COMPUTERIZATION OF PLOT ALLOCATIONS IN NIGER STATE

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PGD/MCS/2003/2004/1130

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE
FEDERAL UNIVERSITY OF TECHNOLOGY MINNA, NIGER STATE

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COMPUTERIZATION OF PLOT ALLOCATIONS IN NIGER STATE

BEING THESIS SUBMITTED

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TO THE DEPARTMENT OF COMPUTER SCIENCE,
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JANUARY, 2006.

DECLARATION

I HEREBY DECLARE THAT THIS THESIS IS BORN OUT OF MY HARDWORK AS MY CONTRIBUTION TO TOWN PLANNING PROFESSION IN NIGERIA.

TPL. OBAJE, ITODO SIMEON

CERTIFICATION

This is to certify that this thesis titled **"COMPUTERIZATION OF PLOT ALLOCATIONS IN NIGER STATE"** was written by **OBAJE, ITODO SIMEON** under my supervision.

....

Dr. Y. M. Aiyesimi Date

Project Supervisor

....

Dr. L. N. Ezeako Date

Head of Department

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External Examiner Date

DEDICATION

THIS RESEARCH WORK IS DEDICATED TO MY BELOVED **BABY FAITH ENE OBAJE**, A BLESSING TO THE FAMILY FROM ALMIGHTY GOD ON 22ND JANUARY, 2005.

IN GOD, FAITH ENDURETH FOREVER.

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ABSTRACT

This thesis discusses and highlights the features and applications of the computer system which is one of the tools and million methods of production and management of computer in Urban and Regional Planning. It suggest that computer should be utilized for generation of information required in management of Urban and Regional Planning problems in Nigeria.

1.0 GENERAL INTRODUCTION

1.1 BACKGROUND TO STUDY

Computing devices have been used in public planning for more than one hundred years. Hermann Hoilerith invented the punched card machine at the turn of the century for the US population census, and this eventually led to the formation of the worlds largest computer company, IBM. Once the digital computer was developed half a century later, applications in public planning and management became wide spread. By the mid 1950s, population and transportation data were being processed by computers and these were quickly followed by various simulation modeling efforts. By the late 1960s, Urban data management systems were being widely implemented by public agencies for a variety of routine and less routine management and strategic planning functions.

The micro-computer, provides a relatively inexpensive but powerful tool for handling and processing information relating to Urban and Regional Planning. Apart from being relatively inexpensive, the use of micro computers in planning have many advantages over main frame computers. They possess standard features such as screen editing facilities and interactive colour graphics that are not common to mainframe work. In addition they can perform multiple functions.

Broadly speaking, the use of computer to assist the work of Urban and Regional Planners, and all professionals can be classified into four

main areas. These are: administration, analytical activities, ordinance enforcement, and liaison.

Administrative activities are those related to personnel, record keeping accounting and budgeting. Analytical activities are needed for plan formulation, plan assessment and monitoring. Computers are also used for data gathering and analysis, modeling and for costing and report writing. On their part, ordinance enforcement activities include development control, plot mapping for the purposes of planning and property rate collection, and the processing of planning applications. Finally, liaison activities involves contact with relevant government and quasi-government agencies, policy makers, developers and relevant interest or pressure groups, through their direct access to files that are not classified.

The extent to which a computer can be applied varies among these four main areas of Urban and regional planning activities. Depending on the scale and complexity of the functions of the planning outfit concerned, and because of the lower speed and data storage capacity of some micro computers, several of these functions may be better performed by computers with data bases that can handle sufficiently large number of records.

Urban and Regional planning cannot afford to be left out of the computer age now sweeping across the world. Policy makers and advisers in Nigeria should provide the resources both in materials and financial terms, to enable planning partake in the use of modern

information technology, so as to carry out its functions. This is even more compelling now, given the rapidity of Nigeria's urbanization process and the resultant complicities of Urban and regional planning functions in the country, as well as the large volume of information that needs to be handled in order that planning activities can be carried with adequate information and in a more scientific way.

Conclusively, it is imperative to apply the use of computer technology for the automated management of the problems of urban and regional planning in order to enhance the quality of the environment in Nigeria.

1.2 JUSTIFICATION FOR THE STUDY AND CHOICE OF FEDERAL LOW COST SULEJA.

The computer is a relatively new technology and a new tool for Urban and regional planning. The computer presents an enormous opportunity to improve the professional work of planners. Its expanded use depends on understanding both the computer and the planner's job. The administrative aspects of planning require the use of computer technology. However, in Nigeria, surveys of planners reveal that in the majority of planning offices, the use of personal computer is not yet highly sophisticated. Most planners in Nigeria use the personal computer for word processing alone and only a very few percentage actually have functional, information system on the micro-computer. Planners engage in several activities that involves the use of the computer

technology in varying degrees. Planners negotiate, explain and argue about planning rules, changes and permissions. This interpersonal activity should be supported by some form of information system, which can be used to prepare a position, and to present facts to clients and the public.

A large part of planning deals with the administration of rules and regulations and the analysis of their impacts and or possible changes in them. Indeed, in modern Urban managements, administrative records like those of urban crimes, infrastructural facilities and services, real estate transaction, development control, and assessments are often installed in computerized data bases. Each case is given its location, most commonly by street address or zones in each agency for local governments.

Computer provides the planner with the capacity to map land parcels and to follow events in the development process. It has multiple uses in the management and control of Urban affairs.

The efficient use of computer also depends on the availability of data which are needed for urban and regional planning.

The poor standard of record keeping and information may affect the ease of data collection from such organizations for planning purposes.

It is also necessary to train planning staff who do not have much computing knowledge, and retrain those who are accustomed to

working with computer from time to time, so as to catch up with the rapidity changing computer technology.

Finally, technical back-up facilities for the maintenance of computer equipments and service costs, which incidentally continues after computer installation, need to be carefully looked into so as not to make the introduction of computer into a planning department a flash in the frying pan.

Ideally, looking at the above justification for the study, the topic was chosen to justify the fact that "computers in Urban planning and management in Nigeria" is of paramount importance and its relevance cannot be over emphasized.

Again, a study of this kind has never been done for Suleja in Niger State looking at the past records available in that area.

Suleja in Niger State was chosen for the facts that the area is known to me and obtaining necessary information will not be a problem. Also, the cost of investigation, in terms of time constraints, funding, training of field staff, labour and inconveniences of the survey will reduced to a minimal level.

1.3 AIMS AND OBJECTIVES

AIM: To appraise the current State and nature of computer technology in the context of Urban and Regional Planning in Nigeria.

OBJECTIVES:

(i) To identify the area of usage of computer in assisting the work of Urban and Regional Planners.

(ii) To identify the constraints in computer applications in Urban and Regional Planning.

(iii) To ascertain the currents and potential impacts of computers technology in urban planning.

(iv) To prescribe how computer should be managed for the purpose of meeting the present needs in Urban and Regional Planning in Nigeria.

1.4 THE STUDY AREA
AN INTRODUCTION TO SULEJA TOWN

Suleja is located on Lat. 9° 31′ North of the equator and Longitude 7° 58′ to the East. It is situated very close to the boundary between Niger State and the Federal Capital Territory. The town has become an important junction town linking Minna, Bida, Lokoja, Kaduna and Abuja. The main town occupies an area of about 1371 hectares, with a total population of over 55,000 persons (1977) at an average density of 40 per/hectares.

The Federal Low Cost Housing Estate popularly called Shagari low cost is located within Suleja with good access. There are 320 of one bedroom housing units in Suleja.

1.5 SCOPE OF STUDY

Computers in urban Planning and Management in Nigeria is a vast topic hence the study is limited to Computerization of Plot Allocation in Niger State.

2.0 LITERATURE REVIEW

2.1 PREVIOUS STUDIES OF INFORMATION TECHNOLOGY

The development of information technology (IT), since the advent of the mainframe computer in mid-20th century, has radically transformed modern societies all over the world. According to some analysts, the impact of information technology can be compared to that of the invention of the printing press in the mid - 15th century (Bell, 1979; Batty, 1985; papert 1980). Although the notion of computing goes back into the history of mathematics, its formal embodiment in the technology of the computer, less than fifty years ago, has led to a change so fast and so pervasive that we are only beginning to appreciate its consequences (Nora and Minc, 1980).

With the magnitude and speed of change, once the information revolution has run its course, information technology and computing will be simply part of the background to every day life, and there is no reason to think that it will be less pervasive than the invention of printing or the development of writing (Martin, 1978; Manhem 1987, Dubard, 1995).

Traditionally, information systems and control paradigms in Urban and regional planning have not been exclusively related to information technology since the developments of the system theory, a couple of decades ago, planning has been based upon a model of information processing in which information has served to integrate the various tasks or stages comprising the planning process (Chadwick, 1971).

provides a relatively inexpensive but powerful tool for handling and processing information relating to urban and regional planning.

With appropriate software packages, computers can become word processors, calculators, data storage and computer high resolution graphics devices. They can be used to emulate terminals linked to mainframe and micro computers, either as stand alone micro computers or intelligent terminals (Ottensmann, 1984 Cullen, 1986). Figure 1 shows the major input, output and data communication devices of micro-computer.

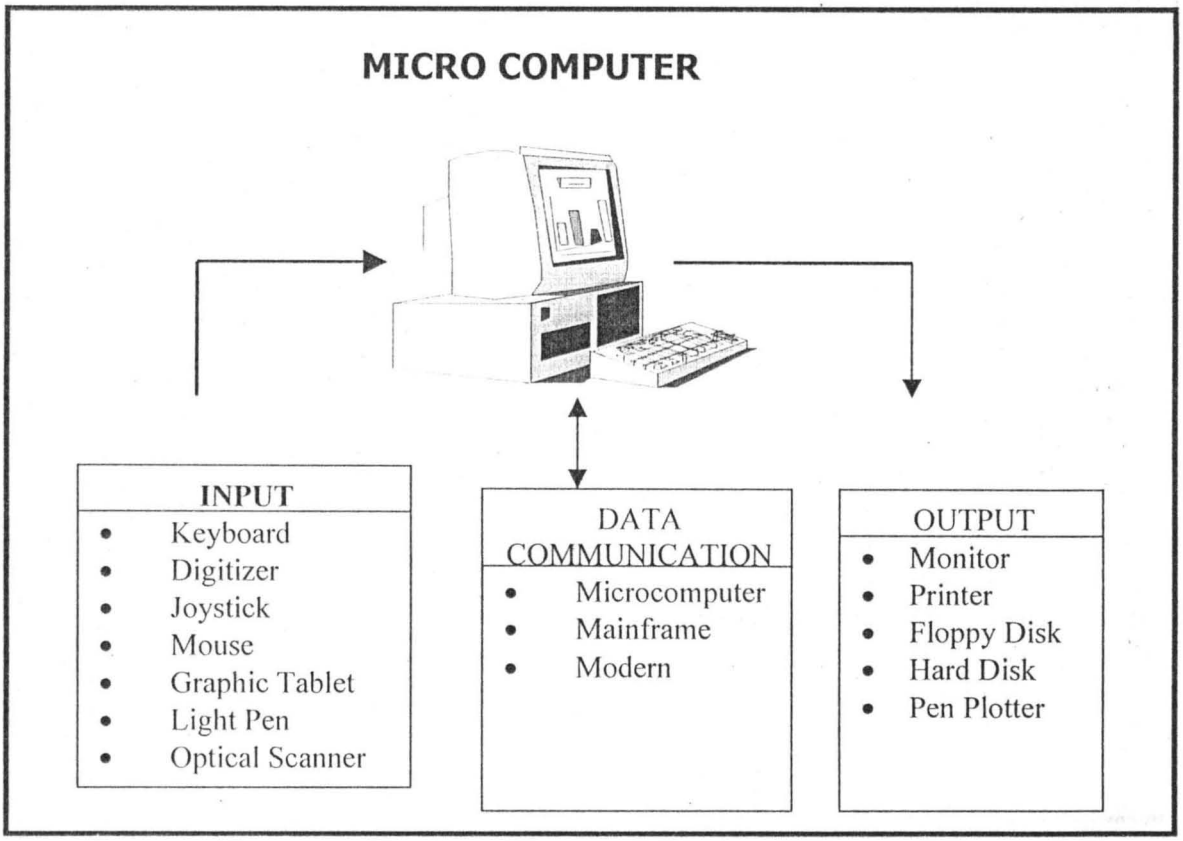


Figure 1: A Micro-Computer

Computers can assist the work of Urban and regional planners and allied professional in the following areas:-

- Administration.
- Analytical activities
- Ordinance enforcement
- Liaison.

The extent to which a computer can be applied varies among these four main areas or urban and regional planning activities.

Figure 2 shows the main applications of micro computer functions in Direct areas of Urban and Regional Planning activities.

Figure 2: Main Application of Microcomputer Function in Different Areas of Urban and Regional Planning Activities

CAPABILITIES MICROCOMPUTER FUNCTIONS	URBAN PLANNING ACTIVITIES			
	Administration	Analytical Functions	Ordinance Enforcement	Liaison
Word Processing	●	●	●	●
Database	▭	○	○	○
Mathematical Computation and programming		▭		
Statistical Analysis		▭		
Modeling		▭		
Computer Mapping		▭		
Geographic Information System		○	○	
Digital Image Analysis		○		
Simulation		○		
Computer Graphics	▭	▭	▭	▭
Project Management	▭			

Key:- ● Most Applicable ▭ Applicable ○ May be applicable

2.3 CONSTRAINTS IN COMPUTER APPLICATION IN PLANNING

There are a number of constraints that limits computer applications in Urban and regional planning, namely: Hardware and software, manpower, and Data constraints.

The availability or otherwise of computer hardware and appropriate software in planning department/agencies is definitely one of the factors which limits or enhances the application of computers in urban and regional planning. It is a truism that generally in Nigeria, the dearth of funds and sheer disinterest, in some cases, have affected the installation of computer machines and undoubtedly large planning establishment in Nigeria are also affected in this regard. These include agencies such as Federal and State Ministries of Housing and Urban Development, and those of Environment, Transport, Federal Housing Authority, State owned Urban Development Board, and property investment companies, Local Planning Authority and so on.

The efficient use of computer also depends on the availability of data which are needed for urban and regional planning. For political and administrative reason, information is jealously guided against, hence this partly explains the relative difficulty encountered in the process of data collection on all facets of Urban and regional planning in Nigeria.

According to DuBard (1995) this "Information poverty" that afflicts Third world countries, Nigeria inclusive manifest in several forms; planning without facts, unreliable information, poor information support

to decision makers, and cumbersome reporting and monitoring systems and so on.

In view of this, there is the need for the initiation of access to networks and databases in Nigeria and other Third world countries (Menou, 1993).

It is equally necessary to train planning staff who do not have much computing knowledge and retrain those who are accustomed to working with computer from time to time, so as to catch up with the rapidly changing computer technology. All these require extra staff time and diversification from their normal planning training and activities (Adeniji and Ojeneye, 1993), but the benefits are quite substantial in terms of meeting information needs and increasing overall efficiency.

2.4 COMPUTERS IN URBAN PLANNING AND MANAGEMENT

Computing devices have been used in public planning for more than 100 years. Hermann Hollerith invented the punched card machine at the turn of the century for the US population census and this eventually led to the formation of the world largest computer company, IBM. Once, the digital computer was developed half century later applications and management became wide spread,. By the mid 1950s, population and transportation data were being processed by computers and these were quickly followed by various simulation modeling efforts. By the late 1960s, urban data management system were being widely

implemented by public agencies for a variety of routine and less routine management and strategic planning functions.

This experience has been well documented (Edralin 1986) but in the last 10 years, application of computers in Urban planning have changed dramatically (Batty, 1995). The top-down approach based or remote, large scale, database computing has been replaced by much more personal computing style in which graphical display of urban data now provides the focus.

In the last 10 years, the emphasis has shifted to graphic display, the representation of spatial data, and its manipulation in quite straight forward ways. Interms of planning and problem solving processes, to date there has been very little emphasis on formal analysis simulation and modeling and hardly any at all on design and decision making aids. However, this picture is changing and new functions are being slowly added. In the next 10 years however, the use of computers in Urbana and regional planning will clearly be affected by developments in computer use in general – across networks based on decentralized interaction between users and it is likely that we will see a much greater emphasis on informal decision making using computers interactively.

2.5 PLANNING AND SPATIAL DECISION SUPPORT

Planning and management are based on generic problem solving process which begins with problem definition and description involves various forms of analysis which might include simulation and modeling

moves to prediction and then to prescription or design which often involves the evaluation of alternative solutions to the problem. Decision characterizes every stage of this process while the process of implementation of the chosen plan or policy involves this sequences once again.

2.6 THE PLANNING PROCESS AS A SEQUENCES OF COMPUTABLE METHODS ENABLING DECISION SUPPORT.

This is the kind of structure that Harris (1989, 1991) refers to as a planning support system (pss) which links a variety of computer based software supporting decisions at different stages of the planning process (Batty 1995).

2.7 THE COMPUTER AND THE PLANNING PROFESSION

The computer presents an enormous opportunity to improve the professionals work of Town Planners (Journals of NITP, October, 2000). Its expanded use depends on understanding both the computer and the planners job.

Geographic information system (GIS) is normally used to describe the computer facilities for handling data referenced to the spatial domain. It is a computer based spatial data handling system (Marble et al, 1983), Ducker, 1987; Leary, a989; Dangermond 1988 and Paulson, 1982).

With the aid of computer technology Town planners are at advantage in the following are as:-

- Data are maintained in a physically compact form in magnetic data file.
- Data can be retrieved with great speed.

- Various computerized tools allows for a variety of types of manipulations, including layouts design, map overlay, transformation, calculations, graphic design and database manipulation.
- Change detection analysis can be effectively performed for two or more different time periods.

2.8 HARDWARE AND SOFTWARE FOR URBAN AND REGIONAL PLANNING IN A COMPUTERIZED ENVIRONMENT.

Computer that has sufficient processing speed and data-storage capacity has the following hardware configuration as follows:-

Computer CPU + Monitor	Printer
Multi-pen plotter	Scanner.
Digitizer	UPS.

The soft ware required to perform certain analytical urban and regional planning tasks varies according to the nature of the job at hand as well as the quality and quantity of information available. Some of the software include:- Altas GIS, Arcview, AutoCAD, ArCAD, Arcinfo, IdrisWingis, TRansCAD, Map info, PROGIS.

2.9 APPLICATION OF PROJECT MANAGEMENT TO TOWN PLANNING PROJECTS IN NIGERIA.

Generalizations are difficult to make without convincing data, however it appears that normal organization and Town planning firms

find it difficult to follow project management principles and process in the projects that they handle (ABIN D.J. 2002).

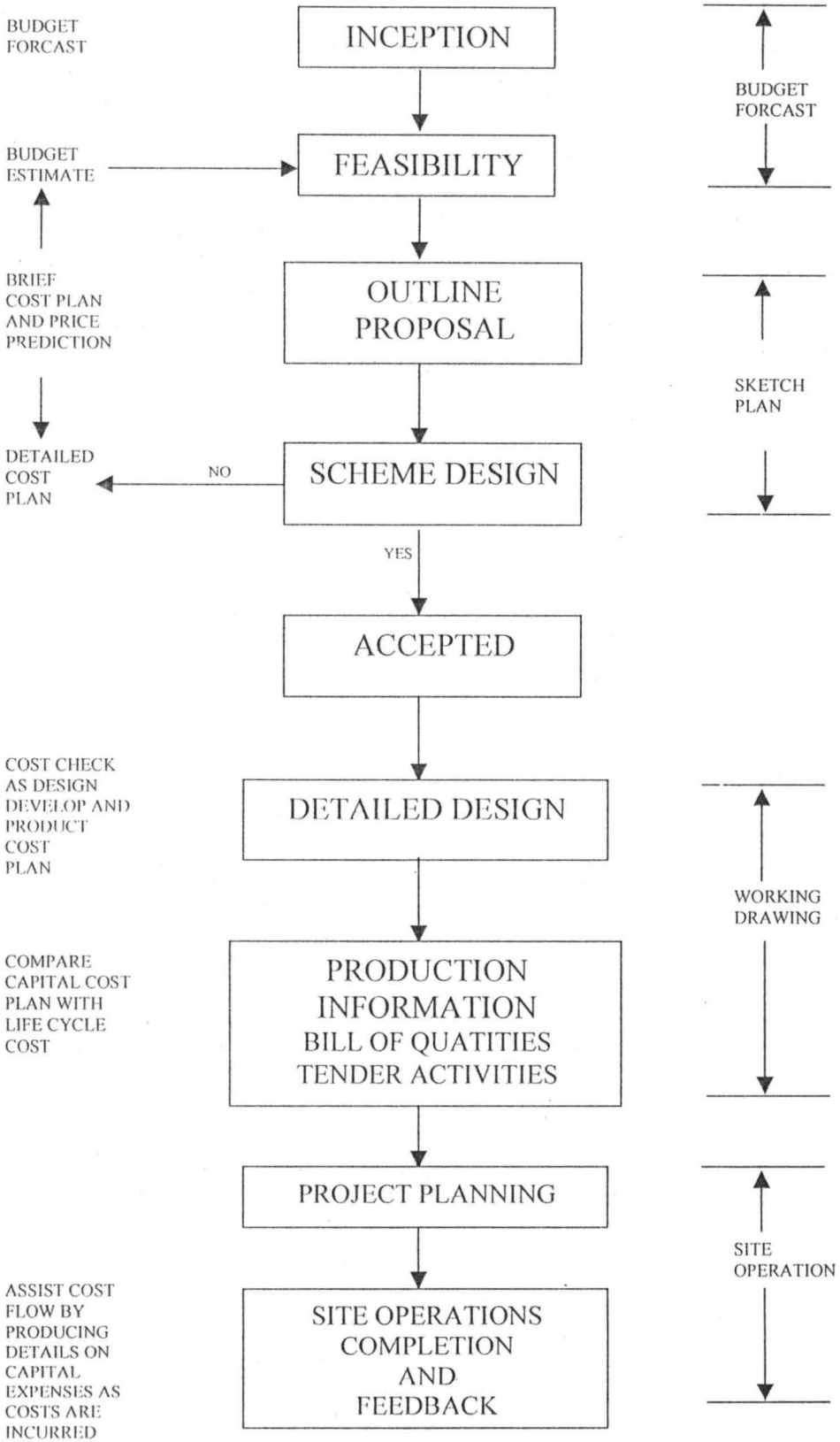
Some of the problems are outlined below:

(i) Size of firms, (ii) Small size of projects, (iii) Lack of immediate plan implementation (iv) Lack of knowledge – in most of the planning schools, there is little emphasis placed on the subject of project management.

Generally, project management ensures prudent use of scarce resources to enhance the achievement of results.

The figure 4: drawn below is self explanatory to all who know what a project is all about especially with emphasis on life cycle cost management since optimum cost utilization is paramount to all type of client be they public or private.

FIG. 4: STAGES IN DESIGN PROCESS AND PLAN OF WORK



Project management is defined as "the function of planning, managing, and controlling a construction project on behalf of a client in order to achieve a completed project which satisfies the client in terms of his own needs within the constraints imposed upon the client and the project by society and maintenance of the utility of the project throughout its life" (NITP, MCPDCP - 2002).

To plan is to be in agreement with J.F. Kennedy's statement that "change is the law of life, and those who look only for the past and present are certain to miss the future". This is in confirmation with the recent development in information technology through the use of computers, internet etc.

CHAPTER THREE

3.0 SYSTEM ANALYSIS & DESIGN

3.1 RESEARCH METHODOLOGY

Research Methodology forms the main stay of the research process. According to Mc Clareta (1988 research methodology is the basic plan, which guide the data collection and analysis phase of the research project. It is the framework, which specifies the resources of data.

In carrying out this research on "Computers in Urban Planning and Management in Nigeria", the following principles can be followed as a guide to the research.

1. Development and administration of research instrument.
2. Data analysis and interpretation.

3.2 RESEARCH INSTRUMENTS:

The aim of this projects is to appraise the current state and nature of computer technology in the context of Urban and Regional Planning in Nigeria.

Among the areas to be considered are:

a. Computer and Building plan approval processing.
b. Computers in Environmental assessment (EIA)
c. Computers in Environmental monitoring.
d. Computers and site selection analysis.
e. Computers and land use and allocation processing.

In order to achieve this goal, the following instruments will be applied as sources of information.

PRIMARY DATA – This will include personal interview, questionnaire administration and physical observation survey on site.

SECONDARY DATA – This will cover area of past research records, text books, journals, magazines and internet etc.

3.3 PRIMARY DATA

For the purpose of this study, data was collected through the following method:

PERSONAL INTERVIEW

This method was used to obtain information from the following people:

(a) The Federal Controller, Federal Ministry of Housing and Urban Development Minna.

(b) The Zonal Town Planning Officer FMHUD Minna.

(c) Staff of Lands and Town Planning department of FMHUD.

(d) Allotees of Federal Government plots in Gauraka-Suleja, Bida, Minna and New Bussa.

(e) Residents of selected sites and Estates in Niger State.

The purpose of this interview is to ensure proper insight at first hand information from the various respondents.

QUESTIONNAIRE:

Questionnaire were designed and administered to the following people:-

(a) Federal Controller, Federal Ministry of Housing and Urban Development Minna.

(b) The Zonal Town Planning Officer.

(c) Some staff of the Ministry in the Lnad & Town Planning offices.

(d) Allotees of plots in Gauraka, Bida, Minna and New-Bussa.

(e) Residents of selected sites and Estates in Niger State.

OBSERVATIONS:

This method is applied in form of reconnaissance survey where the researcher observe physically on the site the actual happenings of activities as it is on ground. To ascertain the researchers curiosity, photographs and video coverage of things observed on sites are carried out.

3.4 SECONDARY DATA

The main source of information are:

(a) Forms and documents used in the organization.

(b) Procedure manuals and books, journals, magazines, related books which specify how various activities are carried out in the organization.

(c) Various report used in the organization.

(d) Computer programs of part records released to existing systems.

All these methods are strategies adopted to establish quantitative and qualitative information in ensuring good output of the research project.

3.5 SAMPLING TECHNIQUES.

Gomer (1983) defined sampling techniques as a design which specifies the manner in which sampling unit are to be selected from the whole population. For the purpose of this project random sampling is used.

In order to determine the sampling population for this research work, Niger State was grouped into four study areas out of which some plots and allotees were selected at random from each zone within the location to ascertain their allocation and payment of premium/ground rent to government as well as obtaining building plan approval, compliance with environmental assessment/monitoring, and site selection analysis.

Table 3 A

Analysis of Allocation Made

SITE LOCATION	TOTAL ALLOCATION MADE	QUESTIONNAIRE ADMINISTERED	RESPONDENT
Gauraka-Suleja	200	120	85
Minna	50	50	42
Bida	150	100	70
New-Bussa	120	80	68
Total	**520**	**350**	**265**

A total number of 520 allocations were made by Federal Ministry of Housing and Urban Development in Niger State (April 2003). A total of 350 questionnaire were administered and 265 respondent were received from the respondents.

3.6 METHOD OF DATA ANALYSIS

The data collected from the questionnaire administered, observation made on site during inspection and through literatures from past records were gathered and analyzed with the use of descriptive and statistical means.

3.7 CHOICE OF PROGRAMMING LANGUAGE

The system is developed with Microsoft Visual Basic Version 6.0 Database (Record keeping) are accessed through Microsoft Access and the preparation of the reports is by Crystal Reports.

The language chosen is for effective management of database and report of this project due to its compatibility, maintainability, readability, user friendliness and portability.

3.8 INPUT AND OUTPUT SPECIFICATION

INPUT SPECIFICATION

Each allotee and concerned staff of FMHUD in Niger State are expected to fill the entry disk form, which are stored in general database file.

Please see appendix 1-4 the format of the questionnaire used during the research project.

- Application for Building plan approval entering form.
- Building plan assessment form
- Site inspection form
- Offer of lease form (Allocation)

TABLE 3B

PLOT ALLOCATION ANALYSIS

SITE LOCATION	TOTAL ALLOCATION MADE				TOTAL QUESTIONNAIRE ADMINISTERED				TOTAL NUMBER OF RESPONSE RECEIVED			
	LD	MD	HD	TOTAL	LD	MD	HD	TOTAL	LD	MD	HD	TOTAL
Suleja	30	60	110	200	20	40	60	120	15	30	40	85
Minna	30	20	-	50	30	20	-	50	28	14	-	42
Bida	40	80	30	150	25	50	25	100	15	35	20	70
New Bussa	30	70	20	120	25	40	15	80	22	32	14	68
TOTAL	**130**	**230**	**160**	**520**	**100**	**150**	**100**	**350**	**80**	**111**	**74**	**265**

LD = low density plot 36m x 36m

MD = Medium Density plot 36m x 18m

HD = High Density Plot 15m x 30m

TABLE 3C

DATABASE DESIGN

S/N	NAME OF ALLOTEES	LOCATION OF SITE				BLOCK NO	PLOT NO	TYPE OF RESIDENTIAL PLOT & SIZES			SURVEY FEES (N2,000)		EIA		BUILDING PLAN APPROVAL	
		Suleja	**Minna**	Bida	New Bussa			LD 36mx36	MD 36mx18	HD 15m x 30	Paid	Not paid	Good	Bad	Approved	Not Approved
1-15	.....	√				1, 2, 3,	1-15	√			√		√		√	
16-45	.....	√				4, 5, 6,	16-45		√		√		√		√	
46-85	.....	√				7, 8	46-85			√	√		√		√	
1-28	.....		√			1, 2, 3,	1-28	√			√		√		√	
29-42	.....		√			4, 5,	29-42		√		√		√		√	
1-22	.....				√	1, 2, 3,	1-22	√			√		√		√	
23-54	.....				√	4, 5, 6,	23-54		√		√		√		√	
55-68	.....				√	7	55-68			√	√		√		√	
1-22	.....				√	1, 2, 3,	1-22	√			√		√		√	
23-54	.....				√	4, 5, 6,	23-54		√		√		√		√	
55-68	.....				√	7	55-68			√	√		√		√	

TABLE 3D

PLANS NOT APPROVED

SITE LOCATION	LD	MD	HD	TOTAL
SULEJA	2	10	12	24
MINNA	5	8	-	13
BIDA	2	7	5	14
NEW BUSSA	4	10	2	16
TOTAL	**13**	**35**	**19**	**67**

- Total Building plans received = 265
- Building plans approved = 195
- Building plans Not approved = 67

TABLE 3E

SUMMARY OF ENVIRONMENTAL IMPACT ANALYSIS REPORT OF ALL DEVELOPERS AT THE SITE (DATABASE DESIGN)

S/NO	ATTRIBUTES	MAXIMUM POINTS OBTAINABLE	POINTS OBTAINABLE
1	Physical Environment		
	- Soil	5	5
	- Landscape	5	5
	- Drainage	5	5
	- Zoning Regulation	5	5
2	Ecological Characteristics	5	2
3	Human activities		
	- Population	5	3
	- Employment	5	5
	- Transportation	5	4
4	Infrastructural Services		
	- Water	5	5
	- Electricity	5	4
	- Sewage	5	4
	- Solid & Liquid Waste	5	4
5	Social and Community Services	5	4
6	Environmental Pollution		
	- Air pollution	5	2
	- None pollution	5	2
	- Water pollution	5	2
	Total	80	60
	Percentage	100	75%

$$\% \text{ Performance} = \frac{\text{Points Obtainable}}{\text{Max. points Obtainable}} \times 100$$

Therefore $\frac{60}{80} \times 100$

Performance = 7.5.0%

SCORING GUIDE

5 – Very Positive Impact

4 – Positive Impact

3 – Neutral Impact

2 – Negative Impact

1 – Very Negative Impact

RATING

100% - 61%	=	Acceptable consideration
60% - 40%	=	Critical Consideration
<40%	=	Not acceptable

In view of the survey guide recommended by Nigerian Institute of Town Planners, the proposed development by allotees of National Site and services scheme in Niger State has an average performance of 75.0% which is considered acceptable by all standards.

The developments of allotees under scrutiny, which in all intents and purposes is of positive impact.

3.82 OUTPUT SPECIFICATION

The system is expected to generate the following reports:

(i) List of all allotees

(ii) Location of all sites

(iii) Address of allotees (Block No and plot No for each of the allotee in various locations.)

(iv) Types of Residential plots and sizes

(v) List of allotees that PAID SURVEY FEES OF N2,000

(vi) List of allotees that had approved building plan.

(vii) List of allottee that had Building plans not approved.

CHAPTER FOUR

4.0 SOFTWARE DEVELOPMENT

4.1 RESEARCH FINDINGS/ANALYSIS/INFERENTIAL STATISTICS

A total number of five hundred and twenty (520) allocations were made by Federal Ministry of Housing and Urban Development in 2003. The allocation is spread across four major towns in Niger State, namely:

1. Suleja with a total allocation of 200
2. Minna with a total allocation of 50
3. Bida with a total allocation of 150
4. New Bussa with a total allocation of 120

Please refer to table 1 on detail analysis of the allocation made and the different plot sizes.

Table 3C and 3D shows the detail analysis of building plans approved and others that are not approved.

A total number of 265 Building Plans were received out of which 195 were approved and only 67 were not approved due to one fault of the allottee or other factors considered not to be valid in granting approval.

Table 3E is the summary indicators of environmental impact analysis of all developers at the sites.

In view of the scoring guide recommended by Nigerian Institute of Town Planners, the proposed development by allottees of National site and Services Scheme in Niger State has an average performance of 75% which is considered acceptable by all standards.

The developments by allottees under scrutiny, which in all intent and purposes is of positive impact.

4.2 IMPLEMENTATION AND DOCUMENTATION

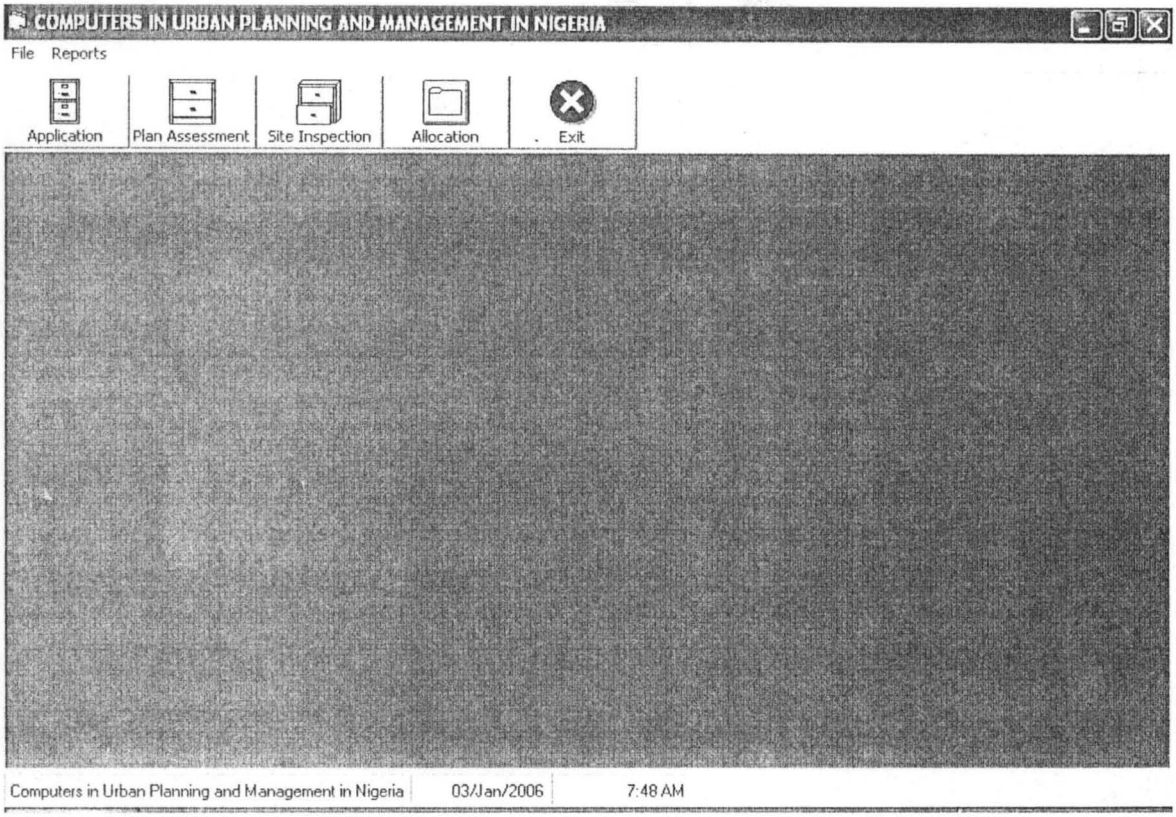
To use the program, the system must have the following hardware and software specifications.

1. Windows 95 or higher running on Pentium processor.
2. A hard disk with 100MB of available disk space for normal installation.
3. A 3.5" floppy drive and windows '95 keyboard.
4. At least 16MB of external memory.
5. A windows-compatible mouse and SVGA monitor (with 4M RAM).
6. Microsoft Visual Basic of version 6.0

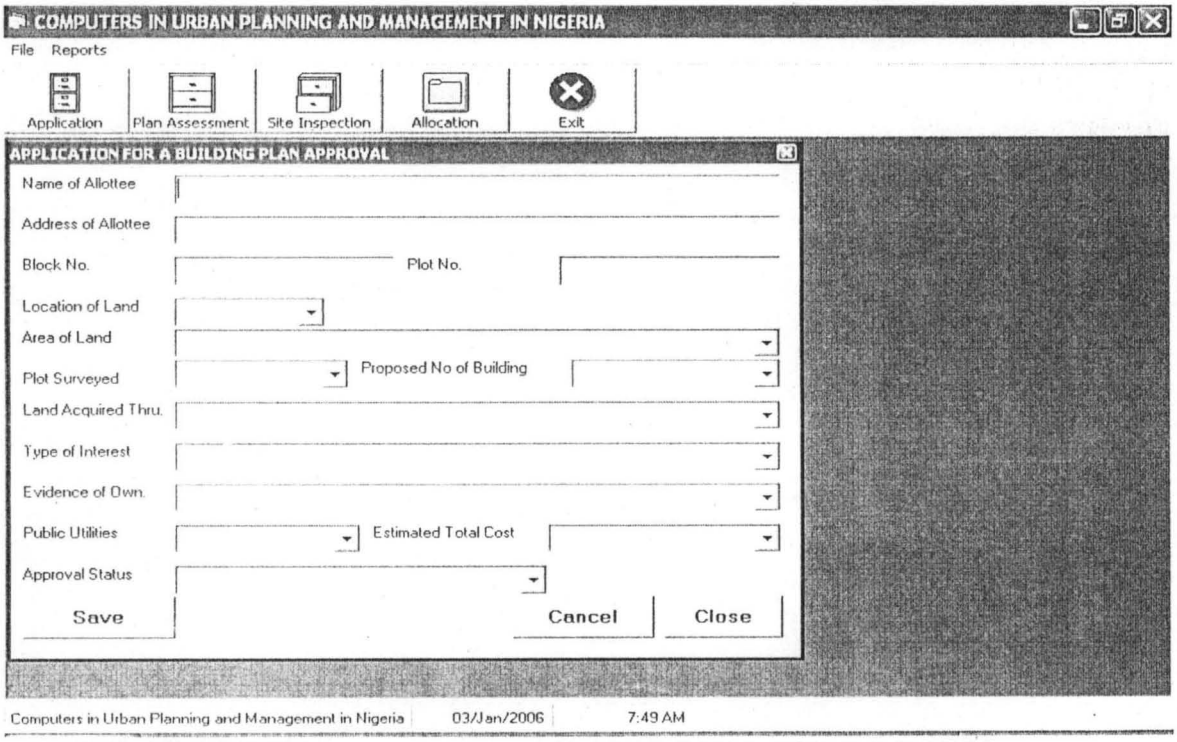
4.3 INSTALLATION/OPERATIONAL GUIDELINES

To install the program from floppy drive, the following steps should be followed as operational guidelines:

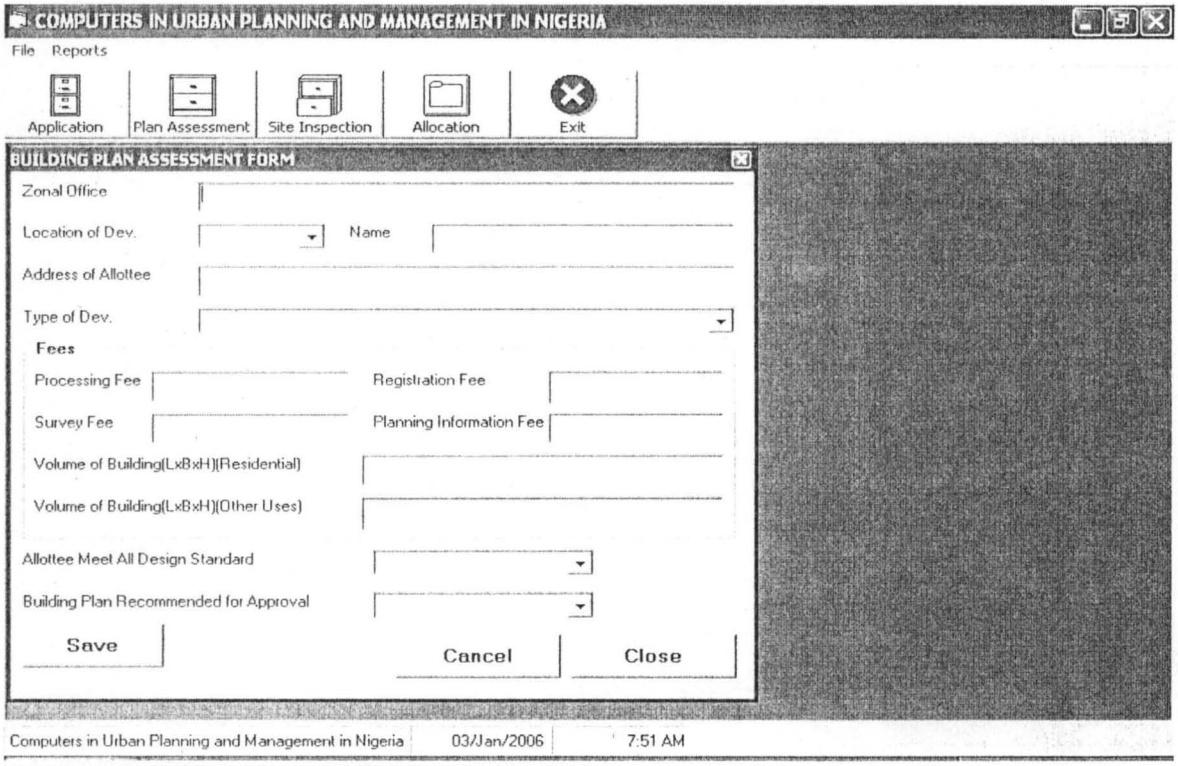
1. Start the program
2. The welcome screen will be displayed
3. Click login on the welcome screen
4. The login window will be displayed, enter your users name and password and click login.
5. If the user name and password entered are correct, the main menu will be displayed else an error message will be displayed informing you about a wrong user name or password.
6. When the main menu is displayed, you can select the appropriate entry forms from the file menu or the appropriate reports from the reports menu.
7. To quit the program, click exit.



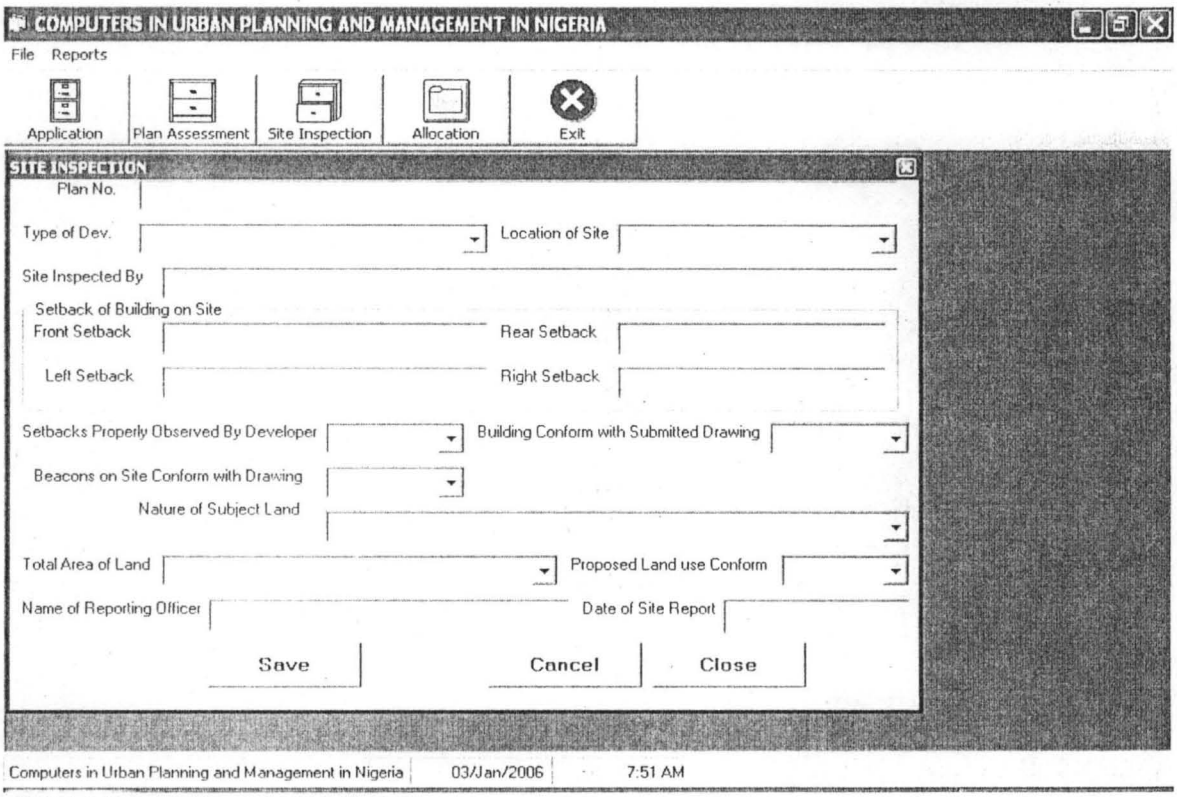
MAIN MENU



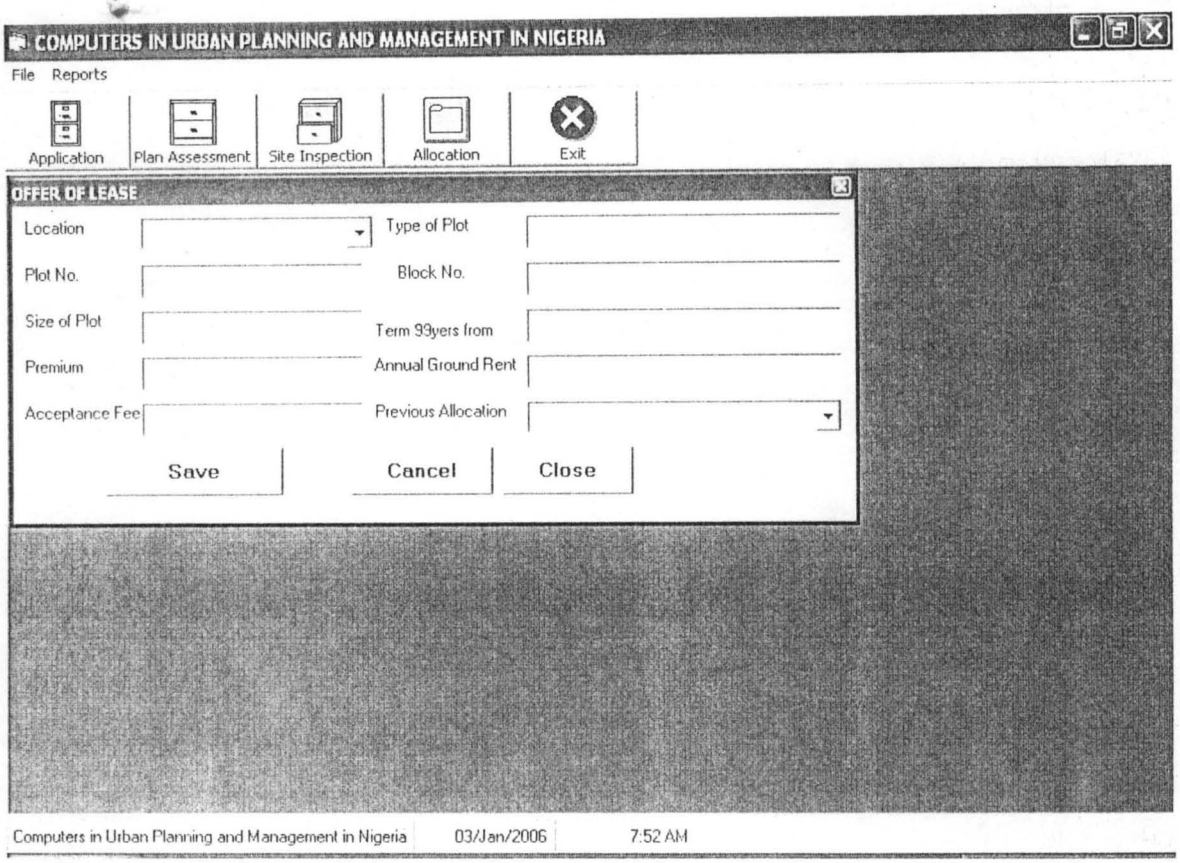
APPLICATION FOR BUILDING PLAN APPROVAL ENTRY FORM



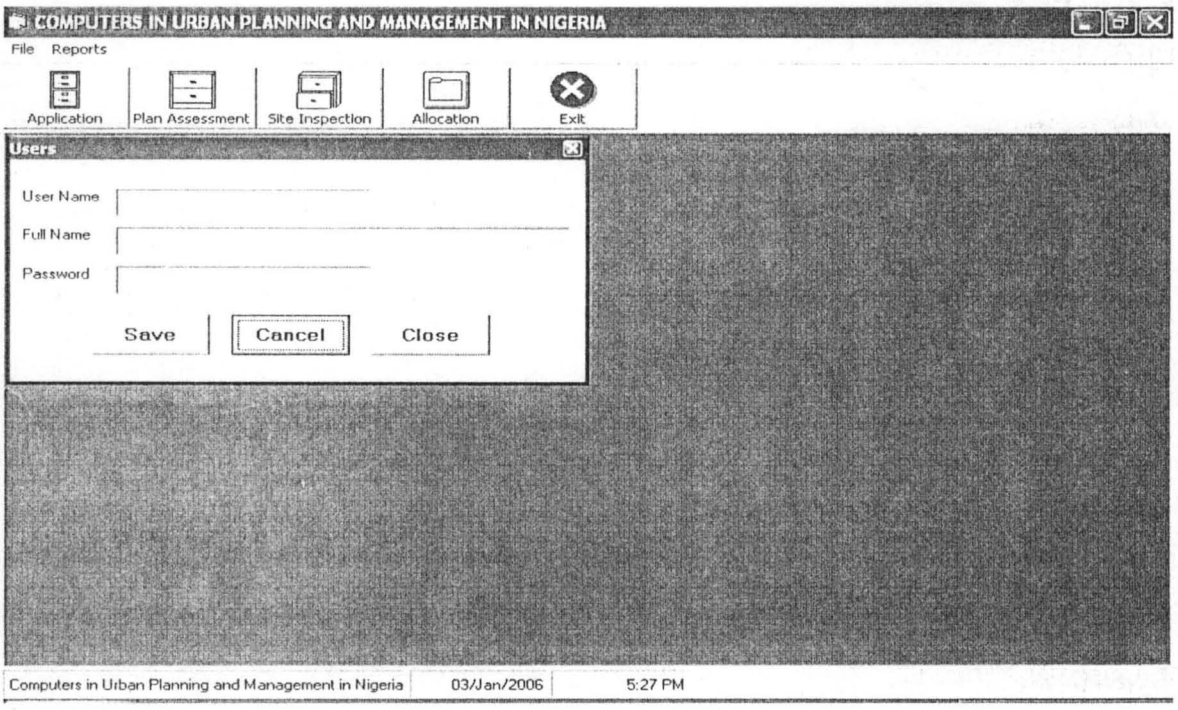
BUILDING PLAN ASSESSMENT FORM



SITE INSPECTION FORM



OFFER OF LEASE FORM



USERS CREATION FORM

OPERATIONAL GUILDLINES

4.4 COST IMPLICATION

Hardware

❖ Pentium 233 MH2 (system unit) ❖ Multimedia Kit ❖ CTX Monitor ❖ Windows '95 Keyboard ❖ Mouse	₦120,000.00
❖ Printer (LaserJet 6L)	₦ 60,000.00

Software

❖ Program developed	₦ 60,000.00
❖ User Manual	₦ 5,000.00
❖ Training of 4 staff	₦ 50,000.00

4.5 USER TRAINING

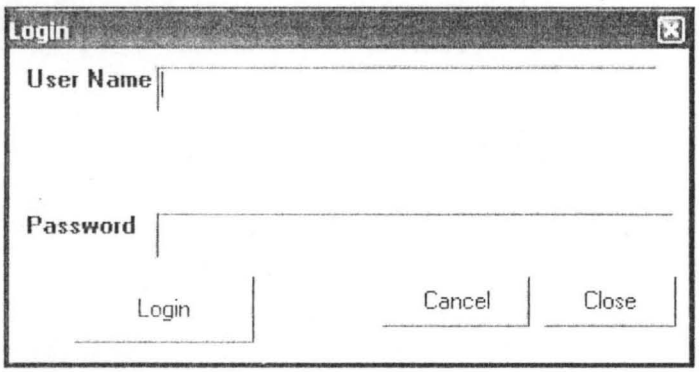
The programs developed needs to be acquainted with the user. This implies that the users of the program need to be trained to adequately justify the capital invested on the new system.

This may take about two weeks with a minimum of six hours per day.

PICTURES

COMPUTERIZATION OF PLOT ALLOCATIONS IN NIGER STATE

WELCOME SCREEN



LOGIN WINDOW

- Start the program
- The welcome screen will be displayed
- Click Login on the welcome screen
- The Login window will be displayed, enter your user name and password and click Login.
- If the user name and the password entered are correct, the main menu will be displayed else an error message will be displayed informing you about a wrong user name or password.
- When the main menu is displayed, you can select the appropriate entry forms from the file menu or the appropriate reports from the reports menu.
- To quit the program, click Exit

LIST OF ALLOTTEES

03/01/2006

NAME OF ALLOTTEES	ADDRESS	BLOCK NO.	PLOT NO.	LOCATION	
	HIGH DENSITY SULEJA				
BASHIR MADAKI	DEPT. OF LANDS F.M.W. & H.	0697409	409	SULEJA	HD
	LOW DENSITY SULEJA				
SIMON ABASHE	BOX 2684, MINNA	0598975	2684	SULEJA	LD
BELLO S. MAMOUD	F.M.W. & HOUSING MINNA	0598052	2741	SULEJA	LD
JOHN OLUWOLE OKUBADEJ	F.M.W. & HOUSING, MINNA	0598399	8955	SULEJA	LD
	MEDIUM DENSITY SULEJA				
[illegible]	P.M.B 86, MINNA	0598132	86	SULEJA	MD
NOAH DAVID	P.M.B. 253 GARKI ABUJA	0697402	253	SULEJA	MD

TEES THAT HAD APPROVED BUILDING PLAN

NAME OF ALLOTTE	ADDRESS OF ALLOTTE	PLAN APPROVE	TYPE OF DEV.
	MINNA		
SIMON ABASHE	BOX 2684, MINNA	YES	RESIDENTIAL
AYO ALIYU	BOX 1555 GOMBE	YES	RESIDENTIAL

EES THAT HAD BUILDING PLAN NOT APPROVED

AME OF ALLOTTE	ADDRESS OF ALLOTTE	PLAN APPROVE	TYPE OF DEV.
	MINNA		
IR OBI C. O	NDIC ABUJA	NO	RESIDENTIAL
LOTUN SEGUN	P.M.B 2026 KADUNA	NO	RESIDENTIAL

ÉES THAT PAID SURVEY FEES

AME OF ALLOTTE	ADDRESS OF ALLOTTE	SURVEY FEE	TYPE OF DEV.
	MINNA		
IMON ABASHE	BOX 2684, MINNA	1,000.00	RESIDENTIAL
MR OBI C. O	NDIC ABUJA	1,500.00	RESIDENTIAL
LOTUN SEGUN	P M B 2026 KADUNA	1,500.00	RESIDENTIAL
YO ALIYU	BOX 1555 GOMBE	2,000.00	RESIDENTIAL

PES OF RESIDENTIAL PLOTS AND SIZES

OT TYPE		SIZE
W DENSITY	LD	36M x 36M
EDIUM DENSITY	MD	36M x 18M
GH DENSITY	HD	15M x 30M

CHAPTER FIVE

5.0 RECOMMENDATIONS AND CONCLUSION

5.1 RECOMMENDATIONS

i. All professional Town Planners and allied professionals in the building environment must be computer literate especially in AutoCAD designs and analysis as well as other related areas of town planning profession practices in computer planning and management in Nigeria.

ii. A database design for allocation of National Site and Services Scheme that can be accessed in all Town Planning Offices at the Local, State and Federal levels should be maintained in order to have a uniform National Town Planning Concept in Nigeria. That is computation of land allocation of National Site and Services Schemes at all levels in the federation which can be accessed at any point in time.

iii. It is also recommended that all efforts should be geared towards personal computing style in which graphical display of urban data provides the main focus in Urban Planning and Management in Nigeria.

iv. With the lack of computer technology by most Town Planners in the country, problems the profession has grappled with for years remain unsolved. Current legislation is inadequate for the demand of the computer age. Town planners observations on statutory reform, land allocation and management, affordable , growth management of urbanization, and the role of the comprehensive plan in land-use decision are recommended for planning reform.

5.2 CONCLUSION

Urban and Regional Planning cannot afford to be left out of the computer age now sweeping across the world. Policy makers and advisers in Nigeria should provide the resources; both in materials and financial terms, to enable planning partake in the use of modern information technology, so as to better carryout its functions. This is even more compelling now, given the rapidity of Nigeria's urbanization process and the resultant complexities of urban and regional planning functions in the country; as well as the large volume of information that needs to be handled in order that planning activities can be carried with adequate information and in a more scientific way.

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APPENDIX 1

TO BE COMPLETED BY APPLICANT FOR A BUILDING PLAN APPROVAL (INPUT SPECIFICATION) 1

1. Name of allotee _____
2. Address of Allotee _____

   Block No _____ Plot No _____
3. Location of Land_____

   ☐ Suleja ☐ Minna ☐ Bida ☐ New Bussa
4. Area of Land _____

   (a) 36m x 36m - Low Density plot
   (b) 18m x 36m - Medium Density plot
   (c) 15m x 30m - High Density plot.
   (Specify which is applicable)
5. Has the plot area surveyed with survey beacon in site? Yes/No.
6. Proposed Number of building in site.

   ☐ 1 ☐ 2 ☐ 3
7. Land acquired through:-

   ☐ FMHUD ☐ Private ☐ Purchase from original allottee of FMHUD
8. Type of interest in the Land.

   ☐ Freehold
   ☐ Lease hold
   ☐ Assignment
9. Evidence of ownership to the land

   (a) Certificate of ownership (b) No Document
10. Availability of public utilities:

    ☐ Yes ☐ No
11. Estimated total cost of proposed building

    ☐ <1.0m ☐ 1.0m-2m ☐ >2m

APPENDIX II

SITE INSPECTION REPORT (INPUT SPECIFICATION) 2

DEVELOPMENT CONTROL UNIT

Site Report of Building plan No FMHUD/URD/NG/BPA/00/etc

Type of development _____

Residential	Others specify

Location of site (specify) ..... Minna, Suleja, Bida, New-Bussa.

1. Site was inspected by _____
2. Setback of building on site
   (a) Front setback - 6m
   (b) Rear setback - 3m
   (c) Left setback - 3m
   (d) Right setback - 3m
   Are the setbacks properly observed by developer (Yes/No)
3. Does the building on site conform with the submitted drawings approved? Yes/No
4. Does the beacons (survey pillar) on site conform with those in the drawing? Yes / No
5. Nature of subject land

Developable	Not Developable

6. Total area of land coverage
   (a) 36m x 36m - Low Density plot
   (b) 36m x 18m - Medium Density plot
   (c) 15m x 30m - High Density plot
   (Specify applicable area please)
7. The proposed land use conforms with the existing general land use of the area (Yes/No).
8. Name of reputing officer_____
9. Date of site report _____

APPENDIX III

DEVELOPMENT CONTROL UNIT (INPUT SPECIFICATION) 3

..... ZONAL OFFICE

BUILDING PLAN ASSESSMENT FORM

1. Location of Development _____

2. Name of Allotee _____

3. Address of Allotee _____

4. Type of Development _____

_____

Residential Commercial Others (specify)

5. Fees to be paid by allotee:

(a) Processing fee N1,500

(b) Registration fee N1,500

(c) Survey fee N1,000

(d) Planning information fee N1,000

(e) Volume of Building (LxBxH) N5 (Residential)

(f) Volume of Building (LxBxH) N12 (other uses

6. Allotee meat all design standards? Yes/No.

7. Building plans recommended for approval Yes/No.

8. If Building plans approved, allotee can now commence development on site under the supervision/monitoring of tamistry staff.

APPENDIX IV

WELCOME SCREEN MODULE

```
Private Sub Command1_Click()
   Unload Me
   frmLogin.Show
End Sub

Private Sub Command2_Click()
   Unload Me
End Sub

Private Sub Form_Load()
   With frmStart
      .Top = (Screen.Height - Height) / 2
      .Left = (Screen.Width - Width) / 2
   End With
End Sub
```

APPENDIX V

LOGIN MODULE

```
Private Sub Command1_Click()
  Dim dat As Database, rst As Recordset
  Dim usrname As String
  Set datt = OpenDatabase(App.Path & "\planning.mdb")
  Set rst = _
            datt.OpenRecordset("users", dbOpenTable)
  Text1.Text = UCase$(Text1.Text)
  Text2.Text = UCase$(Text2.Text)
  rst.index = "userid"
  skk = Text1.Text
  rst.Seek "=", skk
  If rst.NoMatch Then
    MsgBox "Unregistered User."
    Exit Sub
  Else
    Unload Me
    MDIForm1.Show
  End If
rst.Close
datt.Close
End Sub

Private Sub Command2_Click()
   Text1.Text = ""
   Text2.Text = ""
```

```
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

APPENDIX VI

ALLOCATION MODULE

```
Private Sub Combo1_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text1.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo2_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Command1.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Command1_Click()
On Error Resume Next

    Dim dat As Database, rst As Recordset
    Dim location1 As String, typeofplot1 As String
    Dim plotno1 As String, blockno1 As String
    Dim sizeofplot1 As String, term99yrsfrom1 As String
    Dim premium1 As String, previousallocation1 As String
    Dim annualgroundrent1 As Currency, acceptancefee1 As Currency

        Set datt = OpenDatabase(App.Path & "\planning.mdb")
        Set rst = _
            datt.OpenRecordset("allocation", dbOpenDynaset)

            typeofplot1 = Text1.Text
            location1 = Combo1.Text
            previousallocation1 = Combo2.Text
            plotno1 = Text2.Text
            blockno1 = Text3.Text
            sizeofplot1 = Text4.Text
            term99yrsfrom1 = Text5.Text
            premium1 = Text6.Text
            annualgroundrent1 = Text7.Text
            acceptancefee1 = Text8.Text

            With rst
```

```
    Label3.Caption = ""
End Sub

Private Sub Command3_Click()
    Unload Me
End Sub

Private Sub Form_Load()
    With frmLogin
        .Top = (Screen.Height - Height) / 2
        .Left = (Screen.Width - Width) / 2
    End With
End Sub

Private Sub Text1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
   Text2.SetFocus
End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text1_LostFocus()
  Dim dat As Database, rst As Recordset
  Dim usrname As String
  Set datt = OpenDatabase(App.Path & "\planning.mdb")
  Set rst = _
            datt.OpenRecordset("users", dbOpenTable)
  Text1.Text = UCase$(Text1.Text)
  Text2.Text = UCase$(Text2.Text)
  rst.index = "userid"
  skk = Text1.Text
  rst.Seek "=", skk
  If rst.NoMatch Then
    MsgBox "Unregistered User."
    Exit Sub
  Else
    usrname = rst!UserName
    Label3.Caption = usrname
  End If
rst.Close
datt.Close
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
   Command1.SetFocus
End If
```

```
            .AddNew
            !typeofplot = typeofplot1
            !location = location1
            !previousallocation = previousallocation1
            !plotno = plotno1
            !blockno = blockno1
            !sizeofplot = sizeofplot1
            !term99yrsfrom = term99yrsfrom1
            !premium = premium1
            !annualgroundrent = annualgroundrent1
            !acceptancefee = acceptancefee1
            .Update
          End With
          MsgBox "Record Created Successfully"

        With frmAllocation
          .Text1.Text = ""
          .Text2.Text = ""
          .Text3.Text = ""
          .Text4.Text = ""
          .Text5.Text = ""
          .Text6.Text = ""
          .Text7.Text = ""
          .Text8.Text = ""
          .Combo1.Text = ""
          .Combo2.Text = ""
        End With
      rst.Close
      datt.Close
End Sub

Private Sub Command2_Click()
 With frmAllocation
   .Text1.Text = ""
   .Text2.Text = ""
   .Text3.Text = ""
   .Text4.Text = ""
   .Text5.Text = ""
   .Text6.Text = ""
   .Text7.Text = ""
   .Text8.Text = ""
   .Combo1.Text = ""
   .Combo2.Text = ""
End With
End Sub

Private Sub Command3_Click()
```

```
    Unload Me
End Sub

Private Sub Form_Load()
    Me.Top = 0
    Me.Left = 0
    With frmAllocation
        .Combo1.AddItem "SULEJA"
        .Combo1.AddItem "MINNA"
        .Combo1.AddItem "BIDA"
        .Combo1.AddItem "NEW BUSA"
    End With
    With frmAllocation
        .Combo2.AddItem "YES"
        .Combo2.AddItem "NO"
    End With
End Sub

Private Sub Text1_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text2.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text3.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text3_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text4.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text4_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text5.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text5_KeyPress(KeyAscii As Integer)
```

```
    If KeyAscii = 13 Then
        Text6.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text6_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text7.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text7_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text8.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text8_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Combo2.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo1_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Combo2.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo10_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Command1.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo2_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Combo3.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

```
Private Sub Combo2_LostFocus()
   If UCase$(Combo2.Text) = "36M X 36M - LOW DENSITY PLOT" Then
      Label15.Caption = "LOW DENSITY" + " " + Combo1.Text
      Label16.Caption = "LD"
   End If
   If UCase$(Combo2.Text) = "36M X 18M - MEDIUM DENSITY PLOT" Then
      Label15.Caption = "MEDIUM DENSITY" + " " + Combo1.Text
      Label16.Caption = "MD"
   End If
   If UCase$(Combo2.Text) = "15M X 30M - HIGH DENSITY PLOT" Then
      Label15.Caption = "HIGH DENSITY" + " " + Combo1.Text
      Label16.Caption = "HD"
   End If
End Sub

Private Sub Combo3_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo4.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo4_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo5.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo5_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo6.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo6_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo7.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo7_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo8.SetFocus
```

```
        evidence1 = Combo7.Text
        publicutilities1 = Combo8.Text
        estimatedcost1 = Combo9.Text
        aprovalstatus1 = Combo10.Text
        statusa1 = Label15.Caption
        statusb1 = Label16.Caption

        With rst
           .AddNew
           !Name = name1
           !address = address1
           !blockno = blockno1
           !plotno = plotno1
           !locationofland = locationofland1
           !areaofland = areaofland1
           !surveyed = surveyed1
           !proposednobuilding = proposednobuilding1
           !landacquiredthrough = landacquiredthrough1
           !typeofinterest = typeofinterest1
           !evidence = evidence1
           !publicutilities = publicutilities1
           !estimatedcost = estimatedcost1
           !aprovalstatus = aprovalstatus1
           !statusa = statusa1
           !statusb = statusb1
           .Update
        End With
        MsgBox "Record Created Successfully"

 With frmPlanApproval
   .Text1.Text = ""
   .Text2.Text = ""
   .Text3.Text = ""
   .Text4.Text = ""
   .Combo1.Text = ""
   .Combo2.Text = ""
   .Combo3.Text = ""
   .Combo4.Text = ""
   .Combo5.Text = ""
   .Combo6.Text = ""
   .Combo7.Text = ""
   .Combo8.Text = ""
   .Combo9.Text = ""
   .Combo10.Text = ""
   .Label15.Caption = ""
   .Label16.Caption = ""
End With
```

```
    rst.Close
    datt.Close
End Sub

Private Sub Command2_Click()
  With frmPlanApproval
    .Text1.Text = ""
    .Text2.Text = ""
    .Text3.Text = ""
    .Text4.Text = ""
    .Combo1.Text = ""
    .Combo2.Text = ""
    .Combo3.Text = ""
    .Combo4.Text = ""
    .Combo5.Text = ""
    .Combo6.Text = ""
    .Combo7.Text = ""
    .Combo8.Text = ""
    .Combo9.Text = ""
    .Combo10.Text = ""
    .Label15.Caption = ""
    .Label16.Caption = ""
  End With
End Sub

Private Sub Command3_Click()
  Unload Me
End Sub

Private Sub Form_Load()
  Me.Top = 0
  Me.Left = 0
  With frmPlanApproval
    .Combo1.AddItem "SULEJA"
    .Combo1.AddItem "MINNA"
    .Combo1.AddItem "BIDA"
    .Combo1.AddItem "NEW BUSA"
  End With
  With frmPlanApproval
    .Combo2.AddItem "36M x 36M - LOW DENSITY PLOT"
    .Combo2.AddItem "36M x 18M - MEDIUM DENSITY PLOT"
    .Combo2.AddItem "15M x 30M - HIGH DENSITY PLOT"
  End With
  With frmPlanApproval
    .Combo3.AddItem "YES"
    .Combo3.AddItem "NO"
  End With
```

```
    With frmPlanApproval
        .Combo4.AddItem "1"
        .Combo4.AddItem "2"
        .Combo4.AddItem "3"
    End With
    With frmPlanApproval
        .Combo5.AddItem "FMHMD"
        .Combo5.AddItem "PRIVATE"
        .Combo5.AddItem "PURCHASE FROM ORIGINAL ALLOTTEE OF FMHMD"
    End With
    With frmPlanApproval
        .Combo6.AddItem "FREEHOLD"
        .Combo6.AddItem "LEASEHOLD"
        .Combo6.AddItem "ASSIGNMENT"
    End With
    With frmPlanApproval
        .Combo7.AddItem "CERTIFICATE OF OWNERSHIP"
        .Combo7.AddItem "NO DOCUMENT"
    End With
    With frmPlanApproval
        .Combo8.AddItem "YES"
        .Combo8.AddItem "NO"
    End With
    With frmPlanApproval
        .Combo9.AddItem "<1M"
        .Combo9.AddItem "1 - 2M"
        .Combo9.AddItem ">2M"
    End With
    With frmPlanApproval
        .Combo10.AddItem "AP"
        .Combo10.AddItem "NAP"
    End With
End Sub

Private Sub Text1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Text2.SetFocus
End If
KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        Text3.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

```
Private Sub Text3_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Text4.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text4_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo1.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text9.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text3.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo3_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo4.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo4_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Command1.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

```
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text2.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo3_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Combo4.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo4_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Combo5.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo5_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Combo6.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo6_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Combo7.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo7_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Combo8.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo8_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
```

```
Private Sub Text4_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Text5.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text5_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Text6.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text6_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Text7.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text7_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Text8.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text8_KeyPress(KeyAscii As Integer)
   If KeyAscii = 13 Then
      Combo3.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text9_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text2.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Combo1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Combo2.SetFocus
   End If
```

APPENDIX VIII

PLAN ASSESSMENT MODULE

```
Private Sub Command1_Click()

On Error Resume Next

   Dim dat As Database, rst As Recordset
   Dim devlocation1 As String, nameofallottee1 As String
   Dim zonaloffice1 As String, addressofallottee1 As String
   Dim devtype1 As String, allotteemeetstandard1 As String
   Dim planrecommended1 As String
   Dim processingfee1 As Currency, registrationfee1 As Currency
   Dim surveyfee1 As Currency
   Dim planninginformationfee1 As Currency, volumeofbuildingr1 As Currency
   Dim volumeofbuildingo1 As Currency

      Set datt = OpenDatabase(App.Path & "\planning.mdb")
      Set rst = _
          datt.OpenRecordset("planassessment", dbOpenDynaset)

          devlocation1 = Combo1.Text
          nameofallottee1 = Text9.Text
          zonaloffice1 = Text1.Text
          addressofallottee1 = Text2.Text
          devtype1 = Combo2.Text
          processingfee1 = Text3.Text
          registrationfee1 = Text4.Text
          surveyfee1 = Text5.Text
          planninginformationfee1 = Text6.Text
          volumeofbuildingr1 = Text7.Text
          volumeofbuildingo1 = Text8.Text
          allotteemeetstandard1 = Combo3.Text
          planrecommended1 = Combo4.Text

          With rst
             .AddNew
             !devlocation = devlocation1
             !nameofallottee = nameofallottee1
             !zonaloffice = zonaloffice1
             !addressofallottee = addressofallottee1
             !devtype = devtype1
             !allotteemeetstandard = allotteemeetstandard1
             !planrecommended = planrecommended1
             !processingfee = processingfee1
             !registrationfee = registrationfee1
             !surveyfee = surveyfee1
```

```
            !planninginformationfee = planninginformationfee1
            !volumeofbuildingr = volumeofbuildingr1
            !volumeofbuildingo = volumeofbuildingo1
            .Update
        End With
        MsgBox "Record Created Successfully"

    With frmPlanAssessment
        .Text1.Text = ""
        .Text2.Text = ""
        .Text3.Text = ""
        .Text4.Text = ""
        .Text5.Text = ""
        .Text6.Text = ""
        .Text7.Text = ""
        .Text8.Text = ""
        .Text9.Text = ""
        .Combo1.Text = ""
        .Combo2.Text = ""
        .Combo3.Text = ""
        .Combo4.Text = ""
    End With
        rst.Close
        datt.Close
End Sub

Private Sub Command2_Click()
    With frmPlanAssessment
        .Text1.Text = ""
        .Text2.Text = ""
        .Text3.Text = ""
        .Text4.Text = ""
        .Text5.Text = ""
        .Text6.Text = ""
        .Text7.Text = ""
        .Text8.Text = ""
        .Text9.Text = ""
        .Combo1.Text = ""
        .Combo2.Text = ""
        .Combo3.Text = ""
        .Combo4.Text = ""
    End With
End Sub

Private Sub Command3_Click()
    Unload Me
End Sub
```

```
    Text7.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

APPENDIX IX

SITE INSPECTION MODULE

```
Private Sub Command1_Click()
On Error Resume Next
   Dim dat As Database, rst As Recordset
   Dim planno1 As String, devtype1 As String
   Dim location1 As String, inspectedby1 As String
   Dim setbackproper1 As String, buildingconform1 As String
   Dim beaconsconform1 As String, natureofland1 As String
   Dim totalarea1 As String, proposeduseconform1 As String
   Dim nameofofficer1 As String, dateofsitereport1 As String
   Dim frontsetback1 As String, rearsetback1 As String
   Dim leftsetback1 As String, rightsetback1 As String

      Set datt = OpenDatabase(App.Path & "\planning.mdb")
      Set rst = _
            datt.OpenRecordset("siteinspection", dbOpenDynaset)

            planno1 = Text1.Text
            devtype1 = Combo1.Text
            devlocation1 = Combo2.Text
            inspectedby1 = Text2.Text
            frontsetback1 = Text3.Text
            rearsetback1 = Text4.Text
            leftsetback1 = Text5.Text
            rightsetback1 = Text6.Text
            setbackproper1 = Combo3.Text
            buildingconform1 = Combo4.Text
            beaconsconform1 = Combo5.Text
            natureofland1 = Combo6.Text
            totalarea1 = Combo7.Text
            proposeduseconform1 = Combo8.Text
            nameofofficer1 = Text7.Text
            dateofsitereport1 = Text8.Text

            With rst
               .AddNew
               !planno = planno1
               !devtype = devtype1
               !location = devlocation1
```

```
            !inspectedby = inspectedby1
            !frontsetback = frontsetback1
            !rearsetback = rearsetback1
            !leftsetback = leftsetback1
            !rightsetback = rightsetback1
            !setbackproper = setbackproper1
            !buildingconform = buildingconform1
            !beaconsconform = beaconsconform1
            !natureofland = natureofland1
            !totalarea = totalarea1
            !proposeduseconform = proposeduseconform1
            !nameofofficer = nameofofficer1
            !dateofsitereport = dateofsitereport1
            .Update
        End With
        MsgBox "Record Created Successfully"

    With frmSiteInspection
      .Text1.Text = ""
      .Text2.Text = ""
      .Text3.Text = ""
      .Text4.Text = ""
      .Text5.Text = ""
      .Text6.Text = ""
      .Text7.Text = ""
      .Text8.Text = ""
      .Combo1.Text = ""
      .Combo2.Text = ""
      .Combo3.Text = ""
      .Combo4.Text = ""
      .Combo5.Text = ""
      .Combo6.Text = ""
      .Combo7.Text = ""
      .Combo8.Text = ""
    End With
      rst.Close
      datt.Close
End Sub

Private Sub Command2_Click()
    With frmSiteInspection
      .Text1.Text = ""
      .Text2.Text = ""
      .Text3.Text = ""
      .Text4.Text = ""
      .Text5.Text = ""
      .Text6.Text = ""
```

```
        .Text7.Text = ""
        .Text8.Text = ""
        .Combo1.Text = ""
        .Combo2.Text = ""
        .Combo3.Text = ""
        .Combo4.Text = ""
        .Combo5.Text = ""
        .Combo6.Text = ""
        .Combo7.Text = ""
        .Combo8.Text = ""
    End With
End Sub

Private Sub Command3_Click()
    Unload Me
End Sub

Private Sub Form_Load()
    Me.Top = 0
    Me.Left = 0
    With frmSiteInspection
        .Combo2.AddItem "SULEJA"
        .Combo2.AddItem "MINNA"
        .Combo2.AddItem "BIDA"
        .Combo2.AddItem "NEW BUSA"
    End With
    With frmSiteInspection
        .Combo1.AddItem "RESIDENTIAL"
        .Combo1.AddItem "COMMERCIAL"
        .Combo1.AddItem "OTHERS"
    End With
    With frmSiteInspection
        .Combo3.AddItem "YES"
        .Combo3.AddItem "NO"
    End With
    With frmSiteInspection
        .Combo4.AddItem "YES"
        .Combo4.AddItem "NO"
    End With
    With frmSiteInspection
        .Combo5.AddItem "YES"
        .Combo5.AddItem "NO"
    End With
    With frmSiteInspection
        .Combo6.AddItem "DEVELOPEABLE"
        .Combo6.AddItem "NOT DEVELOPEABLE"
    End With
```

```
    With frmSiteInspection
        .Combo7.AddItem "36M x 36M - LOW DENSITY PLOT"
        .Combo7.AddItem "36M x 18M - MEDIUM DENSITY PLOT"
        .Combo7.AddItem "15M x 30M - HIGH DENSITY PLOT"
    End With
    With frmSiteInspection
        .Combo8.AddItem "YES"
        .Combo8.AddItem "NO"
    End With
End Sub

Private Sub Text1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
        Combo1.SetFocus
End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
        Text3.SetFocus
    End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text3_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
        Text4.SetFocus
End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text4_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
        Text5.SetFocus
End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text5_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
        Text6.SetFocus
End If
    KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text6_KeyPress(KeyAscii As Integer)
```

```
    With frmSiteInspection
      .Combo7.AddItem "36M x 36M - LOW DENSITY PLOT"
      .Combo7.AddItem "36M x 18M - MEDIUM DENSITY PLOT"
      .Combo7.AddItem "15M x 30M - HIGH DENSITY PLOT"
    End With
    With frmSiteInspection
      .Combo8.AddItem "YES"
      .Combo8.AddItem "NO"
    End With
End Sub

Private Sub Text1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Combo1.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text3.SetFocus
   End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text3_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text4.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text4_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text5.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text5_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
      Text6.SetFocus
End If
   KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text6_KeyPress(KeyAscii As Integer)
```

```
If KeyAscii = 13 Then
    Combo3.SetFocus
End If
  KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text7_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Text8.SetFocus
End If
  KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub

Private Sub Text8_Change()
If KeyAscii = 13 Then
    Command1.SetFocus
End If
  KeyAscii = Asc(UCase(Chr(KeyAscii)))
End Sub
```

APPENDIX X

MAIN MENU MODULE

```
Private Sub MDIForm_Load()
  With MDIForm1
    .Top = 0
    .Left = 0
    .Height = Screen.Height
    .Width = Screen.Width
  End With
End Sub

Private Sub mnuAllocation_Click()
  frmAllocation.Show
End Sub

Private Sub mnuAllotteeAddress_Click()
  CrystalReport1.ReportFileName = App.Path & "\address_of_allottees.rpt"
  CrystalReport1.DiscardSavedData = True
  CrystalReport1.WindowTitle = "Address of Allottees"
  CrystalReport1.Action = 1
End Sub

Private Sub mnuAllotteesSurveyFee_Click()
  CrystalReport1.ReportFileName = App.Path & "\paid_survey_fee.rpt"
  CrystalReport1.DiscardSavedData = True
  CrystalReport1.WindowTitle = "ALLOTTEES THAT PAID SURVEY FEES"
```

```
    CrystalReport1.Action = 1
End Sub

Private Sub mnuApplication_Click()
    frmPlanApproval.Show
End Sub

Private Sub mnuExit_Click()
    If MsgBox("Are you sure you want to Quit ?", vbYesNo + vbQuestion +
vbDefaultButton2, "Attention") = vbYes Then
        End
    Else
        Exit Sub
    End If
End Sub

Private Sub mnuListAllottee_Click()
    CrystalReport1.ReportFileName = App.Path & "\list_of_allottees1.rpt"
    CrystalReport1.DiscardSavedData = True
    CrystalReport1.WindowTitle = "List of Allottees"
    CrystalReport1.Action = 1
End Sub

Private Sub mnuLocationSites_Click()
    CrystalReport1.ReportFileName = App.Path & "\location_of_sites.rpt"
    CrystalReport1.DiscardSavedData = True
    CrystalReport1.WindowTitle = "Location of all sites"
    CrystalReport1.Action = 1
End Sub

Private Sub mnuPlanApproved_Click()
    CrystalReport1.ReportFileName = App.Path & "\building_plan_approved.rpt"
    CrystalReport1.DiscardSavedData = True
    CrystalReport1.WindowTitle = "Allottees that had Approved Building Plan"
    CrystalReport1.Action = 1
End Sub

Private Sub mnuPlanInspection_Click()
    frmPlanAssessment.Show
End Sub

Private Sub mnuPlanNotApproved_Click()
    CrystalReport1.ReportFileName = App.Path & "\building_plan_notapproved.rpt"
    CrystalReport1.DiscardSavedData = True
    CrystalReport1.WindowTitle = "Allottees that had Approved Building Plan"
    CrystalReport1.Action = 1
End Sub
```

```
Private Sub mnuPlotTypesSizes_Click()
   CrystalReport1.ReportFileName = App.Path & "\plots_and_sizes.rpt"
   CrystalReport1.DiscardSavedData = True
   CrystalReport1.WindowTitle = "RESIDENTIAL PLOTS AND SIZES"
   CrystalReport1.Action = 1
End Sub

Private Sub mnuSiteInspection_Click()
   frmSiteInspection.Show
End Sub

Private Sub Toolbar1_ButtonClick(ByVal Button As MSComctlLib.Button)
Dim index As Integer
Select Case Button.index
Case Is = 1
   frmPlanApproval.Show
Case Is = 2
   frmPlanAssessment.Show
Case Is = 3
   frmSiteInspection.Show
Case Is = 4
   frmAllocation.Show
Case Is = 5
   If MsgBox("Are you sure you want to Quit ?", vbYesNo + vbQuestion +
vbDefaultButton2, "Attention") = vbYes Then
      End
   Else
      Exit Sub
   End If
End Select
End Sub
```