

**DESIGN AND DEVELOPMENT OF STUDENT ADMISSION SYSTEM
CASE STUDY: ST. PIUS SENIOR SECONDARY SCHOOL**

BY

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**A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF OPEN DISTANCE AND
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UNIVERSITY**

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DECLARATION

I, **EMORUT SIMON PETER** do hereby declare that this is my original work and has never been submitted for any award in any institution of higher learning.

Signed :.....

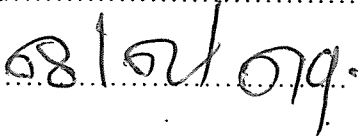
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Date : 08/02/2019.....

APPROVAL

This research report entitled “**DESIGN AND DEVELOPMENT OF STUDENT ADMISSION SYSTEM CASE STUDY: ST. PIUS SENIOR SECONDARY SCHOOL**” was conducted under my supervision and with my approval it is now ready for submission to the College Examination Board for the award of a Bachelor of Computer Science in Education.

Signed :.....

Date

MR OKURUT GODFREY

DEDICATION

I dedicate my research report to my parents Mr. Onyait Lambery and Mrs. Ikilai Mary Machulate.

ACKNOWLEDGEMENT

I wish to acknowledge the valuable contribution of all those persons who assisted me in the completion of this dissertation.

I appreciate the work of my supervisor Mr. Okurut Godfrey whose effort in guiding me towards the accuracy of my research report.

The list is too long to be individually appreciated for the support they accorded to me. However, I cannot totally refrain from mentioning a few individuals without whose support and input, this research report would never have been accomplished. These are my parents Mr. Onyait Lambert and Mrs. Ikilai Mary Machulate and my friends who motivated me in one way or another on completing this task.

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LIST OF ACRONYMS

VB.NET	Visual basic net framework
Er	Electronic Registration
W3	World Wide web
TEL	Telephone
SDLC	System development life cycle.
SQL	Structured Query Language
HDD	Hard disk drive
GB	Giga byte
RAM	Random Access Memory
PC	Personal Computer
MBs	Mega bytes
MODEM	Modulation Demodulation
CPU	Central Processing Unit
IT	Information Technology
SS	Secondary School
UCE	Uganda Certificate of Education
UACE	Uganda Advanced Certificate of Education.

ABSTRACT

St. Pius secondary school's admission system is characterized by manual method as a result, serious threat has been posed to the operation of the service and too much workload on the School's staff to admit new students. When a student selects to study from St. Pius secondary school, he/she submit his/her previous academic performance to the admission body of the school. If he/she is eligible with all the necessary requirements, the student is given an admission form which he/she fills and signs the school rules and regulations. After filling the admission form the student is then admitted to St. Pius senior Secondary school We have therefore designed an Admission system for ST. PIUS SENIOR SECONDARY SCHOOL which will help the school solve problems associated with the manual admission system currently in use.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The Students Admission System helps the school to handle admission process which includes registering students' details, parent's details and assigning student Identification number.

Students' Admission System marks a major shift from the traditional manual admission of new students by using electronic means, i.e. use of computer and software designed and developed for that purpose

The System operates as follows

1. Capturing of data (Students' details) using a Windows based **Software** (application).
2. Storing of students' admission details in a school database
3. Retrieving students' details whenever they are needed.

With the **Students' Admission System**, the following processes have been eased and effectively accomplished.

- Authentication of users using a user-name and password.
- Accurate capturing of **Students' details** together with their **photographs**.
- Exporting of Students' details into **excel** format.

1.1 Background of the study

St. Pius Senior secondary school is a private is a private founded institution mixed day and boarding with both O' Level and A' Level.

It started in 2007 in Kawempe village by Mr. Lule Richard who is the director. In 2012, it was shifted to Konge Lukuli Kibalama zone.

The school vision is 'To produce an all-round educated, innovative, confident and morally upright person who can adopt to ever changing global environment. With increased advancement in technology, the school needs to transform from the traditional method of student admission to more advanced way of admitting new students

Being a private venture, St. Pius secondary school has shown the capacity to sponsor the project with all the necessities to come up with high tech **Student Admission System**

1.2 Statement of the problem

St. PIUS Secondary school started admitting students in April 2007 after it had registered with the ministry of education and sports (MoES). The school started with 47 candidates and continued receiving more others up to today. It has a total population of 426 students among these 46 are S.4 candidates while 17 are S.6 candidates.

Currently admissions are handled by the Director of studies Mr. SSEBADDWA IVAN

The system currently in use is characterized by the manual method and as a result, serious threats have been posed to the operation of the service and too much workload on the staff. The manual method involves storing manual admissions in shelves and students' details retrieval is so tiresome since it requires to check the shelves for a students' details which has been tiresome and time consuming.

We have therefore designed and implemented a Student Admission System for St. PIUS senior secondary school that helps the school handle admission process.

1.3 Research Objectives

1.3.1 Main objective

“To design and implement Student Admission system for St. PIUS senior secondary school “

1.3.2 Specific Objectives

1. To ensure effective admission of new students using a computer based system
2. To promote growth and quick service delivery to the education sector in Uganda
3. To improve the technology of the school to match with current technology.

1.3.3 Research questions

1. How can St. Pius senior secondary school transfer from using manual admission system to Student Admission system?
2. How can St. Pius senior secondary school carry out student admission using a computer application?

1.4 Justification

The justification for the research work is as follows to

- To allow for effective service delivery in St. PIUS senior secondary school in student admission exercise.
- To do away with the traditional method of using admission forms to admit students to using a computerized computer system
- To contribute to the enormous change in information technology in the school.
- To minimize errors and ensure maximum utilization of students' admission requirements.

1.5 Scope of the study

The scope of the project covers the development of a computer application typically involving programming which is capable of providing platform for admission of students for easy access to students' admission details by the school

The methods of data collection, system design and implementation and other necessary materials under close supervision has been put together for the success of the work.

1.6 Significance of the study

- The research has helped St. Pius senior secondary school to do away with the existing manual method of admitting students
- In the modern world, with all the complexities involved in developing an expert system that will certify user's needs. Management requires well-structured and versatile comp application that would meet user's needs at all point irrespective of the location provided the resource such as internet facility is available to ensure remote access.
- The research has helped us to find even more problems affecting the education sector and finding appropriate solution to such problems.
- The research has also acted as a guide or a base line for other researchers who wish to carry out further research on the same topic or the related.

1.7 Conceptual frame works.

The concept of this application is based on the computer performance that gives a chance to the school staff to register or admit new students electronically by using computers and the designed system i.e. Student Admission System. This relieves the workload that school staff would face while using the traditional method of admitting new students by using manual form hence easing the storage students' admission details since a computer can be used to store huge information basing on its hard disk capacity or storage space. To implement the above mechanism, the following functionality has been designed and implemented using VB.net and SQL server.

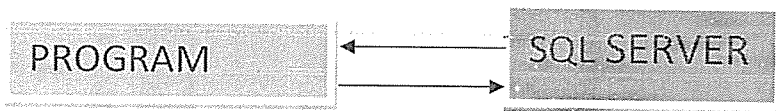


Figure 1 shows the conceptual framework

1.8 SCHOOLS' ADMISTRATION HIERACHY

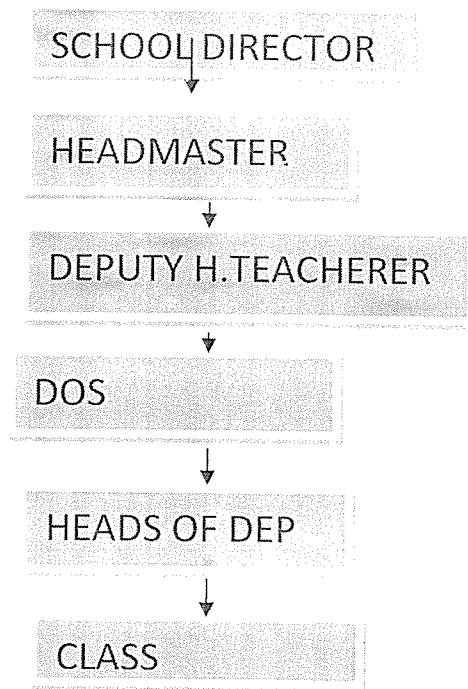


Figure 2 shows school administrative hierarchy

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

According to Richard (2009) at the Simpson magazine New York, a computer based application can be also described as an aspect of electronic commerce. Electronic commerce (EC) comprises new ways of doing business with customer, suppliers and other business partners that is, rendering the required service through web based application. EC is enabled by information and communication technology, in particular, the World Wide Web (in short, the web). While of numerous organizations have started to use the web as an interface to clients and business partners, many have been disappointed by lower than expected response rates and higher than expected costs. One reason for non-profitable web based EC applications is that they do not reflect the state.

2.1 Facts finding technique

Lonme D.Bently, Jeffrey L. Whitten, and Kevin C. Ditman (2001:219), Fact finding techniques are the formal process of using research, interviews, questionnaires, sampling and other techniques to collect information about problems, requirements and preferences. It's also called information gathering.

2.2 Software design

Design is a process of applying various techniques and principles for the purpose of defining system insufficient details to permit its physical realization. However Ian Sommerville (2002:56) explains design as a description of structure of the software to be implemented, the data which is part of the system, the interfaces between the system components and sometimes the algorithm used.

SERVICE: A type of activity that is intangible is not stored and does not result in ownership. A service is consumed at the point of sale.

APPLICATION: Computer based software used to perform certain functions.

STRATEGY: Method applied in doing certain work

QUALITIES: great features of certain entity that differentiate others

ORGANIZATION: A cooperative society with equal motive and goal.

ACCESS: Authorization to gain entrance.

2.2.1 Waterfall model

A waterfall model is SDLC sequential process that flows one by one downwards like a waterfall. Waterfall model is used when the requirements, conceptual model and design are considered stable, predictable, and certain. It's appropriate when the simulation under development has predictable performance expectations, includes reused and previously accredited legacy components, has pre-existing input data. Also, experienced knowledge participants and adequate documentation.

The simplest software development life cycle model is water model, which states that the phases are organized in a linear order. A project begun with feasibility analysis. On the successful demonstration of the analysis, the requirements analysis and project planning begins. The design start after requirements analysis is done. And coding begins after the design is done. Once programming is completed, the code is integrated and testing is done. On successful completion of testing, the system is installed. After this the regular operation and maintenance of the system takes place.

PROJECT WATERFALL MODEL

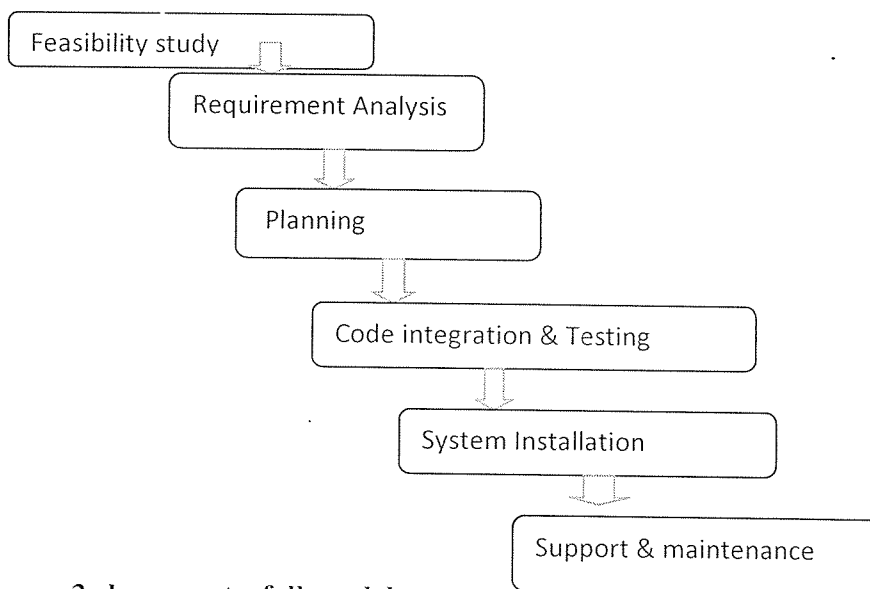


Figure 3 shows waterfall model

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter includes specific methods which were used in order to achieve the objective of the project, particular requirements for implementation of the project and a brief explanation of why such methods are to be used for implementing the proposed tools, sources of data collection. And also this chapter discusses how database was set up in order to incorporate these features.

3.1 Sources of data

Data was collected from both primary and secondary sources. The face to face interviews conducted are primary sources of data, text books and online documents are the secondary sources of data.

We interviewed Mr., the head teacher of St. Pius senior school who provided us much of the information about the school

3.2 Method of Data Collection

Having achieved the software requirements, the next step was to source for information relative to the subject. The most appropriate data collection instruments shall be used during the research from St. Pius senior secondary school; these include interview, questionnaire, and observation.

3.2.1 Interview

This involves face to face interaction between the researcher and correspondent i.e school administrator, staff and parents. We used this technique to attain the first hand information from the school.

3.2.2 Questionnaire form

We used this technique to collect information from staff and students who are currently registered under the school.

3.2.3 Observation

This technique was used to gather information within the school so as to get data which will not be found through questionnaire and interview techniques. This involved the use of naked eyes to observe the current manual admission system being used.

3.2.4 Feasibility Study

The process of carrying out survey to ascertain the possibility for the implementation of the technology as a result through investigation needs to be done in order to obtain an accurate result during the feasibility study factors such as;

- Service level of the technology
- Total number of usage of technology
- The average increase of users of the technology
- Future modification of the technology

The web application can provide student details. The system provides services like;

- Capturing students' details which includes students' names, parents etc.
- Sorting and assigning students with school ID

3.4 Target population and Sampling method

The targeted population is St. Pius senior secondary school Nanganda

3.4.1 Sample size

The size of the sample comprised of 145 students from which the information was collected

3.4.2 Sampling technique

We used a systematic method since it is easy to carry out and more precise.

3.5 Data analysis

The data collected was analyzed using data wrangler after it was cleaned in accordance to the objectives of the study i.e design and implementation of Student Admission system for the school.

3.6 System development and tools

To achieve above objectives, we used the system development life cycle (SDLC) methodology which include different stages such as Planning phase, Analysis phase, Design phase and Implementation phase.

3.6.1 SQL server 2008R2and VB.Net 2010

These were used as tools to create user interface and database system to manage the application data. Other development will include software, Hardware tools such as computers with different specification such as Dual core, 2GHz 559MHz, 2GB of RAM, and 500GB of HDD.

3.7 System analysis

System analysis is a problem solving technique that decomposes a system into its component pieces for the purpose of studying how well component works and interact to accomplish their purpose Or

It is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements to the system.

System analysis focuses on specifying for what the system or the application is required to do. It allows the individuals to see the logical elements (what the system should do) apart from the physical components it uses (computers, terminals and storage system).

The research was carried through questionnaire and interviewing method to discover many problems with the current manual Student Admission system Therefore we conducted a detailed study which prompts us to go ahead with developing the system to solve the problems encountered. The purpose of this stage is to understand the existing system, develop a system according to the user requirements and to ensure that all feasible alternatives are considered. The Student Admission system will be developed as a standalone system to offer users a convenient way of admitting students at St. Pius senior secondary schools

3.7.1 SQL – Structured Query Language

SQL was used in the implementation of designed system for the reason that it allows combination, extraction, manipulation and organization of students details in St. Pius schools' database. It is a platform independent and therefore can be implemented and used across several platforms such as Windows, Linux server and is compatible with various hardware mainframes.

3.7.2 Visual Basic .Net (VB.Net)

This was used for designing the interface that enables staffs to login as administrators to register and login as well.

3.8 System design

System design is the detailed technical specification including construction of a program and program testing. Designers use certain standard tools and techniques to organize their work through system specification like output design. These tools may include Flow chart, Data flow diagrams (context level diagrams, data decomposition diagram and entity relation diagram)

3.9 System requirements

For the system to be put in place necessities such as hardware software and people must be available, these necessities were integrated to come up with full functional system

Hardware requirements are:

Hard disk 50MB free space or more, processor speed 133MHZ and above, input/output devices (printer, keyboard, mouse, monitor).

Software requirements are:

The operating system such as window XP, Window 7 and above can be used and also the application software such as VB.Net and SQL server2008 or above is required.

People

This refers to the personnel required to operate the system. We have trained the school's staff on how to use the computer and the system and be aware of the software used like database software. We carried out a 7 day campaign at the school to train all staff members on how to register and admit students using the students and admission system.

We assigned two types of system users that is data entrants under data entry department and system administrators under Administration department. Data entrants have been denied edit rights, while system administrators have full access to all system entities and is responsible of adding system users and deny access to the system.

3.10 Database formulation

Allan Simpson(2002) states that the data entry routine is at the heart of any dBaseIII plus application. It is usually the first routine you write in any program and it is usually the first one that user will come in contact with.

Kroenke (2006) states that in order to avoid the more common loop holes in database design, several texts on subject matter were examined before commencing the Student admission system for St. Pius School. One of the fundamental formulation rule is that database should avoid duplication of data (data redundancy)

3.12 Validation

This system was evaluated by the developer using the actual data of students admitted at St. Pius senior secondary school.

CHAPTER FOUR

SYSTEM DESIGN AND IMPLEMENTATION

4.1 STATUS OF THE EXISTING ADMISSION SYSTEM

The existing admission system was manual where students filled manual admission forms that must be filled and signed by the new student.

Today the school has a total population of about 426 students of which 268 are girls and the remaining are boys. Being a private institution can easily to our new students admission system.

REGISTRATION FORM 1

Day/ Boarding DAY /
Surname NISSONKO
Other names
Date of birth 22 / 04 / 2002 Place of birth
Sex F District BUNDIA
Nationality UGANDA Religion RESISTANCE
Special health problem None
(Attach Doctors letter)
PARTICULARS OF THE PERSON WITH WHOM YOU WILL BE STAYING OR WHO WILL BE RESPONSIBLE FOR YOU WHILE ATTENDING SCHOOL
Name MATOVU MIKE Relationship FATHER
Address MUTEZASIRA Office Tel No
Home Tel 0772 992959 Mobile Tel 0772 992959
No
Name of place KIPATI
LC I Area LC II Area
HOME BACKGROUND:
Fathers/ Guardians' name MATOVU MIKE
Address MUTEZASIRA occupation B. Imani
Students' signature NISSONKO EVERYNE
FOR OFFICIAL USE ONLY:
Reg No Class admitted to
School house Date
HEADTEACHERS' SIGNATURE
Official Stamp: P.O. BOX 504, KIPATI, BUNDIA DISTRICT, UGANDA. STAMPED AND SIGNED BY: [Signature] P.O. BOX 504.

Figure 4 shows a filled admission form

After the student information has been captured and the forms filled, admission forms are stored in the shelves in the head master's office where if any student's information is required, the head

teacher then checks in the shelves for the student's information. This process is so tiresome and time consuming most especially when the number of students is too many.



Figure 5 shows files that store registration forms

4.2 SYSTEM DESIGN

4.2.1 CREATING SYSTEM DATABASE

SQL server 2012 is the back end server that we have used to create the system database. The STUDENT ADMISSION SYSTEM for ST.PIUS senior secondary school consists of two tables, namely activestudents table and terminatedstudents table.

Activestudents table contains information about students who are continuing their studies with the school while terminated students table contains students who have been expelled or discontinued from the school. This table also contains students who changed to another school

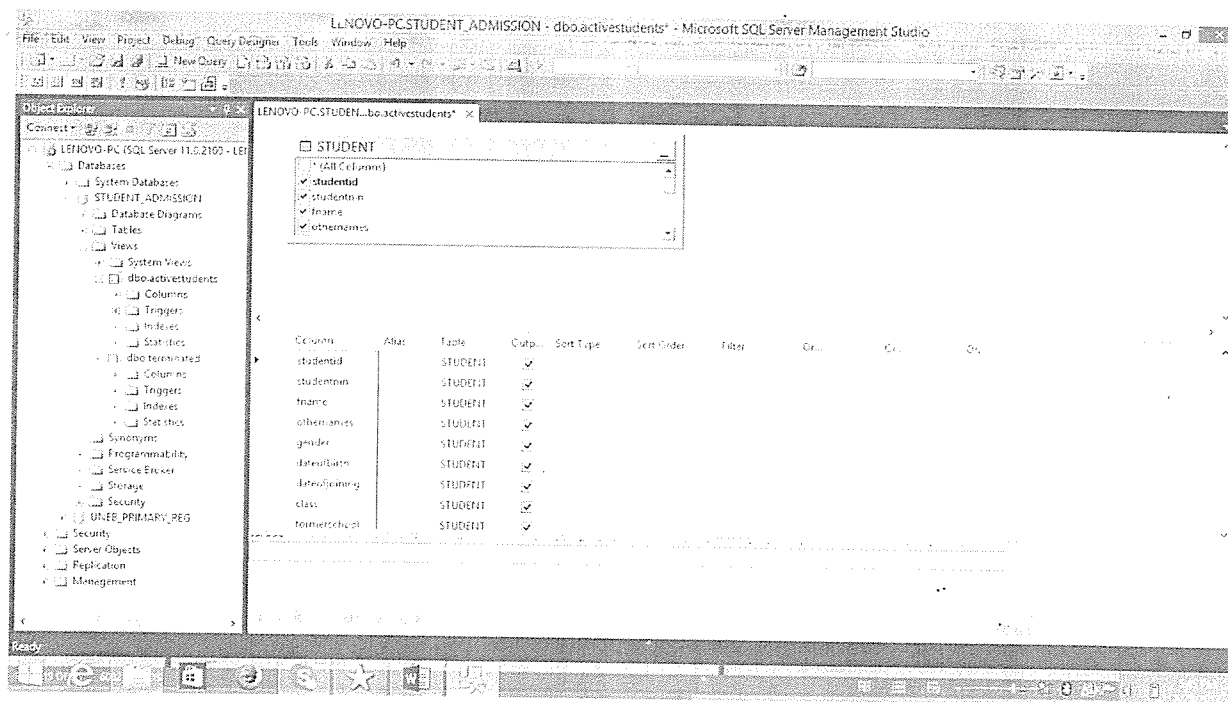


Figure 6 show the database table

After we have designed our databases we can now continue to design the user interface using Microsoft Visual Studio 2008 in order to come up an amazing user interface for our STUDENT ADMISSION SYSTEM.

System design is the process of defining the architecture, modules, interfaces and data for a system to satisfy specified requirements. This process involves the application of various techniques and principles for the purpose of defining system insufficient details to permit its physical realization.

4.1.2 DESIGNING USER INTERFACE

We have used Microsoft Visual Studio 2008 and SQL server 2012 to design the *Student Admission system for St. Pius senior secondary school*.

Microsoft visual studio 2008 was used to design the system interfaces and programming logically the system behavior and how the different objects interact with each other.

Microsoft visual studio makes creating of graphical user interfaces easier and fast hence making our work more easier, the controls for user forms can be found on what is known as '**Toolbox**'. When we insert a new user form from within the VBE(visual basic environment) via the **insert>UserForm**, The properties box, Tool box will be displayed which will help in designing a user friendly user interfaces.

By default, there are controls available and they are sixteen in number namely label, TextBox, ComboBox, ListBox, CheckBox, OptionBox rame, ToogleButton, and others

The backend database will help us to store data that will be retrieved every time they are required using sql commands.

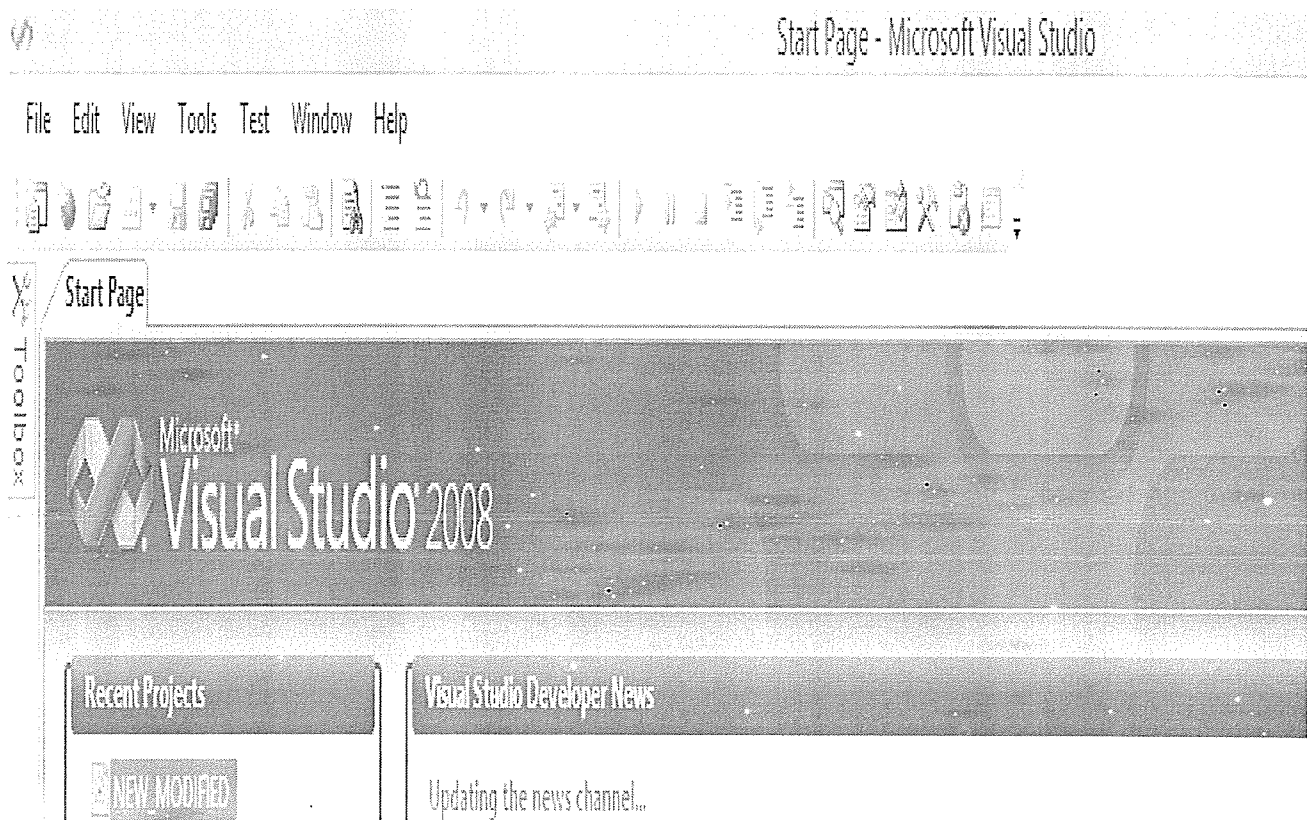


Figure 7 shows the visual studio software

LOGIN.vb

We created a login page using visual studio, therefore a user is required to login before accessing student Admission system

Please note the following before Login:

1. You can't login if any of the fields is not filled.
2. Contact the system administrator to create for you an account

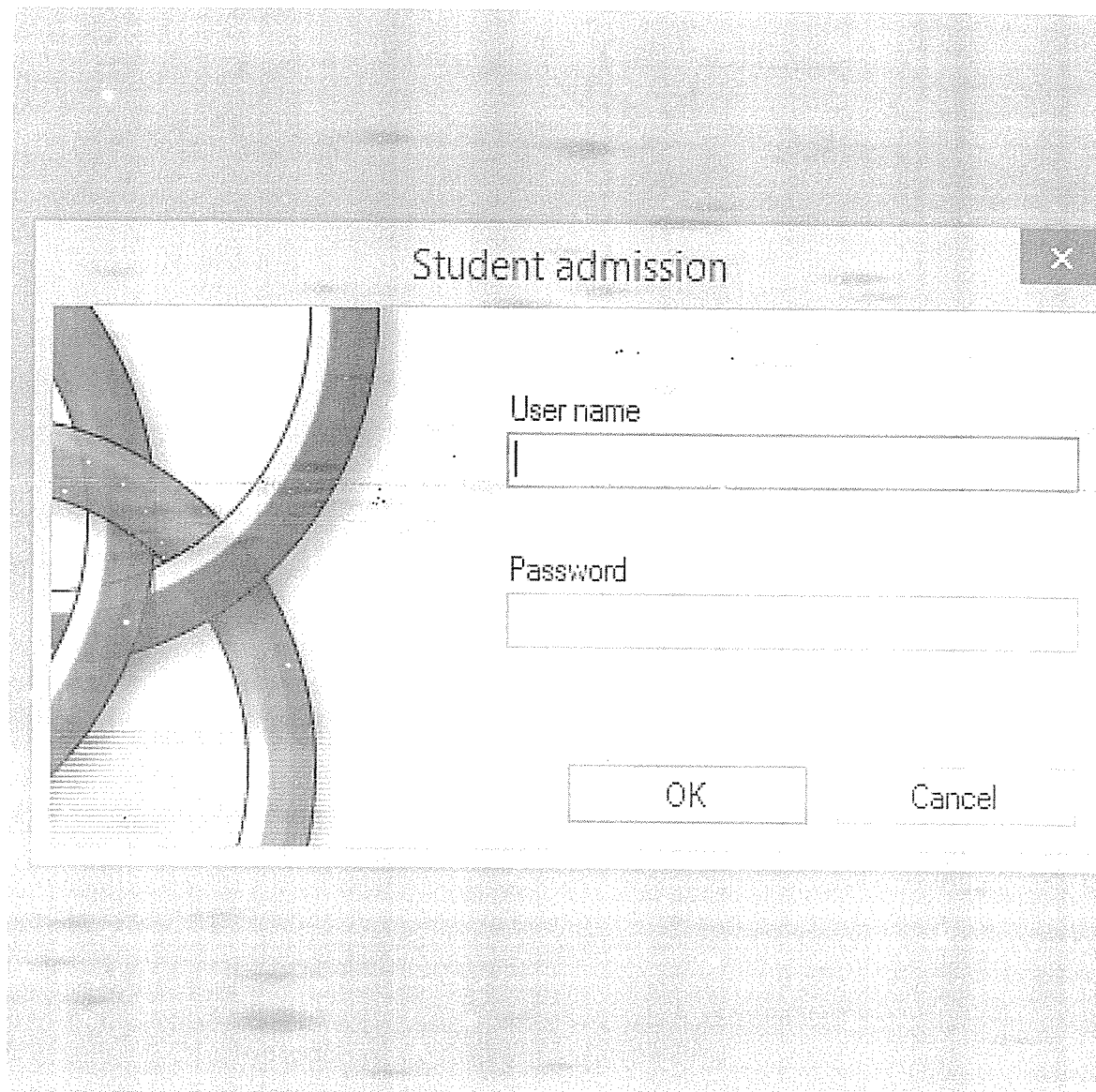


Figure 8 shows the login page

After the system has granted the user access, the logged in user is directed to a default page where he/she starts to interact with the system

4.1.2 USERS

There are two types of users who have been designed to gain access to the Students' admission system namely data entry and administration.

DATA ENTRY

Data entrants are people who are responsible for registering students in the school, this means they don't have full rights. They can't therefore create new system users, edit user details, admit/expel a student and others as seen in the system

ADMINISTRATION

System administrators have full access to the system functions, they can create a new user, edit user, admit/expel a student.

An administrator can make a data entrant to be an administrator, change user name while a data entrant can't

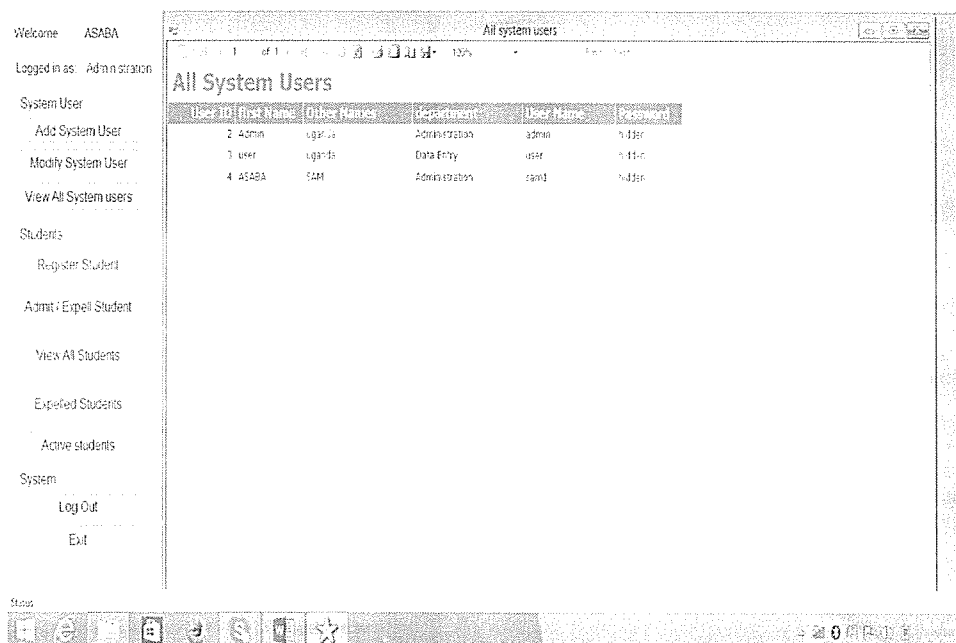


Figure 9 shows the system users

4.1.3 DEFAULT INTERFACE

The Default interface that we named MAIN.vb which is the first page loaded when the system is run, however in order to restrict unauthorized users from using this system, we have encrypted our system with the username and password such that to be able to use the system, the system administrator must first create for the user the user account. Once you have been given the username and password, the user can now access the system. This was done to restrict other

persons with harmful intentions who can delete, alter Student Admission details. The system administrator is the one who can admit or dismiss a student from a school.

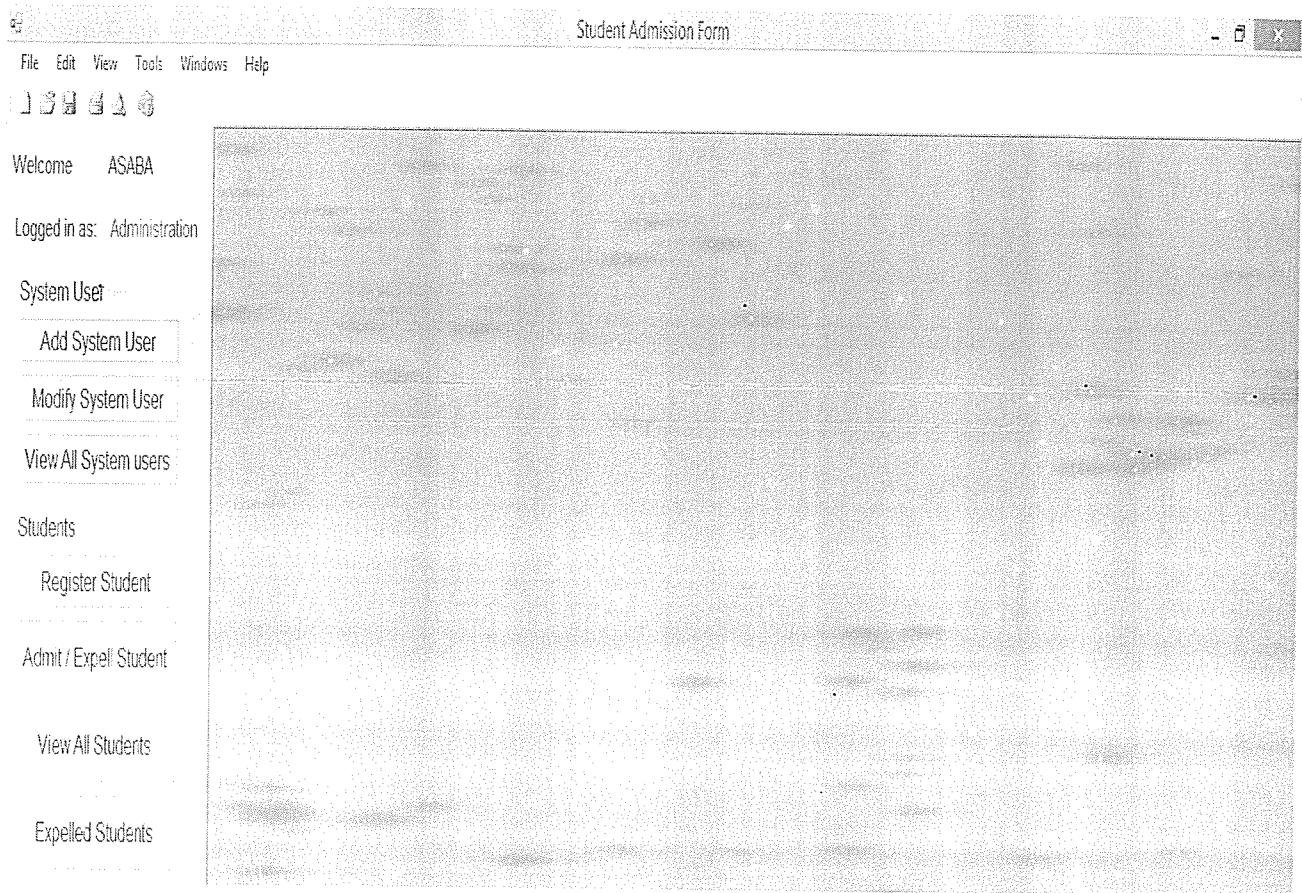


Figure 10 shows the main page

4.1.4 NEW USER ACCOUNT INTERFACE

This function is only accessible to system administrators

Imports System.Data

Imports System.Data.SqlClient

Imports System.IO

These are system libraries that helps in data entry such as the IO is used to enable entering of keys from in put devices and also enables out put devices such as the monitor to read or display such data from input devices

Student Admission Form - [Add User]

File Edit View Tools Windows Help

Welcome ASABA

Logged in as: Administration

System User

Add System User

Modify System User

View All System users

Students

Register Student

Admit / Expell Student

View All Students

Expelled Students

Active students

System

Log Out

Exit

Create System User

First Name

Other Names

Department

Username

Password

Confirm Password

Save Cancel

Figure 11 shows the form for creating system user

4.1.5 ADMISSION INTERFACE

This interface admit a student by taking student names, date of birth, gender, class parents contacts, address and name it.

All forms in our system validates data, this features helps in controlling the kind of information you require the system user to enter. Validation also helps to prevent submit empty forms into the database as this would make the system useless.

The Students' Admission System first registers, the student details is then sent to database. Once the data is at the back end, then admission process follows.

At this very point we admit a student and is then rendered to be an active student, or we can expel the student out of the school or if the student requests to change to another school, he/she is then said to belong to inactive students.

The screenshot displays the 'Student Admission Form - [Register Student]' interface. It features a standard menu bar (File, Edit, View, Tools, Windows, Help) and a toolbar with icons for file operations. The interface is divided into three main areas:

- Left Sidebar:** Contains navigation links including 'Welcome', 'ASABA', 'Logged in as: Administration', 'System User', 'Add System User', 'Modify System User', 'View All System users', 'Students', 'Register Student', 'Admit / Expell Student', 'View All Students', 'Expelled Students', 'Active students', 'System', 'Log Out', and 'Exit'.
- Enter Student Details:** This section contains the following fields:
 - National ID No. (text input)
 - First Name * (text input)
 - Other Names (text input)
 - Gender (dropdown menu)
 - Date of Birth (calendar picker showing Monday, August 28, 2017)
 - Date of Joining (calendar picker showing Monday, August 28, 2017)
 - Class (dropdown menu)
 - Previous school (text input)
- Guardians details:** This section contains the following fields:
 - Full Names (text input)
 - Contacts (text input)
 - National ID no. (text input)
 - Relationship (text input)
 - Comments (text input)

A 'Save' button is located at the bottom right of the form.

Figure 12 shows student admission form

4.1.6 REGISTRATION FORM INTERFACE

This interface is purposely for registering new students. This helps the school staff to register students electronically by using computers and the designed system (student admission system). This form requires the user to enter student's details that uniquely identifies him/her from others

such as:- National ID NO, First Name, Other Name, Gender, Date of Birth, Date of Joining, Class and Guardian details.

The screenshot displays a web application window titled "Student Admission Form". The interface includes a menu bar (File, Edit, View, Tools, Windows, Help) and a toolbar. On the left, a sidebar contains the following sections:

- Welcome ASABA
- Logged in as: Administration
- System User
 - Add System User
 - Modify System User
 - View All System users
- Students
 - Register Student (highlighted)
 - Admit / Expell Student
 - View All Students
 - Expelled Students
 - Active students
- System
 - Log Out
 - Exit

The main content area features a "Register Student" dialog box with the following fields:

- Enter Student Details**
 - National ID No. (text input)
 - Firs Name * (text input)
 - Other Names (text input)
 - Gender (dropdown menu)
 - Date of Birth (calendar picker: Wednesday, September 6, 2017)
 - Date of Joining (calendar picker: Wednesday, September 6, 2017)
 - Class (dropdown menu)
 - Previous school (text input)
- Guardians details**
 - Full Names (text input)
 - Contacts (text input)
 - National ID no. (text input)
 - Relationship (text input)
 - Comments (text input)

At the bottom right of the dialog box are "Save" and "cancel" buttons. The Windows taskbar at the bottom shows the system clock as 11:14 AM on 9/6/2017.

Figure 13 shows the registration form

4.1.7 UPDATING REGISTERED STUDENTS ADMISSION DETAILS.

This form is purposely for updating the registered students in case any error is proven. By using this form the user is provided a chance of rectifying errors where necessary. Here the user is required to click on the student name in order to be able to change the required information.

The screenshot shows a web application window titled "Student Admission Form - [Admit or Expell a student]". The interface includes a menu bar (File, Edit, View, Tools, Windows, Help), a toolbar, and a sidebar with navigation options. The main content area is divided into a table of students and a details panel on the right.

Navigation Sidebar:

- Welcome ASABA
- Logged in as: Administration
- System User
 - Add System User
 - Modify System User
 - View All System users
- Students
 - Register Student
 - Admit / Expell Student
 - View All Students
 - Expelled Students
 - Active students
- System
 - Log Out
 - Exit

Students Table:

studentid	studentrin	fname	othernames	gender
279	0422512	Nokas	Oumo	Male
535	0223900	Iwaga	micheal	Male
791	cm13290020hs1	asaba	seam	Male
1047	none	AYINEBYONA	RITAH	Female
1303	NONE	NUMULON	ESTHER	Female
1559	NONE	ASSERE	EDITH	Female
1815	NONE	AUMA	CONSTINCY	Female
2071	none	nasmbwa	jane	Female

Student details panel (for student 1559):

- Students ID NO: 1559
- National ID No: NONE
- Firs Name *: ASSERE
- Other Names: EDITH
- Gender: Female
- Class: S1
- Select action: Active (dropdown)
- Buttons: Save, Delete, Cancel

Status Bar:

Status: [Icons for Home, Back, Forward, Stop, Reload, Print, etc.]

Figure 14 shows the form for updating students' admission details

4.1.8 UPDATING SYSTEM USERS ACCOUNTS.

This form helps the user to edit some system user accounts when necessary. By using this form the user is given a chance to delete users, update users and change other relevant information concerning user accounts for example changing the user name and password.

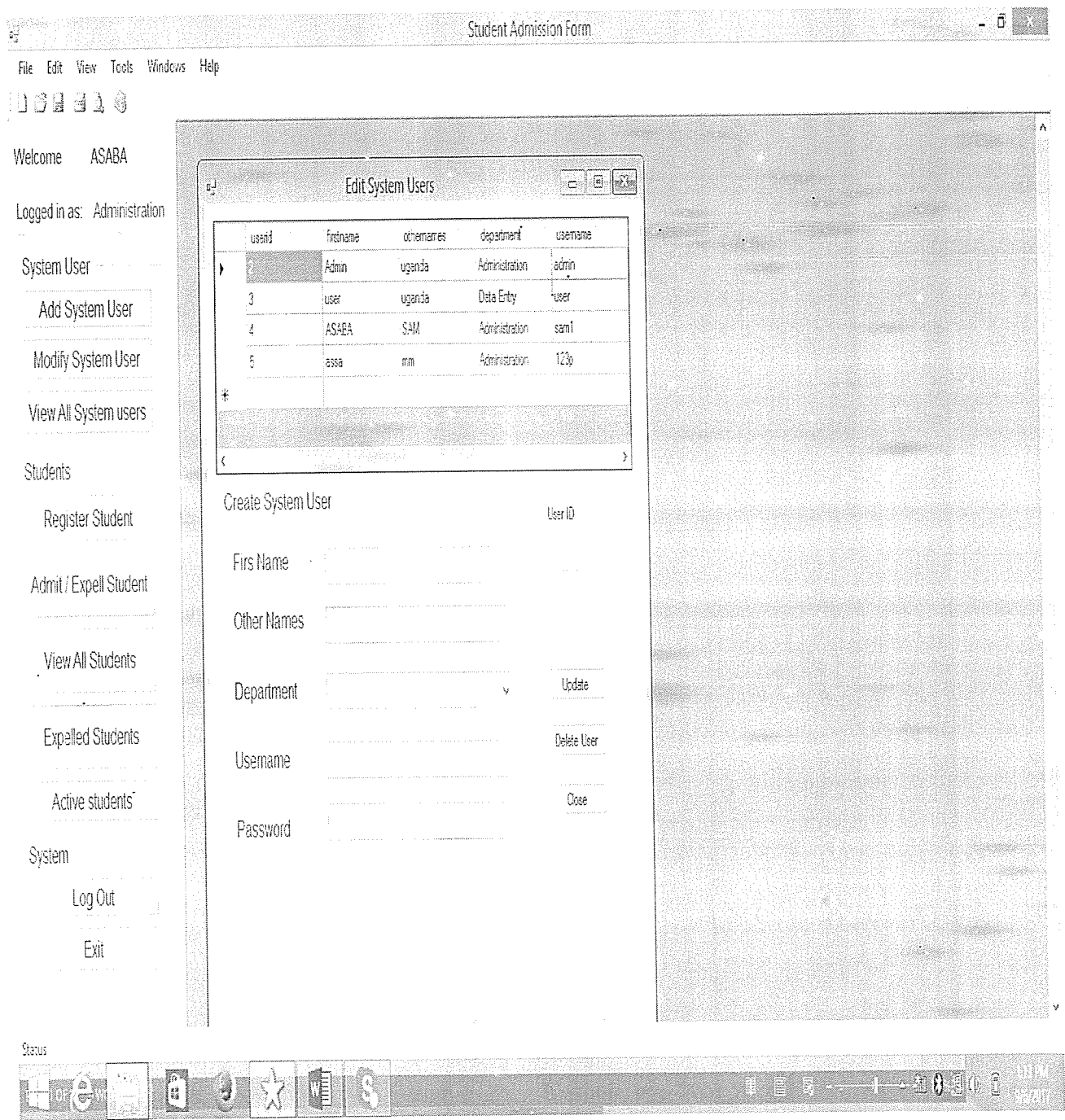


Figure 15 shows the form for updating users' accounts

4.1.9 VIEW ALL STUDENTS

This form helps the user to view all the registered students. By using this form the user is capable of observing the student admission details like student id, NIN, First Name, Other Name, Gender, Date of Birth, date of joining, class, former school, guardian details as critically shown below.

Student Admission Form - [ALL_STUDENTS]

Welcome ASABA

Logged in as: Administration

System User

- Add System User
- Modify System User
- View All System users

Students

- Register Student
- Admit / Expell Student
- View All Students

Expelled Students

Active students

System

- Log Out
- Exit

All Students

student ID	NIN	First Name	Other Names	Gender	date of birth	date of joining	class	former school	guardian names	contacts
279	0422512	Kokas	Oumo	Male	9/26/1989 11:05:04 AM	8/28/2017 11:05:04 AM	S6	mulusa	amori Geoffrey	07758946
535	02233000	Iwege	micheal	Male	12/30/2008 11:06:19 AM	8/28/2017 11:06:19 AM	S1	kitende	mukasa	06661
791	cm19260020u hs1	asaba	saam	Male	8/2/2017 11:26:45 AM	8/28/2017 11:26:45 AM	S1	kasubi	sanyu stephen	09889 gango street
1047	none	AYINEBYONA	RITAH	Female	8/29/2015 11:08:20 AM	8/29/2017 11:08:20 AM	S1	KANASANGA PS	LIWAMAZA MICHEAL	0751637515
1303	NCNE	NAMULONI	ESTHER	Female	8/29/2014 11:11:16 AM	8/29/2017 11:11:16 AM	S1	KANUSANGA PS	MLLONI JOSEPH	0774337025
1559	NONE	ASSERE	EDITH	Female	8/29/2002 11:13:02 AM	8/29/2017 11:13:02 AM	S1	KANSANGA PS	INABEERE SARAH	0756378900
1815	NCNE	AUMA	CONSTINCY	Female	8/29/2003 11:15:01 AM	8/29/2017 11:15:01 AM	S1	KANSANGA	LUKONGE MICHEAL	0756789322
2071	none	nassimbiwa	jane	Female	2/29/2016 11:27:42 AM	9/6/2017 11:27:42 AM	S1	kansanga model p/s	sssekitoleko fred	0786667887

Figure 16 shows the view all students form

4.1.10 VIEW TERMINATED STUDENTS

This form helps the user to view terminated students and those who changed the school. This will help the head teacher to keep track of the activeness of the student and therefore this will help to eradicate abscentism among the students.

Student Admission Form - (TERMINATED)

File Edit View Tools Windows Help

Welcome ASABA

Logged in as: Administration

System User

Add System User

Modify System User

View All System users

Students

Register Student

Admit / Expell Student

View All Students

Expedited Students

Active students

System

Log Out

Exit

Terminated Students

studentid	studentn	fname	othernam	gender	dateofbirt	dateofoi	class	formersc	guardian	contacts	nin
	n		es		h	ning		hool	names		
279	0422512	Kokas	Oumo	Male	9/26/1989 11:05:04 AM	8/28/2017 11:05:04 AM	S6	mulusa	amori Geoffrey	07758946	023462
535	02233000	Iwege	micheal	Male	12/30/2008 11:06:19 AM	8/28/2017 11:06:19 AM	S1	kitende	mukasa	06661	0000175
1303	NONE	NAMULONI	ESTHER	Female	8/29/2004 11:11:16 AM	8/29/2017 11:11:16 AM	S1	KANSANGA PS	MULONI JOSEPH	077433702 5	CM9077803 423Q7
1815	NONE	AUMA	CONSTINCY	Female	8/29/2003 11:15:01 AM	8/29/2017 11:15:01 AM	S1	KANSANGA	LUKONGE MICHEAL	075678932 2	CMT200000 29005
2071	none	nassimbwa	jane	Female	2/29/2016 11:27:42 AM	9/6/2017 11:27:42 AM	S1	kansanga model p/s	ssekitoleko fred	078666788 7	3455

Status

11/7 PM 9/6/2017

Figure 17 show the terminated students report

4.2 SEQUENTIAL DIAGRAMS THAT SHOWS DATA FLOW STUDENT ADMISSION SYSTEM

These diagrams are used to explain or visualize the performance of the designed system (student admission system). They are used when the requirements, conceptual model and design are considered stable, predictable, and certain. It's appropriate when the simulation under development has predictable performance expectations, includes reused and previously accredited legacy components, has pre-existing input data. Also, experienced knowledge of participants and adequate documentation.

This sequential diagram shows the major entities used while designing the student admission system.

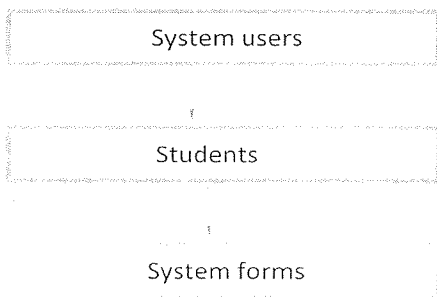


Figure 18 shows major entities of student admission system

4.2.1 SEQUENTIAL DIAGRAM THAT SHOWS SYSTEM USER ENTITY

This diagram shows the system user entity on the student admission system which helps the user to add or create a new user, modify the created user where necessary, and viewing all created users on the system i.e. both administrators and data entrants.

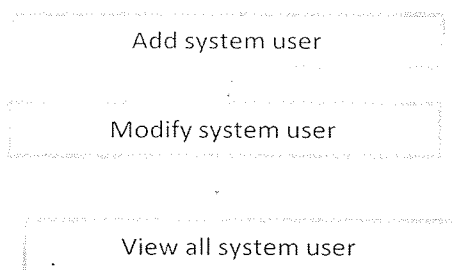


Figure 19 shows system users entity

4.2.2 SEQUENTIAL DIAGRAM THAT SHOWS STUDENTS ENTITY

This diagram shows the students entity on the student admission system which helps the user to perform some operations as clearly analyzed below:-register student, admit student, view all registered students, view active students, view terminated students.

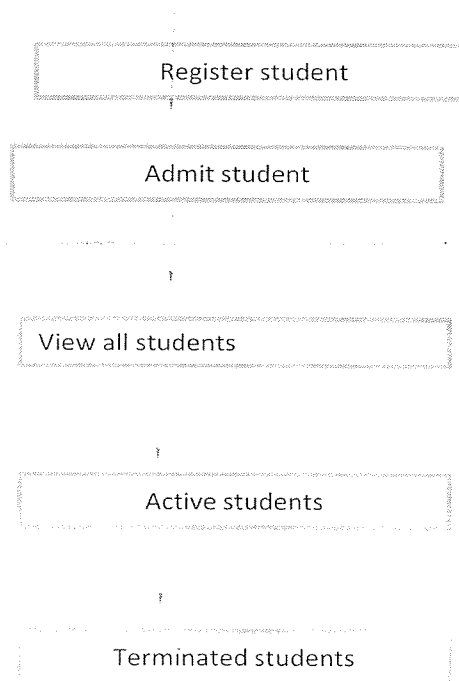


Figure 20 shows students entity

4.2.3 DATA FLOW DIAGRAM FOR STUDENT ADMISSION SYSTEM

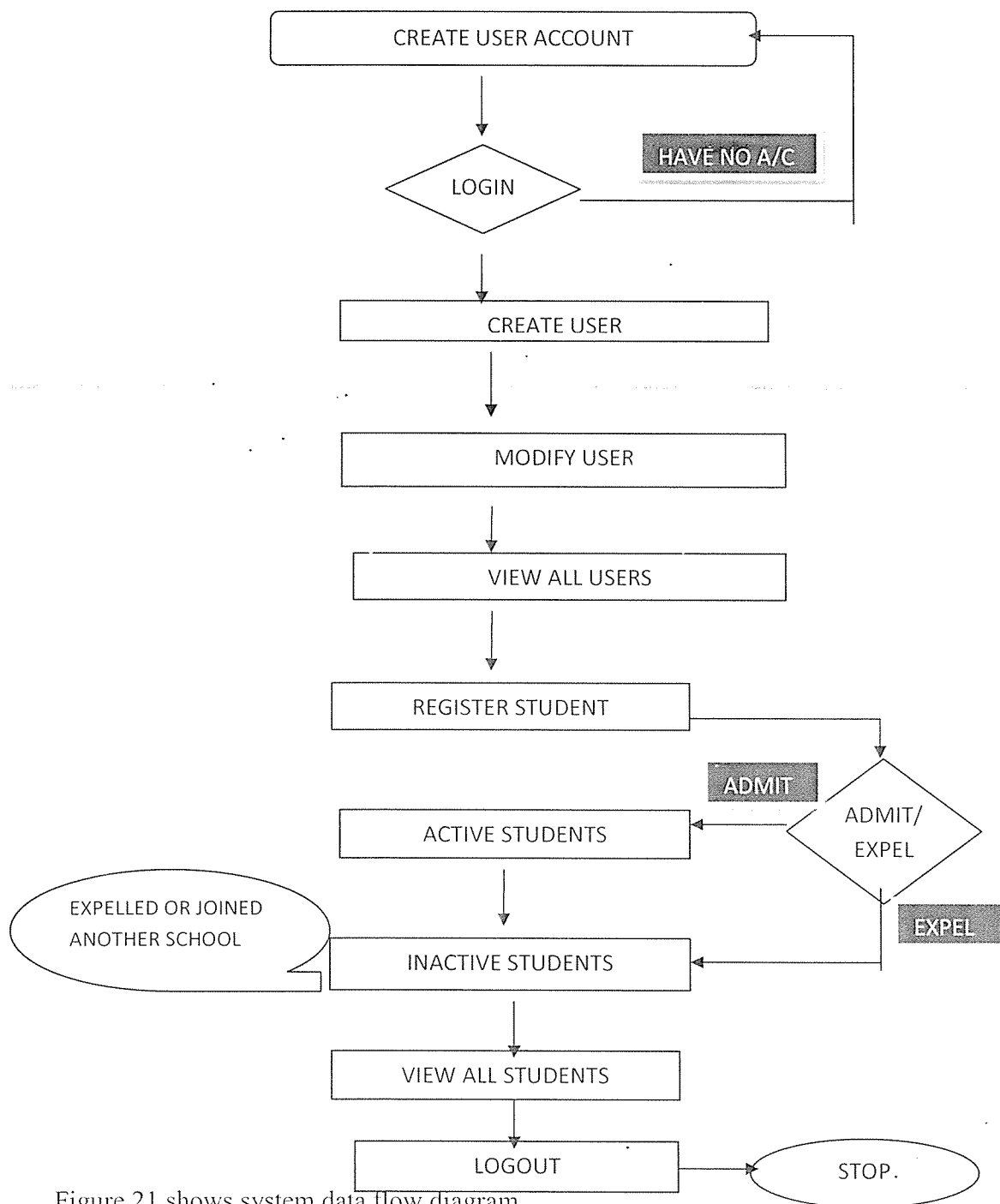


Figure 21 shows system data flow diagram

4.2 SYSTEM INSTALLATION

To use Students Admission System, we need the following software installed on your computer

- SQL SERVER 2008 and other latest versions.
- Visual studio 2008 and other latest versions.
- Windows 2007 and other latest versions.
- 2GB RAM
- Enabled Network framework 3.5
- Internet connection
- Minimum of 50 GB hard disk

- I. Copy and paste the folder provided to you into my documents >>visual studio 2008>>projects>>.
- II. Open visual studio and click on open projects.
- III. Select STUDENT ADMISSION SYSTEM
- IV. Installation of the system will be done.

4.3 SYSTEM IMPLEMENTATION

We have successfully installed the STUDENT ADMISSION SYSTEM and it is working well.

We implemented our system by admitting students at ST. PIUS SENIOR SECONDARY SCHOOL in Nanganda Lukuli

4.4 USEFUL CODES

The codes below are part of those that our project entirely depends on. We are having a proper and running system ready for deployment in the school, with all its entities and features working normally, to avoid re-use of these codes, we have decided to use print previews instead of the real codes.

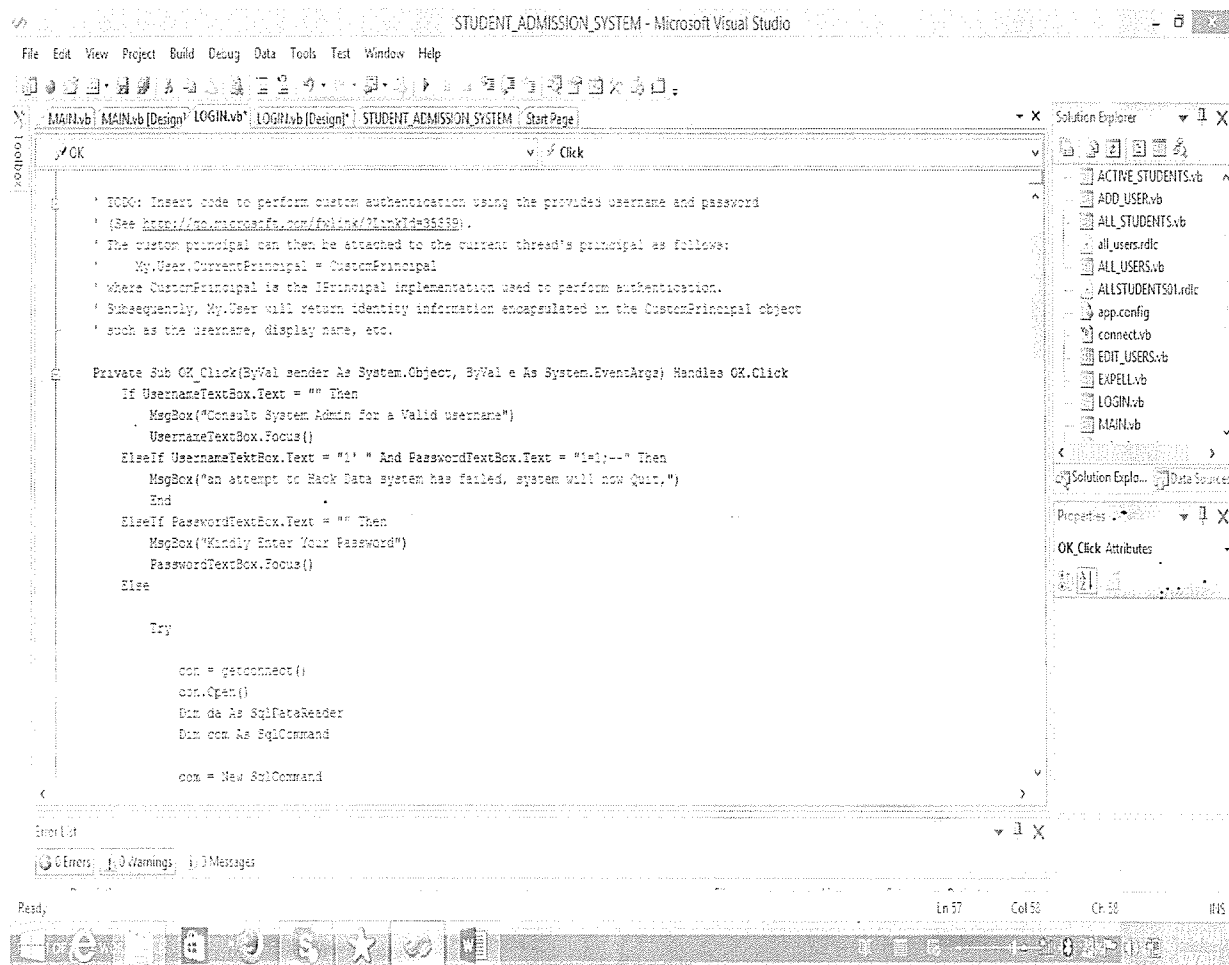


Figure 22 showing some codes of Students admission system

The student admission system has been validated to control the kind of information that is inserted into the system's database, when your username is incorrect, it will kindly ask you to consult system administrator for a valid username and password, still you can't login when the form is empty, it will kindly ask you to fill all the fields in order to be granted access to the system. Using the best user interface designing software (Microsoft Visual studio), the student admission system has got user friendly interface that will keep system users interactive without boredom

4.4 USER MANNUAL

4.4.1 INTRODUCTION

Student Admission system is about the capture and storing of students details who are admitted at St. Pius senior secondary school. We believe that embracing such innovations would lead to **enhanced efficiency of service delivery and client satisfaction.**

Student Admission system marks a major shift from the traditional manual admission method at secondary school. Use of computer and the software designed and developed for that purpose students at St. Pius senior secondary school will ease the work of admitting new students at the system assigns student identity number automatically and thus it avoids redundancy in the school. The Student Admission system operates as follows:-

Interviewing students is used for capturing data from the students

Insertion of collected student detail in the school database using the designed system ie Student Admission system.

Here is some of the system requirements needed to run the Student Admission system. A computer with :-

- Microsoft .NET Framework 4 or later versions
- At least 512MB (RAM) of Memory
- Processing speed of 1GHZ
- Screen Resolution minimum of 1280 x 600.
- **Office 2013** is preferred.
- Installed visual studio 2008 is preferred
- Installed SQL server 2012 and other latest versions.

NOTE:

- Well installed **SQL server** is highly recommended to use Student Admission system. This is because SQL server is used to create, store and retrieve data in the database.
- Well installed visual studio preferably 2008 is also recommended in order to allow the user interactivity with the Student Admission system because it was used to create the

interface of the system. Visual studio makes the interface of the Student Admission system visible.

- The computer may have other *applications* installed to assist the user though not necessary for the system to operate. The system is already customized to suit the purpose.
 - Acrobat Reader
- Students' details with their corresponding digital photos are highly recommended in order to use the Student Admission system.
- With the Student Admission system, the following processes will be eased and effectively accomplished:
 - Authentication of users using a **user-name** and **password**.
 - Accurate capturing of **students' details**
 - Exporting of students' details into **excel** format.

Students are recommended to move with their national identity cards during admission after the mentioned operations are done with the recommended system requirements, student admission system will be a success.

CHAPTER FIVE

DISCUSSION OF RESULTS/FINDINGS

5.1 PROJECT SUCCESS

Research findings indicated that the Student Admission system at St. Pius senior secondary school can improve student Admission mode hence a major shift from traditional method to a computerized method using the designed system. ie Student Admission System.

We have successfully designed a system that can be used to admit new students at St. Pius senior secondary school. The student Admission system is capable of sorting or organizing students' details.

We have successfully implemented student admission system at St. Pius senior secondary school where we registered a number of students from different classes.

The UNEB e-Registration system eases the registration process since it can be conducted in only one day as compared to the current manual registration that could take number of days.

The Student Admission system minimizes costs as compared to traditional method since manual forms are not needed in the whole registration process.

The Student Admission system relieves the workload from the school staff since the whole registration process will be conducted by a single click.

5.2 LESSONS LEARNT

We learnt that togetherness is the key to success. We were able to design Student Admission system because of our recommendable effort we generated.

We learnt that research is very vital in Information Technology field .Through research conducted we were able to gather relevant information concerning St.Pius senior secondary school admission method that has helped us during the designing and development of the Student Admission system.

We gained experience in designing systems with different software for example SQL server for creating system database, Visual studio for designing the system interface.

CHAPTER SIX

RECOMMENDATIONS AND CONCLUSION

6.1 RECOMMENDATIONS

According to the research we have done, we would like to see the following done in order to improve the research for the future scholars

We recommend that universities should issue recommendations letters with students in order to help them during research process.

We recommend that the number of students per group should be increased to **FIVE** in order to minimize the workload and costs incurred during the project development.

We recommend that the university should sponsor the students with funds because project development is costly.

We recommend other researchers to always use fast computers with RAM of 2GB or above, less RAM leads to slowing down and freezing of computers since Visual Studio is a heavy programming environment that needs to be run on fast machines

We recommend that the university should advise students to start up their final projects when it is too early in the second year because project development is time consuming including a lot of consultations.

We recommend that the university should select for the best project and sponsor it in order to see such projects a success. This will encourage research among scholars since they work hard to come up with the best project

6.2 CONCLUSIONS

According to the findings from our research, we discovered that the attitudes of St. Pius senior secondary school towards the Student Admission system is highly need.

In conclusion, there are many things we learnt and experienced during the whole process of final year project development.

The final year project development was very interesting, exciting, informative, instructive, educative and challenging. Through in this research we were able to gain new insights and more comprehensive understanding about the real system development environment. Interacting with

different software like SQL server, visual studio helped us to acquire vital knowledge at designing different systems.

All of this valuable experience and knowledge that we gained were not only acquired through the direct involvement in the tasks of project development, but also through other aspects of the training such as work observations, interactions with colleagues, supervisors and extensive reading of books in the resource center(library).

From what we underwent, we totally agree that final year project development aims at achieving primary objectives and is also the best way to prepare students for the real working world.

As a result of the student admission system completion we became more and more confident of our future career plans.

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APPENDICES

APPENDIX A: TIME FRAME OF RESEARCH

Activity	Duration
Developing a research proposal	2 months
Conceptualization of the problem.	
Getting research proposal acceptance.	
Acquiring the required information about the project.	
Studying the existing admission System	1 months
Identifying the current system and its limitations.	
Analyzing the software development tools	3 weeks
Making recommendations	
Design and Coding of the System	1 month
Coding	
Testing	
Writing research report	2 weeks
Compiling reports from each step above.	
Editing and proof reading the entire report.	

Figure 23 shows the research schedule

APPENDIX B: THE BUDGET

ITEM	QUANTITY	UNIT COST (UGX. Shs)	TOTAL COST (UGX. shs)
Laptop	2	500,000	1,000,000
Internet	2 Months	35,000	70,000
Consultation Fee		100,000	300,000
Transport			300,000
Airtime	2 Months	30,000	90,000
Printing	300 pages	200	60,000
Others			100,000
TOTAL			1,920,000

Figure 24 shows the research budget

APPENDIX C: GUIDING QUESTIONS WE USED TO INTERVIEW STAFF

1. Which position do you hold in the school?
2. Which method do you use to admit students?
3. Do you find any difficulty in admitting students using the method above?
4. What are some of those difficulties?
5. Do you find difficulties in knowing the number of students that are admitted
6. Where are the records stored?
7. What method do you use to share candidates information with the registered centre numbers?

APPENDIX D: QUESTIONNAIRE FOR STUDENTS

1. What is your name

.....

2. How old are you?

.....

3. How were you admitted?

.....

.....

.....

.....

3. How long did the exercise take?

.....

.....

4. What are some of the challenges you faced during admission?

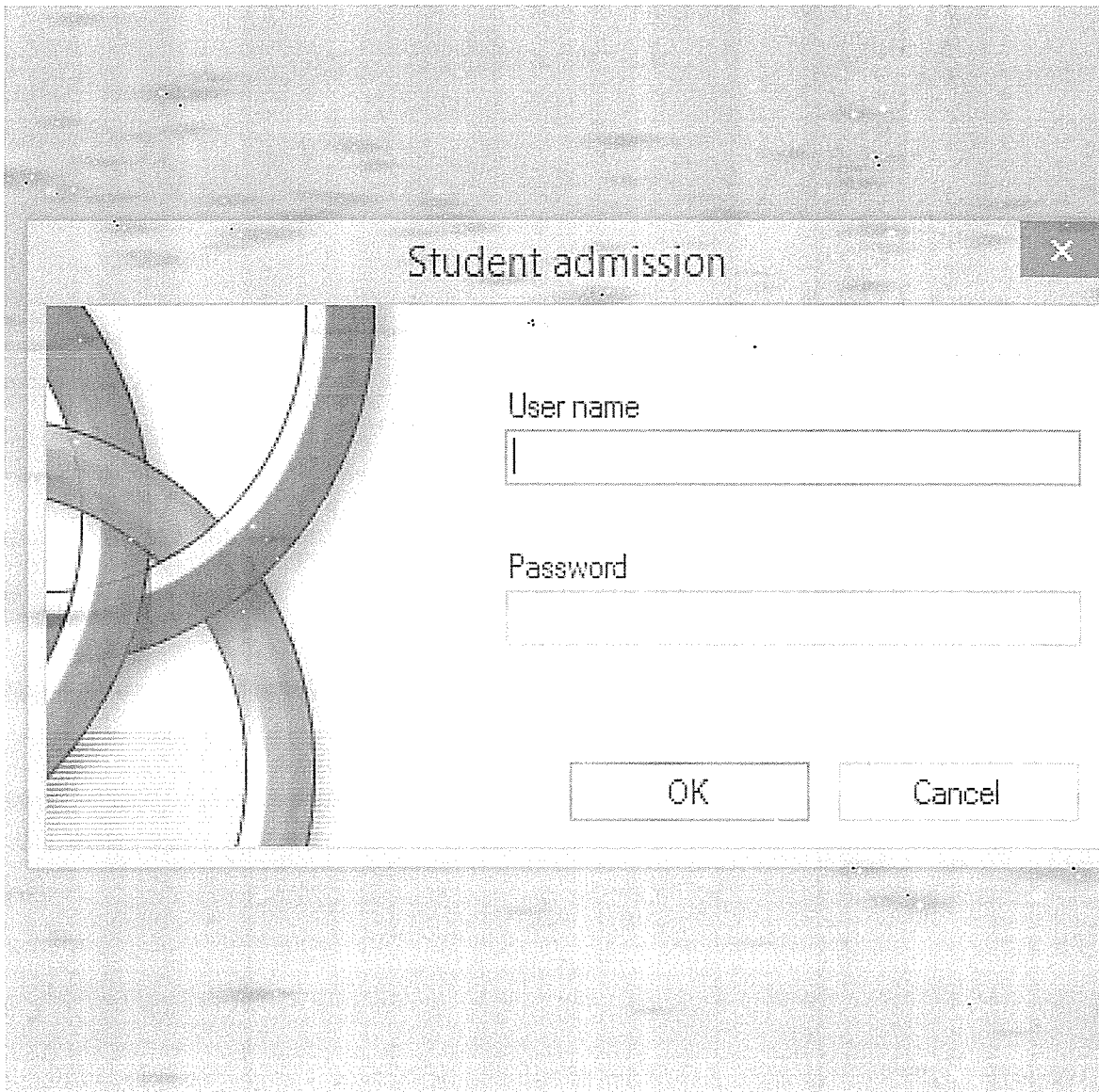
.....

.....

.....

.....

APPENDIX E: SYSTEM LOGIN



A screenshot of a Windows-style dialog box titled "Student admission" with a close button (X) in the top right corner. The dialog box is set against a background image of a large, stylized knot. Inside the dialog, there are two input fields: "User name" and "Password". Below these fields are two buttons: "OK" and "Cancel".

Student admission

User name

Password

OK Cancel

Figure 25 Showing System Login Page

APPENDIX F: ADMISSION FORM INTERFACE

Student Admission Form - [Register Student]

File Edit View Tools Windows Help

Welcome ASABA

Logged in as: Administration

System User

Add System User

Modify System User

View All System users

Students

Register Student

Admit / Expell Student

View All Students

Expelled Students

Active students

System

Log Out

Exit

Enter Student Details

National ID No.

Firs Name *

Other Names

Gender

Date of Birth

Date of Joining

Class

Previous school

Guardians details

Full Names

Contacts

National ID no.

Relationship

Comments

Save

Figure 26 Showing Admission Form interface

APPENDIX G: ALL ADMITTED STUDENTS

Student Admission Form - [ALL_STUDENTS]

File Edit View Tools Windows Help

Welcome ASABA

Logged in as: Administration

System User

Add System User

Modify System User

View All System users

Students

Register Student

Admit / Expell Student

View All Students

Expelled Students

Active students

System

Log Out

Exit

All Students

student ID	NIN	First Name	Other Names	Gender	dateofbirth	dateofjoini ng	class	formerschool	guardrann ames	contacts
279	0422512	Kokas	Oumo	Male	9/26/1989 11:05:04 AM	8/28/2017 11:05:04 AM	S6	mulusa	amori Geoffrey	07758946
555	02233000	Iwege	micheal	Male	12/30/2008 11:06:19 AM	8/28/2017 11:06:19 AM	S1	kitende	mukasa	06661
791	cm19290020u hs1	asaba	saam	Male	8/2/2017 11:26:45 AM	8/28/2017 11:26:45 AM	S1	kasubi	sanyu stephen	09889 gango street
1047	none	AYINEBYOMA	RITAH	Female	8/29/2015 11:08:20 AM	8/29/2017 11:08:20 AM	S1	KANSANGA PS	LWAMAZA MICHEAL	0751637515
1303	NONE	NAMULONI	ESTHER	Female	8/29/2004 11:11:16 AM	8/29/2017 11:11:16 AM	S1	KANSANGA PS	MULONI JOSEPH	0774337025
1559	NONE	ASSERE	EDITH	Female	8/29/2002 11:13:02 AM	8/29/2017 11:13:02 AM	S1	KANSANGA PS	NAGEERE SARAH	0756378900
1815	NONE	AUMA	CONSTINCY	Female	8/29/2003 11:15:01 AM	8/29/2017 11:15:01 AM	S1	KANSANGA	LUKONGE MICHEAL	0756789322
2071	none	nassimbwa	jane	Female	2/29/2016 11:27:42 AM	9/6/2017 11:27:42 AM	S1	kansanga model p/s	ssakutaleko fred	0786567887

Status

Figure 27 Showing All Admitted Students