DESIGN AND IMPLEMENTATION OF A DATABASE MANAGEMENT SYSTEM FOR A PLANNING AND ENGINEERING DEPARTMENT OF A LOCAL GOVERNMENT

CASE STUDY: KIRA TOWN COUNCIL WAKISO DISTRICT

BY

BETTY ETHEL NALUYIMA

BIT / 17844 / 71/ DU

A PROJECT REPORT SUBMITTED TO THE SCHOOL OF COMPUTER STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY OF KAMPALA INTERNATIONAL UNIVERSITY

DATE: APRIL 2010

DECLARATION

I **Betty Ethel Naluyima** do hereby declare to the best of my knowledge that this Graduation Project is my original work and that it has never been submitted to any University or any other Institution.

The Literature and Citations in from other people's work have been duly referenced in the footnotes and bibliography.

Signed:

.....

Student

Betty Ethel Naluyima

22nd April 2010

Date

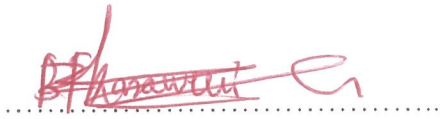
DEDICATION

This Report is dedicated to my late parents who encouraged me to continuously add-on a level of Education in my life.

APPROVAL

I certify that this Project Report is an original work of BETTY ETHEL NALUYIMA and has been submitted with my approval.

Signed:



.....

Supervisor

24TH APRIL 2010

.....

Date

Eng.Faik Kasawuli

Lecturer- School of Computer Studies

Kampala International University

P.O Box 20000,

Kampala.

ACKNOWLEDGEMENT

My heartfelt thanks go to the Almighty God who has enabled me to realize several achievements in my life including the accomplishment of this Project.

I am indebted to Kira Town Council Staff, the Councillors and all my classmates (Cathy, Michael, Helen,Shiribo,Daniel,Rita and Nathan) who helped me in one way or the other in this Project. Particularly I wish to thank the Town Council Mayor-His Worship Mamerto Mugerwa, the Town Clerk- Hajji Ssebadduka Authman, the Town Engineer- Eng. Sam Mwesigwa , The Physical Planner- Mr. Kato Geoffrey . the Economic Planner and all the Councillors for the encouragement and Support they rendered me all the time I consulted them concerning this Project.

I wish to thank my Supervisor – Eng Faik Kasawuli for all his efforts as to enable me realize the completion of this Project. In addition special thanks go to all my lecturers of the School of Computer Studies -Kampala International University and all those teachers whose hands have natured me as to be a very responsible citizen of this Country -Uganda. I also express cordial gratitude to my brother Aaron Kawunda and his wife Harriet Kawunda for their unavoidable resourceful ideas, which have enabled me to work tirelessly in life.

Finally, Special thanks go to my husband, Eng.Thaddeus Lugolobi for his encouragement, advise and bearing with me all this time I have spent at the University.

ABSTRACT

This Report describes the Design and Implementation of a Database Management System (DBMS) for Kira Town Council – a Local Government found in Wakiso District, Uganda

The System was developed to reduce the problems associated with the traditional file-based management system in the Town Council , using Microsoft Access and Visual Basic 6.0. It underwent the different stages of the System Development Life Cycle (SDLC) such as feasibility study, system design, testing and implementation. It comprises of the database of all the Town Council records for Clients, Staff and Assets. Reports can be generated for each of the records. Its Security is ensured by use of password protection.

The System's Results demonstrate that it meets Kira Town Council's database needs and that such problems like data redundancy are reduced, in effect saving a lot of the Local Government's resources.

TABLE OF CONTENTS

CHAPTER ONE

BACKGROUND

1.0 Introduction

This Project was intended to be a baseline for the design and Implementation of a Database Management System for the Planning and Engineering Department of Kira Town Council. This Chapter particularly covers the Background, Location, and Statement of the Problem, the Scope, Research Questions, Purpose and Objectives of the Study.

1.1 Background to the Study

Kira Town Council is one of Uganda's Local Governments (LG). As an Urban Authority, it has a role to authorize the construction of buildings in its area of Jurisdiction.

For each building to be erected, a well- approved plan is to be presented to the Town Council. Such a plan should have an approved Architect's stamp, a Title block which should reflect; the nature of the Structure (Commercial or Residential), the drawing number, the date when its drawn, the location (including Ward and Zone) and many more details as it may necessitate.

Despite such a requirement of a well proposed plan for a given building, many people do not adhere to the requirements of Construction in this Town Council. Many would - be residents of this area, start the Construction without any permission from the Town Council. They at times build in other people's plots or in roads, block drainage channels, build substandard houses, and cause such more related problems. As the Town Council

Agents get hold of them. many of these wrong- doers pretend they submitted plans to the Town Council and probably the plans were lost, others keep forging Town Council authorization documents.

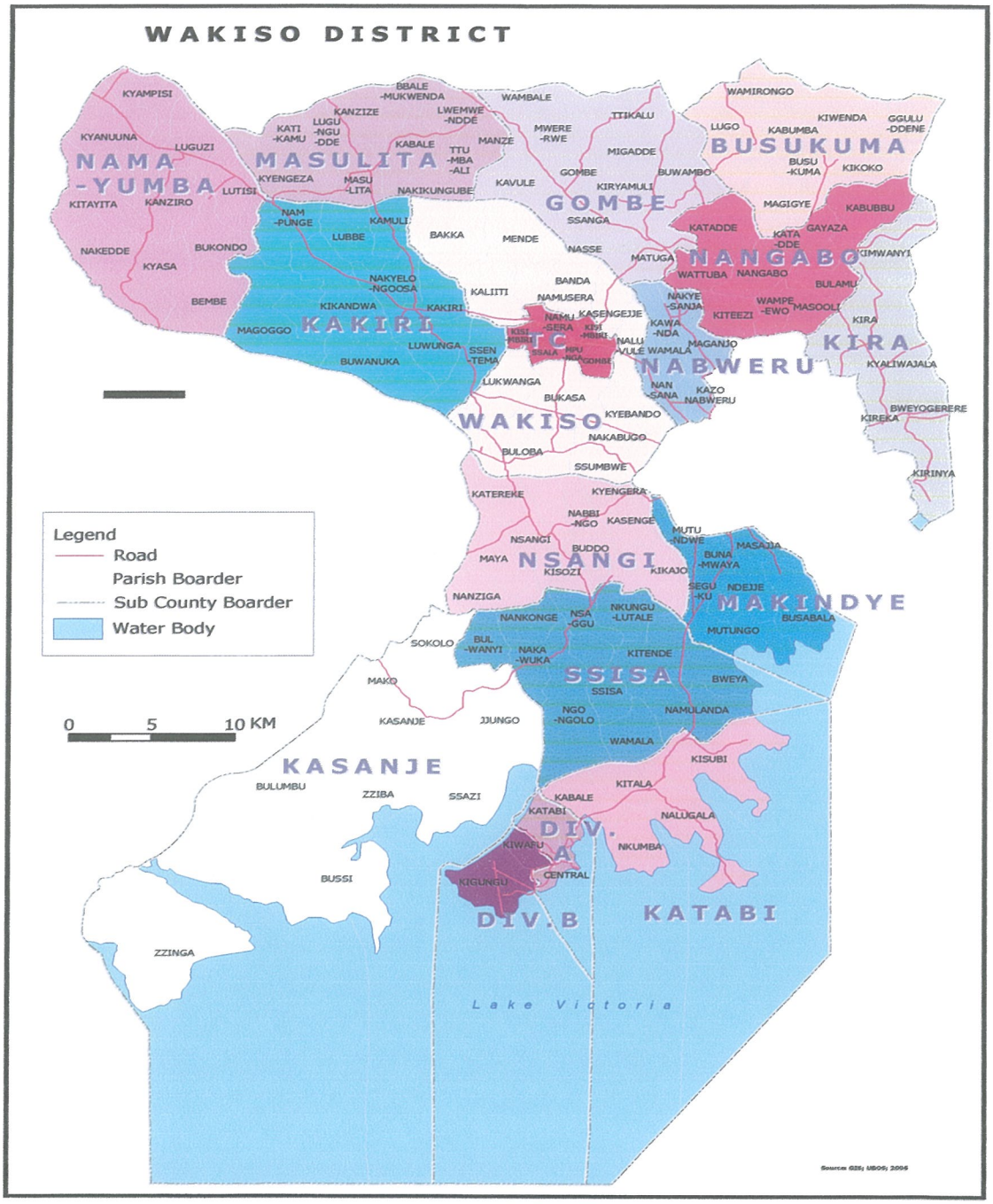
For this reason, Kira Town Council needs a well designed database system which would help it to detect and rectify such problems.

1.2 Location

The Town Council is located with in Wakiso District in Central Uganda, in Buganda region. The Town Council is bound by Kampala to the West and Nangabo Sub County to the North.From the east Kira bounds Mukono from the Namanve stream that drains South wards into lake Victoria while to the North, the Nakiyanja and Nangobe streams that flows into Lwajjali river forms the boundary. To the North is the Ntole swamp that flows to the South Western direction bordering Nangabo Sub County. While to the West, Kawooya and Kinawataka swamps form the boundary between Kampala and Kira. A section of the Eastern border is formed by the boundaries of the mailo blocks in Kyaddondo near Najjera and Kiwatule-Kungu area. A larger section of the boundary is formed by Walufumbe, Nyanjaradde, Nakalerere and Kinawataka streams.

The majority of the population in the Town Council is Baganda by tribe.

Kira Town Council covers an area of approximately 98.83 square kilometers, approximately 10 kilometers from the city centre as illustrated in the Map of Wakiso district shown below.



Map1 :Map showing the Location of Kira Town Council in Wakiso District

Source: Wakiso District planning Unit

1.3 Problem Statement

Given the then situation that at times Field Informers and Agents of the Town Council do not have full evidence of the true and genuine documents (that is, whether they are those

from the Town Council), the researcher found it necessary to design a System that was to help Kira Town Council Implement a Database of all Buildings of the Town Council and such is to be used by The Town Physical Planner, Town Agents, those of the Finance Department and many more.

1.4 Purpose

The goal of this study was to design and implement a good database system that would help to overcome the problems associated with unauthorized construction of buildings in Kira Town Council.

1.5 Objectives:

The following were the objectives for designing the system;

1 .To design a Database Management System for Kira Town Council.

2.To link the design and the prototype of the Database.

3.To establish the relationship between a computerized database system and the Business functions of Kira Town Council.

1.6 Research Questions

1. How can Kira Town Council overcome its problems related with record keeping?
2. What is the relationship between implementing a good database system and the Business functions of the Kira Town Council?
3. What are the effects on the of having a database management system in Kira Town Council?

1.7 Scope

The study was concerned with a System to realize a database of the Town Council plans. It looked into the then methods of Data Storage and Record Keeping of the plans in this area. It considered the ways of relating Town Council records in comparison to what existed in the field in the Engineering Department of the Town Council.

The study considered all the six Wards that constitute the Town Council that is Bweyogerere, Kireka, Kira , Kirinya, Kyaliwajjala and Kimwanyi.

1.8 Justification

In Kira Town Council, a lot leaves to be desired on the Plan Records in place and the way one can correlate the given authorization paper vis- a - vis a construction site in place.

The Technical Staff concerned that is the Physical Planner, Town Engineer, Health Planner and many more take along time searching for a given Town Council Number allocated to a plan which is authorized for building.

Similarly the Town Council field Workers is not equipped at all with the true record of a given building and thus at many new developers take advantage of this and replicate plans, forge Town Council authorizing documents, and construct buildings in an authorized areas whereas others construct in land not belonging to them.

At the end of it all, the department of Finance in this Town Council realizes less income than expected which is a general loss to this Institution.

A Database system in place for this Town Council is to aid several the engineering department reduce and in the long run prevent all illegal constructions in the Town Council and thus having a well planned area.

It will also help the Finance Department of this Town council increase its Income base as more money will be paid to its offices since each plan, is supposed to be paidfor before its authorization. In essence, it will also help to solve the problems of Kira Town Council. The Database will help the Council to plan in advance as it will act as the key source of data. Finally, the study will help the researcher to discover the importance of a good Database system in solving the problems that prevail in Local Governments in Uganda.

1.7 Conceptual Framework

The figure below shows the Conceptual framework of how to access data through Data Base Management System.

Consider the figure below to illustrate the different interactions of Kira Town Council and its Environment:

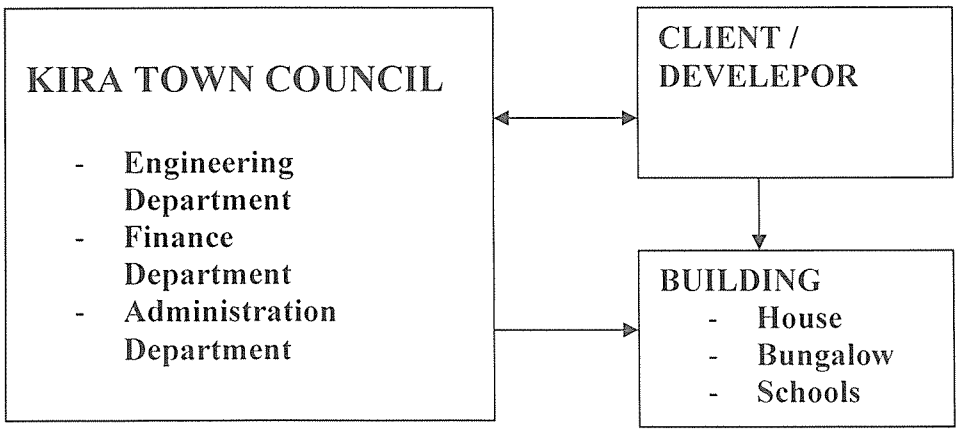


Figure 1: Conceptual Framework of Kira Town Council

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter contains all the already existing literature about developing and designing a database for Kira Town Council. It explicitly defines a database and a database management system , giving its characteristics , disadvantages and advantages.

2.1 Database

2.1.1 Definitions

According to Valacich,George and Hoffer , a database is a shared collection of logically related data designed to meet the information needs of multiple users in an organization.

Riaga (1994), described a database as a non redundant collection of logically related files,organized in a manner to satisfy the needs of an organization where typical needs of an organization are for carrying out administrative duties, decision-making and control. It should fulfill information needs of an organization and designed in a way that is only accessible to authorized persons.

French(1996),defined a database as a single organized collection of structured data, stored with minimum of duplication of data items so as to provide consistent and controlled pool of data and this data is common to all users of the system but is independent of programs that use the data.

Andrews, Thomason & Fujimoto(1986), defined a database as a method of organizing and sorting data for use in multiple applications. To accomplish this type of multiple use, special link or connection must be made among data items. These links define and relate data items that are accessed or processed under several different applications.

2.1.2Characteristics of a database

Riaga (1994), characterized a database to have the following;

- Related and organized data
- Cover key operational area of an organization
- Holds data that is required for many applications
- Must enhance accuracy , security and integrity
- Confidentiality and flexibility
- Must reduce/ eliminate data redundancies as far as possible

2.1.3 Advantages of use of databases

Riaga (1994), agreed on the following advantages of using a database in comparison to the traditional method of filing;

- Reduces data redundancy
- Provide accurate information
- It enhances data security as passwords are created
- Auditing a system is easier
- It enhances both data and program independence
- Accessing data is easy since the logical data is well arranged.

2.1.4 Disadvantages :

Riaga (1994), on the other hand, gave the following as disadvantages of a database;

- The systems are complex , costly and take much time to develop
- It causes security problems internally since the database is used by many departments or personnel
- They are difficult to thoroughly test.
- The database system requires special skills to handle.
- A database system is vulnerable to software and hardware failure.
- It needs complex and expensive systems to be developed as backup.

2.2 Database Management System

This is a software system that enable users to define create and maintain the database and which provide controlled access to the database .it interacts with users application programs and the database which typically provide the following:

- Data definition languages (DDL) which allow users to specify constraint and store data. Data definition language (DDL) compiler. This DDL compiler converts DDL statements into a set of tables containing Meta data. These tables are then stored in the dictionary while control information is stored in the data file headers
- Allow users to insert update delete and retrieve data from the database usually through data manipulation language (DML). Data manipulation language (DML) processor. This module converts DML statements

embedded in an application program into standard function calls of in the host language. The DML processor must interact with query processor to generate appropriate code.

- Provide controlled access to database for example, security systems, integrity systems, recovery control systems, user accessible catalog.

Below is an illustration of the outline view of a database system;

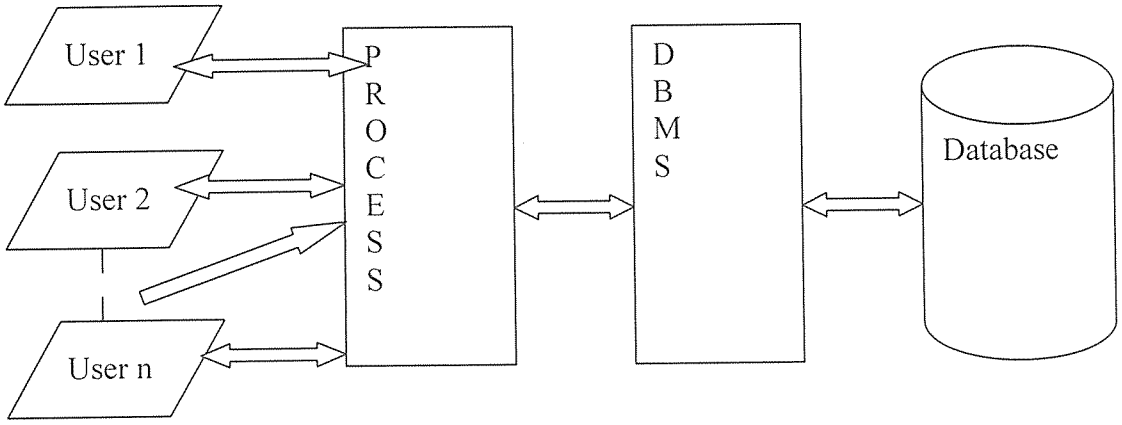


Figure 2: An illustration of the outline view of a database system;

Source: Data Processing and Information Technology (Oliver, Chapmans and French)

2.3 Data Model

Wikipedia contributors (2006), defined a data model as a representation of data objects and events as well as their associations. It is a "description" of both a container for data and a methodology for storing and retrieving data from that container. Data models are abstractions, oftentimes mathematical algorithms and concepts

2.3.1 Classifications of Data Models

Data Models can be classified as;

2.3.1.1 Hierarchical Model

In a hierarchical data model, data is organized into a tree-like structure. The structure allows repeating information using parent/child relationships: each parent can have many children but each child only has one parent. All attributes of a specific record are listed under an entity type. In a database, an entity type is the equivalent of a table; each individual record is represented as a row and an attribute as a column. Entity types are related to each other using 1: N mapping, also known as one-to-many relationships.

2.3.1.2 Network Model

In the Network Model, a parent can have several children and a child can also have many parent records. Records are physically linked through linked-lists. The objective of network model is to separate data structure from physical storage, eliminate unnecessary duplication of data with associated errors and costs.

The basic data modeling construct in the network model is the set construct. A set consists of an owner record type, a set name, and a member record type. A member record type can have that role in more than one set, hence the multi-parent concept is supported. An owner record type can also be a member or owner in another set.

2.3.1.3 Object-Oriented Model

Object Database Management Systems (DBMS) add database functionality to object programming languages. They bring much more than persistent storage of programming language objects.

Object DBMSs extend the semantics of the C++, Smalltalk and Java object programming languages to provide full-featured database programming capability, while retaining native language compatibility. A major benefit of this approach is the unification of the application and database development into a seamless data model and language environment. As a result, applications require less code, use more natural data modeling, and code bases are easier to maintain. Object developers can write complete database applications with a modest amount of additional effort.

2.3.1.4 **Semantic Models:**

Semantic data models describe the semantics of the data. With the help of the semantic model, object sphere type objects (entities) are defined, as well as their features (attributes) and the relationships between them are specified.

Semantic modeling provides richer data structuring capabilities for database applications.. In general terms, semantic modeling complements work on knowledge representation (in artificial intelligence) and on the new generation of database models based on the object-oriented paradigm of programming languages.

The above as explained is the literature review for the Database Management System.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This Chapter covers the procedures and methods which the Researcher used to carry out the design of the Town Council Database Management System. Such included; Analysis of and Sampling the Town Council Population.

3.1 Analysis

The Researcher made an analysis of the current system of the Town Council. The Researcher found out the data sources including the population, procedures, the system collection methods and system specification were analyzed.

3.1.1 Total Population

3.1.1.1 Technical staff:

The Management arm comprises of the technical staff headed by the Town Clerk

The Town Council employs a team of staff who carry out the functions of the Town Council together with the Town Clerk, in 10 departments as shown in the table below.

Section	Approved Posts	Staff in Post	Vacant posts
Administration and Council	27	6	21
Finance and Planning	15	7	8
Production	3	2	1
Heath	7	3	4
Education	3	1	2
Works and Urban Planning	22	2	20
Community Based Services	5	1	4
Internal Audit	4	2	2
Total	86	24	62

Table 1: Level of Government employees by March 2007

Source: Wakiso District planning Unit

Demographic and Socio-Economic Characteristics.0

- The population of Kira is estimated to be 67,222males and 73,548 female according to the 2002 census .

Parish	Males	Females	Total
Bweyogerere	17547	20,094	37,641
Naalya(Kireka)	25281	28728	54,008
Kirinya	7322	7892	15,214
Kyaliwajjala	7844	8302	16,151
Kira	5687	5265	10,952
Kimwanyi	3541	3267	6,808
Total	**67,222**	**73,548**	**140,774**

Table 2: Population by parishes

Source: Wakiso District planning Unit

3.1.2 Sample Population

From the total population of twenty four technical staff as indicated in the tables above , the Researcher took a Sample Population of fifteen people. The Researcher also consider a sample of thirty (30) Town Council clients.

The departments in consideration were those of the Finance. Engineering and Administration.

3.1.3 Sampling Methods

The Researcher used two Sampling methods , that is disproportionate Stratified and Random sampling methods.

The thirty clients were chosen randomly taking five from each Ward of the Town Council and also the Researcher took the two staff of the Engineering Department due to its necessity in the Study. The stratified method of sampling was used to find out the numbers of staff to be considered for the other two crucial technical staff departments as below;

Administration Department :6

Finance Department ; 7

3.2 Data Collection Methods

The researcher analyzed data by making inference to the available literature, comparisons and also made contrasts in relation to work of different scholars and the exposed gaps in the existing literature upon which recommendations were based.

Such methods included primary data collection (use of interviews, questionnaires, and observations) and secondary collection of data (use of reviewing data).

3.2.1 Interviews

Through interviews with the different departments, the researcher is got different options about the current system

3.2.2 Observation

This was carried out through the observation to the methods, procedures and operations that are taking place in the Town council.

3.2.3 Document Review

Data was collected through the investigation of the literature of the scholars that was written about the management of records and Data base management system to show the procedures, techniques, tools that are required in the development. Some data was collected from the Town council's information and records.

3.2.4 Data Processing And Analysis

Data was analyzed, sorted and summarized to maintain accuracy and consistency. It was then assembled into key data elements.

In Summary , the illustration below shows the different stages the Researcher followed in order to have a Database System for Kira Town Council.

A summary of the stages that were followed in the Study

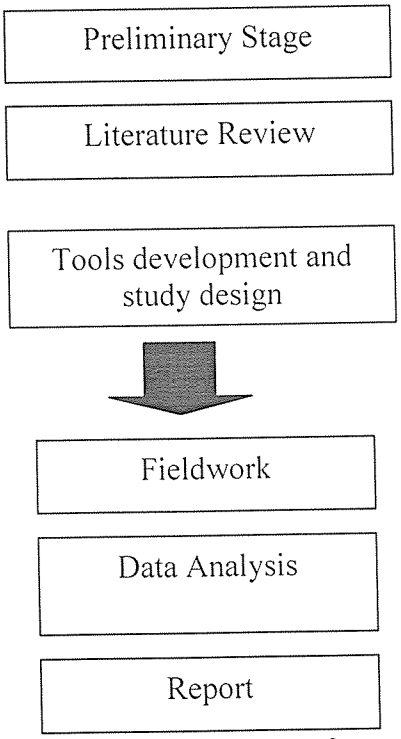


Figure 3: Stages for the Database Management System of Kira Town Council

CHAPTER FOUR

DATA PRESENTATION, DESIGN AND IMPLEMENTATION

4.0 Introduction

This Chapter is about the different methods of data presentation, the system requirements, design and implementation of the Database Management System..

4.1 System Requirements Specifications

The requirements include; user, functional and systems requirements.

4.1.1 User Requirements

The users of the interface are: the Town Engineer and The Town Physical Planner.

The requirements of the are:

- Capturing raw data
- Processing client's documents
- Processing maintaining and updating the database
- Checking and validating records.
- Training of the user in the proper maintenance of the database.

4.1.2 Functional Requirements

The function requirements include; forms for the details of the clients' data, processing relevant reports, print the reports as required by the Council.

4.1.3 System Requirements

The System requirements are categorized into Hardware and Software requirements :

4.1.3.1 Hard Ware Requirements

- Direct access storage device.
- Operating system of windows 98 as minimum requirement.
- A CD ROM or UBS port for the system installation.
- A hard disk capacity of 6 GB or higher.
- Processing speed of 233MHZ minimum.
- Laser printer, which prints 20000 lines per minute to save time.

4.1.3.2 Soft Ware Requirements

- DBMS (Data management Systems) that will manage data base activities.
- A data Definition Language that will construct and maintain the database by defining it.
- A data Manipulation Language to allow program to access data in the data base.
- A Query Language – MS Access
- Backup devices like a movable local drive or diskettes.
- Anti-virus soft ware like F-secure.

4.2 System Design and Development

This phase involved converting design specifications into executable programs. The researcher used various techniques to develop the System. Computer Applications used

were Visual Basics and Microsoft Access. Primary procedural programming included ; design of appropriate tables ,forms and reports.

4.2.1 Tables

Tables in the database are very important because they show the field name, data type, description and the field properties. The following is a table of Kira Clients in design view that was created.

KiraClients

KTC_No	NAME	ZONE	WARD	TYPE	CONTACT	LANDMARK
KTC/067	Nakiwala Halima	Nsasa	Kira	Residential	0772-630978	Jomayi Estates
KTC/069	Christine N.Mugoya	Janda	Kyaliwajjala	Residential	0702-560952	Off Janda Nsasa rd
KTC/072	Serugga Joseph	Ntebetebe	Bweyogerere	Residential	0712-086374	Ntebetebe rd
KTC/075	Sam and Esther Akodu	Bukasa	Kirinya	Residential	0772-651223	Kirinya Bukasa rd
KTC/077	Mbabazi Percy	Kitukutwe	Kimwanyi	Commercial	0752-697702	Kimwanyi rd
KTC/078	Namuwonge Mariam	Naalya	Kireka	Residential	0772-582902	Kamuli rd

Table 3: Tables showing part of the Database 'KiraClients'

4.2.2 Forms

The Splash Form

It is the commencement form with a logo of Kira Town Council. It is unloaded after a configured time which thereafter calls on Form Menu. The Form has a timer that is set to false that enables it to be timed.

Diagram 1:A snapshot of The Splash Form

The Code:

Private Sub Form_Load()

```
End Sub
Dim i As Integer

Private Sub Image1_Click()

End Sub

Private Sub Timer1_Timer()
i = i + 1
If i = 1 Then
Label3.Caption = "PLEASE WAIT....."
ElseIf i = 3 Then
Label3.Caption = "LOADING DATABASE....."
ElseIf i = 5 Then
Label3.Caption = "WELCOME!!"
ElseIf i = 7 Then
Label3.Caption = "Viewing!...."
Unload Me
frmLogin.Show
End If
End Sub
```

The Login Form

The login form is created as a means to protect the database from unauthorized users, the researcher has created a login form which is password protected.

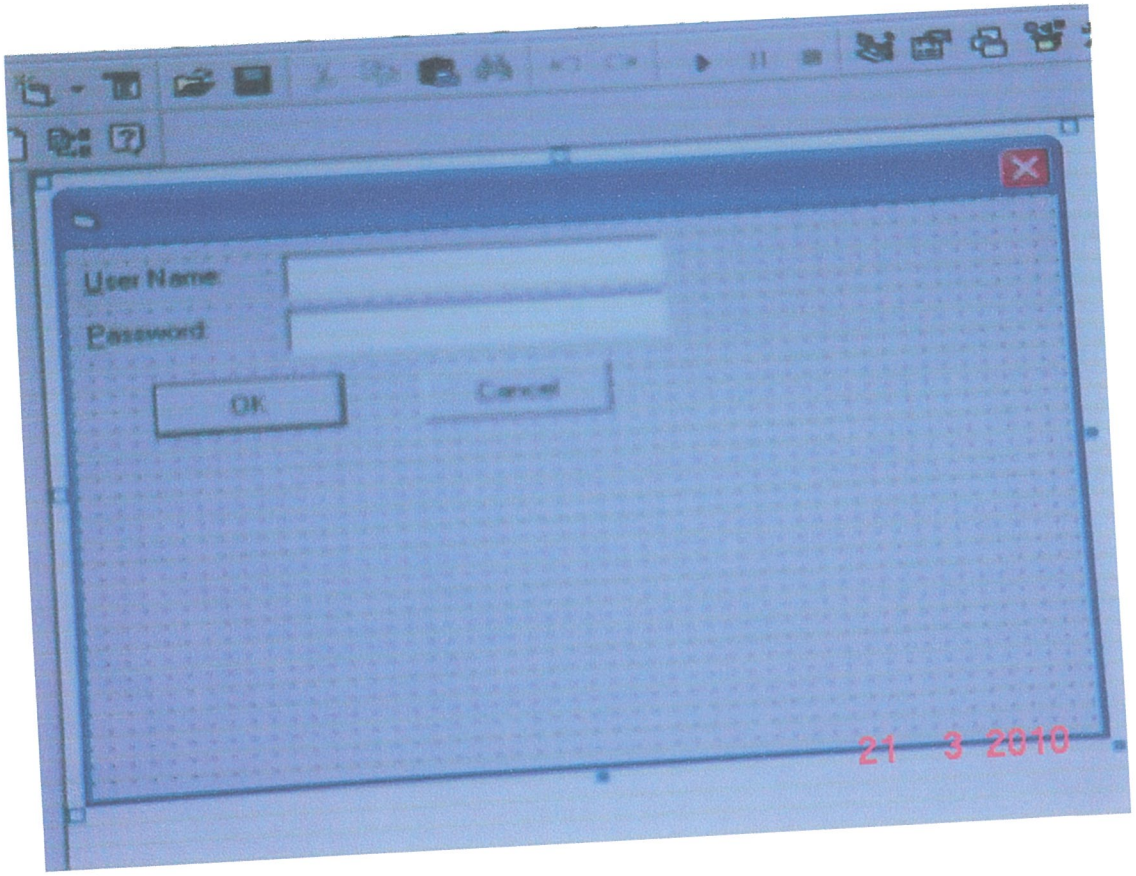


Diagram 2:A snapshot of The Login Form

The Code:

```
Option Explicit


Public LoginSucceeded As Boolean


Private Sub cmdCancel_Click()
```

```
 End
End Sub
Private Sub cmdOK_Click()
   'check for correct password
   On Error GoTo noUser
      Dim log As New ADODB.Connection
      Dim logfile As New ADODB.Recordset
      log.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Documents and Settings\Administrator\Desktop\BIT\VISUAL BASIC\KIRA
TC PROJ\Kira.mdb;Persist Security Info=False"
      log.Open
      logfile.Open "select * from Users where UserID='" & Me.txtUserName.Text & "'
and Password = '" & Me.txtPassword.Text & "'", log, adOpenKeyset

      If logfile!Userid <> "" Or Not IsNull(logfile!Userid) Then
      Userid = logfile!Userid
      level = logfile!Userlevel
      Unload Me
      Formmenu.Show
      End If
      Exit Sub
noUser:
 Userid = ""
```

```
    level = 0
    MsgBox "Invalid UserID or Password", vbInformation, "Note from Ethsoft"
End Sub

Private Sub Form_Load()
Userid = ""
level = 0
End Sub
```

4.2.3 Reports

Reports were captured from the forms with the use of Queries. The reports represent only that data that is selected in Microsoft Access Database. Below the output of a Vehicle/Plant Report of Kira Town Council.

VEHICLE/PLANT REPORT ***1 of 1*** ***Monday, March 22, 2010***

NAME OF PLANT / VEHICLE	***NUMBER PLATE***	***TYPE / MODE***	***YEAR OF ACQUISATION***
Grader	*LG 0030-55*	*Plant*	*2007*
Tata Tipper	*LG 0051-55*	*Vehicles*	*2007*
Wheel Loader	*LG 0064-55*	*Plant*	*2009*

Diagram 3: Vehicle/Plant Report

4.3 System Testing

At this stage, it required the Researcher to debug the codes and make various tests as to ensure the accuracy of programmed codes, the inclusion of expected functionality, and the interoperability of applications and other database components. Primary tests included: Acceptance Testing, End-to-End Testing, Functional Testing, Integration Testing and System Testing.

4.4 System Implementation

The implementation phase involved installing the approved System into the Planning and Engineering Department of the Town Council . Primary tasks included announcing the implementation schedule and training end users .The Town Council Engineer notified users of any implementation responsibilities.

4.5 System Evaluation

After four months, the Town Engineer is to conduct post-implementation reviews to validate the completion of project objectives and assess project management activities. He is to analyze the effectiveness of project management activities by comparing, among other things, planned and actual costs, benefits, and development times. It is to document the results and present them to the Town Clerk and Council. The Town Clerk should be informed of any operational or project management deficiencies.

4.6 System Maintenance

For Kira Town Council's Database Management System - the Maintenance Phase is to involve making changes to hardware, software, and documentation to support its operational effectiveness. It includes making changes to improve a system's performance, correct problems, enhance security, or address user requirements. All this is to be conducted on a routine basis.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This Chapter identifies a preview of the Researcher's Conclusion and Recommendations for the undertaken Study.

5.1 Conclusion

With a database Management System in place, Kira Town Council has a better method of record keeping, and most of all, data redundancy is minimized. Plan records are accessed more easily and in effect the Town Council has an increased Clientele in the Planning and Engineering Department thus an increase in its Source of Income.

5.2 Recommendation

In the near future, Kira Town Council should adapt a computerized database management system for all its departments.

Similarly, the Researcher recommends all Local Governments in Uganda to acquire a database management system for their records.

REFERENCES:

- French.C.S,(1996), **Computer Science** , 5th Edition , Continuum, London
- Riaga.A,(1994),**System Theory , Analysis And Design**, 1st Edition, 2000 Publications, Nairobi
- M.Cannoly and E.Begg, **Database Systems: A practical approach to design implementation and management** (2nd Edition) ,McGraw Hill Inc
- Oliver and Chapmans (6th Edition,1983) **Data Processing**,Hants
- Oliver, Chapmans and C.S French (10th Edition) **Data Processing and Information Technology**,Berwick upon Tweed
- Ramez Elsmasrri and Shamkant.B Navathe (2nd Edition) **Fundamentals of database system**, California.
- Grey Perry and Sanjayo Hettiwa, **Visual Basic 6.0** ,New Delhi-2
- Cannoly and Begg,(2002), **Understanding Modern Business Data Processing,** (1st Edition) ,McGraw Hill Inc
- .J.F.Borenstein, (1991),_**Multimedia Electronic Mail Communications of the AGM34**,(April 1991)
- Drnnam, Pete and Gate Wood Robert,(2003),**Strategic Planning for Office Automation-_Information and Management**
- **District and Urban Councils Development Guidelines** (2006)

APPENDIX I

The Actual Budget

Item	Amount (Ug.shs)
Transport	300,000/=
Stationary	150,000/=
Internet costs	100,000/=
Airtime	100,000/=
Printing and Binding	200,000/=
Flash Disk	50,000/=
Total	**900,000/=**

APPENDIX II

THE QUESTIONNAIRE USED(FOR THE STAFF OF KIRA TOWN COUNCIL):

TO THE RESPONDENT:

This questionnaire is meant to help in the collection of data about buildings and plan records in Kira Town Council.. It is a necessary requirement for the attainment of a Bachelor's Degree in Information Technology. I promise that this information will be kept with utmost sincerity and confidentiality. Please fill the blank spaces as required.

1. Sex; Male ☐ Female ☐
2. What is your department in Town Council?

   Administration ☐

   Engineering ☐

   Finance ☐
3. Education Level

   Up to A Level ☐

   Certificate Level ☐

   Diploma ☐

   Degree ☐

   Masters ☐

   Any other, please specify;

   .....

4. How long have you worked for Kira Town Council?

   1-2 years ☐ 3-5 years ☐ 5-10 years ☐

   If otherwise, please do

   specify;.....

5. Are you satisfied with Kira Town Council current plans and buildings

   records'management?

   Yes ☐

   No ☐

   If other wise, specify;

   .....

6. How have you been retrieving records of

   Clients?.....

7. For how long does it take you to get a given record of a client?

   A week or less ☐

   Two weeks ☐

   Three weeks ☐

   Four weeks ☐

   If otherwise, please specify;

   .....

8. How do you think Kira Town Council can manage better its

   records?.....

Thank you so much for your cooperation.

APPENDIX III

THE QUESTIONNAIRE (FOR THE CLIENT OF KIRA TOWN COUNCIL):

TO THE RESPONDENT:

This questionnaire is meant to help in the collection of data about buildings and plan records in Kira Town Council.. It is a necessary requirement for the attainment of a Bachelor's Degree in Information Technology. I promise that this information will be kept with utmost sincerity and confidentiality. Please fill the blank spaces as required.

1. Sex; Male ☐ Female ☐
2. What is your Ward of Residence in Town Council?

   Kireka ☐

   Kimwanyi ☐

   Kireka ☐

   Kimwanyi ☐

   Bweyogerere ☐

   Kira ☐

3. Education Level

   Up to A Level ☐

   Certificate Level ☐

   Diploma ☐

Degree ☐

Masters ☐

Any other, please specify;

.....

4.How long have you lived in Kira Town Council?

1-2 years ☐ 3-5 years ☐ 5-10 years ☐

If otherwise, please do

specify;.....

5. Have you ever submitted a plan at Kira Town

Council?.....

6.For how long did it take to get approved?

A week ☐

Two weeks ☐

Three weeks ☐

Four weeks ☐

If otherwise, please specify;

.....

7.How do you find the services of the Town Council and the staff

generally?.....

8..How best do you think the Kira Town council employees can improve their relationship with their clients?

Good interpersonal relationship ☐

Good communication ☐

If otherwise, please specify;.....

.....

Thank you so much for your cooperation.