

Ewurama Aboagyewaa Amponsah

by Abubakari Bilal

Submission date: 23-Sep-2022 04:02AM (UTC+0800)

Submission ID: 1904878552

File name: main_2.pdf (5.86M)

Word count: 5406

Character count: 29525

¹
UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FACULTY OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

A PROJECT REPORT ENTITLED
DESIGN AND IMPLEMENTATION OF A WEB BASED
CHURCH MANAGEMENT SYSTEM

BY
EWURAMA ABOAGYEWAA AMPONSAH

¹
SUBMITTED FOR THE PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND
ENGINEERING

PROJECT SUPERVISOR

.....
DR HAMIDU ABDEL-FATAO

¹
TARKWA, GHANA

SEPTEMBER, 2022

DECLARATION

I, Ewurama Aboagyewaa Amponsah , declare that this project work is my own work. It is being submitted to the Computer Science and Engineering Department of the University of Mines and Technology (UMaT), Tarkwa. It has not been submitted for any degree or examination in any other University.

Signature of Student: _____

_____ day of _____ (year) _____

ABSTRACT

A church management system provides a means for the church to store and retrieve records. The ability to do so is vital to overall church performances and good governance. The management system provides financial accounting, a means of communication and a centralized membership management platform. This project is a report on how a system for developed for the Christ Apostolic Church International, New Bortianor Assembly. It was observed that the systems already developed do not fit the needs of the church wholly. The church was facing a lot of difficult in creating a centralized storage of data and it was even harder to retrieve data. This web-based management system presents an efficacious and coherent means for the church to store and retrieve all essential records of members which include but are not limited to personal details and tithes. The system has an intuitive user interface and so users with fundamental skills are comfortable using it. Every church needs a managements system which will help hold leaders accountable for finances and other operations of the church.

ACKNOWLEDGMENTS

I am thankful to God for grace, favour and knowledge which saw me through the completion of this project. To my Supervisor, Dr. Hamidu Abdel-Fatao whose contributions were essential to the problem solution. I also want to thank my parents, who have supported and invested in my education. Finally, I want to thank Bilal Abubakari, who gave me the push whenever I needed and saw to the development of the system.

DEDICATION

This project is dedication to Harmony House

Contents

DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGMENTS	iv
LIST OF FIGURES	ix
1 INTRODUCTION	1
1.1 Statement of the Problem	1
1.2 Project Objective	2
1.3 Expected Outcomes	2
1.4 Methods To Be Used	2
1.5 Tools and Facilities	3
1.6 Scope of Work	3
1.7 Organisation of Theses	3
2 LITERATURE REVIEW	4
2.1 Introduction	4
2.2 Historical Overview of the Church	4
2.3 Christ Apostolic Church International	4
2.3.1 Structure of the Management of Christ Apostolic Church International, New Bortianor Central Assembly	5
2.4 Systems	6
2.5 Definition of Management Systems	6
2.6 Church Management Systems	6
2.6.1 Features of a Good Management System	6
2.6.2 Importance of Church Management Systems	7
2.7 Review of Already Existing Systems	8
3 SYSTEM DESIGN AND METHODOLOGY	10
3.1 Chapter Overview	10

3.2	Introduction	10
3.3	Phases Agile Software Development Model	11
3.3.1	Requirements Gathering	11
	Interviews	11
	Reading Existing Documents	11
3.3.2	Designing the Requirements	12
	Functional Requirements	12
	Non-Functional Requirements	13
3.3.3	Construction	13
	Use Case Diagram	13
	FlowChart	14
3.3.4	Testing	14
	White box Testing	14
	Black box Testing	16
3.3.5	Deployment	16
3.3.6	Feedback	16
4	SYSTEM TESTING AND DISCUSSION	17
4.1	Chapter Overview	17
4.2	Homepage	17
4.3	Admin/Group Leader Login Page	18
4.3.1	Admin Dashboard	18
4.3.2	Add Member Form	19
4.3.3	Offering Page for Admin	19
4.3.4	Tithes Page for Admin	20
4.4	Group Leader Dashboard	20
4.4.1	Tithes Page for Group Leader	21
4.4.2	Offering Page for Group Leader	21
4.5	Member Sign Up Page	22
4.5.1	Member Sign In Page	22
4.5.2	Member Dashboard	23
4.5.3	Member Tithes Page	23

2		
5	CONCLUSION, LIMITATIONS, RECOMMENDATIONS	24
5.1	Conclusion	24
5.2	Limitations	24
5.3	Recommendations	24

LIST OF FIGURES

3.1 Use Case Diagram	14
3.2 Flowchart	15
4.1 Homepage	17
4.2 Login page for Admin and Group Leader	18
4.3 Administrator Dashboard	18
4.4 Form Used in Registering Members	19
4.5 Offering Page for the Administrator	19
4.6 Tithes Page for the Administrator	20
4.7 Saturday Group Leader Dashboard	20
4.8 Saturday Group Leader Tithes Page	21
4.9 Saturday Group Leader Offering Page	21
4.10 Member Sign Up Page	22
4.11 Member Sign In Page	22
4.12 Member Dashboard	23
4.13 Member View Tithes	23

Chapter 1

INTRODUCTION

1.1. Statement of the Problem

Digitalization is the current norm. Digitalization helps improve and facilitate a better informational exchange, take advantage of analytics and real user data and also prevents human error (Rolson, 2022). It is an essential and efficient form of record keeping. The impact of digitalization will be major; it has been compared to the industrial revolution. (Brennen et.al, 2016). The church is one of the institutions that greatly relies on records, and so it is only right that the church keeps digital records of members and all other important information, such as the offering, tithe, and contribution of members.

Keeping records is one the effective ways to ensure that church funds are not misappropriated or embezzled. A study by Ahiabor and Mensah(2013) reveals the fact that churches are now not carrying out their administrative tasks in a competent manner, particularly when it comes to finances, is a huge problem. Many churches believe that all Christian employees can be trusted, hence many theft and fraud instances go unreported as a result.

Most church management systems are designed to keep records of members and a few other givings. However, this project is tailored to meet the needs of the Christ Apostolic Church, New Bortianor Central Assembly. Currently, the church has no record of personal details of its members. The entire membership is divided into seven main groups, managing the various groups and ministries includes keeping track of the financial records of both individual members and the groups as a whole.

Currently, the church only stores financial records which are the tithes and offerings. These records are stored in excel sheets. This is unreliable as the data could be lost if the hard disk of the laptop develops a fault. It is also a security risk as the computer that has these files is not for private use. Also, management cannot access this data remotely. The church also has no means of communicating to members

electronically, apart from the WhatsApp platform. However, the platform communication is not entirely effective as a majority of the members do not own smart phones and so are not members of the platform.

This system will ensure consistent update of records of the church. It will keep records of the various groupings and their finances in the church. In the event where a member needs support, it will keep record of the contributions for this purpose. The church is also unable to send announcements to all members since a fraction of members are not always present during Sunday gatherings and are not on the WhatsApp platform.

1.2. Project Objective

The objective of this project is to:

- i. Design and implementation of a web application to allow management of the church store records of the church.
- ii. Provide an electronic means for the church management to communicate.

1.3. Expected Outcomes

At the end of the project, it is expected that the system will:

- i. Be an efficient web application to help store and retrieve relevant and sensitive details of members of the church.
- ii. Help keep track of the finances of the church.
- iii. Send announcements (in the form of emails) to all members every Sunday.

1.4. Methods To Be Used

- i. Review of relevant literature.
- ii. Consultation with supervisor and the church management.
- iii. Agile software development model.

1.5. Tools and Facilities

- i. GitHub
- ii. Stack overflow
- iii. Server-side programming language: PHP
- iv. Scripting and styling languages: HTML and CSS
- v. Client-side scripting: JavaScript and jQuery
- vi. Database: MYSQL
- vii. IDE: Visual Studio Code, PyCharm
- viii. Internet
- ix. University of Mines and Technology (UMaT) Remote Library

1.6. Scope of Work

This project is limited to the Christ Apostolic Church, New Bortianor Assembly.

1.7. Organisation of Theses

This report is divided into five chapters. Chapter 1 is the Introductory chapter which contains the statement of problem. Chapter 2 provides a history of the problem via review of relevant literature and investigates existing solutions to the problem. Chapter 3 and 4 contains relevant information and describes the procedures that were used in the implementation of the project. Chapter 5 summarizes the work and lists limitations of the solution developed and recommends possible solutions for these limitations.

Chapter 2

LITERATURE REVIEW

2.1. Introduction

This chapter contains the review of literature on church management systems that have already been developed. It defines and explains the importance of church management systems. It also highlights the features of a good management system.

2.2. Historical Overview of the Church

The Christian religion is the largest religious group on earth. Christians believe in the trinity which is God as the father, the son and the holyspirit. Research by Nortey (2019), states that as of the early 21st century, Christianity had around 2.2 billion adherents and represented about a quarter to a third of the world's population and is the world's largest religion. Christianity is the state religion of several countries. However, there are divisions which are based on various practices and beliefs. The main divisions of the Christianity religion are the Catholics and the Protestants. A study by Arrunada (2010), develops two hypotheses about economically-relevant values of Christian believers and goes on to highlight the different social ethic and the similarities in the work ethic between the two major divisions. There are significant splits within the protestant community or subcategories like the Orthodox, which consists of Methodists, Presbyterians, and Anglicans, the Charismatic and other Pentecostal movements.

2.3. Christ Apostolic Church International

Apostle Peter Newman Anim is known as the founding father of Pentecostalism in Ghana. From 1917 Anim and his Prayer group desired to live like the early Christians in the book of Acts (Anon, 2022). Majority of the members left their towns, villages, and houses to settle in Asamankese to form a community known as "Beliefs Home" or "Faith Quarters," where they lived out their faith, they practically adopted the

lifestyle of the early Apostles. Others persisted in selling some of their possessions in order to join them. They were similar in certain ways. Later, several of these residences or quarters for the Faith were built at Finte in the Volta region, Pepeadze, Mankessim in the central region, and other locations. Living in close proximity to each other was essential as that would ensure effective and swift gatherings for various religious activities such as bible studies and prayers. Anim was said to have caused the holy spirit visitation at Asamankese. Many of the church members till this day, go to Asamankese to seek the face of God, especially for divine healing.

2.3.1. Structure of the Management of Christ Apostolic Church International, New Bortianor Central Assembly

The management of the church is the leadership board of the church. The pastor is appointed by the national executives, but the other members of management are appointed by the pastor based on qualification, dedication and spiritual leading. The management of the church is backbone of the church. They ensure smooth running of operations.

Pastor: The pastor is the spiritual leader of the church and so his primary task is to ensure that the required leadership and direction for his subordinates and the church is provided.

Secretary: The secretary is responsible for conveying relevant messages to the congregation through announcements. **Financial Secretary:** The financial secretary draws the church budget and also sets the target for the mid-year and end of year harvest. He/she is also responsible for recording the financial expenses of the church.

Deacons and Elders: They are a group of appointed leaders who provide assistance to the pastor. They are also responsible for organising events such as revivals and conventions. They organise evangelism activities draw more people to the church and also spread the word of God. They also take care of banners and other means of conveying written messages especially to non-congregation members.

2.4. Systems

In system engineering, a system is an aggregation of end products and enabling products to achieve a given purpose (Escudier and Atkins,2019). A system essentially brings multiple components together to achieve a common objective.

2.5. Definition of Management Systems

A computer application that enables the owner of a franchise network to access and coordinate information about the business activities of the franchisees (Law, 2016). A management system is the means an organization uses to coordinate the various aspects of its operations to accomplish its goals. The quality of the product or service, operational effectiveness, environmental performance, workplace health and safety, and many other issues can all be addressed by these objectives.

2.6. Church Management Systems

This system is designed to ensure that the church has a centralized storage of data or records. It is in dire need of a means to store and retrieve. The church has a wide range of activities and transactions to accommodate the needs of the congregation, both in terms of ecclesiastical activities and financial transactions of the church (Kurniawan and Cassandra,2014).

2.6.1. Features of a Good Management System

Membership management This is the primary function of any management system. It is crucial to keep track of members data such as name, date of birth, residence and contact information. It should also allow details to be edited and deleted where necessary.

Financial accounting Keeping records of the finances of the church is incumbent and has a great effect on the overall performance of the church and its members. It ensures that the leaders are accountable.

Communication tools A good management system should provide a means for the management or administration of the church to communicate with the members.

It is necessary to keep members well informed about events, deadlines and other expectations.

2.6.2. Importance of Church Management Systems

It is necessary to ensure that members of the church are pleased and satisfied, this has a direct effect on the turn up for church activities. According to Saunders (1999), ¹⁰ understanding the factors that underlie member satisfaction allows church management to prioritize the use of resources and focus on those performance issues that make a difference to the member. It is essential that the church is able to retain its members as it contributes to achieving its goal of shepherding the children of God and ensuring that the gospel is propagated.

The congregation is being given stronger external incentives to expand and become more involved in the church, which in turn results in higher contributions in the form of increasing revenue from events and other activities and larger donations. ²⁰ Hudson (2013) suggests that church leaders who focus on member relations build confidence and support for the church. As a result, the church has more funds available to devote to supporting the membership. The potential benefits multiply when the church reinvests these extra funds in expanding its community outreach, starting a positive feedback loop. Therefore, a church management system's potential influence goes much beyond the straightforward advantages that individual administrative and communication technologies can provide. However, it doesn't follow that certain capabilities within these systems won't significantly outperform any current church-use tools, as there is a good chance they will.

The system also serves as a repository of members' information. Church management systems are platforms that strive to ensure that tasks that need to be done in the church are smoother, efficient and well-organized while offering convalescent ways of conversing and developing a relationship with the members. ⁵ "For effectual planning and execution, which enhances the management practices of a church structure and set up, pre-analysis of all the risks involved in the execution of various church functions as well as the management of time, finance and other resources is key for eventual success" (Awuku-Gyampoh and Asare, 2019). As the number of members

increase, the storage of data (such as contact information, health history, next of kin and occupation just to mention a few) size also increases which causes a lot of stress on the administrator. Internally, this enables church administrators to spend far less time on each activity thanks to tools created specifically for churches and improved integration between these platforms, freeing up time to schedule events and communicate with other church employees.

The present of a management system also promotes good governance as it ensures accountability and prevents misuse and or embezzlement of church funds. Busby (1999) points out that a reliable mechanism for allocating monies is necessary for effective financial administration of a church. Effective reporting of the usage of funds, appropriate disbursements of funds, and adequate internal controls over all expenditures are some outcomes of an appropriate system. With a management system in place, it is easy to create an audit trail to track monies that go in and out of the church's account. These systems also allow for essential financial reports to be made in a click instead of compensating with multiple cheque books and bank accounts.

2.7. Review of Already Existing Systems

The objective of the project was to provide a system that facilitates the centralization of data storage for a church. This system provides an interface to access and manage data ecclesiastical for users that can be accessed online so that staff for management procedure of worship and financial staff can more easily and quickly make accessing and managing data in accordance with their needs (Kurniawan and Cassandra,2014). It also allows non-congregation members to have access to news about events of the church, a self-registration form and a direct contact to the church administrator. The financial staff is the only user that has financial data access. It allows the congregation to view personal data and payments or contributions they have made, as well as make edits to their data. However, the user interface of this system is cumbersome and does not provide an English option and so would be a huge struggle for out intended users. It also allows users to make edits to sensitive data which affects the integrity of the data in the system.

A system developed for BNKP Pewarta Church was aimed at providing a means for the administrator and or pastor of the church to store congregation data during the pandemic. The result of this research is an information system website for the BNKP Pewarta Church, which is able to display information about the Church, monitor and collect data on the congregation who will carry out worship directly (Wiratama and Desanti, 2022). A landing page is created for the congregation to view data that is available to them. The administrator uses a Content management system to update the information on the said landing page. The information displayed on the landing page includes, health data for the members who attend worship services. The system allows the administrator to input congregation data, input news regarding events and other vital announcements and edit the profile. The system does not keep financial records of the church. It also does not provide a means for members to have access to personal data and other relevant information. There is a risk of data security as the health data of members are available to the general public.

Another system adopted the PIECES analysis method and extreme programming in designing and implementing a web-based church information system for HKBP Kebon Jeruk Church located in Jakarta. PIECES method is one method that can be used in the process of analysis and evaluation of a system that has been running on a company. PIECES Framework method is a framework containing the categories of classification and problem-solving problems. The classification is divided into six categories according to the sequence, namely Performance, Information and Data, Economics, Control and Security, Efficiency, and Service (Fatoni et. al., 2020). Hameed (2016) has defined extreme programming as an agile methodology providing quality products and provides a chance to retort to ever-changing client needs. The system provides access for the admin to add, edit and delete data and also upload church agenda. The members are limited to viewing church agenda only. It does not allow members to view personal data. It also does not have a means of keeping track of financial records. The church does not only focus on existing members: this system also focuses only on the existing members and does not provide a means to draw non existing members to the church.

Chapter 3

SYSTEM DESIGN AND METHODOLOGY

3.1. Chapter Overview

This chapter focuses on the main methods used in information gathering, and the analysis of the said information which led to the design and implementation of the proposed system.

3.2. Introduction

Software Development Life Cycle refers to the list of all the steps necessary to construct a software application. This improves the effectiveness of the development process and lowers waste. Additionally, monitoring guarantees that the project remains on schedule and is a viable investment for the business (Öztürk,2013). It is essential that every developer has a cut out life cycle to follow as this is essential to the project and affects the progress and overall turn out of the progress.

Considering the nature of this project, two software development processes were considered: the waterfall development model and the agile development model. “Waterfall project management is essentially a linear way of structuring the project schedule, with separate (also linear) plans for risk mitigation, resourcing, budget and various other critical project functions” (Grech,2015). The agile development model splits the project into small iterations without directly including long-term planning.

The agile development model was chosen over the waterfall development model because it makes room for the clients and the developer to be in constant communication. McCormick (2012) suggests that the design idea of the waterfall model is frozen whereas that of the agile model is never totally frozen and so essentially it evolves as new ideas come with each release. This means changes can be made easily and since this project is made to fit the needs of a specific church, the agile methodology was best suited

3.3. Phases Agile Software Development Model

¹¹ Agile software development is a form of development process that anticipates the need for flexibility and applies a degree of pragmatism to the delivery of the finished product. The steps involved in the development process include: ²¹ requirements gathering, designing the requirements, construction, testing or quality assurance, deployment and feedback.

3.3.1. Requirements Gathering

This involves understanding what needs to be done and discussing the resources required to make the project a success. The method of requirements gathering that I used for this project was interviews and reading existing documents.

Interviews

Interviews with the stakeholders involved were conducted to fully grasp the concept of the system to be built. According to Pereira (2014), the interview process has two main goals which are to find out the primary “what,” “who”, and “where” questions. The interview process seeks to find out who the end-users of the application are, what the application is going to be used for and where the application will be used. A study by Akugizibwe et. al., (2016) reveals that the interviews also help researchers achieve the best rate of data quality and identify issues, information requirements, and potential solutions because respondents reply objectively during face-to-face meetings.

Reading Existing Documents

I reviewed current documents, such as books and articles relating to church management and activities and gained adequate knowledge on how to improve church performance from these documents. Additionally, journals that have been used to implement church management systems served as an alternative source of information. These strategies aided in providing details used in determining user requirements.

3.3.2. Designing the Requirements

This step involves analysing the requirements and defining prospects of the clients. The behavioural and functional needs of the system's software components are identified, recorded, and evaluated during requirements analysis. The system safety requirements that apply to the system's software must also be found and documented by the requirements analyst (Atlee and McDermid, 1995).

Functional Requirements

12 Functional requirements specify what a system is expected to do and can include computations, technical details, data manipulation and processing, among other specialized features. The functional requirements for the system include:

- 9 a. The system provides login for admin
 - i. Admin can add, edit and delete congregational data such as name and group.
 - ii. Admin can add, edit, and delete congregational financial records such as tithes and offerings.
 - iii. Admin can send announcements to all members.
- b. The system provides login for group leaders
 - i. Group leader can add, edit and delete group member data such as name and date of birth.
 - ii. Group leader can add, edit, and delete group and group member financial records such as tithes and offerings.
 - iii. Group leader can send announcements to group members.
- c. The system provides login for users
 - i. Users can view their tithes records.
 - ii. Users can view announcements.
 - iii. Users can sign up

Non-Functional Requirements

Non-functional requirements generally refer to how the system functions in terms of behaviour and performance. A study by Gorthi and Bajpai (2012) reveals that Meeting the functional requirements alone won't satisfy the customer's need for high-quality software. Non-functional requirements must be formally included into the software development life cycle, and their satisfaction must be ensured. Some non-functional requirements include:

- i. Performance: This refers to how quickly it takes the pages to load.
- ii. Scalability: This measures the optimal functionality of the system at the highest possible workload.
- iii. Portability: This refers to the ability of the system to be accessed under different work and environmental conditions.
- iv. Localization- This requirement ensures that the end users can comprehend the system language. For example, English should be used for users who speak English, currency should be in cedis, just to mention a few.

3.3.3. Construction

This phase involves the design of the software. It is done by implementing the functional and non-functional requirements. According to Yau and Tsai (1986), software design is the process of translating requirements into a thorough design representation of a software system. The secret to creating trustworthy and comprehensible software is good software design. The modelling of the system is done at this stage using the Unified Modelling Language (UML). UML serves as the de facto modelling language standard for describing, visualizing, building and documenting software system components. Siau and Cao (2001). It delineates the note-worthy features of a system.

²³ *Use Case Diagram*

Figure 3.1 below is the Use Case Diagram of the system which represents the users possible interactions with the system.

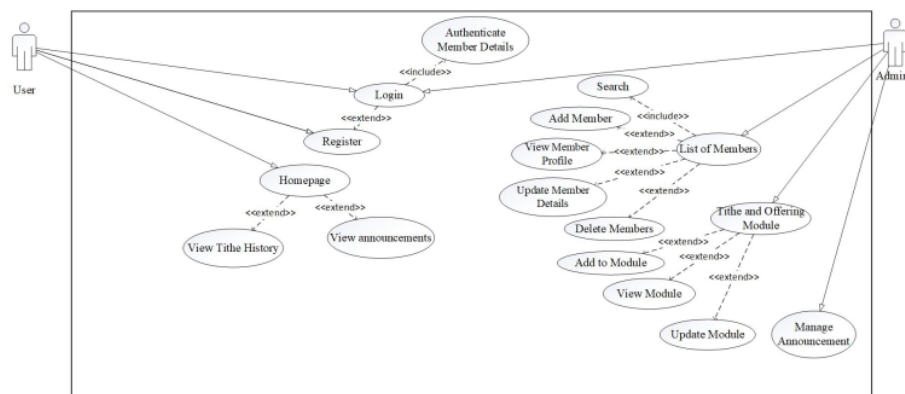


FIGURE 3.1: Use Case Diagram

FlowChart

Figure 3.2 shows the step by step process involved for basic functionalities in the system.

3.3.4. Testing

After the construction of the system, testing was done to see if the system is error-free and if it complies with the stated functional and user expectations. This phase involved ensuring that the software is doing exactly what it is supposed to do. A study by Hernard et.al.,(2016) highlighted the importance of prioritizing regression testing(which is a form of white box testing) and how it is crucial to detecting faults early in the testing phase.

White box Testing

Hamilton (2022) defined it as a testing approach where the internal structure, architecture and coding of application are examined to ensure input-output functionality and to enhance design, usability and security. This type of testing focuses on the flow of the system. The expected output and the console output are compared to ensure that there are no bugs in the code. The main goal is to fix bugs and ensuring that all the decision branches, loops and statements in the code are verified.

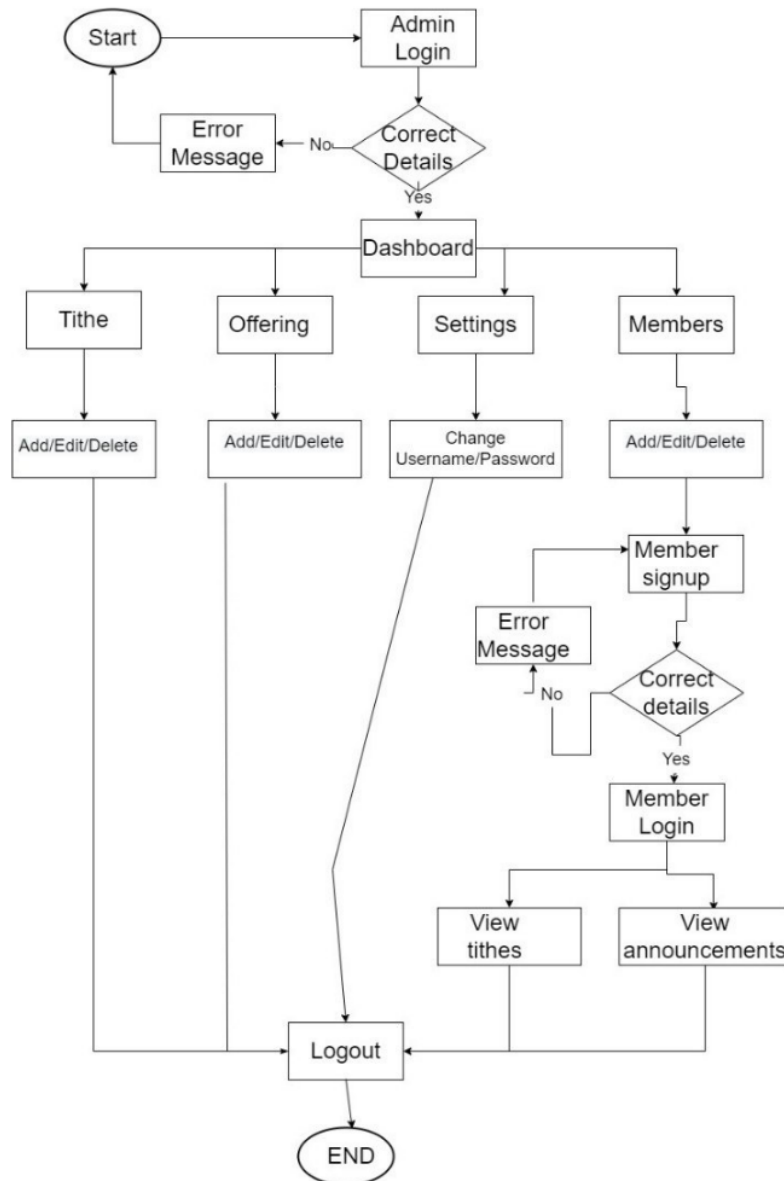


FIGURE 3.2: Flowchart

Black box Testing

This method essentially tests the application from the user's point of view. This has less to do with the code and focuses mostly on the expected output of a specific input. The tester is oblivious to the internal construction of the application. Hamza and Hammad (2019) looked into various tools such as B-Box Tester and Auto-black-test that have been used to test web and mobile applications, they also said black box testing is used to accredit the system's behavioural affairs.

3.3.5. Deployment

The system was developed with HTML and CSS(bootstrap and tailwind CSS) for the front-end, PHP for the backend and SQL for the database. The first phase of the system was launched on a server. The clients were given access and allowed to have a feel of the built system.

3.3.6. Feedback

Constructive feedback from the clients were accepted and implemented.

Chapter 4

SYSTEM TESTING AND DISCUSSION

4.1. Chapter Overview

This chapter displays some essential pages of the system that depict the design and implementation of the research done. It also shows that the system works fine and is without any defects.

4.2. Homepage

A landing page which is a website that is accessible to the general public and provides information about the church.



FIGURE 4.1: Homepage

4.3. Admin/Group Leader Login Page

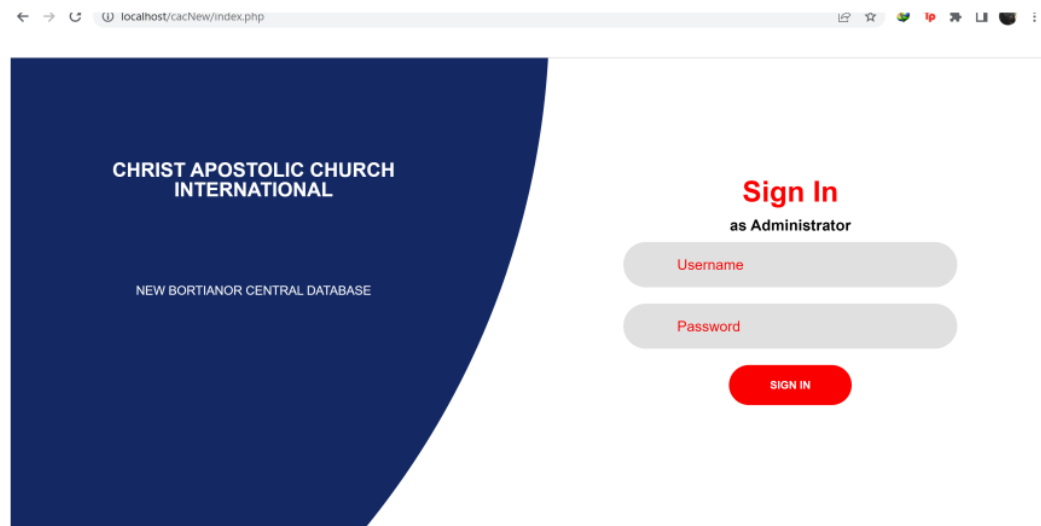


FIGURE 4.2: Login page for Admin and Group Leader

4.3.1. Admin Dashboard

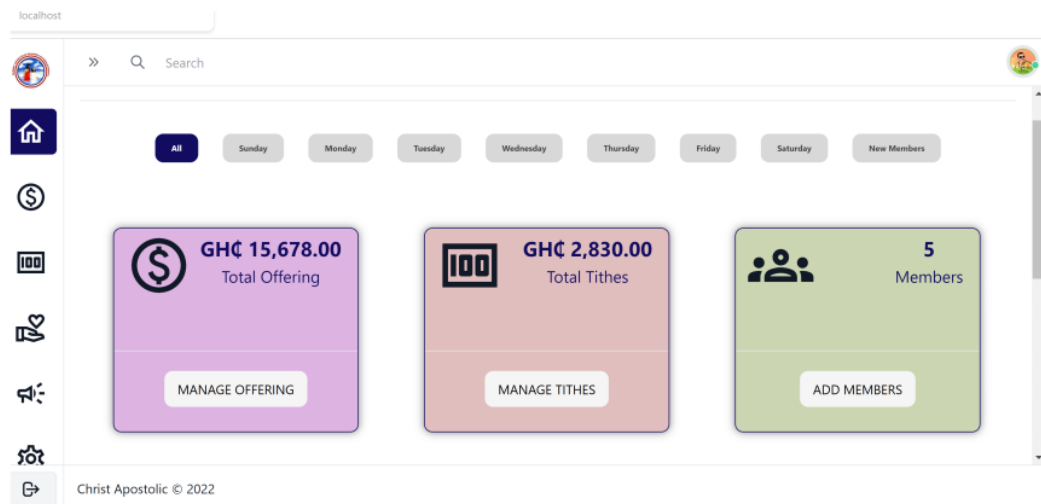


FIGURE 4.3: Administrator Dashboard

4.3.2. Add Member Form

The screenshot shows a web application interface for adding members. On the left is a sidebar with icons for home, currency, 100, and settings. The main area is divided into two sections: 'Add Member' and 'Member List'.

Add Member Form:

- Header: **Add Member**
- Section: **Select Member Type:**
- Buttons: **Old** (selected), **New**
- Input fields: Surname, First Name, Other Names
- Dropdowns: Select Gender, Select Marital Status

Member List Table:

NAME	GROUP NAME	OCCUPATION	
Amponsah Ewurama 055-414-9763	Saturday Youth Ministry	student	Edit Delete
Amponsah Akosua 055-131-5666	Sunday Women's Ministry	accountant	Edit Delete
Forson Esther 024-770-9290	Thursday Women's Ministry	HR consultant	Edit Delete
Appiah Isaac Yeboah 055-658-1462	Thursday Youth Ministry	IT consultant	Edit Delete
Gyimah Abigail Akua 050-484-1235	Wednesday Youth Ministry	cyber security engineer	Edit Delete

Christ Apostolic © 2022

FIGURE 4.4: Form Used in Registering Members

4.3.3. Offering Page for Admin

The screenshot shows a web application interface for offering management. On the left is a sidebar with icons for home, currency, 100, and settings. The main area is divided into two sections: 'Offering' and 'Offering List'.

Offering Form:

- Section: **Group Name**
- Dropdown: **Select Group**
- Section: **Amount (GH¢)**
- Input field: Amount
- Section: **Date**
- Input field: mm/dd/yyyy
- Button: **Submit**

Offering List Table:

GROUP NAME	AMOUNT	DATE	
Monday	GH¢ 678	September 19 2022	Edit Delete
Thursday	GH¢ 15000	July 03 2022	Edit Delete

Christ Apostolic © 2022

FIGURE 4.5: Offering Page for the Administrator

4.3.4. Tithes Page for Admin

Search

Tithe List

NAME	AMOUNT	DATE		
Forson Esther	GH¢ 1070	July 10 2022	Edit	Delete
Forson Esther	GH¢ 1070	July 03 2022	Edit	Delete
Gyimah Abigail Akua	GH¢ 690	September 14 2022	Edit	Delete

Name of Member
Select Member

Amount (GH¢)

Date
mm/dd/yyyy

Submit

Christ Apostolic © 2022

FIGURE 4.6: Tithes Page for the Administrator

4.4. Group Leader Dashboard

Figure 4.7 below shows the dashboard for the saturday group leader. It is observed that the leader has access to only information pertaining to saturday group members.

Search

Saturday Dashboard

GH¢ 0.00
Total Offering
MANAGE OFFERING

GH¢ 0.00
Total Tithes
MANAGE TITHES

1
Members
ADD MEMBER

Member List

Christ Apostolic © 2022

FIGURE 4.7: Saturday Group Leader Dashboard

4.4.1. Tithes Page for Group Leader

In Figure 4.8 ,it is seen that the group leader is limited to make tithe record entries for only group members.

The screenshot shows a web application interface for a group leader. On the left is a sidebar with icons for home, currency, and a document. The main content area is titled "Saturday Tithe List". On the left of this area is a form to add a new tithe entry. The form has a "Name of Member" dropdown menu with "Amponsah Ewurama" selected, a "Date" field with the placeholder "mm/dd/yyyy", and a "Submit" button. On the right is a table of existing tithe entries.

NAME	AMOUNT	DATE		
Amponsah Ewurama	GHC 900	September 24 2022	Edit	Delete
Amponsah Ewurama	GHC 67	September 02 2022	Edit	Delete

FIGURE 4.8: Saturday Group Leader Tithes Page

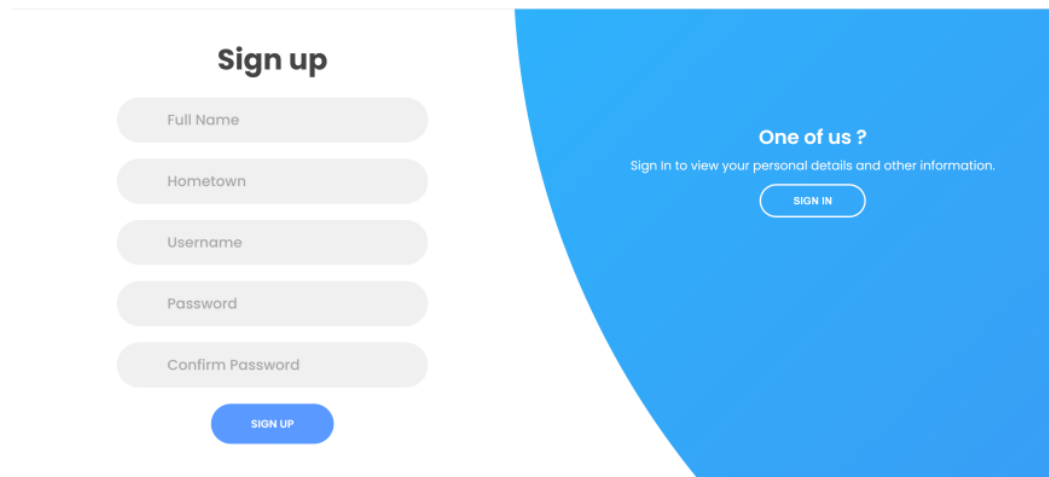
4.4.2. Offering Page for Group Leader

The screenshot shows a web application interface for a group leader. On the left is a sidebar with icons for home, currency, and a document. The main content area is titled "Saturday Offering List". On the left of this area is a form to add a new offering entry. The form has an "Amount (GHC)" input field, a "Date" field with the placeholder "mm/dd/yyyy", and a "Submit" button. On the right is a table of existing offering entries.

GROUP NAME	AMOUNT	DATE		
Saturday	GHC 567	September 28 2022	Edit	Delete
Saturday	GHC 700	September 08 2022	Edit	Delete
Saturday	GHC 89.6	September 02 2022	Edit	Delete

FIGURE 4.9: Saturday Group Leader Offering Page

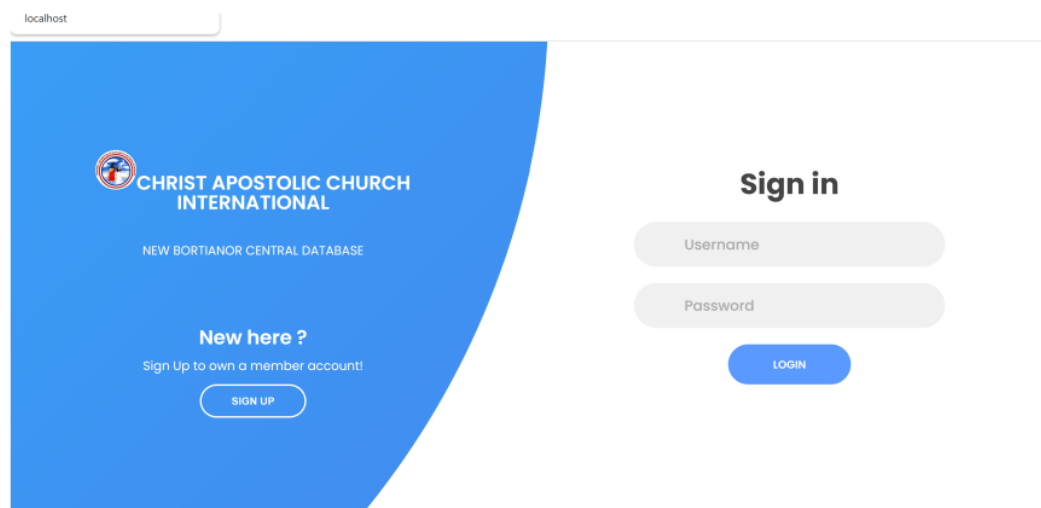
4.5. Member Sign Up Page



The screenshot shows a web page with a white background and a blue curved decorative element on the right. On the left, under the heading "Sign up", there are five input fields: "Full Name", "Hometown", "Username", "Password", and "Confirm Password". Below these fields is a blue "SIGN UP" button. On the right, within the blue curved area, the text "One of us ?" is displayed above the instruction "Sign In to view your personal details and other information." and a white "SIGN IN" button.

FIGURE 4.10: Member Sign Up Page

4.5.1. Member Sign In Page



The screenshot shows a web page with a white background and a blue curved decorative element on the left. At the top left, a browser address bar shows "localhost". On the left, within the blue curved area, is the logo for "CHRIST APOSTOLIC CHURCH INTERNATIONAL" and the text "NEW BORTIANOR CENTRAL DATABASE". Below this, the text "New here ?" is followed by "Sign Up to own a member account!" and a white "SIGN UP" button. On the right, under the heading "Sign in", there are two input fields: "Username" and "Password". Below these fields is a blue "LOGIN" button.

FIGURE 4.11: Member Sign In Page

4.5.2. Member Dashboard

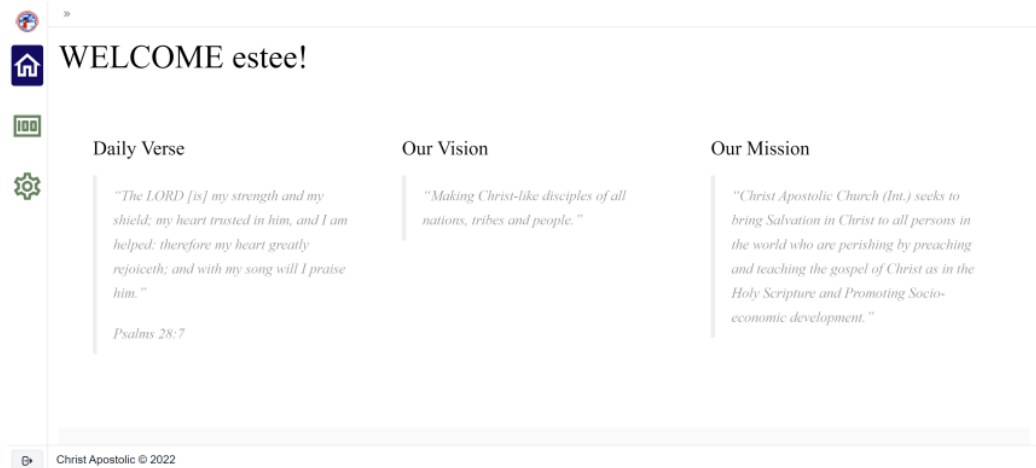


FIGURE 4.12: Member Dashboard

4.5.3. Member Tithes Page

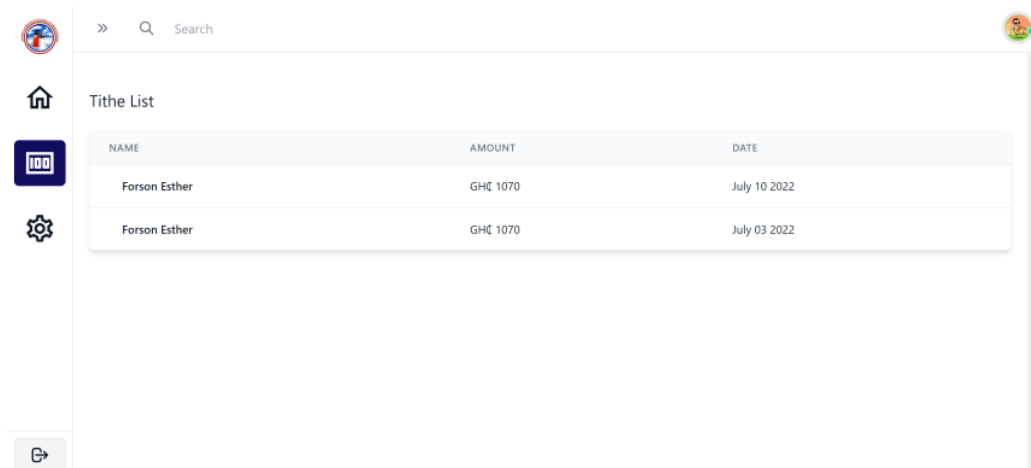


FIGURE 4.13: Member View Tithes

Chapter 5

CONCLUSION, LIMITATIONS, RECOMMENDATIONS

5.1. Conclusion

The application has helped store and retrieve relevant and sensitive details of members of the church while keeping track of the finances of the church and sending announcements to all members. It has also provided a means for leaders to be held accountable. The workload on the church secretary has also been reduced as group leaders are allowed to input records.

5.2. Limitations

The system does not allow members to make payments through mobile money and other e-transaction platforms. Even though, the New Bortianor Assembly is the head of the entire area, the system is limited to only the central church and does not make provisions for the sub-circuits and branches.

5.3. Recommendations

In future, we recommend that the system should be able to synchronize with the church's payment platforms to generate a real time statistics about the church finances. We also recommend that application scalability is increased to include other church branches.

Ewurama Aboagyewaa Amponsah

ORIGINALITY REPORT

17%

SIMILARITY INDEX

11%

INTERNET SOURCES

4%

PUBLICATIONS

12%

STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Mines and Technology Student Paper	3%
2	www.coursehero.com Internet Source	1%
3	www.sersc.org Internet Source	1%
4	ugspace.ug.edu.gh Internet Source	1%
5	Ransford Kwabena Awuku- Gyampoh, Andy Ohemeng Asare. "Assessing the Impact of Good Governance, Church Management and Structure on the Growth and Development of the Church", International Journal of Business and Management, 2019 Publication	1%
6	Submitted to The Open College Student Paper	1%
7	cac-int.org Internet Source	1%

8	Submitted to Kaplan International Colleges Student Paper	1 %
9	journal.portalgaruda.org Internet Source	1 %
10	www.tandfonline.com Internet Source	1 %
11	Submitted to University of Mauritius Student Paper	1 %
12	Submitted to Middlesex University Student Paper	<1 %
13	ojs.unud.ac.id Internet Source	<1 %
14	Submitted to National College of Ireland Student Paper	<1 %
15	Submitted to Glyndwr University Student Paper	<1 %
16	Submitted to Informatics Education Limited Student Paper	<1 %
17	Submitted to Universiti Teknologi MARA Student Paper	<1 %
18	Submitted to Universiti Tenaga Nasional Student Paper	<1 %
19	hal.laas.fr Internet Source	<1 %

20	Submitted to CSU, Dominguez Hills Student Paper	<1 %
21	Submitted to De La Salle University Student Paper	<1 %
22	Submitted to Swansea Metropolitan University Student Paper	<1 %
23	etd.aau.edu.et Internet Source	<1 %
24	samphina.com.ng Internet Source	<1 %
25	creativecommons.org Internet Source	<1 %
26	researcharchive.lincoln.ac.nz Internet Source	<1 %
27	www.studymode.com Internet Source	<1 %
28	repository.up.ac.za Internet Source	<1 %
29	repository.president.ac.id Internet Source	<1 %
30	Submitted to Indiana Wesleyan University Student Paper	<1 %

Exclude quotes On

Exclude matches Off

Exclude bibliography On