

# **DESIGN AND IMPLEMENTATION OF A STUDENT ATTENDANCE MANAGEMENT SYSTEM USING BIOMETRICS**

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE, FACULTY  
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DEGREE IN COMPUTER SCIENCE

[MONTH, YEAR]

## CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Student Attendance Management System Using Biometrics" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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PROJECT SUPERVISOR

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Date

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HEAD OF DEPARTMENT

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Date

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EXTERNAL EXAMINER

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Date

## **DEDICATION**

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

## **ACKNOWLEDGEMENT**

My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Computer Science, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

## **ABSTRACT**

This study developed and evaluated a Web software solution for design within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Technology Acceptance Model and the UTAUT. A total of 67 users were purposively selected for the usability evaluation, out of which 59 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 84.4% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the Study

The study of design and implementation of a student attendance management system using biometrics is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

Scholars have long recognised design as a critical determinant of outcomes in computer science. The socio-cultural diversity of Nigeria implies that responses to design must be differentiated rather than uniform. Comparative work by Kalu and Obiora (2022) across several states uncovered a consistent pattern linking design with implementation. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. The aggregate picture emerging from Alade and Adeniyi (2023) points to a modest but consistent association between design and the outcomes of interest. These observations collectively invite a reconsideration of standard assumptions regarding implementation. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

Debates on national transformation repeatedly return to the role of design and its attendant dynamics. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream design into routine governance. Empirical evidence from Ibrahim and Chukwu (2021) suggests that positive developments in implementation are associated with improvements in design. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Longitudinal research by Dauda and Obiora (2016) revealed that sustained attention to design yields appreciable dividends over time. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

The phenomenon of design, while not new, has acquired fresh analytical urgency in Nigeria. Globalisation and technological change have intensified both the opportunities and the challenges associated with design. Studies conducted within the West African subregion by Dauda and Obiora (2018) reached conclusions broadly consistent with the Nigerian evidence. Accordingly, there is a growing consensus that deliberate policy action is required. Olawale and Famuyide (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Over the past two decades, design has become increasingly significant within the Nigerian landscape and beyond. National policies and programmes have sought, with varying degrees of success, to respond to the realities of design and implementation. A notable study by Osinachi and Adigun (2017) argued that the impact of design is substantially mediated by the quality of institutions. Sustained engagement with the issues raised