COMPUTERIZED MORTGAGE SYSTEM

[A CASE STUDY OF FEDERAL HOUSING AUTHORITY]

BY

ECHONO, JUDYTH PGD/MCS/2006/1212

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.

SEPTEMBER 2008

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A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE IN PARTIAL FULFILLMENT OF THE AWARD OF POST GRADUATE DIPLOMA IN COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.

SEPTEMBER 2008

CERTIFICATION

This is to certify that this research project is undertaken by Echono Judyth PGD/MCS/2006/1212 of the department of Mathematics and Computer Science, Federal University of Technology, Minna, Niger State.

Dr N.I Akinwande Project supervisor

date/ sign.

Dr N.I Akinwande Head of department

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External supervisor

date/ sign.

Dedication

This research work is dedicated to God Almighty and to all those who in a way or at one point in time contributed to my academic pursuit.

Acknowledgement

I give all the glory to God for making this work a success.

My gratitude goes to my supervisor Dr Akinwande for all your help and assistance during this research work.

I acknowledge with thanks all my lecturers and friends for they have touched my life in one way or the other.

How can I forget you Mr Adam the head of Mortgage, my boss

Mr M.L Kuru and Mr J.S Saidu, Mr A Kyawu of Finance department and

Mr J.O.E Mattu of Federal Housing Authority, your words of encouragement has seen me through this course.

My profound thanks goes to Mr Nickola Itobor the General Manager Gitan

Limited for his assistance and contribution during this research work.

My thanks go to all my course mates, I am so happy to meet you all on this journey of life.

Finally I would like to appreciate my brothers, sisters and my mum for all their support. May God bless you all. Amen.

Abstract

This research work focuses mainly on the computerized approach to the mortgage record with special emphases on the repayment period.

A computer program was developed in an attempt to facilitate its

effectiveness.

It focuses on the reduction of problems faced in processing mortgage records and highlights the benefits to be derived from the computerized system.

With the use of a relational database management (RDM) system that uses standard query language to process data into information, various stages in the processing was incorporated to enable efficiency in operation, quick generation of the statement of account, viability of records and the financial position of the mortgage organization can be easily ascertain.

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CHAPTER ONE.

INTRODUCTION

1.0 The problem of adequate housing is a global phenomenon and the severity of the problem however differs from one nation to the other.

Housing, as it were is a complex and enormous endeavour that requires hugh capital outlay, which unfortunately hinders affordable housing among Nigerians.

Some factors are involved in affordability issues which are, housing finance affordability and housing affordability.

The former deals with those who are able to provide need finance for housing provision while, the latter involves those who are in position to have a roof over their heads.

Experience has shown that as a country scale higher on the rungs of the ladder of economic development, demand for housing especially owner-occupier unit increases.

Various governments in different nations have put in place some measures to help in solving the housing problem within their domain.

One of such measures is the formulation of the National housing policy of 1991. The ultimate goal of the policy was to ensure that all Nigerians own or

have access to decent housing accommodation at affordable cost by the year 2000.

As at 2007, a vast majority are unable to afford soaring rental accommodation especially in urban cities because of their income. For the prospective borrowers who deserve assistance, the demand for housing credit often outstrips the supply as available loanable funds cannot adequately be utilized to meet the mortgage needs.

The national housing fund was introduced to create a pool of funds for lending to contributors to the fund and encouraging them to build or buy their own accommodation.

The national housing fund is a mandatory scheme where deductions are made from workers monthly salaries.

1.1 Mortgage finance problems.

The high cost of housing construction relative to the average incomes of prospective home owners has made borrowing from housing finance institutions the "sine qua non" for people who find themselves in such a bind.

Government attempted to tackle the problem making funds available for financing project by administratively hold down the interest rates but it has

not worked. The unstable state of interest rate has reduced investment in this sector.

1.2 Motivation.

In the light of the prevailing problems encountered due to improper record handling, the case of manual record keeping often leads to lost of vital information/data in the unit and to device a means for the effective information technology support in business activities in Federal Housing Authority, the computerization of Mortgage records as a drive to this reform can not be over-emphasized.

In view of the above, there is a need to evaluate and select appropriate human resource process automation software to support the Mortgage operations of the Authority nation wide.

1.3 Aims and objective

The aim of this project lies on the development of a computer programme that will enhance Federal Housing Authority's mortgage operations and in turn achieve the following:

- i) provide easier access to mortgage information
- ii) provide information on house type and their locations
- iii) reduce the stress in locating files of individual customers.

- iv) Provide detailed information on the mortgage type, the cost of mortgage and the repayment period.
- v) Eradicate the occurrences of double allocation of housing unit.
- vi) Identify and attempt to solve the problems and barriers involve in manual processing
- vii) To recommend policy decision based on the findings.

1.4 SIGNIFICANCE OF THE STUDY

Why we need to computerize mortgage records.

The usefulness of this study is demonstrated by the general importance attached to the way a computer handle and process large volume of data compare to the manually performed task. If the process is computerized, there will be a major decrease in wasted resources and man power. And also, there will be fewer mistake and bottle neck.

This will lead to a reduction in cost due to the reduction in waste, a holding down of the cost of labour, energy and paper work as such; productivity will be increased, Check and balances will be enhanced and fraud will be reduce due to accountability to a minimum level.

This will make report generation easier and timely and as such enhance management quick decision making.

1.5 SCOPE AND LIMITATION OF THE STUDY

The study focuses on the Mortgage system as operational in the Federal Housing Authority and the problems faced in processing mortgage information. This study is limited to two department in the organization where allocation of the housing unit and payment records are kept.

They are :- the Mortgage unit of the Finance department where records for payment on the allocated housing unit are kept and the Estate department where allocation of the housing unit takes place.

CHAPTER TWO

LITERATURE REVIEW

2.0 Population natural growth and migration together with growth in economic activities and general well being of any community are the main factors that aggravate its housing demands.

The importance of housing to human well being cannot be over emphasized. Housing has been generally recognized as one of mans basic needs and as such, has become the subject of international discussion on development to such an extent that the provision of adequate housing to the populace is now the yard-stick by which the level of development of a country can be measured.

2.1 OBJECTIVE OF THE PROGRAMME.

The Federal Housing Programme which includes the necessary elements in order to ensure suitable housing conditions has correlated its policy with the general, social and economic policy of the Nigerian government.

The main objective of the program are:-

- i) Ensuring suitable dwellings in order to cope with the urban population growth
- ii) The gradual solution of the co-inhabitation problem in the existing urban dwellings

iii) The general improvement of the situation of the urban housing stock.

2.2 HISTORY OF FEDERAL HOUSING AUTHORITY

The Federal Housing Authority was established by decree (now Act) No 40 of 1973. In addition to its numerous other responsibility, it was charged with the responsibility of implementing the national housing programme. It was in pursuance of this programme that estates like Festival town in Lagos, Gwarimpa estate and Lugbe estate to mention a few was developed

2.3 Organizational structure of Federal Housing Authority.

The organization is managed by a Managing Director/Chief Executive who runs the affairs of the Authority. Beside him, there are member of staff who are empowered to effectively discharge their duties.

The organization is made up of 5 department, with exception of the office of the chief executive, the remaining department is headed by an Executive Director and the duties in each department includes:-

Office of the chief executive: this department is headed by the Chief Executive. The department handles all the affairs of the authority, including legal, secretariats and public affairs group.

Management services department: it is headed by the Executive Director Management services who is charge of all Staff matters, Staff welfare, Administration and Training in the authority.

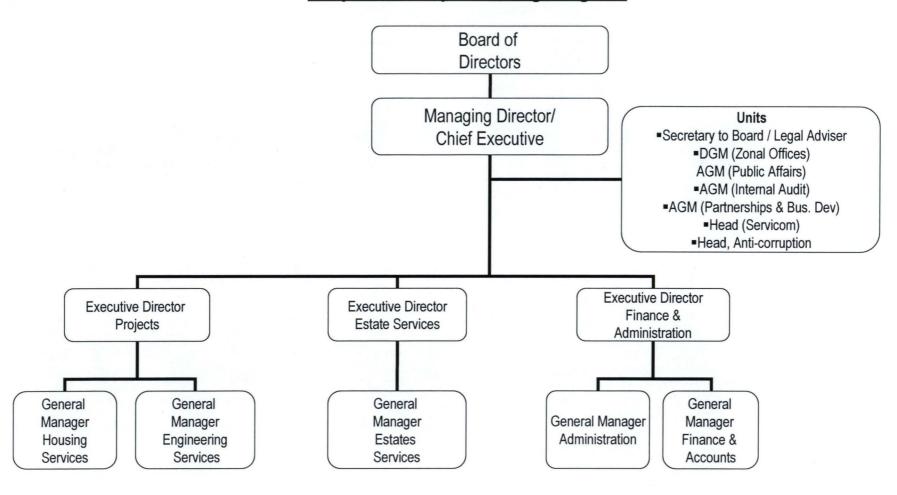
Project department: Headed by the Executive Director Project. The department is responsible for the design, drawing and supervision of various projects. They also provide the bill of quality for the project.

Estate department: Headed by the Executive Director Estate. They are in charge of the allocation and sales of finished houses. The department is fully in charge of the over all management of all the landed properties inclusive are the Federal Housing Authority's Housing Estate.

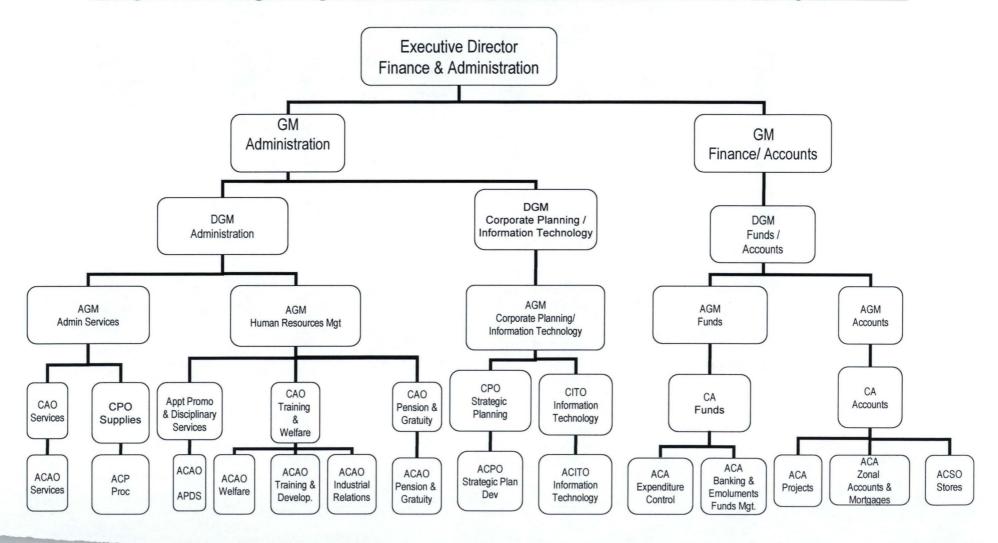
Finance department: The department is headed by an Executive Director Finance. They handle all payments in the Authority. This department is further broken down into various units for the effective running of the department. These include:

Cheque Room, Cash Room, expenditure control, Salaries and Wages,
Final Account, Stores unit, Bank Reconciliation, Project Account, Budget
and The Mortgage Unit.

Schedule I Federal Housing Authority Proposed Corporate Organogram



Schedule II Federal Housing Authority Proposed Organogram for Finance & Administration Department



2.3 Mortgage

Housing (shelter) is generally accepted to rank second after food among man's most basic needs. The expensive finance to fund a home project, and the desperate need for shelter has push man into going for a mortgage market.

Generally, mortgages are long time investments (assets).

2.3.1 Mortgage systems:

The dearth of housing stock are numerous though vary from country to country. The major one cause is the expensive finance to fund home purchase or construction. This high cost has made people turn to borrowing as the only resort.

The solution frequently proposed is the introduction of a mortgage market. A mortgage market can tap wider sources of funds and can facility improved risk management in the housing finance market.

2.3.2 Need for a mortgage.

The major need of a housing finance is to provide funds which home buyers need to purchase or build their own houses. The mortgage market has emerge as an attempt to channel more funds to the housing finance sector with the aim of satisfying demand for mortgages to a level

reasonable enough and by so doing moderate interest rates in addition to expanding levels of home ownership.

2.3.3 Benefit of a mortgage market.

Since the mortgage finance has all that it takes to channel more funds into the housing finance sector, its benefit can be said to be numerous, these includes:

- a) A reduction in the cost of mortgage credit in view of more efficient allocation of risk and reducing transaction cost of mortgage lending.
 By so doing, it leads to standardization of mortgage loan documentation.
- b) It leads to the smoothening of balance sheet mismatches by helping lenders overcome capital constraints associated with holding long-term assets against short term liabilities.

2.4 Need for a computerized system.

Over the last few years we have seen computing evolve from a niche technology associated with scientific and technical computing, into a business-innovating technology that is driving increased commercial adoption, deploy accelerate application performance, improve productivity and collaboration, and optimize the resiliency of the IT infrastructure. By accelerating application performance, companies can quickly deliver business results; achieving greater productivity, faster time to market, and increased customer satisfaction.

Technology also provides the ability to store, share and analyze large volumes of data, ensuring that people have access to information at the right time, which can improve decision making, employee productivity and collaboration. Technology improves resource utilization and reduces costs, while maintaining a flexible infrastructure that can cope with changing business demands, yet remain reliable, resilient and secure. When ever a system is computerized, resources are more fully utilized, resulting in decreased infrastructure costs, reduced processing time, increased responsiveness and faster time-to-market.

More importantly, the computerized system focus mainly on departmental integration and utilization of resources, enabling better access to information, mitigating business operating risk, more easily introducing new applications and systems across the company, and finally, managing heterogeneous systems while "keeping the whole thing running" at a reasonable total cost of ownership. The benefits that are most often aligned are:

- a) improved sharing of all IT resources offered and greater opportunity for cross-organizational collaboration;
- b) greater scalability of infrastructure by removing limitations inherent in the artificial IT boundaries existing between separate groups or departments;
- c) increased ability to launch new projects or initiatives without being limited by what systems are available to a single group or department;
- d) reduction of overall IT costs.

The computerized system solves the problem of managing information, which may include databases, files, storage spanning across heterogeneous resources, software and hardware.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN.

In line with the problem on ground it is of importance to adopt a method that is best suitable when used with other resources can perform task that best meet the information need of the organization. The method is to design a system that can handle and eliminate all the weaknesses earlier enlisted and in essence give room to smooth operation in the unit. The fact of how systems are integrated and operates is important in analysis.

3.1 RESEARCH INSTRUMENTS.

Primary data: list of beneficiary and their deductions from payroll.

Data from the mortgage unit.

Secondary data: test books, journals and previous research work.

3.2 SAMPLING TECHNIQUE:

Random sampling technique is adopted

3.3 METHOD OF DATA ANALYSIS:

Design of the proposed system.

In designing a system certain factors should be taken into consideration such as:

Maintainability

Compatibility

Portability

User friendly: it should be Acceptable

Readable: it should be Simple and clear

Reliability:- it should be dependable

It is of paramount importance to also consider the design elements

INPUT FORMAT:

The input consideration to a large extent is greatly influenced by the output needs. Consideration should be given to:-

- (a) data collection method and validation.
- (b) Types of input media available
- (c) Volumes of input documents
- (d) Design of input layout

OUTPUT FORMAT

It is important to consider what is required from the system before deciding how to go about putting it in place. The point to consider here are:

- (a) form
- (b) types
- (c) volume and frequency of reports and documentations.
- (d) Choice of output media.

FILES

In designing files, consideration are given to:

- a) the storage media
- b) the file organization and access method.
- c) The security of the file in question
- d) And the record layout.

PROCEDURES

This has to do with the steps involve in the processing of data.

The steps start with the original source document and end with the output document.

Before going further, it is important to evaluate the project base on some feasibility factors such as;

- i) Technical feasibility: this help to know if the technology needed is available and if it's in use.
- ii) Operational feasibility: it helps to find out weather the propose solution can fit in with existing operations and if the right information is readily available when required.
- iii) Economic feasibility: here we try to find out if there are available fund to implement the propose solution.

Priority is given to establishing procedure and control by value or quality in order to maintain the qualitative integrity of the data and security of the system. Like wise, flexibility of the process is considered to ensure adaptability to different varieties of changes in a near future.

REQUIREMENTS

The proposed requirements here includes

- a) Computer hardware: this has to do with the physical components that make up a computer system. In this research work, consideration for the choice of hardware should go along with the volume of data, the memory space and the processing speed. The following requirements are necessary. They include:
 - i) Hard disc type:- this is the fixed primary storage device used to store the large volume of data. Since data entry and a lot of file creation will be involved, it will be reasonable enough to have at least 40GB of memory space for the proposed system.
 - ii) Ram:- although this is the temporary storage device but a very important feature, which ever size that is chosen from the beginning, it can be upgraded with time.

- iii) Processor type:- the speed of the computer has to do with the type of processor in place. It controls all the other component of the system and carries out the mathematical, arithmetic and logical operations within the computer. A processor with a reasonable speed of 322MHZ will be required due to the nature of processing that will take place.
- iv) Peripherals:- this has to do with some external hard ware that is needed in order to make the processing more effective: such as
 - a) Flash disc or a CD drive:- used for transferring information from one system to another.
 - b) UPS:- use to prevent power failure or interruption and lost of unsaved data during data input and computer processing.
 - c) A printer:- it enable the print out of report in a hard copy.

3.4 BENEFIT OF THE PROPOSED SYSTEM.

The benefit to be derived from the proposed system can not be over emphasized, in the end of this researched work the organization will have:-

- a) a computerizes mortgage system
- b) better service delivery
- c) a faster way of doing business
- d) an easier method of retrieving information,
- e) a timely report generation for decision making
- f) and an efficient mortgage operation.

SOFTWARE CAPABILITY

- Accepting data about types of houses
- Accepting data to register names and numbers of beneficiaries of mortgage scheme
- Accept data to receive payments made by beneficiaries
- Accept data to receive computed liabilities of beneficiaries
- Compute monthly interests for a particular beneficiary/staff
- Compute monthly interest for all beneficiary /staff
- Generate and print statement of account for all beneficiary /staff
- Generate and print statement of account for any expense, income,
 liability accounts, etc

3.5 OBJECTIVE OF THE PROPOSED SYSTEM.

The objective of this proposed system are:-

- i) speed:- a faster way of processing data
- ii) a secure and sound management of mortgage funds.
- iii) the need for accountability
- iv) a simplify mortgage administration.

PROGRAM IMPLEMENTATION.

Computer soft ware:-the soft ware to be used to implement this program shall involve the used of MySQL and Borland Delphi 7.

Delphi 7, is a programming language.

SQL(Standard query language) is a software written in a programming language to keep data in a structured way.

MySQL software:

- It has an object oriented capability i.e, it has the ability to link up with various data bases and it is not restricted to any programming language.
- It is a structured language.
- It is a relational database management (RDM) system that uses standard query language to process data into information. i.e it has, that ability to relate different data with out problem.
- It is light and do not consume so much of the system resources ie
 - i. it do not require too much energy to process.
 - ii. Do not use up much of the system RAM

ADVANTAGES OF THE SOFT WARE.

- a) It makes generation of the statement of account easier.
- b) It allow copies of the record to be kept electronically.
- c) When copies are kept electronically, it makes it more viable.
- d) The financial position of the mortgage organization can be easily ascertain.

CHAPTER FOUR

SOFTWARE DESIGN AND IMPLEMENTATION.

In designing a good program, emphases are given to some very important factors like:- the program should be user friendly, cost effective, reliable and should be easy to maintain.

The design stage.

Detail information about the input and the output date should be determine at this point because this stage define the detailed outline on how the highlighted problems can be solved which usually, is in an algorithm form. A flow chart was used for this purpose.

The coding stage.

The process here involved the translation of the stated algorithm into a language that is understandable by the computer.

The testing stage.

A test check is conducted on the coded program to ensure that it works.

When this happens, and the result compared with the previous run and if the result meets the required specification, it will be concluded that the new system is working.

4.0 PROGRAM PRESENTATION.

The program can only be accessed with the use of a password, which when entered correctly; the mortgage account opening screen appears where a fresh mortgagee can be entered into the system. The program consist of eight main tabs which comprises the location screen, the house type screen, the mortgage type screen, the mortgage details screen, control account code screen, charge accounts/ receive payments screen, reports screen and a user name screen.

The location screen present the area, town where all the house types are situated and the house type screen give a comprehensive description of the type of house and number of bedroom in it. This two screens are created to standardize the way data are been entered into the computer.

The "mortgage type" screen gives a picture of the mortgage types and reference numbers which is made up of the location, house type, the mortgage tenure and then from the housing principal, the interest to be paid on the house on a monthly basis is also included.

The "Mortgagee details" screen provides the mortgage account opening screen where records are created for a beneficiary of the

mortgage. It gives a narration of the beneficiary detailed account in relation to the house type.

The control account screen has to do with those accounts which are not necessary mortgage related such as mortgage interest, payments and stock of mortgage Houses.

The charge accounts/ receive payments has to do with the transaction details. It shows if an account has receives value, it will be debited or if an account has issued value it will be credited.

The reports allow one to view and print two accounts, mortgage account and control account.

Under the mortgage account, reports to be generated are

- Balance of all mortgage accounts
- Reference as output
- Statement of account
- Summary of restricted data.

CHAPTER FIVE

Conclusion and Recommendations.

The project is aimed at showing the practical aspect of the importance of using computer in mortgage payments in Federal Housing Authority.

MySQL and Delphi 7 a relational database management (RDM) system that uses Standard Query Language to process data into information was used to achieve this and data collected from the Mortgage unit and Estate department was used for analyses.

The study reviews the mortgage record systems in the Federal Housing

Authority. The process begins with the allocation of a housing unit under the

Federal Housing Authorities staff housing scheme, then the repayment

process. The initial procedure involves the manual calculation of the

repayment period amount and the interest rate which most often generates

inaccurate and error report.

Conclusion

The computerization of mortgage records provides increase accountability. It is shown from this research work that a computerized system has to a greater

extend reduce the volume of space occupied by filing system and has reduce the time spent in document retrieval due to manual working system.

The program has to a greater extent tried to provide a solution to problems often encountered during processing of mortgage records and payments in the Federal Housing Authority.

The designed program has to a large extent meet with the mortgage basic needs and has reduced to a minimum the bottle neck that has occurred in the past in processing mortgage records.

To computerize a mortgage records means to enhance Federal Housing Authority's Mortgage operations and in turn ease the accessibility to mortgage information such as house allocation, cost of mortgage and re payment status.

It was observed that the use of computer has significantly improved and structured method of processing records, enhanced accuracy, efficiency, speed and has reduce unnecessary stress on man power. It shows a higher standard when compared with manual system.

Recommendations

The proposed system is to ensure maximum benefit as such it is recommended that:

- A) Staff in the unit should be trained to handle the operational aspect of the job.
- B) Computers with adequate memory should be procured and the service of a good programmer should be employed to make the process more effective and realistic.
- C) The system should be upgraded and service from time to time in order to meet up with new trend in technology, also to reduce system mishap.

References

Azhar Kazmi (1999) Business Policy.

Tata McGraw-Hill Publishing

company Limited.

Brain K. Williams(1985) Computers and Information

Pprocessing with Business

Application. Cumming Publishing

Company, Inc USA.

Paul T J James (1996) Total Quality Management-

:an introductory text.

T,J Press (Padstow) Limited,

Great Britain.

Prince R.O Badmus (2008) System Analysis and design.

(unpublished) FUT Minna.

Journals / Magazine

(June/August 2003)

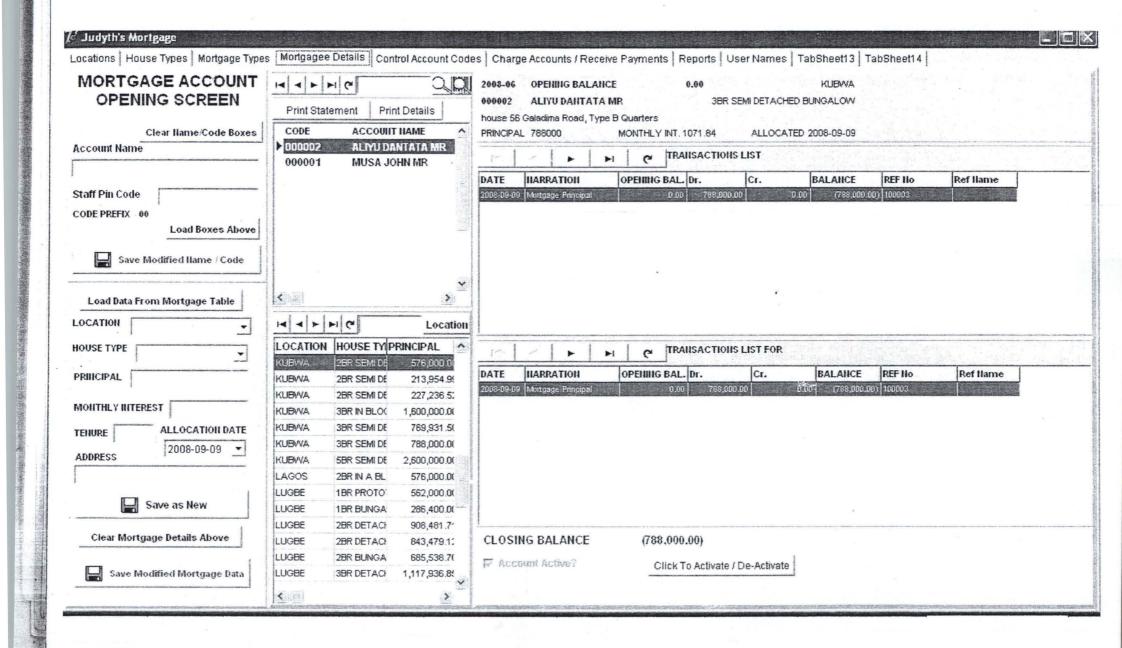
FHA news magazine(2007) "A new beginning".

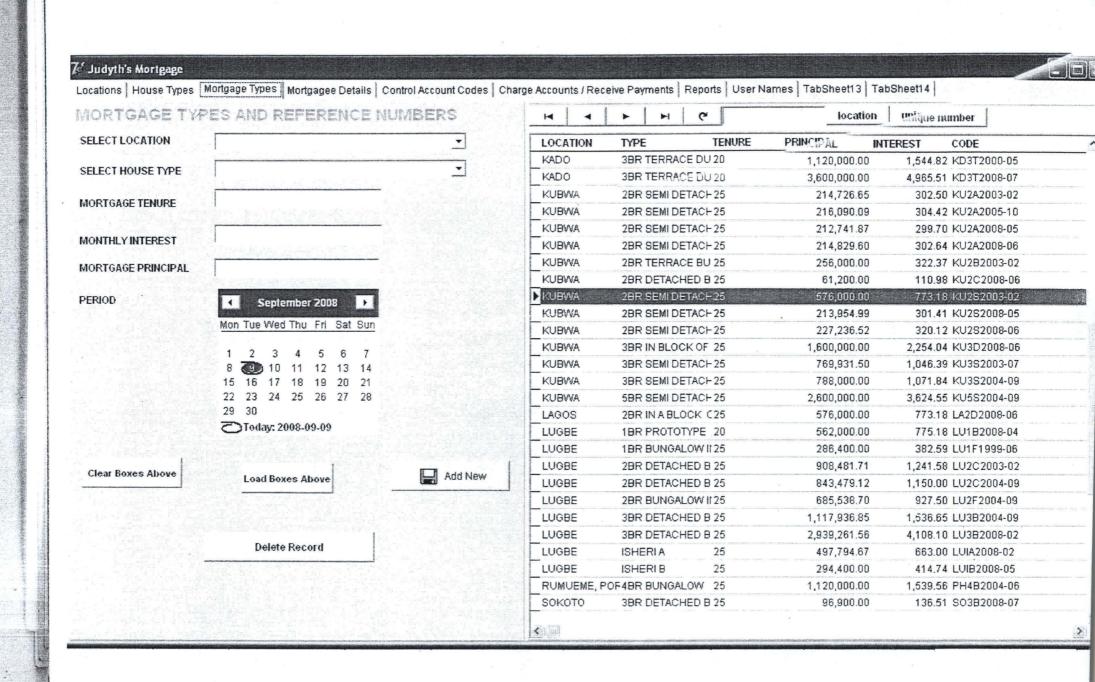
FHA Study team(1976-1985) "A ten year development Programme".

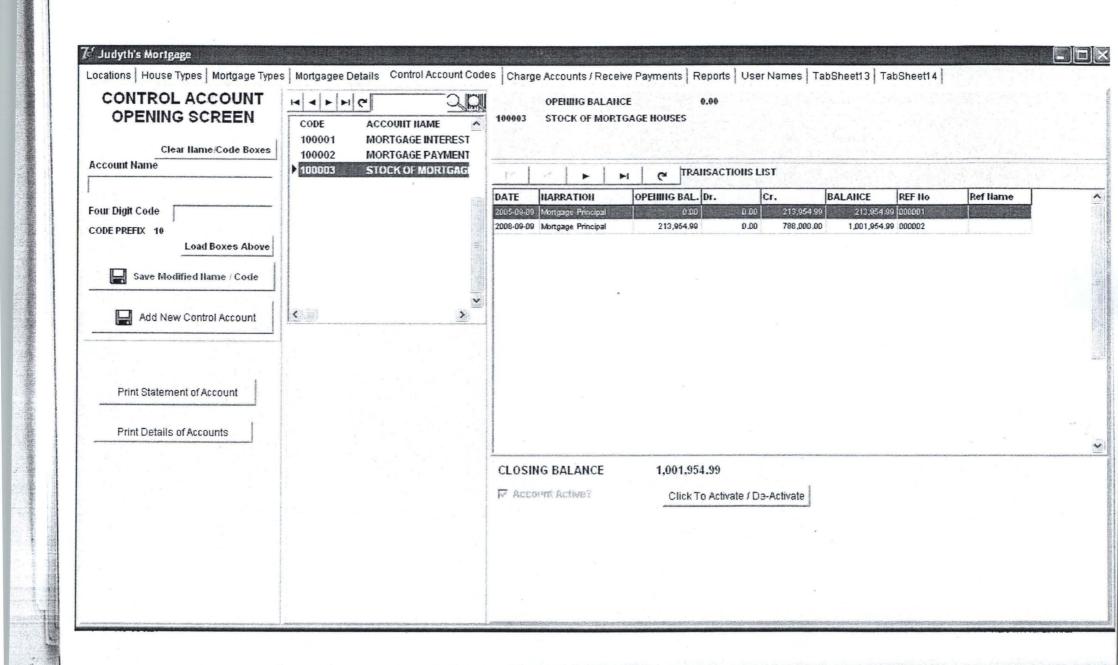
Journals of Association of Housing Housing Today Corporations of Nigeria

Technical committee (1991-2000) FHA Corporate plan On Privatization & commercialization.









S PROJECT

STATEMENT OF ACCOUNT

NT NUMBER000002

ALIYU DANTATA MR

56 Galadima Road, Type B Quarters

TYPE: 3BR SEMI DETACHED BUNGALOW

KUBWA

PAL =N=788,000.00

MONTHLY INTEREST =N= 1,071.84

DATE ALLOCATED: 2008-09-09

NARRATION

REF CODE:

Dr.

BALANCE

9 Mortgage Principal

100003

788,000.00

0.00

Cr.

(788,000.00)

1CS PROJECT

STATEMENT OF ACCOUNT

UNT NUMBER000001

MUSA JOHN MR

32 B Road Kubwa

E TYPE: 2BR SEMI DETACHED BUNGALOW

KUBWA

IPAL =N=213,954.99

MONTHLY INTEREST =N= 301.41

DATE ALLOCATED:2005-09-09

REF CODE: Dr. Cr. **BALANCE NARRATION** -09 Mortgage Principal 100003 213,954.99 0.00 (213,954.99) -09 Interest for Sep, 2008 0.00 (216,366.27) 2,411.28

MORTGAGE LISTING REFERENCED DATA [ACCOUNT NAMES]

TOTAL

216,366.27

PRINTED ON :2008-09-09 12:55:15

STAEMENT OF ACCOUNT

OCK OF MORTGAGE HOUSES

RRATION	REF:	Dr.	Cr.	BALANCE	
tgage Principal	000001	0.00	213,954.99	213,954.99	
tgage Principal	000002	0.00	788,000.00	1,001,954.99	

STAEMENT OF ACCOUNT

MORTGAGE INTEREST

NARRATION	REF:	Dr.	Cr. BALANCE
lj:jl	100002	0.00 890	.00 890.00
Interest for Sep, 2008	000001	0.00 2,411.	.28 3,301.28

```
unit J_MortMF_F;
interface
uses
```

Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms, Dialogs, ComCtrls, StdCtrls, DB, MemDS, DBAccess, MyAccess, ExtCtrls, Buttons, Grids, DBGrids, DBCtrls, ToolWin, Mask, Gauges, QRCtrls, QuickRpt, jpeg;

type TJ MortMF = class(TForm) PageControl1: TPageControl; TabSheet1: TTabSheet: TabSheet2: TTabSheet; TabSheet3: TTabSheet: TabSheet4: TTabSheet; TabSheet5: TTabSheet; TabSheet6: TTabSheet: TabSheet7: TTabSheet: TabSheet8: TTabSheet; TabSheet9: TTabSheet; TabSheet10: TTabSheet: Clxlocations: TMyQuery; LocationsDS: TDataSource; ClxMod xx: TMyQuery; Panel1: TPanel; Splitter1: TSplitter; Panel3: TPanel; Label2: TLabel; Label3: TLabel; Label4: TLabel; Edit1: TEdit; Edit2: TEdit; BitBtn1: TBitBtn; BitBtn2: TBitBtn; BitBtn3: TBitBtn; BitBtn4: TBitBtn; BitBtn5: TBitBtn; BitBtn6: TBitBtn; Panel4: TPanel; ToolBar1: TToolBar; DBNavigator1: TDBNavigator;

Edit3: TEdit; SpeedButton1: TSpeedButton; SpeedButton2: TSpeedButton;

```
procedure TJ MortMF.BitBtn2Click(Sender: TObject);
begin
cba;
end;
procedure TJ_MortMF.cba;
begin
edit1.Clear;
edit2.Clear;
edit1.SetFocus;
end;
procedure TJ MortMF.add new_locations;
var
variable01, variable02 : string;
variable03: integer;
begin
variable01 := Trim(edit1.Text);
variable02 := Trim(edit2.Text);
if variable01 = "then
 begin
  messagedlg('Please enter a new location', mtinformation, [mbok], 0);
  edit1.SetFocus;
  abort;
 end;
 if variable02 = "then
 begin
  messagedlg('Please enter a new location code',mtinformation,[mbok],0);
  edit2.SetFocus;
  abort;
 end
 else
 begin
  variable03 := length(variable02);
  if variable03 \Leftrightarrow 2 then
  begin
   messagedlg('Please enter a two digit location code',mtinformation,[mbok],0);
   edit2.SetFocus;
   abort;
  end
```

end;

```
end;
if not ClxLocations. Active then
 begin
 ClxLocations.SQL.Text := 'select * from locations';
 ClxLocations.Open;
 ClxLocations.IndexFieldNames := 'locations';
 end:
if ClxLocations.Locate('locations', vararrayof([variable01]),[locaseinsensitive]) then
 begin
 messagedlg('The location already exists. Enter another
location', mtinformation, [mbok], 0);
 edit2.SetFocus;
 abort;
 end
else
 begin
 if ClxLocations.Locate('acode', vararrayof([variable02]), [locaseinsensitive]) then
   messagedlg('The location code already exists. Enter another location
code',mtinformation,[mbok],0);
   edit2.SetFocus;
   abort;
  end
  else
  begin
   ClxLocations.Insert:
   ClxLocations.FieldByName('locations').AsString := variable01;
   ClxLocations.FieldByName('acode').AsString := variable02;
   ClxLocations.Post;
   cba;
  end:
 end;
end;
procedure TJ MortMF.BitBtn1Click(Sender: TObject);
begin
add new locations;
end:
procedure TJ MortMF.BitBtn4Click(Sender: TObject);
begin
save modifications locations;
end;
```

```
procedure TJ MortMF.save modifications locations;
variable01, variable02: string;
begin
variable01 := Trim(edit1.Text);
//variable02 := Trim(edit2.Text);
if ClxLocations. Active then
 begin
 if not ClxLocations. FieldByName ('locations'). IsNull then
  begin
   if variable01 = "then"
   begin
    messagedlg('Please enter a new location', mtinformation, [mbok], 0);
    edit1.SetFocus;
    abort;
   end:
   variable02 := ClxLocations.FieldByName('locations').AsString;
   if variable02 <> variable01 then
   begin
    if ClxLocations.Locate('locations', vararrayof([variable01]),[locaseinsensitive]) then
     messagedlg('The location already exists. Enter another
location', mtinformation, [mbok], 0);
     edit2.SetFocus;
     abort;
     end
    else
     if messagedlg('Do you want to change ' + variable02 + ' to ' + variable01,
mtconfirmation,[mbyes,mbno],0) = mryes then
      begin
       ClxMod xx.Close;
       ClxMod xx.SQL.Text := 'update slaccounts set location = ' +
quotedstr(variable01) +
       'where location = ' + quotedstr(variable02);
       ClxMod xx.Execute;
       ClxMod xx.Close;
       ClxMod xx.SQL.Text := 'update slnames set locations = ' + quotedstr(variable01)
       ' where locations = ' + quotedstr(variable02);
       ClxMod xx.Execute;
       ClxMod xx.Close;
       ClxMod xx.SQL.Text := 'update mortgagetypes set location = ' +
quotedstr(variable01) +
```

```
' where location = ' + quotedstr(variable02);
      ClxMod xx.Execute;
      ClxLocations.Edit;
      ClxLocations.FieldByName('locations').AsString := variable01;
      ClxLocations.Post;
     end;
    end:
   end:
  end;
 end;
end;
procedure TJ MortMF.BitBtn5Click(Sender: TObject);
begin
save modifications code;
end;
procedure TJ MortMF.save modifications code;
variable01, variable02 : string;
variable03: integer;
begin
//variable01 := Trim(edit1.Text);
variable02 := Trim(edit2.Text);
if ClxLocations. Active then
 if not ClxLocations. FieldByName('acode'). IsNull then
  begin
   if variable02 = "then"
   begin
    messagedlg('Please enter a new location code',mtinformation,[mbok],0);
    edit2.SetFocus;
    abort;
   end
   else
   begin
    variable03 := length(variable02);
    if variable03 \Leftrightarrow 2 then
    begin
     messagedlg('Please enter a two digit location code', mtinformation, [mbok], 0);
     edit2.SetFocus;
     abort;
     end;
    variable01 := ClxLocations.FieldByName('acode').AsString;
```

```
if variable01 <> variable02 then
    begin
     if ClxLocations.Locate('acode',vararrayof([variable02]),[locaseinsensitive]) then
      messagedlg('The location code already exists. Enter another location
code',mtinformation,[mbok],0);
      edit2.SetFocus;
      abort:
     end
     else
     begin
      ClxLocations.Edit;
      ClxLocations.FieldByName('acode').AsString := variable02;
      ClxLocations.Post;
      cba;
     end;
    end;
   end;
  end:
 end:
end;
procedure TJ MortMF.BitBtn6Click(Sender: TObject);
begin
if ClxLocations. Active then
 begin
 if not ClxLocations. FieldByName ('Locations'). IsNull then
  begin
  ClxLocations.Delete;
  end;
 end;
end;
procedure TJ_MortMF.BitBtn3Click(Sender: TObject);
begin
lba;
end;
procedure TJ MortMF.lba;
begin
if Clxlocations. Active then
 begin
 if not Clxlocations. Field By Name ('acode'). Is Null then
  edit1.Text := Clxlocations.FieldByName('locations').AsString;
```

```
edit2.Text := Clxlocations.FieldByName('acode').AsString;
  end:
 end;
end;
procedure TJ MortMF.SpeedButton2Click(Sender: TObject);
begin
search locations code;
end:
procedure TJ MortMF.search locations code;
variable01: string;
begin
if ClxLocations. Active then
 begin
 variable01 := Trim(edit3.Text);
 if variable01 <> " then
  begin
   if not
ClxLocations.Locate('acode',vararrayof([variable01]),[locaseinsensitive,lopartialkey])
then
   begin
    messagedlg('Code' + variable01 + 'does not exist',
    mtinformation,[mbok],0);
   end
  end;
 end;
end;
procedure TJ MortMF.SpeedButton1Click(Sender: TObject);
search locations;
end;
procedure TJ MortMF.search locations;
variable01: string;
begin
if ClxLocations. Active then
 begin
  variable01 := Trim(edit3.Text);
  if variable01 <> " then
  begin
```

```
if not
ClxLocations.Locate('locations', vararrayof([variable01]), [locaseinsensitive, lopartialkey])
then
   begin
    messagedlg('Location' + variable01 + 'does not exist',
    mtinformation,[mbok],0);
   end
  end;
 end;
end;
procedure TJ MortMF.BitBtn8Click(Sender: TObject);
begin
cba housetypes;
end;
procedure TJ MortMF.cba housetypes;
begin
edit4.Clear;
edit5.Clear;
edit4.SetFocus;
end;
procedure TJ MortMF.lba housetypes;
begin
if Clxhousetypes. Active then
 if not Clxhousetypes.FieldByName('acode').IsNull then
  begin
   edit4.Text := Clxhousetypes.FieldByName('housetype').AsString;
   edit5.Text := Clxhousetypes.FieldByName('acode').AsString;
  end;
 end;
procedure TJ MortMF.BitBtn9Click(Sender: TObject);
begin
lba housetypes;
end;
procedure TJ_MortMF.add new housetypes;
var
variable01, variable02: string;
variable03: integer;
begin
```

```
variable01 := Trim(edit4.Text);
variable02 := Trim(edit5.Text);
if variable01 = "then"
begin
 messagedlg('Please enter a new house type',mtinformation,[mbok],0);
 edit4.SetFocus:
 abort;
end:
if variable02 = "then"
 messagedlg('Please enter a new house type code',mtinformation,[mbok],0);
 edit5.SetFocus;
 abort;
 end
else
begin
 variable03 := length(variable02);
 if variable03 \Leftrightarrow 2 then
  begin
  messagedlg('Please enter a two digit house type code',mtinformation,[mbok],0);
  edit5.SetFocus;
  abort;
  end
 end;
if not Clxhousetypes. Active then
 begin
 Clxhousetypes.SQL.Text := 'select * from housetypes';
 Clxhousetypes.Open;
 Clxhousetypes.IndexFieldNames := 'housetype';
 end:
if Clxhousetypes.Locate('housetype',vararrayof([variable01]),[locaseinsensitive]) then
 begin
 messagedlg('The housetype already exists. Enter another
housetype',mtinformation,[mbok],0);
 edit5.SetFocus;
 abort:
 end
else
 begin
 if Clxhousetypes.Locate('acode',vararrayof([variable02]),[locaseinsensitive]) then
   messagedlg('The housetype code already exists. Enter another housetype
code',mtinformation,[mbok],0);
```

```
edit5.SetFocus;
  abort;
  end
  else
  begin
  Clxhousetypes.Insert;
   Clxhousetypes.FieldByName('housetype').AsString := variable01;
   Clxhousetypes.FieldByName('acode').AsString := variable02;
   Clxhousetypes.Post;
  cba housetypes;
  end:
 end;
end;
procedure TJ MortMF.BitBtn7Click(Sender: TObject);
begin
add new housetypes;
end;
procedure TJ MortMF.BitBtn19Click(Sender: TObject);
begin
change password;
end;
procedure TJ MortMF.change password;
variable01, variable02: string;
begin
variable01 := trim(edit10.Text);
if variable01 = "then
 begin
 messagedlg('Please enter your old password',mtinformation,[mbok],0);
 edit10.SetFocus;
 end
else
 begin
 variable02 := logonname;
 if ClxLogonnames. Active then
  begin
  if Clxlogonnames.Locate('lg',vararrayof([variable02]),[]) then
    If Clxlogonnames.FieldByName('pp').AsString = variable01 then
    begin
```

```
label11. Visible := true;
     edit11.Visible := true;
     edit12.Visible := true;
     bitbtn20.Visible := true;
     label10. Visible := false;
     edit10.Visible := false;
     bitbtn19.Visible := false;
     edit10.Clear;
    end;
   end
  else
   begin
   messagedlg('Please enter your old password',mtinformation,[mbok],0);
    edit10.SetFocus;
   end:
  end;
end;
end;
procedure TJ MortMF.BitBtn20Click(Sender: TObject);
variable01, variable02 : string;
begin
variable01 := trim(edit11.Text);
variable02 := trim(edit12.Text);
if variable01 = "then
 begin
 messagedlg('You have not entered a value',mtinformation,[mbok],0);
 edit11.SetFocus;
 end
else
 begin
 if variable02 = "then
  begin
   messagedlg('You have not entered a value',mtinformation,[mbok],0);
   edit12.SetFocus;
  end
  else
  begin
   if variable01 \rightarrow variable02 then
    messagedlg('The values you have entered are not the same',mtinformation,[mbok],0);
    edit11.SetFocus;
```

```
end
   else
   begin
    Clxlogonnames.Edit;
    Clxlogonnames.FieldByName('pp').AsString := variable01;
    Clxlogonnames.Post;
    label11. Visible := false;
    edit11.Visible := false;
    edit12.Visible := false;
    bitbtn20.Visible := false;
    edit11.Clear;
    edit12.Clear;
    label10. Visible := true;
    edit10. Visible := true:
    bitbtn19.Visible := true;
   end;
  end;
 end;
end;
procedure TJ_MortMF.BitBtn22Click(Sender: TObject);
begin
cba usernames;
end;
procedure TJ_MortMF.cba usernames;
begin
edit13.Clear;
edit14.Clear;
edit13.SetFocus;
end;
procedure TJ_MortMF.save_modifications_housetypes;
variable01, variable02: string;
begin
variable01 := Trim(edit4.Text);
//variable02 := Trim(edit2.Text);
```

```
if Clxhousetypes. Active then
 begin
 if not Clxhousetypes.FieldByName('housetype').IsNull then
  begin
  if variable01 = "then"
   begin
   messagedlg('Please enter a new housetype',mtinformation,[mbok],0);
    edit4.SetFocus;
    abort:
   end:
   variable02 := Clxhousetypes.FieldByName('housetype').AsString;
   if variable02 <> variable01 then
   begin
   if Clxhousetypes.Locate('housetype',vararrayof([variable01]),[locaseinsensitive])
then
    begin
     messagedlg('The housetype already exists. Enter another
housetype',mtinformation,[mbok],0);
     edit4.SetFocus:
     abort:
    end
    else
    begin
     if messagedlg('Do you want to change ' + variable02 + ' to ' + variable01,
mtconfirmation,[mbyes,mbno],0) = mryes then
      begin
      ClxMod xx.Close;
      ClxMod xx.SQL.Text := 'update slaccounts set housetype = ' +
quotedstr(variable01) +
      'where housetype = ' + quotedstr(variable02);
      ClxMod xx.Execute;
      ClxMod xx.Close:
      ClxMod xx.SQL.Text := 'update slnames set housetype = ' +
quotedstr(variable01) +
      'where housetype = ' + quotedstr(variable02);
      ClxMod xx.Execute;
      ClxMod xx.Close;
      ClxMod xx.SQL.Text := 'update mortgagetypes set housetype = ' +
quotedstr(variable01) +
      'where housetype = ' + quotedstr(variable02);
      ClxMod xx.Execute;
      Clxhousetypes.Edit;
      Clxhousetypes.FieldByName('housetype').AsString := variable01;
```

```
Clxhousetypes.Post;
    end;
   end;
  end;
 end:
end:
procedure TJ MortMF.BitBtn10Click(Sender: TObject);
begin
 save modifications housetypes;
end:
procedure TJ MortMF.save modifications code housetypes;
var
variable01, variable02: string;
variable03: integer;
begin
//variable01 := Trim(edit1.Text);
variable02 := Trim(edit5.Text);
if Clxhousetypes. Active then
 begin
 if not Clxhousetypes.FieldByName('acode').IsNull then
  begin
   if variable02 = "then"
   begin
    messagedlg('Please enter a new house type code',mtinformation,[mbok],0);
    edit5.SetFocus;
    abort;
    end
   else
    begin
    variable03 := length(variable02);
    if variable03 \Leftrightarrow 2 then
     messagedlg('Please enter a two digit house type code',mtinformation,[mbok],0);
     edit5.SetFocus;
     abort:
     end;
    variable01 := Clxhousetypes.FieldByName('acode').AsString;
    if variable01 <> variable02 then
     begin
     if Clxhousetypes.Locate('acode',vararrayof([variable02]),[locaseinsensitive]) then
      begin
```

```
messagedlg('The house type code already exists. Enter another location
code',mtinformation,[mbok],0);
      edit5.setFocus;
      abort;
     end
     else
     begin
      Clxhousetypes.Edit;
      Clxhousetypes.FieldByName('acode').AsString := variable02;
      Clxhousetypes.Post;
      cba housetypes;
     end;
    end;
   end;
  end;
 end;
end;
procedure TJ MortMF.BitBtn11Click(Sender: TObject);
save modifications code housetypes;
end;
procedure TJ MortMF.BitBtn12Click(Sender: TObject);
begin
if Clxhousetypes. Active then
 begin
 if not Clxhousetypes.FieldByName('housetype').IsNull then
   Clxhousetypes.Delete;
  end;
 end;
end;
procedure TJ MortMF.save mortgagetypes;
variable01, variable02, variable04, variable05, variable06, variable07,
variable011, variable022, variable10: string;
variable03: integer;
variable08, variable09: currency;
variable01 := dblookupcombobox1.Text;
variable02 := dblookupcombobox2.Text;
 variable04 := trim(edit7.Text);
 variable05 := trim(edit8.Text);
```

```
variable06 := trim(edit16.Text);
variable07 := formatdatetime('yyyy-mm',monthcalendar1.Date,localset);
variable08 := 0;
variable09 := 0;
if variable01 = "then"
begin
 messagedlg('Please select a new location',mtinformation,[mbok],0);
 DBLookupCombobox1.SetFocus;
 abort:
end;
if variable02 = "then
begin
 messagedlg('Please select a new house type',mtinformation,[mbok],0);
 DBLookupCombobox2.SetFocus;
 abort:
end
else
begin
 if ClxLocations. FieldByName('locations'). AsString = variable01 then
  variable011 := ClxLocations.FieldByName('acode').AsString;
  end
 else
  begin
  if Clxlocations.Locate('locations', vararrayof([variable01]),[locaseinsensitive]) then
   variable011 := ClxLocations.FieldByName('acode').AsString;
   end
  else
   begin
   messagedlg('Reselect location can not find location code',mtinformation,[mbok],0);
   dblookupcombobox1.SetFocus;
   abort;
   end:
  end;
 end;
if variable02 = "then"
 begin
 messagedlg('Please enter a new house type',mtinformation,[mbok],0);
 DBLookupCombobox2.SetFocus;
 abort;
```

```
end;
procedure TJ MortMF.bal mort accts;
variable01, variable02: string;
begin
//variable02 := Clxactiveperiod.fieldbyname('activeperiod').AsString;
variable02 := '2008-06';
if variable02 <> " then
 begin
 variable01 := 'select * from slaccounts, slnames where slaccounts.actype = ' +
quotedstr('H') +
  ' and slnames.acode = slaccounts.acode and slaccounts.period = ' +
quotedstr(variable02);
 ClxBalMod xx.Close;
 ClxBalMod xx.SQL.Text := variable01;
 ClxBalMod xx.Open;
 ClxBalMod xx.IndexFieldNames := 'aname';
 QRLabel197.Caption := 'PRINTED BY ' + Logonname;
 //QRLabel74.Caption := 'PRINTED BY ' + Logonname;
 Quickrep19.Preview;
 end;
end;
procedure TJ MortMF.vdr control;
var
variable03, variable04, variable07, variable08,
variable09: string;
begin
 variable09 := ";
 if checkbox6. Checked then
 begin
  variable08 := Trim(edit39.Text);
  variable09 := variable09 + '; ' + 'Records restricted to ' + variable08;
  if variable08 = "then
  begin
```

messagedlg('Please enter a reference number before you click on this

button',mtinformation,[mbok],0);

abort; end end;

```
if CLxGLNames.Active then
 begin
 variable03 := CLxGLNames.FieldByName('acode').AsString;
 variable04 := CLxGLNames.FieldByName('activeperiod').AsString;
  begin
  if radiobutton5. Checked then
   begin
   //CLxGLaccount yx.Close;
   variable07 := 'select * from SLaccounts where acode = ' + quotedstr(variable03) +
   'and actype = ' + quotedstr('F') + 'and period >= ' + quotedstr(variable04);
   //CLxGLaccount yx.SQL.Text := variable07;
   //CLxGLaccount yx.Open;
   vearlabel.Caption := 'TRANSACTIONS LISTING FROM ' + variable04:
    variable09 := variable09 + '; ' + 'Credit and Debit transactions';
   end
  else
   begin
   if radiobutton6. Checked then
    begin
     //CLxGLaccount vx.Close;
     variable07 := 'select * from SLaccounts where acode = ' + quotedstr(variable03) +
     ' and actype = ' + quotedstr('F') + ' and period >= ' + quotedstr(variable04) + ' and tt
= ' + quotedstr('DR'):
     //CLxGLaccount yx.SQL.Text := variable07;
     //CLxGLaccount yx.Open;
     vearlabel.Caption := 'TRANSACTIONS LISTING FROM ' + variable04:
     variable09 := variable09 + '; ' + 'Debit transactions only';
    end
    else
    begin
     //CLxGLaccount yx.Close;
     variable07 := 'select * from SLaccounts where acode = ' + quotedstr(variable03) +
     ' and actype = ' + quotedstr('F') + ' and period >= ' + quotedstr(variable04) + ' and tt
= ' + quotedstr('CR');
     //CLxGLaccount yx.SQL.Text := variable07;
     //CLxGLaccount yx.Open;
     yearlabel.Caption := 'TRANSACTIONS LISTING FROM ' + variable04;
     variable09 := variable09 + '; ' + 'Credit transactions only';
    end;
   end
  end;
 if checkbox6. Checked then
  begin
```

```
variable07 := variable07 + ' and foliono = ' + quotedstr(variable08);
  end:
 variable07 := variable07 + 'order by gitaen';
 CLxGLaccount yx.Close;
 CLxGLaccount yx.SQL.Text := variable07;
 CLxGLaccount yx.Open;
 label83.Caption := variable09;
 end;
end;
procedure TJ MortMF.BitBtn46Click(Sender: TObject);
vdr control;
end;
procedure TJ MortMF.bal nonmort accts;
variable01, variable02 : string;
//variable02 := Clxactiveperiod.fieldbyname('activeperiod').AsString;
variable02 := '2008-06';
if variable02 <> " then
 begin
  variable01 := 'select * from slaccounts, glnames where slaccounts.actype = ' +
quotedstr('H') +
  ' and glnames.acode = slaccounts.acode and slaccounts.period = ' +
quotedstr(variable02);
  ClxBalMod xx.Close;
  ClxBalMod xx.SQL.Text := variable01;
  ClxBalMod xx.Open;
  ClxBalMod xx.IndexFieldNames := 'aname';
  QRLabel205.Caption := 'PRINTED BY ' + Logonname;
  Quickrep20.Preview;
 end;
end;
procedure TJ MortMF.ref as output CONTROL;
begin
QRLabel214.Caption := 'PRINTED BY ' + Logonname;
QRLabel225.Caption := label83.Caption;
Quickrep21.Preview;
end;
```

```
procedure TJ_MortMF.print_statement_control;
begin
Quickrep2.preview;
end;

procedure TJ_MortMF.print_rest_data_control;
begin
QRLabel226.Caption := 'PRINTED BY ' + Logonname;
QRLabel236.Caption := label83.Caption;
Quickrep22.Preview;
end;

procedure TJ_MortMF.TabSheet6Show(Sender: TObject);
begin
op_charge_cma;
end;
end.
```