COMPUTERISATION OF STAFF CONTRIBUTION TOWADS

NATIONAL HOUSING SCHME

(ACASE STUTY OF USMAN DANFODIO UNIVERSITY TEACHING

HOSPITAL SKOTO)

BY

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CERTIFICATION

This project work has been read and approved by the undersigned as meeting the

requirement of the mathematics / computer science, Federal University of Technology,

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DEDICATION

These Project is dedicated to my Mother (Haj. Zainab Titi), Wife (Lubabatu S.

Dabai) and Daughter (Lubaabatu T. Hassan)

ACKNOWLEDGEMENT

I owe the Almighty Allah my total existance and success in my life.

My Project Supervisor – Prince R. Badamosi, a father , a guardian who upon all his commitment spared allot of his valuable time to suppervised me on these project. May Allah continue to guide him and reward him for all his assistance.

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ABSTRACT

The National Housing scheme (established by decree 3, 1992) provide an enduring pool of funds for lending to contributors to enable them build, buy or renovate their own homes.

Usman Dinfodio University Teaching hospital Sokoto provide means of access to this pool of funds through hiring of services.

The study analyses mortgage loan services by the Federal mortgage Bank of Nigeria. A computer program is also developed as an attempt to facilitate the effectiveness of such services. The study highlights the major benefits to be derised by automating the services.

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CHAPTER ONE

1.0   INTRODUCTION

Recently, the Federal Mortgage Bank of Nigeria   (FMBN) has
embarked on large scale publicity measures aimed at promoting the National
Fund (NHF) Scheme. These basic stages have been identified and these are
Information, Education and Communication. The subsisting phase is that of
the information on the NHF. Hopefully we shall progress to the interactive
state of intrinsic appreciation of the NHF through education.

The third and last phase of this campaign is deliberately planned to
prepare individuals to be able to communicate in the language of this NHF
and be able to use it for their own benefits and protection.

1.1   FOUNDATION OF THE STUDY

The housing sector is the largest single investment sector in most
economics and its ownership has become the highest previty for asset
formation for most people. The availability, accessibility and affordability of
housing has therefore become a priority agenda of Government in most
countries.

In Nigeria, part of government efforts in this regard was the
promulgation of decree No. 53 of 1989 with the establishment of a two tier
institutional structure with the Federal Mortgage Bank of Nigeria (FMBN)
as the apex and regulatory Agency and the primary mortgage institutions as
retail outfits.

Also, was the establishment of this national housing fund (NHF) scheme under Decree No. 3 of 1992 which is being managed by the Federal Mortgage Bank of Nigeria to address primarily the constraints to the mobilization of long term funds for housing development by ensuring that every Nigerian has access to housing loans at affordable rates of interest.

1.2 IMPORTANCE OF THE STUDY

The ultimate goal of National Housing policy is to improve living standards, to increase individuals chance and to create conditions that will enable people to realize their potentials through the gradual and sustained increase of the nation's housing stock.

Base on the above we under take these study to investigate how the introduced National Housing Fund (NHF) Scheme operate in a manual system and check the possibility of using the information technology system. Since the scheme involves hundreds of thousands of employers and millions of employees the Data information must be cumbersome, that going about processing the records manually can lead to a lot of errors and also can allow lost of records, which might lead to making some contributors lose some part of this contributions.

1.3 OBJECTIVE OF STUDY

The process of registration of employers, employees, self-employed and respective contribution into National Housing Fund (NHF) Scheme

Great improvement could be achieve in this direction by computerizing the staff contribution of Usman Danfodio university Teaching Hospital (UDUTH) Sokoto.

However, there could be some counter arguments to the computerization (1) there should be adequate Technical know how in the computerization process. (2) it is capital intensive (3) with present situation of power supply information may not be gotten unless there is an alternate power source.

1.5 WHAT IS A COMPUTER

A computer can be defined as "an electronic devise that is used for collection and processing of instructions or data and giving out the required information or output". It is electronic because it works with electricity, though it has some mechanical parts that it works with.

The basic function done by a computer are:

Input (receiving data or instruction)

Processing (i.e. calculating, comparing, storing, controlling, arranging, classifying, sorting, reproducing or otherwise acting upon).

Output (giving the required information or action).

Data (Plural for Datum) is referred to the raw material or input to any processing system while information refers to the output that is required to help in decision making.

Relay switches were replaced with vacuum tubes in the 1940's leading to fully electronic computers such as the electronic numerical integrated al calculator otherwise called ENIAC.

Great strides have since then been made with each break through making the previous model to become technologically obsolete. Subsequent development of computer were grouped into stages known as GENERATIONS, obtained over certain periods. These generation are:-

FIRST GENERATION (1937)

The first generation of computers have the following features.

(a)   Characteristically large in size

(b)   They use vacuum tubes which generate a lot of heat and use to be constantly replaced.

(c)   They used machine language for communication which is based on binary numbers (O'S 4 1'S).

The first generation of Computers marked the beginning of data process organization. Limitations such as being very expensive, cannot be easily moved, not easy to operate, etc, made development to continue.

SECOND GENERATION (1959)

These computer has the following features

a.   Great reduction in size

b.   Transistors replaced Vacuum tubes, and are smaller in size, faster, more reliable and produce less heat.

c.   Low-level (or assembly) language was developed using symbols or pneumonics.

These second generation of computers marked the beginning of programming, and the use of magnetic media for permanent storage of data.

THIRD GENERATION (1965)

The features of the third generation computers

a.   Great reduction in size

b.   Integrated circuit (or chips) replaced transistors

c.   High level (procedure oriented) language were introduced.

These generation of computers marked an increase in processing speed, greater accuracy, integration of hardware and software, ability to perform simultaneously. Data communication, improved performance to pace ratio.

FOURTH GENERATION (1972)

The feature of this generation computer are:

a.   About the same size as the third generation

b.   Very large integrated circuit (VLIC)

c.   Microprocessors.

These generation marked the beginning of microcomputers. It also marked the change from language that describe how to solve problems to language that tells what the problem is, leaving the computer to work out the how, e.g. data base management system (DBMS).

FIFTH GENERATION (1980'S = 90'S)

The main features of these generation of computers is the artificial intelligence.

These involves getting computers to think and act, such as recognizing patterns and working out to solve problems. Though artificial intelligence is still being developed, some aspect considered to be intelligence such as language translation, optical and speech recognition.

CLASSIFICATION OF COMPUTER

Computer are generally classified into

1.   TYPES: This class includes

a.   **ANALOGUE COMPUTERS:**

These computers operates using smooth, continuous changes in electrical signals.

b.   **DIGITAL COMPUTERS**

The computers operates using electrical signals that switches on an off.

c.   **HYBRID COMPUTERS**

These computer operates using a continuation of analogue and digital system.

2.   **PURPOSE**

    a.   General purpose computer; built for any kind of operations.

    b.   Specific purpose computers:- designed for specific operation.

3.   **SIZE**

    In this class there are

    a.   Embedded Computer

    b.   Micro Computers

    c.   Mini Computers

    d.   Mainframe Computers

    e.   Super Computer

1.7   COMPUTER CONFIGURATION

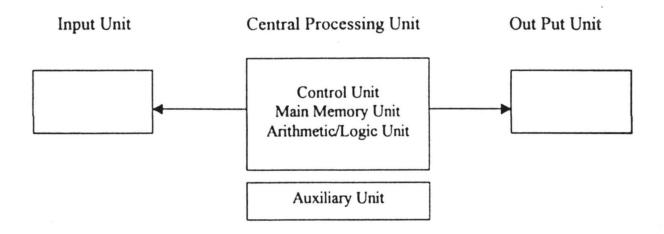Component of computer can be divided into two,

    1. Hardware

    2. Software

1.   **HARDWARE**

    Computer hardware refers to all physically seen and torched electrical and mechanical parts that make up the computer including its peripheral devices.

The main parts are grouped into 3 units, input unit, central processing unit, and output unit.

These is represented in the following diagram.

Input Unit	Central Processing Unit	Out Put Unit

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┌──────────┐         ┌─────────────────────┐        ┌──────────┐
│          │         │    Control Unit      │        │          │
│          │ ◄────── │   Main Memory Unit   │ ─────► │          │
│          │         │ Arithmetic/Logic Unit│        │          │
└──────────┘         └─────────────────────┘        └──────────┘
                     ┌─────────────────────┐
                     │    Auxiliary Unit    │
                     └─────────────────────┘
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INPUT UNIT

These is the unit that allows to be fed into the computer. The devices use for input are:-

1. Keyboard for typing numeric and alpha-numeric data.

2. Mouse, a pointing device use for faster operation

3. Joystick used in computer games

4. Scanner for inputting data in pictures

5. Tablets for inputting data in tables

6. Magnetic Ink, character recognition for data written in magnetic ink.

6. Magnetic Ink, character recognition for data written in magnetic ink.

7. Optical, character recognition for reading data from light.

8. Voice recognition for inputting data from voices.

These use of an input device depend on the operation desired by the Computer user .

OUTPUT UNIT

These units shows the desired result as processed by the Computer. It uses the following devices.

i. Monitor (Screen). This is a cathode ray tube (CRT), like a TV set, that shows the output on screen.

ii. Printer gives the output on paper print

iii. Plotters use for notting figures

iv. Micro Film reduces the amount of paper work where the output is large.

v. Voice out, the desired result is spoken by the device.

CENTRAL PROCESSING UNIT.

This is the heart of the computer. It control the entire system and execute process instruction given to it. it is made up of the following sections.

1.   **CONTROL UNIT.**

This direct and control all the peripheral devices attached to the computer. It receives data and/or instruction and directs them to and from, for processing and/or storage.

2.   **ARITHMETIC AND LOGIC UNIT (ALU)**

This unit is responsible for all arithmetic operations, mathematical, calculations, as well as making logical decisions. It receives data in to the main memory when directed (by the control unit), processes them and send them back to the main memory.

3.   **MAIN MEMORY**

Also known as the Random Access Memory (RAM). It received data from the control unit and stored it temporarily until further directed. It is early a temporary workspace, therefore data stored in it can be wiped out when the computer is switched off. The Ram houses the Read Only Memory (ROM), which is a permanent Memory that contains instructions or programs that assists in the flow of information eg. Goto etc.

4.   **AUXILIARY MEMORY**

This is responsible for permanent storage of data or information. It is of two common types.

   a.   Floppy Disks: which are made of the plastic coated with magnetic particles. They transfer data from one computer to another, or

requires to carry out his chosen table. These type of software is as vast the ranges of computer use. Application software production is now a major business field with so many manufacturers bringing at their own products, one of such producers in Microsoft. Some example of application softwares are MS Dos, Word perfect 6.2, Lotus 123, Dbase IV, MS windows etc.

Generally the components of the computer i.e. the hardware and software, interact with themselves when a computer is being put to any use. Hence are of them can not work without another for any computer to operate.

1.8. COMPUTER OPERATION

The modern computer is digital in nature. It is a multipurpose, programmable, machine that reads binary instructions from it memory, accepts binary data as input, processes the data according to the instructions, and provide the result as output. Thus the computer recognizes and operates in binary digits, it 0 and 1, also known as Bits (Short for Primary digits). There digits are represented in terms of electric voltage in the machine; generally 0 represents one voltage (low) and 1 represents another voltage (high).

All instructions and data to a computer can only be understood in 0's and 1's, hence an instruction for adding two numbers together may look like

a group of eight binary digits 10000001 these instructions and data are written in the computer memory which has space for a fixed number of binary numbers on each line mostly 8 binary bits known as BYTE) several of these bytes are arranged in powers of two hence 1624 (21B) byte register is known as a kilobyte. Thus the size of a computers is a function of the number of bytes the memory can register in its memory and not it physical appearance memory capacity is the number of bytes the memory can hold in both the users memory (RAM) and the hard disk, measured in Kilo (thousands), meg (Millions) or Giga (Thousand of Millions) Bytes. e.g. A 128KB Ram Computer has 131,078 bytes of many space in its ram. Modern computers are made with the ability to expand their RAM capacities by providing expansion slots.

Also, each computer has its own binary words, meaning and language. Computer words, defined as the number of bits the computer recognizes at a time, are formed by combining a group of binary bits, and it ranges from 4 bits to 32 bits. A word length is generally equivalent to 8 bits which is also equal to 1 byte. Thus a 4 bits word half word or nibble, a 8 bit word = one word or 1 byte. A 16 bits word = 2 bytes or double ward, a 32 bit word 4 bytes or 4 words, and a 64 bits word 8 bytes or 8 words.

Data and instructions are fed into the computer through and input device, which sends signal inform of coded instructions to the memory. The codes are interpreted by a monitor program built in the room into an

equivalent number of bits or bytes to the processor. A typical computer use keyboards for input that send signals in hexadecimal codes (number to base 16). Or ASCII Codes which is more common in data communication, and EBCDIC, and EBCDIC codes used by IBM Computers.

COMPUTER PROCESSES

Users of computers are always interested on how fast instructions can be supplied, processed and retrieved. Where there are sets of data to be supplied or retrieved the user surely wants their processing in the shortest possible time. Computer processes refers to the way sets of data are received by a computer for processing. It is the time its takes a computer to take in processing. It is the time its takes a computer to take in and process a data given.

Computer Processing Types Are:

1. Single process: this is refereeing to where a user will have exclusive access to the machine. One user goes to the machine to run a problem while another user wait until he finishes.

2. Multi programming: This is where several programs are loaded on the Computer, with one program being processed while another one is on the input/output.

3. Batch Processing: Programs are accumulated until ready to run as a batch, then the batch is sent to the machine for processing and the output returned when ready.

4. Time Sharing: Several users runs their programs with individual 1/0 devices share one processors. The data are retained and processed at the central processor so they will not have to be fed in again.

5. Real Time: This refers to where the computer responds to changes in a process without delaying the process.

6. Multi processing this is used to increase computing speed by grouping two or more interconnected C.P.U.S. are used at the same time to solve problems.

7. On Time: The use of input/output equipment that may be called upon any time transmit to or from the computer to which it is connected.

CHAPTER TWO

2.0 BRIEF HISTORY OF USMAN DAN FODIO UNIVERSITY TEACHING HOSPITAL

The history of Usman Danfodiyo University Teaching Hospital dates back to 1972/73 financial year when the Federal Military Government authorized the release of N1m to each of then 12 states of the Federation for the development of Specialist Hospital with Teaching facilities. The then North-Western State Government decided to build Sokoto Specialist Hospital, engaged the services of messrs dar-al-Handasah Consultants for the construction of the project divided into three phases 1A, 1B and 2 in 1973. The contract for the construction of phase 1A, which comprises of the administration Block and 3 ward blocks was awarded to Messrs Taylor Woodrow Nigeria (TWN) Limited on a "Cost plus" basis in 1975.

Subsequent to a public enquiry, the state Government decided to terminate the Consultancy Agreement with Messrs Dar-Al-Handash in 1976; and TWN Ltd terminated the construction contract for phase 1A of the hospital for lack of supervision by Consultants.

In 1975, in line with the Federal Government Policy, the Federal Ministry of Health took over the execution of Sokoto Specialist Hospital project from the former North Western State Government, for its development as a Teaching Hospital.

Messr. Comprehensive services International (CSI) Nigeria were appointed as a consortium in 1976, and TWN Ltd invited in December, 1976 to complete phase 1A. project. In available to the Medical School of Sokoto University for Temporary use.

In September, 1979, the Construction contract for the completion of phase 1A (mechanical and electrical services) and revised phase 1B and 2 was awarded to TWN Ltd. In the sum of N34,978.28, while the contract Agreement was signed on the 18th February, 1980 with a completion date in August, 1982.

In 1983, the construction contract had to be reviewed, involving cost of re-measured works, variation based on additional works, labour and material fluctuations and extension of time claims. The contractor (TWN) agreed in July, 1984, to an estimated final account of N51,889,504.00 this was approved by the Federal Executive council in 1985.

Unfortunately, the contractor (TWN) refused to progress with work according to the agreement. To this end, the Federal Government approved the reward of the project to NECCO Nig. Ltd; Lemit Engineering Ltd, Drake & Scull Nigeria Ltd and other contributors. Meanwhile, the contract for the supply, installation, and commissioning of medical equipment and hospital furniture were awarded to five indigenous suppliers to 1983.

On 16th July, 1981, the Vice-Chancellor of the then University of Sokoto set up an implementation Committee to oversee the putting in place

of available facilities for the teaching of medical students in the teaching hospital.

On 1st November, 1982, in accordance with Decree No. 74 of 1979, the Board of management of Sokoto Teaching Hospital was inaugurated and charged with the responsibility of the general management of the hospital.

On the 1st April, 1983, by virtue of the take-over agreement, the Sokoto General Hospital (500beds) was handed over to the Management Board of the Sokoto University Teaching Hospital for 5 years.

In 1983 and again in 1986, reports of the Visitation Team from the Nigeria Medical & dental Council showed that both the general Hospital and the College of Health Science were still poorly developed in terms of staffing and facilities. Meanwhile, the target date of completion of the permanent site (New Teaching Hospital) had to be postponed beyond the 1986/1987 academic session on account of contractual disagreements and the country's prevailing financial recession.

After much concerted efforts, the hospital new complex was commissioned on Wednesday 29th November, 1989 by Gen. Ibrahim Badamasi Babangida.

2.1   NATIONAL HOUSING SCHEME

Long term borrowing is the logical way for most people to finance their housing needs, because the longer the repayment period, the lower the repayment amount, the lower the burden on the borrower and so the easier it is for me to borrow and own a house.

Therefore, National Housing Scheme is a scheme established by the Federal Government of Nigeria to facilitate the continuous plan of low-cost funds for long term investment in housing for the benefit of all Nigerians. The fund is to be managed and administered by Federal Mortgage Bank of Nigeria, essentially to provide long term housing loans to individuals through wholesale lending to primary mortgage institutions.

2.2   FEDERAL MORTGAGE BANK

The paucity of mortgage institutions was recognized as a limitation to the expansion of lending services. This informed, in part, the acquisition by government of the then Nigerian building Society (NBS) from the common wealth Development Co-operation in 1973. The objective was that, with government as proprietor, the NBS would be made a more effective instrument to address the identified constraints. The NBS later metamorphose into the Federal Mortgage Bank of Nigeria (FMBN). In 1977 by decree 7 with a mandate to spearhead the multiplication of

mortgage lending institutions. Some how these objectives were not to be consolidated for several years, as a result of policy conflict.

It later becomes a wholesale, Apex Mortgage Institution by virtue of Decree 82 of 1989 as a result of the National Housing Policy of 1991. This resulted in the establishment of a two tier housing finance mechanism with the earlier promulgated mortgage institution 53 of 1989 which restructed the FMBN, as the regulatory Mortgage Institution in the country. This allows for private participation in organized mortgage business. Such private mortgage institution popularly known as **PRIMARY MORTGAGE INSTITUTIONS** are to be licensed and accredited by the FMBN.

2.3   **PRIMARY MORTGAGE INSTITUTION (PMI)**

This institution is the retail function of the apex lender of the FMBN.

The Primary Mortgage Institution are expected to draw from its credit facilities on lending to NHF beneficiaries for purpose of building, purchasing, expanding or renovating their own houses.

To date, about 287 PMIs have been licensed since the first licenses were issued in 1991. But the system has not been without its teething problems. Especially in the first two to three years of their emergence some PMIs patterned their operations after commercial banks (some even believed they were miniature commercial banks).

2.4   CONCEPTS OF NATIONAL HOUSING SCHEME

However, the reality is that even as most people will need to borrow, finance is in short supply, more so for long term lending. A common complaint is that the housing sector does not have sufficient access to credit. Sometimes the blame is put on public policies which promote, directed credits at subsidized rates of interest or induce a sub-optimal financial intermediation. At other times it is the lending institutions that are blamed because of their pre-disposition to short term trading. In some cases, it is the borrowers, because of their low level of credit worthiness.

To a certain extent, each of these view points is correct. However, the more compelling explanation is the absence of long term funds in the economy engendered by a general low savings propensity and culture reinforced by a poor macro-economy.

Much of the housing finance problem experienced today is on equivocal expression of cumulative distortions from policy weakness in the past. As a result, what had appeared to be no worse than precarious, balance between resources and demand is now threatened by increasing urbanization and absolute growth of population. And, rather fortuitously, the increasing need for housing finance services coincides with a clattering slow down in the growth of resources, and a consequential reduction in the

financial capability of both the government and the individual household which poses a challenge to enterprise extension of concept.

2.5   THE PROCEEDINGS OF THE NHF

i.   *FUND MISSION*

The national Housing fund was established to facilitate the continuous flow of low-cost funds for long term investment in housing for the benefit of all Nigerians.

ii   *MANAGEMENT OF THE FUNDS*:

The fund is to be managed and administered by Federal Mortgage Bank of Nigeria essentially to provide long term housing loans to individuals through wholesale lending to primary mortgage institutions.

iii   *CONTRIBUTORS*

The fund is to be subscribed by mandatory contributions as prescribed in the decree.

Any Nigerian earning an income of N3,000 and above per annum should contribute 2.5 percent of his/her basic monthly salary of income to the fund.

If you are self-employed or you own your business, whether as a trader, artisan, professional, or business person, etc, you are expected to contribute to the fund.

In addition, commercial and merchant banks, insurance companies and the Federal Government will also contribute to the fund.

iv   HOW TO CONTRIBUTE

1.   REGISTRATION

All potential contributors to the fund are to be registered by FMBN A registration form will be issued by FMBN to an employee through his/her employer. This should be completed and returned as indicated on the Form. Each Employer is to be similarly registered to facilitate the deduction and remittance of contributions.

A participation number will be allocated to you and would remain the same, even when you change your place of employment.

If you are self-employed you are also expected to register. You are to collect a form from any Branch of FMBN. Your employees (if any) should be equally register.

2.6 PAYMENT OF CONTRIBUTION

Following your registration with the Fund, your employer is expected to deduct 2.5 percent from your salary monthly and remit to FMBN.

If you are self-employed you may pay directly to any office of FMBN. A passbook shall be issued to you to record your monthly contributions. This passbook must be surely kept, as it will be required for every transaction.

2.7 REMITTANCE OF CONTRIBUTIONS

Employer must deduct the appropriate amount of contribution from the salary of every worker registered with fund, and remit same promptly to FMBN. A yearly statement of your contributions shall be sent to the individual concerned.

BENEFITS OF THE SCHEME

(i) HOUSING LOAN:

The pool of contributions is to provide housing loan for every Nigerian at relatively low rate of interest. To borrow from the fund you must be a contributor, and a contributor can automatically apply for the loan. All applications are made through any mortgage institution, where you receive further information and assistance.

(ii)   *FIXED RATE OF INTEREST*

The interest rate applicable at the time you take the loan will remain fixed until the loan is fully repaid.

(iii)   *LONG REPAYMENT PERIOD*

You will be able to repay the loan over a period of twenty-five (25) years.

a.   Whether or not you borrow from the fund your contributions shall attract interest.

2.8   REFUND OF CONTRIBUTION

Your contribution together with the accrued interest will be refunded to you. When you are sixty (60) years or retired or can no longer continue in employment due to ill-health.

9 ELEMENT AND CHARACTERISTIC OF NATIONAL HOUSING SCHEME

Concurrent with the acquisition of the Nigerian building society (NBS), and in apparent complicit with that initiative, there was a massive program for direct housing construction by public sector, which unwillingly come to reinforce notion of as social good that must be provided by government cushioned by large reserves from the sale of oil, the third national development plan (1976-1980) had a target for 202,000dwelling units over the plan period, these units were to be allocated at highly subsidized prices. A similar programme, these time for 40,000 units per year, was the center piece of the housing component of the fourth national development plan (1981-1995). The physical achievement in the for case was 28,000 units or 14 percent), while about 60 percent of the first years housing (i.e 15% of the 4 year target) was achieved at the end of the planed period. An interesting feature of these direct contribution programs was that there was little or not involvement of housing finance agencies. The direct financing by government represented a substitution for, and there for discouraged that mobilization of private savings that could have otherwise mobilized and could have relieved the public purse of it huge financial commitment to the programs.

Several measure were taking to direct credit into housing and loan cheaper. Pursuant to the recommendation of the Anti-inflation task force in 1976, the NBS was compelled to reduced the interest rates on mortgage loans to a flat rate of 3% as against the then prevailing rate of between 8.5% and 10%.

Also under the credit allocation mechanism that was in place before the introduction of Structural Adjustment Programme (SAP) in 1986, it was mandatory for Banks to lend for housing, a prescribed minimum percentage of their loanable funds. All such were at prescribed concessionary rates of interest. In practice there were three major effects of these measures. The first was that the cheap loans induced a high volume of applications beyond the immediate response capability of FMBN the sole provider of direct mortgage financing. It also spun a spate of opulent consumption of housing loans. The second was that as the sectoral interest rate regime for housing was not competitive, inflow of savings became dub due. Thirdly, and most profound, other lending institutions (like state housing corporations and commercial banks) felt compelled to reduce their exposure to mortgage lending due to the relative and unprofitability of the prescribed interest rate level. Even though the interest rates were increase in later years, systematic distortions had been induced. The combined effect of the measures was that the growth of the housing finance system was subdued for several years, as

the flow of savings into the system suffered and institutional development became stunted. As a result the lending system become progressively dependent on government patronage for long term loans.

With the increase in the make of the Structural Adjustment Programme housing became less affordable to more people. This was compounded by the import dependence of the construction industry which induced its own derived inflation. As funds in loan to housing suffered further, the obvious reality was to redefine the welfare economics of housing credits. Thus a new National Housing Policy was formally launched in 1991. The thrust of the policy is to widen the role of the private sector as the chief means of addressing the shortages of funds and materials, with government as an enabler and facilitator. The policy is the facilitation of the accumulation of hugh amounts of cheap funds mainly by the private sector through a set of two mutually reinforcing measures.

The first was the establishment of two tier institutional structure, with primary lenders and FMBN as the apex institution. The idea is for private enterprises to establish PMIs to mobilize household savings for their loan making operation, while FMBN is to regulate and supervise their operations as well as to perform the role of a secondary lender to them. The loyal framework is defined in the mortgage institutions decree no. 53 of 1998.

The second was the establishment by Decree 3 of 1992 of the national Housing Fund (NHF) which is to be subscribed through compulsory

monthly savings by individuals earning N3,000:00 or more per year. Employers are to deduct the contribution from salary of each of their staff and remit to FMBN on a monthly basis. It is also mandatory for Commercial and Merchant Banks as well as insurance companies to invest prescribed proportions of their loanable resources in the Fund. Government is also to contribute unspecified amounts to the Fund from time to time. Proceeds of the fund are to be utilized for housing credits through the PMIs to contributors to the fund at interest rates that are predetermined and fixed below markets rates. The fund is to be administered and managed by FMBN.

The two measures were designed to collaterally address the three problems of inadequate lending institutions, scarcity of long term loanble funds and unaffordable interest rates in the system. The interest rate structure on the NHF operation was deliberately made low (on both the contributions and the loans to be granted) to make housing loans cheaper. The NHF is essentially a window for soft loans which would complement the volume of savings freely mobilized by the PMIs to increase the resources available. Thus the voluntary and mandatory sources of funds are private sector base; and they offer the advantage of insulating the system from the fluctuations that characterized the past reliance on government patronage.

2.10 ESTABLISHMENT OF NATIONAL HOUSING FUND SCHEME

In other to facilitate the continuous flow of low-cost funds for long term investment in housing for the benefit of all Nigerians, the Federal Military Government under decree No. 3 of 1992 established the National Housing Fund Scheme.

2.11 MERITS

Before the introduction of Federal Housing Fund, the Federal Mortgage Bank was almost with nothing much doing except for monitoring the primary mortgage institutions and paying salary's and wages to it ten's of hundred staff which was attracting mass retrenchments of staff. But the introduction of National Housing Scheme made it such that on monthly bases the Bank realized about N120 million as at July 1999.

As at these date 9 July, 1999) the Bank has about 1.6 million contributors which in accumulation have so far contributed about N3.6 Billion to the scheme. The Bank has initially approved for disbursement to 159 contributors through eight primary mortgage institutions the sum of N78 Million Naira.

And later approved the sum of N32,149,731:00 to Union Homes Saving and loans limited for disbursement to 50 NHF contributors to enable them purchase 50 houses in Owutu Estate, new Ikorodu town.

Also, 22 PMIs applied for the sum of N251,170,700:00 on behalf of 306 NHF contributors.

As at the date of this research about 19,160 passbooks were processed and distributed to some contributors.

Introduction of FHS has help the FMBN to assist in arresting the distress situation that has plagued the Primary Mortgage Institutions (PMIs)

2.12 DEMERITS

From what is obtained in 2.5.1, N3.6 billion was realized, but only N110,149,731 million was disbursed to contributors. And that disbursement was done in since the year the scheme was founded (1992) to July, 1999. It can be well mention that the scheme is not being well operated.

And also, only 19,160 passbooks were distributed to contributors. Base on these more than 60% of the contributor are not with any record of their contribution for all these years of contribution coupled with the facts that the operations of FMBN is mostly manual, there is high tendency of committing errors, since no record on the side of the majority contributors.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

System analysis in a specialized branch of organization and method, which contains a general approach to solving procedural problems in computerisation to meet the information needs of an organisation.

It details a process of analyzing facts about an existing operations in order to obtain a full appreciation of the situation prevailling so that an effective computer system may be design and implemented.

3.1 FEASIBILITY SUDY

The feasibility study was enabarked upon to determine the protential of the proposed system by studying the existing method of administering staff contribution. There had never been any means of keeping staff contribution separately from normal salary payslip.

Since the normal passbook was not available for the contributors, the contributors happens not to be with any thing to monitor their contributions. These makes it more difficult for the organisation and the contributors to administer their information. These lead to the computerisation of the contribution

3.2 TESTING PROJECT FEASIBILITY

The following are the usual three process of Testing feasibility of any proposed

Project.

(a) Operational feasibility Test

(b)   Techinical feasibility Test

(c)   Economical feasibility Test.

(a)   OPERATIONAL FEASIBILITY TEST

This is a way of testing the posibility and workability of the proposed system. Meaning weather the system will be pracitcable and acceptable by management and the situation an the proved

(b)   TECHNICAL FEASIBILITY

These is done by testing the limits of Techical know haw and equipment in existance.

(c)   ECONOMICAL FEABILITY TEST

This test for the feasibility for the financial comitment with the benefit to be derived from the system.

3.3   COST AND BENEFITS ANALYSIS

(a)   DEVELOPMENT COST

The proposed system will cost less. This is because the organisation will used the Hardwares in existance. It will only needs to pay the system analyst and the programmer. Which will mean spending once for the system to be operated for many years.

(b)   OPERATING COST

Little of stationeries suply will be added for the use of the new system, in which considering the stationaries been used for correspondence in respect of rectifying problems in staff contribution and finances been used for the

movement along with the inconviniences encaunted the excess supply will mean nothing to the organisation

3.4 BENEFITS TO BE DERIVED FROM THE PROPOSED SYSTEM

1. Consistency in information about the contribution.

2. The response time for any information required will be very less.

3. Better planing of credited contribution.

4. Security of contribution.

3.5 CHANGE OVER PROCEDURE

This is systems conversion for the old system to the new system. These process is possible in 3 ways

1. Parallel change over

2. Direct change over

3. Pilot change over

1. PARALLEL CHAGE OVER

Parallel change over is operating the old and new systems together using the same input while comparing the 2 output. This is done until the new system works satisfactorily.

2. DIRECT CHANGE OVER

Is the process of replacing the old system by the new one at ago. On doing these, system test and training must be comprehensive, and the change over must be well planed.

3.   PILOT CHANGE OVER

This is similar in concept to parallel change over. Data from one or more previous methods for the whole or part of the system is run on the new system after results have been obtained from the old system, and compared with the new result. It is not as destructive as parallel change over, since timing is not critical.

Haw ever, it is recommended that parallel change over of the system be adopted for the full conversion of the system. This is to ensure that within the period of change over reliable results are achieved.

CHAPTER FOUR

PROGRAMMES DESIGN AND IMPLEMENTATION

4.1 PROGAM DESIGN

The use of computer in processing National housing scheme in Usman Danfodio University Teaching Hospital Sokoto bring about faster processing and better monitoring of contribution made. Thus the program developed here has the following objectives:

a. To ensure faster processing of mortgage application

b. To ensure secured and sound management of the funds

c. To ensure accountability and

d. To simply contribution Administration.

4.2 PROGRAM IMPLEMENTATION: -

The program designed implemented using Ashton Tate Dbase iv programming commands. Ashton Tate Dbase is one of the most popular Dbase packages. The package is available is several different PC's. it is also an efficient Dbase Database files. This therefore, outlines the significance of using this package. Many computer users are already familiar with the package. This suggests easy comprehension of the program designed. Another reason for implementing the program using package is allow the program to be used on DOS or 'environment. The program can be completely compiled into object code by using Clipper' program; another

known to several users. The complete version of the program is attached in Appendix 1.

In the implementation of the program some database files are involved.

1 Security

2 Pay file

3 Date file

4 Heditlist

SECIRITY

It contains the user name, corresponding password and their corresponding level of accessibility. It has 2 level of accessibility, the one with 1 no can access all the items in the main menu while the one with 2 no can access few of the items. The password background and foreground are of the same color for some more security.

PAY FILE

It contain all the employee name, corresponding employee nember, account number, basic salary the amount of monthly contribution for housing scheme and cumulative amount contributed

DATE FILE

This is the file that stores the month/year of contribution.

HEDITLST

All fields that are likely to be edit listed are contain in these file i.e all the fields in the PAYFILE

4.3   OPERATION PROCEDURE

4.3.1 GETTING INTO THE PROGRAM

Since the program has been converted into executable file mood, at the DOS prompt (C:I), you can move to drive A and load the program (i.e by typing the name Hsheme) a window will open. These window display 2 message

1.   Username

2.   Password

On typing the correct username and password, it gets you straight to the main menu. Otherwise it will display a message wrong password with the number of chances remaining (though there are only 3 chances). On pressing escape key it gets you back to the immediate past position. If 3 trials were made and correct password not inputted, its display sorry trials exhausted, access denied.

4.3.2 MAIN MENU

On inputting the correct user name and corresponding password, its get you direct to the main menu. The main menu contain:-

1   New staff documentation

2   Enquiry

3   Amendments

4   Delete staff from contribution

5   H/scheme processing

6   Report generation

7   System maintenance

8   Exit from main menu

On highlighting any of the options, press enter and gets into the window.

1.   NEW STAFF DOCUMENTATION

It prompt you a small window with message enter new staff number. After imputing the number, it seek for it from the payfile, if found, it will display a message. This number already exist. Otherwise it will display a window where you enter the name, the amount of basic salary, account number and the cumulative housing scheme. After the imputations, a message is prompted. Sure to add the employee number in H/scheme. If yes, it will go ahead to register the above input into the payfile.

2.   ENQUIRY

On getting into the enquiry, a popup will display all the available employee numbers in the payfile, where you select the employee number of interest to make enquiry, whereby it will display all the employee details i.e. the name, the number, the account number, the H/scheme and the cumulative H/scheme.

3. AMENDMENTS

On getting into it, a popup will display all the available employee numbers, where you select the number of interest to make amendments, a blinking cursor will allow you to make amendments according to your desire. After making changes a message will be displayed, sure, to make changes of the employee number. If the respond is yes, it automatically effect the changes otherwise it wont.

4 DELETE STAFF FROM CONTRIBUTION

On getting into option, you select number to be deleted, it will prompt a message sure to delete if yes, it will go to delete the employee numbers in all the available database files.

5 PROCESSING H/SCHEME

on getting into the option, it will then prompt you a window where you enter month/year. Then it will immediately display a window telling you H/scheme process in progress. After finishing the process the window is deactivated.

6 REPORT GENERATION

On getting into these option a popup appear with 2 major activities

1.   monthly contribution report

2.   edit list report

After highlighting it will first check whether the printer is ready, if ready, it will message asking you to enter number of copies. On doing

that it will print automatically, the detail report. Otherwise it will display printer not ready. Make printer ready and press enter, it will ask for number of copies.

EDITLIST : same as above, then the affected changes printed.

SYSTEM MAINTANANCE

This option add user name, password and level of access. And the variables can either be deleted or change.

EXIT

Takes you out of the main menu

For the detailed of the programme see appendix 1
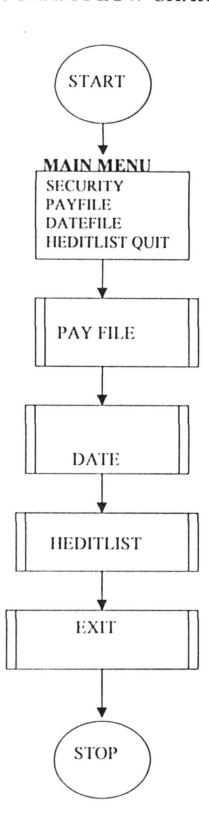
4·4   **FLOW CHART**

When a given can be done in a sequence of step (i.e. algorithm), a flow chart can be used to plan the steps and show how they are related. Thus a flow chart is a pictorial representative of an algorithm. It show clearly, the sequence of steps required to carry out a given task by the use of symbols. Often a flow chart is used by programmers and analysts as the first step in writing a computer program. The symbol used in flow charts are:-

i   [   ]   Start/Stop

ii   [parallelogram]   Input/output

iii		Process
iv		Decision
v		Direction of flow
vi		Connectors
vii		Predefined

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PROGRAM FLOW CHART

```
                    ┌─────────┐
                   (   START   )
                    └─────────┘
                         │
                         ▼
        ┌────────────────────────────┐
        │ MAIN MENU                   │
        │   SECURITY                  │
        │   PAYFILE                   │
        │   DATEFILE                  │
        │   HEDITLIST QUIT            │
        └────────────────────────────┘
                         │
                         ▼
        ┌────────────────────────────┐
        │                            │
        │        PAY FILE            │
        │                            │
        └────────────────────────────┘
                         │
                         ▼
        ┌────────────────────────────┐
        │                            │
        │          DATE              │
        │                            │
        └────────────────────────────┘
                         │
                         ▼
        ┌────────────────────────────┐
        │        HEDITLIST           │
        └────────────────────────────┘
                         │
                         ▼
        ┌────────────────────────────┐
        │          EXIT              │
        └────────────────────────────┘
                         │
                         ▼
                    ┌─────────┐
                   (   STOP    )
                    └─────────┘
```

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1   SUMMARY

The aims of the study were to show the practicability and efficiency of the aplication of computers towards administration of National Housing scheme a case study of Usman Banfodio University Teaching Hospital Sokoto.

The program was written using dbase IV application package. Information base on the conduct of record administration obtained from the case study was used to analyse the program.

In chapter one, a general introduction of the study together with the scope and limitation were presented. In chapter two a brief history of Usman Danfodio University Teaching Hospital Sokoto and description of mortgage administration was made. Chapter three deals with the system analysis and design with the testing and cost benefit of the analysis. Chapter four consist of program design and implementation. It also, contained the choice of language used.

5.2   CONCLUSION.

The study enbarked upon here reviewed the control of staff contribution towards National Housing scheme case study of Usman Danfodio University Teaching Hospital Sokoto.

It also explained how contributions made towards National housing scheme were processed from the contributor to the Federal mertgage Bank of Nigerian and

how loans are provided through the recognised primary martgage institutions to the benefiaries.

5.3   RECOMMENDATION

The study presented here focused on the use of computer to administer contributions made towards National Housing Scheme and various process that takes place in recording contribution and issuance of loans to contributors based on which the following recommendation were made

(a)   Immediate issuance of contributors passbooks to contributors.

(b)   Base on Nigerians altitude in record keeping, accounts balances to be sent to contributors twice a year instead of once a year.

(c)   As much as possible, Government should limits it interception of processes of these institution.

(d)   The rate of insuance of these loans should be a reflection of rate of contribution.

```
set talk off
set exact on
set bell off
set safe off
set scor off
set stat off
set cent on
set echo off



CLOSE DATA
CLEAR


musername = space(11)
mpassword = space(13)

DEFINE WINDOW XY_WAIT FROM 20,11 TO 23,65 COLOR N/BG,N/BG
use security in 4
sele 4
index on username tag byname
index on username+password tag byuser

counter = 3
valid=.f.
do while (counter>0) .and. (.not. valid)
   do identify with musername,mpassword
   mpassword = encrypt(mpassword)

   valid = seek(musername+mpassword)
   if .not. valid
      counter = counter-1
      if counter<>0
      do alert with 'Wrong password! '+str(counter,1)+ ;
          ' trial left, press any key to try again'
      mpassword=space(13)
      endif
   endif
enddo


if .not. valid
    do alert with 'Sory trials exhausted, ACCESS DENIED! '
    do reset_env
    return
else
   maccesslev = accesslev
endif

DO welcome


ssenior = .f.
```

```
editlst = .f.


USE payfile IN 1
SELE 1
INDEX ON EMP_NO TAG BYNO

USE DATEFIL IN 2
SELE 2
INDEX ON MONTH TAG BYMONT

USE HEDITLST IN 5
SELE 5
INDEX ON EMP_NO TAG BYNO


msg = 'Select option and press ENTER'
DEFINE POPUP main_pop FROM 0,0 MESSAGE msg
DEFINE BAR 1 OF main_pop PROMPT "        MAIN MENU"  SKIP
DEFINE BAR 2 OF main_pop PROMPT REPL("_",29) SKIP
DEFINE BAR 3 OF main_pop PROMPT "New Staff Decumentaion"
DEFINE BAR 4 OF main_pop PROMPT "Enquiry >"
DEFINE BAR 5 OF main_pop PROMPT "Amendments >"
DEFINE BAR 6 OF main_pop PROMPT "Delete Staff from Contibution"
SKIP FOR MACCESSLEV <> 1
DEFINE BAR 7 OF main_pop PROMPT "H/Scheme Processing" SKIP FOR
MACCESSLEV <> 1
DEFINE BAR 8 OF main_pop PROMPT "Report Generation        >"
DEFINE BAR 9 OF main_pop PROMPT "  System Maintainance    >" SKIP
FOR MACCESSLEV <> 1
DEFINE BAR 10 OF main_pop PROMPT REPL("_",29) SKIP
DEFINE BAR 11 OF main_pop PROMPT "EXIT FROM MAIN MENU"
ON SELECTION POPUP main_pop DO main_menu


DEFINE POPUP print_pop FROM 2,25 MESSAGE msg
DEFINE BAR 1 OF print_pop PROMPT "   PRINT REPORT MENU"  SKIP
DEFINE BAR 2 OF print_pop PROMPT REPL("_",27) SKIP
DEFINE BAR 3 OF print_pop PROMPT "Monthly Contribution Report"
DEFINE BAR 4 OF print_pop PROMPT "Edit List"
DEFINE BAR 5 OF print_pop PROMPT REPL("_",27) SKIP
DEFINE BAR 6 OF print_pop PROMPT "Exit To Main Menu"
ON SELECTION POPUP print_pop DO print_menu


DEFINE POPUP sys_pop FROM 7,27 MESSAGE msg
DEFINE BAR 1 OF sys_pop PROMPT "Add User"
DEFINE BAR 2 OF sys_pop PROMPT "Modify User"
DEFINE BAR 3 OF sys_pop PROMPT "Delete User"
ON SELECTION POPUP sys_pop DO sys_menu
```

```
do stamp with editlst,'Clear editlist file ? (Y/N)   '
if editlst
   SELE 5
   zap
endif



ACTI POPUP main_pop

do reset_env

*******************************END OF MAIN*********************


PROC welcome
priv oldscrn

     save screen to oldscrn
     clear
     @ 2,8 TO 19,70 DOUBLE color n/n
     @ 4,23 SAY "UDUTH, SOKOTO H/SCHEME SYSTEM"
     @ 7,35 SAY "DESINGNED"
     @ 9,39 SAY "BY"
     @ 11,33 SAY "ABUBAKAR T. HASSAN"
     @ 14,20 SAY "DEPARMENT OF MATHS & COMPUTER STUDIES"
     @ 17,19 SAY "FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA"
     keypress = inkey(3)
     restor screen from oldscrn
RETURN


PROC main_menu
priv memp_no
memp_no = ' '

   DO CASE
      CASE bar() = 3
           stop =.f.
           do while .not. stop
              stop = (lastkey() = 27)
              DO DOCUMEN
           enddo
      CASE bar() = 4
           memp_no = space(6)
           msg = 'Select Number to View Staff Details'
           stop = .f.
           do while .not. stop
              do getemp_no with memp_no,msg
              stop = (lastkey() = 27)
              if (.not. isbl(memp_no)) .and. (.not. stop)
                 DO VIEW_STAF WITH memp_no
```

```
                    endif
                enddo
        CASE bar() = 5
            memp_no = space(6)
            msg = 'Select Number to Modify Staff Details'
            stop = .f.
            do while .not. stop
                do getemp_no with memp_no,msg
                stop = (lastkey() = 27)
                if (.not. isbl(memp_no)) .and. (.not. stop)
                    DO VARIATION WITH memp_no
                endif
            enddo
        CASE bar() = 6
            do del_staff
        CASE bar() = 7
            do create_rpt
        CASE bar() = 8
            acti popup print_pop
        CASE bar() = 9
            acti popup sys_pop
        CASE bar() = 11
            deact popup
    ENDCASE
RETURN


PROC sys_menu
    DO CASE
        CASE bar() = 1
            stop = .f.
            do while .not. stop
                stop = (lastkey() = 27)
                DO ADD_USER
            enddo
        CASE bar() = 2
            DO MOD_USER
        CASE bar() = 3
            DO DEL_USER
    ENDCASE
RETURN


PROC add_user
priv musername,mpassword,maccesslev,npassword,yesadd,ok,stop
    musername = space(11)
    mpassword = space(13)
    maccesslev = 2
    npassword = space(13)
    yesadd = .f.
    ok=.f.
    stop = .f.
```

```
      do while (.not. ok) .and. (.not. stop)
         do get_user with musername,mpassword,maccesslev
         do g_confirm with npassword
         ok=(mpassword=npassword)
        stop = (lastkey() = 27)
         if (.not. ok) .and. (.not. stop)
            do alert with 'Sory confirmation wrong, press any key
to try again!'
            mpassword=space(13)
           stop = (lastkey() = 27)
         endif
     enddo
     yesadd = (.not. isbl(musername))
     if yesadd
         msg = 'Sure to add '+trim(musername)+' ? (Y/N) '
         do stamp with yesadd,msg
         if yesadd
            sele 4
            append blank
            REPLACE    USERNAME    WITH    musername,PASSWORD    WITH
encrypt(mpassword),;
               ACCESSLEV WITH maccesslev
         endif
     endif
RETURN


PROC get_user
para musername,mpassword,maccesslev
    define wind w_user from 7,19 to 17,65 color w/n
    acti wind w_user
    @ 2,3 SAY "ENTER USER NAME:"
    @ 2,19 GET musername PICTURE "@!"
    @ 4,3 SAY "ENTER YOUR PASSWORD:"
    @ 4,23 GET Mpassword PICTURE "@!" color w/w,w/w
    @ 6,3 SAY "LEVEL OF ACCESS:"
    @ 6,19 GET Maccesslev PICTURE "9"
    read
    deact wind w_user
    release wind w_user
RETURN


PROC mod_user
priv musername,newpass,mpassword,maccesslev,stop,msg,msg1,yesmodify
    musername = space(11)
    mpassword = space(13)
    maccesslev = 0
    yesmodify = .f.
    stop = .f.
    msg = 'Select user name to modify his accessibility'
     do while .not. stop
```

```
            do get_uname with musername,msg
            stop = (lastkey() = 27)
            msg1 = 'Sure to modify '+trim(musername)+' ? (Y/N) '
            if (.not. isbl(musername)) .and. (.not. stop)
                sele 4
                set order to tag byname
                if seek(musername)
                    do g_user with mpassword,maccesslev
                    if .not. isbl(mpassword)
                        newpass=encrypt(mpassword)
                        yesmodify = newpass<>PASSWORD;
                           .or. maccesslev<>ACCESSLEV
                        if yesmodify
                            do stamp with yesmodify,msg1
                            if yesmodify
                                REPLACE PASSWORD WITH newpass,ACCESSLEV
WITH;
                                    maccesslev
                            endif
                        endif
                    endif
                endif
            endif
        enddo
RETURN


PROC g_user
para mpassword,maccesslev
    define wind wm_user from 6,19 to 16,65 color w/n
    acti wind wm_user
    @ 0,10 TO 2,31
    @ 1,12 SAY "MODIFYING PASSWORD" color rg/gb+*
    @ 4,3 SAY "ENTER NEW PASSWORD:"
    @ 4,22 GET Mpassword PICTURE "@!" color w/w,w/w
    @ 6,3 SAY "NEW LEVEL OF ACCESS:"
    @ 6,23 GET Maccesslev PICTURE "9"
    read
    deact wind wm_user
    release wind wm_user
RETURN


PROC g_confirm
para npassword
    define wind n_pass from 5,15 to 9,70 color w/n
    acti wind n_pass
    @ 1,3 SAY "PLEASE CONFIRM YOUR PASSWORD:"
    @ 1,32 GET Npassword PICTURE "@!" color w/w,w/w
    read
    deact wind n_pass
    release wind n_pass
```

```
RETURN


PROC del_user
priv musername,stop,msg,msg1,yesdelete
    musername = space(11)
    yesdelete = .f.
    stop = .f.
    msg = 'Select user name to delete his accessibility'
     do while .not. stop
        do get_uname with musername,msg
        stop = (lastkey() = 27)
        if (.not. isbl(musername)) .and. (.not. stop)
            msg1 = 'Sure to delete  '+trim(musername)+' ? (Y/N) '
            do stamp with yesdelete,msg1
            if yesdelete
               acti window xy_wait
               @ 0,0 say 'Please Wait...'
               @ 1,10 say 'Deleting '+trim(musername) color n/bg*
              sele 4
               delete for USERNAME = musername
               pack
              deact wind xy_wait
            endif
        endif
     enddo
RETURN



PROC get_uname
PARA musername,msg
   SELE 4
   DEFINE POPUP user_pop FROM 8,39 PROMPT FIELD username MESSAGE
msg
   ON SELECTION POPUP user_pop DO acc with musername
   ACTI POPUP user_pop
RETURN


PROC acc
PARA musername
  if lastkey() = 13
    musername = prompt()
  else
    musername = space(11)
  endif
  deact popup
RETURN
```

```
PROC DOCUMEN
priv memp_no,mname,mbasic,mact_no,mcumm_hsc
   memp_no = space(6)
   do get_number with memp_no
   if .not. isbl(memp_no)
      sele 1
      seek memp_no
      if found()
         do alert with 'Sorry,this number already exist'
      else
         mname = space(26)
         mbasic = 0.00
         mact_no = space(15)
         mcumm_hsc = 0.00
          yesadd = .f.


         DO g_staf1 with memp_no,mname,mbasic,mact_no,mcumm_hsc

         yesadd = (.not. isbl(memp_no))
         if yesadd
            msg = 'Sure to add '+memp_no+' in H/Scheme ? (Y/N) '
            do stamp with yesadd,msg
            if yesadd
               SELE 1
               APPEND BLANK
               REPL EMP_NO WITH memp_no,NAME WITH mname,BASIC WITH
mbasic,;
               ACCT_NO WITH mact_no,CUMM_HSC WITH mcumm_hsc

               sele 5
               append blank
               REPL EMP_NO WITH memp_no,NAME WITH mname,BASIC WITH
mbasic,;
               ACCT_NO WITH mact_no,CUMM_HSC WITH mcumm_hsc
            endif
         endif
      endif
   endif
RETURN


PROC get_number
para memp_no
      define window w_number from 5,25 to 9,66 color w/n
      acti wind w_number
      @ 1,2 SAY "Enter number for New Staff:"
      @ 1,30 GET memp_no PICTURE "@!"
      read
      deact wind w_number
      release wind w_number
```

```
RETURN


PROC g_staf1
PARA memp_no,mname,mbasic,mact_no,mcumm_hsc
     ·define window wg_staf1 from 0,0 to 24,79 color w/n
     acti wind wg_staf1
     @ 1,16 SAY "USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL,
SOKOTO."
     @ 2,30 SAY "ADDING NEW STAFF"
     @ 5,1 SAY "EMP_NO:"
     @ 5,8 SAY m->Memp_no PICTURE "@!"
     @ 5,16 SAY "NAME:"
     @ 5,21 GET mname PICTURE "@!"
     @ 5,51 SAY "BASIC:"
     @ 5,57 GET m->Mbasic
     @ 7,1 SAY "ACCOUNT_NO:"
     @ 7,12 GET m->Mact_no PICTURE "@!"
     @ 7,33 SAY "COMMULATIVE H/SCHEME:"
     @ 7,54 GET m->Mcumm_hsc
     read
     deact wind wg_staf1
     release wind wg_staf1
RETURN


PROC VIEW_STAF
para memp_no
priv mname,mbasic,mact_no,mcumm_hsc,msg
   if (.not. isbl(memp_no)) .and. (.not. stop)
      sele 1
      if seek(memp_no)
          mname = NAME
          mbasic = BASIC
          mact_no = ACCT_NO
          mcumm_hsc = CUMM_HSC


          DO g_staf2 with memp_no,mname,mbasic,mact_no,mcumm_hsc
      endif
   endif
RETURN


PROC g_staf2
para memp_no,mname,mbasic,mact_no,mcumm_hsc
     define window wg_staf2 from 0,0 to 24,79 color w/n
     acti wind wg_staf2
     @ 1,16 SAY "USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL,
SOKOTO."
     @ 2,28 SAY "ENQUIRYING STAFF DETAILS"
     @ 5,1 SAY "EMP_NO:"
```

```
      @ 5,8 SAY m->Memp_no PICTURE "@!"
      @ 5,16 SAY "NAME:"
      @ 5,21 SAY mname PICTURE "@!"
      @ 5,51 SAY "BASIC:"
      @ 5,57 SAY m->Mbasic
    · @ 7,1 SAY "ACCOUNT_NO:"
      @ 7,12 SAY m->Mact_no PICTURE "@!"
      @ 7,33 SAY "COMMULATIVE H/SCHEME:"
      @ 7,54 SAY m->Mcumm_hsc
      read
      deact wind wg_staf2
      release wind wg_staf2
RETURN


PROC VARIATION
para memp_no
priv mname,mbasic,mact_no,mcumm_hsc,yesmodify,msg
    yesmodify = .f.
    sele 1
    if seek(memp_no)
        mname = NAME
        mbasic = BASIC
        mact_no = ACCT_NO
         mcumm_hsc = CUMM_HSC

        DO get_staf1 with memp_no,mname,mbasic,mact_no,mcumm_hsc

        yesmodify  =  ((.not.  isbl(memp_no))  .and.  (memp_no  <>
EMP_NO));
                   .or. (mname <> NAME);
                   .or. (mbasic <> BASIC);
                   .or. (mact_no <> ACCT_NO);
                   .or. (mcumm_hsc <> CUMM_HSC)

        sele 5
        append blank
        REPLACE EMP_NO WITH memp_no
        sele 1
        if mname <> NAME
           sele 5
            seek memp_no
            REPL NAME WITH mname
            sele 1
        endif
        if mbasic <> BASIC
           sele 5
            seek memp_no
            REPL BASIC WITH mbasic
            sele 1
        endif
        if mact_no <> ACCT_NO
```

```
            sele 5
            seek memp_no
            REPL ACCT_NO WITH mact_no
            sele 1
        endif
     .  if mcumm_hsc <> CUMM_HSC
            sele 5
            seek memp_no
            REPL CUMM_HSC WITH mcumm_hsc
            sele 1
        endif
       if yesmodify
            msg ='Sure to effect changes made for '+memp_no+' ?
(Y/N) '
            do stamp with yesmodify,msg
            if yesmodify
                REPLACE EMP_NO WITH memp_no,NAME WITH mname,BASIC
WITH mbasic,;
                ACCT_NO WITH mact_no,CUMM_HSC WITH mcumm_hsc
            else
                sele 5
                seek memp_no
                delete
                pack
                sele 1
            endif
         endif
    endif
RETURN


PROC get_staf1
PARA memp_no,mname,mbasic,mact_no,mcumm_hsc
     define window wg_staf1 from 0,0 to 24,79 color w/n
     acti wind wg_staf1
     @ 1,16 SAY "USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL,
SOKOTO."
     @ 2,27 SAY "CHANGING NEW STAFF DETAILS"
     @ 5,1 SAY "EMP_NO:"
     @ 5,8 GET m->Memp_no PICTURE "@!"
     @ 5,16 SAY "NAME:"
     @ 5,21 GET mname PICTURE "@!"
     @ 5,51 SAY "BASIC:"
     @ 5,57 GET m->Mbasic
     @ 7,1 SAY "ACCOUNT_NO:"
     @ 7,12 GET m->Mact_no PICTURE "@!"
     @ 7,33 SAY "COMMULATIVE H/SCHEME:"
     @ 7,54 GET m->Mcumm_hsc
     read
     deact wind wg_staf1
     release wind wg_staf1
RETURN
```

```
PROC del_staff
priv memp_no,msg1,stop,yesdelete,msg2
    yesdelete = .f.
    memp_no = space(6)
    stop = .f.
    msg1 = 'Select Staff Number to delete him/her from H/Scheme'

    do while .not. stop
        DO getemp_no with memp_no,msg1
        stop = (lastkey() = 27)
        if (.not. isbl(memp_no)) .and. (.not. stop)
            msg2 = 'Sure to delete  '+memp_no+' from H/Scheme ?
(Y/N) '
            do stamp with yesdelete,msg2
            if yesdelete
                acti window xy_wait
                @ 0,0 say 'Please Wait...'
                @ 1,10 say 'Deleting '+memp_no+' from H/Scheme'
color n/bg*

                sele 5
                if seek(memp_no)
                    delete
                    pack
                endif

                sele 1
                seek memp_no
                delete
                pack
                deact wind xy_wait
            endif
        endif
    enddo
RETURN


PROC CREATE_RPT
priv memp_no,mhschm,mcumm_hsc,msg,msg1,val1,val2
    msg = 'Enter Month (JAN....DEC):'
    msg1 = 'Enter Year:'
    val1 = space(3)
    val2 = 0
    do numeric with msg,val1,msg1,val2
    sele 2
     repl month with val1,year with val2

    acti window xy_wait
    @ 0,0 say 'Please Wait...'
    @ 1,10 say 'Housing Scheme Processing in Progress' color n/bg*
```

```
    SELE 1
    go top
    DO WHILE .NOT. EOF(1)
       memp_no=EMP_NO
       mhschm = H_SCHEME
   .   mcumm_hsc = CUMM_HSC

       seek memp_no
       repl    h_scheme    with    basic*2.5/100,cumm_hsc    with
(cumm_hsc+h_scheme)

       skip
    ENDDO
    deact wind xy_wait
RETURN


PROC print_menu
priv fname
    fname = ' '
    DO CASE
       case bar() = 3
            fname = 'sn.prt'
            DO REPORT with fname
       case bar() = 4
            fname = 'edit.prt'
          DO EDITLS with fname
       case bar() = 6
          deact popup
    ENDCASE
RETURN


PROC REPORT
para fname
priv counter,shschm,scumm_sch,memp_no,header
  header    =    'S/N'+'          '+'EMP_NO'+'          '+'ACCT.
NO.'+SPACE(10)+'NAME'+SPACE(27)+;
          'H/SCHEME'+space(5)+'TOTAL'


    acti window xy_wait
    @ 0,0 say 'Please Wait...'
    @ 1,10 say 'Preparing Staff Monthly Report' color n/bg*

    set cons off
    set print to file (fname)
    set print on
    ?
    ? space(10)+'USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL,
```

```
SOKOTO'
                                                                    ?
space(10)+'_____'
        ? space(18)+'H/SCHEME MONTHLY CONTRIBUTION REPORT'
        ? space(18)+'_____'
      . sele 2
        ? space(27)+'MONTH OF:'+month+'/'+str(year,4)
        ? space(27)+'TIME: '+time()
        ?
        ? header
        ? repl('_',86)
        counter = 0

        sele 1
        go top
        shschm = 0
        scumm_sch = 0
        do while .not. eof()
           memp_no = EMP_NO
            counter = counter + 1
           shschm = shschm+h_scheme
           scumm_sch = scumm_sch + cumm_hsc

           ? str(counter,3) + '.' + '   ' +EMP_NO + '   ' + ACCT_NO +
'     ' +;
             NAME +space(3)+str(H_SCHEME,8,2) + ' '+str(CUMM_HSC,12,2)

           skip
        enddo
        ? repl('_',86)
                ?      ' T O T A L : ' + s p a c e ( 5 2 )
+str(shschm,12,2)+space(2)+str(scumm_sch,12,2)
        ? repl('_',86)
        set print to
        set print off
        set cons on
        deact wind xy_wait
        do print_file with fname
RETURN


PROC EDITLS
para fname
priv memp_no,mname,mbasic,mcumm_hsc,mact_no,msg

   acti window xy_wait
   @ 0,0 say 'Please Wait...'
   @ 1,10 say 'Preparing Editlist Report' color n/bg*

   set cons off
   set print to file (fname)
```

```
    set print on
    cnt=0

    ?
    ?  space(23)+'USMANU  DANFODIYO  UNIVERSITY  TEACHING  HOSPITAL,
SOKOTO'
    ?  space(47)+'EDITLIST REPORT'
    sele 2
    ?  space(40)+'MONTH OF: '+month+'/'+str(year,4)
    ?

    sele 5
    go top
    do while .not. eof(5)
       cnt = cnt + 1
       memp_no = EMP_NO
         mname = NAME
         mbasic = BASIC
         mcumm_hsc = CUMM_HSC
         mact_no = ACCT_NO

       ? str(cnt,3)+space(3)+'[EMP_NO]'+space(3)+emp_no+space(3)
       if .not. isbl(name)
          ?? '[NAME]'+space(3)+name +space(3)
       endif
       if .not. isbl(basic)
          ?? '[BASIC]'+space(3)+str(basic,10,2) +space(3)
       endif
       if .not. isbl(cumm_hsc)
          ?? '[TOTAL_CONT]'+space(3)+str(cumm_hsc,12,2) +space(3)
       endif
       if .not. isbl(acct_no)
           ?? '[ACCT. NO.]'+space(3)+acct_no+space(3)
       endif
         skip
       enddo
       ?
       set cons on
       set print to
       set print off
       deact wind xy_wait
       do print_file with fname
RETURN


PROC accept
para prmpt
      if lastkey() = 13
          prmpt = prompt()
      endif
      deact popup
RETURN
```

```
PROC getemp_no
PARA memp_no,msg
    SELE 1
    set order to tag byno
    DEFINE POPUP n_pop FROM 3,30 PROMPT FIELD emp_no MESSAGE msg
    ON SELECTION POPUP n_pop DO gt_empno with memp_no
    ACTI POPUP n_pop
RETURN


PROC gt_empno
PARA memp_no
  if lastkey() = 13
     memp_no = prompt()
  else
     memp_no = space(6)
  endif
  deact popup
RETURN



PROC numeric
para msg,val1,msg1,val2
     define window numeric from 5,15 to 11,len(msg)+33 double color
w/n
     acti wind numeric
     @ 1,2 SAY msg GET val1 PICTURE "@!"
     @ 3,2 SAY msg1 GET val2 PICTURE "9999"
     read
     deact wind numeric
     release wind numeric
RETURN


PROC STAMP
  PARA ok, msg
  private ans
  ans = ' '
  DEFINE WINDOW win_msg FROM 18,5 TO 20, len(msg)+15
  ACTIV WINDOW win_msg
  @ 0,3 SAY msg GET ans PICT "!"
  read
  ok = UPPER(ans) = 'Y'
  DEACT WINDOW win_msg
  release wind win_msg
RETURN


PROCEDURE alert
para msg
```

```
    set escape off
    define window w_alert from 18,8 to 22,len(msg)+14 double color
w/n
    activate window w_alert
    @ 1,2 say msg
    WAIT ''
    deactivate window w_alert
    release wind w_alert
    set escape on
RETURN


PROC print_file
PARA fname
PRIV barmsg,oldscrn,copies,ct
    barmsg='To try again, Press: '+chr(17)+chr(217)+' '+chr(186)+'
'+;
        'To Cancel, Press: Esc'
    DEFINE wind w_print from 18,10 to 23,70 color n/bg,n/bg

    copies=1
    DO while .t.
       if printstatus()
       DO num_field with copies,'Enter number of copies'
          ct=1
          do while ct<=copies
          save screen to oldscrn
          !copy &fname prn
          eject
          ct=ct+1
          clear
          restore screen from oldscrn
          release oldscrn
          enddo
          eject
          exit
       ELSE
          acti wind w_print
          @1,0 say 'Printer not ready '
          @1,col() say '...' color n/bg*
          @2,0 say barmsg
          read
          deacti wind w_print
          release wind w_print
        IF lastkey()#13
           exit
        ENDIF
       endif
    ENDDO
RETURN
```

```
PROC num_field
para mfield,msg
    define window w_num from 18,4 to 22,len(msg)+22 double color w/n
    activate window w_num
  . @ 1,2 say msg color n/bg
    @ 1,len(msg)+4 get mfield PICT "@9"
    read
    deactivate window w_num
    release wind w_num
RETURN


PROC identify
para musername,mpassword
    define wind w_pass from 10,19 to 18,65 color w/n
    acti wind w_pass
    @ 2,3 say "ENTER USERNAME:"
    @ 2,18 get musername PICTURE "@!"
    @ 4,3 say "ENTER YOUR PASSWORD:"
    @ 4,23 get mpassword PICTURE "@!" color w/w,w/w
    read
    deact wind w_pass
    release wind w_pass
RETURN


FUNCTION encrypt
para mpassword
private s1,s2,n,newmpass,ch
newmpass = ''
s1="ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890'¬!£$%^&*()-=_+[]{}#';:@~
/.,<>?\|"
S2="'1£3B|X7&9!-=][P?IU+TR{W@AS.F%H)KL;'#/D,>N4VC6Z\¬02$G^8*(J_Y}
E~Q:OM<5"
do while .not. len(mpassword)=0
  ch=substr(mpassword,1,1)           && get the next character in
mpassword
  n1=AT(ch,s1)              && get the position of of next character
in s1
  ch=substr(s2,n1,1)       && get the corresponding character in s2
  newmpass = newmpass + ch   && add the character to newmpass
  if .not. len(mpassword)=1
     mpassword = substr(mpassword,2) && updates mpassword (remove
the first character of old mpassword)
  else
     mpassword = ''
  endif
enddo
RETURN newmpass
*************************
```

```
PROC reset_env
  clear
  close data
  set exact off
  set bell on
  set safe on
  set scor on
  set stat on
  set cent off
  set talk on
  set echo on
RETURN
```

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