ATTENDANCE MONITORING AND RECORDS MANAGEMENT SYSTEM FOR PILAR NATIONAL COMPREHENSIVE HIGH SCHOOL USING FACE RECOGNITION

A Project Study Presented to the Faculty of the
Master in Information Technology
Aemilianum College Inc.
Rizal St., Piot, West District, Sorsogon City
Sorsogon, Philippines 4700

In Partial Fulfillment
of the Requirements for the Degree
MASTER IN INFORMATION TECHNOLOGY

LEO HIGUIT GREFALDO, JR.

2025

Aemilianum College Inc.
Master in Information Technology
Piot, 4700 Sorsogon City, Sorsogon, Philippines

RECOMMENDATION FOR ORAL DEFENSE

In partial fulfillment of the requirements for the degree of MASTER'S IN INFORMATION TECHNOLOGY, this research project entitled, "**ATTENDANCE MONITORING AND RECORDS MANAGEMENT SYSTEM FOR PILAR NATIONAL COMPREHENSIVE HIGH SCHOOL USING FACE RECOGNITION,"** by **LEO HIGUIT GREFALDO, JR.**, is hereby submitted to the thesis committee for oral examination.

MILAN E. BAUSA, MIT
Adviser

THESIS COMMITTEE

In partial fulfillment of the requirements for the degree of MASTER'S IN INFORMATION TECHNOLOGY, this research project, entitled, "**ATTENDANCE MONITORING AND RECORDS MANAGEMENT SYSTEM FOR PILAR NATIONAL COMPREHENSIVE HIGH SCHOOL USING FACE RECOGNITION,"** by **LEO HIGUIT GREFALDO, JR**, is hereby recommended for ORAL DEFENSE.

MARCO L. ESPINOSA, MIT
Member

SHERRY MAE R. LLANDELAR, DIT
Member

JOSEFINA R. SARMIENTO, MIT PhD
Member

LYDIA D. DOCTOR, Ph.D
Member

REV. FR. MANDEE N. BATAC, CRS
Chairman

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RESULT OF THE ORAL DEFENSE

Result of the Oral Examination for **LEO HIGUIT GREFALDO, JR.**, candidate for the degree, MASTER IN INFORMATION TECHNOLOGY.

Project Title	:	**ATTENDANCE MONITORING AND RECORDS MANAGEMENT SYSTEM FOR PILAR NATIONAL COMPREHENSIVE HIGH SCHOOL USING FACE RECOGNITION**
Adviser	:	Milan E. Bausa, MIT
Place	:	Aemilianum College Inc.
Date	:	January 26, 2025
Day	:	Sunday
Time	:	11:30 a.m.

APPROVED by the Committee on the Oral Examination with a grade of _____%.

MARCO L. ESPINOSA, MIT
Member

SHERRY MAE R. LLANDELAR, DIT
Member

JOSEFINA R. SARMIENTO, MIT PhD
Member

LYDIA D. DOCTOR, Ph.D
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REV. FR. MANDEE N. BATAC, CRS
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APPROVAL SHEET

ACCEPTED and APPROVED in partial fulfillment of the requirements for the degree of MASTER IN INFORMATION TECHNOLOGY.

Comprehensive Examinations – PASSED.

JOSEFINA R. SARMIENTO, PhD
Dean, CECTLA

LYDIA D. DOCTOR, Ph.D
Assistant Director for Academics

REV. FR. REY GENARO M. MALABANAN, CRS
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First and foremost, the researcher expresses **her** heartfelt thanks to the Almighty Lord God, whose grace and guidance provided strength and wisdom throughout this project. Without His blessings, this achievement would not have been possible.

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Acknowledgment is extended to the panel of examiners—**Marco L. Espinosa, MIT, Dr. Sherry Mae R. Llandelar, Dr. Josefina R. Sarmiento, Dr. Lydia D. Doctor,**

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L. H. G. J.

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PROJECT STUDY ABSTRACT

Title	:	**ATTENDANCE MONITORING AND RECORDS MANAGEMENT SYSTEM FOR PILAR NATIONAL COMPREHENSIVE HIGH SCHOOL USING FACE RECOGNITION**
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The Attendance Monitoring and Records Management System for Pilar National Comprehensive High School Using Face Recognition was developed to automate and streamline attendance tracking using facial recognition technology. This system aims to enhance accuracy, efficiency, and security in managing attendance records for students and employees. Utilizing Rapid Application

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Development (RAD) methodology, the system was iteratively designed, tested, and refined based on user feedback to ensure its functionality and effectiveness. Key features include a structured database for efficient data management, an intuitive user interface for ease of navigation, and a real-time attendance receiver module integrated with face recognition technology.

Findings from the testing and evaluation of the system confirmed its effectiveness in various aspects. The structured database provided an organized and secure approach to attendance management, improving data accessibility. The intuitive interface facilitated seamless user interaction, enhancing system usability for administrators and employees. Additionally, the attendance receiver module ensured real-time updates, increasing reliability and accuracy in attendance tracking. The incorporation of face scanners/web cameras and internet connectivity further strengthened the system's efficiency and accessibility. The system's overall effectiveness was validated through an ISO 25010 software quality model evaluation, achieving a high rating of 4.4, affirming its compliance with industry standards.

Based on these findings, the study concludes that the system successfully meets its objectives by providing an accurate, reliable, and user-friendly solution for attendance monitoring and record management. The structured database, technological integration, and real-time processing capabilities contribute to its overall functionality and efficiency. Furthermore, the positive evaluation results

confirm that the system is suitable for deployment, demonstrating its capability to improve attendance tracking processes at Pilar National Comprehensive High School.

To further enhance the system, several recommendations are proposed. Regular database maintenance and backup strategies should be implemented to ensure data integrity and security. Additional usability improvements, such as customizable settings and accessibility features, are suggested to accommodate a wider range of users. Continuous monitoring and optimization of the attendance receiver module will help maintain real-time accuracy and performance. Moreover, incorporating offline functionality and backup mechanisms can address potential connectivity issues. Finally, periodic re-evaluation of the system using updated industry standards and user feedback is encouraged to ensure its long-term effectiveness, security, and reliability.

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