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1. INTRODUCTION

1.1 Background

Christian Foundation Fellowship church (CFF) traces its roots back to 1997 when it was established in the city of Nairobi, situated along Bunyala Road. Founded as a ministry by Harrison Nganga, CFF has grown into a thriving religious institution over the years. With a membership count that exceeds three thousand individuals, the church has experienced remarkable growth, attributed in large by commitment to evangelism and soul-winning efforts.

CFF is full of diverse range of activities and services on a daily basis. The church maintains its central headquarters at Bunyala, serving as the epicentre of its spiritual and administrative activities. Additionally, CFF has established a rented hall within the urban landscape of Nairobi, located at the Jamii Business Center premises, (PR8H+476, Sheikh Karume Rd, Nairobi), for conducting morning glory and lunch hour services.

Throughout the week, CFF hosts a multitude of services, including Morning Glory sessions lunch-hour service and Evening Services, at both of its premises. These gatherings draw hundreds of faithful members each day, for mentorship.

However, despite its remarkable growth and vibrant activities, CFF, like many other organizations, faces several significant challenges in effectively communicating information and efficiently managing its extensive membership base. Currently, the church relies predominantly on traditional methods of communication, such as paper-based records and verbal interactions, in its day-to-day operations. These outdated practices not only consume valuable time but also introduce a host of disadvantages, including the risk of errors, data loss, and a general lack of efficiency.

As a result, leaders within CFF have expressed a growing need for a more advanced and integrated digital communication and record-keeping system. This desire stems from the recognition that modernizing their systems will not only optimize their daily operations but also enhance their overall effectiveness in fulfilling their spiritual mission.

In response to these challenges and the expressed needs of the church, this study aims to develop and implement a comprehensive management system tailored specifically to the unique requirements of CFF

2. Problem statement

The Christian Foundation Fellowship (CFF) Church, has grown into a vibrant congregation with a membership exceeding three thousand faithful individuals. Over the years, this church has experienced exponential growth, attributed in large part to its zealous commitment to evangelism and soul-winning endeavours.

However, despite its remarkable expansion and the thriving spiritual community, CFF Church currently confronts several pressing challenges in the operation of its management system, which encompasses registering members, viewing member details, handling offerings, celebrating birthdays, managing teen and Sunday school activities, overseeing visitors, and orchestrating church events.

2.1 Existing Church Management System Operation:

1. Registering Members

The current church management system relies on manual processes for member registration, involving handwritten records and paper-based forms. This antiquated approach is not only time-consuming but also prone to errors, leading to discrepancies and inefficiencies in maintaining an accurate membership database.

2. Viewing Member Details

Accessing member information is hindered by the lack of an integrated digital system. Information retrieval often involves flipping through physical records or relying on verbal communication, leading to delays and inaccuracies in member management.

3. Handling Offerings records

It is difficult to access how much has been given as offering since one has to go through envelopes counting the money given to get the total that can help in financial management of the church

4. Celebrating Birthdays

Acknowledging and celebrating member birthdays is a vital part of church community-building. However, the current system does not provide an efficient means to keep track of birthdays

5. Managing Teen and Sunday School

Coordinating and managing activities related to teen and Sunday school classes involve a plethora of manual processes. This includes attendance tracking, communication with parents, and resource management, all of which are susceptible to errors and inefficiencies.

6. Overseeing Visitors

Greeting and managing visitors effectively is essential for creating a welcoming atmosphere in the church. However, the existing system lacks a structured approach to visitor management, often resulting in missed opportunities for follow-up and engagement.

7. Orchestrating Church Events

Planning and executing church events, including services and meetings, require extensive effort and coordination. The absence of a centralized system for event management results in challenges such as double-booked facilities and communication gaps.

3. Proposed Solution

CFF Management System

3.1 Introduction to the CFF Management System

In response to the pressing challenges outlined in the previous section, the proposed solution involves the development and implementation of Church Management System customized specifically for the Christian Foundation Fellowship (CFF) Church. This innovative system, referred to as the CFF Management System, represents a transformative step towards modernizing and optimizing the church's administrative and operational processes. The CFF Management System aims to harness the power of technology to address the challenges currently faced by the church and to enhance its overall effectiveness in fulfilling its spiritual mission.

3.2 Discussion of the Introduced System

The CFF Management System offers a comprehensive solution that will revolutionize the way CFF Church manages its day-to-day operations and engages with its congregation.

3.2.1 Key aspects of the introduced system

1. Membership Management:

The CFF Management System will provide a centralized and digitized platform for member registration, storing essential member details securely. This will streamline the process of adding new members and updating existing member records in database.

2. Member Information Access:

Members will have access to their personal profiles, enabling them to view and update their information. This self-service feature will empower members to maintain accurate records and stay engaged with the church community.

3 Financial Management:

The transition to digital offering records will expedite total offering calculations, enabling faster decision-making on financial budgets. This automation streamlines processes, reduces errors, and enhances data accessibility, ultimately leading to more efficient financial management.

4 Birthday Celebrations:

The CFF Management System will automate birthday reminders, ensuring that members receive heartfelt messages and well-wishes on their special day. This will foster a sense of belonging and connection within the church.

5 Teen and Sunday School Management:

Coordinating teen and Sunday school activities will become more efficient with tools for

attendance tracking, communication with parents, and resource management. This will enhance the spiritual growth of young members.

6. Visitor Engagement:

The system will facilitate the seamless management of visitors, capturing their contact information and visit details. This will enable the church to extend warm welcomes, follow up effectively, and integrate visitors into the church community.

7 Event Coordination:

Events communication will be digitalised This will keep members updated on events and will enhance the overall planning and execution of church events.

4. Objectives

4.1 Introduction to the System Objectives

Main objective

The new CFF Management System is designed with a clear set of objectives aimed at enhancing the overall efficiency, communication, and management of Christian Foundation Fellowship (CFF) Church's operations. These objectives are aligned with the system's scope and functionality, ensuring that they are realistic and attainable within the system's capabilities.

4.2 System Objectives

4.2.1 Member Information Management

To provide a user-friendly platform for church administrators to view and update the details of the existing members, ensuring accurate and up-to-date member profiles within the system.

4.2.2: Member Registration

To enable church administrators to effortlessly add new members to the system, streamlining the registration process and facilitating the integration of newcomers into the church community.

4.2.3: Financial Transparency

To record and track member contributions and offerings with transaction IDs, promoting financial transparency, accuracy, and accountability within the church.

4.2.4: Birthday Celebration Facilitation

To automatically identify and display upcoming member birthdays, facilitating the timely acknowledgment and celebration of these special occasions, thereby fostering a sense of belonging and connection within the church.

4.2.5: Financial Reporting

To generate comprehensive financial reports summarizing total giving, making it easier for church leadership to assess financial health, plan budgets, and make informed decisions.

4.2.6: Teen and Sunday School Management

To provide tools for church administrators to manage and organize teen and Sunday school activities effectively, including the addition of participant details to the system, ensuring the spiritual growth and engagement of young members.

4.2.7: Event Coordination

To simplify the management of church events by offering features for scheduling, resource allocation, and communication, thereby improving overall event planning and execution.

- By achieving these objectives, the system aims to bring tangible improvements to the church's operations, member engagement, financial transparency, and event management

5. Literature review

In the realm of church management systems, several solutions have emerged to facilitate the administrative and organizational needs of religious institutions. In this literature review, we explore two prominent church management systems, Church Teams Management System and Smart Church Management System, to evaluate their scope, users, strengths and weaknesses. we emphasize the distinctive features of the proposed CFF Management System.

5.1 Church Teams Management System

Church Teams Management System is a well-established software solution utilized by numerous religious organizations.

5.1.1 Methodology

The literature does not provide specific details about the methodology used in developing Church Teams Management System. It may have been developed through a combination of software engineering practices and industry-specific consultations.

5.1.2 Scope

Church Teams Management System primarily focuses on membership management, Groups, financial transparency, volunteers, event registration and communication. It encompasses features for tracking member attendance, maintaining detailed profiles, managing financial transactions, generating reports, capturing information for paid events and facilitating communication through email texting.

5.1.3 Users

The system caters to a wide range of users within the church, including administrators, clerical staff, finance teams, event organizers, and even members. Its user base includes individuals with varying levels of technical proficiency.

5.1.4 Strengths:

1. Membership Management

Church Teams Management System excels in maintaining comprehensive member profiles, tracking attendance, recording financial transactions and recording participation in church activities. Its user-friendly interface facilitates efficient member data management.

2. Financial Transparency

It offers robust financial management tools, enabling precise tracking of contributions, generating comprehensive financial reports, and ensuring accountability in financial transactions.

3. Event Coordination

Church Teams Management System effectively manages church events, from scheduling and resource allocation to communication and coordination. It streamlines event planning and execution, promoting smooth operations.

5.1.5 Weaknesses:

1. Complexity

Its extensive features and functionalities can be complex for smaller or medium-sized churches, potentially necessitating extensive training for users to fully leverage the system's capabilities.

2. Limited Customization

While feature-rich, customization options may be limited, making it less adaptable to the unique requirements of individual churches.

3. Integration Challenges

The system may face difficulties when integrating with other existing software or databases within the church. This can lead to data silos and inefficiencies in data sharing and synchronization between different church systems.

4. Scalability Issues

As the size and complexity of a church grow, the system might struggle to scale effectively. This could result in performance bottlenecks and increased demands on hardware and IT resources, making it less suitable for large or rapidly expanding religious organizations.

5.2 Smart Church Management System

Smart Church Management System, in contrast, is known for its user-friendly interface and accessibility. Its strengths primarily revolve around ease of use and accessibility:

5.2.1 Methodology

Similar to Church Teams Management System, specific details about the development methodology are not available in the literature, it is likely that the Church Teams

Management System was crafted through a blend of software engineering practices and consultations with experts in the religious organization management industry. This incorporation of knowledge and expertise has contributed to the system's effectiveness.

5.2.2 Scope

Smart Church Management System distinguishes itself through its user-friendly interface and online accessibility. Its primary scope includes member management, event scheduling, and financial recording. However, it may have limitations in terms of advanced features and scalability.

5.2.3 Users

The system is designed to accommodate users with varying technical backgrounds. It targets church staff, volunteers, and administrators who require a straightforward and accessible platform for managing church-related tasks. Its cloud-based nature allows for remote access, making it suitable for users working from different locations.

5.2.4 Strengths:

1. Ease of Use

This system prides itself on its intuitive interface, which simplifies member management, event scheduling, and financial recording. It accommodates users with varying levels of technical expertise.

2. Online Accessibility

Often cloud-based, Smart Church Management System allows users to access data and system features remotely, promoting collaboration among church staff and volunteers, particularly when working from different locations.

3. Data Security and Privacy

The Smart Church Management System prioritizes data security and privacy, implementing robust encryption and access controls to safeguard sensitive member and financial data.

4. Event Planning and Coordination

The system excels in planning and coordinating church events, from scheduling and resource allocation to online registration and communication, making event management more efficient and member-friendly.

5.2.5 Weaknesses:

1. Limited Features

While user-friendly, it may lack certain advanced features, such as robust financial reporting or highly customized event management, which could be essential for larger or more complex churches.

2. Scalability

Smart Church Management System may face limitations when attempting to scale up for larger churches with more intricate and diverse needs.

3. Costly Implementation

The initial setup and customization of the system can be expensive, posing a financial barrier to smaller churches with limited budgets.

5.3 Proposed CFF Management System

The CFF Management System distinguishes itself from the aforementioned systems in several significant ways:

5.3.1 Distinctive Features:

1. Integration of all key functionalities

Unlike Church Teams Management System and Smart Church Management System, the CFF Management System integrates a wide array of functionalities into a unified platform. It seamlessly combines member management, financial transparency, event coordination, birthday celebration facilitation, teen and Sunday school management, and visitor engagement, offering a comprehensive solution tailored to the unique needs of CFF Church.

2. Customizability

The system provides a high degree of customization, allowing CFF Church to tailor the platform to its specific requirements. Whether it's a small local assembly or a rapidly growing mega-church, the CFF Management System adapts to accommodate evolving needs.

3. Scalability

Designed with scalability in mind, the CFF Management System can expand alongside the church, ensuring it remains an effective solution as the congregation continues to grow.

4. Enhanced Engagement

The system prioritizes member engagement and community-building. Features such as automated birthday celebrations and visitor management aim to foster a sense of belonging and connection within the church.

5. Comprehensive Financial Management

The system boasts robust financial tools for detailed transaction tracking and reporting, ensuring financial transparency, accuracy, and accountability.

6. Project Scope

6.1 What the CFF Management System Will Do

1. Membership Management:

The CFF Management System will provide a comprehensive platform for managing member profiles, including registration, updating member details, and tracking attendance.

2. Financial Transparency:

The system will enable the recording and tracking of financial transactions, including offerings and donations, providing transparency and accountability in financial management.

3. Event Coordination:

It will facilitate the scheduling and coordination of church events, including services, meetings, and special gatherings. The system will allocate resources, manage event logistics, and send event notifications.

4. Birthday Celebration Facilitation:

The system will automate the identification of upcoming member birthdays and facilitate the timely acknowledgment and celebration of these occasions, fostering a sense of community within the church.

5.Teen and Sunday School Management:

It will include tools for managing and organizing teen and Sunday school activities, allowing for the addition of participant details to the system. This will enhance the spiritual growth and engagement of young members.

7.Visitor Engagement:

The system will capture visitor contact information and visit details, facilitating warm welcomes, effective follow-ups, and integration of visitors into the church community.

8.Comprehensive Financial Reporting:

The system will generate detailed financial reports summarizing total giving and financial health, supporting budget planning and informed decision-making.

6.2 Project Constraints

6.2.1 What the CFF Management System Will Not Do

- No Direct Spiritual Guidance:

The CFF Management System is a tool for administrative and organizational purposes. It will not replace or provide direct spiritual guidance, counseling, or pastoral services to members.

- No Theological Content Management:

The system will not manage or deliver theological content, sermons, or religious teachings. It is not a platform for theological discussions or doctrinal debates.

- No Physical Event Execution:

While the system aids in event planning and coordination, it will not physically execute events or provide event-related services, such as catering or venue setup.

- No Financial Transactions Processing:

The CFF Management System will record and track financial transactions but will not process actual financial transactions, such as handling money or online payments. It serves as a record-keeping and reporting tool.

- **No Personal Counselling or Confession:**

The system will not facilitate personal counseling sessions or confessionals. Sensitive personal matters and counseling sessions should be conducted separately and in person.

- **No Theology Interpretation:**

The system will not interpret religious texts, doctrines, or theology. Interpretations of religious texts should be done by qualified religious authorities.

7. Project Limitations and mitigation

- **Resource Constraints**

Limited financial resources and technical expertise may hinder the development and deployment of the CFF Management System.

Mitigation

Seek partnerships with technology experts or consider outsourcing certain development tasks to reduce resource constraints. Explore cost-effective software development tools and platforms.

- **Time Constraints**

Due to the comprehensiveness of CFF church management system it can be time-consuming, potentially impacting the project timeline.

Mitigation

Develop a detailed project schedule with milestones and allocate sufficient time for each phase.

- **Data Privacy and Security**

Ensuring the security and privacy of member data is critical, and any data breaches or privacy concerns could have legal and reputational consequences.

Mitigation

Implement robust data encryption and access controls. Comply with data protection regulations and regularly conduct security audits and assessments.

- **User Adoption**

Resistance to change among church members and staff may impact the successful adoption of the new system.

Mitigation

Conduct thorough user training and provide ongoing support. Involve key stakeholders in the system design and development to address their needs and concerns.

- **Scalability**

As the church continues to grow, the system may face scalability challenges.

Mitigation

Choose a flexible and scalable architecture for the system. Regularly assess and optimize system performance to accommodate growth.

8. Research Methodology:

8.1 Data Collection Methods:

- Observation

we will observe the church's current management processes and workflows to identify areas that need improvement or automation.

- Interviews

In-depth interviews will be conducted with key stakeholders within CFF Church, including church administrators, finance team members, youth and Sunday school leaders, and regular

members. These interviews will provide qualitative insights into the existing challenges and expectations.

- Surveys

Survey will be conducted among members and some teens to know their feel about the current system and what they suggest can be done to implove

- Document Review

Existing church documents, including membership records, financial reports, event schedules, and communication protocols, will be reviewed to gain a comprehensive understanding of current processes and documentation.

8.2 Data Analysis Methods

- Thematic Analysis:

Thematic analysis will be applied to data gathered from in-depth interviews. It involves identifying recurring themes, patterns, and trends in the qualitative responses of key stakeholders. This method will help uncover insights into existing challenges and expectations within CFF Church.

- Quantitative Analysis:

Quantitative analysis will be used for data collected through surveys. This method includes statistical techniques to summarize and interpret numerical survey responses. It will enable you to assess member and teen sentiments quantitatively, such as satisfaction levels and improvement suggestions.

- Process Mapping:

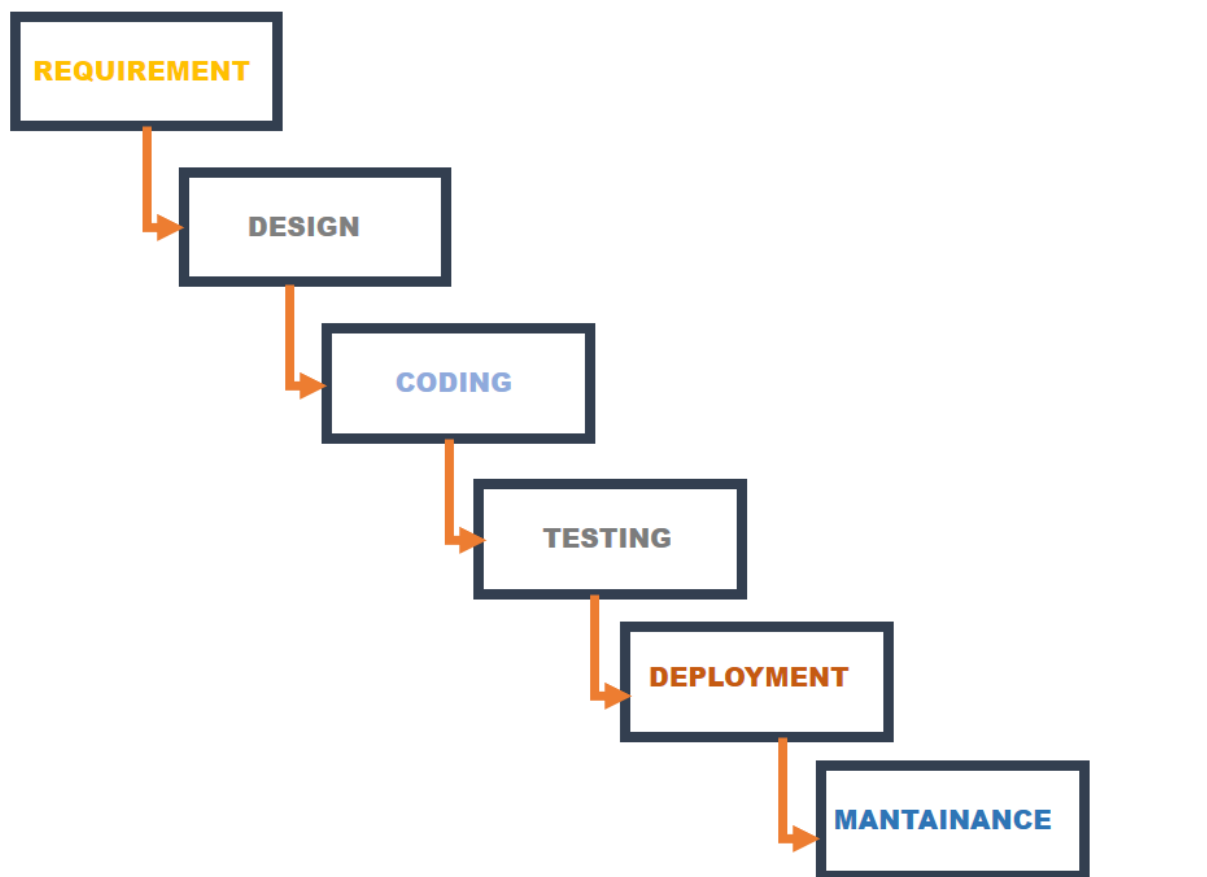
Process mapping is particularly relevant for the data obtained through observation of current management processes. It involves creating visual representations of workflows, highlighting bottlenecks, inefficiencies, and areas needing improvement or automation. This method will provide a clear picture of the existing processes.

- Content Analysis:

Content analysis will be applied to data collected through document review. It will involve systematically examining existing church documents, such as membership records and financial reports, to extract relevant information. This method will help identify trends, discrepancies, and opportunities for improvement within the church's documentation processes.

8.3 System Development Methodology

The system development for the CFF Management System will use Waterfall methodologies



- Requirements Gathering:

In this initial phase, a detailed analysis of the church's requirements will be conducted. This involves engaging with church administrators, key stakeholders, and potential system users to identify and document specific needs and expectations for the CFF Management System.

- System Design:

Once requirements are well-defined, the system design phase will commence. Designers and architects will create comprehensive system specifications, including user interface designs, system architecture, and data models. This phase will focus on defining how the system will meet the identified requirements.

- Implementation (Coding):

With the system design in place, the actual coding and development of the CFF Management System will begin. Programmers and developers will write the code to create the system's modules and functionalities based on the design specifications.

- Testing:

Following development, the system will undergo rigorous testing to ensure that it functions correctly and meets the defined requirements. This phase includes unit testing, integration testing, and system testing to identify and rectify any defects or issues.

- Deployment:

Once the CFF Management System receives approval from stakeholders, it will be deployed within the CFF Church community. This involves the installation of the system on relevant servers and ensuring that it is accessible to authorized users.

- Maintenance and Support:

After deployment, the system will enter a maintenance phase. This phase includes providing ongoing support to address any issues, applying updates or patches, and making necessary refinements. A support mechanism will be established for users to report problems or request assistance.

- Documentation:

Throughout the Waterfall methodology process, thorough documentation will be maintained. This includes documenting requirements, design specifications, coding guidelines, and user manuals to ensure clarity and transparency in system development and usage.

9. PROJECT BUDGET AND RESOURCES

9.1 BUDGET

S/N	Item	Quantity	availability	Estimated cost	Total cost
1	internet	8Mps	none	4,500	4,000
2	Desktop computer	1	available	50,000	50,000
3	Security firewalls	1	none	40,000	30,000
4	Back up media	2 TB Hard disk	500 gb HDD	15,000	15,000
5	server	1	70,000	70,000	70,000
	total			179,500	169,000

9.2 PROJECT SHEDULE

TASK NO.	TASK	DURATION (weeks)	Start Date	End Date	Deliverables
1	Idea generation	2 days	10/09/2023	120/09/2023	System idea in place
2	Proposal writting	2 days	21/09/2023	23/09/2023	Proposal ready
3	Proposal presentation	1 day	25/09/2023	25/09/2023	Presentation
4	System requirement	3 days	27/09/2023	30/09/2023	System requirements
5	System design and programming	4 weeks	1/10/2023	31/10/2023	Systems requirement
6	Testing and debugging	4 days	11/10/2023	4/11/2023	Testing
7	System implementation	1 week	6/10/2023	13/11/2023	implantation
8	Final presentation	1 day	19/10/2023	19/11/2023	Final document
	Total	7 weeks			

9.3 SYSTEM RESOURCES

Resource	specifications	usage
firewalls	Powerful firewall	To secure the server against malicious attracts
Windows operating system	Windows 10 pro	Operating the machine

Server software	High performance servers	To host the database and web application
Database management system	Mysql	For storing church data safely
Development tools	Visual studio code	For coding and debugging
Support team	Security graduate	Providing technical support and maintenance

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