AKENTEN APPIAH-MENKA

UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

FACULTY OF APPLIED SCIENCES AND MATHEMATICS EDUCATION
DEPARTMENT OF INFORMATION TECHNOLOGY EDUCATION

A RESEARCH PROJECT ON THE DEVELOPMENT OF AN

ORPHANAGE ONLINE MANAGEMENT SYSTEM FOR HELP THE NEEDY FOUNDATION, ABUAKWA-KUMASI.

BY

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AUGUST, 2021

DECLARATION

Candidate's Declaration

We hereby declare that this project work is the result of our original research and that no part of it has been presented to Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, or elsewhere.

Candidate's Signature …………………   Index Number: 5191040495

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Supervisor's Declaration

I hereby declare that the preparation and presentation of this project work were supervised in accordance with guidelines on supervision of project works laid down by the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development.

Name of Supervisor: Dr. Joshua Dagadu

Signature ………………..…………………   Date…..………...………..……

ACKNOWLEDGEMENT

ABSTRACT

The Orphanage Management System is a software solution that aims to improve orphanages' operations and enhance the care provided to orphaned children. The project follows a structured System Development Life Cycle approach, ensuring a methodical and coherent development journey. The project aims to alleviate operational challenges faced by orphanages and improve their management, communication, financial tracking, and reporting.

The system's core components include staff management, orphans' profiles, financial tracking, communication channels, and reporting mechanisms. The system's architecture is designed to serve as a unified hub that streamlines processes, fosters transparency, and enriches communication among staff members and stakeholders. The project collaborates with Help The Needy Foundation to align with the Ghana Ministry of Gender, Children, and Social Protection's objectives.

The project's success is attributed to strategic planning, stakeholder involvement, and adherence to industry-best software engineering practices. The system undergoes rigorous evaluation, showcasing its resilience and versatility when subjected to a myriad of real-world scenarios. The Orphanage Management System project is a tangible testament to the catalyzing influence of technology on effectuating transformative enhancements within the realm of orphanage management, culminating in a positive societal impact that reverberates across beneficiaries and stakeholders alike.

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Chapter 1   Introduction

1.1   Introduction

This chapter's introduction talks about the project's background, the problem statement of the project, the aims and objectives of the project, and the significance of the project (project's relevance). This chapter goes on to describe the project's scope and how the project report is structured before concluding with a summary.

1.2   Project Background

The introduction of technology and the internet has exposed many non-profit organizations like orphanages to improve their activities. The significant importance of technology is making it productive for orphanage homes in their day-day activities. Regardless of its productive impact on organizations, other organizations are still using the manual system. There are challenges such as data loss and data integrity that are associated with this manual system. On more engagement with numerous orphanage homes, various administrators do complain about the need for a new management system to enhance the daily activities they undertake as a non-profit organization. Challenges that they frequently incur are often due to the old manual system (Shukla, V., & Singh, A, 2018). The key purpose of creating this OMS is to simplify and recreate a new documentation process in the running of orphanage homes. Creating an effective, efficient, and reliable computer database to replace the existing manual system.

1.3 Problem Statement

In the early days of the orphanage management system, these systems were primarily used for basic manual record-keeping, such as writing information about the children in the orphanage home and their medical histories, making it difficult for administrators considering the time and number of orphans in the home. In some cases, accountability of orphanage funds was a problem due to mismanagement of the receipt of donations funds that was recorded manually. The orphanages were also frequently plagued by corruption, with funds intended for the children being misused and misappropriated. The lack of proper regulation and oversight meant that many of these issues went unchecked, leading to a perpetuation of the problems. All of these factors combined created a dire situation for the children in these homes, with many of them struggling to thrive and find stability in their lives and declining the development of orphanage homes.

1.4 Aims and Objectives of the Project

The main goal of this system is to find and design an efficient system for managing diverse types of information used by the management to make the running of the orphanage easier and more efficient

1. The system will design an efficient and effective user interface to ensure ease of use for administrators and regular users.
2. It will provide a secure system to store and process sensitive data related to the orphanage.

3. Users can store and view orphans' educational records.

4. Establishment of a mechanism for user authentication, authorization, and verification.

5. It will integrate an automated system for tracking and monitoring donations and expenses and also facilitating online donations.

6. This system will implement efficient communication and messaging systems to promote collaboration between administrators and users.

1.5 Significance of the Project

The system will simplify all manual activities involved in the information that has been gathered. This system will enable secured data storage and access. Data loss and preservation of data will be safeguarded. It will conserve effort and boost efficiency. The system will be run at all times on successful operations and executions.

1.6 Scope of Project

The system's primary users will be administrators and possible individuals or donors. Only after generating user accounts will users be allowed to utilize the system. Registration of individuals will be done only on the system. All information will be backed up in the system periodically. In

addition to that admission and enrollment, medical records, education, and financial records will save.

1.7   Project Report Organization

The structure of a project report on an Orphanage management system will be simple and logical, with each component building on the one before it. Here is a more thorough explanation of how the report is organized:

1. Chapter One (Introduction): The background of the project, problem statement, project objectives (primary objective), significance, scope, and organization of the project report will all be covered in this chapter, which will also include a summary of the chapter.

2. Chapter Two (Literature Review): This will give a summary of the material that has been written about Orphanage management systems and related technology. It will go through the key characteristics of these systems and the advantages they offer the Orphanage.

3. Chapter Three (Methodology): The gathering and analyzing data process for this project will be described in detail in Chapter 3 which will be the methodology. The rationale for holding orphanage money accountable will once more be outlined in this chapter.

4. Chapter Four (Outcomes and Evaluation): In this chapter, the project's findings will be addressed and the efficiency of the orphanage management system will be evaluated. Feedback will be added and the project's results will be outlined and thoroughly discussed.

5. Chapter Five (Conclusion): A summary of the study's findings will be discussed. A final summary of all the project results and discussions will be done in the fifth and final chapters.

1.8 Summary

The background of the project, the problem statement, the aims and objectives of the project, the justification of the project, and the scope of the project have all been covered in this first chapter, which serves as an introduction. The literature review on the topic (project) that is being studied would be covered in the second chapter.

Chapter 2   Literature Review

2.1   Introduction

This chapter provides an overview of the study, the purpose of the review, the methods used (conceptual and theoretical review), and the empirical/existing systems review relevant to the study and it ends with a summary of the main points of the chapter.

2.2   Conceptual and Theoretical Framework/Review

A single, organized theory is represented by a theoretical framework. When a study is grounded in a theoretical framework, the theory acts as the main means of explanation and questioning of the research subject. Although they are frequently used in analysis design, theoretical frameworks can also be used in testing research. In contrast, a conceptual framework includes one or more conceptual theories as well as extra ideas and empirical data that have been found in the literature. Its goal is to clarify the connections between these concepts and how they relate to the research investigation. The social and behavioral sciences typically use conceptual frameworks in their exploratory studies. This is because a variety of hypotheses are frequently needed to effectively explain the facts being examined.

2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The theoretical framework underlying this study is the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003). The UTAUT is an extension of the Technology Acceptance Model (TAM) and integrates additional factors to provide a comprehensive understanding of technology acceptance and usage. According to Venkatesh et al. (2003), the UTAUT incorporates four key factors that influence users' intentions to use technology. We have the factor that captures users' beliefs about how using the technology will enhance their performance and productivity. It is based on the work of Davis (1989) and reflects the concept of perceived usefulness in TAM. It is essentially a measure of the perceived usefulness of the technology.

In TAM, perceived usefulness is a central construct that influences users' acceptance and adoption of technology. It is the extent to which users believe that using the technology will enhance their job performance or facilitate the accomplishment of specific tasks. Performance Expectancy focuses specifically on this aspect of perceived usefulness. For example, if an employee believes that using a new project management software will help them organize tasks more efficiently, collaborate with team members effectively, and ultimately improve their productivity, they are more likely to have high-performance expectancy for that technology. On the other hand, if they perceive the software as cumbersome, difficult to use, or irrelevant to their tasks, their performance expectancy may be low.

The second factor which is the effort expectancy, describes how if users believe that the technology is easy to understand, navigate, and operate, they are more likely to adopt and use it.

On the other hand, if they perceive the technology as difficult to learn, cumbersome, or confusing, they may be less inclined to use it from TAM (Davis, 1989). This factor considers users' subjective judgments about the effort required to become proficient in using the technology. It takes into account their beliefs about the learning curve, the amount of time and resources needed to become comfortable with the technology, and the perceived simplicity or complexity of its features and functions.

Another factor is social influence, this is the consideration people make whether to adopt and use a new technology, the opinions and actions of the people around them play a role. This factor takes into account how the influence of colleagues, friends, and superiors can shape individuals' attitudes and intentions toward technology (Venkatesh et al., 2003). Social norms, which are the unwritten rules and expectations within a social group, also come into play. If a technology is widely accepted and used by others in a person's social circle or workplace, it can create a sense of social pressure or conformity that may influence their decision to adopt the technology.

When users are considering whether to adopt and use technology, the support and resources available to them play a crucial role. This factor takes into account the organizational and technical conditions that can facilitate or hinder the use of the technology (Venkatesh et al., 2003). Organizational support refers to the availability of resources such as training programs, user manuals, technical assistance, and other forms of support provided by the organization. When users perceive that the necessary resources and support are readily available, it can enhance their confidence and willingness to adopt and use the technology.
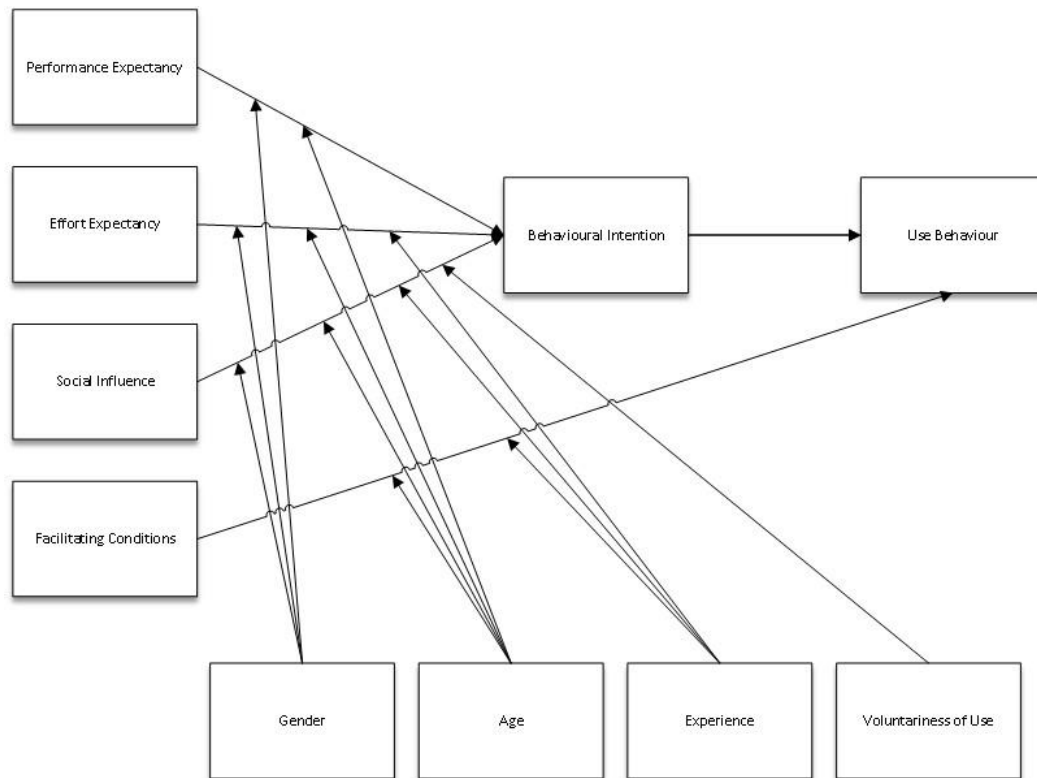
Figure 1 (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) has been extended and adapted through various iterations to address limitations and enhance its explanatory power. UTAUT2 integrated additional constructs of hedonic motivation, price value, habit, and facilitating conditions to improve the model's predictive capability.

UTAUT2.0 further expanded the model by incorporating social influence from social identity theory, introducing constructs of social influence and facilitating conditions to capture the social dynamics influencing technology acceptance. UTAUT-PC focused on the post-adoption phase, adding continuance intention and using behavior constructs to explain users' continued use of technology. These extensions have allowed UTAUT to provide a more comprehensive

understanding of technology acceptance and use, considering various factors and stages of adoption.
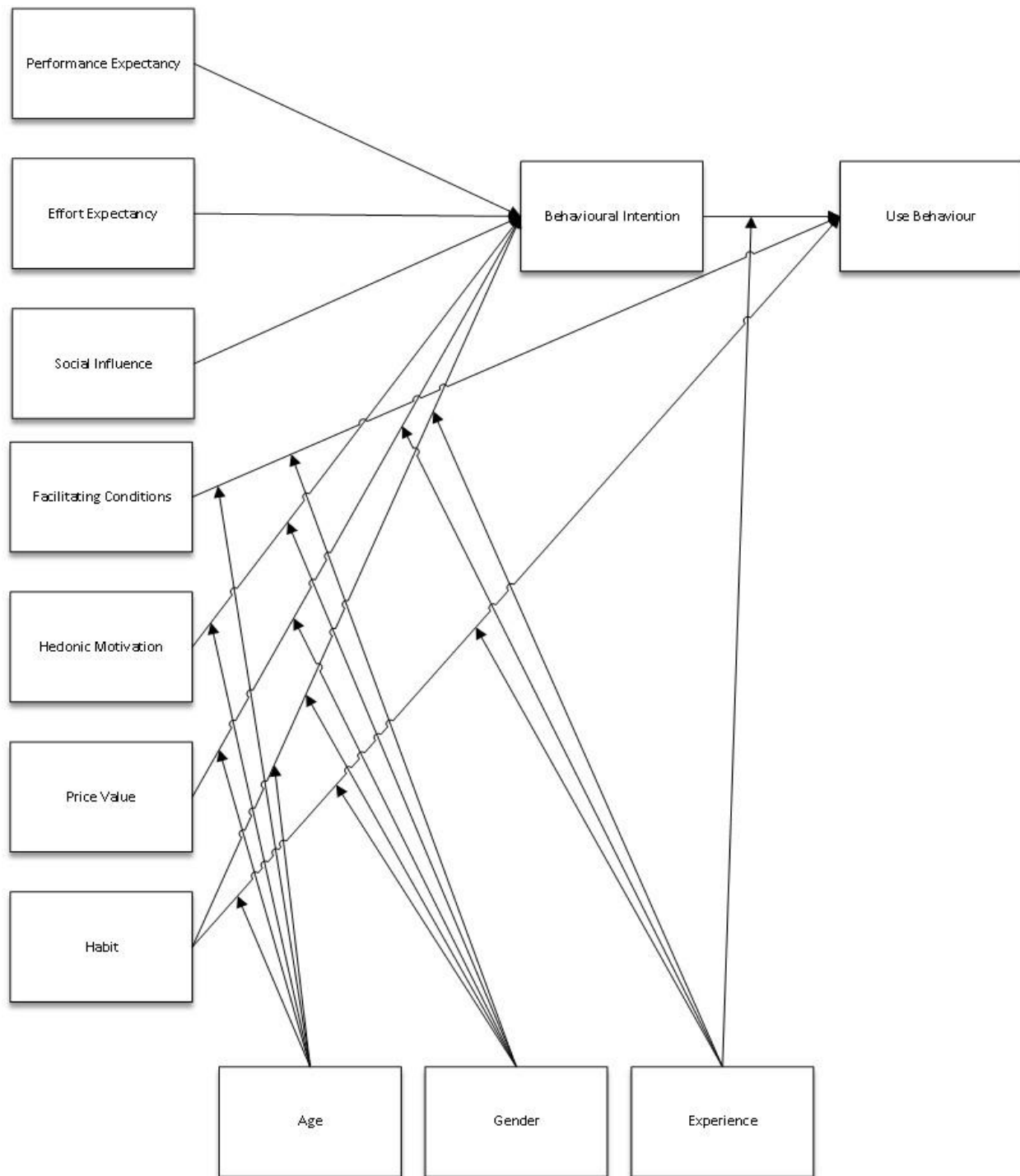

Figure 2 UTAUT2

The Unified Theory of Acceptance and Use of Technology (UTAUT) has been criticized for its limitations in accounting for contextual factors, limited predictive power, neglect of emotional factors, overemphasis on intention as a mediator, and inadequate attention to social influence (Venkatesh & Bala, 2008; Holden & Karsh, 2009; Nambisan & Wang, 2011; Venkatesh, Thong, & Xu, 2012; Zhang, Yu, Yan, & Ton, 2018).

The Unified Theory of Acceptance and Use of Technology (UTAUT) demonstrates resilience and strengths, including its comprehensive framework, high predictive power, broad applicability, clear and measurable constructs, practical implications, and continual evolution, contributing to its continued relevance and influence in the field of technology acceptance.

2.3   Empirical/Existing Systems Review

The management of orphanages plays a crucial role in providing care and support to orphaned children. In recent years, the advancement of technology has led to the development of online orphanage management systems, aiming to improve the efficiency and effectiveness of managing orphanages. This review aims to explore the existing literature on online orphanage management systems and analyze their impact on the management and operations of orphanages.

Several studies highlight the significance of technology in enhancing orphanage management processes. Tadesse et al. (2019) emphasize the potential of online systems in automating administrative tasks, such as record-keeping, fundraising, and communication, leading to increased operational efficiency. Online systems also enable centralized data management, facilitating easy access and retrieval of information (Alemu & Debebe, 2020).

2.3 .1   Role of Technology in Orphanage Management

Several studies highlight the significance of technology in enhancing orphanage management processes. Tadesse et al. (2019) emphasize the potential of online systems in automating administrative tasks, such as record-keeping, fundraising, and communication, leading to increased operational efficiency. Online systems also enable centralized data management, facilitating easy access and retrieval of information (Alemu & Debebe, 2020).

2.3.2   Challenges with the Manual Role of Technology in Orphanage Management

The manual role of technology in orphanage management faces several challenges. These challenges can hinder the effective implementation and utilization of technology in improving orphanage management processes. Here are some key challenges:

1. Limited Access to Technology
2. Digital Literacy and Skills Gap
3. Data Security and Privacy
4. Training and Technical Support

5. Cultural and Contextual Factors

6. User Adoption

2.3.3 Orphanage Management System

This is a stand-alone system which is an application used by some of the orphanages and children's homes in India and accessed via a command-line interface. (Krishnam, 2016). The application is used in the management of Orphans, Daily activities, Finance, and Reports. Provides background details of the children which include: the orphan's Id, Interest in Orphans, the amount received from people, contacts, date of joining the orphanage, contacts, and addresses of the person who brought the child to the orphanage.

To improve on the advantages offered by an OMS, various recommended modules were introduced. As stated in the article (Welligent Inc., 2001). One of these models was the foster parent's module which allows the user to complete forms, upload attachments, track recruitment calls, set preferences, and record basic demographics.

Welligent modules highlight the potential of technology to streamline operations, improve communication, enhance data management, and increase overall efficiency in serving orphaned children effectively.

Engaging stakeholders in the process of selecting and implementing the orphanage management system is considered a valuable approach to ensure that the system aligns with the specific requirements of the orphanage.

Another recommended approach is to ensure that the orphanage management system (OMS) is integrated with existing workflows and processes, to facilitate seamless operations and minimize disruptions.

Features of the Orphanage Management System

The orphanage management system offers a range of features to support efficient and effective management of various aspects of orphanage operations. Here are some common features found in orphanage management systems:

1. Child Information Management:

  - Managing information about each child, including personal details, medical history, educational records, and placement information.

  - Track and update child information as necessary, including changes in guardianship or contact details.

2. Staff Management:

  - Maintain a database of staff members with their qualifications, roles, and schedules.

  - Assign and track tasks and responsibilities for staff members.

3. Admission and Placement Management:

- Facilitate the admission process for new children, including capturing their details and required documentation.

- Manage the placement of children in different foster homes or care facilities within the orphanage.

- Monitor the availability and capacity of various placements.

4. Donor and Fund Management:

- Record and manage donor information, including contact details, donation history, and communication records.

- Track and manage fundraising campaigns, events, and donations received.

- Generate reports on donor contributions and financial transactions.

5. Inventory and Resource Management:

- Maintain an inventory of supplies, including food, clothing, educational materials, and other resources.

- Track the utilization and availability of resources.

- Generate reports on resource allocation, consumption, and future requirements.

6. Attendance and Security:

- Record and monitor the attendance of children and staff members.

- Implement security measures to ensure the safety of the premises and the children.

7. Reporting and Analytics:

  - Generate various reports, such as child progress reports, financial statements, donor activity reports, and resource utilization reports.

  - Provide analytics and insights on orphanage operations and performance.

  - Enable data-driven decision-making and planning.

8. Communication and Collaboration:

  - Facilitate internal communication and collaboration among staff members through messaging, task assignments, and document sharing.

  - Enable communication with external stakeholders, such as donors, government agencies, and volunteers.

It's important to note that the specific features may vary based on the orphanage management system provider and the customization options available. The features listed above provide a general overview of the functionalities commonly found in orphanage management systems.

Benefits of Using an Orphanage Management System

Implementing an orphanage management system (OMS) brings several benefits to the operations and administration of an orphanage. Here are some key benefits of using an orphanage management system:

1. Streamlined Administrative Processes: An OMS automates various administrative tasks, such as data entry, record-keeping, and report generation. This streamlines operations reduces manual errors, and frees up staff time for more meaningful activities.

2. Improved Data Management: With an OMS, orphanages can maintain a centralized database of child information, staff details, donor records, and other relevant data. This ensures easy access to accurate and up-to-date information, facilitating better decision-making and efficient coordination among stakeholders.

3. Enhanced Child Tracking and Care: OMS enables comprehensive tracking of individual children, including their medical history, education progress, and placement details. This improves the overall care provided, facilitates personalized interventions, and supports the holistic development of each child.

4. Increased Accountability and Transparency: OMS promotes accountability by recording and tracking financial transactions, donor contributions, and resource utilization. This fosters transparency and ensures that orphanages meet compliance standards, thereby building trust with donors, government agencies, and other stakeholders.

5. Efficient Donor Management: An OMS streamlines the management of donor information, allowing orphanages to track donor history, generate donation reports, and maintain regular

communication. This strengthens donor relationships, enables targeted fundraising efforts, and enhances financial sustainability.

6. Effective Resource Allocation: By tracking inventory and resource utilization, OMS helps orphanages optimize resource allocation. This ensures that essential supplies, such as food, clothing, and educational materials, are available when needed, reducing wastage and improving overall resource management.

7. Data-Driven Decision Making: OMS provides robust reporting and analytics capabilities, offering insights into orphanage operations, donor engagement, and child progress. This empowers administrators to make data-driven decisions, identify areas for improvement, and measure the impact of interventions and programs.

8. Improved Communication and Collaboration: OMS facilitates communication and collaboration among staff members, enabling efficient task assignment, message sharing, and document management. This enhances teamwork, streamlines workflows, and promotes a cohesive working environment.

2.4 Summary

In the chapter, the focus was on Technology Acceptance and Adoption, specifically the utilization of the Technology Acceptance Model (TAM) as the theoretical foundation for the

project. The significance, expansions, and criticisms of TAM were thoroughly examined. The empirical review encompassed the difficulties associated with relying on manual processes in technology, the definition of the Orphanage Management System, and its features and advantages as highlighted in prior research conducted by other authors in the field.

Chapter 3   Methodology

3.1   Introduction

This chapter provides an overview of the systematic approach and procedures employed to plan, execute, and analyze data, including the selection of a suitable research design, data collection methods, sampling techniques, data analysis techniques, ethical considerations, and acknowledgment of limitations.

The methodology chapter of the research design includes several elements, from the proper research design strategy chosen to construct the study to the last section in which the researcher fully examines the system development life cycle on the planned system. The following is a list of the numerous topics covered in this section.

The first feature of the research design or strategy is the section of the study that addresses the researcher's aims and justifications for the approach they chose. This section also emphasizes the research environment, which may be characterized as the social, physical, or cultural context in which the experimental study is carried out.

A description of the specific tool(s) used by the study to collect the data, along with instructions on how to use them, is provided in the data collection instrument (requirements). Since sensitive information is needed for the study, this chapter takes the necessary precautions to preserve the privacy, confidentiality, and wellbeing of the research participants.

The chapter concludes with a summary of the chapter's main points after a detailed discussion of the proposed system and its development/building, which covers tools, the development method, and the system development life cycle (SDLC).

3.2   Research Design/Approach

Research design encompasses the comprehensive approach and design adopted by a researcher to investigate a research question or objective. It delineates the structured methodology employed to gather, analyze, and interpret data, thereby enabling the resolution of the research question or hypothesis. An accurately crafted research design guarantees the integrity, dependability, and applicability of the study's findings. This research study will utilize the survey research method as its foundation. The survey research method is a widely used approach in social sciences and other fields to collect data from a sample of individuals or groups. It involves the systematic gathering of information by asking questions and recording responses from respondents. According to Babbie (2016). The survey research method involves identifying the purpose of the survey, defining the research objectives, and formulating relevant research questions that will guide data collection. Surveys allow the gathering of large amounts of data from a diverse range

of respondents which makes it an option for selection for our project. By administering standardized questionnaires to a sample of individuals or groups, researchers can collect a wide range of information efficiently.

3.3   Research Setting

The Help the Needy Orphanage Foundation is located at T.E 20 Atwima Takyiman, Kumasi-Ghana. Situated in a vibrant residential area of Kumasi, the foundation aims to provide a safe and nurturing environment for orphaned and vulnerable children in the local community. The purpose-built facility comprises well-maintained buildings, including dormitories, administrative offices, a kitchen, a dining area, classrooms, and recreational spaces. The foundation operates with a dedicated team of staff and caregivers, including administrators, social workers, teachers, nurses, cooks, and maintenance personnel. They work collaboratively to meet the children's physical, emotional, and educational needs. Services offered include secure accommodation, nutritious meals, access to education, healthcare services, counseling, and recreational activities. The foundation actively engages with the local community, fostering partnerships and collaborations, while also welcoming the involvement of volunteers. The home follows a structured daily routine to ensure consistency and stability for the children. This includes waking up, hygiene routines, meals, educational activities, recreation, homework time, and bedtime routines. The research conducted within this setting will adhere to ethical guidelines, ensuring the protection of participants' rights and privacy.

3.4   Data (Requirements) Collection Instrument

Data collection instruction is a systematic approach or tool used to gather information or data from individuals or sources. Our choice of instrument that will be utilized to gather the required data and information for this project was surveys and interviews.

- Surveys

Surveys involve a set of pre-determined questions presented to participants in a structured format. Surveys can be conducted through various mediums, such as online forms, paper questionnaires, or telephone interviews. Surveys were chosen because it is a valuable instrument for gathering information and data about this orphanage management system. They enable the systematic collection of feedback, opinions, and experiences from various stakeholders, such as staff members, administrators, donors, experts, and children. Surveys provided a structured and standardized approach to collecting quantitative data, allowing for the analysis and comparison of numerical information. They help identify areas for improvement, gather diverse perspectives, provide anonymity and confidentiality to respondents, and facilitate data analysis and reporting. When using surveys, it is important to carefully design questions, consider the target audience and research objectives, and pilot test the survey for effectiveness in collecting relevant information.

- Interviews

Interviews involve face-to-face or remote interactions with individuals or groups to collect information. Interviews can be structured (using a predefined set of questions), semi-structured

(combining predetermined questions with room for open-ended responses), or unstructured (allowing for free-flowing conversation).

Interviews were chosen as an instrument for gathering information about this orphanage management system due to their ability to provide firsthand, qualitative data, explore specific topics in-depth, capture diverse perspectives, facilitate clarification and probing, foster human connection, and offer flexibility and adaptability to suit our research objectives, thereby enabling a comprehensive understanding of the complex factors involved in the effective orphanage management.

3.5   Ethical Consideration

In designing the orphanage management system, it is crucial to prioritize the key ethical considerations:

1. Privacy and confidentiality, ensuring that children's personal information is protected and accessible only to authorized personnel.

2. Consent and participation, obtaining informed consent, and involving children and their caregivers in decision-making processes.

3. Non-discrimination and inclusivity, treating all children fairly and providing equal opportunities regardless of their background.

4. Safety and well-being, implementing measures to safeguard children from harm, including secure data storage and protocols for reporting concerns.

By addressing these ethical considerations, the orphanage management system promoted privacy, respected autonomy, fostered inclusivity, protect children's well-being, and maintain transparency and accountability in the operations.

3.6 Description of Proposed System

The proposed Orphanage Management System (OMS) is intended to reduce the known workload associated with the existing manual system. The proposed system would make it simple for administrators to access, manage, and save documentation of activities in the orphanage home. To enable donors and adopters to make donations and adoption of children. Also, create a safety mechanism of signing in with valid credentials that restrict unauthorized workers from the system's accessibility. Its design is made to streamline and enhance the operations and administration of orphanages. It includes features such as child information management, admission and placement, staff management, financial management, inventory and resource management, health and medical care, education and skill development, communication, and reporting, as well as security and privacy measures.

Element of the Website:

Home Page – The home page of the website will enable the visitor (donor/adopter) to view information about the main activities of the organization, that is the fundraisings, donations, and photo galleries of all events that go on within the organization. This page also gives more information that showcases and promotes a fundraising campaign or initiative

The About Page – The about page will give information about the various units of the organization, the services that provide as an orphanage, and the activities that go on in the organization daily.

The Fund Raiser Page – the fundraiser page presents various donation options, including different donation amounts or tiers. Provide information on how the funds will be used and the

specific projects or activities they will support. It also displays a visual representation of the fundraising progress.

The Charity Members Page – The page presents pictures of all orphans in the orphanage organization.

The Gallery Page – The gallery page present pictures of all public events organized by the orphanage organizations in various towns and villages.

The Contact Page – This page shall bear the contact details of the organization and also it will be used by visitors to make comments and recommendations to the organization.

Administrator Page – The page will be used only by the admin of the management system of the orphanage organization to add fundraiser campaigns, new employees, and new orphans, upload galleries, approve the appointment, adoption proposals, and view reports from employees.

Staff Page – This page shall enable the employee to make a report about an adopted child to the administrator of the management system.

Donor Page – This page will enable the donor and adopter to make donations and also adopt a child from the orphanage organization.

3.7   System Development/Building

3.7.1 Tools

THE FRONT END

HTML: HTML (Hypertext Markup Language) is a standard markup language used to create and structure web content. HTML is the foundation of all websites and web applications and is used to describe the structure and content of a web page. HTML is an essential skill for web developers

and designers and is constantly evolving to meet the changing needs of the web. It is extremely simple to learn.

BACK END

PHP: PHP (Hypertext Preprocessor) is a server-side scripting language used for creating dynamic web pages. PHP allows for the generation of dynamic content, such as pulling data from a database and displaying it on a website, as well as processing form data and creating cookies. PHP code is executed on the server and the result is sent to the client's browser as HTML. It is a popular language for web development due to its simplicity, wide support, and strong community. PHP is often used in combination with other technologies, such as HTML, CSS, and JavaScript, to create dynamic and interactive websites. Additionally, PHP can be used to create content management systems, e-commerce websites, and a variety of other web applications.

DATABASE

SQL: SQL (Structured Query Language) is a standard language used to manage relational databases. It is used to create, modify, and manipulate databases, as well as to retrieve, insert, update, and delete data. SQL is a declarative language, meaning that the user specifies what they want the database to do, and the database management system takes care of the implementation details. SQL is widely used by businesses and organizations to store and manage large amounts of data and is the foundation of many popular relational database management systems, such as MySQL, PostgreSQL, and Microsoft SQL Server. Understanding SQL is an essential skill for database administrators, data analysts, and developers working with databases.

IDE (INTEGRATED DEVELOPMENT ENVIRONMENT)

Visual Studio Code: (VSCode) is a source code editor developed by Microsoft. VSCode is designed for modern web and cloud development and supports a wide range of programming languages, including but not limited to JavaScript, Python, C++, and Java. It has a large and active community of developers and contributors and offers a variety of extensions that can be installed to add new features and functionality. It is widely used by developers due to its ease of use, performance, and robust set of features.

WEB SERVER

XAMPP: XAMPP is a free, open-source software package that provides a complete web server solution for testing and developing dynamic web applications. It is an acronym for Cross-Platform, Apache, MariaDB, PHP, and Perl. XAMPP provides an easy way to install Apache, MariaDB (a fork of MySQL), and PHP on a single computer, allowing developers to test and develop dynamic web applications locally without the need for a live web server. Additionally, XAMPP includes other components such as phpMyAdmin, a web-based interface for managing MariaDB, and Perl, a scripting language. XAMPP is widely used by developers due to its ease of use, comprehensive set of features, and ability to run a complete web server environment on a single computer.

3.7.2 Development Process

ADVANCED WATERFALL MODEL

The Waterfall Model is a traditional project management approach that follows a sequential and linear process for software development of the orphanage management system. It consists of

distinct phases, including requirements gathering, design, implementation, testing, deployment, and maintenance. However, the Waterfall Model has been criticized for its lack of flexibility and inability to accommodate changes that may arise during the development process.

This study will utilize the Advanced Waterfall Model process to summarize the main steps to be taken in conjunction with the corresponding deliverable. The new waterfall model, which is known as the Advance Waterfall Model has been explained in Figure 3 (Gary, 1999).

Waterfall Model allows returning to the previous stage when the need arises but this provision should be used with care. This advantage is important in the software development of the orphanage management system as it is considered a plus point of this model. It is undesirable to change the specifications of the previous phases to accommodate new requirements. However, this model does allow this to provide the flexibility to incorporate important requirements found later in the development process of the project.
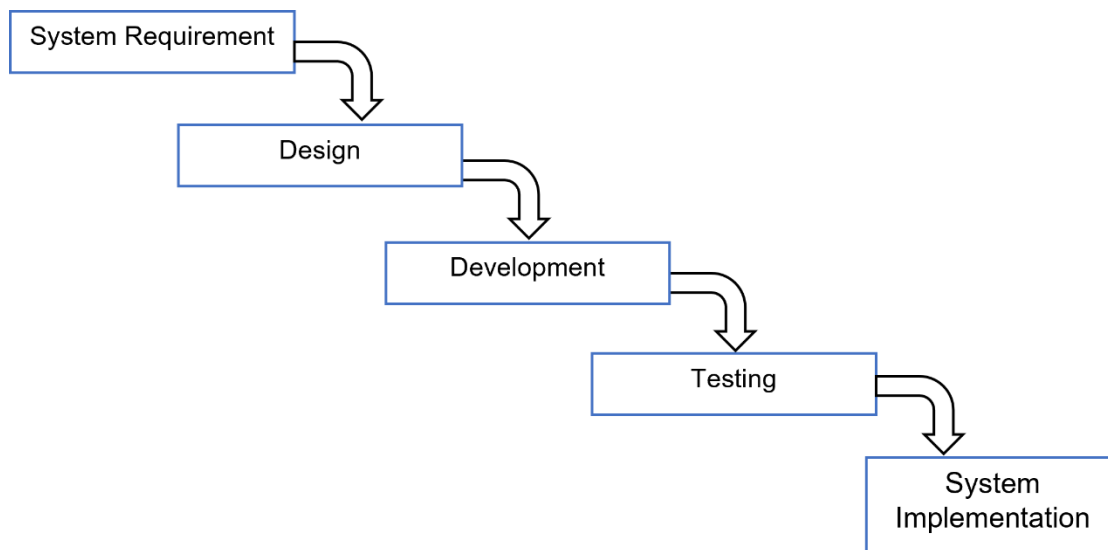
Figure 3 Advanced Waterfall Model

This model combines the elements of the waterfall model with the iterative philosophy of prototyping.

3.8   The System Development Life Cycle (SDLC)

We decided to use Software Development Life Cycle in making the project. SDLC is a framework defining tasks performed at each step in the software development process and is a structure followed by development teams within software organizations. Under the Software Development Life Cycle is the Waterfall model which is the most common and basic type of SDLC. The study will base on the concept of effective analysis, designing, prototyping, and development that would lead to a successful implementation of an orphanage management system.

  The focal point of the study is the Waterfall Model of the Software Development process. This is to summarize and show easily how the system is being generated.

3.8.1 Planning Phase

In the planning stage of this model, the project was initiated and managed**.**
Project Initiation:

- **Identifying the Need:** The project initiation began with identifying the need for an orphanage management system. The team recognized the challenges faced by orphanages in managing their operations and the potential benefits of a streamlined software solution.
- **Defining Objectives:** The team outlined the objectives of the project, such as improving orphanage operations, enhancing communication between staff and stakeholders, and providing a centralized system for data management.
- **Stakeholder Analysis:** The team identified key stakeholders, including orphanage staff, administrators, potential users, and possibly external parties like donors and adopters. Understanding their needs and expectations helped shape the project's scope.

- **Project Sponsorship:** A project sponsor was designated within the team. The team members championed the project, provide necessary resources, and make key decisions when required.

Project Management:

- **Project Manager Assignment:** One team member was appointed as a project manage to oversee the entire project. This person would be responsible for planning, execution, and ensuring the project's successful completion.
- **Requirements Gathering:** The team members engaged with orphanage staff, administrators, and potential users to gather detailed requirements. This involved conducting interviews, surveys, and workshops to understand their needs and challenges.
- **Scope Definition:** Based on the gathered requirements, the team defined the scope of the orphanage management system. This included specifying the features, functionalities, and boundaries of the system.
- **Project Schedule:** Using the gathered information, the team created a project schedule that outlined the sequence of phases, milestones, and estimated timeframes for each activity. This schedule served as a roadmap for the project's progress.
- **Resource Allocation:** The team identified the necessary resources, both human and technical, required for the project. This included assigning roles to team members, acquiring hardware and software, and considering any external services needed.
- **Risk Assessment:** Potential risks were identified and assessed. These could include technical challenges, data security concerns, delays in procurement, or changes in requirements. The team developed a plan to mitigate and manage these risks throughout the project.
- **Communication Plan:** A plan was developed to ensure effective communication among team members and stakeholders. Regular status updates, progress reports, and meetings were scheduled to keep everyone informed.
- **Budget Estimation:** The team estimated the project budget, considering costs related to development, testing, deployment, training, and ongoing maintenance. This budget was aligned with available resources and organizational constraints.

- **Approval and Kickoff:** With the project plan in place, the team presented the detailed project plan to relevant stakeholders for review and approval. Once approved, the project was officially kicked off, and work began on the subsequent phases.

3.8.2 Analysis Phase

Requirements Gathering and Analysis:

For the orphanage management system project, your team employed two primary requirements elicitation techniques: surveys and interviews.

1. Surveys:

Surveys were distributed to orphanage staff, administrators, potential users, and other relevant stakeholders. The survey aimed to gather a broad understanding of their needs, pain points, and expectations regarding the system. The survey contained questions about the current challenges faced in managing orphanage operations, desired features, and the expected outcomes of implementing the system.

2. Interviews:

In-depth interviews were conducted with key stakeholders, including orphanage staff, administrators, and potential users. These interviews provided an opportunity for a detailed exploration of their requirements and allowed your team to ask follow-up questions to clarify and delve deeper into their needs. Interviews were particularly useful in uncovering nuanced requirements and understanding the workflow intricacies of the orphanage.

Requirements Specification Document:

Orphanage Management System - Requirements Specification Document

1. Introduction:

   Purpose: To outline the functional and non-functional requirements for the orphanage management system.

   Scope: The system will cover aspects related to staff management, orphan records, financial tracking, communication, and reporting within the orphanage.

2. User Requirements:

Staff Management:

- Ability to create, update, and manage staff profiles.

- Assign roles and responsibilities.

Orphan Members Records:

- Maintain individual orphan profiles with personal details and social background.

Financial Tracking:

- Record and monitor donations.

Communication:

- Provide information for staff and stakeholders.

Reporting:

- Generate reports on orphans, financial transactions, and operational efficiency.

3. Functional Requirements:

User Authentication and Access Control:

- Implement secure login for staff members with role-based access.

Dashboard:

- Display an overview of key metrics and notifications.

Staff Profile Management:

- Allow creation, editing, and deletion of staff profiles.

Orphan Members Profile Management:

- Enable the addition, modification, and removal of orphans' information.

Donation Recording:

- Provide a form to input donation details, including amount and source.

Communication Module:

- Messaging functionality for staff and stakeholders.

Reporting System:

- Generate predefined and customizable reports based on user-selected criteria.

4. Non-Functional Requirements:

Security:

  - Ensure access control mechanisms.

Performance:

  - System should respond to user actions within 2 seconds.

Usability:

  - User-friendly interface with intuitive navigation.

Scalability:

  - System should accommodate growth in data and users.

5. Constraints:

  - The system must be developed in a way that will be usable and useful for users.

  - Compatibility with modern browsers.

6. Assumptions and Dependencies:

  - Users have basic computer literacy.

  - Stable internet connection for online usage.

This Requirements Specification Document serves as a foundation for the development phase, ensuring that the system meets the needs of the orphanage and its stakeholders.

3.8.3 System Design Phase

System design refers to the process of creating a detailed blueprint or plan for the development

of a software system or application. The goal of the system design phase is to produce a model or

representation of the system, which can be used to build the system. Here the emphasis is on translating the requirements of the system into design specifications.

a. Context Flow Diagram

A context flow diagram is a top-level data flow diagram. It only contains one process node that generalizes the function of the entire system in relationship to external entities. In the context diagram, the entire system is treated as a single process and all its inputs, outputs, sinks, and sources are identified andshown.

Context Flow Diagram:
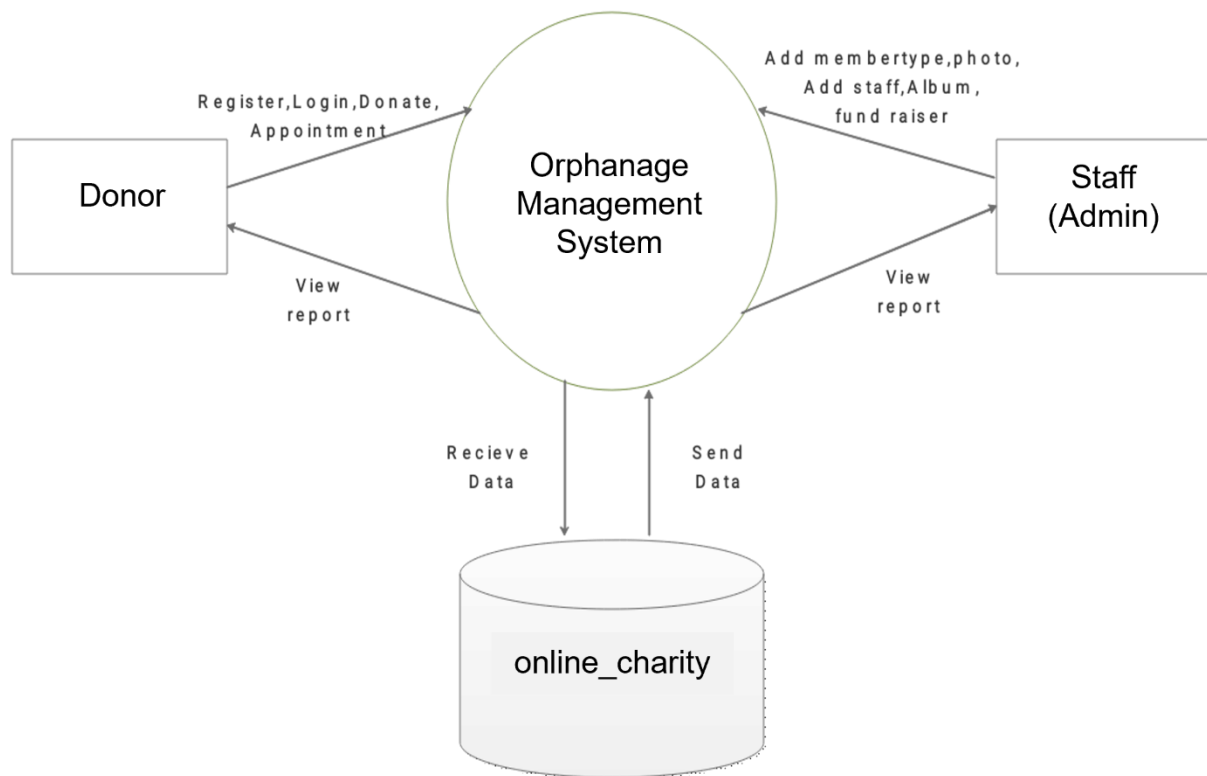
Figure 4 Context Flow Diagram

b. Use Case Diagram

Use Case Diagram:

A use case diagram is a visual representation that illustrates the interaction between actors (users, systems, or external entities) and the functionalities of a system. It helps to capture the system's behavior from a user's perspective and identifies the different use cases or actions that actors can perform within the system.
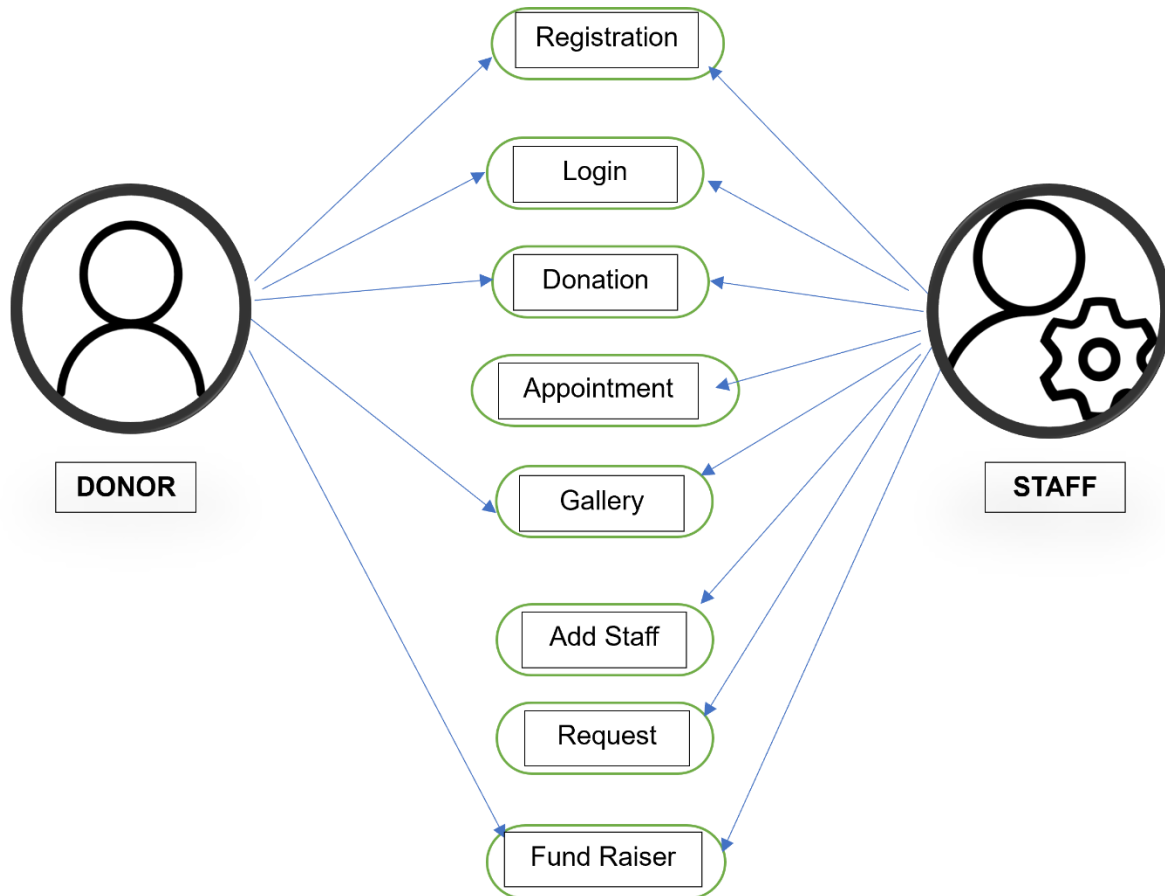
Figure 5 Use Case Diagram
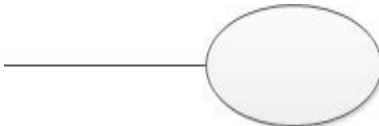
c. ER Diagram

Entity-Relationship Diagram:

An entity-relationship (ER) diagram is a specialized graphic that illustrates the relationships between entities in a database. ER diagrams often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes.

The Symbols are shown below table:

Table 1 ER Diagram Symbol

Name	Notation	Description
Entity		An entity is represented by a box within the ERD. Entities are abstract concepts, each representing one or more instances of the concept in question. An entity might be considered a container that holds all of the instances of a particular thing in a system. Entities are equivalent to database tables in a relational database, with each row of the table representing an instance of that entity.
Relationship		Relationships are represented by Diamonds. A relationship is a named collection or association between entities or used to relate to two or more entities with some common attributes or meaningful interaction between the objects.
Attributes		Attributes are represented by Oval. An attribute is a single data item related to a database object. The database schema associates one or more attributes with each database entity.
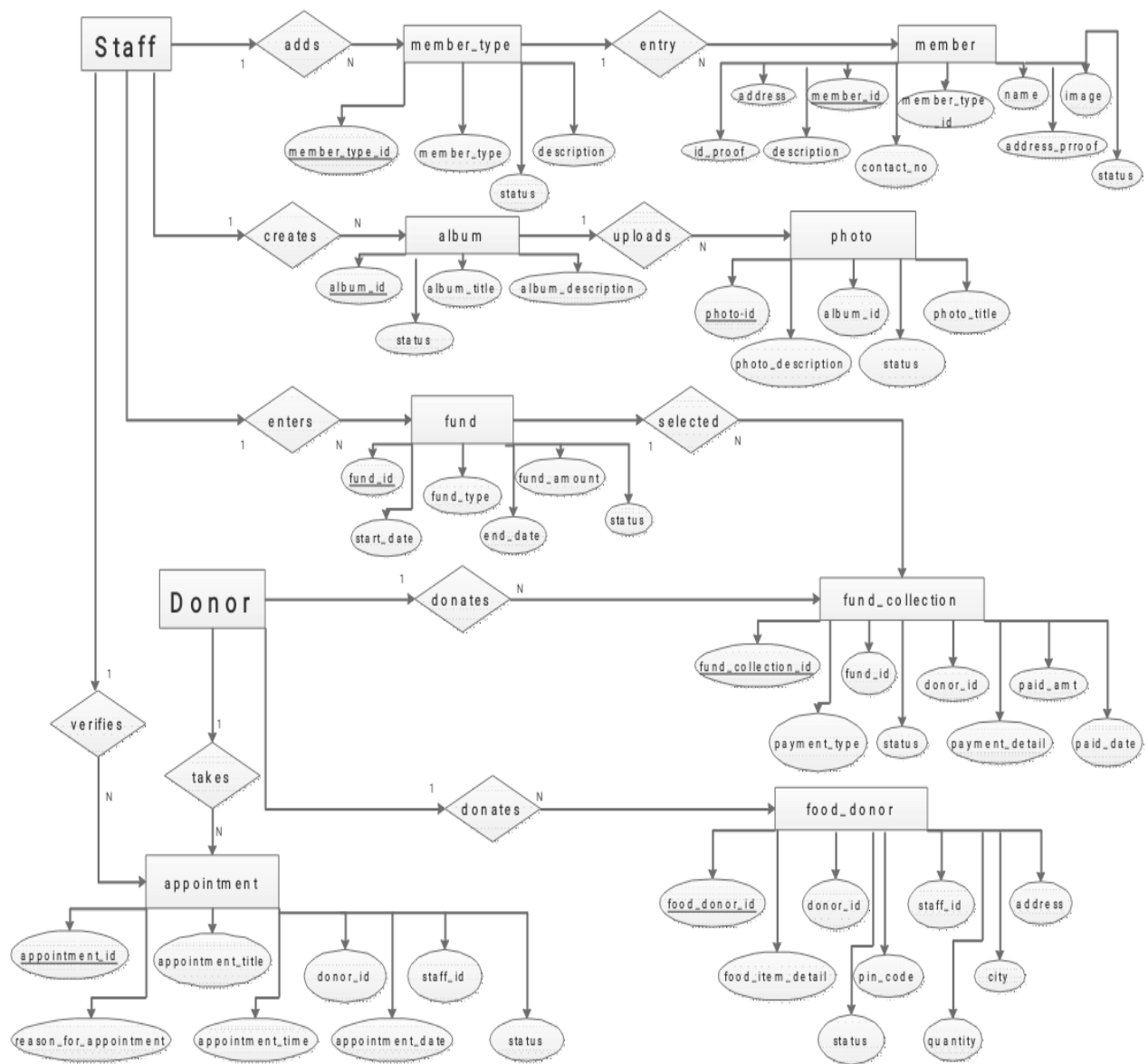
Figure 6 ER Diagram

d. Database schema Diagram:

A schema contains schema objects, which could be tables, columns, data types, views, stored procedures, relationships, primary keys, foreign keys, etc. A database schema can be represented in a visual diagram, which shows the database objects and their relationship with each other.

Figure 7 Database Schema (E-RD)
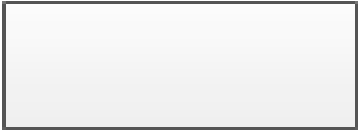
e. Data Flow Diagram

A data flow diagram is a graphical representation of the flow of data through an information system. A data flow diagram can also be used for the visualization of the data processing.

Data Flow diagrams can be used to provide the end users with the physical idea of where the data they input ultimately affects the structure of the whole system from order to dispatch to restock how any system is developed can be determined through a data flow diagram. The appropriate register is saved in the database and maintained by the appropriate authorities. A data flow diagram can also be used for the visualization of the data processing.

Notations in the DFD

Table 2 Notations in DFD

	The circle or bubble represents a process. A process is named and each process is represented by a named circle.
	The source or sink is represented as a rectangular box. The source or sink is the net originator or the consumer of the data that flows in the system.
	The arrow represents the flow of data through the system. The labeled arrows enter or leave the bubbles.
	The database is represented with the open box symbol.

Staff (Admin)

album & photo
detail

**2.1
Updating
photos**

photo_title, photo_description

photo

charity
member list

**2.2
Adding
members**

name, image, address

member

Donor

appointment
detail

**2.3
Requesting
for
visiting
appointment**

appointment_title, reason_for_
appointment, appointment_date

appointment

food donation
detail

**2.4
food
donating
process**

donor_id, address, city, qty

food_donor

fund donation
detail

**2.5
Fund donation
process**

donor_id, paid_amt, paid_date

fund_collection

child adaption
detail

**2.6
Child adoption
process**

member_id, name

Figure 8 Data Flow - DFD Level 2.1: (Admin and Donor/Adopter Activities)
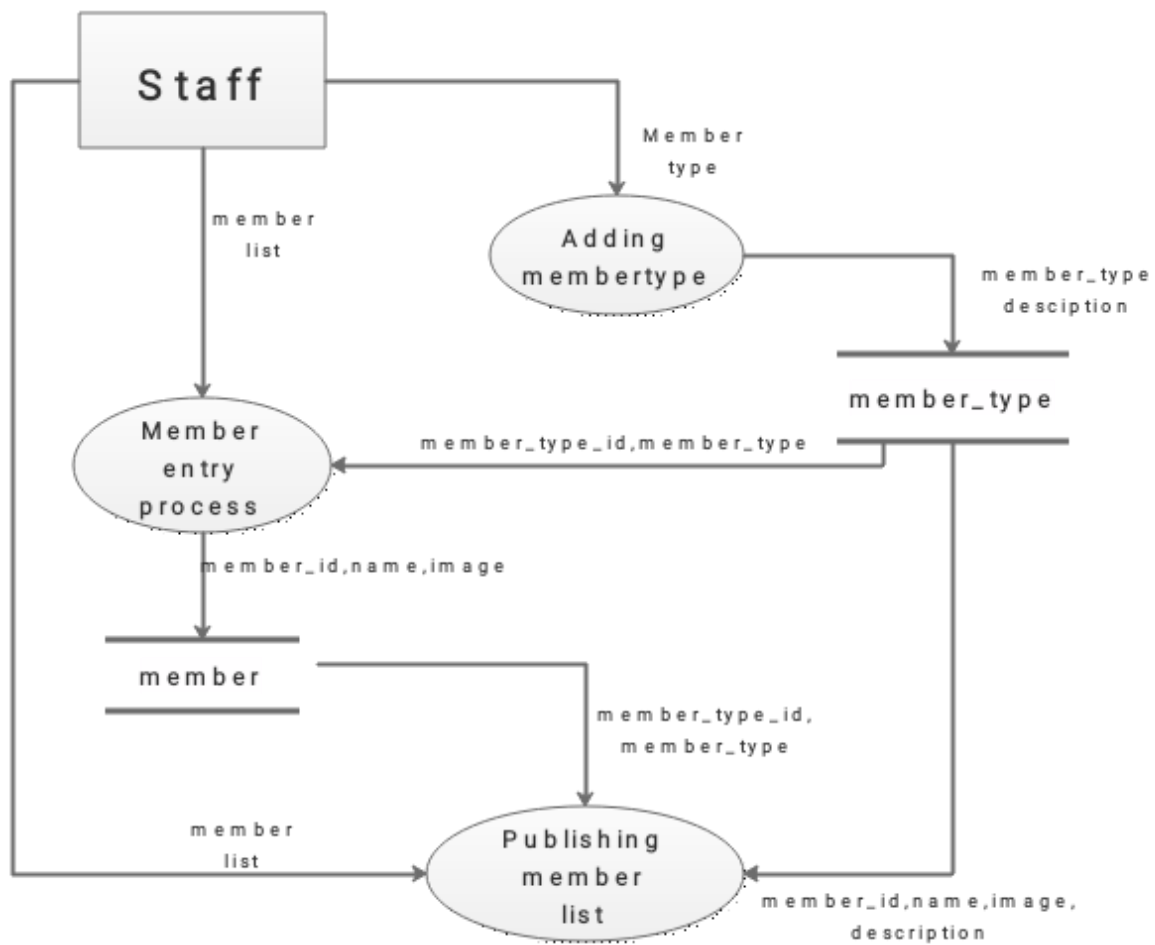
Figure 9 Data Flow - DFD Level 2.2: (Orphan Member Adding)
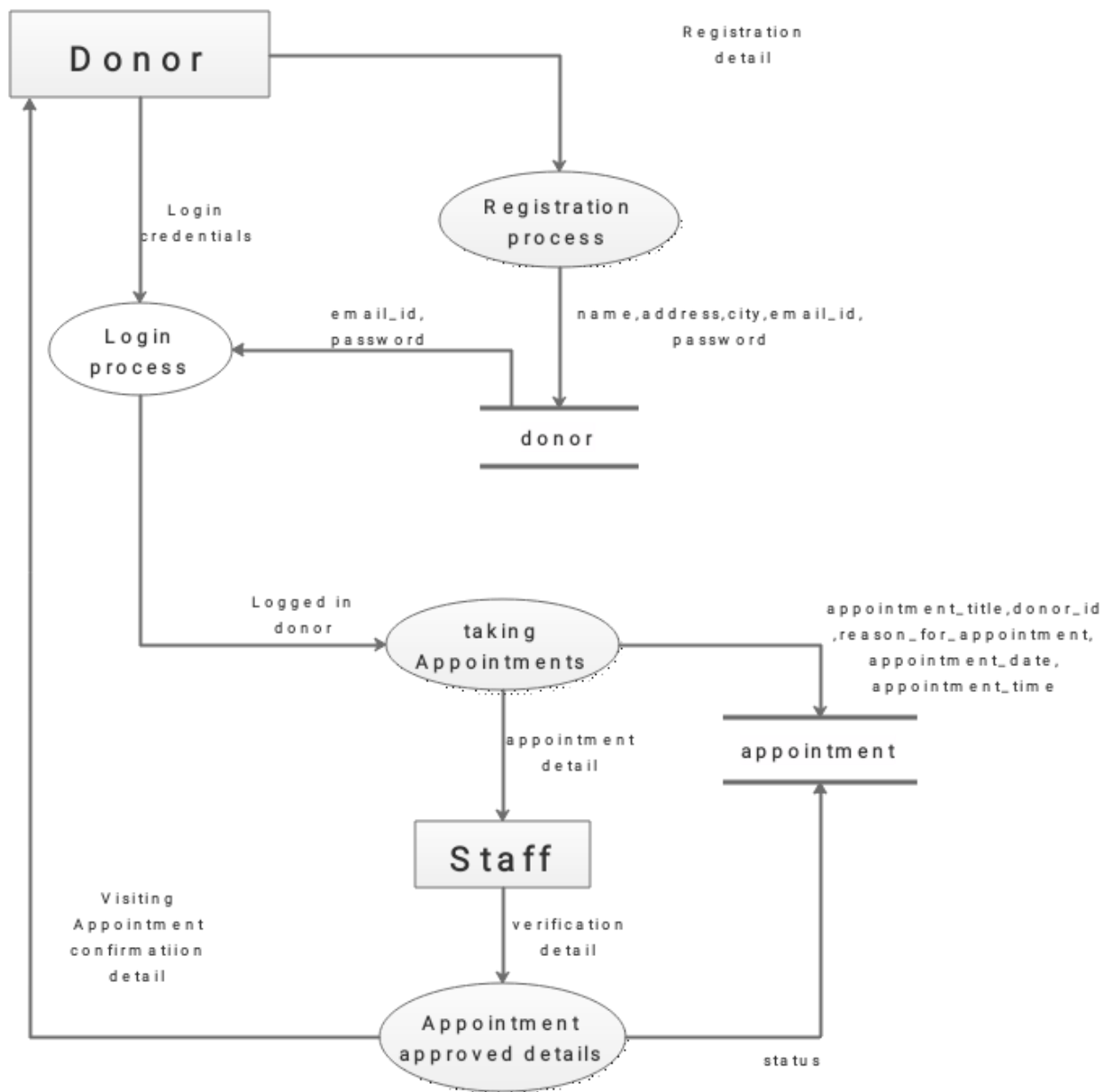
Figure 10 Data Flow - DFD Level 2.3: (Donor Registration)
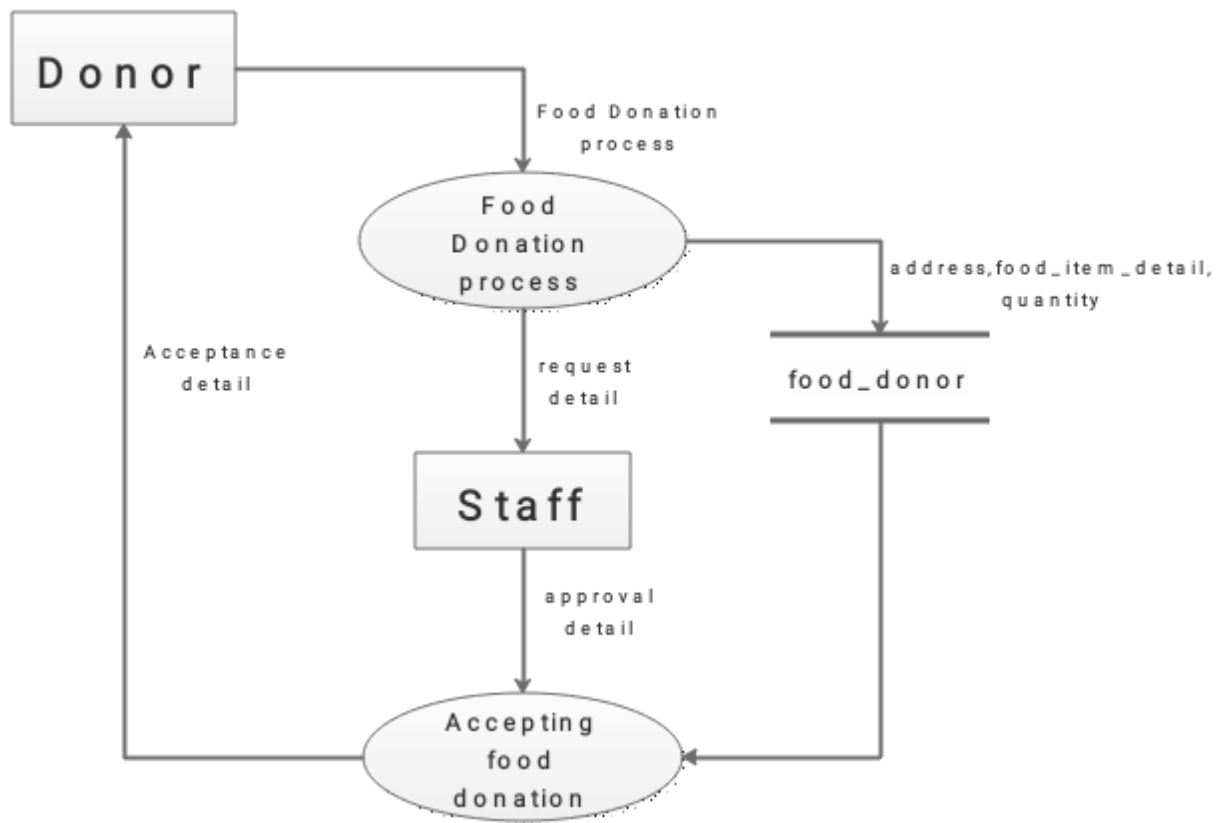
Figure 11 Data Flow - DFD Level 2.4: (Food Donation)
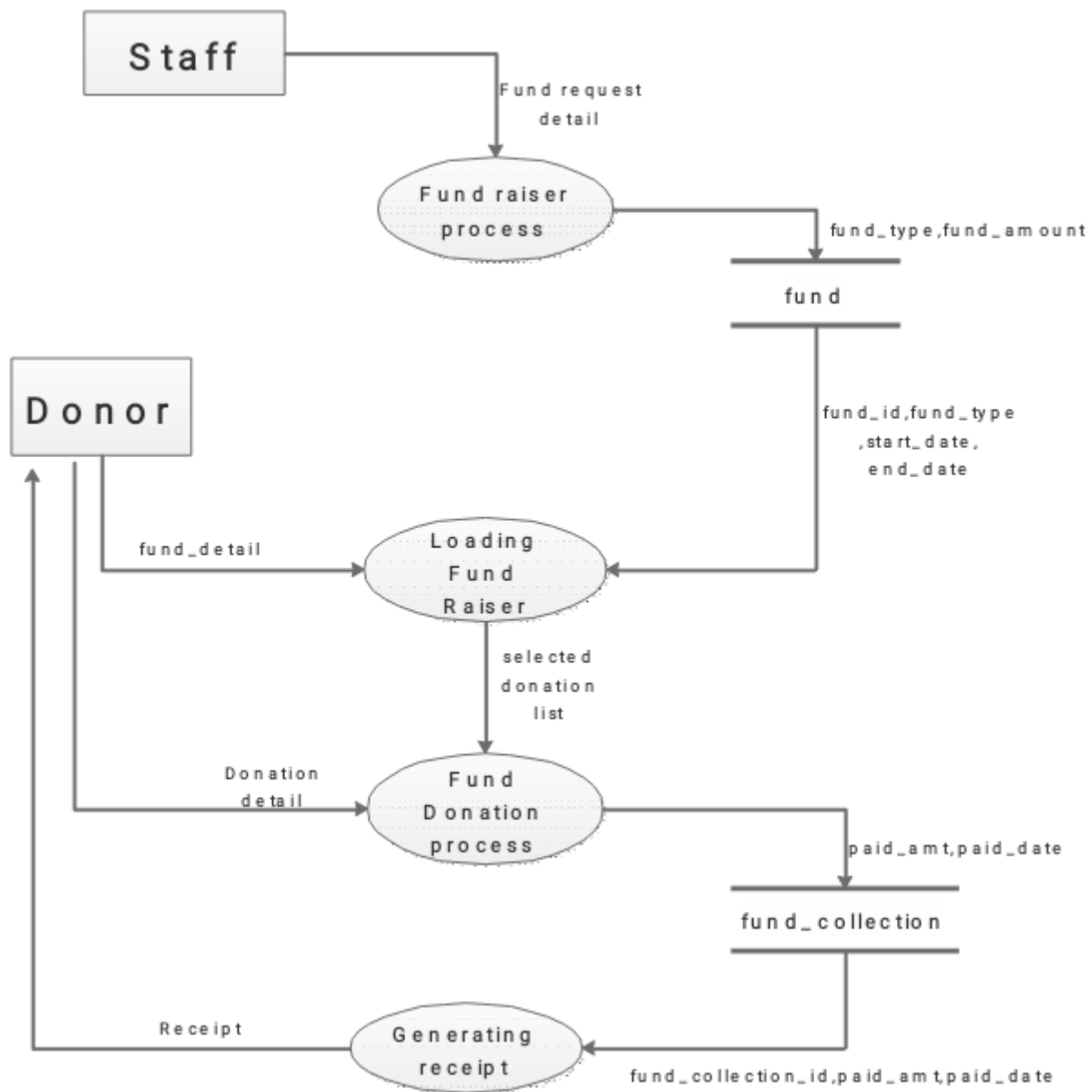
Figure 12 Data Flow - DFD Level 2.5: (Fund Raiser)
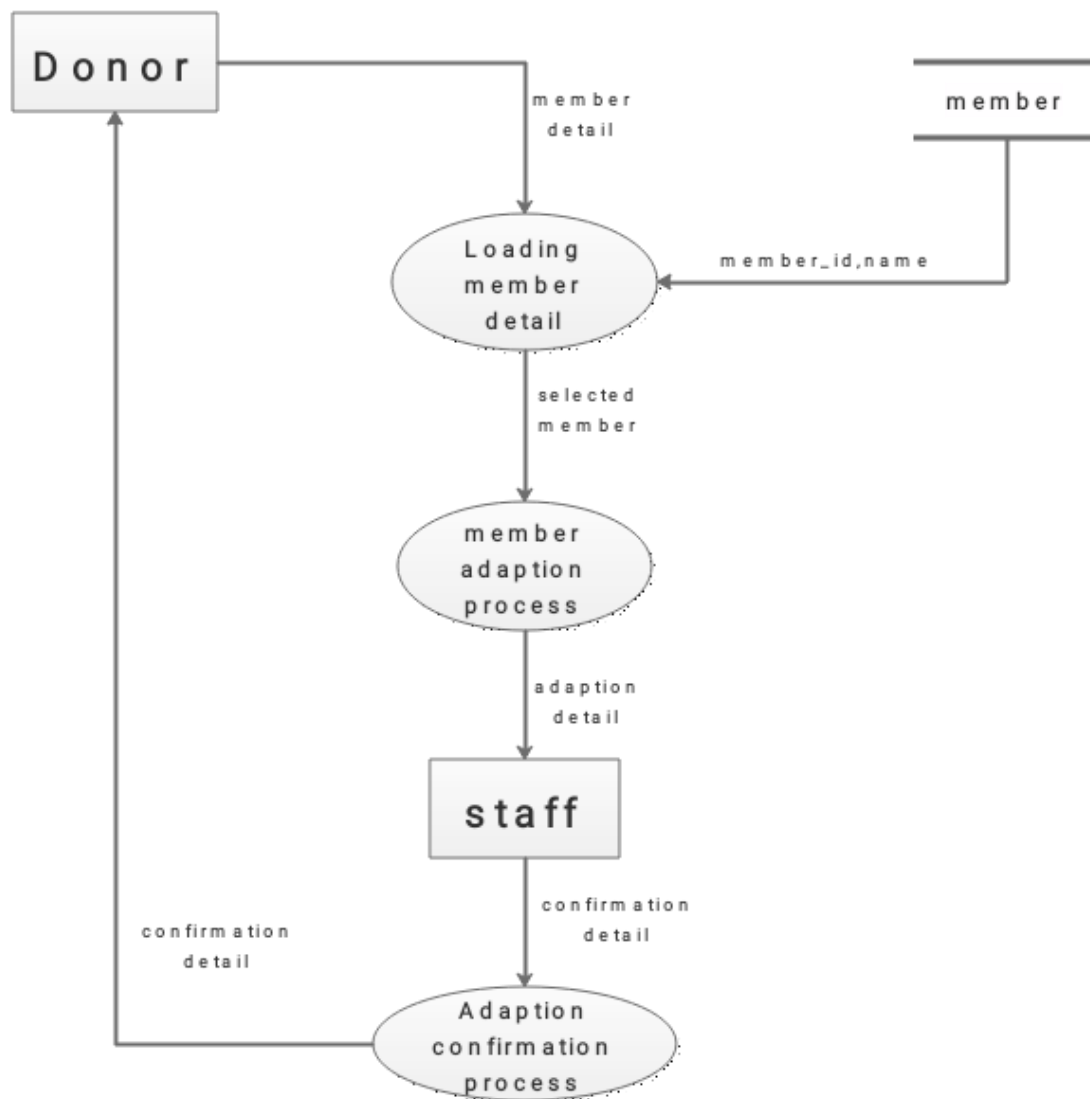
Figure 13 Data Flow - DFD Level 2.6: (Donor/Adopter Adaption)

f. Class Diagram
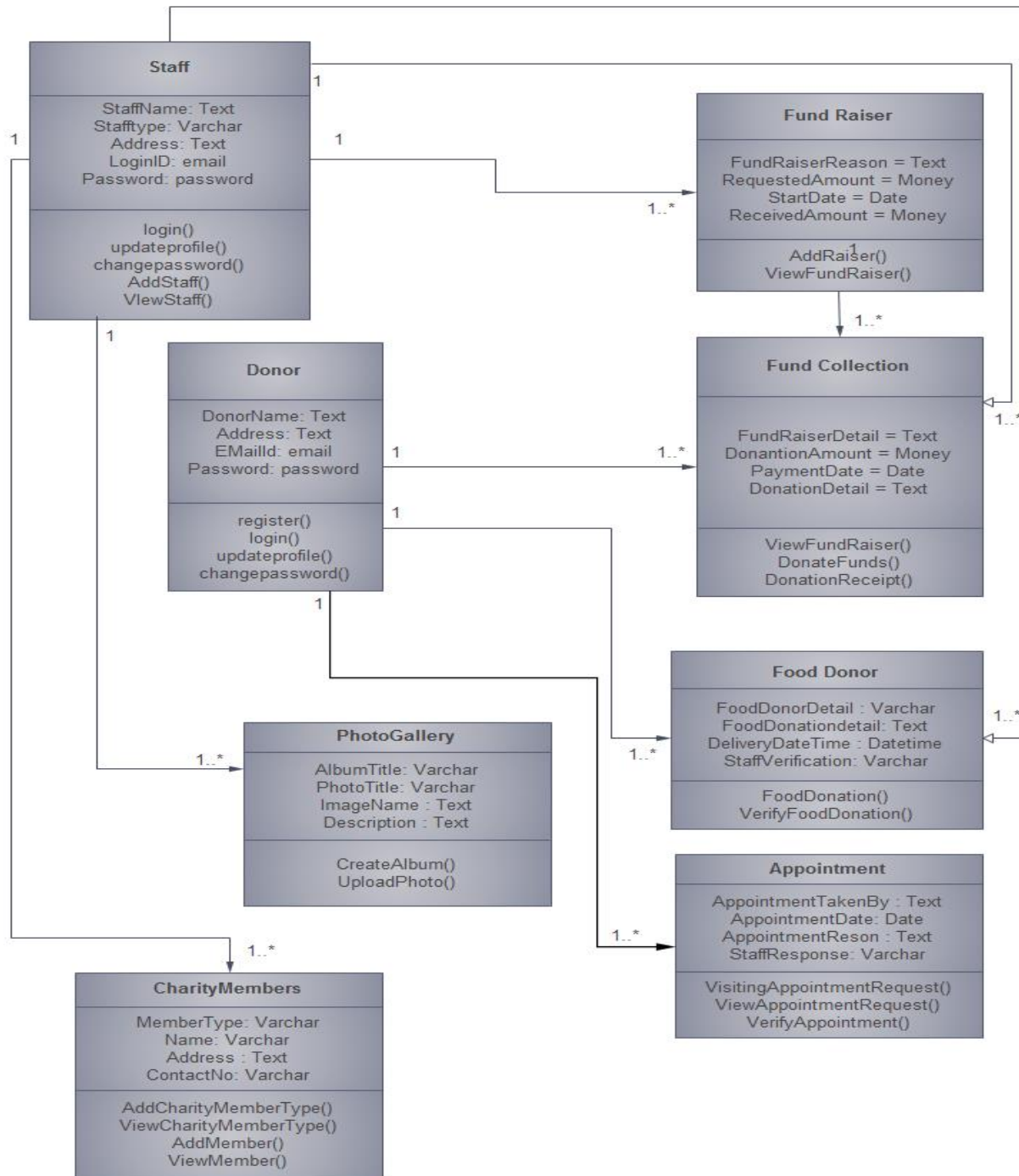
Figure 14 Class Diagram

g. Activity Diagram
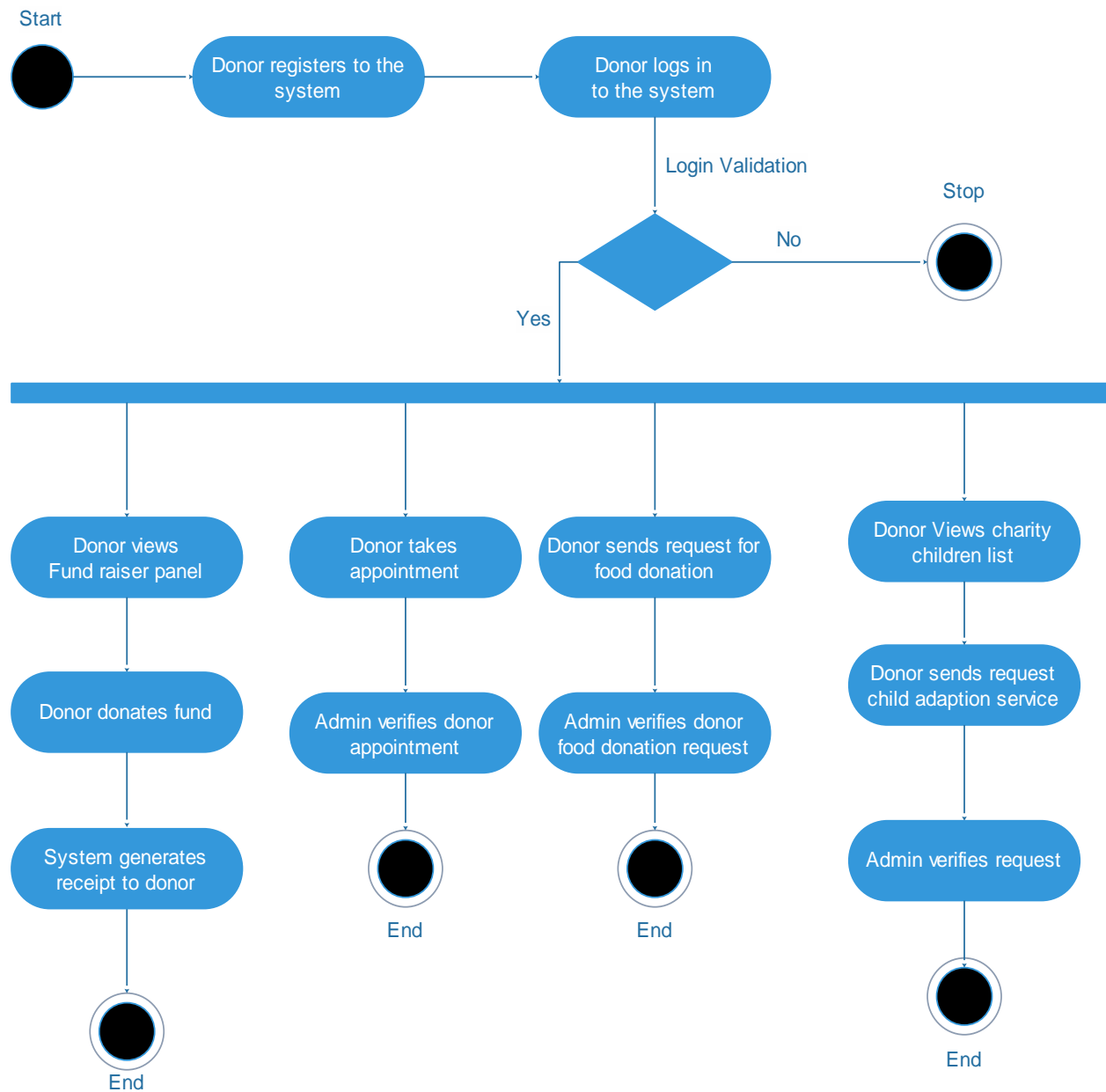
Figure 15 Activity Diagram

3.8.4 Implementation Phase

In this phase of system development and deployment, the system design and requirements are translated into a fully functional solution. The process involves writing code based on the design, integrating modules, and conducting testing to ensure proper system functionality.

During the implementation phase of the orphanage management system project, the team will build the system based on the design specifications. The selected tools and technologies, including PHP, HTML, CSS, MySQL, XAMPP, and Visual Studio Code, will be utilized to ensure efficient and effective development.

Tools and Technologies:

1. PHP: PHP (Hypertext Preprocessor) is a server-side scripting language that is widely used for web development. It will be the core programming language for creating dynamic web pages and handling backend logic in the orphanage management system.

2. HTML and CSS: HTML (Hypertext Markup Language) is used to structure the content of web pages, while CSS (Cascading Style Sheets) is used for designing and styling the visual elements of the website. They will ensure the system's user interface is well-organized and visually appealing.

3. MySQL: MySQL is an open-source relational database management system. It will be employed to store and manage the system's data, including orphan profiles, staff information, financial transactions, and communication records.

4. Visual Studio Code: Visual Studio Code is a popular code editor that provides features like syntax highlighting, debugging, and version control integration. It will streamline the coding process and enhance collaboration among team members.

5. XAMPP: XAMPP is a local development environment that includes Apache (for web servers), MySQL, PHP, and Perl. It allows you to develop and test the system on your local machine before deployment.

Implementation Strategy

Front-End Development: Using HTML and CSS, your team will create the user interface components, design layouts, and ensure the system is visually appealing and user-friendly.

Back-End Development: PHP will handle the back-end logic, processing user inputs, interacting with the database, and generating dynamic content based on user actions.

Database Design: MySQL will be used to design and implement the database schema, including tables to store staff information, orphans' profiles, donations, expenses, and communication records.

Integration: HTML, CSS, and PHP will be integrated to create dynamic web pages. PHP scripts will fetch data from the database and generate content for display.

Testing: The developed components will be rigorously tested to ensure they function correctly, handle different scenarios, and provide accurate results.

Reasons for Choosing Each Tool and Technology

1. PHP: PHP is a server-side scripting language well-suited for web development. It allows for dynamic content generation, database connectivity, and user authentication, which are essential features of the orphanage management system.

2. HTML and CSS: HTML provides the structural foundation of web pages, and CSS ensures a consistent and visually appealing user interface. This combination allows for flexibility in designing and presenting information.

3. MySQL: MySQL is a robust and widely used database management system that provides data security, reliability, and efficient data retrieval. It's a suitable choice for handling the diverse data requirements of the orphanage management system.

4. Visual Studio Code: Visual Studio Code offers a range of features that streamline the development process, enhance code quality, and facilitate collaboration. Its extensibility through plugins and its user-friendly interface makes it an ideal choice for development teams.

5. XAMPP: Offers a convenient local environment for development and testing, mimicking the production environment closely.

By utilizing these tools and technologies, my team can effectively translate the design specifications into a functional orphanage management system that aligns with the project's objectives and requirements.

3.9   Summary

This chapter focused on the system methodology to be deployed in designing, developing, and implementing the system. A survey research design was considered for the study. Surveys and interviews were the data collection tools adopted. The chapter also covered the tools and technology required to create and implement the system, as well as the system development process (i.e., Advanced Waterfall). A detailed explanation of the System Development Life Cycle (SDLC) was provided.

Chapter 4   System Demonstration and Evaluation

4.1 Introduction

In this chapter, we present an overview of how the Orphanage Management System works based on the identified requirements and design specifications. The primary focus of this chapter is to provide an in-depth demonstration of the system's functionalities, highlighting how it addresses the operational needs of the orphanage. Additionally, we delve into the evaluation of the system's performance, usability, and alignment with stakeholder expectations. This chapter will provide an in-depth overview of how the Orphanage Management System was used in support of the management of Help The Needy Foundation in Atwima-Techniman in the Ashanti region.

The OMS is a web Application software that is compatible with smartphones, Tablets, and desktop computers. The home page shall hold the navigation links to the other components of the site such as the About Page, Fund Raiser Page, Charity Members Page, Gallery Page, Contact Page, Staff Login Page, and Donor Page.

A lot of tests such as unit testing, system testing, integration testing, and acceptance testing are conducted to evaluate the system.

4.2 System Demonstration

The system is to support the management of the orphanage organization and their

donors/adopter in the execution of every activity at their own pace with or without

internet access. The architecture design consists of a front-end which is a graphical

user interface and a back-end link which will help in generating dynamic content based

on user actions.

How the System Works:

The Orphanage Management System operates as follows:

1. User Authentication and Dashboard:

   Users log in with their credentials.

Upon successful login, users are directed to the dashboard.

The dashboard presents an overview of the campaign, key data, and quick-access links.

2. Staff Management:

Users navigate to the "Staff Management" section.

They can add new staff members, new campaigns, and new members by providing their details.

Existing staff profiles can be edited or deleted.

3. Members Profiles:

Users access the "Members Profiles" module.

They create new profiles with member information, including medical history and social background.

Members' data can be updated as needed.

4. Financial Tracking:

Users explore the "Financial Tracking" feature.

They record donations received, specifying sources and purposes.

5. Communication Module:

Users interact with the "Contact" tab.

Feeback can be sent to staff and stakeholders for effective communication.

6. Reporting System:

Users access the "Reports" section.

Reports are generated on members' well-being, donation trends, and various appointment.

Report parameters can be customized for specific insights.

The system operates through a user-friendly interface, enabling staff and stakeholders to manage operations efficiently, communicate effectively, and access vital information easily. Through this process, the system contributes to smoother orphanage management and improved communication channels.

4.2.1 Experimental/Simulation Setup

The team delves even deeper into the system in this section to experiment on overall performance, platform compatibility, and other system software and hardware that would be applicable for the system's efficient operation so that it can be used to conduct various types of testing that might interfere with the system's goals.

4.2.1.1 Platform Compatibility

The system's compatibility with the Windows operating system was examined. Following the installation on the Microsoft platform, it operated without issue. With a Net framework ranging from 4.0 to 6.0 and a processing speed of 2.6 Giga Hertz and more, the system application software is compatible with Microsoft Windows 7, 8, 10pro, and 11.

4.2.1.2 Software and Hardware Requirements

A supported application must be installed for the system to function on Microsoft Windows only. These are Xampp Server Application, which enables live reloading, and Visual Studio Code. The hardware that is used by the system includes a computer, a smartphone, and a printer.

4.2.2 Experimental/Simulation

- **System installation stage**

To operate the examined system, use software programs like Visual Studio Code and the Xampp Server Applications for live reloading. A Windows 10 Pro operating system with a dual-core processor of 2.6 gigahertz and a 4.5 net framework is essential. Fortunately, the setup file has already been successfully installed on the mentioned workstation.

- **Running the System**

To run the Orphanage Management System on your local machine, follow these steps using Visual Studio Code, XAMPP, and a web browser:

Prerequisites:

- Ensure you have Visual Studio Code, XAMPP, and a modern web browser (Chrome, Firefox, etc.) installed on your computer.

Step-by-Step Guide:

1. Setting Up XAMPP:
   - Open XAMPP Control Panel.
   - Start the Apache and MySQL modules.
   - Make sure the Apache server is running by checking the green indicator.

2. Database Setup:
   - Open your web browser and go to `http://localhost/phpmyadmin`.
   - Create a new database for the system (e.g., "online_charity").
   - Import the SQL script provided with the system to set up the necessary tables and data.

4. Visual Studio Code:
   - Open Visual Studio Code.
   - Open the system's code directory in Visual Studio Code.

5. Configuration:
   - Locate the configuration files (e.g., database connection file).
   - Update the database connection settings to match your XAMPP configuration (host, username, password, database name).

6. Running the System:
   - Open a terminal in Visual Studio Code.
   - Navigate to the project directory using the terminal.
   - Run a local development server by entering the appropriate command (e.g., `php -S localhost:8000`).

7. Accessing the System:
   - Open your web browser.
   - Enter the URL `http://localhost/online_charity` (or the port specified in the previous step) to access the system.

8. User Interaction:
   - Use the user interface to navigate through different modules.
   - Log in using the provided credentials or create a new account if applicable.
   - Interact with the system's features, such as adding staff members, managing orphans, tracking finances, sending messages, and generating reports.

9. Testing and Exploration:
   - Test different scenarios and functionalities to ensure the system works as expected.
   - Explore various modules and interactions to familiarize yourself with the system's capabilities.

By following these steps, you can successfully run the Orphanage Management System locally using Visual Studio Code, XAMPP, and a web browser. This allows you to test and explore the system's features in a controlled environment before deploying it for actual use.

4.3 System Evaluation

System testing

System testing is an essential step in the software development life cycle that ensures the software is functioning correctly, performing well and is reliable before its release. It guarantees that the system meets the specific requirements and operates as intended. The tests included in system testing evaluate the software's overall readiness for deployment and its ability to function in the real world.

Testing Approach for the Orphanage Management System

The Orphanage Management System team adopted a comprehensive testing approach to ensure the reliability and functionality of the system. The testing process included unit testing, system testing, integration testing, and acceptance testing (alpha and beta tests), utilizing a combination of black box, white box, and gray box testing methodologies based on the nature of testing required for each phase.

- **Unit Testing**

Unit testing is a type of functional testing that involves comparing the expected and actual outcomes of using a component of the software.

Methodology: The team primarily employed white box testing.
Explanation: White box testing involves examining the internal structure and logic of the system's code. It helped identify coding errors, logical flaws, and integration issues at the unit level, ensuring that each module worked as intended.

- **System Testing**

Methodology: A combination of black box and gray box testing.
Explanation: Black box testing focused on verifying system functionalities without delving into internal code details. Gray box testing provided a balanced approach by considering both internal logic and external behavior. This combination ensured comprehensive coverage of functionalities while addressing potential system interactions.

- **Integration Testing**

Integrated testing is a stage in software testing where various software modules are combined and tested together. This type of testing helps to confirm if a system or component meets a set of functional requirements. It usually comes after unit testing and system testing.

Methodology: Primarily black box testing.

Explanation: Black box testing was chosen to assess interactions between system components or modules. It validated those integrated parts worked seamlessly as a whole, without requiring knowledge of the internal code structures.

- **Acceptance Testing (Alpha and Beta Tests)**

Methodology: A combination of black box and gray box testing.

Explanation: During alpha testing, black box testing was used to validate the system's functionalities against initial requirements. Gray box testing allowed testers to gain insights into internal workings while focusing on real-world user scenarios. In beta testing, black box testing ensured end-users could use the system without technical knowledge.

The Rationale for the Chosen Methodologies

1. **White Box Testing:** Chosen for unit testing to ensure that individual components were free of logical errors, improving code quality and reliability.

2. **Black Box Testing:** Utilized integration and acceptance testing to assess functionalities without knowledge of internal code. It imitated real-world user experiences and identified user-centric issues.

3. **Gray Box Testing:** Incorporated in system testing and acceptance testing for a balanced approach. It considered both internal logic and external behavior, providing a broader view of system functionality.

The chosen testing methodologies were based on the specific testing objectives and the level of internal code visibility required. They ensured a thorough evaluation of the Orphanage Management System, addressing various aspects of quality, functionality, and user experience.

Screenshots of Key System Operations:

HOME PAGE
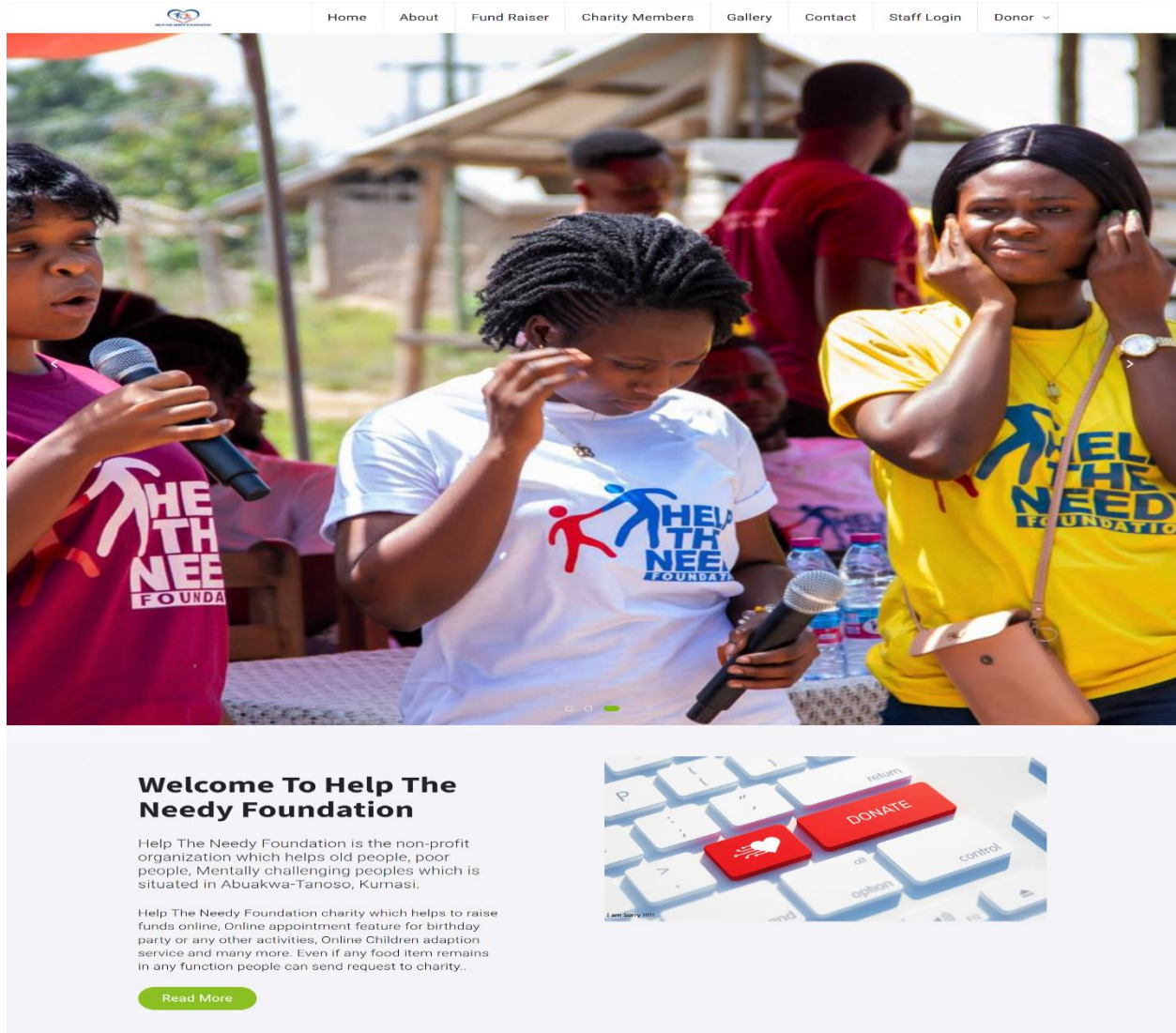
The Home Page: It displays the current campaigns that have been initiated by the organization, photos of previous events, and other navigation tabs to specific pages.
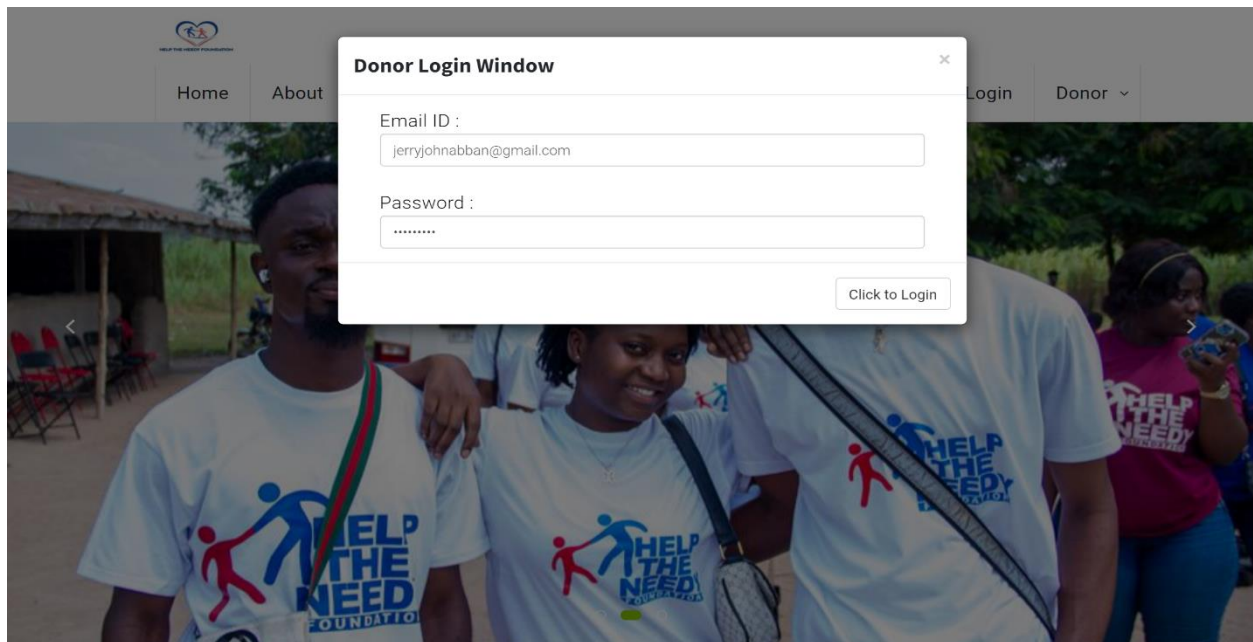
LOGIN SCREEN
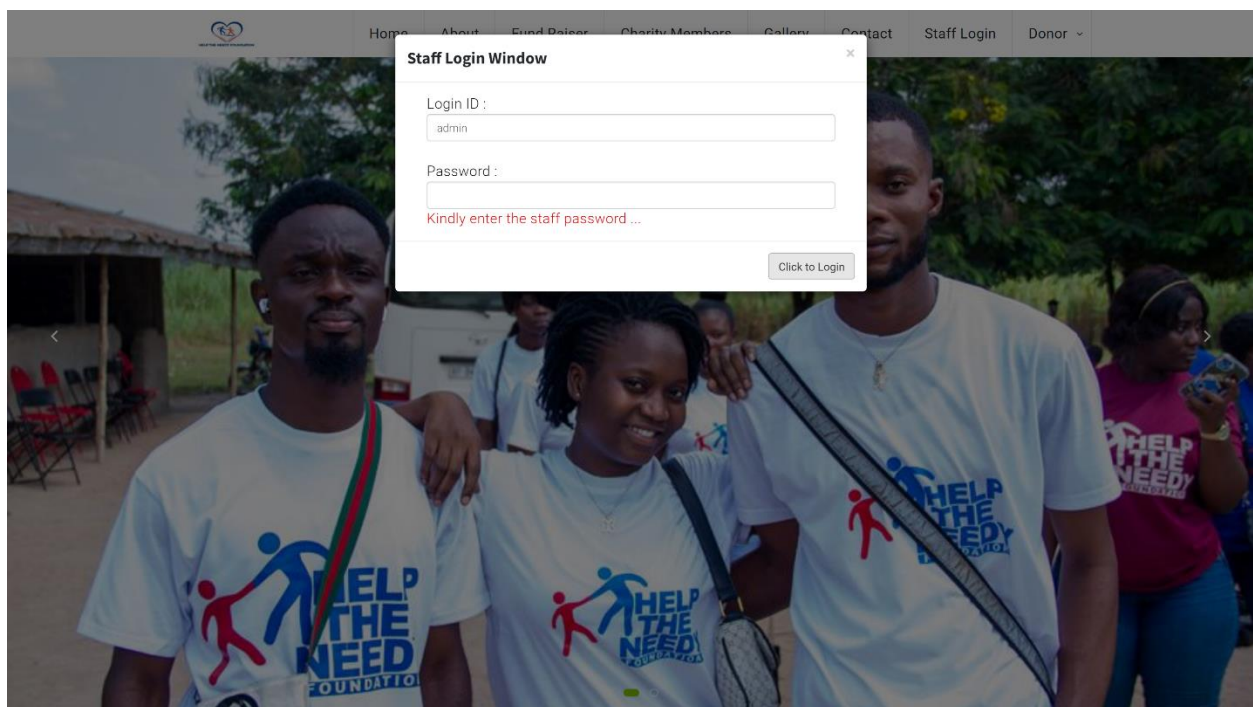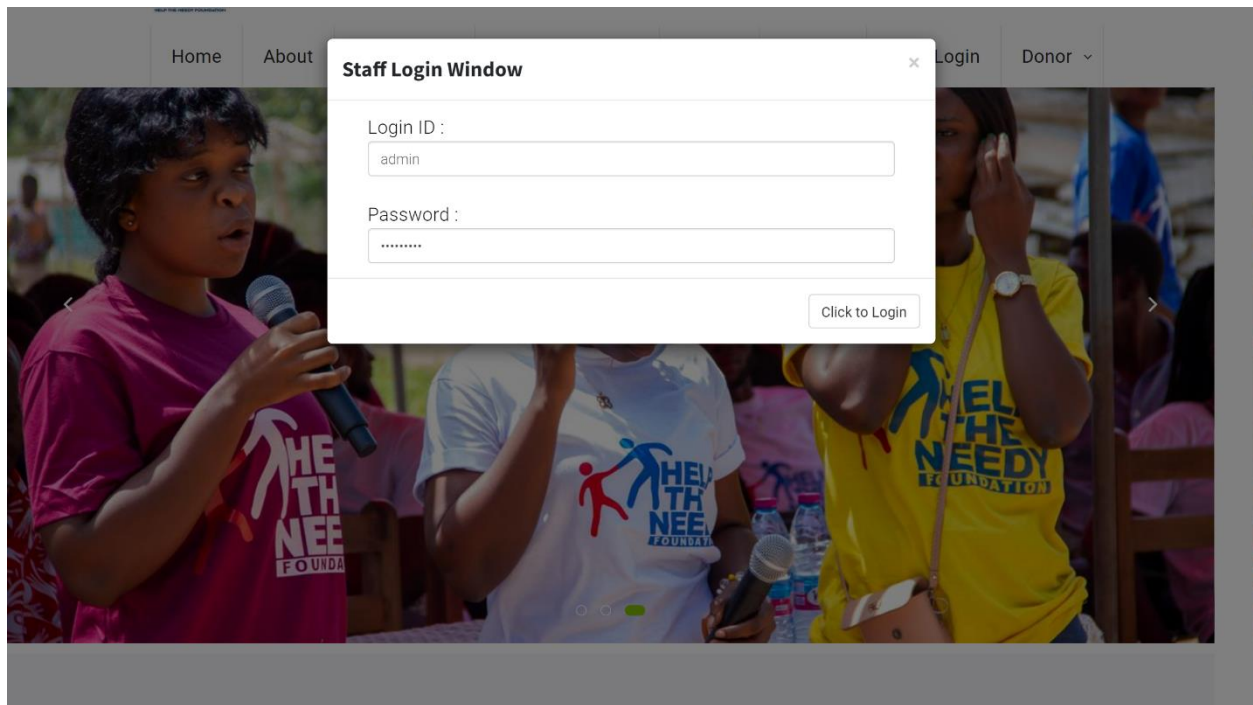
Description: The login screen where users authenticate themselves.

Robustness: Both valid and invalid login attempts were tested.

DONOR LOGIN AND REGISTER WINDOW

Description: The login screen where DONOR registers and authenticate themselves.

Robustness: Both valid and invalid login and registration attempts were tested.

ONLINE DONOR APPOINTMENT

Donor Appointment Page: this page enables the registered donor to book an appointment for food and clothes donations.

VIEW APPOINTMENT

	Dashboard	Fund Raiser ⌄	Gallery ⌄	Members ⌄	Report ⌄	Staff Account ⌄

View Appointment

Show 10 ⌄ entries

Search: [   ]

Donor	Appointment title	Appointment date time	Status	Action
Isaac Kyeremeh Phone No: 0559866650 Email: jerryjohnabban@gmail.com	**Donation** Contribution of foodstuffs to the foundation	**Date:** 03-Jun-2023 **Time:** 12:00 PM	Approved	Approve Cancel
Isaac Kyeremeh Phone No: 0559866650 Email: jerryjohnabban@gmail.com	**Contribution of foodstuff** Contribution of foodstuffs to the foundation	**Date:** 16-Aug-2023 **Time:** 12:00 PM	Approved	Approve Cancel

Showing 1 to 2 of 2 entries

Previous | 1 | Next

Help The Needy Foundation is the non-profit organization which helps old people, poor people, Mentally challenging peoples which is situated in Abuakwa-Tanoso, Kumasi.

Gallery

Newsletter

⦿ Help The Needy Foundation, Abuakwa-Tanoso, Kumasi

☎ +233 59 593 7225 / +233 24 078 9017

✉ Helpthelessprivildge503@gmail.com

Glastaborg© 2023

View Appointment: It displays the various appointment made by both registered donors and adopters.

FUND RAISER

Fund Raiser Page: It gives registered donors and potential donors more information on the various campaigns of the foundation and it also enables them to make donations.

CHARITY MEMBER LIST

Charity Members Page: It displays images of all the orphans in the foundation
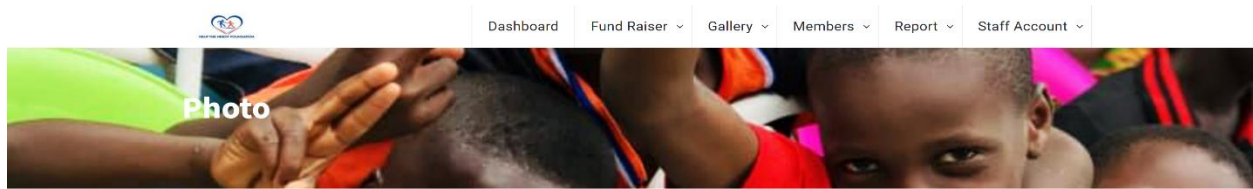
UPLOAD PHOTOS

Upload Photos: allows the admin to upload pictures of all the events of the organization.

PAYMENT COLLECTION REPORT

Payment Collection Report: It allows the admin to view the various donations made by a donor

FUND COLLECTION

Fund Collection: It gives the donors an interface for them to donate.

FUND COLLECTION RECEIPT

Fund Collection Receipt: gives more detailed information on the donation made by a donor.

4.3.1 Functional Evaluation

During this stage, the team assessed the system's ability to meet the customer's requirements. They carefully examined each customer request and compared it to the system's capabilities. The test results are presented in the table below.

Test Reports:

- **Member Type component**

Table 3 Member Type

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the member type is not selected	Member type	Kindly select the member type	SUCCESSFUL
2.	If a description is not entered.	Description	Kindly enter description	SUCCESSFUL
3.	If the status is not selected.	Status	Kindly select status	SUCCESSFUL

- **Upload photo component:**

Table 4 Upload Photo

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the album is not selected	Album	Kindly select album	SUCCESSFUL

2.	If the photo title is not entered	Photo Title	Kindly enter the photo title	SUCCESSFUL
3.	If the photo is not uploaded	Photo	Kindly upload the photo	SUCCESSFUL
4.	If the photo description is empty	Photo Description	The photo description should not be empty	SUCCESSFUL
5.	If the status is not selected	Status	Kindly select status	SUCCESSFUL

- **Table 3 Create album component:**

Table 5 Create Album

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the album title is not entered	Album Title	Kindly enter the album title	SUCCESSFUL
2.	If the album description is empty	Album Description	The album description should not be empty	SUCCESSFUL

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
3.	If the status is not selected	Status	Kindly select status	SUCCESSFUL

- **Table 4 Fund Raiser component:**

Table 6 Fund Raiser

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the title is not entered	Title	Kindly Enter the Title	SUCCESSFUL
2.	If the Banner Image is not entered	Banner Image	Kindly Enter the Banner Image	SUCCESSFUL
3.	If the Description is empty	Description	Kindly Enter the Valid Description	SUCCESSFUL
4.	If the Start Date is not entered	Start Date	Enter the Start Date	SUCCESSFUL
5.	If the End Date is not entered	End Date	Enter the End Date	SUCCESSFUL
6.	If the amount is not entered	Amount	Kindly Enter the amount	SUCCESSFUL
7.	If the Status is not Selected	Status	Kindly select the status	SUCCESSFUL

- **Table 5 Staff component:**

Table 7 Staff

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the staff type is not selected	Staff Type	Kindly select the staff type	SUCCESSFUL
2.	If the staff name is not entered	Staff name	Staff name should not be empty	SUCCESSFUL
3.	If the login id is not entered	Login Id	The login id should not be empty	SUCCESSFUL
4.	If the password is not entered	Password	The password should not be empty	SUCCESSFUL
5.	If the Confirm password is not entered	Confirm password	Confirm password should not be empty	SUCCESSFUL
6.	If the status is not selected	Status	Kindly select the status	SUCCESSFUL

- **Table 6 Staff login component:**

Table 8 Safe Login

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the staff login id is not entered	Login Id	Kindly enter the staff login id	SUCCESSFUL
2.	If the staff password is not entered	Password	Kindly enter the Staff password	SUCCESSFUL

- **Table 7 Donor login component:**

Table 9 Donor Login

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the Email id is not entered	Email Id	Kindly enter the donor's Email id	SUCCESSFUL
2.	If the Donor password is not entered	Password	Kindly enter the donor's password	SUCCESSFUL

- **Table 8 Donor Register component:**

Table 10 Donor Register

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the name is not entered	Name	Kindly Enter the Name	SUCCESSFUL
2.	If the Email id is notentered	Email Id	Kindly Enter the Email Id	SUCCESSFUL
3.	If the Contact no is not entered	Contact no	Kindly Enter the Contact no	SUCCESSFUL
4.	If thePassword is not entered	Password	Kindly enter the donor's password	SUCCESSFUL
5.	If the Confirm password is not entered	Confirm Password	Kindly enter Confirm password	SUCCESSFUL

4.3.2 Non-Functional Evaluation

We evaluated non-functional aspects like system responsiveness, performance under different loads, security measures, and user interface usability. These evaluations aimed to ensure the system meets high-quality standards beyond just functionality.

Usability Testing:

Explanation: Showcased the intuitive design and organization of the dashboard for users.

Security Testing:
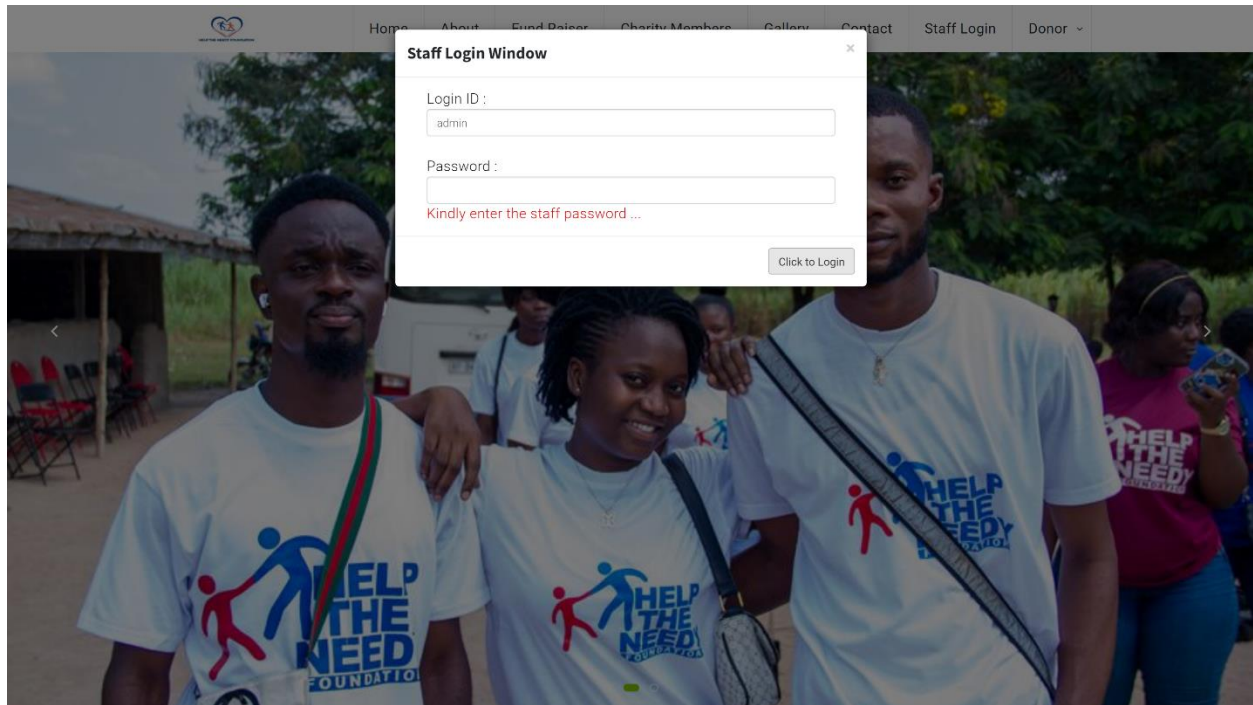
Explanation: Illustrated the system's ability to validate passwords during staff and users

4.4 Summary

This chapter presents a thorough evaluation of the orphanage management system. We employed various testing techniques, including black box, white box, and gray box methods, to assess the unit, system, integration, and acceptance phases. Our analysis features screenshots that demonstrate the system's ability to withstand different inputs. By scrutinizing functional and non-functional considerations, we ensured the system's dependability, performance, and user-friendliness. In summary, this chapter provides a comprehensive assessment of the system's effectiveness and readiness for deployment.

Chapter 5 Summary, Conclusion, and Recommendations

5.1 Introduction

The final chapter of this report will comprehensively summarize the important aspects of the Orphanage Management System project. It will provide a detailed account of the project's journey, highlighting its notable achievements, and addressing the key objectives established at the onset of the project. The chapter will also offer an overview of the system's performance and suggest potential upgrades and future improvements, based on a rigorous analysis of the project's progress, outcomes, and recommendations for future endeavors.

5.2 Summary

The Orphanage Management System project is an all-inclusive software equipped with communication tools, staff and orphan profiles, financial tracking, and reporting features for orphanages. The project addressed challenges faced by orphanages in managing operations, communication, orphan profiles, financial tracking, and reporting. The system was designed to improve efficiency, enhance data management, and provide a user-friendly interface for staff and donors. The team worked tirelessly to offer a user-friendly solution customized to meet the specific requirements of orphanage management.

5.3 Conclusion

Achievement of Project Objectives

The project team has successfully achieved the set objectives of developing the Orphanage Management System. The system's functionalities align with the project's goals and effectively address the challenges faced by orphanages in managing their operations and communication.

Evidence of Achievement

1. Staff Management: The system enables efficient staff management through the ability to add, edit, and delete staff profiles. Roles and responsibilities can be assigned, enhancing organizational structure.

2. Orphans Profiles: The system offers comprehensive orphan profiles with options to update medical history, social background, and personal information. This ensures accurate and up-to-date records.

3. Financial Tracking: The system allows seamless recording of donations and expenses, categorizing them for efficient financial tracking and reporting.

4. Communication: The communication module facilitates effective interaction between staff and stakeholders through messaging and inquiry forms, improving communication channels.

5. Reporting: The reporting feature generates various reports, such as orphans' status, donation trends, and expense summaries, aiding decision-making and transparency.

5.4 Recommendations

Target Audience

The Orphanage Management System is recommended for implementation by orphanages and child welfare institutions like Help The Needy Foundation, Help The Less Priveledge Foundation, and many other organizations. It is tailored to meet the needs of organizations responsible for managing the well-being of orphans, streamlining operations, and enhancing communication with staff and stakeholders.

Potential Enhancements:

While the system fulfills its core objectives, several functionalities could be added to further enhance its capabilities:

a. Mobile Application:

Develop a mobile application version of the system to allow staff members to access critical information and perform tasks on the go, improving overall efficiency.

b. Inventory Management:

Incorporate inventory management functionalities to track the availability of resources such as food, clothing, and medical supplies. This would enable efficient resource allocation and prevent shortages.

c. Secure Document Storage:

Enhance data security by incorporating a document storage feature for confidential records, ensuring they are accessible only to authorized personnel.

By adding these functionalities, the system can offer an even more comprehensive solution, addressing additional aspects of orphanage management and catering to the diverse needs of the users.

5.4 Summary

It's reassuring to know that the system's adherence to requirements has been ensured through rigorous testing methods. Overall, the Orphanage Management System project seems like an invaluable resource for orphanages seeking to improve orphans' care and operational efficiency.

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Appendices

Sample Codes

```php
<?php
if (!isset($_SESSION)) {
            session_start();
}
error_reporting(E_ALL & ~E_NOTICE  &  ~E_STRICT  &  ~E_WARNING);
$dt = date("Y-m-d");
$rupeesymbol = "$";
include("databaseconnection.php");
if (isset($_POST['btndonorregister'])) {
            $sql = "INSERT INTO donor(name,email_id,password,contact_no,status) VALUES
('$_POST[name]','$_POST[donoremailid]','$_POST[donornpassword]','$_POST[contactno]','Active')";
            $qsql = mysqli_query($con, $sql);
            echo mysqli_error($con);
            if (mysqli_affected_rows($con) == 1) {
                        echo "<script>alert('Donor Registration done successfully..');</script>";
                        echo "<script>window.location='index.php';</script>";
            }
}
if (isset($_POST['btndonorlogin'])) {
            $sql  = "SELECT * FROM donor WHERE email_id='$_POST[donoremail_id]' AND
password='$_POST[donorpassword]' AND status='Active'";
            $qsql = mysqli_query($con, $sql);
            echo mysqli_error($con);
            if (mysqli_num_rows($qsql)  == 1) {
                        $rs = mysqli_fetch_array($qsql);
                        $_SESSION['donor_id'] = $rs['donor_id'];
                        echo "<script>window.location='donoraccount.php';</script>";
            } else {
                        echo "<script>alert('You have entered Invalid login credentials..');</script>";
            }
}
if (isset($_POST['btnstafflogin'])) {
            $sql  = "SELECT * FROM staff WHERE login_id='$_POST[staffloginid]' AND
password='$_POST[staffpassword]' AND status='Active'";
            $qsql = mysqli_query($con, $sql);
            echo mysqli_error($con);
            if (mysqli_num_rows($qsql)  == 1) {
                        $rs = mysqli_fetch_array($qsql);
                        $_SESSION['staff_id'] = $rs['staff_id'];
                        $_SESSION['staff_type'] = $rs['staff_type'];
                        echo "<script>window.location='dashboard.php';</script>";
            } else {
                        echo "<script>alert('You have entered Invalid login credentials..');</script>";
            }
}
if (isset($_SESSION['donor_id'])) {
            $sqldonor  = "SELECT * FROM donor WHERE donor_id='$_SESSION[donor_id]'";
            $qsqldonor = mysqli_query($con, $sqldonor);
            echo mysqli_error($con);
            $rsdonor = mysqli_fetch_array($qsqldonor);

<?php
session_start();
?>
<?php
include("header.php");
```

```php
if(isset($_POST['submit']))
{
            if(isset($_GET['editid']))
            {
                        $sql ="UPDATE appointment set
appointment_title='$_POST[appointment_title]',donor_id='$_POST[donor_id]',staff_id='$_POST[staff_id]',
            reason_for_appoinment='$_POST[reason_for_appoinment]',appointment_date='$_POST[appointment_date]',app
ointment_time='$_POST[appointment_time]',status='$_POST[status]' WHERE appointment_id='$_GET[editid]'";
                        $qsql = mysqli_query($con,$sql);
                        if(mysqli_affected_rows($con) == 1)
                        {
                                    echo "<script>alert('Appointment record updated successfully..');</script>";
                        }
                        else
                        {
                                    echo mysqli_error($con);
                        }
            }
            else
            {
            $sql ="INSERT INTO appointment(appointment_title,donor_id,staff_id,      reason_for_appoinment,
appointment_date ,appointment_time ,status)
VALUES('$_POST[appointment_title]','$_SESSION[donor_id]','$_POST[staff_id]','$_POST[reason_for_appoinment]','$_PO
ST[appointment_date]','$_POST[appointment_time]','Pending')";
            $qsql = mysqli_query($con,$sql);
            if(mysqli_affected_rows($con) == 1)
            {
                        echo "<script>alert('Appointment Entry done successfully..');</script>";
                        echo "<script>window.location='viewappointment.php';</script>";
            }
            else
            {
                        echo mysqli_error($con);
            }
}
}
?>
<?php
if(isset($_GET['editid']))
{
            $sqledit = "SELECT * FROM appointment WHERE appointment_id='$_GET[editid]'";
            $qsqledit = mysqli_query($con,$sqledit);
            $rsedit = mysqli_fetch_array($qsqledit);
}
?>
<?php
session_start();
?>
<?php
include("header.php");
if(isset($_GET['st']))
{
            $sql = "UPDATE appointment SET status='$_GET[st]' WHERE appointment_id='$_GET[id]'";
```

```php
            $qsql = mysqli_query($con,$sql);
                        echo mysqli_error($con);
            if(mysqli_affected_rows($con) == 1)
            {
                        echo "<script>alert('Appointment $_GET[st] successfully..');</script>";
                        echo "<script>window.location='viewappointment.php';</script>";

            }
}
?>
</header>
<div id="about" class="section">
            <div class="container">
                        <div class="row">
                                    <div class="col-md-12">
                                    <div class="section-title">
                                    <center><h2 class="title">view appointment</h2></center>
                                    </div>
                                    </div>
                        </div>
            </div>
</div>


<div id="numbers" class="section">

<div class="container">

<div class="row">

<div class="col-md-12 col-sm-12">
            <div class="number">

<table id="datatable"  class="table table-striped table-bordered">
            <thead>
                        <tr>
                                    <th>Donor</th>
                                    <th>Appointment title</th>
                                    <th>Appointment date time</th>
                                    <th>Status</th>
                                    <th>Action</th>
                        </tr>
            </thead>
            <tbody>
<?php
            $sql = "SELECT appointment.*, donor.name, donor.contact_no, donor.email_id, staff.staff_name FROM
appointment LEFT JOIN donor on appointment.donor_id=donor.donor_id LEFT JOIN staff ON
staff.staff_id=appointment.staff_id WHERE appointment.status !=" ";
            if(isset($_SESSION['donor_id']))
            {
                        $sql = $sql . " AND appointment.donor_id='$_SESSION[donor_id]'";

            }
            $qsql = mysqli_query($con,$sql);
            echo mysqli_error($con);
```

```php
            while($rs = mysqli_fetch_array($qsql))
            {
                    echo "<tr>
                            <td style='text-align: left;'>
                            <b>$rs[name]</b>
                            <br>
                            Phone No: $rs[contact_no]<br>
                            Email: $rs[email_id]
                            </td>
                            <td style='text-align:
left;'><b>$rs[appointment_title]</b><br>$rs[reason_for_appoinment]</td>
                            <td style='text-align: left;'><b>Date:</b> " . date("d-M-
Y",strtotime($rs['appointment_date'])) . "<br> <b>Time:</b> " . date("h:i A",strtotime($rs['appointment_time'])) . "</td>
                            <td>$rs[status]";
                    echo "</td>
                            <td>";

if(isset($_SESSION['staff_id']))
{
                    echo "<a href='viewappointment.php?id=$rs[0]&st=Approved' class='btn btn-info'  onclick='return
confirmdel1()' >Approve</a><hr>";
}
                    echo "<a href='viewappointment.php?id=$rs[0]&st=Cancelled' class='btn btn-danger'
onclick='return confirmdel2()' >Cancel</a>";

                    echo "</td></tr>";
            }
?>
            </tbody>
</table>

            </div>
</div>

</div>


<?php
include("footer.php");
?>
<script>
function confirmdel1()
{
            if(confirm("Are you sure want to Approve?") == true)
            {
                    return true;
            }
            else
            {
                    return false;
            }
}
function confirmdel2()
```

```
{
        if(confirm("Are you sure want to Approve?") == true)
        {
                return true;
        }
        else
        {
                return false;
        }
}
</script>
```