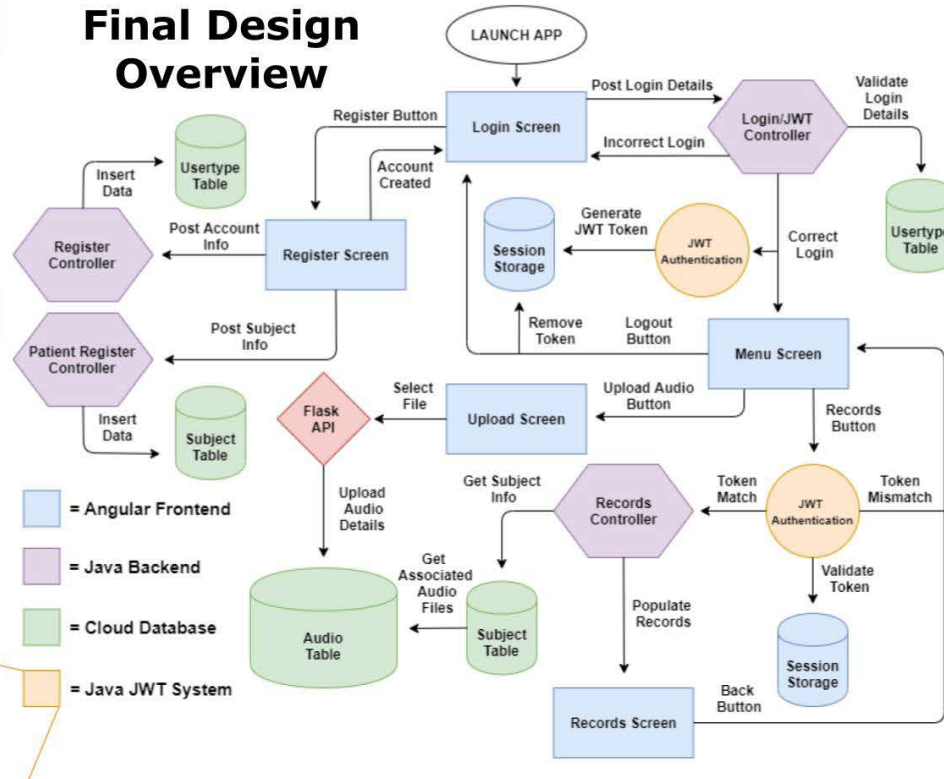
Background

Research shows that about 8% of children need speech therapy globally and while there are many speech therapy apps intended for them in the market, many are too expensive, not intuitive for younger children, or too simplistic for therapists.

Value Proposition

This project's aim has been to create an all-in-one computer application for speech therapy utilizing last year's database system by implementing: a dynamic user-interface, an overhauled security system, and features useful to children, therapists, and researchers, alike.

Final Design Overview



System Requirements

An intuitive user interface provided to the client by the front-end

A back-end server utilizing modern standards for data passing

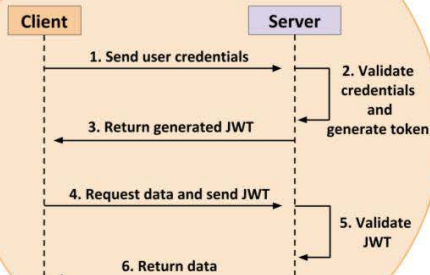
An organized integration of the previous database system

A robust security layer to ensure privacy compliance

Results

This project has resulted in a working front-end and expanded security layer, implementing last year's speech therapy database system. For future work, an audio parsing system utilizing machine learning should be implemented that can provide genuine feedback to patients after they record a session. Additionally, security should continue to expand in this project to keep it compliant with privacy laws such as HIPAA (Health Insurance Portability and Accountability Act) and COPPA (Children Online Privacy Protection Act)

JSON Web Token (JWT)



Special thanks to:

The Micron Foundation,
Micron Client: Eric Booth,
and Lead Instructor: Dr. Feng Li



Project Learning and Development

- Security layer authenticates with a JSON Web Token system utilizing the Java Spring Security framework
- A matched username and password will generate a unique token for authentication

- Front-end developed with Google's web framework Angular for its component-based architecture and fast testability
- The interface loads quickly and boasts expansive libraries for future project additions

- Back-end developed with Java to remain consistent with the previous team's database system
- It utilizes various data controllers to pass the database information to and from the front-end while applying the security layer

The Login Screen

