Development of an online NYSC Orientation Camp Information System

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ABSTRACT

The National Youth Service Corps (NYSC) is an organization set-up by the Nigerian government to immerse the country's graduate yearly in the development of the country. The one year service period has three weeks orientation period when the corps members are trained in paramilitary training. During this period, the corps members use the manual approach to supply their personal information. The manual method used by the corps members is very tedious, time consuming, prone to errors, and also, the information modification and retrieval are practically impossible. To solve these problems, an online NYSC orientation camp information system is proposed. The proposed system is analyzed, designed and developed using Entity-Relationship Model (ERM) and Unified Modeling Language. The developed design is implemented using PHP and MySQL programming languages. The results showed that the researchers have designed and implemented an interactive online NYSC orientation camp information that can handle updates and modification of data more efficiently and can be accessed anywhere and anytime than the manual methods of information system. The researchers hereby recommended the developed software to the National Youth Services Corps headquarters for efficient database analysis of the corps members' information.

Keywords: Corps members, NYSC Scheme, NYSC Orientation Course, NYSC Orientation Camp, Information System.

1. INTRODUCTION

The National Youth Service Corps (NYSC) is an organization set up by the Nigerian government to immerse the country's graduates in the development of the country. The scheme is primarily to inculcate in Nigeria Youth the spirit of selfless service to the community, and to emphasize the spirit of oneness and brotherhood of all Nigerians, irrespective of cultural or social background. The National Youth Service

Corps year comprises of four (4) main segments which every corps members must satisfactorily participate before he/she is qualified to be issued a certificate of National Service. This service year therefore comprises of: orientation course, primary assignment, community development services and winding up/passing out. A National Youth Service Corps year starts with a three (3) weeks orientation course and is compulsory for all Nigeria graduates mobilized for national service.

2. STATEMENT OF THE PROBLEM

During this period, corps members are requested to submit their personal information for documentation. Although, these information have been submitted manually by the corps members. This manual approach of data documentation is prone to error, data redundancy and impossibility of data modification and updates. Therefore, an online NYSC orientation camp information system is proposed to solve the problems of the manual information system.

3. OBJECTIVES OF THE SCHEME

The general objective of this study is to design and implement an online Orientation Camp Information System using an entity relationship model and the Unified Modeling Language.

4. HISTORICAL REVIEW OF THE NYSC PROGRAMME

According to [1] NYSC is an organization that was set up by the Nigerian government to involve the country's graduates in the development of the country. There is no military conscription in Nigeria, but since 1973 graduates of the University and later Polytechnics have been required to take part in the NYSC programme for one year. This is known as national service year. Corps members are posted to cities far from their place of origin. They are expected to mix with people of other tribes, social and family background, to learn the culture of the indigenes in the place they are posted to. This action is to bring about unity in the country and help youths appreciate other ethnic groups. There is an orientation period of approximately three weeks spent in camp away from family and friends. There is also a passing out ceremony at the end of the year and primary assignment followed by one month of vacation. The National Youth Service Corps (NYSC) scheme was establish out of the nation's desire to accelerate socio-economic development, foster national integration and unity after the unfortunate civil war that ravaged the country.
In 1972, the then government under General Yakubu Gawon which had earlier at the end of the civil war in 1970 announced the programme of rehabilitation, reconstructs and reconciliation set necessary machinery in motion for the scheme to be put in place. The Gowon's administration decides to mobilize the educationally qualified youth for the scheme and to inculcate in them the sense of discipline, dedication, national pride and consciousness. The NYSC scheme was established by Decree No 24 of 22nd May 1973 which stated that the NYSC was being established with a view to the proper encouragement and development of common ties among the youths of Nigeria and the promotion of national unity [2].

5. OBJECTIVES OF THE SCHEME

To actualize the scheme, the federal government on 22nd May 1973, promulgated the degree No. 24 to establish the NYSC with the following objectives: this was later replaced by 51 of 1973 which is now on act.
  1) To inculcate discipline in Nigerian youth by installing in them a tradition of industry at work and patriotic and loyal service to the nation in any situation they may find themselves.

2) To raise their moral tone by giving the opportunity to learn about higher ideals of national achievements, social and culture improvement.
3) To develop in mind the attitudes acquired through shared experience and suitable training which will make the more amendable to mobilization in the national interest.
4) To induce employers, partly through their experience with members of the corps, employ more readily qualified Nigerians irrespective of their states of origin.
5) To enable Nigerian youth acquire the spirit of self-reliance.
6) To develop ties among them and promote national unity by ensuring that:
   a) As far as possible youths are assigned jobs in state other than their state of origin.
   b) Each group assigned to work together is a representation of the country.
   c) The youths are exposed to modes of living of people in the prejudices, eliminating ignorance and confirming at first hand the similarities among Nigerians of all ethnic groups.

6. EMPIRICAL REVIEW OF RELATED WORKS

Since the inception of the National Youth Service Corps (NYSC) scheme, NYSC orientation camp information system has been manually done where the corps members provide their personal information manually and also posting of corps members has been done manually. In order to eliminate the manual approach the manual approach used by the scheme, [3] developed an automated posting system for National Youth Service Corps (NYSC) Nigeria. The developed software provided two means of record entry: mass record entry via an import command (merely from the Microsoft access files) and individual entry via registration window. The software was implemented using Visual Basic 6.0 programming language. Despite of the development of the automated posting system, the system has categorised graduate into geopolitical zone based on the state of origin.

7. INFORMATION SYSTEMS

Information system has been defined in terms of two perspectives: one relating to its function; the other relating to its structure. From a functional perspective; an information system is a technologically implemented medium for the purpose of recording, storing, and disseminating linguistic expressions as well as for the supporting of inference making. From a structural perspective; an information system consists of a collection of people, processes, data, models, technology and partly formalized language, forming a cohesive structure which serves some organizational purpose or function. According to [4], an information system is a group of interrelated components that work to carry out input, processing, storage, output and control actions in order to convert data into information that can be used to support forecasting, planning, control, coordination, decision making and operational activities of the organization. [5] defined an information system as a computerized system that processes data (facts) and produces information. This process is defined as an information processing cycle. The information process cycle consists of four operations: input, process, output and storage. An information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making, coordination and control in an organization. In addition to supporting decision making, coordination, and control, information systems may also help managers and workers analyze problems, visualize complex subjects, and create new products [6].

8. NYSC ORIENTATION CAMP INFORMATION SYSTEM

The tremendous advancement in computer technology, software engineering and telecommunications have brought radical changes and advances in the techniques of data and information processing, storage, retrieval and dissemination in developed countries [7]& [8]. Computers are being used to collect, process, store and maintain data to produce information. Computer system today has become the easiest way of processing data to get meaningful information due to its high speed to manipulate data in respect to input and error operation. Since the inception of this powerful tool in human society, it enables us to carry out all our activities without difficulties. The NYSC orientation information is the information provided in the orientation camp by the corps members. This information include corps members surname, first name, other name(s), date of birth, state of origin, institution attended, date of graduation, contact address, email and GSM number.

9. RESEARCH METHODOLOGY

Research methodology represents the strategies involved in collecting and analyzing data collected, in order to have meaningful interpretations of the research findings. [9] defined research methodology is a systematic rules and procedures upon which a research is based against which claims for knowledge and assumptions are proved in favour of a decision. [10] also defined research methodology as a systematic process of collecting, presenting, analyzing and interpreting data for the purpose of arriving at a dependent solution to human problem. The methodology defines the software process model used in the development of the proposed system.

Software process model is an abstract representation of a process [11]. It is a description of process from some particular perspective as specification, design, validation and evolution [12]. The general software process models are waterfall model, rapid application development model, incremental model, iterative model and spiral model. In this study, the waterfall model was adopted in the design of the proposed system. The software development process model uses Structured System Analysis and Design Model (SSADM), Entity Relationship Model (ERM) or the Object-Oriented Analysis and Design Model (OOADM). In this study, the researchers have adopted the Entity Relationship Model, using the entity relationship diagram in the analysis and design of the proposed system.

Analysis of the proposed system
To overcome the problems of the existing system, the researchers have proposed the design and implementation of an online NYSC orientation camp information system. The researchers have adopted the entity relationship model, using the entity relationship diagram and the Unified Modeling Language in the analysis of the proposed system. The entity relationship diagram and the use case diagram of the proposed system are illustrated in Figure 1 and 2 respectively.
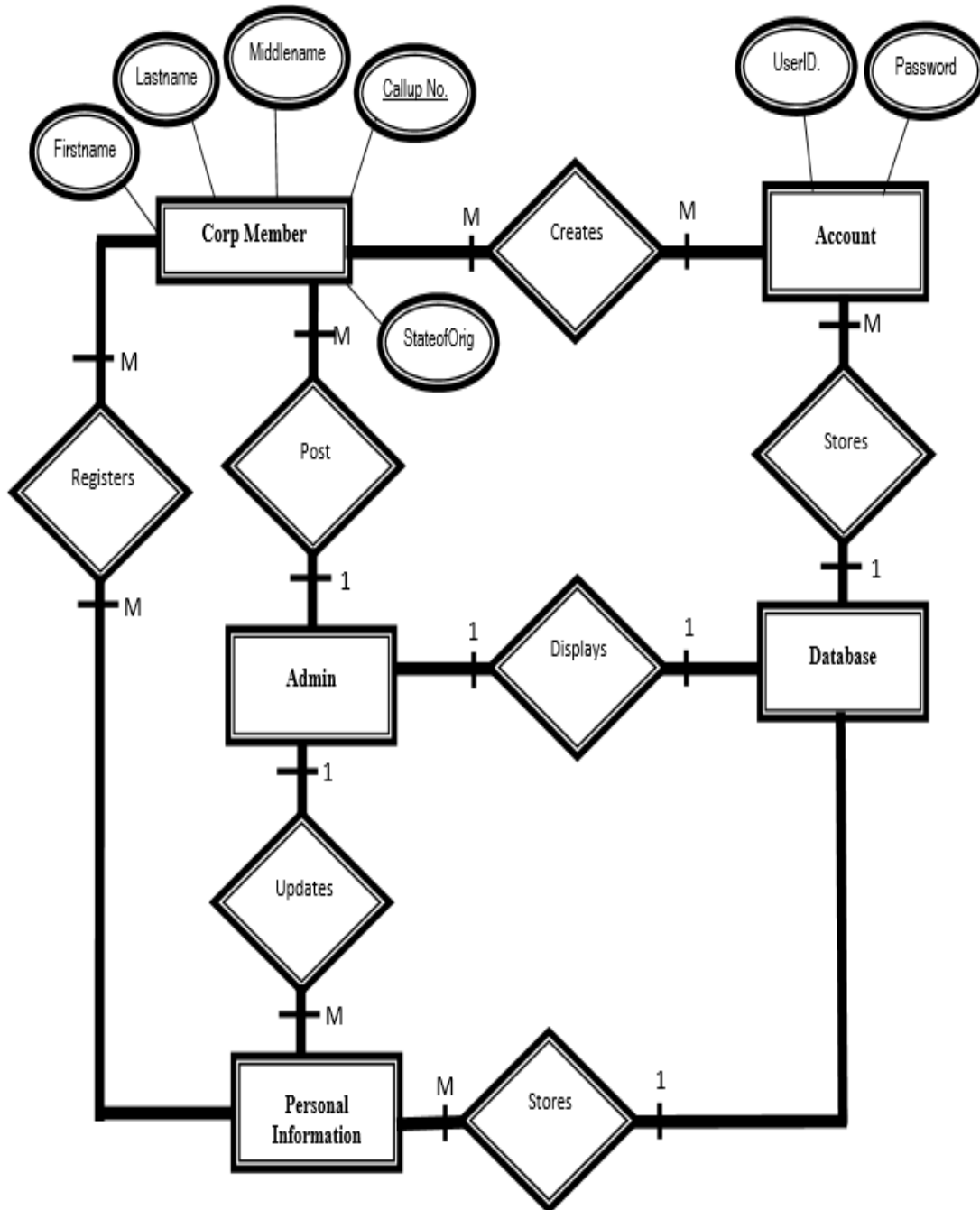
Figure 1: Entity Relationship diagram of the proposed system

The researchers have adopted the entity relationship model, using the entity relationship diagram, in the analysis of the proposed system. The entity relationship diagram of the proposed system is illustrated in Figure 1 on the previous page.
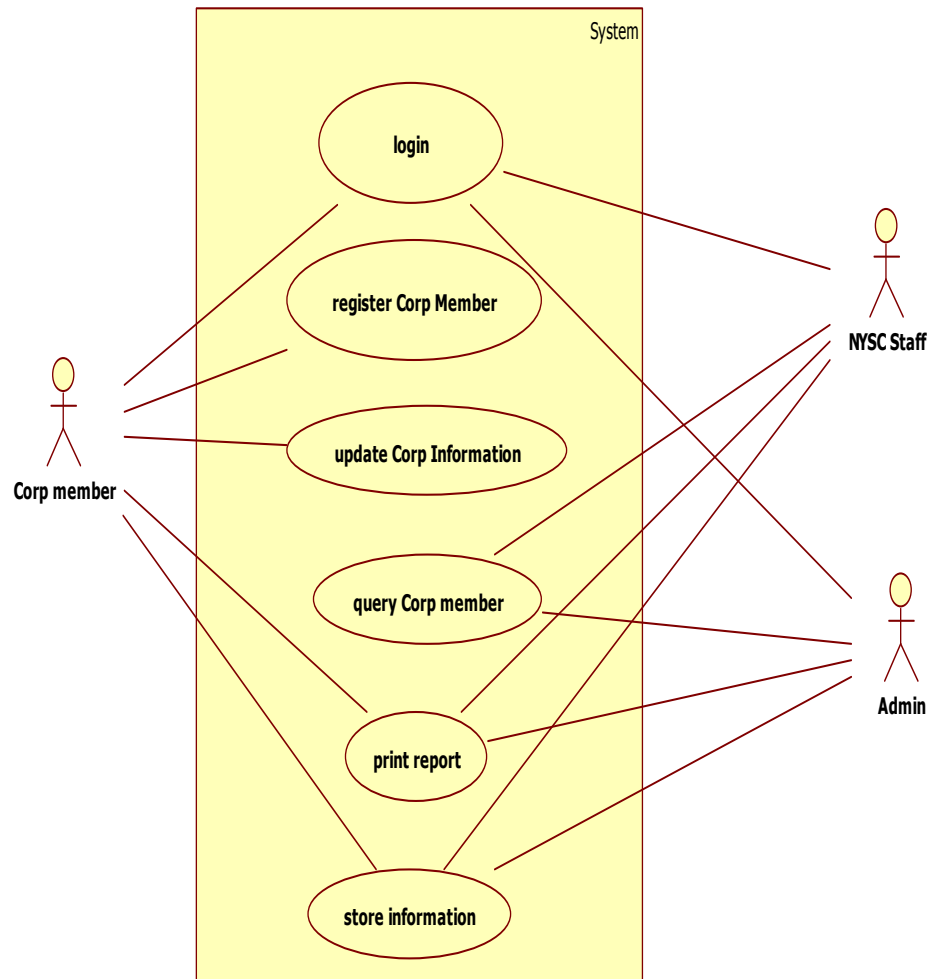
Figure 2: Use case diagram of the proposed system

System Design

The design phase of a system development life cycle involves the use of requirements gathered during the analysis phase to create a blueprint for the system. It involves the process of defining the architecture, components modules, interfaces and data for a system to satisfy specified requirements. It is described as a multistep process in which representations of data and program structures, interface characteristics and procedural details are synthesized from information requirements.

Architectural design of the proposed system

The National Youth Service Corps (NYSC) orientation camp information system is built on a three-tier architecture model. The three-tier architecture of the proposed system is shown in Figure 3.2. At the base of an application is the database tier, consisting of the database management system that manages the database containing the data users create, delete, modify, and query and MySQL relational database is used to provide the required functionality. Built on top of the database tier is the complex middle tier, which contains most of the application logics and communicates data between the other tiers. The web server is

Apache and it is running under Windows operating system which is used to achieve a secured client-server communication. The scripting engine uses server side PHP functions to communicate with the database. PHP scripts are used to co-ordinate all the procedures in the system. PHP handles data which are passed from the html forms in the way the structured query language formed are sent to the database and then results of the queries are processed and passed back in an html document format. The three-tier architecture of the proposed system is shown in Figure 3.
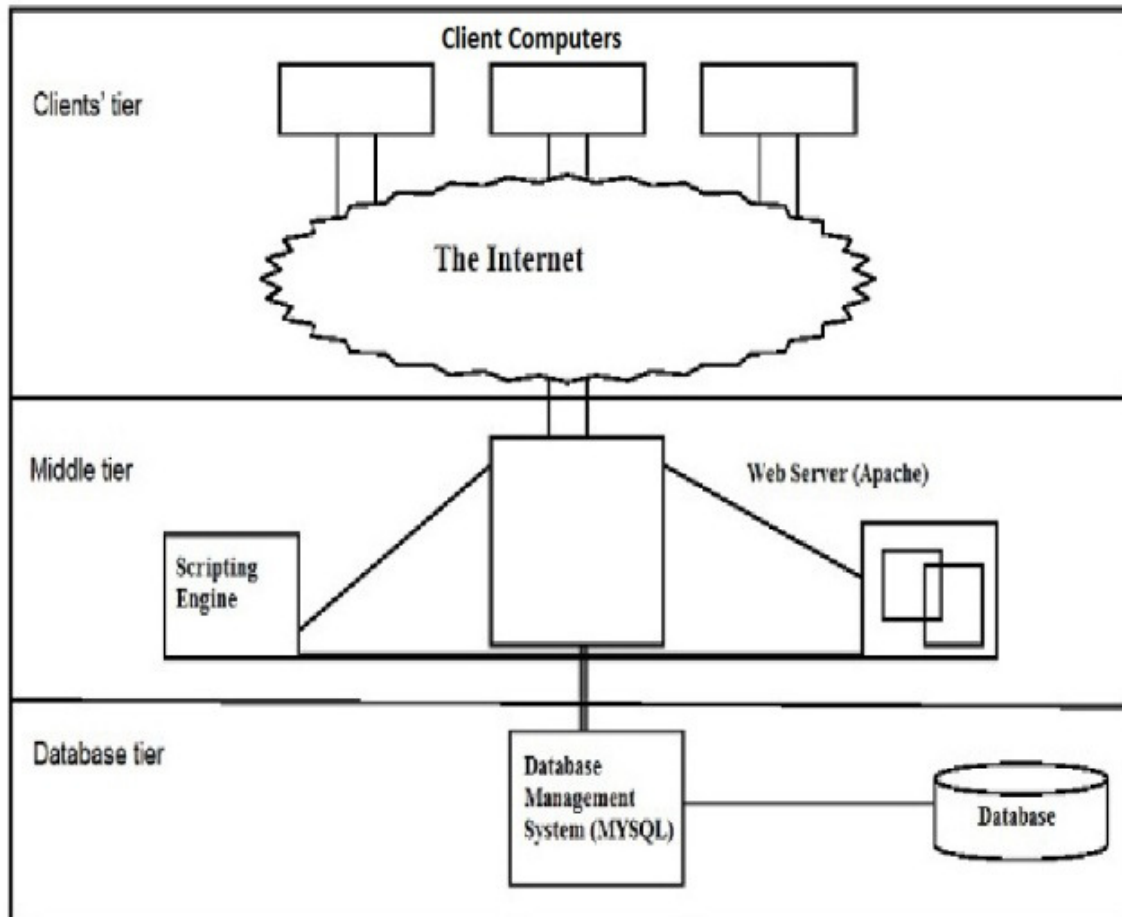

Figure 2: Three-tier architecture of the proposed system

The web server is Apache and it is running under Windows operating system which is used to achieve a secured client-server communication. The scripting engine uses server side PHP functions to communicate with the database. PHP scripts are used to co-ordinate all the procedures in the system. PHP handles data which are passed from the html forms in the way the structured query language formed are sent to the database and then results of the queries are processed and passed back in an html document format.The three-tier architecture of the proposed system is shown in Figure 2.
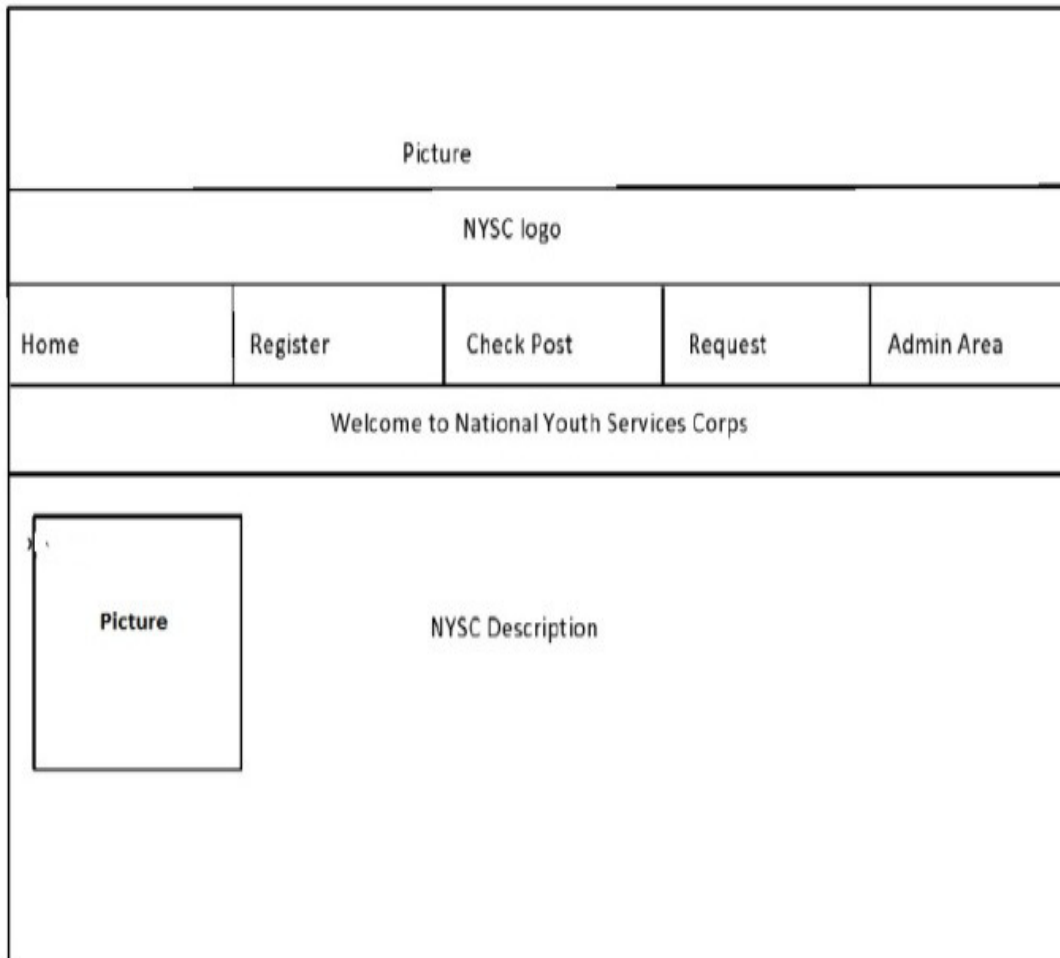
Figure 3: Home page design interface

Home page Interface design of the proposed system
The interface design involves the design of pages that enables the users have access with the system. The interface page contains the home page that provides link to all other pages in the site. It consists of five modules: Home, Register, Login, Check post, Request and Admin area. The home page design of the proposed system is shown in Figure 4.
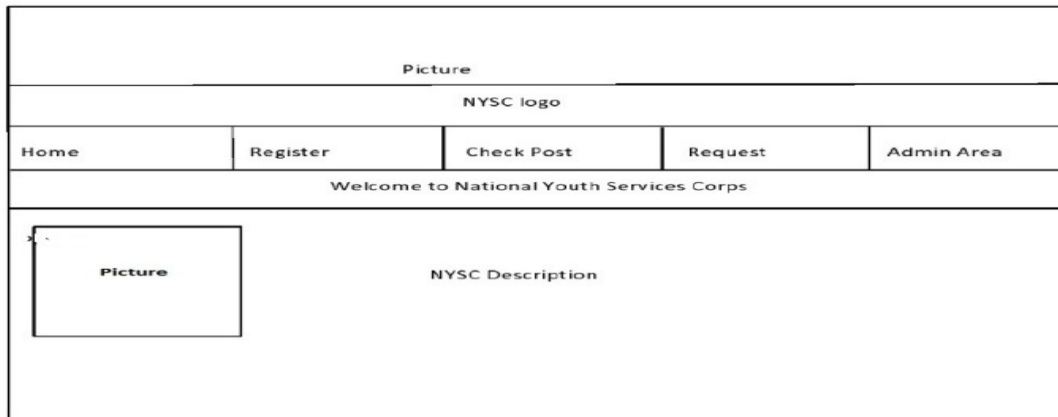
Figure 4: Home page design interface

Registration page Interface design of the proposed system

The registration page interface is used by the corps members to register their personal information. The registration page interface design is shown in Figure 5
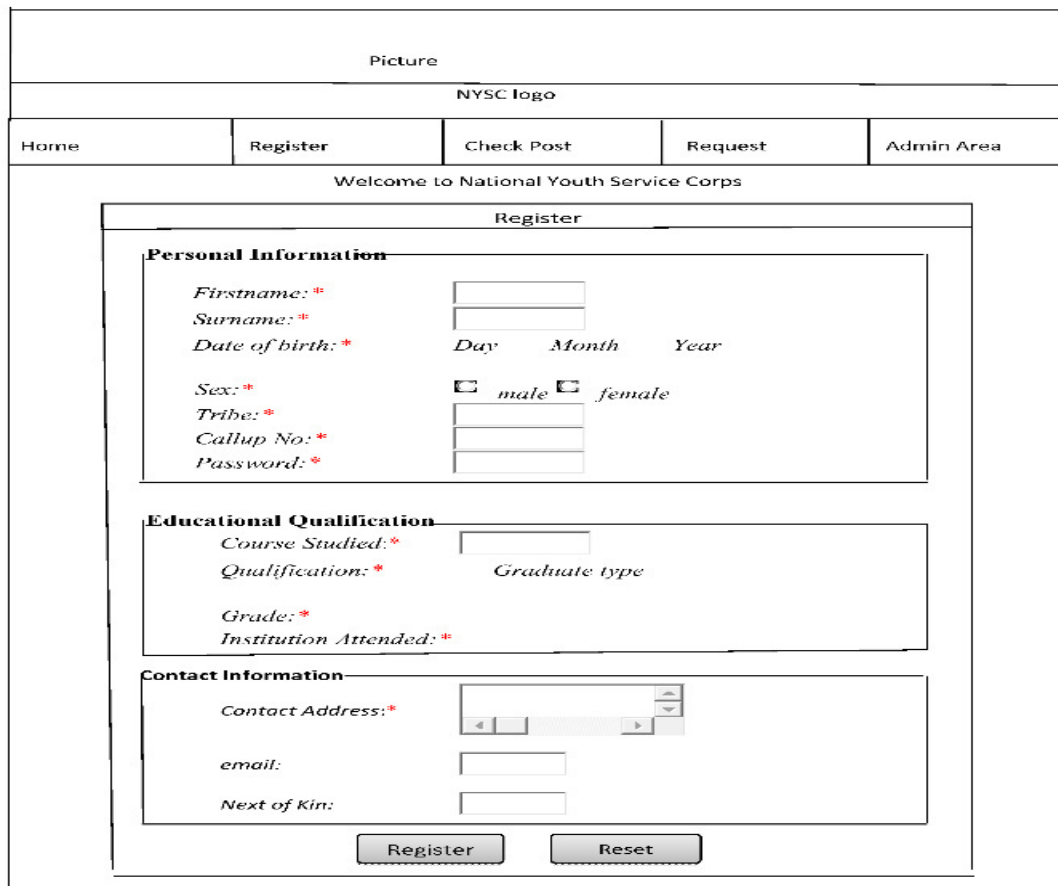

Figure 5: Registration Interface

Check Post interface design of the proposed system
The check post page is used by the corps members to view and print their posting letter. The check page interface design of the proposed system is illustrated in Figure 6.
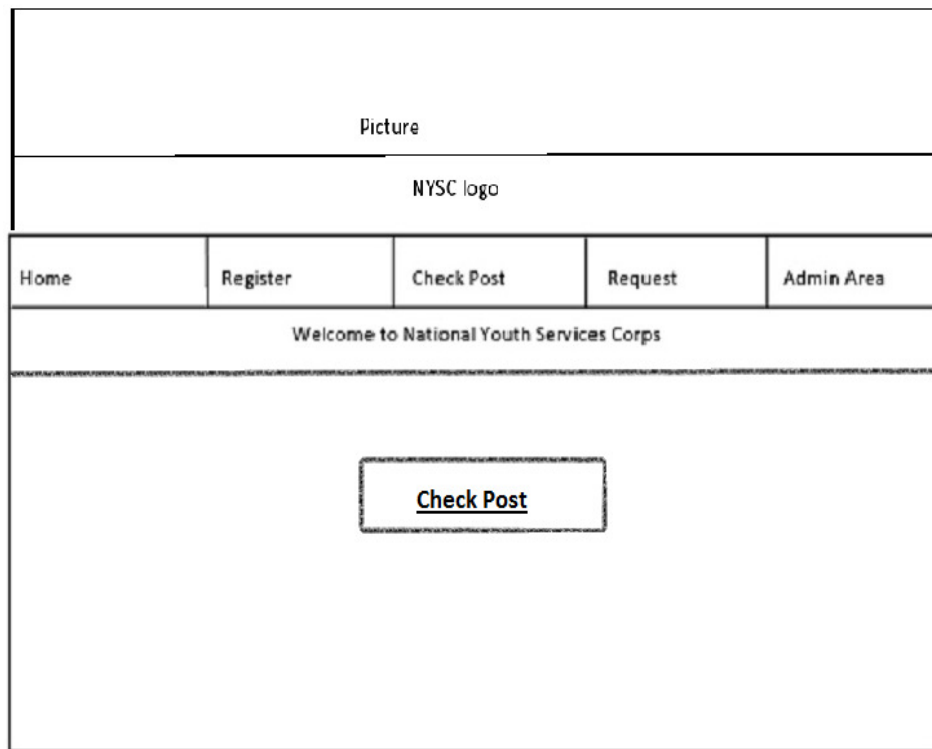

Figure 6: Check post interface of the proposed system

Database design of the proposed system
The database architecture of the proposed system shows the specification, type and size of the fields involved in the system. The database design of the proposed system is shown in Table 1.

Table 1: Database design of the proposed system

Field name	Field data type	Field size
First_name	Text	50
Surname	Text	50
Date_of_birth	Number	Date/Time
Sex	Text	10
Tribe	Text	50
Callup_no	Alphanumeric	25
Course_studied	Text	50
Qualification	Text	25
Graduate_type	Text	50
Grade	Text	25
Institution_attended	Text	50
Contact_address	Alphanumeric	50
State_of_Origin	Alphanumeric	25
Email	Alphanumeric	25
Next_of_kin	Text	50

10. IMPLEMENTATION

The implementation procedure in software development involves a sequence of steps taken to accomplish the given task. The implementation procedures for this project work include:

Snapshot implementation of the Home page interface
This is the center that provides link to all other pages in the site. It consists of five modules: Home, Register, Login, Check post, Request and Admin area. The page gives a brief introductory message about the Web based NYSC orientation camp information system. The snapshots implementation of the home page, registration page and the check posted page of the developed system are shown in Figures 7, 8 and 9 respectively.
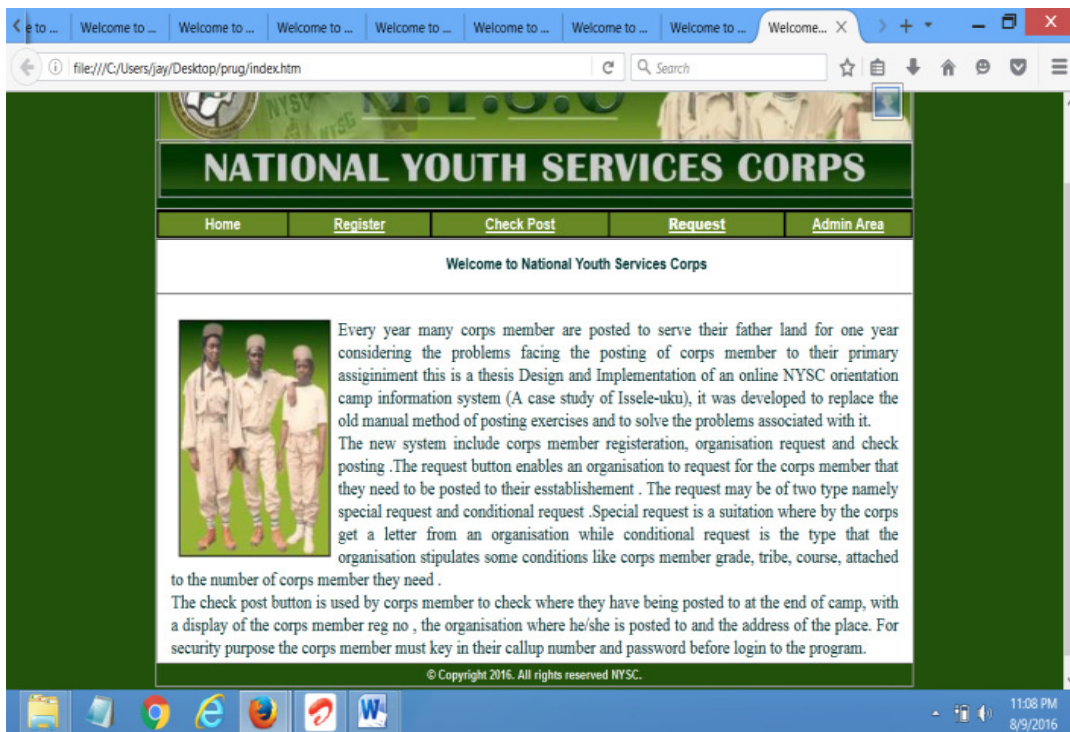
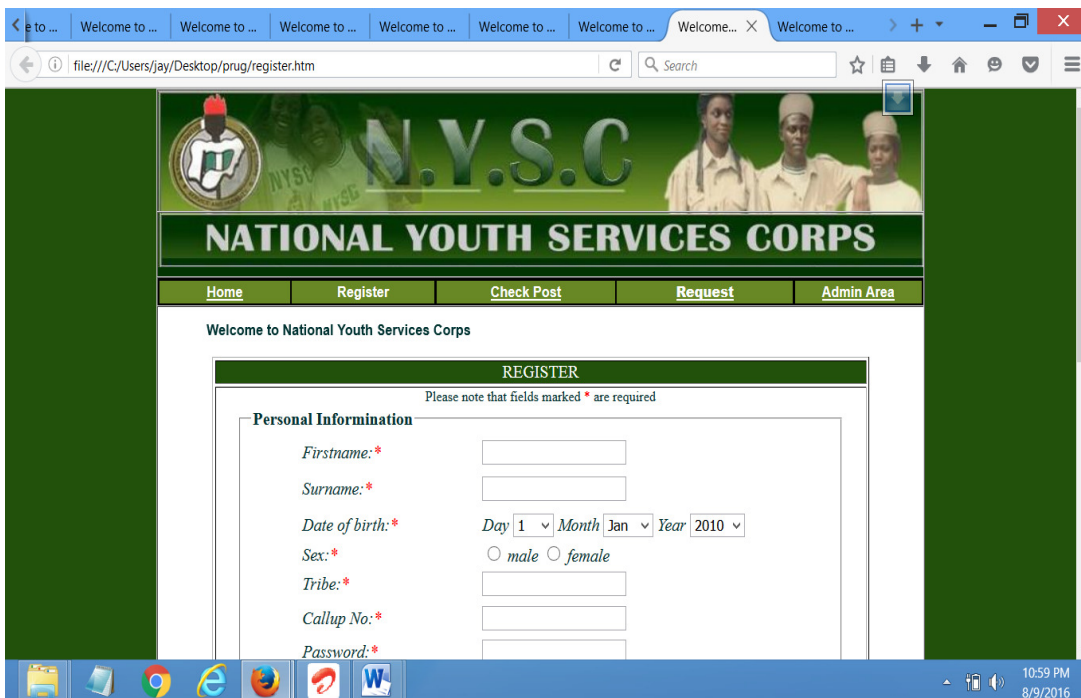Figure 7: Snapshot Implementation of home page

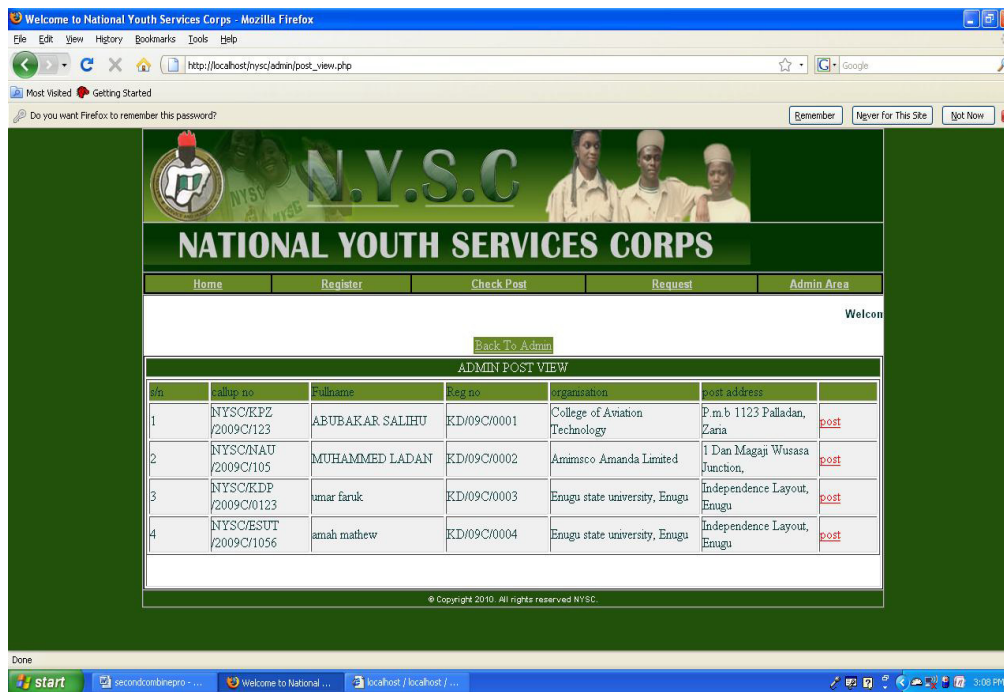Figure 8: Snapshot implementation of the registration page

Figure 9: Snapshot implementation of the corps members posted page

11. DISCUSSION OF RESULTS

The results have shown that the developed online NYSC orientation camp information system is more efficient and effective to handle database redundancy errors, updates, accessibility and modification than the existing manual approach. It gives the corps members of the NYSC officials the ability to access the information from anywhere in the world and at all times.

12. CONCLUSION

Online National Youth Service Corps (NYSC) Orientation camp information has been developed to handle errors, updates, modifications of information and the developed system can be accessed anywhere and at all time. The system was developed using Entity-Relationship Model and the Unified Modeling Language, and was implemented using PHP and MYSQL languages.**11.**

13. CONTRIBUTIONS TO KNOWLEDGE

This study will help the management and the government in taking important decisions.
Secondly, the study will help the management in predicting the population of the Corp members.

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Author's Biographies
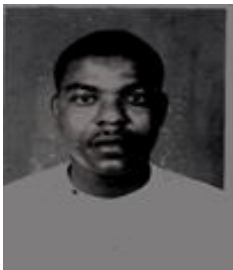
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