



# Health Monitoring Application



## A PROJECT REPORT

*Submitted by*

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*in partial fulfillment of requirements for the award of the course*

**AGB1211 – DESIGN THINKING**

*in*

**ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY**

(An Autonomous Institution, affiliated to Anna University Chennai and Approved by  
AICTE, New Delhi)

**SAMAYAPURAM – 621 112 DECEMBER, 2024**

**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)**

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**BONAFIDE CERTIFICATE**

Certified that this project report on “ **HEALTH MONITORING APPLICATION** ” is the bonafide work of **BALARUBAN R (2303811724321019)** , **BHAVAN SABARI S (2303811724321020)** , **DARRUNSITASH M (2303811724321021)** , **DHINESH M (2303811724321027)** who carried out the project work during the academic year 2024 - 2025 under my supervision.

**Signature**

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Submitted for the viva-voce examination held on 5.12.24

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

## DECLARATION

I declare that the project report on “**HEALTH MONITORING APPLICATION**” is the result of original work done by us and best of our knowledge, similar work has not been submitted to “**ANNA UNIVERSITY CHENNAI**” for the requirement of Degree of **BACHELOR OF TECHNOLOGY**. This project report is submitted on the partial fulfillment of the requirement of the award of the **AGB1211 – DESIGN THINKING**.

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**DARRUNSITASH M**

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**DHINESH M**

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**Place:** Samayapuram

**Date:** 5/12/2024

## ACKNOWLEDGEMENT

It is with great pride that I express our gratitude and indebtedness to our institution, “**K. Ramakrishnan College of Technology (Autonomous)**”, for providing us with the opportunity to do this project.

I extend our sincere acknowledgement and appreciation to the esteemed and honourable Chairman, **Dr. K. RAMAKRISHNAN, B.E.**, for having provided the facilities during the course of our study in college.

I would like to express our sincere thanks to our beloved Executive Director, **Dr. S. KUPPUSAMY, MBA, Ph.D.**, for forwarding our project and offering an adequate duration to complete it.

I would like to thank **Dr. N. VASUDEVAN, M.TECH., Ph.D.**, Principal, who gave the opportunity to frame the project to full satisfaction.

I thank **Dr.T.AVUDAIAPPAN, M.E.,Ph.D.**, Head of the Department of ARTIFICIAL INTELLIGENCE AND DATA SCIENCE, for providing her encouragement in pursuing this project.

I wish to convey our profound and heartfelt gratitude to our esteemed project guide **Mrs.S.GEETHA M.E.**, Department of ARTIFICIAL INTELLIGENCE AND DATA SCIENCE, for her incalculable suggestions, creativity, assistance and patience, which motivated us to carry out this project.

I render our sincere thanks to the Course Coordinator and other staff members for providing valuable information during the course.

I wish to express our special thanks to the officials and Lab Technicians of our departments who rendered their help during the period of the work progress.

## **VISION OF THE INSTITUTION**

To serve the society by offering top-notch technical education on par with global standards.

## **MISSION OF THE INSTITUTION**

- Be a centre of excellence for technical education in emerging technologies by exceeding the needs of industry and society.
- Be an institute with world class research facilities.
- Be an institute nurturing talent and enhancing competency of students to transform them as all- round personalities respecting moral and ethical values.

## **VISION AND MISSION OF THE DEPARTMENT**

To excel in education, innovation and research in Artificial Intelligence and Data Science to fulfil industrial demands and societal expectations.

Mission 1: To educate future engineers with solid fundamentals, continually improving teaching methods using modern tools.

Mission 2: To collaborate with industry and offer top-notch facilities in a conducive learning environment.

Mission 3: To foster skilled engineers and ethical innovation in AI and Data Science for global recognition and impactful research.

Mission 4: To tackle the societal challenge of producing capable professionals by instilling employability skills and human values.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOS)**

**PEO 1:** Compete on a global scale for a professional career in Artificial Intelligence and Data Science.

**PEO 2:** Provide industry-specific solutions for the society with effective communication and ethics.

**PEO 3:** Hone their professional skills through research and lifelong learning initiatives.

## **PROGRAM OUTCOMES**

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

- **PSO 1:** Capable of working on data-related methodologies and providing industry focussed solutions.
- **PSO2:** Capable of analysing and providing a solution to a given real-world problem by designing an effective program.

## **ABSTRACT**

This health monitoring application aims to provide a seamless and user-friendly platform for individuals to track, manage, and enhance their health and wellness. The application integrates features such as secure user authentication, personalized dashboards, real-time progress monitoring, and reminders for medication or activities. It also supports wearable device integration for accurate health data synchronization and customization options to suit individual needs. Designed using advanced tools like Figma, Adalo, and Bubble.io, the application emphasizes accessibility and usability. By addressing gaps in existing solutions, this project strives to offer a comprehensive, innovative, and engaging approach to health management, promoting a healthier and more informed lifestyle.



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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

In today's fast-paced world, managing personal health has become increasingly challenging. The health monitoring application addresses this issue by providing a reliable platform to track health metrics, set wellness goals, and manage daily health-related activities. Equipped with features like secure authentication, personalized dashboards, real-time progress monitoring, and reminders, it offers a holistic approach to health management. The app integrates wearable devices to ensure accurate data collection and synchronization. Designed using advanced tools like Figma, Adalo, and Bubble.io, it emphasizes accessibility, ease of use, and customization. This innovative solution empowers users to monitor their health effectively and adopt healthier lifestyles.

### **1.2 PROBLEM STATEMENT**

Existing health monitoring applications face challenges such as a lack of motivational features, inadequate personalization, and poor accessibility. They fail to engage users consistently, provide tailored health insights, or cater to diverse needs. Additionally, complex interfaces and difficulties in syncing with healthcare systems further limit their effectiveness, highlighting the need for a more user-friendly and inclusive solution.

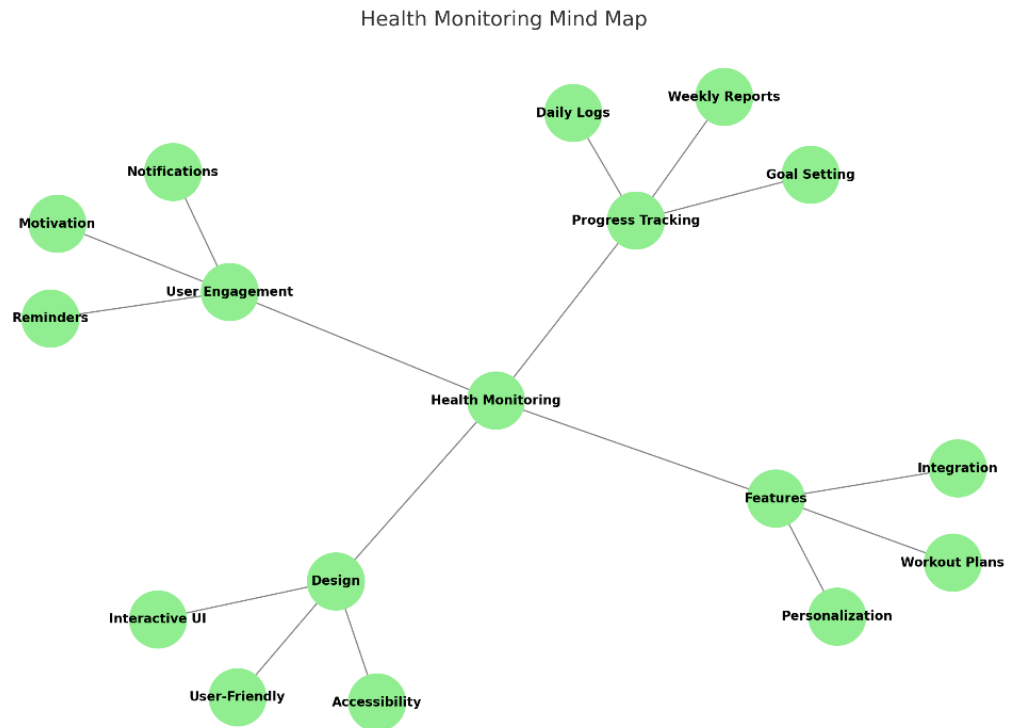
### **1.3 OBJECTIVE**

The objective of this project is to develop a user-friendly and accessible health monitoring application that addresses key challenges such as lack of motivation, personalization, and integration. The application aims to engage users through reminders, progress tracking, and tailored insights while ensuring inclusivity for diverse user groups. By leveraging advanced tools and technology, the goal is to create a seamless platform for effective health management and improved user satisfaction.

# CHAPTER 2

## PROJECT METHODOLOGY

### 2.1 BLOCK DIAGRAM



## **CHAPTER 3**

### **KEY PHASES OF DESIGN THINKING**

#### **3.1 EMPATHIZE**

The first step in designing the health monitoring application is understanding the needs, challenges, and expectations of the target users. Through research, surveys, and interviews, it becomes evident that users often struggle with maintaining consistent health routines due to a lack of motivation, personalized insights, and accessible features. Elderly users and those unfamiliar with technology face additional barriers with complex interfaces. By empathizing with these pain points, the application is designed to provide a user-friendly, personalized, and engaging experience that promotes better health management for diverse user groups.

#### **3.2 DEFINE**

In this phase, we define the core problem that the health monitoring application aims to solve. Users need a solution that not only tracks their health metrics but also motivates them to maintain healthy habits through personalized insights and reminders.

Additionally, the application must be accessible and easy to use, especially for individuals who may not be tech-savvy. There is also a need for seamless integration with wearable devices and healthcare systems to ensure accurate, real-time data. By addressing these issues, the application aims to provide an inclusive and engaging platform that supports

### **3.3 IDEATE**

During the ideation phase, multiple potential solutions are brainstormed to address the challenges identified in the previous stages. Ideas are generated for features like personalized health insights, gamification to motivate users, and easy-to-use interfaces for all age groups. Concepts such as integrating wearable devices for real-time tracking, providing customized reminders, and creating interactive dashboards for progress monitoring are explored. Collaboration and feedback from potential users help refine these ideas into practical, innovative features that align with user needs and project goals.

### **3.4 PROTOTYPE**

In this phase, selected ideas from the ideation stage are turned into functional prototypes using tools like Figma, Adalo, and Bubble.io. The prototypes will include key features such as user authentication, personalized dashboards, progress tracking, reminders, and wearable integration. These prototypes are designed to be simple yet interactive, allowing users to experience the basic flow of the application. The aim is to visualize the app's interface and functionalities, offering a tangible representation that can be tested and iterated upon.

### **3.5 TEST**

The testing phase involves gathering feedback from actual users to evaluate the functionality, usability, and overall user experience of the prototype. Users test features like personalized insights, notifications, progress tracking, and integration with wearable devices. Based on user feedback, adjustments are made to improve the app's accessibility, ease of use, and engagement. This phase may include multiple rounds of testing, refining the prototype each time to ensure that the application meets user expectations and provides a seamless, user-friendly experience.

## **CHAPTER 4**

### **MODULE DESCRIPTION**

#### **4.1 USER AUTHENTICATION AND DASHBOARD MODULE**

This module provides secure access to the application with login, signup, and password recovery features. It uses encryption and authentication protocols to protect user credentials. The dashboard offers a centralized, user-friendly view of key health metrics, activity summaries, and updates. Designed to be visually appealing, it organizes information effectively and supports session management for a smooth experience. Real-time syncing ensures users have the latest data available.

#### **4.2 PROGRESS MONITORING MODULE**

The progress monitoring module tracks daily, weekly, and monthly health trends, providing visual insights like graphs and charts. Users can set health goals and track progress against them, with achievements and milestones highlighted for motivation. It integrates with health devices for real-time data and stores historical data for long-term trend analysis.

#### **4.3 NOTIFICATION AND REMAINDER MODULE**

The progress monitoring module tracks daily, weekly, and monthly health trends, offering visual insights like graphs and charts to help users analyze their improvement. Users can set health goals, and the module compares progress against them, highlighting achievements and milestones for motivation.

## **CHAPTER 5**

### **CONCLUSION**

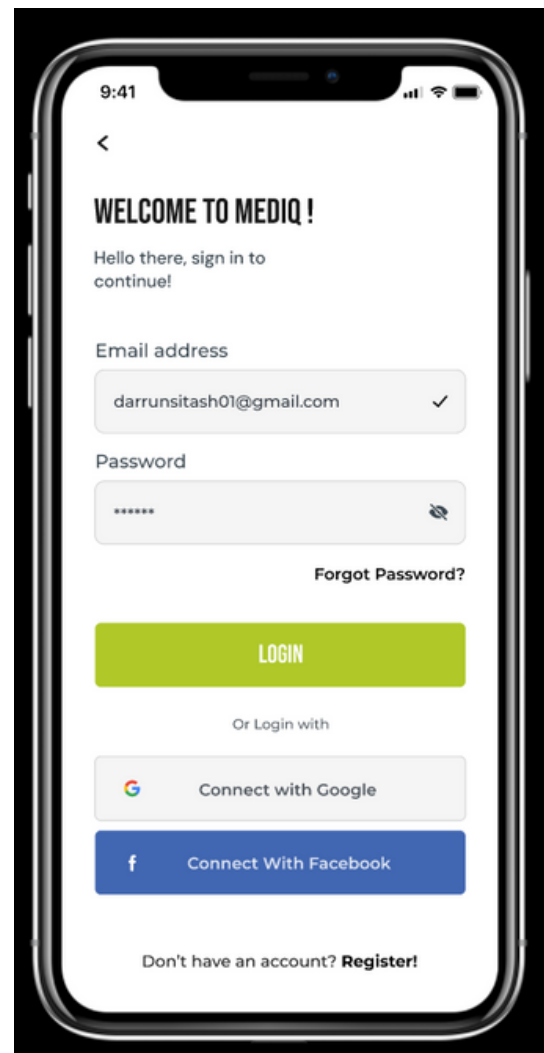
The health monitoring application is designed to empower users by providing a comprehensive and personalized platform for tracking and improving their well-being. Through secure authentication, intuitive design, and modules like progress monitoring, reminders, and integration with wearable devices, the application ensures an engaging and user-centric experience. Leveraging modern tools like Figma, Adalo, and Bubble.io, it focuses on creating an accessible and efficient solution. This project addresses key gaps in existing health monitoring systems while emphasizing innovation, usability, and long-

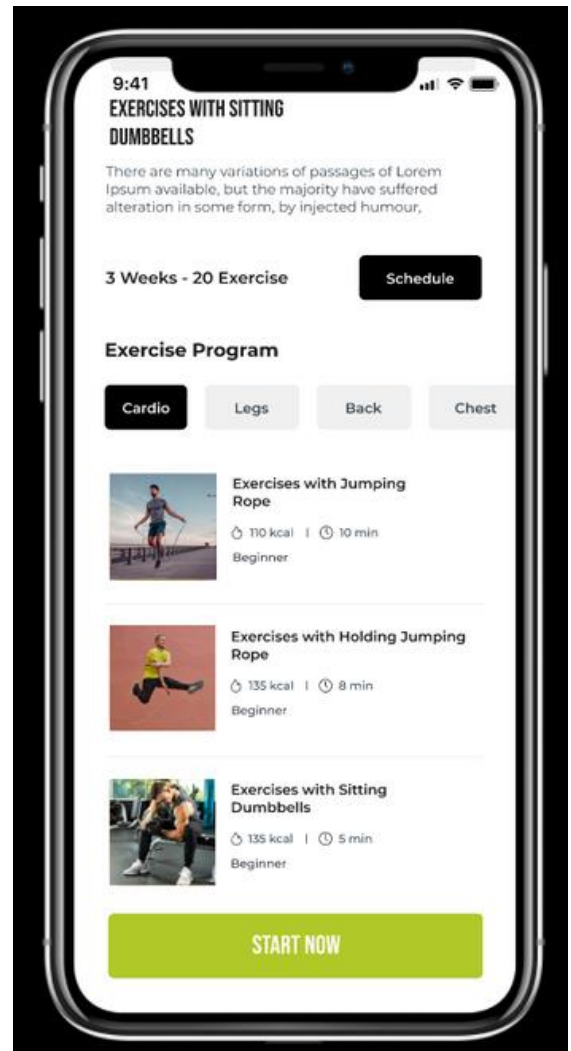
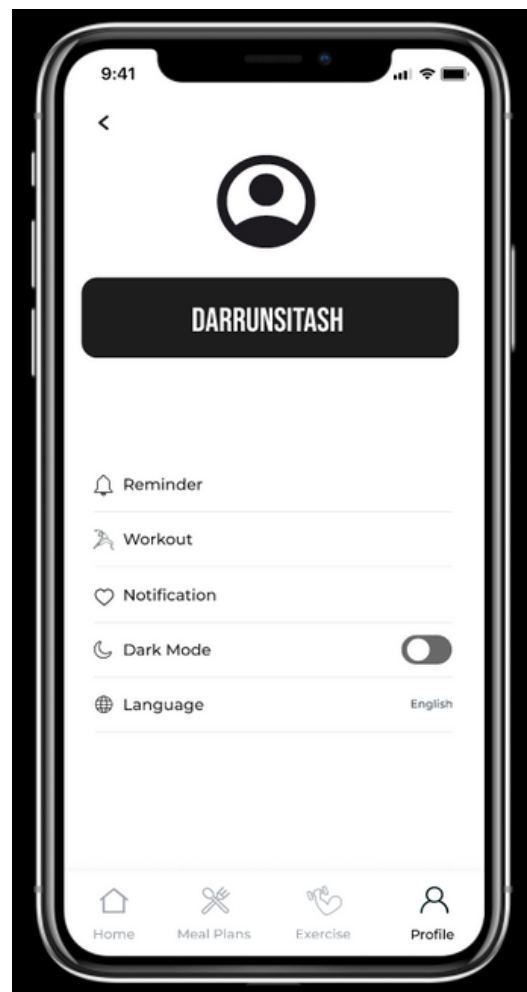


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DEV Community: Building Health Monitoring Apps with Laravel
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YouTube
- Figma Tutorial for Beginners – A detailed walkthrough that covers all the basics to get you started with Figma's design and prototyping features.  
YouTube
- Complete Figma Tutorial for Beginners (30-Minute Overview) – An efficient 30-minute tutorial that provides an overview of Figma's basic tools and interface.  
YouTube


## APPENDIX A – SCREENSHOTS





9:41

< EDIT PROFILE



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Weight

55 LBS KG

Height


170 FEET CM



Gender

♂ Male ▾

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 135 kcal |  5 min

Level Category Weight

Beginner Cardio Lose

**EXERCISES WITH SITTING DUMBBELLS**

There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration in some form, by injected humour,

3 Weeks - 20 Exercise [Schedule](#)

**Exercise Program**

Cardio Legs Back Chest