

TITLE PAGE.

COMPUTERIZATION OF BUILDING PLANS

IN THE DEPARTMENT OF LAND,

PLANNING AND SURVEY,

FEDERAL CAPITAL DEVELOPMENT

AUTHORITY, ABUJA

BY

YUSUF OMONUBI SAIDU

(PGD/MISC/224/96)

**A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS
AND COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY,
MINNA, NIGERIA**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD
OF POST GRADUATE DIPLOMA IN COMPUTER SCIENCE.**

MARCH 1998.

DEDICATION

I dedicated this project to my beloved late daughter in person of **LATE MISS SALAMATU YUSUF**, wife and children for their patience, courage and understanding during the course of my absence from home. May Almighty Allah continue to bless and guide them in all their endeavors "Amen".

CERTIFICATION

1. I certify that this project was carried out by **YUSUF OMONUBI SAIDU** a student of the department of mathematics/
computer science ,school of science and science
education, federal university of technology, Minna.

DR. YOMI AIYESIMI
SUPERVISOR

DATE

PROF. K. R. ADEBOYE
HEAD OF DEPARTMENT
MATHS/COMPUTER

DATE

EXTERNAL EXAMINER

DATE

ACKNOWLEDGMENT

I sincerely acknowledge and register my profound gratitude to Almighty Allah for his guidance and protection throughout my studies and for raising me academically.

My thanks also goes to my project supervisor **DR. YOMI AIYESIMI**, the head of Maths/computer science department **PROF. k. R. ADEBOYE**, the course coordinator PRINCE Badamasi and all other members of the department.

My gratitude also go to **ALH. ISAH ALIYU NDAKO** and **ALH. WADA ALIYU** (DIRECTOR General FCT) .My gratitude also goes to **ALH. MUSA A. AUDU** of the Federal Capital Development Authority ,Abuja, for his financial and moral support during the course of my studies.

I am also indebted to the management and staff of the Federal Capital Development Authority, Abuja, for their support and encouragement.

My highest and unreserved gratitude goes to my beloved wife **(MALAMA AISHA S. YUSUF)**, children and my entire Household for their courage ,moral and financial support during the period of my studies.

YUSUF OMONUBI SAIDU

ABSTRACT

Development control is the practical aspect of physical planning which affects the live of the general populace. I therefore involved rules setting and enforcement of such rules in the use of Land to achieve set out goals and objectives.

The choice of this topic " Computerisation of building plans approval" in the department of Land, Plnning & Survey, FCDA, is therefore very unique as it affects the orderly arrangement of facilities needed for the planning and development of a new Capital City of this nature.

In order to meet the current Economic and social developments, of the new system becomes inevitable.

At this junture, I wish to suggest that the use of this system would form a good springboard for keeping records and development of the new Capital City - Abuja.

TABLE OF CONTENTS

TITLE PAGE

DEDICATION

CERTIFICATION

ACKNOWLEDGEMENT

ABSTRACT

CHAPTER ONE

1.0	INTRODUCTION -----
1.1	BRIEF HISTORY OF DEVELOPMENT CONTROL DIVISION -----
1.2	STATEMENT OF THE PROBLEM -----
1.3	THE SCOPE AND LIMITATION OF THE STUDY -----
1.4	OBJECTIVE OF THE STUDY -----
1.5	JUSTIFICATION FOR THE STUDY -----
1.6	RESEARCH METHODOLOGY -----

CHAPTER TWO

2.0	LITERATURE REVIEW -----
2.1	THE IMPORTANCE OF COMPUTER IN DEVELOPMENT CONTROL DIVISION -----
2.2	RECORD KEEPING -----
2.3	THE ROLE OF RECORDS IN AN ORGANISATION -----
2.4	TYPES OF RECORDS -----
2.5	RECORD MANAGEMENT -----
2.6	THE BASIC OBJECTIVES OF RECORD MANAGEMENT -----
2.7	COMPONENTS OF A RECORD MANAGEMENT SYSTEM -----
2.8	FEASIBILITY STUDY -----
2.81	THE MAIN FINDINGS OF FEASIBILITY STUDY -----

CHAPTER THREE

3.0	SYSTEM ANALYSIS AND DESIGN -----
3.1	INTRODUCTION -----
3.2	THE DESIGN OF THE PROPOSED SYSTEM -----
3.3	SYSTEM INPUT SPECIFICATION -----
3.4	SYSTEM OUTPUT SPECIFICATION -----
3.5	CHOICE OF LANGUAGE -----
3.6	DATABASE FILE DESIGN -----
3.7	THE PHYSICAL DESIGN -----
3.8	COST BENEFIT ANALYSIS OF THE SYSTEM -----

CHAPTER FOUR

4.0	SYSTEM IMPLEMENTATION -----
4.1	DESCRIPTION OF THE PROPOSED SYSTEM -----
4.2	SOFTWARE REQUIREMENT -----
4.3	SYSTEM TESTING -----
4.4	SYSTEM CONVERSION -----
4.5	POST IMPLEMENTATION REVIEW -----

CHAPTER FIVE

5.0	SUMMARY, RECOMMENDATION AND CONCLUSION
5.1	SUMMARY -----
5.2	RECOMMENDATION -----
5.3	CONCLUSION -----
	REFERENCES -----
	APPENDIX -----

CHAPTER ONE

1.0 INTRODUCTION

Sometimes ago computer was so inconspicuous that most people were hardly aware of it's existence. All we know was that there was a sort of big computer some where that did such things as keeping records of information regarding our daily activities in an organization. All this involved a large volume of data and can naturally be unwise if accomplished manually as it will be tiring, slower, and inaccurate.

Today, things are quite different, since we are intensively aware of the modern computer technology as a great force in our modern society. we live in the computer age and the computer is reshaping our world. The influence of computer technology cannot be over emphasized than any other dominant technology in our society.

The development of computer not only improve our living standard, but has also go a long way to make the power of infinite intelligence available in our society. This is to say that the contribution of computer to the development of our modern society can only be limited by human imagination. This, therefore, call for the information and application in many diverse fields. This is because computer is very efficient and adequate for data processing and storage of information with high degree of accuracy. Hence, a computer is an electronic device which is capable of accepting and processing data by following a set of instructions(programs)to produce an accurate and efficient result (information).

Every organization, regardless of its size or purpose is concerned with the processing of facts or data about its operation in order to provide accurate and current information to the management and the general public.

The primary assignment of this project is to discuss the relevance of computer to organizational development. In other word, the focus will be on the computerization of Building plans approval in the department of Land, planning and survey, in the Federal capital development Authority, Abuja. With the improved management information system, as a result of this computerization, better, quicker and efficient services will be rendered to developers that is private and cooperate sector in the society both at home and abroad.

However, anything with an advantages must have its own disadvantages. Though, such are very few in case of automating a manual system like the computerization of development control plans approval records. Some notable disadvantages are rendering some workers unemployed especially those that cannot cope with the acquisition of the new skill that will be necessary for the implementation of the new system. However, this may not be a hindrance to our development and implementation of the new system especially when considering the cost benefit analysis of the proposed system.

1.1 BRIEF HISTORY OF DEVELOPMENT CONTROL DIVISION

The federal capital development authority (FCDA) was created in 1976 under degree 2 of 1976 by the Federal Government under the regime of General Muritala Ramat Muhammed the then Head of state of the Federal Republic of Nigeria on the submission of the

Aguda commission's report for the relocation of our national capital city due to some reasons such as proximity of Lagos (the capital city) to water, the non-centralization from the rest part of the Nation and to ease the congestion in Lagos.

This decision was informed for reasons that by maintaining Lagos as the new Federal capital, our national sovereignty is been threatened. Thus, the need for the capital to be centralized to reduce the burden of long distance journey to the headquarters, administrative convenience to the Federal Government, Landmass etc.

The creation of the Federal Capital development authority was to monitor and develop the new capital city.

However, it's functions presently with nine departments and some parastatals among which are:

DEPARTMENTS

- (i) PERSONNEL MANAGEMENT SERVICES
- (ii) EDUCATION
- (iii) HEALTH SERVICES
- (iv) MAINTENANCE
- (v) PUBLIC WORKS
- (vi) ENGINEERING SERVICES
- (vii) LEGAL SERVICES
- (viii) FINANCE AND ECONOMIC DEVELOPMENT
- (ix) LANDS, PLANNING AND SURVEY.

PARASTATALS

- (i) FCT WATER RESOURCES AGENCY
- (ii) MASS LITERACY EDUCATION AGENCY
- (iii) AREA COUNCIL SERVICE BOARD
- (iv) URBAN MASS TRANSIT SERVICE. etc.

The division of the Federal Capital development authority into this various departments and parastatals mentioned above is to speed up all kinds of developments/infrastructures in the capital Territory, Abuja, for sustainable and habitable living. In an attempt to achieve this objective, consultants were employed to designed and prepared a master plan for the development of Abuja, the new capital territory ,through the department of Land, planning and survey.

The responsibilities of the department are carried out through various arms of this department, this include:-

(I) **URBAN PLANNING DIVISION** :- This division is responsible for the designing and allocation of plot to both cooperate organization and private individual within the Federal Capital, granting requests for planning permission etc.

(ii) **REGIONAL PLANNING DIVISION** :- This arm is responsible for all regional request within the territory. They also oversee the zonal offices in each of the existing local Government Area Councils.

(iii) **DIRECTORATE DIVISION** :- This division is responsible for the general administration of the department. e.g. Staff promotion, discipline, welfare, training, appointments etc.

(iv) **LAND SURVEY DIVISION** :- This arm is responsible for all kinds of survey works within the territory e.g mapping, cartography, establishment of property becons etc.

(v) **DEVELOPMENT CONTROL / RESETTLEMENT DIVISION** :- This is the division where this project focuses it's attention. The following are the responsibilities of the division :-

- (a) To approve all buildings proposals in the Federal capital city.
- (b) To monitor and reports all cases of illegal developments within Abuja city.
- (c) To issue all setting out approval for all developments.
- (d) Granting all planning permission for temporary and permanent usages.
- e) To issue completion certificate to all habitable building in Abuja city.
- (f) Collect revenue on behalf of the authority for all kinds of approvals in the capital City.
- (g) Handles all resettlement cases in the territory.
- (h) Sitting of Markets / Motor parks in the City.
- (i) Prepare the "development control standards and regulations" to guide all developers in the new Capital City.
- (j) To demolish all illegal structures in the territory.
- (k) In charge of Street Naming and House numbering schemes in the territory.

1.2 **STATEMENT OF THE PROBLEM**

The use of computer in an organization has not been recognized until recently. The development of it can be seen in colleges and universities where computer science is a well established field with the coming of inexpensive micro-computers. However, the trend has become a tidal wave.

For organizational and managerial convenience, it is important to identify the problem of the study in order to give direction to the study. These problems are put in question form in situation where theories are not in existence. Therefore the realization of these facts and the following:

- (I) The increasing volume of developers.
- (ii) Can information about developers whether cooperate body or private individuals be readily available at all time?
- (iii) Increasing need for security and safeguard assets entrusted to development control division care.
- (iv) Is the new system of keeping Building plans approval records faster and accurate ?
- (v) The bulk of the work is still being done manually.
- (vi) Is there going to be an abuse of the new system on the part of human factor ?
- (vii) With the new system work on the issue of maintenance ?

Based on these problems that the studies shall attempt to find solution, on this computerization of Building plan approval was conceptualized.

1.2 THE SCOPE AND LIMITATION OF THE STUDY

Many have been doubting the importance of computer in organizational setup. The benefits derived by computerizing the record owned by an organization can not be overemphasized. To this end, the researcher decided to carry out the project "COMPUTERIZATION OF BUILDING PLANS APPROVAL" in an organizational setting with particular reference to development control division of the Federal Capital development Authority , Abuja.

Firstly, the scope of the research study is limited to computerizing BUILDING PLANS APPROVAL and not the entire activities of the division.

Secondly, there was inadequate information on the existing system since it is greatly characterized by operational manual.

1.4 OBJECTIVE OF THE STUDY

Despite the background that a sure way to success is the use of a well articulated information technology (IT) and the observed constraints of the system in use, this research work intend not only to achieve the award of postgraduate diploma in computer science of the Federal university of Technology minna, but among other things design a package for Building plan approval in development Control division of the department of Land , planning and survey with the view to reducing if not eliminating the difficulties and problems encountered by the users of the new system and enhance there efficiency and productivity while meeting up the set down development control targets and objectives.

1.5 JUSTIFICATION FOR THE STUDY

The primary effect of computerizing BUILDING PLAN APPROVAL RECORDS in the Development Control Division is to solve the problems encountered in using the present manual system. Studies have shown that the crude and tiring nature of keeping records could gravely affects the image of the division and the organization as a whole. This has made the researcher to look into an alternative way of keeping Building Plans approval records.

A computerized Building plans approval records will produce a neat , comprehensive and accurate information for both the management and the developers whenever it is required.

1.6 **RESEARCH METHODOLOGY**

The data used for the study rested heavily on the use of primary and secondary data.

In order to obtain the primary data for this research work, there was the need to make an observational techniques in order to compliment interview reports obtained from the staff of Development control division.

While to obtained the secondary data used for this research work, emphasis was on the survey of the existing documents and other existing literatures both published and unpublished.

CHAPTER TWO

2.0 LITERATURE REVIEW

Development control is the practical aspect of physical planning that touches directly on the lives of the majority of the populace who at one time or the other will seek for planning permission for different type of physical development. It should therefore be understood to imply a process of rule setting and rule enforcement in pursuit of a set of social objectives. This is to stress the need for orderly development of our urban cities particularly Abuja (the nation's new capital).

Today, looking at the way the city is been planned, one will be convinced to say that Abuja is going to be one of the best cities in the world.

In order to achieve the objectives, building plans processing committee was inaugurated in 1983 and charged with responsibility of processing and granting planning permission for both private and public developers within the Abuja capital territory. This committee has therefore produced a document known and called "THE DEVELOPMENT CONTROL STANDARDS AND REGULATIONS" which can be reviewed at any time it's deemed necessary. This intends to give proper public awareness, education and guide the would-be developers within the Abuja capital territory.

This document which of recent has to be reviewed and updated to meet the space of time, will help to attain the development control goals which include the attainment of a balanced harmonious growth, assurance of a suitable environmental quality, prevention of over loading of infrastructure, protection of right of individuals as well as establishment of acceptable and constantly improving standard of living.

The most common features of most Nigerian urban settlement today suffer from disorderliness of the physical planning. The streets are not purely laid-out, Building line are hardly maintained, coupled with constant changes in Land use, a situation which encourages inaccessibility and chaos. This is one of the impacts of physical planning on the lives of the populace. As such the computerization of Building Plans approval for efficiency and effectiveness will be a step in the right direction.

Infact, also uncontrolled development featured prominently in these cities with large areas of recently built up parts, lack of amenities and inaccessibility. In view of this rather chaotic situations in our cities, many Nigerians look to Abuja as a place where we can demonstrate our ability, as a people to create a well ordered city, hence we cannot afford to fail. This document is a significant milestone in the achievement of orderly development of our national capital city, Abuja.

However social change can be promoted as regard national development by relaying through our physical planning programs, habitable settlement that portray our believes, culture and norms. Such presentation through the use of characters could produce examples which other nations emulate as much human learning occurs not because of a persons own actions but by observing others.

At this end, one will suggest that the government should give priority to physical planning in other to obtain Her set objectives in the development of Abuja. In view of the above, it will be clearly understood that the computerization of the

Building Plans approval in the development control division of Land, planning and survey department will be a step in the right direction. However, there will be need to emphasize training of personnel for effective take off of the automation process.

" The Department of Land, Planning and Survey should develop an organize system of training staff. This is a program design through research. It involve an orderly method of defining training programs and measuring training impacts on the trainees and their environment".

This approach will be very effective considering the present circumstances. If automation is to be carried out, the right calibre of people should be trained and consideration should be taken of the area where they will be serve.

On the other hand, computerization will have it attendant problems and prospects. One of the prospects is that a powerful tool will be provided which is capable of handling huge amount of data at enormous speed. Useful and important impacts will be provided for managerial decision making. They organize, compress and select data so that they become meaningful information which are valuable at an appropriate time for dealing with particular problems.

On the other hand, the problems include the resistance for change on the part of the management, problems of control on confidentiality and privacy of information and high cost of hardware and software as well as maintenance problem.

Thus, notwithstanding, the computerization of BUILDING PLANS APPROVALS is a development, is not only preferable but highly desirable.

2.1 THE IMPORTANCE OF COMPUTER IN DEVELOPMENT CONTROL DIVISION

Many had over looked the importance of computer science in the society, computer in the development control division is as importance as it is to business activities. The in coming of micro-computers had improve the use of computer in the society.

Record keeping and application programs have being used successfully by some organizations. Much work is been done with computer these days.

In many professions, programs have been written to assist in some professional activities e.g. Medical, Industrial, Administrative, Institutions of higher learning etc.

Administratively, many programs have been written to assist in administration of School organization, stock records and control can be done effectively and standard letters can be produced easily and quickly using word processors.

In Development Control Division, Building Plans Approval can easily benefit from being computerized and records such as names of Developer, location of the proposed development, Year of allocation, certificate of occupancy date, File number, Approval date etc are capable of been produced by a computer. To this end, the main objective is to disseminate the work / information both proposed and approved plans submitted by the developers.

Further to the above facts, it is also importance to mention that the computerization of the division will help to reduce cost of purchases such as file tags, file jackets, working papers etc. Also it will further reduces the bulky nature of storage facilities such as the shelves, for file storage. This will equally alleviate the problem of damages as atimes these accumulated files are eaten up by termites resulting to loss of useful information.

The increase application of computer technology into every facet of business lives is evident, that it is possible to design a program which will draw plans through the use of COMPUTER AIDED DESIGN (CAD). This CAD can equally be used to test the accuracy and correctness of Building Plan design before approval are granted to developers.

The personnel records of the division can equally benefit from this computerization since records regarding their nature of jobs, Year of services, personnel data are capable of being produce by a computer.

2.2 **RECORD KEEPING**

Just like in every urban cities in the world, Abuja, the new capital city of Nigeria, settlement is based upon competition and as such, the Development Control Division has the concern to work hard to maintain high standard to satisfy the challenging need of urban settlement. In view of this, records keeping plays a vital role.

Record keeping is the method by which facts and figures are recorded and stored with ease. The speed with which findings are retrieved when needed makes the difference between success and failure.

In computerizing Building plans Approval, each Developer carries out it's development in accordance with the Authorities approval.

2.3 **THE ROLE OF RECORDS IN AN ORGANISATION**

Every material that comes into or goes out of the office becomes a record. Every organization whether business or otherwise keeps a record in one form or the other. Records could

be looked into as an account in written or permanent form serving as evidence of a facts or events.

Information are preserved and handed down on it. For example the plan, approved for a developer offers evidence of an event.

One of the important roles of records in an organization is to give information. This information is then used by the organisation, Developers and even the competitors in the case of plans approval records, the role played by the record foster information to Developers about their development progress, give information to the management about the Developers.

In the business world, the information is used for planning and decision making, such information is also used by the customers for guidance. It will be good to know such things as the length of time the average customers wait in a line, the length of time from receipts of a customer's request to the time of acknowledgement via the mail or the average numbering of Telephone.

A good record keeping will make retrieval of information easier and faster because of the modern method of record keeping which allow for retrieval of information at optimal level with efficiency.

Development Control Division stands as the most critical source of useful information about development. Retrieval of the referenced enables the user to locate the desired record (Document). In many sophisticated retrieval system, parts of records may be retained for a line not exceeding the period for which other records are retained.

A good record must also play the role of storing information, if an information could not be properly stored, then the method should be checked. References to the information at one time or the other for updating the facts and figures in the record in order to make decision for the next plan for action.

The essence of keeping record is to ensure that information are readily available at all times. Therefore, a good record keeping system must be properly stored to facilitate quick retrieval whenever it's needed for instant use.

2.4 **TYPES OF RECORDS**

In record keeping, efforts are usually geared towards identifying, collecting and making available the most urgently needed information at all levels of the organization. The types of records available in any organization, depends upon the type of services rendered by such an organization. The type of record kept by a business organization is quite different from those kept by an administrative setup. For the purpose of this project, records are categorized into the following:

(i) **ADMINISTRATIVE RECORDS** :- This include the executive and general correspondence form used for administrative works, system and procedure record, management project, paper work etc.

(ii) **COMMUNICATION RECORDS** :- This involves bulletins as communications, messenger records, postage records, Telecommunication copies etc.

(iii) **PERSONNEL RECORDS** :- This includes employees activities, application records, injury claims and settlements, health and safety bulletin, insurance records, job description, time cards, training manual, union-agreement.

(iv) **ACCOUNTING RECORDS** :- This includes records of account payable, account ledger, invoices, Bank statement deposits, balance sheets, record cash, budgets, capital assets, receipts and payment records etc.

(v) **CORPORATE RECORDS** :- This deals with annual reports, authority to issue securities, bonds, surety, corporate election records etc.

(vi) **LEGAL RECORDS** :- It entails claims and legitimation on torts and breach of contract, Copy right, Trade mark constitution and bye laws.

(vii) **MEDICAL RECORDS** :- This could be referred to as Patient Cards, Drugs inventory Cards, Death Register, Birth Register, Staff matters etc.

(viii) **OTHER TYPES OF RECORDS** :- This could be grouped as miscellaneous records such as Office supplies and services, Office equipments, requisitions for supplies etc.

2.5 **RECORD MANAGEMENT**

There are many ways and methods of regulating the volume of records which are usually destroyed as a result of information duplication or changes in rules and regulations, Business practice and the need of the user. The system of control is known as record management.

The available system and techniques required to support information storage and retrieval at optimal level are not effectively and efficiently utilized. This is supported by current estimates that sixty percent of all records currently retained are valueless and costly to maintain. As a result of this, a highly sophisticated system which has ability to collect,

evaluate, store, remove, reproduce and reference information through mechanization and automation was developed. However, it is entirely possible to achieve dramatic reduction in cost without employing an elaborate and expensive equipments and methods.

The adoption of elementary concepts and techniques of record management will result in the number of ideal records being processed and stored in other to provide easier and accurate records for the identification and retrieval of essential records.

2.6 THE BASIC OBJECTIVES OF RECORD MANAGEMENT

Record management program has basic objectives which embraces the concept of relevance, self improvement and custodianship.

(i) The program must provide every level of organizational activities with the most accurate and visible information timely in an understandable manner with expressed need at cost level.

(ii) Increase the productivity of the administrative functions through the identification and addition of improved and responsive system, techniques and equipments which enlarge information potentials, reduce records and files requirement, expand discrimination capability and effect cost savings.

(iii) Protects the organization assets by preserving essential and valuable information vital to the continuance of profitable activity interposing meaningful control over the flow of records and safeguarding them against physical hazard sabotage, business espionage.

Successful attainment of the stated objectives depend largely upon the competence and communicative skills of the records management professional.

It is their ability to understand and at significant level that will determine the extent to which they enjoy the confidence of the extent to which they enjoy the confidence and support vital their work.

2.7 COMPETENCE OF A RECORD MANAGEMENT PROGRAM.

The following are the components of our required record management program.

- I) CONTROL
- ii) EVALUATION
- iii) SIMPLIFICATION
- iv) IMPLEMENTATION
- v) REVIEW

At this juncture, control is established to isolate and enumerate all major elements of information following through the information network. Control is exercised to ensure compliance with the practices and procedures of the modified record management system.

Evaluation involves measuring the validity and effectiveness of information flow and after modification examining the relevance of the information generated and stored and the flexibility of the records management system, to provide for future requirements.

SIMPLIFICATION process consist of restructuring the network design and, content, eliminating waste and confusion and establishing clarity and efficiency through the application valid techniques and principles. The information network which finally

emerges must also be suggested to the security of the simplification function.

IMPLEMENTATION:- Afterward, engulf reference technique and deployment of authorized personnel armed with specific procedure with which to create, process, store, retrieve and destroy record under the supervision. This constitute the implementation function. Hence, implementation requires active participation by records management professions.

REVIEW:- Requires monitoring of the program immediately after active profession participation is withdrawn and at predetermined gradually longer interval after which accuracy, reliability, validity and relevance are tested.

2.8 FEASIBILITY STUDY

This is one of the vital stage in developing a system. It looks at the system which is currently in operation, considering the existing problem and bringing out alternative ways of doing the job.

This is done by collecting and interpreting facts in order to evolve a proper understanding of a system so as to diagnose the problems associated with it. The outcome of this analysis is used to determine what must be done to solve the problem at the existing system. The existing system which has been earlier stated in chapter one, is carried out manually.

For each of the possibilities, a list of the cost and benefits is compiled and recommended solution presented to the management.

An attempt to analyze the existing plan approval record result to an investigation which was carried out in order to determine the efficiency of the resulting activities can be

improved. Alternatives and suggestions which can be considered in case of the desire to design a new system.

2.81 THE MAIN FINDING OF FEASIBILITY STUDY

In the cause of analyzing the existing system of PLANS APPROVAL RECORDS in the Development Control Division , Department of Land, planning and survey, Federal Capital development Authority, Abuja, it is said to be feasible when it passes through these tests:

- (1) OPERATIONAL FEASIBILITY
- (2) TECHNICAL FEASIBILITY
- (3) ECONOMIC FEASIBILITY

OPERATIONAL FEASIBILITY :- This indicates that the existing system is very slow to the extent that it takes longer period to obtain a comprehensive record of approved building plans. This is as a result of using manual system which sometimes are prone to errors and mismatch of data. All these could be accomplished effectively and efficiently if the computer is used with the right software.

TECHNICAL FEASIBILITY :- This has to do with the existing equipments at the Division and to see whether they meet up with the operational requirement and the Operator that will operate this system. He must be competent in the application of the system.

In findings, there exist a micro computer without any Operator and no desired software for computerizing their operation. **ECONOMIC FEASIBILITY** :- This aspect deals with cost benefit analysis. This could be viewed from the following:

(I) Development Cost

(ii) Operational Cost

(iii) Maintenance Cost

DEVELOPMENT COST:- This is the actual cost of system installation. It involves the cost of the hardware and software requirements.

OPERATIONAL COST:- This is the cost of operating the system after installation. It is based on the number of programmers, system analysts and user staff involved.

MAINTENANCE COST:- This is the cost of routine maintenance and enhancement. A system needs to be maintained and serviced as a result of wear and tear.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 INTRODUCTION

The system analysis and design stage entails analyzing the existing system in order to aid the design of the proposed system. In this regard, the analysis is considered to be important because the design of the new system is based on whatever information gathered during the analysis stage.

In view of the foregoing, this chapter begins with lining the problems associated with the existing system as well as the objectives guiding the investigation are also outlined so that the new system that will be designed will be able to meet the desired goals. In addition , this chapter will also discuss the design of the new system in terms of the input requirement, output requirement and the data files required for the system to work conveniently. The cost and benefits analysis of the new system will also be highlighted.

3.2 THE DESIGN OF THE PROPOSED SYSTEM:

Given that a clear statement on the scope and objectives of the project have been made as well as the collection of data completed, the next focal point is the transformation of this data into logical and physical design of the new or improved system. The pre-occupation of this chapter is centered on the design of the proposed system, that is, computerization of Building APPROVAL RECORDS.

It is also pertinent for us to mention that the information available and perspective of the project was considered for improving the operations of Development control Division.

Accordingly, the design is tailored to meet the need and requirement of the users with provision for full automation of the tasks to be done in the proposed system.

The purpose of the system design stage is to transform the conceptual design into a detailed one for implementation. In line with this, the design specification and its features in terms of input, output, files and procedures will be described in this chapter. In addition detail of physical construction of the system and the program software which performs the integral part for the attainment of the physical design specification are outlined.

3.3 SYSTEM INPUT SPECIFICATION

The use of the computer to perform the task of data processing cannot be carried out without feeding data into it. The system input specification, therefore states the source and the type of data that needs to be supplied into the system. This is very vital because if the information supply are correct definitely the result of processing will certainly be error free. This is in line with the saying in computer environment

"garbage in garbage out GIGO". It is in view of this, that the input specification of the proposed system is design to achieve cost effectiveness, the degree of accuracy and ensuring both acceptability and understandability by the users.

For the proposed system, there are two types of data needed that is the personal information of the Developer as well as their respective development in both Residential, commercial, industrial areas etc. During the submission of the proposed design or development, comprehensive data about the proposed development are fed into the computer with the following details:

PHASE

DISTRICT

DEVELOPER'S NAME

DEVELOPER'S ADDRESS

PLOT NUMBER

PLOT SIZE

PURPOSE CLAUSE - Residential, commercial, industrial
etc.

TYPE OF DEVELOPMENT

DATE OF SUBMISSION

DATE OF APPROVAL

PROCESSING FEES

STAGE OF WORK

REF. NUMBER

CERTIFICATE OF OCCUPANCY NUMBER

CERTIFICATE OF OCCUPANCY DATE

REMARKS.

This details are to be supplied on a form designed
as shown below :-

F O R M D E S I G N

Once the information supplied have been confirmed to be authentic and approved for implementation, the forms are therefore transferred to the computer room for entering into computer.

3.4 **SYSTEM OUTPUT SPECIFICATION**

The result or information arising from the processing of data generated by the system is referred to as output. The output from a computer system is of course necessary primarily to communicate to the end user the result of data processing. There are two types of output from computer data processing viz:

(i) Hard Copy and (ii) Soft Copy.

The hard copy output are usually generated on continuous stationary and are readable whereas, the output of soft copy are generated on magnetic media to be used for subsequent data process cycles and they are in magnetic spots (Not readable). The design process of the output begins by the identification of the output, the system must produce. For the purpose the purpose of these particular research, the proposed system is designed to generate output on BUILDING PLANS APPROVALS

The output details are as follows:-

(1) **PHASE**

The development of the new capital city ,Abuja is in four phases that is, phase 1, 2, 3 and 4 and in each of the phases, there exists Districts and Plots.

(2) **DISTRICTS:**

In each of the districts, layouts are planned for various types of plots which could be residential, commercial, Petrol filling Station, or industrial are usually allocated to prospective Developers.

(3) **DEVELOPER'S NAME:**

Allocation of plots any where in the World are usually made on the Applicant's name. So in Abuja, plans are approved based on the name in the certificate of occupancy.

(4) **DEVELOPER'S ADDRESS:**

For communication, the Developer's address is highly important and necessary and also to discourage greed.

(5) **PLOT NUMBER:**

In every Districts, plots are carved out and identified with numbers and the title deed plans in the certificate of occupancy bears the number to enable the developer develop the right place offered to him or her.

(6) **PLOT SIZE:**

Size of plots are indicated in the letter of offer and certificate of occupancy to avoid encroachment and over development as against the development regulations.

(7) **PURPOSE CLAUSE:**

This column provide the developer to know the use to which a plot is granted to him and the type of structure expected of him to put up in a particular plots or location e.g. Residential, commercial, Hotels etc.

(8) **TYPE OF DESIGN:**

The type of proposed Building has to be entered in to the database records such as Bungalow, Duplex, school, Hotels etc.

(9) **DATE OF SUBMISSION:**

It refers to the day the design is been submitted to the division to check unnecessary delay in the approval process.

(10) **DATE OF APPROVAL:**

This refers to the date in which approval is being granted to the developer.

(11) **PROCESSING FEES:**

Is the amount payable to the government for granting approval to the proposed design (developer).

(12) **CERTIFICATE OF OCCUPANCY NUMBER:**

In every certificate issued, the reference number of the file also appear on the certificate for reference cases.

(13) **CERTIFICATE OF OCCUPANCY DATE:**

The certificate of occupancy has to carry date of issuance on it. This will also help in knowing when the hon. minister signed the certificate.

(14) **SETTING OUT APPROVAL DATE:**

This refers to the day the setting out of building is inspected and satisfied to be in line with the approved drawings.

(15) **CERTIFICATE OF COMPLETION:**

At the final stage of every development, there is the need to issued the developer with a certificate of completion having satisfied that the construction is habitable for living.

(16) **CERTIFICATE OF COMPLETION DATE:**

The issuance of this certificate has to carry the date of issued, in order to know the year, day and month in case of future needs.

(17) **REMARKS :**

This refers to the possible comments on each plot of development e.g. poorly finished, fair, good, satisfactory etc. are the likely remarks to be made at the remark column.

3.5

CHOICE OF LANGUAGE

computer programming languages are developed with the primary objective of facilitating a large number of people to use computer without the need to know in detail , the internal structure of the computer. Languages are matched to the type of operations to be performed in algorithms for various operations. This languages are designed to be machine independent. The proposed system for the computerization of Building plans approval in the development control division has been designed to be a complete database systems.

Database management uses logical relationship to link integrated data of different types. In essence, the application software constructs, expands and maintained in the database. It also provides an interphase between the user and the data in such a way that users are able to record, organize, select, summarize and extract data contained in database. The fundamental objective in database technology is to treat data has an organizational resources and has an integrated whole, thereby allowing data to be protected and organized separately from other resources.

The benefits derive from the use of database system include the following :-

1. **MAINTENANCE :-** It is easier to maintain one database as it allows centralized control rather than maintaining two or more separate files containing many and the reorganizing the physical

data. In the case of database system, any change in the data is easily accommodated simply by a change in database management system without necessarily changing the application program.

2. **DATE INTEGRITY:-** Data integrity and consistency is easily maintained in database management due to centralization of control.

3. **CENTRAL CONTROL:-** Data and operation in database environment is centrally controlled and this results in better management of data consequently enforcing standards for all the database users.

FEATURES OF THE LANGUAGE CHOSEN :

The features of the database chosen includes the following :-

i. **DATA INTEGRATION :-** This feature allows two or more applications to share compatible data thereby enabling the users to gain valuable information linking data across the organization could be coordinated, assessed and operated.

ii. **DATA REDUNDANCY :-** Wastage of storage space and duplication arising from improper management of all files to all application programs is reduced by the use of database management. In short, redundancy is reduced if not eliminated in database management system.

iii. **DATA INDEPENDENCE:-** The application programs in database management is usually insulated from the physical or logical storage of data. This allows for modification in the content and organization of the physical data without tempering with the application programs and vice-versa.

iv. **SECURITY:-** Database management system allow protection from unauthorized data and users.

3.6 **DATABASE FILE DESIGN:**

Database file design defines and described all files that are used in the system. It also spell out the content and structure of each of the files. The structure states the field names, field type and the field width associated with each of the files. Therefore, the proposed computerized system is designed and developed specifically to run with the database files in a database management system environment. Consequently, the proposed system is designed to use forty database files namely:
PH1DS1.DBF, PH1DS2.DBF, PH1DS3.DBF, PH1DS4.DBF, PH1DS5.DBF,
PH1DS6.DBF, PH1DS7.DBF, PH1DS8.DBF, PH1DS9.DBF, PH1DS10.DBF,
PH2DS1.DBF, PH2DS2.DBF, PH2DS3.DBF, PH2DS4.DBF, PH2DS5.DBF,
PH2DS6.DBF, PH2DS7.DBF, PH2DS8.DBF, PH2DS9.DBF, PH2DS10.DBF,
PH3DS1.DBF, PH3DS2.DBF, PH3DS3.DBF, PH3DS4.DBF, PH3DS5.DBF,
PH3DS6.DBF, PH3DS7.DBF, PH3DS8.DBF, PH3DS9.DBF, PH3DS10.DBF,
PH4DS1.DBF, PH4DS2.DBF, PH4DS3.DBF, PH4DS4.DBF, PH4DS5.DBF,
PH4DS6.DBF, PH4DS7.DBF, PH4DS8.DBF, PH4DS9.DBF, PH4DS10.DBF .

The development of Abuja the new capital city is in four phase or stages. As there are four phase or stages of development, in each of the phases there exist about ten district and in any of there districts, plots are created and allocated to prospective applicants. Therefore, the files are named according to their respective phase number and district number in order to ease accessibility and storage of data with high degree of clarity.

The description of these files therefore, differ from each other, because each files contains data about their respective Developers based on the phase number and district number they are situated. The contents of these forty files are the same.

Below is the structure of the files:-

FIELD	FIELDNAME	FIELD DESCRIPTION	FIELD TYPE	FIELD WIDTH	DECIMAL
1	PHASE	PHASE	numeric	1	-
2	District	District	character	2	-
3	Plnumber	Plot number	numeric	8	-
4	Size	Plot size	character	10	-
5	Name	Developer's name	character	40	-
6	Address	Developer's address	character	50	-
7	Purpose	Purpose clause	character	15	-
8	Design	Type of design	character	25	-
9	Subdate	Date of submission	date	8	-
10	Appdate	Date of approval	date	7	-
11	Fee	Processing fee	numeric	12	2
12	Cernumber	Certificate of occupancy	character	10	-
13	Codate	cert. of occupancy date	date	8	-
14	Setdate	Setting out approval date		8	-
15	Complete	certificate of completion	character	1	-
16	CCdate	Completion Cert. date	date	8	-
17	Remarks	Poss. comments on each plot	character	20	-

3.7 THE PHYSICAL DESIGN:

This deals with the physical construction of the logical design above. It has to do with the program specification for output, input database files and processing into computer software. The designing of the computer software is important to ensure that the actual programs produced performed all the desired task intended and to create opportunity for modification in the future in an efficient manner with the goal of improving the software and not destroying the design of the system. As a result, the documentation of the program specification are outlined in the appendix.

3.8 COST BENEFIT ANALYSIS OF THE SYSTEM:

The trends in substitution of computer based system for manual operation has become widely an acceptable phenomenon in our modern society. This is due to the fact that computer is very relevant in all aspect of Human endeavor. In addition to speedy retrieval of information and security of data, computer operation allows for retrieval of reliable data due to the accuracy of computers.

The specific benefits that the development control division of the department of land, planning and survey, federal capital development authority will derive are outlined below:-

- i. Enhance the departmental efficiency in her operations to the general public.
- ii. Creation of speedy procedures for information retrieval regarding Building plans.

- iii. Reduction in complications arising as a result of the increased number of developers.
- iv. Eradication of double approval for the same plot in a district.
- v. Provision of adequate and efficiency computation of all building developments in Abuja.
- vi. Cost reduction on clerical and stationary expenses in terms of the demanding need for staff and stationary requirements.

It is generally believe that any thing that has benefit, there is always cost to be incurred. In view of this, it is pertinent to mentioned here that the proposed system will require initial cost outlay. There would be a huge financial cost to be expended on things like procurement of computer hardware and other peripherals. It would also require training for computer operators and users to aid their interaction with the computer. This cost is only incurred once after which the department will only deriving the benefit.

The cost of the proposed system are discussed under two categories namely; development cost system and system operating cost.

A. **DEVELOPMENT COST:**

- i. COMPUTER HARDWARE
 - 1. IBM computer, 1 UPS and 1 printer
 - #185,000:00
- ii. INSTALLATION COST ----- #25,000:00
- iii. PERSONNEL TRAINING -- (3) Three operators at
 - #2,500:00 each per month
 - for a period of six months
 - #45,000:00

B. **SYSTEM OPERATING COST:**

I.	PROGRAM MAINTENANCE	
	1 Programmer at	----- #3,500:00 per month
	for one year	----- #42,000:00
ii.	INSTALLATION OF AIR CONDITIONER	----- #21,000:00
iii.	UTILITIES (LIGHT)	----- #11,000:00
iv.	SUPPLIES OF COMPUTER PAPERS AND OTHER CONSUMABLE	----- #17,000:00
V.	LABOUR COST - 3 OPERATOR AT #2,500 PER MONTH PER OPERATOR FOR ONE YEAR	----- #90,000:00
vi.	MISCELLANEOUS EXPENSES	----- #15,000:00
vii.	TOTAL COST	----- #451,000:00

CHAPTER FOUR

4.0 SYSTEM IMPLEMENTATION

Having completed the physical system, the next stage is the transformation of the design into a workable system with due regards for monitoring of the of the operations and with the view to ensuring the effective and the efficient performance. Impliedly, system implementation phase of system development is where the conceptual requirement and overall objectives are turned into physical reality.

The phase is the critical stage of the achievement of the success of the new system. t is at this end that the user can be pre-emptive of the success of the new system thereby giving room to confidence building in the entire system.

The proper analysis and hinge sight of the tasks of implementation begins with the description of the proposed system and its hardware requirement and immediately followed by system testing. after successful testing of the new system , the mode of system conversion is described. Finally, the chapter is rounded up with the discussion on the procedures required in carrying out amendment on the system.

4.1 DESCRIPTION OF THE PROPOSED SYSTEM

4.11 DOCUMENTATION:

The description of a system software normally comes in form of documentation. This documentation serves as instructory guide to users on how to setup use and maintain the software. It gives a detail description of how the system operates. this is done to ensure better understanding of the system by the users

in case of any problem. Therefore, in documenting the proposed system, the mode of starting the new system and disruption and linkage of the menu structure would be started.

4.1.2 **STARTING THE SYSTEM**

The system is developed using DbaseIV. For the system to work at all, there is need to install DbaseIV on the computer to be procured. If this is done, the program would be started by typing "DO PLAN". This would lead into the first level of menu in which user would select from the choice available.

4.1.3 **MENU STRUCTURE**

The new system is composed of the main menu consisting of five options namely; Adding Building Plans Data, Modifying Building Plans Data, Viewing Building Plans Data, Deleting Building Plans Data and Exit. At the main menu, the system prompts the user to enter the task code of any of the available operation options for selection of the alternatives. The screen format display is illustrated by figure 1 in the appendix. The detailed description of each option in the main menu is also as given below:

1. **ADDING BUILDING PLANS DATA:-** This involves the entry of a new building plan approval in the Development Control division in the department of Land, Planning and Survey. The information required in this process include the phase, district, plot number, plot size, Developer's Name, Developer's contact Address, purpose clause, Type of design, Date of submission, Date of approval, processing fees, Certificate of occupancy number, certificate of occupancy date, setting out approval date, Certificate of completion of work issued, Date of completion of

work certificate and possible comments on each development on Abuja. The format of this is as displayed in figure 2 at the appendix.

2. **MODIFYING BUILDING PLANS DATA:-** This option needs to be selected only if the Building plans data of any developer is to be modified. The key field use to achieve this objective is the "PLNUMBER", that is, the plot number of the proposed design on each phase , with their respective districts. The format for this is as shown in figure 3.

3. **VIEWING BUILDING PLANS DATA:-** This is used for displaying Developer's Building plans data on the screen for reference. The format for this is as contained in figure 4 at the appendix.

4. **DELETING BUILDING PLANS DATA:-** It allows the removal of developer's building plans data form the database file, as shown in figure 5 in the appendix.

5. **EXIT:-** This option in the main menu serves as the only way to quit the system. Once it is invoked, it takes the user back to the operating system prompt.

4.2 **SOFTWARE REQUIREMENT:**

The system requirement has to do with the computer configuration necessary for the new system. The collection of hardware which forms a complete computer system is referred to as computer configuration.

The choice of computer configuration is usually fashioned to suit both the current and the likely forcibly future needs of the organization with respect to the volume and type of data to be processed. Given the complexity and dynamism of the operation of the system being developed, a computer with higher speed and

larger storage space is required. Especially, this will accommodate the future expansion need of Development control division achieve. At this end, it is presumed that the division will necessarily procure an uninterrupted power supply (UPS) as a means to forestall power failure and maintain constant power supply to the computer and the environment. This is very important so as to avert obstructions during processing of data. At this junction, a computer system with a hard disk of a minimum of 540MB and have two floppy drive units is hereby recommended. Preferably, the two floppy units should be the "MALE-FEMALE TWIN" in which one should be 3.5 inches and the other providing for 5.25 inches floppy. These two floppy units will provide for the transfer of the software from diskettes in to the hard-disk as well as making backups on floppy diskettes. The computer should have a speedy capacity of about 8MB to aid fast processing of data and a UPS with a stop-gap of about 45 minutes in the event of power failure or light off.

Furthermore, the processor should be a minimum of 486DX 100MHZ (IBM Computer) while, the output device should be HP laisser jet 5L. Adequate provision should be made for stationary and other computer consumable.

Finally, the operating software recommended include DOS 6.2, Dbase IV and any compatible word processing package such as word perfect 6.0 or microsoft word would suffice.

4.3 **SYSTEM TESTING**

System test during implementation serves as confirmation of the correctness of the system. It provides the opportunity to prove to the user that the system is in a perfectly working state as envisaged.

The system testing is therefore, a key stage in system implementation. It involves the use of test data on the new system to ensuring the accuracy and the efficiency of the system prior to the commencement of live operation. At this stage a thorough examination of the conceptual design and the physical design are carried out.

Practically, this test was conducted by using some raw test data on the modules of the system, and at the end it has been confirmed that the system is working efficiently. The result of the testing is shown on the various report displayed in the earlier chapter.

4.4 **SYSTEM CONVERSION**

System conversion refers to aiding the transformation of the existing system to the newly developed system. It involves file conversion, file setup and changeover.

File conversion requires changing the old (existing system files to the format and content required by the new system.

File setup is the process of setting up the converted files on the computer. Thus, our system conversion exercise would be regarded as incomplete without changeover. The changeover stage therefore, entails the movement from the old system to the newly developed system and this can be achieved through any of the following forms: such as parallel run, pilot run, and direct changeover.

Parallel run requires both the old and the new system to operate or run concurrently for some time using the same inputs. The output of the two systems are compared. this will continue until the new system is confirmed to be working satisfactorily.

The pilot run requires changing to the new system on a piece meal. In case of direct changeover the new system becomes operational immediately. Despite the fact that changeover can be achieved through the use of the afore-mentioned system, in our case the parallel run is preferable. The main attraction of this method is that the old system is kept alive until the operational units of the new system has been proved for at least one system cycle using live data in the real operating environment of place, people, equipments and time.

Furthermore, the method allows the opportunity for comparing the results of the new system with the old system thereby added to confidence of the user, if satisfactory. Parallel run also ensures that within the period of changeover, information regarding building plans approved in terms of storage and retrieval are not in any way affected.

The method allows no loss should the new system crash since the old system is still being maintained.

Finally, it should be noted that the file conversion and setup can be performed by a computer operator under a supervision.

CHAPTER FIVE

5.1 SUMMARY

This project work emphasized the need to computerized the department of Land, planning and Survey, F.C.D.A, Abuja by attempting to review the existing system taken into cognisance the observed constraints and thereby design a new system capable of reducing, if not, eradicating the difficulties and problems encountered by the department with the view of enhancing efficiency and productivity while meeting up the set down organizational standards and objectives.

The background introduction on the department and the Federal Capital Development Authority were considered in the earlier chapter. The project observed the under mentioned facts and problem existing on the system, before we were able to recognize the need for a computer based system as against the current manual processing and storage of information in order to get out of the precarious situation.

The observed problems includes:-

1. Increasing need for security and safe-guard of Building plans approval in the department of Lands, Planning and survey, Federal capital Development Authority, Abuja.
2. The increasing number of Developers.
3. The fast growing nature and rapid expansion of the city.
4. Inaccurate retrieval of information.
5. Lack of adequate documentation.
6. Continued use of manual operations.
7. Lack of applicable software for the existing computer machine idle in the division.
8. Lack of manpower to operate the divisional computer.

The main body of the project is contained in the chapter three and four where the description of the proposed system was made, the output and the input requirement specified, the file design, choice of language, system implementation, and system testing, system conversion, and post implementation review stated.

5.2 **RECOMMENDATIONS**

Despite the merit of computerization and the benefits realizable from the newly designed system, the system needs to be reviewed as a package and be absolute.

The hardware and software requirement such as minimum of 540MB with two floppy disk derive units, computer with speed capacity like (RAM) of about 8MB and a UPS with the stop gap of about 45 minutes should be put in place. Also the software requirement such as processor with a minimum of 486DX 100MHZ and other output devices should be put in place.

Manpower requirement such as employing an in house programmer who is fully knowledgeable about the concept of database management system . The programmer should be able to write programs in DbaseIV. This is to ensure future modification of the suit of programs that constitute the proposed system. Also, some staff like the typist will have to be trained for the use of word processor and new staff will have to be employed.

Adequate provision should be made for training of the users on how to use the proposed system. Training spanning over a period of between three to four weeks is highly recommended. This is expected to be done before the installation of the new system.

There should be adequate provision for security requirement in order to avoid both logical and physical problems. In view of this, not every staff and public be given access to the computer room.

The computer environment should be airconditioned. The division should provide a good cooling facility for the computer room so as to ensure durability of the system.

However, the necessary procedures and test have being carried out with the result confirmed satisfactory and efficient. It is recommended that same be carried out by the organization on parallel run at least for one system cycle. Definitely, this design will serve the present and future requirement of department of Land, Planning and survey.

5.3 **CONCLUSION**

The computerization of building Plans approval in the department of Land, planning and Survey, Federal Capital Development Authority, Abuja has a choice of topic for this research work today and in the distant future became relevant as a result of the fast changing and dynamic environment that characterizes the modern world and the global situation of computer base systems for manual procedures in virtual all aspects of human endeavor.

The versatility and the efficiency of a computer based system given it's capacity to process large quantity of data with great degree of speed and accuracy intensified concern in order to cope with challenges of time by having access to adequate, up-to-date and reliable data, save cost and provide an error-free background information for decision making.

The demand for excellency and also the realization of the qualities automation from Development control / Resettlement division in the department of Land, Planning and survey occasioned the designing of the new system. The new system aimed at the automation of the building plans approval will therefore, help the department to accomplish and achieve the following benefits:-

1. Enhanced the efficient approval of building plans, notwithstanding the increasing volume of Developers
2. Maintenance and other assets security would be increased.
3. Speedy processing and generation of necessary reports.
4. Enhance easy changes / modification of data.
5. Reduce attendants problems of communications, delay in management information and decision making.
6. Proper documentation.
7. Enhance storage and retrieval of the information.

Therefore, the benefits and efficiency of the new system will be highly practical and glaring; considering that Department of Land, planning and survey has assumed a more focal position over all departments in Federal Capital Development Authority, Abuja.

REFERENCES

1. **AKIN F.** - Understanding and using Micro Computers.
Published by Aflon Limited, Abuja - Nigeria.
2. **BRITISH BROADCASTING CORPORATION,** London (1982). The
Computer book - An Introduction to Computers and Computing.
3. **FEDERAL CAPITAL DEVELOPEMNT AUTHORITY (FCDA),** DEVELOPMENT
CONTROL REGULATIONS FOR FCT, ABUJA (1996) 2ND EDITION BY
DELTA DESIGNS, ABUJA.
4. **GORE M. R. & JOHN W. S** (1989) - Computer & Information
Systems, Megraw Hill book Company, New York. 2nd Edition.
5. **Sommerville, I** (1982) Software Engineering (International
Computer Science Series). Addison - Wesley Publishers. Ltd,
London.
6. **Williams M. F.** (1984) Introduction to the Computer (The
tool of Business) pretice hall Publishing, Inc. U. S. A.
2nd Edition.
7. **BADMUS R.** (1995) Course Material in Analysis and Design,
General Press Minna - (Unpublished).
8. **Dogara S.** (1998) Hard ware components System Course
Material, General Press Minna (Unpublished).
9. **Raheem K.** (1998) Database Management System - Course
Meterial, General Press Minna (Unpublished).

SET STATUS OFF
SET SCOREBOARD OFF
SET COLO TO W+/BG+
CLEAR

@3,3 say " PROGRAM OUTPUT"
@6,6 SAY " COMPUTERIZATION OF BUILDING PLANS APPROVAL "
@7,6 SAY " IN THE DEPARTMENT OF LAND, PLANNING AND SURVEY, "
@8,6 SAY " FEDERAL CAPITAL DEVELOPMENT AUTHORITY, ABUJA. "
@13,6 SAY " DESIGNED BY "
@14,6 SAY " ALH. YUSUF O. SAIDU "
@16,6 SAY " SUPERVISED BY "
@17,6 SAY " DR. YOMI AIYESIMI "
@19,4 SAY "DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE,"
@20,4 SAY "FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA - NIGERIA "

WAIT
CLEAR

@ 4,6 TO 23,74 DOUBLE COLO RB+
@ 6,9 SAY " PROJECT SUBMITTED TO THE "
@8,9 SAY " DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE "
@9,9 SAY " FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA-NIGERIA "
@13,9 SAY "IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE"
@15,9 SAY "AWARD OF POST GRADUATE DIPLOMA IN COMPUTER SCIENCE"
@17,9 SAY " (P G D C S) "
@21,9 SAY " N O V E M B E R, 1 9 9 7 "

WAIT
SET TALK OFF
SET STATUS OFF
SET SCOREBOARD OFF
SET COLO TO W+/BG+
DO WHILE .T.

CLEAR

@ 3,8 TO 21,72 DOUBLE COLO RB+
@ 5,16 SAY " DEVELOPMENT CONTROL / RESETTLEMENT DIVISION " COLO GR+
@ 6,16 to 6,62
@ 7,16 say " COMPUTERIZATION OF BUILDING PLAN APPROVAL " COLO GR+
@ 8,16 to 8,62
@ 10,35 say "MAIN MENU" COLO G+
@ 11,35 to 11,43 double
@ 13,27 say "TASK CODE" COLOR RG+
@ 13,42 say "TASK" COLO RG+
@ 14,27 to 14,35
@ 14,42 to 14,46
@ 15,27 say "1"+SPACE(14)+"ADD RECORD " COLO G+
@ 16,27 SAY "2"+SPACE(14)+"MODIFY RECORD " COLO G+
@ 17,27 SAY "3"+SPACE(14)+"VIEW RECORD " COLO G+
@ 18,27 SAY "4"+SPACE(14)+"DELETE RECORD " COLO G+
@ 19,27 SAY "5"+SPACE(14)+"QUIT " COLO G+

CHOICE=0

@22,29 SAY " ENTER A TASK CODE: " COLO W*+/B+

@22,48 GET CHOICE PICTURE "9" RANGE 1,5

READ

DO CASE

CASE CHOICE = 1

DO PROG1

CASE CHOICE = 2

DO PROG2

CASE CHOICE = 3

DO PROG3

CASE CHOICE = 4

DO PROG4

CASE CHOICE = 5

QUIT

ENDCASE

ENDDO

SET STATUS ON

SET TALK ON

SET SCOREBOARD ON

CLEAR

RETURN

```
* DATA ENTRY PROG
SET TALK OFF
SET STATUS OFF
SET SCOREBOARD OFF
SET DATE BRITISH
SET COLO TO G+/N+
CLEAR
@10,15 TO 20,65 DOUBLE
STORE 0 TO PHASE,DIST
@13,20 SAY "ENTER PHASE NUMBER:" GET PHASE PICT "9" RANGE 1,4
@15,20 SAY "ENTER DISTRICT NUMBER:" GET DIST PICT "99" RANGE 1,10
@18,20 SAY "Activating The Database File To Add Record" colo r+
READ
IF phase = 1 .AND. dist = 1
    USE PH1DS1.DBF
ENDIF
IF phase = 1 .AND. dist = 2
    USE PH1DS2.DBF
ENDIF
IF phase = 1 .AND. dist = 3
    USE PH1DS3.DBF
ENDIF
IF phase = 1 .AND. dist = 4
    USE PH1DS4.DBF
ENDIF
IF phase=1 .AND. dist=5
    USE PH1DS5.DBF
ENDIF
IF phase=1 .AND. dist=6
    USE PH1DS6.DBF
ENDIF
IF phase=1 .AND. dist=7
    USE PH1DS7.DBF
ENDIF
IF phase=1 .AND. dist=8
    USE PH1DS8.DBF
ENDIF
IF phase=1 .AND. dist=9
    USE PH1DS9.DBF
ENDIF
IF phase=1 .AND. dist=10
    USE PH1DS10.DBF
ENDIF
IF phase=2 .AND. dist=1
    USE PH2DS1.DBF
ENDIF
IF phase=2 .AND. dist=2
    USE PH2DS2.DBF
ENDIF
IF phase=2 .AND. dist=3
    USE PH2DS3.DBF
ENDIF
IF phase=2 .AND. dist=4
    USE PH2DS4.DBF
ENDIF
IF phase=2 .AND. dist=5
    USE PH2DS5.DBF
ENDIF
IF phase=2 .AND. dist=6
    USE PH2DS6.DBF
```

```
ENDIF
IF phase=2 .AND. dist=7
  USE PH2DS7.DBF
ENDIF
IF phase=2 .AND. dist=8
  USE PH2DS8.DBF
ENDIF
IF phase=2 .AND. dist=9
  USE PH2DS9.DBF
ENDIF
IF phase=2 .AND. dist=10
  USE PH2DS10.DBF
ENDIF
IF phase=3 .AND. dist=1
  USE PH3DS1.DBF
ENDIF
IF phase=3 .AND. dist=2
  USE PH3DS2.DBF
ENDIF
IF phase=3 .AND. dist=3
  USE PH3DS3.DBF
ENDIF
IF phase=3 .AND. dist=4
  USE PH3DS4.DBF
ENDIF
IF phase=3 .AND. dist=5
  USE PH3DS5.DBF
ENDIF
IF phase=3 .AND. dist=6
  USE PH3DS6.DBF
ENDIF
IF phase=3 .AND. dist=7
  USE PH3DS7.DBF
ENDIF
IF phase=3 .AND. dist=8
  USE PH3DS8.DBF
ENDIF
IF phase=3 .AND. dist=9
  USE PH3DS9.DBF
ENDIF
IF phase=3 .AND. dist=10
  USE PH3DS10.DBF
ENDIF
IF phase=4 .AND. dist=1
  USE PH4DS1.DBF
ENDIF
IF phase=4 .AND. dist=2
  USE PH4DS2.DBF
ENDIF
IF phase=4 .AND. dist=3
  USE PH4DS3.DBF
ENDIF
IF phase=4 .AND. dist=4
  USE PH4DS4.DBF
ENDIF
IF phase=4 .AND. dist=5
  USE PH4DS5.DBF
ENDIF
IF phase=4 .AND. dist=6
  USE PH4DS6.DBF
```



```

ENDIF
IF phase=4 .AND. dist=7
  USE PH4DS7.DBF
ENDIF
IF phase=4 .AND. dist=8
  USE PH4DS8.DBF
ENDIF
IF phase=4 .AND. dist=9
  USE PH4DS9.DBF
ENDIF
IF phase=4 .AND. dist=10
  USE PH4DS10.DBF
ENDIF
APPEND BLANK
  DO WHILE .T.
    CLEAR
* formatting our data entry screen
  @2,2 TO 20,75 DOUBLE
@ 3,13 SAY "DEVELOPMENT CONTROL / RESETTLEMENT DIVISION " COLO R+
@ 4,13 TO 4,60 COLO W+
@ 5,17 SAY "D A T A      E N T R Y      F O R M " COLO R+
@ 6,17 TO 6,56 COLO W+
@7,4 SAY "PHASE NUMBER" GET PHASE PICT "9" RANGE 1,4
@7,45 SAY "DISTRICT NUMBER " GET DIST PICT "99" RANGE 1,10
@8,4 SAY "PLOT NUMBER" GET PLNUMBER
@8,42 SAY "PLOT SIZE" GET SIZE
@9,4 SAY "DEVELOPER'S NAME" GET NAME
@10,4 SAY "DEVELOPER'S ADDRESS" GET ADDRESS
@11,4 SAY "PURPOSE CLAUSE" GET PURPOSE
@11,42 SAY "TYPE OF DESIGN" GET DESIGN
@12,4 SAY "DATE OF SUBMISSION" GET SUBDATE
@12,50 SAY "DATE OF APPROVAL" GET APPDATE
@13,4 SAY "PROCESSING FEE" GET FEE PICT "99,999,999"
@14,4 SAY "CERTIFICATE OF OCCUPANCY NUMBER" GET CERNUMBER
@15,4 SAY "CERT. OF OCCUPANCY DATE" GET CODATE
@15,41 SAY "SETTING OUT APPROVAL DATE" GET SETDATE
@16,4 SAY "CERTIFICATE OF COMPLETION ISSUED (Y/N)" GET COMPLETE
@17,4 SAY "CERTIFICATE OF COMPLETION DATE " GET CCDATE
@18,4 SAY "REMARK /POSSIBLE COMMENTS" GET REMARKS
LEAD
IF PLNUMBER=0
  DELETE
ENDIF
CH=SPACE(1)
21,31 SAY "TO CONTINUE (Y/N)"GET CH PICT "!"
LEAD
IF CH= 'Y'
  APPEND BLANK
  LOOP
ELSE
  EXIT
ENDIF
WDDO
CLOSE DATABASES
SET COLO TO W+/BG+
RETURN

```

```
* M O D I F Y      R E C O R D      P R O G
SET TALK OFF
SET STATUS OFF
SET SCOREBOARD OFF
SET DATE BRITISH
SET COLO TO W+/B+
CLEAR
@10,15 TO 20,65 DOUBLE
STORE 0 TO PH,DS
@13,20 SAY "ENTER PHASE NUMBER:" GET PH PICT "9" RANGE 1,4
@15,20 SAY "ENTER DISTRICT NUMBER:"GET DS PICT "99" RANGE 1,10
@ 18,18 SAY "ACTIVATING THE DATABASE FILE TO MODIFY RECORD " COLO  RG+
READ
CLEAR
IF PH=1 .AND. DS=1
    USE PH1DS1.DBF
ENDIF
IF PH=1 .AND. DS=2
    USE PH1DS2.DBF
ENDIF
IF PH=1 .AND. DS=3
    USE PH1DS3.DBF
ENDIF
IF PH=1 .AND. DS=4
    USE PH1DS4.DBF
ENDIF
IF PH=1 .AND. DS=5
    USE PH1DS5.DBF
ENDIF
IF PH=1 .AND. DS=6
    USE PH1DS6.DBF
ENDIF
IF PH=1 .AND. DS=7
    USE PH1DS7.DBF
ENDIF
IF PH=1 .AND. DS=8
    USE PH1DS8.DBF
```

```
ENDIF
IF PH=1 .AND. DS=9
  USE PH1DS9.DBF
ENDIF
IF PH=1 .AND. DS=10
  USE PH1DS10.DBF
ENDIF
IF PH=2 .AND. DS=1
  USE PH2DS1.DBF
ENDIF
IF PH=2 .AND. DS=2
  USE PH2DS2.DBF
ENDIF
IF PH=2 .AND. DS=3
  USE PH2DS3.DBF
ENDIF
IF PH=2 .AND. DS=4
  USE PH2DS4.DBF
ENDIF
IF PH=2 .AND. DS=5
  USE PH2DS5.DBF
ENDIF
IF PH=2 .AND. DS=6
  USE PH2DS6.DBF
ENDIF
IF PH=2 .AND. DS=7
  USE PH2DS7.DBF
ENDIF
IF PH=2 .AND. DS=8
  USE PH2DS8.DBF
ENDIF
IF PH=2 .AND. DS=9
  USE PH2DS9.DBF
ENDIF
IF PH=2 .AND. DS=10
  USE PH2DS10.DBF
ENDIF
IF PH=3 .AND. DS=1
  USE PH3DS1.DBF
ENDIF
IF PH=3 .AND. DS=2
  USE PH3DS2.DBF
ENDIF
IF PH=3 .AND. DS=3
  USE PH3DS3.DBF
ENDIF
IF PH=3 .AND. DS=4
  USE PH3DS4.DBF
ENDIF
IF PH=3 .AND. DS=5
  USE PH3DS5.DBF
ENDIF
IF PH=3 .AND. DS=6
  USE PH3DS6.DBF
ENDIF
IF PH=3 .AND. DS=7
  USE PH3DS7.DBF
ENDIF
IF PH=3 .AND. DS=8
  USE PH3DS8.DBF
```

```

ENDIF
IF PH=3 .AND. DS=9
  USE PH3DS9.DBF
ENDIF
IF PH=3 .AND. DS=10
  USE PH3DS10.DBF
ENDIF
IF PH=4 .AND. DS=1
  USE PH4DS1.DBF
ENDIF
IF PH=4 .AND. DS=2
  USE PH4DS2.DBF
ENDIF
IF PH=4 .AND. DS=3
  USE PH4DS3.DBF
ENDIF
IF PH=4 .AND. DS=4
  USE PH4DS4.DBF
ENDIF
IF PH=4 .AND. DS=5
  USE PH4DS5.DBF
ENDIF
IF PH=4 .AND. DS=6
  USE PH4DS6.DBF
ENDIF
IF PH=4 .AND. DS=7
  USE PH4DS7.DBF
ENDIF
IF PH=4 .AND. DS=8
  USE PH4DS8.DBF
ENDIF
IF PH=4 .AND. DS=9
  USE PH4DS9.DBF
ENDIF
IF PH=4 .AND. DS=10
  USE PH4DS10.DBF
ENDIF
DO WHILE .T.
GO TOP
CLEAR
PTNUMBER=0
@8,20 SAY "ENTER PLOT NUMBER" GET PTNUMBER
READ
LOCATE FOR PLNUMBER = PTNUMBER
IF FOUND()
  CLEAR
  @2,19 SAY " M O D I F Y      R E C O R D      S C R E E N " COLO RB+
  @3,19 TO 3,64 DOUBLE
  @5,4 SAY "Phase Number" GET PHASE RANGE 1,4
  @5,25 SAY "District Number" GET DISTRICT RANGE 1,10
  @6,4 SAY "Plot Number" GET PLNUMBER
  @6,40 SAY "Plot Size" GET SIZE
  @7,4 SAY "Developer's Name" GET NAME
  @8,4 SAY "Developer's Address" GET ADDRESS
  @9,4 SAY "Purpose Clause" GET PURPOSE
  @10,4 SAY "Type of Design" GET DESIGN
  @11,4 SAY "Date of submission" GET SUBDATE
  @12,4 SAY "Date of Approval" GET APPDATE
  @12,40 SAY "Processing Fee #" GET FEE PICT "9,999,999.99"
  @13,4 SAY "Certificate Of Occupancy Number " GET CERNUMBER

```

```
@14,4 SAY "Certificate of Occupancy Date" GET CODATE
@15,4 SAY "Setting Out Approval Date" GET SETDATE
@16,4 SAY "Certificate of completion issued" GET COMPLETE
@17,4 SAY "Completion Certificate date " GET CCDATE
@18,4 SAY "Remarks / possible comments" GET REMARKS
READ
```

```
ELSE
```

```
@15,30 SAY "R E C O R D   N O T   F O U N D"
```

```
ENDIF
```

```
CH = SPACE(1)
```

```
@20,24 SAY " TO      CONTINUE  MODIFICATION (Y/N)" GET CH PICT "!" COLO RG
```

```
READ
```

```
IF CH= 'Y'
```

```
  LOOP
```

```
ELSE
```

```
  EXIT
```

```
ENDIF
```

```
ENDDO
```

```
CLOSE DATABASES
```

```
SET COLO TO W+/BG+
```

```
RETURN
```

* VIEW RECORD PROG

SET TALK OFF

SET STATUS OFF

SET SCOREBOARD OFF

SET DATE BRITISH

SET COLO TO RG+/B+

CLEAR

@10,15 TO 20,65 DOUBLE

STORE 0 TO PH,DS

@13,20 SAY "ENTER PHASE NUMBER:" GET PH PICT "9" RANGE 1,4

@15,20 SAY "ENTER DISTRICT NUMBER:" GET DS PICT "99" RANGE 1,10

@ 18,18 SAY "ACTIVATING THE DATABASE FILE TO VIEW RECORD " COLO W+/N+

READ

CLEAR

IF PH=1 .AND. DS=1

USE PH1DS1.DBF

ENDIF

IF PH=1 .AND. DS=2

USE PH1DS2.DBF

ENDIF

IF PH=1 .AND. DS=3

USE PH1DS3.DBF

ENDIF

IF PH=1 .AND. DS=4

USE PH1DS4.DBF

ENDIF

IF PH=1 .AND. DS=5

USE PH1DS5.DBF

ENDIF

IF PH=1 .AND. DS=6

USE PH1DS6.DBF

ENDIF

IF PH=1 .AND. DS=7

USE PH1DS7.DBF

ENDIF

IF PH=1 .AND. DS=8

USE PH1DS8.DBF

ENDIF

IF PH=1 .AND. DS=9

USE PH1DS9.DBF

ENDIF

IF PH=1 .AND. DS=10

USE PH1DS10.DBF

ENDIF

IF PH=2 .AND. DS=1

USE PH2DS1.DBF

ENDIF

IF PH=2 .AND. DS=2

USE PH2DS2.DBF

ENDIF

IF PH=2 .AND. DS=3

USE PH2DS3.DBF

ENDIF

IF PH=2 .AND. DS=4

USE PH2DS4.DBF

ENDIF

IF PH=2 .AND. DS=5

USE PH2DS5.DBF

ENDIF

IF PH=2 .AND. DS=6

```
USE PH2DS6.DBF
ENDIF
IF PH=2 .AND. DS=7
  USE PH2DS7.DBF
ENDIF
IF PH=2 .AND. DS=8
  USE PH2DS8.DBF
ENDIF
IF PH=2 .AND. DS=9
  USE PH2DS9.DBF
ENDIF
IF PH=2 .AND. DS=10
  USE PH2DS10.DBF
ENDIF
IF PH=3 .AND. DS=1
  USE PH3DS1.DBF
ENDIF
IF PH=3 .AND. DS=2
  USE PH3DS2.DBF
ENDIF
IF PH=3 .AND. DS=3
  USE PH3DS3.DBF
ENDIF
IF PH=3 .AND. DS=4
  USE PH3DS4.DBF
ENDIF
IF PH=3 .AND. DS=5
  USE PH3DS5.DBF
ENDIF
IF PH=3 .AND. DS=6
  USE PH3DS6.DBF
ENDIF
IF PH=3 .AND. DS=7
  USE PH3DS7.DBF
ENDIF
IF PH=3 .AND. DS=8
  USE PH3DS8.DBF
ENDIF
IF PH=3 .AND. DS=9
  USE PH3DS9.DBF
ENDIF
IF PH=3 .AND. DS=10
  USE PH3DS10.DBF
ENDIF
IF PH=4 .AND. DS=1
  USE PH4DS1.DBF
ENDIF
IF PH=4 .AND. DS=2
  USE PH4DS2.DBF
ENDIF
IF PH=4 .AND. DS=3
  USE PH4DS3.DBF
ENDIF
IF PH=4 .AND. DS=4
  USE PH4DS4.DBF
ENDIF
IF PH=4 .AND. DS=5
  USE PH4DS5.DBF
ENDIF
IF PH=4 .AND. DS=6
```

```
USE PH4DS6.DBF
ENDIF
IF PH=4 .AND. DS=7
  USE PH4DS7.DBF
ENDIF
IF PH=4 .AND. DS=8
  USE PH4DS8.DBF
ENDIF
IF PH=4 .AND. DS=9
  USE PH4DS9.DBF
ENDIF
IF PH=4 .AND. DS=10
  USE PH4DS10.DBF
ENDIF
DO WHILE .NOT. EOF()
```

```
CLEAR
```

```
@2,20 SAY " V I E W      R E C O R D " COLO RB+
@3,20 TO 3,57 DOUBLE
@4,2 SAY "Phase Number"
@4,16 SAY PHASE COLO W+/N+
@5,2 SAY "District Number"
@5,19 SAY DISTRICT COLO W+/N+
@6,2 SAY "Plot Number"
@6,15 SAY PLNUMBER COLO W+/N+
@7,2 SAY "Plot Size"
@7,13 SAY SIZE COLO W+/N+
@8,2 SAY "Developer's Name"
@8,20 SAY NAME COLO W+/N+
@9,2 SAY "Developer's Address"
@9,23 SAY ADDRESS COLO W+/N+
@10,2 SAY "Purpose Clause"
@10,18 SAY PURPOSE COLO W+/N+
@11,2 SAY "Type of Design"
@11,19 SAY DESIGN COLO W+/N+
@12,2 SAY "Date of submission"
@12,22 SAY SUBDATE COLO W+/N+
@13,2 SAY "Date of Approval"
@13,20 SAY APPDATE COLO W+/N+
@14,2 SAY "Processing Fee #"
@14,21 SAY FEE PICT "99,999,999.99" COLO W+/N+
@15,2 SAY "Certificate Of Occupancy Number "
@15,37 SAY CERNUMBER COLO W+/N+
@16,2 SAY "Certificate of Occupancy Date"
@16,33 SAY CODATE COLO W+/N+
@17,2 SAY "Setting Out Approval Date"
@17,30 SAY SETDATE COLO W+/N+
@18,2 SAY "Certificate of completion issued"
@18,35 SAY COMPLETE COLO W+/N+
@19,2 SAY "Completion Certificate date "
@19,32 SAY CCDATE COLO W+/N+
@20,2 SAY "Remarks / possible comments"
@20,31 SAY REMARKS COLO W+/N+
```

```
SKIP
```

```
CH = SPACE(1)
```

```
@23,18 SAY " TO      V I E W      M O R E      R E C O R D (Y/N) " GET CH PICT "!"
```

```
READ
```

```
IF CH= 'Y'
```

```
  ELSE
```



```
EXIT  
ENDIF  
ENDDO  
CLOSE DATABASES  
SET COLO TO W+/BG+  
  
RETURN
```

* D E L E T E R E C O R D P R O G

SET TALK OFF

SET STATUS OFF

SET COLO TO W+/RG+

SET SCOREBOARD OFF

SET DATE BRITISH

CLEAR

@10,15 TO 20,65 DOUBLE colo r/b

STORE 0 TO PH,DS

@13,20 SAY "ENTER PHASE NUMBER:" GET PH PICT "9" RANGE 1,4

@15,20 SAY "ENTER DISTRICT NUMBER:" GET DS PICT "99" RANGE 1,10

@ 18,18 SAY "ACTIVATING THE DATABASE FILE TO DELETE RECORD " COLO RG+

READ

CLEAR

IF PH=1 .AND. DS=1

 USE PH1DS1.DBF

ENDIF

IF PH=1 .AND. DS=2

 USE PH1DS2.DBF

ENDIF

IF PH=1 .AND. DS=3

 USE PH1DS3.DBF

ENDIF

IF PH=1 .AND. DS=4

 USE PH1DS4.DBF

ENDIF

IF PH=1 .AND. DS=5

 USE PH1DS5.DBF

ENDIF

IF PH=1 .AND. DS=6

 USE PH1DS6.DBF

ENDIF

IF PH=1 .AND. DS=7

 USE PH1DS7.DBF

ENDIF

IF PH=1 .AND. DS=8

 USE PH1DS8.DBF

ENDIF

IF PH=1 .AND. DS=9

 USE PH1DS9.DBF

ENDIF

IF PH=1 .AND. DS=10

 USE PH1DS10.DBF

ENDIF

IF PH=2 .AND. DS=1

 USE PH2DS1.DBF

ENDIF

IF PH=2 .AND. DS=2

 USE PH2DS2.DBF

ENDIF

IF PH=2 .AND. DS=3

 USE PH2DS3.DBF

ENDIF

IF PH=2 .AND. DS=4

 USE PH2DS4.DBF

ENDIF

IF PH=2 .AND. DS=5

 USE PH2DS5.DBF

ENDIF

IF PH=2 .AND. DS=6

```
USE PH2DS6.DBF
ENDIF
IF PH=2 .AND. DS=7
  USE PH2DS7.DBF
ENDIF
IF PH=2 .AND. DS=8
  USE PH2DS8.DBF
ENDIF
IF PH=2 .AND. DS=9
  USE PH2DS9.DBF
ENDIF
IF PH=2 .AND. DS=10
  USE PH2DS10.DBF
ENDIF
IF PH=3 .AND. DS=1
  USE PH3DS1.DBF
ENDIF
IF PH=3 .AND. DS=2
  USE PH3DS2.DBF
ENDIF
IF PH=3 .AND. DS=3
  USE PH3DS3.DBF
ENDIF
IF PH=3 .AND. DS=4
  USE PH3DS4.DBF
ENDIF
IF PH=3 .AND. DS=5
  USE PH3DS5.DBF
ENDIF
IF PH=3 .AND. DS=6
  USE PH3DS6.DBF
ENDIF
IF PH=3 .AND. DS=7
  USE PH3DS7.DBF
ENDIF
IF PH=3 .AND. DS=8
  USE PH3DS8.DBF
ENDIF
IF PH=3 .AND. DS=9
  USE PH3DS9.DBF
ENDIF
IF PH=3 .AND. DS=10
  USE PH3DS10.DBF
ENDIF
IF PH=4 .AND. DS=1
  USE PH4DS1.DBF
ENDIF
IF PH=4 .AND. DS=2
  USE PH4DS2.DBF
ENDIF
IF PH=4 .AND. DS=3
  USE PH4DS3.DBF
ENDIF
IF PH=4 .AND. DS=4
  USE PH4DS4.DBF
ENDIF
IF PH=4 .AND. DS=5
  USE PH4DS5.DBF
ENDIF
IF PH=4 .AND. DS=6
```

```

USE PH4DS6.DBF
ENDIF
IF PH=4 .AND. DS=7
  USE PH4DS7.DBF
ENDIF
IF PH=4 .AND. DS=8
  USE PH4DS8.DBF
ENDIF
IF PH=4 .AND. DS=9
  USE PH4DS9.DBF
ENDIF
IF PH=4 .AND. DS=10
  USE PH4DS10.DBF
ENDIF
DO WHILE .T.
GO TOP
CLEAR
PTNUMBER=0
@ 6,17 TO 10,60 DOUBLE COLO RB+
@8,20 SAY "ENTER PLOT NUMBER TO DELETE" GET PTNUMBER
READ
LOCATE FOR PLNUMBER = PTNUMBER
IF FOUND()
  CLEAR
  @2,20 SAY "D E L E T E      R E C O R D      S C R E E N" COLO NB+
  @3,2 TO 19,77 DOUBLE COLO N+/RG+
  @5,4 SAY "Phase Number" GET PHASE RANGE 1,4
  @5,25 SAY "District Number" GET DISTRICT RANGE 1,10
  @6,4 SAY "Plot Number" GET PLNUMBER
  @6,40 SAY "Plot Size" GET SIZE
  @7,4 SAY "Developer's Name" GET NAME
  @8,4 SAY "Developer's Address" GET ADDRESS
  @9,4 SAY "Purpose Clause" GET PURPOSE
  @10,4 SAY "Type of Design" GET DESIGN
  @11,4 SAY "Date of submission" GET SUBDATE
  @12,4 SAY "Date of Approval" GET APPDATE
  @12,40 SAY "Processing Fee #" GET FEE PICT "9,999,999.99"
  @13,4 SAY "Certificate Of Occupancy Number " GET CERNUMBER
  @14,4 SAY "Certificate of Occupancy Date" GET CODATE
  @15,4 SAY "Setting Out Approval Date" GET SETDATE
  @16,4 SAY "Certificate of completion issued" GET COMPLETE
  @17,4 SAY "Completion Certificate date " GET CCDATE
  @18,4 SAY "Remarks / possible comments" GET REMARKS
  CLEAR GETS
  DELETE
  PACK
  @20,35 SAY "RECORD IS DELETED" COLO GR+
ELSE
  @15,25 SAY "R E C O R D      N O T      F O U N D" COLO R+*
ENDIF
CH = SPACE(1)
@22,25 SAY " MORE RECORDS TO DELETE ? (Y/N)" GET CH PICT "!" COLO RG
READ
IF CH= 'Y'
  LOOP
ELSE
  EXIT
ENDIF
ENDDO
CLOSE DATABASES

```

SET COLO TO W+/BG+
RETURN

PROGRAM OUTPUT

COMPUTERIZATION OF BUILDING PLANS APPROVAL
IN THE DEPARTMENT OF LAND, PLANNING AND SURVEY,
FEDERAL CAPITAL DEVELOPMENT AUTHORITY, ABUJA.

DESIGNED BY
ALH. YUSUF O. SAIDU

SUPERVISED BY
DR. YOMI AIYESIMI

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE,
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA - NIGERIA

Press any key to continue ...

PROJECT SUBMITTED TO THE
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA-NIGERIA

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

(P G D C S)

N O V E M B E R, 1 9 9 7

Press any key to continue ...

DEVELOPMENT CONTROL / RESETTLEMENT DIVISION

COMPUTERIZATION OF BUILDING PLAN APPROVAL

MAIN MENU

<u>TASK CODE</u>	<u>TASK</u>
1	ADD RECORD
2	MODIFY RECORD
3	VIEW RECORD
4	DELETE RECORD
5	QUIT

ENTER A TASK CODE:0

ENTER PHASE NUMBER: 1

ENTER DISTRICT NUMBER: 1

Activating The Database File To Add Record

ENTER PHASE NUMBER: 0

ENTER DISTRICT NUMBER: 0

ACTIVATING THE DATABASE FILE TO MODIFY RECORD

ENTER PLOT NUMBER 34567

MODIFY RECORD SCREEN

Phase Number 1 District Number 1
Plot Number 123456 Plot Size 523SQ
Developer's Name SAIDU YUSUF
Developer's Address NO.14 , TMQ ABUJA
Purpose Clause PRIVATE
Type of Design BONGALO
Date of submission 09/09/97
Date of Approval 09/09/97 Processing Fee # 3,245,667.00
Certificate Of Occupancy Number 378887T
Certificate of Occupancy Date 09/09/96
Setting Out Approval Date 09/09/95
Certificate of completion issued Y
Completion Certificate date 06/09/95
Remarks / possible comments EXCELLENT CONSTRUCTION

TO CONTINUE MODIFICATION (Y/N)

ENTER PHASE NUMBER: 0

ENTER DISTRICT NUMBER: 0

ACTIVATING THE DATABASE FILE TO VIEW RECORD

V I E W R E C O R D

Phase Number 1
District Number 1
Plot Number 45566556
Plot Size 6679SQ
Developer's Name WARREN WEAR
Developer's Address NO.3, TMQ , ABUJA
Purpose Clause PRIVATE
Type of Design DUPLEX
Date of submission 03/03/97
Date of Approval 02/04/96
Processing Fee # 444,444.00
Certificate Of Occupancy Number 562526
Certificate of Occupancy Date 20/03/22
Setting Out Approval Date 03/02/97
Certificate of completion issued Y
Completion Certificate date 25/07/95
Remarks / possible comments SATISFACTORY

TO VIEW MORE RECORD (Y/N)

V I E W R E C O R D

Phase Number 1
District Number 1
Plot Number 13455
Plot Size 534SQ
Developer's Name ABDULLAHI MUHAMMED
Developer's Address NO.15, TMQ ABUJA
Purpose Clause PRIVATE
Type of Design BONGALO
Date of submission 02/05/97
Date of Approval 04/08/97
Processing Fee # 543,545.00
Certificate Of Occupancy Number 63531T
Certificate of Occupancy Date 08/07/95
Setting Out Approval Date 09/02/95
Certificate of completion issued Y
Completion Certificate date 03/05/96
Remarks / possible comments COMPLETED

TO VIEW MORE RECORD (Y/N)

ENTER PHASE NUMBER: 1

ENTER DISTRICT NUMBER: 1

ACTIVATING THE DATABASE FILE TO DELETE RECORD

ENTER PLOT NUMBER TO DELETE 123456

D E L E T E R E C O R D S C R E E N

Phase Number 1 District Number 1
Plot Number 123456 Plot Size 523SQ
Developer's Name SAIDU YUSUF
Developer's Address NO.14 , TMQ ABUJA
Purpose Clause PRIVATE
Type of Design BONGALO
Date of submission 09/09/97
Date of Approval 09/09/97 Processing Fee # 3,245,667.00
Certificate Of Occupancy Number 378887T
Certificate of Occupancy Date 09/09/96
Setting Out Approval Date 09/09/95
Certificate of completion issued Y
Completion Certificate date 06/09/95
Remarks / possible comments EXCELLENT CONSTRUCTION

RECORD IS DELETED

MORE RECORDS TO DELETE ? (Y/N)

D E L E T E R E C O R D S C R E E N

Phase Number 1 District Number 1
Plot Number 123456 Plot Size 523SQ