**COMPUTERIZED ABU NYSC MOBILIZATION SYSTEM**

**ABSTRACT**

*National youth service corps (NYSC) is a scheme established in 1973 by the military government of Nigeria as one of the measures of achieving the objective of reconciliation and reconstruction after the civil war. The process is to enlist qualified indigene graduate of universities and polytechnics under the age of thirty who have attended higher institution of learning both home and abroad which are then posted to various states outside their state of origin to serve their father land for a period of twelve month. The topic aims at using a computerized system to manage the data of all qualified graduates of each department for NYSC mobilization. Hence, deprecating the current manual method used by ABU senate for mobilization. However, this system will provide all qualified students with login details allowing them to check their mobilization status online without stress of having to be on the university campus to check the list.*

**CHAPTER ONE**

**1.1 Introduction**

Till date, the mobilization of graduated student of Ahmadu Bello University, Zaria for NYSC is done manually andhas had some negative effects on both the institution and the students.

For instance, the manual mobilization of students is complex and time consuming, this is because of the volume of data and this makes routine task performed relatively very large. This results in inaccuracy and slow processing. The data that is being manipulated must be reliable and this requires a reliable system. This intensifies the need to provide a sophisticated machine that will help in the processing for convenience.

The system with its advanced features in storage, processing and retrieval make this processing very easy.

With the aid of the computerized system, all problems of the manual system in the processing of students’ records for mobilization will be a thing of the past.

**1.2 Statement of the Problem**

This project titled the “Computerized ABU NYSC Mobilization System” is aimed at enhancing the process of mobilizing graduating student of ABU, Zaria to service. The processes involved in mobilizing are still being done manually and manual way of mobilizing has some negative effects as follows:

1. The manual system makes retrieval of stored information very slow and difficult
2. Usually, duty is labor intensive and time consuming. This is because the volume of data on which task are performed is relatively very large.
3. There may be omission of information
4. There may also be loss of vital information

**1.3 Purpose of the Study**

The purpose of this study is to enhance the mobilization of graduating students in ABU, Zaria to service by the use of a computerized system rather than the manual system that makes work difficult, to identify the problems of the existing system, to provide solution alternatives to the operations inherent in the existing system and to design a new system that will take off the problems of the existing system.

**1.4 Aims and Objectives**

The primary aim of this project work is to study the existing system of mobilizing graduating students and produce a computerized design for automatic mobilization. Therefore, the objective this study sets is;

1. To review existing literature youth service and mobilization in ABU, Zaria.
2. To examine the relevance of adopting a computerized NYSC Mobilization System.
3. To offer useful recommendations on how to improve the mobilization of graduating students.
4. To identify the means through which the recommendations can be effectively implemented.

**1.5 Methodology**

This research work was carried – out by collection of data which was done by an oral interview. Other means are the use of the published books on National Business and Technical Examinations Board and also research and findings were carried – out through the use of internet in order to know more about the research topic and suitable languages in implementing it. The following are suitable languages that were used for implementing the research work.

1. Java SE 8.
2. MySQL database.

**1.6** **Scope**

This topic is designed to highlight the use of a computerized system for mobilization of graduation students ofAhmadu Bello University, Zaria for service to different areas of life, according to their professions.It provides quick way of operation by capturing the manual process and automating them.

**1.7 Limitations**

The study met with a lot of difficulty in the collection of information, time constraints was one of the limiting factors in carrying out this study. This was because of the fact that the restoratives are students; it was done in consummation with normal class work.

During the research there were financial constraints. Time and energy was also spent in trying to design the system.

**1.8 Definition of Terms**

**i. Computer:** The electronic device/machine that accepts data (input, process it and give desired output.

**ii. Copper:** A person that graduated in a recognized university or any other institution within or outside the country.

**iii. Posting:** The form of sending people to their various places of service in accordance with their respective areas of specialization.

**iv. Program:** A set instructions combined together to perform specific task

**v. Manual processing:** - This is the process by which office activities are carried out directly by human beings without the help of computer.

**CHAPTER TWO**

**2.1 Preamble**

A literature review is defined as a survey on scholarly articles, books and other sources (e.g. dissertations or conference proceedings) relevant to particular issue, area of research, or theory, providing a description, summary, and critical evaluation of each work. The purpose of literature review is to offer an overview of significant literature published on a topic.

There is a growing body of research focusing on developing better ways to manage online examination systems and e-learning systems. Some of these researches focused on various sections of the system.

**2.2 Literature Review**

According to Zago (2002), computer system is an essential electronic, mechanical control device comprising five component which are input device, memory device, processor device, control device and output device that accept data, process and execute the data and produce the output data for decision making consumption. With the automated system, graduating student records are loaded into the computer by the operators. The quest to computerized ABU mobilization system has been minimally attempted due to reasons associated to the belief that the systems are automated, but in this proposed system, I have decided to review a project work on computerized NYSC posting (2003) by Julius Ogar and Gboyega**Otolorin.The automated system can improve documentation, reduce posting and mobilization errors, and enhance security; it can indirectly contribute to human error when it creates complacency. Development and implementation of appropriate policy and procedures and oversight through quality assurance and continuous quality improvement programs, are required for the safe and effective use of computerized mobilization system.** ([www.amazon.com](http://www.amazon.com/)).

Eyitayo and Akeju (1999) explains that system development is the entire process of developing a computerized system, initiation and preliminary investigation, system analysis, designing and documenting the system, implementing the system, and maintaining the system.

A system can be defined as the orderly grouping of interdependent component linked according to plan to achieve a specific objective. (Alade et al 2004).

According to Julius Ogar; he suggested that corp. members eligible for concessionary posting as stipulated in the NYSC act are married women corps members with peculiar health related issues and corps embers with physical disabilities are allow deploying. To eradicate most limitation and hindrance caused in the use of manual system in posting. Also observed by the writer is that before one will be posted him/she must be physically fit and healthy.

Eyitayo and Akeju (1999) explains that system development is the entire process of developing a computerized system, initiation and preliminary investigation, system analysis, designing and documenting the system, implementing the system, and maintaining the system.

According to Brutus, from India (2008); A Database Management System (DBMS) is a software system designed to efficiently store, retrieve, manipulate and query large amounts of data. Since the introduction of the relational data model in 1970, the database management system industry has grown to $100 billion dollars a year and increases more by 25% every year. With the new and emerging internet applications posing new requirements in the DBMS design and implementation, the database market is expected to grow even faster, and database design and implementation techniques are constantly evolving to meet the new requirements. According to Michael Stonebreaker’s Ingress (2012), DBMS are usually categorized according to the database model that they support. The data model tends to determine the query languages that are available to access the database. A great deal of the internal engineering of a DBMS, however is independent of the data model and is concerned with managing factors such as performance, concurrency, integrity and recovery from hardware failures.In these areas there are large differences between products. According to Professor Allen S. Lee (2014), Management Information System,MIS is a planned system of collecting, processing, storing and disseminating data in the form of information needed to carryout the functions of management.According to Philip Kotler (2015), a marketing information system consist of people, equipment and procedures to gather, sort, analyze, evaluate and distribute needed, timely and accurate information to marketing decision makers.The terms MIS and information system are often confused. Information system includes systems that are not intended for decision making MIS is sometimes referred to,in a respective sense as Information Technology Management. That area of study should not be confused with Computer Science. IT service management is a practitioner-focused discipline. MIS has also some differences with Enterprise Resource Planning (ERP) as ERP incorporates elements that are not necessarily focused on decision support. Database normalization, sometimes referred to as canonical synthesis, is a technique for designing relational database tables to minimize duplication of information and so doing,to safeguard the database against certain type of logical or structural problems,namely data anomalies. For example, when multiple instances of a given piece of information occur in a table,the possibility exists that these instances will not be kept consistent when the data within the table is updated, leading to a loss of data integrity. A table that is sufficiently normalized is vulnerable to problems of this kind, because its structure reflects the basic assumptions for when multiple instances of the same information should be represented by a single instance only.

**CHAPTER THREE**

**METHODOLOGY AND SYSTEM DESIGN**

**3.1 Introduction**

According to Kerlinger A. (1997) he describes research methodology as a planned structure and strategy of investigation concerned so as to ascertain answer to research question and to control variance. In a study of this kind detailed facts are required to enable the researcher draw out important conclusion. The various design procedures required for a successful implementation of the proposed automated system is adequately discussed in this chapter.

**3.2 Method of Data Collection**

Data collection methods are the means taken to father facts that enable the researcher to discover why the existing system was introduced and how it is operated.

In an attempt of writing this project, some techniques of data collection used are:

1. Interview method
2. Record inspection
3. Reading and Internet browsing

**i. Interview Method**

This is a fact finding technique and the most efficient. During the interview method, discussion was made face to face with those concerned and opinion of the interview regarding fact about what is happening in the present system that is its weakness.

**ii. Record Inspection**

This method involves collecting data in which the investigator reads through records, document reports, bulletin etc. In this method of data collection, sample output of the folio was given of how they prepared billing.

However, a close study of the form currently being used should give the best guide to current practices which may be the original requirements.

**iii. Reading and Internet Browsing**

This method is known as documentation or record inspection method. It is a form of secondary research technique that entailed the researcher going into library to look for piece of information relating to the problem at hand. The method involves gathering information from secondary source such as newspapers, magazines, textbooks, journals, and even past projects and also accessing internet documents.

**3.3 Database Design**

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

The term database design can be used to describe many different parts of the design of an overall database system. Principally, and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In the relational model these are the tables and views. In an object database the entities and relationships map directly to object classes and named relationships.

**3.4 Output Specification**

**OUTPUT MEDIUM**

1. Printer

2. Monitor

**3.5 Input Design**

Input facilities are the entry of data into the computer system. Input design involves the selection of the best strategy for getting data into the computer system at the right time and as accurately as possible. This is because the most difficult aspect of input designs is accuracy. The use of well-defined documents can encourage users to record data accurately without omission. For example, if an offender’s telephone number is a needed input data, the offender registration form should have a specific line that is clearly labeled ‘customer telephone number’. Input errors can be greatly reduced when inputting directly by using appropriate forms for data capture and well designed computer screen layout.

**INPUT MEDIUM**

The input medium consists of the following hardware which includes

1. Keyboard
2. Mouse

**3.6 System Requirement**

System specification has to do with explicitly defining and stating the input and output specification as regards to the project workability. It includes the formats in which the input will be supplied to the computer for processing, and the resultant output from the system, as well as the data and information that will be supplied and retrieved from the system.

**SOFTWARE REQUIREMENTS:**

* Operating system
* JDK 7 or above

**HARDWARE REQUIREMENT:**

* Monitor
* Hard disk 20MB and above
* 64MB RAM and above
* processor Pentium 1 and above
* UPS
* Stabilizer
* Mouse
* HP LaserJet 1600 printer
* Keyboard

**3.7 Choice of Programming Language**

The programming language used to design and implement this project is Net Beans IDE version 8.0 (Java). Why I used this particular programming language and version is due to the following reasons:

1. **Ease of Use**: Application programmers can focus on their domain object model and leave the details of persistence (field-to-field storage of objects) to the Java implementations.
2. **Portability**: Applications written with Java can be run on multiple implementations without recompiling.
3. **Database independence:**Applications written in Java are independent of the underlying database. Java supports many kind of transactional data stores including relational and object databases, XML, flat files, MS Access and others.
4. **High Performance:** Application programmers delegate the details of persistence to Java implementation, which can optimize data access patterns for optional performance.
5. **Popularity:**Java is so popular so, there are many good resources (Books, web sites and more) that can help you learn the language. You can find the answers to your programming problems much more easily than other programming language.

**CHAPTER FOUR**

**SYSTEMS IMPLEMENTATION EVALUATION**

**4.1 Introduction**

This chapter describes the detailed design state and consists of installation of the new system and removal of the old system. This involves the co-ordination of the efforts of the user department and the seven-up department in getting the new system into operation. During the process of implementing the new system, the old system is also used in line with the new system so as to support the newly implemented software in case the system does not meet up with the necessary requirement or unable to perform as expected. The implementation of the new system involves the following stages;

Testing of the program

Education and training of staff

System change over plan

**4.1 System Testing and Evaluation**

Before actually implementing the new system into operations, a test run of the system was done and all of the bugs present were removed. Program testing is an important phase of a successful system. It is also aimed for ensuring accuracy and reliability of the programs. This before a new system is adopted is an integral part of our operations, it must be properly tested. In general program testing can be done in three phases which include:

* Unit Testing
* Integration Testing

In unit test, when the programs have been coded, compiled and brought to working conditions, they must be individually tested with the prepared test data. Any undesirable happening must be noted and debugged.

In system test, after carrying out the unit test for each of the programs of the system and when the errors are removed, then the system test is done on actual data. The completed system is executed on the actual data. At each stage of the execution, the result or the output of the system is analyzed. If the output is not matching the expected output of the system, the errors in a particular program or procedure are identified and fixed.

**4.2 System Conversion Plan**

Implementation is the process of translating design specifications into source code.  The primary goal of implementation is to write source code and internal documentation so that conformance of the code to its specification can be easily verified and also that debugging, testing and modification are ceased.  The source code is developed with clarity simplicity and elegance.

The coding is done in a modular fashion giving much importance even to the minute details.  So, when hardware and storage procedures are changed or a new data is added, rewriting of application programs are not necessary.

Source code clarity, is enhanced by good coding style and meaningful identifier names for denoting user-defined data types, variables, parameters and sub-programs which are used for the readability of Source-Code.

When the new system is fully tested and proved, changeover from the old (manual) system to the new (automated) system is then implemented. This could be achieved in one of these three (3) ways:

* Direct Changeover
* Parallel Running
* Pilot Operation
* Phased Approach

Changing from an existing system to either another manually operated or automated system is not as easy as it may sound or seem it is the one area that is most susceptible to mistakes and lapses, because of this it requires careful consideration, we therefore recommend the **parallel change over method.** In this case, both the old and new systems are operated side by side in order to compare their results and outcomes. This is needed to watch the performance and capacity of the new system. When a satisfactory result is obtained from the new system, the old system is then be laid-off, while the new system is then put into full operation.

**CHAPTER FIVE**

**SUMMARY, CONCLUSION AND RECOMMENDATIONS**

**5.1 SUMMARY**

The proposed computerization of ABU NYSC Mobilization system is designed to solve the problem of manual operation during the process of mobilization hereby making it easier, efficient, effective and less cumbersome for the officers in the following ways.

* Making the security of the university graduating student more reliable.
* Eliminating the clumsiness and reducing the rate of manpower used in record taking
* The keeping of accurate records is assured on computers as well as the use of backups such as extra hard disks that contains the exact information as the original.
* Here, portability is achieved as the size of files in the hard disk does not increase its physical size.
* Accessibility of data/mobilized student information is made easy.

**5.2 CONCLUSION**

Above all, computers have gotten many applications in all the fields that have been explored. The application or usefulness of computer in the mobilization of graduating students for the NYSC scheme cannot be over emphasized as it may form the backbone if used continuously for collection of data and posting.

**5.3 RECOMMENDATION**

Owing to the difficulties or problems associated with the manual system and the benefits derivable from the new system, it is however recommended as follows:

* The management and staffs of ABU Zaria should derive a method of starting the process of implementing the new system so as to satisfy and cater for the needs of both the student and management.
* The management of ABU Zaria should see to the reason why this project work should be picked up and proper examined as it will help in the mobilization of graduating students in a long way.
* Management of ABU Zaria should discourage the continual usage of manual NYSC mobilization system
* Management should provide in all ramifications the computer system needed for mobilization process.

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