

**AN OPTIMISED LOAN PROCESS MANAGEMENT SYSTEM
FOR A COOPERATIVE SOCIETY
CASE STUDY: KITGUM CO-OPERATIVE SAVINGS AND CREDIT SOCIETY
LTD**

BY

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**A GRADUATION PROJECT REPORT SUBMITTED TO THE COLLEGE APPLIED
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DECLARATION

I do hereby declare to the best of our knowledge that this graduation project is my original work and that it has never been submitted to any university or any other institution.

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Sign.....

Date.....1st Oct - 2012

APPROVAL

This graduation project is under the title *AN OPTIMIZED LOAN PROCESS MANAGEMENT SYSTEM FOR A COOPERATIVES SOCIETY LIMITED-KITGUM* and has been checked and submitted with my approval as a project supervisor.

Signed 

date 01st Oct 2012

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DEDICATION

I dedicate this work to my beloved parents, Brothers and sisters for the care and support rendered to me in various ways towards my studies may, God bless them.

AKNOWLEDGEMENT

I would like to thank God who assisted me to successfully go through this struggle. Special thanks goes to my supervisor Mr. Kasawulli Faik and my beloved Mum Nsereko Rechea, my Brothers and Sisters for the guidance, facilitation and knowledge towards my Education which made me what I am today.

ACRONYMS/ABBREVIATION

a) DB	-Database
b) VIZ	-Namely
c) MIS	-Management Information System
d) MGT	-Management
e) IT	-Information Technology
f) IS	-Information Systems
g) VB	-Visual Basic
h) DBMS	-Database Management System
i) GB/MB	- Gigabytes/Megabytes

ABSTRACT

An Optimized loan process management system is meant to store, update and help in the follow up of clients who are on loan program at Kitgum Cooperative Savings and Credit Society in loan department and store confidential information on them. This will also cater a newly accepted client under the department.

It's in due course because of the problems incurred due to storage of data in a paper system like; data loss, misplacement, and disclosure of confidential data to unauthorized retrieval, and others. It therefore calls for a security for the data by design for a computerized database systems and will generate a reports for staff.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Kitgum cooperative savings and credit society Ltd is a Micro Finance institution operating in Kitgum District.

It is founded in 2000 by a group of Association with the help of Kitgum District Private sector promotion centre under UNDP and government of Uganda programme and officially registered in 2001 under the cooperative Act and it is a SACCO limited by shares.

VISION

To be an institution which meets all the financial services of its clients.

MISSION

To promote sustainable financial human development focusing on poverty reduction within the community.

Aims and objectives

- i. To provide financial services relevant to the needs of the majority active poor.
- ii. To encourage saving amongst the community and extent credit facilities to the members.
- iii. To mobilize loan fund from the community through selling of shares, receiving member's deposit for sustainable socio-economic development.
- iv. To provide training in business skills, HIV/AIDS and gender.
- v. To promote awareness amongst the public on the importance of self help project.
- vi. To promote modern methods of Agriculture Agro Industries within the District.
- vii. To foster unity among shareholders, Development Agencies and NGOs in Kitgum District.
- viii. To provide advisory and counseling services to the District community.

Membership

KCS and CS Ltd is a member-owned member-user and member-controlled Micro Finance institution. Membership currently stands at 1400 members. Its head office is in the heart of Kitgum Town with outlets in all the sub-counties.

1.2 Statement of Problem

According to Loan Manager the current status of storing details in Loan department is manual that is box file storage which in turn makes data update, retrieval, detection and manual production of department report for decision making very difficult. In this case it is more stressing by the fact that a client need to be referred to using the number in time of update and more than four box files has to be returned/opened in order to find the fact and among the problems include loss of confidential information on client, insecurity of records, times wastage in record location, inconsistency of data and space wastage in storage in relation to the file system.

1.3 Objectives

1.3.1 Main objectives

The main objectives of the research is to come up with the database system which can be used to investigate, analyze, design, construct, test and implement the database of loan department in Kitgum cooperative savings and credit society.

1.3.2 Specific objectives

- I. To investigate the method use for storing client details at the loan department
- II. To design database for client details
- III. To develop/construct physical database
- IV. To test and implement the database

1.4 Research Question

- a) What is the system of storage the organizations are using?
- b) How effective is the system?

- c) What problems are you facing with the system?
- d) It's possible to design a Graphical user interface that is user friendly?
- e) Can the security be enhanced in the data being stored in the database?

1.5 Scope of the study

This project will be bounded to loan department of Kitgum Cooperative Savings and Credit Society Limited. The software will be able to handle the duties of this department which include data entry, update, and storage, maintaining confidentiality, integrity of the data, and to overcome the constraints that the loan department is currently experiencing. They include loss of confidential information on clients, insecurity of records, time wastage in record location, inconsistency of data and space wastage in storage in relation to the file system.

1.6 Significance of the study

The design of the automated client database loan management system is to help facilitate organizations that need to implement it, in that it has the following purposes:-

1. To provide security constraints to the records of the organization. It's emphasized by the provision of the username and password to the user so that only those who have high privileges to access a particular database.
2. It should cut down the cost of manual methods of file organization that shall enhance fast access and response time using user interface buttons.
3. To provide easy and effective making processes by report production that shall help in future decision making of the organization.
4. To provide easy retrievals, format and modification of the records for instance, adding new client into the database using the **ADD NEW** button in VB application.

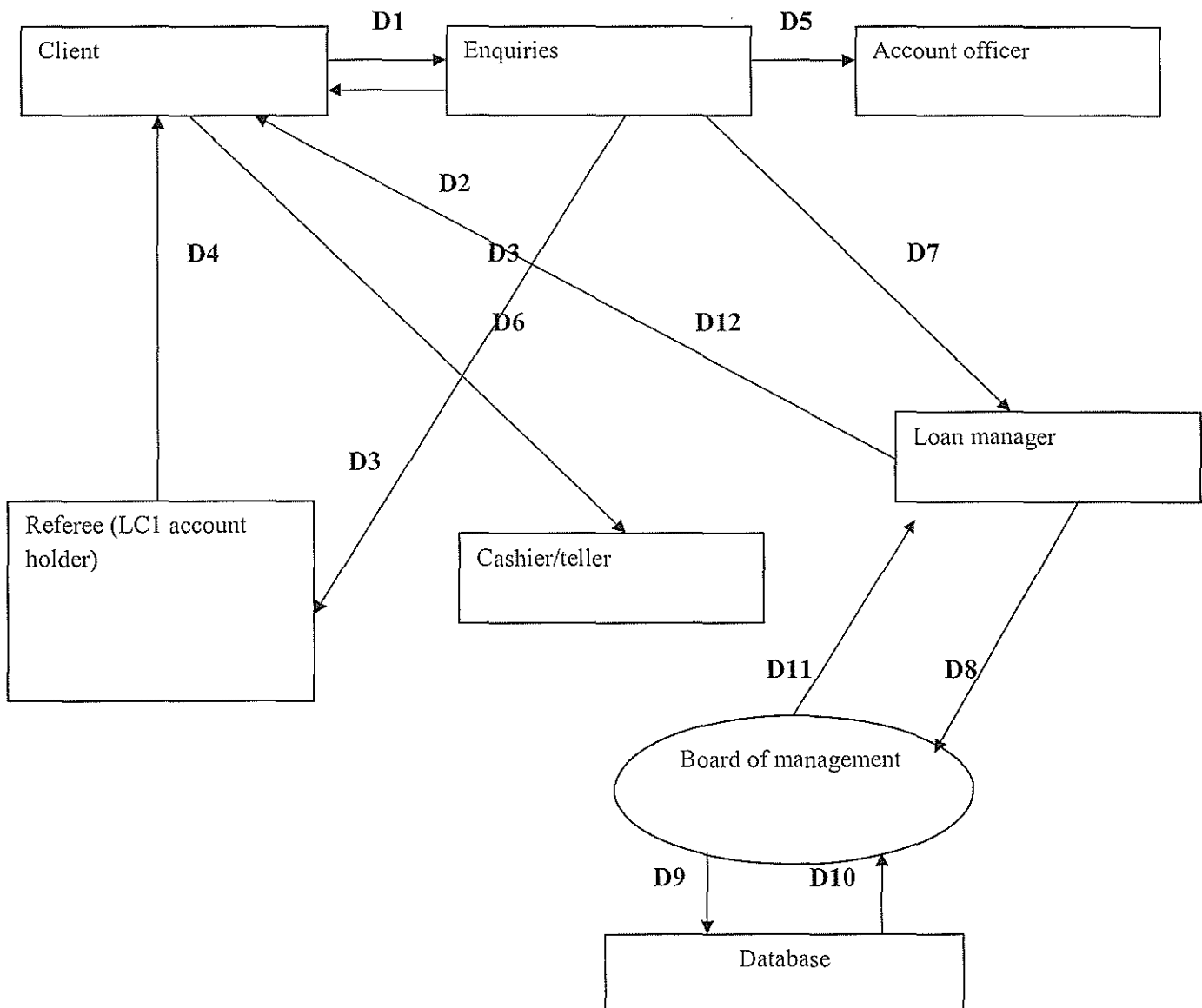
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter gives a summary and interpretation of research findings reported by the researchers in the related systems. It also takes a deeper look at concepts like MIS, IS, IT, DB related terminologies DBMS and strength plus weakness of the other systems are also looked at.

2.1 The Conceptual Framework.



DESCRIPTION OF DATA FLOW DIAGRAM

D1: Client request for forms from Enquires

D2: Enquires releases form to the client

D3: Enquires request for recommendation from the Referees such as LCI, A n account holder of Kitgum Cooperative Savings and Credit Society

D4: Referees recommend the client

D5: Accounts officer open an account for the client

D6: Payment made by client to cashier/Teller

D7: Enquires produces the name of the clients with their Account number and are in need of loan from Kitgum Cooperative Savings and Credit Society

D8: Verification of clients by the board of management

D9: Identification of the client

D10: The list of clients is identified to be given loan.

D11: The names of the clients are to be produced to the loan manager for payment

D12: The payment is made to the clients by the loan manager

2.2 Management information system.

According to Effy (2002), MIS refers to the use of computer for planning, controlling decision making and problem solving, rather than just reporting transactions MIS is a strategy that provides periodic information about such a topic and operational corporate database and processing it according to (Turban et al...2002), therefore in conclusion, MIS refers to a computer based information system that is use to provide information for planning, controlling decision by extracting it from a cooperate database and processing according to user's interests.

2.3 Information systems.

According to James (2004) information system refers to any organized combination of people, hardware, software, communication and data sources that disseminate information in an organization. According to Effy (2002) information system refers to all components that work together to process data and produce information.

Information system is the arrangement of people, data, processes and interfaces that interact to support and improve day-to-day operation in business as well as problem solving and decision making needs of management and users (Whitten, 2001).

Conclusively, information system refers to a situation which all the components and resources like:- people, hardware, software and communication are organized together in order to produce expected output of a system for a decision making.

2.4 Information Technology

The term IT represents the various types of hardware and software used in an information system including computer and networking equipments (Gerald 2000).

According to Whitten (2001), IT refers to the contemporary terms that describe the combination of computer technology (data, image and voice network).

Inclusion, the term IT refers to the computer technology like printer, plotters, CR ROM cables and software like office applications like Ms word, Ms Excel, and network operation system, window 2000 that are use to transfer data in a network.

2.5 Database

According to Date (2002), a database system is basically a computerized record keeping system. The database itself can be regarded as a kind of electronic filing cabinet that is, a repository or container for a collection of computerized data files.

According to Turban etal (2001), database refers to the collection of interrelated data organized to meet the need and structure of an organization and can be used by more than one person for more than one application like; ORACLE, VB 6.0.

In relation to the two definitions, database refers to the collection of a computerized interrelated data organized to meet the need of an organization.

2.5.1 Terminologies in database

E-R modeling (Entity-Relationship modeling)

E-R model is based on the perception of the real world which consists of sets of objects called entities and the relationship among those objects.

2.5.1.1 Entities

An entity is a “thing” or “object” in the real world that is distinguishable from the other objects (Silberscharz et al, 2002).

2.5.1.2 Attributes

It's a descriptive elements or properties possessed by each member of an entity set (Silberscharz et al, 2002).

2.5.1.3 Entity Integrity

Entity integrity rules state that no components of the primary key are allowed to accept a null value or null values (Date 2000).

2.5.1.4 Referential Integrity

It's a rule which state the database must not contain any unmatched foreign key values (Date, 2000).

2.6 Database management system-DBMS

According to Date (2000), DBMS is software that handles all access to the database. DBMS is software application system that is used to create, maintain, and provides a controlled access to the user database (Mc Fadden, 1994).

According to Whitten et al (2001), DBMS is specialized computer software available from computer vendors that is used to create, access, control and managed the DB.

In conclusion, DBMS is a software program for adding information to a DB and updating, deleting, manipulating, storing, and retrieving information.

2.6.1 Function of a database management system.

According to (2002) **Data definition:** The DBMS must be able to accept data definition (external schemas, the conceptual, the internal, and all associated mappings) in source form and convert them to appropriate object form.

b) **Data manipulation.** It must be able to handle requests to retrieve, update, delete existing data in the database, or add new data to the new database.

c) **Optimization of the execution.** DML request, planned and unplanned, must be processed by the optimizer components whose purpose is to determine an efficient way of implementing the request. Optimized request are then executed under the control of run-time managers.

d) **Data security and integrity.** The DBMS must monitor user request and reject any attempt to violate the security and integrity constraints defined by the DBA. This task can be carried out at compiling or run time or both.

e) **Performance.** A database provides user interface to the database efficiently and effectively.

2.6.2 Advantages of Database management systems

According to Ramakrishna (2002), DBMS has the following advantages:

1. **Data independence:** application programs should be as independent as possible from details of data representation and storage. The DBMS can provide an abstract view of the data to insulate application codes such from details.
2. **Data security and integrity:** if data is always access through the DBMS, the DBMS can enforce integrity constraints on the data. Example, before inserting certain information for an employee the DBMS can check that the department budget is not exceeded. Also the DBMS can enforce access controls that govern what data is visible to different class of users.
3. **Efficient Data Access:** a DBMS utilizes a variety of sophisticated techniques to store and retrieve data efficiently and effective. The feature is important if data is stored in an extended device.
4. **Data Administration:** when several users share the data, centralizing the administration of data can offer significant improvement. Experience professionals who can understand

the nature of data being managed and how different user uses it, can be responsible for organizing the data representation to minimize redundancy and for fine tuning the storage of data to make the retrieval efficient.

5. **Concurrent Access and Crash Recovery:** A DBMS schedules concurrent access to the data in such a manner that users can think of the data as being accessed by only one user at a time. Further, protects the user from effects of system failures.
6. **Reduced Application Development Time:** clearly, the DBMS supports many important functions that are common to many applications accessing data stored.

2.6.3 Disadvantages of Database management system

- I. **Complexity:** The provision of functionality we expect of a good DBMS makes the DBMS an extremely complicated piece of software.
- II. **Size:** The complexity and breath of functionality makes the DBMS an extremely large piece of software, occupying many MB or GB of disk space and requiring substantial amount of memory to run efficiently.
- III. **Cost of DBMS:** The cost of the DBMS varies significantly, depending on the environment and functional provided.
- IV. **Additional Hardware Cost:** The disk storage requirement for the DBMS and the DB may necessitate the purchase of additional space to adhere required performance, it may be necessary to buy a large machine.
- V. **Cost of Conversion:** This cost may also include; cost of training staff to use the new system, employing specialist staff to help with the conversion and running of the system.
- VI. **Performance:** DBMS is written to be more general to carter for more application rather than just one. The effect is that some application may not run as fast as any other.
- VII. **Higher Impact of Failure:** The centralization of resources increases the vulnerability of the system since all users and applications rely on the availability of the DBMS.

The DBMS must produce the following

1. **Forms:** These are the screen display of the DBMS of the computer form that someone fills in for a particular entity.

2. Reports: It is a printed document, output for the system in a paper. It's especially applicable in VB.

Characteristics of Database management systems

According to Elmasri (2000); a number of characteristics distinguish the DB approach from programming of files.

1. **Self-Describing Nature of DBS:** The DB system contains not only the DB itself but also a complete definition of the DB structure and constraints.
2. **Insulation between programs and Data abstraction:** In files system, the structure of the file may require changing all the programs that access the file. By contrast, DBMS, access program do not require such changes. The structure of data file is stored in the DBMS catalog separately from the access programs.
3. **Support of Multiple Views of the data:** A database typically has many users of who may require a different perspective or view of the DB. A view may be a subset of the DB or it may contain virtual data i.e. desired from the database file but not explicitly stored.
4. **Multiple users to access the database at the same time.** The DBMS include; concurrent control software to ensure that several users are trying to update the same data that the result is correct.
5. **Database Administrator:** In a database environment, the primary resources it the database itself and the secondary resources are the DBMS and related software.

2.7 Recent Development

2.7.1 Infinity Patient Monitoring System

It's a unique combination of integrated hardware and software products-include patient monitory, central and beside telemetry and wireless monitory, a cardiology mgt system, web-enabled enterprise docking system. At the heart of the infinity architecture, is the patented infinity docking system that automatically monitors patients. It also optimizes access to high

acuity patient data for all care team whenever they are- remote location, central station, and other places.

2.7.2 A&E whiteboard patient tracking system

The system is called KLOK develop for East and Northern Hertfordshire in UK. It consist of electronic whiteboard to manage patient traffic in E&A dept to treat, discharge, transfer, or admit patients within 4 hours of arrival. Klok displays a visual record of patients activating in real time, showing E&A staff who need help instantly, what test have been worked, result obtained, where to act to prevent breeches of waiting times, where bottleneck may be forming, and allocation of doctors or clinicians to the patient, together with their accompanying medical note.

- I. This also makes the process of allowing beds to the patients by the bed managers easy because they only view the system database.
- II. All the information needed by the A&E staff for efficient decision making is clearly and simply laid out allowing real time observation and interviewing.
- III. The patient tracking information (that can be displayed on the wall – mounted VDU screen, on the satellite PC's and other mobile devices) links to the hospital patient Administration System (PAS).

In conclusion, the related patient monitoring systems are good but when compared in terms of cost, staffing, and requirement for the space. It's required that about \$600 is expected in order to effectively manage the system, and the system require many experts in order to operate and maintained efficiently and space requirements for a complete system is relative costly in terms of the feasibility study.

This and many other weaknesses of the system makes Kitgum cooperative and savings and credit society Ltd for a small organization the only solution or means used to store information on the clients and requires little labor force to monitor and efficiently manage it.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter explains the choice of the research area, the criteria by which the data was generated; it further explains how the various research tools or the techniques that were applied in data collection were used to acquire the details, data management and analysis, research tools, steps that were followed in executing the study to the fullest and problems that were encountered while carrying out the whole exercise.

3.1 Choice of the research area

Information system is a wide topic, if entirely covered; it will generate a lot of data. This report was limited to; the Evolution of the database, definition of information system and the basic functions of the system, hardware and software components. The research talks about, the concept of the database, database models, Database Management System, Sample Interactive database management System, Advantages of Database Management System (DBMS), lastly, Records and Records management System

3.2 The overall research design of the case study

3.2.0 Study area

The research was based on Kitgum Cooperative Savings and Credit Society limited, located on Christ the road, opposite council hall in Kitgum town, in order to find out the challenges of the existing Automation of Client database loan management system. This area was used as a case study because the researcher is familiar with the place. The researcher intended to find out the challenges faced by the existing optimised loan process management system, and then designs and implements a reliable and flexible information system.

3.2.1 Research method

It involved both qualitative and quantitative methodology because the researcher wanted to understand the people he was interviewing and at the same time acquire numerical data.

3.2.2 Study population

The study was carried out at Kitgum Cooperative Savings and Credit Society limited whose population is approximately fifty people.

3.2.3 Sampling and sampling techniques

The researcher targeted the staff of Kitgum Cooperative Savings and Credit Society limited loan department. The researcher used the purposive sampling strategy because the findings had a purpose. The researcher mainly chose the staff mainly involved in loan issuing, thus making it simple for acquisition of new and reliable information.

3.2.4 Sample size

The researcher considered loan department staffs, few staffs in other department, and the administrator's office of the organization, so as to have a mode of comparison to give a clearer view of responses.

3.3 Data collection techniques.

In order for the researcher to get enough information on the existing advertising and marketing strategies, various methods were used. Data was collected using the most commonly used fact finding techniques. Both the primary and secondary sources were significant.

3.3.1 Primary data sources

Primary sources were divided into two categories such as, face- to- face interviews, and observation of the existing database management system.

3.3.2 Face- to- face interviews

During week days and busy weekends, the researcher used this tool as a fact finding technique where he got an opportunity to talk to persons individually. This helped the researcher to improve on the project design. Questions asked were open ended. The advantages of the interview are as follows;

- They gave up to date information as the researcher directly gets data from the respondents.
- Cheap method of data collection, the researcher did not spend a lot of money on printing question sheets.
- It is a fastest technique of data collection.

3.3.3 Observation

The researcher took a step forward to look at existing system used to manage loan at the organization. This was of great impact towards the system design of the information system for Kitgum Cooperative Savings and Credit Society limited.

3.4 Secondary data sources.

3.4.1 Document Review

The researcher used secondary sources which include;

Library material sources that involved reviewing of different types of books about system design, Information systems, and database management, among others from Kampala International University main library.

The library was of great importance towards the design of this project. Information was got from various resources like Internet, Text books etcetera.

The data collection gave the general outlay of the existing database management system and processes and how it works and favours users.

3.5 Data analysis technique

Data collected was verified for accuracy and the most useful were selected, coded, edited and recorded for analysis.

3.6 Testing and validation.

The researchers in this testing phase used the existing data in the DBMS Oracle; errors are identified and corrected signifying that the system was fit for use by the users

3.7 Limitations of the study

- The researcher failed to get some data due to inadequacy of the sources of such data which arose from purposeful denial of data by some respondents.
- The respondents became suspicious of the goals of the study which resulted into insufficient cooperation thus holding back information.
- The researcher was limited by financial resources as the research needed a lot of funds to make it more successful.

3.8 System Development

This part of the research will focus on the development tools and techniques the researcher used for the design, development and implementation of the Automated Client loan management system.

3.8.1 Systems Development Life Cycle (SDLC)

This is a traditional methodology used by many organizations to develop and design a system. It features several phases that mark the progress of the system analysis and design effort. The researcher chose this methodology because it is accepted universally.

- **Planning** This is the first phase in SDLC, all the information the system needs are identified, analyzed, prioritized and arranged so that the needs of the project are identified.
- **Analysis.** This is the second phase in SDLC, during this phase; the system requirements are studied and structured. During this process, a careful study of any current system, manual and computerized systems that might be replaced or enhanced as part of the project.
- **Design.** During this phase of SDLC, the descriptions of the recommended solution is converted into logical and the physical system specifications.
- **Logic design** (all the functional features of the system are chosen for development is analyzed and described independently of any computer platform.)
- **Physical design** (logical specifications of the system from logical design are transformed in to technology specific details.)
- **Implementation:** This is the forth phase in SDLC, during this phase, the database or system is coded, tested, installed, that is to say put into use.
- **Maintenance,** The system is systematically repaired and improved

3.9 Conclusions

This chapter has dealt with issues concerning the choice of the research area, the criteria by which the data was generated; it further explained how the various research tools or the techniques that were applied in data collection were used to acquire the details, data management and analysis, research tools, steps that were followed in executing the study to the fullest and problems that were encountered while carrying out the whole exercise. The next chapter will show the current system analysis and new system design.

CHAPTER FOUR

SYSTEM DESIGN AND IMPLEMENTATION

4.1.0 INTRODUCTION

This chapter explains the current system, analyzing its Objectives, and the new system design; which will include; functional design, logical and physical design, database planning and Implementation. The design of the system produces the details that state how the system will meet the requirements identified during system analysis.

4.2.0 Desired system

4.2.0.1 Functional requirements

- This is system functionality that is essential for the system. They include the followings.
- The system should have a login functionality to allow only access by authorized users.
- The system should allow a user to connect to the database.
- It should allow a user to delete, and update the database.
- Automatic report generation should be allowed by the system.
- The users should be allowed to logout after system use.

4.2.0.2 Non-Functional requirements

These are systematic qualities that defined the system properties and constraints. They include the following,

- **Performance.** The system will be expected to have good response time in order to successfully perform data manipulation.
- **Security.** The system will be expected to have security functionalities like the user name and Password to avoid unauthorized users from accessing the system.
- **Accessibility.** Efficiency, reliability, speed and retrieval of information needed will be made easier for the system users.
- **User friendly.** The system uses commands, for system navigation that the user will find it easy to learn, because of reduced complexity.

- **Versatility.** Access to the system is a bit simplified to allow users to be able to start work as smoothly as possible. Maintenance by system administrator should be done regularly to keep the system available to the users.

4.3 Hardware and Software requirements

4.3.1 SOFTWARE REQUIREMENTS

NO	ITEM	SPECIFICATION	DESCRIPTION	BENEFIT	COST
1	Ms visual/(DBMS software)	VB	Version6.0withMSDN integrated	User friendly customized ID report	200,000
2	Anti virus	MacAfee	Version 2009	Min security risk on computer information -monitors your PC incase of attack	
	O/S	Windows xp service pack 3	version	NTFS file system for recent reason inbuilt	400,000
				Supportive drives for devices -easy management	
	DBMS	Wamp	version	Inbuilt feature that are upgraded for database -it is compatible with other software system	150,000

4.3.2 HARDWARE SOFTWARE REQUIREMENTS

ITEM	SPECIFICATION	DESCRIPTION	AMOUNT	BENEFIT
IPC	17 or 15 inch Pentium iv (dell)	CPU speed 2.40ghz ram 1GB -CD Rom Drive 48X Max _Hard disk 120 GB -Bus speed (800hz) -cache size 1MB -system memory	1,800,000	-Security -Better access -large storage -faster reaction in case of destruction robustness
		Speed 333MHZ		
Digital camera	-1gb of speed		1,300.000	Easy entry of client photo in the computer -fast
printer	Inkjet printer D3640	Black and colored cart and black high yield cart		
1UPS	APC smart UPS 700	-220-240Volts -4A 4ports cable	Power stability and storage to keep PC prone during power loss -prevention of data loss	

Other requirements

- a. Data clerk
- b. Conducive working environment for the administrator

4.4 Organizational Requirements

With the new system in place, there will be a need to maintain the database. Therefore some cost will need to be budgeted for in terms of operational and maintenance cost.

4.5 User requirements

An agreement was reached upon with the help of the system administrator and the general manager that user requirements and system constraints shall define the system services and functionality. They included the functional and non-functional requirements of the system.

4.6 Target users

These will be technical users who are well acquainted with the system. Possibly, these will be the Manager, Receptionist, Database Administrator and Systems Administrator.

4.7 System user

These are the users who will be using the system daily to carry out their responsibilities. These users will need training on how to properly use the system during the implementation of the system. They will carry out the following activities in the system.

4.7.1 System administrator

The System administrator will manage the system in the Organization in case of any breakdown or failure.

4.8 Technical user

Database/system administrator

- Monitor the progress of the system.
- Manage the system in case of breakdown.
- Protect the entire system from external threats.
- Maintenance and Repair.
- Provision of new types of security features for the system

4.8.1 Final system

From the research and documentation that was done in this chapter the researcher was able to develop the proposed system.

4.8.2 DETAILED ANALYSIS AND DESIGN

It's also known as the logical or physical design. Here the researcher's looks at how the proposed system- Automation of Client Database Loan Management shall deliver the general capabilities in the problem definition.

4.8.3 LOGICAL DESIGN

The researchers decided to use the E-R diagram as a technique of the logical design.

Fig 3: E-R DIAGRAM

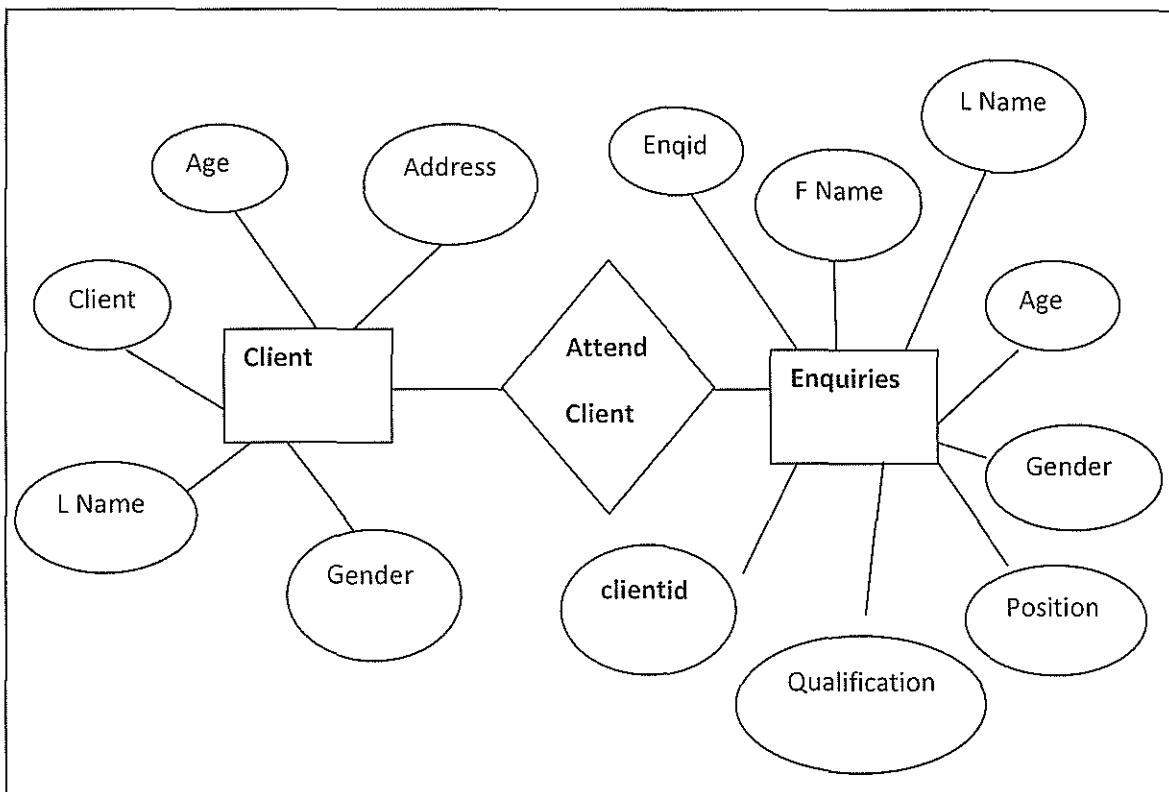


Fig 4: E-R DIAGRAM

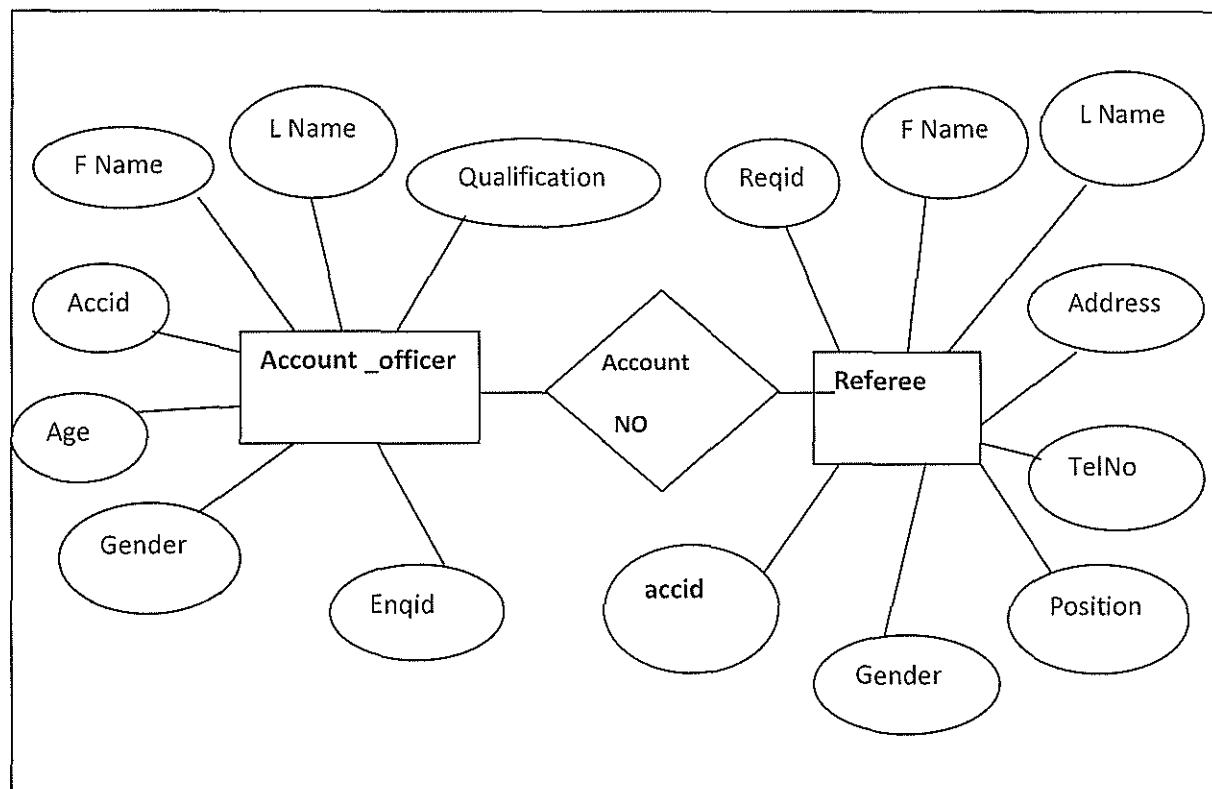
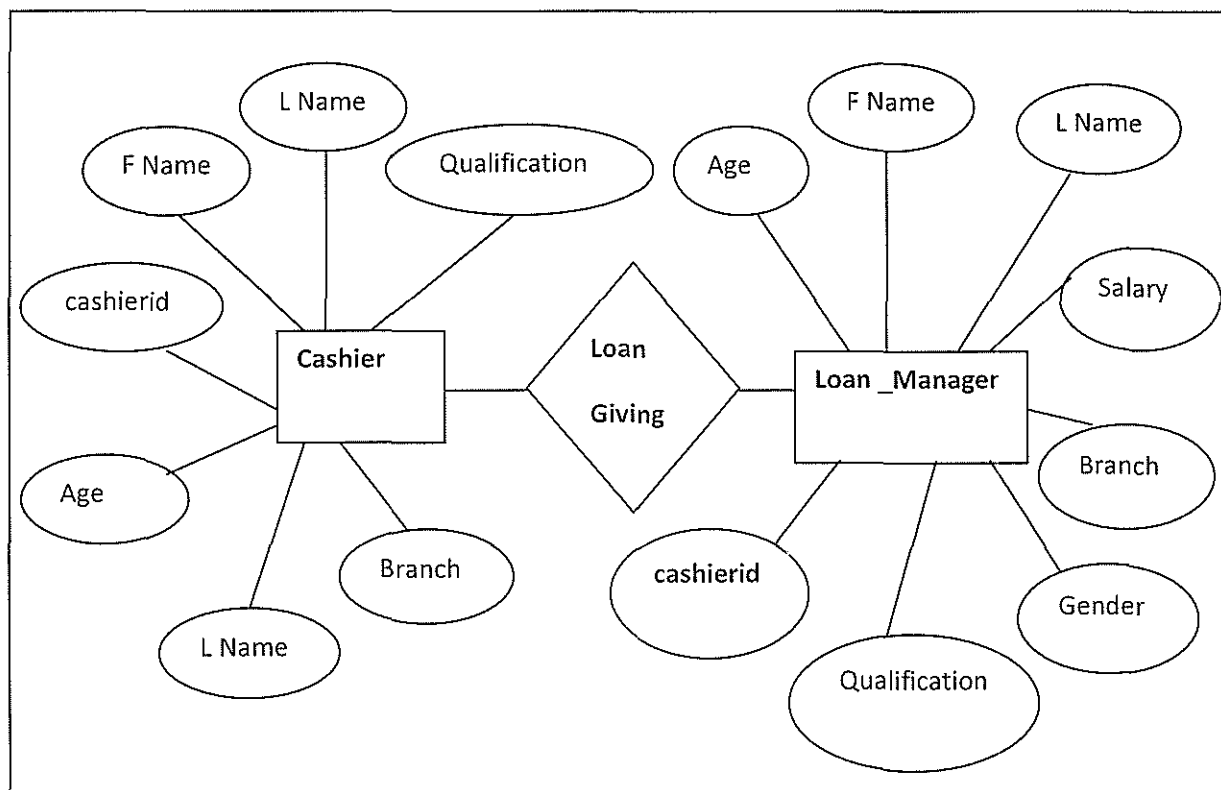
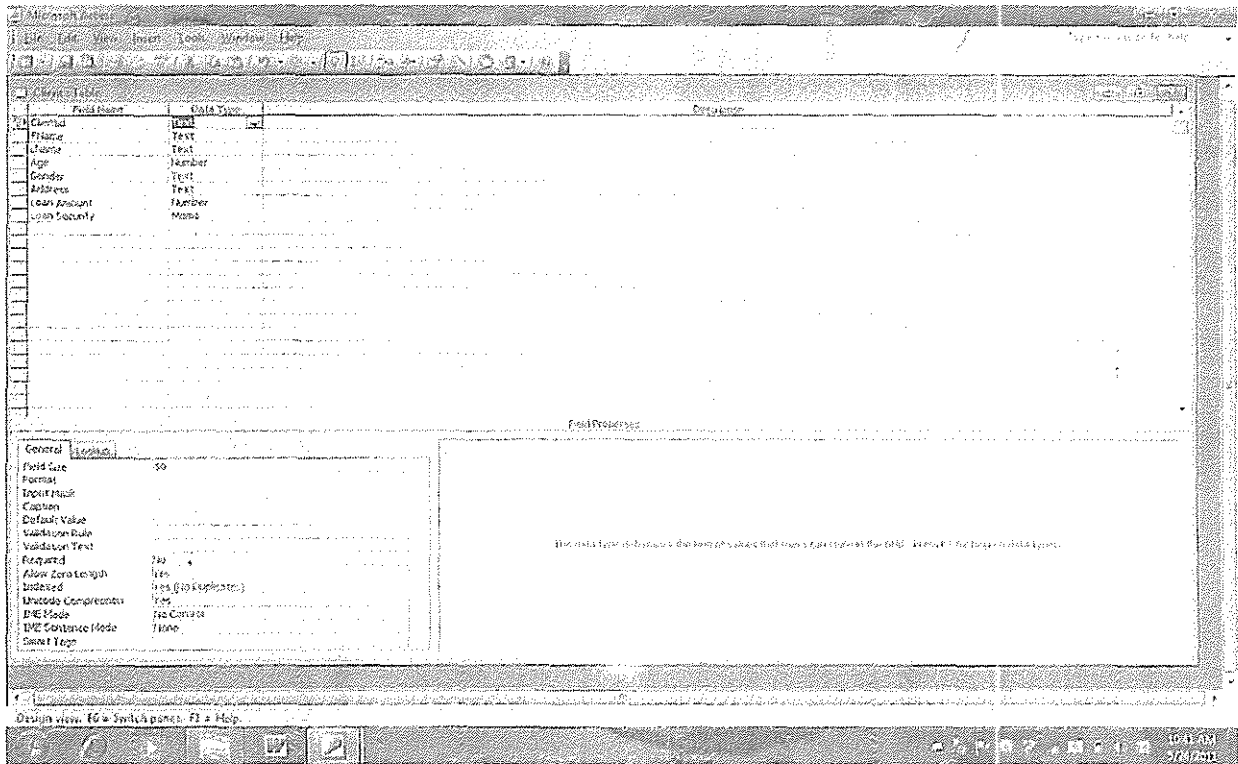


Fig 5: E-R DIAGRAM



4.8.4 Conceptual design Table

4.8.4.1 Clients Table



4.8.4.2 Cashiers Table

Cashiers Table

Field Name	Data Type
CashierID	Text
Fname	Text
Mname	Text
Age	Number
Gender	Text
Qualification	Text
Branch	Text
RefId	Text

Field Properties

Field Name: CashierID

Field Size: 50

Format:

Input Mask:

Caption:

Default value:

Validation rule:

Validation text:

Required: Yes

Allow Zero Length: Yes

Indexed: Yes

Cascade Referential Integrity: Yes

Is Primary Key: Yes

Is Hidden: No

Is System Field: No

Smart Tag:

The field is set as the primary key. It is also set as the field that is used to create the table's primary key. Please refer to the help for more information.

4.8.4.3 Accounts Table

4.8.4.4 Enquiries 'Table

Enquiries Table

Field Name	Data Type
Name	Text
Address	Text
Age	Text
Gender	Text
Qualification	Text
Marital Status	Text
Employment	Text

Field Properties

Field Name	Name
Format	
Length	
Decimal Places	
Validation Rule	
Validation Text	
Required	Yes
Allow Nulls	Yes (Not Enforced)
Indexed	Yes
Unique	Yes
PK	Yes
PK Sequence	1
Table Name	Enquiries

Design view. For a Switch panel, click on the Switch icon in the toolbar.

4.8.4.5 Loan Manager's Table

Loan Manager's Table

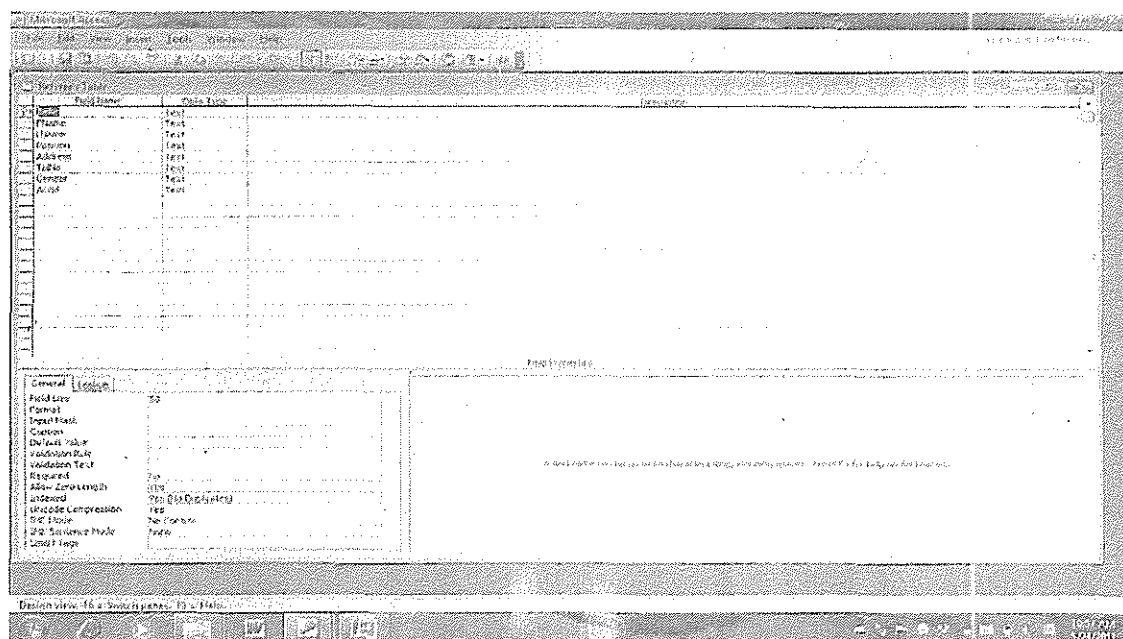
Field Name	Data Type
Name	Text
Address	Text
Age	Text
Gender	Text
Qualification	Text
Marital Status	Text
Employment	Text

Field Properties

Field Name	Name
Format	
Length	
Decimal Places	
Validation Rule	
Validation Text	
Required	Yes
Allow Nulls	Yes (Not Enforced)
Indexed	Yes
Unique	Yes
PK	Yes
PK Sequence	1
Table Name	Loan Manager's

Design view. For a Switch panel, click on the Switch icon in the toolbar.

4.8.4.6 Referee's Table



4.8.5 Physical Design

This design describes how the proposed system shall deliver the general capability as we logical design

4.8.5.1 Login

From this same form you can login on to the Main Menu form

The image shows a screenshot of a login form for the KITGUM CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LIMITED. The form is displayed within a window titled "Login". The form itself has a title bar that reads "KITGUM CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LIMITED". Below the title bar, there are two input fields for "USERNAME" and "PASSWORD". The "USERNAME" field is labeled "USERNAME" and the "PASSWORD" field is labeled "PASSWORD". Below these fields, there are two buttons: "LOGIN" and "CANCEL". The form is set against a light blue background with a subtle pattern. The window is running on a Windows operating system, as indicated by the taskbar at the bottom.

KITGUM CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LIMITED	
USERNAME	PASSWORD
<input type="text"/>	
<input type="text"/>	
<input type="button" value="LOGIN"/>	<input type="button" value="CANCEL"/>

4.8.5.2 Main Menu

The screenshot shows a window titled "Main Menu" with a rounded rectangular border. Inside the window, there is a table with two columns and three rows of buttons. The buttons are labeled "LOAN MANAGER", "ACCOUNT", "CASHIER", "REFEREE", "ENQUIRIES", and "CLIENT". At the bottom left of the window is a "LOCK" button, and at the bottom right is a "CANCEL" button. The window is set against a light gray background. Below the window, a Windows taskbar is visible with various application icons and a system clock showing 10:01 AM.

Main Menu	
LOAN MANAGER	ACCOUNT
CASHIER	REFEREE
ENQUIRIES	CLIENT
LOCK	CANCEL

From the same form you can login on to all the Forms in the System

4.8.5.2 Loan _Manager Form:

From this same form you can manipulate data in Loan _Manager database

Details of Loan_Manager in Cooperative Society Ltd

Loan_Managerid:	<input type="text"/>	<input type="button" value="OK"/> <input type="button" value="Close"/> <input type="button" value="Add New"/> <input type="button" value="Save / Edit"/> <input type="button" value="Delete"/> <input type="button" value="Search"/> <input type="button" value="Refresh"/> <input type="button" value="Loan Manager Report"/>
FName	<input type="text"/>	
LName	<input type="text"/>	
Age	<input type="text"/>	
Gender	<input type="text"/>	
Qualification	<input type="text"/>	
Salary	<input type="text"/>	
Branch	<input type="text"/>	
Cosnterid	<input type="text"/>	

4.8.5.4 Cashiers Form

From this same form you can manipulate data in Cashier database

Details of Cashier in Cooperative Society

Cashierid	<input type="text"/>	<input type="button" value="OK"/> <input type="button" value="Close"/> <input type="button" value="Add New"/> <input type="button" value="Save / Edit"/> <input type="button" value="Delete"/> <input type="button" value="Search"/> <input type="button" value="Refresh"/> <input type="button" value="Cashier Report"/>
FName	<input type="text"/>	
LName	<input type="text"/>	
Age	<input type="text"/>	
Gender	<input type="text"/>	
Qualification	<input type="text"/>	
Branch	<input type="text"/>	
Ref001	<input type="text"/>	

4.8.5.5 Enquiries Form:

From this same form you can manipulate data in Enquiries database

Details of Enquiries in Cooperative Society

Enqid	1001
ENName	OPELLA
LName	PERIN
Age	45
Gender	MALE
Qualification	DIPLOMA
Position	MANAGERIAL
Clientid	1001

Go

Clear

Refresh

Save / Edit

Print

Search

Refresh

Export/Import

Move First

Move Previous

Move Next

Move Last

4.8.5.6 Account Form

From this same you can manipulate data in Account database

Details of Account Officers in Co-operative Society

Acco	<input type="text"/>	<input type="button" value="Add New"/>
FName	<input type="text"/>	<input type="button" value="Save / Edit"/>
LName	<input type="text"/>	<input type="button" value="Delete"/>
Age	<input type="text"/>	<input type="button" value="Search"/>
Gender	<input type="text"/>	<input type="button" value="Refresh"/>
Qualification	<input type="text"/>	<input type="button" value="Account Officers Report"/>
Enqno	<input type="text"/>	

4.8.5.7 Referee Form

From this same form you can manipulate data in Referee database

RefNo

RefNo

RefName

RefName

RefName

RefName

Position

Position

Address

Address

Phone

Phone

Gender

Gender

ACRD

ACRD

OK

Close

Add New

Save / Edit

Delete

Search

Refresh

Referee Report

Move First

Move Next

Move Previous

Move Last

4.8.5.8 Clients form

From this same form you can manipulate data from Clients database

Details of Clients in Co-operative Society

Clientid	<input type="text" value="1001"/>
FName	<input type="text" value="Raj"/>
LName	<input type="text" value="Soni"/>
Age	<input type="text" value="22"/>
Gender	<input type="text" value="Male"/>
Address	<input type="text" value="Gokulnagar"/>
Loan Amount	<input type="text" value="100000"/>
Loan Security	<input type="text" value="House"/>

10:46 AM 5/11/2011

4.8.6.0 Cashiers Report

CASHIER REPORT IN COOPERATIVE SOCIETY

Report Date: 20/03/2013 145

CashierID	Name	Champs	Age	Gender	Qualification	Branch	RefNo
C001	Amde	Champs	27	Female	Engineer	ashalegala	0001
C002	Dechalu	Haymanot	42	male	Teacher	ashalegala	0002

Page: 1/1

10:47 AM
3/22/2013

4.8.6.1 Enquiries

ID	Name	Address	Age	Gender	Occupation	Status	Contact
ID001	CHARLES PETER	14	MALE	EMPLOYEE	MARRIED	1001	
ID002	JOHN WILLIAM	20	MALE	SECRET	EMPLOYEE	1002	
ID003	JOHN DAVID	28	MALE	SECRET	EMPLOYEE	1003	

4.8.7 The Input Requirements.

The system used the following input devices:

- Optical Mouse lens- It indicates an area where the data is to be entered by the keyboard. It's rolled on the desk to position it.
- The keyboards- Input device that converts letters, numbers into an electronic signal. The client details data is entered by the keyboard.

4.8.8 Output Requirements.

This is to help produce the hard copy of data entered in loan department incase its urgently needed by the director or any other analysis.

- Printer- the device that shall print out the hardcopy or printed reports for depm1ment.
- “17th “ “or 15th” Monitor/Screen used to display detailed or summary of the database if it's being entered.

4.9 Analysis of the current system

This was concerned with analyzing the actual system, what it did and how it worked, that is, the strength and weakness of the system. The analysis was aimed at identifying the problems that the proposed automated client loan management system is expected to overcome and contributes to the development and access of the organization. In analyzing the present system, I collected a lot of relatively unstructured data through face to face interviews, and observation as already shown in the previous chapter. (Chapter three). Within this chapter, we shall see all the design tools used in the design and implementation of this project in the development plat form.

4.9.1 Strengths and Weaknesses of the current system

4.9.1.1 Strengths

The current system is affordable since it does not consume a lot of computer resources for example RAM, CPU.

4.9.1.2 Weaknesses in the current system

- Time wastage. There are always delay to fix a particular problem in case a system breaks down, which slows down work and hence time wasting.
- Insecurity of organization information. Records are kept in only one office. In case of any system breakdown, there will be no back up data.

CHAPTER FIVE

RECOMMENDATION AND CONCLUSION

5.0 Introduction

This chapter lays out the system being delivered and talks about the limitation faced when developing the system. It also includes the system installation, maintenance and conclusion to the document.

5.1 Recommendation

Since the system is under operation for it to be implemented with fewer problem, it is recommended for it to be run on window XP operating system, hard disk size of at least 80 GB and RAM size of at least 512MB. Functionally such as one that will enable different users to access relevant forms use of password is recommended.

The researcher recommended that before the application is put into use, it should be tested in a sample helped to estimate any buys that may not have been identified at the time of Password levels may increased to higher level dependency in the confidentiality of the stored data. However, on completion the following should be done.

- After the completion of system implementation we would recommend the institute to employ a technician to monitor the system as stated below.
- The system administrator should be interviewed and asked several questions about his experience in his field of system administration and with at least a 2 years experience.
- His work at the institution should not be undermining as it ensures the smooth operation of the system.
- The system administrator should be able to identify all the hardware and software requirements according to the company's budget.
- The system administrator should be able to periodically maintain, update or improve the system where necessary.

5.2 Training

The purpose of the training will be to get the users familiar with the system. The system users, manager and administrators will all be trained differently since they all perform tasks. Training has been estimated to last about three weeks so as to resume for work as soon as possible.

5.3 Implementation

Now that the system has been developed there is need for it to be tested. This requires the organization to organize a budget for the purchase of hardware and software as stated in the requirements. Serious measures should be taken to protect the system from any external threat.

The implementation process will include installing the system on a computer with an operating system that is compatible plus other system and user applications

5.4 System evaluation

The system is easy and secure since relatively unskilled programmers and non programmers 'power users' can use it to handle the duties of the department which include data entry, update, storage, maintaining confidentiality, integrity of data and to overcome the constraints that the loan department is currently experiencing without having to deal with features they do not understand.

5.5 Conclusion

The system has to be developed with scalability and can be re-developed or updated to new requirements. This system can be updated to include requirement that may come up as the system requirements expand.

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APPENDICES A

SAMPLE QUESTIONIARES

QUESTIONNAIRE FORM FOR LOAN DEPARTMENT IN KITGUM COOPERATIVE SAVINGS AND CREDIT SOCIETY LTD

The purpose of this questionnaire is to find out information regarding the optimised loan process management system in Kitgum Cooperative Savings and Credit Society Ltd. The findings of this research are purposely academic. All information provided in here will be treated with strict confidentiality.

Note: please tick in the box of your choice and fill in the blank spaces.

1. Does Loan Department have computerized loan process system?

YES ☐ NO ☐

2. How are Loan Records entered / stored in your database?

Using Ms Excel ☐ Us Ms Access ☐ Oracle ☐ Financial problem ☐

3. Who enters Client records into the database?

.....
.....
.....
.....

4. What part of the optimmised Loan process management system would you like to be computerized or improved?

Client details ☐ Compilation of Client's Record ☐ Financial Problem ☐

5. What do you think would be the advantages of a computerized Loan Process Management system at kitgum Savings and Credit Cooperative Society Ltd?

.....
.....
.....
.....

6. What do you think would be the disadvantages of computerized Loan process management system at Kitgum Savings and Credit Society Ltd?

.....

.....

.....

7. Are the staffs satisfied with the new computerized client record keeping system compared to the old file based recording keeping system?

.....

.....

.....

8. Are there some information that would affect the creditability of the cooperative incase the system is not computerized?

.....

.....

.....

9. Make some general comments about the current computerized Client record keeping system at Kitgum Savings and Credit Cooperative Society Ltd?

.....

.....

.....

10. Do you have any measure to enforce security so as to protect Client's record as per now?

.....

.....

.....

11. If yes how is security for clients' record enforced?

.....

.....

.....

APPENDICES B

System Internal Coding / Design

It is definition stage where the researchers' used the existing database in Oracle linked to the Microsoft ADO 4.0 (ODBC) driver of VB programming interface. This is to make the system user friendly, and coordinate data movements or controls of the entire process.

Below are the codes of the following command buttons and others interface;

a) Move First Command button

```
Private Sub cmdMoveFirst_Click()  
    Adodc1.Recordset.MoveFirst  
    If Adodc1.Recordset.BOF Then  
        Adodc1.Recordset.MoveLast  
    End If  
End Sub
```

b) Move Next Command button

```
Adodc1.Recordset.MoveNext  
If Adodc1.Recordset.BOF Then  
    Adodc1.Recordset.MoveLast  
End If
```

c) Move Previous Command button

```
Adodc1.Recordset.MovePrevious  
If Adodc1.Recordset.BOF Then  
    Adodc1.Recordset.MoveLast  
End If
```

d) Move Last Command button

```
Adodc1.Recordset.MoveLast  
If Adodc1.Recordset.BOF Then
```



```
Adodc1.Recordset.MoveFirst
```

```
End If
```

e) Refresh Command button

```
If MsgBox("are you sure you want to refresh?", vbOKCancel) = vbCancel Then
```

```
Exit Sub
```

```
text1.Text = ""
```

```
text2.Text = ""
```

```
text3.Text = ""
```

```
text4.Text = ""
```

```
text5.Text = ""
```

```
text6.Text = ""
```

```
text7.Text = ""
```

```
End If
```

f) Search Command button

```
Dim Searchvar As String
```

```
Dim sBookMark As String
```

```
Searchvar = InputBox("Enter the Enqid to find")
```

```
Searchvar = Trim$(Searchvar) 'remove surplus spaces
```

```
If Searchvar <> " " Then 'cancel if nothing entered
```

```
With Adodc1.Recordset
```

```
sBookMark = .Bookmark
```

```
.Find "Enqid like '" + Searchvar + "'"
```

```
If .BOF Then 'record not found
```

```
Adodc1.Recordset.MoveNext
```

```
If .EOF Then
```

```
Adodc1.Recordset.MovePrevious
```

```
MsgBox "Hey! There is no such record in this Database ", vbYesNoCancel
```

```
Else
```

```
If Searchvar = "" Then
```

```
MsgBox "You must add an item", vbOKCancel
```

```
End If
```

```
End If
```

```
End If
```

```
End With
```

End If

g) Delete Command button

```
Confirm = MsgBox("Are you sure you want to delete this record?", vbYesNo,
"Deletion Confirmation")
If Confirm = vbYes Then
Adodc1.Recordset.Delete
MsgBox "Record Deleted!", , "Message"
Else
MsgBox "Record Not Deleted." Message
End If
Adodc1.Recordset.MoveFirst
If Adodc1.Recordset.BOF Then
Adodc1.Recordset.MoveLast End
End If
```

h) Add New Command button

```
Private Sub cmdAddNew _ Click()
cmdOK.Enabled = True
Adodc1.Recordset.AddNew
cmdSave.Enabled = False
cmdDelete.Enabled = False
End Sub
```

i) OK Command button

```
Adodc1.Recordset.MovePrevious
cmdOK.Enabled = True
cmdDelete.Enabled = False
cmdSave.Enabled = False
cmdAddNew.Enabled = False
cmdSearch.Enabled = False
cmdClose.Enabled = False
cmdRefresh.Enabled = False
End
End If
End If
```

j) Close Command button

```

Private Sub cmdClose _ Click()
fnnGeneral.Show
Unload Me
End Sub

```

k) Save / Edit Command button

```

Adodc 1.Recordset.AddNew
txtCashierid. SetFocus

```

l) Form at run stage by the user coding(FORM LOAD)

```

Private Sub Form Load()
cmdOK.Enabled = False
cmdDelete.Enabled = True
cmdSave.Enabled = True
cmdAddNew.Enabled = True
cmdSearch.Enabled = True
cmdClose.Enabled = True
cmdRefresh.Enabled = True
End Sub

```

m) MMDI form coding

```

Private Sub cmdENQUIRIES _ Click()
fnnEnquiriesForm. Show
Unload Me
End Sub

```

n) Security Login form codes

```

Private Sub cmdLOGIN_Click()
If txtUSERNAME = "Bank" And txtPASSWORD = "Bank123" Then
frmGeneral.Show
Unload Me
Else MsgBox "VERIFY USERNAME AND PASSWORD", vbQuestion, "LOGIN"
txtUSERNAME = "bank"
txtPASSWORD = "bank123"
End If
End Sub

```