

Cyber Security Tasks

Completed:

Authentication:

- Implemented authentication using Firebase Authentication
- User data is end to end encrypted and stored in an encrypted, secure database
- User roles are linked to JWT tokens using custom claims and securely stored in the authentication database

Custom Claims:

- Implement user roles using custom claims. Roles as of 4/21/2025 are: parent, researcher, and admin
- Use roles to limit access in database and cloud functions

File Upload Security

- Upload and download files using signed urls that only allow write or read functionality for a set period of time for a specified file path. The current time is 5 minutes.
- Ensure that uploaded files are only of type .mp4 by adding that MIME type to the signed url and to the header of the url when a request is made.

Database Rules:

- Use firestore database rules and firebase authentication to limit access to collections in our database based on user custom claims (roles)
- Only allow write access to research documents if user is an admin or a researcher
- Only allow write access to parent documents if the user is a parent, researcher, or admin.
- Only allows write access to child documents and child word trackers if the user is the child's parent
- Allow read and write access to the word bank to any authenticated user

Cloud Functions:

- Create cloud functions to securely perform role-limited actions, actions requiring the admin sdk, and actions requiring cross account data access
- Implement cloud functions for role management, custom claims retrieval, email-uid table creation, and signed urls for file upload and download

- Cloud functions allow the execution of sensitive operations out of reach of the user and allow limitations based on custom claims to be enforced

Encryption:

- The use of firebase and firestore enables data encryption for both data at rest and data in motion. Additional steps are not necessary for end to end encryption.

Remaining:

- Based on conversations with our cyber team and independent research, we are currently unaware of any additional cyber security tasks or concerns.