

Knights Foundation of Computing and Information Sciences

Summer 2023 Senior Design Project

Auditory Training App

Student: Rafael Mejia Galvan

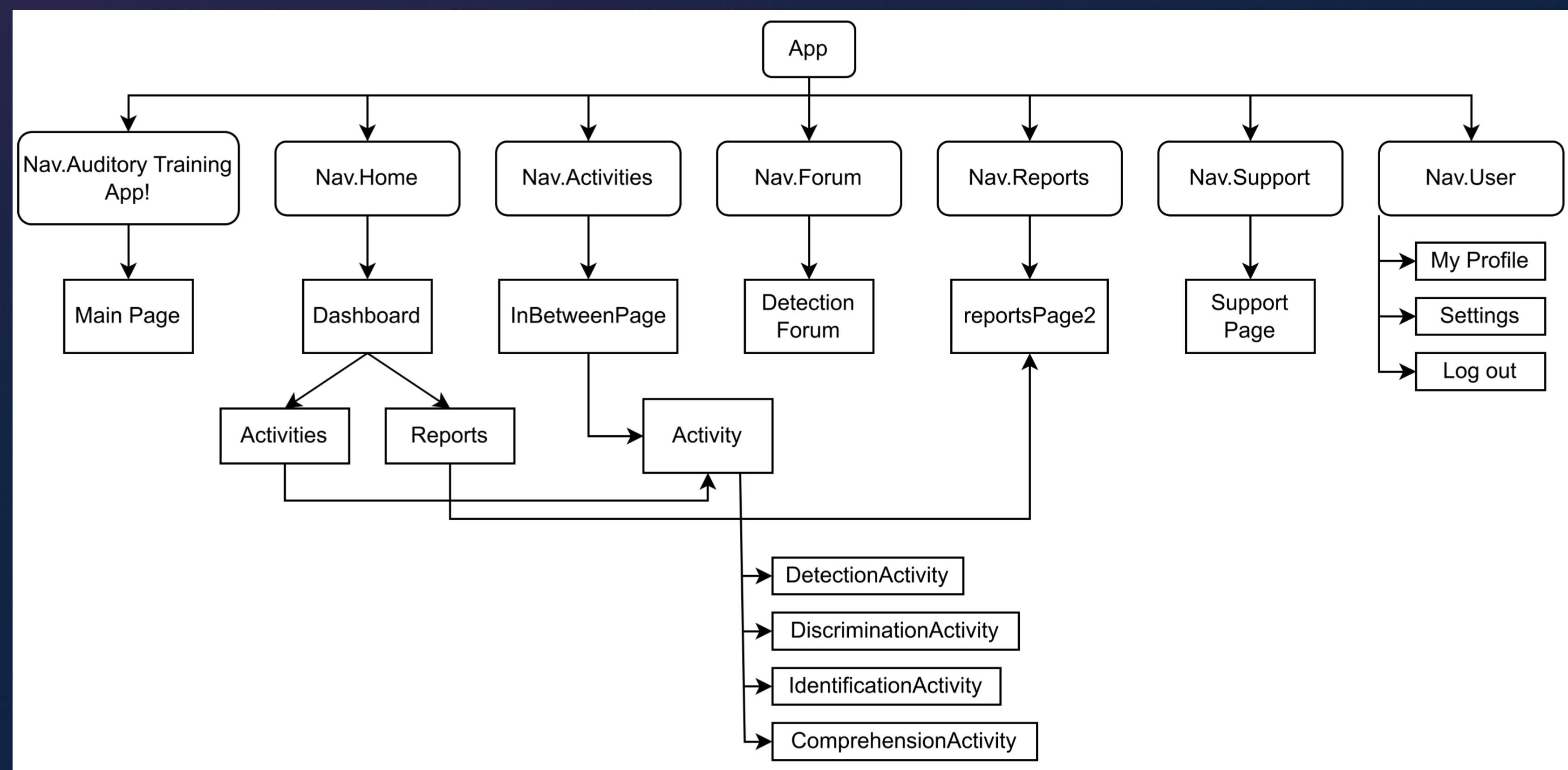
Mentor: *Dr. Alliete Alfano, Product Owner (if different from Instructor and where applicable)*

Instructor/Faculty: *Dr. Masoud Sadjadi, Florida International University*

PROBLEM

Our Auditory Improvement App is a web-based platform dedicated to adults grappling with hearing loss who are either on hearing aids or have received cochlear implants. The aim is to enhance their auditory capabilities through an interactive and enjoyable assortment of games and listening tasks. Despite numerous apps on the market, there's a noticeable gap in the availability of engaging, well-scaled difficulty exercises and community interaction resources. This app aims to bridge that gap and provide a comprehensive solution to auditory training needs.

SYSTEM DESIGN



VERIFICATION

As we worked on the application's development, each team member took responsibility for a particular feature that needed enhancement. In our meetings, proposed changes were demonstrated, manually tested, and then critically examined by fellow team members. After obtaining the necessary approvals, we consolidated all the updated code into the "development" branch of the GitHub repository, thereby making the enhanced program available for users.

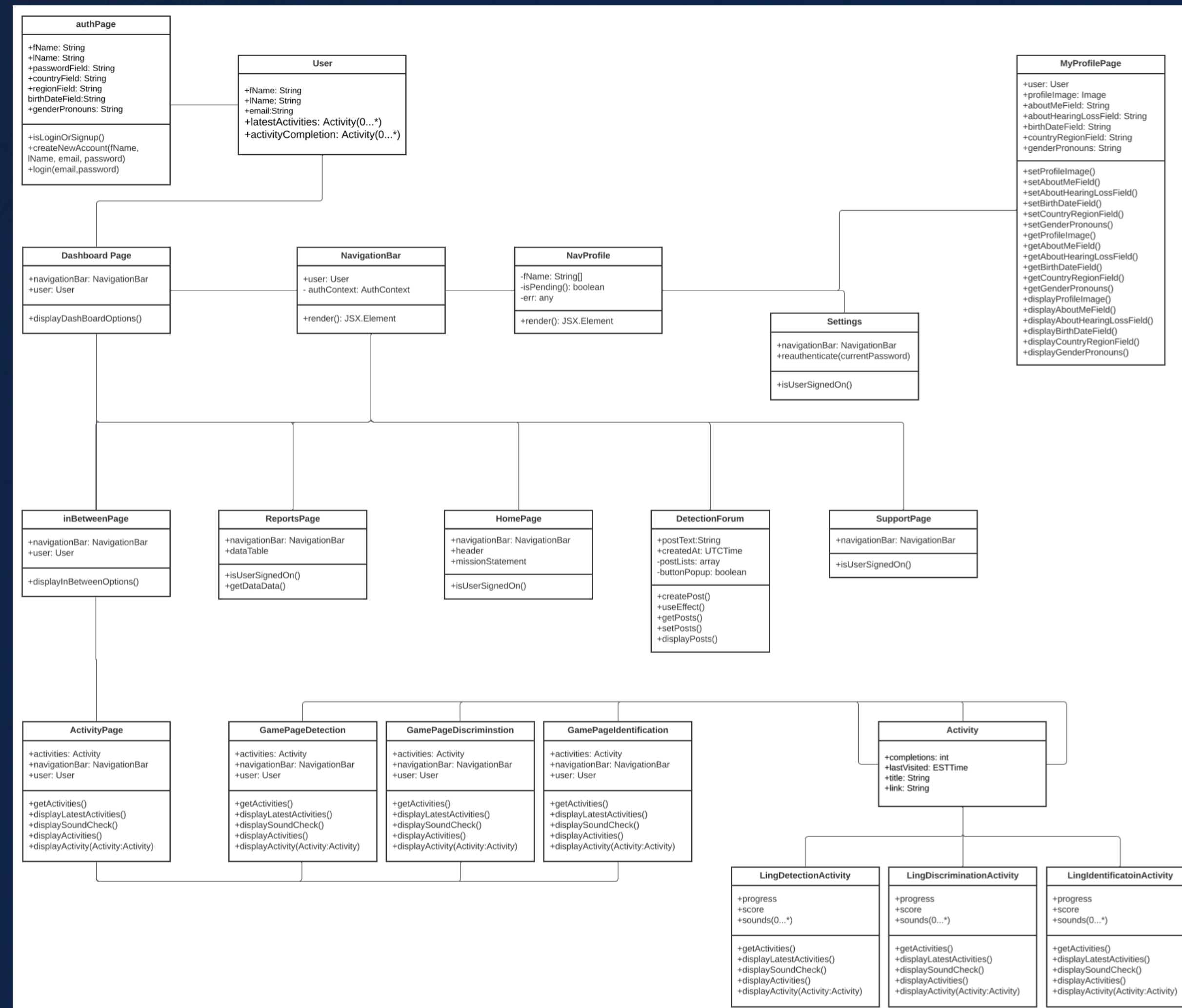
CURRENT SYSTEM

This is a continuation of the project. The team continued building from the previous semester's progress on the application. Some aspects that were wished to be improved on included:

- Settings: Dark mode to be applied to all pages and invert picture colors
- Forums: Added functionality, especially in the threads area on the right
- Mobile UI: Screen adjustments in different sizes and access points

The goal of this app is to provide entertaining new ways to improve users' hearing abilities by providing interactive games.

OBJECT DESIGN



SUMMARY

The primary aim for this semester was to enhance and broaden the horizons of the app's future. This involved meticulous debugging and documentation of features developed in past semesters. Overall, the work undertaken this semester has effectively solidified the app's foundations. Further improvements can be made to the website's responsiveness by designing mobile-friendly features, thereby extending user accessibility to the auditory programs.

REQUIREMENTS

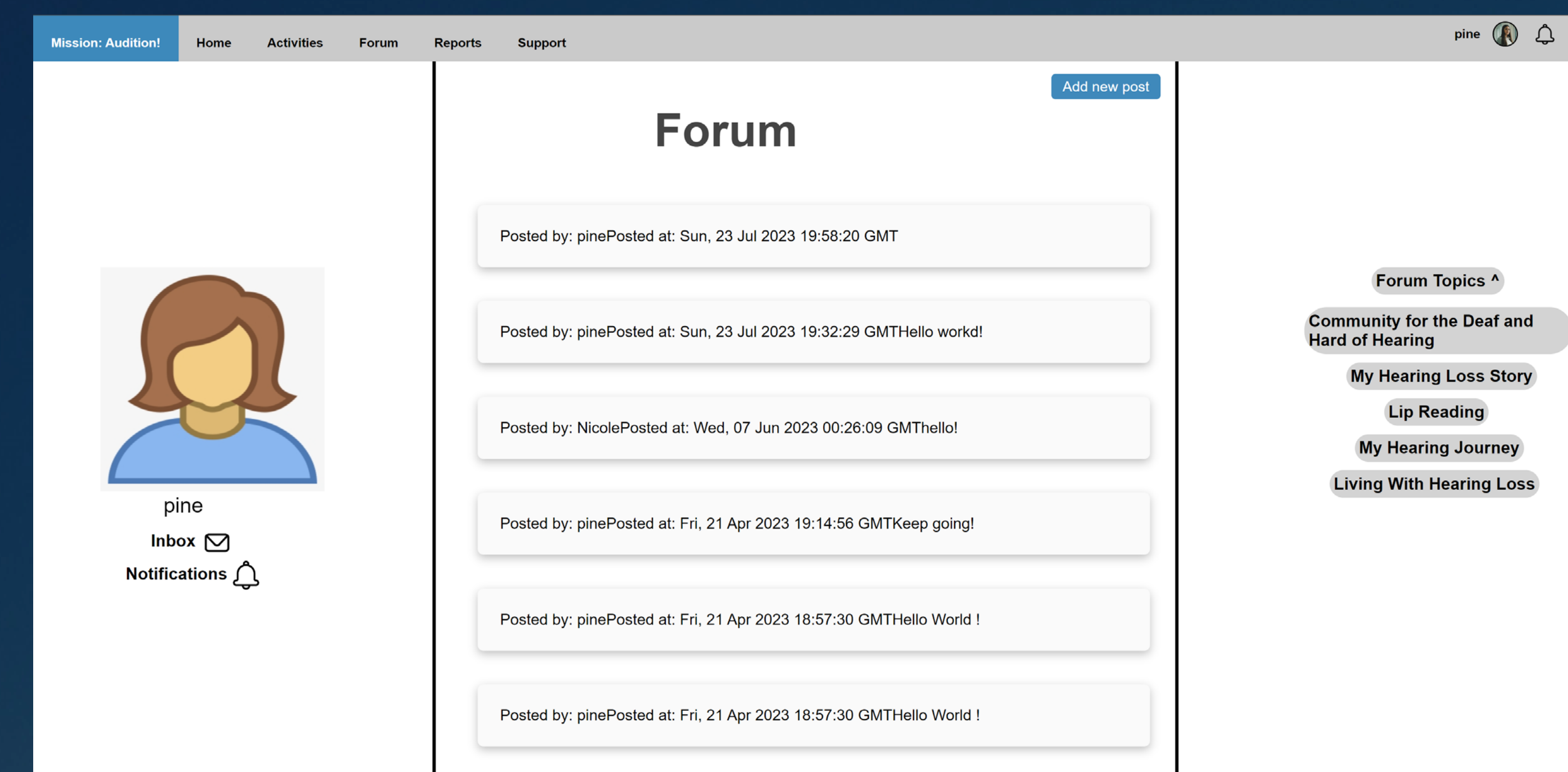
The following are required to run the program:

- A computer with the following software:
- **Node JS** which is installed by the Node Package Manager
- **GitHub** desktop or access to GitHub to download the repository containing the project
- An IDE of the user's preference to be able to run the program itself. (Recommended: **VSCode**)
- The **Google Firebase** key in order to connect the database which stores the user's information when they create an account and activity records.

IMPLEMENTATION



REFERENCES



ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by XXXXX (name of the project sponsor: federal, state or local government, or corporate partners, where applicable). We/I thank XXXX for his/her/their assistance and mentorship that I/we received throughout the senior design project.