PDE 2101
ENGINEERING SOFTWARE DEVELOPMENT

IFIT STUDIO

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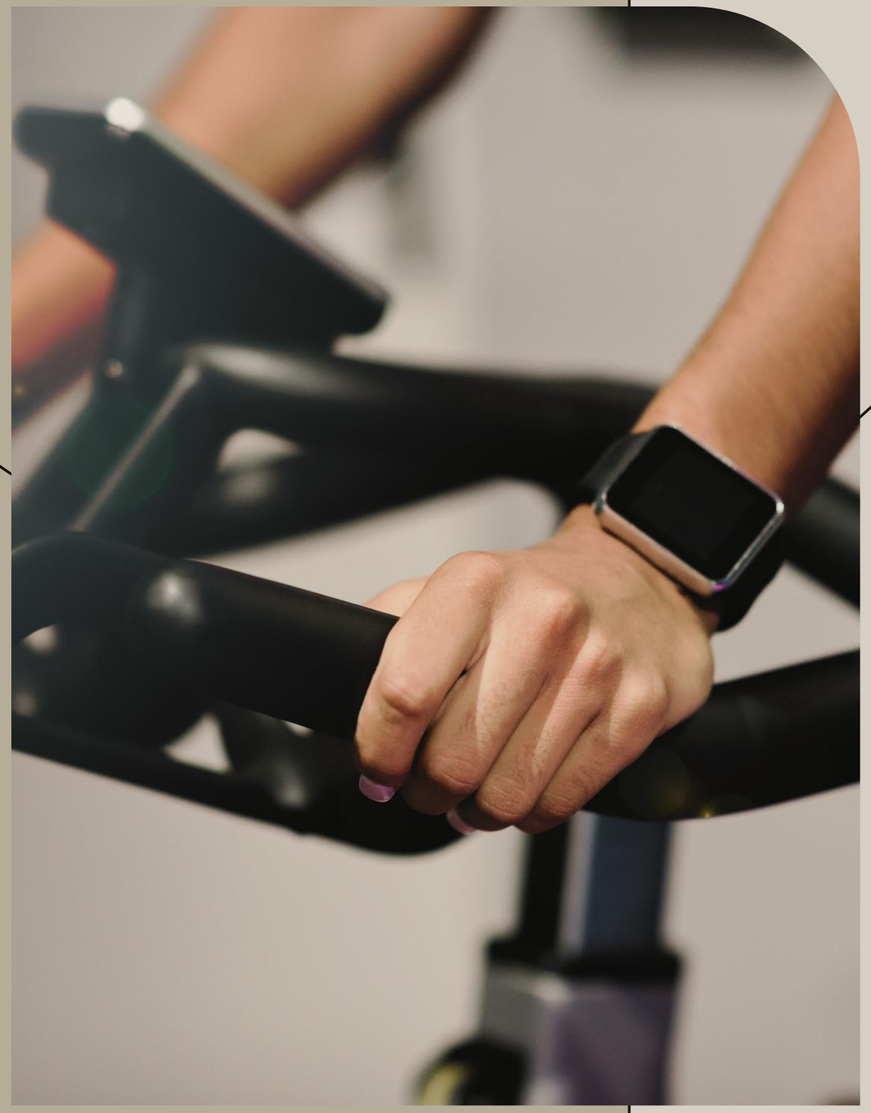
OVERVIEW



ABSTRACT

Our project introduces an innovative IoT-based fitness management system comprising a smartwatch and a companion mobile application.

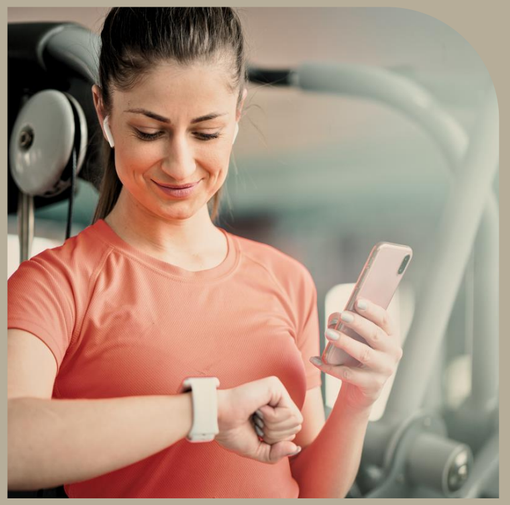
The system seamlessly integrates these components to enhance the fitness tracking experience and optimize gym operations.

PROBLEM DEFINITION

In the realm of fitness management, a key challenge is seamlessly integrating equipment availability tracking and workout guidance.

Based on research from Healthline and IEEE Xplore, we can effectively address these challenges by developing a comprehensive IoT-based fitness management system that displays present and upcoming workouts on a smartwatch.

This system aims to streamline gym operations, optimise equipment usage, and enhance the overall fitness experience for users.



BENEFITS

- Exercise Tracking: Tracks exercise with minimal data for efficient monitoring and progress tracking.

- New workout addition Feature: No current products have this option, & it is essential since exercises are inexhaustive.

- Personalized Workout Guidance: The smartwatch displays present and upcoming exercises, providing personalized guidance tailored to users' fitness goals, keeping them motivated and on track.

- Improved Community Engagement: The mobile app's group chat fosters a sense of community, enabling users to share tips, motivation, and fitness-related discussions, promoting accountability.

REQUIREMENTS SPECIFICATION

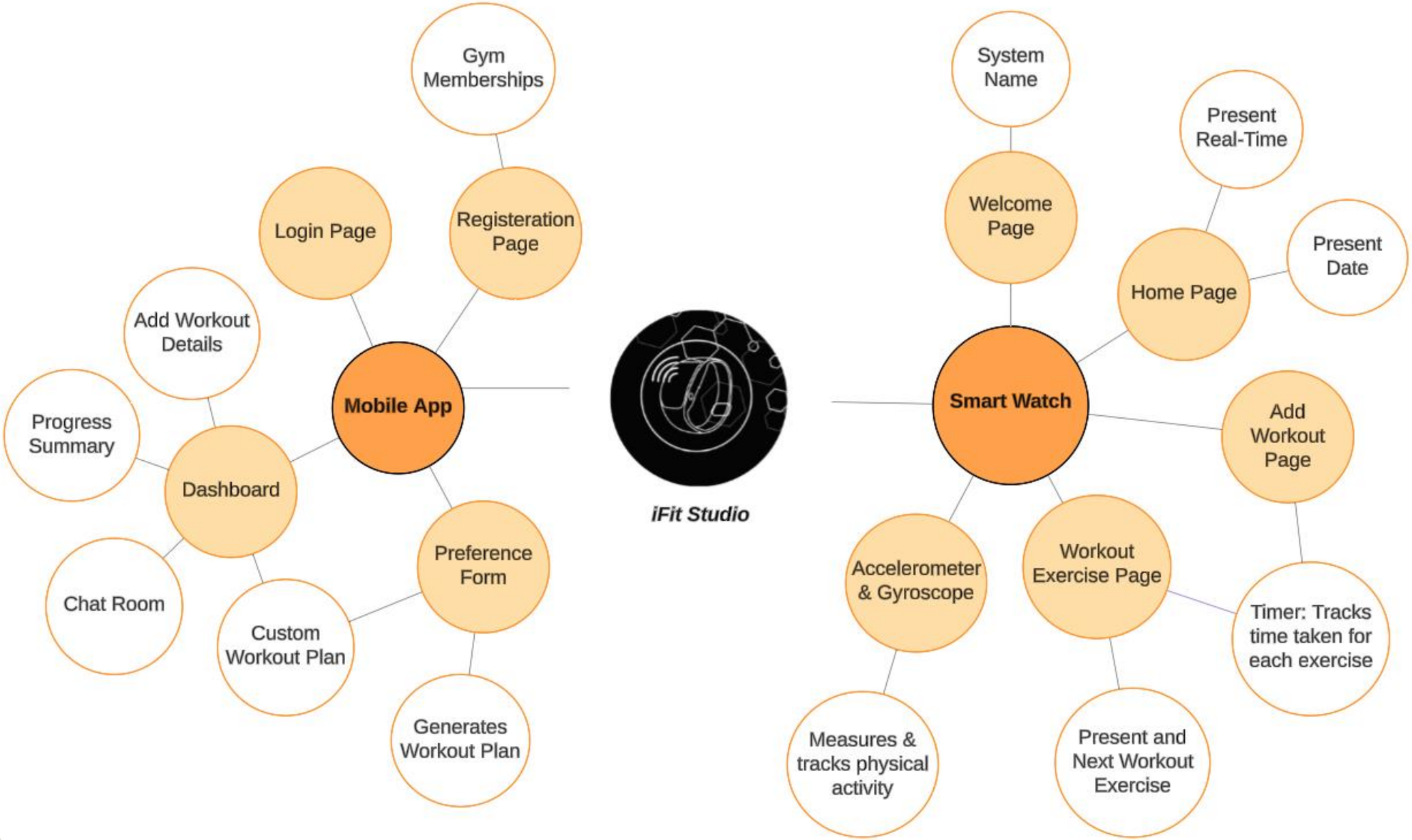
FUNCTIONAL REQUIREMENTS:

- Workout tracking on the smartwatch
- Plan Generation
- Present and following scheduled exercises displayed based on the user's workout plan
- User authentication on the mobile application
- Group chat feature for community engagement

NON-FUNCTIONAL REQUIREMENTS:

- Reliability and accurate data tracking
- User-friendly interfaces on smartwatch and mobile app
- Low latency in displaying real-time data and notifications
- Robust user authentication mechanisms
- Safe keeping of sensitive data
- Scalable to accommodate future updates and expanding user base

FEATURES MINDMAP



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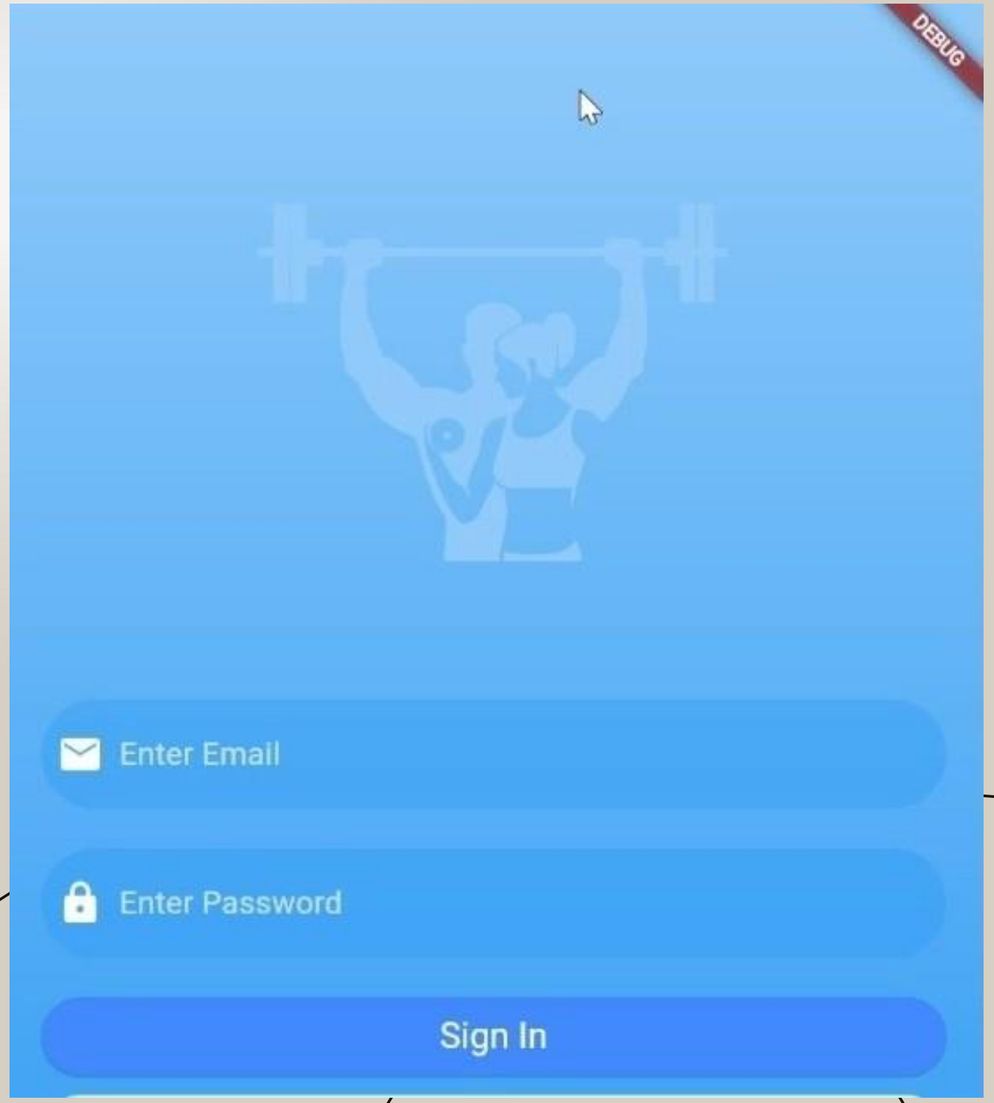

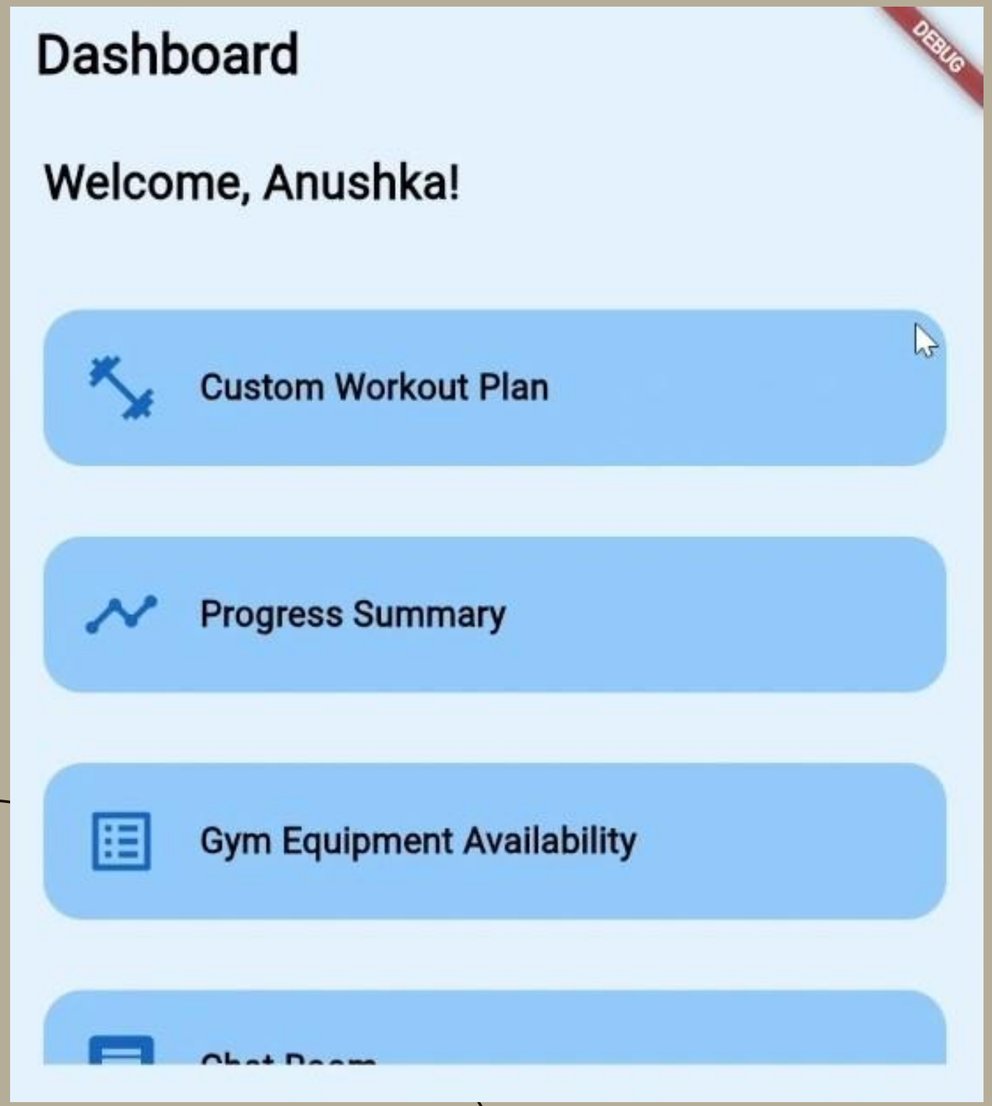

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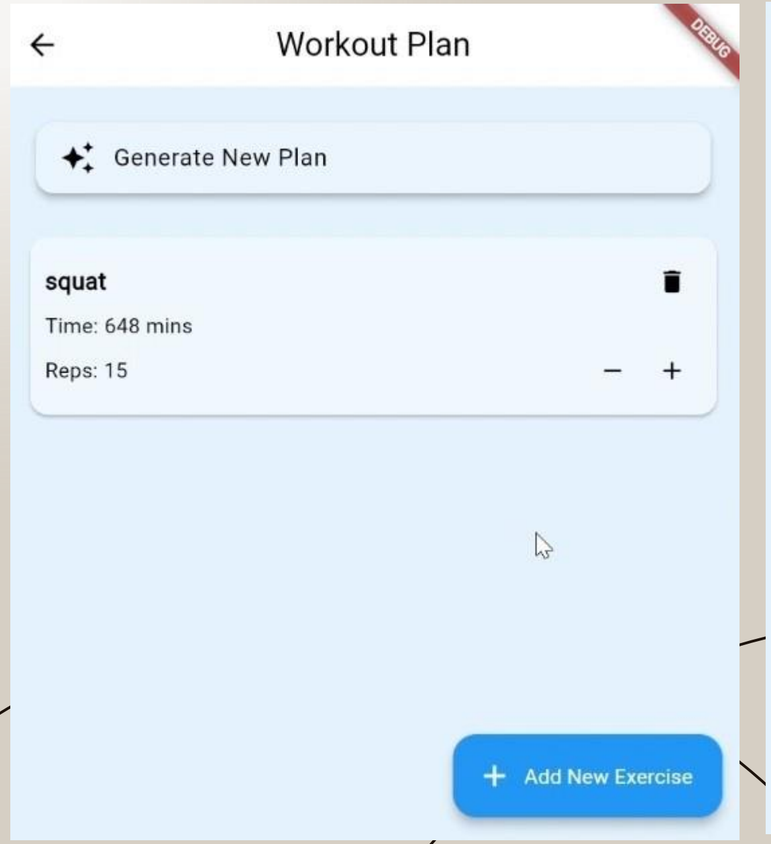

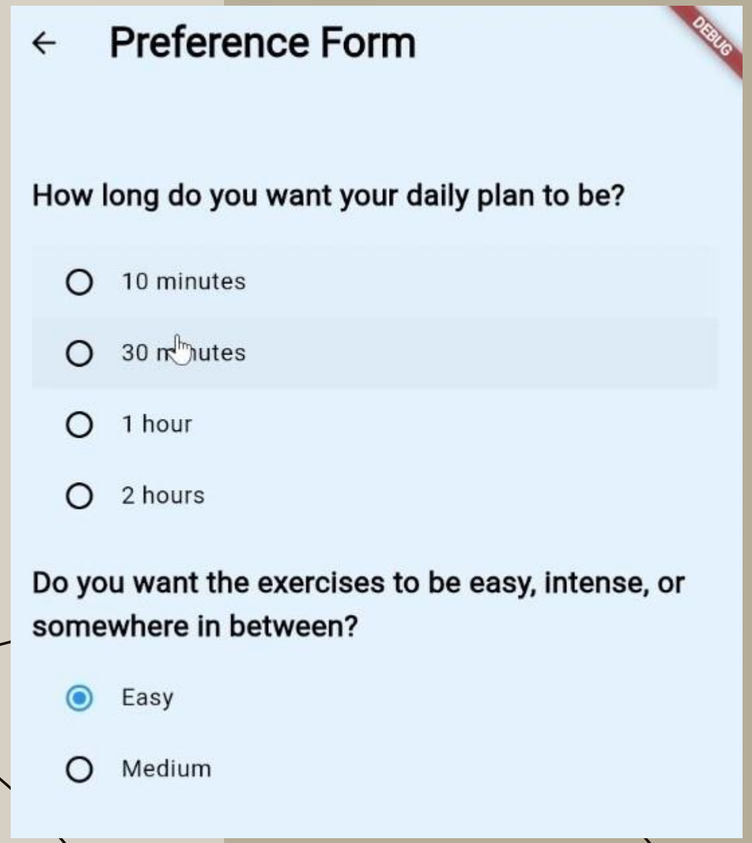

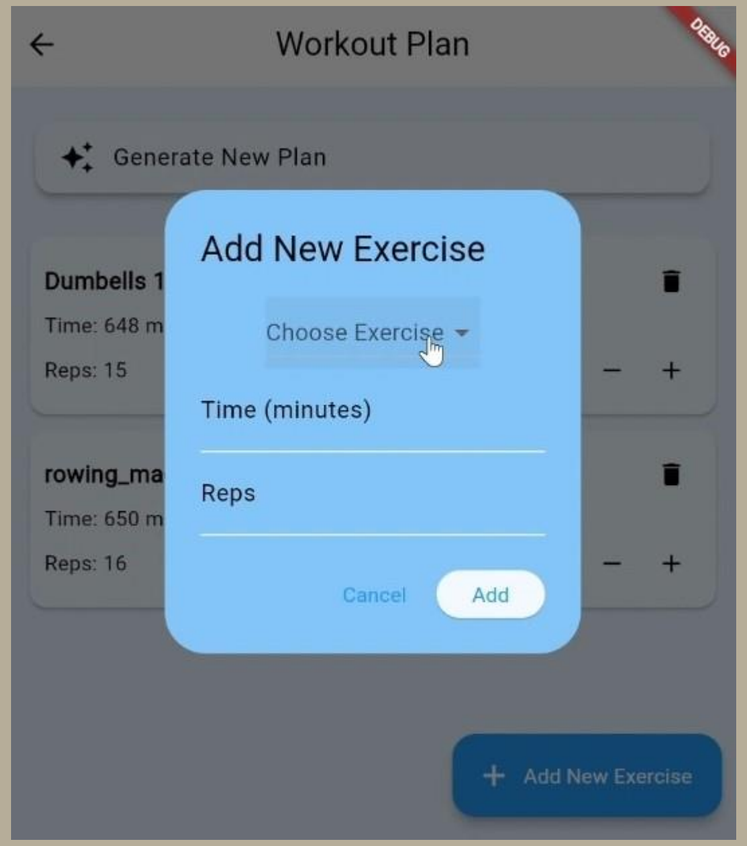

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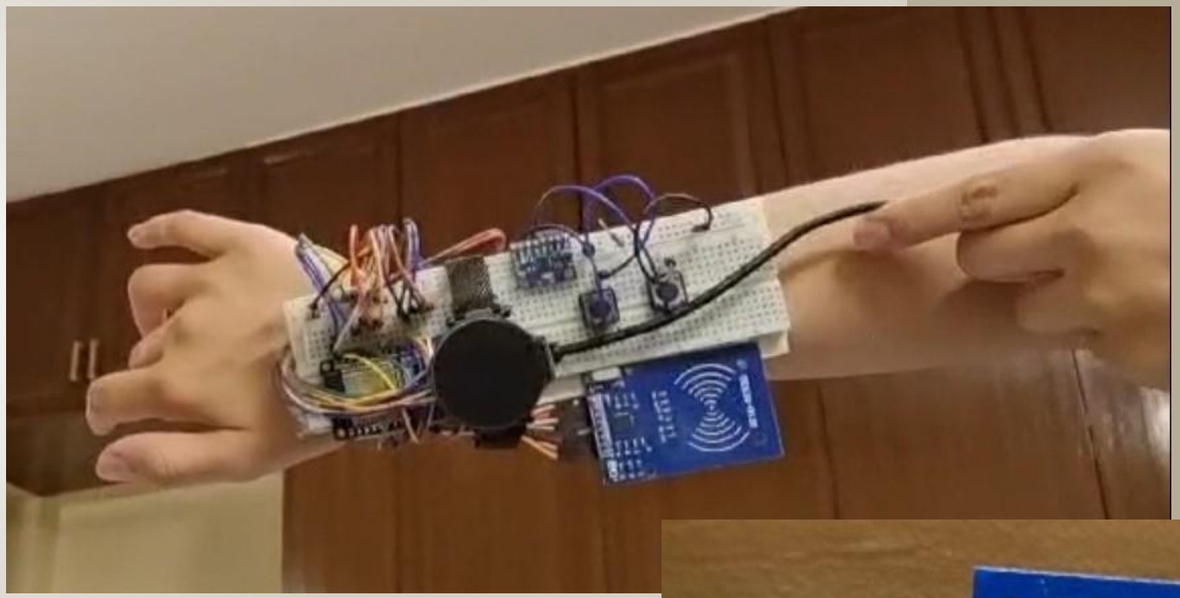

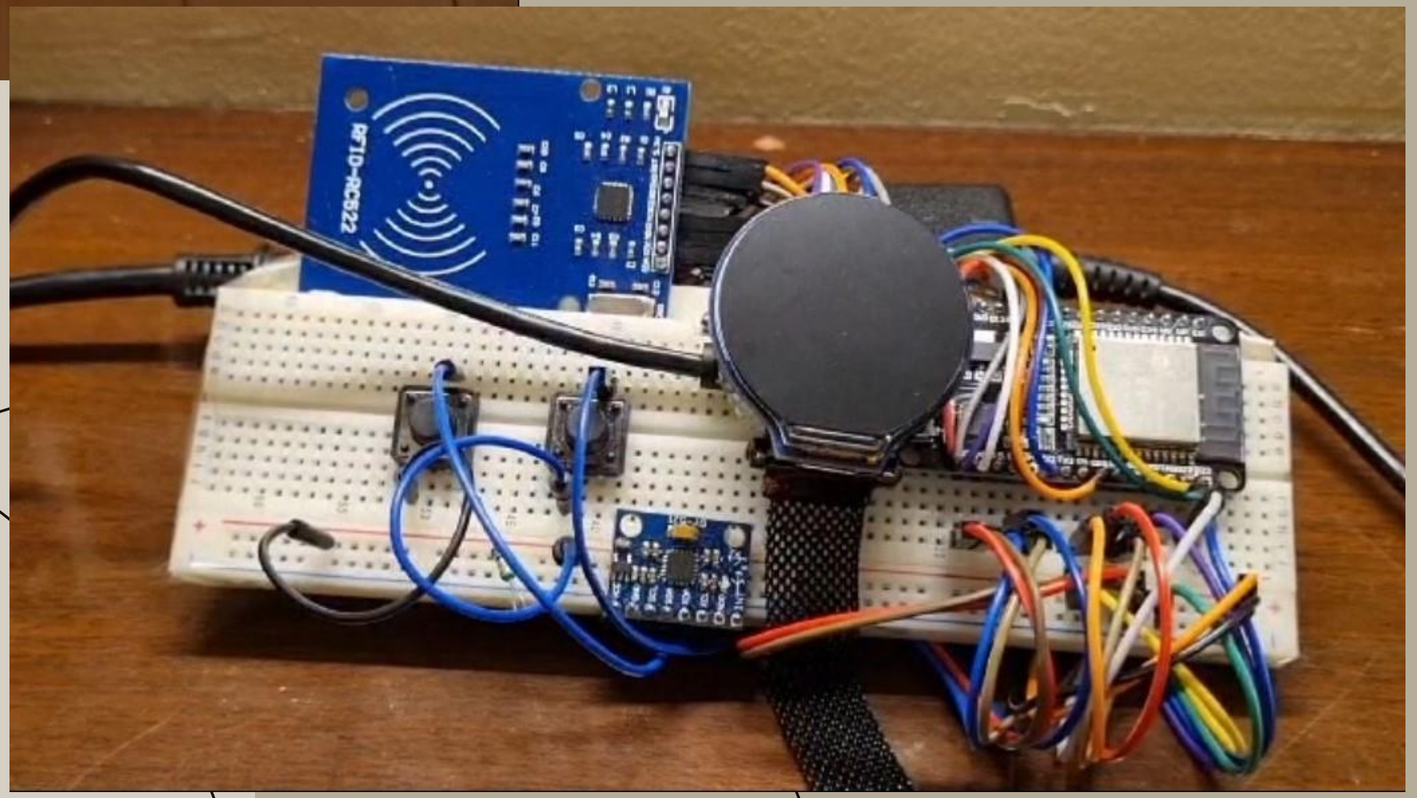

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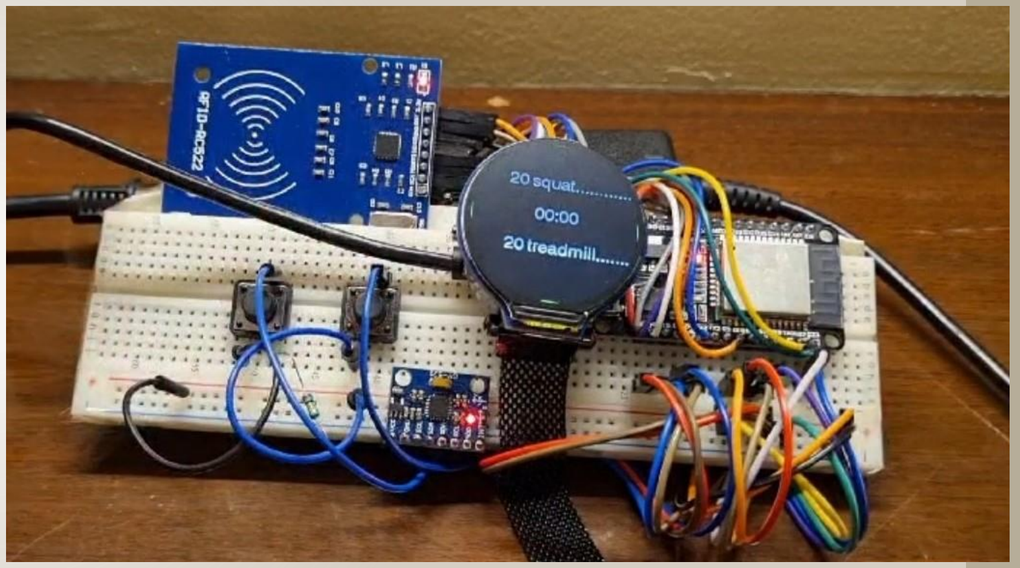

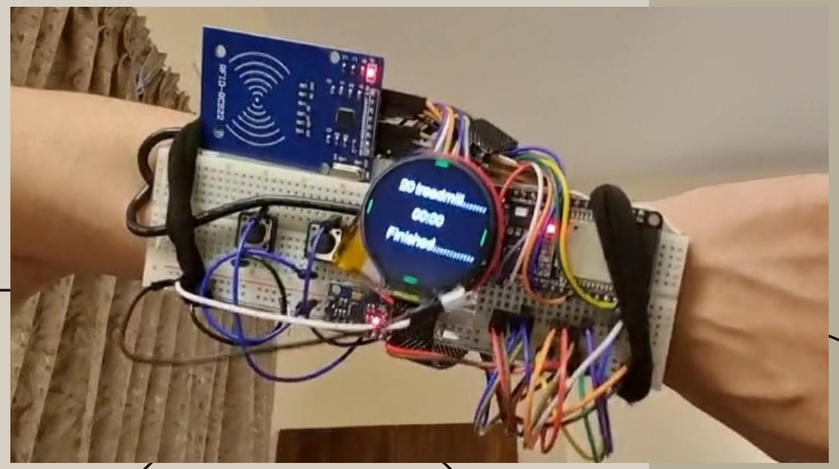

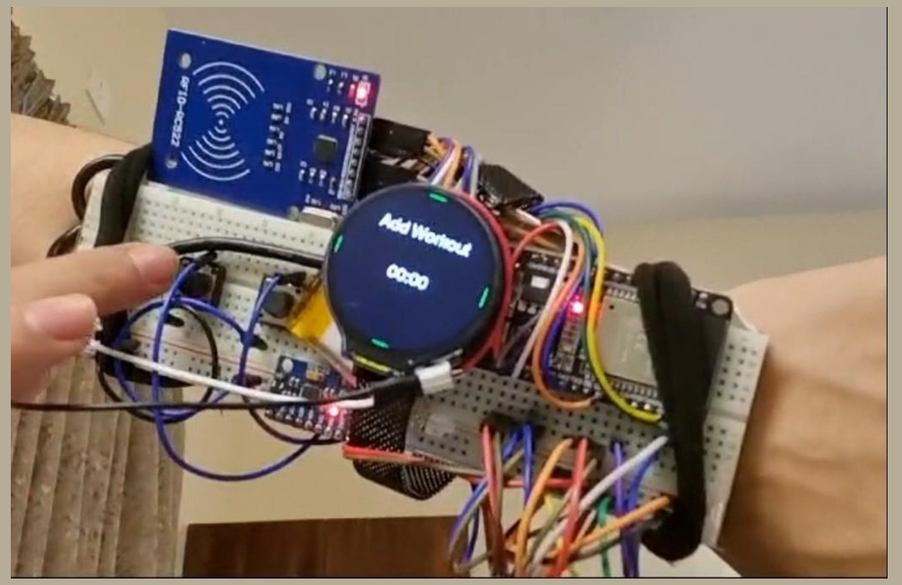

DEMO VIDEO

https://drive.google.com/file/d/12qZoK2mq690vt8tCjXizODcbNkykJB8g/view?usp=drive_link

FUTURE PROSPECTS

This project opens up opportunities for further enhancements and refinements. We can continuously improve the system's functionality and user experience by leveraging data analytics and user feedback. Additionally, exploring partnerships and expanding the system's capabilities to support diverse workout routines and fitness goals will contribute to its long-term success.

5 main future prospects we would like to highlight are:

- Advancements in Hardware
- Influencer Workout led content
- UI/UX
- MedPALM Integration
- Compact PCB

THANK YOU

The development and implementation of the iFit project have resulted in a comprehensive IoT-based fitness user management system that integrates a smartwatch and a companion mobile application.