

DESIGN AND IMPLANTATION OF MANAGEMENT INFORMATION SYSTEM

FOR A RESOURCE CENTRE

A CASE STUDY NIMULE RESOURCE CENTRE

PRESENTED

BY

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A PARTIAL FULFILEMENT FOR THE A WARD OF DIPLOMA

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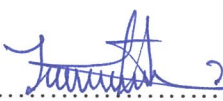
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JANUARY, 2011

Declarations

I do hereby declare that this research proposal presented is my own work and it has never been presented to any academic institution for any academic qualification.

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Dedications

This project proposal is dedicated to God the almighty, for His Grace and blessing to us.

To my parents, grandparents, friends, brothers, and sisters and to all those who made this project become a success.

Abstract

Management Information and the processes key performance indicators with the help of the computer and Information Technology is an important and easy tool in improving organizations performance and customer relationship. Nimule Resource Center is one of these organizations that can benefit from these using computer and Information Technology.

The Design and Implementation of Management Information System project constitutes of centralized database system developed using MS ACCESS and user interfaces for data entry and updates developed using VISUAL BASIC. This project accomplishes the goal to provide and help the management to generate timely reports and keep data in a secure manner. The system captures all Details of students and staffs in different Departments of the Resource Center.

Access to the Database is restricted to only Database Managers and other privileged persons who have the authority to view the Details of students and the staffs. The system has a welcome form where registered users can log in to get access to the database and, new users can first register to get access to the database. On the welcome form, registered users can choose Login while the new users have to choose Register before logging in.

Abbreviations

CASE	Computer-aided software Engineering
DB	Database
DBA	Database Administration
DBMS	Database Management System
DDL	Database Definition Language
DFD	Data Flow Diagram
DML	Data Manipulation Language
E-R Model	Entity-Relationship Model
MB	Megabyte
GUI	Graphical User Interface
ICT	Information Communication Technology
IT	Information Technology
MIS	Management Information System
RAM	Random Access Memory
VB	Visual Basic
1NF	First Normal Form
2NF	Second Normal Form
3NF	Third Normal Form

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CHAPTER ONE

INTRODUCTION

1.1 Introduction.

The Resource Centre is located in Nimule in Magwi County Eastern Equatorial South - Sudan. The Resource Centre was started by Rev. Fr. A. Fleskens. M from the Netherlands in 2002. It started as a small project for school children, displaced persons and refugees receiving relief aid where socially and economically disadvantaged youths could meet to share their life experiences as well as some material necessities. The Resource Centre directly involved in teaching in the various departments, i.e. Computer Lab, library services, Internet services, Tailoring, and Joinery and Sports. The Centre has always been run by Catholic missionaries, the Missionaries of Africa popularly known as 'White Fathers'.

1.2 Background.

Since this Resource Centre was started they have number of problems of keeping information or data in their system, because they are using manual file system where information and data are stored otherwise there is a lot of data redundancy, insecurity, poor retrieval and update of information, there is also poor report generation in the way that data are repeated. It takes time to access the information because of the much paper work involved. Therefore the purpose of this system is to help the management to generate timely reports and keep data in a secure manner.

1.3 Problem Statement.

The problem being faced by the Resource Centre is that they use manual file systems to store information and there is no proper management of information there is a lot of data redundancy, insecurity, poor retrieval and update of information, there is also poor report generation. If there is need for information from any of the department on the committee, it takes time to access the information because of the much paper work involved. Therefore the purpose of this system is to help the management to generate timely reports and keep data in a secure manner.

1.4 Objectives of the project

1.4.1 General Objective.

To develop a System that will help the management of the Resource Centre to efficiently manage the information of all the department of the Resource Centre.

1.4.2 Specific Objectives.

1. To develop a fast and efficient computerized information system by use of Transaction Processing System.
2. To develop secure and reliable information system for the Resource center.
3. Testing and validating the developed system

1.5 Research Questions

The following questions were used as a guide to the study:-

- 1-Will the automated Management Information System enables the department to input store, Manipulate retrieved information and come up with reports?
- 2-Will it reduces data redundancy and enforces integrity and security?

1.6 Scope of the study.

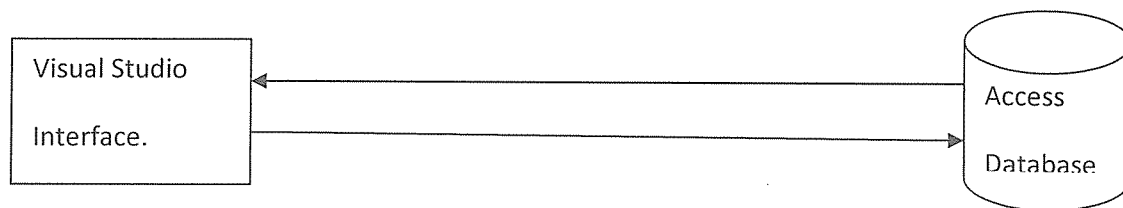
The researcher visited the following departments, Computer School, Library, Tailoring, and Internet Services and the researcher will be visiting the head of department for library, the manger for internet service, and the director or the manger for tailoring and others.

1.7 Significance.

- (i). the speed of data processing and report generation will be increased.

1.8 Conceptual frame work

The Visual Basic interface interacts with the Access Database through the use of different user level passwords. The interface offers registration and other data entry to the Database, and there after generates reports of both grouped and ungrouped data. Like student details and registered students in the department.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction.

This chapter introduces reviews on other writer's articles concerned with areas of manual systems, Information systems, system architectures, computer databases, Report Generation and Information Technology. In this chapter, we shall also discuss the importance and relevancy of information technology, information systems. It also addresses the structure of Manual System and File Processing, Database system and Database Management Systems with their effects as perceived by different authors. It will also include the researcher instructions.

2.1 Scope of the literature review.

The literature review is restricted to the ideas that has been raised, acknowledged and written about the researcher topic. It has involved reading a lot of literature, from the internet, text books and journals.

2.2 Problem area.

In this case, the problem area is the Resource Centre, but more specifically, the library department. The researchers were involved in identifying the exact problem in the existing system. Once the problem was recognized and acknowledged by the management, the researchers went ahead with analysis and design of the proposed system.

2.3 Application area

Application area is the area where the proposed system will be run from. In this case, the proposed system will be run from the Library Department, and will be accessed only by the authorized people. That is the head of the department and the librarian. Password will be used in order to enhance security.

2.4 Development methodology

To ensure the success of the given organization, there is need of an information system that will handle all the needs of the users efficiently and effectively.

According to Kroenke, David. M (2000), an information system is an arrangement of people, data, processes, information presentation and information technology that interact to support and improved day to day operation in a business as well as support the problem solving and decision making needs of management and users.

2.4.1 Management

According to Robert (2000), this is the process that involves managerial skills to interact various components to make the organization plan run effectively. An operation of management comprises the process or the various.

2.4.2 Information

According to O'Brien (2001), Information generally, is assigned to data and its definition. Information can be broadly viewed as any collection ideas, written or verbal. Whereas data involves facts and figures in their raw form, information must be processed and useful in planning. Data on the other hand can be referred to as stream of raw facts representing events occurring in an organizations or the physical environment before they have been organized and arranged into a form that can be understand and used.

2.4.3 System

According McFadden, Hoffer (1993), A system in simple terms consist of a set or group of interrelated elements, interacting components working together to achieve a stated objective. These include:

An input that is raw data for processing which may include raw material, physical resources, and knowledge of information.

Processing, transforming raw data into useful information. He activities involved include:- sorting, editing, classification and formation.

Output. The final processed information for the end user, the result of operation. It is the objective for which the system is defined.

Feedback. That is to say the function that make possible the control over the system operation.

2.5 Database (DB).

According to Zwass (1998), Data base can be define as a shared collection of logically related data and a description if that data designed to capture information need of an organization. A Database is managed by a Database Management System (DBMS). A database typically has two main parts: first, the files holding the physical database and second, the database management system (DBMS) software that applications use to access data.

And here are some are some of the advantages of database.

(i). Databases save time.

According to summer, (1989), Instead of rummaging through endless piles of paperwork, a database pulls up information with simple query. A user can enter in specific keywords in order to recall information. The database becomes a more efficient solution than paper files held in a file folder.

(ii). Databases Aid Communication.

According to Laudon, (1995), larger companies can benefit from databases when information must be spread to various users. For example, if a company has two branches but must share central information, it would be prudent to implement a central database that can be viewed by all employees of that company.

(iii). Databases Are More Secure.

According to McFadden, Hoffer (1993), File cabinets can be compromised. They can be stolen, accidentally destroyed, or lost. Databases add another level of security to valuable information. Not only can a database be stored in a remote facility unaffected by devastating events such as fire or thievery, but a database can also be password protected. This locks out any eyes that should not view sensitive reports.

Although the system works, it has a number of disadvantages that limit its efficiency for and effectiveness to the organization

1. Database systems are complex, difficult, and time-consuming to design.
2. Initial training required for all programmers and users.

3. Suitable hardware and software start-up costs.

2.5.1 Database Management System (DBMS).

According to Darwen, H.(2000) www.management-hub.com, It is a special data processing system, or part of a data processing system, which aids in the storage, manipulation, reporting, management, and control of data. A Database has got two types of views, that is, Physical and Logical views that can allow users to customize according to their individual needs.

2.6 View of data

1. The Physical View:-

According to Gehani, N. (2006), The word physical view comes from the viewing of the database. In viewing a database, there can be many different ways users can view a database depending on their needs and purposes. Physical view refers to the way data are physically stored and processed in a database.

2. The Logical View:-

According to Codd, (1970), on the other side, logical view is designed to suit the need of different users by representing data in a meaningful format. Another word, the logical view tells the users, in their term, what is in the database. So while there can be numerous logical views of a database to suit the needs of the users, there can only be one physical view of a database because physical view deals with the physical storage of information on a storage device.

3. View level:-

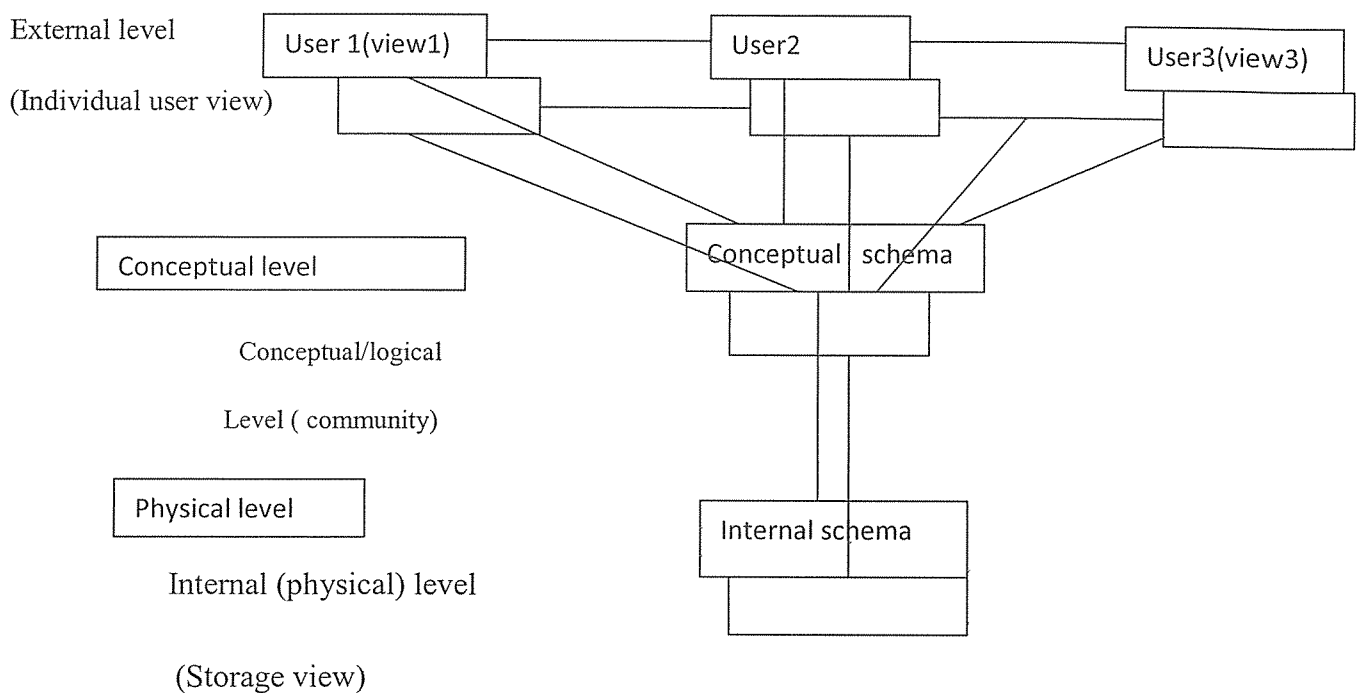
According to C.J. Date (2000), view level is also known as the external level. This is the highest level of abstraction. It describes only part of the entire database, the part is important to the users.

Database systems have several schemas partitioned according to the level of abstraction in reference to C.J. Date (2000)

- i. Physical schema:- Describes the database design at the physical level.
- ii. Logical schema:- Describes the database design at the logical level.

- iii. Sub-schema:- Describes different views of the database.

At the external level, we have Data Definition Language (DDL) which supports the definition or declaration of database objects and Data manipulation Language (DML) which supports the manipulation or processing of such objects.



2.7 Microsoft Access

According to Timothy J. O'Leary (2000) and Linda, I. O'Leary, Microsoft Access is a relation database management system. In relation database system, data is organized in table that are related or linked to one another. Each table consists of rows called records and Colum called fields.

Access is a powerful program with numerous easy-to-use features including the ability to quickly locate information, add, delete and modify records, sort records, analyze records and produces professional looking reports.

2.8 Microsoft Visual Basic (MSVB).

According to Burrows, Langford (2000), Microsoft visual basic is a program that allows its users to create new programs? It is especially well suited to the creation of program for supporting business operation, and it has gained considerable acceptance in companies around the world.

2.9 Conclusion

This chapter mainly dealt with issues related to the subject under study and the tool that were used. The next chapter will mainly cover the analysis of the current system and the proposed system. It will answer the question on how the problem was going to be solved.

CHAPTER THREE

METHODOLOGY

3.0 Introduction.

This chapter deals with the analysis of the data been collected from the research carried out. It also includes the procedures that were used to carry out the study, the method of data collection, analysis of the strengths and weakness of the current system, system specification and requirements, user requirements, functional requirements.

3.1 Study Design

An information system method embodies a number of techniques each chosen for its appropriateness for a particular task with a method or methodology several methods may be combined for a given computer system development strategy. In this case SDLC was used.

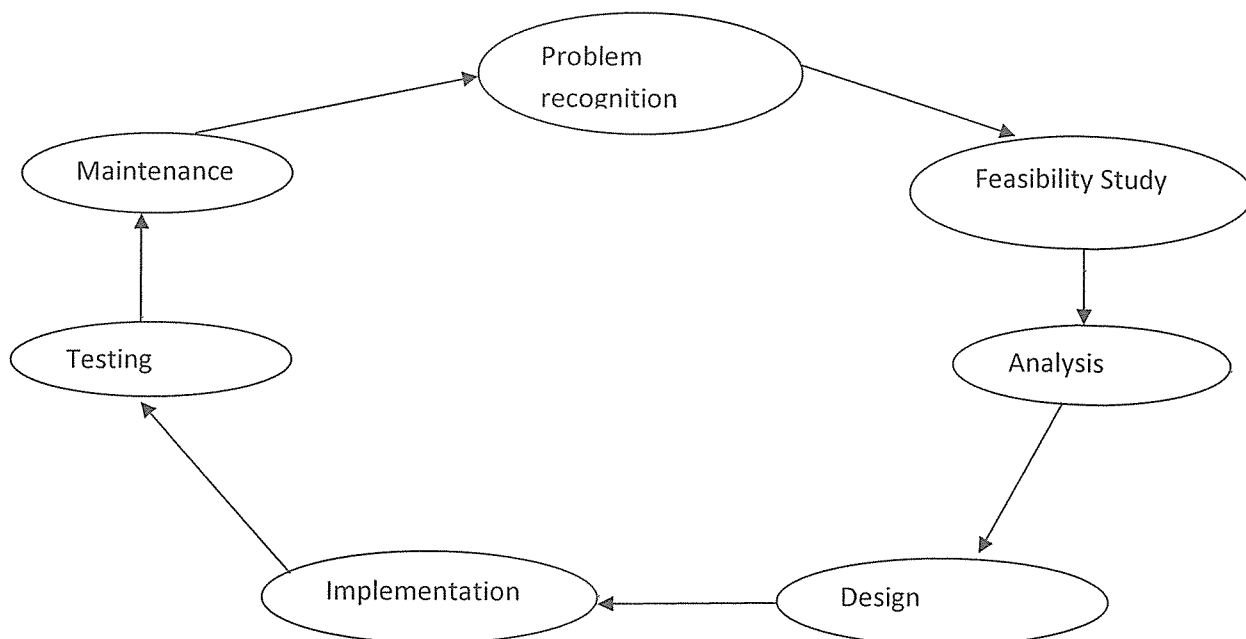


Figure 2: software development life cycle

3.2 Research Instruments.

This refers to the method applied to collect data. Under this category, the researcher concentrated much on issues concerning the area of study. The following methods were applied in the collection of the namely: Questionnaire, observation, research and document examination and analysis

3.2.1 Primary Data Collection.

The following methods are used for collecting primary data.

3.2.1.1 Questionnaire.

This method involved written questions send to the targeted group to acquire information that may not be obtained from the above research method. Thirty questionnaires were issues out to students, and twenty of them were returned. Also twenty questionnaires were to staff members and seven of them were returned.

3.2.1.2 Observation.

This method was very useful especially where the required information was not easy to obtain due to the restriction imposed on the obtaining of such information that provide to be relevant to this research. Observation involved visiting the offices in the computer department, where the information is kept and taking note of what was going on, and then come up with a conclusion. It included where the relevant staff (teachers) would go and pick bits of information they required, and handing it in to the head of department. By observing this pattern, it was possible to come up with an analysis that helped in developing a better system.

3.2 .2 Secondary Data Collection.

The following are the method are used for collecting secondary data.

3.2.2.1 Document examination and analysis

The researcher examined and analysis result slip, student academic report and records for more information which was rather difficult to obtain from the above mentioned methods.

3.2.2.2 Research

This was a very instrumental fact finding technique to research the application and problem. Documents such as journals, magazine, lecture note reference books, other peoples' research work and the internet including user groups and bulletin boards provided good source of relevant information.

3.3 The Current system specification

This specification the functionality of the system and the constraint in its operation. System specifications are intended to establish what services are require from the system and constraints on the system's operation and development. This stage is very delicate because errors at this point inevitably lead to later problem in the system design and implementation.

3.3.1 User requirements of the new system.

The services the system is expected to provide and the constraints under which it must operate.

The userof the system will perform the following requirements.

- i. Update and save records.
- ii. Delete any records.
- iii. Edit and refresh records

- iv. Add records that will to be added into the system
- v. Generate crystal report.

3.3.2 System requirements.

These specify system behavior that is not allowed rather than the behavior that is expected f the system. The following security checks will be observed:

- i. Unauthorized users should not be allowed to access the database. This can be enhanced by use of passwords and user name.
- ii. Relevant information should be made available to the relevant people only.
- iii. The system should allow the authorized people to change the different logins when need arises.

3.3.3 Functional requirements.

These are the statement of service the system should provide, how the system should react to particular inputs and how the system should behave in particular situation. They explain what the system should do and what it entails:

- i. Produce report of all students registered in a given period of time.
- ii. Produce reports of all students' academic performance in given semester.
- iii. Produce individual result slip for each student and their details.
- iv. Update, delete, refresh, exit and add are some of the functionalities that the system will have.
- v. The system shall provide appropriate views for the user to read document in the document store.
- vi. There is need for sufficient hard disk space to manage the system, at least 80GB.
- vii. Enough memory (RAM) is needed to ensure quicker and better responsiveness, least at 512MB.

3.3.4 Non-functional requirements.

These are constraints on the service or functions offered by the system. They include timing constraints, constraints on the development process, standards and so on. The following are expected of the new system:

- i. The system alerts the user if he clicks a button without a valid data type.
- ii. It is designed to be user-friendly through the various button and simple forms by which the user interacts.
- iii. Data integrity is ensured through the user of validation rules.

3.4 The Use System.

The system seeks to overcome the shortfalls associate with the old system. The new system seeks to achieve the following goals.

- i. Improve the current data collection, storage and update methods.
- ii. Increase collaboration by putting in place a database that will enable the units within the scope to share information on data stored.
- iii. Improve on data capture and reporting. It will be possible to make periodic reports based on accurate information.
- iv. Keep track of students' performance so as to accurately monitor them.
- v. Quick and efficient retrieval of data.

3.5 Conclusion

This chapter mainly dealt with the fact finding method and the scope at which the research was concentrated on. This user, system, functional and non functional requirements were as well identified.

The next chapter will mainly cover the design of the proposal system

CHAPTER FOUR

SYSTEM DESIGN, IMPLEMENTATION AND TESTING

4.0 Introduction

This chapter encompasses the conceptual, logical and physical design of the proposed system. It deals with the preliminary design then the detailed design. It as well includes diagrams which will facilitate the users' understanding of the new system. The purpose of this chapter is to develop a design of the intended system.

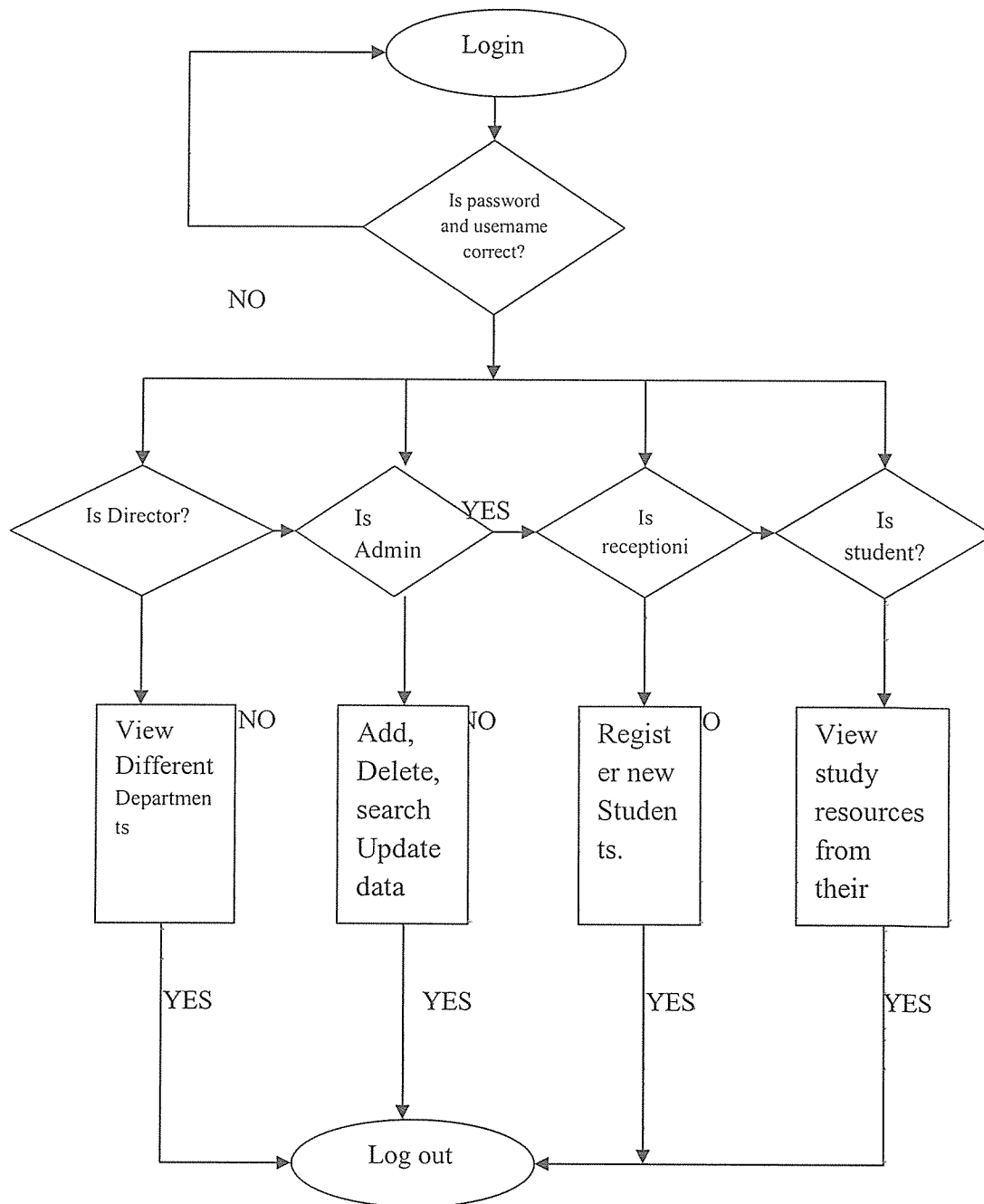
4.1 Description of the System

The designed system has two main parts; the system Administrators and the end users. This will help in registration and updating from which system reports are derived for better decision making and process improvement. The developed system gives access to only authenticated and authorized end users with a right password and username. The users should be of type administrator, receptionist-Data entry clerk, each of which with roles to carry out different tasks and therefore access different information.

The Director's logon leads to many reports that are generated by the system such as sharing locations, activity reports, sales reports and gross income reports to give information that can be used to drive performance and improvement of user relationships and service.

This system also has a page for sharing user members on which he or she can log in to view different resources available for both study purposes and for references.

Figure 4.1: System Flow Chart



Key

Admin –Administrator

4.2 Organizational Structure of the Current system

The Resource Centre is headed by a Managing Director; he is the executive head of the establishment and is in charge of all the policies and top management decisions for the

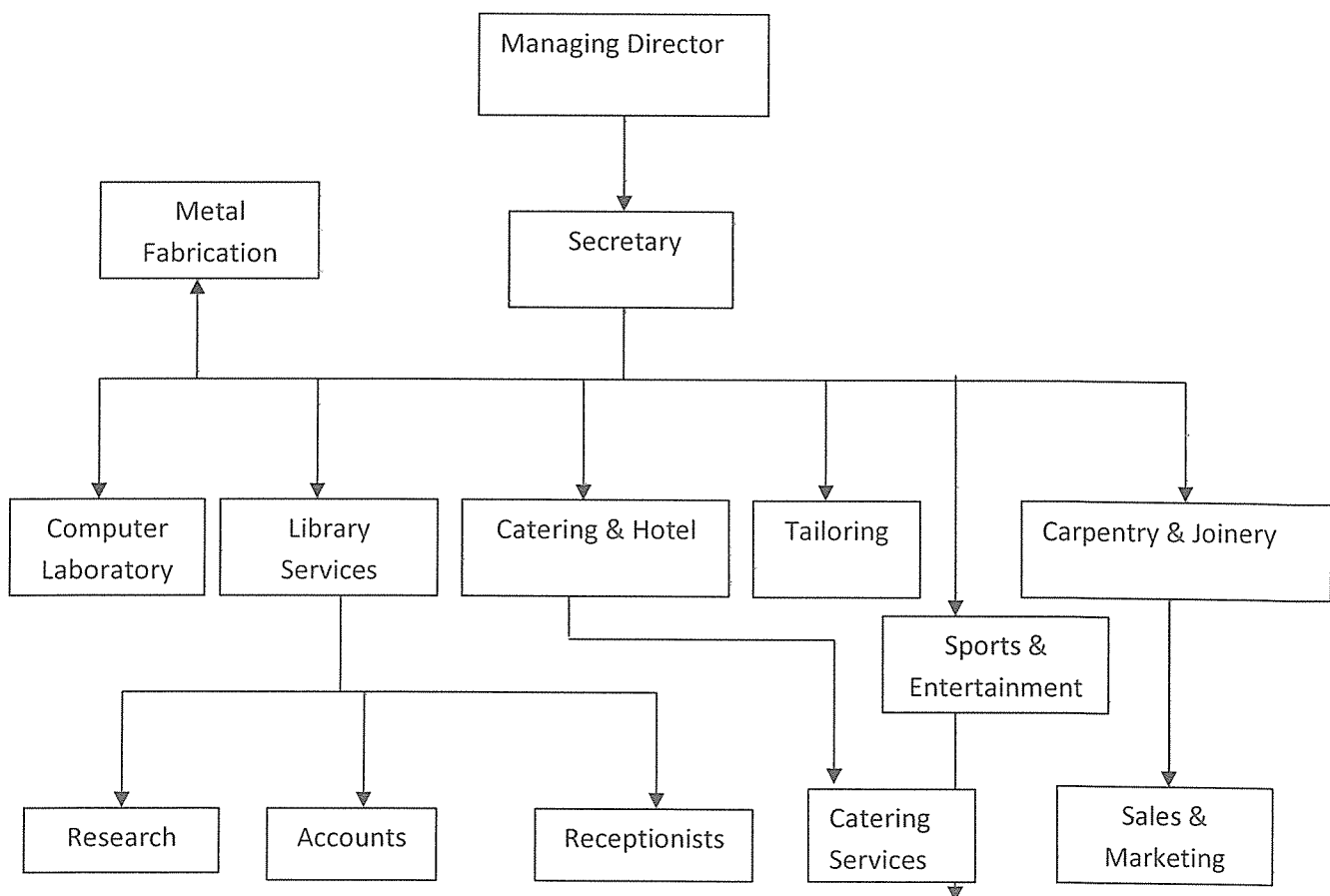
Center. The Director is assisted by a secretary who helps in running the office of the Director. The organization is further split into seven (7) major divisions which include; Computer Lab, library services, catering and Hotel Management, Tailoring, Carpentry and Joinery, Metal Fabrication and Sports and entertainment departments.

The Computer department handles all issues involving the organization's computer systems, computers and the network that are run at the Resource Centre.

The Director is responsible for recruitment and selection of new workers, salary management, and human resource planning and performance appraisal.

The Sales Department oversees the sales and stock of all deliveries carried out at the Resource Centre. Whereas the Accounts Department bills sales, tracks the sales and keeps the accounts of the Center as a whole.

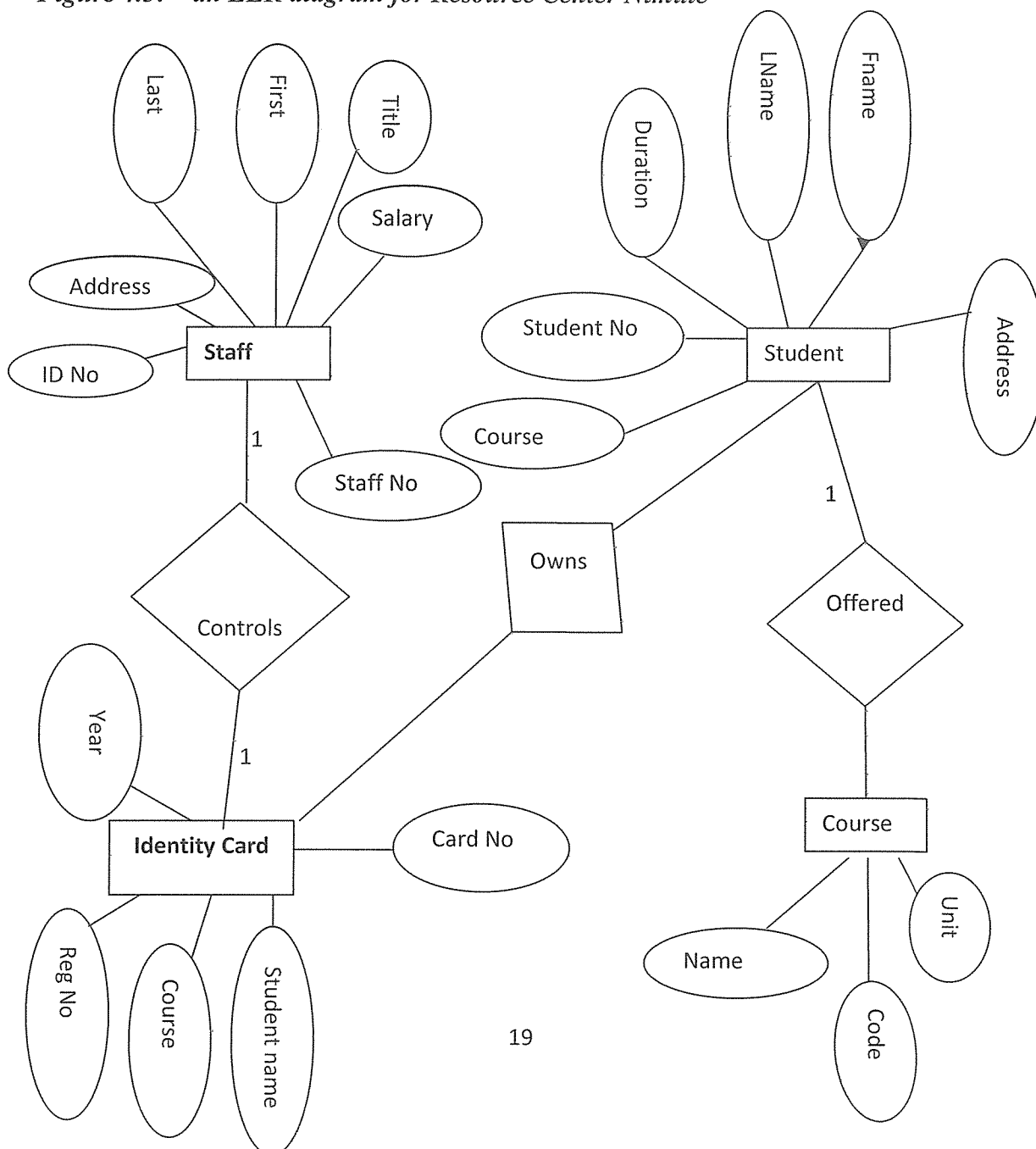
Figure 4.2: Organizational Structure of the Current System



4.3 System Design

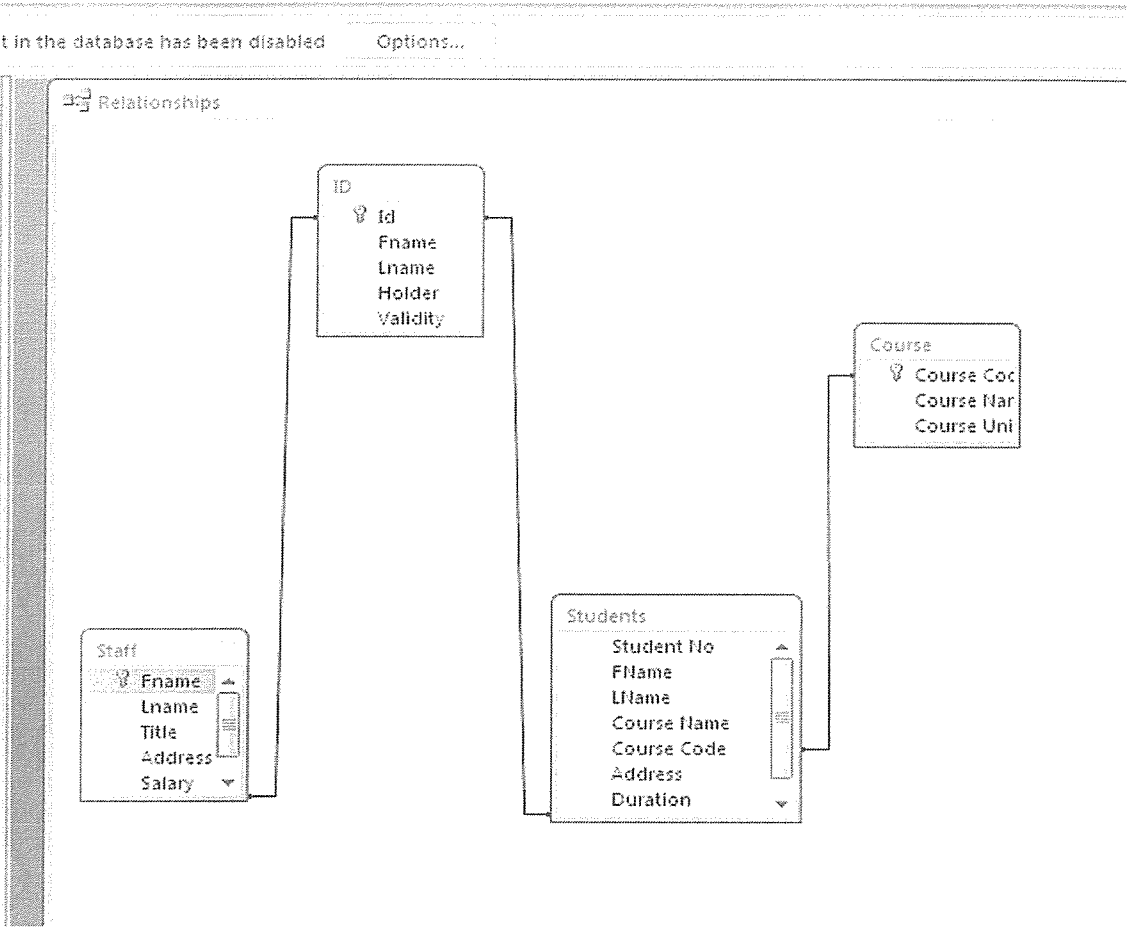
System design involved an enhanced entity relationship model that was used to design a Management Information System for the Resource Centre. An enhanced entity relationship model represented all the concepts of the basic entity relationship model. These concepts were addressing entities (goods, services, customers and employees), the relationships between the entities and the constraints to be put into consideration for the Resource Centre MIS that is effective and reliable. This model also included object oriented concepts like inheritance, specialization, generalization and categories. An enhanced entity relationship model was recommended as it models applications complete and accurate where and whenever needed.

Figure 4.3: an EER diagram for Resource Center Nimule



1:1 refers to a one- to- one entity relationship

Fig 4.4 Relationship Diagram



4.4 Data base design.

TABLE 4.1: STUDENT’S TABLE

This Student’s Table shows the Design View and its Properties.

Field name	Data type	Field size	Description
Stud_No	Text	15	Student’s identification Number (Primary key)

Fname	Text	15	Student first name
Lname	Text	15	Student last name
Course Name	Text	15	course offered
Address	Text	20	Area of residence
Duration	Number		Duration of course
IDCardNo	Number		Student identity card number

TABLE 4.2: STAFF TABLE.

This Staff Table shows the Design View and its Properties.

Field name	Data type	Size	Description
Staff_No	Text	15	Staff employment number
Fname	Text	15	Staff first name
Lname	Text	15	Staff last name
Title	Text	15	Title of staff
IDCardNo	Number		Staff identity card number5

TABLE 4.3: COURSE TABLE.

This Course Table shows the Design View and its Properties.

Field name	Data type	Size	Description
Course_code	Text	20	Code of the course
courseName	Text	20	Course name
Courseunit	Text	20	Unit

TABLE 4. 4:ID CARD TABLE.

This ID Card Table shows the Design View and its Prosperities.

Field name	Data type	Size	Description
IDCardNo	Text		identification card number
studentName	Text		name of student on the identity card
Validity	Number		Year of expiration
CourseUnit	Text		course unit

4.5 Inputs Form.

Nimule Resource Centre (NRC) input forms were designed using Visual Basic. The attributes of the forms are given different description values or names. This section discusses the inputs and processes involved in the designed system.

4.5.1 Main Interface Form

The main interface displays login interface to users that will link them to the login form. The authenticated users that are allowed to login include, the Administrator, and the Database Administrator. The main interface also contain the Register button that will display the registration form if click.

Fig 4.5.1 Main interface Form

The screenshot shows a window titled "RESOURCE CENTER". Inside, there is a box with the text "NIMULE RESOURCE CENTER". Below this, another box contains the text "WELCOME TO NIMULE RESOURCE CENTER!" followed by "Choose login to access the Database if you are registered or you can Register to log in to get access". There are two buttons: "Login" and "Register". At the bottom right, there is an "Exit" button.

4.5.2 Login Interface

The login form links authenticated users to data entry forms and reports based on the roles they play as, Administrator, and Database Administrator. The system uses security authentication to protect its various resources. To access the system resource prompts the user to identify him or herself by entering a user name and password. Once the user has been given permission, then he or she can access the form.

Fig 4.5.2: Login Form

The screenshot shows a window titled "Resource Center Nimule(Login Form)". Inside, there is a box with the text "NIMULE RESOURCE CENTER". Below this, another box contains the text "Enter your User Name and Password then click the OK Button." followed by "User Name:" and "Password:". There are two buttons: "OK" and "Clear". At the bottom right, there is an "Exit" button.

4.5.3 Registration Form

The Registration form is used for registering new users to the user data table. User Name and Password is required of the new user. After entering the Use Name and the Password, the confirm Button is clicked to register the user. When the operation is successful, the login form will be displayed.

Fig 4.5.3 Registration Form Interface

The screenshot shows a web application window titled "Resource Center Nimule: Students Data Entry Interface". The main heading is "NIMULE RESOURCE CENTER NIMULE". Below this, a form is displayed with the following fields and values:

- StudentId: HYT76
- First Name: BASA
- Last Name: JOHN
- Sex: MALE
- Date of Birth: 10-Dec-1998
- Age: 78
- Phone Number: 779601093
- Course: DCS
- Duration: 2
- Department: COMPUTER SCIENC
- Nationality: UGANDAN

On the right side of the form, there are several buttons: Add, Save, Next, Previous, Delete, and Exit. At the bottom of the window, there is a link labeled "View Students Reports".

4.6 The system output (Report)

The system output includes the reports, services and goods that will be achieved as a result of the implementation of the system. It also includes the result of all the internal designs and the coding of the system that are displayed to the user after registering and logging into the system.

Fig 4.6.1 Below Shows Student's Report

WELCOME TO NIMULE RESOURCE CENTER

Nimule Resource Center Data Report Center Monday, February 14, 2011

Studentid:	HY778
FName:	BASA
LName:	JOHN
Sex:	MALE
DOB:	12/10/1987
Age:	24
Phone number:	779801093

Pages: 1

4.9 Critical analysis of the software developed

4.9.1 Analysis of the User Interface

The system interfaces are all validated using Microsoft Visual Basic coding and if the user submits any invalid data, the system automatically generates error messages to remind the user that some information is not valid.

The interfaces are locked to the Resource Center login and this ensures maximum security of data, the person who logs to the system is only able to work on data that he or she has access to and view specific reports entitled to each user.

4.9.3 Evaluations

This design will help the Resource Center to improve their daily activities of sales, management, delivery, as well as improving their customer relationship. The system holds the Center's master data on which all their activities run that include all the Center's different partners, beneficiaries and sponsor's locations in Sudan, the addresses for each location, customer's information and the system end user details. This system includes annual renewals and all the management processes that include registration, products transit, and service order receiving.

The system generates reports which are accessed by the centre management for information about all the Resource Centre activities, service renewal information, free and taken items (activities or services in the Center, parcel delivery information and gross income generated from parcel delivery per location over a period. This system captures the day to day process updates and information is retrieved from a centralized data base to which all data is stored.

Below are the features that elaborate how well developed the Management Information System for the Resource Centre is:

4.9.4 Security of the System

The developed system is secure because it uses passwords that are encrypted and stored in a password protected database accessed only by the database administrator. The same database stores all records of this system. The administrator issues out and changes user names and passwords for all system users.

4.9.5 Efficiency

The output of the system will entirely depend on the accuracy of data entered by the systems administrator and the entry data clerk –The receptionist. Since the developed system runs on an existing Sharing master data which include the Sharing location and the different beneficiaries of the Resource Centre.

The speed and response time of the system will depend on the server capacity and the network design; it is a real time system that outputs real time and dynamic reports and real time search results. The Apache server used in the design of the system together with Microsoft Access database are capable of handling multiple requests from client machines. This ensures a very

high level of efficiency and reliability. The form in the system are all validated using Microsoft Visual Basic to ensure that the system only accepts right information into the system and that all required fields are all filled in.

4.9.7 Data Integrity

The Management Information System for the Resource Centre requires only authenticated users to access the system with a valid user name and password. User levels authorizations ensure that only persons with rights to update or modify data into the database. The system ensures that all required fields are filled before accepting posted data; it uses server side validation of all inputs. All password information encrypted when entered. Thus all the data stored and used by the system to compile reports has a high level of integrity.

CHAPTER FIVE

CONCLUSION AND RECOMENDATION

5.0 Introduction

This chapter handles and discusses the limitations of the developed Management Information System for the Resource Centre, future areas of research, the researchers' evaluation of the system and conclusions about the system.

5.1 Recommendations

The developers recommend that all the users of the system should have knowledge of using computers and their applications especially Microsoft access and Microsoft visual studio for proper management of the Databases. This goes specifically to Database administrators to ensure data safety and legal access to authorized users.

Since the information stored in the database is sensitive, the developers recommend that the senior executives be responsible for selecting an overall administrator who will be the sole employee in charge of the system.

The system could be further improved in the area of reports generating by making them more user friendly and also linking them to be accessed by the administrator.

5.2 Conclusions

This report describes both the traditional manual and systematic computerized methods of storing, retrieving of information stating out both the good and bad side of each of them. The background of the study, problems encountered objectives of the study and the layout of the new system is all well stated. New concepts have been adopted in the computer to meet and manage files and services.

The previous system was developed with scalability and now redeveloped to meet new requirements, the system can also be updated to meet other developments along the way as the system expands in the future, this renders a greater flexibility to the newly developed system.

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Appendix I

3.3.1 Time Frame Chart

	YEAR 2010-2011					
ACTIVITY	AUG	OCT	NOV	DEC	JAN	FEB
Feasibility Study	XX	XX				
Data Collection		XX				
Data Analysis			XX	XX		
Proposal Writing			XX			
System Design					XX	
Coding Validation					XX	
Testing Debugging					XX	
Report Writing					XX	XX
System Implementation						XX

Appendix II

BUDGETS FOR THE DESIGN AND IMPLEMENTATION OF INFORMATION MANAGEMENT SYSTEM

Item	Quantity	Unit price	Total amount
Computer set	1	700,000/=	700,000/=
Hard Disk	80 GB	80,000/=	80,000/=
Photocopying machine	1	400,000/=	400,000/=
Printer	1	200,000/=	200,000/=
Internet services	**	50,000/=	50,000/=
Transport	**	50,000/=	50,000/=
Total	**	1,080,000/=	1,480,000/=

Appendix III

Pseudo Codes

Pseudo code for the system

Check if all fields are filled correctly

If all are filled correctly

Proceed

If not

Display appropriate error message

If proceed

Query the database to know whether an administrator, receptionist, manager has logged on

If administrator, receptionist, director proceed

If not

Display appropriate error message

If administrator logged on

Set session Administrator logged in to User name of administrator

Direct administrator to administrator menu

If director is logged on

Set session director logged in to User name of director

Direct the director to the director menu

If receptionist is logged on

Set session receptionist logged in to User name of the receptionist

Direct the receptionist to receptionist menu

4.7 The System Codes

4.7.1 The MDI Form Codes

```
Private Sub cas_Click(Index As Integer)
```

```
Me.Arrange vbCascade
```

```
End Sub
```

```
Private Sub horiz_Click(Index As Integer)
```

```
Me.Arrange vbHorizontal
```

```
End Sub
```

```
Private Sub login_Click(Index As Integer)
```

```
frmlogin.Show
```

```
frmlogin.SetFocus
```

```
End Sub
```

```
Private Sub register_Click(Index As Integer)
```

```
frmregister.Show
```

```
frmregister.SetFocus
```

```
End Sub
```

```
Private Sub staff_Click(Index As Integer)
```

```
frmstaf.Show
```

```
frmstaf.SetFocus
```

```
End Sub
```

```
Private Sub student_Click(Index As Integer)
```

```
frmstud.Show
```

```
frmstud.SetFocus
```

```
End Sub
```

Appendix IV: QUESTIONNAIRE

GENERAL KNOWLEDGE QUESTIONNAIRE

1. Kindly state your name

.....
.....

2. State the name of the department you are in? Are you a student or staff? If staff please state your title? If student state your department please?

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

3. Kindly state your sex and age?

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

USERS' QUESTIONNAIRE

4. How many times is a candidate supposed to register for examination? Give reason for your answer.

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.....
.....

5. What are the requirements for a student to register?

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.....

.....

.....

.....

6. How does a registration process take place?

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.....

.....

.....

8. Typically, estimate the number of registered students in each Department?

.....

.....

.....

9. How long does it take to retrieve data?

.....

.....

.....

10. Estimate the number of candidates who registers for Computer Courses?

.....

.....

11. What problem do you encounter during the registration process?

.....

.....

12. An Information System (IS) is a collection of components that capture, process, store, retrieve and disseminate information in an organization to enable decision making; to provide information to the user as you can ,how the pre- existing Resource Centre registration system works in the organization ?

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

13. As a user of the above mentioned system, kindly explain the type of information you handle in this organization?

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

14 Given the scale ranging from bad, fair, good and excellent, rate how effective it would be to handle registration online without candidates doing it manually. Give a reason for your answer.

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