

DECLARATION

I, **NDAYISHIMIYE Muhamudu** hereby declare that this project submitted in completion of A2 level in computer science, at Saint Philip TVET School, is my own original work and has not previously been submitted to any other school or higher education. I further declare that all sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.

NDAYISHIMIYE Muhamudu

On September ..., 2018

Signature:

BONAFIDE CERTIFICATE

I, **Jean Baptiste Nshongore** hereby certify that this project report entitled “**SAINT PHILIP TVET ONLINE MANAGEMENT SYSTEM**” is the original work of **NDAYISHIMIYE Muhamudu**, who carried out the project under my supervision. I certify further that, to the best of my knowledge, the work reported herein does not form part of any other project report.

Jean Baptiste Nshongore

On September ..., 2018

Signature:

DEDICATION

This project is dedicated:

- To the Almighty ALLAH,
- To my beloved parent and relatives,
- To my supervisor,
- To my families and friends,
- To our computer scientists' young brothers and sisters' school year 2018 and classmates.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank the government of Rwanda through the ministry of education to sponsor our studies.

I would like to express my sincere thanks to my supervisor ***Jean Baptiste Nshongore*** for his encouragement, suggestions, guidance and valuable advice.

I would like also to express my appreciation to both supervisors and students in computer science option at ***Saint Philip TVET School***, their comments and criticism helped to improve the quality of this work.

I'm also grateful to my mother ***KARUGWIZA Rukiya***, my father ***UWIMANA SAIDI Salim*** and relatives for their patience and constant love, their support and comfort has been very fulfilling and they encouraged me to proceed with my three years of A2 level of studies.

MAY THE ALMIGHTY ALLAH BLESS YOU ALL!

ABSTRACT

In education as any other institutions, websites occur to provide many goals to people in order to make them perform many tasks so that *Saint Philip TVET School* web application was designed for three primary goals. The first is to act as an on-line brochure for prospective students and parents, providing them with as much information as possible to help them decide if the school may be right for them. The second goal is to improve the efficiency and effectiveness of communication between students, parents, teachers, and administrators. The third goal is to make work easier for the administration and staff. In this dissertation here's a list of keys included in that web application in order to reach those three goals.

- ✓ Friendly, appealing design
- ✓ Pictures of happy, diverse, smart-looking students.
- ✓ Contact information for the main school office
- ✓ Up-to-date calendar of school-wide events
- ✓ Map of school's location
- ✓ Automatic assessment report for level students
- ✓ Search place for school administrators to view students' information easily

TABLE OF CONTENT

<i>DECLARATION</i>	i
<i>BONAFIDE CERTIFICATE</i>	ii
<i>DEDICATION</i>	iii
<i>ACKNOWLEDGEMENTS</i>	iv
<i>ABSTRACT</i>	v
<i>LIST OF ABBREVIATIONS</i>	viii
<i>LIST OF TABLES</i>	ix
<i>LIST OF FIGURES</i>	x
CHAPTER 1. GENERAL INTRODUCTIONS	1
1.1 Introduction	1
1.2 Problem statement	1
1.3 Objectives of the study	1
1.3.1 General Objective	1
1.3.2 Specific objective	1
1.4 Hypothesis of the study	2
1.5 Scope of the study	2
1.6 Interest of the study	2
1.7 Organization of the study	2
CHAPTER 2. THE THEORETICAL CONCEPT AND LITERATURE REVIEW	3
2.1 Introduction	3
2.2 Definitions of terms	3
2.2.1. Database concept	3
2.2.2 Information system	5
2.2.3. Tools and languages used in developing the software	5
2.2.4 Web Server	6
CHAPTER 3. RESEARCH METHODOLOGY	7
3.1. Introduction	7

3.2 Data collection techniques	7
3.2.1 Interview	7
3.2.2 Observation	7
3.2.3 Documentation	7
3.2.4 Questionnaire	7
3.3 Software development Methodology	7
CHAPTER 4. SYSTEM DESIGN AND IMPLEMENTATION	10
4.1. System analysis	10
4.1.1. Analysis of existing system.....	10
4.1.2. Analysis of New System.....	10
4.2. System implementation.....	10
4.2.1. Software and hardware system requirement of a proposed system	10
4.2.2. Organizational structure of new system.....	11
4.2.3 Entity Relationship Diagram (ERD)	12
4.2.4 Data Dictionary	13
4.2.5 Data Flow Diagram (DFD)	24
4.3 Interface Design	25
CHAPTER 5. CONCLUSION AND RECOMMENDATIONS	30
5.1. Conclusion	30
5.2. Recommendations.....	30
REFERENCES	31
Books	31
Electronic References	31

LIST OF ABBREVIATIONS

- **WDA:** Workforce Development Authority
- **TVET:** Technical and Vocation Education Training
- **ICT:** Information and Communication Technology
- **DOD:** Dean of Discipline
- **DOS:** Dean of Studies
- **DBMS:** Database Management System
- **ERD:** Entity Relationship Diagram
- **DFD:** Data Flow Diagram
- **HTML:** Hypertext Markup Language
- **HTTP:** Hyper Text Transfer Protocol
- **CSS:** Cascading Style Sheet
- **PHP:** Hyper Text Preprocessor
- **SQL:** Structured Query Language
- **XAMPP:** Cross-Platform, Apache, Maria DB, PHP and Perl
- **MySQL:** My Structure Query Language
- **AJAX:** Asynchronous JavaScript and Xml

LIST OF TABLES

Table 1: Shows an example of records	3
Table 2: Shows hardware requirement for the system to run	10
Table 3: Shows the accountability table.	13
Table 4: Shows the Admin table.....	14
Table 5: Shows babyeyi post.	14
Table 6: Shows blog comment with its Indexes	14
Table 7: Shows blog posted	15
Table 8: Shows conduct table	15
Table 9: Shows dean of discipline table	16
Table 10: Shows dean of studies table.....	16
Table 11: Shows results from events	17
Table 12: Shows event available.....	17
Table 13: Shows feedback table	17
Table 14: Shows gallery tables	18
Table 15: Shows module table.....	18
Table 16: Shows Non-staff data.....	18
Table 17: Shows Non-staff payment table.....	19
Table 18: Shows Permission table	19
Table 19: Show the punishment table	20
Table 20: Shows reported modules table	20
Table 21: Shows secretary table	21
Table 22: Shows Student fees table	21
Table 23: Shows Student registered.....	22
Table 24: Shows Teacher payment table	23
Table 25: Shows Teachers registered	23
Table 26: Shows users registered.....	23

LIST OF FIGURES

Figure 1: Schematic illustration of the waterfall model.....	8
Figure 2: System organization graph	11
Figure 3 Entity Relationship Diagrams.....	12
Figure 4: Data Flow Diagram	24
Figure 5: Login page for school administration and staff.....	25
Figure 6: Admin panel	25
Figure 7: Administration & staff profile	26
Figure 8: Search page shows students card.....	26
Figure 9: Trainee’s assessment report.....	27
Figure 10: Student data & updating them.	27
Figure 11: Student list with their profile picture.....	28
Figure 12: Teacher’s payment shown in table	28
Figure 13: School student paid fees	29
Figure 14: Student registration conduct form	29

CHAPTER 1. GENERAL INTRODUCTIONS

1.1 Introduction

Nowadays ICT is a major tool used to develop Rwanda in different department, so why I choose to develop the web application of Saint Philip TVET School.

Saint Philip TVET School is the school of Catholics that has four options such as Computer science, Hotel Operation, Accountancy and Tourism, it is a technical School that is included in WDA (Workforce Development Authority).

Saint Philip TVET is the school which is located in Kigali City, Kicukiro District, in Nyarungege sector.

1.2 Problem statement

Usually at **Saint Philip** school administrators, teachers, students and parents they don't have the way to communicate together easily because there is no currently designed system and also the school management would delay the work of staffs and administrations for that purpose where:

- Lack of security and integrity for the assessment school reports.
- Time consume to get student card.
- Lack of information to the parents and other prospective
- Student information is stored manually.
- Time consuming to administration and staff to get student information quickly.

1.3 Objectives of the study

The objectives of this web application are subdivided into general objectives and specific objectives all aiming to benefit students, parents, school administrators and teachers.

1.3.1 General Objective

The general objective of this web application is to act as an on-line brochure for prospective students and parents, providing them with much information about the school as possible to help them decide if the school may be right for them. And to improve the efficiency and effectiveness of communication between students, parents, teachers, and school administrators.

1.3.2 Specific objective

This research aims to attain the following Specific objectives:

- Creation of web application which manage St Philip TVET School.
- This website will reduce time consuming for school administrators, teachers and parents in different fields like:
 - Communication between staff with parents

- Job timing.
- To get information about the school very easily.
- Automatic student cards and Assessment student reports.

1.4 Hypothesis of the study

Normally, is it possible to develop good school web application that offer many different services simplify the activities of school?

1.5 Scope of the study

This project of “St Philip TVET Online Management System” will focus on:

- Student assessment reports
- Student cards
- Student registration
- Student discipline and,
- School student accountability.

1.6 Interest of the study

In **St Philip TVET School**, student, parents, school administrators, teachers and other people will get benefits in following fields:

- The **School Assessment** in administration and staff panel, will simply get the student Assessment report with well-designed interface and also well calculated marks.
- **News and E-newsletter subscription** will help parents and people to get updated and informed about news at school where they will be able to go on internet and search the website and follow the link of news archive or leaving feedback to the headmaster.
- It has improved more knowledge to me and I have even learned many things during the designing of this project.

1.7 Organization of the study

This project is grouped into five chapters as follow:

- Chapter one is mainly general introduction of the project
- Chapter two is the theoretical concept and literature review, in this chapter I focused on the definition of keywords used in the project.
- Chapter three deals with research methodology
- Chapter four deals with system analysis and implementation
- Chapter five deals with conclusion and recommendation.

CHAPTER 2. THE THEORETICAL CONCEPT AND LITERATURE REVIEW

2.1 Introduction

This chapter explains related theoretical work or references used to develop the “**ST. PHILIP TVET ONLINE MANAGEMENT SYSTEM**” and a background of the web application. It also expands on technologies to be used with a view of providing an overview for the concept of the web application’s design.

2.2 Definitions of terms

2.2.1. Database concept

a. Database

Database is a structured collection of records or data that is stored in a computer system. In order for a database to be truly functional, it must not only store large amounts of records well, but be accessed easily.

b. Record

A record or tuple is a complete set of related fields.

For example, the Table 1 below shows a set of related fields, which is a record. In other words, if this were to be a part of a table then we would call it a row of data. Therefore, a row of data is also a record.

Message_id	From	To	Content	Time
1	Muhamudu	Headmaster	I would like to thank you for your support in our education	21:26:44 2015-Jul-Sat

Table 1: Shows an example of records

c. Field

A field a property or a characteristic that holds some piece of information about an entity. Also, it is a category of information within a set of records. For example, “from” or “to” or “content” or “time” of message saved in database

d. Entity

Entity is an existing or real thing, in relation to database; an entity is a single person, place or thing about which that can be stored.

e. Relationship

Relationship is an association among several entities.

Relationship between more than two entities set is rare. Most relationships are binary

f. Attributes

An attribute is a property or characteristics that hold some information about an entity. For example, a message, has attributes such as from, to, content, and time.

g. Data

Data is a collection of facts; such as values or measurements.

It can be numbers, words, measurements, observations or even just descriptions of things

In computing, data is information that has been translated into a form that is more convenient to move or process.

h. Data aggregation

Data aggregation is raw facts about the organization and its business transactions, most data items have little meaning and use by themselves.

i. Keys

The key is defined as the column or attribute of the database table. For example, if a table has id, name and address as the column names then each one is known as the key for that table. The keys are also used to identify each record in the database table.

The following are the various types of keys available in the DBMS system.

- A **simple key** contains a single attribute.
- A **composite key** is a key that contains more than one attribute.
- A **candidate key** is an attribute (or set of attributes) that uniquely identifies a row.
- A **primary key** is the candidate key which is selected as the principal unique identifier. Every relation must contain a primary key. The primary key is usually the key selected to identify a row when the database is physically implemented. For example, a part number is selected instead of a part description.
- A **super key** is any set of attributes that uniquely identifies a row. A super key differs from a candidate key in that it does not require the non-redundancy property.
- A **foreign key** is an attribute (or set of attributes) that appears (usually) as a non-key attribute in one relation and as a primary key attribute in another relation. I say *usually* because it is possible for a foreign key to also be the whole or part of a primary key.

j. Database management system

Database management system is a collection of programs that enables you to store, modify, and extract information from a database. There are many different types of DBMSs, ranging from small systems that run on personal computers to huge systems that run on mainframes.

2.2.2 Information system

a. Information

Is data that has been refined and organized by processing and purposeful intelligence. The latter, purposeful intelligence is crucial to the definition. People provide the purpose and the intelligence that produces true information.

b. An information system (IS)

Is a combination of hardware, software, infrastructure and trained personnel organized to facilitate, control, coordination, and decision making in an organization?

c. Information technology

Information technology is a contemporary term that describes the combination of computer technology (hardware and software) with telecommunications technology (data, image, and voice networks).

- **Processes:** The activities (including management) that carries out the mission of the business.
- **Interfaces:** How the system interfaces with its users and other information systems.

2.2.3. Tools and languages used in developing the software.

a. HTML

HTML (Hyper Text Markup Languages) is used to create a document on the World Wide Web (www). It is simply a collection of certain keywords called “tags” that is helpful in writing document to be displayed using a browser on internet. It is a platform independent language that can be used on any platform such as windows, Linux, and Macintosh and so on.

b. PHP

PHP is a powerful server-side scripting language for creating dynamic and interactive websites.

PHP is the widely-used, free, and efficient alternative to competitors such as Microsoft's ASP. PHP is perfectly suited for Web development and can be embedded directly into the HTML code.

The PHP syntax is very similar to Perl and C. PHP is often used together with Apache (web server) on various operating systems. It also supports ISAPI and can be used with Microsoft's IIS on Windows.

c. CSS

CSS stands for Cascading Style Sheets. With CSS you can define for each HTML tag, a specific format which will applied on it. CSS syntax is made up of three parts: a selector, a property and a value: Selector {property: value}

The selector is normally the HTML element/tag you wish to define, the property is the attribute you wish to change, and each property can take a value.

d. JAVASCRIPT

JavaScript is the scripting language of the Web.

JavaScript is used in millions of Web pages to add functionality, validate forms, detect browsers, and much more.

e. JQUERY

Is a JavaScript library that allows web developers to add extra functionality to their websites, it? Is open source and provided for free under the MIT license. In recent years, jQuery has become the most popular JavaScript laboratory used in web development. To implement J query, a web developer simply needs to reference the J query, JavaScript file within the HTML of a web page.

f. AJAX

AJAX stands for Asynchronous JavaScript and XML is a technique for creating fast and dynamic web pages. AJAX allows web pages to be updated asynchronously by exchanging small amounts of data with the server behind the scenes. This means that it is possible to update parts of a web page, without reloading the whole page.

2.2.4 Web Server

a. MYSQL

MYSQL is a database system used on web basically, a MySQL database allows you to create a relational database structure on a web-server somewhere in order to store data or automate procedure.

b. Apache

Apache is an open-source (source code is freely available and can be shared) HTTP Web software. It is currently the most popular web server on the Net. It usually run on different operating system. It is a full-featured server with many powerful add-ons freely available.

CHAPTER 3. RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses and elaborates in detail methodology used to achieve the objectives of this project. It describes the area of study and gives also existing system and proposed system description. An overview of methodology is given in the enclosed work plan which includes following main steps: iterative methodology to develop St. Philip TVET website, system requirements, and data collection techniques.

3.2 Data collection techniques

This is the methods that you use while you collect information anywhere. There are some types of data collection such as:

- Observation
- Interview
- Documentation
- Questionnaire

3.2.1 Interview

Interview is mostly face to face conversation between the interviewer and the interviewee for conducted and obtaining information; this method assumes that interviewee has the required information.

Unstructured interview (interview without any set format but in which the interviewer may have some key questions formulated in advance. unstructured interviews allow questions base on the interviewee's responses and proceeds a friendly, on-threatening conversation) is the one of interview types has been used.

3.2.2 Observation

This technique that I used in data collection when I was on the fields I saw how the current system working and I got information to the problem statements.

3.2.3 Documentation

Is a technique that consists of collecting information from documents like books, newspaper, reports, internet etc....In this technique I used internet to collect some information

3.2.4 Questionnaire

Questionnaire is a list of questions that several people are asked so that information can be collected about something.

3.3 Software development Methodology

The development models are the various processes or methodologies that are being selected for the development of the project depending on the project's aims and goals. There are many development

life cycle models that have been developed in order to achieve different required objectives. The models specify the various stages of the process and the order in which they are carried out. There are various Software development models or methodologies. They are as follows: model, Incremental model, etc. Among those, Waterfall methodology was chosen as Software development methodology.

3.3.1 Waterfall model

This is the most common and classic of life cycle models, also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed in its entirety before the next phase can begin. At the end of each phase, a review takes place to determine if the project is on the right path and whether or not to continue or discard the project.

Waterfall Model schema

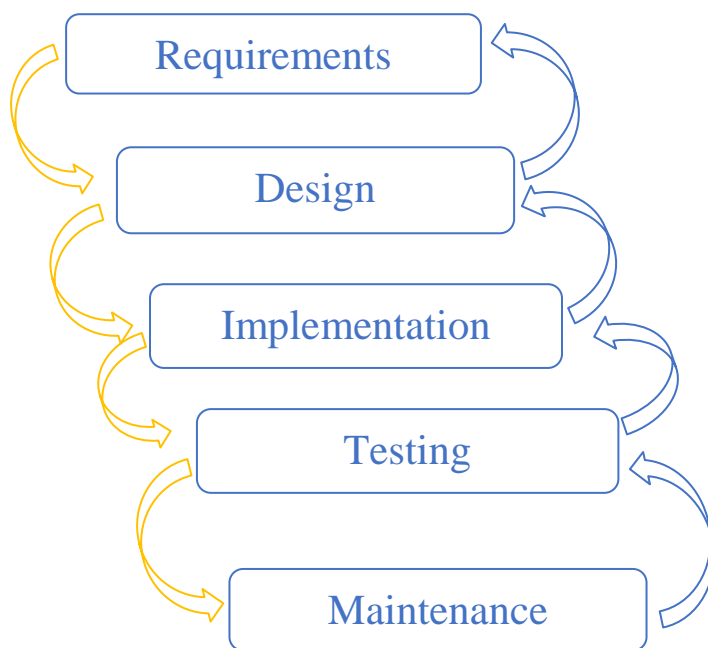


Figure 1: Schematic illustration of the waterfall model.

The waterfall provides an orderly sequence of development steps and helps to ensure the adequacy of documentation and design reviews to ensure the quality, reliability, and maintainability of the developed software. While almost everyone these days disparages the "waterfall methodology" as being needlessly slow and cumbersome, it does illustrate a few sound principles of life cycle development.

The waterfall model consists of sequential stages described by Dr Winston Royce in 1970 based on his experience developing software for spacecraft mission planning.

- **System requirements**
 - Identify, select and document functional, scheduling and financial requirements.
 - Defines the purpose of the information system.

- The deliverable at the end of this stage is the feasibility study.

Here in this stage I collected all required information about the proposal of the project (**St Philip TVET School**)

- Identify, select and document the software features necessary to satisfy the system requirements.
- A deliverable at the end of this stage is the software requirements document.
- Another deliverable is the preliminary design specification.
- Resolve problems, handle dependencies and develop plans to diminish risks.
- **Program design**
 - Use programming techniques to design software and hardware within the constraints and objectives set in the earlier stages.
 - A deliverable at the end of this stage is the design specification.
 - Another deliverable is the test plan.
- **Coding**
 - Implement the program as designed in the earlier stages.
 - The deliverable at the end of this stage is the software program.
- **Testing**
 - Test the software and record the results.
 - A deliverable at the end of this stage is the updated test plan.
 - Another deliverable is the updated design specification.

On this stage I kept testing if all designed parts of the system run and satisfy all needs.

- **Maintenance**
 - The deliverable at the start of this stage is the operating manual.
 - Deliver, install and configure the completed software.
 - Provide maintenance and support of the software.

CHAPTER 4. SYSTEM DESIGN AND IMPLEMENTATION

4.1. System analysis

4.1.1. Analysis of existing system

Actually St. Philip's daily activities need communication, in communication between school administrators, teachers and parents or any other one, but all those activities were done manually.

4.1.2. Analysis of New System

Saint Philip TVET web application work as an automatic system that will store data automatically and it will save time for the users. Student assessment report are automatic and well calculated the marks and also provide student position according to their percentage.

4.2. System implementation

This introduces techniques for the design of interfaces, menus, and databases, based on the requirement specification worked out during the analysis phase (functioning diagram, relationship diagram, dataflow diagram ...).

This phase is the first step in moving from the problem domain to the solution domain. In other words, starting with what is needed; design takes us towards satisfying the needs. The design of a system is the most critical factor affecting the quality of the software. It has impact on the late phases as well as testing and maintenance of the software

4.2.1. Software and hardware system requirement of a proposed system

Software		Hardware	
Operating system	Android O.S, Linux, Mac O.S, Windows, Vista, XP, 7, 8 and 10	Computer, Laptop	HDD 500GB
Browser	Chrome, Mozilla Firefox, opera, UC Browser, Water fox, Internet Explorer	RAM	8GB, 4GB, 2GB
Server	XAMMP	Processor	Intel(R) Core i5
Database	MYSQL	Printer	Inkjet printer, all-in-one printer

Table 2: Shows hardware requirement for the system to run

4.2.2. Organizational structure of new system

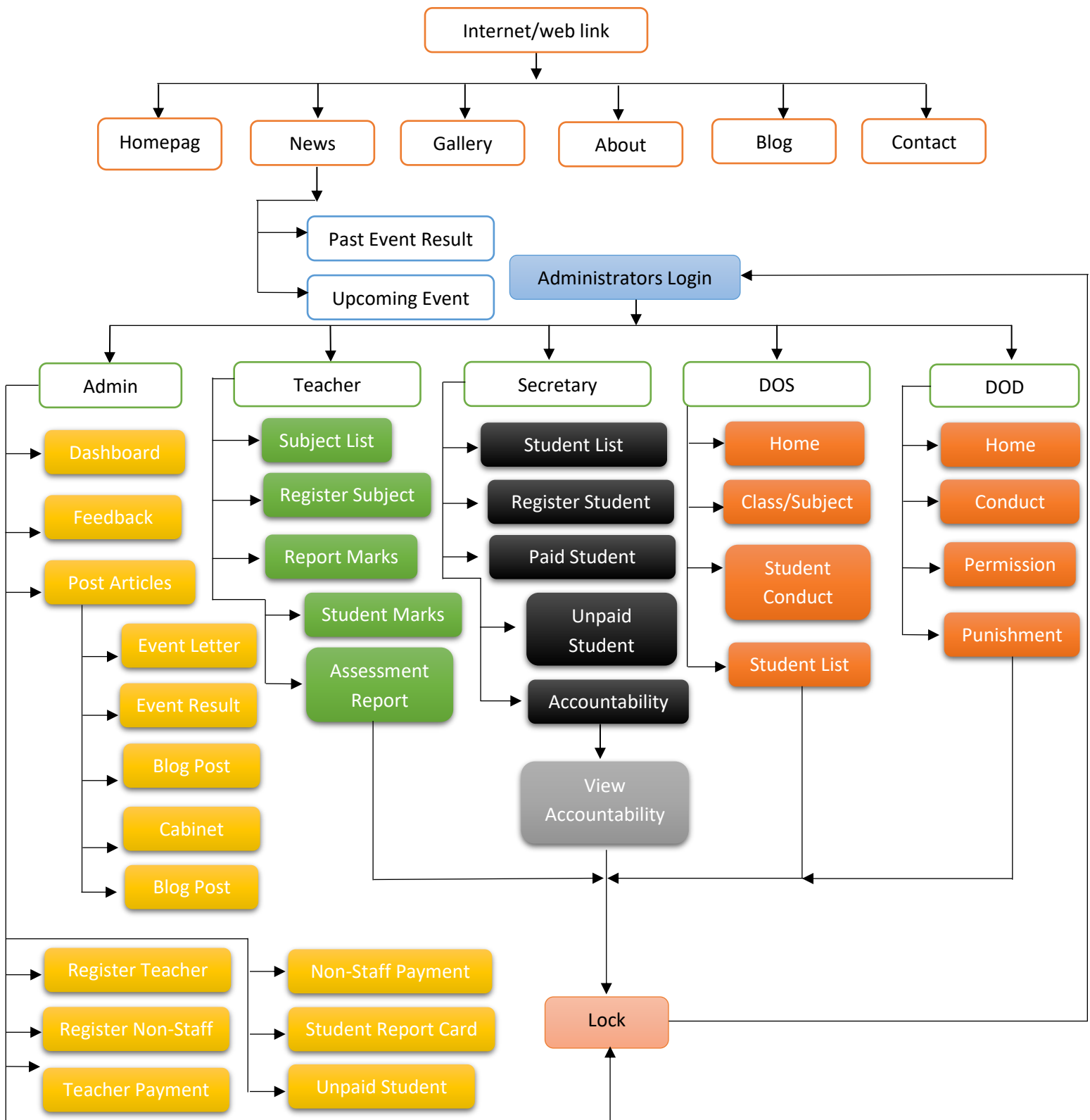


Figure 2: System organization graph

an ERD is a data modeling technique that creates a graphical representation of the entities and the relationship between the entities within a database system. and the figure below is an entity relationship of new system where it shows how tables are related and linked in database and how communicate.



4.2.4 Data Dictionary

4.2.4.1 accountabuluty

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
std_id	int(11)	No		student_tb -> id	Foreign Key
class	varchar(500)	No			
content	varchar(500)	No			
year	varchar(200)	No			
uniform	varchar(200)	No			
sweater	varchar(200)	No			
Piece_of_paper	varchar(200)	No			
practical	varchar(200)	No			
School_card	varchar(200)	No			
trip	varchar(200)	No			
Bed_rent	varchar(200)	No			
cleaning_material	varchar(200)	No			

Table 3: Shows the accountability table.

4.2.4.2 admin

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(500)	No			
lastname	varchar(500)	No			
email	varchar(500)	No			

gender	varchar(50)	No			
age	varchar(50)	No			
province	varchar(500)	No			
district	varchar(500)	No			
sector	varchar(500)	No			

Table 4: Shows the Admin table.

4.2.4.3 babyeyi_post

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
message	text	No			
time	timestamp	No			

Table 5: Shows babyeyi post.

4.2.4.4 blog_comment

Column	Type	Null	Extra	Link to	Action
id (Primary)	int(11)	No	AUTO_INCREMENT		Primary Key
blog_id	int(11)	No		blog_post -> id	
username	varchar(100)	No			
email	varchar(200)	No			
comment	text	No			
date	timestamp	No			

Table 6: Shows blog comment with its Indexes

4.2.4.5 blog_post

Column	Type	Null	Extra	Link to	Action
--------	------	------	-------	---------	--------

id	int(11)	No	AUTO_INCREMENT		Primary Key
blog_img	text	No			
title	varchar(200)	No			
heading	varchar(200)	No			
short_data	text	No			
more_data	text	No			
date/time	timestamp	No			

Table 7: Shows blog posted

4.2.4.6 conduct_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
class	varchar(500)	No			
student_name	int(11)	No		student_tb -> id	Foreign Key
term	varchar(500)	No			
year	year(4)	No			
max_conduct	int(11)	No			
min_conduct	int(11)	No			

Table 8: Shows conduct table

4.2.4.7 dod

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(200)	No			
lastname	varchar(200)	No			

email	varchar(200)	No			
gender	varchar(200)	No			
age	varchar(200)	No			
province	varchar(200)	No			
district	varchar(100)	No			
sector	varchar(200)	No			
phone	varchar(15)	No			
other_phone	varchar(15)	No			

Table 9: Shows dean of discipline table

4.2.4.8 dos_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(500)	No			
lastname	varchar(500)	No			
email	varchar(500)	No			
gender	varchar(500)	No			
age	varchar(50)	No			
province	varchar(500)	No			
district	varchar(500)	No			
sector	varchar(500)	No			
phone	varchar(10)	No			
other_phone	varchar(10)	No			

Table 10: Shows dean of studies table

4.2.4.9 event_results

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
result	text	No			
time	timestamp	No			

Table 11: Shows results from events

4.2.4.10 event_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
event_name	varchar(500)	No			
date	datetime	No			

Table 12: Shows event available

4.2.4.11 feedback

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
username	varchar(800)	No			
email	varchar(800)	No			
feedback	text	No			
time	timestamp	No			

Table 13: Shows feedback table

4.2.4.12 gallery_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
g_img	text	No			

title	varchar(100)	No			
date/time	timestamp	No			

Table 14: Shows gallery tables

4.2.4.13 module_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
teacher_email	varchar(200)	No			
module_code	varchar(200)	No			
competence_title	varchar(200)	No			
credit	varchar(30)	No			
hour	int(11)	No			
level	varchar(50)	No			

Table 15: Shows module table

4.2.4.14 non_staff

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(500)	No			
lastname	varchar(500)	No			
duty	varchar(500)	No			
gender	varchar(200)	No			
age	varchar(200)	No			
salary	varchar(200)	No			

Table 16: Shows Non-staff data

4.2.4.15 nonstaff_payment

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
nonstaff_id	int(11)	No		non_staff -> id	Foreign Key
salary	int(11)	No			
date_paid	date	No			
paid_salary	int(11)	No			

Table 17: Shows Non-staff payment table

4.2.4.16 permission_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
std_id	int(11)	No		student_tb -> id	Foreign Key
class	varchar(50)	No			
date_time_left	datetime	No			
date_time_return	datetime	No			
place	varchar(150)	No			
reason	text	No			

Table 18: Shows Permission table

4.2.4.17 punishment_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
std_id	int(11)	No		student_tb -> id	Foreign Key
class	varchar(100)	No			
date	date	No			

fault	varchar(200)	No			
cutted_marks	int(11)	No			
punishment	text	No			

Table 19: Show the punishment table

4.2.4.18 reported_modules

Column	Type	Null	Extra	Link to	Action
id (<i>Primary</i>)	int(11)	No	AUTO_INCREMENT		Primary Key
teacher_email	int(11)	No		module_tb -> id	Foreign Key
std_id	int(11)	No		student_tb -> id	Foreign Key
level_id	int(11)	No		module_tb -> id	Foreign Key
competence_id	int(11)	No		module_tb -> id	Foreign Key
credit_hour_id	int(11)	No		module_tb -> id	Foreign Key
year	year(4)	No			
credit_point	int(11)	No			
max	int(11)	No			
2nd_sitting_piont	varchar(100)	No			
2nd_sitting_result	varchar(100)	No			
mode_comment_observation	varchar(500)	No			

Table 20: Shows reported modules table

4.2.4.19 secretary_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(500)	No			

lastname	varchar(500)	No			
email	varchar(500)	No			
gender	varchar(500)	No			
age	varchar(50)	No			
province	varchar(500)	No			
district	varchar(500)	No			
sector	varchar(500)	No			

Table 21: Shows secretary table

4.2.4.20 student_fees

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
std_id	int(11)	No		student_tb -> id	Foreign Key
class	varchar(80)	No			
status	varchar(50)	No			
term	varchar(20)	No			
year	year(4)	No			
paid_fees	int(11)	No			

Table 22: Shows Student fees table

4.2.4.21 student_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
profile_picture	varchar(5000)	No			
firstname	varchar(600)	No			

lastname	varchar(600)	No			
student_ID	varchar(16)	No			
gender	varchar(20)	No			
date_of_birth	varchar(500)	No			
student_card_number	varchar(11)	No			
class	varchar(50)	No			
registered_year	int(11)	No			
content	varchar(500)	No			
status	varchar(200)	No			
province	varchar(200)	No			
district	varchar(200)	No			
sector	varchar(200)	No			
father_name	varchar(600)	No			
father_phone	varchar(15)	No			
mother_name	varchar(600)	No			
mother_phone	varchar(15)	No			
date_time	timestamp	No			

Table 23: Shows Student registered

4.2.4.22 teacher_payment

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
teacher_id	int(11)	Yes		teacher_tb -> id	Foreign Key
salary	int(11)	No			

paid_salary	int(11)	No			
date_paid	date	No			

Table 24: Shows Teacher payment table

4.2.4.23 teacher_tb

Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
firstname	varchar(500)	No			
lastname	varchar(500)	No			
email	varchar(500)	No			
gender	varchar(200)	No			
age	varchar(200)	No			
qualification	varchar(200)	No			
salary	varchar(220)	No			
province	varchar(500)	No			
district	varchar(500)	No			
sector	varchar(500)	No			

Table 25: Shows Teachers registered



4.2.4.24 user_tb



Column	Type	Null	Extra	Link to	Action
id	int(11)	No	AUTO_INCREMENT		Primary Key
email	varchar(500)	No			
category	varchar(100)	No			
password	varchar(200)	No			

Table 26: Shows users registered

4.2.5 Data Flow Diagram (DFD)

A data flow diagram is a tool that depicts the flow of data through a system and the work processing performed by that system. This is a DFD representing the flow of data:

1. Data Flow: 
2. Data Store: 

3. Process: 
4. Output: 

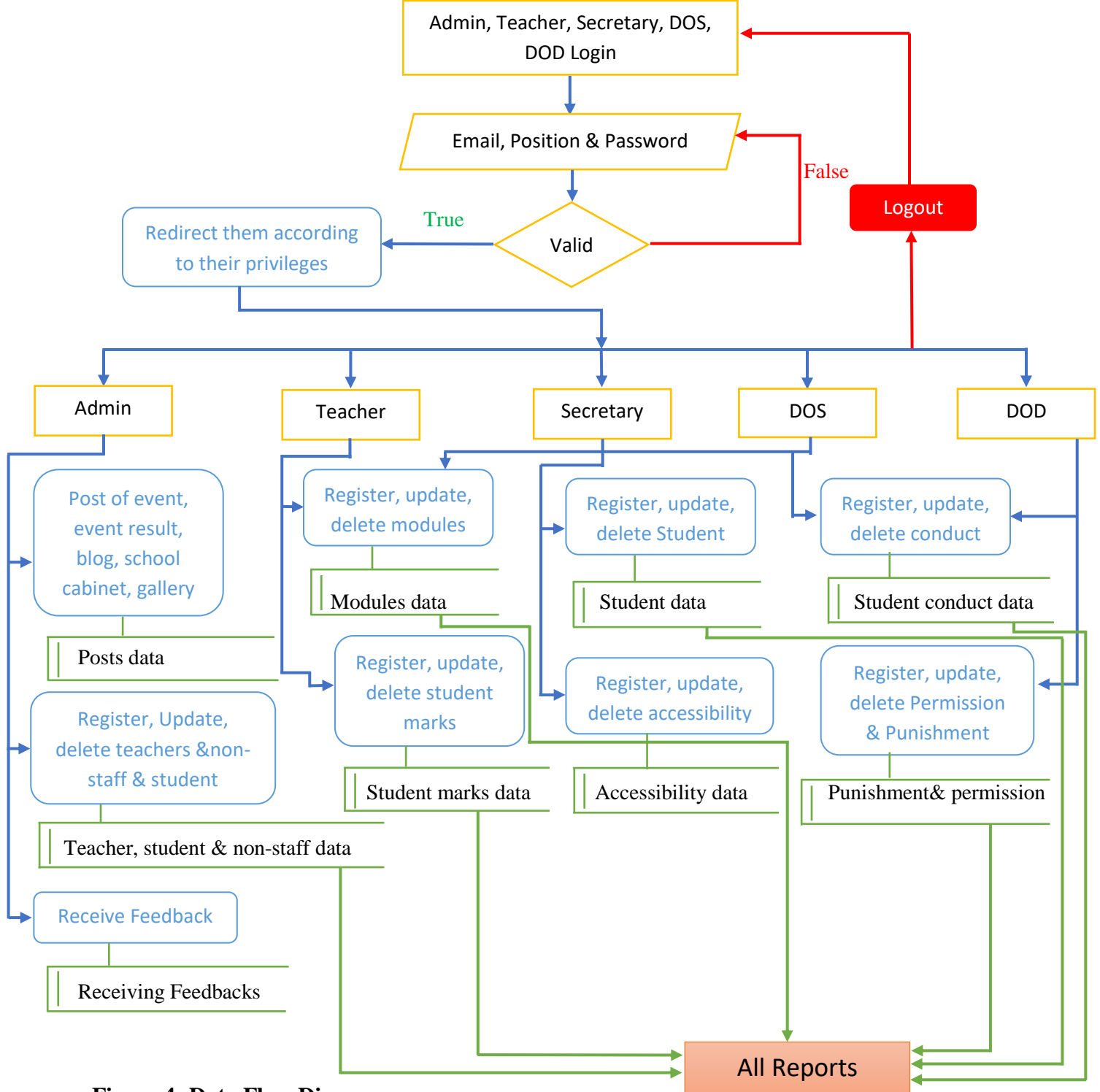


Figure 4: Data Flow Diagram

4.3 Interface Design

This section composed by the interfaces that used alternatively to perform different actions, such as the following.

4.3.1 Login Form

This login page is where all staff will register and login and also the administration will use it to login into their account

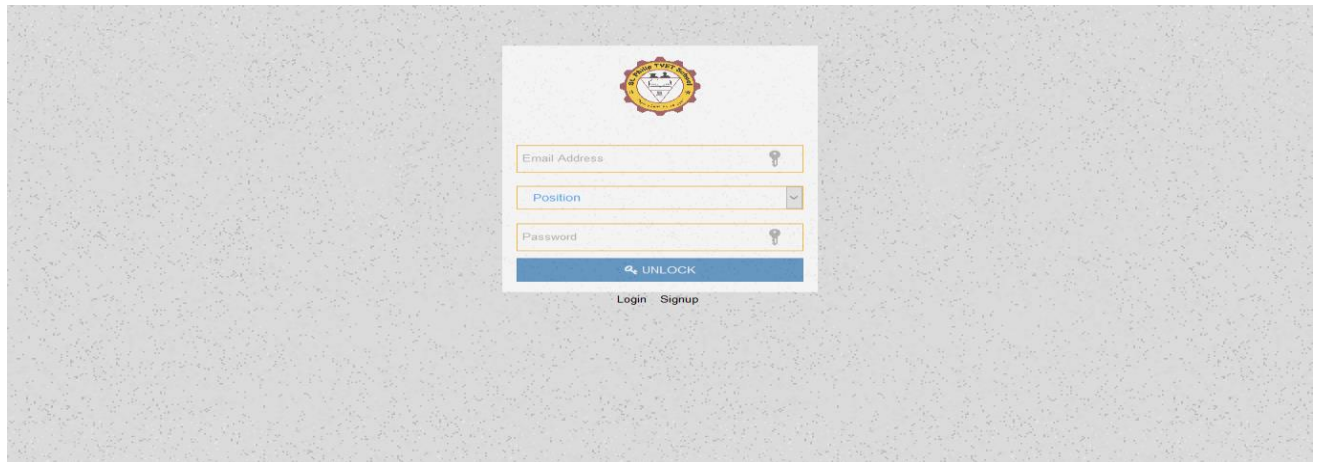


Figure 5: Login page for school administration and staff

4.3.2 Admin Dashboard

This is the admin page panel where he/she will be able to control all activities done at school

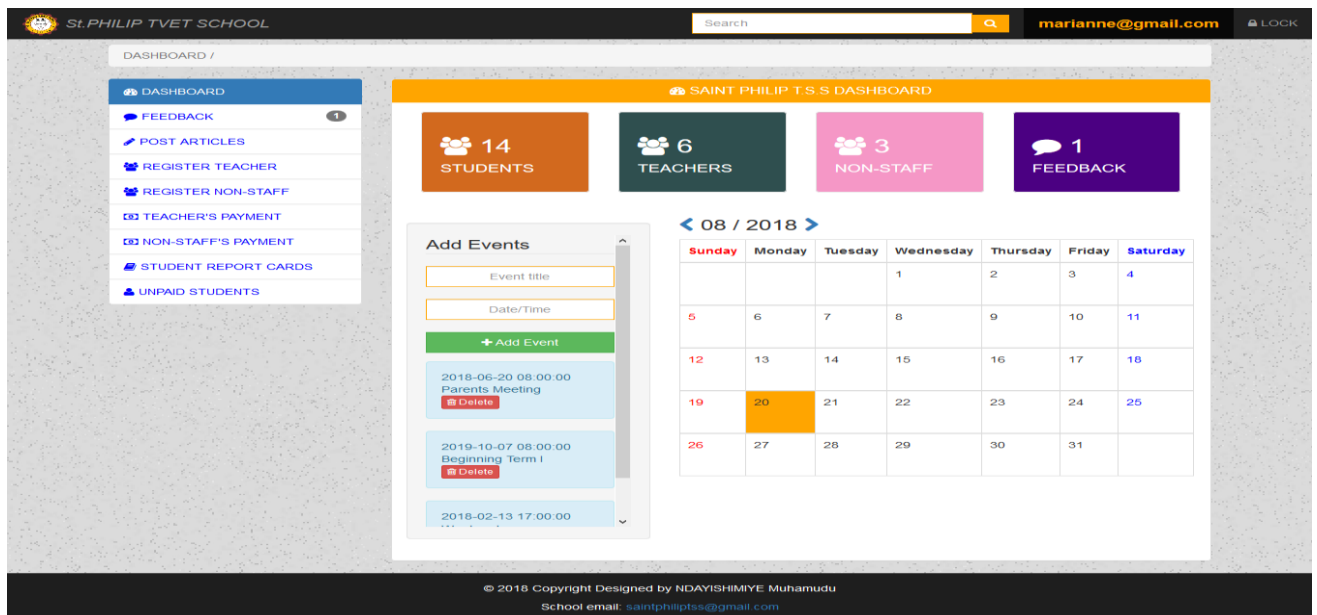


Figure 6: Admin panel

4.3.3 Admin Profile

This is the admin profile page where he/she will be able to update his/her account even changing account password.

St. PHILIP TVET SCHOOL Search **marianne@gmail.com** LOCK

DASHBOARD / ADMIN PROFILE

- DASHBOARD
- FEEDBACK 1
- POST ARTICLES
- REGISTER TEACHER
- REGISTER NON-STAFF
- TEACHER'S PAYMENT
- NON-STAFF'S PAYMENT
- STUDENT REPORT CARDS
- UNPAID STUDENTS

HEADMISTRESS PROFILE

First Name:	Last Name:	Date of birth:	Province:
Nyirarugwiro	Marianne	02/18/1969	Kigali City
Email:	Gender:	District:	Sector:
marianne@gmail.com	Female	Kicukiro	Kigarama

UPDATE PROFILE

SET NEW PROFILE PASSWORD

Old Password:

New Password:

Re-Enter Password:

UPDATE NEW PROFILE PASSWORD

© 2018 Copyright Designed by NDAYISHIMIYE Muhamudu
School email: saintphiliptss@gmail.com

Figure 7: Administration & staff profile

4.3.4 Student Cards

This is the search page where it will be able to display school student card through searching

SAINT PHILIP TVET SCHOOL

P.O BOX 1692 Kigali-Rwanda Tel:+250 788 565 100
E-mail:saintphiliptss1985@gmail.com

STUDENT CARD

2018

FIRSTNAME:Uwase
LASTNAME : Nadeje
DATE OF BIRTH: 1998-06-15
CLASS : L5CSC

SAINT PHILIP TVET SCHOOL

SAINT PHILIP TVET SCHOOL

Figure 8: Search page shows students card

4.3.5 Assessment Report

This is the school Trainee's assessment report page where even it will be printed through passing in excel software.

REPUBLIC OF RWANDA
MINISTRY OF EDUCATION
Saint Philip TVET School
P.O.Box 1692 Kigali, Rwanda
stphilliptvet012@gmail.com
+250 788 565 100

TRAINEE'S ASSESSMENT REPORT

Name Of Student: **Muhoracyeye Jeanette** Gender: **Female**
Class: **L3CST** School Year: **2018**
Student Serial Number: **L3CST3168** School Term: **Final Report**
Date of birth: **06/16/2000** Behavior: **35 / 40**

N°	Module Code	Competence Title	Credit / Hour	Assessment			Re assessment		Comment / Observation On each mode
				Credit Point	Max/100	Result	Credit Point	Result	
01	COM302	Computer System	2	180	90%	Compitent			Pass
02	CN302	Computer Maintenance	3	240	80%	Compitent			Pass
03	ND180	Networking Design	2	136	68%	Compitent			Pass
Total				7	556				
Percentage				79.43%					
Position			 / 3					
Feedback/Obseravtions(Class Trainer)									
Name of school Manager: NYIRARUGWIRO Mariane									
Signature & Stamp								Date: 16 / 09 / 2018	

Figure 9: Trainee's assessment report

4.3.6 Student data form

This page displays all data about student and even they can be updated

St. PHILIP TVET SCHOOL Search **secr@gmail.com** LOCK

HOME / REGISTER STUDENT

- STUDENTS LIST
- REGISTER STUDENT
- PAID STUDENT
- UNPAID STUDENT
- ACCOUNTABILITY

EDIT STUDENT REGISTRATION FORM

Profile Picture

Select image

First Name: Uwase
Last Name: Nadeje
Select Class: L5CSC
Student ID: L5CSC4066
Content: Daycare

Gender: Female
Date of birth: 1998-06-15
Year Registered: 2017
Father Name: Ngabo
Father Contact: 0787064275
Mother name: N.Syntia
Mother Contact: 0787064275

Status: Active
Identification Card Number: 19985444552
Province: Kigali City
District: Nyarungege
Sector: Nyakabanda

UPDATE STUDENT

© 2018 Copyright Designed by NDAYISHIMIYE Muhamudu
School email: saintphilliptss@gmail.com

Figure 10: Student data & updating them.

4.3.7 School Student list

This page displays all student from the school and has search field in case you need search.





STUDENT LIST								
<div><div>Print</div></div>								
<div><div>Show 5 entries</div><div>Search:</div></div>								
Image	First Name	Last Name	Gender	Age	Class	Father Name	Phone Number	Action
	Muhoracyeye	Jeanette	Female	06/16/2000	L3CST	Harerimana	0787064275	Edit Delete
	Mupenzi	Samiru	Male	06/29/1998	L3CST	Uwimana Saidi Salim	0784333001	Edit Delete
	Ntwari	Siradj	Male	06/23/1998	L3CST	Harerimana	0787064275	Edit Delete
	Umuhoza	Walda	Female	06/21/2000	L3SFTD	Harerimana	0787064279	Edit Delete
<div><div>Showing 1 to 4 of 4 entries</div><div><div>Previous</div><div>1</div><div>Next</div></div></div>								

Figure 11: Student list with their profile picture

4.3.8 Teacher's payment

This is the page that shows the payment of staff(teachers)

TEACHERS PAYMENT TABLE								
<div><div>Pay</div><div>Print</div></div>								
<div><div>Show 5 entries</div><div>Search:</div></div>								
N°	First Name	Last Name	Gender	Age	Total Salary	Paid Salary	Balance	Action
1	Kamikazi	Esta	female	1993-08-27	50000 Frw	40000 Frw	10000 Frw	Edit Delete
2	Uwase	Assouma	Female	1988-05-12	30000 Frw	30000 Frw	0 Frw	Edit Delete
3	Kamikazi	Odette	female	02/14/1989	60000 Frw	60000 Frw	0 Frw	Edit Delete
4	Niyonzima	Cogore	male	07/10/1996	60000 Frw	60000 Frw	0 Frw	Edit Delete
<div><div>Showing 1 to 4 of 4 entries</div><div><div>Previous</div><div>1</div><div>Next</div></div></div>								

Figure 12: Teacher's payment shown in table

4.3.9 Paid student


This page shows paid student list and also this list can be printed through passing in excel software.

PAID STUDENTS										
								Pay	Print	
Show	5		entries	Search:						
Nº	First Name	Last Name	Serial Nº	School Fees	School Term	Year	Class	Status	Action	
1	Mupenzi	Samiru	L3CSC3613	60000	2nd Term	2016	L3CSC	Daycare	Edit Delete	
2	Umurerwa	Annick	L5CSC4094	130000	2nd Term	2018	L5CSC	Boarding	Edit Delete	
3	Kirezi Cyisa	Fideli	L5CSC2840	60000	3rd Term	2018	L5CSC	Daycare	Edit Delete	

Figure 13: School student paid fees

4.3.10 Conduct Form

This page shows registration of student conduct form



Uwase Nadeje

L5CSC

Select Year

Select Term

40

Conduct Marks

Save Conduct

Figure 14: Student registration conduct form

CHAPTER 5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

During the realization of my project I used all possible solution to analyze a system that will act as an on-line brochure for prospective administrator, students and parents, providing them with as much information as possible to help them decide if the school is right for them. And improve the efficiency and effectiveness of communication between students, parents, teachers, and administrators easily without spending a long time consuming, and also making the automated trainee's assessment report and also school card. According to what I wanted, my project was successfully finished as I wish.

5.2. Recommendations

During this work project, I met some problems so; this is the reason why I recommend this follow,

- The school might provide all needed material in project researches like books, done projects as references, and other documents that can help students, and to give more time to them in their projects research.
- To provide a precise more time for supervisor to meet with the students and, I would also recommend the students to work hard all time during the project.

REFERENCES

Books

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- Oxford and Cambridge Dictionary

Electronic References

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2. [http:// www.stackoverflow.com](http://www.stackoverflow.com) (Visited on 05-02-2018 & 25-05-2018)
3. [http:// www.github.com](http://www.github.com) (Visited on 05-02-2018, 14-04-2018 & 10-06-2018)
4. [http:// www.jquery.com](http://www.jquery.com) (Visited on 22-04-2018)
5. [http:// www.bootstrap.com](http://www.bootstrap.com) (Visited on 22-04-2018)