ATTENDANCE MONITORING AND DISCIPLINARY ACTION IN OUR COLLEGE

A PROJECT REPORT

Submitted by

KEERTHANA M (23038117243054)

LAVANYA A (2303811724322060)

MAGISHA M (2303811724322062)

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)

SAMAYAPURAM – 621 112

BONAFIDE CERTIFICATE

Certified that this project report on **"ATTENDANCE MONITORING AND DISCIPLINARY ACTION IN OUR COLLEGE"** is the bonafide work of **KEERTHANA M(2303811724322054), LAVANYA A (2303811724322060) , MAGISHA M (23038117243322062)** who carried out this project during the academic year 2024-2025 under my supervision.

Signature	**Signature**
Dr. T. AVUDAIAPPAN M.E.,Ph.D.,	Mrs. S. GEETHA M.E
HEAD OF THE DEPARTMENT,	**SUPERVISOR,**
Department of Artificial Intelligence,	Department of Artificial Intelligence,
K. Ramakrishnan College of Technology,	K. Ramakrishnan College of Technology,
Samayapuram, Trichy -621 112.	Samayapuram, Trichy -621 112.

Submitted for the viva-voce examination held on 5.12.24

INTERNAL EXAMINER **EXTERNAL EXAMINER**

DECLARATION

I declare that the project report on "**ATTENDANCE MONITORING AND DISCIPLINARY ACTION IN OUR COLLEGE**" 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.**

Signature

KEERTHANA M

LAVANYA A

MAGISHA M

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 acknowledgment 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 conductive 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 project focuses on developing a mobile application to manage student attendance and disciplinary actions in colleges. The app allows faculty to record attendance digitally, replacing traditional manual methods and ensuring accuracy and efficiency. It also tracks absenteeism and notifies students and parents automatically if attendance falls below the required threshold.

For disciplinary actions, the app maintains a record of student violations and ensures transparency in the process. By centralizing these functions in a single app, the system simplifies management, reduces paperwork, and promotes accountability among students. This digital approach fosters a disciplined and organized academic environment while saving time and resources.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Attendance monitoring and disciplinary management are essential in maintaining the academic integrity and overall discipline of educational institutions. Traditional methods of recording attendance, such as paper-based registers, are time-consuming, prone to errors, and lack transparency. Similarly, managing disciplinary actions manually often leads to inefficiencies and miscommunication.

With advancements in technology, mobile applications provide a streamlined solution to address these challenges. By digitizing attendance and disciplinary processes, an app-based system offers real-time data recording, automated notifications, and a centralized platform for managing student records. This approach not only enhances operational efficiency but also fosters accountability and transparency among students and faculty..

1.2 PROBLEM STATEMENT

Traditional attendance and disciplinary management methods have several drawbacks. Manual processes are slow, prone to human errors, and difficult to manage, especially for large student populations. Students and parents often lack timely updates on attendance status or disciplinary actions, leading to communication gaps. Additionally, paper-based systems increase administrative workload, risk data loss, and delay action on absenteeism or misconduct. These inefficiencies highlight the need for a digital solution to streamline these processes effectively**.**

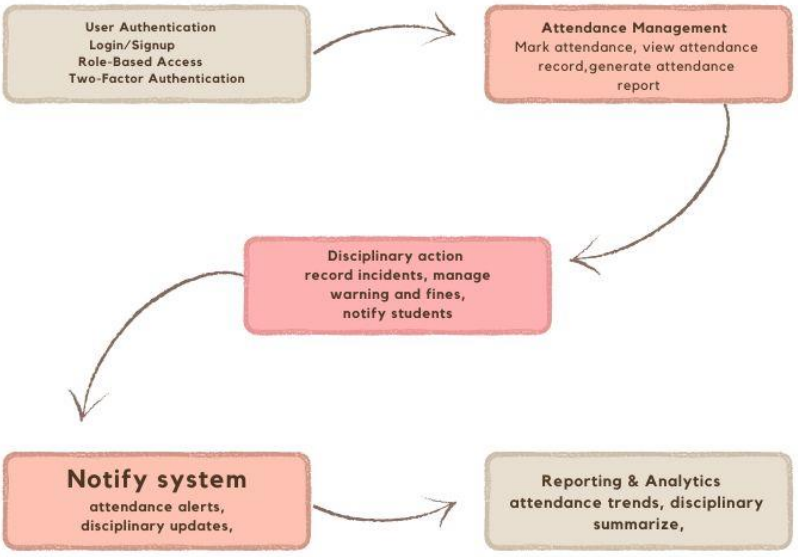
1.3 OBJECTIVE

The objective of this project is to develop a mobile application that simplifies attendance monitoring and disciplinary action management in colleges. The app aims to replace traditional manual methods with a digital system to ensure accuracy, reduce errors, and save time. It seeks to improve communication by providing timely updates to students and parents about attendance and disciplinary records. Additionally, the app will streamline disciplinary processes, reduce administrative workload, and promote accountability by maintaining transparent and easily accessible records. Ultimately, the system aims to create a more efficient and organized academic environment.

CHAPTER 2

PROJECT METHODOLOGY

2.1 BLOCK DIAGRAM



v

CHAPTER 3

KEY PHASES OF DESIGN THINKING

3.1 Empathize

- Identify the challenges faced by students, faculty, and administrators in managing attendance and disciplinary actions.
- Conduct interviews or surveys to gather insights into their experiences and expectations.
- Example: Faculty may need a quick attendance marking feature, while students want instant access to their attendance status.

3.2. Define

- **Problem Statement**: Based on user feedback, define the core issue, e.g., “Students and faculty need a simple way to track attendance and handle disciplinary actions in real time.”
- **Create Personas**: Develop profiles of typical users (students, teachers, etc.) to help focus the design on their needs.

3.3 Ideate

Generate ideas to address the defined problems.

Explore features like automated attendance marking (e.g., QR codes) and real-time notifications for disciplinary actions.

Use Proto.io to sketch initial wireframes and plan interactive flows.

3.4 Prototype

Use Proto.io to design a high-fidelity prototype of the app.

Develop key screens such as login/signup, attendance tracking, disciplinary action logs, and user dashboards.Focus on user-friendly navigation and role-specific access

3.5 Test

- Share the Proto.io prototype with users (students, faculty, and administrators) for feedback.
- Test usability, navigation, and the effectiveness of features like notifications and analytics.
- Use feedback to refine and improve the app before full development.

CHAPTER 4

MODULE DESCRIPTION

4.1 PROTO.IO

Proto.io is a powerful tool for creating interactive, no-code prototypes that allow teams to quickly visualize, test, and refine their ideas. It helps designers and developers communicate their concepts more effectively and iterate faster, leading to better final products.

Faster Iteration: Proto.io enables quick prototyping and testing, so teams can quickly iterate on their designs and make improvements.

Cost-Effective: By allowing users to create prototypes without the need for coding, Proto.io helps reduce the time and cost involved in the development process.

4.2 USER AUTHENTICATIONAN MODULE

The User Authentication module is designed for managing the secure access of students, faculty, and administrators to the Attendance Monitoring and Disciplinary Action System in a college setting.

• Login: Students, faculty, and administrators can log in using their username/email and password. A “Forgot Password” feature allows users to reset their password if they forget it.

•Signup: New users can create accounts with necessary details (email, username, password). Students, faculty, and admins have different levels of access based on their roles.

4.3 ATTENDANCE MANAGEMENT

Faculty: Mark attendance manually or via automated options (e.g., QR code scanning).

Generate attendance reports for classes.

Administrators: Monitor attendance trends across departments.Access aggregated attendance data and analytics.

4.4 DISCIPLINARY ACTION MODULE

Students: View records of disciplinary actions taken (e.g., warnings or fines).

Acknowledge actions through the app.

Faculty: Record and manage disciplinary incidents linked to students. Notify students and administrators of recorded actions.

Administrators: Oversee all disciplinary records.

Generate summary reports for decision-making.

4.5 NOTIFICATION AND ALERTS

Automated notifications for low attendance, pending disciplinary actions, or upcoming deadlines. Real-time alerts for students and parents about critical issues.

CHAPTER 5

CONCLUSION

The Attendance Monitoring and Disciplinary Action Mobile App offers a streamlined, secure, and efficient way to manage student attendance and disciplinary records in a college environment. By integrating features such as real-time notifications, role-based access, and automated reporting, the app enhances transparency and accountability for students, faculty, and administrators. Prototyped using Proto.io, the app ensures a user-friendly interface and seamless functionality tailored to the needs of its users. This system simplifies administrative processes, promotes better communication, and ensures timely action, contributing to an organized and well-regulated academic environment.

REFERENCES:

Proto.io Documentation
Proto.io. (n.d.). Official Documentation for Interactive Prototyping.
Retrieved from https://proto.io/docs

Comprehensive guide to using Proto.io for designing, prototyping, and testing mobile and web applications.
Proto.io Blog
Proto.io. (n.d.). Design Thinking and Prototyping with Proto.io.
Retrieved from https://proto.io/blog

Offers insights and tutorials on leveraging Proto.io for creating user-centered designs.
Getting Started with Proto.io
Proto.io. (n.d.). Beginner's Guide to Building Prototypes.
Retrieved from https://proto.io/tutorials

Step-by-step tutorials to help users create interactive prototypes for app.

Prototyping Attendance Systems with Proto.io
Smith, J. (2022). Developing an Attendance Management System Prototype.
Available at https://proto.io/examples

Focuses on creating attendance management features using Proto.io's prototyping tools.
Proto.io Use Cases
Proto.io. (n.d.). Case Studies: How Proto.io is Used in App Development.
Retrieved from https://proto.io/case-studies

APPENDIX A – SCREENSHOTS