A PROJECT PAPER ON

DESIGN AND DEVELOPMENT OF PERSONNEL INFORMATION SYSTEM (A CASE STUDY OF NATIONAL POPULATION COMMISSION)

BY

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APPROVAL PAGE

This project is written under the direction and supervision of the candidate's project supervisor and approved. This is to satisfy that the student has presented it orally to the Department of Computer Science and Information Technology Caritas University Enugu fulfilment for the award of Bachelor of Science (B.Sc) Degree in Computer Science and information Technology.

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CERTIFICATION

This is to certify that this research project was carried out by me, Obi Chioma Blessing, a post graduate student in the Caritas University Enugu, with matriculation number CST/2009/386, under the supervision of Engr. Solomon Onuh.

In partial fulfillment of the requirement for the award of Bachelor of Science (Bsc) Degree, in information Technology.

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DEDICATION

Dedicated to Almighty GOD for His infinite love over me

ACKNOWLEDGEMENT

To God I give all the glory.

The completion of this work came as a result of the contributions of various individuals too numerous to mention. However, some of them deserved to be mentioned.

My sincere thanks go to my amiable, dedicated and meticulous supervisor *Engr. Solomon Onuh* for the constructive criticism, encouragement and scholarly advice which he gave me throughout the period of this work.

I am indebted to my mentor, Dr. *Arinze Steve Nwaeze* for his advice. Also, I am indebted to all my friends and colleagues for their encouragement and advice.

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OBI CHIOMA BLESSING

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ABSTRACT

This work intends to provide a computer based system for the maintenance of personnel records of employees in organization. The work addresses limitations identified with manual method of handling personnel records of employees in a firm by providing a better platform to eliminate fraud, corruption, file hiding and misplacement, records falsification, duplication, fragmentation, inconsistencies and other vices attendant with manual method of handling personnel records. The Personnel Information System (PIS) software is a user friendly package that gives one the fit to accurately monitor employees' records effortless. With Personnel Information System (PIS), the personnel records of employees in a firm regardless of their place of assignment are simultaneously integrated and rationalized through the creation of a single system that provides accurate information to all in a time and cost efficient manner. This software is designed for stand-alone windows environment, but has the ability to be networked. The interface is Visual Basic language with the structured query language (SQL). The implementation of the system will provide speedy retrieval of data as well as enhancing effective and efficient data.

CHAPTER 1

1.1 INTRODUCTION:

This chapter introduces and presents the baseline of the thesis. It provides an overview of the study and the important issues that will be discussed and investigated

1.2 RATIONAL/THEORETICAL FRAMEWORK:

Personnel Information System is a computer based system for the maintenance of the service registers of individuals in an organization.

According to Hicks and Gullet (19974; 316), "An information system may be defined as an organized way of sending, receiving and recording messages".

Traditionally, personnel record for federal public servants of any organization in a country like ours are held in three places namely: Open and secret register of the organization at the headquarters for all the staff of the organization in the nation. The state offices for all the staff in each particular state and local government area offices for staff posted to the local government area where applicable.

There are also operational departmental records for staff at the headquarters and states head offices. This, however, led to duplication, fragmentation and inconsistencies in records of staff. Whereas, a firm's information system should be unified, there should be no contradictions, no overlaps, and no gaps.

Information needed by many departments should be collected by one source, stored and made available to any section of the organization that needs it (Unamka and Ewurum 1995; 329). Therefore, the Data are inaccurate and thus unreliable as a basis for decision making.

Unamka and Ewurum (1995; 329) say, "Unless a manager has the correct information at the right time, he is unlikely to make the right decision".

Since the data are inaccurate and unreliable, the information generated therein is of low quality and decisions taken likely to be wrong in confirmation to;

"The higher the quality of the information, the better the result of the decision Eating" (Unamka and Ewurum 1995; 329).

For instant, the name of a deceased local government area staff may continue to be appearing in the register or nominal roll of the organization at the quarters years after the staff demise, whereas his/her name has been removed from the state register or nominal roll list. Secondly, there are cases where officers obtained additional qualification beside the ones they were employed with, but these qualifications are not accredited to them at the headquarters whereas they have them at their states office files. Another case is where a couple of staff were employed at the same time, place on the same grade level and step and posted to different states, but few years later, the officers started earning different amount of

money as salaries because of one manipulation or the other. Thus data gathering and updating are subject to delay or worse when files are lost. Though the existing manual system of recording information is useful, however, with the development of PERSONNEL INFORMATION SYSTEM (PIS) software, personnel records will be simultaneously integrated and rationalized. It should then be seen as a route to eradicating all the problems of manual method of handling records through the creation of a single system that would provide accurate information to all in a time and cost efficient manner.

According to Unamka and Ewurum (1995; 329), "Information that is useful in business should be accurate and timely".

With Personnel Information System (PIS), the details pertaining to personnel postings, qualifications, departmental test passed, training attended, family details, etc are stored in this system. With the help of nice friendly graphical interface, retrieval of information is possible based on any individual or on collective information grouped by certain categories. These categories could be designation, retirement time, length of service, place of work or location, etc. Thus the issue of ghost workers, hiding of files, falsification of records, and other vices that are often associated with manual system will be things of the past.

Therefore, Personnel Information System is very much in need for every organization.

1.2.4 BRIEF HISTORY OF NATIONAL POPULATION COMMISSION (NPopC):

The present National Population Commission was established in April 1988 by the legal instrument creating it (Decree No.23 of 1989).

The Commission is made up of the board members headed by the chairman and 37 federal commissioners, one each from all the states of the federation and federal capital territory. Also on the board is the Director General (DG) who happens to be the accounting officer of the commission. The board also has appointed secretary called the secretary to the commission, who oversees the secretariat of the commission. The board has the responsibility to formulate policies as directed by the federal government, while the core civil servants are saddled with the responsibilities to carry out the policies.

The commission in other to carry out its functions effectively has eight departments and each department is headed by a director. The departments are

- ADMIN AND SUPPLY
- CARTOGRAPHY
- CENSUS
- FINANCE AND ACCOUNTS
- INFORMATION TECHNOLOGY
- PLANNING AND RESEARCH

- PUBLIC AFFAIRS
- VITAL REGISTRATION

The commission has its headquarters in Abuja and offices in all states capitals of the federation including the federal capital territory. It also has offices in the 774 local government areas of the country. Presently, the total staff strength of the commission is about five thousand. The personnel information gathering, processing and management of all the staff of the commission is carried out by the Admin and Supply department.

According to Unarnka and Ewurum (1995; 135), "Personnel Management also called human resource management is the management of people at work. That also refers to the functions and operations of a single department of the corporation which has the responsibility and authority to select and train personnel".

This department in order to carry out the complex challenges of managing human resources is subdivided into divisions to enhance efficiency. The divisions are as follows:

- ESTABLISHMENT:- Under which we have Open and Secret Registry, nominal roll, salary variations, leaves and disengagement sections.
- WELFARE:- Here we have Pensions, Gratuity, Stores, and Loans Sections
- TRAINGS:- Here we have Manpower Development and Structure sections.
- APD: - Here we have Appointments, Promotions, and Discipline sections.

- TRANSPORT: - Here we have vehicle Maintenance, Communications and Supply sections.
- LEGAL.

1.3 STATEMENT OF THE PROBLEM.

For the past four decades, manual personnel data management system has been used. This method has its problems and it has been proved to be very ineffective and inefficient, and some of the problems identified are:

- Manual method of preparing, gathering and processing data as a personnel management function entails considerable manual efforts. Thus manual method is cumbersome, tiresome, boring, frustrating and time consuming.
- Manual method has a lot of discrepancies.
- Manual method encourages frauds and corruption. Figures are easily falsified and changed with perhaps some exchange of money.
- Manual method inflicts severe hardship on the staff due to avoidable human errors, like misplacement of files. When there are errors, then the reliability, accuracy, neatness, tidiness, and validity of the data would be in doubt.
- Since it is the function of the Admin Department to raise variation advice for the use of the finance and account department (pay roll), manual method requires staff that have some numerical background to do the job reliably. This

group of people are grossly inadequate, hence, we have a set of staff that were employed at the same time, place on the same grade level and step, and posted out to different states, but they earn different salaries years after due to variation preparation.

- Manual method results in incomplete service records of staff which undermines the personnel management function that depends upon the information gathered from the earliest stages of employee's career. For instance, additional qualifications obtained after the initial one presented on employment may not be used to place an employee adequately due to lack of updating data or information. Further, management needs adequate information to resolve disciplinary cases fairly, otherwise there may be costly delay in obtaining decision for there is a dictum which says, " ***justices delayed is justices denied*** or unfair decisions may be made in order not to deny justices. Besides, a great deal of staff time may be wasted tracking down missing documents.
- Manual method of handling personnel information involves waste of paper materials.
- The size of the paper records with attendant management problem has significant logistic implications to the commission.
- Manual method encourages waste of man-hour and resources because staff employed to carry files from one point to another do some time use the time to

do something else instead of doing the job they were employed for. To see that this job is done more staff are employed than ordinary should be.

- Manual method does not allow for the processing of large volume of data on a regular and timely basis.

Given these above scenarios, this study seeks to evaluate the various contributions of Personnel Information System (PIS) toward the improvement of inadequacies accompanying the manual method of handling personnel information issues in National Population Commission (NPopC).

1.4 PURPOSE OF THE STUDY

This project seeks to design and develop an efficient and effective Personnel Information System (PIS) using National Population Commission as a case study. It also aims at identifying the importance of Personnel Information System in handling personnel records against the manual method. Specifically, the following are the objective of the study.

- To identify the various problems of manual approach towards handling Personnel Information System in the Commission.
- To identify and eliminate the major problems encountered through the use of manual method of processing personnel information like falsification of records, ghost workers among others.

- To develop an integrated and rationalized Personnel Information System in NPopC.
- To suggest other measures that will help in eradicating the problem associated with manual method of handling personnel information matters.

1.5 RESEARCH HYPOTHESIS.

Three Null (Ho) hypothesis though not tested are proposed to strengthen the concept of the project work.

- H_I Personnel Information System will enhance significantly the processing of staff records in the National Population Commission.
- H_O Personnel Information System will not enhance significantly the processing of staff records in the National Population Commission.
- H_I Personnel Information System will significantly affect adversely the staff strength of the Commission.
- H_0 Personnel Information System will not significantly affect adversely the staff strength of the Commission.
- HI Personnel Information System will eradicate fraud, corruption and other malpractices in the Commission.
- H_O Personnel Information System will not eradicate fraud, corruption and other malpractices in the Commission.

1.6 SIGNIFICANT OF THE STUDY:

This study is significant in the sense that it determines the benefit accruable to the staff of the Nation Population Commission through the use of Personnel Information System against the manual method. These include:

- It supports large volume of data processing and storage; promote information retrieval, addition, deletion, as well as other database updating activities.
- It provides relevant, complete, accurate and timely information to the management and staff.
- It exposes and equips the staff of the Commission to the field of information technology by sending them to training to acquire necessary skills in Information Technology (IT).
- It evaluates quickly the establishment and payment changes.
- It demonstrates the importance of modernization of information and communication.
- It improves the quality of information communication by making it available to all the staff of the Commission at the time of their need.
- The system will enable the managers of the Commission discharge their managerial function easily on any staff at any level due to availability of information.

- It demonstrates how business needs could be met efficiently and effectively through the application of information tools made available by the advances in the field of science and technology.
- The software will be able to compliment personnel database with payroll database. Hence, enhancing the Personnel Management Information System and tighten the control of the payroll database.

1.7 LIMITATION OF THE STUDY:

In the course of carrying out this project some factors tried to hinder the free flow of the work. These factors include:

FINANCE: Finance constituted major problem as there was no sufficient fund to round for the required materials, visit library, and cybercafẻ.

LACK OF MATERIALS: It was not easy to get written text on the subject matter from libraries and internet.

ACCESS TO PERSONAL FILES OF STAFF: It was not easy to have access to personal files of staff. A lot of persuasion and conviction was applied before the management could grant permission for us to have access to the staff files, where we extracted the form, format we used as a model in this project.

TIME: Time was not at my liberty being a student| who is fully engaged with my studies, it was not easy for me to squeeze out time for me to out the project.

1.8 SCOPE OF THE STUDY:

This project seeks to design and develop Personnel Information System. Our focus is on National Population Commission. Our major area is to identify and modernize the specific function of Admin and Supply Department as regard to the management of personnel information. The software will be able to complement personnel database with payroll database. The sample size will be the staff of National Population Commission Enugu state office. The design will have three levels of users. They include:

- AN INDIVIUAL USER: Here an individual is able to view his records.
- THE ADMINISTRATIVE USER: Here the administrator has access to all the users' record of the department.
- THE SUPER USER: Here the officer has access to all the users of all the departments. The individual user can login and access their data/records only.

1.9 OPERATIONAL DEFINITION OF SOME TERMS:

Application:

An application is the executable file and all related files that a program needs to function which serve common purposes. The word is sometimes used synonymously with program.

ASCII:

This is an acronym for 'American Standard Code Information Interchange'. It is used to describe the byte values assigned to specific character. For instance, the letter 'a' has ASCII code of 65.

CLIENT:

1 Is anything that requires the service of something else. Example, in Object Pascal, a client is any code that uses one or more features of an object or unit. In windows, a client is the code that makes use of windows Application Program Interface (API).

2 Is a database system, in which a workstation connected to a server can request for data from the server. The client workstation can process data locally and write it back to the server.

COMPILER:

This translates a program source written in a high level language to an object code which consists of instructions that the computer can understand.

COMPONENT:

The element of visual basic application ionized on the component palette in the visual basic programming environment. Component including forms are object one can manipulate. It is always self contained and provides access to its features through properties.

DATA ACCESS COMPONENT:

Data objects are based within a visual basic program to manipulate database as well as the tables and indexes within the database. The data objects are the representations (in program code) of the physical database, data tables, fields, indexes and so on.

DATABASE:

A collection of operational data of organization stored in related tables.

DATA CONTROL COMPONENT:

Data control component means a visual basic component that enables a developer to create the interface of a database application.

DATA SET:

This is a collection of data determined by a Ttable or Tquery component. A dataset defined by Ttable includes every row in a table and dataset defined by a Tquery contains a selection of rows and columns from the tables that meet the condition specified in the query.

END USER:

This is a member of an application's intended audience synonymous with user but emphasized the fact that the programmer is not the user. According to Delphi document, end user is referred to as the users of application developed in a programming environment such as Delphi.

EXCEPTION, EXCEPTION-HANDLER:

An exception is an event or condition that if it occurs, breaks the normal flow of execution. Code assigned to resolve the situation in run-time environment that raises the exception and/or restores the environment to a stable state is called exception handler.

EVENT, EVENT-HANDLER:

Event is a user action such as a button click or a system occurrence such as a preset time interval recognized by a component. Each component has a list of specific events to which it can respond. Code that is executed when a particular event occurs is called an event-handler.

FIELDS:

These are rows of information that stores data of particular records.

FILE:

This is a group of related records.

INFORMATION:

This is a processed data/facts obtained by assembling them into meaningful form.

LOOK-UP-TABLE:

This is a secondary table that enables database systems to use a small code field to enable many records in a primary table to referring to information

stored in another. This can be used as a means of ensuring that values entered in a primary table are legitimate values, thus safeguarding data integrity.

METHOD:

This is a procedure or function associated with a particular object.

MODEL, MODELESS:

This represents the run-time state of a form designated as a dialog box in which the user must clear the form before continuing with the application. A model box restricts access to other areas of the application. If the user can switch focus away from the dialog box without first closing it, then the run-time state is called modeless.

NON-WINDOWED CONTROL:

A non windowed control is a control that can not receive focus, that cannot be the parent of any other control and which does not have a window handler.

OBJECT LINKING AND EMBEDDING (OLE):

OLE is a method of sharing complex data among applications. With OLE, data from a server application is stored in a container application using the OLE object.

PRIMARY INDEX:

Primary index is an index on the key field of a database table. An index performs the following tasks:

- Determine the location of the record
- Keeps record in sorted order
- Speed up search operation

A primary index typically has a requirement of uniqueness that is no duplicate key can exist.

PROGRAM:

Set of coded instructions written in any of the programming languages to perform a specific task.

RELATIONAL DATABASE:

This is a database management model in which data is stored in rows and columns and which the data in one table can access the data in other tables by means of common data field. The database assigned to specific characters. For instance, the letter V has ASCII code of 65.

SOFTWARE:

This is a procedure in machine-readable instruction called program that directs the activities of the computer.

SQL:

Structured Query Language (SQL) is a relational database language used to define, manipulate, search, and retrieve data in database.

WINDOWED CONTROL:

This is a control that can receive focus, that can own other control, and which does have a window handle.

WINDOW HANDLE:

This is a number that is assigned by windows to a control that must be used to request services for that control from the windows' Application Program Interface (API).

VISUAL COMPONENT:

This is a component that is visible or can be made visible on a form at run-time.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION.

The review of literature in this study will be represented under the following headings.

i. Personnel Management (PM)

ii. Information System (IS)

iii. Management Information System (MIS)

iv. Database

v. Database Management System (DBMS)

vi. Data processing System (DPS).

2.2 PERSONNEL MANAGEMENT (PM):

Web finance (2011) defines personnel Management as administrative discipline of hiring and developing employees so that they become more valuable to the organization. It enumerated the functions of personnel management to include

- Conducting job analysis
- Planning personnel needs
- Orienting and training
- Determining and managing wages and salaries.

- Providing benefits and incentives.
- Appraising Performance
- Resolving disputes
- Communicating with all employees at all levels.
- Selecting the right people for the job

Unamka and Ewurum (1995.135) say "Personnel management is concerned with obtaining and effectively utilizing human resources so as to achieve the objective of the organization".

They went further to enunciate that the extent to which this program is employed depends on the form of the organization and the nature of business it does.

Brech (1975) defines personnel management as "That Concerned with the development and deployment of people within an organization so that the objective of the organization will be achieved and adopted with the changing circumstances or condition".

Graham (1981) defines it as "A series of management activities which procures personnel for the organization to ensure effective performance towards organizational growth".

Personnel management can also be defined as the planning, organizing, directing and controlling of the procurement, development, compensation, integration,

maintenance and separation of human resources to the end that individuals, organizational and societal objectives are accomplished (Flippo, 1984).

Malcolm Tatum (2011) States "In all organization there should be someone concerned with the welfare and performance of persons who are a part of the operation. When an individual or a team of individuals takes on this task of seeing to programs and setting polices that impact everyone associated with the company, they are engaged in the process of personnel management sometimes referred to as human resource (HR) management".

Harbison (1973;3) says, "Human resources constitute ultimate basis for the wealth of nations since they accumulate and exploit natural resources, build social economic and political organizations".

Stahi (1962; 15) defines it as "The totality of concerns with human resources of organization".

Graham (1980) says, "The purpose of personnel management is to ensure that employees of an organization are used in such a way that the employer obtains the greatest possible benefit from their abilities and the employees obtain both material and psychological reward from their work".

Ikeagwu (1998; 108) gave two functions and activities surfaces of personnel management, namely, management function and operational functions. According to him, management functions deal with the personnel management involvement in

formulating and implementing of organization's policies, while operational function deal with the techniques and procedures for procuring employees and securing their compliance for execution of the stated policies for the realization of organizations goals.

Eze (2010; 116) concluded by saying "Personnel management performs a reconciling function in an organization; reconciling organization's interests with that of the employee's interest which are of course complementary".

Therefore personnel management is hiring of a person into an organization, studying his behaviour in the work situation, his interest and his relationship with other workers and the organization.

23 INFORMATION SYSTEM (IS):

Information system (IS) exists today all around us, and perhaps we don't even think about them or see them. The goal of the first information system was to give managers critical information tailored according to the need and presented when they are needed (O'Brien 1996).

Boddy et al (2005) defines an information system as a set of people, procedures and resources that collects data which it transforms and disseminate. Likewise an information system (IS) can be defined as a consistent, coordinated set of

components acting together towards the production, distribution or processing of information (Ratzan, 2004).

Baynon - Davies (2002; 312) says, "Information System development is the science and art of designing and making information systems that support the activity of particular organization".

There are two general types of models in information system development the linear and the iterative (Baynon - Davies 2002).

This assertion is collaborated by Reynold (1995) when he says "The linear is a traditional model sometimes also called the waterfall approach, goes from the conception analysis, design construction, implementation and maintenance as sequence without any rework".

He opined that it is effective in developing an IS but requirement have to be well understood.

Kroenke (1992) described information system as an open system that produces information using input processing and output cycles. The minimal information system consists of three element; people, procedures and data. I.e. people follow procedure to manipulate data and produce information. Sanders (1988) in analyzing information system states that an information system is a group of integrated elements, people, procedures and equipment working together to support decision- making and operations within an organization.

Atuenyi (1994) says that here are four broad categories of information systems namely:

— Operation system (OP): Designed to process data generated by the day - to-day business transaction of a firm.

— Management information system (MIS): it supports the planning and decision-making activities of many managers.

— Decision support system (DSS): This is a system designed to help reach a decision by summarizing or comparing data from either or both the internal and external sources to solve unstructured problems.

— Expert Systems (ES): These are made up of the combined subject knowledge of the human experts.

According to Modum (1996; 100) "An expert system is a term applied to a process whereby a computer system tries to imitate the work of an expert in that field".

Hicks and Gullet (1974; 316) in Unamka and Ewurum (1995; 329) say "An information system may be defined as an organized way of sending, receiving and recording messages"

while Adamii (2006; 15) defines information system as "A set of interrelated components that collects, stores and process data from various sources to provide information necessary to support and improve the day-to-day operations in a business"

2.4 MANAGEMENT INFORMATION SYSTEM (MIS):

The field of management information System (MIS) addresses the effective use of human and computer resources to realize important business objectives. MIS Professionals are responsible for developing information to all levels of decision - making in a business organization. (Adamu 2006; 186).

Lucey (1991) defines management information system as the combination of human and computer based resources that result in the collection, storage, retrieval, communication and use of data for the purpose of efficient management of operations and for business planning.

Modum (1995; 3) Says "MIS has always existed from the time there were managers requiring information that enable them to plan, control and run the operation of their organization. What is new are the added new advantages and dimensions that the computer has provided to the manager in the exercise of his traditional function".

Information Management System involves collection and storage of accurate information to enable the managements of large institutions takes effective decisions at short notice on the future of the institutions. This kind of computerized system makes it possible to know of any given time where the money is going and how the institution is faring or changing for better (Modum 1996; 107).

On his on part Q'Leary (1996) states that management information system is a feature of all large organization nowadays.

Kanter and Davis in Bhatnagar and Ramani (1989; 79) state, "Management Information System (MIS) is an integrated man-machine system that provides information to support the planning and control function of managers in an organization".

Nwaocha (2009; 249) says "Management Information System (MIS) is a special kind of information system that helps managers to take decisions. It is tailored to provide special information to individual manager for long term and strategic decision making".

This information can relate to internal and external intelligence and it can assist with planning, staffing, organizing, directing and controlling (Adamu 2006). The use of MIS helps to produce the information that organizations need to improve decision making, problem solving, controlling operations and creating new products or services (Nwaocha 2009; 249).

On the complexness of MIS, Modum, (1995 ; 43) says, "MIS is a complex system, its formulation usually takes time and money and demands a great deal of detailed and meticulous preparation if it is going to be an effective support instrument for company management decision".

The overall purpose of management information system is to provide the right information to the right managers or decision makers at the right time (Adamu 2006).

In support of Adamu's assertion, Nkuma-Udah (2009;6) says, "In information management, it is important to note that the value of information is variable. Some information are always valuable, such as investment account balance; other information has a defined period of time when it is valuable, such as plane departure and arrival information; and still other information (data) has value only periodically such as business intelligence. Nevertheless, all information has a life cycle during which it is identified, captured, organized, controlled, utilized, and eventually archived or stored".

2.5 DATABASE:

When an organization has a centrally controlled integrated collection of logically structured data, the organization is said to have a database (Modum, 1996; 89). In supporting Modum's view, Clifton (1983) defines database as a collection of data supporting the operation of an organization.

Dean (1977) says, "Database is a generalized integrated collection of data which is structured on natural data relationship so that it provides all necessary access paths to each unit of data in order to fulfill the differing needs of all users".

Lucey (1991) defines database as a file of data structured in such a way that it may serve a number of applications without its structure being dictated by any one of those applications. The concept is that programs are written around the database rather than files being structured to meet the need of particular program. Meet and Fairthere (1981) emphasized that in a database all the data is defined together rather than each file being defined separately.

Bhatnagar and Ramani (1981) say, "A collection of data files constitute a database and can be defined as an organized collection of operational data used by the application system in an organization".

Modum (1996; 87) Says "Data bank or database is therefore a collection of structured data with minimum duplication that are constructed and stored to enable the retrieval of information used in common by the various subsystems of the organization".

O' Leary and Leary (1996) list the following: sharing information, security, fewer files, and data integrity as advantages datable has over the traditional file processing method.

Modum (1996; 90) gave the advantages of an electronic database as;

- It provides for mass storage of all the organization relevant data in a structured manner in such a way as to eliminate redundancy.

- It equally makes access to the data easy by providing prompt response to user request.
- It allows multiple users to access the database at a time and at the same time protects the data from physical harm and unauthorized access.

Vossen (1991) collaborates this assertion by enumerating the problems that result from the use of the file system to organize data as;

- High redundancy between files; this is a result from the fact that the information are replicated in different places, and these replications are not controlled by a central monitor.
- Inconsistencies might result from the possibilities that a program makes changes on the file without these changes being made at the same time by all other programs that use the file.
- There exists inflexibility against changes in the application if actions or events arise in the course of time. These can be realized at a substantial expense of time.
- The work of many programmers involved is characterized by low productivity since program maintenance is expensive if the structure of an existing file has to be modified during its lifetime, and then all applications program have to be modified during its lifetimes correspondingly.

- The problem of adopting and maintaining standards (with respect to coding, data formats, etc), which is important for exchanging data or for migration to a new operating system.

Bhatnagar and Ramani (1989; 110) says "A database is defined by describing the characteristics of the data items in each file. A data item (field) is characterized by its name, type and width".

And Modum (1996; 87) concluded by saying that "Database can grow and change and is built up stage by stage depending on the type and nature of activities performed within the organization"

Therefore, database is a collection of structural data with the structured data being independent of any particular application.

2.6 DATABASE MANAGEMENT SYSTEM (DBMS):

Database management system (DBMS) is a complex software system which constructs, expands and maintains the database. It also provides a link or interface between the user and the data in the database (Lucey 1991).

Bhatnagar and Ramani (1989; 109) say "Data Base Management System (DBMS) overcomes most of a convention system. Data redundancy and data inconsistency are minimized by maintaining an integrated database and providing access to all the application programs, depending on their requirements".

Modum (1995) defines Data Base Management System as "A collection of programs that enable you to store, modify and extract information from a database".

Just like a human being manages, controls, and supervises the manual organizational records and files stored in the file cabinets so do we have a manager or a supervisor that manages the electronic database. But in contrast to the manual system where a human being does all the functions, in the computer based system, the management is achieved through a complex software system which construct, expands and maintains the database. It is this complex software which is called Database management System (DBMS) (Modum 1996; 89-90).

According to Bhatnagar and Ramani (1989), " DBMS sometimes just called a database manager is a program that lets one or more computer users create and access data in a database".

Nwaocha (2011; 2) says, "A Database Management System (DBMS) can be defined as a set of software programs that controls the organization, storage, management, and retrieval of data in a database".

However, DBMS are categorized according to their data structures and types. The most typical DBMS are relational, hierarchical and object-oriented database management systems (RDBMS).

2.7 DATA PROCESSING SYSTEMS (DPS):

Stair (1984) States, "Data processing involves converting facts into useful information. It is also the gathering and processing, storing and retrieval of data to yield output which is information. These processing activities include solving, updating, merging, calculating, rearranging and deleting to arrive at a desirable output, therefore information is processed data".

Adamu (2006 ; 10) Says "Information is a data that has been processed and presented in a useful format that will enable an individual to gain knowledge in order to be able to make a decision".

He opined that the act of producing data does not itself produce information. Information is data that have been interpreted and understood by the recipient of the message.

Adams (1986) Says "Information is power just as much as wealth is, therefore, the need to store it and be able to retrieve it becomes essential. For information to be transmitted the following elements are important bit, characters, field, records and record structures".

Lucey (1991) noted that any change in the data they process or function, they perform usually requires the intervention of information system specialist such as system analysts and programmers. Some data processing systems have to cope

with huge volumes and a wide range of data types and output formats. Transaction processing is necessary to ensure that day-to-day activities of the

Organization are processed, recorded and acted upon.

Files are maintained which provided the current data for transactions and which also serve as a basis for operational and tactical control and for answering inquiries (Modum 199; 80). .

Clifton (1983) Says "Transaction processing can be subdivided into current activity processing, report processing, and inquiry processing". While

Nwaocha (2009; 245) Says, "Transaction processing System (TPS) is an information system that supports business in the delivery of various business transactions. TPS transforms large number of inputs to output using simple processing logic and operation".

2.8 SUMMARY OF LITERATURE REVIEW:

Personnel Management (PM) is all about effective utilization of human resources (employees) in an organization so that the objectives of the organization are achieved. These objectives can only be achieved when there is adequate information system concerning the resources. According to Sander (2988), information system is a group of integrated elements: people, procedures, and equipment working together to support decision-making and operations within an

organization. However, this information system has to be managed. According to Modum (1995;3), Management Information System (MIS) has always existed from the time there were managers requiring information that enable them to plan, control and run the operations of their organization by the use of computers. This computerized system that involves

collection and storage of accurate information makes it possible to know at any given time where money is going and how the institution is faring or changing for better.

The overall purpose of Management Information System (MIS) is to provide the right information at the right time (Adamu 2006). Therefore, there is need for an organization to have a centrally integrated collection of logically structured data called Database (Modum 1996; 89). Whereas, Database Management System (DBMS) is a complex software system which constructs, expands and maintains the database. It also provides a link or interface between the user and the data in the database (Lucey 1991).

In organization, data are constantly emanating from various departments. These data have to be processed to yield information which managers require. According to Stair (1984), Data Processing involves converting facts into useful information. It is also the gathering and processing, storing and retrieval of data to yield output called information. These processing activities include solving, updating, merging,

calculating, rearranging and deleting to arrive at a desirable output called information.

CHAPTER THREE

MATERIALS AND METHODS

3.1 INTRODUCTION:

Generally System development is all about the transition from one mode of data processing to another or modification of an old existing one. The design of the Personnel Information System (PIS) software partly evolved from the need for an all embracing personnel information system and partly from the need for a user friendlier package that can fulfill any large organization personnel information demands.

Changes of system are necessitated by a number of factors ranging from growth of business to change in national law. For instance, there could be,

- Changes in business policies and regulations
- Change in government policies and regulations
- New innovations/development of better methods of system operations.

For any of these reasons or more, a system can be forced to change. As business outfit grows so does the number of personnel and with this growth, there will be a continuous search for a better method of processing personnel information.

3.2 RESEARCH DESIGN:

Personnel Information System is designed to overcome the limitations as exist in the system. To achieve this, PIS has to be structured to include the following:

i. A relational database support and dependency this feature promotes the efficient use and storage of data. It equally optimizes data organization by the use of tables in the database.

ii. Efficient System Resource Usage: PIS database are normally saved as compressed database before and after their use by the system Thus reducing the disk storage space they might take.

iii. Centralized Personnel Information Management. All personnel information management as well as running personnel involvement for specified periods are all handled by the central copy of the PIS software. This feature makes it possible for the personnel department (Human Resource Dept, Admin Dept, or Personnel Management Dept) to be the sole administration over personnel affairs and subsequently forestalls data in consistency as observed in the manual system.

iv. Customizable data structure; By this PIS software can be readily adopted to serve within different corporate setting.

v. Customizable Report Generator: A good report should reflect the true position of company affairs whenever required from the system. PIS

application achieves this by presenting different customable report views format so that accurate and reliable information is given for any report criteria selected.

vi. Ergonomically Designed User Input Forms: PIS input forms are such that information inputs or displays are handled by same form formats. Besides, the modules are such that they facilitate easy user input or modifications to the database at points where they are needed to be updated.

vii. Backup feature: With PIS, the user has the options of backing data in the database to removable drivers, disk or to the system. This is a strong maintenance culture that can facilitate data recovery and smooth system running in times of system crash or any other system errors.

3.3 POPULATION OF STUDY:

National Population Commission Enugu State is an organization with a population of one hundred and sixty six (166) staff. The organization is set up to carry the functions of National Population Commission in Enugu State. The

organization as its functions dictates has offices in the seventeen (17) Local Government Areas of the state. The Enugu State head office is located at 7 Ridgeway Road GRA Enugu. As stated earlier, all the departments of the Commission at the headquarters in Abuja are also present in the Enugu Office.

3.4 SAMPLE PROCEDURE:

In this study, information was acquired through two sources namely:

Primary source and Secondary source. The reason for this is to gather information and necessary data about the existing system so as to adopt a way of designing the new system.

Primary source: Information from this source was given priority because it is first hand information. Primary data are those got form questionnaires, personal Interviews, observations, etc. (Chukwuemeka and Oji 1999; 56).

Secondary Source: Information from this source is second hand information.

According to Chukwuemeka and Oji (1999; 56), "Secondary data are those gathered from pamphlets, journals, newspapers, books and records available at the organization under study".

3.4.1 QUESTIONNAIRE:

Here questions on how the Admin/Personnel handled staff records, their mode of filing as well as compiling of such records were asked. The responses were used to draw conclusion on the actual state of the current system.

3.4.2 INTERVIEW:

This involves a face to face discussion with the Admin/Personnel staff. Questions were asked and responses received determined how personnel function are carried out base on the responses to the questions asked by the researcher, it was obvious

that the Admin/Personnel department of National Population Commission was manually operated and staff records manually handled in files (paper work).

3.4.3 OBSERVATION:

Here the researcher being a staff of National Population Commission observed critically and participated where necessary with activities of the Admin/Personnel department to arrive or draw some conclusions.

3.5 THE CURRENT PERSONNEL INFORMATION SYSTEM:

The current personnel information system that is adopted in the

National Population Commission (NPC) is one that can be described as not so versatile in coordinating personnel data accumulating from the various department of the Commission. With the system (PIS) each department is provided with separate copies of the program which run the personnel information for each of the departments. The generated reports are then pooled together at the Admin/Personnel department through printed outputs.

3.5.1 SYSTEM INPUT:

The System inputs are manually provided through various input forms. Therefore a computer operator trained on this package is needed. The content of these forms are save to files on the local system. The forms are structured in such a way that different forms show the current staffs personnel information, emoluments

information, trainings attended, record of service, employment status etc. Each forms format differs depending on the section of the package being accessed. A typical example is figure i

3.5.2 SYSTEM OUTPUT:

The output from the system is provided on demand from the printout the commission's personnel nominal roll, status, emoluments, etc, whenever needed will necessitate the running of the program. The interface (form) desired are then generated and printed out. A typical example of an output form is figure ii

3.5.3 FILES AND RECORDS:

The existing system in National Population Commission makes use of the traditional computer filling system using Microsoft excel and words. This implies that several data have to be manipulated based on fixed system metadata .i.e. structure which defines how data is to be accepted and stored in the file. Upon these structures, the accepted data are then organized in the files as records. Also several files are created and manipulated by the system since it has to coordinate what obtains from each department of the commission.

3.6 CHOICE OF IMPLEMENTATION LANGUAGE:

In the course of the development of personnel information system (PIS) visual Basic (VB) is the choice programming language. The Visual Basic has powerful features that are extended by Microsoft within the enterprise edition that makes Visual Basic the choice language for this project or work. Some of these features includes;

1. The rich set of development and system tools such as the code profile that are shipped with visual Basic (VB)
2. The Rapid Application Development (RAD) environment offered by visual Basic and targeted at 32 bit windows development.
3. The ease with which Graphical user interface is developed in Visual Basic (VB).
4. It interface easily well with relational data base system like Microsoft Access and it supports structural query languages like oracle (SQL)
5. Visual Basic has very efficient and easy to use debugging tools.
6. It comes with a customizable set up and software packaging tools for easy product distribution and installation.

3.7 METHOD OF INFORMATION GATHERING/CAPTURING:

Data gathering/capturing method with PIS is an easy processing method. This is because it adopts ergonomic principles in designing the various forms that provide input venues for the user. It also adopts the principle of interface consistency such that similar buttons or controls on the input forms provide seemly identical outcomes upon invocation by the user. The input forms are designed to provide a better and user friendly interface while showing the input steps that would have been performed by the manual personnel system. In the event of a wrong entry, data entry retrace facility is provided to handle the re-entries situation. Besides, to bring a clear organization of each input point, each category is associated with district menu item.

CHAPTER FOUR

RESULT, ANALYSIS AND FINDINGS:

4.1 PROBLEMS OF THE EXISTING SYSTEM (FINDINGS):

In looking at the problems facing the existing system, which is the use of manual approach in the personnel information System of the National Population Commission. The following issues could be outlined;

i. It generally poses problem during processing of data and also reduces the speed, efficiency in manipulation of records in the Commission.

ii. It subjects personnel data to high standard of insecurity as anyone who is opportune can pickup a file and gain access to personnel data.

i. Data corruption and duplication is highly encountered.

ii. Large volume of data occupies much space

iii. Problems are encountered in the process of updating, deleting and addition of new data.

iv. Staff salaries are not accurately disbursed in that errors are frequently observed from pay roll scheme.

v. The need for the provision of a black up facility to removable drives can never be overemphasized. This facility is absent in the existing System.

4.2 REQUIREMENT SPECIFICATION

Requirement specification refers to the operational constrain services or functions which the system is expected to deliver (Nwaocha; 2008). The overall systems capabilities and the tasks for which it was designed is sum up. The Personnel Information System (PIS) is designed to meet the following requirement as they exist within any organization that needs some personnel or payroll management. The software is expected to after its design and implementations achieve the following aims:

i. Reduction or total eradication of computational errors that were frequently observed in the manual approach.
ii. Personnel Information captures and database management.
iii. Modular/global password control system for user authentication and authorization.
iv. Data encryption and compression.
v. Provision of a query and report generation facility to excel support.
vi. Periodic timesheet scheduling system for personnel.

4.3 SOFTWARE SYSTEM DESIGN:

The software system design gives a clear and logical outline from which the software evolved.

It also portrays the general procedures or Planning of the software, which guided the software designers approach towards the project realization. The project design is done as an integration of various subsystems each performing a specific task but all working in synergy to contribution to the overall through put of the system.

4.3.1 MODULAR DESIGN:

A Modular is a system component that provides services to other components but would not normally be considered as a separate system (Nwaocha 2008; 84).

Random House (1999) defines it as "A separable component one that is interchangeable with others for assembling into units of differing size, complexity or function".

Therefore Personnel Informal System (PIS) is designed along modular techniques. This necessitated the decomposition of the system into clearly defined subsystems with their associated sub-modules such that the initial requirements specifications were met. The software system comprises six main subsystems namely:

- Personnel subsystem.
- Structure subsystem
- Register time sheet subsystem
- Viewer subsystem
- Analyzer subsystem
- Shutdown subsystem.

Figure 4.1 gives the graphical relationship of these subsystems in top down hierarchy. These six subsystems depending on the user selected operations can draw from or add to the databases.

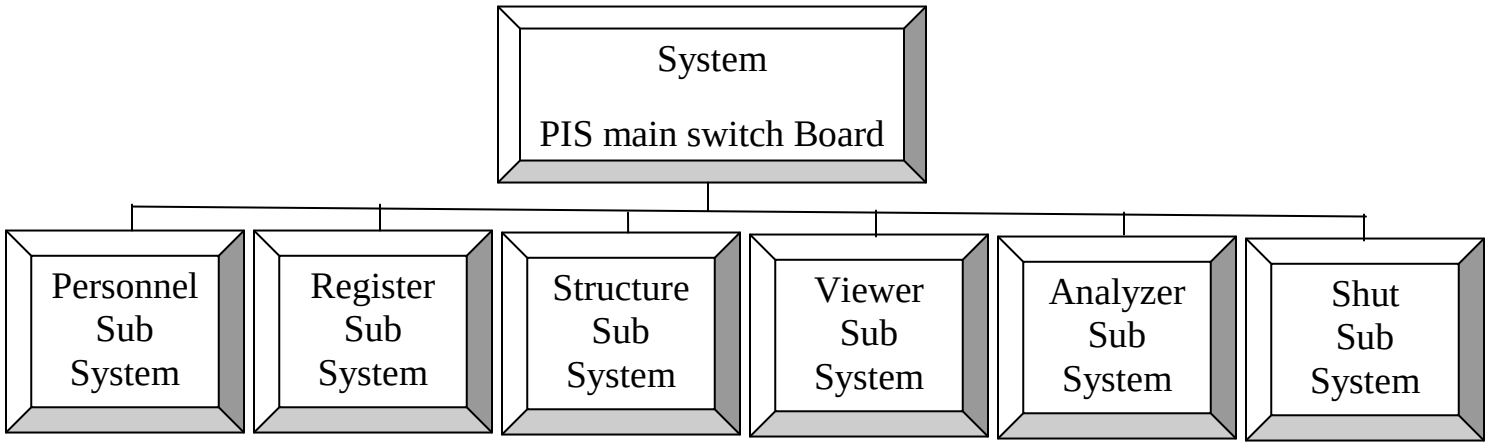


Figure 4. 1 Top down hierarchy representation of PIS software

All these subsystems are integrated into one main system interface design that is laid out like a switch board screen. This chosen design was adopted so as to offer ergonomics user friendly interface. The main system design coordinates the other subsystems and their sub modules. Hence in this design, the main system interface was designed using a menu and a switch board layout.

4.3.2 THE PERSONNEL SUBSYSTEM:

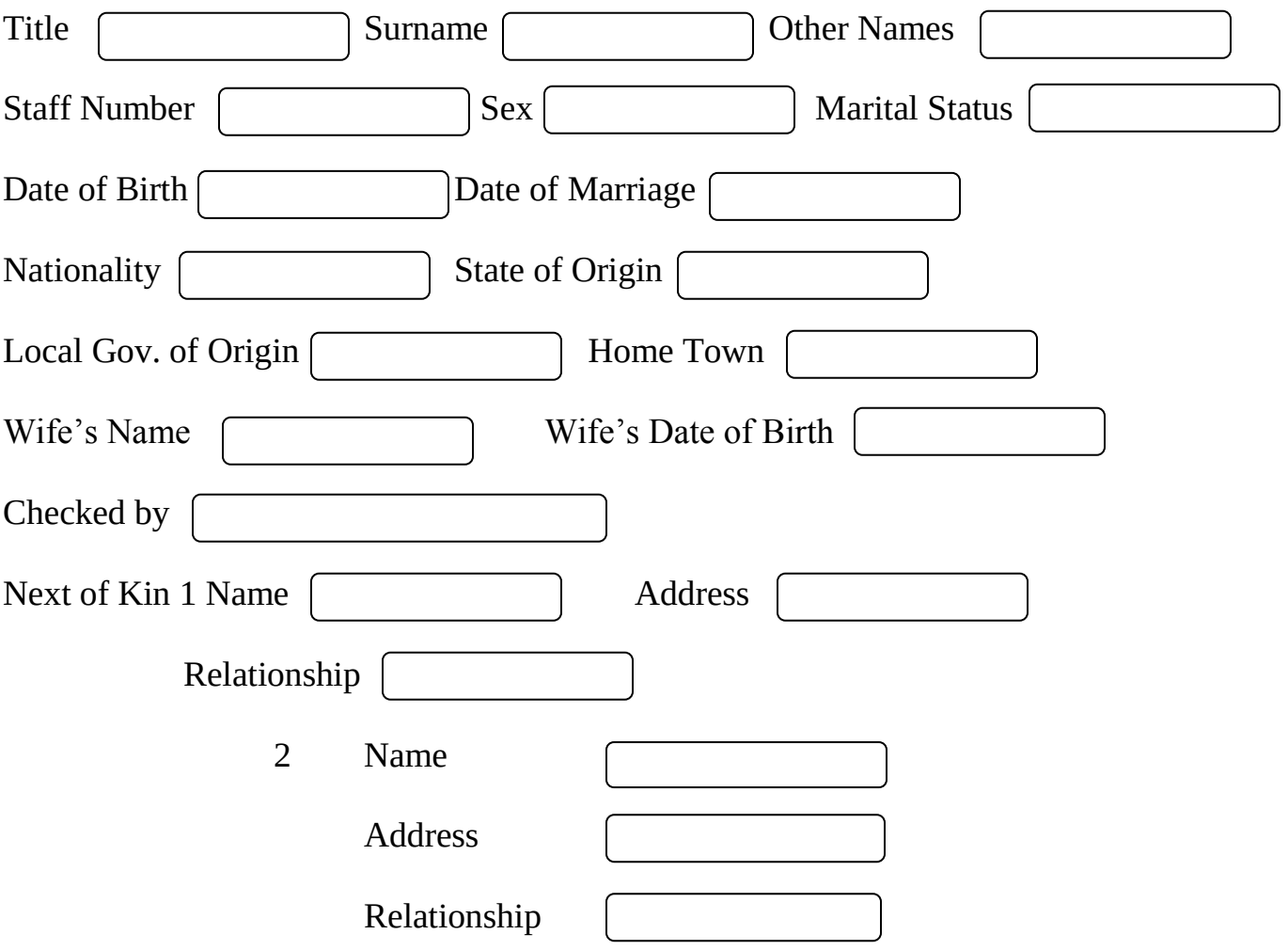
The function of personnel subsystem is to capture detailed information about staff. The information is subsequently saved to the database. For ease of entry, the input forms are provided as elements of property pages or of type sstab control in visual basic. However four other sub-modules work in synergy to the overall functionality of personnel sub-system. The four modules are;

- **Personnel Status Sub module:** Here personnel data are displayed in the context of appointment type, staff number, name, date of birth, sex, qualifications and area of specialization, state and local government of origin, marital status, number of children, next of kin, designation, post, title etc. the information gathered by this sub-module are used during the generation of staff report. However all these fields are modifiable and make it easier to update personal data for already stored employee details.
- **Address sub-module:** This module accepts input on employee's contact home and e-mail addresses. The phone numbers are also accepted all saved to the database so that subsequent processes that require the information make use of them.
- **Employment Sub module:** This module provides the input fields for getting employee's details with regard to employee's data of 1st appointment, present appointment, department, division, section, unit rank/grade level and step, previous

employment, training attended and project carried. All these are entered accordingly and saved in the database.

- **Loans and Sub-Modules:** These modules were designed to take care of the situations involving the granting and tracking of loans to employees and the colleting of data relating to an employee's previous locations, the grade level, post, qualification etc.

Figures – below are users interface designed of the PIS software showing the input points within the personnel module?



Particulars of Children

S/N	Name	Sex	Date of Birth	Checked by
1				
2				
3				
4				
5				

S/N	Degrees and Professional Qualifications	Checked by
1		
2		
3		

Education

S/N	Type of Schools Attended	From	To	Checked by
1				
2				
3				
4				
5				

S/N	School Certificates Held	Checked by
1		
2		
3		

Language and Degree of Fluency

S/N	Language	Spoken	Written	Exam Qualified	Checked

Tour and Leave Record.

S/N	Date Tour/Leave Start	Date Due to Return From Tour/Leave	Date Extension Granted to	Date Resumed Duty
2				
3				
4				
5				

Figure 4.2 Personnel/Status Sub-Module Form.

Residence/Contact Address_____
Home Address:_____
E-mail Address:_____ Phone Numbers:

1	
2	
3	

Figure 4.3. The Address Sub Module Form.

Title [ ] Staff Number r [ ]

Surname [ ] First Number [ ]

Current Appointment/Rank [ ] Appt. Date [ ]

Department _____ Division /Section/Unit _____

Grade Level and Step _____ Substantive Appt/Date _____

Term of Engagement _____

Record of Service

To include details of all Second merits, Transfer, Posting, Promotions (Acting and Substantive) and Change of Appointment

Date entry made	Detail	Certified by

Authority	Certified by

Record of Emoluments

Date Entry Made	Salary Scale	Basic Salary P.A	Inducement Pay P.A	Date Paid From	Increment Month	Date Year

Training Attended	Date
Project Carried	Date

Figure 4.4: The Employment Sub-Module Form.

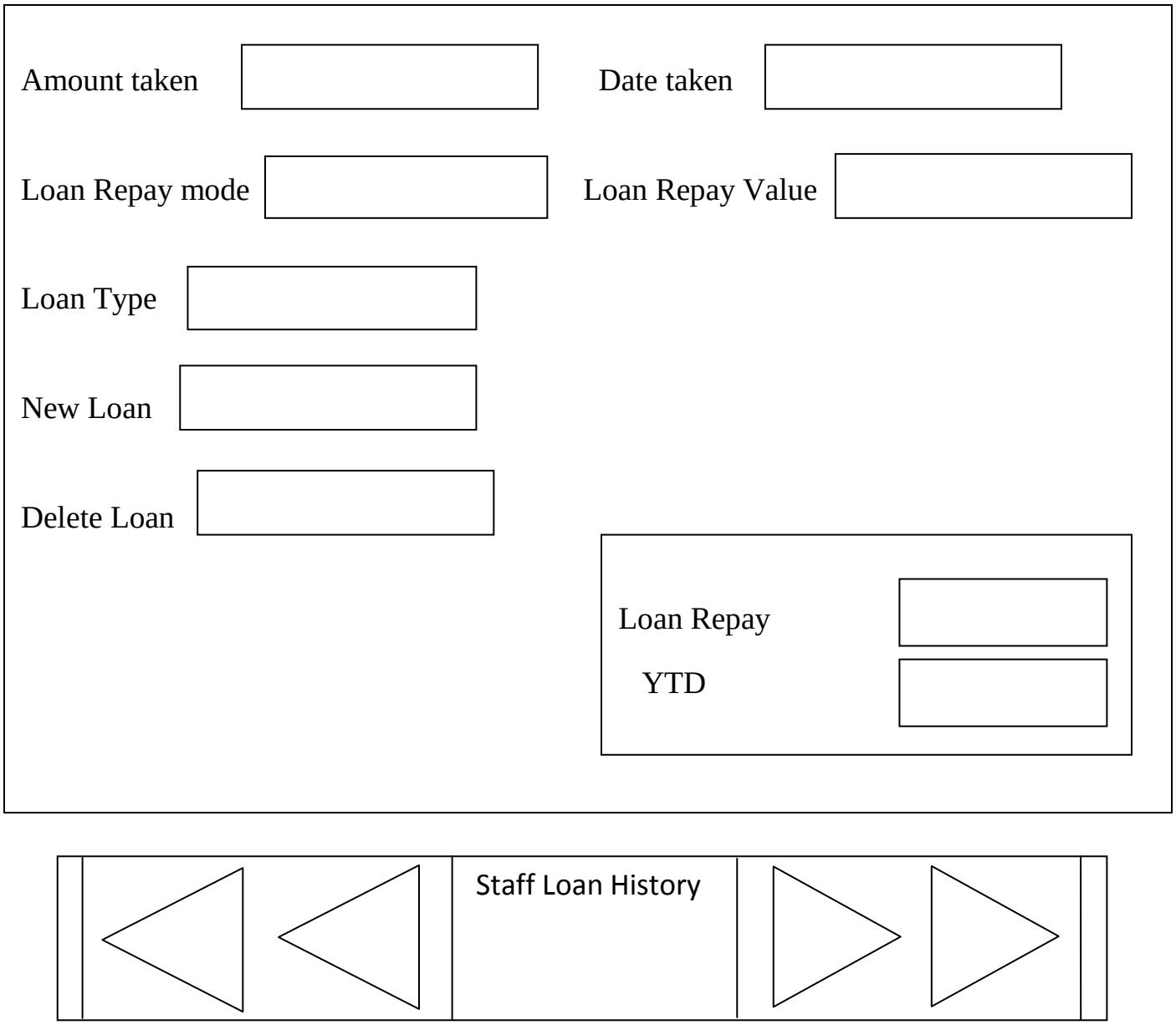


Figure 4.5 Loan Sub-Module Form.

Salary Advance

Housing Loan

Future Loan

Car Loan

Other Loans\

4.3.3 REGISTER SUBSYSTEM:

This is a vital system that gives and controls the movement of staff in the work place. It is also used to check the productivity and commitment of staff in the organization. The manual method of handing this is inefficient, cumbersome and prone to abuse. The actual time of arrival and departure of staff to and from Work is not strictly adhering to. The book keeping of these registers after use is also a problem. It is a common thing to observe that an absentee staff is clocked present in the register by his/her friend. Therefore, PLC is necessary in this area and register module is to take over the manual register system for all the staff to eliminate the above problem or shortcoming of the manual method. The register module will provide the facilities that indicate:

- Time of arrival at work place
- Time of departure from the work place

The register module will be responsible for

- Computing the number of hours worked by each staff in a day.
- Computing overtime for each staff if necessary
- Computing the number for each staff is absent from duty.
- Using some keys (Al, CL, ML, SL, NL) to denote absence and absence type for instance,

AL – Annual Leave, CL – Casual leave

ML – Maternity leave, SL – Sick leave,

NL – Not on leave

This register module when generated periodically will checkmate the issue of "ghost worker" and payment of time not worked for by staff. It will also give the

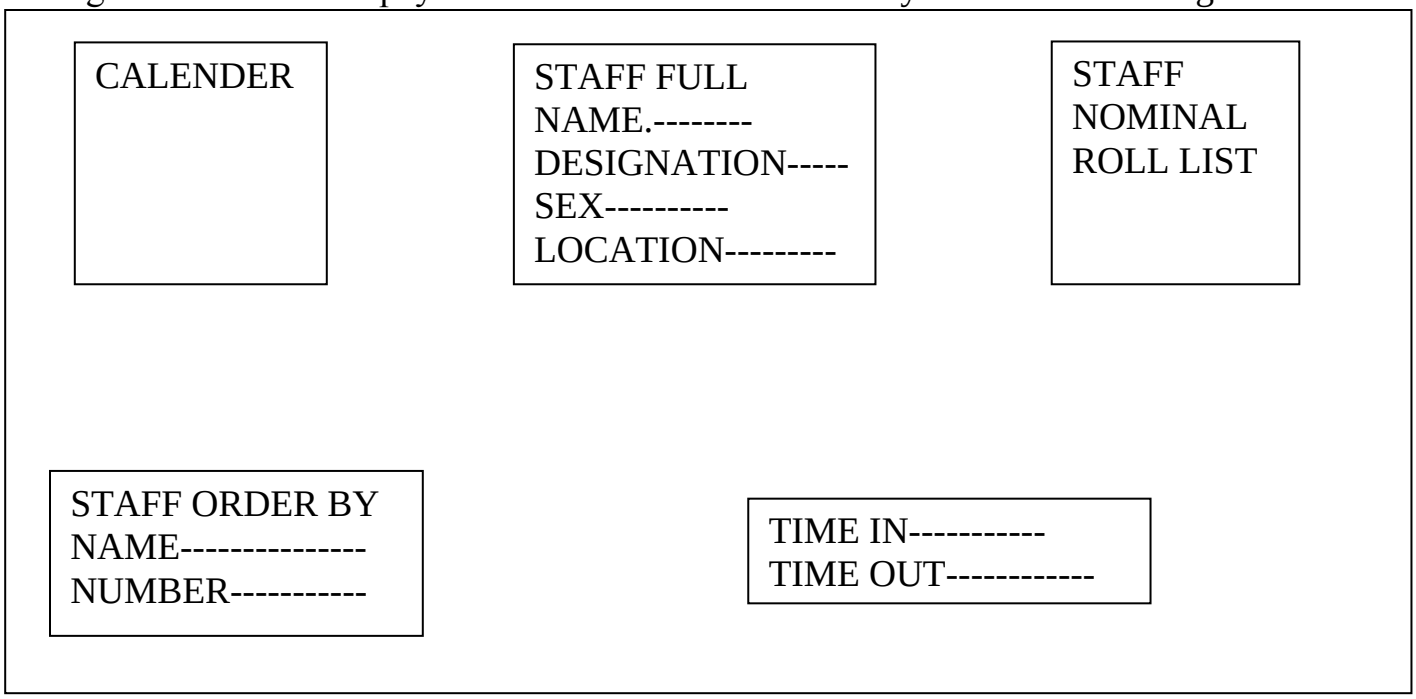


Figure 4.6 time sheet forms for the roster sub-module.

4.3.4 THE STRUCTURES SUBSYSTEM:

The accuracy and efficiency of the tables/fields making up a database makes the database a very powerful and indispensable one. Personnel Information System achieves this by offering various but relevant structures upon which personnel data

are collated, stored and managed in the database. The structures module provides data groups for capturing.

a. Staff cadre

b. Location

c. Designation

d. Year/month of appointment

e. State of origin

f. Department

g. Nationality

h. Qualification

i. Debtors (loan owner)

j. Grade level

k. Post

4.3.5 THE ANALYZER SUBSYSTEM

This module is the processing engine of the application (PIS). It is responsible for actual imputation, updatement, deletion, and all analysis over each desired output from the subsystems. For instant, it takes inputs from the register table of the database to process and compute/analyze month emoluments of staff by organizing payment details based on

- Total number of hours worked

- Labour cost per hour.
- Loan payment and deductions.

It is also used to compute retirement time of staff based on the years of service or age of the staff which is currently 35 years and 60 years respectively.

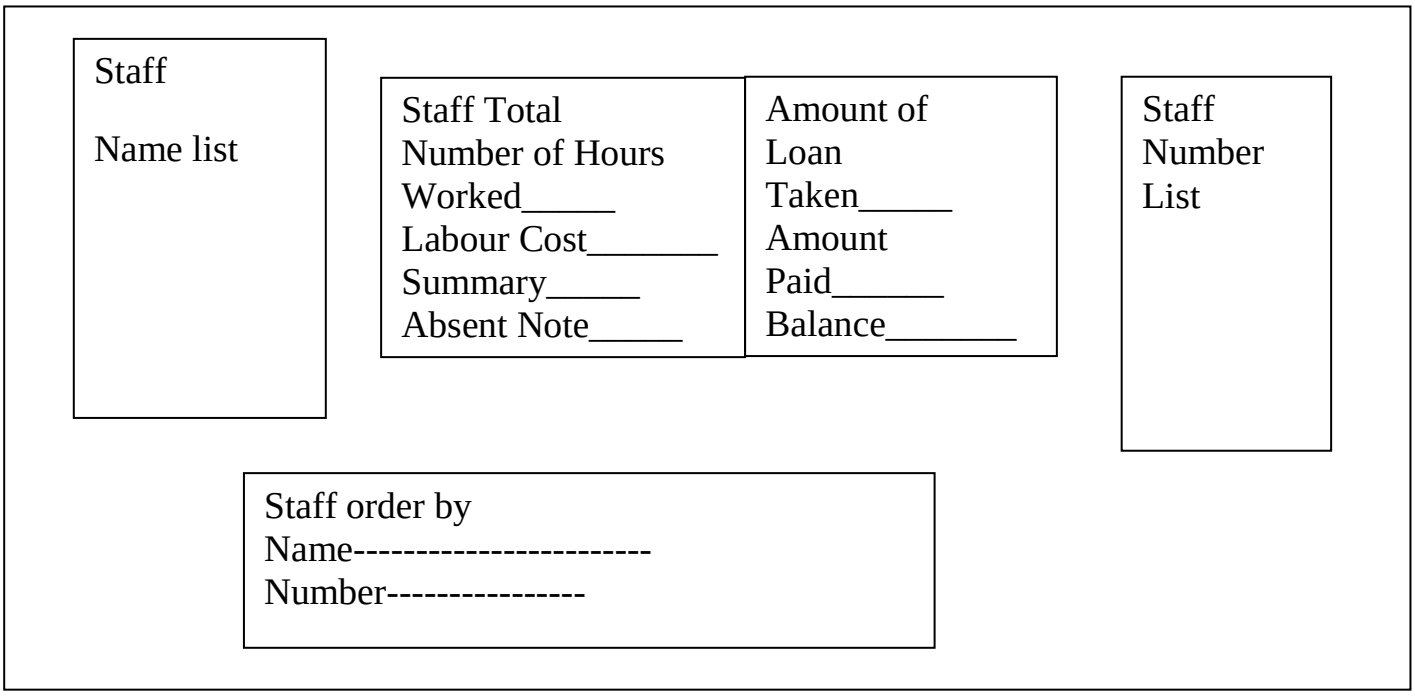


Figure 4.7 User interfaces for staff payments.

4.3.6 THE VIEWER SUBSYSTEM:

This module provides the facility to view the output of the other modules computed by the analyzer module. It becomes accessible only after a successful running. Output formats include:

- Staff emolument payment
- Loan repayment
- Retirement date

- Other outputs as desired

4.3.7 THE INITIALIZATION SUBSYSTEM:

This module handles the initial system test routines that must execute before the software is ready for meaningful work. These initialization routines are the means by which the software does.

a. Self – recovery from indeterminate errors

b. Enforcement of global/modular password authentication.

4.3.8 THE SHUT DOWN OR QUIT SUSBSYSTEM:

This module becomes functional when the user of the application or software wishes to quit. The basic function is to provide optional database backup and freeing of the acquired system resources. The user is asked whether he/she wished to save the change made or not before the system shuts down.

4.4 THE DATABASE DESIGN:

According to Modum (1996; 90) "The advantages of an electronic database are numerous. It provides for mass storage of all the organization's relevant data in a structured manner, in such a way as to eliminate redundancy". Therefore, good organization of data is vital, and unnecessary information and repetition of data/information should be avoided. Due to the diverse nature of its data collation

routine, personnel information system (**PLS**) draws and manages its needed data from four (4) district databases. Each of these databases contains tables with so many relevant fields define within.

The Database Includes:

- **PisL.mtb:** This is the loan database that contains the table with fields whose relevance are focused towards data need for managing loan repayment or deduction as required.
- **NomRoll.mtb:** The Nominal Roll database is responsible for providing the essential data for generating reports based on the nominal roll criteria after any successful run.
- **Worker.mtb:** This database holds the personnel information proper. The database is structured such that district tables bear the data relating to staff personal information, record of service and appraisal forms, leave details, transfer details, training details emoluments, discipline and commendations. The database handles these for each staff.
- **Ssdbz.mtb:** The salary structure definition database (ssdbz) is responsible for providing the fields over which the make up of each staff salary structure vis-à-vis grade levels and steps is stored and used in salary variation for staff.

Figure 4.7 gives a diagrammatic representation of the PIS database concept as concerns a staff database.

Field Name	Field Type	Size	Example
Title	Text	9	Mr.
Sex	Text	6	Mae
Nationality	Text	30	Nigeria
State of origin	Text	20	Anambra
L.G. of origin	Text	25	Aguata
Home Town	Text	25	Nkpologwu
Surname	Text	30	Obi
Other Names	Text	30	Chioma Blessing
Marital Status	Text	11	Married
Next of kin	Text	40	Chidozie Obi
Qualifications	Text	20	BSc. Ind. Mathematics
Grade Level	Text	5	15
Appointment	Text	16	2008
Contact Address	Text	60	Caritas University
Date of Birth	Text	15	10-11-2004
Staff Number	Text	7	08160

E-mail	Text	40	Chiomaobi71@yahoo.com
Phone	Text	25	08068381063
First Appointment	Text	15	08-01-1991

Table 4.1 General Characteristic's table.

4.4.1 THE DATABASE TABLE LAYOUT:

A table is a collection of related records and a record is a collection of related fields, and a filed a collection of characters (Adams, 1986). The four district database managed by PIS involve around tables within which are organized specific records (resulting from various field): Analysis of these can be given as follows:

1. General characteristics tables: This table is used too stored all the personnel data for each staff. It is used specifically for old and new staff intakes. Some fields in this table are fixed i.e. they are not modifiable once they are entered example date of birth, date of first appointment, contact address, Next of kin, etc. Table 4.1 below reflects these fields.

2. The loan table: This is used to store all the information as regard to taking loans from the organization by a staff. The table holds the necessary fields required in computing and analyzing outstanding loan balance based on agreed repayment pattern. Table 4.2 reflects these fields.

Field name	Field Type	Size	Example
Amount Taken	Real	35	N30,000
Date Taken	Text	11	01-01-2011
Loan Repay mode	Text	10	Absolute
Loan Type	Text	15	Motor/Vehicle Advance
Loan Repay Value	Real	15	N25,000
Loan Repay YTD	Text	15	N5,000
Repay Status	Text	10	On-going

Table 4.2: The Loan table and its fields

4.5 THE SYSTEM FLOW CHART:

The System Flowchart or structure chart shows in block diagram the various building blocks that make up the software package (system)

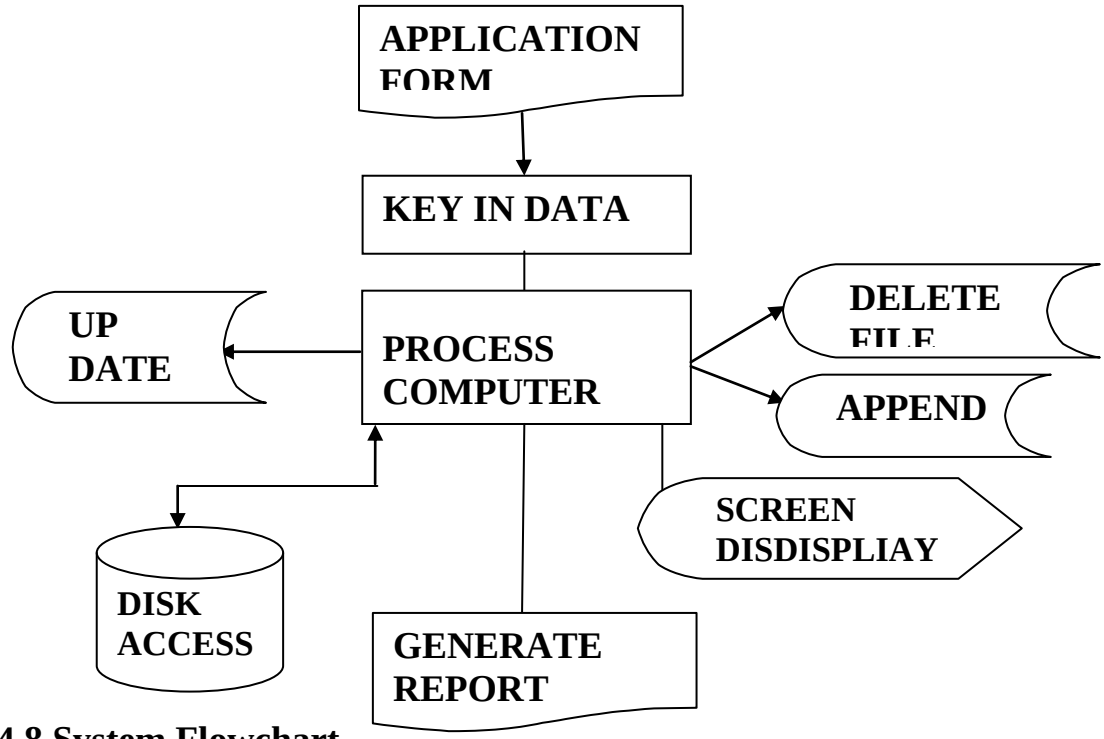


Figure 4.8 System Flowchart

PIS System flowchart is such that for each subsystem a simplified operational process is presented. The personnel subsystem for example does both a storage and retrieval to the concerned database. Data are first retrieved and displayed in the appropriate modules and store back to the database after any modification is done. The analyzer work by first retrieving the necessary details or parameters from the database, use the same to compute and analyze the required output like loan repayment, payroll, retirement time etc and stores back the result to the

database. The viewer subsystem will perform data retrieval and use them to build up the reports. The structure subsystem which is the data bank or (metabata provider) retrieves data from the database for display and retrieves data from the database whenever there is a modification to the data. The Register subsystem does the sorting of data either by name using alphabetic order, staff number of seniority before displaying them

4.6 THE SYSTEM DATA FLOW DIAGRAM:

This displays the data link and data flow between the individual blocks and the concerned databases. Control is passed to particular subsystem from the main menu based on current menu selection.

Looking at the data flow for each subsystem interacts with three other databases via the PisL, Ssdbz, and worker. Data input is made to the analyzer subsystem

through PisL, Worker and Ssdbz databases. The output generated by same subsystem is saved to the Nominal Roll databases. The personnel subsystem retrieves and stores data to PisL, Worker, and Sssdbz databases. The register subsystem functions only to display the data retrieved from the worker, PisL, and Nominal Roll databases.

4.7 DESIGN REALITY ANALYSIS:

The design reality analysis compares the assumptions / requirements within the application design and development with the reality pertaining just before the design is implemented along the following dimensions.

1. **Information:** The design did not seek to radically change the type of basic personnel information being used. It assumed a very different set of organization storage locations and information flows by moving to a single system from pre-existing multiple storage system. In the old system, data was neither 100% complete nor 100% accurate.

2. **Technology:** The design assumed the use of a broad range of new software and hardware including a possible series of networked PCs spread across the whole of the commission's offices and the use of human resources. The initial was entirely manual personnel in formation system, with some PCs in use for word

processing. The project design assumption of a robust nationwide telecommunication infrastructure that largely matched national realities.

3. Process: The design incorporated a new set of security procedures which barred clerical staff (those who did the data entry work) from amending personnel records of staff without authorization. The design assumed a change in location of many processes even though many of the basics of

Personnel record keeping would remain as they were in pre-existing reality except for their partial automation.

4. Staffing and Skills: The design assumed the presence of a broad range of staff competences. These particularly include a sizeable Information Technology (IT) staff large enough to be posted in every state and department (so that they could rapidly address user problems and queries). In reality, the team did exist but was nowhere near the number required by the design. The design required a broad of personnel – related IT Skills that were not present before development. The design also assumed that those real IT competencies would be raised by a one size fits all five days training workshop. This fits all five-days training workshop. This take no account of the reality of a very varied base of existing competencies and a very varied set of training needs.

5. Management Systems and Structures: The design assumed changes in the personnel management system of commission with system responsibilities for data entry, entry being devolved to individual location/departments.

Formal Structures were not intended to change but the design did assumed some changes in the balance of power within informal structures.

6. Objective and values: The design assumed that the objective of the project, automation integration and rationalization of personnel processes were shared by all stakeholders. In initial reality, some of these objectives as stated earlier in chapter one were shared by some senior officers mainly in Admin department and IT staffers. However few senior officers of the commission did not share those objectives and their real values of hoarding information and changing data clashed with the design assumption that sharing personnel data around Commission was a good thing.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION FOR FUTURE STUDIES

5.1 SYSTEM DEVELOPED:

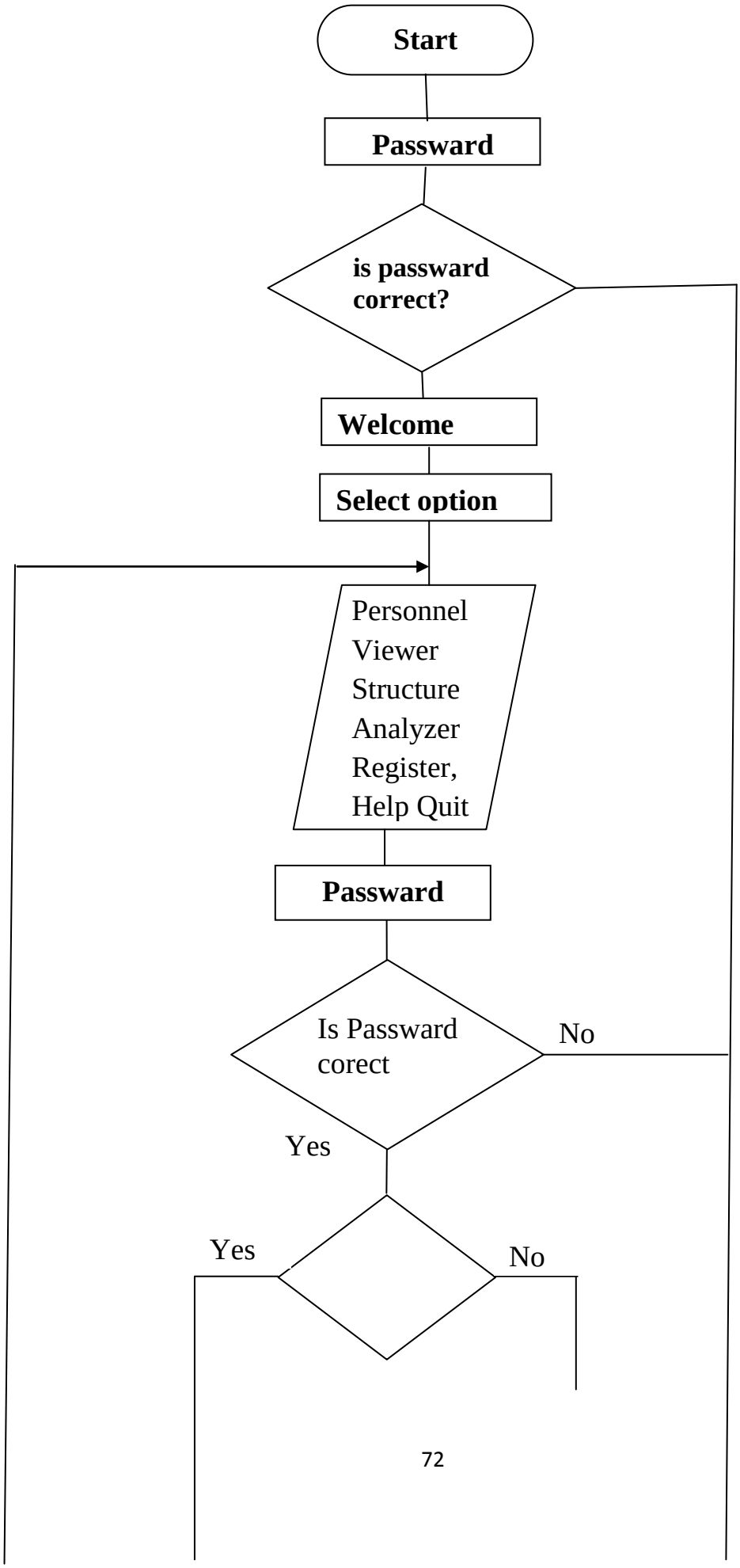
The system is developed using individual modules first from main modules to the subsequent sub modules.

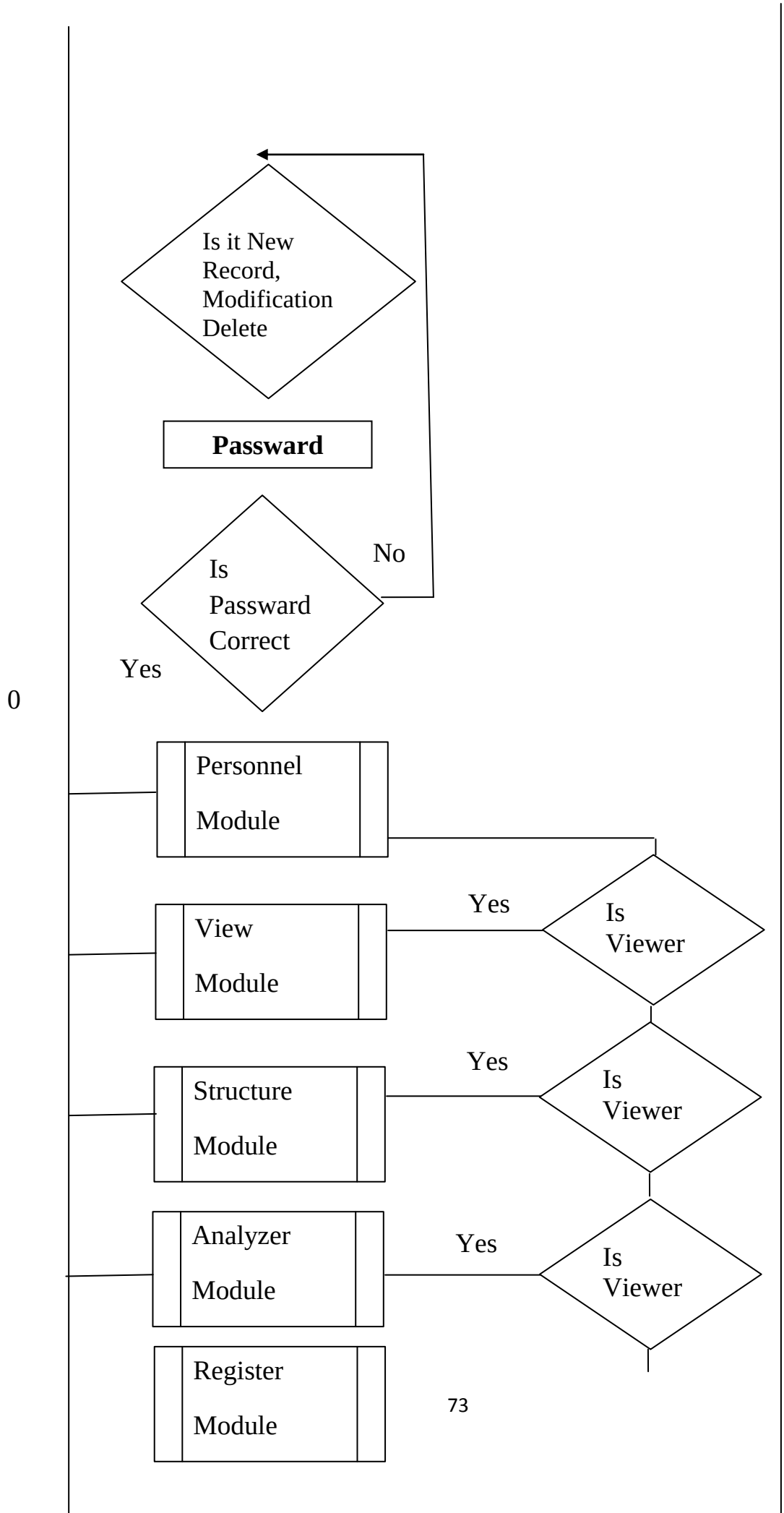
5.2 THE MAIN MENU:

The PIS software which is user friendly provides a main menu that can be referred to as a main ‘switch board’. This main Menu consists of the icon representation of the main modules that make up the system as follows:

- Personnel
- Structures
- REGISTER
- Analyzer
- Viewer
- Quit

The activation of any of these main menu items leads to the presentation of further options from highlighting the such-modules. The flowchart below gives an illustration of it.


Start
Password
is passward correct?
Welcome
Select option
Personnel
Viewer
Structure
Analyzer
Register,
Help Quit
Password
Is Passward corect
No
Yes
Yes
No


Is it New Record, Modification Delete
Passward
Is Passward Correct
No
Yes
Personnel Module
View Module
Yes
Is Viewer
Structure Module
Yes
Is Viewer
Analyzer Module
Yes
Is Viewer
Register Module

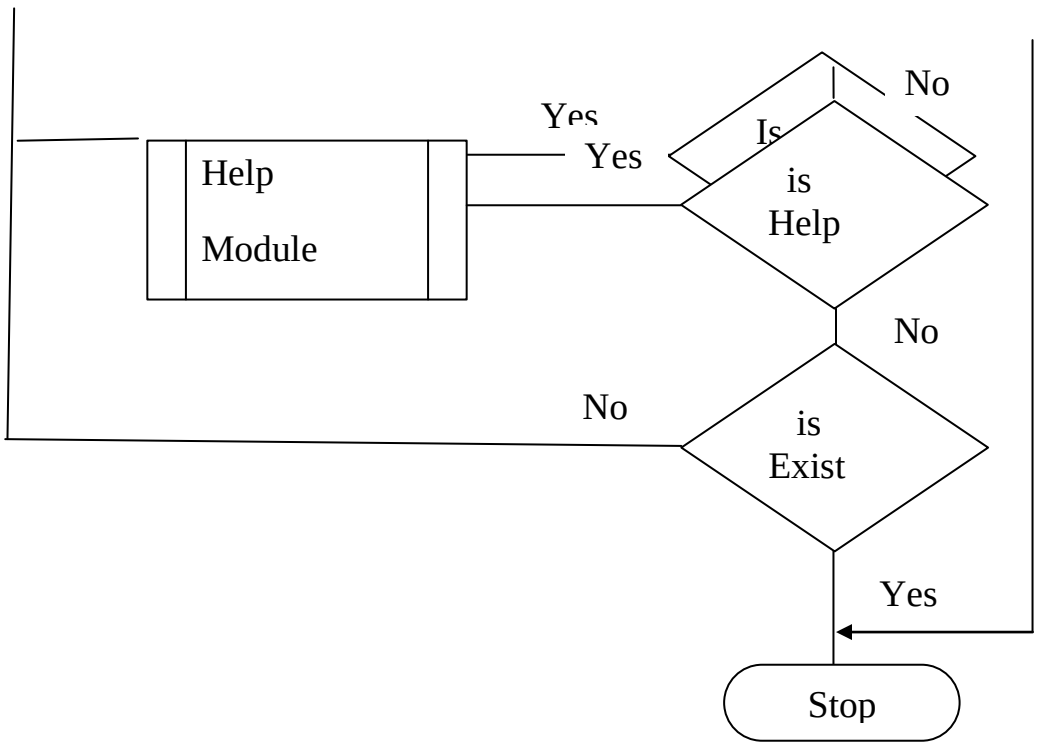


Figure 5.1 Main Menu Flowcharts.

5.2.1 THE IMPLEMENTATION OF SOFTWARE SUBSYSTEMS:

According to Adamu (2006), to ensure the smooth transition to the organization desired goal, all aspects of the implementation phase should be followed regardless of the type of the system. In this projects (PIS), the software lifecycle adopted is a variation of the incremental and waterfall models. Hence, different sub0modules of the system were designed, coded separately and tested based on the waterfall principle. The verification of the modules correctness led instantly to it's integrated with already functional modules of the system. For each module and its sub modules, the main objective is to have a strong cohesions and loose coupling.

5.2.2 THE MAIN MENU MODULE:

The Personnel Information System (PIS) software was designed to be menu driven system. The main menu module has six broad subsystem which perfumes district task vis-à-vis the job of capturing user input with respect to the desired task to perform. Once a user selects any of the broad tasks, the concerned modules implementation will be invoked.

5.2.3 THE SUB SYSTEM MODULES:

Depending on the choice of user, each subsystem has its own range of subtasks to perform designed within a submenu. This means that each sub module with more than one district task presents such task as part of a submenu context. For the whole duration of its activation, the sub modules' submenus are presented within the parent menu but unload as soon as the sub module is inactivated. Also it can be observed from the personnel, register, analyzer and structure modules that the tasks of data entry in the sub modules are made easy by allowing the user modify the staff data in the database at the point of the staff's information display.

5.2.4 THE ANALYZER:

As stated earlier, this subsystem is the processing engine of the whole application. It draws from the database the data supplied by other subsystems to process the required output.

5.3 PROGRAMME FLOWCHART:

As diagrammatically illustrated in figure 5.1, the program flow chart gives the modules, the relationship between them as regard to the execution and operation of program. The PIS software when loaded and run begins execution by performing some initial system examination. During these routines, the system is examined for compatibility, the files and directories are prepared by linking to the Win Zip command line tool and log of last run is examined to help recover from pass errors if any.

The global user authentication routine then runs to verify user's password with respect to granting access to the system. On having been granted access to the system, the user is presented with the main menus for the core tasks performed by the software. A selection from the main menu invokes the code modules associated with the selected main menu items. This initial code module will then pass control to the appropriate sub-modules based on particular function or functions to carryout. The integration of a query facility into the entire main

Modules of the system make PIS unique software. This is because it enable the user to get instant reports or output on selected criteria.

5.4 SYSTEM REQUIREMENTS:

According to Nwaocha (2008), "System requirement are more detailed specifications of system functions, services and constraints than user requirements. They are intended to be a basic for designing the system".

Here we are talking of hardware and software required for the smooth operations of the PIS program application. However, if it is not met, the Software can not be installed.

5.4.1 HARDWARE REQUIREMENT:

- PCs with at least Pentium 111 processors or higher.
- At least 512 MB RAM.
- 1.5 SVGA.
- Leser jet printer 600 dpi
- Mouse and keyboard

5.4.2 SOFTWARE REQUIREMENT:

- Ms-window 98 Operating System (OS), window NT or other high version of the windows operating system can be used as the platform for the PIS software.
- VB interpreter
- Antivirus package
- Ms-Office 2007

5.4.3 USER REQUIREMENT:

PIS is design to be user friendly, it has comments on the forms displayed. Therefore the user is only required to be computer literate.

5.5 DOCUMENTATION OF THE SOFTWARE:

The source code of this project writing in Visual basic (VB) is attached at the end of this report at the appendix section. The software is compiled into an executable file called PIS and can be installed from a CD Rom.

5.5.1 SOFTWARE DEVELOPMENT TOOL:

A software development tool refers to the device used for the development and testing of written program. It is made up of a compiler debugging tools and a Design environment. To develop the PIS application, the Visual studio 6.0 package was used with special emphasis on Visual Basic development tools.

The database was designed and developed as relational database using Microsoft Access. They are referenced through the Visual Basic codes. Requests made on the database could involve query access to the database tables. The reason for relational database model adoption is because the software application is for multi-user environment.

5.6 SETUP CONFIGURATION:

METHOD (I)

i. Start your computer; insert the PIS installation CD-ROM into the CD-ROM Driver.

ii. From windows explorer or my computer, open the PIS folder and double click on set up exe.

iii. Make sure to select to install PIS on CD Driver this is very important.

iv. Click OK to proceed with the installation.

v. After installing PIS, return to the folder in the CD-ROM and double click on the Win Zip 8.0 and Wzline (Win Zip command line tool) to

Install them. These are needed for the database decompression and recompression.

METHOD (ii)

1. Go to start
2. In the programs input Box, type CD Driver letter: Setup exe and click on or press enter key.
3. Follow the instruction sequences as method always making sure to change the installation drive to CD Drive.
4. After installing PIS, return to the folder in to the CD and double click on the folder in the CD and double click on the WIN Zip 8.0 and WZ cline (Win

Zip command line tool) to install them. These are needed for the database's decompression and recompression.

5.7 SUMMARY OF WORK DONE

The name of the software developed is Personnel Information System PIS. The software captures Personnel's' records. It is organized into various Structures as reflected in the database. These structures include, staff timesheet, creation and work hours monitoring, fast personnel information updatement and retrieval, and loan repayment computation. All these are safeguarded behind a global/modular user authentication routine that ensures that only authorized personnel have access to the software's database and functions, unlike the manual method where every clerk can change personnel records of staff without permission to do so.

5.8 PERFORMANCE EVALUATION OF THE SOFTWARE:

This software pis was companied against other existing ones Vis-à-vis

1. EASE OF USE:

This software is designed to have user friendly interface. The records modification or addition is smoothly streamlined into most of the major modules of the software. For instance, inside the viewer module, a user has the capability to up data a displayed staff's records to reflect the current status.

2. RELIABILITY ADOPTABILITY AND ACCURACY OF COMPUTATION:

The extensive data structures adopted by PIS make it possible for a reliable operation. The software can be adopted or deployed into any organization since most of the data structures are customizable to suit the needs of the organization. This indicates that the software has

Adoptability features. Accuracy of computation is heightened by the inclusion of mechanisms that check bounds overflow of computation and return results correct to the last digit. The currency data format of visual basic is used to widen the data range.

3. EFFICIENCY:

PIS make efficient use of resources by utilizing its databases in the decompressed format (mtb). These files are decompressed any time an operation is to be performed on them and recompressed back before program exist. This reduces the tax on system memory or on the hard drive space as database can easily grow in size.

4. ERROR RECOVERY FACILITY:

This is an area in which PIS excels well over existing ones. It has inbuilt capability to detect abnormal moves on the database a program shut down.

5. DATA ENCRYPTION AND REPORT TO MICROSOFT EXCEL SUPPORT:

Apart from data decompression and recompression feature of PIS, it equally encodes stored information in the database for security reason. The report facility is also designed to Microsoft excel support

Such that the traditional spread sheet look is retained. This can be observed at the crystal generation reference at the coding level.

5.9 SUGGESTION FOR FURTHER RESEARCH:

A further research work on the level of impact this project work has made on the management of human resource in organization could be carried out Vis-à-vis the staff strength, the benefits and other things the introduction of the application brought.

Secondly, this package (PIS) could be redesigned to include pay roll system of the organization so that the co-ordination between the Admin and Supply department, and the Finance and Accounts department should be enhanced.

5.10 CONCLUSION:

The problem of any public organization is not on the availability of human and material resources of the conceptual and development of sound policies but rather on the accurate implementation of these polices which rely on the management and utilization of the resources whose baselines hinge on Personnel Management. Personnel can not be managed efficiently and effectively without adequate and timely information required on any staff of the organization. Hence, PIS is designed and developed to efficiently take care of these Requirements that will replace the manual system of handling personal information in any organization.

REFERENCE

Abdalla Uba Adamu (2006). "*Information Systems Design and Programming*".

Anderson R.G (1990). "*Data processing Volume 1, Principles and Practice*". London, M&E Hand Books Pitman Publishing coy 7th Edition.

Chukwuemeka Emma. E.O and Oji Okey R. (1999). "*Applied Social and Behavioral Research, Guideline for thesis writing*". Enugu, John Jacob's Classic

Clifton H.D. (1983). "*Business Data Systems, A practical Guide System Analysis and Data Processing*". Prentice Hall of India.

Date C.J. (1981). "*An Introduction to Database System*". Addison-Wesley Publishing Company.

Deen S.M. (1977). "*Fundamentals of Database System*". MacMillan Press Ltd.

Dupree D'etal (1990). "*Computer Studies*". BTEC Business Education Publishers, New York.

Flippo. E. (1984). "*Personnel Management 6th Ed*". New York, McGraw- Hill inc.

French C.S. (1993) "*Computer Science* 4th Edition". London, DP Publication Ltd. Alderine Place.

French C.S. (1993). "*A Complete Computer Course Test*". London, DP Publication Ltd Alderine Place.

Futhrman, Peter, Back Gregory F. (1971). "*Micro Computer For Management Design Making*". Published by Prentice Hall, Englewood Cliffs N.J 07632 4th Edition.

Graham T.H (1998). "*Human Resources Management*". United Kingdom, Macdonald and Evans Ltd.

Ikeagwu E.K (1998). "*Element of Personnel Management*". In Business Management Topics, E.U.L. Imaga and U.J.F. Ewurum (eds). Enugu, Okeke Publishers.

Kruse Robert (1989). " *Data Structures and Programme Design*" Prentice Hall of India.

Lucey, T. (1991). "*ELBS Management Information System*". DP Publishers London.

Malcolm tatum (2011). "*What is Personnel Management*?" wise GEEK Conjecture Corporation.

Microsoft Cooperation (1993). "*Programmers Guide, Microsoft Visual basic Programming System for Windows Version 3.0*". Microsoft press.

Murdick Ross. J (1991). "*Information System For Management*" Eagle Wood Cliffs, New Jersy.

Mysers G.J. (1976). "*Software Reliability, Principles and Practices*". John Wilky and Ons.

National Open University of Nigeria. Lagos, 14/16 Ahmadu Bello Way Victoria Island.

Nkuma-Udah Kenneth Ikechukwu (2009). "*Advanced Information Storage and Retrieval*". National Open Uniersity of Nigeria. Lagos, 14/16 Ahmadu Bello Way Victoria Island.

Norton Peter and Yao Paul (1990). "*Peter Norton Windows 3.0 Power Programming"*. Techniques business Books.as

O' Leary L. I. (1996). "*Computing Essential, Annual Edition",* 1996-1997". McGraw Hall Companies Inc.

Press Man Royers ('986). "*Software Engineering, A Practitioners Approach*". Prentice hall of India.

Publisher Ltd. 1 Okpara Avenue (Christ Chemist building) P.O. Box 173.

Rejaraman, V. (1991). "*Analysis and Design of Information System*". Published by Prentice Hall, New Delhi India.

Robert Techo (1984). "*Data Communication, And Introduction to Concepts and Design*". Lodon, Planm Press.

Roger Cater (1983). "*Student Guide to Information Technology*". B/N Newners Publishers 2nd Edition. London, Lianasre House Hill Oxford.

Rusel, M. (1987). "*An Introduction to Computer Information Science*". The Scare Crow Press Inc. Metuchen, New Jersey.

S.C. Bhatnagar and K.V. ramani (1989). "*Computers and Information Management, A Primer For Practing Manahers*". New Delhi, Prentice Hall of India Private Ltd.

Seymour .V. Polladi and Sheodor. D. Sterling (1990). "*A Guide to Structure programming*". Tula, McGram Hill Publishing Company 30th Edition.

Stahl. O. Elem (1962). "*Public Personnel Administration*". New York, Harper and Row Publishers.

Tomeski, Edward A. (1990). "*Fundamentals of Computer in Business. A System Approach*". 2nd Edition.

Uche Modum (1995). "*Management Information Systems, Analysis and Design"*. Enugu, Fourth Dimension Publishing Co. Ltd.

Uche Modum (1996). "*Computer in Business*". Enugu, Precision Printers and Publishers.

Unamka P.C. and Ewurum U.JC. (1995). "*Business Administration*". Enugu, Precision Printers and Publishers.

Vivian Nwaocha (2008). "*Software Engineering Methodologies"*. National Open University of Nigeria. Lagos, 14/16 Ahmadu Bello Way Victoria Island

Vivian Nwaocha (2009). "*Advanced System Analysis and Design*". National Open University Nigeria. Lagos, 14/16 Ahmadu Bello Way victoria Island.

Vossen Golt Fried (1991). "*Data Models, Database Language and Datebase Management Systems*". Addison Wesley Publishing Company.

APPENDIX A

SOURCE CODE LISTINGS

```
PUBLIC GLD As String

Private Sub Form_Load()

On Error Go To localErr

‘If  frmEmployement. Visible = True Then

Unload frmEmployement

‘End If

Call Explode Form(Me,b_FORM)

‘Me. WindowState = 2

Dim strQuery As String

strQuery = “select * from tbl_employement where id ="' & gld & "'"

with Adodc 1

. CommandType = adCmdText

. Record Source = strQuery

. Refresh

End with

With Adoc 1.Recordset

If .AbsolutePosition ◇ - 1 the

'dtEmployementDate. Value = !emp_date
```

```
If !Image ◇ "" Then
Imgpassport. Picture = LoadPicture("c:/program files/passport/" & !Image)
End If
End with Exit Sub
Local Err:
errHandler(Err.Number)
End Sub
Private Sub Form Unload (Cancel As Integer)
Call Implode Form(Me,b_FORM)
End Sub
Private Sub Label_Click()
Unlad Me
frmEmployement.Show
End Sub
Private Sub Label2_Click()
contactDialog.Show vbModal
End Sub
Private Sub label5_Click()
End Sub
Private Sub Label7_Click ()
```

```
Unload me
FrmpersonnelDetail. Show
End Sub
Private Sub lblExit_Click()
Unload Me
End
End Sub
Private Sub lblLogout_Click()
Unload Me
Form l. Show
End Sub
Private Sub lblprint_Click()
With dlgprint
.DialogTitle = "Print"
.Showprinter
PrintForm
End With
End Sub
Private Sub !blUpdate_Click()
On Error Go To localErr
```

```
With Adodc l.Recordset
.Update
frmGerror.gerrMsg = "Record update was successfully completed"
frmGerror.gErrTitle = "Update Alert!!! "
frmGerror.Show vbModal
End With
Exit Sub
localErr:
errhandler (Err.nNumber)
End Sub
Private Sub x _Click()
Unload Me
End Sub
Private Sub Form_Load()
Call ExplodeForm(Me, s_FORM)
Adodc l.Recordset.AddNew
End Sub
Private Sub Form Unload (Cancel As Integer)
Call ImplodeForm(Me, s_FORM)
End Sub
```

```
Private Sub Labell_Click()
Unload Me
End Sub
Private Sub lblAdd_Click()
On Error Go To LocalErr
With Adode l. Recordset
.AddNew
End With
Exit Sub
localErr.
errHandler (Err. Number)
End Sub
Dim imageUrl As String
Dim imageLocation As String
Dim imageCopy As New FileSystemObject
Private Sub Form Load()
‘Me. WindowState = 2
Call ImplodeForm(Me, b_FORM)
Adodcl.Recordset.Addnew
```

```
End Sub
Private Sub Form_Unload(Cancel As Integer)
Call ImplodeForm(Me, b_FORM)
End Sub
Private Sub imagePassport DblClick()
On Error GoTo localErr
With dialogl
ShowOpen
Imgpassport. Picture = LoadPicture (FileName)
imageUrl = FileName
End With
Exit Sub
localErr.
errHandler (Err. Number)
End Sub
Private Sub Label6_Click()
End Sub
Private Sub Label2_Click()
contactDialog.Show vbModal
End Sub
```

```
Private Sub Label4_Click()
frmRoaster.Show vbModal
Enb Sub
Private Sub Label7_Click()
Unload Me
frmPersonnelDetail.Show
End Sub
Private Sub imagePassport DblClick()
On Error GoTo localErr
frmPersonnelDetail.Show
Set frmSearch.inc_form = frmEmployementUpdate
Set frmSearch.Form2 = Me
frmSearch.Show vbModal
Exit Sub
localErr.
End Sub
Private Sub lblprint_Click()
Unload Me
End
End Sub
```

```
Private Sub lblLogout_Click()
Unload Me
Forml.Show
Private Sub lblSumit_Click()
On Error GoTo localErr
Filetransfer.CopyFile App.Path & "\npc.mdb", "c:\progrm file\"
With Adodc l.Recordset
!emp_date = dtEmployementDate.Value
!Image = imageUrl
imageCopy.CopyFile imageLocation, "c:\program files\passport\
.AddNew
frmGerror.gerrMsg = "Record was successfully submite"
frmGerror.gErrTitle = "Submit Alert!!! "
frmGerror.Show vbModal
End With
Eixt Sub
localErr:
errHandler (Err.Number)
End Sub
Private Sub x_Click()
```

```
Unload Me
End Sub
Private Sub Form_Click()
Adodcl.Recordset.Addnew
Adodcl.Recordset.AddNew
Call ImplodeForm(Me, b_FORM)
dtDate.Value = Date
End Sub
Private Sub Form_Unload(Cancel As Integer)
Call ImplodeForm(Me, b_FORM)
End Sub
Private Sub lLabel3_Click()
Unload Me
End Sub
Private Sub lblSubmit_Click()
On Error GoTo localErr
With Adodc l.Recordset
!dtDate = dtDate.Value
!Balance = txtAAmount. Text
!repaydate = dtDate.Value
```

```
.AddNew
With frmGerror
.gerrMsg = "
With dlgprint
.DialogTitle = "Print"
.Showprinter
PrintForm
End With
End Sub
End With
With Adodc
.CommandType = adCmdText
.RecordSource = c heck_user
.Refresh
End With
With Adodc2.Recordset
If .AbsolutePosition =-1 Then
With frmGerror
.gerrMsg = "Unknown staff ID."
.Show vbModal
```

End With

txtNo.SetFocus

Exit Sub

End if

End

//

//

Query = "select *from loan where staffno ="'& txtNo.Text & ""&" oder by sn desc"

With Adodc2

.CommandType = adCmdText

.RecordSource = query

.Refresh

End With

With Adodc2.Recordset

If .AdsolutePosition <> -1 Then

bal = !Balance

End If

If bal > 0 Then

With frmGerror

```
gerrMsg = "No new loan for you. You are still owing "& "NGN" &
FormatNumber(bal
2)
.gErrTitle = "Pay up first"
.Show vbModal
End With
txtNo.Text =""
txtNo.SetFocus
End
```

APPENDIX B

Samples of Screenshots of input and output forms

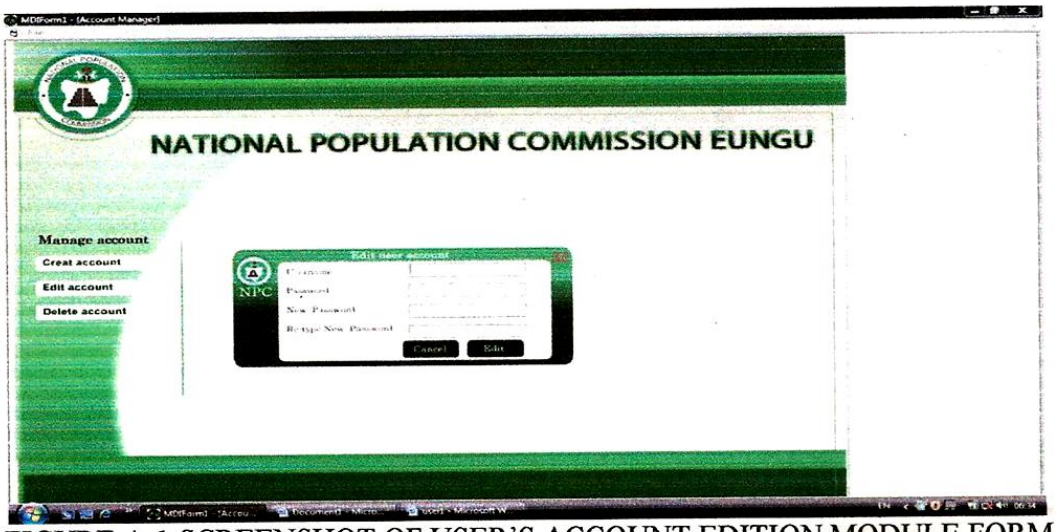


FIGURE A-1 SCREENSHOT OF USER'S ACCOUNT EDITION MODULE FORM

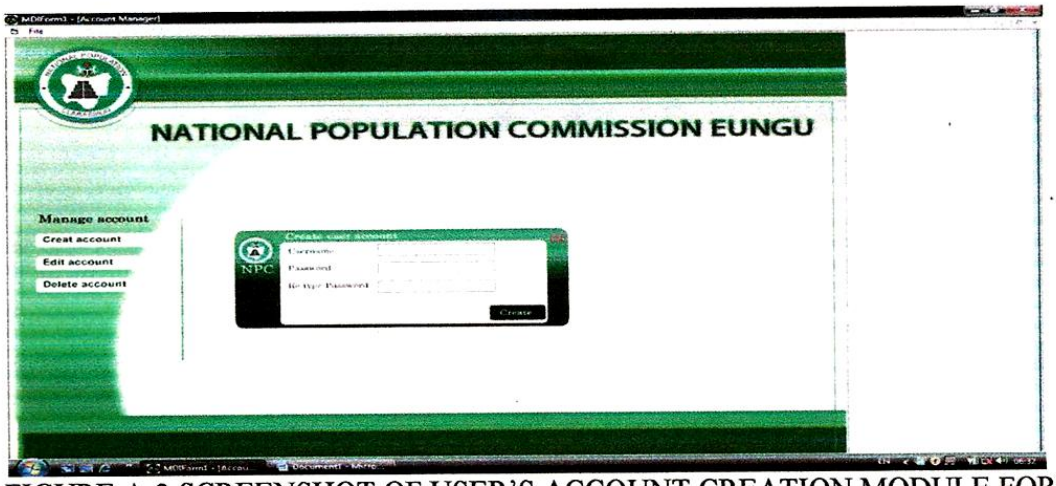


FIGURE A-2 SCREENSHOT OF USER'S ACCOUNT CREATION MODULE FORM

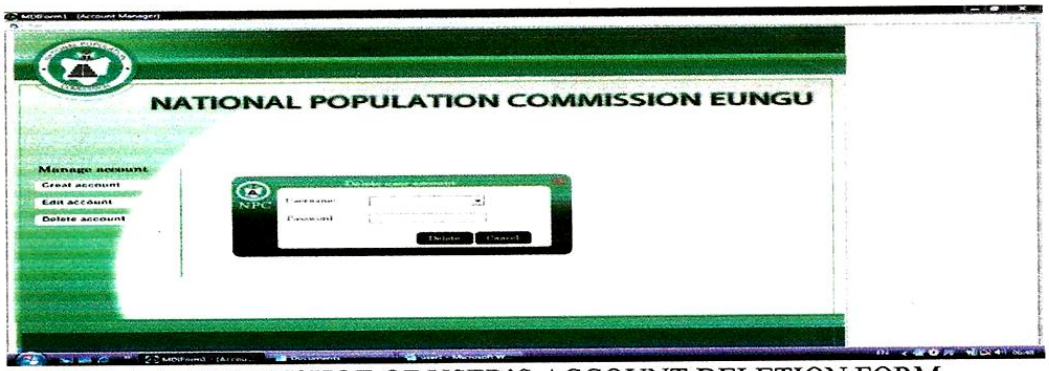


FIGURE A-3 SCREENSHOT OF USER'S ACCOUNT DELETION FORM

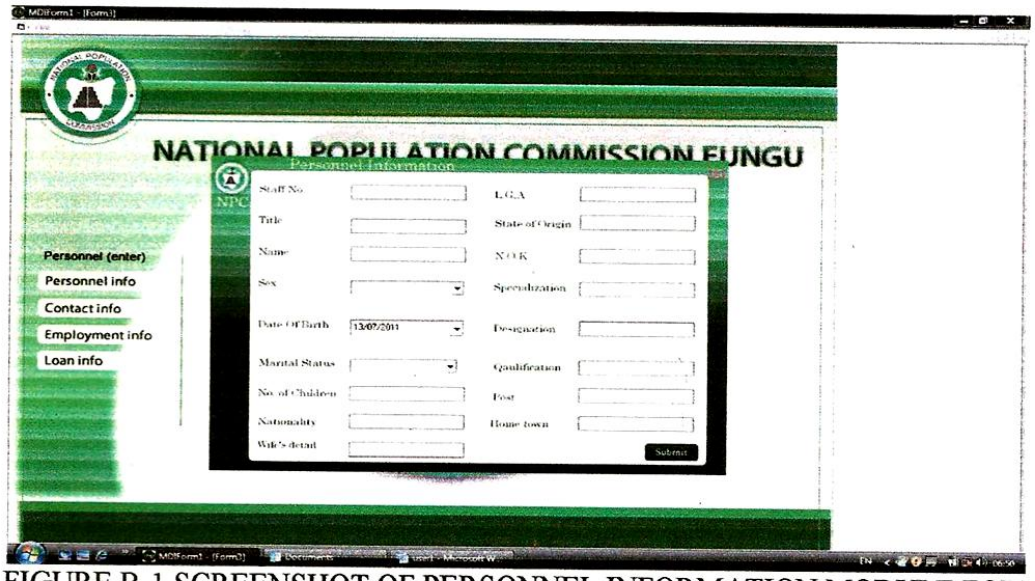


FIGURE B-1 SCREENSHOT OF PERSONNEL INFORMATION MODULE FORM

FIGURE C-1 SCREENSHOT OF CONTACT INFORMATION MODULE FORM FOR A NEW CONTACT OR FOR AN UPDATE.

FIGURE C-2 SCREENSHOT OF CONTACT INFORMATION MODULE FORM FOR NEW CONTACT.

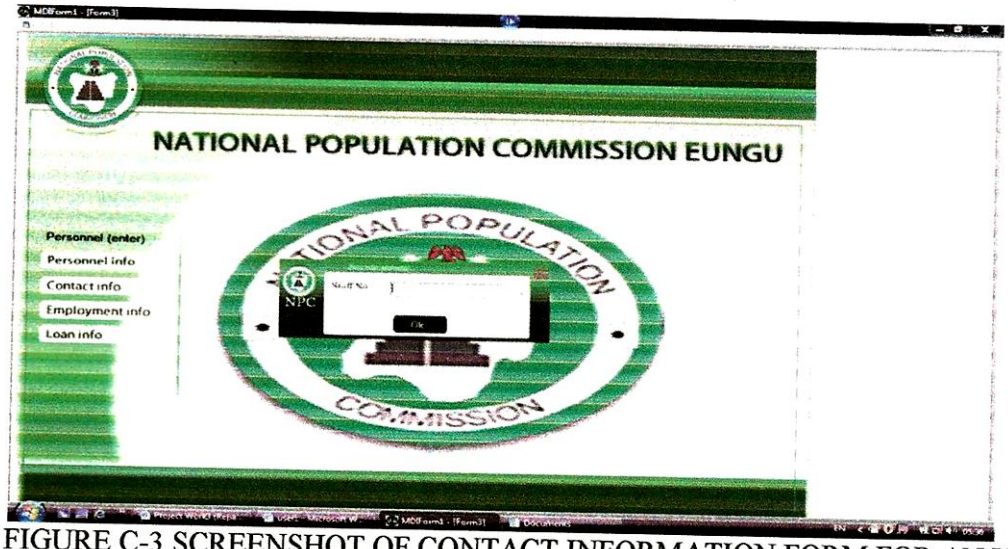


FIGURE C-3 SCREENSHOT OF CONTACT INFORMATION FORM FOR AN UPDATE.

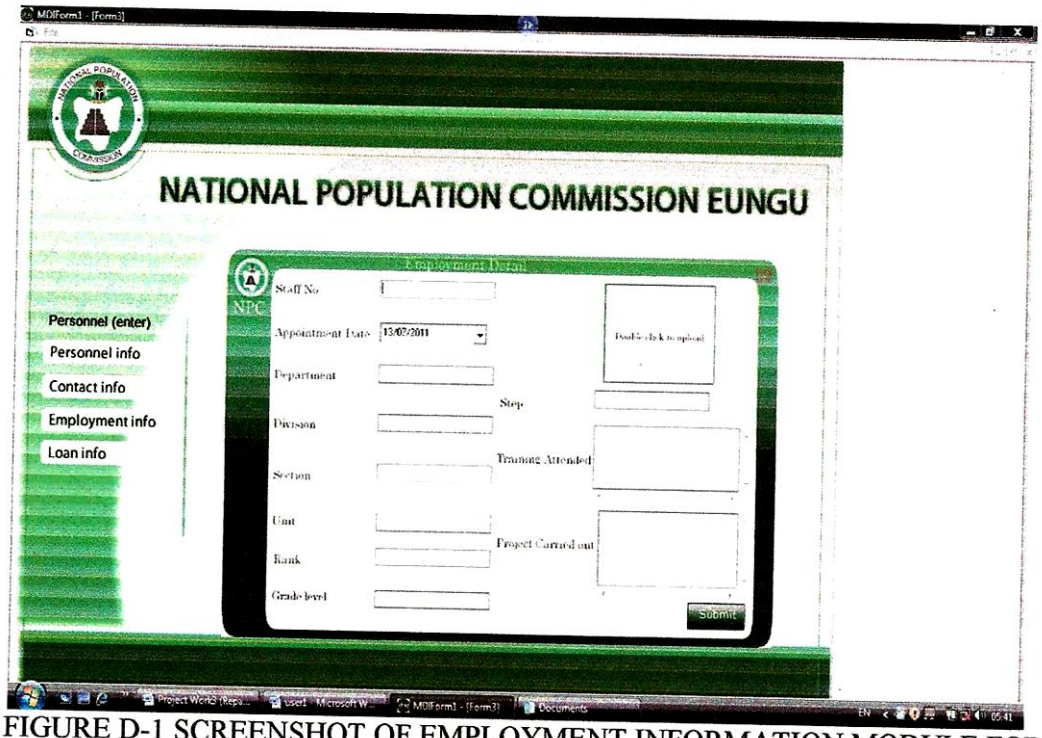


FIGURE D-1 SCREENSHOT OF EMPLOYMENT INFORMATION MODULE FORM.

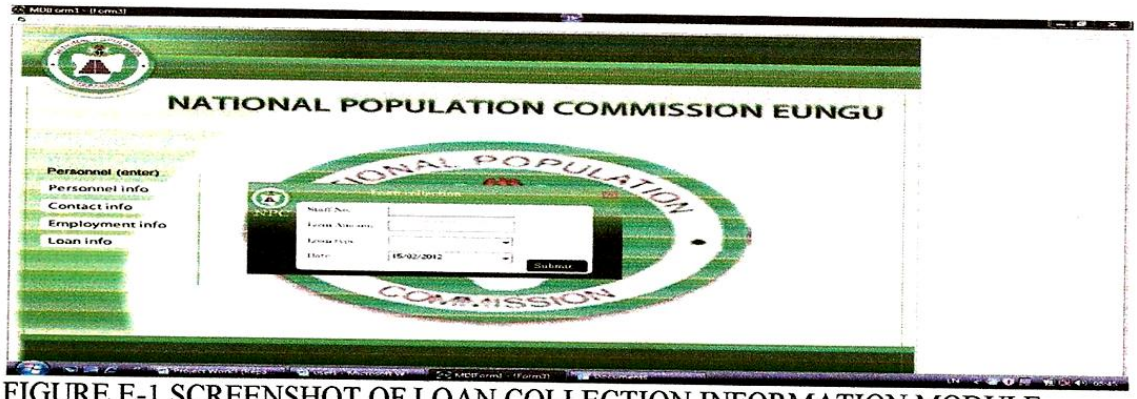


FIGURE E-1 SCREENSHOT OF LOAN COLLECTION INFORMATION MODULE FORM.

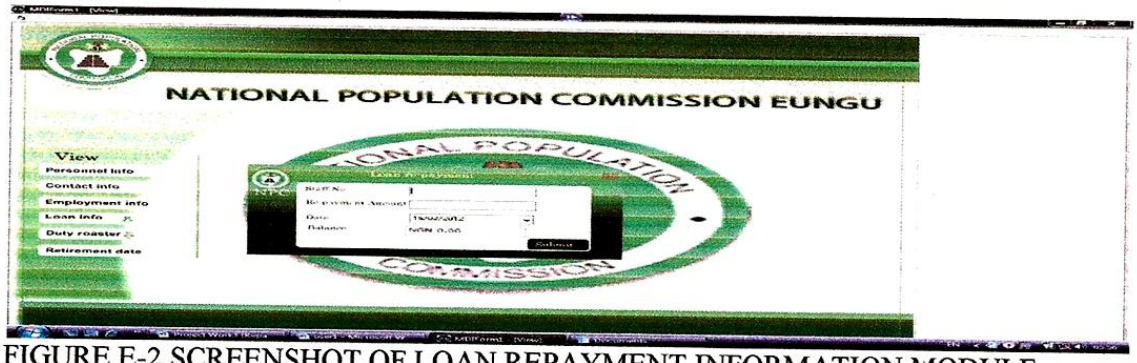


FIGURE E-2 SCREENSHOT OF LOAN REPAYMENT INFORMATION MODULE FORM.

FIGURE F-1 SCREENSHOT OF PIS MAIN MENU "SWITCHBOARD".

FIGURE G-1 SCREENSHOT OF DUTY ROASTER (SIGN IN) MODULE FORM.

FIGURE G-2 SCREENSHOT OF DUTY ROASTER (SIGN OUT) MODULE FORM.

FIGURE H-1 SCREENSHOT OF LEAVE INFORMATION MODULE FORM.

FIGURE J-1 SCREENSHOT OF VIEW MODULE FORM.

FIGURE K-1 SCREENSHOT OF RETIREMENT DATE INFORMATION MODULE FORM.

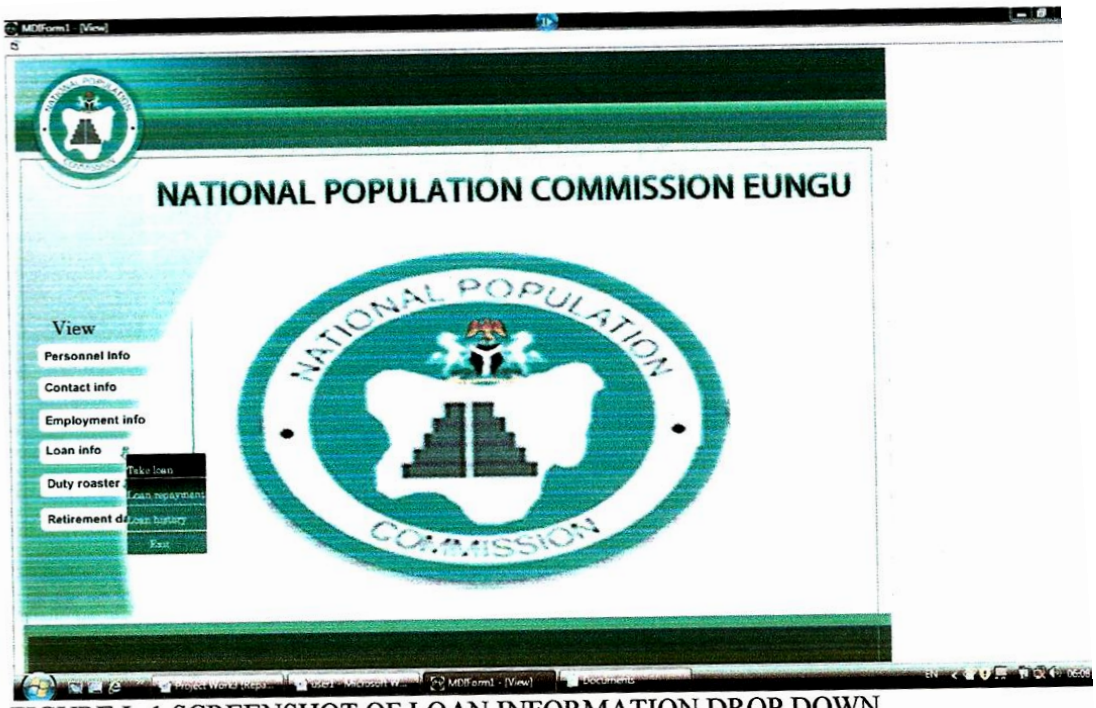


FIGURE L-1 SCREENSHOT OF LOAN INFORMATION DROP DOWN.

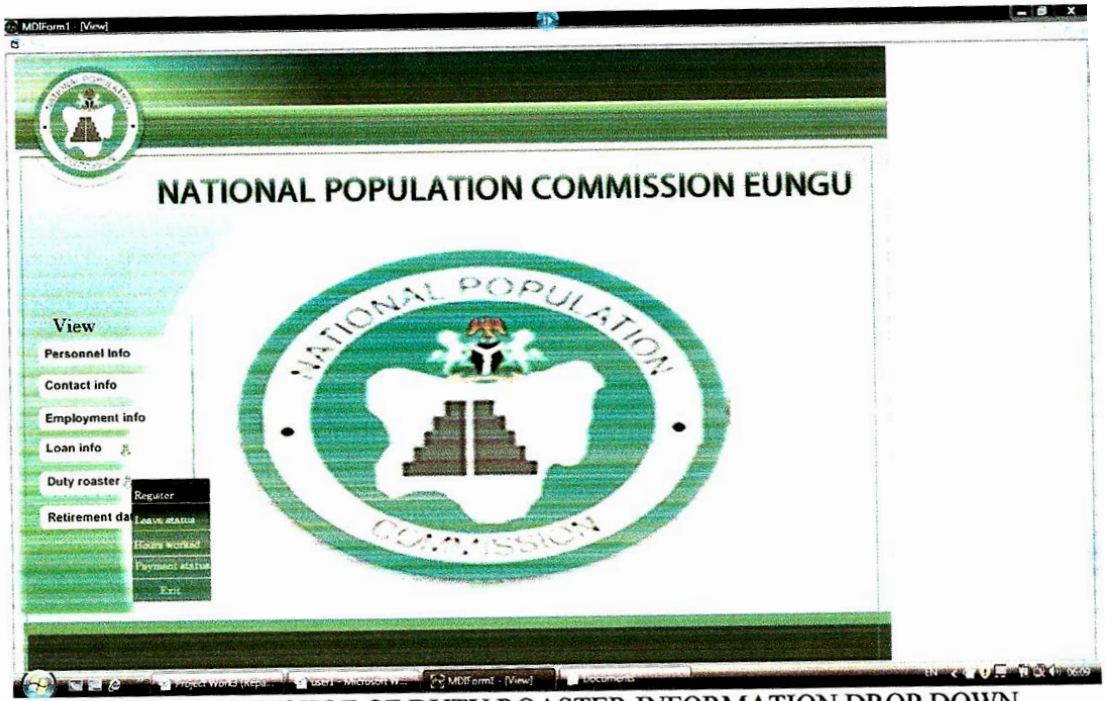
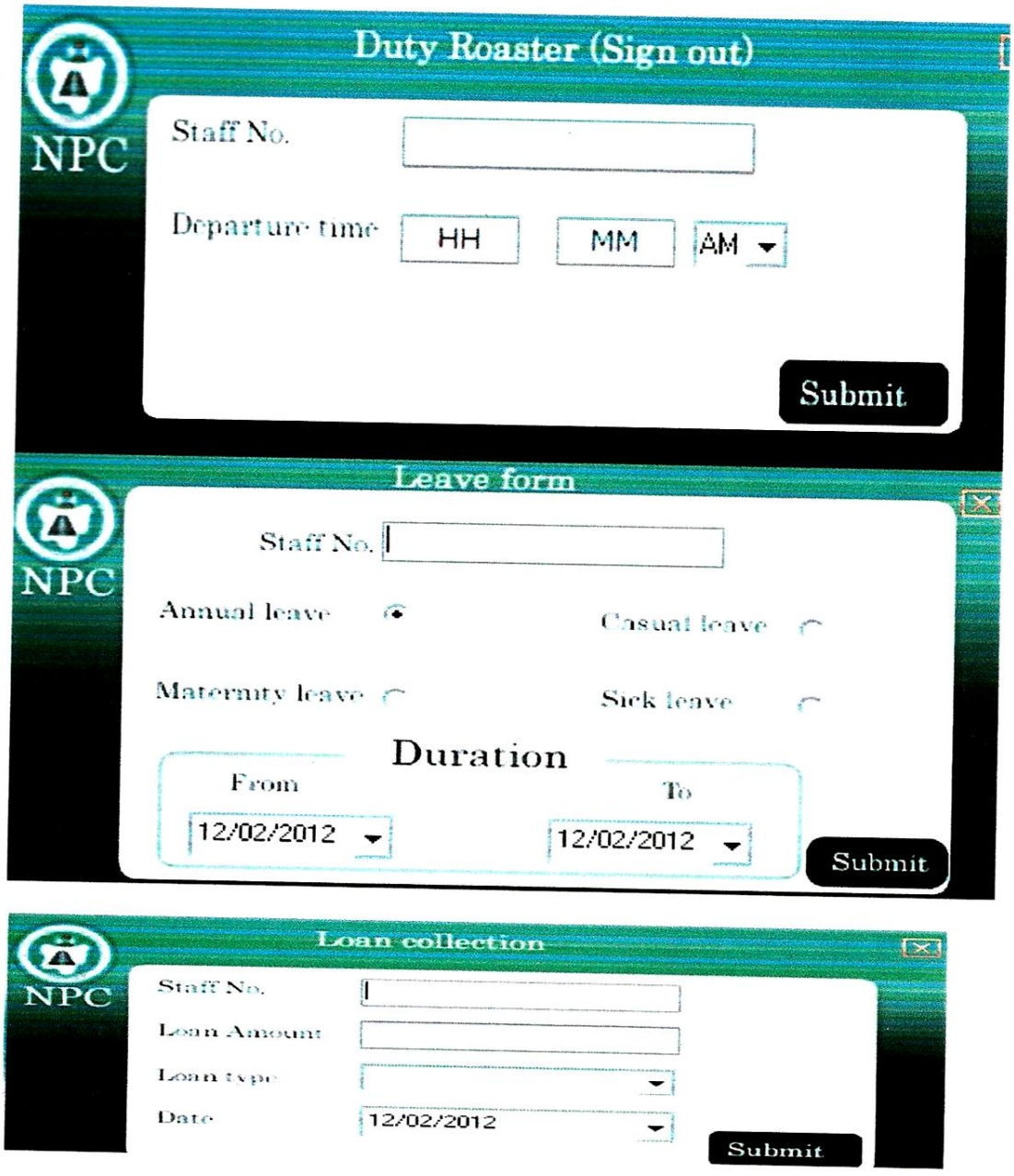
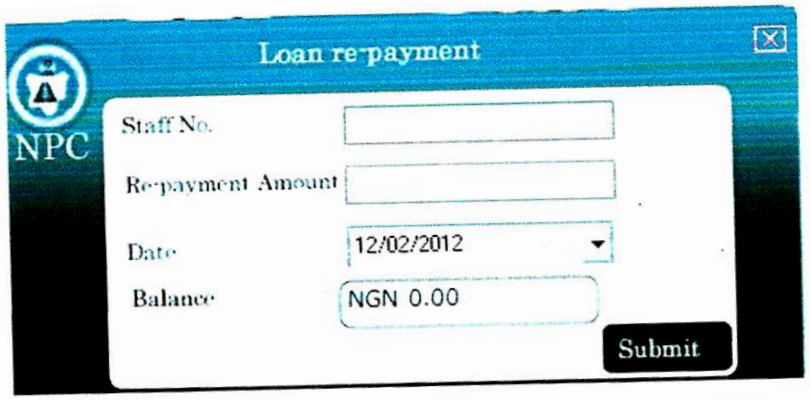
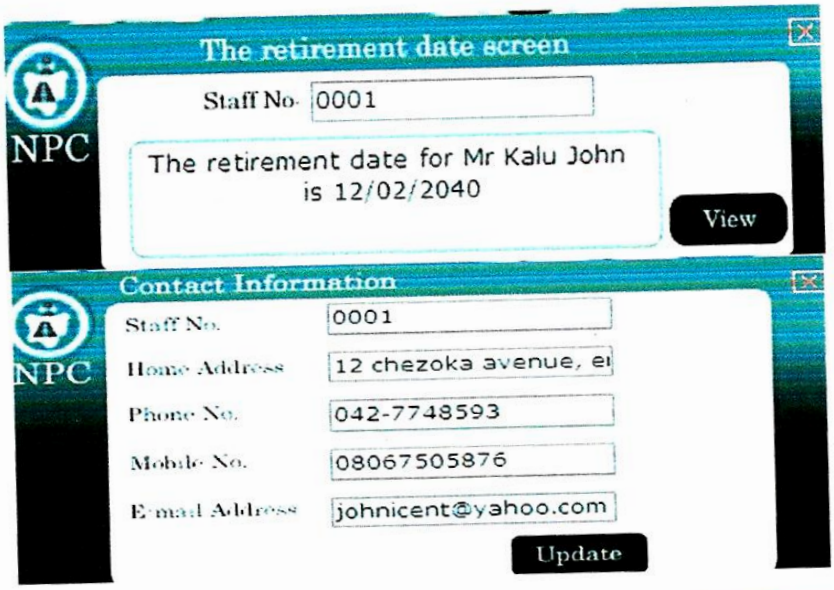


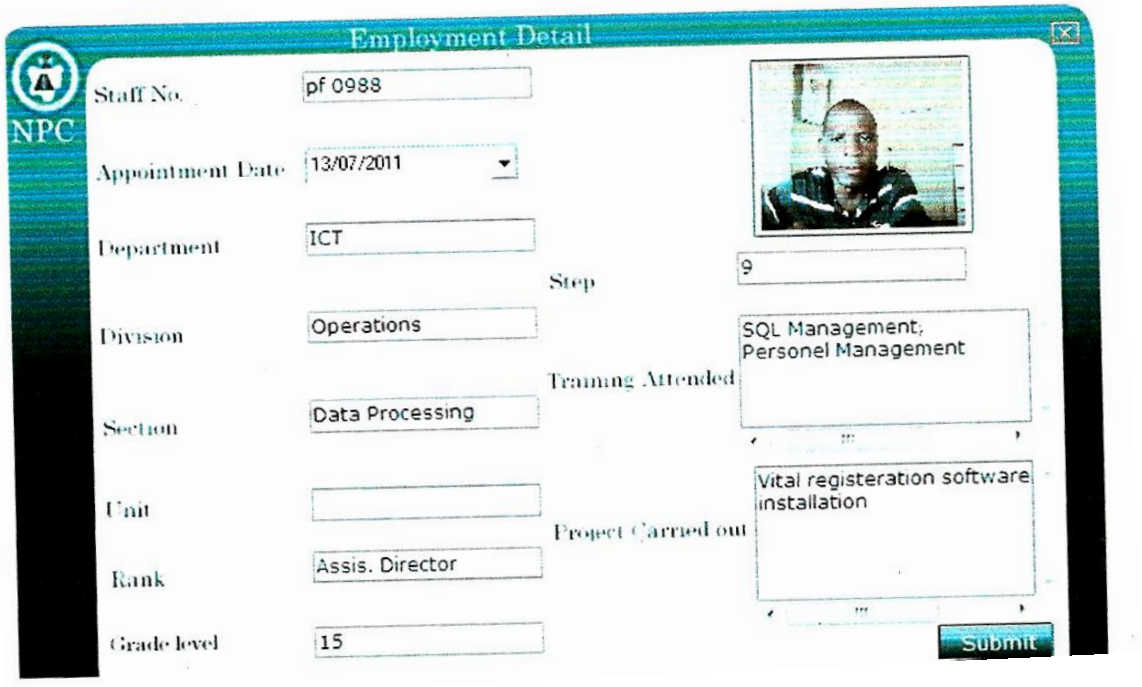
FIGURE L-2 SCREENSHOT OF DUTY ROASTER INFORMATION DROP DOWN.


Duty Roaster (Sign out)
NPC
Staff No.
Departure time
HH
MM
AM
Submit
Leave form
NPC
Staff No.
Annual leave
Casual leave
Maternity leave
Sick leave
Duration
From
To
12/02/2012
12/02/2012
Submit
Loan collection
NPC
Staff No.
Loan Amount
Loan type
Date
12/02/2012
Submit


Loan re-payment
NPC
Staff No.
Re-payment Amount
Date
12/02/2012
Balance
NGN 0.00
Submit


The retirement date screen
NPC
Staff No.
0001
The retirement date for Mr Kalu John is 12/02/2040
View

Contact Information
NPC
Staff No.
0001
Home Address
12 chezoka avenue, e
Phone No.
042-7748593
Mobile No.
08067505876
E-mail Address
johnicent@yahoo.com
Update


Employment Detail
NPC
Staff No.
pf 0988
Appointment Date
13/07/2011
Department
ICT
Division
Operations
Section
Data Processing
Unit
Rank
Assis. Director
Grade level
15
Step
9
Training Attended
SQL Management; Personel Management
Project Carried out
Vital registeration software installation
Submit