**COLLEGE MANAGEMENT SYSTEM**

**SUBMITTED TO**

**THE DEPARTMENT OF COMPUTER SCIENCE**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**THE GATEWAY (ICT) POLYTECHNIC SAAPADE, OGUN STATE.**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT AWARD OF NATIONAL DIPLOMA (ND) IN THE DEPARTMENT OF COMPUTER SCIENCE.**

**BY**

**OLADELE PETER GBENGA**

**MATRIC NUM: 22010211160**

**JUNE 2024**

**SUPERVISOR IN-CHARGE**

**MR AINA**

**CERTIFICATION**

This is to certify that this project report titled **COLLEGE MANAGEMENT SYSTEM** is an authentic and original work completed by **OLADELE PETER GBENGA** in partial fulfillment of the requirements for NATIONAL DIPLOMA (ND) IN THE DEPARTMENT OF COMPUTER SCIENCE. The project report has been prepared under the guidance of **MR. AINA** at GATEWAY (ICT) POLYTECHNIC SAAPADE, OGUN STATE.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MR. AINA DATE

(Supervisor)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MR. ONALAJA DATE

(Head of Department)

**DEDICATION**

I humbly dedicate this project report to **GOD Almighty** for seeing ME through my project, and to my brother for his support and encouragement.

I dedicate this project report to all the individuals who have supported and inspired me throughout this journey. Without their guidance, encouragement, and unwavering belief in our abilities, this project would not have been possible.

I would like to express our deepest gratitude to my supervisor, **MR. AINA**. His expertise, patience, and valuable insights have been instrumental in shaping this project. Her constant support and guidance have motivated me to push my boundaries and strive for excellence.

I would also like to acknowledge the support of my parents, whose love, understanding, and encouragement have been my pillars of strength. Their sacrifices and belief in my potential have motivated me to reach higher and work harder. I am grateful for their constant encouragement and for always being there for me, no matter the circumstances.

In conclusion, I dedicate this project report to all those who have been a part of my journey, directly or indirectly. Your support, encouragement, and belief in us have been invaluable. This project stands as a testament to our collective efforts and serves as a reminder of what can be achieved when we come together with a shared vision. Thank you all for being an integral part of my growth and for inspiring me to pursue excellence.

**ACKNOWLEDGEMENTS**

I would like to express my sincere appreciation to the Almighty God and my parents for their valuable support, guidance, and contributions throughout the development of this project.

I would like to extend my heartfelt gratitude to **MR. AINA** for her unwavering support, invaluable insights, and expert guidance throughout the entire duration of this project. His mentorship and expertise have been instrumental in shaping the direction and outcomes of this work.

Finally, I would like to acknowledge the unwavering support, encouragement, and patience of my friends and families. There constant belief in us and their understanding during the ups and downs of this project have been a source of strength and inspiration.

**KEYWORDS**

**College Management System**: A comprehensive software application designed to manage all aspects of college operations, including student records, course administration, and faculty assignments.

**Student Records**: Digital files containing detailed information about students, including personal details, academic performance, and attendance.

**Academic Management**: The process of overseeing and coordinating the academic functions of a college, such as course scheduling, grading, and curriculum development.

**Course Management**: The administration of course offerings, including the creation, modification, and scheduling of courses within the college.

**Attendance Tracking**: A system feature that monitors and records student attendance in classes, ensuring compliance with academic requirements.

**Database Design**: The structured organization of data in a database, ensuring efficient storage, retrieval, and management of information.

**System Architecture**: The high-level design of the software system, defining its components, their interactions, and the underlying technologies used.

**User Authentication**: Security processes that verify the identity of users accessing the system, ensuring only authorized individuals can log in.

**Data Flow Diagrams (DFD)**: Visual representations that illustrate how data moves through the system, highlighting the processes, data stores, and data flows.

**Entity Relationship Diagram (ERD)**: A graphical representation of the database structure, showing the relationships between different entities within the system.

**Flowchart Design**: Diagrams that map out the step-by-step processes within the system, providing a visual overview of workflows and decision points.

**System Implementation**: The process of deploying and integrating the software system within the college, ensuring it functions as intended.

**Software Development**: The activities involved in designing, coding, testing, and maintaining the software system.

**Automated Student Management**: The use of technology to handle student-related tasks, such as registration, grading, and record-keeping, reducing manual effort.

**Information Security**: Measures and protocols put in place to protect sensitive data within the system from unauthorized access or breaches.

**Record Management**: The systematic control of records throughout their lifecycle, ensuring they are stored, retrieved, and disposed of securely.

**Administrative Functions**: The operations and tasks performed by college administrators, such as managing faculty, scheduling courses, and handling student affairs.

**Higher Education Technology**: The use of technology in colleges and universities to enhance learning, administration, and management processes.

**Online Registration**: A feature that allows students to enroll in courses and programs through a web-based interface, streamlining the registration process.

**Exam Management**: The administration of exams, including scheduling, grading, and distributing results, within the college management system.

**ABSTRACT**

ABSTRACT

This project is based on COLLEGE MANAGEMENT SYSTEM. It manages the college

information, student information, placement information, various different types of event going

on in our college. It also keeps track records of all the information regarding students those who

are placed in the various organization. It has a notice board which contains information about

various cultural or technical or any sports which is supposed to be held soon.

ABSTRACT

This project is based on COLLEGE MANAGEMENT SYSTEM. It manages the college

information, student information, placement information, various different types of event going

on in our college. It also keeps track records of all the information regarding students those who

are placed in the various organization. It has a notice board which contains information about

various cultural or technical or any sports which is supposed to be held soon.

The process is to develop COLLEGE MANAGEMENT SYSTEM by using the Web Application. The main aim of this project is to develop web application which covers all the details of college like student profile, teacher profile, student profile, notice, student attendance, feedback. All the data related to college, staff and student is securely stored on database which is managed by the college administrator. The system utilizes the authentication, each sub activity has authentication allowing the authorized users to login in the system to create or update information in the particular activity. The staff can submit request for the leave thus reducing the processing time. The application reduced the time needed to access and delivers the student records to users. College Management system is integrated web application that handles various academic or non-academic activities of college. The system can access by every students/faculties/employee of the college through internet mobiles with their username and password. Every user in college management system home page with their respective levels like student has the different level and teacher has the different level. Through that displayed menu user can access the different option of the application assigned him. The system college management system can be used to manage data of all type of education institute. It will support both stand alone and also networking environment. The application reduces as much as possible to avoid error while entering the data. No formal knowledge is needed for the user to use this application. Thus, it provides user-friendly environment for everyone.

**TABLE OF CONTENT**

**Content** **Pages**

Title Page i

Certification ii

Dedication iii

Acknowledgement iv

Keywords v - vi

Abstract vii

Table of content viii – x

List of figures xi

**CHAPTER ONE- GENERAL INTRODUCTION**

1. Introduction………………………………………………………………....1

1.1 Background of Study ……………………………………………..1 - 2

1.2 Statement of Problem………………………………………………………2

1.3 Aims and objectives………………………………………………………..2 - 3

1.4 Significance of the Study………………………………………………….3 - 4

1.5 Purpose of Study…………………………………………………………..4 - 5

1.6 Methodology……………………………………………………………….5 - 6

1.7 Operational definition of terms…………………………………………….7

**CHAPTER TWO – LITERATURE REVIEW**

2.1 Theoretical Framework………………………………………………….…8

2.1.1 Theoretical Under-pinning of the Study…………………………...8

2.1.2 Data Collection on Maintenance of Student Record………………8

2.1.3 Computerized Information Protection on Student Record………...9

2.1.4 Record/Data Management on Maintenance of Student Record…...9 - 10

2.2 Conceptual Framework…………………………………………………….11

2.2.1 Technical, Economically & Operational Feasibility………………..11

2.2.2 Feasibility Gained by the System…………………………………..11 - 12

2.2.3 Concept of Computer Networking and the Internet……………...12

2.2.4 Internet Access…………………………………………………….12

2.2.5 The Concept of Internet Gateways ………………………………12

2.2.6 The World Wide Web and Its Benefits ………………………….12 - 12

2.2.7 UML (Unified Modeling Language)………………………………13

2.2.8 Use case Diagram……………………………………………..….13 – 14

2.2.9 Sequence Diagram…………………………………………………15 - 16

2.2.10 Component Diagram……………………….……………………....16 - 17

2.2.11 Deployment Diagram…………………….………………………...17

2.3 Empirical Framework………………………………………………………18

2.3.1 HTML, CSS and JAVASCRIPTS..................................................18

2.3.2 PHP MYSQL……………………………………………………..19

2.3.3 XAMPP…………………………………………………………...20

2.3.4 Bracket (Editor)…………………………………………………...20

2.3.5 PhpMy Admin …………………………………………………….20

2.3.6 Application Description…………………………………………...20

2.3.7 Analysis Models…………………………………………………...21

**CHAPTER THREE- SYSTEM ANALYSIS DESIGN AND IMPLEMENTATION**

3.1 Method……………………………………………………………………21

3.1.1 Modules…………………………………………………………...21

3.1.2 Front End - Back End Connectivity ………………………………22 - 23

3.1.3 Logical View ……………………………………………………...23

3.1.4 Evaluation of Good Design Software (Life Cycle Model)…...……24

3.1.5 Context Level DFD ………………………………………………..24

3.1.6 LEVEL- 1 DFD ………………………………………………………………………..…25

3.1.7 LEVEL- 2 DFD……………………………………………………26

3.1.8 Entity Relationship Diagram……………………………………….27

3.2 Material…………………………………………………………………….28

3.2.1 Functional Requirements…………………………………………..28

3.2.2 Non-Functional Requirements……………………………………...28 - 29

3.3 Algorithm…………………………………………………………………...29 - 31

3.4 Flowchart Diagram……………………………………………………….…32 - 33

3.5 System Architecture………………………………………………………....33 - 34

3.6 Database Design……………………………………………………………..34 - 35

**CHAPTER FOUR - RESULTS AND DISCUSSION**

4.1 System Implementation……………………………………………………...37

4.1.1 Output Generation ..............................................................................37

4.1.2 Analysis of Results .............................................................................38

4.2 System Requirements………………………………………………………..38

4.2.1 Software Requirements………………………………………………38

4.2.2 Hardware Requirements……………………………………………...39

4.3 Program Design………………………………………………………………39

4.3.1 Performance Metrics ......................................................................... 39

4.3.2 User Satisfaction................................................................................. 39 - 40

4.4 Testing….........................................................................................................40

4.4.1 Unit Test……………………………………………………………..40

4.4.2 System Test…………………………………………………………..40 - 41

4.5 Packaging (Integration) ..................................................................................41

4.6 Screen Shots…………………………………………………………………42 - 43

4.7 Discussion on Implementation Challenges…..................................................44

4.7.1 Software Design Documentation (SDD).............................................44 - 45

**CHAPTER FIVE - SUMMARY, CONCLUSION AND FUTURE WORK**

5.1 Summary on Findings…................................................................................. 46

5.2 Conclusion .................................................................................................... 47

5.3 Recommendations .......................................................................................... 48

5.4 Future Work ...................................................................................................49

**REFERENCE** .......................................................................................................................50

**APPENDIX A-B**…................................................................................................................51 - 55

**LIST OF FIGURES**

**Figure 2.1.** Theoretical Framework of the Study.......................................................................... 8

**Figure 2.2.** Conceptual Model for Data Collection and Maintenance of Student Records........... 9

**Figure 2.3.** Feasibility Analysis Diagram for System Implementation ........................................ 11

**Figure 2.4.** Use Case Diagram for College Management System ................................................ 14

**Figure 2.5.** Sequence Diagram for User Registration and Authentication Process ...................... 16

**Figure 2.6.** Component Diagram of the System Architecture........................................................ 17

**Figure 2.7.** Deployment Diagram of College Management System .............................................. 17

**Figure 3.1.** Context Level Data Flow Diagram (DFD) .................................................................. 24

**Figure 3.2.** Level 1 Data Flow Diagram (DFD).............................................................................. 25

**Figure 3.3.** Level 2 Data Flow Diagram (DFD).............................................................................. 26

**Figure 3.4.** Entity Relationship Diagram (ERD) for the Database ................................................. 27

**Figure 3.5.** Flowchart of College Management System Workflow ................................................ 32

**Figure 3.6.** System Architecture Overview .................................................................................... 33

**Figure 3.7.** Database Schema Design ............................................................................................. 34

**Figure 4.1.** Sample Output of User Registration ............................................................................ 37

**Figure 4.2.** Output Generation of Course Enrollment Process ....................................................... 38

**Figure 4.3.** System Testing Results for College Management System .......................................... 40

**Figure 4.4.** Sample Screenshots of the User Interface.................................................................... 42

**Figure 4.5.** Packaging and Integration Workflow........................................................................... 41