



Florida International University

Spring 2024 Senior Design Project

Stress & Anxiety Management App

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PROBLEM	CURRENT SYSTEM	REQUIREMENTS
The project aims to address the challenges of managing stress and anxiety through a digital platform. Originally developed as an Android app, it faced significant technical debt, including unstable legacy code that required extensive revisions to meet current standards. The primary challenge was updating the app’s outdated API level, a necessary step for Google Play compliance, which risked destabilizing the entire application.	The existing system is a legacy Android application. It is full of spaghetti code making maintenance and updates a complex and error-prone process. The application features include progress tracking, a calendar, breathing exercises, meditation, and more. However, its outdated API level and unstable codebase have led to significant operational challenges.	The requirements for the revised platform include maintaining the core functionality of the original app while transitioning from a mobile application to a web-based platform. The new system must be user-friendly, scalable, and easily maintainable. It should support stress and anxiety management features like progress tracking, scheduled activities, interactive exercises, and real-time data synchronization using Firebase.
SYSTEM DESIGN	OBJECT DESIGN	IMPLEMENTATION
The redesigned system is a web-based application using a responsive design to ensure accessibility across various devices. It leverages HTML, CSS, and JavaScript to create a seamless user experience. The architecture is designed for scalability and maintainability, integrating Firebase for backend services, including database management and authentication.	The object design focuses on modular components that encapsulate specific functionalities of the system. Key objects include User Profile, Exercise Module, and more. Each object interacts through clearly defined interfaces, promoting code reusability and reducing dependencies.	In addition to small development accomplishments, as the team lead, my implementation efforts were primarily focused on project management, interfacing with the Project Owner to define sprint goals and deliverables. I coordinated the team's efforts in developing the web application, ensuring alignment with the project requirements and overseeing the integration of individual components into the main system.
VERIFICATION	SUMMARY	REFERENCES
The verification process involved regular code reviews, unit testing of individual components, and integration testing of the entire system. User acceptance testing was conducted to ensure the system met the functional and usability requirements. Feedback loops were established with the Project Owner to ensure continuous improvement.	Transitioning from a problematic Android app to a robust web-based system has significantly enhanced the manageability and functionality of the stress and anxiety management platform. The new system not only meets the initial requirements but also provides a scalable foundation for future enhancements and features.	Cascading Style Sheets (w3.org) HTML Standard (whatwg.org) JavaScript MDN (mozilla.org) Firebase Documentation (google.com)