

COMPUTERISED CONTROL OF THE PROJECT ACTIVITIES OF
AN ENGINEERING ORGANISATION
(A CASE STUDY OF NIGER STATE HOUSING CORATION
N.S.H.C) MINNA

BY

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CERTIFICATION

This project has been examined and found acceptable in partial fulfilment of requirement for the P.G.D. in Mathematics/Computer Science of Federal University of Technology, Minna

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DEDICATION

This project is dedicated to my beloved wife Alawiyya for her moral support and my children; Aballahi, Yusuf and Rahinatu.

ACKNOWLEDGEMENT

All thanks and praise be to the Almighty ALLAH (S.W.T.). The Beneficent, The Merciful, The Omniscient, The Omni-Potent, The Nourisher, The Cherisher and The Sustainer.

My profound gratitude goes to my supervisor, DR.YOMI AIYESEMI, who has been my guardian and supervisor. I honestly appreciate his endurance, guidance, good suggestions of ideas and words of encouragement to make this piece of work a success. May the Almighty God take you to greater heights.

My special thanks goes to the Head of Department of Mathematic /Computer Science MR. L.N. EZEAKO. He is a very loving and caring father. He is a leader with a difference, the department lecturers, my special appreciation and thanks for all their support in one way or the other to make this work a succes. May Allah bless and reward abundantly, Ameen.

ABSTRACT

Niger State Housing Corporation was established by an edict with the aim of improving the living standard and condition of people in Niger State and Nigeria as a nation.

The corporation as a system is made up of units, which are Planning, Engineering, Estate Surveyors Architecture and Quantity Surveyors, which are functionally involved in consultancy and contractual services.

However, to ensure effective monitoring and control of performance of the corporation which is the project execution or accomplishment there is need for smooth flow of plan of the project activities. Thus improvement on information flow with aid of computer application involvement into the control of the project activities which will, as a result, aid in effective decision to tackle both complex and simple projects by easy flow of information within the units in the corporation derived from more available quality records and data in the computer.

In view of the above, the concept of computer in the case study, only small area in the corporation is however instituted with computer application.

Furthermore, urgent implementation of aforementioned concepts of computer literacy could relay the knowledge of reducing delay in retrieval and flow of records and data.

Thus the research is divided into five chapters; chapter one deals with the insight of the work tool of the study, while chapter two is enlightening about the case study internal units background, chapter three states the existing activities control

analysis and consequential computer application, while chapter four elaborates about proper execution of computerised system environment to change over and steps of interacting with the new system. Finally, chapter five states the summary, conclusion and recommendations.

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REFERENCE

CHAPTER ONE

1.1 INTRODUCTION

All activities whether social, economic or commercial activity is being carried out in a structure.

This presupposes that, the desirability and necessity for one to own a house cannot be over-emphasized.

Housing is one of the basic necessities of life. An employee gives out his maximum output when he knows and he is assured that, his basic necessities of life are satisfied i.e food, clothing and housing.

The need for housing as one of the sociological needs of man cuts across all nations and tribes. Everybody needs shelter to protect himself against wind, rain and cold.

The emergence of houses in any given area symbolizes the existence of a community. In a wider perspective it represents villages, towns and cities.

Invariably the productivity of any nation is substantively influenced by provision of good housing to its citizenry or employees. Hence the creation of National Housing Authority by the Federal Government with the sole objective of providing houses to all Nigerians by the year 2010.

Viewing housing socially, a house that is good improves the living condition of the citizen of any nation in that, it provides individual honour, privacy and contentment. This increases his zeal to serve at his place of work with unwavering commitment which gives less capacity of absenteeism and rise of work force. And economically the employer has generated employment to employee and therefore gets profit as income which serve both directly to the employee and employer and further indirectly linking other sector of the economy.

House is an investment good and capable of generating income and also a tool/goal of a development policy. It is also a very good favourable investment climate for shelter.

Essentially there are many housing policies with thrust of assuring house functions adequately comfortable to meet social economic needs of the country and to provide an effective instrument of national development policy.

In Nigeria as a developing nation mode of houses are changing gradually from muddy thatched houses to modern blocks or bricks houses with galvanised iron roof aluminium roofs and roofing tiles. Further more the people from rural to urban has cause the idea of different types of houses to be innovated which could be of low cost and high cost houses, G.R.A. houses, satellite town and estate serving house with regards to category of needs.

By and large incorporation of land development policies and town planning policies during the design is essential

as lack of continuity in ruling regime gives difficulty of aim and objective achievement. Furthermore inflation and indiscriminate granting of contract lead to abandonment of projects, which effect low income earners most especially Civil Servants who live in dilapidated houses end up spending their earnings patching the houses. Thus the principal problem of housing includes:

- a. Lack of service renovation of the houses
- b. Increase in building material cost
- c. Involvement of polity in construction policies
- d. Inadequate statistical base of people leaving in standard houses
- e. Lack of long term policy exercises

Thus housing organizations require planning and control in order to achieve the targeted objectives. It is in this consideration that, the effective of computer application is needed to monitor and control the housing production activities.

1.2 HOUSING ORGANISATION

This is a setup system to bring the problematic accommodation prevailing over the developing countries like Nigeria.

Thus the establishment of the housing organization by private and Government Sectors, has greatly accelerated the development policy of the nation which is highly commendable.

In this write up the concept based on engineering is generally viewed in design of the house to attain maximum comfortability of the house at affordable price.

An housing organization could come in different forms of operation such as:

- a. Proprietorship
- b. Partnership
- c. Corporation

Above different categories of housing providers satisfy different types of buyers or renters of which could be sited at different locations like, cities towns rural or urban satellite areas or wherever the organization is called to serve.

However, the housing organization need the concept of engineering to innovate a durable building material which could be used in constructing some buildings to achieve, tremendous success of satisfaction of the owner, in that cheap material could be made with like traditionally used burnt bricks, roofing tiles manufactured with little or less chemicals.

Further view on housing organization ideally oriented in Engineering perspective needs the housing project to be planned for execution in less time to achieve, less direct and indirect cost estimated cost to be abide-by also project program set up to achieve shortest project time and cost.

1.3 HOUSING SERVICES AND TYPES

For an individual cover, privacy, honour and provision of avenue for one to do what he likes he must have a house” called up from ‘Housing today publication.

An housing organisation needs above as one its ethics, thus need different schemes to provide its elite's with houses within reach. Furthermore types of structure that could be affordable by buyer's status socially and economically should be innovated and modes of acquiring the houses contract service from government and private sector areas follows:

- a. Consultancy Services: Professional services to interested member are provided in field of housing development, planning and engineering.
- b. Project contractual services; undertaking of contracting of construction of market, secretariat conversion of building to desired types etc.
- c. Estate services; wide services on request
 - i. Rental or owner occupier
 - ii. Estate surveying services on costing of an existing structure or house mortgage paying of houses.
- iii. Site and services:- Development required land for need on request. However the house services and types are always considered in respect of its engineering feasibility before being accepted from the client.

1.4 OBJECTIVES OF THE STUDY

The computerization of an organisation was ideally meant to study the existing procedural function of the organisation towards the actualisation of the objectives of the study.

Thus the objectives are:

- i. To analyse the existing function and problems of its execution.
- ii. To complement economic and managerial measures towards achieving comfort and cheap housing.
- iii. To stimulate the need for computerised project activities' execution aimed at replacing the existing processes control.
- iv. To design a computerised project activities by interacting each unit of the corporation's control of its activities.

1.5 SCOPE

The computerisation of the case study is a large task and money consuming. Nevertheless it is good to be on technological advancement side for ease of retrieval and flow of information from each unit. Therefore undertaking and implementing the study outcome could be of modest technological improvement to Niger State Housing Corporation.

CHAPTER TWO

2.1 PROJECT PROCEDURE AND CONTROL

The success of any project is to see that it is good and completed at a stipulated time with good adherence to the standards and specifications, to land use code of practice and engineering concept of stability, and durability.

As project implies planning to accomplish an object is procedurally actuated when an agreement has been reached with the head of an organisation. A file is open in the name of the project with indication whether the project is new or renovation.

If the project is new all the system units are involved but if it is just renovation or extension, some of the units are only selected to undertake the job needed to be done. Moreover the job file is then sent to the director of works for controlling the activities where he assigns each unit head to open a file for the said project and to produce its statements.

However, the planning unit professionals visit the land or area, for topography access ares, survey and sketch the layout. The architecture section put the idea into plan for the engineering electrical, structural and mechanical designs and sketches which is manually done and tediously laboured on and costly wise.

To achieve various operations timely and qualitative information for purposeful control and decision making, computer provision to aid in undertaking this task is highly desirable to each unit operators.

2.2 PROJECT ACTIVITIES AND PROBLEMS

In view of the above subject the activities of project development in respect of each unit are events which are undertaken in respective order of programmed activities tabled below:

S/NO.	UNIT	EVENT	ACTIVITIES
1.	Administration	Project file	Site take over
2.	Planning	Survey sketches	Layout and setting out
3.	Qualitative Survey	Costing Project	Building bill of Quants.
4.	Architecture	Building Plan	Building Plan Paint schd.
5.	Civil/Building	Civil Structure desg	Project Construction
6.	Electrical/Mech.	Electrical Design	Conducting & Fittings
7.	Estate Survey	Project records of completed project	Hand over of Projects

The above table illustrates the activities and events due to each unit which are construction programme of a project from inception to finish and hand over of the project.

PROBLEM:

The problems in each unit are peculiar to one another in that:

- i. The sketches are manually prepared which are very much exposed to lost and chemical effect thus worn out
- ii. The mode of storage of the sketches is insecured that they can be stolen or sold out, hence call for new ones
- iii. Unease of retrieval when in need for check or correction after long time of storage.
- iv. Careless handling of Bills of Quantities lead to lost of some pages which create delay in dealing with arise problem
- v. Delay in project progress report as all unit must be consulted before final compilation, hence cause delay of the report presentation.
- vi. Lack of accurate number of materials used on each project due to frauding.

All the above factors cause mental retardation and cause the organisation money, labour and time hence spirit of progress is highly reduced.

2.3 NIGER STATE HOUSING CORPORATION

The case study of this project is Niger State Housing Corporation, which was established in 1979 by an edict, with the aim of bringing an end to the perennial accommodation

problem in the State Capital and the nation in general. Secondly the purpose of setting up the Corporation is to improve the living condition of the people within rural/urban and state capital by providing affordable houses for different category of income earners in both public and private sectors.

However, housing corporations have brought a lot of intense of the durability of building materials which have been applied in some building projects, like traditional-low cost, with tremendous success.

Housing Corporation has units with its team of professionals qualified and vastly experienced in the system. These units undertake activities, out of a stated project from inception to finish. The units are Administration, Planning, Quantity Surveyor, Architectural unit, Civil/Building, Electrical, Mechanical Engineering and Estate Survey sections.

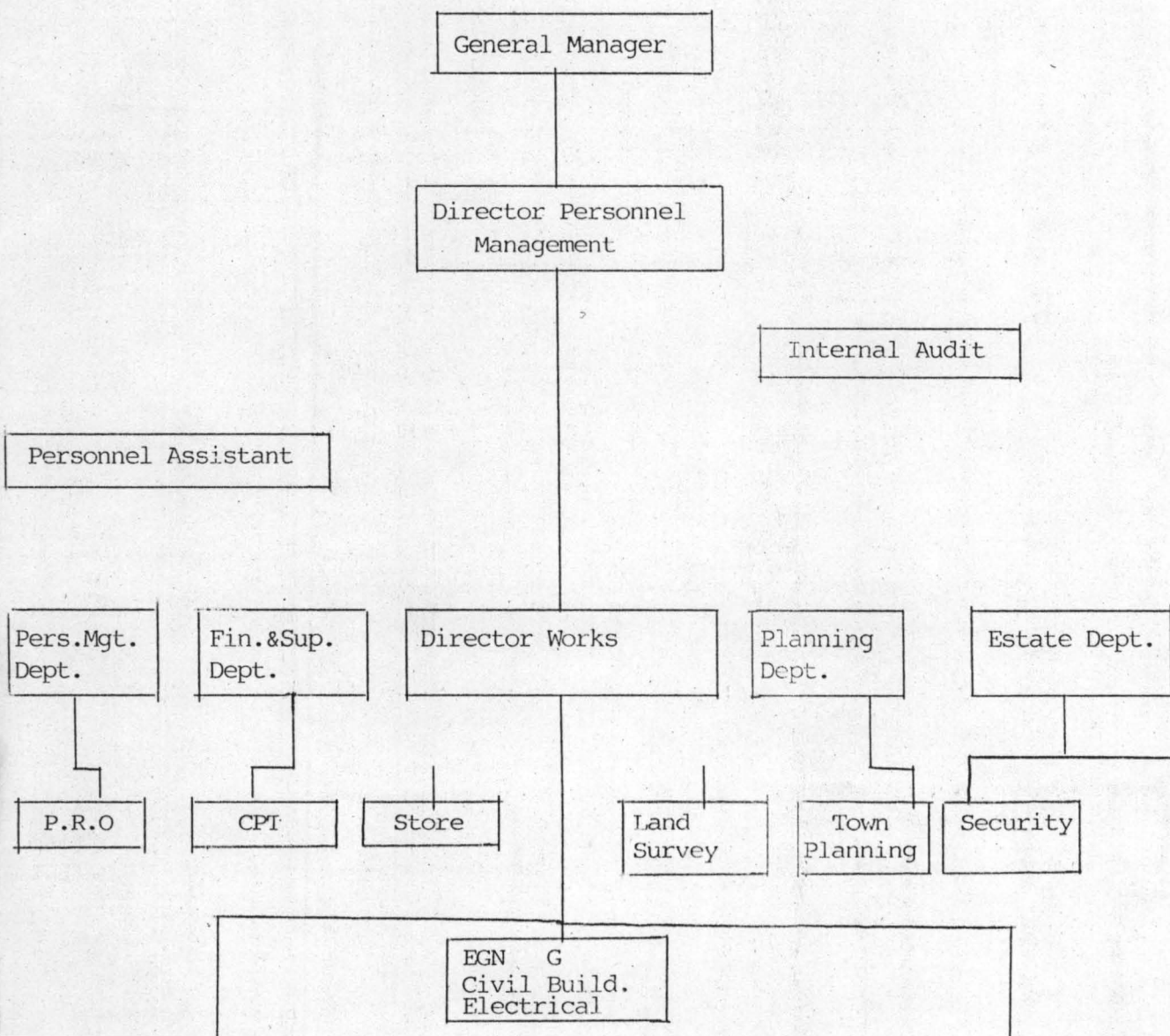
In view of this the corporation undertakes consultancy services, project contractual services and estate survey services which gives it Legal Right and responsibility in commercial field to serve the public, private and government sectors in carrying out its activities.

To complement the corporation success, the application of computer service into the procedural activities of its project could yield a tremendous achievement.

2.4 ORGANISATIONAL CHART

The organisational chart of the corporation explains the line of reporting in hierarchical order to accomplish a common goal. Each unit is headed by HOD, who in turn is controlled by a Director. The Director receives directives from the General Manager or any other job as may be assigned by the General Manager.

This is illustrated by the Chart below:



CHAPTER THREE

3.2 EXISTING METHOD AND PROBLEMS

The Niger State Housing Corporation has been operating since 1979. It is pertinent to note that its contractual or operational activities have been carried out manually.

In areas where manual operations are still in practice there exist a lot of various problems such as loss of vital information, insecurity of information, loss of building plans, drawings and lateness of sketches retrieval for amendment and reprinting. This leads to inefficiency in general operations of the organisation which result to net effect of not meeting up the objectives.

Specifically the Niger State Housing Corporation is faced with major problems peculiar with non-computerised organisation as outlined below.

- i. Time wastage in preparation of project site layout sketches
- ii. Time wastage in Architectural electrical and Civil Engineering design and sketches.
- iii. Lack of proper storage medium for building bill of quantities and also its timely preparation.
- iv. Lack of proper accounts record storage and security for project financial analysis
- v. Poor store records of issued stocks or remains project materials consumables and vehicle parts.
- vi. Lack of proper vehicle maintenance and movement record

- vii. Unreliable records of information and date of the corporation system.

3.3 CURRENT METHOD OF OPERATION

This stage of system development involves assessing the existing procedure in the organisation. Thus it is based on the analysis that could be applied practically to suit the future needs of the organisation.

At present the whole activities of the organisation are performed manually. Information about projects on construction, renovation those on preliminary design building bills of quantities, building materials which movement and those on repair, staff lists are all recorded and processed manually on file jackets which are obviously insecured. Moreover the delay in retrieving new and old records and data lead to inefficiency and difficulty in meeting up the set up goals of the organisation.

3.4 PROPOSED SYSTEM

In view of the problems highlighted earlier, it is paramount to design a system that would eliminate all the problems identified in the course of the research and in addition to earmark the software packages suitable for each activities for smooth operation of each unit in the system.

It is intended to be designed in form of many drivers where users could properly select from main menu and sub-menu, which implies that all facilities of the system would be presented in a menu structure and others, to ease access to users and programmers of the computers within the corporation.

3.5 COST BENEFIT

The cost benefit of the proposed system in socio-economic view would bring the organisation to modern technological level of operation of worthy consideration.

3.5.1 COST ANALYSIS

In order to analytically determine the cost of operation for the new system it is imperative to recognise the various ways in which cost may be incurred as categorised here under:

A. Development Cost

i. Computer Hardware

5 No of IBM compatible at ₦140,000 = ₦700,000.00

ii. Uninterrupted Power Supply(UPS)

5 No of UPS(600 Volts)at ₦15,000 = ₦75,000.00

iii. Printer

ai 3 Laser Jet Printer at ₦42,900 = ₦128,700.00

ii. 2 Epson Printer at ₦64,000 = ₦129,800.00

b. Cost of Software development	=	₦120,000.00
C Installation Cost	=	₦25,000.00
D. Personnel Training	=	₦20,000.00
Total	=	₦1,198,500.00

B. SYSTEM OPERATING COST

i. Programmer at	₦8,000.00 =	₦32,000.00
ii. Installation of Air-conditioner		
5No Air conditioner at ₦45,000 each=		₦225,000.00
iii. Utilities (Lights)	=	₦10,000.00
iv. Computer Papers	=	₦200,000.00
v. Miscellaneous expenses	=	₦50,000.00
TOTAL	=	<u>₦517,500.00</u>

Grand Total Cost of development
and system operating cost = ₦1,715,500.00

3.5.2 BENEFIT OF THE PROPOSE SYSTEM

Specifically the organisation could derive alot of benefits from the newly designed system which includes:

- i. Maintenance of data security
- ii. Efficiency and improvement of retrieval and storage of information
- iii. Automated project activity procedure and control
- iv. Avoidance of existing system problems

CHAPTER IV

3.6 CHOICE OF LANGUAGE

The propose system is written using data function management system (Software package) which functions with its strategies of creating, retrieving, maintaining and organizing information from a database, where the corporations related information or data are stored.

However the choice of DBMS is in the convenience of its function

Outlined here below:

- a. Retrieves data from database
- b. Update information from database
- c. Consistence and integrity in the maintenance of data
- d. Organise and share data within users
- e. Create and populate a database.

However, D.B.M.S. comes in various types, which includes dbase, paradox, Oracle, FoxBASE to mention but a few. Specifically the new system is developed in dBase IV.

Dbase IV is an advance version of Dbase that provides a full relational database environment to users. While many users found the ASSISTANT mode in Dbase 3+ too restrictive, they will find the control Center of Dbase IV a significant improvement.

Dbase IV designed for the user and the developer with most, if not All of the feature of the menu computing

dbase products and the wide ranged of products that has been developed as add-ons for the dbase III and dbase 3+ plus. It is said to be one of the most popular and (powerful) DBMS available for PC.Dbase IV organizers data to database file. A database file is a collection of data. It is a form of two-dimensional table consisting of a number of rows and columns. Each row represents a record in the database file and each column represent the description of the record. Therefore, a database file is made of some components, which are records and files. When applied to personal record, the data base file can be set up to keep the record of employees. This is done such that each employee information such as employee Number, Name, Age, Sex, Dept, Rank, Date of his appointment, type of appointment etc.

3.7.1 HARDWARE REQUIREMENT

The new system is designed to work on standard micro computerised system.

COMPUTER HARDWARE

A micro computer with micro processor of about pentuim 166MHZ and a minimum RAM of 16 MB and floppy disk drive unit providing for 3.5 inches diskette all to satisfy the feature of the proposed micro computer

to ensure speedy retrieval of information and future needs of the corporation.

PRINTER

A neat letter quality feature and speed of about 1200 lines per minutes and maximum width of 132 characters per line is recommended. For hard copies of the organisation necessary reports, specifically EPSON printer, LQR 170 and a Laser Jet Printer (Laser Jet 6L) for production of text and reports. U.P.S.(Uninterrupted Power Supply) is a facility with capability for automatic provision of power incase of power failure, thus ensures constant supply of power to the computer and its environs, for continuity of job.

3.7.2 SOFTWARE REQUIREMENT

Introduction of computer application to Niger State Housing Corporation should be used to facilitate the activities of all main units in the corporation which are in text Separation, Engineering designs, Architectural designs, Graphic design and other forms of data processing.

As a new system, packages with ready-made programs are ease mostly required or set of units as they have advantages of flexibility, relatively cheap and easy to use. Therefore, the dBase IV, Word Perfect 6.0 (Word Processing-Package) Lotus 1-2-3 (Spreadsheet Package), Lotus(Graphic-Package) and Auto Card could be picked for suitability function, in respect of the unit use.

3.8.1

SYSTEM SPECIFICATION

As the saying goes that computer is a "Dummy" it performs the task of processing data imputed into the computer system with a specified source and type of data that need to be supplied into the system.

Due to the fact of computer balance which states "Garbage in Garbage out" (GIGO) that data given-in is correct to information given out.

With this recognition the inputs of the new propose system is designed to produce a cost effective method, achieve the highest level of accuracy and ensure that the input is acceptable and understandable by users programmes.

Hence, for the propose system three forms of point for data supplying into the system are: New projects, projects on extension and on going projects.

3.8.2

SYSTEM OUTPUT SPECIFICATION

It is expected of a task to be internally performed and the computer user. However, outputs are results and information generated by a system, which are result primarily required to communicate the processed result to users, other systems and permanent copy for consultation.

3.9

DATA BASE FILE DESIGN

In order to reduce data duplication, inconsistence and to increase share-ability, privacy and also ease access to data. The database file design is desirable

to be able to save the files and update information on transaction also to aid in management views of the organisation by the database management system.

The design therefore defines the description of all files that could be use in the proposed system and their menu table content.

Furthermore, the proposed system units are designed to use suitable packages and bear on personal computer data base files as follows:-

ADMIN. DBF. Is a file with records and information on contracts, personnel assistance works and project records.

FIN/STORE DBF. Is a file with records and information on Accounting, Auditing, Store contract financing records.

QUANTITY SURVEY DBF:- Is a file with records and information on billed projects, estimates of contracts or projects and bill of quantity preparation.

ARC/PLANNING DBF. Is a file with records and information on building plans drawings, area survey and land topography layouts.

ENGINEERING DBF. Is a file with record and information Civil, Electrical design.

ESTATE SURVEY DBF. Is a file with records and information on completed projects, rental monthly payment records, information on client and tenants.

3.9.1 SOURCE PROGRAM SPECIFICATION

The design of the computer software is important to ensure that the actual program produced perform all intended task of decision making and future modification to be performed efficiently with minimum bug to the designed system.

4.0 SYSTEMS IMPLEMENTATION

4.1 INTRODUCTION

The systems implementation and application is a stage required to effect newly designed system into the existing organisation environment, conducive for efficient working of the system. This chapter emphasis on description of menu screen choice, testing of the system, its starting and affecting the change of old by the new system finally implementation review to check effectiveness, durability of the proposed system.

4.2 DESCRIPTION OF MENU

The menu structure is the point of discussion using the figures represented on the screen designed for the proposed system.

Specifically the new system has three options in the first level menu which leads to others and shown on figure 1 in the appendix 1 which are contractual projects consultancy projects and abandoned projects.

However, each 1 level menu formats are descriptively represented on the figures in appendix 1.

REPORT GENERATION: This is an option used to generate the hard copy result of the processing.

EXIT: Once the user is through with the system at any time the system exit option is accessed for existing the software properly.

4.3 SYSTEM TESTING AND DOCUMENTATION

To ensure that, system works accurately and efficiently before live operation commences the system need to be tested. Also the local and physical design be thoroughly and continually examined on paper to confirm the correctness of the system by user before implementation.

However, if the proposed system was fully tested and ensured could work as required, and as carefully selected tested data were used to enter into the system. Thus the results were used in comparison with result obtained from previous run and were found to be the same.

In view of this, it is then concluded that the newly development system is working accordingly. Furthermore in view of the above description of how these systems work and better understanding of the system by the user when problem arises there is need for documenting the proposed system as stated earlier in the menu description.

4.4 STARTING THE SYSTEM

As the new system is developed using dBase IV which should be installed on the computer to be procured, after which the program would start by typing "Do Main" which leads into the first level of menu and the user would further select from the choice available.

4.5 CONVERSION AND CHANGE OVER

The file conversion of old (existing) systems files to the format and content required by the new system and setting up the converted files into the computer were all processed which when finished (the change over) where the full replacement of all the procedures by the new ones are done.

For more enlightening change over could be effected to the new system by either choosing one of the following.

- i. Parallel change over
- ii. Direct change over
- iii. Pilot change over

Where parallel change over is a type of method where old and the new system are concurrently run, and Direct change over is- where the new one takes over the old one and Pilot change over is changing the old by the new on piece m al bases.

All the above are good for system change over but for the newly proposed system a parallel change over method is recommended. As parallel suite the background of the conservation where file conversion and file set up can be performed at the same time with adherence within the period of change over. The storage activities and retrieval activities of data and information are not in anyway affected.

4.6 POST IMPLEMENTATION REVIEW

When the completion of the implementation and conversion are made, there is need for the system review which has to do with maintenance against environmental changes which might effect the computer hardware or the base system. This, also will lead to the improvement of the system, function and ease on correcting arise fault during the operation of the system. The review is objectively needed to:

- i. Determine the objective and aim of the system
- ii. Determine if unexpected limitation of the system needs attention
- iii. Determine service requirement in reduction of errors and cost.
- iv. Determine if personnel procedures, operative activities and other controls have been improved.

However users call for amendment directly and also expected to identify problem areas or external requirement of the system. Thus base on these, the system is redesigned to meet the requirement whenever the users agree for the system inefficiency or amendment.

CHAPTER FIVE

5.1 SUMMARY

Niger State Housing Corporation Minna is an Engineering Corporation under Ministry of Environment established to implement the housing policy in providing houses to the people within and outside the state. These objectives were adhered to by provision of houses on rentals, ownership scheme, site and services contractual projects and many more like renovation and conversion on extension of building structures.

However, as a result of population explosion and economic activities, there is call for efficient control and management of provision of affordable accommodation for the populace.

For good foundation of computer base system it analyses the background and objectives of the organisation, the existing departmental units as well as the organisational chart.

In line with this, the designing was done given due consideration to the procedural operation and problems peculiar to the respective units were highlighted. The design was solely based on logical and physical design. By and large the logical issues were based on input and output forming specification and database files required by the system while the physically design contains in the menu program codes.

On the part of implementation of the new system the software, system conversion and change over were given due consideration.

In conclusion, necessary recommendations were highlighted in order for the major objectives of setting Niger State Housing Corporation on good computerization part.

5.2 RECOMMENDATION

Housing is indispensable in all socio-economic activities of our human life. We need shelter to protect ourselves from the biting cold, scorching sun and windy rain. House is an avenue for one to retire after a tiresome day from office or any other job. One needs a place to rest. It is an avenue for one to do what he likes, to protect oneself against ill health and self prestige and also good investment climate for shelter.

Nigeria as a developing nation has become clear that manual operation and control of the organization could not meet up with the requirement of efficient and timely execution of its project, mainly of offices and houses. It is therefore, imperative for most organizations such as Niger State Housing Corporation to unequivocally accept the concept of office automation (Computerization) in rendering services to customers and client.

Thus the highlighted problems and anticipated ones could be solved through the computer base system of the organization

5.3 CONCLUSION

The purpose of system installation is to ensure maximum benefit. Thus for immense benefit the following recommendations are for adoption.

MANPOWER:‡ The requirement of manpower reviewing is needed most especially the present manpower. The Typists who are not computer literate need to be trained to use word processor and some staff need to be employed like in-house programmer with basic knowledge of Data-Base Management and DBase IV program. This is to ensure feature modification suit programs that constitute this proposed system.

PERSONNEL TRAINING:- The need for training of each unit designed system staff with respect to type of packages of the proposed system before installing the designed system.

SECURITY:- Securities of any computer room should be orderly stated to avoid both logical and physical problems hence should be applied to both staff and outsiders of the corporation.

COMPUTER ENVIRONMENT:- The good system should be well treated for efficient, durable function of the computer itself. Therefore Airconditioner should be put in place, to keep the room cool at all times for the durability and maximization of the importance of a computer base system.

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APPENDIX 1

NIGER STATE HOUSING CORPORATION, MINNA
NIGER STATE
COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM

- (A) CONTRACTUAL PROJECTS
- (B) CONSULTANCY PROJECTS
- (C) ABANDONED PROJECTS
- (D) EXIT

Enter Your Choice

NIGER STATE HOUSING CORPORATION, MINNA
COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
CONTRACTUAL PROJECTS MENU

- (A) ADD NEW PROJECTS
- (B) UPDATE ON GOING PROJECTS
- (C) VIEW PROJECTS
- (D) PRINT REPORT
- (E) EXIT

Enter Your Choice

NIGER STATE HOUSING CORPORATION, MINNA
COMPUTERISED PROJECT ACTIVITIES CONTROL, SYSTEM
CONSULTANCY PROJECTS MENU

- (A) ADD NEW PROJECTS
- (B) UPDATE ON GOING PROJECTS
- (C) VIEW PROJECTS
- (D) PRINT REPORT
- (E) EXIT

Enter Your Choice

NIGER STATE HOUSING CORPORATION, MINNA
COMPUTERISED PROJECT ACTIVITIES CONTROL, SYSTEM
ABANDONED PROJECTS MENU

- (A) ABANDONED PROJECT
- (B) UPDATE/RESTORE PROJECT
- (C) VIEW PROJECTS
- (D) PRINT REPORT
- (E) RETURN TO MAIN MENU

Enter Your Choice

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTER PROJECT ACTIVITIES CONTROL, SYSTEM
 NEW CONTRACTUAL PROJECTS DATA

PROJECT TYPE (E=EXTENSION; F=FRESH; R=RENOVATION Or X=EXIT(F)
 PROJECT ID.NO (21)

PAGE-1

Land Acquisition	(3)
Survey Sketches	(2)
Architectural Design	(5)
Civil/Building Design	(3)
Electrical Design	(2)
Bill of Quantity	(2)
Estate	(2)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL, SYSTEM
 NEW CONTRACTUAL, PROJECTS DATA

PROJECT TYPE(E=EXTENSION; F=FRESH; R=RENOVATION Or X=EXIT(R)
 PROJECT ID. NO (13)

PAGE-1

Project Description	(Renovation of Hospital)
Contract No:	(099/2933)
House Type	12 Blocks(Wards))
Location of the house	(GEN.HOSPITAL, MINNA)
Contract Sum (Naira)	(1,029,302.00)
Date started	(06/04/2001)
Expected date of completion	(08/05/2001)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 NEW CONSULTANCY PROJECTS DATA

PROJECT TYPE(E= EXTENSION;F= FRESH; R= RENOVATION Or X= EXIT(F)

PAGE-2

Project Description	(CONSTRUCTION OF NEW EXTENSION)
Contract No:	(394/23)
House Type	(ORRICE)
Location of the house	(BOSSO ESTATE)
Contract Sum (Naira)	(74,877,743.00)
Date Started	(01/01/2001
Expected date of completion()

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 NEW CONSULTANCY PROJECTS DATA

PAGE-3

Site Clearance	(2)
Setting Out	(1)
Excavation	(1)
Substructure	(1)
Superstructure	(1)
Roofing	(2)
Doors and Windows	(2)
Conduct Wiring	(1)
Plastering	(2)
Painting	(3)
Handover	(1)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 UPDATING CONTRACTUAL, PROJECT ACTIVITIES

PROJECT TYPE (E=EXTENSION; F=FRESH; R= RENOVATION Or X=EXIT(F)

PROJECT ID.No. (22)

PAGE- 1

Land Acquisition	(2)
Survey Sketches	(3)
Architectural Design	(3)
Civil/Building Design	(2)
Electrical Design	(2)
Bill of Quantity	(2)
Estate	(1)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 UPDATING CONTRACTUAL, PROJECT ACTIVITIES

PROJECT TYPE (E=EXTENSION; F=FRESH; R=REMOVATION Or X=EXIT (F)

PAGE-2

Project Description	(CONSTRUCTION OF HOUSE)
Contract No:	(45/304/98)
House Type	(2 BEDROOM FLAT)
Location of the house	(KAITA RD. MINNA)
Contract Sum (Naira)	(1,233,232.00)
Date Started	(01/02/2001)
Expected date of completion	(08/05/2001)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 VIEWING CONTRACTUAL PROJECTS ACTIVITIES

PROJECT TYPE (F)

PROJECT ID.No (4)

PAGE-1

Land Acquisition	(5)
Survey Sketches	(2)
Architectural Design	(3)
Civil/Building Design	(4)
Electrical Design	(3)
Bill of Quantity	(2)
Estate	(1)

Strike any Key to proceed

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 VIEWING CONTRACTUAL PROJECTS ACTIVITIES

PROJECT TYPE (F)

PROJECT ID.NO. (4)

PAGE-2

Project Descript	(RENOVATION OF HOSPITAL)
Contract No:	(34-9/99)
House Type	(OFFICES)
Location of the house	(MINNA)
Contract Sum (Naira)	(877,837.50)
Date Started	(12/07/2001)
Expected Date of Completion	(05/10/2001)

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 VIEWING ABANDONED PROJECTS DATA

PROJECT TYPE (E)
 PROJECT ID.NO. (7)

PAGE-1

Project Description (RENOVATION OF HOUSE)
 Contract No: (3/0233)
 House Type ()
 Location of the house (TYPE B QTRS)
 Contract Sum (Naira) (46,743.00)
 Date stated (/ /)
 Expected date of completion (/ /)

Strike any Key to proceed

NIGER STATE HOUSING CORPORATION, MINNA
 COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM
 VIEWING ABANDONED PROJECTS DATA

PAGE-2

Site Clearance (0)
 Setting Out (0)
 Excavation (0)
 Substructure (0)
 Superstructure (0)
 Roofing (0)
 Doors and Windows (0)
 Conduct Wiring (0)
 Plastering (0)
 Painting (0)
 Handover (0)

Strike any Key to proceed or (Q) = quit ()

NIGER STATE HOUSING CORPORATION, MINNA
NIGER STATE

COMPUTERISED PROJECT ACTIVITIES CONTROL SYSTEM

CONTRACTUAL PROJECTS REPORT

02/03/01		PAGE 1	
PROJECT DESCRIPTION	LOCATION	CONT.	SUM
03/02/99 CONSTRUCTION OF ONE FLAT	NASKO RD. MINNA	4,885,493.00	
06/05/99 CONSTRUCTION OF BUNGALOW	NO. 2AKE RD. KADUNA	837,494.81	
12/07/99 GENERAL RENOVATION	13, AJAY CRESCENT	498,848.00	
14/08/01 RENOVATION OF HOSPITAL	MINNA	877,837.50	
22/09/01 REHABILITATION OF OFFICE	GOVT. HOUSE, MINNA	567,775.00	
26/10/01 CONSTRUCTION OF GARDEN	GOVT. HOUSE, MINNA	345,322.00	
18/11/01 CONSTRUCTION OF A2 B/R FLAT NO. 3	KAITA RD. MINNA	4,857,753.00	
13/12/01 RENOVATION OF HOSPITAL	GEN. HOSP. MINNA	1,029,302.00	
	TOTAL	13,899,825.31	

```

*****
*****
***** PROGRAM ; COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM
*** CASE STUDY; NIGER STATE HOUSING CORPORATION
*** ADDRESS : NIGER STATE
*** BY : SANI NABABA
*** REG.NO : PGD/MSC/2000/2001/1007
*** DEPT. : MATHETICS/COMPUTER SCIENCE
*** DATE : APRIL,2002
*****
*****

```

```

*** PROJECT ACTIVITIES MAIN PROGRAM
* SET UP ENVIRONMENT
SET TALK OFF
SET ECHO OFF
SET STAT OFF
SET INTE OFF
SET DELT ON
SET DELT TO "[]"
*SET *
PUBLIC 1

```

```

DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA"
@5,15 SAY " NIGER STATE"
@ 7,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 8,10 TO 64
@ 10,24 SAY "[A] CONTRACTUAL PROJECTS"
@ 12,24 SAY "[B] CONSULTANCY PROJECTS"
@ 14,24 SAY "[C] ABANDONED PROJECTS"
@ 16,24 SAY "[Q] EXIT"
SET COLO TO PGI
@ 20,10 SAY "DEVELOPED BY: SANI NABABA
(PGD/MCS/2000/2001/1007
SET COLO TO R1
@ 10,25 SAY "A"
@ 12,25 SAY "B"
@ 14,25 SAY "C"
@ 16,25 SAY "Q"
SET COLO TO W1
@ 18,25 SAY "Enter your choice"
SET COLO TO TD
I=0
DO WHILE I=D
I=INKEY()
IF UPPER (CHR(1)) $ "ABCQ"
EXIT
ENDIF

```

```

3
I=0
ENDDO
DO CASE
  CASE UPPER (CHR (I)) $ "A"
    DO CONTRMEN
  CASE UPPER (CHR (I)) $ "B"
    DO CONSLMEN
  CASE UPPER (CHR (I)) $ "C"
    DO ABANDMEN
  CASE UPPER (CHR (I)) $ "D"
    EXIT
ENDCASE
ENDO
CLEAR
CLEAR ALL
RETURN

```

***** NEW ABANDONED PPO. II IS MONDULA. *****

```

  SELECT 1
  USE PROJECT
  SELECT "
  USE FRESHPRJ
  DO WHILE .T.
  CLEAR
  SELECT 1
@ 2,9 TO 22, 75 DOUBLE
@ 4,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
@ 5,15 SAY "      NIGER STATE"
@ 5,15 SAY " COMPUTERISED PROJEC A IN  ITIES CONTROL SYSTEM"
@ 7,15 SAY "      APPLIED ABANDONED PROJECTS"

```

```

  STORE SPACE (10) TO CNO
  STORE SPACE (15) TO CTYPE
  STORE 0 TO CSUM,PID
  STORE SPACE (1) TO PTYPE

```

@9,10 TO 9,74

```

@11,15 SAY "PROJECT ID.NO Or [Q]uit      " GET PID PICT
"99999"
READ

```

```

  IF PID=0
    EXIT
  ENDIF
  LOCATE FOR PROJECT ID.
  IF EOF()
    @22,1 SAY ""
    ? CHR (7)

```

PROJECT ID. DOES NOT EXIST !

```

  WAIT+"
  PRESS ANY KEY."
  @23,15 SAY SPACE (50)
  LOOP

```

```

ENDIF

SELECT 1
@12,10 TO 12,74
    @12,58 SAY "PAGE -1"
    @13,10 CLEA TO 10,74
    @13,15 SAY "Project Description" " GET P_DESC
PICT "@!"
    @14,15 SAY "Contract No:" " GET CONT_NO
PICT "@!"
    @15,15 SAY "House type" " GET HT PICT
"@!"
    @16,15 SAY "Location of the house" " GET LOCATION
PICT "@!"
    @17,15 SAY "Contract sum (Naira)" " GET CON_SUM
PICT "9,999,999,999.99"
    @18,15 SAY "Date started" " GET DTS PICT
"99/99/9999"
    @19,15 SAY "Expected date of completion" " GET DTC
PICT "99/99/9999"
    CLEAR GETS
    K=SPACE(1)
@23,15 SAY " [A]bandon this project and [Q]uit " GET K
PICT "!"
    READ

    IF K="Q"
        EXIT
    ENDIF
    IF K="A"
        REPL STATUS WITH "Q"
    ENDIF.

ENDDO
CLEAR
CLOSE DATABASE
RETURN

```

```

* * * * * ABANDON PROJECT MENU
* * * * *

```

```

DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA
@ 5,15 SAY " NIGER STATE"
@ 5,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 7,15 SAY " ABANDONED PROJECTS MENU"

@ 8,10 TO 8,64
@ 09,24 SAY "[A] ABANDON A PROJECT"
@ 11,24 SAY "[B] UPDATE/RESTORE PROJECT"

```



```
@ 13,24 SAY "[C] VIEW PROJECTS"  
@ 15,24 SAY "[D] PRINT REPORT"  
@ 17,24 SAY "[Q] RETURN TO MAIN MENU
```

```
SET COLO TO W+  
@ 09,25 SAY "A"  
@ 11,25 SAY "B"  
@ 13,25 SAY "C"  
@ 15,25 SAY "D"  
@ 17,25 SAY "Q"
```

```
@ 20,24 SAY "Enter your choice."
```

```
SET COLOR TO  
I=0  
DO WHILE I=0  
I=INKEY (  
IF UPPER (CHR(I)) $ "ABCDQ  
EXIT  
ENDIF  
I=0  
ENDDO
```

```
DO CASE  
CASE UPPER(CHR(I)) $ "A"  
DO ABANDADD  
CASE UPPER(CHR(I)) $ "B"  
DO ABANDRESS  
CASE UPPER (CHR(I)) $ "C"  
DO ABANDVIW  
CASE UPPER (CHR(I)) $ "D"  
DO ABANDREP  
CASE UPPER (CHAR(I)) $ "Q"  
EXIT  
ENDCASE  
ENDDO  
CLEAR  
CLEAR ALL  
RETURN
```

```
***** ABANDONED PROJECTS REPORT MODULE *****
```

```
CLEAR  
STORE 0 TO TOTSUM,B,P  
STORE 60 TO L  
SELE 1  
USE FRESHPRJ  
SET DEVICE TO PRINT  
SELE 1  
SET FILT TO STATUS "B"  
GO TOP
```

```

DOUBLE .NOT. EOF ( )
  IF L > 22
    P=P+1
    @ 15,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
    @   ,15 SAY "      NIGER STATE"
    @   ,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
    @   ,15 SAY "      ABANDONED PROJECTS REPORT"
      @5,01 SAY "DATE  :"
      @5,08 SAY DATE( )
    @   ,70 SAY "PAGE "+DTRIM (STR(P==
    @   ,01 SAY REPL ('-', 79)
    @   ,12 SAY "CONT. NO"
    @   ,25 SAY "PROJECT DESCRIPTION"
    @   ,25 SAY "HOUSE TYPE"
    @   ,47 SAY "LOCATION"
    @   ,69 SAY "CONT.SUM"
    @   ,01 SAY "REPL ('-',79)
ENDIF

```

```

    @L,01 SAY CONT_NO
    @L,12 SAY P_DESC
    @L,47 SAY LOCATION
    @L,66 SAY CON_SUM
      L=L+1
      TOTSUM=TOTSUM+CON_SUM
    SKIP

```

ENDDO

```

    @L,1 SAY REPL ('-',79)
    @L+1,47 SAY "T O T A L"
    @L+1,65 SAY TOTSUM
    SET FILT TO
    CLOSE DATABASE
    EJECT
    SET DEVICE TO SCREEN
    RETURN

```

***** ABANDONED PROJECTS RESTORING/COMPLETION MODULE *****

```

    SELECT 1
    USE PROJECT
    SELECT 2
    USE FRESHPRJ
    DO WHILE .T.
    CLEAR
    SECLECT 1
    @ 2,9 TO 22,75 DOUBLE
    @ 4,15 SAY "      NIGER STATE HOUSING CORPORATION,MINNA"
    @ 5,15 SAY "      NIGER STATE"
    @ 5,15 SAY " COMPUTERISED PROJEC ACTIVITIES CONTROL
SYSTEM"
    @ 7,15 SAY "      UPDATING/RESTORING/ABANDONED PROJECTS"

```

STORE SPACE(10) TO CNO
STORE SPACE(15) TO CTYPE
STORE 0 TO CSUM, PID
STORE SPACE (1) TO PTYPE

@9,10 TO 9,74

@11,15 SAY "PROJECT ID.NO [0]= QUIT " GET PID PICT "99999"

READ

IF PID = 0
EXIT
ENDIF
LOCATE FOR PROJ IB= PID
IF EOF()
@22,1 SAY ""
? CHR(7)

WAIT+"

PROJECT ID. DOES NOT EXIST !

PRESS ANY KEY. "

@23,15 SAY SPACE(50)

LOOP

ENDIF

IF STATUS <> "0"

@22,1 SAY ""

WAI+"

PROJECT, PRESS ANY KEY."

NOT ABANDONED

@23,15 SAY SPACE(50)

LOOP

ENDIF

@12,10 TO 12,74

@12,58 SAY "PAGE-1"

@13,10 CLEA TO 12,74

@13,15 SAY "Project description " GET P_DESC

PICT "@!"

@14,15 SAY "Contract no: " GET CONT_NO

PICT "@!"

@15,15 SAY "House type " GET HT PICT

"@!"

@16,15 SAY "Locaiton of the house " GET LOCAITON

PICT "@!"

@17,15 SAY "Contract sum(Naira) " GET CON_SUM

PICT "9,999,999,999.99"

@18,15 SAY "Date strated " GET DTS PICT

"99/99/9999"

@19,15 SAY "Expected date of completion " GET DTC

PICT "99/99/9999"

CLEA GETS

K=SPACE(1)

@23,15 SAY "RESTORE AS [1= Contractual. 2=Consultancy or
[Q]uit " GET K PICT "!"

READ

IF K="Q"

```
EXIT
ENDIF
IF K="1"
    REPL STATUS WITH "1"
ENDIF
IF K="2"
    REPL STATUS WITH "2"
ENDIF
```

```
ENDDO
CLEAR
CLOSE DATABASE
RETURN
```

```
***** VIEW ABADONED PROJECTS DATA *****
```

```
***** ABANDONED PROJECTS MODULE *****
```

```
SELECT 1
USE PROJECT
SELECT 2
USE FRESHPRJ
SELE 1
    SET FILT TO STATUS ="0"
GO TOP
DO WHILE .NOT. EOF()
CLEAR
SELECT 1
@ 2,9 TO 22,75 DOUBLE
@ 4,15 SAY "    NIGER STATE HOUSING CORPORATION, MINNA"
@ 5,15 SAY "                NIGER STATE"
@ 5,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 7,15 SAY "    VIEWING ABADONED PROJECTS DATA"
```

```
STORE SAPCE(10) TO CNO
STORE SPACE(15) TO CTYPE
STORE 0 TO CSUM, PID
STORE SPACE ID TO PTYPE
```

```
@9,10 TO 974
```

```
*O WHILE .T.
```

```
@10,15 SAY "PROJECT TYPE " GET TYPE PICT "1"
```

```
@11,15 SAY "PROJECT ID.NO " GET PROJ ID PICT "99999"
```

```
CLEAR GETS
```

```
PTYPE = TTYPE
```

```
IF PTYPE ='F'
```

```
    PID=PROJ_ID
```

```
SELECT 2
```

```
    LOCA FOR PROJ ID =PID
```

```
@12,10 TO 12,74
```

```
@12,58 SAY "PAGE 1 "
```

```
@13,15 SAY "Land Acquistion " GET LAND PICT
```

```
"999"
```

```

    @14,15 SAY "Survey Sketches"           " GET SURVEY
PICT "999"
    @15,15 SAY "Achitectural Design"       " GET ARC PICT
"999"
    @16,15 SAY "Civil/Building Design"     " GET CIVIL PICT
"999"
    @17,15 SAY "Electrical design"        " GET ELEC PICT
"999"
    @18,15 SAY "Bill of Quantity"         " GET BOQ PICT
"999"
    @19,15 SAY "Estate"                   " GET ESTATE
PICT "999"
    CLEAR GETS
    @22,0 SAY ""
    WAIT + "                               Strike any key to proceed"
    @23,10 SAY SPACE (60)
ENDIF

SELECT 1
@12,10 TO 12,74
IF PTYPE='F'
    @12,58 SAY "PAGE-2"
ELSE
    @12,58 SAY "PAGE-1"
ENDIF
@13,10 CLEA TO 19,74
@13,15 SAY "Project Description"         " GET P_DESC
PICT "@!"
@14,15 SAY "Contract No:"               " GET CONT_NO
PICT "@!"
@15,15 SAY "House type"                 " GET HT PICT
"@!"
@16,15 SAY "Location of the house"      " GET LOCATION
PICT "@!"
@17,15 SAY "Contract sum(Naira)"        " GET CON_SUM
PICT "9,999,999,999.99"
@18,15 SAY "Date started"               " GET DTS PICT
"99/99/9999"
@19,15 SAY Expected date of completion " GET DTC
PICT "99/99/9999"
    CLEAR GETS
    @22,0 SAY " "
    WAIT + "                               Strike any key to proceed"
    @23,10 SAY SPACE(60)
    IF PTYPE= 'F'
        @09,58 SAY "PAGE-3"
    ELSE
        @09,58 SAY "PAGE-2"
    ENDIF
    @10,10 CLEA TO 19,74
    @10,15 SAY "Site clearance"          " GET S_C PICT
"999"

```

```

@11,15 SAY "Setting out" " GET S_O PICT
"999"
@12,15 SAY "Excavaiton" " GET EXC PICT
"999"
@13,15 SAY "Substructure" " GET SUB_S PICT
"999"
@14,15 SAY "Superstructure" " GET SUP_S PICT
"999"
@15,15 SAY "Roofing" " GET RF PICT
"999"
@16,15 SAY "Door and Windows" " GET DW PICT
"999"
@17,15 SAY "Conduit Wireing" " GET CW PICT
"999"
@18,15 SAY "Plastering" " GET PB PICT
"999"
@19,15 SAY "Painting" " GET PT PICT
"999"
@20,15 SAY "Hand Over" " GET HO PICT
"999"

```

```
CLEAR GETS
```

```
K=SPACE(1)
```

```
@23,15 SAY " Strike any key to proceed or [Q] = quit. "
GET K PICT "!"
```

```
READ
```

```
IF K = "Q"
```

```
EXIT
```

```
ENDIF
```

```
SELE 1
```

```
SKIP
```

```
ENDDO
```

```
CLEAR
```

```
SET FILT TO
```

```
CLOSE DATABASE
```

```
RETURN
```

```
* * * * * NEW CONSULTANCY PROJECTS MODULE * * * * *
```

```
SELECT 1
```

```
USE PROJECT
```

```
SELECT 2
```

```
USE FRESHPRJ
```

```
DO WHILE .T.
```

```
CLEAR
```

```
SELECT 1
```

```
@ 2,9 TO 22,75 DOUBLE
```

```
@ 4,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA"
```

```
@ 5,15 SAY " NIGER STATE"
```

```
@ 5,15 SAY " COMPUTERISED PROJEET ACTIVITIES CONTROL
SYSTEM"
```

```

@ 7,15 SAY "                                NEW CONSULTNCY RPROJECTS DATA"[V!]
    STORE SPACE (10 TO CNO
    STORE SPACE (15) TO CTYPE
    STORE 0 TO CSUM, PID
    STORE SPACE (1) TO PTYPE
@9,10 TO 9,74
DO WHILE .T.
@10,12 SAY "PROJECT TYPE IN EXTENSIONS; F FRESH;
R= RENOVATION OR X=Exit " GET PTYPE PICT "!"
READ
IF PTYPE='X' .OR. PTYPE 'E' .OR. PTYPE 'F' .OR. PTYPE='R'
    EXIT
ENDIF
ENDDO
    IF PTYPE = 'X'
        EXIT
    ENDIF
    IF PTYPE='F'
        CTYPE='FRESH'
    ENDIF
    IF PTYPE='E'
        CTYPE='EXTENSION'
    ENDIF
    IF PTYPE='R'
        CTYPE='RENOVATION'
    ENDIF
@11,15 SAY "PROJECT ID.HQ" GET PID PICT "99999"
READ

    LOCATE FOR PROJ_ID      PID
    IF .NOT. EOF()
        @22,1 SAY ""
        ? CHR(7)
    WAIT+"                                PROJECT ID. NO ALREADY EXISTS!
PRESS ANY KEY."
        @23,15 SAY SPACE (50)
        LOOP
    ENDIF
    IF PTYPE='F'

        SELECT 2
        APPEND BLANK
        @12,10 TO 12,74
        @12,58 SAY "PAGE-1"
        @13,15 SAY "Land Acquisition"                                " GET LAND
PICT"999"
        @14,15 SAY "Survey Sketches"                                " GET SURVEY
PICT "999"
        @15,15 SAY "Architectural Design"                            " GET ARC PICT

```

```

"999"      @16,15 SAY "Civil/Building Design"      " GET CIVIL PICT
"999"      @17,15 SAY "Electrical Design"          " GET ELEC PICT
"999"      @18,15 SAY "Bill of Quantity"           " GET BOQ PICT
"999"      @19,15 SAY "Estate"                     " GET ESTATE
PICT "999"
  READ
  REPL PROJ_ID WITH PID
ENDIF

  SELECT 1
  @12,10 TO 12,74
  IF PTYPE= 'F'
    @12,58 SAY "PAGE-2"
  ELSE
    @12,58 SAY "PAGE-1"
  ENDIF
  @13,10 CLEA TO !),74
APPEND BLANK
  @13,15 SAY !Project Description                  " GET P_DESC
PICT "@!"
  @14,15 SAY "Contract No."                        " GET CONT_NO
PICT "@!"
  @15,15 SAY "House type"                          " GET HT PICT
"@!"
  @16,15 SAY "Location of the house"              " GET LOCATION
PICT "@!"
  @17,15 SAY "Contract sum (Naira="                " GET CON_SUM
PICT 9,999,999,999.99"
  @18,15 SAY "Date starte"                         " GET DTS PICT
"99/99/9999"
  @19,15 SAY "Expected dat of completion"         " GET DTC
PICT "99/99/9999"
  READ
  REPL PROJ_ID WITH PID, TYPE WITH CTYPE, STATUS
WITH "2"

  IF PTYPE = 'F'
    @09,58 SAY "PAGE-3"
  ELSE
    @09,58 SAY "PAGE-2"
  ENDIF
  @10,10 CLEA TO 19,7e
  @10,15 SAY "Site clearance"                      " GET S_C PICT
"999"
  @11,15 SAY "Setting out"                        " GET S_O PICT
"999"
  @12,15 SAY "Excavation"                         " GET EXC PICT
"999"
  @13,15 SAY "Substructure"                       " GET SUB_S PICT
"999"

```



```

"999"      @14,15 SAY "Superstructure           "GET SUP_S PICT
"999"      @15,15 SAY "Roofing                 " GER RF PITC
"999"      @16,15 SAY "Doors (and) Windows     " GET DW PICT
"999"      @17,15 SAY "Conduit Wiring          " GET CW PICT
"999"      @18,15 SAY "Plastering              " GET PB PICT
"999"      @19,15 SAY "Painting                " GET PT PICT
"999"      @20,15 SAY "Hand Over               " GET HO PICT
"999"      READ
          K= SPACE(1)
@23,15 SAY " [M]ore projects           [Q]uit           " GET K PICT
"! "
          READ
          IF K="Q"
            EXIT
          ENDIF
ENDDO
CLEAR
CLOSE DATABASE
RETURN

```

***** CONSULTANCY PROJECTS MENU *****

```

DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
@ 5,15 SAY "      NIGER STATE"
@ 5,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTM"
@ 7,15 SAY "      CONSULTANCY PROJECTS MENU

@ 8,10 TO 8,64
@ 09,24 SAY "[A] ADD NEW PROJECTS MENU"
@ 11,24 SAY "[B] UPDATE ON_GOING PROJECTS"
@ 13,24 SAY "[C] VIEW PROJECTS"
@ 15,24 SAY "[D] PRINT REPORTS"
@ 17,24 SAY "[Q] E X I T"

SET COLO TO W.
@ 09,25 SAY "A"
@ 11,25 SAY "B"
@ 13,25 SAY "C"
@ 15,25 SAY "D"
@ 17,25 SAY "Q"

```

```
DO
@ 20,24 SAY "Enter your choice"
SET COLOR TO
```

```
I=0
DO WHILE I=0
I=INKEY()
IF UPPER (CHR(I) $ "ABCDQ"
EXIT
ENDIF
I=0
ENDDO
```

```
DO CADE
CASE UPPER (CHR(I) $ "A"
DO CONSLADD
CASE UPPER(CHR(I) $ "B"
DO CONSLUPD
CASE UPPER )CHR(I))$ "C"
DO CONSLVIW
CASE UPPER (CHR(I)) $ "D"
DO CONSREPT
CASE UPPER (CHR(I)) $ "Q"
EXIT
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN
```

```
* * * * * CONSULTANCY PROJECTS ACTIVITIES UPDATE MODULE * * * * *
* * * * *
```

```
SELECT 1
USE PROJECT
SELECT 2
USE FRESHPRJ
DO WHILE .T.
CLEAR
SELECT 1
@ 2,9 TO 22,75 DOUBLE
@ 4,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA"
@ 5,15 SAY " NIGER STATE"
@ 5,15 SAY " COMPUTERISED PROJEC ACTIVITIES CONTROL
SYSTEME"
@ 7,15 SAY " UPDATING CONSULTANCY PROJECTSACTIVITIES"

STORE SPACE (10) TO CHO
STORE SPACE (15) TO CTYPE
STORE 0 TO CSUM, PID
@9,10 TO 9,74
```

```

DO WHILE .T.
@10,12 SAY "PROJECT TYPE [E=EXTENSION; F=FRESH;
R=RENOVAITON Or X=Exit          " GET PTYPE PICT ""
READ
IF PTYPE='X' .OR. PTYPE='E' .OR. PTYPE='F' .OR. PTYPE='R'
    EXIT
ENDIF
ENDDO

    IF PTYPE    =  'X'
        EXIT
    ENDIF
    IF PTYPE =  'F'
        CTYPE = 'FRESH'
    ENDIF
    IF PTYPE='E{
        CTYPE='EXTENSION'
    ENDIF
    IF PTYPE='R'
        CTYPE='RENOVAITON'
    ENDIF
@11,15 SAY "PROJECT ID.NO  " GET PID PICT "99999"
READ

    LOCATE FOR PROJ ID = PID
    IF EOF ()
    @22,1 SAY ""
    ? CHR(7)
    WAIT+"          PROJECT ID. DOES NOT EXIST
PRESS ANY KEY."
    @23,14 SAY SPACE (50)
    LOOP
    ENDIF
    IF STATUS <> "2"
    @22,1 SAY ""
    WAIT+"          NOT A CONSULTANCY
PROJECT, PRESS ANY KEY."
    @23,15 SAY SPACE(50)
    LOOP
    ENDIF

IF PTYPE='F'
    SELECT 2
        LOCA FOR PROJ ID = PID
        @12,10 TO 12,74
        @12,58 SAY "PAGE-1"
        @13,15 SAY "Land Acquisition          " GET LAND
PICT"9992
        @14,15 SAY "SURVEY Sketches          " GET SURVEY
PICT "999"
        @15,14 SAY "Architectural Design    " GET ACR PICT
"999"

```

```

"999"      @16,15 SAY "Civi/Building Design      " GET CIVIL PICT
"999"      @17,15 SAY "Electrical Design        " GET ELEC PICT
"999"      @18,15 SAY "Bill of Quantity         " GET BOQ PICT
"999"      @19,15 SAY "Estate                   " GET ESTATE
PICT "999"
      READ
      ENDIF

      SELECT 1
      @12,10 TO 12,74
      IF PTYPE='F'
          @12,58 SAY "PAGE -2"
      ELSE
          @12,58 SAY "PAGE-1"
      ENDIF
      @13,10 CLEA TO19,74
      @13,15 SAY "Project Description          " GET P_DESC
PICT "@!"
      @14,15 SAY "Contract No:                " GET CONT_NO
PICT "@!"
      @15,15 SAY "House type                   " GET HT PICT
"@!"
      @16,15 SAY "Location of the house        " GET LOCAITON
PICT "@!"
      @17,15 SAY "Contract sum (Naira)         " GET CON_SUM
PICT "9,999,999.999.99"
      @18,15 SAY "Date started                  " GET DTS PICT
"99/99/9999"
      @19,15 SAY "Expected date of completion " GET DTC
PICT "99/99/9999"
      READ
      REPL TYPE WITH CTYPE

      IF PTYPE='F'
          @09,58 SAY "PAGE-3"
      ELSE
          @09,58 SAY "PAGE-2"
      ENDIF
      @10,10 CLEA TO 19,74
      @10,15 SAY "Site clearance                " GET S_C PICT
"999"
      @11,15 SAY "Setting out                   " GET S_O PICT
"999"
      @12,15 SAY "Excavation                     " GET EXC PICT
"999"
      @13,15 SAY "Substructure                   " GET SUB_S PICT
"999"
      @14,15 SAY "Superstructure                 " GET SUP_S PICT
"999"

```

```

"999" @15,15 SAY "Roofing " GET RF PICT
"999" @16,15 SAY "Doors and Windows " GET DW PICT
"999" @17,15 SAY "Conduit Wiring " GET CW PICT
"999" @18,15 SAY "Plastering " GET PB PICT
"999" @19,15 SAY "Painting " GET PT PICT
"999" @20,15 SAY "Hand over " GET HO PICT
"999"
READ
K=SPACE(1)
@23,15 SAY " [M]ore projects [Q]uit " GET K PICT
"! "
READ
IF K="Q"
EXIT
ENDFI
ENDO
CLEAR
CLOSE DATABASE
RETURN

```

* * * * * CONSULTANCY PROJECTS REPORT MODULE * * * * *

```

CLEAR
STORE 0 TO TOTSUM,L,P
STORE 60 TO L
SELE 1
USE FRESHPRJ
SET DEVICE TO PRINT
SELE 1
SET FILT TO STATUS "2"
GO TOP
DO WHILE .NOT. EOF()
IF L > 22
P=P+1
@ 1,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA"
@ 2,15 SAY " NIGER STATE"
@ 3,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 4,15 SAY " CONSULTANCY PROJECTS REPORT"
@5,01 SAY "DATE : "
@5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))

```

```
@6,01 SAY REPL('-',79)
@7,01 SAY "CONT.NO"
@7,12 SAY "PROJECT DESCRIPTION"
@7,25 SAY "HOUSE TYPE"
@7,47 SAY "LOCATION"
@7,69 SAY "CONT.SUM(N)"
@8,01 SAY "REPL('-',79)
L=9
ENDIF
```

```
@L,01 SAY CONT_NO
@L,12 SAY P_DESC
*@L,32 SAY HT
@L,47 SAY LOCATION
@L,66 SAY CON_SUM
      L=L+1
      TOTSUM=TOTSUM+CON_SUM
```

```
SKIP
```

```
ENDDO
```

```
@L,1 SAY REPL('-',79)
@L+1,47 SAY "T O T A L"
@L+1,65 SAY TOTSUM
SET FILT TO
CLOSE DATABSE
EJECT
```

```
SET DEVIE TO SCREEN
RETURN
```

```
***** NEW CONTRACTUAL PROJECTS MODULE *****
```

```
*****
```

```
SELECT 1
USE PROJECT
SELECT 2
USE FRESHPRJ
DO WHILE .T.
CLEAR
SELECT 1
```

```
@ 2,9 TO 12,75 DOUBLE
```

```
@ 4,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
```

```
@ 5,15 SAY "      NIGER STATE"
```

```
@ 5,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
```

```
@ 7,15 SAY "      NEW CONTRACTUAL PROJECTS DATA"
```

```
STORE SAPCE(10) TO CNO
STORE SPACE(15) TO CTYPE
STORE 0 TO CSUM,PID
STORE SPACE (1) TO PTYPE
```

```
@0,10 TO 9,74
DO WHILE .T.
```

```

@10,12 SAY "PROJECT TYPE [E=EXTENSION; F=FRESH;
R=RENOVATION Or X=Exit " GET PTYPE PICT "!"
READ
IF PTYPE='X' .OR. PTYPE='E' .OR. PTYPE='F' .OR. PTYPE='R'
  EXIT
ENDIF
ENDDO

```

```

IF PTYPE = 'X'
  EXIT
ENDIF
IF PTYPE='F'
  CTYPE='FRESH'
ENDIF
IF PTYPE='E'
  CTYPE='EXTENSION'
ENDIF
IF PTYPE='R'
  CTYPE='RENOVATION'
ENDIF
ENDFI

```

```

@11,15 SAY "PROJECT ID.NO "GET PID PICT "99999"
READ

```

```

LOCATE FOR PROJ=ID PID
IF .NOT. EOF()
  @22,1 SAY ""
  ? CHR(7)

```

```

WAIT+" PROJECT ID. NO ALREADY EXISTS!
PRESS ANY KEY."
@23,15 SAY SPACE (50)
LOOP
ENDIF
IF PTYPE='F'

```

```

SELECT 2
APPEND BLANK
@12,10 TO 12,74
@12,58 SAY "PAGE-1"
@13,15 SAY "Land Acquisition" " GET LAND
PICT"999"
@14,15 SAY "Survey Sketches" " GET SURVEY
PICT "999"
@15,15 SAY "Achitectural Design" " GET ARC PICT
"999"
@16,15 SAY "Civil/Building Design" " GET CIVIL PICT
"999"
@17,15 SAY "Electrical Design" " GET ELEC PICT
"999"
@18,15 SAY "Bill of Quantity" " GET BOQ PICT
"999"
@19,15 SAY "Estate" " GET ESTATE
PICT "999"
READ

```

```

REPL ROJ_ID WITH PID
ENDIF
SELECT 1
@12,10 TO 12,74
IF PTYPE='F'
    @12,58 SAY "PAGE-2"
ELSE
    @12,58 SAY "PAGE -1"
ENDIF
@13,10 CLEAR TO 19,74

```

APPEND BLANK

```

@13,15 SAY "Project Description" " GET P_DESC
PICT "@!"
@14,15 SAY "Contract No:" " GET CONT_NO
PICT "@!"
@15,15 SAY "House type" " GET HT_PICT
"@!"
@16,15 SAY "Location of the house" " GET LOCATION
PICT "@!"
@17,15 SAY "Contract sum (Naira)" " GET CON_SUM
PICT "9,999,999,999.99"
@18,15 SAY "Date started" " GET DTS_PICT
"99/99/9999"
@19,15 SAY "Expected date of completion" " GET DTC
PICT "99/99/9999"
READ
REPL PROJ_ID WITH PID, TYPE WITH CTYPE, STATUS
WITH "1"

```

```

IF PTYPE='F'
    @09,58 SAY "PAGE-3"
ELSE
    @09,58 SAY "PAGE-2"
ENDIF

```

```

@10,10 CLEA TO 19,78
@10,15 SAY "Site clearance" " GET S_C_PICT
"999"
@11,15 SAY "Setting out" " GET S_O_PICT
"999"
@12,15 SAY "Excavation" " GET EXC_PICT
"999"
@13,15 SAY "Substructure" " GET SUB_S_PICT
"999"

```


"999"

@15,15 SAY "Roofing

" GET RF PICT

"999"

@16,15 SAY "Doors and Windows

" GET DW PICT

"999"

@17,15 SAY "Conduct Wiring

" GET CW PICT

"999"

```

"999"      @18,15 SAY "Plastering           " GET PB PICT
"999"      @19,15 SAY "Painting            " GET PT PITC
"999"      @20,15 SAY "Hand over          " GET HO PICT
"999"      READ
           K=SPACE(1)
@23,15 SAY "      [M]ore projects          [Q]uit "GET K PICT
           READ
           IF K = "Q"
             EXIT
           ENDIF
ENDDO
CLEAR
CLOSE DATABASE
RETURN

```

***** CONTRACTUL PROJECTS ACTIVITY UPDATE MODULE *****

```

           SELECT 1
           USE PROJECT
           SELECT 2
           USE FRESHPRJ
           DO WHILE .T.
           CLEAR
           SELECT 1
@4,9 TO 22,75 DOUBLE
@4,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
@5,15 SAY "      NIGER STATE"
@ 5,15 SAY "  COMPUTERISEDPROJECT ACTIVITIES CONTROL
SYSTEM"
@ 7,15 SAY "      UPDATING CONTRACTUAL PROJECTS ACTIVITIES"

           STORE SPACE(10) TO CNO
           STORE SPACE(15) TO CTYPE
           STORE 0 OT CSUM,PID
           STORE SPACE(1) TO PTYPE
@9,10 TO 9,74
DO WHILE .T.
@10,12 SAY "PROJECT TYPE [E=EXTENSION; F=FRESH;
R=RENOVATION Or X=Exit " GET PTYPE PICT ""
READ
IF PTYPE='X' .OR. PTYPE '1' .OR. PTYPE (F' .OR. PTYPE='P'
EXIT
ENDIF
ENDDO
           IF PTYPE = 'X'
             EXIT

```

```

ENDIF
IF PTYPE='F'
  CTYPE='FRESH'
ENDIF
IF PTYPE='E'
  CTYPE='EXTENSION'
ENDIF
IF PTYPE='R'
  CTYPE='RENOVATION'
ENDIF
@11,15 SAY "PROJECT ID.NO
READ

```

" GET PID PICT "99999"

```

LOCATE FOR PROJ_ID =PID
IF EOF()
@22,1 SAY ""
? CHR (7)
WAIT+"
PRESS ANY KEY."
  @23,15 SAY SPACE(50)
  LOOP
ENDIF
IF STATUS <> "1"
  @22,1 SAY ""
  WAIT+"
PROJECT, PRESS ANY KEY."
  @23,15 SAY SPACE (50)
  LOOP
ENDIF

```

PROJECT ID. DOESNOT EXIST !

```

IF PTYPE='F'
  SELECT 2
    LOCA FOR PROJ ID=PID
    @12,10 TO 12,74
    @12,58 SAY "PAGE-1"
    @13,15 SAY "Land Acquisition
PICT "999"
    @14,15 SAY "Survey sketches
PICT "999"
    @15,15 SAY "Architctural Design
"999"
    @16,15 SAY "Civil/Building Design
"999"
    @17,15 SAY "Electrical Design
"999"
    @18,15 SAY "Bill of Quantity
"999"
    @19,15 SAY "Estate
PICT "999"
  READ
ENDIF

```

" GET LAND

" GET SURVEY

" GET ARC PICT

" GET CIVIL PICT

" GET ELEC PICT

" GET BOQ PICT

" GET ESTATE

```

SELECT 1
@12,10 TO 12,74
IF PTYPE='F'
    @12,58 SAY "PAGE-2"
ELSE
    @12,58 SAY "PAGE-1"
ENDIF
    @13,10 CLEAR TO 19,44
    @13,15 SAY "Project Description" " GET P_DESC
PICT "@!"
    @14,15 SAY "Cont. No:" " GET CONT_NO
PICT "@!"
    @15,15 SAY "House type" " GET HT PICT
"@!"
    @16,15 SAY "Locaiton of the house" " GET LOCATION
"@!"
    @17,15 SAY "Contract sum (Naira)" " GET CON_SUM
PICT "9,999,999,999.99"
    @18,15 SAY "Date started" " GET DTS PICT
"99/99/9999"
    @19,15 SAY "Experted date of complition" " GET DTCE
PICT "9,99/99/9999"
    READ
    REPL TYPE WITH CTYBE

IF PTYPE='F'
    @09,78 SAY "PAGE-3"
ELSE
    @09,58 SAY "PAGE-2"
ENDIF
    @10,10 CLEAR TO 19,74
    @10,15 SAY "Site clearance" "GET S_C PICT
"999"
    @11,15 SAY "Setting out" "GET S_O PICT
"999"
    @12,15 SAY "Excavation" "GET EXC PICT
"999"
    @13,15 SAY "Substructure" " GET SUB_S PICT
"999"
    @14,15 SAY "Superstructure" " GET SUP_S PICT
"999"
    @15,15 SAY "Roofing" " GET RF PICT
"999"
    @16,15 SAY "Doors and Windows" " GET DW PICT
"999"
    @17,15 SAY "Conduct Wiring" "GET CW PICT
    @17,15 SAY "Conduct Wiring" " GET CW PICT
"999"
    @18,15 SAY "Plastering" " GET PB PICT
"999"
    @19,15 SAY "Painting" " GET PT PICT
"999"
    @20,15 SAY "Hang Over" " GET HO PICT

```

```

      READ
      K=SPACE (1)
@23,15 SAY "      [M]ore Projects [Q]uit " GET K PICT
"! " DO
      READ
      IF K = "Q"
        EXIT
      ENDIF
ENDO
CLEAR
CLOSE DATABASE
RETURN

```

***** CONTRACTUAL PROJECTS REPORT MODULE *****

```

      CLEAR
      STORE 0 TO TOTSUM,L,P
      STORE 60 TO L
      SELE 1
      USE FRESHPRJ
      SET DEVICE OT PRINT
      SELE 1
          SET FILT TO STATUS = "1"
      GO TOP
DO WHILE .NOT. EOF()
      IF L > 22
        P=P+1
@ 1,15 SAY "      NIGER STATE HOUSING CORPORATION, MINNA"
@ 2,15 SAY "      NIGER STATE"
@ 3,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 3,15 SAY "      CONTRACTUAL PROJECs REPORT"
          @5,01 SAY "DATE :"
          @5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))
@6,01 SAY REPL('-',79)
@7,01 SAY "CONT. NO"
@7,12 SAY "PROJECT DESCRIPTION"
*@7,25 SAY "HOUSE TYPE"
@7,47 SAY "LOCATION"
@7,69 SAY "CONT.SUM"
@8,01 SAY REPL('-',79)
      ENDIF

      @L,01 SAY CONT_NO
      @L,12 SAY P_DESC
      @1,32 SAY HT
      @L,47 SAY LOCAITON

```

```
@L,66 SAY CON_SUM
      L=L+1
      TOTSUM=TOTSUM+CON_SUM
SKIP
```

ENDO

```
@L,1 SAY REPL('-', '9)
@L+1,47 SAY "T O T A L"
@L+1,65 SAY TOTSUM
SET FILT TO
CLOSE DATABASE
EJECT
```

SET DEVICE TO SCREEN

RETURN

* * * * * CONTRACTUAL PROJECTS MENU * * * * *

* * * * *

DO WHILE .T.

CLEAR

@ 4,9 TO 19,65 double

@ ,15 SAY " NIGER STATE HOUSING CORPORATION, MINNA"

@ 5,15 SAY " NIGER STATE"

@ 5,15 SAY " COMPUTERISED PROJECT ACTIVITIES CONTROL
SYSTEM"

@ 7,15 SAY " CONTRACTUAL PROJECTS MENU"

@ 8,10 TO 8,64

@ 69,24 SAY "(A) ADD NEW PROJECTS"

@ 11,24 SAY "(B) UPDATE ON GOING PROJECTS"

@ 13,24 SAY "(C) VIEW PROJECTS"

@ 15,24 SAY "(D) PRINT REPORT"

@ 17,24 SAY "(Q) EXIT"

SET COLO TO W+

@ 09,25 SAY "A"

@ 11,25 SAY "B"

@ 13,25 SAY "C"

@ 15,25 SAY "D"

@ 15,25 SAY "Q"

@ 20,24 SAY "ENTER YOUR CHOICE.

SET COLOR TO

I=0

DO WHILE I=0

I=INKEY ()

IF UPPER (CHR(I)) \$ "ABCDQ"

EXIT

ENDIF

I=0

ENDO

```
DO CASE
CASE UPPER (CHR(I)) $ "A"
DO CONTRADD
CASE UPPER (CHR(I)) $ "B"
DO CONRUPD
CASE UPPER (CHR(I)) $ "C"
DO CONTRVIW
CASE UPPER (CHR(I)) $ "D"
DO CONTREPT
CASE UPPER (CHR(I)) $ "Q"
EXIT
```

```
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN
```

```

I=0
ENDDO
DO CASE
CASE UPPER(CHR(1)) $ "A"
DO CONTRMEN
CASE UPPER(CHR(1)) $ "B"
DO CONSIMEN
CASE UPPER(CHR(1)) $ "C"
DO ABANDMEN
CASE UPPER(CHR(1)) $ "."
EXIT
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN

```

***** NEW ABANDONED PROJECTS MODULE *****

```

SELECT 1
USE PROJECT
SELECT 2
USE FRESHPRJ
DO WHILE .T.
CLEAR
SELECT 1
@ 2,9 TO 22,75 DOUBLE
@ 4,15 SAY " HIGH STATE HOUSING CORPORATION, MINNA"
@ 5,15 SAY " HIGH STATE"
@ 5,15 SAY " COMPUTERIZED PROJECT ACTIVITIES CONTROL
SYSTEM"
@ 7,15 SAY " ABANDONED PROJECTS"

```

```

STORE SPACE(10) TO CHO
STORE SPACE(15) TO CTTP
STORE 0 TO CSUB, FID
STORE SPACE(1) TO FTAL

```

@9,10 TO 9,74

```

@11,15 SAY "PROJECT ID: " GET PID PICT
"99999"
READ

```

```

IF FID = 0
EXIT
ENDIF

```

```

LOCATE FOR EOF(1)
IF EOF()
@22,1 SAY ""
? CHR(0)

```

```

WAIT
PRESS ANY KEY."

```

PROJECT DOES NOT EXIST !

```

@23,15 SAY " "
LOOP

```