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UNIVERSITY OF PROFESSIONAL STUDIES, ACCRA

Scholarship with Professionalism



FACULTY OF INFORMATION TECHNOLOGY AND COMMUNICATION STUDIES

DEPARTMENT OF INFORMATION TECHNOLOGY STUDIES

UNDERGRADUATE WORK

DESIGN AND IMPLEMENTATION OF WEB-BASED CLASS

ATTENDANCE SYSTEM

BY:

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JUNE 2022

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DESIGN AND IMPLEMENTATION OF CLASS ATTENDANCE SYSTEM

THIS PROJECT REPORT IS SUBMITTED TO THE
DEPARTMENT OF INFORMATION TECHNOLOGY STUDIES
OF THE FACULTY OF INFORMATION TECHNOLOGY AND
COMMUNICATION STUDIES OF THE UNIVERSITY OF
PROFESSIONAL STUDIES, ACCRA IN PARTIAL
FULFILLMENT FOR A BACHELOR OF SCIENCE DEGREE IN
INFORMATION TECHNOLOGY MANAGEMENT.

JUNE 2022.

CANDIDATES' DECLARATION

We, the undersigned do hereby declare that this Project Work is the result of our original research and that no part of it has been presented for another Degree in any University.

However, all sources of borrowed materials have been duly acknowledged with due respect.

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SUPERVISOR'S DECLARATION

I declare that the preparation and the presentation of this Dissertation were by the guidelines on supervision of Dissertation laid down by the University of Professional Studies, Accra (UPSA)

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SIGNATURE.....

DEDICATION

This project is dedicated to the Almighty God, the giver of knowledge, wisdom, and inspiration, who made it possible for us to accomplish this project with His grace and undaunted protection. Also, to our parents for their sincere support financially and morally, and to our supervisor, Dr. Selasi Occansey, for his support and guidance to enable this creditable project.

ACKNOWLEDGEMENT

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Finally, we wish to recognize the help and extraordinary love of our families. They propped us on, and this work would not have been possible without their input. We likewise offer our extraordinary thanks and gratitude to all colleagues from the University of Professional Studies, who helped us tackle a few issues in our exploration with their insight and knowledge, supported and enlightened us throughout the project, and to everyone who had time and tolerance. We are appreciative of the help.

ABSTRACT

There have been many proposals to optimize the students' management systems in higher education. Managing student attendance during lecture periods has become a difficult challenge. Manual calculation of attendance produces errors and wastes a lot of time. This proposed system manages the student's attendance on a web portal, and the records of that attendance will be stored in a database.

This system will use MySQL for the database. The template of the website will be built using HTML and CSS (Cascading Stylesheet) code. JavaScript will be added to the system to improve its usability.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 INTRODUCTION

Due to students' interest in classrooms and whose is the largest union in the study environment of a university or institution, recording absences in a department with a large number of students in a classroom is a difficult task and time-consuming. Moreover, the process takes a long time and many efforts are made by the staff of the department to complete the attendance rates for each student. In so many institutions and academic organizations, attendance is a very important criterion that is used for various purposes. These purposes include record keeping, assessment of students, and promotion of optimal and consistent attendance in class. As in many developing countries, a minimum percentage of class attendance is required in most institutions, and this policy has not been adhered to because of the various challenges the present method of taking attendance presents. The process of recording attendance for students was in the form of hardcopy papers, and the system was manually done. Besides wasting time and exerting effort on preparing sheets and documents, other disadvantages may be visible to the traditional one due to loss or damage to the sheets. Sheets could be stolen. (Jacksi, 2018)

The purpose of this system is to solve the problem of keeping track of the students who attend class by providing a web interface for either the lecturer or class prefect to log in and record students who will be present at the end of the day.

1.2 BACKGROUND OF THE STUDY

A growing number of people are pursuing a high degree of education to safeguard their future and increase their economic prospects. Academic achievement is critical to employment success in the post-education phase. As a result, the capacity to anticipate pupils' academic progress has become increasingly popular. Expected academic performance is particularly useful information for educators and school officials, since it may be used to identify and target vulnerable children who are in danger of dropping out or who require extra attention. However, traditional techniques of getting information regarding attendance levels (surveys or self-

reports) have inherent biases and can be costly to collect at the scale of schools or universities. (Kassarnig et al., 2017)

For many years, student class attendance at the university and college levels has been a source of worry. In numerous nations, poor class attendance is a problem since many colleges use manual attendance recording, which can be a time-consuming operation. Faculty members are frequently occupied with formal obligations, such as taking daily student attendance on sheets of paper, rather than teaching. Teachers require automated student attendance management information systems to assist them to manage precious class time efficiently in today's competitive world, with growing working hours and reduced classroom time. To speed up the daily attendance process, an automated system assists instructors in recording and managing daily student attendance. (Marcel, 2022)

Attendance management is crucial for every organization; it can influence whether a business, such as a school, the public sector, or the private sector, will be successful in the future. Organizations will need to keep track of people within the organization, such as employees and students, to maximize their effectiveness. It's become difficult to keep track of student attendance during lecture sessions. Because human calculation leads to errors and consumes time, the ability to compute attendance becomes a significant barrier. As a result, an effective Web-based attendance tracking system for tracking student actions in class is being developed. This application tracks attendance in real-time and stores the data in a database. (Shahab, 2018)

In the Philippines, the majority of schools adopt arduous and time-consuming attendance monitoring. Some students are required to present paper assignments that include their names and section. In large classes, a seating plan is a valuable tool for verifying free seats and assigning them to assigned pupils. To generate an attendance report, any of these options would still require the data to be encoded after it was collected. Students must attend school every day to be successful. The good news is that, according to one study, going to school leads to academic success. Attendance has an impact on achievement, particularly in some areas, and even skipping two weeks throughout the school year can be detrimental. (Bernard et al., 2021)

Every college should have an information systems strategy that is directly related to its mission statement and business plan. This should contain well-defined Management Information Systems (MIS) and register rules, as well as proper funding, clear output expectations, staff training, and cogent reasoning for why the college is adopting a particular register system.

It is extremely difficult to run the institution smoothly and respond to external agencies on time and accurately without the use of the registration system. Some colleges are currently using register data analysis to generate useful management insights. (Adjei, 1997)

A system is a Web-based tool that allows university departments to track daily student attendance. It makes finding a student's attendance in a certain class much easy. This technology will also help with report generating and determining a student's attendance eligibility. The system not only boosts job productivity and student learning and development but also saves time and money. There has recently been a lot of research into the development of student absence and attendance systems, including web-based systems and mobile-based attendance systems, as well as computerized attendance systems with hardware technology, such as fingerprint-based attendance systems, iris-based attendance systems, face recognition-based attendance systems, and RFID (Radio Frequency Identification)-based attendance systems. (Jacksi, 2018)

1.3 PROBLEM STATEMENT

Taking and tracking student attendance manually losing attendance sheets dishonesty wasted time and high error scales are problems facing the lecturers' use of the existing attendance system.

Successful schools begin by making sure their students come to school regularly. The consequences of low attendance can result in the closure of lectures. Due to the small number of students, lecturers can be based on that to stop teaching the entire class. The attendance rate tells us the average percentage of students attending school each day in a given year.

(Siti Hawa Apandi, 2021)

Irregular attendance can lead to increased repetition and dropout rates, as well as poor learning outcomes. Several factors contribute to irregular attendance and difficulty attending tertiary school, including the distance to school is another major impediment to children's attendance, as not all households can afford or have access to transportation. Some schools may be too far away for some children to travel safely. Inaccessible and inappropriate infrastructure has an impact on children's attendance and educational outcomes. Furthermore, attitudinal barriers and school climate place significant constraints on children's attendance, participation, and learning in schools. Many youngsters engage in manual labor, such as working on their family's

land, which their family may rely on for survival. Even if this work does not prevent kids from attending school, combining work and school has been found to increase absences and negatively impact educational achievement, resulting in school dropouts in many cases. (UNESCO, 2015)

This isn't simply about missing classes or skipping school. Many of these absences are indeed excused, particularly among our youngest children. Medical issues such as asthma, diabetes, and oral and mental health issues are usually associated with absences. Other barriers, such as a lack of a nearby school bus, a safe approach to school, or food insecurity, make it tough to attend school every day. In many cases, chronic absence is undetected because schools are more concerned with how many children show up every day than with how many and which individuals miss so much school that they fall behind. (Attendance Works, 2018)

Keeping track of students who are expected to be in the lecture hall at a specific time poses numerous difficulties. The following are some of the issues that need to be addressed:

- Tedious in using the manual or traditional way of recording student data.
- Lecturers and class representatives waste a lot of time when recording students.
- Having a large number of students in a lecture room is extremely difficult.
- Most students are not able to record their presence because they perceive the system to be very slow and time-consuming.

1.4 SCOPE OF PROJECT

The scope of the study is limited to UPSA Level 400 actuarial science class due to the limited time frame of the given project. This approach could be used as a testing approach for the full implementation of the system

1.5 LIMITATION OF THE STUDY

- Lack of funds for developing a fully functional system to solve problems related to UPSA lecture halls.

- The system does not support facial recognition.
- The system doesn't support student fingerprint device systems.
- The system doesn't track the activities of the administrator and other users of the system.

1.6 OBJECTIVE OF THE STUDY

The "attendance management system" is a piece of software that tracks a college student's daily attendance. The instructors in charge of the topics will keep track of the students' attendance. Each member of staff will be given a unique login and password based on the subject they manage. Based on student attendance, this page delivers an accurate report. This method can also be used to determine a student's attendance eligibility. A report on the student's attendance is generated weekly and monthly. We present a new method for determining attendance in this paper. The shortcomings of prior approaches are addressed by this new methodology. The purpose of the web-based class attendance system has been devised and provided efficient and transparent means for recording students who will be present in class at the end of each lecture. This is accomplished by allowing class representatives to record and download information using an interface called "admin portal" or "web portal" for further examination.

Theoretical student achievement research emphasizes the link between class attendance and better performance. Pedagogical models are one branch of theoretical literature in which class attendance is seen as an indication of student engagement, together with other features that highlight the school's resources and the topic being taught. (Kassarnig et al., 2017)

1.7 GENERAL OBJECTIVES

The main purpose of the proposed project is to develop a web-based class attendance system that will allow the lecturers to keep track of students who are present and absent and who will be rewarded or punished based on their reporting status within the school.

1.8 SPECIFIC OBJECTIVES

- It provides authentication and authorization access to the system.

- Provide a report on the students present or absent at a particular lecture time.
- Designing a system to ensure transparency in recording attendance.
- Perform extensive research on the already existing class attendance systems.

1.9 SUBJECT AND FIELD OF STUDY

Within this field, this research is focused on the University of Professional Studies and how class attendance is recorded with the means of technology. Hence, all of the analysis, reviews, and research were performed to enhance the class attendance system for the school.

1.10 METHODOLOGY

Methodologies are a set of guiding principles and processes used to plan, manage, and execute projects. The project management methodology that is chosen determines how work is prioritized and completed. To be able to implement the web-based system successfully, system developers need accurate data and information from their stakeholders or clients as inputs to feed the new system. Incorrect information will result in an incorrect output of results in the system. Some traditional methods used to collect data from their clients include interviewing and observing the existing system and also implementing Joint Application Development workshops including system observers, research expertise, system users, system analysis personnel, and project supervisors in the system. Performing such activities will help developers of the system to analyze the current system, which helps to reduce defects that will be addressed in developing the new system concerning their clients' organizational direction. Recognize why current systems are designed the way they are to successfully integrate them with other systems while retaining as much critical functionality as possible and maintaining as familiar a user interface as possible to reduce the need for additional training. (Bennett, 2017)

1.11 ORGANIZATION OF THE STUDY

This research work covers five chapters that are listed below:

Chapter 1: Introduction Chapter.

The first chapter of the project provides brief background information on the project and the background of the study; the problem statement; the scope of the project; limitations of the study; general and specific objectives of the study; the subject and field of research and methodology deployed.

Chapter 2: Chapter of Literature Review

This chapter analyzes and evaluates the system in comparison with already existing systems. Also, it evaluates the current work with previous research done in the field of study. This chapter also explains the techniques and appropriate technologies that will be utilized in the implementation of the project.

Chapter 3: Life Cycle Design of the Proposed System.

The chapter discusses the approach and frameworks adopted in project development. These comprise system requirements, functional and non-functional requirements, hardware and software requirements, as well as the analytic tools used (context diagrams, data flow diagrams, and use cases).

Chapter 4: System Testing, Implementation, and Documentation.

The chapter deals with the system implementation and system testing stages. It describes the development tools as well as the various interfaces that serve as an interacting platform between users and the system.

Chapter 5: Conclusion and Recommendations.

This chapter gives a comprehensive summary of the whole report, throwing light on all chapters and the importance of the entire project together with its achievements. Based on the conclusion, recommendations are made to stun the constraints of the system.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will analyze and evaluate existing systems, which will include the manual system and other available automated systems. It also analyzes the proposed system in comparison to the existing system in terms of features, functionalities, and defects or limitations in additional advantages of the proposed system.

2.2 GENERAL BACKGROUND OF AREA OF STUDY

One of the major problems that face schools when it comes to keeping records of students present in the class during lecture hours is that, as a result, it has become very difficult to keep records of the students that are absent and present in the class. There is no effective and transparent way to keep student records.

2.3 THE MANUAL SYSTEM

The manual system had served schools well in keeping and tracking records of students who reported to school and students who were absent. This is done by recording the present students on a sheet of paper supervised by the class representatives. This was not a secure way of keeping track of the students because the paper containing the list of students' records could be lost. Moreover, there is no transparency when it comes to keeping records of the students. This leads to favoritism. Finally, it is very difficult to provide a report on the recorded students provided.

2.4 REVIEW OF THE EXISTING SYSTEM

Student Attendance Management System by Karwan Jacksi, Falah Ibrahim, and Shahab Ali According to the Web application attendance management system, SMS software technology is used to send SMS easily to student parents. The system can store all the data about the

students and those who are absent in detail. The advantage of it is that it uses efficient techniques to store and update the student attendance and report on the website rather than wasting paper and decreasing the faculty's time as well. The system has other techniques to register the attendance according to the system. The student attendance management system uses QR Code technology to register the student's presence by scanning the QR Code using a QR Code scanner. Then this information is delivered to the server, where the server makes the call to the API. The system uses Frequency Identification technology to significantly improve the current manual process of student attendance recording and tracking systems, especially in a university or school environment, because it is easy to connect data to the internet. The system promotes a semi-automated approach to capturing student attendance, i.e., by having the students flash their student cards to the RFID reader. (Jacksi, 2018)

2.5 COMPARATIVE STUDY OF THE REVIEWED SYSTEM

Based on the studies and reviews that have been conducted on both the web-based attendance system and the manual system, the following comparative findings have been made in terms of features, functionalities, and limitations.

Firstly, the manual system comes with a lot of human errors. Some of the names of the students are not captured in the recorded lists. The class representatives need to go through the names one after another to tick off the present students. Then the class representatives need to sit down and compile all the lists to know the absent students.

Secondly, the online system is too complex to use just for keeping records and tracking the students. There is the involvement of technology, which is needed to afford the project. This requires a lot of training before it can be used.

2.6 CONCLUSION

Concerning the reviews, findings, and comparative studies performed above, it can be concluded that the manual system is not secure and transparent and that the online system is secure and transparent but costs a financial burden on the schools. The manual cannot be dependent because it cannot generate a report for further analysis.

CHAPTER THREE

LIFE CYCLE DESIGN OF THE PROPOSED SYSTEM

3.1 INTRODUCTION

The life cycle is a multistep, interactive process, structured methodologically. The process is used to model both technical and non-technical activities to provide and enhance the system quality used to manage the decision-making progress.

Instruments for Data Collection

The system was developed using an action research methodology. Action research methodology is an interactive inquiry process that balances problem-solving actions implemented in a collaborative context with data-driven collaborative analysis or research to understand underlying causes, enabling future predictions about personal and organizational change.

Elements of action research studies include:

- Identify problems
- Research the problem and its probable causes
- Develop a response to the problem
- Implement the proposed solution
- Observe the implementation of the solution
- Reflect on the results (and start over, if necessary)
- We chose the action methodology because;
- It best suits the problem we identified at the client's facility, which is a real-life problem.

Unlike the other research methodologies, it deals with solving the problem identified rather than gathering information alone.

- It is also more participating and collaborating. With this methodology, we were able to have enough time with the client before coming out with the problem and proposing a new system to resolve it.

3.2 TECHNICAL METHODOLOGY

To analyze, design, and implement the software system, we used the prototype model of the System Development Life Cycle. A prototype methodology is a software development model in which a prototype is built, tested, and then reworked when needed until an acceptable prototype is achieved.

The prototyping model has the following six SDLC phases as follow:

- Requirements gathering and analysis

A prototyping model starts with requirement analysis. This is the first phase of the model. In this phase, the requirements of the system are defined in detail. During this process, the users of the system are involved and interviewed to learn their expectations for the system. We went to the mall to interview the sales personnel on how the inventory system works. Their explanations were collected, documented, and used in the development of the system. We interviewed the potential users and got their views and ideas on how the system should function.

- Quick Design

The second phase is a preliminary design or a quick design. At this stage, a simple design for the system is created. However, it is not a complete design. It gives the user a brief idea of the system. The quick design helps in developing the prototype. Here we used a vector design application called Adobe XD to design what the system should look like before we started the actual system.

- Build a Prototype

In this phase, an actual prototype is designed based on the information gathered from quick design. It is a small working model of the required system.

- Initial user evaluation

At this stage, the proposed system is presented to the client for an initial evaluation. It helps to find out the strengths and weaknesses of the working model. Comments and suggestions were collected from the students and were given to us to enhance our chances of meeting the requirements of the users.

- Refining prototype

If the user is not happy with the current prototype, you need to refine the prototype according to the user's feedback and suggestions. This phase wouldn't be over until all requirements specified by the user are met. Once the user is satisfied with the developed prototype, it is deployed. We did this over and over again to make sure that the user requirements entailed in the system were achieved.

- Implement Product and Maintain

Once the final system is developed based on the final prototype, it is thoroughly tested and deployed for production. The system undergoes routine maintenance to minimize downtime and prevent large-scale failures. This is where the system was finally built to meet the specified requirements specified by UPSA.

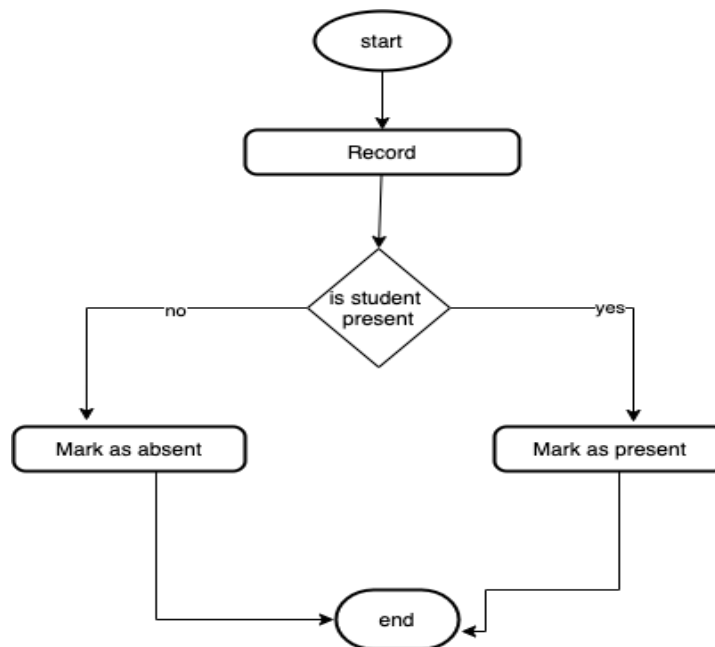
3.3 CRYSTALLIZATION OF THE PROBLEM

The problem definition for the system is to launch the automated and web-based class attendance system needed to be developed for the UPSA level 400 marketing class. The whole student record system is done manually. Since it is a manual system, it has an unlimited number of drawbacks, such as being time-consuming. Some of the drawbacks of the current system include;

- Data inconsistencies
- Loss of precious time.
- Increase in favoritism
- Faced with issues of transparency and accountability

- Difficulties in keeping track of absentees and attendants
- The inability to generate a statistical report on previous and newly added products for plans

Flow chart of the existing system



3.4 ANALYSIS AND DESIGN OF THE SYSTEM

The system allows its administrators to log in and perform some actions on products they register. The system also allows administrators to register new users on the system with access to perform some actions. The administrator or the user can generate a report about the recorded products. Users of the system can track products and user actions on the platform.

3.5 SYSTEM REQUIREMENTS

The system requirements cover the functional and non-functional requirements of the system. The functional requirement deals with the project deliverables, while the non-functional requirement involves the hardware and software requirements of the system.

3.5.1 FUNCTIONAL REQUIREMENTS

- The system should only allow the administrator to manipulate or make changes to the database.
- The system should enable multiple users to access the web-based system.
- The system should allow the administrator to delete users from the system
- The system should provide an avenue for the generation of live reports by the administrator and class representatives for further analysis.

3.5.2 NON- FUNCTIONAL REQUIREMENTS

- The system should allow room for expansion.
- A system should have a high performance and reliability level.
- The system must prompt users in the event of any change in inactivity.
- The system should be highly secure.
- All user input must be checked and validated by the system, and users must be told if there are any problems with their authentication while they are using the system so that they can fix them.

3.5.3 HARDWARE REQUIREMENT

The most common set of requirements defined by any operating system or software application is physical components or resources known as hardware. The minimum requirements for hardware for running this system are as follows.

Client-Side		Server Side	
Processor	1.6 GHz	Processor	2.4 GHz
Hard Disk	10 GB free space	Hard Disk	150 GB free space
RAM	2 GB	RAM	4 GB

Table 1: Hardware Requirement

3.5.4 SOFTWARE REQUIREMENT

A software program is/are a collection of programs designed to perform a specific task for a computer user. Software requirements are documents that define the components and behavior of a software application. The minimum requirements for software for running this system are as follows:

Server Side		Client-Side	
Operating System	Windows 10	Operating System	Windows 10 or any compatible OS
Web Server	Apache 2.4.46	Web Browser	Chrome or any compatible browser
Front-End tools	HTML5, JAVASCRIPT, CSS3, jQuery, Bootstrap, JavaScript		
Back-End Tools	PHP		
Database	MSQL		

Table 2: Software Requirements

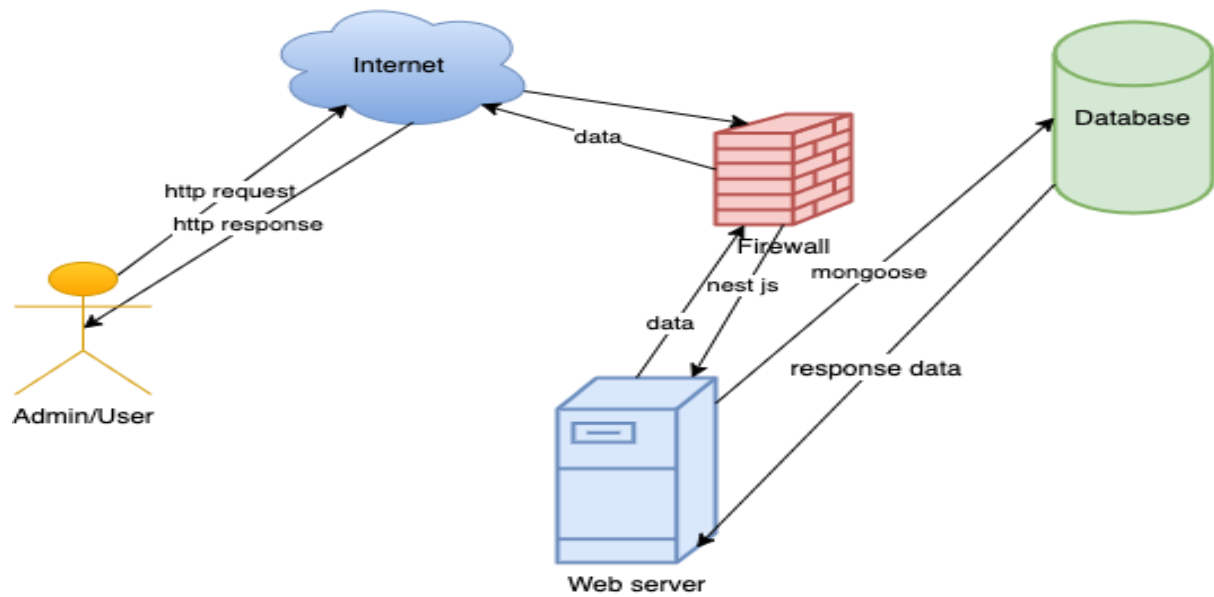
Administrator unit functionalities

The administrator's task is to manage the entire system. He or she can perform all actions within application activities includes; uploading student data, adding new users to the system, and generating attendance reports.

Users' unit functionalities

Users are required to:

1. Perform upload data in the web-based system.
2. Generate a report based on daily, monthly, or annually.
3. Edit users in the database
4. Authenticate before accessing the entire system.



CLASS ATTENDANCE MANAGEMENT SYSTEM

Pictorial design of the system.

3.6 FLOW CHART DIAGRAM

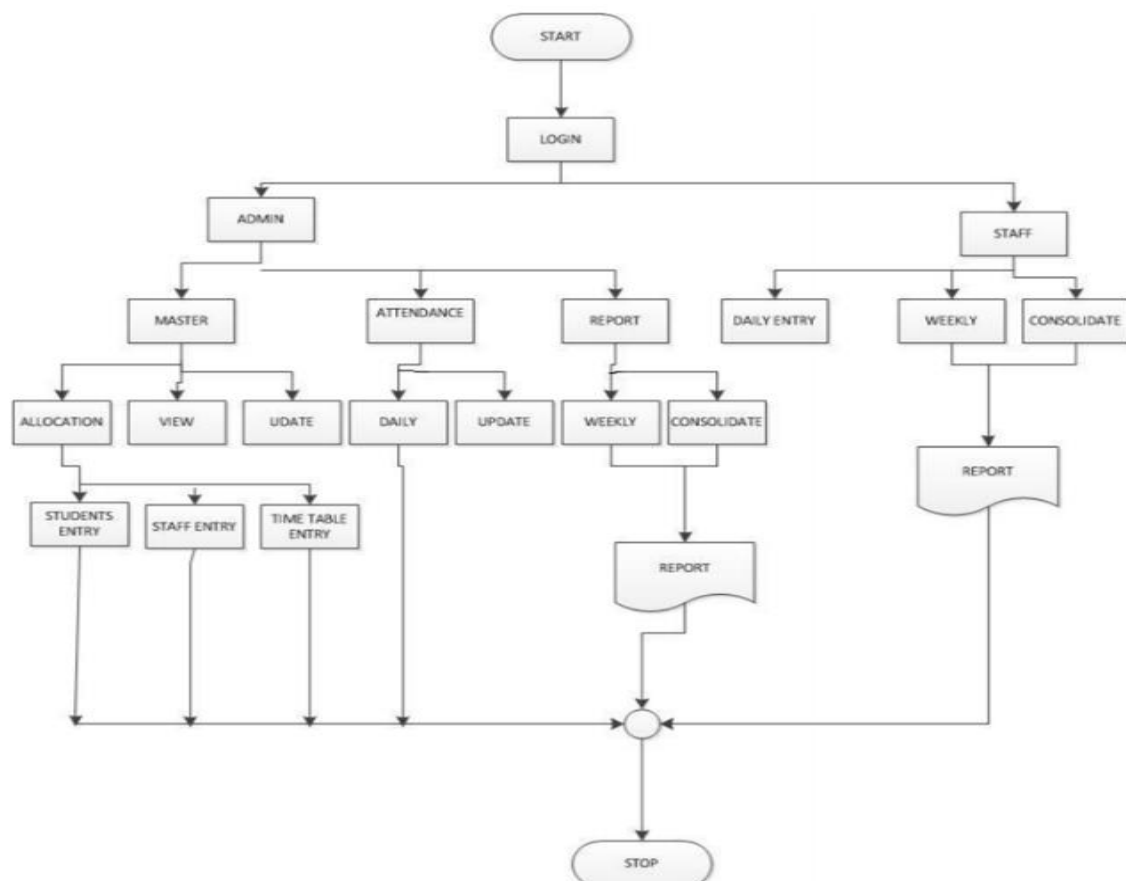
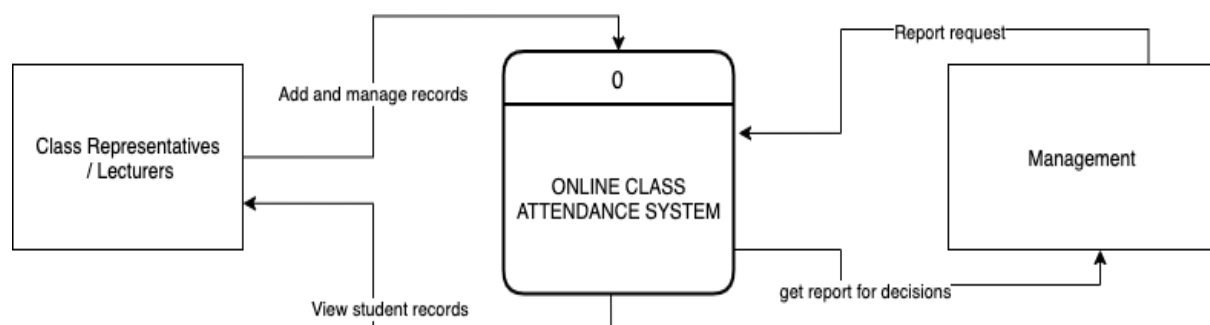


Figure 3.3: System Flow Chart Diagram

The diagram above shows the steps and processes that users need to follow to use the system.

1. The user launches the application by using either a laptop or a desktop computer for the correct rendering of the application.
2. The user logs into the system through a username or email and password.
3. The system checks to see if the person is who they say they are and has permission to use the system before they can do things with stocks.
4. If the login fails or the user doesn't have access to the system, the system will terminate, and the user will be redirected back to the login page with an authentication failure message.
5. When the user has successfully logged in, they will be sent to the homepage or dashboard of the system.
6. The user inputs the information of the system users, programs, courses, and students on the system
7. The system can search his index number to click present when he enters the class.
6. A report can be generated in PDF after class by the administrator for further analysis.
8. The logged-in user can log out of the system and terminates the system.

3.7 CONTEXT DIAGRAM



3.8 ENTITY-RELATIONSHIP DIAGRAM

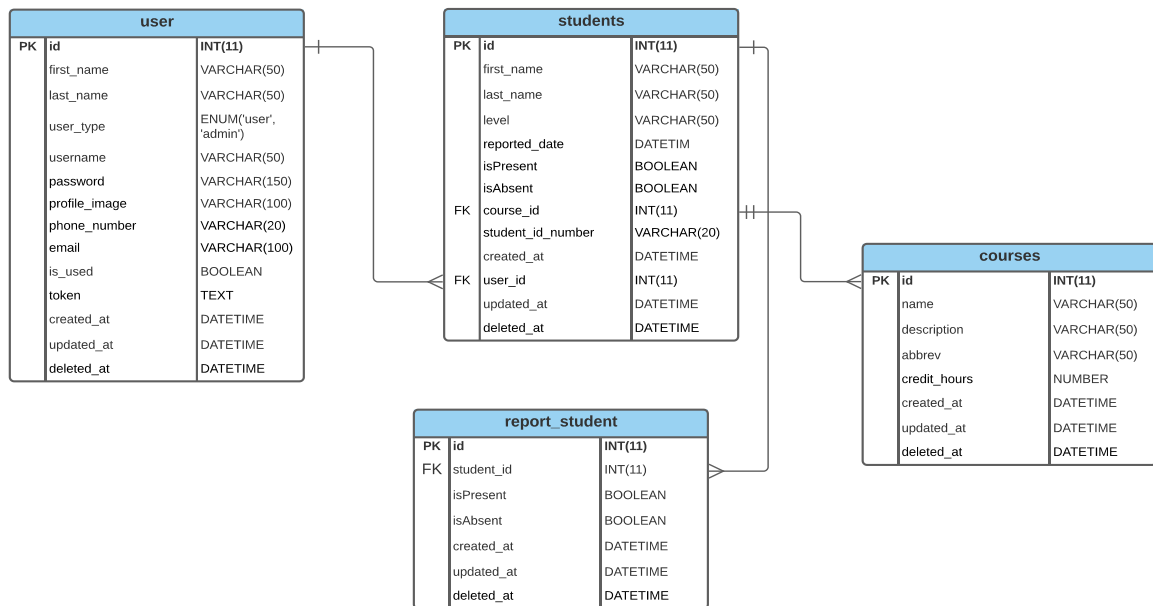


Figure 3.5: Entity relationship diagram

3.9 DATA FLOW DIAGRAM

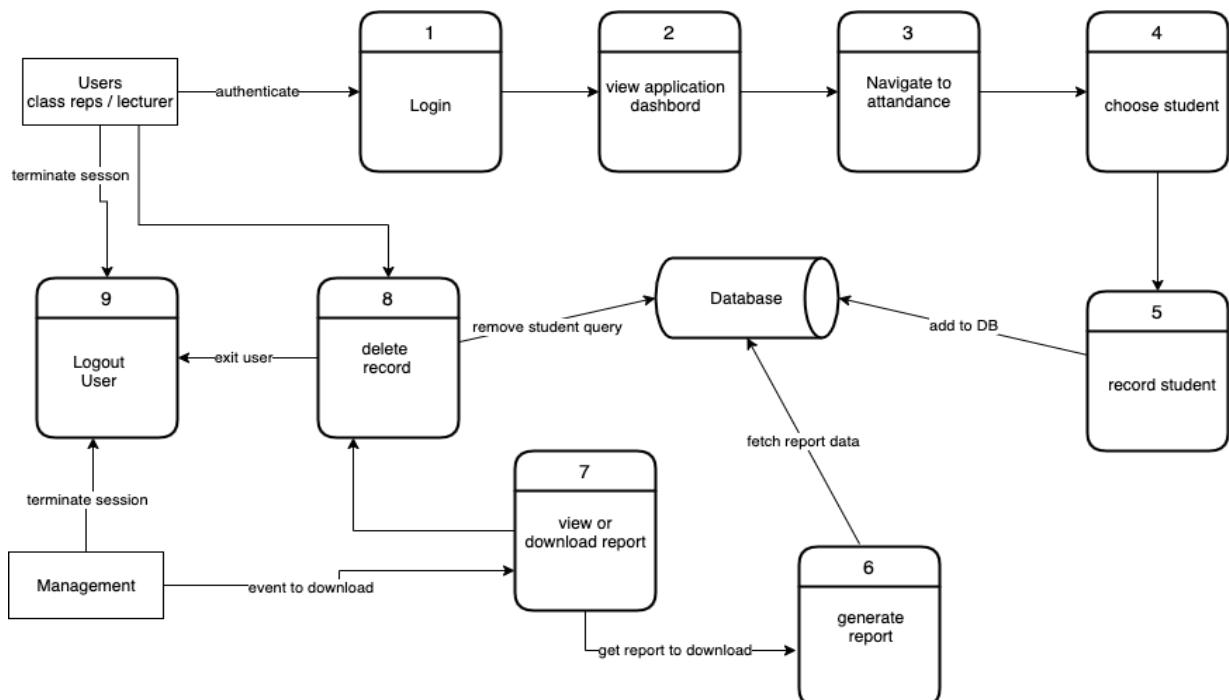


Figure 3.6: Data flow diagram

3.10 USE A CASE DIAGRAM

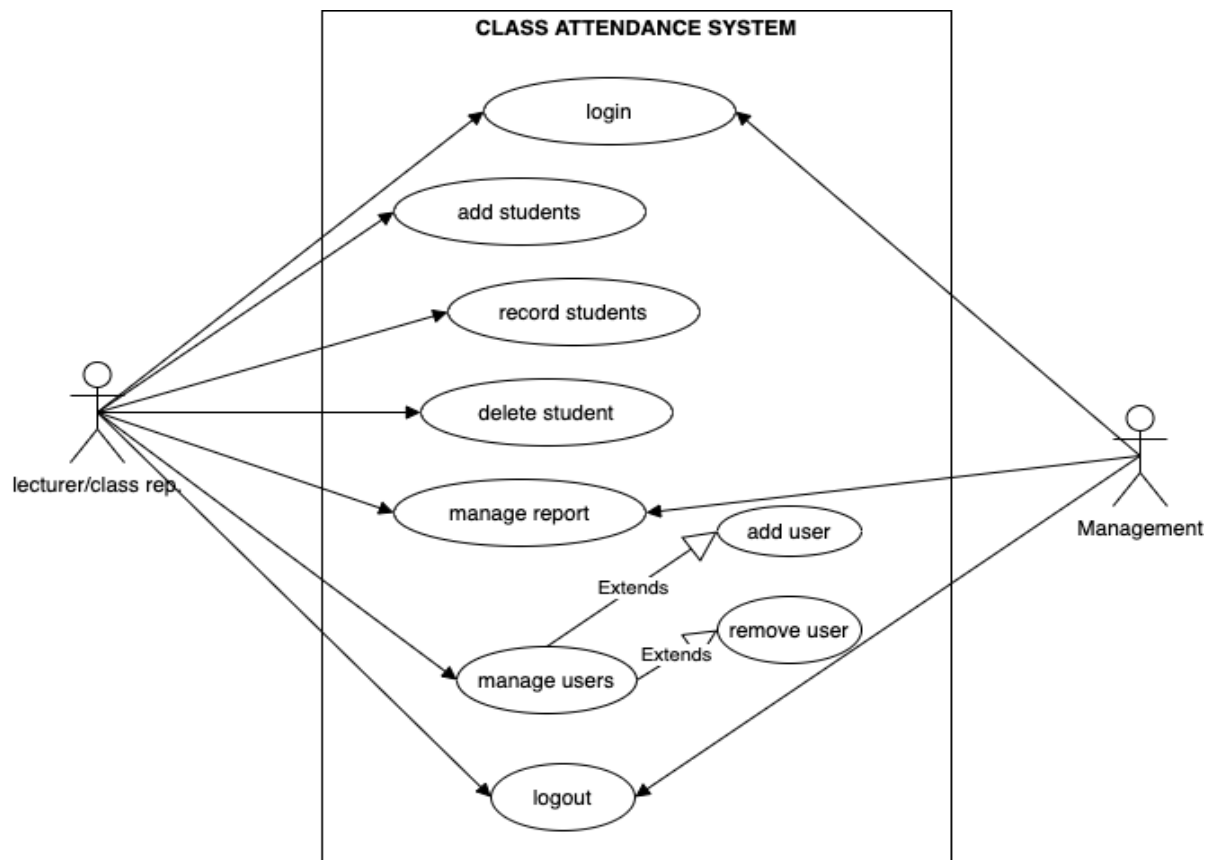


Figure 1: Use Case Diagram – Lecturers/class representatives and Management architecture

3.11 TOOLS USED

HTML: HTML or HyperText Markup Language is the standard markup language used in creating web pages and web applications. With CSS and JavaScript for World Wide Web. HTML allows you to mark selections of text as titles or paragraphs, and then leaves the interpretation of these marked elements up to the browser.

Cascading style sheets (CSS) give tremendous control over the presentation of a document and also allow one to specify the various style properties for a given HTML element such as

color, font, etc. Ease in maintenance, more formatting options, lightweight codes, etc. is among the few merits of CSS. (Republic, 2018)

JavaScript: JavaScript is a technique for manipulating HTML documents in the browser. This is often called client-side scripting. It allows the page author to incorporate facilities such as buttons that change in appearance when you move the mouse over them and menus that expand.

PHP: This is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

MySQL: The database management system that will help users to connect our application and store the products and user data in a relational format.

3.12 CONCLUSION

Based on the above analysis and study conducted based on the life cycle of the system development methodology, requirements, and functionalities of this newly developed system, we are confident to say that our system management meets all the requirements that were specified by the users. We also provide quality assurance activities to get the full system functionalities.

CHAPTER 4

SYSTEM TESTING, IMPLEMENTATION, AND DOCUMENTATION

4.1 INTRODUCTION

System Testing is the process of testing an integrated system to verify that it meets specified requirements. System testing is performed in the context of a system requirement specification and a functional requirement specification. It is the last step in the process of making sure that the product that will be delivered meets all of the requirements in the requirement document.

System Implementation uses the structure of the architectural design and the results of the system analysis to build system parts that meet the needs of the stakeholders and the needs of the system (Sebokwiki, 2018).

System Documentation plays a very crucial role in the development of a system or software. It comprises detailed language, illustrations, and photos that help different users understand and operate the system. This is referred to as a "written text" or "illustration" that conveys software or is embedded in the source code. (Bizfluent, 2019)

4.2 TESTING OF THE NEW SYSTEM

4.2.1 Unit testing

Students Module

First Name: Prince Middle Name: Kankam

Student Email: 10040101@ Gender: Male

Please enter a valid email address. 10040101@gmail.com is incomplete.

Add New Student

All Students In The System

Student ID	First Name	Last Name	Email	
10097447	Prince	Boadu	10097447@gmail.com	Bsc.
10096879	Wilson	Kulevome	10096879@gmail.com	Bsc.
10096972	Julian	Turkson	10096972@gmail.com	Bsc.
10097180	Daniel	Korsah	10097180@gmail.com	Bsc.
10097303	Jeremy	Ofori	10097303@gmail.com	Bsc.
10097532	Raphael	Kwashi	10097532@gmail.com	Bsc.

The Unit testing would not accept a student email without the @ sign and would not accept the student details to be added without all fields being filled with the correct details. It also checks if the date of birth is the correct and if any details are are complete

4.2.2 Functional testing

Check your passwords

Chrome found the password you just used in a data breach. To secure your accounts, we recommend checking your saved passwords.

Check passwords **Close**

Welcome to UPSA attendance System

admin@gmail.com

.....

Class Rep

Login

LIBRARY

With the functional testing, logging in with the wrong login details or users (Class rep or Admin) who are not saved in the system users would not be accepted. Also, any password used on the site used in a data breach would be identified for the user to change it

4.2.3 Usability testing

Book Attendance

search:

1

Prince Boadu10097447100

Present

Absent

Recorded Data

Name	Index Number	Status	Date	Action
Prince	10097447	present	2022-05-26 14:56:43	-
Gifty	10101595	present	2022-05-26 14:56:48	-
Ernest	10040101	absent	2022-05-26 14:56:57	-

Here, users are asked to perform or complete a task and will be observed by the developers for issues. This testing mainly focuses on the user's ease of using the application, the flexibility in handling controls, and the ability of the system to meet its objectives. This process involves searching for the students' index numbers to see if it shows the details of the student for the attendance to be taken effectively.

4.2.4 Acceptance testing

Reports

Manage Daily report

Daily Report

Generate Today's Report

From

dd/mm/yyyy

To

dd/mm/yyyy

Generate

student ID	Name	Status	Date
10097447	Prince Boadu	present	2022-05-29 14:47:01
10101595	Gifty Tetteh	present	2022-05-29 14:47:06
10040101	Ernest Dzene	absent	2022-05-29 14:47:25
10096879	Wilson Kulevorne	present	2022-05-29 14:47:59
10097303	Jeremy Ofori	present	2022-05-29 14:48:08
10098129	Emmanuel Crosby	absent	2022-05-29 14:48:18

Print

The purpose of this test is to evaluate the system's compliance with the requirements and assess whether it is acceptable for delivery. The main requirement needed by the system is to take,

generate, and print attendance reports. The daily attendance report is generated in the diagram above.

Daily Attendance

Name	Student ID	Attendance Status	Date
Prince Boadu	10097447	present	2022-05-29 14:47:01
Gifty Tetteh	10101595	present	2022-05-29 14:47:06
Ernest Dzene	10040101	absent	2022-05-29 14:47:25
Wilson Kulevome	10096879	present	2022-05-29 14:47:59
Jeremy Ofori	10097303	present	2022-05-29 14:48:08
Emmanuel Crosby	10098129	absent	2022-05-29 14:48:18

The daily attendance is generated to be printed in a pdf format if needed by the lecturer. This is shown in the diagram above.

4.2.5 Visual software testing

Online Attendance System

Attendance
7

System Administrators
1

Programmes
10

Courses
9

Total Students
17

Today's Record

student ID	Name	Status	Date
10097447	Prince Boadu	present	2022-05-29 14:47:01
10101595	Gifty Tetteh	present	2022-05-29 14:47:06

[Dashboard](#)
[Attendance](#)
[Add Programme](#)
[System Users](#)
[Add Course](#)
[Add Students](#)
[Report](#)
[Logout](#)

This testing is done to make sure that the layouts and appearance of the system user interface are correct. This is done to make sure that the user interface that the application shows to its users is correct based on how the system is developed to make it easier to use.

4.3 IMPLEMENTATION OF THE SYSTEM

This defines how the information system should be built, i.e., the physical system design, ensuring that the information system is operational and used, and ensuring that the information system meets quality assurance models.

4.3.1 Parallel Implementation

This is the implementation strategy that was used to deploy the new system into the stakeholders' existing systems. With this implementation method, the old and the new systems are operated side by side until the new system proves beyond reasonable doubt that it's reliable and can be used without running into any problems. This helps to prevent unnecessary costs in the future since both systems are used simultaneously, and the old system will be eradicated after verification and maximum operation of the new system. The ca-boat stock management system will run alongside the traditional way of keeping records. Doing this would help us identify any problems that arise so they can be solved.

4.3.2 Phased Implementation

This is a method of system changeover from an existing system to a new system that occurs in a staged manner. With phased installation, the new system is brought online in functional components; different parts of the old and new systems are used in cooperation until the new system is completely installed.

4.3.3 Pilot Implementation

Pilot implementation is an activity undertaken in the context of systems development and implementation to test a system in a realistic setting and thereby learn about the fit between the system and its organizational use situation and about changes necessary before full-scale deployment (Simonsen, Hertzum, Granlien, & Barlach, 2008).

4.3.4 Direct Implementation

This is the process of changing over from the old information system to a new one by turning off the old system when the new one is turned on.

4.4 SYSTEM DOCUMENTATION

4.4.1 About the system

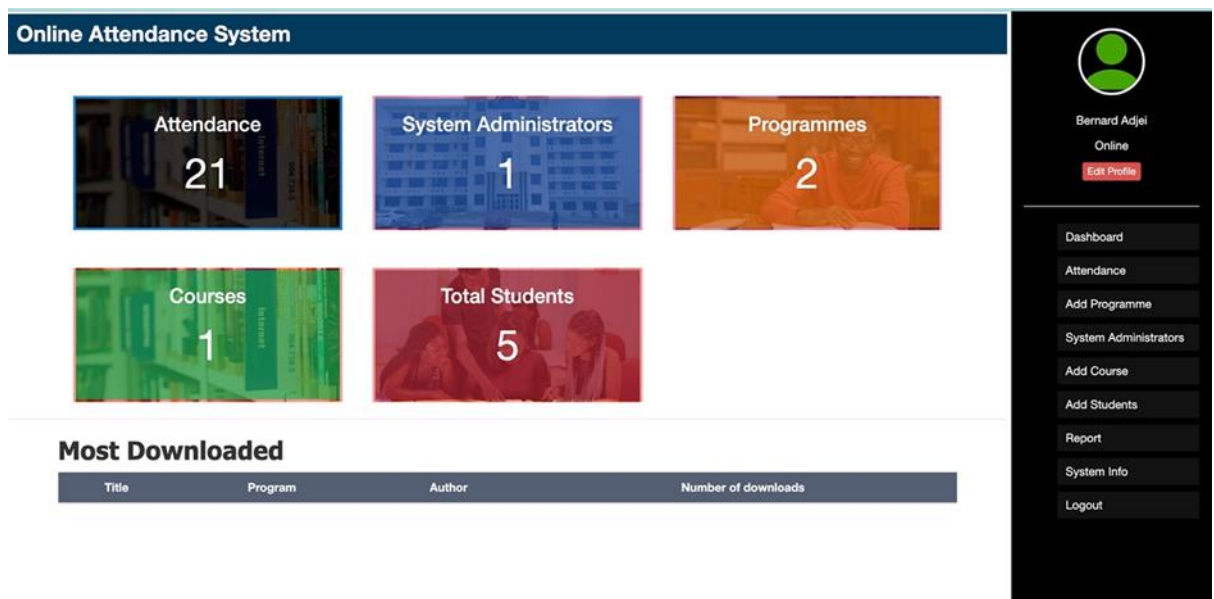
Web-based class attendance system

The system is a web-based system designed to suit both desktop devices and mobile devices to solve and promote transparency for recorded students during a particular lecture period. With this system, management can monitor and make management decisions for future growth.

Features and Functionalities:

- **Dashboard module**

This is where an authenticated user is redirected to perform and manage the system. This shows the statistics of the entire system. With this functionality, users can keep track of the recorded students, total attendance, programs, and more.



- **System User module**

The User module is where new users can be added to the system to perform a specific operation based on the user's status.

System Users Module

First Name:

Middle Name:

Last Name:

Email Address:

User Type:

Choose User

Password:

Add Admin

System Administrators

First Name	Middle Name	Last Name	Email	User Type	Added Date	Action
KamKam	Boadu	Prince	10097447@upsamail.edu.gh	Admin	2020-06-03 17:55:25	+ -
Amos	Ron	Steve	10097650@upsamail.edu.gh	Admin	2022-02-20 07:49:47	+ -

KamKam Prince

Online

Edit Profile

Dashboard

Attendance

Add Programme

System Users

Add Course

Add Students

Report

Logout

- Programs module

This is where system administrators can add programs offered by students that will be recorded on the platform.

Programmes

Programme Name:

Programme Description:

Add New Programme

List Of Programmes

#	Programme Name	Programme Description	Added By	Added On	Action
9	Makerting	dd	4	2022-01-23 09:11:19	-
10	Makerting new	das	4	2022-01-23 09:12:21	-

Bernard Adjei

Online

Edit Profile

Dashboard

Attendance

Add Programme

System Administrators

Add Course

Add Students

Report

System Info

Logout

- Courses module

This is the module for adding and displaying courses offered by a student.

Courses

Add Course

Course Title:

course name

Course Code:

course code

Credit Hours:

credit hours

Description:

description for course

Add Course

Available Courses

Course Title	Course Code	Credit Hours	Description	Action
Software Quality Management	BITM 408	3	This course covers methods and tools for achieving software quality assurance at various levels of a software system (module, subsystem, and system levels). The principles of software development and management will be discussed with special emphasis on the processes and activities of quality assurance. State-of-the-art tools and techniques including development process modeling, manual and computer-assisted reviews, and ROI analysis of new processes and the role of standards, policies, and procedures will be discussed.	+ -
Professional Computing Practice	BITM 402	3	Professional Computing Practice provides a comprehensive treatment of issues facing computer professionals in today's working environment. The course among a number of things introduces students to the rudiments of ethical computing and what is required of computer professionals. The course also gives students the foundation they need to make appropriate computing	+ -

Prince Boadu

Admin

Edit Profile

Dashboard

Attendance

Add Programme

System Users

Add Course

Add Students

Report

Logout

- Report module

With this functionality, administrators and users can generate a report based on the monthly or daily activities of the system

Manage Report

Reports

Manage Daily report

Daily Report

Generate Today's Report

From

dd/mm/yyyy

To

dd/mm/yyyy

Generate

student ID	Name	Status	Date
10097447	Prince Boadu	present	2022-05-26 14:56:43
10101595	Gifty Tetteh	present	2022-05-26 14:56:48
10040101	Ernest Dzene	absent	2022-05-26 14:56:57

Print

Prince Boadu

Admin

Edit Profile

Dashboard

Attendance

Add Programme

System Users

Add Course

Add Students

Report

Logout

- Student module

This module handles the adding and displaying of the new system that is been added to the system.

Students Module

First Name:

Middle Name:

Last Name:

Student Email:

Gender:

Male

Date of Birth:

Student Id:

Level:

100

Program:

Choose

Session:

Morning

Add New Student

All Students In The System

Student ID	First Name	Last Name	Email	Program	Added Date	Action
10097447	Prince	Boadu	10097447@gmail.com	Bsc. Information Technology Management	2022-05-17 12:40:07	+ -
10096879	Wilson	Kulevome	10096879@gmail.com	Bsc. Information Technology Management	2022-05-17 12:46:15	+ -
10096972	Julian	Turkson	10096972@gmail.com	Bsc. Information Technology Management	2022-05-17 12:50:38	+ -
10097180	Daniel	Korsah	10097180@gmail.com	Bsc. Information Technology Management	2022-05-17 12:56:55	+ -
10097303	Jeremy	Ofori	10097303@gmail.com	Bsc. Information Technology Management	2022-05-17 13:07:55	+ -
10097532	Raphael	Kwadwo	10097532@gmail.com	Bsc. Information Technology Management	2022-05-17 13:09:11	+ -

Prince Boadu

Admin

Edit Profile

Dashboard

Attendance

Add Programme

System Users

Add Course

Add Students

Report

Logout

4.4.2 USER ACCESS LEVEL

The user is the most crucial reason for the development of this system. For this project, the user (client) is the UPSA lecturer.

Download and install

Installation of the app is simple and easy. The user has to navigate to the endpoint of the server. The app is installed and hosted on a web server with a domain. Users must enter the domain name or server address to get the interface of the app running on the user's device.

4.4.3 GETTING STARTED

The whole process of operating this system involves the following chain of events;

1. Launch the application.
2. Login with user details such as username, password, and user type.
3. Click on add program.
4. Click on add courses.
5. Click on add student.
6. Click on attendance to start recording students

4.5 CONCLUSION

For every successful system development project, there must be proper and effective testing, implementation, and documentation. This chapter deals with how the web-based system was tested after its development. This is to ensure that the system complies with all the various standards and specifications that were specified and gathered earlier.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

The UPSA class attendance system is a web-based application for managing, tracking, and recording students' UPSA class attendance during the lecture period. The system provides an efficient, effective, and transparent way of keeping the students present or absent. The system did solve the problem of using paper for recording students available for a particular lecture period. Moreover, the report section can be accessed by the lecturers and management of the school to make their own decisions based on the status of the students.

5.2 SUMMARY

The study on the development of a class attendance system for UPSA management and lecturers enables UPSA to manage and keep track of students during academic activities. This came to our notice in the study that UPSA lecturers find it very difficult to get trusted reports on students present and absent. The manual way of recording the students was time-consuming and lacked transparency. As a result of this, we decided to build this application to solve the above problem. We believed that, with the approach, methodology, and procedures deployed in this study, we had developed an effective and user-friendly system that would solve the above-stated challenges in the school.

5.3 RECOMMENDATION

- We recommend that staff of UPSA lecturers, management, and class representatives, who will be exposed to the web-based system will be taken through proper and effective training and education on the use of the system.
- Also, we recommend that frequent maintenance and review must be carried out on the system when and where necessary.

5.4 CONCLUSION

This study aimed to outline the importance of an electronic and modern way of keeping records of student attendance. The development focused primarily on the usability and friendliness of the system. The study documents include the additional module that gives the system a more exciting interface for users. Our system's objective provides ease, effective and efficient keeping track of recorded students was achieved. On the other hand, this study has been very complex and challenging, but in all, it yielded value to our studies since different knowledge and experience were acquired. Also, we have been able to acquire knowledge on how to solve challenges to the best of our ability.

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I. APPENDIX A – PROGRAMMING SAMPLE CODES

```
<?php

session_start();

//link to connect to database

include '../db.php';


//Query for fetching all books

$sql = "SELECT * FROM books";

$queryBook = mysqli_query($conn, $sql);

$AllBooksAvailable = mysqli_num_rows($queryBook);


//Query for fetching Featured books

$sql = "SELECT * FROM programmes";

$queryProgramme = mysqli_query($conn, $sql);

$programTotal = mysqli_num_rows($queryProgramme);


//Query for fetching System Users

$sql = "SELECT * FROM users";

$queryUsers = mysqli_query($conn, $sql);

$usersAvailable = mysqli_num_rows($queryUsers);


//Query for fetching total Students

$sql = "SELECT * FROM students";

$queryStudents = mysqli_query($conn, $sql);

$totalstudents = mysqli_num_rows($queryStudents);
```

```
//Query for fetching total courses
```

```
$sql = "SELECT * FROM course";
```

```
$querycourse = mysqli_query($conn, $sql);
```

```
$courseTotal = mysqli_num_rows($querycourse);
```

```
//Getting the most downloaded book
```

```
//Query for fetching Featured books
```

```
$sql = "SELECT * FROM books ORDER BY downloads DESC LIMIT 0, 5";
```

```
$queryBookMostDownloaded = mysqli_query($conn, $sql);
```

```
?>
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
    <title>class attendance | admin</title>
```

```
    <link rel="stylesheet" href="../../bootstrap/bootstrap.min.css">
```

```
    <link rel="stylesheet" href="../../css/adminPages.css" type="text/css">
```

```
</head>
```

```
<body>
```

```
<section class="dashboard_page">
```

```
<div class="row side_bar_nd_main_area">
```

```
<!-- //include the sibear navigation here -->
```

```
<?php include '../includes/sideNavBar.php'; ?>
```

```
<div class="col-md-10 main_area">
```

```
<div class="header">
```

```
<h2>Online Attendance System</h2>
```

```
</div>
```

```
<div class="content">
```

```
<div class="grid">
```

```
<div class="box box1">
```

```
<div class="overlay">
```

```
<div class="items">
```

```
<h3>Attendance</h3>
```

```
<p><?php echo $AllBooksAvailable; ?></p>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<div class="box box2">
```

```
<div class="overlay">
```

```
<div class="items">
```

```
<h3>System Administrators</h3>
```


<p><?php echo \$usersAvailable; ?></p>

</div>

</div>

</div>

<div class="box box3">

<div class="overlay">

<div class="items">

<h3>Programmes</h3>

<p><?php echo \$programTotal; ?></p>

</div>

</div>

</div>

<div class="box box4">

<div class="overlay">

<div class="items">

<h3>Courses</h3>

<p><?php echo \$courseTotal; ?></p>

</div>

</div>

</div>

<div class="box box5">

<div class="overlay">

<div class="items">

<h3>Total Students</h3>

<p><?php echo \$totalstudents; ?></p>

</div>

</div>

</div>

</div>

<hr>

<!-- The most downloaded book display section -->

<section class="most_downloaded container-c">

<h2 style="font-weight:bolder;font-family:tahoma">Most Downloaded</h2>

<table class="table table-striped table-responsive">

<thead>

<th>Title</th>

<th>Program</th>

<th>Author</th>

<th>Number of downloads</th>

</thead>

<tbody>

<!-- while(\$results = mysqli_fetch_assoc(\$queryBookMostDownloaded)): ?> -->

<!-- < endwhile; ?> -->

</tbody>

</table>

</section>

</div>

</div>

</div>

</section>

</body>

</html>

<?php

session_start();

//link to connect to database

include '../db.php';

if(isset(\$_POST['addNewStudent'])){\n

//processing the users form

//variables

\$firstname = mysqli_real_escape_string(\$conn, \$_POST['firstname']);

\$middlename = mysqli_real_escape_string(\$conn, \$_POST['middlename']);

\$lastname = mysqli_real_escape_string(\$conn, \$_POST['lastname']);

\$email = mysqli_real_escape_string(\$conn, \$_POST['email']);

\$gender = mysqli_real_escape_string(\$conn, \$_POST['gender']);

\$dob = mysqli_real_escape_string(\$conn, \$_POST['dob']);

\$student_id = mysqli_real_escape_string(\$conn, \$_POST['student_id']);

```

$level = mysqli_real_escape_string($conn, $_POST['level']);

$Program = mysqli_real_escape_string($conn, $_POST['Program']);

$Session = mysqli_real_escape_string($conn, $_POST['Session']);

// echo $Program;

// die();


//insert user to the database

$sql = "INSERT INTO students(firstname, othername, lastname, email, gender, dob, program,
level, student_id, profileImage, session) VALUES('$firstname','$middlename','$lastname',
'$email','$gender', '$dob','$Program','$level','$student_id', 'avatar1.png','$Session')";

$query = mysqli_query($conn, $sql);

if($query == true){

    echo 'user added';

    header("Location: students.php?students=added");

}else{

    echo 'failed when inserting the new user';

    header("Location: students.php?students=failed");

}

}


//fetch users and place them in the table

$sql = "SELECT * FROM students";

$usersQuery = mysqli_query($conn, $sql);

```

```

//fetch users and place them in the table

$sql = "SELECT * FROM programmes";

$programmeQuery = mysqli_query($conn, $sql);


//check number of rows

//$usersCount = mysqli_row_nums($usersQuery);


//if($usersCount > 0){

//    fetch users

// }

//else{

//    display no user found

// }


// delete user by id from the table

if(isset($_GET['del_id'])){

    $del_id = $_GET['del_id'];

    $sql = "DELETE FROM students WHERE id = '$del_id'";

    $query = mysqli_query($conn, $sql);

    if($query == true){

        header("Location: students.php?deleted=true");

    }

}

```

```
// if(isset($_GET['edit_id'])){  
  
//     $edit_id = $_GET['edit_id'];  
  
//     $sql = "SELECT * FROM users WHERE user_id = '$edit_id'";  
  
//     $query = mysqli_query($conn, $sql);  
  
//     if($query == true){  
  
//         $user = mysqli_fetch_assoc($query);  
  
//         echo $user['firstName'];  
  
//         header("Location: users.php?edit=true");  
  
//     }  
  
// }
```

?>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>ITSA Library | admin</title>

<link rel="stylesheet" href="../../bootstrap/bootstrap.min.css">

<link rel="stylesheet" href="../../css/adminPages.css" type="text/css">

</head>

<body>

```

<section class="dashboard_page">

    <div class="row side_bar_nd_main_area">

        <!-- //include the sibebar navigation here -->

        <?php include '../includes/sideNavBar.php'; ?>

        <div class="col-md-10 main_area">

            <div class="header">

                <h2>Students Module</h2>

            </div>

            <div class="content">

                <div class="container-c">

                    <div class="addUserArea">

                        <form action="" method="post" enctype="multipart/form-data">

                            <div class="row">

                                <div class="col-md-4">

                                    <div class="form-group">

                                        <label for="firstname">First Name:</label>

                                        <input
                                            type="text"
                                            name="firstname"
                                            id="firstname"
placeholder="FirstName" class="form-control" value="" required>

                                    </div>

                                </div>

                                <div class="col-md-4">

                                    <div class="form-group">

                                        <label for="middlename">Middle Name:</label>

```

```
        <input      type="text"      name="middlename"      id="middlename"
placeholder="middlename" class="form-control">
```

```
    </div>
```

```
</div>
```

```
<div class="col-md-4">
```

```
    <div class="form-group">
```

```
        <label for="lastname">Last Name:</label>
```

```
        <input      type="text"      name="lastname"      id="lastname"
placeholder="lastname" class="form-control" required>
```

```
    </div>
```

```
</div>
```

```
</div>
```

```
<div class="row">
```

```
    <div class="col-md-5">
```

```
        <div class="form-group">
```

```
            <label for="email">Student Email:</label>
```

```
            <input type="email" name="email" id="email" placeholder="email"
class="form-control" required>
```

```
        </div>
```

```
</div>
```

```
<div class="col-md-3">
```

```
    <div class="form-group">
```

```
        <label for="gender">Gender:</label>
```

```
        <select name="gender" id="gender" class="form-control" required>
```

```
            <option value="Male">Male</option>
```


<option value="Female">Female</option>

</select>

</div>

</div>

<div class="col-md-4">

<div class="form-group">

<label for="dob">Date of Birth:</label>

<input type="date" name="dob" id="dob" class="form-control" required>

</div>

</div>

</div>

<div class="row">

<div class="col-md-3">

<div class="form-group">

<label for="stuid">Student Id:</label>

<input type="text" name="student_id" id="stuid" class="form-control"
required>

</div>

</div>

<div class="col-md-3">

```
<div class="form-group">
```

```
<label for="level">Level:</label>
```

```
<select name="level" id="level" class="form-control" required>
```

```
<option value="100">100</option>
```

```
<option value="200">200</option>
```

```
<option value="300">300</option>
```

```
<option value="400">400</option>
```

```
</select>
```

```
</div>
```

```
</div>
```

```
<div class="col-md-3">
```

```
<div class="form-group">
```

```
<label for="Program">Program:</label>
```

```
<select name="Program" id="Program" class="form-control" required>
```

```
<option value="0">Choose</option>
```

```
<?php while($programme = mysqli_fetch_assoc($programmeQuery)):
```

```
?>
```

```
<option value="<?php echo $programme['program_title'] ?>"><?php  
echo $programme['program_title'] ?></option>
```

```
<?php endwhile; ?>
```

```
</select>
```

```
</div>
```

```
</div>
```

```
<div class="col-md-3">
```

```
<div class="form-group">
```

```
<label for="Session">Session:</label>
```

```
<select name="Session" id="Session" class="form-control" required>
```

```
<option value="Morning">Morning</option>
```

```
<option value="Evening">Evening</option>
```

```
<option value="Weekend">Weekend</option>
```

```
</select>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<div class="form-group">
```

```
<button class="btn btn-success " name="addNewStudent" type="submit">Add New  
Student</button>
```

```
</div>
```

```
</form>
```

```
</div>
```

```
<h3>All Students In The System</h3>
```

```
<div class="usersDisplay">
```

```
<table class="table table-striped table-bordered table-responsive text-center"  
id="tableData">
```

```
<thead >
```

```
<th class="text-center">First Name</th>
```

```
<th class="text-center">Middle Name</th>
```

```
<th class="text-center">Last Name</th>
```

```
<th class="text-center">Email</th>
```

```
<th class="text-center">Program</th>
```

```
<th class="text-center">Added Date</th>
```

```
<th class="text-center">Action</th>
```

```
</thead>
```

```
<tbody>
```

```
<?php while($row = mysqli_fetch_assoc($usersQuery)): ?>
```

```
<tr>
```

```
<td> <?php echo $row['firstname']; ?> </td>
```

```
<td> <?php echo $row['othername']; ?> </td>
```

```
<td> <?php echo $row['lastname']; ?> </td>
```

```
<td> <?php echo $row['email']; ?> </td>
```

```
<td><?php echo $row['program']; ?> </td>
```

```
<td><?php echo $row['added_on']; ?> </td>
```

```
<td>
```

```
<a href="students.php?edit_id=<?php echo $row['id']; ?>" class="btn btn-  
success btn-xs"><span class="glyphicon glyphicon-plus"></span></a>
```

```
<a href="students.php?del_id=<?php echo $row['id']; ?>" class="btn btn-
danger btn-xs"><span class="glyphicon glyphicon-minus"></span></a>
```

```
</td>
```

```
<!-- <td>
```

```
<a href="students.php?edit_id=<?php echo $row['id']; ?>" class="btn btn-
success btn-xs"><span class="glyphicon glyphicon-plus"></span></a>
```

```
<a href="students.php?del_id=<?php echo $row['id']; ?>" class="btn btn-danger
btn-xs"><span class="glyphicon glyphicon-minus"></span></a>
```

```
</td> -->
```

```
</tr>
```

```
<?php endwhile; ?>
```

```
</tbody>
```

```
</table>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

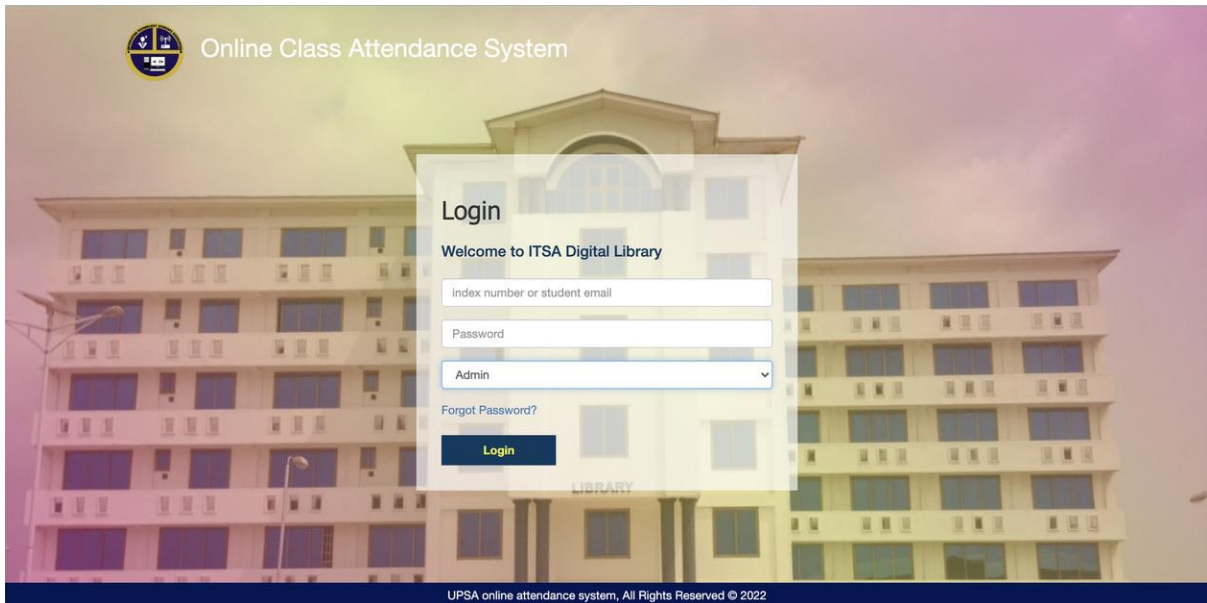
```
</section>
```

```
</body>
```

```
</html>
```

II. APPENDIX B – APPLICATION INTERFACES

LOGIN



Online Class Attendance System

Login

Welcome to ITSA Digital Library

index number or student email

Password

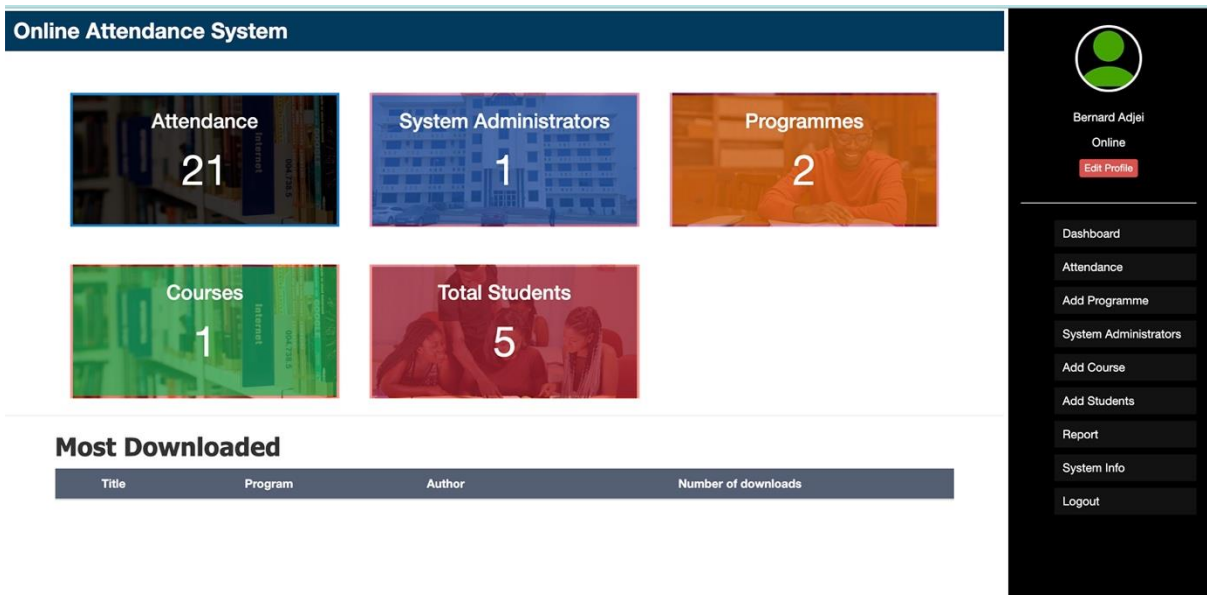
Admin

Forgot Password?

Login

UPSA online attendance system, All Rights Reserved © 2022

DASHBOARD



Online Attendance System

Attendance
21

System Administrators
1

Programmes
2

Courses
1

Total Students
5

Most Downloaded

Title	Program	Author	Number of downloads
-------	---------	--------	---------------------

Bernard Adjiei
Online
Edit Profile

Dashboard
Attendance
Add Programme
System Administrators
Add Course
Add Students
Report
System Info
Logout

STUDENTS

Students Module

First Name:
Middle Name:
Last Name:

Student Email:
Gender:
Date of Birth:

Student Id:
Level:
Program:
Session:

[Add New Student](#)

All Students In The System

First Name	Middle Name	Last Name	Email	Program	Added Date	Action
John		Doe	johnd123@upsamail.edu.gh	Bsc. Information Technology Management	2020-06-19 13:07:47	+ -
PRINCE	KANKAM	BOADU	10097447@upsamail.edu.gh	Bsc. Information Technology Management	2020-06-19 13:09:08	+ -
AMOS	RON	STEVE	10097650@upsamail.edu.gh	Bsc. Information Technology Management	2020-06-19 13:10:44	+ -
Joshua		Yeboah	11111@upsamail.edu.gh	Bsc. Information Technology Management	2020-06-19 15:06:18	+ -



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[Edit Profile](#)

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[Add Course](#)
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[Report](#)
[System Info](#)
[Logout](#)

SYSTEM USERS

System Users Module

First Name:
Middle Name:
Last Name:

Email Address:
User Type:

Password:

[Add Admin](#)

System Administrators

First Name	Middle Name	Last Name	Email	User Type	Added Date	Action
KamKam	Boadu	Prince	10097447@upsamail.edu.gh	Admin	2020-06-03 17:55:25	+ -
Amos	Ron	Steve	10097650@upsamail.edu.gh	Admin	2022-02-20 07:49:47	+ -



KamKam Prince
Online

[Edit Profile](#)

[Dashboard](#)
[Attendance](#)
[Add Programme](#)
[System Users](#)
[Add Course](#)
[Add Students](#)
[Report](#)
[Logout](#)

PROGRAMMES

Programmes

Programme Name:

Programme Description:

Add New Programme

List Of Programmes

#	Programme Name	Programme Description	Added By	Added On	Action
9	Makerting	dd	4	2022-01-23 09:11:19	
10	Makerting new	das	4	2022-01-23 09:12:21	



Bernard Adjel

Online

Edit Profile

Dashboard

Attendance

Add Programme

System Administrators

Add Course

Add Students

Report

System Info

Logout

REPORT

Manage Report

Reports

Manage Daily report

Daily Report

Generate Today's Report

From



To



Generate

student ID	Name	Status	Date
10097447	Prince Boadu	present	2022-05-26 14:56:43
10101595	Gifty Tetteh	present	2022-05-26 14:56:48
10040101	Ernest Dzene	absent	2022-05-26 14:56:57

Print



Prince Boadu

Admin

Edit Profile

Dashboard

Attendance

Add Programme

System Users

Add Course

Add Students

Report

Logout