**DESIGN AND IMPLEMENTATION OF OPHANAGE MANAGEMENT AND SUPPORT SYSTEM(OMASS)**

BY  
AISHA MUSA UMAR

171103035

SUBMITTED TO THE  
OFFICE OF UNDERGRADUATE RESEARCH

NILE UNIVERSITY OF NIGERIA

In partial fulfilment of the requirements for the award of Bachelor of Science Honors (B.Sc. Hons), degree in Computer Science, Faculty of Natural and Applied Sciences, Nile University of Nigeria, Abuja JANUARY, 2020

Major: Computer Science

**CHAPTER ONE: INTRODUCTION**

* 1. **Background of study**

Orphanage describes a place where those who have lost their parents known as orphans reside

If the parents of a child or children is no more, then it becomes the duty of the grandparents of the orphan to care for the child(ren), but in a case where they are no more, then the orphanage home takes them to care and teach them as they grow. Orphanage information includes the records of children, guardians or caretakers, donors, sponsors, adoptive parents, adoption, activities, schedules of events. Some special events such as organizing donations and marathons, visitation of volunteers and well-wishers are also kept in records.

The proposed management and support systems for orphanage homes in Nigeria, will eliminate the manual way of storing, retrieving and managing data and information and transform it into a digitized management system that will also allow people book appointment.

This system is designed mostly for orphanage homes to achieve the registration of orphan and maintenance, and for booking appointment by visitors. It is a web-based system which can be accessed on the internet. The system seeks to overcome the general problems in the way data is handled such as that of data redundancy, time consuming and recovery manners and the security of data. Cloud storage will be used for storage and retrieval of data instead of the conventional way of storing and retrieving data by just keeping all the records on a book and searching through the records to locate an information. Using the Mother Theresa orphanage home which is located in Gwarimpa 3rd avenue Abuja, Nigeria as a case study, Mother Theresa Children's Home was established in December 2007 as a non-profit, non-governmental organization by the Late Yeye Bolanle Dare, of blessed memory and began with only 3 babies and has grown to cater for 80 children. Since the day of establishment of Mother Theresa orphanage home till date, the manual way record keeping, and retrieval of data has been the only way for chandelling data and has grown to become too cumbersome to handle as the number of children to cater for grow. With this system all that is needed is portable smart device with an internet connectivity.

**1.2 statement of problem**

Currently, in the orphanage homes in Nigeria the way of registering orphans and keeping of records is done manually with pen and papers because of this manual way of access the manual system is unreliable, inaccurate and misarranged. Also, the integrity, transparency and accountability of these records becomes a major challenge. Visitors who want to visit will have to come to the orphanage home and book a date for visitation which is very stressful. There are also clashes in booking appointment.

Accessing the records of the orphanage homes is a very big and exhausting task to do, because the record keeper will have to go through all the records one by one or alphabetical depending on their recoding arrangement just to find information. This system is also suitable for small to medium orphanages and also make it possible for easy generation of reports, faster access and searching of information, and also it offers a secure access of information and reliability to only the authorized users.

* 1. **Aim and objectives**
     1. **Aim**

The main aim is to create a web-based system for management of records in orphanage homes.

* + 1. **Objectives**

The objectives are to:

1. Collect and analyze data on information of entities in an orphanage home.
2. Design the front end and backend prototype of the system.
3. Convert the system prototype to a working model.
4. Test, verify and validate the system.
5. Integrate all the subparts to make the whole system.

**1.4 Scope and limitation**

1.4.1 **scope**

This focus of this system, is to analyze, design, develop, test, implement and evaluate a web based system which is only meant to be used in orphanages for managing records. it is for different orphanages. The orphanage homes must have a computer that they will use for registration and performing other features of this system.the system is to effectively manage records of children, that of their guardians, their adoptive parents, volunteers, sponsors and the staff of the orphanage homes. The system will also allow the assignment of the orphans to their adoptive parents and to their caretakers.

1.4.2 **limitation**

1. The system will only be useable in Nigerian orphanage home.
2. The system requires an operator who is computer literate and can operate it.
3. The system requires a reliable internet connection.
4. The security of the application will depend on the integrity of the user.
   1. **SUMMARY AND REPORT**

It is very difficult to get access to the operation involving record keeping in the orphanage homes because of the manual way of keeping records. But this system is so aimed at developing a convenient, reliable and efficient system that will be used to manage the orphanage home information or record keeping, since the manual way of doing it is not accurate and efficient. The system will require an internet connectivity and in Nigeria the internet connection can be reliable to make it possible for the effective usage of this system.

**CHAPTER 2: LITERATURE REVIEW**

**2.1 Introduction**

This chapter is to introduce and review the various existing systems about information management in orphanage homes. This several systems will be reviewed based on what the OMASS (orphanage management and support systems) will look like.

**2.2 Review of existing systems**

There exist different systems like web applications that were developed for the information management in orphanage homes, but these systems exist outside Nigeria. There were also website that were developed to manage records, but the case in Nigeria is different.

Some of these systems that exists are:

**2.2.1 Orphanage management system (INDIA)**

This system is a stand-alone system that is used by some orphanages in India, and this system is accessed through a command line interface. It was developed comprehensively with c++ language that has the concept of object-oriented programming. The various ways the application is used is to manage the children, daily activities, finance and the reports of the orphanage homes. It was created in a way that it can be accessed in two modes, which are the administrator and the supervisor. The administrator has full control while the supervisor mode has limited access. Some of the systems features are:

**Inmate details:** these are the records of the children that are being taken care of in the orphanage home. The details include their names, ID, gender, date of birth, age, health deficiencies, date of leaving and the purpose of leaving the orphanage home.

**Inmate background:**  this provides the background details of the children. It includes the inmate id, mothers name, fathers name, email, guardian, amount received from people, contacts, date of joining the orphanage, contact and address of the person that brought the child to the orphanage.

**Fund inflow:** this record manages the funds received. It includes the following details persons\ group \ or institutions name, address, contact, email id, the amount received, gifts\service sponsored, date of receipt, purpose, mode of fund, the remarks of the received funds.

**Expenses:** this feature tracks day to day expenses of the orphanage. The details include the date, purpose of expense, amount spent, the mode of expenditure, details and the remarks made.

**Daily activities:** this feature keeps track of the running operations of theorphanage. It includes the morning attendance, evening attendance, daily activities performed in the orphanage home, date and the name of the activity performed.

**Reports:** this record keeps track of all the reports generated every week or month. It includes the attendance report, month, and the report on the expenditure.

**2.2.2 Wellgent’s foster care software (USA)**

This is a system that was established at the year 2001 by welligent. It is a web application that helps the family service organizations and the orphanage homes to mage records. The system has both the android for mobile phones and the web-based application for both mobile devices and that of the desktop devices. The system is also a cloud-based system.

The users of this system get to purchase the system and pay a subscription fee of 50 dollars monthly.

The following are the four modules of the welligent’s foster care software:

1. The foster recruitment module
2. The foster homes module
3. The foster parents’ module
4. The foster kids’ module

**The foster recruitment module:**  this module allows the users of the system to track from prospective foster parents, record home details including address, school, pets in the home, the income and the expenses, convert calls into foster homes and parents, and the preference of the foster child including the age range, the race and the gender, then the adoption willingness.

**The foster parents’ module:**  this module allows the users to complete forms, upload attachments, track recruitment calls, set preferences, link parents to the foster notes, records the rate and services and link family members to incidents involving the foster children.

**The foster kids’ module:** this module allows the users of this system to: track call-related case management and therapeutic services, record demographics, receive and send client alerts, track program enrolment, manage room and bed assignments, track educational information, use complex search criteria to find homes for children.

**Foster Homes Module** this allows the users to: effectively manage rooms and beds, Track incidents involving foster kids, as well as family members and complete forms and upload attachments, Track certification processes, Set parental and home preferences, Record emergency phone numbers, Document local school information, Track vehicles linked to a particular home including make, model, registration and insurance information, Track pets including rabies shots, insurance, etc. and also to Link foster parents and foster children to homes and then Search complex criteria to perfectly match foster kids to homes.

**Some of the Salient Features of the Welligent’s Foster Care Software includes the underlisted:**

1. Tracking payment systems.
2. Tracking calls and records of home details
3. Set parents, home and children preferences.
4. Searching for complex criteria for appropriate child-home matching.
5. Complete screening tools

**2.2.3 Orphans Record Management and Tracking System (ORMTS) for House of Hope Orphanage in Jos, Plateau State**

The **ORMTS** is a stand-alone system that was developed to help manage the existing manual way of keeping records accurately and storing the identities of orphans in the house of hope orphanage home in Jos, plateau state. The **ORMTS** system helped the orphanage homekeep adequate, accessible and correct records of orphans. The software was developed as a standalone software using a Microsoft .net framework for tracking and monitoring child admittance and adoption within the orphanage. Microsoft Visual Basic.net, OLedb adapter and MYSQL was used to build the system. The system offers Graphical User Interface, it was tested and implemented on Windows 7, 8 & 10. The result of the test was highly accurate and reliably solved the problems of the existing manual system with 85% accuracy.

**2.2.4 Orphanage web app**

This system is a web app that was developed also to tackle the setbacks in the manual way or information management in orphanage homes. It was developed with the sole aim of the system was to give a reliable database of information to the orphanage management for effectively keeping reliable, accessible and accurate records of orphans. It had a large database that was used to keep the records of the member details and the orphan’s records. It also provided a reliable and efficient search facility to the staff.

**2.3** **Review on proposed system based on the various Existing Systems**

Comparing Welligent’s software to what OMASS would look like, the Foster care software would be very expensive for most of the local orphanage here in Nigeria to afford since the income is less. The system is also a very complex system as it manages not only the foster caring records but also the health records of these children. And so, the complex nature of the Welligent’s Foster Care Software will mean developing a new easier to use system which is OMASS, a web application that will help overcome the challenges. The OMASS is simple and easy to understand for the user since the modules are few and easier to understand. It will not require any training so long as the user is computer literate. The Welligent’s system does not also provide tracking of children that are adopted from orphanages but only track payments and calls.

That of the Orphanage Management System - India gives the users of the system a hard time to navigate through the functionalities of the system since there is no graphical user interface and instead a command line interface is used. Also, this system has less security i.e. it gives user accounts with passwords view thus unauthorized person can alter orphanage information at any time. These are some of the problems that are addressed by developing OMASS, it will adopt some of the entities such as inmate details and inmate background.

The Orphanage Web App gives a good graphical user interface but has limited features like not having the entities such as inmate details and inmate background, not allowing users book appointment with the orphanage, which is what OMASS also tends to solve.

The Orphans Record Management and Tracking System (ORMTS) for House of Hope Orphanage in Jos, Plateau State. A stand-alone system is a complex system that is prone to errors, requires training on how to use, it is also costly, and it is not easy to maintain majorly because of all the frame works used for the development of the system. The OMASS system avoids these setbacks by, using frameworks that can be easily maintained and it is less complex to navigate, and requires little or no training for the usage of the system.

The OMASS will have a better human computer interaction in terms of graphical user interface which is easier for users and will not require any skills. Security is enhanced by secure login by authorized users only and log files to check for previous access and alterations to information in case of a conflict.