

# **COMPUTERIZATION OF LAND ALLOCATION**

**A CASE STUDY OF MINISTRY OF FEDERAL CAPITAL TERRITORY (MFCT)**

**GARKI, ABUJA.**

**BY**

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**PGD/MCS/156/93**

**DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE,**

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**

**MARCH 1998.**

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**A PROJECT SUBMITTED TO THE DEPARTMENT OF  
MATHS/COMPUTER SCIENCE, FEDERAL UNIVERSITY OF  
TECHNOLOGY, MINNA IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF POST-GRADUATE  
DIPLOMA IN COMPUTER SCIENCE.**

**MARCH 1998.**

# ACKNOWLEDGMENT

It never dawned on me the involvement in carrying out an academic task of this nature. This is because to be able to accomplish this task, I passed through overwhelming problems and difficulties.

Also it would have been impossible for an individual to have articulated to comprehension the various aspects put together in this project work.

It is therefore with unreserved gratitude and appreciation that I acknowledge the following who have really helped immensely to make this project work a success. First and foremost, I acknowledge the Head of Department of Computer Science Dr. K.R. Adeboye who has served as a source of inspiration to me in this field of endeavour. Also the course coordinator in the person of Prince Badmus whose unflinching support I have to acknowledge. Finally I acknowledge the efforts of my supervisor Dr. S.A. Reju for his cooperation and the entire lecturers of the department. Also, I extend my sincere gratitude to the entire staff of the department of MFCT, Abuja.

I also particularly remember in a very special way God's guidance and protection to my life, intellect throughout the period of this work.

## **DEDICATION**

This project is specially dedicated to the Almighty God for his guidance, assistance and protection on me throughout all my pursuit to accomplish this work .

This dedication also goes to my beloved ones especially my wife and my children who have really encouraged me in achieving this objective.

## **ABSTRACT**

This is an attempt to have an effective data management system necessary for generating information that will allow for proper processing and allocation of land in the Ministry of Federal Capital Territory Garki, Abuja.

The Ministry of Federal Capital Territory encounters a lot of problem in allocating land through the manual system. Their problem can be eliminated if a computer based information management system is used in the allocation of this resource keenly coupled for.

A system analyst and Design has been carried out with a view to computing land Allocation and Application Processing in the Ministry.

The program for design or the system design uses the dBase IV software which has many modular programming facilities with in-built functions. Any module can be executed by the user through choosing from the main program to get solution to the multiple problems encountered.

# CERTIFICATION

This is to certify that this project has been examined and found to have met the requirements for the award of the Post graduate Diploma in Computer Science of the Federal University of technology, Minna.

.....  
DR. S.A. REJU  
PROJECT SUPERVISOR

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DATE

.....  
DR. K.R. ADEBOYE  
HEAD OF DEPARTMENT.

.....  
DATE

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EXTERNAL EXAMINER

.....  
DATE

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# CHAPTER ONE

## GENERAL INTRODUCTION

### 1.1 INTRODUCTION

Computer is an electronic device which can accept data, store the data and supply the output under the control of a program.

The idea behind the use of computer is to assist in recording, filing and communicating data and information. This increases efficiency, speeds up record handling, and quick response to the needs of the customer than may be possible under manual system. In the world of business, early knowledge is power.

Introducing computer in the office, can also be described as office automation which is often used to describe the application of computers and other electronic office equipment processing techniques to task normally associated with office work.

There is a variety of human dominated tasks in either a business or government environment which traditionally are done by specially trained staff. One such activity is typing; using a conventional manual type-writer requires a high degree of hand and eye co-ordination in order to achieve a reasonable rate of output. Error correction in typed text is time consuming and laborious. In order to achieve a high degree of efficiency, the computer was introduced. In the field of communication; techniques such as Electronic Mail have made conventional system of inter-office memoranda obsolete. Facsimile reproductions of documents is yet another advancement which has reduced the physical handling of

documents. In using computers in the office or computerizing an office work, some of the mode of operation that are normally changed are word processing, communicating facilities, record keeping and some managerial tasks such as scheduling, Project Management. In fact, computerization is the use of technology to increase production and achieve goals in the office environment.

Instituting computer system in the office improved the efficiency of the business, because the computer instantly retrieved and matched job order with applicants. A second result was speedier input of job descriptions. A job order logged in the system by a counselor at the North office at say 10.05am became available a Counselor at metro office later. A third result was the organisation could now monitor its placement by counselor work order, thus if management notice that the South office was swapped with data processing work orders, it could quickly transfer a counselor those who specialised in Data Processing (DP) applicants. Eventually such as trend would also be spotted under a manual system, but much later. Like an army, the business that can deploy its people where they are most needed has a better chance of success.

## **1.2 STATEMENT OF THE PROJECT**

The computer can if properly used or programmed and installed in the office take care of several important matters in the office environment, such as storage, calculation, updating, editing and reformatting. In the past, computers have mainly been used for computation, but in recent years, a great recognition has been given to their logic abilities, and this later can turn the computer into competent and efficient copy producer and editor for the office.

One must gradually come to grip with the fact that an electronic record though invisible to eye, is nonetheless a permanent type of record which is, infact, considerably easier to store, retrieve and protect record than vast files of paper records.

### **1.3 MINISTRY (AN OVERVIEW).**

The Ministry of Federal Capital Territory came into existence by Decree Number 6 of 1979. It assumed the status of the Nations' Capital on the 12th December, 1979 when the seat of government moved from Lagos.

### **1.4 SCOPE AND LIMITATION OF THE PROJECT**

This covers land division and the method of processing land application to the approval state of Certificate of Occupancy (C of O) with land division and it covers 36 states in Nigeria and miscellaneous application (Commercial applications).

### **1.5 METHODOLOGY**

This study covers all the units concerned with data collection about any applicant during registration of land forms up to approval of Certificate of Occupancy. Especially in the Land Registry, Data was sorted from individual application form, such data are: Name, Address, Status, Local Government, State, Purpose etc. Then the index number which the registry staff give at the point of payment of processing fee. It is only when the aforementioned information are sorted that an applicat is entitled to a piece of plot.

In the Deed registry, the data collected was about application which allocation of land had favoured, such data are:

- i. File awaiting payment

- ii. Bill preparation
- iii. Consent of Assign
- iv. Mortgage files
- v. Power of Attorney

The methods used in data collection are:-

- i. Record Inspection
- ii. Observation
- iii. Interview.

## **1.6 RECORD INSPECTION**

During data collection, it was noted that most of or all recordings are done manually especially in the land registry where the data is first noted, the land registry staff are not much to handle all the recordings in the aspect of registration of land forms for applications.

Some staff of the department do other jobs or works assigned to them by the Head of the Department and at the same time interfere with the work of the registry staff which they know nothing about, for example, the recording and storage of files. Some of the interference is caused by the registry staff not being able to handle or cope with pressure of work. This interference by none registry staff brings a lot of problems for the department and the whole ministry at large.

## **1.7 OBSERVATION**

It was observed that data storage is also done manually. The data collected are stored first in the registry and then the form is stored in the cabinet. All the forms are stored

according to their states and in serial numbers. In as much as data stored to state serial, a lot of data and important records usually get missing as time goes on. It was also observed that form and files opened for applicants can be misplaced because different people handle these forms and files at different time without keeping proper records of them. Also one was made to understand that files do not move in stages as they are supposed to, which is usually the reason for data and files missing easily during processing.

Equally observed is the fact that some applicants misplaced obtained receipts and Acknowledgment letters obtained after payment of processing fees. This often contain file numbers and other important information very vital. Some often than not forget their file numbers which are needed for processing of land files. This eventually makes the job more tedious and cumbersome for the registry staff. Applicants atimes forget the year and month such files are open, and because there are no specially devised means of tracing file numbers, locating the files become a problem, since one would have to go through all the files in the past months and years to locate the file using the applicants' name.

All the problems enumerated below could have been taken care of adequately if the computer were provided. Detailed information could be so programmed to enable easy tracing of applicants file number using such information as the applicants' name, and the state of origin with other salient information that might be of immense assistance.

## **1.8 INTERVIEW**

To achieve the data and fact collection exercise in this project, elaborate efforts were made to interview quite a large number of staff on the mode of land allocation to applicants

and to identify those who actually work in the land department, their duties, and the various stages involved in the issuance of Certificate of Occupancy to land allottee.

Most problems seemingly encountered seem to have emanated from recording of data at land Registry which often manifest in duplication of numbers in the register which are not often noticed until the allocation stages or at the stage when the Right of Occupancy (R of O) or Certificate of Occupancy (C of O) are to be issued. This further delay the collection of the aforementioned documents. These problems can easily be got rid of with the application of computers to land allocation.

# CHAPTER TWO

## 2.1 LITERATURE REVIEW

Donald D. Spencer (Third Edition) "INFORMATION PROCESSING", considered computer implementation in office organisation. The writer noted that some organisations have different reasons for computerizing, which mostly depend on their jobs or activities, but the major reasons are:-

- i. It is a working tool management information system.
- ii. It handles personnel activities and records as well as organisations' registration services.
- iii. The cost per unit of output is low if we are to compare it with the manual system.
- iv. The computers' degree of speed and accuracy in the processing of data is beyond human capability.
- v. The computer can work our optimum solution to a problem.

The views, opinions or contributions of other workers in considering the importance of records keeping and database management in Land allocation is very much appreciated.

Reasons for this can be considered under three sub-headings:

- i. Manual Procedure
- ii. Mechanised Procedure
- iii. Computerised Procedure.

EDWARD J. LAUNE in his write-up "COMPUTER AND SOCIETY", manual procedure is defined as a system where all organisational recordings are done by hand and stored in the database management (usually in cabinets).

Computerised procedure is a system that makes use of electronic devices for collecting, analysis, recording, storing retrieval of data.

Robert H. Bilismer and Ronald H. Alden (1980) noted that with computerisation of office proceedings it will eliminate the previous manual and Mechanised system such as:-

- i. Mis-filing/lost records, personnel turnover, job boredom
- ii. Duplication of numbers.
- iii. Mis-spelling of names.
- iv. Calculation of numbers of application on monthly basis.
- v. Entry of data at wrong places.

The computer will thus:-

- i. Check for mis-spellings
- ii. Check for numbers duplicated
- iii. Store the data for future use with lost of records or important data.

Now some of the tasks performed by the two or more registry staff with computerization available will be carried out by the computer system thereby creating room for professional decision making.

## **2.2 IMPACT OF COMPUTERISATION**

Robert Bilismer Rowald H. Alden in their book "WORKING WITH COMPUTER",

highlighted some advantages or benefits of computerisation. Their main points noted was to increase efficiency and effectiveness.

Every organisation succeeds through proper record keeping. The use of computer database system and computer aided microfiche system not only ensure proper and accurate record keeping but also ensures the security of the data and its integrity. To keep in line with the faster moving rate of organisational activities, one needs a “helper”, that can ensure prompt release of information when needed since “time is money”. This “Helper”, can only be found in computers.

The computer has the ability to store quantity of data in a very large area, the computer can maintain very old records and quickly gain access to them.

Computers are said to assist man in his business and many walks of life. They reduce our complicated problems to simple level.

Computers do not suffer human beings of tiredness and lack of concentration as compared with the manual method.

The aforementioned writers above have clearly shown the impact of computerization of organisational operations which has improved the quality and accelerated the speed of services rendered to people.

### **2.3 GEOGRAPHICAL LOCATION OF FEDERAL CAPITAL .**

It is located at the geographical centre of the country, it is bounded in the North by Kaduna State, in the East and South-east by Nassarawa State, in the west by Niger State and in the South-west by Kogi State, it falls within latitude 25 degree N-920'N and longitude.

The development of the city is planned in four phases.

#### **2.4 LAND.**

The term 'Land' connotes different meaning to different people depending upon their outlook and their interest or purpose at any time. Land is the solid part of the earth's surface (contrasted with sea and water). And according to Baarlove (1958) he defined 'Land' as it could apply to a nation, a people or a political division of the earth's surface. Land may also be considered as portion to the earth's surface over which ownership rights may be exercised. These rights relate not just to surface area but also things such as trees which have been attached to the surface by nature; to build and other purpose which lie either above or below the surface. In this project, 'Land' is seen as a conglomerate comprising mainly of rocks, minerals, ground/surficial water and soil. When one views land this way, it becomes evident that it is one of the valuable gifts of God because it more or less constitutes the zones of life. Everybody needs it directly or indirectly because it forms the basis of livelihood in an agricultural economy and the platform upon which labour and capital interact in developed economies. Land also can be said to be the stage upon which all human act their lives because man is born on the land, he lives on the land and from land he obtains things that he uses; be it shelter, mineral resources, clothing, fuel and food etc. And when a man dies, his body is buried on land. Infact no wonder therefore that individuals, communities and nations defend their rights over land with all their strength and might, sometimes up to the extent of making supreme sacrifice of laying down their lives in the process. National Governments also defend vigorously their territorial bounderies to ensure that their neighbours do not

encroach on this most expensive assets. Since there cannot be a people without land. International boundaries are increasingly becoming sensitive issues in international and community relations as the human population continues to grow. For instance, Egypt and Sudan are at their lowest ebb because of these countries claim or counter claim or counter claim of the Halaib Triangle, Nigeria and Cameroun over Bakkasi Peninsula, Somalia and Eritrea over the Orgaden Region. So do most communal conflicts in Nigeria emanate as a result of Land interest. Land is a continuum; it is not discrete in the natural setting, it has not got natural boundaries suitable for human occupation; consequently, it has got to be demarcated artificially, parcels of land must be properly defined in industry or agriculture since people will spend very much time and energy quarreling over rights on land. Here, boundaries and their associated problems arise and the land surveying profession is born. An essential working feature of land Administration is land surveying.

## **2.5 LAND ADMINISTRATION.**

Land administration as a subject can be defined as the study of the relationship of man to land and that of man in relation to land. It is empirical from country to country. As a function, land administration can be conceived as the exercise of executive and authority over the land resources of a nation or providing the facilities for the fulfillment of the legitimate needs of a community. Land administration is often characterized by its practical, institutional and problem solving approach.

Apart from function in an executive capacity (which is the case in Abuja) land administration can also function in the following capacities:-

In the field of land administration, such a man is the land administrator. A land administrator is one who mobilizes or facilitates the mobilization of nations' resources or communities land resources. He does this by ensuring that land and its resources are concerned and allocated in the most advantageous manner both socially and economically.

More specifically, the land administrator:-

- i. Classifies or facilitates the classification of actual land use;
- ii. Assesses potential land use or land capability from such classification and assessment;
- iii. Provides basic information to enable new land development plans of policies to be satisfactorily drawn or framed.
- iv. Studies the concepts and implication of land tenure;
- v. Provides means by which sufficient degree of performance and in such a manner as to dissatisfy development requirement with regards to both their physical and abstract qualities.

The work of the land administrator is therefore a very important one because failure to mobilize a nation or community, land resource, especially in countries where agricultural production is still basic to economic growth and social development. His other functions include Co-ordinating, Supervisory and advisory.

- i. **Co-ordinating:-** Land administration exists to co-ordinate the activities of other technical or executive bodies within the governmental structures to co-ordinate the activities of private institutions dealing with land.

- ii. **Supervisory:-** Land administration function just like public administration. It is concerned mainly with the maintenance of law and order with respect to land.
- iii. **Advisory:-** Land administration function in this capacity where rights in Land have crystallized, where other institutions dealing with land exist.

## **2.6 ORGANISATION STRUCTURE**

To facilitate the effective and efficient performance of land administration as an institution, it should be grouped along with related institutions or departments within the Government structure.

Figure 1 illustrates this. Here departments are in one Ministry and technical problems arising from differences in professional perceptions can be reconciled or resolved without getting to the top administrative level, (the level of Minister). In addition, logistic problems associated with field work can be minimized since some instruments like compass and levels can be shared or placed in a common pool for use by different departments.

## **2.7 A LAND ADMINISTRATOR**

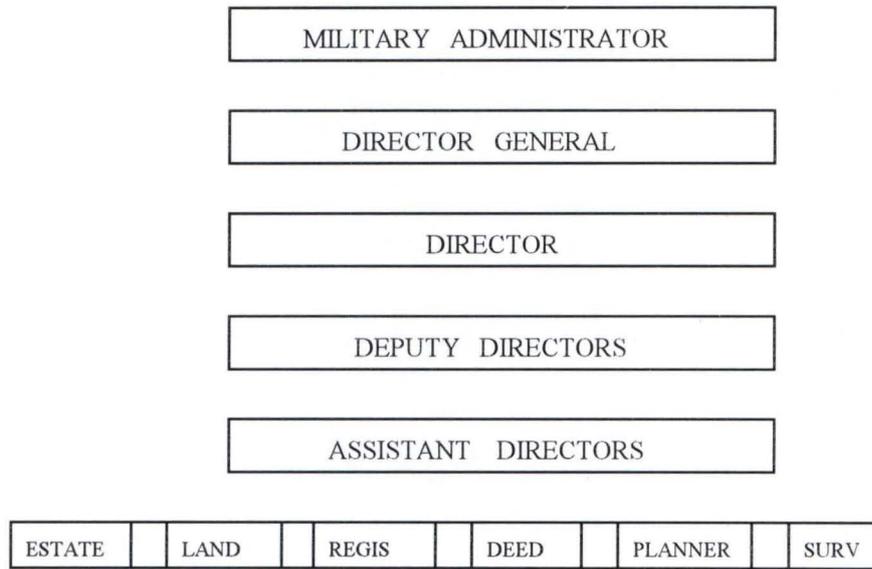
There is a common saying mainly military circles, that "it is not the gun but the soldier behind the gun that makes the difference in a battle field".

However, their task though an important one, is also difficult and delicate. This is because it concerns, apart from the things mentioned above, there are other difficulties encountered during processing of land documents, hence the decision to write on this topic:

Computerization of land allocation. It is to ease matters to whom ever is concerned with land processing and the method used.

### **ORGANISATION CHART**

#### **MINISTRY OF FEDERAL CAPITAL TERRITORY**



**FIGURE 1**

This ministry has system of functional department. Related section are under one administrative head and also conflict can be resolved at departmental level. The main functions as it relate to the above diagram is this:-

#### **Military Administrators**

#### **Introduction**

1. Supervision and coordination of all policy matters in the ministry

## **Director General**

1. The day to day running of the Administration of the ministry and coordination of the various departments.

## **Directors**

1. Responsible to the DG and assists in coordinating each department in the day to day running of the department.

## **Deputy/Assistant Director**

1. Assists the Directors in the coordination of the various department they represent.

The honourable Minister of the Federal Capital Territory on assumption of office received several complaints from concerned members of the public who had applied for plots of land for almost 13 - 16 years and are yet to be allocated a piece of land. Among the allocation noted were:-

- i. Deliberate delays and dishonesty in handling land matters which was the order of the day;
- ii. Duplication of numbers from registers;
- iii. Some outright illegal allocations had been made;
- iv. Case of one plot being allocated to two or more applications;
- v. No appropriate land management records had been effectively maintained by the Department of land, Planning and survey.

The most terrible situation had been the absence of proper coordination between the department of land, planning and survey.

Specially the study seek to answer the following questions:-

- i. What role do planners play in land allocation?
- ii. What is the role of land registry staff?
- iii. What does cartography division do in land allocation?
- iv. What is the role of deed registry in record keeping after allocation of plot?

The project is aimed at identifying the major factors and find ways of educating and integrating computer into land information system. Thus, this will help to defuse people minds against the manual method of record keeping. To effectively do this, data was sourced by the use of designed questions like above and interview of some staff of the department.

The finding is expected to serve various purpose. The finding will help to fill the gaps in the area of Deed registry and land registry and thus the project also intensifies the integration of modern method of record keeping through computerization will help the management.

## **2.8 MASTER PLAN**

To achieve a more orderly growth such that the target population of 3 million is achieved, the city was divided into four developmental phases as follows:-

### **PHASES PROJECTED LARGEST POPULATION**

Phase 1	-	230,000 inhabitants
Phase 2	-	585,000 inhabitants
Phase 3	-	640,000 inhabitants

Phase 4 - 1,700,000 inhabitants

The phase I which comprised the most important and glamorous function of the city is made up of six district which includes:-

- |                             |               |
|-----------------------------|---------------|
| - Maitama district          | - Residential |
| - Wuse district             | - Residential |
| - Garki district 1 & 2      | - Residential |
| - Asokoro district          | - Residential |
| - General Business district | - Business    |

These are areas of intense activities with the exception of the Central Business District, all the other areas, are meant to be residential. But due to office accommodation constraints, many residential quarters have been temporarily converted to offices.

## **2.9 RESIDENTIAL DISTRICT**

Each residential district is broken into smaller unit called Neighbourhoods. The Garki districts 1 and 2, have eight Neighbourhoods, Wuse district 1 and 2, 15 Neighbourhoods, Maitama district, six Neighbourhoods in the residential district of phase 1 of the plan. Each district is served by a district centre, while each neighbourhood is served by a neighbourhood centre. The district and neighbourhood centres are design for the distribution of goods and services to the residents.

## **2.10 THE OBJECTIVE OF LAND, PLANNING AND SURVEY**

The objective of land planning and survey department in the Federal Capital Territory, is to ensure not only the proper use of land but also to make sure that the land is equally distributed among Nigerians from different parts of the country and from all walks of life.

The decision is based on equality of states and on the ability of the individuals to develop the land allocated to them. They also give advise on matters and policies connected with the management of land as earlier mentioned. More so, they see to the signature, registering, planning, surveying, mapping and releasing the certificate of occupancy, approving application to mortgage promoters and deeds of assignments and collection of land revenue for the ministry.

The Ministry of Federal Capital Territory, through the department of land, planning and survey liberalized procedures for property development in the territory. Right of Occupancy (R of O) is now issued immediately payment for the land is made and certificate of occupancy (C of O) is now automatic.

## **2.11 GUIDELINE FOR PLOT ALLOCATION**

As mentioned earlier, the Federal Capital City is divided into four phases. Since the entire land with the Federal Capital is subject to the provision of the land use Decree 1978, it follows that all citizens of Nigeria must have equal rights to use and occupy all the lands within the FCT. Allocation of plot is made by the MFCT on the land use allocation committee (LUAC). All recommendations of plot are sent to the Honourable Minister of FCT who signs all the certificates of occupancy issued to grantees.

All application for plots within the Federal Capital City must be made to the Ministry on the prescribed forms. It therefore means that only applications for land by individuals and organisation made on the prescribed forms will be considered by the Ministry. Each application for plots must be accompanied by an application fee of ₦10,250.00 for

residential, ₦15,500 for commercial and industrial, ₦5,500.00 for place of worship, agriculture, school and two (2) passport photographs, age declaration, three years tax clearance for residential purpose. Then if commercial, is has to be accompanied by certificate of registration, feasibility study of the project, systematic design of the project, tax clearance, memoranda and article of association of the project.

## **2.12 QUALIFICATION REQUIRED FOR ALLOCATION**

The qualification for allocation of plots within the Federal Capital Territory is that applicants must:-

- i. Be a Nigerian and not below 25 years of age.
- ii. The need to reflect Federal character of the country is also essential to ensure the promotion of unity of the country which is one of the objectives of establishing the new Federal Capital Territory.
- iii. There is a “one person one plot for residential use” policy. This recognises the need to control the number of plots which can be allocated to a person within the FCT in order to prevent land “grabbling” for speculative purpose.
- iv. Allottee must show ability to develop within a given period, otherwise the plot will be revoked and given out to other applicants. This will be determined from the details obtained from completed application forms.
- v. Application from companies for residential plots to develop housing estates for their workers will also be considered.

### **2.13 CONDITION OF GRANT**

Allottee of plots will be required to comply with conditions of grants as contained in their Certificate of Occupancy (C of O) which must be issued in evidence of such grants. In particular, minimum amount of improvements will be imposed on all categories of users in order to ensure that grantees of plots develop them to reasonable standard befitting the status of the nation' Capital. An offer for a Right of Occupancy (R of O) of allocated plot will be subject to the following conditions.:

- i. The offer must be accepted the allottee within 30 days of the grant.
- ii. Plots allocated must be fully developed within 2 years.
- iii. Rents fixed are subject to revision from time to time.
- iv. The term of each grant is 99 years maximum for residents.

### **2.14 LAND RECORD**

A land record contain data about land. It contains item such as:-

- i. The soil types (Area of the surveyors) and town planners in this write-up.
- ii. Its topographic characteristic such as hill lands, table lands, plains, foots lopes, channeled drainage floors also, this concerns the surveyors and town planners.
- iii. What it is being used for e.g. Commercial, Agriculture, School, Place of Worship.

- iv. The total amount of land that is available, this mainly the concern of cartographic unit of land, planning and survey department.
- v. Information on the ownership of the card, the deed registry has the required data.

The importance of a land record cannot be over emphasised because one cannot efficiently and effectively manage something whose size, and other characteristics, one does not know. And essential feature of land, planning and survey department therefore is land record.

## **2.15 LAND USE POLICY AND PLANNING**

From data available in land record, the following land use policies and action can be framed:-

- i. Land can be classified according to its intrinsic properties and the various categories. It can be relatively easier to say how much of land group "B" is equal to land group "A".
- ii. Physical planners can provide consultancy service with greater precision, if for instance an investor walk into the office and say, he wants land for a particular purpose, planners will be able at once to tell the area where the suitable land can be found and whether or not such land is vacant.
- iii. The objective of land use policy and planning is to ensure national allocation of land among competing uses and users and to guarantee

highest and best use, but it is to be noted, that this objective is unlikely to be achieved in the absence of reliable land statistics and method used for allocation of plots.

It is however to be further noted that although land records are very important in decision making with respect to land, many problems are encountered in the compilation of reliable land record.

## **2.16 LAND REGISTRY AND DEED REGISTRY**

An important feature of land, planning and survey of MFCT is Land Registry and Deed Registry. They are where records about an applicant is kept, such as the rights and interest over land and the nature and boundaries of such titles and rights. These two units take care of all the transactions that take place in the land. The Deed Registry takes care of preparation of Certificate of Occupancy, Power of Attorney, Propriate to Assign, Mortgage. It is the most sensitive unit in land transactions.

## **2.17 OBJECTIVES OF STUDY**

The objective of this project is to identify the degree to which the general public face problem in processing of their application for land especially in areas of duplication of numbers, bottleneck in some offices where application are being processed.

The objective of this project is to identify processes involved in land allocation and factors that affect plot allocation. In an attempt therefore to identify these processes, the following were taken into consideration:-

- i. Study the existing procedure in handling of matters relating to land

allocation.

- ii. Study areas of obstacle militating against speedy processing of application for land and recommending appropriate measure aimed at eliminating such problems.
- iii. Recommend a suitable system of proper keeping of land matter records with a view of ensuring an efficient and effective information system.

# CHAPTER THREE

## 3.1 SYSTEM ANALYSIS AND DESIGN

## 3.2 PROBLEM DEFINITION

There are a number of problems identified with the manual system of land allocation or method of processing applications for land allocation.

These are:-

- i. The registration of land application is prone to mistakes especially in the duplication number. This occurs frequently with manual system. But this can be solved by writing a program that will check numbers entered at any moment the operation of registration is being done.
- ii. Lost Records:- Land, Planning and survey have enormous quantities of chart, maps and other vital documents on paper to handle especially the land registry, deed registry, and cartography unit. The result is that files can grow large and complex or chart, maps may grow old and worn-out. The size and complexity alone will cause record to get lost. It is not even necessary that records be mis-filed, only that the person searching for the record is not aware of all the possible classification under which the record could have been filed. The more staff performing the filling function, the more likely these natural differences are to occur.

The rate of turnover can materially affect the result, the higher the turnover the

more often the errors are likely to occur and the more difficult the task of clearing up filing problem on that part of the long-term regular personnel.

The problem can be solved by computerizing the whole files in land registry and deed registry and other sections that deal with paper to enable the computer to retrieve, or gain access to data and update records as the case may be within a given time.

### iii. **PERFORMANCE OF LABOUR EXTENSIVE JOBS**

The performance of labour extensive jobs in the manual system involved the following:

- A. Registration of application form
- B. Storing the file in the cabinet as the database
- C. Retrieving of file processing
- D. Receiving back file non availability of plot.
- E. Tracing movement of files from on office to another.

A lot of time is involved. To eliminate these problems, all the aforementioned procedures should be Computerised and this will make the work enjoyable and also increase the rate of turnover.

iv. Paper is the most expensive medium of land, planning and survey used for storing information or data. This can be solved by using office system with electronic storage and retrieval capabilities as electronic filing cabinets, as well as work processors. With this method one can see that electronic filing gives

80 to 90 percent better access to store documents than do traditional filing method and at lower costs.

v. **BOTTLENECKS**

Land planning and survey department runs into problem of bottleneck in the communication lines, for example, the Minister may write a memo requesting for a file but the memo is put in an "in" register somewhere, and there it lies as the hours tick by and days match along to months, no action takes place because the important document left alone and unattended. There is no automatic monitoring system to do a follow-up and a check on precisely where the document is and whether someone is doing something about it, because of the largeness of the office, there are varieties in the types of documents and more staff are involved in processing these documents, so they are prone to bottlenecks, that is where the work stops and time and money lie wasting. Bottleneck may be either accident or deliberate. In many groups of people, there are bound to be difficulties from time to time in matter of interpersonal relations.

It is not rare that someone sitting at control position in a paper network (that single point where a document must pass before it is spread out through the other offices) can sabotage who has become an "enemy", real or imaginary.

The deliberate bottleneck is harder to deal with but fortunately makes up the smaller amount of the problem. The in advert bottleneck one discovered, can be and quickly cured. The most typical case of course is over working some officers encounter when a critical person at a desk is receiving more actual work than can be properly dealt with. In such a

case, a backlog piles up and an automatic and continually increased delay system is set up. The aim is to divide the work properly after determining just how much of load each critical point desk can actually handle.

This problem can be eliminated by computerising all offices concerned and they should be linked in a network so that officers can interact with one another without moving from office to office.

### **3.3 THE MANUAL SYSTEM ANALYSIS**

At this stage, is a general description of the manual operation in the land, planning and survey department. Especially the area that deals with record keeping, or data storage (Land registry and deed registry) is our concern here.

The first point where data are recorded is at the land registry, everything is carried out manually, first, the applicant collects application form from the revenue at the rate of ₦250 (Two hundred and fifty naira) for residential or ₦500 (Five hundred naira) for commercial firm, then supply all the necessary information needed, submit the form with ₦15,000 (Fifteen thousand naira) for commercial which is the processing fee.

Before the payment, a number is given by the registry staff who are in charge of any form before payment is made. This is to ensure that the number obtained at the registry is accurate before payment, after payment, acknowledgment letter is issued to accompany the payment receipt.

### **3.4 MODE OF DATA STORAGE**

After payment, the file or form is being stored manually in the cabinet room where

files are kept until they are required for by the Director, Deputy Director or even the Minister.

### **3.5 RETRIEVAL OF FILE NUMBER**

Occasionally, most applicants who by share carelessness or misfortune misplace receipt or number given to them at point of payment now come for tracing of their file number sometimes many may not remember the month or year the file was open or even in which state it was registered, thereby creating a very tedious work for the registry staff for the tracing of the number using only name of the applicant, all these take time, energy, resulting is slow down of work in the department.

### **3.6 MOVEMENT OF FILES**

Sometimes an officer may require a file and the file is being recorded against him or but as time passes by, another officer may request for that particular file because its been long the file went out, it cannot be located at the cabinet nor at the outgoing register, nor the incoming register for returned files, this creates a lot of work for the person in charge sometimes, the staff who may happen to be there at the time the file is being requested for, may not be at the Ministry or even at the department.

When this file is previously sent out or the old register is no where to be found or it is torn. This create a lot of problems in the whole department, often people mis-interpret it negatively, thereby given the department an ugly image.

### **3.7 PROCEDURE FOR PLOT ALLOCATION**

The under listed procedures are necessary for plot allocation:-

- i. Application made
- ii. Processing of plots
- iii. Earmarking of plots
- iv. Compilation of list of applicants
- v. Recommendation
- vi. Forwarding to Minister for approval
- vii. Minister's approval
- viii. Approved list from Minister
- ix. Issuing of letter of grant (R of O) to allottee
- x. Acceptance of letter of grant.
- xi. Charting
- xii. Printing
- xiii. Preparation of initial bill and Certificate of Occupancy (C of O)
- xiv. Forwarding of C of O for ministers approval
- xv. Issuing of C of O to allottee (Certificate of Occupancy)

### **3.8 DATA FLOW DIAGRAM**

In all these procedures, files pass from one table to another, and as files pass from one desk, records are being kept about them to make it easy for future use or reference.

During the interview carried out, some officers confessed that they have nothing to use to keep records about files they treat. In this case data or file can easily be misplaced.

The planners also keep records about the plots or district or phases as was mentioned

before that Abuja city is made up of different phases which is in maps, sometimes, those maps get so old or worn out that cannot read anything from them. The surveyors both regional Surveyors and cadastral Surveyors all keep records about areas surveyed such as plots in the city centre which is about 2,000 plots, Garki 1 And 2 about 2,500, 1800 in Asokoro, others are Maitama Use 1 and 2 (see maps for FCT plots as appendix.)

### **3.9 THE CARTOGRAPHY UNIT**

This units keeps records about the preparation of Title of Deed plans, file drawing and administrative revision maps. More than 30,00 charts and reports, title deeds, plans and varying TDP were done for state, Federal Government and others. It is the duty of the cartography unit to keep records about plot allocated applicant to avoid double allocation.

### **3.10 CAPABILITY OF THE MANUAL SYSTEM**

- i) In spite of the fact that the method employed in the handling of information about applicant files was tedious and cumbersome, the information themselves are accurate and in some situation they are not.
- ii) The manual system enables the staff to interact with each other especially between Junior and Senior staff and even the Minister and Director.
- iii) The manual system also enables the staff to meet people face to face, that is people of all categories.

### **3.11 SYSTEM DESIGN**

An information system design is the solution to a business organisation. Problem design demands the translation of the required problem uncovered in analysis into possible

ways of meeting them.

The design of this section will amount from the existing system such as the method of registration of application, tracing of files, processing method, storage of files or data about an applicant.

Everything is done manually thereby creating problems to the system.

The include:-

- i) Using register to trace movement of files.
- ii) Storage of charts, maps for plots which had been allocated.
- iii) Checking for double allocation manually.
- iv) Accessing whether all the methods are met.

Nevertheless, the system developed is very friendly in that will prompt you to select an option in the menu specification. The main menu option gives a numbered list of options (work to be carried out). The option listed drives to a procedure within a completion of every selected task, the user is returned to the application menu. If not correct, the appropriate message or query is displayed such as file numbers already or does not exist, double numbering, file had been sent out, not authorized to use the system and so on this will give room for correction before harm is done to the department.

The first thing to expect when the system is switch on is the "PASSWORD" to be entered or logged in. The user may be logged out after many attempts to log in to the system. But if the password is entered then it will now give access to whoever that enters such password and processing of file begins. In the case of registering of form for application, it

will first check for correctness of numbers entered whether it amount to double entry or in the case of allocation of plot it will check to make sure that this piece of land is not given to low applicants. After making sure that the the number to an applicant is not duplicated, it will then request for the First name, Surname, Address, State of Origin, and Status.

In the case of processing a file, it may request for the file number and name, if the file is still in the cabinet or database, the appropriate information is given like, file intact, but if sent out, the system gives message like file not found or please check director's office and with date it was sent there.

In the case of checking for a particular number, the system will give a message such as "Please enter the name of applicant and state", the system should respond as, the applicant number..... or otherwise file number not existing or not found.

For allocation the system gives the rightful owner of a particular plot when a wrong one is entered by giving a message like plot belongs to a particular person or plot already committed.

### **3.12 ADVANTAGES OF THE COMPUTERISED SYSTEM**

- i) The problem of duplication of number and double allocation in land processing will automatically stop.
- ii) The time required to trace files is reduced.
- iii) Expense are also reduced, since most of the manual operation involve like writing in registers of different kind. Also in the movement of registers a lot of money is involved.
- v) More job opportunity for the unemployed.

# CHAPTER FOUR

## IMPLEMENTATION

### 4.1 TEST RUNNING

The development of land allocation processing system used the modular approach to get solution to the difficulties met.

### 4.2 SOFTWARE IN USE

dBASE IV was used for programming of this project. It has many modular programming facilities and it has in-built functions in it.

### 4.3 THE DESIGNED SYSTEM

The system design is divided into modules meeting one problem. Any module can be executed by user through choosing from the main program only. There are modules in all. The main program displays the choice from where to choose for the system; that is the system program is menu driven.

### 4.4 MAIN PROGRAM-LAND PROCUREMENT PROGRAM

The module takes care of activities of program. Initially the module request normal beginning (Norm-begin) for the user to type or enter password. After required attempts and the password is incorrect, the program will continue to the next step to accept number for registration of land form and land accordingly.

Any period the computer is boot or started, it should check the days' date against the previous date the program was run. The series number is check for any state that is being

processed before entering another number.

After the beginning routine had been run, the main menu is displayed and the user selects any option which he or she wants to process or deal with at the particular time. The main menu is made up of the following choice which could be chosen by the user to solve the situation.

a) **APPLICANT RECORD**

Choice of choosing if a new record is to be recorded for any applicant for any state and this serves as the first choice of the main menu. This selection allows user to enter data or create a new record for new applicant, series number is first typed in the space provided for the purpose if the number typed is in existence, the program will be able to give message and prompt the user to enter or type a number that is non existing before any particular state typed or entered.

b) **FILE MOVEMENT**

This stage confirm that the file is in existence, is still intact where files are stored or at the data base before processing further. The program should be able to check for the state number typed to be sure that the number is correct, and if the file had been sent out it should be able to say where , when and at what stage, whether plot had been allocated to it or not and what area and size. But if the file is not out, it should be able to display appropriate message tell the user no action on the file.

c) **INQUIRING**

One is prone to mistakes or carelessness when one lost his/her number, this state or step should make it possible that when one entered or typed the name and state, the program should be able to display appropriate number corresponding to the number and state typed.

d) **UPDATE**

This stage has many submenu, when chosen, this stage should reflect the submenu where all information needed about a particular file or individual record can be carried out.

i **PLOT ALLOCATED**

Whenever an applicant is allocated a piece of land this state is used to hold the information so that the program can be displayed.

ii **COLLECTED CERTIFICATE OF OCCUPANCY**

Whenever applicant collects C of O, this option is used to display the appropriate information needed for instance, the program should be able to display who collected it, payment, or what date.

iii. **DOUBLE ALLOCATION**

Anytime two applicants happened to be given the same piece of land, this option should be able to display it and whether alternative is issued to one person or not.

## vi **REPORTS**

This state is to give or state output. It leads to a submenu options which in turn leads to another submenu; that is screen or paper. The screen option is selected to new output result from the passed menu on screen and the paper option to print the result from printer.

### a) **REPORT BASED STATE**

This option will give detailed information about each state; the number of application received so far in each state.

### b) **REPORT ON PLOT ALLOCATION**

This option will give all information about plot allocated to applicant, as well as district and phase.

### c) **REPORT ON STATISTICS**

To print or view the statistics of number of applicants on monthly basis or yearly or weekly, for management decision.

### d) **EXIT**

The user may want rest for the day's work or to close for the day, this stage will stop execution of any program, it will close all files opened, remove program from main memory and operating system takes control.

## 4.5 **DOCUMENTATION**

### i) **DATA BASE FILE**

This stage explains the different used and such as:

ii) **MASTER FILE**

The masterfile is used to store information about each applicant such as name, address, state, purpose for which plot is required and status.

**THE MASTERFILE DESCRIPTION**

FIELD NAME	FIELD TYPE	FIELD WIDTH
SURNAME	CHARACTER	15
FIRST NAME	CHARACTER	20
OTHER NAME	CHARACTER	25
STATE ORIGIN	CHARACTER	10
POSTAL ADDRESS	CHARACTER	25
FILE NUMBER	ALPHANUMERIC	10
HOME ADDRESS	CHARACTER	25
DATE OPENED	DATE	8
STATUS	LOGICAL	1
SEX	CHARACTER	1

**TABLE 4A**

The FIELD NAME Surname, has the surname of the applicant and is of character type with a width of 15, the first name, other name, state of origin, home address, or postal address contain character type and is made of the first-name and other name of the applicant as well as his/her state origin, postal address and they have the field width of 20, 25, 10, and 25 respectively.

The file number is not the same in the sense that no two applicants or file number or applicant number that are the same. The file number is given to every applicant by registrar who is in charge. It is alphanumeric type with a width of 10.

The field name sex contains the sex of the applicant and of character FIELD TYPE with a width of 1.

iii) **PROCESSING FILE**

The processing file is used to update the masterfile, the processing file keeps information about any file being processed such as the file number, date, plot allocated, district and area.

FIELD NAME	FIELD TYPE	FIELD WIDTH
FILE NUMBER	ALPHANUMERIC	10
DATE	DATE	8
PLOT ALLOCATED	LOGICAL	1
DISTRICT	CHARACTER	10
AREA	ALPHANUMERIC	2

**TABLE 4B**

The FILE NUMBER is just like the one in table 4a. The date contains the date at which plot allocation is made of date, FIELD TYPE and has FIELD WIDTH of 8.

The FILE NUMBER plot allocated contains the FIELD TYPE which is logical and has FIELD WIDTH of 1 and is either 'Y' or 'N'

The area FIELD NAME contains the filed type alphanumeric with FIELD WIDTH

of 2.

iv) **DOUBLE ALLOCATION FILE**

The double allocation file is used to keep record of all file that has double allocation of plot. It is used to view or print. all applications that receive double allocation.

FIELD NAME	FIELD TYPE	FIELD WIDTH
FILE NUMBER	ALPHANUMERIC	10
DATE ALLOCATED	DATE	8
DOUBLE ALLOCATION	CHARACTER	15
DISTRICT	CHARACTER	10
AREA	ALPHANUMERIC	2

**TABLE 4C**

The format of this table is just like table 46

v) **CERTIFICATE OF OCCUPANCY COLLECTED (C OF O) FILE**

Certificate of Occupancy called (C of O) file is used to hold information about file where allocation id mad and C of O collected. It takes this shape.

FIELD NAME	FIELD TYPE	FIELD WIDTH
FILE NUMBER	ALPHANUMERIC	10
DATE	DATE	8
DISTRICT	CHARACTER	10
AREA	ALPHANUMERIC	2
NAME	CHARACTER	15
PAYMENT	NUMERIC	10

**TABLE 4.4**

The FIELD NAME contains the FILE NUMBER of the applicant. It is of

alphanumeric type with of 10.

The date FIELD NAME holds the date the C of O was issued or signed by the honourable Minister, it is of date FIELD TYPE with width of 8. The district field name contains the district given to the applicant, it is of alphanumeric type with width of 2. The FIELD NAME hold the name of any person who collected the C of O signs either by the owner or solicitor of the applicant. It is the character type, with width of 15. Payment FIELD NAME hold the amount paid for the C of O it is of numeric type width of 10.

vi) **PROGRAM PROCEDURES**

1. **INPUT PROGRAM**

The input program modules allow data into files in the computerized system. They are:

(a) **CREATE APPLICATION PROGRAM**

This program module gives the user the access to enter or input all required information or a new application, this amounts to creating masterfile for the new applicant.

(b) **MOVEMENT FILE OF PROCESSING PROGRAMS**

The movement program are used to carry out different types of processing on the file in the system. This program whether file is from the storage unit or not, and to whom and when and who signed for it. Tracing program makes it possible to check for a particular file number in any state using the applicant

name, this is to reduce the time spent going through all the available serial number in the register concern.

iii. **LAND ALLOCATION PROGRAM**

The program informs whether or not plot had been allocated to the applicant or not, and what district, area, double allocation and when C of O had been collected and who signed for it.

iv. **REPORT PROGRAM**

This program module is responsible for giving report on any state, that is the number of file registered in any state, this number of file that had been favoured, the number of file registered within a given period as the management may require it.

**F. OUTPUT PROGRAM**

The output program modules create different reports. They include:-

i. **REPORT PROGRAM**

The program modules print out the number of the whole file registered in all states as the management needs, it could be monthly, yearly or quarterly. Also the number of plot available for allocation by district and areas. Otherwise this report may be called the "Progress Report" of the department.

ii. **LAND ALLOCATION**

This program modules print out all files with double allocation and detailed information about them.

#### **4.6 DISADVANTAGES OF THE DESIGN SYSTEM**

In the design of this system, its disadvantages arise from the inability of the program to display all the available plots or physical ground or the necessary maps concern.

## **CHAPTER FIVE**

### **5.1 SUMMARY**

In general, the computerization of land, planning and survey department is very labourious. The computerization can be done with much investigations and study of operations done in the department to sort out the management and the department requirements and needs. The goal of this tedious task will no doubt diffuse people's minds about computerisation. The investigation has revealed that the computerized system brings about vast changes in the way the department or organisation concerned conduct their day to day activities which occur too rapidly and also frequently. Despite the rapid and frequent nature in which activities are conducted people are not disoriented or alienated rather new jobs are continuously been created.

On the part of the management carder of operations, computerisation reduces operational costs and faster the processing of file due to time by retrieval of information required.

### **5.2 RECOMMENDATIONS**

The department should organise seminars and symposia to let staff see and acknowledge and the significance of computerisation and its profound effect on efficient and effective development in the modern world of science and technology. IT is the believe that this will go along way in educating users of computers that efficient and effective processing will not be achieved without the use of knowledgeable hands/experts in the domain of

computer. This will enhance efficient allocation and speedy processing of land now and in the next millennium too.

### **5.3 CONCLUSION**

In conclusion, computerisation in any organisation is a function of the volume of activities on the ground for processing, the availability of the resources on the ground to enhance computerization, and also the cost benefit analysis of the activities and resources available are of immense significance.

It is therefore pertinent that for effective and efficient decision making on land, planning, and the survey departments, experts in land management, planners, surveyors and those knowledgeable in land administration should be highly proficient in the field of computer.

## REFERENCES

- (1) AVISON D.E. (1985) Information Systems Development: A Data Base Approach. Blackwell Scientific Publications, London.
- (2) Badamosi, R.O. (1997) Systems Analysis and Design (Unpublished) F.U.T. Minna.
- (3) Bhatnagar S.C. (1991) Computers and Information Management. Prentice-Hall of India Private Ltd. New Delhi.
- (4) Kwardem M.D. (1995) Essential Features of Land Administration. FAB Education Books, Jos. Nigeria.

## JOURNALS

- (1) MFCT PRS (1985-92) ABUJA, Achievement of the Ministry of Federal Capital Territory. Efua Media Associates Ltd. Abuja.
- (2) MFCT PRS (1992) ABUJA so far, so good, Efua Media Associates Ltd, Abuja.

## APPENDIX

\*\*

PROGRAM NAME: LAND PROC.PRG

\*\* PURPOSE : TO DESIGN MENU FOR LPSPS

\*\* THIS SECTION SETS THE ENVIRONMENT AREA

SET DEVELOPMENT ON  
SET SCORE OFF  
SET CONFIRM ON  
SET TALK OFF  
SET COLOR TO B+/W+, R/B,R  
SELECT 1  
USE APPLICAN  
SELECT 2  
USE STATE  
MCHOICE = SPACE (1)  
CLEAR  
CLOSE ALL

\*\* I AM INITIALISING MY VARIABLES

MNAME = SPACE (13)  
MSURNAME = SPACE (11)  
MOTHER = SPACE (10)  
MSTATE = 0  
MAGE = 0  
MSEX = SPACE (1)  
MADDRESS = SPACE (30)  
MFILENO = SPACE (8)

DO INIT-PROC  
PUBLIC PAPER, PROOC  
STORE SPACE (10) TO PROC  
STORE .F.OR.T. TO PAPER  
CLEAR DO HEADING  
RETURN

DO WHILE .T.

MSURNAME = SPACE (11)  
MOTHERS = SPACE (10)  
MNAME = SPACE (13)  
MSTATE = 0  
MAGE = 0  
MSEX = SPACE (1)  
MADDRESS = SPACE (30)  
MFILENO = SPACE (8)

\*\* I AM DESIGNING MY INPUT SCREEN

@ 03,15 SAY "LAND PLANNING & SURVEY" COLOR W/B  
@ 05,15 SAY "MAIN MENU"  
@ 07,12 TO 19, 65  
@ 08,6 SAY "1. CREATE APPLICANT REC"  
@ 10,6 SAY "2. VIEW APPLICANT REC"  
@ 12,6 SAY "3. UPDATE APPLICANT REC"  
@ 14,6 SAY "4. MOVEMENT OF FILE"  
@ 16,6 SAY "5. TRACING OF NUMBER"  
@ 18,6 SAY "6. STORE FILE"  
@ 20,6 SAY " -----"  
@ 22,6 SAY "7. ALLOCATION"  
@ 24,6 SAY "8. REPORT ON LAND MATTERS"  
@ 26,6 SAY " -----"  
@ 28,6 SAY "19 QUIT"

@ 32,10 SAY "KINDLY SELECT YOUR CHOICE BY PRESSING ENTER KEY"  
@ 32,20 GET MCHOICE VALID REQUIRED MCHOICE & 1,2,3,4,5,6,7,8,,9,?:  
ERROR CHECK OPTION SELECTED!

READ

PROCEDURE MAIN-DIV

@ 02,4 SAY "MOVEMENT OF FILE"  
@ 06,14, 30 TO 15, 70  
@ 08,4 SAY "1. NAME OF APPLICANT"  
@ 10,4 SAY "2. FROM"  
@ 12,4 SAY "3. TO"

@ 4,6 SAY "TRACING OF FILE NO"  
@ 16, 40 TO 12, 75  
@ 18,6 SAY "1. NAME"  
@ 20,6 SAY "2. STATE"

@ 6,8 SAY "ALLOCATION"  
@ 18,55 TO 10, 80  
@ 20,8 SAY "1. FILENO"  
@ 22,8 SAY "2. NAMES"  
@ 24,8 SAY "3. DISTRICT"  
@ 26,8 SAY "4. CHARTED"  
@ 28,8 SAY "5. PRINTED"  
@ 30,8 SAY "6. SURVEYED"  
@ 32,8 SAY "7. C OF O SIGNED"  
@ 34,8 SAY "8. C OF O COLLECTED"

@ 6,8 SAY "REPORT ON LAND MATTERS"  
@ 20, 60 TO 8, 85  
@ 22,10 SAY "1. NO OF APPLICATIONS FOR EACH STATE  
@ 24,10 SAY "2. TOTAL NO OF APPLICATIONS  
@ 26,10 SAY "3. NO OF APPLICATIONS THAT HAD BEEN ALLOCATED

```
DO CASE  
  CASE MCHOICE = '1'  
    DO TEST 1  
  CASE MCHOICE = '2'  
    DO TEST 2  
  CASE MCHOICE = '3'  
    DO TEST 3  
  CASE MCHOICE = '4'  
    DO TEST 4  
  CASE MCHOICE = '5'  
    DO TEST 5  
  CASE MCHOICE = '6'  
    DO TEST 6  
  CASE MCHOICE = '7'  
    DO TEST 7  
  CASE MCHOICE = '8'  
    DO TEST 8  
  CASE MCHOICE = '9'  
    DO TEST 9
```

END CASE

ENDDO

DO TITLE

RETURN

```
PROC MOVFIL_DIV
```

```
DO CASE
```

```
  CASE MCHOICE = '1'
```

```
    DO TEST 1
```

```
  CASE MCHOICE = '2'
```

```
    DO TEST 2
```

```
  CASE MCHOICE = '3'
```

```
    DO TEST 3
```

END CASE

ENDDO

RETURN

```
PROC TRAFI NO_DIV
```

```
DO CASE
```

```
  CASE MCHOICE = '1'
```

```
    DO TEST 1
```

```
  CASE MCHOICE = '2'
```

```
    DO TEST 2
```

END CASE

```
ENDDO
RETURN
  PROC ALLN_DIV
  DO CASE
    CASE MCHOICE = '1'
      DO TEST 1
    CASE MCHOICE = '2'
      DO TEST 2
    CASE MCHOICE = '3'
      DO TEST 3
    CASE MCHOICE = '4'
      DO TEST 4
    CASE MCHOICE = '5'
      DO TEST 5
    CASE MCHOICE = '6'
      DO TEST 6
    CASE MCHOICE = '7'
      DO TEST 7
    CASE MCHOICE = '8'
      DO TEST 8
```

```
END CASE
ENDDO
RETURN
```

```
  PROC REPRT_DIV
  DO CASE
    CASE MCHOICE = '1'
      DO TEST
    CASE MCHOICE = '2'
      DO TEST 2
    CASE MCHOICE = '3'
      DO TEST 3
```

```
END CASE
ENDDO
RETURN
```

```
  IF PAPER
    SET PRINT OFF
    SET CURSOR ON
    SET DEVICE TO SCREEN
```

```
END IF
CLEAR
RETURN
```

```
  PROC PAPER_DIV
  CLEAR
  DO CASE
    DO CASE
      CASE MCHOICE = 1
```

```
PAPER = .T.  
DO & PROC  
DO CASE  
CASE MCHOICE = 2  
PAPER = .F.  
DO&PROC  
END CASE  
ENDDO  
RETURN
```

```
** THIS SECTION CREATES A BACKGROUND PROCEDURE  
HEADING BACKGROUND  
PARAMETER R1, R2, C1, C2  
@ R1, C1 FILL TO R2,L C2 CGLOR N  
@ R1-1, C1-1 FILL KTO R2-1,L C2-2 COLOR W/B  
RETURN
```

```
** THIS PROCEDURE PRINTS THE HEADING FOR THE MAIN MENU  
PROCEDURE HEADING  
DO BACKGROUND WITH 4, 10, 29, 51
```

```
@ 4,34 SAY "COMPUTERIZATION OF LAND ALLOCATIONS" COLOR B/R  
@ 6,32 SAY "SYSTEM" COLOR B/R  
@ 8,32 SAY "MAIN MENU" COLOR B/R  
@ 10,32 SAY "-----" COLOR B/R  
RETURN
```

```
** THIS PROCEDURE INITIALISE TLHE PRINTER FOR PRINTING ON PAPER  
PROCDURE PAPER-INI  
CLEAR  
@ 10,20 SAY "MAKE SURE THE PRINTER IS READY"  
@ 11,20 SAY "PRESS ANY KEY TO ACHIVE YOUR GOAL"  
SET CURSOR OFF-MFNS="  
SET DEVICE TO PRINT-WAIT" TO MFNS  
SET PRINTER ON  
RETURN
```

```
** THIS PROCEDURE INITIALISES THE PRINT FOR PRINTING ON PAPER  
PROCEDURE PAPER-INI  
CLEAR  
@ 14,25 SAY "MAKE SURE THE PRINTER IS READY"  
@ 15,25 SAY "PRESS ANY KEY TO START PRINTING OKAY"  
MANS ="
```

```
WAIT" TO MANS
SET CURSOR OFF
SET DEVICE TO PRINT
SET PRINTER ON
RETURN
```

```
** THIS CHECKS FOR CHANGES IN FILES, UPDATING & MOVEMENT
** CHECKS FOR PASSWORD SECURITY & INITIATES THE MAIN PROGRAM
```

```
PROCEDURE INIT-PROC
RESTORE FROM INIT ADDITIVE
CLEAR
```

```
@ 14, 14 TO 16, 62
```

```
MPASS=
```

```
N=0
```

```
DO WHILE N<3
```

```
@ 15,16 SAY "PLEASE ENTER PASSWORD" GET MPASS COLOR, N/N
```

```
READ
```

```
SET EXACT ON
```

```
IF TRIM (MPASS)=TRIM(PASSWORD)
```

```
EXIT
```

```
ELSE
```

```
?CHR(7)
```

```
N=N+1
```

```
IF N=2
```

```
@ 17,23 SAY "ACCESS DENIED
```

```
WAIT" TO MFNS
```

```
QUIT
```

```
ENDIF
```

```
LOOP
```

```
ENDIF
```

```
ENDDO
```

```
ENDDO
```

```
CLEAR
```

```
@14,25 SAY 'PLEASE WAIT.... INTIALISING FILES
```

```
IF DATE ()>IDATE
```

```
USE PLOT NUMBER
```

```
*SELE B
```

```
USE CURRENT FILE NUMBER
```

```
DO WHILE .NOT. EOF()
```

```
MFILNO=FILNO
```

```
ENDIF
```

```
REC=RECNO()
```

```
ENDDO
```

```
ENDIF
```

```
SET SATETEY OFF
```

```
RELEASE ALL EXCEPT PASSWORD
```

```
IDATE=DATE()
```

```
SAVE TO INIT
SET EXACT OFF
CLOSS DATABASES
CLEAR
RETURN
```

```
***THIS PROCEDURE INITIALISES THE FOR PRINTING ON PAPER
```

```
PROCEDURE PAPER_INI
```

```
CLEAR
```

```
@14,25 SAY 'MAKE SURE THE PRINTER IS READY'
```

```
@15,25 SAY 'PRESS ANY KEY TO START PRINTING'
```

```
MANS = ' '
```

```
WAIT ' ' TO MANS
```

```
SET CONSOLE OFF
```

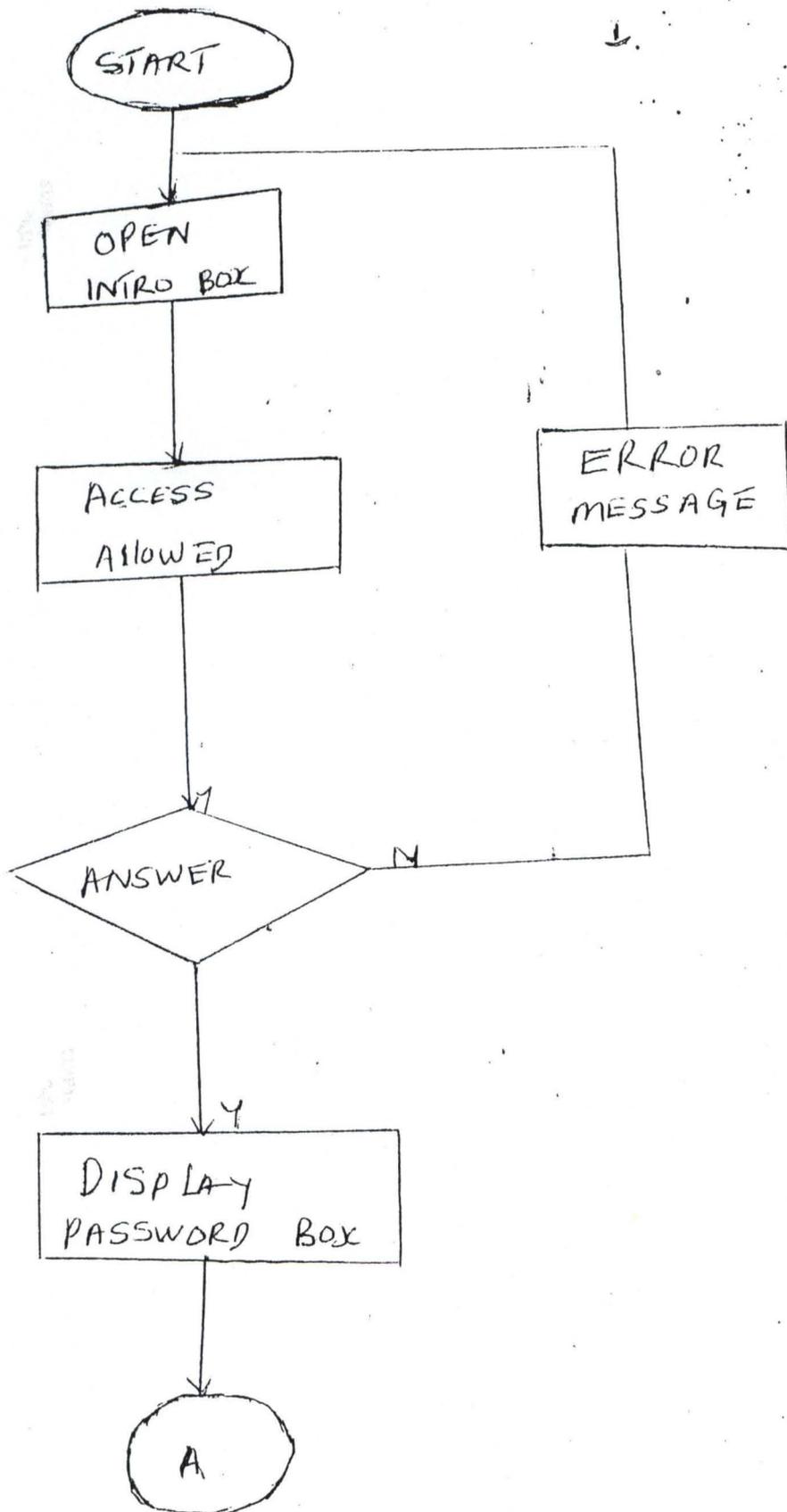
```
SET DEVICE TO PRINT
```

```
SET PRINTER ON
```

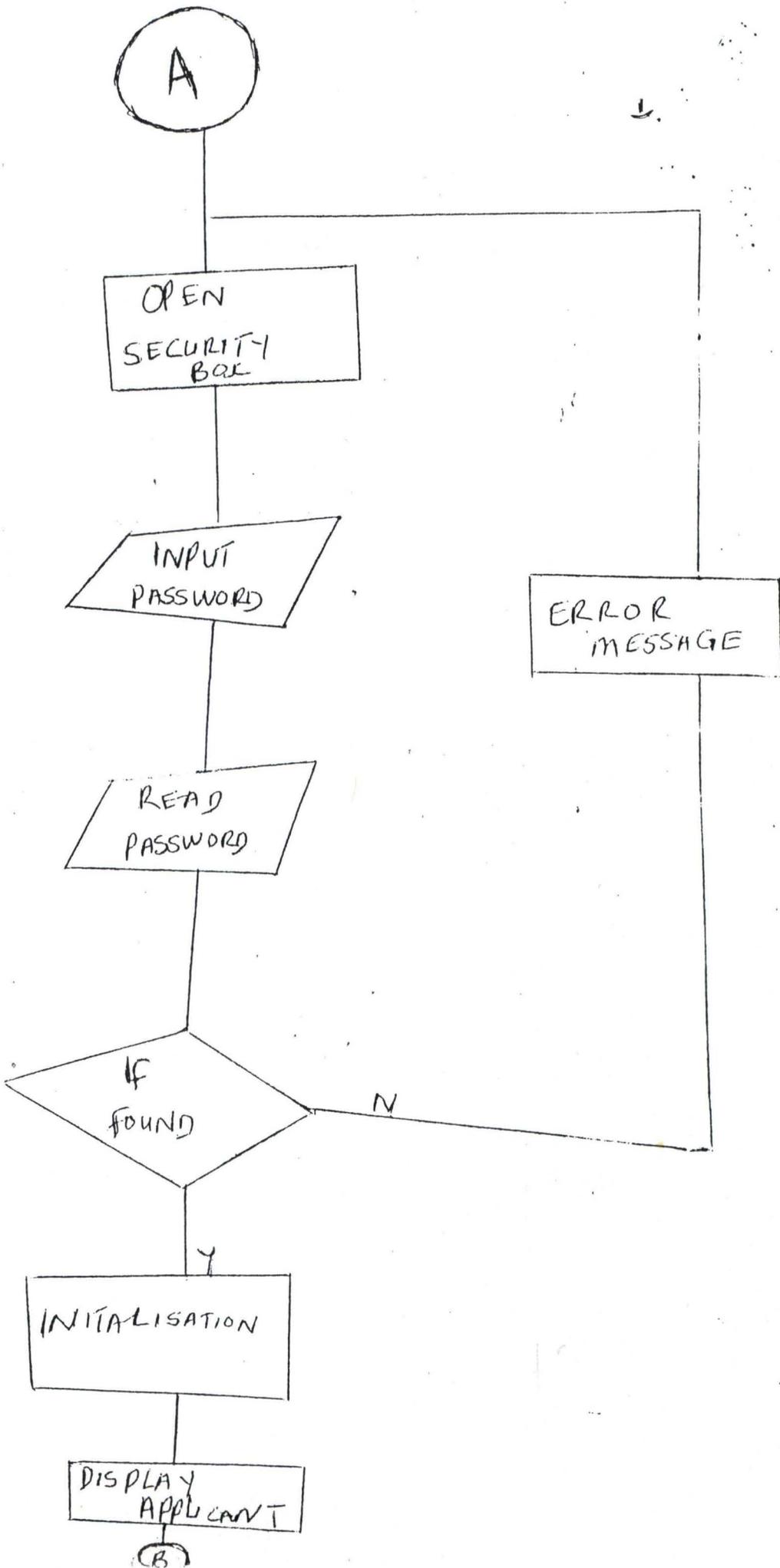
```
RETURN
```

XXX INTRO PROGRAM

g I.

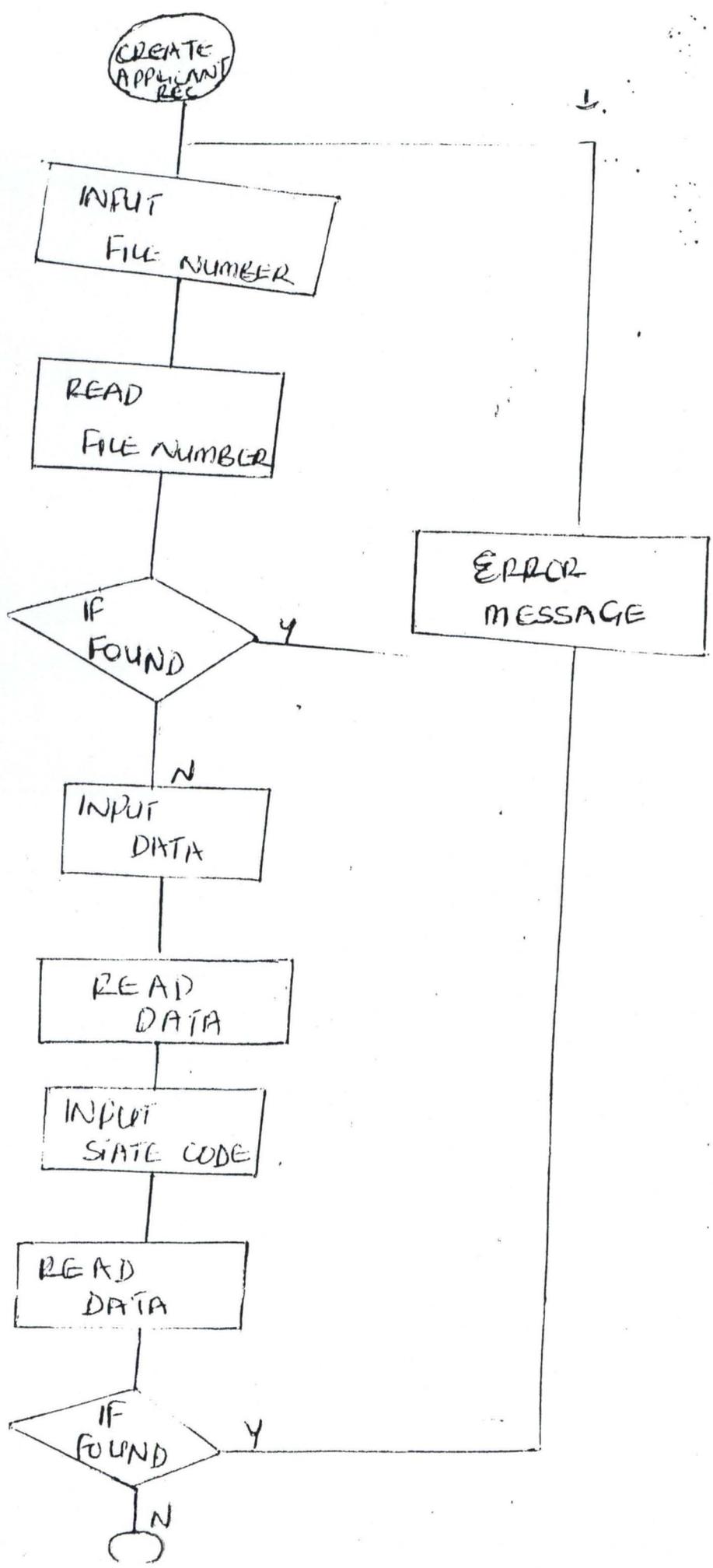


THE PASSWORD PROGRAM

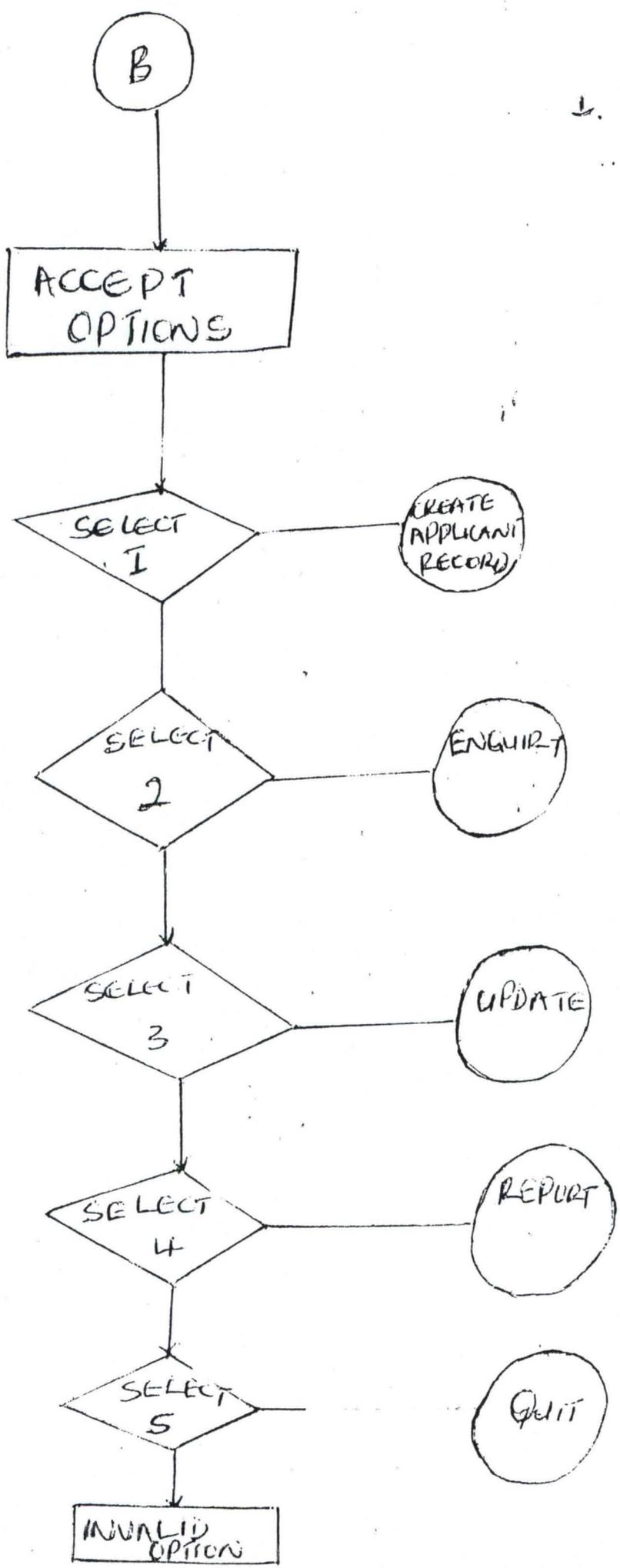


# PROCEDURE FOR CREATING APPLICANT RECORD

A

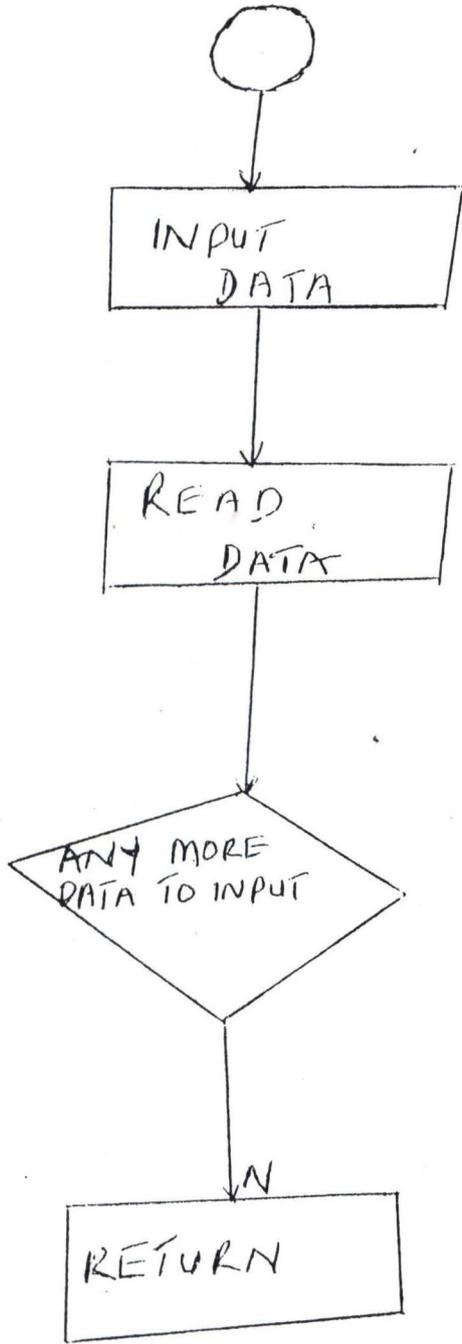


# THE PROGRAM FOR APPLICANT (MAIN MENU PROGRAM)



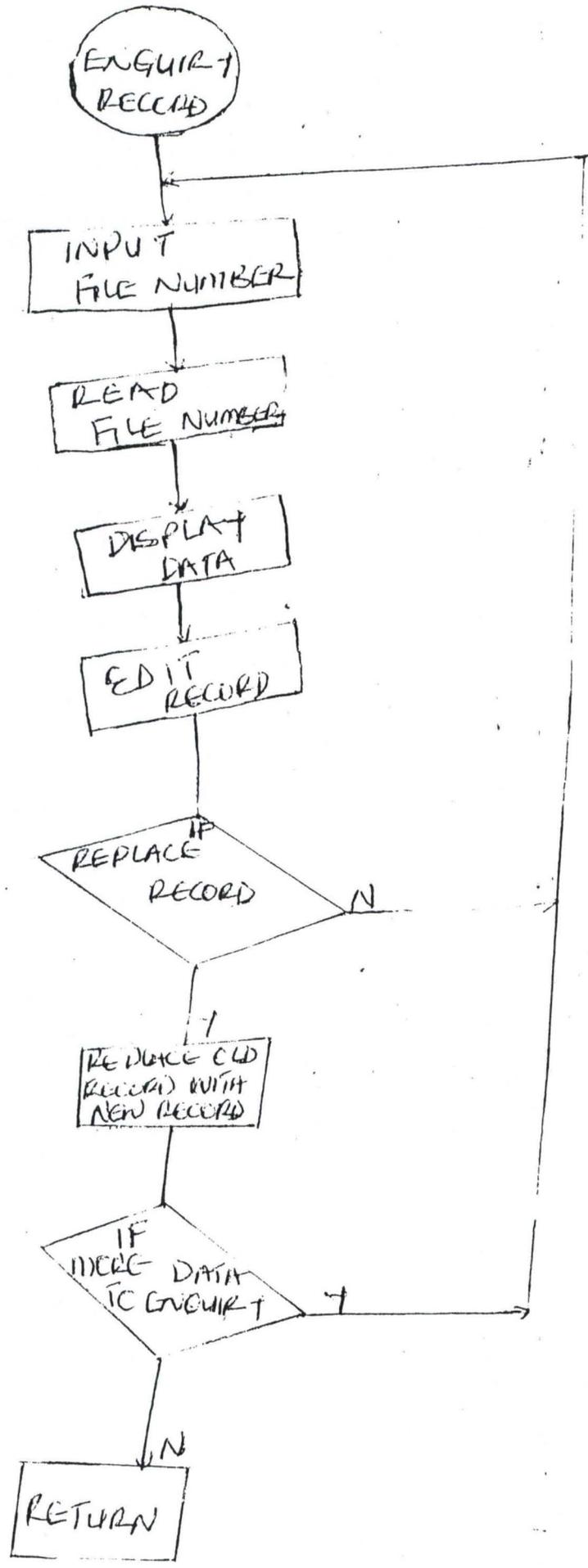
PROCEDURE FOR CREATING DATA

4B.

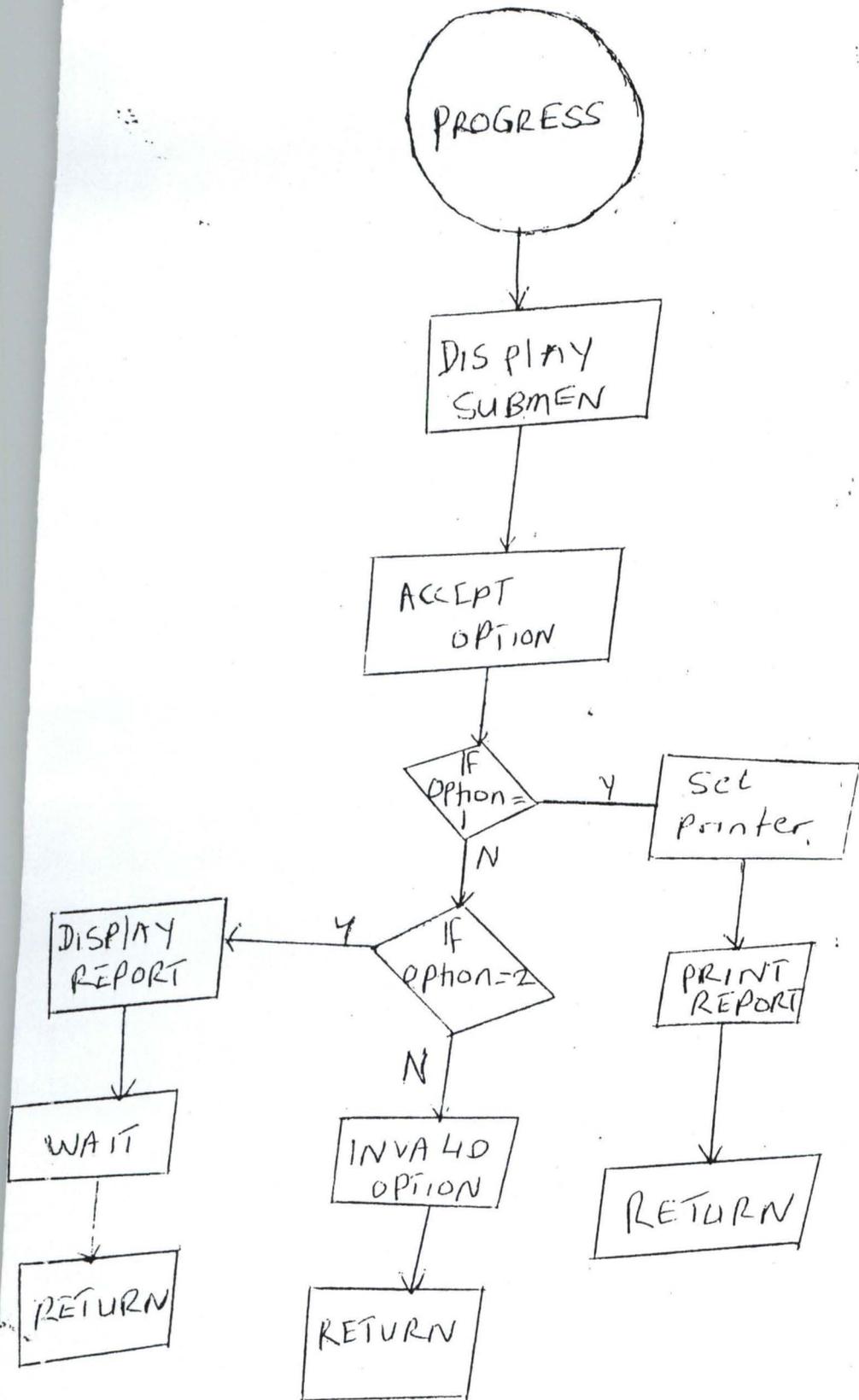


# PROCEDURE FOR ENQUIRY RECORD

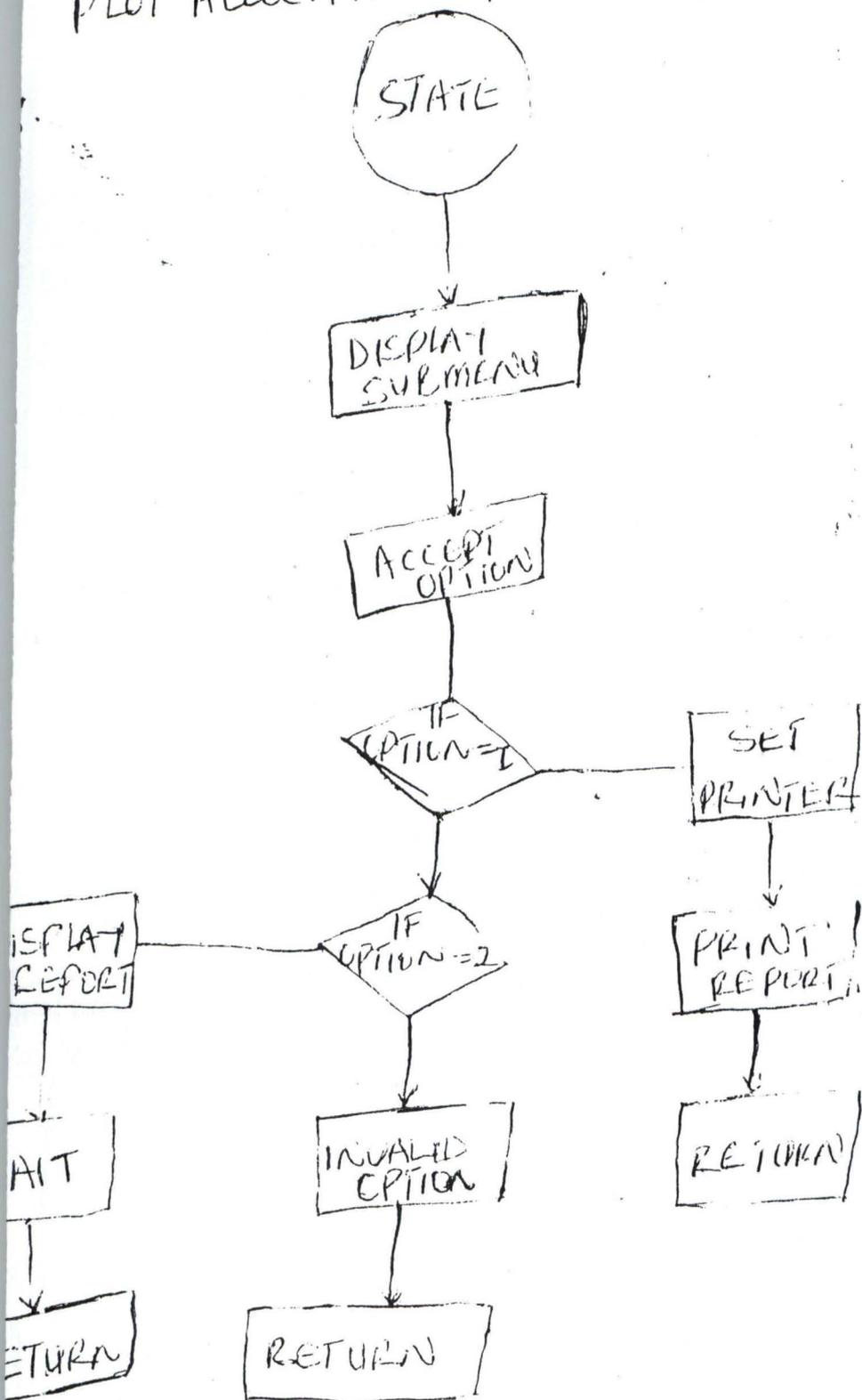
6



# PROCEDURE FOR REPORT GENERATION PROGRAM

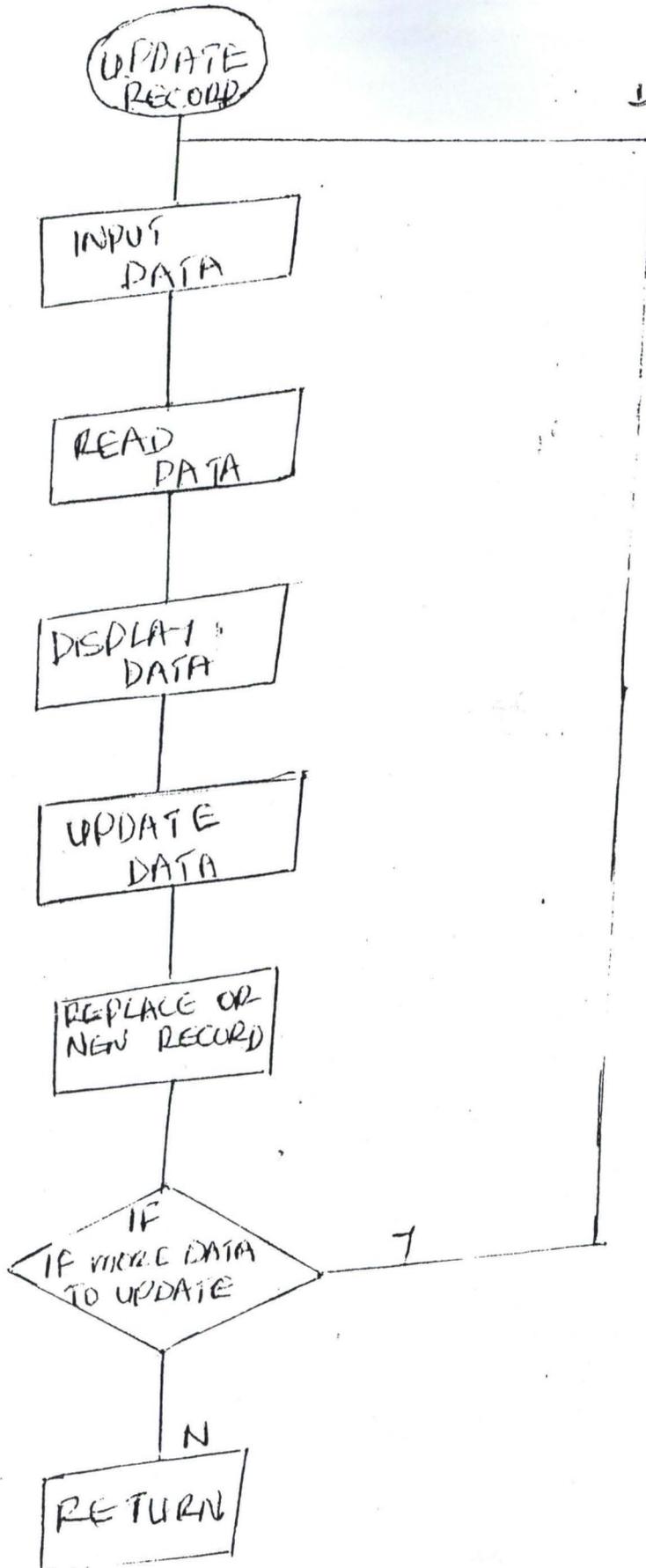


# PROCEDURE FOR REPORT GENERATION FOR STATE PLOT ALLOCATION & STATISTICS



# PROCEDURE FOR UPDATE RECORD

5.



# PROCEDURE FOR C OFO \$ DOUBLE ALLOCATION

