ATMAS
Attendance Management System

A project report submitted by

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Sri. C. Achutha Menon Government College, Thrissur
Kuttanellur, Kerala

CERTIFICATE

This is to certify that the project titled ……………………………………. submitted by, ………………………………………………………………………………… ………………………………………………………is a bonafide record of the project work done at the Department of Computer Science, Sri C Achutha Menon Government College, Thrissur in partial fulfilment of the requirement of Bachelor of Computer Science of the University of Calicut.

Submitted for the Viva Voce Examination held on …………………

Internal Examiner

External Examiner

Seal

Head of the Department

DECLARATION

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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Place :
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Chapter 1

Introduction

ATMAS is an online attendance management system that provides a digital interface for attendance tracking and management processes for educational institutions. The system is designed to automate the attendance management process, eliminating most of the paper works and reducing human effort. ATMAS uses PHP for the backend and HTML, CSS, and JavaScript for the frontend, with the Bootstrap framework, making it a robust and scalable attendance management system.

1.1 Attendance Management System

ATMAS is a digital attendance management system that provides a secure, accurate, and user-friendly interface for attendance tracking. The system is designed to automate the attendance tracking process, eliminating the need for manual attendance tracking, which can be time-consuming, error-prone, and inefficient. The system includes features such as digital attendance tracking, reporting, scalability, user-friendly interface, and security. ATMAS provides a robust and scalable attendance management system for educational institutions.

1.2 Features of Existing Systems

Existing attendance management systems typically involve manual attendance tracking, which can be time-consuming, error-prone, and inefficient. Additionally, paper-based attendance management systems can be difficult to manage and require a significant amount of administrative effort. ATMAS aims to solve these issues by providing a digital interface for attendance tracking and management, which can significantly reduce the workload of teachers and administrative staff.

ATMAS includes features such as digital attendance tracking, reporting, scalability, user-friendly interface, and security. With digital attendance tracking, teachers can easily track attendance for their classes, and administrators can monitor attendance for the entire institution. The system also includes reporting capabilities that allow administrators to generate attendance reports monthly or for a selected time period. With scalability, ATMAS can handle an increasing number of users and data without affecting system performance. The user-friendly interface allows for easy navigation and use of the system, while security features ensure that sensitive attendance data is protected from unauthorized access.

1.3 Limitations of Existing Systems

The limitations of existing attendance management systems include manual attendance tracking, paper-based attendance management systems, and limited reporting capabilities. These limitations can result in inefficiencies, inaccuracies, and compliance issues. ATMAS addresses these limitations by providing a digital attendance management system that automates attendance tracking, eliminates paper-based systems, and provides advanced reporting capabilities. With ATMAS, educational institutions can significantly reduce the workload of teachers and administrative staff while ensuring compliance with attendance policies.

1.4 Area and Category of the Project Work

The area and category of the project are attendance management systems for educational institutions, specifically universities. The project falls under the category of digital attendance management systems and is specifically designed for universities, where attendance tracking is often done on an hourly basis. With an hour-based attendance taking method, ATMAS provides a more suitable and accurate solution for universities, reducing the possibility of errors and ensuring compliance with attendance policies. With ATMAS, universities can streamline their attendance management process, reducing the workload of teachers and administrative staff, while ensuring compliance with attendance policies.

Chapter 2

Problem Definition & Methodology

2.1 Introduction

ATMAS is an online attendance management system designed to provide an efficient and effective solution for attendance tracking and management in educational institutions, particularly universities. The system uses a digital hour-based attendance taking method that eliminates paper-based attendance taking, reduces human effort, and enhances the accuracy and speed of attendance tracking. This chapter provides an overview of the problem definition and methodology adopted in the development of ATMAS, which includes a description of the problem, objectives, motivation, methodology, and scope of the project.

2.2 Problem Definition

The problem addressed by ATMAS is the inefficiency and inaccuracy of traditional attendance management systems. These systems rely on manual attendance tracking and paper-based systems, which can be time-consuming, error-prone, and inefficient, leading to compliance issues and a significant workload for teachers and administrative staff. The traditional methods of attendance taking require a lot of manual effort, including the preparation of attendance registers, manual entry of attendance, and the calculation of attendance percentages. Additionally, manual attendance systems are vulnerable to fraudulent practices like proxy attendance, which can affect the accuracy of attendance records.

2.3 Objectives

The primary objective of the ATMAS project is to provide an efficient and effective solution for attendance tracking and management in educational institutions, particularly universities. The system aims to solve the issues associated with traditional attendance management systems, which can be time-consuming, error-prone, and inefficient, leading to compliance issues and a significant workload for teachers and administrative staff.

The primary objective of ATMAS is to automate the attendance management process, reducing the workload of teachers and administrative staff, and ensuring compliance with attendance policies. The system is designed to eliminate the manual effort involved in the preparation of attendance registers, manual entry of attendance, and the calculation of

attendance percentages. By automating the attendance management process, ATMAS aims to enhance the accuracy and speed of attendance tracking, eliminate fraudulent practices, and provide a secure attendance management system.

Another objective of ATMAS is to provide advanced reporting capabilities, allowing administrators to generate attendance reports monthly or for a selected time period. The system is designed to generate reports automatically, saving time and effort for teachers and administrative staff. This feature allows administrators to analyze attendance data, identify trends, and act accordingly. The system also allows administrators to monitor student attendance in real-time, providing up-to-date information on attendance.

ATMAS is designed to enhance the overall efficiency of attendance management systems in universities and reduce the workload of teachers and administrative staff, freeing up their time to focus on more important tasks. By providing a digital attendance management system, ATMAS aims to enhance the accuracy and speed of attendance tracking, eliminate fraudulent practices, and provide a secure attendance management system.

ATMAS is also designed to be user-friendly, with a simple and intuitive interface that is easy to use. The system is designed to be scalable, modular, and maintainable, with a focus on usability and user experience. The system is designed to be accessible from anywhere with an internet connection, making it convenient for teachers and students to access the system from home or on the go.

In summary, the primary objective of the ATMAS project is to provide an efficient, accurate, and user-friendly solution for attendance tracking and management in educational institutions, particularly universities. The system aims to automate the attendance management process, reduce the workload of teachers and administrative staff, ensure compliance with attendance policies, provide advanced reporting capabilities, and enhance the overall efficiency of attendance management systems in universities. By achieving these objectives, ATMAS aims to provide a secure and reliable attendance management system that meets the needs of educational institutions.

2.4 Motivation

The motivation behind the development of ATMAS is to provide an efficient and effective solution for attendance tracking and management in educational institutions, particularly universities. Traditional attendance management systems can be time-consuming, error-prone, and inefficient, leading to compliance issues and a significant workload for teachers and administrative staff. By providing a digital attendance management system, ATMAS aims to solve these issues and provide an efficient, accurate, and user-friendly solution for attendance

tracking and management. ATMAS aims to enhance the overall efficiency of attendance management systems in universities and reduce the workload of teachers and administrative staff, freeing up their time to focus on more important tasks.

2.5 Methodology

The methodology adopted in the development of ATMAS is an object-oriented approach. The system is designed to be scalable, modular, and maintainable, with a focus on usability and user experience. The system uses PHP for the backend and HTML, CSS, and JavaScript for the frontend, with the Bootstrap framework. The development process includes requirements gathering, design, implementation, testing, and deployment. The system is designed with security in mind, using encryption and authentication techniques to protect sensitive data.

The development process begins with requirements gathering, where the team identifies the requirements and needs of the target users of the system. The team then moves on to the design phase, where they create a detailed design of the system, including the user interface, database schema, and algorithms. The team then moves on to the implementation phase, where they write the code and build the system. The team conducts rigorous testing to ensure that the system is error-free, and then moves on to deployment, where they install the system on the server and make it available to users.

2.5 Scope

The scope of the ATMAS project is to provide a digital attendance management system that is efficient, accurate, and user-friendly, specifically designed for educational institutions, particularly universities. The system includes features.

Chapter 3

Analysis

3.1 Requirement Analysis

[Detailed description on the requirements collected]

3.2 Existing System

3.3 Proposed System

3.4 Requirement Specification

3.4.1 Functional Requirements

3.4.2 Non-functional Requirements

Non-functional requirements may exist for the following attributes. Often these requirements must be achieved at a system-wide level rather than at a unit level. State the requirements in the following sections in measurable terms (e.g., 95% of transaction shall be processed in less than a second, system downtime may not exceed 1 minute per day, > 30-day MTBF value, etc.).

Performance

Reliability

Availability

 Security

Maintainability

Portability

3.4.3 Hardware Requirements

3.4.4 Software Requirements

3.4.5 Other Requirements

3.5   Feasibility Study

3.5.1 Technical feasibility

Description to justify your system is technically feasible.

3.5.2 Economical feasibility

Description to justify your system is economically feasible.

3.5.3 Operational feasibility

Description to justify your system is operationally feasible.

Chapter 4

Design

4.1Introduction

4.2 Modularity Criteria

Description about the modules in the proposed work.

4.3 Architecture Diagrams/DFD

DFD Level 0, 1, 2, 3 (how many levels are to be there? it is up to your work) diagrams using the standard notations. Provide a narration about each of the diagrams wherever necessary.

4.3.1 DFD Level 0

4.3.2 DFD Level 1

4.3.3 DFD Level 3

4.4 Use Case Diagrams (if applicable to your system)

4.5 Activity Diagrams (if applicable to your system)

4.6 Class Diagrams (if applicable to your system)

Out of these three at least you can include use case and activity diagrams. (Refer to System Analysis and Design, Avid)

4.7 User Interface Layout

How your forms do looks like. At least include the list of fields that appear in each of the forms that are being created in the system.

4.7 Structure of Reports Being Created

List the all kinds of reports that your intent to produce. Identify each report with a unique title and list the fields that appear in each of the reports.

4.8 Database Design

4.8.1 List of Entities and Attributes

4.8.2 E R Diagram

4.8.3 Structure of Tables

Chapter 5

Implementation

5.1 Introduction

5.2 Tools/Scripts for Implementation

5.3 Process Logic

5.3.1 Module 1

5.3.2 Module 2

………

5.4 Coding

5.5 Screen Shots

5.5.1 Login page

5.5.2 xxxx page

………

Chapter 6

Testing

6.1Introduction

6.2 Unit Testing

6.3 Integration Testing

6.4 System testing

6.5 Test Plan & Test Cases

The primary objectives of test case design methods are to drive a set of tests that has of highest likelihood of uncovering the defects. To accomplish this objective, two categories of test case design techniques are used. Black box testing and White box texting.

(Design test case for each module as given below)

6.5.1 Login Screen

Sl. No	Test Case	Expected result	Observed result	Pass/Fail
1	Without entering user name and password, press login button.	It should prompt message "Invalid entry"	Message is prompted	Pass
2	Enter correct username and password. Click login button.	The application should be loaded.	Application loaded without error.	Pass

Chapter 7

Conclusion

The purpose of this section is to provide a summary of the whole thesis or report. In this context, it is similar to the Abstract, except that the Abstract puts roughly equal weight on all report chapters, whereas the Conclusions chapter focuses primarily on the findings, conclusions and/or recommendations of the project.

There are a couple of rules for this chapter:

1. All material presented in this chapter must have appeared already in the report; no new material can be introduced in this chapter. (rigid rule of technical writing).
2. Usually, you would not present any figures or tables in this chapter. (rule of thumb)

Conclusions section can have the following (typical) content. These contents need not be given in bulleted format.

- Re-introduce the project and the need for the work – though more briefly than in the intro;
- Re-iterate the purpose and specific objectives of your project.
- Re-cap the approach taken – similar to the road map in the intro; however, in this case, you are re-capping the data, methodology and results as you go.
- Summarize the major findings and recommendations of your work.

Future Work

Identify further works that can be added to make your system to meet the challenges of tomorrow. Or you can also include whatever requirements you could not fulfill due to the scarcity of time/resources.

References

Reference are to be listed in IEEE format. A sample format is as shown below.

[1] Steve Young, "The HTK Book", Cambridge University Technical Services Ltd, December 1995.

[2] M.A. Zissman, "Language Identification using Phoneme Recognition and Phonotactic Language Modeling", in Proceedings ICASSP '95, 1995.

[3] Y.K. Muthusamy, E. Barnard, and R.A. Cole, "Reviewing Automatic Language Identification", in IEEE Signal Processing Magazine, October 1994.

[4] PHP 5 Tutorial, Available at http://www.w3schools.com/PHP/