

**REGISTRATION AND STUDENT TRACKING INFORMATION SYSTEM IN
SECONDARY SCHOOLS, CASE STUDY OF
OXFORD MOSLEM SCHOOL**

BY

**KIRABO FARIDAH KASANA
DCS/ 17343/ 71/ DU**

AND

**KONSO BABRA
DCS/ 16111/ 71. DU**

**A graduation report submitted to the school of computer studies, in partial
fulfillment of the requirements for the award of the diploma in
computer science of Kampala international university**

JULY 2009

APPROVAL

This research report has been forwarded and submitted to the school of computer studies for examination under my approval as the University supervisor

SUPERVISOR.

SIGNATURE.....



DATE.....

2nd sept 09

Joseph E James K

DEDICATION

I dedicate this book to my family especially my brothers and sisters

I dedicate this book to my beloved family especially to my big brother and the wife.

ACKNOWLEDGEMENT

My sincere appreciation goes to my mother and cosine brother Babirye R and kataraga M, My sister Kasana Hanifah, Nakibule Aish, Nakavuma Babra for their special love, belief in me, moral support advice and financial support they rendered all through that has made me who I am.

Special tributes go to our supervisor Eng. Ssegawa E. James Kiggundu for this guidance, advice patience and tolerance during the course of the research

Special thanks go to friends Kalema, Jackson, and others for being there at the time we needed them. Last but not least to the Almighty God the provider of all who has been faithful to me.

Glory be to your name

ABSTRACT

The research focused on the challenges of developing computerized information systems in schools. The research study involved visiting Oxford Moslem School Oxford Moslem School uses manual file based system for managing data, they face problems like data redundancy and inconsistency where by some information are duplicated in several files. The file based system does not allow required data to be retrieved in a convenient and efficient manner thus difficult in accessing data. The objectives therefore include; Investigate and analyze the present system so as to identify inefficiencies into the current system of data management at the School; Design, model and develop a computerized system for the School; Develop, implement, Test and validate the system of record keeping in the school.

The methods that were used to come up with the system included; for data collection, self administered questionnaire, observation, document review and interview. For designing the database, Microsoft access was used and for the interface design, visual basic interface programming

Finally the implementation and the operation of the system was designed to accept only those who are the privileged members to access the date base from the visual interface using passwords and Usernames granted by an administrator are used to again access to the database.

The research findings, the study were established causes of record keeping which is manual system of data entry, update and storage of data which is riddled with problems like poor storage, consumption of time during data entry, loss of records, forgery. And many more. the new system is computerized from entry of data processing, to generating of reports. The system reduces on the amount of work done when entering data. The system has speed, validation routines and is reliable. It is secure through a password. however they are faced by the challenges of poverty illiteracy ignorance among others which have hindered development of computerized information system in the school.

Abbreviations / Acronyms

DBMS.....	Data base management system
BKS.....	Ben Kiwanuka street
BR.....	Bombo road
Rd.....	Road
MKT.....	Market
KIU.....	Kampala International University
DB.....	Data base
E-R.....	Entity Relationship
RAM.....	Random Access Memory
VB.....	Visual Basic
DFD.....	Data Flow Diagram.

Definitions of the terms used

Database;

A shared collection of logically related data designed to meet information needs of multiple users in an organization

Data Flow Diagrams;

It's used to module the flow and transformation of data through the system.

Information Systems;

Refers to all components that work together to process data and produce information

Data

Facts concerning things such as people, objects or events

DBMS;

DBMS is a software application system that is used to create, maintain and provide controlled access to access to the user database

LIST OF FIGURES

Figconceptual frame work

Fig 4.2.3.....E-R diagrams

Fig 4.2.4.....entity relational models

Fig 4.3.1.....student form

Fig 4.3.2..... teachers form

Fig 4.3.3.....administration form

Fig 4.3.4.....finance form

Fig 4.3.5.....workers form

Fig last.....map of the case study

LIST OF TABLES

Table 1.....shows respondents

Table 2.....shows tools used to keep student records

Table 3.....student registration

Table 4.....for teachers

Table 5.....workers details

Table 6.....for administration

LIST OF CHARTS

- Chart 1.....for student
- Chart 2.....for teachers
- Chart 3.....for computer knowledge

TABLE OF CONTENTS

DECLARATION.....	ii
APPROVAL.....	iii
DEDICATION.....	iv
ACKNOWLEDGEMENT.....	v
ABSTRACT.....	vi
ABBREVIATIONS.....	vii
DEFINITIONS OF TERMS.....	viii
LIST OF FIGURES.....	ix
LIST OF TABLES.....	x
LIST OF CHARTS.....	x
CHAPTER ONE.....	15
INTRODUCTION.....	15
1.0 Introduction.....	15
1.1 Statement of the problem.....	16
1.2 Objectives of the Study.....	16
1.3 Research Questions.....	17
1.4 Scope.....	17
1.5 Significance / Justification.....	17
1.6 Conceptual Framework.....	18
CHAPTER TWO.....	19
LITERATURE REVIEW.....	19

2.0 Introductions.....	19
2.1 The purpose of literature Review.....	19
2.2 Using a computer in Database manipulation.....	20
2.3 Data base Management System (DBMS)	21
2.4 Development methodology.....	22
2.5 Software Documentation.....	23
CHAPTER THREE.....	24
METHODOLOGY.....	24
3.0 Introduction.....	24
3.1 Study Design.....	24
3.2 Target Population.....	24
3.3 Sample Size and techniques.....	24
3.4 Data Collection Techniques.....	25
3.5. Data presentation.....	26
3.6 System design.....	30
3.7 Design techniques and tools for the system.....	31
3.8 Methodology for Development of the system.....	31
CHAPTER FOUR.....	32
SYSTEMS REQUIREMENTS AND DESIGN.....	32
4.0 Introduction.....	32

4.1 Systems requirements.....	32
4.2 LOGICAL DESIGN.....	33
4.3 Physical Design.....	38
4.4 Internal coding.....	45
CHAPTER FIVE.....	49
RECOMMENDATIONS, CONCLUSION AND DISCUSSION.....	49
5.0 Introduction.....	49
5.1 Assessment of the work done.....	49
5.2 Limitations of the study.....	49
5.2 Discussion.....	50
5.3 Recommendation.....	51
5.4 CONCLUSION.....	52

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Data management is a function that is traditionally ignored and underrated but now, its management is becoming increasingly critical for well functioning of any organization (Jeffrey et al, 2002) noted that management of human resource is one of the functions that have a wider implications in ensuring good governance (in form of service delivery) in all organizations. To have effective management of data, attention must be given to the designing and implementation process otherwise the negative effects of poor data management such as duplication of results

Loss of records and storage, evaluation and poor supervision hence misuse of funds (William et al (2000) and Silbertchatz (2002).

Oxford Moslem School is a private owned school located in Kawempe about 5km from the city center along Kampala – Bombo road. The enrollment capacity of the school is yearly on the raise. This is majorly due to its good will; it has created with the community. In spite of the above, data management process in the school is poor which is a clear indication of much less encouraging picture about the future prospects of the school and it seems to have been one of the major problems that address the situation of education through private schools and many other government schools at large. The School offers a number of subjects among which are Economics ,mathematics, entrepreneurship, biology, geography, history and a great number of combinations in advanced-level which includes HEG, PEM, PCB a among others

However, with the growing population of the school, a sound data management system needs to be put in place in order to avoid cases of duplication of results, loss of information/ records which might hinder the smooth functioning of the school.

It is against this background that the researcher would like investigate and come up with possible solutions to address the poor data management practices at the school by developing a computerized system to replace the old manual system currently in use.

1.1 Statement of the problem

Data management in Oxford Moslem School is not the best, There are high incidences of loss of data, poor storage of records, and inefficiency in capturing data, inability to attend to student's complaints. For example, students do take long to have their results corrected. In addition, there are high cases of loss of information and this has compromised the quality of service from the School probably due to poor data management system in place. It is against this background that the researcher would like to investigate and come up with possible solutions to address the backwardness data management practices at the school by developing a computerized system to replace the old manual system currently in use.

1.2 Objectives of the Study

1.2.1 Main objective

The main aim of this project is to conduct a feasibility study to find out the challenges associated with the current system of data management at Oxford Moslem School and develop a computerized system for the school. to solve the associated problems hence to achieve effectiveness/efficiency of date management.

1.2.2 Specific objectives

- (i) Investigate and analyze the present system so as to identify inefficiencies into the current system of data management at the School.
- (ii) Design, model and develop a computerized system for the School.
- (iii) Develop, implement, Test and validate the system of record keeping in the school.

1.3 Research Questions

- (i) Is there data base management systems in the School currently being used?
- (ii) Is there a computerized system in the school?
- (iii) What are the possible tests and implementation procedures for record keeping in your School?

1.4 Scope

The study will be carried out in Oxford Moslem School centering on the School administration since this is the key body that formulates and implements the school programs in relation to Student, Teachers, Results, Subjects and finance.

1.5 Significance / Justification

Teachers will enter quickly information concerning the students like results and generate on time reports for academic performance, fees paid and out standing balances and so on.

The system will store students' data and sort or classify according to year of admission and students classes

It will improve security of the data so that only the authorized and authenticated users can access the information

The administration will be able to keep truck of the student in terms of performance, fees defaulters, attendance and so on

It will reduce data redundancy, space constraints in storage, improved data retrieval and timely access of the required records for the students.

1.6 Conceptual Framework

The conceptual framework shows data in the form of students' records is captured by the administrator. Under computerized system it is believed that records will be free of misspellings and other inefficiencies such as loss of data will be minimized.

Conceptual Framework

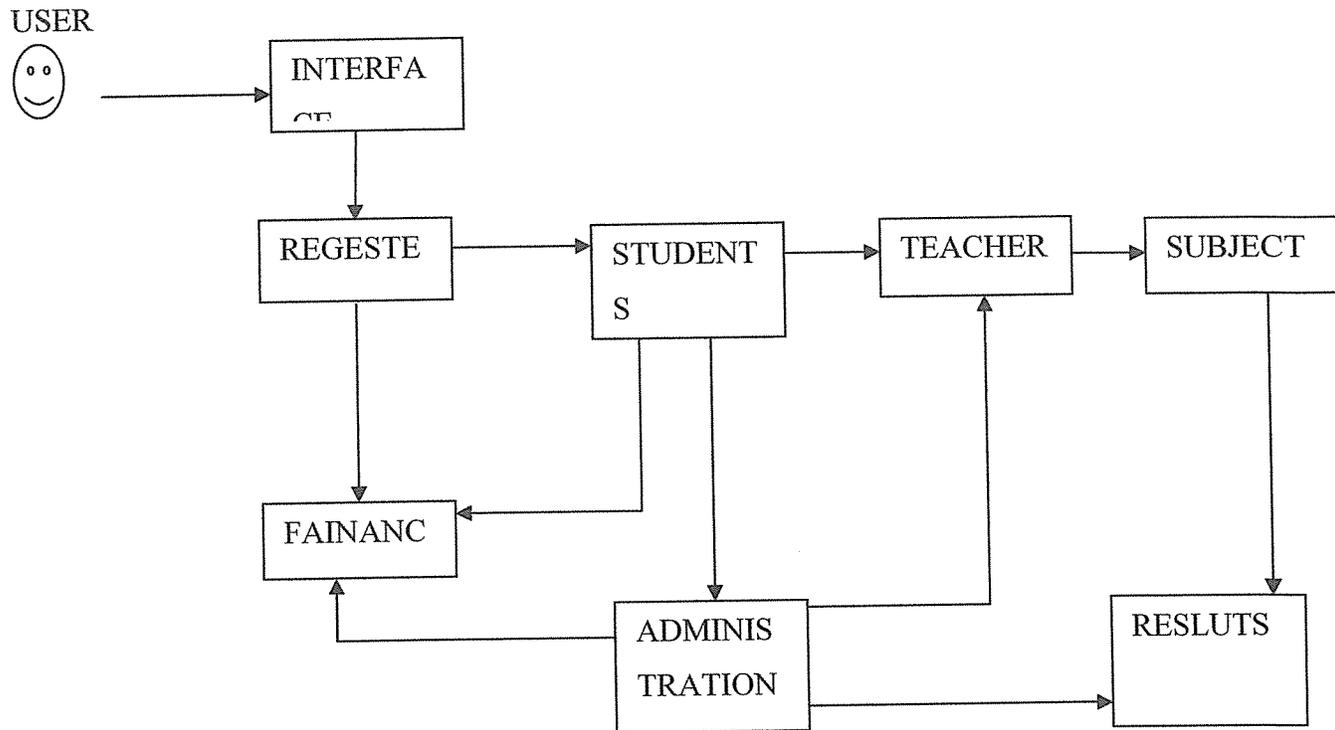


Figure 1: A conceptual framework showing the students' database system in a school setting

The administration is the source of data to the user that's to say if a user wants any information from any of the objects is referred to the administration how ever these object are relate in way, from the administration students are registered and assigned teachers of different subjects where by they study sit for exams and get results after clearing with finance

CHAPTER TWO

LITERATURE REVIEW

2.0 Introductions.

Floyd fuller and Brain Larson,(2002). Defined Literature review as locating, reading and evaluating reports of previous studies, observations and opinions related to the planned study. It therefore leads to appreciating and understanding the research that has already been done in one's area of interest / specialization. Literature review should be extensive and thorough because it is aimed at obtaining detailed knowledge of the topic being studied.

2.1 The purpose of literature Review.

Jeffrey L.Whitten 2001). The main purpose is to determine what has been done already related to the research problems being studied. A detailed knowledge of what has been done helps the researcher to avoid unnecessary and unintentional duplication, Form the framework within which the research findings are to be interpreted. Demonstrate his or her familiarity with the existing body of knowledge. This increases the reader's confidence in the researchers' professional ability.

According to James A.O, Brian, (2001) introduction to information system 8th edition a review of the literature will reveal what strategies, procedures and measuring instruments have been found useful in investigating the problem in question. This information helps one to avoid mistakes that have been made by other researchers' experiences. The information may also help to clarify how to use certain procedures with one way only have learned in theory.

According to Brian K.Williams,(1999). Literature review suggests other procedures and approaches research. This is very useful information because a researcher could try out suggested approaches especially if they will improve the research study.

Jeffery L.Whitten,(2001). Another purpose is to make the researcher familiar with previous studies and thus, facilitate interpretation of the results of the study. In some cases, a researcher may not have narrowed such cases, the literature review helps the researcher to limit the research problem and define it better. One review of the literature will give the researcher the knowledge

needed to convert a tentative research problem into a detailed and concise plan of work. It determines new approaches and stimulates new ideas. One researcher may also be alerted to research possibilities which have been overlooked in the past.

Jeffery L. Whitten 2001) approaches that have proved to be futile will be revealed through literature review. This helps in the research because there is no point in repeating a certain approach in a study if that approach has been found to be consistently unproductive or unreliable. In most cases, other authors of research articles include specific suggestions and recommendations for those planning further research. These suggestions are usually found when reviewing literature and should be considered very carefully. Literature review pulls together, integrates and summarizes what is known in an area. A review analyzes and synthesizes different results revealing gaps in information and areas where major questions still remain.

2.2 Using a computer in Database manipulation

John Von Neumann, (1945). A computer is device that captures, manipulates data into information useful for decision making in an organization. It does this function following a set of program installed. A program may be in variable and built into the computer or customized by the user to suite the requirements of the organization. The development of computers began with abacus in the 16th century; John Von Neumann in (1945) developed a stored program which led the development of the modern computers. With advancement in technology, today computers use internet and higher bandwidth data transmission programs and data that are part of the same overall project can be distributed over a net work system.

Bishop, (1987) various information reveal that computer is almost part and partial of our daily life hence it's everywhere in today. Even if you may not meet it directly in your daily life but you encounter computers usage indirectly say through translation of work like messages, utility firms do capture our usage, phone companies perform capturing of incoming calls and so on.

2.3 Data base Management System (DBMS)

Kenneth & London,(1998). Described database as a collection of data organized to service many applications at the same time by sorting and managing data so that they appear to be in one location. This is in line with the purpose of this system because it tries to organize, control access and outputs reports from a common system.

Bishop (1987) Defined it as a piece of software responsible for all aspects of the location accessing and updating database Generally, users of database do the following operations; adding new empty files to the database, retrievals, storing and manipulating data to suite the need of the organization/user.

According to Date, C. j. (2000) an introduction to Database System, Fourth Edition, Addison Wesley Palpangan, India, and DBMS is software that handles all access to the database. A database management system is specialist software used to create and maintain database, it also allows one to use a computer to create a database, add, change and delete data in a database. A database is a file of data so structured that many applications can use it and update it. It includes tables made up of rows and columns. The rows are called records and the columns are called fields.

Ann Destrehan (2001), states that a file contains information concerning one aspect of the organization data such as details on debtors or financial accounts. A record contains information about a given person, product or event While Earl, M.J (1989).Stated that a field contains a specific piece of information within a record.

Schmidt and Swenson, (1975), defined a primary key that it is also called a unique identifier is a field in which any value entered will appear in only a single record in the table. Primary keys are useful in linking the tables in the database which must be normalized to avoid redundancies as repeating values in the database. While Elmasri and Navathe, (1994), defines Normalization as a technique for producing a set of relations with desirable properties given the data requirements of an enterprise

An entity Howe, D (1989) is an item (a person, a job, a business, a product). Thomas, M., Connolly, (1985), defines an attribute as the characteristic or property of an entry. For a customer, attributes include customer name and address, amounts owing, date of invoices sent and so on.

Codd E., F., (1971). Defined database as a system or a set of interacting elements, interacting with each other to achieve predetermined objectives or goal (the computer receives input and processes then produces output). The linkages between the tables in a database are defined in terms of the above relationships. By linking one table(s) to work with and whether to use or alter data in the selected table(s). He further notes that Relational database or data is split between different dimensional tables which are linked together via a set of unique keys.

2.4 Development methodology

James, A. Senn, Georgia and Sarah E.Hutchinson, et al. (2000). Stated that system development is a process consisting of the two major steps of systems analysis and design. It starts when management, on sometimes systems development personal, realize that a particular business system needs improvement. The system development life cycle is the set of activities, for this case, finance, teachers, students, administrators, subjects, and results are the activities carrying out an information system for students' registration tracking system to Oxford Moslem School. This section is going to examine the activity on how a student can be registered by the administrator. The systems development life cycle is a project management technique that divides complex projects into smaller, more easily managed segments or phases. They further observe that software development projects typically include initiation, planning, design, development, testing, implementation, and maintenance phases.

2.4.2 Application Control Standards

A Sandra Donaldson Dewity, (1996). Systems Analysis and Design and the Transition to Objects, says application controls are manual procedures organizational policies and programmed procedures built into the system's application software to validate system functions and to ensure accuracy. They apply to various specific business applications. For example a registration Tracking System will ensure that students are registered and their details are tracked

by the system which is going to be developed. Application controls include policies and procedures associated with user activities and the automated controls designed into applications. Controls should be in place to address both stand alone and on-line environments. Standards should address procedures to ensure management appropriately approves and control overrides

2.5 Software Documentation

Organizations should maintain detailed documentation for each application and application system in production. Thorough documentation enhances an organization's ability to understand functional, security, and control features and improves its ability to use and maintain the software. The documentation should contain detailed application descriptions, programming documentation, and operating instructions. Standards should be in place that identify the type and format of required documentation such as system narratives, flowcharts, and any special system coding, internal controls, or file layouts not identified within individual application documentation.

Management should maintain documentation for internally developed programs and externally acquired products. In the case of acquired software, management should ensure (either through an internal review or third-party certification) prior to purchase, that an acquired product's documentation meets their organization's minimum documentation standards. For additional information regarding acquired software distinctions (open/closed code) refer to the "Escrowed Documentation" discussion in the "Acquisition" section.

Examiners should consider access and change controls when assessing documentation activities. Change controls help ensure organizations appropriately approve, test, and record software modifications. Access controls help ensure individuals only have access to sections of documentation directly related to their job functions.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter focused on research design, study population, area of the study, sample size and selection, sampling techniques, methods of data collection, validity and reliability. It includes the procedures for data collection and data analysis to be employed in the study.

3.1 Study Design

The Researcher used a quantitative research approach that based on both probability and non-probability designs and sampling. Simple random sampling will be used to sample staff and local people. Purposive sampling was be used to sample top/ middle management staff.

A case study design will be adopted in this study because the items to be studied are few. The study will define the process of hardware and software architecture, components, modules and interfaces data to meet specific requirements of the School.

3.2 Target Population

The research study was based on the students and other staff of the school and the departments that make up Oxford Moslem School, namely, Finance, Administration, Teachers, Students; they were targeted for data collection basing on the fact that they usually perform the routines of the school and usually face the daily challenges/ problems in running the operations.

3.3 Sample Size and techniques

The researchers wanted to know how data is stored and retrieved in the school and the problems they face and in addition the background of the school.

A sample of 100 respondents was engaged from the departments of Finance, Administration offices. A sample of 100 was used because it was manageable in that it minimizes costs and time Krejcie and Morgan, (1970). The Researchers used both probability and non-probability sampling. Simple random sampling was used to sample staff and customers. Purposive sampling was used to sample top/ middle management staff.

3.4 Data Collection Techniques

3.4.1 Questionnaire

A questionnaire was constituted as the main research instruments because the tool is more appropriate for collecting data for a survey research Kaplan, (1993) where the target population is literate and capable of filling the questionnaire Moser, (1979). One set of questionnaires were administered to management staff to seek their opinions and perceptions about the extent to which data management the activities in the School. The questionnaire design consisted of both structured and open-ended questions. Open-ended questions helped to elicit a wide range of responses, provide background answers to questions, helped to obtain elaborations and evaluate arguments Payne, (1973). The collected data was then generalized to a larger population of interest. This made the research exercise economical in terms of time and money. While structured type enables simple data analysis through tabulation in regard to frequencies and percentages, the unstructured provided chances for free expression and by bringing out areas uncovered for better elaboration. This profile was used to come up with questions to address the objectives of the study in quantitative (numerical) terms.

3.4.2 Interviews

According to Gerald Keller, an interview involves an interviewer soliciting information from a respondent by asking prepared questions. Its advantage is that, there is a higher expected response rate than other methods of data collection. In addition, there were probably be fewer incorrect responses resulting from the respondents misunderstanding some questions because the interviewer could clarify misunderstandings when asked. This method was used by the researchers to collect data from the respondents through asking questions. Unstructured questions were administered to respondents who preferred to be interviewed. This was opted for because the interviews give chances for free expression about the respondent's opinions, views, perceptions and suggestions in their own words. It also helped to get detailed responses on perceptions and more clarifications on key issues. Responses in interviews lacked details because they were made without emotional and intellectual support of the interviewer Halt, (1952), as cited in Mbaga, (2000). It helped the researchers to triangulate the findings in the questionnaires and also provided face-to-face contacts with the respondents.

3.4.3 Observation

This was used to gather information within the school that couldn't be obtained by using questionnaires, interviews and documentary analysis. It also helped in verifying data found using other techniques.

3.4.4 Data Analysis and presentation

Data was edited, entered into the computer and then stored. Content analysis of the interview guide questions based on the three objectives of the study to supplement the responses elicited by questionnaires was used in the presentation and analysis.

The researchers, for the purpose of establishing validity of the instruments, conducted a pilot survey in the School. In the pilot survey, a total of 100 respondents were involved. The exercise highlighted any deficiencies and weaknesses in the original instruments designed, prompting the researcher to make some necessary adjustments accordingly. Validity test was carried out to check

for consistency and accuracy of responses from the field. This phase involved the analysis strategy of the information gathered, using SPSS version 10.

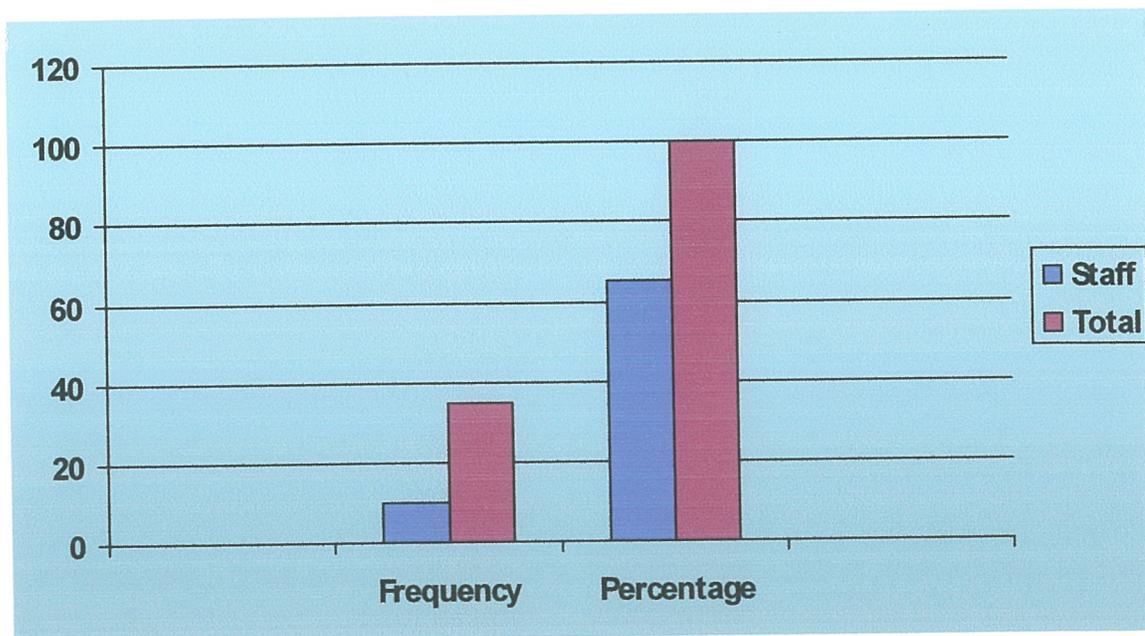
3.5. Data presentation

The respondent's comprised of both staff and students as illustrated in the table below

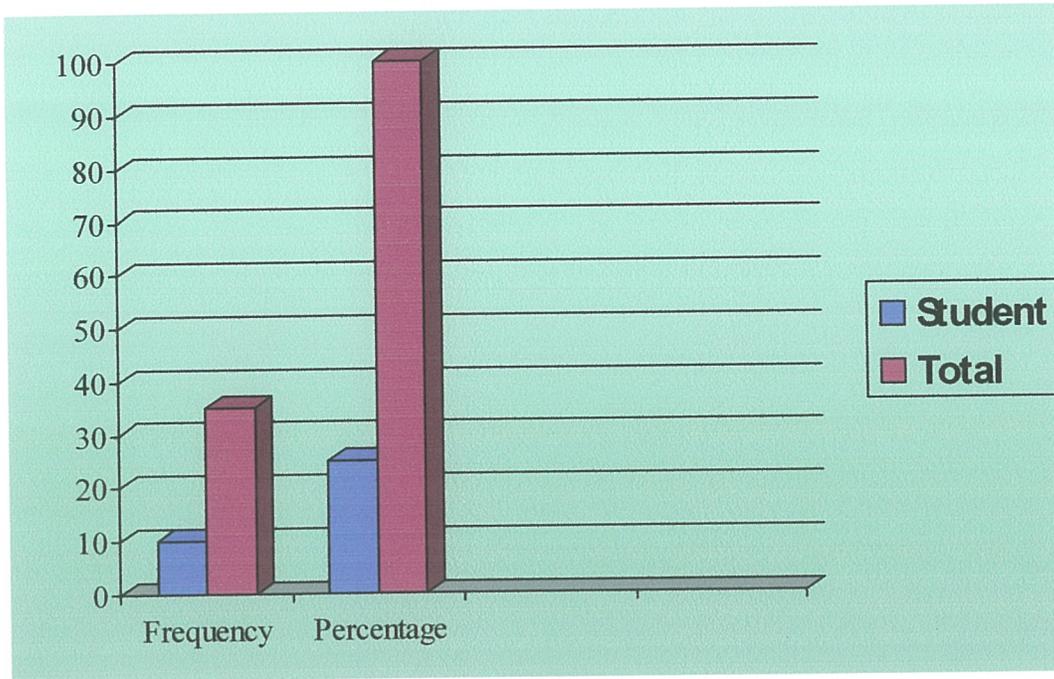
3.5.1 Table 1

Respondents	Frequency	Percentage
Staff	10	65%
Students	25	25%
Total	35	100%

3.5.2.1 Chart 1 for Staff



3.5.1.2 Chart two for students



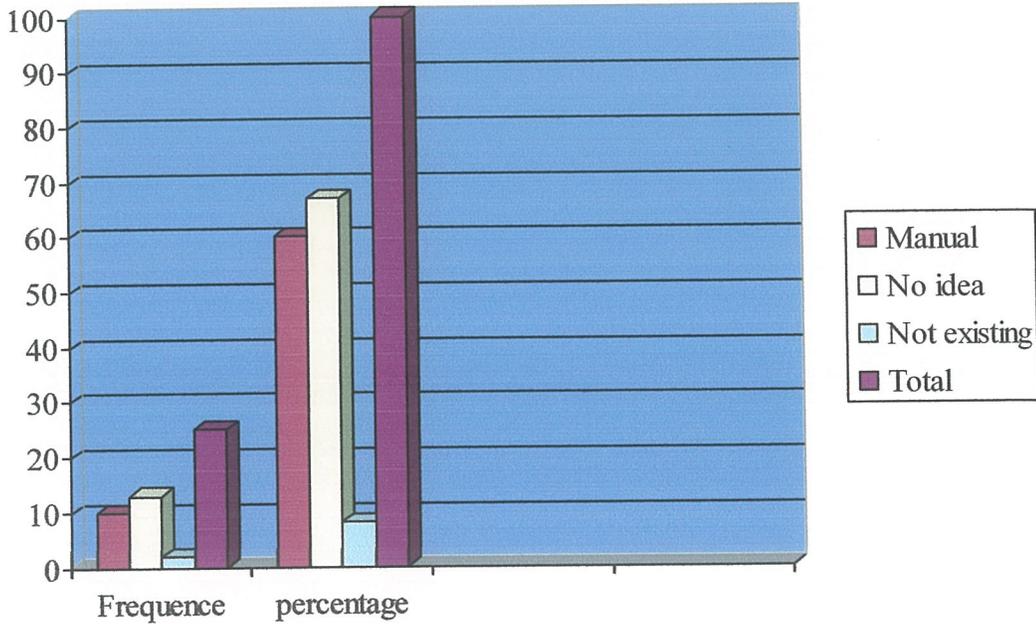
From the Above, the charts and the table, ten staff members of Oxford Muslim secondary school were interviewed and randomly selected also a number of 25 students were also interviewed who gave different opinions and views towards the interview which in turn helped us in designing the new system that responded positively to words the betterment of the school itself and the wellbeing of the students.

3.5.2 Table 2: shows the tools and methods used to keep students record data.

System	Frequency	Percentage
Computerized	0	0
Manual	10	60%
No idea	13	67%
Not existing	2	8%
Total	25	100%

Table tow represents the tools used at Oxford Muslim secondary school to keep students records and information using their manual system method.

3.5.2.1 Chart three is representing the different methods used to keep students records



The table and the graph above shows that 67% of the respondents had no idea and this was particularly the new students who had no idea on the method used by Oxford Muslim secondary school administrators in keeping records.60 percent gave it out that it was the manual system used which manual system is cumbersome and more vulnerable to misappropriation and fraud.

It was found out that there is nothing like computerized means of record keeping and this was found out that it was because, they lack proper skills to use the modern computerized system which is being introduced to the school eight percent shows that there is no tool or method in place used for student's record

3.6 System design

Visual basic 6.0 (VB) was used to design the interface while the database was created in access.

3.6.1 Advantages of VB

It's not a language to program in but a whole graphical development environment. This aids your programming skills allowing you to concentrate on developing novel ideas instead of going over old ground. It's very simple to learn suggests users easy to understand and remember

Its widely used for in- house application program development It can also be used to create Active and COM components for use online because of its popularity there are many resources available to the user VB is a component integration language which utilizes Microsoft component object model (COM) that allows parts to be bolted onto programs easily. These COM programs can be written in any language.

3.6.2 Weaknesses of VB

It is not suited to complex modern programming techniques. Because of its age little is being down to further the VB environment and it has been largely superseded by VB.net and other languages (even by Microsoft).VB is an interpreted language which again slows the execution of your program down. VB programs require large libraries to be present on your PC to enable them to work.

As you can control the checking and warning systems in VB it often enables the programmer to write code that is very difficult to troubleshoot when a bug arises. Mathematical performance is poor which slows down the speed of your program. There is no threading support (although this is also available in VB. Net) Object Oriented Programming (OOp) is missing in VB, this is the most common techniques in all new languages allowing code to be easily reused

3.7 Design techniques and tools for the system

Data flow diagrams (DFD) will be used as a tool for presenting the process of the system. This is means of showing the flow of data in a system. DFD do not give detailed descriptions of modules but graphically describe a system's data and interface with the system.

3.8 Methodology for Development of the system

There are four fundamental steps that were followed in the development of a system. This included; Planning, at this stage, the researchers identify the school value of the system, carry out a feasibility study analysis and then plan for the project to be undertaken. Analysis Design stage- here the researcher developed the physical design, Interface design, database and file specifications and program design Visual basic 6.0.

The database at the back end implemented using access to provide the data stores for the system, the prototype of the system was constructed and tested to ensure that it performs as desired by the objectives of development. Review and corrective measures are done at this stage in order to have an efficient and effective system in place

The researchers used database management system (DBMS) as software that makes designers to create, manipulate and maintain the database. was used because it helped in designing database in the school was visual basic for running the system the researchers was able through the methodology specified above to get the entities of the department, identify the problems of the current system and made a detailed analysis of the whole process in order to specify the new system.

CHAPTER FOUR

SYSTEMS REQUIREMENTS AND DESIGN

4.0 Introduction

In this phase, the researchers gathered substantial data about the existing systems used as a means of storing and keeping information in Oxford Muslim secondary

4.1 Systems requirements

For the system to operate we need both software and hardware requirements among which

4.1.1 Operating system

The user will use MS WINDOWS XP SERVICE PACK 2 as the operating system for running the system

4.1.2 Database Management system

The researchers use visual basic, to maintain and provide controlled access and security to the user by providing a user password to the privileged users only. For adding information, updating, deleting, manipulating, storing, and retrieving information database

4.1.3 Programming language

Visual basic (VB) was also be used by the researchers to create the interface between the database

4.2 LOGICAL DESIGN

These below are the entities of the section necessary for the design of the software and solution to the problems

Students, Finance, Administration, Workers, Teachers

4.2.1 Attributes

1. Student (

stdID, FName, SName, Age, Sex, Cantnct, Adreess, Subject, Nationality Class, Section)

2. Administration (

FName,SName,Department,Duties,Age,Sex.)

3. Finance (

StdName, IDno, Class Amount paid, Balance, Method of payment);

4. Teacher (

FName, SName, Nationality, Age, Contect, Sex, Subject)

5. Worker (

FName, SName, Nationality, Age, Sex)

4.2.2 A table for Students

FILED	DATA TYPE	SIZE
Std ID	Text	4
F name	Text	10
Age	Number	2
S name	Text	12
Subject	Text	8
Address	Text	19
Nationality	Text	9
Class	Memo	2

A table for Teachers

FILED	DATA TYPE	SIZE
F name	Text	10
S name	Text	5
Subject	Text	8
Age	Num	2
Address	Text	19
Nationality	Text	9
Class	Memo	2

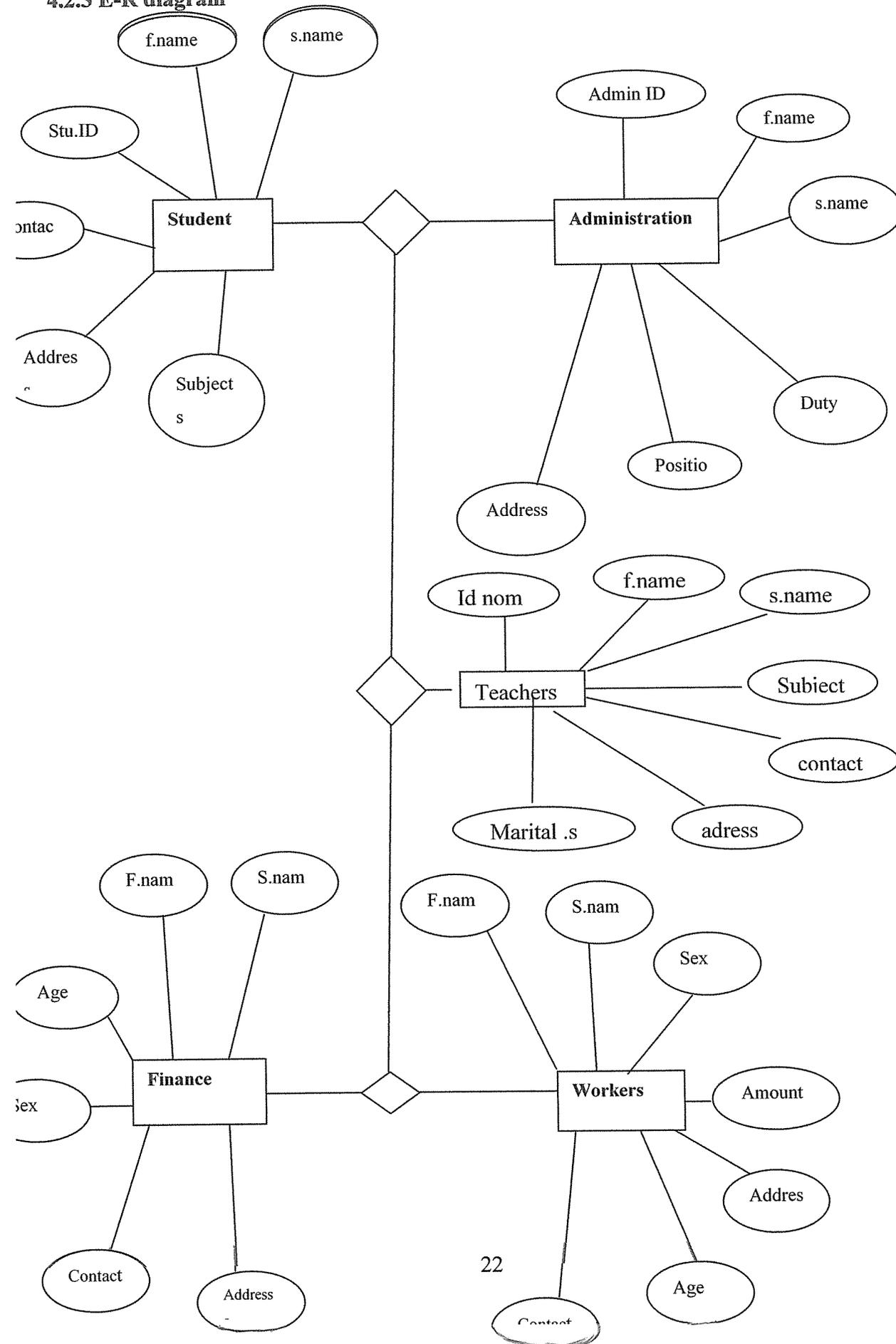
A table for Worker

FILED	DATA TYPE	SIZE
F name	Text	10
S name	Text	5
Age	Num	2
Address	Text	19
Sex	Text	6
Nationality	Text	9

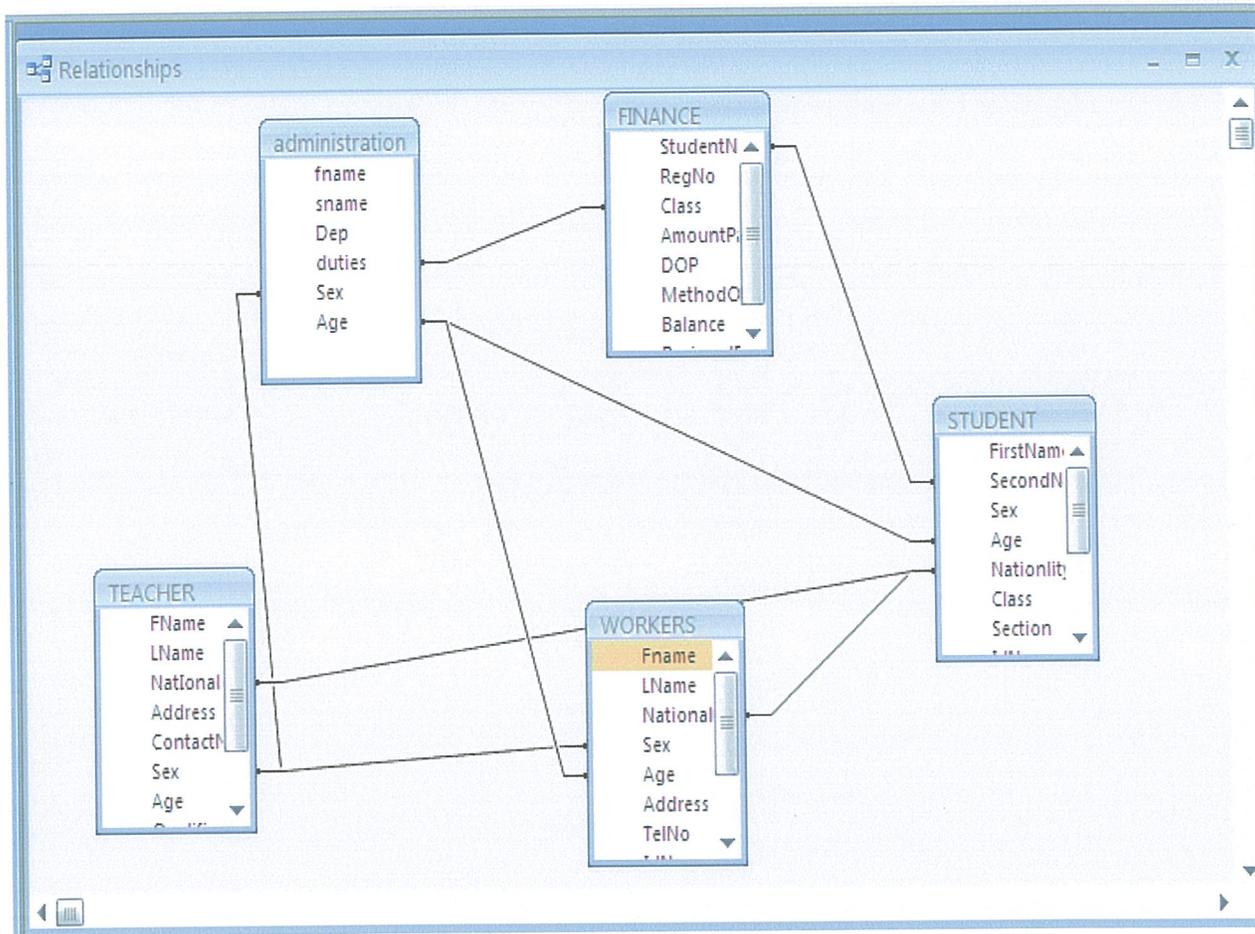
A table for Administration

FILED	DATA TYPE	SIZE
F name	Text	10
S name	Text	5
Age	Num	2
Address	Text	19
Department	Text	10
Duties	Text	9
Sex	Text	6
Nationality	Text	9

4.2.3 E-R diagram



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



4.3 Physical Design

This design describes how the proposed system shall deliver the general capacity as logically designed.

4.3.1 Students form

This form is used to display how a student can be registered in the school

The screenshot shows a software window titled "OXFORD MOSLEM SCHOOL" with a menu bar containing "FILE" and "Exit". Inside the window is a sub-window titled "Student form" with a title bar containing standard window controls. The main area of the "Student form" is titled "STUDENT DETAILS" and contains the following fields:

First Name	MUWANGUZI	Nationality	KENYAN
Second Name	COLLINE	IdNo	UG/0007
Sex	MALE	class	S.4
Age	18	Section	day
Date of Birth	8 /27/2009	Bed Number	7
Address	NAIROBI		

At the bottom of the form are six buttons: "Addnew", "Save", "Next", "Previous", "Delete", and "close".

4.3.2 Teachers form

This is the form which has the details of the teachers in oxford Muslim school.

The screenshot shows a software window titled "OXFORD MOSLEM SCHOOL" with a menu bar containing "FILE" and "Exit". Inside, there is a sub-window titled "Teachers" with a title bar containing standard window controls. The main content area is titled "STAFF DETAILS FORM" and contains the following data:

First Name	TENDO	Address	JINJA
Second Name	TOM	Contact No	0
Nationality	UGANDA	JINJA	JINJA
Sex	male	single	single
Age	24	Subjects	Geography
Qualification	DEGREE		

At the bottom of the form, there are six buttons: "Addnew", "Save", "Next", "Previous", "Delete", and "close".

4.3.3 Administration form

The image shows a screenshot of a software application window titled 'OXFORD MOSLEM SCHOOL'. Inside the window is a sub-window titled 'ADMINISTRATION'. The sub-window has a dark background with the word 'ADMINISTRATION' in red at the top center. Below this, there are several input fields and a dropdown menu. At the bottom of the sub-window, there are six buttons: 'Addnew', 'Save', 'Next', 'Previous', 'Delete', and 'close'. The input fields contain the following text: 'lojum' for FIRST NAME, 'moses' for SECOND NAME, 'lower office' for DEPARTMENT, '42' for AGE, 'logestic off' for DUTIES, and 'Male' for SEX. The NATIONALITY field is empty.

Field	Value
FIRST NAME	lojum
SECOND NAME	moses
DEPARTMENT	lower office
AGE	42
DUTIES	logestic off
NATIONALITY	
SEX	Male

Buttons: Addnew, Save, Next, Previous, Delete, close

4.3.4 Finance form

The screenshot shows a software application window titled "OXFORD MOSLEM SCHOOL" with a menu bar containing "FILE" and "Exit". Inside the window is a sub-window titled "FINANCE" with a "FINANCIAL INFORMATION" header. The form contains the following fields and buttons:

Field Label	Value	Button
Students Names	namulinda	ADDNEW
Reg Number	ug/001/72	SAVE
Class	s.4	NEXT
Recieved by	mr.david	PREVIOUS
Date of payment	7/16/1985	DELETE
Method of	3440000	CLOSE
Amount Paid	2000000	

4.3.5 Works form

The screenshot shows a Windows application window with the title bar 'OXFORD MOSLEM SCHOOL' and a menu bar 'FILE Exit'. Inside the window is a sub-window titled 'WORKERS' with a title bar 'WORKERS'. The main content area is titled 'INFORMATION OF THE WORKERS' and contains a form with the following fields and values:

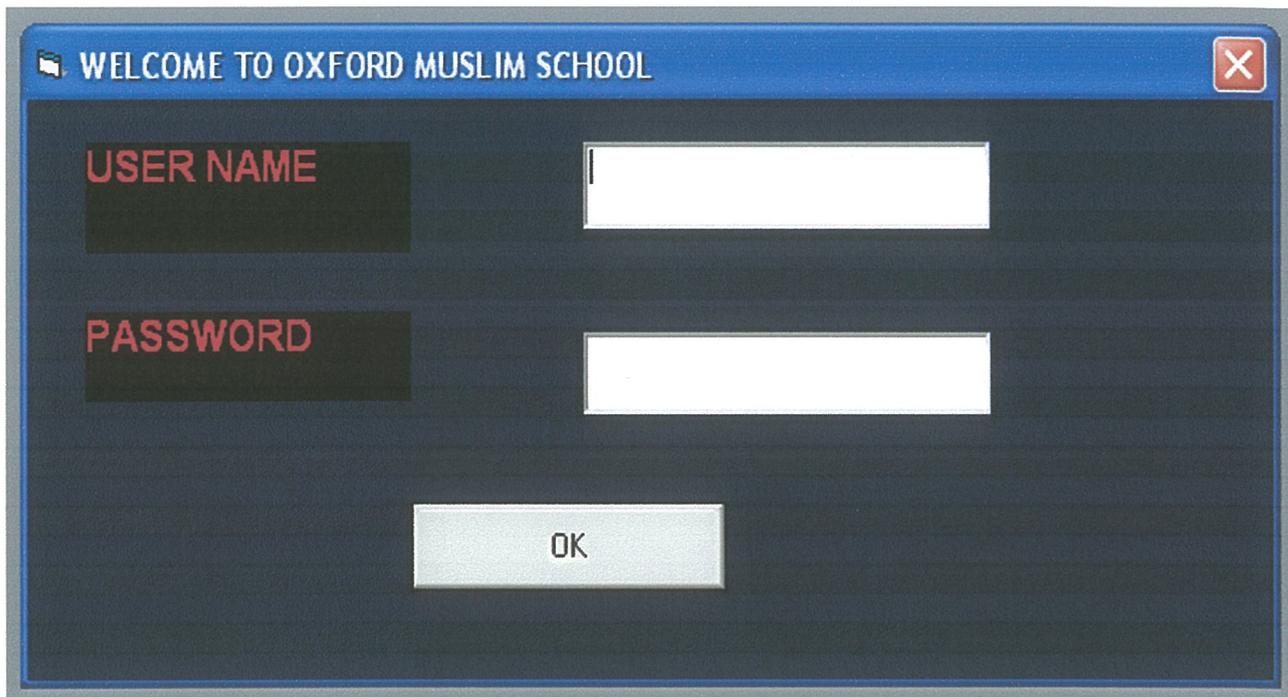
First name	kagwa	Nationality	ugandan
Last name	sam	Sex	male
Address	masaka	Age	54
Tel Number	7860	ID Number	ugandan
Marital status	married	Date of Appt	12/2/2000
Salary	400000		

At the bottom of the form, there are six buttons: **Addnew**, **Save**, **Next**, **Previous**, **Delete**, and **close**.

4.3.6 The login form

The user name and password are required by the system before logging into the database or access to the records .in case the user enters a wrong password a message is displayed as shown in the appendix below

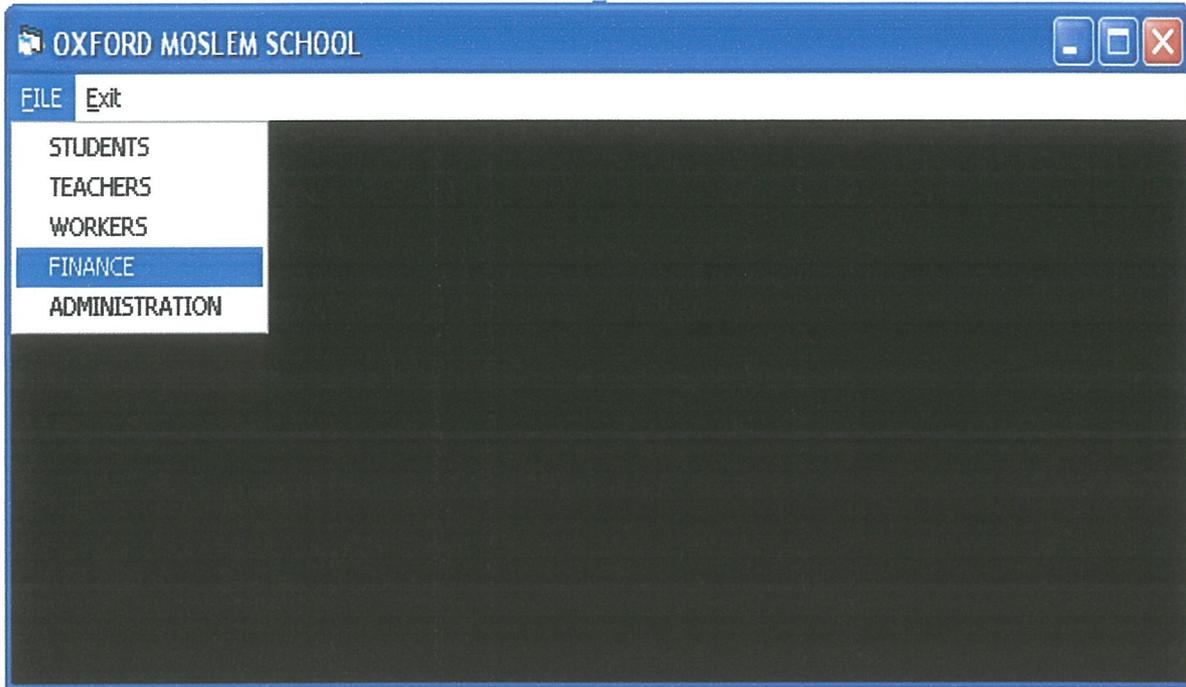
Fig 4.3.6.1 THE LOGIN FORM



The image shows a screenshot of a login form window. The window has a blue title bar with the text "WELCOME TO OXFORD MUSLIM SCHOOL" and a close button (X) in the top right corner. The main area of the window is dark blue and contains two input fields. The first field is labeled "USER NAME" in red text on a black background, followed by a white rectangular input box. The second field is labeled "PASSWORD" in red text on a black background, followed by another white rectangular input box. Below these fields is a single button labeled "OK" in black text on a light gray background.

4.3.7 The MDI Form

After when the user has entered in the correct password .he or she is guaranteed/granted access to the multiple document interfaces) MDI) All the forms are enclosed in this form



4.4 Internal coding

It's a definition stage where the researchers used the existing database in access to the Microsoft ADO 6.0 (ODBC) driver of VB programming interface. This is to make the system user friendly and coding data movements or control of the entire process.

4.4.1 Below are the codes of the following command buttons and other interface

1. Add new command button

```
Private Sub cmdadd_Click ()  
  
Adodc1.  
  
Recordset.AddNew  
  
End Sub
```

2 Close command button

```
Private Sub cmdclose_Click()  
  
Adodc1.Recordset.Close  
  
End Sub
```

3 Delete command button

```
Private Sub cmddelete_Click()  
  
Adodc1.Recordset.Delete  
  
End Sub
```

4 move next command button

```
Private Sub cmdnext_Click()
```

Adodc1.Recordset.MoveNext

End Sub

5 move previous button command

Private Sub cmdpre_Click()

Adodc1.Recordset.MovePrevious

End Sub

6 Save command button

Private Sub cmdsave_Click()

Adodc1.Recordset.Save

End Sub

Private Sub cmdadd_Click()

Adodc1.Recordset.AddNew

End Sub

7 Close command button

Private Sub cmdclose_Click()

Adodc1.Recordset.Close

End Sub

Private Sub cmddelete_Click()

Adodc1.Recordset.Delete

End Sub

Private Sub cmdnext_Click()

Adodc1.Recordset.MoveNext

End Sub

Private Sub cmdpre_Click()

Adodc1.Recordset.MovePrevious

End Sub

Private Sub cmdsave_Click()

Adodc1.Recordset.Save

End Sub

Private Sub Adodc1_WillMove(ByVal adReason As ADODB.EventReasonEnum, adStatus As ADODB.EventStatusEnum, ByVal pRecordset As ADODB.Recordset)

End Sub

Private Sub cmdadd_Click()

Adodc1.Recordset.AddNew

End Sub

Private Sub cmdclose_Click()

Adodc1.Recordset.Close

End Sub

Private Sub cmddelete_Click()

Adodc1.Recordset.Delete

End Sub

Private Sub cmdnext_Click()

Adodc1.Recordset.MoveNext

End Sub

Private Sub cmdpre_Click()

Adodc1.Recordset.MovePrevious

End Sub

Private Sub cmdsave_Click()

Adodc1.Recordset.Save

End Sub

Private Sub cmdadd_Click()

Adodc1.Recordset.AddNew

End Sub

Private Sub cmdclose_Click()

Adodc1.Recordset.Close

End Sub

Private Sub cmddelete_Click()

Adodc1.Recordset.Delete

End Sub

Private Sub cmdnext_Click()

Adodc1.Recordset.MoveNext

End Sub

Private Sub cmdpre_Click()

Adodc1.Recordset.MovePrevious

End Sub

Private Sub cmdsave_Click()

Adodc1.Recordset.Save

End Sub

Private Sub cmdadd_Click

The MDI coding

Private Sub MDIForm_Load()

End Sub

Private Sub mnuadmin_Click()

Form5.Show

End Sub

Private Sub mnuexit_Click()

Unload Me

End Sub

CHAPTER FIVE

RECOMMENDATIONS, CONCLUSION AND DISCUSSION

5.0 Introduction

In this part of the study researcher has summarized the field discoveries, drawn a conclusion and provided recommendations before ending with areas he is convinced deserved further research. The objectives of the study were established causes of record keeping which are a manual system of data entry, update and storage of data of fees payment which is riddled with problems.

5.1 Assessment of the work done.

The new system is computerized from entry of data processing, to generating of reports. The system reduces on the amount of work done when entering data. The system has speed, validation routines and is reliable. It is secure through a password. Also the spread of transmission require to be changed to a high performance speed for the staffs that are using the network.

3.10 Limitations of the study

DBMS requires skilled personnel to design and manage it

The software and system is relatively expensive

Backups and recovery operation is fairly complex in MIS Database environment needs real technological skilled people

5.2 Discussion

It's focused on the maintenance of the system, that is servicing and elimination of errors that were not discovered during the design. However database security of this application is not fore gone

The system provides a timely and instant access of the data require by the user, therefore a required strategy for solving the existed problem that used to take long to look for student's data as was the case formerly in the school.

The system can store lots of data at the described storage devices which otherwise would not be the case in a situation where a lot of space was occupied by paper files making data retrieval un believably difficult.

5.3 Recommendation

In this phase, the researchers take to recommends the application of some requirement for it to work perfectly well with a particular organization, which includes the software requirement, hardware and other. We recommend that the old system of information storage should be changed for example storing student details in files lets say result in form of report they can use the database system which is computerized where there should be regular backups of the records for security reasons.

Access to the database should be limited to few people using password, which should be changed regularly and also the computers which are used the spread which is used in the payment system should be fast like 10mbs to 100mbps to make the end users of Oxford Muslim secondary school also do their work in a short time especially for students who like to download the school's information from the school's site plus all the necessary documents about the school Due to the little time provided, the system was fully developed.

There fore there should be enough time for one to fully develop this system to a purely secure system. Restrictions should also be put in place to prevent misuse school's facilities which have been implemented. This is done by the use password.

5.4 CONCLUSION

As part of the concluding remarks of this research, the researchers are happy that though a lot of challenges were met in carrying out the research, successfully the soft ware was designed according to the user's needs and expectation.

It was evident that the current information system in Oxford Muslim secondary school was riddled with problems which are a manual system of data entry, the designing and implementation of a new system lead to high productivity and efficiency in performance in the School hence enabling the school to cope with the growing population at peace and confidence that was built by the school stakeholders in the data management practices of the school. This calls for effective data management system in order to enhance information/ record keeping in the School. The implementation of this computerization system of data storage is able to eliminate, collision, forgery there was be recreation of the students accounts which will only be created by the system administrator or accountants and properly configured in order to perform a better than the previous system of records keeping.

BIBLIOGRAPHY / REFERENCES

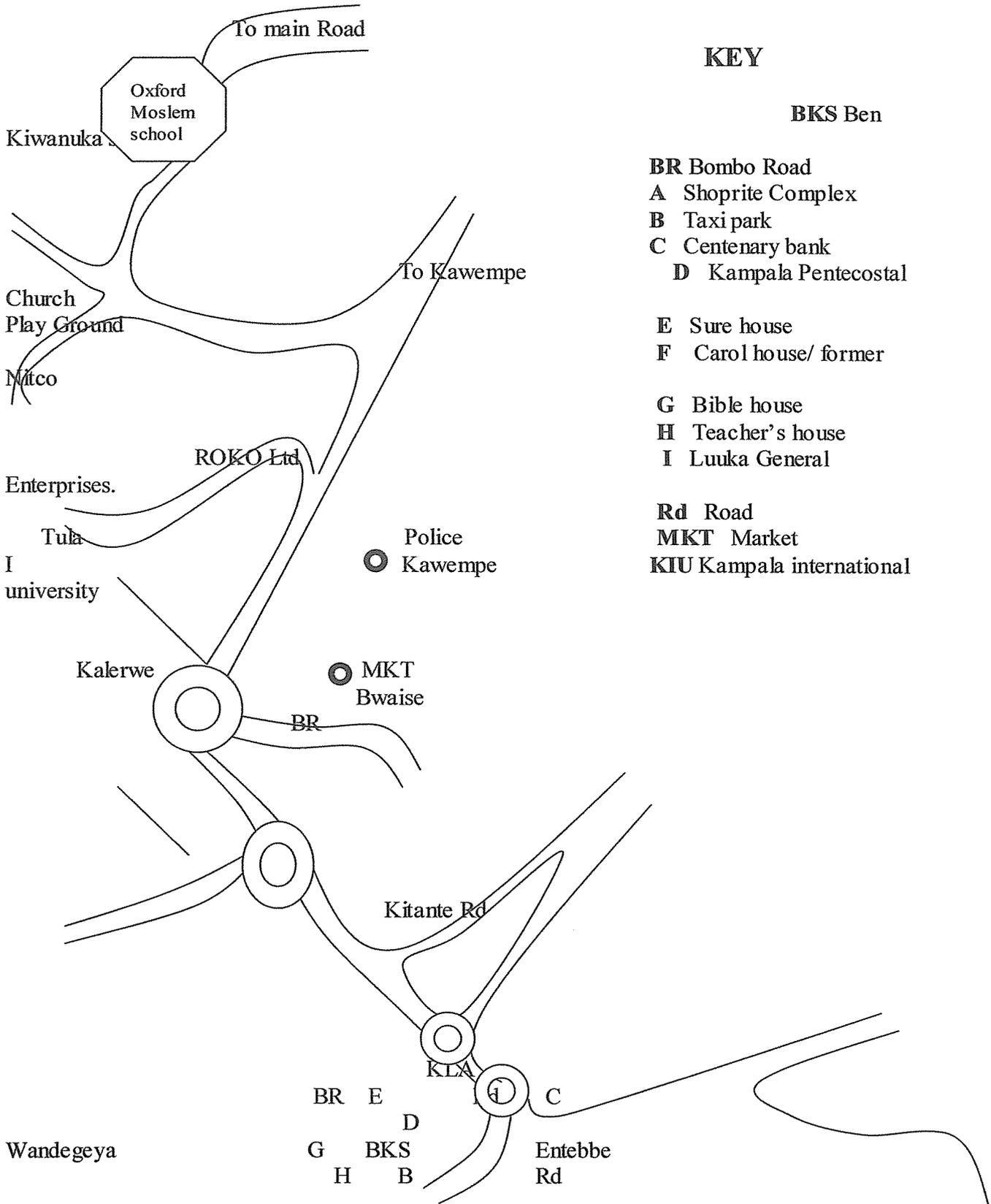
- Turban et al, (2002), Information technology for U.S.A, Editor Beth Lang Golub.
- Phillip et al, (1987), Database System Management and Design Addison Wesley, Tom walker (U.S.A)
- Date, C.J, (2001), an introduction to database system
- McFadden et al, (1994), Modern Database Management, Canada, Editor Michelle Buster,
- Ralf, MS (1985): *Computers in today's world*, Homewood; Dow Jones Irwin.
- Bishop, P (1987), *Computer Science*, 2nd Ed, Sums publishing , USA.
- Fitzgerald and Fitzgerald, (1987), *Fundamentals of System Analysis*; 3rd Ed. John Wiley & Sons, USA.
- Jeffrey. A Hooper, Joey. F, George, Joseph S, Valacich (2002): *modern system Analysis and design*, 3rd Edition, USA.
- Jeffrey, L, Whitten, Lonnie D, Bentley, Kevin C, Dustman (2000): *System Analysis and Design*; 5th Ed.
- William, E. Burrows, Joseph, D/ Lanford (2000), *programming Business Applications with basic 6.0*, USA.
- Silberchatz , Korth Sudarshn, (2002): *Data base system concept*.

APPENDIX

BUDGET FAINANCIAL STATEMENT

ITEMS	AMOUNT (SHS.)
STATIONARY	100,000=
SOFTWARE	100,000=
SKILL/EXPERTISE, LABOR	500,000=
AIRTIME	100,000=
DATA COLLECTION	100,000=
ELECTRONIC MATERIALS LIKE CDS	50,000=
GRAND TOTAL	1,000,000

ASKETCH MAP SHOWING THE LOCATION OF THE CASE STUDY



Appendices

Kampala International University

P.o box 20000 Kampala Uganda

Questionnaire to the local people

Dear respondent, this research is aimed at gathering information about the old system of data storage at oxford Muslim school kawempe

Please your participation is highly needed for the information retrieval

Name of the respondent.....

What is the name of this school...

When was this school started /established?

Who started it?

Give a brief background of the school.....

.....

.....

Who owns the school.....

What do the local people think of the about school.....

.....

Questionnaire to the administrator

This is education research carried out by **Kirabo Faridah Kasana and Konso Babra** students of Kampala international university. It is aimed at gathering information about the recent data storage of oxford Muslim school

Your participation is highly needed for information retrieval

Name of the respondent.....

Title of the respondent.....

Duty of the respondent.....

What is your current data storage at this school.....

.....

How do you find this method you are using now?

.....

.....

What problems do you face while using storage method?

.....

.....

What are the solutions to the problems?

.....

.....

.....

What is your view about this method?

.....

.....

According to you should the current method be changed or not?

.....
.....

Give reasons for your answers

Yes.....
.....

No.....
.....

OXFORD MOSLEM SCHOOL

FILE Exit

ADMINISTRATION

ADMINISTRATION

FIRST NAME	ibjum	DUTIES	logestic off
SECOND NAME	moses	NATIONALITY	
DEPARTMENT	lower office	SEX	Male
AGE	42		

Addnew Save Next Previous Delete close

OXFORD MOSLEM SCHOOL

FILE Exit

Student form

STUDENT DETAILS

First Name	KAWALA	Nationality	UGANDAN
Second Name	FALIDAH	IdNo	UG/0001
Sex	FEMALE	class	S.3
Age	16	Section	day
Date of Birth	8 /27/2009	Bed Number	1
Address	WAKISO		

Buttons: Addnew, Save, Next, Previous, Delete, close

Wrong password

WELCOME TO OXFORD MUSLIM SCHOOL

USER NAME

PASSWORD

UK

Login

Invalid Password, try again!

OK