

# **A COMPUTERISED HOUSE ALLOCATION SYSTEM**

**(A CASE STUDY OF NIGER STATE HOUSING CORPORATION)**

**BY**

**CHUKWU, SEBASTINE UKA**

**PGD/MCS/2006/1206**

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.**

**SEPTEMBER, 2008**

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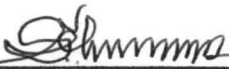
**PGD/MCS/2006/1206**

**THIS PROJECT WORK IS SUBMITTED TO THE DEPARTMENT OF  
MATHEMATICS/COMPUTER SCIENCE IN PARTIAL FULFILLMENT  
OF THE REQUIREMENT FOR THE AWARD OF POST GRADUATE  
DIPLOMA IN COMPUTER SCIENCE.  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA NIGER STATE**

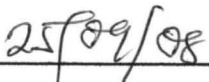
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## CERTIFICATION

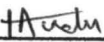
This is to certify that the project titled computerized house allocation system (A case study of Niger State Housing Corporation) is an original work undertaken by **CHUKWU, SEBASTINE UKA (PGD/MCS/2006//1206)** of the department of Mathematics and Computer Science, FUT, Minna. This work has not been presented either in part or full elsewhere for the award of any degree.

  
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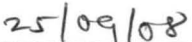
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**Date**

## **DEDICATION**

This project work is dedicated to the sweet memory of my late mother, Ogbuefi Rebecca Oriji Chukwu Eke , who passed unto eternal glory on the 24<sup>th</sup> of September, 2007 , a day after my 1<sup>st</sup> semester exams.

## **ACKNOWLEDGMENT**

I express my sincere gratitude to Almighty God for making it possible for me to successfully carry out this project,

My special thanks go to my supervisor Alhaji (Dr) Audu Isah for his guidance and brotherly advice throughout the course.

My appreciation also goes to the H.O.D, Dr N.I.Akinwade, R.O. Badmus, Dr D. Hakimi, A. Ndanusa, Jiya Mohammed, Mrs Cole, Dr U, A Abubakar, Mike Faleye and to all the lecturers and staff of the Department for their support in one way or the other.

I also appreciate the support from my friends, and my classmates.

I am indeed grateful to the H. O. D Estate Department, public relations department, electrical department and the entire staff of Niger State Housing Corporation for their co-operation

Finally I thank all the members of my family especially my darling wife, Mrs Josephine Chukwu for their support and encouragement. May the Almighty God bless you all Amen.

## **ABSTRACT**

The traditional method of first come , first served, or balloting method of house allocation used by the Niger State Housing Corporation which has the primary responsibility of providing shelter to the general public do not guarantee transparency, sincerity and fairness . This project has therefore succeeded in establishing the need for a computerized house allocation scheme for the Estate department of the Niger State Housing Corporation, Minna , through a systematic development of a computer based program written in Visual Basic 6.0 .

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# **CHAPTER ONE**

## **GENERAL INTRODUCTION.**

### **1.1 INTRODUCTION.**

A computer is essentially an electronic device which processes data supplied through any available input device into information which can be stored in its memory or communicated to the user via any available output device, thus, an interface has to exist between the computer itself and the raw material, and to understand the information produced by processing the raw material.

Computer Technology has evolved through several generations. Each generation has affected data processing, because it has and will continue to have effect on man, job and the entire society.

When trying to figure out the various events, discoveries and inventions, which had taken place up to the success in the development of a modern day ultra fast computer, required an intensive analysis of computational mathematics and other relevant fields of study.

### **1.2 HISTORY OF COMPUTER**

Computer is an electronic machine which is capable of processing data in a wide variety of ways with an extremely high degree of speed and accuracy.

However, all the processes were hard and extremely difficult to keep an accurate record one of. The earliest calculating device created by man was the ABACUS. This was attributed to Chinese around 1642, Edmund Gun then invented a forerunner of slid rule in 1620 which was used for the next two centuries to perform multiplication, division and other mathematical operations.

The development of the first real mechanical calculating device was built by a 19-year-old Frenchman, called Blasé Pascal. He called the machine that could not only add and subtract numbers but can also multiply, divide and calculate square roots of numbers digital counter. Later in the century, Gothfred Wilhelm Von Leibniz, a German Mathematician designed the STEPPED BECKONER, a machine that could not only add and subtract numbers but can also multiply, divide and calculate square roots of numbers in 1674. This formed the basis of many mechanical calculators. By 1920 electromagnetic devices came into being. Since that time the Technology used by the computer manufacturers to design and produce computer has accelerated and influenced by research trends in Artificial intelligence (AI), speech processing, Parallel Architecture, Patten recognition and expert system (ES), with all these, computers are reduced to smaller sizes and has increase memory and storage capacity.

### 1.3 CLASSIFICATION OF COMPUTERS

Computers are basically classified into four main categories. They are:

1. Micro computers
  - ii. Mini computers
  - iii. Main frame computers
  - iv. Supper computers
- i. **Micro computers** are commonly single user computers and mostly have a single processor. They are cheap and very easy to operate hence the commonest computers, examples are desktops and laptops

- ii. **Mini computer** are the medium scale computers which equally allow single and multi users. They can support multi- users up to 100 users. They are more expensive than microcomputers
- iii. **Mainframes computers** are multi-user computers. They are used in large networks because of their high speed and large internal storage and memory capacity. Mainframe computers require controlled environments, equally they are very expensive to procure and maintain. They also require specialized training for operators. These categories of computers are used in very big organizations such as banks and universities.
- iv. **Super computers:** are the fastest computers available today and are always designed for specific purposes. They require controlled environment, very expensive and costly to run. They are used in scientific researches, weather fore-casting, military operations, space exploration, oil exploration etc.

## **CLASSIFICATION OF COMPUTER IN TERMS OF LOGIC**

Computer can be classified in terms of logic into three main types:-

- a. Analog computer
  - b. Digital computer.
  - c. Hybrid computer
- (a) **Analog computer:-** This type of computer performs its operation by measuring and comparing or relating physical phenomena or changes and variables in the form of mathematical equation in some notable quantities. An analog computer processes data that vary continuously such as variation in temperature, speed, the chemical composition of petroleum product or the amount of

current flowing through an electric conductor. Analog computers do not contain memory since they measure or compare data/value.

- (b) **Digital computer:** - It is the one which performs arithmetic operations and access logical decisions according to instruction coded to it in advance. In digital computers, numbers and letters are represented as digits. Examples are micro computers and main frame computers.
- (c) **Hybrid computer:** - This is simply a combination of Analog and digital computers. It combines the capabilities of analog and digital computer systems into one. Hybrid computers are powerful computing devices and as such they are mostly used to solve rather sophisticated problems such as those from the studies of process control and optimization, any physical process described by a set of physical, simultaneous or positive differentiation.

## **CLASSIFICATION BY PURPOSE**

Computers in-terms of purpose are categories into two:-

- (a) **Special purpose:** - This type of computer is designed for only one purpose, that is, to perform a specific operation
- (b) **General purpose:** - A general purpose computer can be used for many purposes. For example it can be used for playing games, for handling payroll computations, to solve complex mathematical problems.

### **1.4 APPLICATION OF COMPUTER IN BUILDING INDUSTRY**

Many building industries in Nigeria now have employed the use of computer to keep inventory of all building materials and equipments. Computer is used to printout or display information about any equipment or material in

stock. With the aid of a kind of application software called “CAD,” computer aided design; the user is assisted in drawing, editing drawings raising bills of quantities, and so on.

The 3D-home architect is a kind of computer aided design with a user friendly graphical user interface (GUI) application with tools to assist the user in drawing or editing the drawings and raising bills of quantity with the “WYSIWYG” features/characteristics. With this type of software an architect can create a complete floor plan for an entire home.

Once a complete floor plan is designed, one can produce spectacular three-dimensional view, it also produces objective intelligence, which creates walls, cabinet modules, doors, windows and other objects. This kind of application software (3D-Home) is also meant for the surveyors, architects, Engineers, Estate valuers, Planners, Interior decorators etc. Each of these professionals can adapt it to suit their immediate and personal use, it can also be used to perform the following functions:-

- Architectural drawings
- Estimating drawings
- Mechanical drawings
- Interior design
- Construction management
- Structural drawings
- Electrical drawings

## **1.5 OBJECTIVES OF THE PROJECT**

The objectives of this study are: (i) to automate allocation of houses to all categories of applicants of houses owned or managed by Niger State Housing Corporation so as to minimize bias or favoritism in house allocation. (ii) The

study is also aimed at maintaining proper records of houses, and occupants of all houses owned by Niger State Housing Corporation.

## **1.6 JUSTIFICATION OF THE STUDY**

The benefits of an effective system of allocation of houses in an organization are as follows:-

- a. It will increase efficiency
- b. It will improve the working condition of the staff and make them more productive.
- c. It will also lead to an improvement on the quality of service to the public.
- d. It will generate a procedure for an orderly flow of relevant Information required for decision- making.
- e. The study will improve the image of the corporation.

As stated above, the problems encountered using balloting method will be solved using a computer. In this program, the officer in charge of allocation or a management staff will be made to sit by the computer and be supplied with all the data for House allocation. The computer is then operated and all data supplied into it, then it will generate random numbers, which will stand in place of the lucky allottees. This numbers are printed out immediately and issued out to the lucky winners. The randomly generated numbers will be in accordance with the numbers of houses for each category of applicant.

In addition, the computerized system offers many facilities for filing, storing and retrieving of information about any of the houses and the allot tee, within shortest possible time. This system also offers the following:-

- Reduction in time spent in searching for data

- Reduction in space occupied by files
- Higher speed in processing information
- Better management of information system.
- It relieves staff of tedious routine work.

## **1.7 SCOPE OF THE STUDY**

This project work is restricted to the physical resources of the Niger State Housing Corporation and the estate department in particular.

The project is on House allocation, which is one of the primary functions of the department. In carrying out the housing allocation one need to know the number of housing estates, number of houses, and type of houses in each of the estate also number of applicants for each type of house, this exercise may be tedious and time consuming without the aid of a computer.

The programmer has chosen house allocation form among the large number of functions the Estate department performs, because it is the one that has direct bearing on the general public.

The department will supply data on the number of houses available for allocation from each housing Estate to the following category of applicants:-

- a. Niger state civil servants (NSCT)
- b. Federal civil servants (FCST)
- c. Political appointees (POAT)
- d. Corporate bodies (CORP)
- e. Individuals (INDD)

## **1.8 METHODOLOGY**

There are several methods of gathering or collecting data. They include among others observation, questionnaires and interview.



The observation and interview methods are employed for this project work because of the desire to get not only firsthand information about how activities are carried out but also to observe how data are handled and processed though it may be necessary to apply two or more of these types of method.

The methods used for the collection of information for this study are:-

1. Interview: - This is by far more common and most satisfactory way of obtaining information, as it gives direct way of discussion with the staff of the estate department.
2. Text books and journals: - They provide a visual way of collecting data as they give a better understanding of the subject.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 IMPORTANCE OF SHELTER**

Shelter is universally acknowledged as one of the most basic human needs along food and health, with profound impact on life style, clothing, happiness as well as the productivity of the individual. But what people actually need is housing. According to Wasiu (2006), Housing encompasses all ancillary services and community facilities, which are necessary to human well-being. It is in fact a package of services, land, utilities and access to employment and special amenities as well as the structure of shelter itself.

Ozigbo (2006), is of the view that shelter connotes a combination of such requirements as adequate living space, environment, utilities, services, location and interaction with neighbours, accessibility to places of work, worship, recreation, safety and security of lives and property including adequate sanitation, etc. He opined that housing is a significant development index by which one can gauge the level of development or growth in any human society.

According to Mbina (2006) , shelter is man's primary need after sustenance and covering. He opined that appropriate steps must be taken to accommodate the various and varied physical, social and cultural needs in any housing environment.

From the foregoing it clears that housing connotes shelter which must meet the basic requirement for human existence.

Agbola(2006), discussed the issue of housing affordability. According to him, despite various government policies, programmes and strategies, it seems that only the upper income group has their housing affordability question resolved. Also, the 'upper- middle' income group often has access by virtue of their position and affordability through credit facilities. In most cases therefore,

it is the poor (low income group) that do not have access to housing since their affordability level is very low. Even, in the few cases where the allocation mechanism favours the poor and thus give them access, such as lottery schemes, affordability problem do deprive them of such access. In most other cases, because of non- affordability of such housing units and because of the housing problems of the middle and high income groups are not adequately addressed, these privileged group tend to 'hijack' such purportedly low income housing units, and thus deprive the poor necessary access to housing.

The question of access is central to housing policy. There is a need to remove allocative inefficiency. Granted that housing matters are usually policy – driven, there is a corresponding need for transparency, sincerity, fairness and good conscience in the allocation of houses.

This project is therefore aimed at eliminating these inefficiencies through a computerized house allocation system.

## **2.2 HOUSING DELIVERY, THE NIGER STATE APPROACH**

Housing development in nation building has been one of the paramount concerns of policy makers in the country in recent time. Despite all efforts coupled with articulated, well-planned and excellent housing policies over the years, the housing delivery system paints a picture of dismal future. The unavailability of adequate finance and high cost of building materials have rendered all policies geared towards the development of the sector virtually unworkable.

The need to keep a pace with the recent development in the nations housing sector has been paramount. There is no doubt that the housing sector is currently facing turbulent times. Construction sites are very few and far apart as corporate and individual resources continue on the down ward side.

It is no gain saying that the quality and quantity of housing stock in the state is a barometer of measuring the standard of living, level of technology and civilization. Indeed, next to food, housing ranks next to man's basic needs. Its importance therefore cannot be over-emphasized.

It has been revealed that since the creation of the state in 1976, only about 1300 housing units have been built by the state government. This figure is startling. no wonder the initiative by the present regime in the state to deliver 12500 houses in the next four years through a public private partnership (PPP) is a welcome development. By this arrangement the state government is to provide the land and infrastructure- road, water, and electricity.

The Housing Corporation is the facilitating agency and will see to the allocation of the houses on completion to civil servants and other category of applicants through her Estate department.

Now the hopes of many citizens to have houses of their own in the state have been rekindled. Salaries earners who have been under the excruciating rents by landlords will soon have hive a sigh of relieve. This pragmatic approach by the government will no doubt put smiles on the faces of the eventual beneficiaries. There is a need for fairness in the allocation of the houses. This can only be achieved through an automated house allocation system.

### **2.3 HISTORY OF NIGER STATE HOUSING CORPORATION**

The provision of shelter to all Nigerians and Nigerlites in particular is being given priority attention by the three tiers of government.

It is in the light of the foregoing that the Niger State government established the Niger State Housing Corporation in 1979 that is 3-years after the creation of the State under the edict No. 5 of 1979. It came into being on the 15<sup>th</sup> of May, 1979. It was set up primarily, to minimize the problem of

accommodation in the state by providing 'improved' accommodation both in quality and quantity, thus enhancing the standard of living of the citizens of Niger State.

## **2.4 STRUCTURE OF THE CORPORATION**

Apart from the board of directors, at the apex of administration in the corporation is the general manager who reports directly to the board of directors. The general manager as the chief executive of the corporation sees to the day-to day running of the organization in conjunction with other members of the management team. For maximum efficiency and effectiveness, the Corporation is made up of five departmental structures, namely: Administration, Works, Planning, Finance and Supply and Estate. It also has the following divisions: Architecture, Quantity Surveying, Engineering, Land Survey, Internal Audit and Public Relations Unit among others.

The public relations unit and audit unit are directly under the office of the general manager.

- a. Administrative department:- headed by a director of personal/secretary this department handles all matters affecting staff and general administration.
- b. Works department:- Headed by a director: this department is responsible for designing drawings, bills of quality, supervision of projects etc.
- c. Planning and survey departments:- The department is headed by a director responsible for land matters, planning and surveying.
- d. Finance and supply departments:- Headed by a director, all financial matters of the corporation are handed by the department.

- e. Estate department:- This department is headed by a director and it is vested with the responsibilities of management of the corporation's housing estates and other landed properties.

## **2.5 OBJECTIVES OF SETTING UP THE CORPORATION**

The Niger State Housing Corporation has as its cardinal objective the provision of houses for the low, medium and high-income classes in the society. The corporation is charged with the responsibility for the planning, designing, construction and management of houses for acquisition and rental by members of the public and such other function as the government may direct.

The corporation is also expected to advise the state government on the following housing related matters:-

- a. To highlight the advantages of type of houses base on demand
- b. To relate urban low and middle level income to appropriate prototype low cost residential accommodation that can easily be funded.
- c. To furnish government with information on demand of various types of houses.

## **2.6 THE ESTATE DEPARTMENT AND ITS FUNCTION**

The estate department of the Niger State housing corporation is one of the functional departments of the organization and is headed by a director who reports to the general manager. The department is divided into 3-main units and further divided into sub-unit each main unit is headed by a principal officer.

The department is vested with the responsibility of management of the corporation's housing estates. It is also charged with the responsibility of acquisition and allocation of land and houses. Other functions of the department are the formulation and implementation of policies relating to the following:-

- a. The general monitoring of a property investment market.
- b. Management of both developed and undeveloped landed properties of the corporation.
- c. Operation of all the various housing estate
- d. Land acquisition and compensation.
- e. Preparation of a feasibility and viability report of Projects
- f. Fund raising from banks and other financial institutions, closely in conjunction with the chief executive.

The department also provides consultancy services in housing related matters, and collection of rent from tenants in its various housing estates. All these are possible because the department has in its employment all the professional disciplines and support technical staff.

## **2.7 HOUSE ALLOCATION “THE TRADITIONAL METHOD”**

The explosion population of applicants applying to own a house has been drawing much attention of the state government and the housing corporation in particular. Equally of interest has been the provision of adequate and affordable shelter for subsequent allocation of the few available ones to members of the public.

A study carried out few years ago has shown that the corresponding average demand by various applicants in Niger State is as follows:-

- a. Low income groups - 48%
- b. Middle income groups - 22.5%
- c. Higher income groups - 12.5%
- d. Others - 17%

The high demand by the low and middle income groups makes it difficult to allocate houses in the traditional way of “**FIRST COME FIRST SERVE,**”

**basis** hence the introduction of sale of forms. The management then set up an allocation committee within the management staff. The Estate departments then submit completed application forms to the committee who then screen the forms one after the other, thereafter they go into **“BALLOTING.”**

The two methods are full of bias or favoritism as each member of the committee or members of the board of directors may have a candidate hence the allocation may not be free and fair.

## **2.8 WEAKNESSES OF THE TRADITIONAL METHOD**

The manual operations have the following drawbacks:

- (a) Loss of vital information
- (b) Insecurity of information data
- (c) Loss of application forms. etc

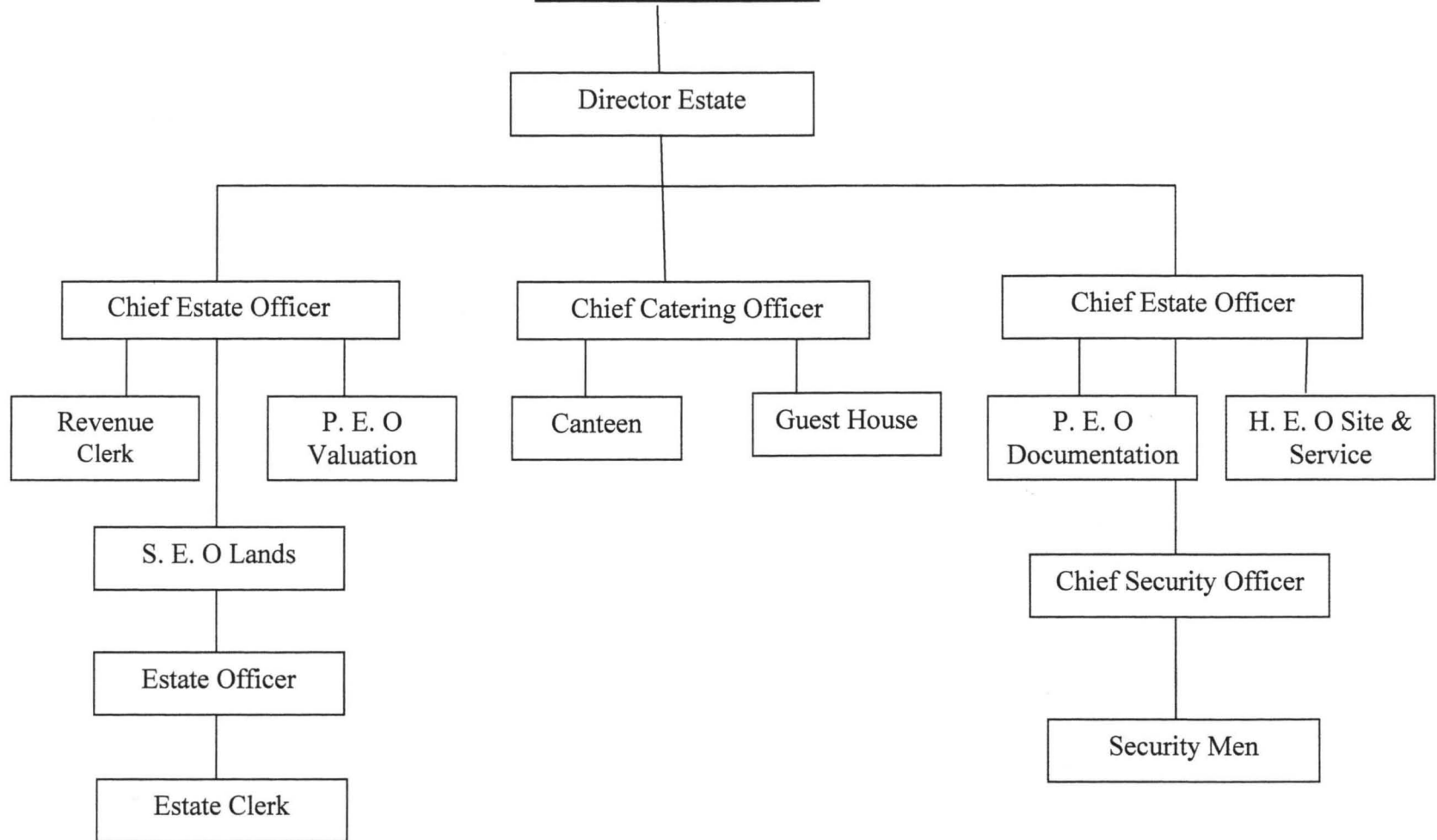
The traditional method is full of ‘biaseness’ for example the committee members chosen for the house allocation may have vested interest on a particular applicant, in some cases there is government interference that is they may hijack the programme to use it to favour their loyalist especially during the this era of politics.

Specifically the estate department is faced with major problem peculiar with the traditional method of house allocation, as listed below:-

- (i) Lack of proper storage medium for the housing estate records.
- (ii) Lack of proper accounts record storage and security of each housing estate’s financial analysis.
- (iii) Unreliable records of information and data of the corporation and the estate department’s system in particular.



# ORGANOGRAM



**THE ORGANIZATION CHART OF THE ESTATE DEPARTMENT NIGER**

**STATE HOUSING CORPORATION**

# CHAPTER THREE

## SYSTEM DESIGN AND REQUIREMENT

### 3.1 DESIGN OF THE PROPOSED SYSTEM

In view of the problem enlisted earlier it is of paramount importance to design a system that could eliminate all the weaknesses identified in the course of the project and in addition to earmark a software package suitable for each activity for smooth operation of each unit in the system.

The software is intended to be designed in form of many drives where users could properly select from main menu, sub-menu, sub-submenu which implies that all facilities of the new system would be presented in a menu structure and others, to ease access to users and programmers of the computer within the department.

The design of any new system can be conveniently divided into four major parts, namely:-

- (i) **INPUT:** - Consideration of input can be influenced greatly by the needs of output. That is, the necessity for quick response from the system would determine the need for an online type of input. Consideration will also be giving to the following:-
  - (a) Data collection method and validation.
  - (b) Type of input media available.
  - (c) Volumes of the input documents.
- (ii) **OUTPUT:** - It is necessary to consider what is required from the system before deciding how to go about producing it.
- (iii) **FILES:** - This element is very much linked to input and output. Input is processed against the files to produce the necessary output. The following consideration is also given in designing files.
  - (a) Storage media.

(b) Method of file organisation and access.

(c) File security.

- (iv) **PROCEDURES:-** These are the steps, which unify the whole process, which link everything together to procedure the desired output. It will involve both computer and clerical procedure. They will start with the organisation of the source documents and end with the output document being distributed.

In a system design, the proposed project has to be evaluated. After looking at a broad alternative solution a short list of solution is to be kept.

These solutions can further be evaluated to find the following:-

- (a) **TECHNICAL FEASIBILITY:** - To find out whether the technology needed is available and if available is it used?
- (b) **OPERATIONAL FEASIBILITY:** - To ask whether the proposed solution can fit in with the existing operation.
- (c) **ECONOMIC FEASIBILITY:** - One then ask whether finances are available for implementing the proposed solution.

The system designer has to make sure that the procedures and controls are carefully built into the system to ensure the integrity of the data and security of the system. Also flexibility of the design process is to be considered, that is the level to which the system is able to adapt to a wide variety of changes.

### **3.2 SYSTEM REQUIREMENTS**

The new system is designed to work on standard Microcomputer system and so the following items are necessary.

- (a) **COMPUTER HARDWARE:** - A micro computer with a micro processor RAM of 16MB and floppy disk drive unit providing for a 3.5" diskette.
- (b) **SYSTEM SOFTWARE:** - A window 95 operating system with Microsoft office must be installed.
- (c) **PRINTER:** - A neat letter quality feature and speed of about 1200 lines per minutes and maxim width of 132 characters per line is recommended, specifically EPSON printer, or LaserJet printer are required for production of reports and Text.
- (d) **UPS (uninterrupted power supply):-** This is a facility which automatically provides power in case of power failure, to the computer and its environs for job continuity.
- (e) **AIR CONDITIONER:** - This is needed for cooling the environment.

### **3.3 (a) COST AND BENEFIT ANALYSIS**

A cost benefit analysis is necessary to determine economic viability of the proposed system. In its socio-economic view, it will bring the organisation to modern technological level of operation of worthy consideration, thus in terms of cost is the financial implication while the benefit could be on the expected reach of performance and result of the system's positive achievement, hence the cost and benefit analysed below.

### **3.3 (b) COST ANALYSIS**

In order to determine the cost of operation under the existing system it is necessary to recognize the various way in which cost may be incurred and these are categories as follows:-

### **(A) DEVELOPMENT COST**

#### **1. COMPUTER HARDWARE: -**

1 <sup>NO</sup> MICRO COMPUTER SYSTEM @	₦80, 000.00
2. PRINTER:-1 <sup>NO</sup> @	₦38,000.00
3. UPS (UNINTERRUPTED POWER SUPPLY) 1 <sup>NO</sup> @	₦18,000.00
4. COST OF SOFTWARE DEVELOPMENT @	₦120,000.00
5. INSTALLATION COST @	₦20,000.00
6. TRAINING OF PERSONNEL @	₦60,000.00

**SUB-TOTAL = (A)            ₦336, 000.00**

### **(A) OPERATING COST**

1. ONE PROGRAMMER @ N15, 000.00 MONTHLY	₦180,000.00
2. INSTALLATION OF 1 <sup>NO</sup> AIR CONDITIONER @	₦65,000.00
3. COMPUTER PAPERS, AND CONSUMABLES @	₦60,000.00
4. UTILITIES (SAY LIGHT AND SO ON) @	₦20,000.00
5. MISCELLANEOUS EXPENSES @	₦30,000.00

**SUB-TOTAL (B)            ₦355, 000.00**

**GRAND TOTAL = A + B = 336, 000 + 355, 000.00    = ₦691, 000.00**

### **3.4 BENEFIT OF THE PROPOSED SYSTEM**

The benefit the organization will drive from the newly design system includes:-

- (a) Automated house allocation system
- (b) Avoidance of existing system problem
- (c) Better services
- (d) Faster communication
- (e) Easier retrieval of information

- (f) Timely decision
- (e) Efficiency and improvement of retrieval and storage of information

### 3.5 CHANGE OVER PROCEDURE

The conversion of files from the old (existing) system to the new format and content required by the new system and setting up the converted files into the computer where all processes when finished (the change over) the full replacement of all the existing procedures by the new ones has been carried out.

The change over could be effected to the new system by either of the following ways:-

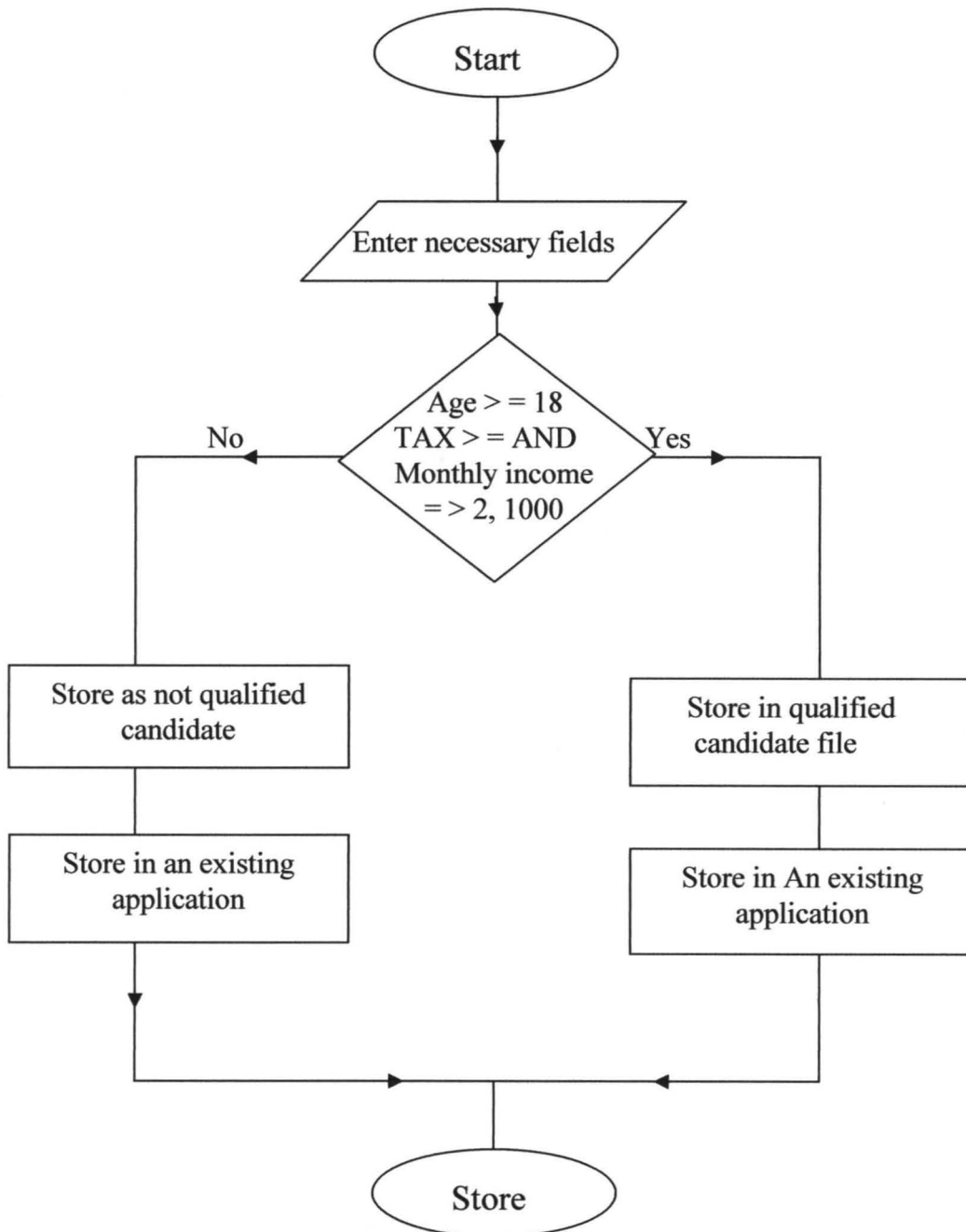
- (i) **Parallel change over:-** This is a type or method where both old and new systems are run concurrently, though it is expensive.
- (ii) **Direct change over:-** This type of change over is one which the new system replaces the old system in one move. This method is potentially the least expensive but most risky.
- (iii) **Pilot change over:-** In this method the changing over is carried out piece by piece. This method reduces the risks in the direct change over of the whole system.

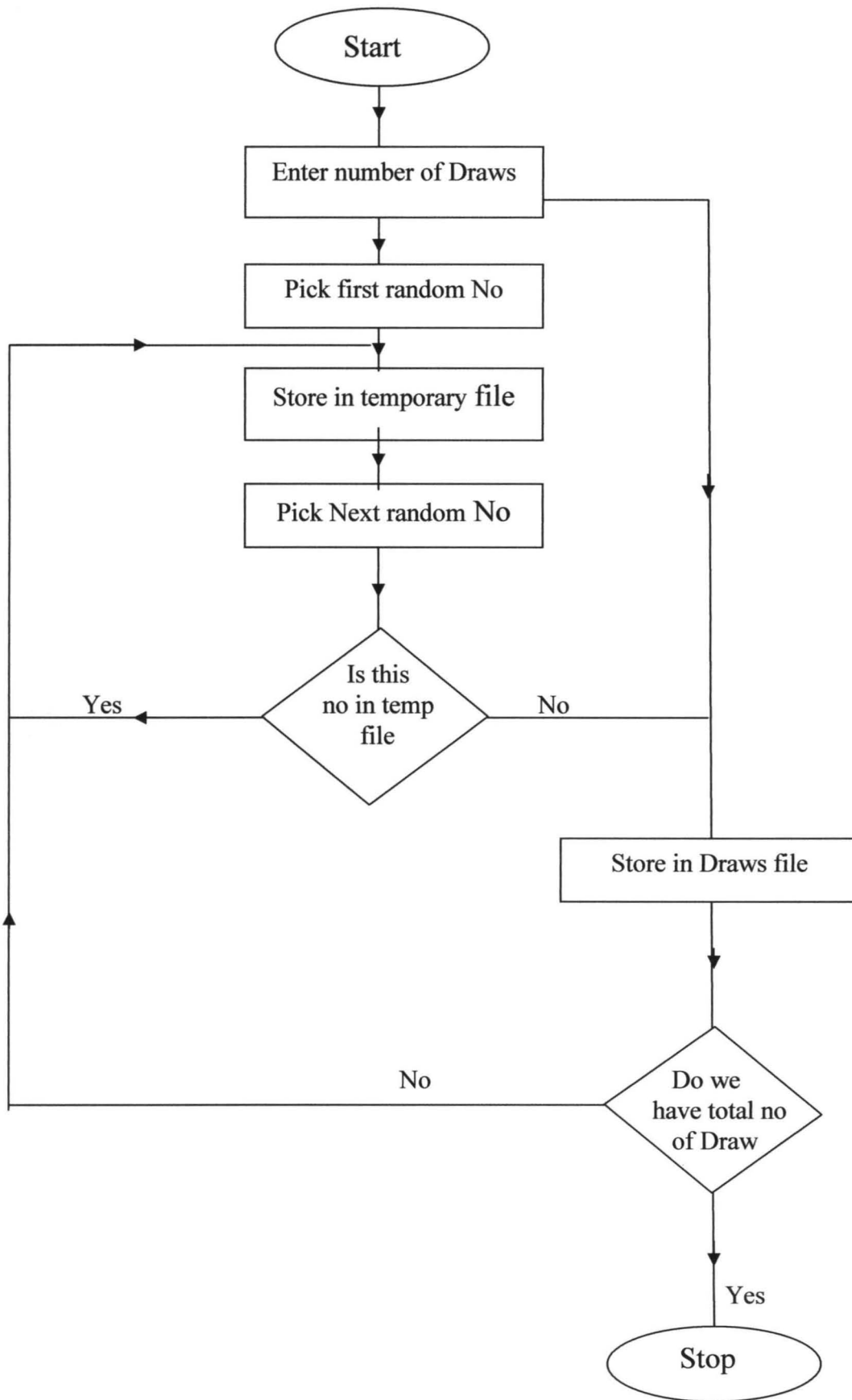
All the methods mentioned above are good for system change over but for the proposed (New) system, the parallel method is recommended, as it suite the back ground of the conversion where file conversion and file set up can be performed at the same time with adherence within the change over. The storage, retrieval activities of data and information are not affected in any way.

### 3.4 SYSTEM FLOW CHART

The system flow-chart provides a broad overview of the processing operation that are to be accomplished. The password is required before the user can have access to the main menu. The programmer uses flow chart since it is very easy to understand due to its diagrammatic nature.

#### Entering Applicants.







# CHAPTER FOUR

## SYSTEM ANALYSIS AND DESIGN

### 4.1 PROGRAM DEVELOPMENT

Developing a good computer program is a task that requires careful and adequate planning. A good program is one that is efficient, user friendly, reliable, easily maintained, portable, cost effective, and well documented and so on. The following technique was used in the program development:-

- (i) **SPECIFICATION:** - The specification should contain details of what the program is expected to do and how to achieve this goal. At this stage, one also determines the required input data as well the output information.
- (ii) **DESIGN:** - This stage defines an outline of how to solve the problem. This outline is usually in the form of an algorithm. An algorithm is a step by step method of solving a problem, and it can be implemented in many ways such a flowcharts, pseudo codes, N-S diagram and simple English. The flow chart method was used for the purpose of this study.
- (iii) **CODING:** - From the algorithm obtained at the design stage one can proceed to transform the outline into a form understandable by the computer. This involves coding the algorithm in a suitable computer language.
- (iv) **TESTING:** - After completing the coding the program is given a desk check or dry run. This involves inventing simple test data and manually going through the program to ascertain the result before typing into the computer.

However, by the time the proposed system has been tested and confirmed to be working as expected work, and carefully selected tested data were used in

comparison with results obtained from previous run and were found to be the same, it is then concluded that the new system is working accordingly.

**IMPLEMENTATION:** - Program implementation implies making a program fully operational once it is ascertained that the program has been tested and found working to specification. This simply means that the program is applied to solve the problem outlined in the specification.

The program can be compiled into an executable form and then installation CD or flash drive will be used to install the new program into the computer.

**DOCUMENTATION:-** Program documentation is the description of what a program does, how the task is achieved and how to use the program to solve problem say “house allocation” for the purpose of this study.

## **4.2 PROGRAMMING LANGUAGE**

The programming language used for this study is Visual-basic which is commonly used with an interpreter and it is more convenient to use because the interpreter executes program only once, unlike FORTRAN, COBOL OR PASCAL that uses compiler which executes program in two steps.

Visual Basic was developed by Microsoft in the early 1990's, and is the most popular Visual programming language. It offers a visual environment for program construction allowing users to build various application components using drag – and –drop tools, buttons, scroll bars, and menus. It is object oriented and event-driven. The user can press keys and click on various buttons and boxes in a window. Each user action can cause an event to occur, which triggers a Basic procedure that has been written. In Visual Basic we work with objects which have properties and methods.

Object can be thought of as a thing, or a noun e.g. forms and controls. Forms are the windows and dialog boxes we place on the screen; controls are the elements we place inside a form such as text boxes, command buttons and list boxes.

Properties tell something about an object, such as its name, colour, size, location, or how it will behave. They can be thought of as adjectives that describe objects.

Methods are the actions associated with objects. They are the verbs of the object-oriented programming e.g. move, print, resize, and clear.

Three steps are involved in writing Visual Basic projects:

- (i) Design the user interface- here we draw a sketch of the screens the user will see when running the project. On the sketch the form is shown as well as all the controls to be used. Indicate the names that you plan to give the form and each of the objects on the form.
- (ii) Plan the properties: - For each object, write down the properties that you plan to set or change during the design of the form.
- (iii) Plan the basic code: - This step is where we plan the procedure that will execute when the project runs. Here we determine which events require action to be taken and then make a step- by -step plan for those actions.

Later, when we actually write the Visual Basic code, we must follow the language syntax rules. But during the planning stage, we will write out the actions using pseudo code, which is an English expression or comment that describes the action.

The good feature of Visual Basic language is that it is readily available on most Micro computers hence; developing a basic program can be achieved in little time with little effort and with minimal cost.

### **4.3 ANALYSIS OF THE PROGRAM**

This unit will analyze how the program runs, how numbers generated randomly are viewed on the screen or printed out. It will serve as a manual to a new operator to read before he can get access to house allocation. From a careful study of this chapter one can get a firm command of three essentials, objective, allocation and control.

One will know what he want learn the rudiments of how to operate the program and to see how houses are allocated, and the conditions that must be met before an applicant qualifies for the draw. Computerized house allocation system is a menu driven application software. In every menu an option can be selected by clicking on the corresponding option.

Starting the house allocation program using windows requires the following steps:-

Step1. Start V-BASIC by clicking on ‘All program’

Step2. Click on ‘Microsoft Visual Basic’ on the desktop.

Step3. Enter the appropriate password.

Ste 4. You are welcome into the Main Menu which comprises:

- (i) Information about the organization
- (ii) Application entry
- (iii) Summary and report
- (iv) Login and edit.

Each of the menus has sub menus as follows:

Information about the organization:

- (a) Brief about the organization
- (b) Edit

Application Entry

- (a) New entry
- (b) Existing entries

(c) Edit entries

Summary and report:

(a) Those that qualified for draws

(b) Those not qualified for draws

(c) Current draws

(d) Existing draws

Login and Edit:

(a) Perform draws

(b) Create users' account

(c) Edit users' account

(d) Edit entries

#### **4.4 SYSTEM MAINTENANCE**

System maintenance includes all the activities to be carried out after converting an old to new system. The maintenance stage covers the following:

##### **Training Needs**

The existing personnel should be given an in-house training to enable them to have basic knowledge on how to operate computer system and its peripheral devices. Emphasis should be given to data entering and other relevant computer operation.

##### **System Installation**

The installation of the equipment can be carried out by the computer or hardware expert. The equipment such as IBM PC or double floppy or hard disk and compatible printer would give the required result.

## **System Maintenance**

In order to protect against interruption of computer services, hardware requires regular maintenance. In large installation maintenance routine at a specific time should be allotted for this purpose. It could be advisable that maintenance personnel are assigned on full time basis or maintenance checks be performed once a week.

Maintenance entails identifying and replacing components that are likely to fail thus keeping mechanical parts properly adjusted.

## **Program maintenance**

Program maintenance involves updating program for necessary changes. Some programs are subjected to frequent modification and when revisions are extensive, an organization may consider a complete re-programming of the job. Specific programmer could be assigned to the job of program maintenance.

## **Security method**

Information in a database is highly essential for day to running of the organization. Precautions have to be taken in order to protect the data from unauthorized persons. Methods of data security are as follows:

- 1 Introduction of password to the database that is known only to the database manager and the computer operators.
- 2 Locking-up drives bays: This is achieved by locking up the bays so as to prevent unauthorized copying or data entry.
- 3 Back-up system: Refers to the copy of the database kept away from main database; back-up copies act as stand by in case of unexpected destruction or failure of database. Back-up can be written, documented, copied on floppy diskette or CD-ROM.
- 4 Installing Ant-virus kits which are capable of detecting viruses and also cleaning them up.



**FIGURE 1. MAIN MENU**

Applicant's data input form

new save view exit

Names	Adamu Isah	Post	Lecturer 1
Corresponding Address	FUT Minna	Grade Level	12
Permanent Address	A45 Tunga Lowcost, Minna	Annual Income	720000
Tel/GSM No	08036451254	Monthly Income	60000
Nationality	Nigerian	Other source of income	Nil
State of Origin	Niger	Bankers	UBA
Local Govt	Gbako	Salary Account No	12345678321543
Age	35	Attached 3 years clearance ?	Yes
Marital status	married	Property type	3 BED ROOM
Occupation	Civil Servant	Want property elsewhere	Yes
Employer	Federal Government	Mode of payment	Installmental
Min/Dept/Agency	Federal Min. of Education	Resume Contribution	Yes
Section/Unit	Fut, Minna		

**FIGURE 2. APPLICANT'S DATA INPUT FORM**



## Current Application

S/N	Names	Correspondence Address	State	Local Govt
1	Moh'd Isah	F U T Minna	Niger	Bosso
2	Lawal Audu	Min. of Works Minna	Niger	Minna West
3	Yakubu Abu	IBB Speci. Hosp.	Niger	Lapai
4	Dara Bilikisu	NSHC Minna	Niger	Rijau
5	Sussan Aliu	Minna	Plateau	Jos North
6	Eke Emmanuel	Tunga Minna	kwara	Ifelodun
7	Poopola Ajayi	Ibadan	Oyo	Ilesha
8	Haruna Adamu	Bida	Niger	Bida
9	Idowu Tailor	Lagos	Benin	Benin
10	Okereke Thimoty	Rijau	Anambra	Idemili
11	Adisa Michael	Kaduna	Osun	Oshogbo
12	Idris Maji	Kuta Road	Niger	Shiroro
13	Abdul Mohammed	Kutigi	Niger	Edati
14	Nwaka Dike	Dutsen Kura	Ebonyi	Ivo
15	Ganiyu Adekeye	Paiko	Duala	Duala
16	Jibrin Hassan	F Layout Minna	Niger	Mashegu
17	Husseini Adamu	Huosing & Environment	Niger	Kontagora
18	Usman Adamu	GGSS Minna	Niger	Kagara
19	Alhaj A A Danlamin	FMW Minna	Taraba	Jalingo

## Existing Applicant

S/N	Names	Correspondence Address	State	Local Govt
25	Joseph Eke	COE, Minna	Niger	Chanchaga
26	Abbas Mohammed	Min of Science & Technology	Kumasi	Kumasi
29	Adana Aliyu	NSHC	Niger	Minna
30	A. B Usman	CABS Bida	Niger	Bida
31	S. U. Chukwu	NSHC	Abuja	Kuja
32	Isa Lapai	Bosso Estate	Niger	Agwara
33	Saidu Mohammed	REB	Kogi	Lokoja
34	Nasiru Mohammed	NSHC	Niger	Bida
35	Ali Garba	Bida	Niger	Bida
1	existing Mana	house table	jkjfd	
2	asejere	dad		
3	yakubu	ibadan		
4	Dara	Lagos		
5	susan	Jos		
6	Mana	Labaran	jkjfd	
7	asejere	dad		
8	yakubu	ibadan		
9	Dara	Lagos		
10	susan	Jos		
14	gyg	gg	g	
15	IBRAHIM KUTA	SHIRORO ROAD	NIGER	
16	HADIZA KUTA	SHIRORO ROAD	NIGER	
17	Hh	H	H	
18	Hh	H	H	

## Qualified Applicant

S/N	Names	Correspondence Address	State	Local Govt
1	qualified	quaified	jkfd	
2	qualified	dad		
3	yakubu	ibadan		
4	Dara	Lagos		
5	susan	Jos		
6	Hh	H	H	
7	Aa	AA	A	
8	Joseph Eke	COE, Minna	Niger	Chanchaga
9	Abbas Mohammed	Min of Science & Technology	Kumasi	Kumasi
10	Adana Aliyu	NSHC	Niger	Minna
11	A. B Usman	CABS Bida	Niger	Bida
12	S. U. Chukwu	NSHC	Abuja	Kuja
13	Isa Lapai	Bosso Estate	Niger	Agwara
14	Saidu Mohammed	REB	Kogi	Lokoja
15	Nasiru Mohammed	NSHC	Niger	Bida
16	Ali Garba	Bida	Niger	Bida
17	Salisu Haruna	WB	Niger	Minna
18	Salisu Haruna	WB	Niger	Minna
19	Musa Yar'dua	High Court Minna	Niger	Minna
20	Musa Kankwaso	Kano	Kano	Nasarawa

## Not qualified Applicant

S/N	Names	Correspondence Address	State	Local Govt
	not qualified	not qualified	kkfd	
	not qia	dad		
	yakubu	Ibadan		
	Dara	Lagos		
	susan	Jos		
	gy9	99	9	
	IBRAHIM KUTA	SHIRORO ROAD	NIGER	
	HADIZA KUTA	SHIRORO ROAD	NIGER	
	Hh	H	H	
	Hh	H	H	
	Aa	AA	A	
	Aa	AA	A	
	Aa	AA	A	
	Usman Mohammed	NSHC	Niger	AGWARA
	chioma	lowcost	abai	ivo

## Existing Draws

S/N	Names	Correspondence Address	State	Local Govt
1	Mana	existing draws	jkfd	
2	asejere	dad		
3	yakubu	ibadan		
4	Dara	Lagos		
5	susan	Jos		

## Current Draw

S/N	Names	Correspondence Address	State	Local Govt
1	Joseph Eke	COE, Minna	Niger	Chanchaga
2	Nasiru Mohammed	NSHC	Niger	Bida
3	Isa Lapai	Bosso Estate	Niger	Agwara
4	Saidu Mohammed	REB	Kogi	Lokoja
5	qualified	quaified	jkjfd	
6	Hh	H	H	
7	Salisu Haruna	WB	Niger	Minna
8	Mrs Joseph Chukwu	A6 Tunga Lowcost, Minna	Ebonyi	Ivo
9	Abbas Mohammed	Min of Science & Technology	Kumasi	Kumasi
10	Adana Aliyu	NSHC	Niger	Minna

# **CHAPTER FIVE**

## **SUMMARY, RECOMMENDATION AND CONCLUSION**

### **5.1 SUMMARY**

A close look at both the manual and computerized house allocation system will show some similarities and differences. Each has its distinct characteristic features that distinguish it from the other.

The problems and weaknesses usually associated with the existing (manual) system house allocation such as time wasting, bias, favoritism, insecurity of data, delay in decision making etc are apparently overcome by the use of the proposed computerized system.

The proposed computerized house allocation system has facility for back-up files against unauthorized users. This allows for more than one copy of a file or a program. That is files on hard disks are copied to floppy disks to serve as back up so that in the event of fire disasters or theft, the other copies can still be accessed.

The new system also ensures protection through the use of password. This is a situation where all users of computerized system are issued with password with which to access it.

The proposed computerized house allocation system is an improvement in efficiency, accuracy, reliability, and speed compared with the existing manual system.

It is strongly believed that if the proposed system is implemented, it will enhance the effectiveness and efficiency of the estate department of the Niger State Housing Corporation, Minna. The purpose of this project work is to provide a lasting solution to the problem being encountered in the house allocation. The programmer was able to design the program in such away that house allocation can be conveniently carried out as designed, with each

applicant having equal opportunity of being selected and the program can be used in any housing estate in terms of house allocation.

## **5.2 RECOMMENDATION**

It has become clear that in any organization manual operation and control of its activities cannot meet with the requirement of efficient and timelines execution of its project, mainly offices and houses. It has therefore become imperative for Niger State Housing Corporation to unequivocally accept the concept of computerization in house allocation and rendering other services to customers. The installation of the proposed system is to ensure maximum benefit as such it is recommended that the following be adopted:-

- i. **MANPOWER:** - There is need to review the manpower need of the department, the typists who are not computer literate should be trained to use word processor and some staff need be employed like an in-house programmer
- ii. **SECURITY:** - Security of any computer room should be orderly as stated to avoid both logical and physical problems hence should be apply to both corporation's staff and outsiders.
- iii. **COMPUTER ENVIRONMENT:** - The system should be treated for efficient durable function therefore the normal air conditioner needed to keep the room cool at all times should be properly maintained.
- iv. **RESEARCH:** - This can be conducted further by including other departments like engineering, planning and so on.
- v. **IMPLEMENTATION:** - I hereby recommend the implementation of the proposed system by the Niger State Housing Corporation, Minna.



### **5.3 CONCLUSION**

Information is an important aspect in the resource allocation system of any organisation because it determines the efficiency of its services.

The estate department of Niger State Housing Corporation makes use of files for recording information of various houses and the occupants, and when there is need for information about any house the files are traced manually one after the other.

The computerized system has provided many facilities such as reduction in space occupied by files, reduction in time spent searching for data, hence searching is faster and accurate.

The purpose of this project work is to provide a lasting solution to the problem being encountered in house allocation by the Niger State Housing Corporation. The programmer was able to design the program in such a way that house allocation can be conveniently carried out as designed, with each applicant having equal opportunity of being selected and the program can be used in any housing estate in terms of house allocation.

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txtEmpIDye.Click =

EmpIDye

txtEmpIDye

## LOGIN FORM

End Sub

Private Sub cmdexit\_Click()

res = MsgBox("Are you sure you want to quit this application?", vbYesNo + vbInformation, "Laundry Manager")

If res = vbYes Then

End

Elseif res = vbNo Then

frmLoginn.Refresh

End If

End Sub

Private Sub cmdLogin\_Click()

Dim strUserID As String

strUserID = UCase(Trim\$(txtUserID.Text))

If txtPassword.Text = "" Or txtUserID.Text = "" Then

MsgBox "One of your login fields is blank, please try again.", , "Attention"

Exit Sub

End If

If Label14.Caption = "Administrator is logging on" Then

With DatLogin.Recordset

strUserID = "UserID = '" & strUserID & "'"

.FindFirst strUserID

' Populate recordset.

' Find first record satisfying search string. Exit

' loop if no such record exists.

.

If .NoMatch Then

MsgBox "User ID does not exist"

txtUserID.Text = ""

txtPassword.Text = ""

Exit Sub

Else

frmUserID = UCase(!userid)

frmpassword = UCase(!password1)

frmHOD = !HOD

If frmHOD = "False" Then

MsgBox "You need to enter through User's entry"

txtUserID.Text = ""

txtPassword.Text = ""

Exit Sub

.

```
Elseif UCase(RTrim(txtPassword)) = frmpassword Then
```

```
Text1.Text = UCase(frmLoginn.DatLogin.Recordset.Fields("surName").Value)
```

```
Text2.Text = UCase(frmLoginn.DatLogin.Recordset.Fields("Name").Value)
```

```
.
```

```
With DatLogFile.Recordset
```

```
.AddNew
```

```
!userid = txtUserID.Text
```

```
!Name = Text1.Text
```

```
!SurName = Text2.Text
```

```
!dateloggedon = Text3.Text
```

```
!timeloggedon = Text4.Text
```

```
.Update
```

```
.
```

```
End With
```

```
frmmenu.Show
```

```
Else
```

```
MsgBox "Invalid Password"
```

```
txtUserID.Text = ""
```

```
txtPassword.Text = ""
```

```
End If
```

```
End If
```

```
End With
```

```
End If
```

```
If Label14.Caption = "User is logging on" Then
```

```
With DatLogin.Recordset
```

```
strUserID = "UserID = " & strUserID & ""
```

```

.FindFirst strUserID

    If .NoMatch Then
        MsgBox "User ID does not exist"
        Exit Sub
        txtUserID.Text = ""
        txtPassword.Text = ""
    Else
        frmUserID = UCase(!userid)
        frmpassword = UCase(!password1)
        frmHOD = !HOD
        If frmHOD = "True" Then

            MsgBox "You need to enter through Manager's entry"
            txtUserID.Text = ""
            txtPassword.Text = ""
            Exit Sub

            ElseIf UCase(RTrim(txtPassword)) = frmpassword Then

                Text1.Text = UCase(frmLoginn.DatLogin.Recordset.Fields("surName").Value)
                Text2.Text = UCase(frmLoginn.DatLogin.Recordset.Fields("Name").Value)

                With DatLogFile.Recordset
                    .AddNew
                    !userid = txtUserID.Text
                    !Name = Text1.Text
                    !SurName = Text2.Text

```

```
        !dateloggedon = Text3.Text
        !timeloggedon = Text4.Text
        .Update
    End With

    frmmenu.Show

    frmmenu.logmnu.Enabled = False

Else
    MsgBox "Invalid Password"

    txtUserID.Text = ""
    txtPassword.Text = ""

    End If
    End If
    End With
    End If
End Sub

Private Sub Form_Load()
    With DatLogin
        .DatabaseName = App.Path & "\login.mdb"
        .RecordSource = "login"
    End With

    With DatLogFile
        .DatabaseName = App.Path & "\login.mdb"
        .RecordSource = "logfile"
    End With

    'center form on screen
```

```
frmLoginn.Left = (Screen.Width - Width) / 2
```

```
frmLoginn.Top = (Screen.Height - Height) / 2
```

```
Label4.Caption = "Login time is:"
```

```
Text4.Text = Time()
```

```
Text3.Text = Date
```

```
Label15.Caption = "Login date is:"
```

```
End Sub
```

```
Private Sub Form_Unload(Cancel As Integer)
```

```
'close login database
```

```
DatLogin.Recordset.Close
```

```
End Sub
```

```
Private Sub Picture1_Click()
```

```
Label14.Caption = "Administrator is logging on"
```

```
Frame1.Visible = True
```

```
txtUserID.Visible = True
```

```
txtPassword.Visible = True
```

```
cmdLogin.Visible = True
```

```
cmdExit.Visible = True
```



Label5.Visible = True

Label15.Visible = True

Label6.Visible = True

txtUserID.SetFocus

End Sub

Private Sub Picture2\_Click()

End Sub

Private Sub Picture3\_Click()

Label14.Caption = "User is logging on"

Frame1.Visible = True

txtUserID.Visible = True

txtPassword.Visible = True

cmdLogin.Visible = True

cmdExit.Visible = True

Label5.Visible = True

Label15.Visible = True

Label6.Visible = True

txtUserID.SetFocus

End Sub

**FORM TO INPUT APPLICATIONS**

```
Private sf, dtp As String
```

```
Private Sub Form_Load()
```

```
'Connecting to the database
```

```
With DatQualified
```

```
.DatabaseName = App.Path & "\house_data.mdb"
```

```
.RecordSource = "house_qualified"
```

```
End With
```

```
With DatNotQualified
```

```
.DatabaseName = App.Path & "\house_data.mdb"
```

```
.RecordSource = "house_notqualified"
```

```
End With
```

```
With DatExistingAppl
```

```
.DatabaseName = App.Path & "\house_data.mdb"
```

```
.RecordSource = "house_table"
```

```
End With
```

```
cmbProperty.AddItem "2 BED ROOM"
```

```
cmbProperty.AddItem "3 BED ROOM"
```

```
cmbProperty.AddItem "4 BED ROOM"
```

```
cmbcontribution.AddItem "Yes"
```

```
cmbcontribution.AddItem "No"
```

```
cmbelsewhere.AddItem "Yes"
```

```
cmbelsewhere.AddItem "No"
```

cmblevel.AddItem "1"

cmblevel.AddItem "2"

cmblevel.AddItem "3"

cmblevel.AddItem "4"

cmblevel.AddItem "5"

cmblevel.AddItem "6"

cmblevel.AddItem "7"

cmblevel.AddItem "8"

cmblevel.AddItem "9"

cmblevel.AddItem "10"

cmblevel.AddItem "11"

cmblevel.AddItem "12"

cmblevel.AddItem "13"

cmblevel.AddItem "14"

cmblevel.AddItem "15"

cmbmstatus.AddItem "single"

cmbmstatus.AddItem "married"

cmbmstatus.AddItem "divorcee"

cmbmstatus.AddItem "widow"

cmbclearance.AddItem "Yes"

cmbclearance.AddItem "No"

End Sub

Private Sub Toolbar1\_ButtonClick(ByVal Button As MSComctlLib.Button)

'On Error GoTo errorcase

Select Case Button.Index

Case 1

txtname.Text = ""

txtcorresaddr.Text = ""

txtpermaddr.Text = ""

txtgsm.Text = ""

txtnationality.Text = ""

txtstate.Text = ""

txtage.Text = ""

cmbmstatus.Text = ""

txtoccupation.Text = ""

txtemployer.Text = ""

txtdept.Text = ""

txtsection.Text = ""

txtpost.Text = ""

cmblevel.Text = ""

txtaincome.Text = ""

txtmincome.Text = ""

txtothers.Text = ""

txtbankers.Text = ""

txtsalary.Text = ""

cmbclearance.Text = ""

txtpayment.Text = ""

cmbcontribution.Text = ""

```
cmbelsewhere.Text = ""
```

```
cmbProperty.Text = ""
```

```
Case 2
```

```
Dim age As Integer
```

```
age = Val(txtage.Text)
```

```
monthly_income = Val(txtmincome.Text)
```

```
clearance = cmbclearance.Text
```

```
With DatExistingAppl.Recordset
```

```
    .AddNew
```

```
    !ID = 0
```

```
    !Name = Trim$(txtname.Text)
```

```
    !corre_address = txtcorresaddr.Text
```

```
    !perm_address = txtpermaddr.Text
```

```
    !telno = txtgsm.Text
```

```
    !nationality = txtnationality.Text
```

```
    !State = txtstate.Text
```

```
    !lga = txtlga.Text
```

```
    !age = Val(txtage.Text)
```

```
    !marital_status = cmbmstatus.Text
```

```
    !occupation = txtoccupation.Text
```

```
    !employer = txtemployer.Text
```

```
    !dept = txtdept.Text
```

```
    !Section = txtsection.Text
```

```
    !post = txtpost.Text
```

```
    !grade = Val(cmblevel.Text)
```

```
    !annual_income = Val(txtaincome.Text)
```

```

!monthly_income = Val(txtmincome.Text)

!other_income_source = txtothers.Text

!bankers = txtbankers.Text

!salary_acct_no = txtsalary.Text

!tax_clearance = cmbclearance.Text

!property_type = cmbProperty.Text

!payment_mode = txtpayment.Text

!contribution = cmbcontribution.Text

.Update

End With

If (age >= 18 And monthly_income >= 25000 And clearance = "Yes") Then

With DatQualified.Recordset

.AddNew

!ID = 0

!Name = Trim$(txtname.Text)

!corre_address = txtcorresaddr.Text

!perm_address = txtpermaddr.Text

!telno = txtgsm.Text

!nationality = txtnationality.Text

!State = txtstate.Text

!lga = txtlga.Text

!age = Val(txtage.Text)

!marital_status = cmbmstatus.Text

!occupation = txtoccupation.Text

```

```

!employer = txtemployer.Text

!dept = txtdept.Text

!Section = txtsection.Text

!post = txtpost.Text

!grade = Val(cmblevel.Text)

!annual_income = Val(txtaincome.Text)

!monthly_income = Val(txtmincome.Text)

!other_income_source = txtothers.Text

!bankers = txtbankers.Text

!salary_acct_no = txtsalary.Text

!tax_clearance = cmbclearance.Text

!property_type = cmbProperty.Text

!payment_mode = txtpayment.Text

!contribution = cmbcontribution.Text

.Update

End With

Else

With DatNotQualified.Recordset

.AddNew

!ID = 0

!Name = Trim$(txtname.Text)

!corre_address = txtcorresaddr.Text

!perm_address = txtpermaddr.Text

!telno = txtgsm.Text

!nationality = txtnationality.Text

```

```

!State = txtstate.Text

!lga = txtlga.Text

!age = Val(txtage.Text)

!marital_status = cmbmstatus.Text

!occupation = txtoccupation.Text

!employer = txtemployer.Text

!dept = txtdept.Text

!Section = txtsection.Text

!post = txtpost.Text

!grade = Val(cmblevel.Text)

!annual_income = Val(txtaincome.Text)

!monthly_income = Val(txtmincome.Text)

!other_income_source = txtothers.Text

!bankers = txtbankers.Text

!salary_acct_no = txtsalary.Text

!tax_clearance = cmbclearance.Text

!property_type = cmbProperty.Text

!payment_mode = txtpayment.Text

!contribution = cmbcontribution.Text

.Update

End With

End If

MsgBox "Saved"

Case 3

DatExistingAppl.Recordset.OpenRecordset

rptcurrent_appl.Show

```



Case 4

End

End Select

'Exit Sub

'errorcase:

'MsgBox "Make sure you input compulsory fields "

'Exit Sub

End Sub

#### **DRAW FORM**

Private Sub cmdClose\_Click()

Unload Me

End Sub

Private Sub cmdCreateAccount\_Click()

Dim enteredNo As Integer

enteredNo = Val(txtno.Text)

If txtno.Text = "" Or enteredNo > DatCurrentAppl.Recordset.RecordCount Then

MsgBox "Please enter number of draws wanted, Meanwhile the number " \_  
& "of draws should not be more than total no of applicant ;"

Else

```
List1.Clear
```

```
Dim MyValue As Integer
```

```
Dim lc As Integer
```

```
Dim listval As Integer
```

```
Dim SN As Integer
```

```
SN = 1
```

```
totalrows = 0
```

```
With DatCurrentAppl.Recordset
```

```
    .MoveFirst
```

```
    Do Until .EOF
```

```
        totalrows = totalrows + 1
```

```
    .MoveNext
```

```
    Loop
```

```
End With
```

```
numbertogenerate = Val(txtno.Text)
```

```
For i = 1 To numbertogenerate
```

```
    lc = List1.ListCount
```

```
Retry:
```

```
MyValue = Int((totalrows * Rnd) + 1) ' Generate random value between 1 and 6.
```

```
For J = 0 To lc
```

```
    listval = Val(List1.List(J))
```

```
If listval = MyValue Then
```

```
    GoTo Retry
```

```
End If
```

```
Next J
```

```
List1.AddItem MyValue
```

```
With DatValueExt
```

```
    applID = "ID =" & MyValue & ""
```

```
    .Recordset.FindFirst applID
```

```
    namee = .Recordset.Fields("Name").Value
```

```
    adres = .Recordset.Fields("corre_address").Value
```

```
    State = .Recordset.Fields("state").Value
```

```
    lga = .Recordset.Fields("lga").Value
```

```
End With
```

```
With DatCurre_draw.Recordset
```

```
    .AddNew
```

```
    !ID = SN
```

```
    !corre_address = adres
```

```
    !Name = namee
```

```
    !State = State
```

```
    !lga = lga
```

```
    .Update
```

```
End With
```

```
SN = SN + 1
```

```

Next i

DatCurre_draw.Recordset.OpenRecordset

rptcurrent.Show

End If

End Sub

Private Sub cmdDel_Click()

Dim dbs As Database, rst As Recordset

' Modify this line to include the path to Northwind
' on your computer.

Set dbs = OpenDatabase(App.Path & "\house_data.mdb")

' Delete employee records where title is Trainee.

dbs.Execute "DELETE * FROM current_draws;"

dbs.Close

End Sub

Private Sub Form_Load()

Randomize

With DatCurre_draw

.DatabaseName = App.Path & "\house_data.mdb"

.RecordSource = "current_draws"

End With

```

With DatCurrentAppl

.DatabaseName = App.Path & "\house\_data.mdb"

.RecordSource = "house\_qualified"

End With

With DatValueExt

.DatabaseName = App.Path & "\house\_data.mdb"

.RecordSource = "house\_qualified"

End With

'display and center form

Show

Left = (Screen.Width - Width) / 2

Top = (Screen.Height - Height) / 2

End Sub

Private Sub view\_c\_appl\_Click()

rptcurrent\_appl.Show

End Sub