Development of School Admission Management System

IUBAT–INTERNATIONAL UNIVERSITY OF BUSINESS AGRICULTURE AND TECHNOLOGY
Founded 1991 by Md. AlimullahMiyan

Report on

"School Admission Management System"

Prepared For

M.M. Rakibul Hasan
Senior Lecturer
Department of Computer Science and Engineering
College of Engineering and Technology (CEAT)

Prepared By

Group – SEVEN Section -E

SN	Name	ID No
01	Md. Mehedi Hasan Real	18203010
02	Md. Eyalid Onim	18203012
03	Ismail Hossain	18203030
04	Sabiha Sultana	18203038
05	Hasan Ahmed	18203044

Letter of Transmittal

28 December, 2020
To,
Chairman,
Practicum and Placement committee,
College of Engineering and Technology (CEAT)
IUBAT - International University of Business Agriculture and Technology
4 Embankment Drive Road, Uttara Model Town
Sector- 10, Dhaka- 1230

Subject: Letter of Transmittal.

Dear Sir,
It is great pleasure for us to submit our report on the topic of "Development of School Admission Management System". We have prepared this report, as partial fulfillment of the course CSC 387 (System Analysis and Design). To prepare this report, we have collected that we have found most relevant information in terms of analytical as well as reliability. We have concentrated our best effort to achieve the objectives of the report and hope that our endeavor will serve the purpose. We request you to pardon us for any mistake that may occur in the report unwillingly despite of our best effort.

We would really appreciate, if you enlighten us with your thoughts and views regarding the report. Also, if you wish to enquire about an aspect of our report, we would gladly answer your queries. We are really indebted to you for your cordial cooperation, support and patience.

Yours Sincerely

……..
Hasan Ahmed
ID- 18203044
Program-BCSE
On behalf of SEVEN group

Letter of Authorization

28 December, 2020
IUBAT - International University of Business Agriculture and Technology
4 Embankment Drive Road, Uttara Model Town
Sector- 10, Dhaka- 1230

Subject: Letter of Authorization.

Group: SEVEN

Md. Mehedi
Hasan Real
ID – 18203010
Program – BCSE

Md. EyalidOnim
ID – 18203012
Program – BCSE

Ismail Hossain
ID – 18203030
Program – BCSE

Sabiha Sultana
ID – 18203038
Program – BCSE

Hasan Ahmed
ID –18203044
Program - BCSE

Dear **SEVEN,**
You will be happy to know that the project on "Development of School Admission Management System", I have received in your project proposal under my concern. Based on your project you will have to submit the project as soon as possible. I hope you will successfully complete it on time. After successful completion of the project. You are requested to write a report based on the project.

For any kind of assistant feel free to consult with me.

Supervisor

……..
M.M. Rakibul Hasan
Senior Lecturer
Department of Computer Science and Engineering
College of Engineering and Technology (CEAT)

Students Declaration

We undersigned are the student of Bachelor of Computer Science and Engineering (BCSE) under College of Engineering and Technology (CEAT) of International University of Business Agriculture and Technology (IUBAT) declaring that the report entitled “Development of School Admission Management System” has been prepared only as the partial fulfillment of the CSC 387 (System Analysis and Design). It is not prepared for any other purposes such as award or degree.

Yours Sincerely,

Md. Mehedi Hasan Real …….

Md. Eyalid Onim …….

Ismail Hossain …….

Sabiha Sultana …….

Hasan Ahmed …….

Acknowledgement

We, first and foremost, would like to express our gratitude to Almighty Allah for helping us to complete the report properly.

We would like to express my profound appreciation to our institute IUBAT – International University of Business Agriculture and Technology and Honorable faculty M.M. Rakibul Hasan for his guidance, advice, patience, questions and generous assistance offered throughout the entire process of making this report.

A special thanks goes to my all team members Hasan Ahmed, Ismail Hossain, Sabiha Sultana, Md. Eyalid Onim and Md. Mehedi Hasan Real, whose help made us to complete the project and report on time.

We owe my deepest gratitude to our parents and our family members whose inexhaustible love was indispensable to endure in the tragic moments that confronted us once again with the vulnerability of life.

This report would not have been possible without the essential and gracious support of many individuals who encouraged us to complete this project on time. We are also so grateful to them.

Abstract

Education is one of the basic needs of human. For education our main and primary palce is school. With passage of time school's systems have been developed tremendously. We can have informations about a school sittion in our home.

Education system is being digitalized day by day. Every school have their own websites from where students can have their lectures, syllabuses and other study materials. But in the maximum school the admission process of the students are manual and physical. Students have to go to the school and apply for their admission.

In order to maintain those student's information, the authority previously had to take their information in diary or paper and the admission process was lengthy.

This previous system is fully manual and therefore there are huge chances of making mistake about student's information.

To overcome this problem we have planned to make a system by with a school can maintain all the information of applicant students. This system will lessen their manual labor and calculation. Rather it will be helpful for them to keep the record of each info electronically.

This system is capable of maintaining student information, admin information, school information, student log. This system has login process for both admin and student to manage the system and to know the admission process accordingly. We hope this system will be much more convenient for the schools to maintain their admission managem

Table of Contents

Students Declaration 5
List of Figures 12
List of Tables 13
Chapter 1: Project Introduction 14
1.1 Introduction 15
1.2 Background of Study 15
1.3 Objectives 17
1.3.1 Broad Objectives 17
1.3.2 Specific Objectives 17
1.4 Methodology 18
1.4.1 Data Source 18
1.4.1.1 Primary Source 18
1.4.1.2 Secondary Source 18
1.5 Limitation 18
1.6 Iterative Process Model 18
1.6.1 The Feature of Iterative Process Model 19
1.6.2 Advantages of Iterative Process Model 20
1.7 Feasibility Study 20
1.7.1 Technical Feasibility 20
1.7.2 Economic Feasibility 20
1.7.3 Operational Feasibility 21
Chapter 2: Requirement Engineering 22
2.1 Requirement Analysis 23
2.1.1. Hardware Requirements 23
2.1.2. Software Requirements 23
2.1.3. Functional Requirements 23
2.1.4 Non Functional Requirement 23
2.1 Cost Estimation 23
2.2.1. Personnel Cost 23

2.2.2 Hardware Cost 24
2.2.3 Software Cost 24
2.2.4 Other Cost 24
2.2.5 Total Cost 24
Chapter 3: Analysis and Design 25
3.1 Use Case Diagram (UCD) 26
3.2 Entity Relationship Diagram (ERD) 27
3.3 Data Flow Diagram (DFD) 29
3.3.1 Context Level Diagram 29
3.3.2 Level 1 Diagram 30
3.3.3 Level 2 DFD of Process 1 (Form) 31
3.3.4 Level 2 DFD of Process 2 (Apply) 31
3.3.6 Level 2 DFD of Process 4 (Approval) 32
3.3.7 Level 2 DFD of Process 5 (Bill) 33
Chapter 4: Risk Engineering 34
4.1 Risk Management 35
4.2 The RMMM Plan 35
4.2.1 Risk Identification 35
4.2.2 Risk Analysis 36
4.2.3 Risk Planning 36
4.2.4 Risk Monitoring 37
5.1 Database Tables 40
5.2 User Interface 42
42
Chapter 6: Quality Assurance 48
6.1 System Quality Management 49
6.2 System Testing Design 50
Chapter 7: Conclusion 52
7.1 Future Plan 53
7.2 Conclusion 53
7.3 Contribution Table 54

Chapter 8: Bibliography 55
8.1 References 56

List of Figures

Figure 1. 1:**Diagram of Iterative process model** 19

Figure 3. 1:: **Use Case Diagram (UCD) of Development of SAMS** 26
Figure 3. 2: **Entity Relationship Diagram (ERD) of Development of SAMS** 28
Figure 3. 3: **Context Level Diagram of Development of SAMS** 29
Figure 3. 4: **Level 1 DFD of Development of SAMS** 30
Figure 3. 5:**Level 2 DFD of Process 1** 31
Figure 3. 6:**Level 2 DFD of Process 2** 31
Figure 3. 7:**Level 2 DFD of Process 3** 32
Figure 3. 8:**Level 2 DFD of Process 4** 32
Figure 3. 9:**Level 2 DFD of Process 5** 33

Figure 5. 1**: List of tables of SAMS database** 40
Figure 5. 2**: Database Table for admission form** 40
Figure 5. 3:**Database Table for student_info** 41
Figure 5. 4**: Database Table for user_list** 41
Figure 5. 5:Home Page 42
Figure 5. 6**: Admission Form** 43
Figure 5. 7**: Admin Login Page** 44
Figure 5. 8**: Admin Dashboard** 45
Figure 5. 9**: Student View – Update - Delete - Search** 45
Figure 5. 10**: Admin View – Approve** 46
Figure 5. 11**: Admin Add Student** 46
Figure 5. 12**: Student Login** 47
Figure 5. 13**: Student Approval or Rejection Confirmation Page** 47

Figure 6. 1**: System Testing** 49

List of Tables

Table 2. 1: **Personnel Cost** 23
Table 2. 2:**Hardware Cost** 24
Table 2. 3: **Software Cost** 24
Table 2. 4: **Other Cost** 24

Table 4. 1:**Risk Identification** 35
Table 4. 2:**: Risk Analysis** 36
Table 4. 3:**: Risk Planning** 36
Table 4. 4:**: Project Risk (P01)** 37
Table 4. 5:**: Project Risk (P01)** 38
Table 4. 6:**: Technical Risk (T01)** 38
Table 4. 7**: Technical Risk (T02)** 38

Table 6. 1**: Testing Scenario No: 01** 50
Table 6. 2**: Testing Scenario No: 02** 50
Table 6. 3**: Testing Scenario No: 03** 50
Table 6. 4**: Testing Scenario No: 04** 51
Table 6. 5**: Testing Scenario No: 05** 51

Table 7. 1**: Contribution table of SAMS project** 54

Chapter 1: Project Introduction

1.1 Introduction

Development of School Admission Management System(SAMS) is the set of processes and technologies that manages admission system system and information of students.

Create report of admission management of students information is main goal of this project. Development of School Admission Management System is an inherently collaborative process. We have done this project using "Iterative Process Model". This system is an online system that can be accessed throughout the organization and outside as well with proper login provided. Our system has two types of accessing modes, administrator and user.

This report based on the project that we have completed in the course CSC 387 (System Analysis and Design). At first we have analyzed the old system.

Therefore, we have designed this automated system for maintaining all the information of any school. In this report we have described how we developed this system and how it will work.

1.2 Background of Study

In order to develop this system we have studied on some established school management software to know about their software, features and other facilities. The software's we have learnt are more suitable for other developed countries. Therefore, we have designed our system in such way so that that it can be more effective for the people of Bangladesh. Some of the softwares that we have studied and other things that will be needed to develop our system are listed below:

- **Powervista Rollcall:** RollCall is a comprehensive administration solution with the features and flexibility you need to support a non-K12/primary education organization. RollCall streamlines management with student progress alerts, invoicing, certficate/ degree program tracking, customizable data elements/ reports/ forms and instantly available accreditation statistics.

- **XAMPP:** XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. (Apache Friends, 2020)

- **HTML:** *HTML* stands for Hyper Text Markup *Language*. *HTML* is the standard markup *language* for creating Web pages. *HTML* describes the structure of a Web page. *HTML* consists of a series of elements. *HTML* elements tell the browser how to display the content. (W3School, 2020)

- **JavaScript:** JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions. (Wikipedia, 2020)

- **CSS:** Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. (Wikipedia, CSS, 2020)

- **MySQL:** MySQL is an open-source relational database management system. Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. (Wikipedia, 2020)
- **PHP Programming Language:** PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.PHP 7 is the latest stable release. (The PHP Group, 2020)

1.3 Objectives

1.3.1 Broad Objectives

Now these days due to the modern systems admission systems have become easier. There is no need to run to the school to get the admission details and result. People can get the information about admission from anywhere.
The school authority can also justify the details and accept or reject a students application form without using pen and paper. All the data can be stored and saved and modified by the authority in the admission management system.

1.3.2 Specific Objectives

The specific objective of this project are listed below:

- Distribute admission form online
- Apply online
- Approve or reject students online
- Store students detail online
- View the result online

1.4 Methodology

In this point we will talk about how we have collected the information. There are two ways of collecting information such as primary source and secondary source. We have used both of these in our project.

1.4.1 Data Source

1.4.1.1 Primary Source: Under primary source we have contacted and collected information from both of school administration and students to know about their problems and suggestion and desires to develop an effective system.

1.4.1.2 Secondary Source: Under secondary source we have studied on several website, blog post and already developed software to collect information:

1.5 Limitation

This project has some limitations those we have planned to develop in futures. The limitations are-

- Applicants cannot pay admission fee via online payment
- Interfaces are little bit complex to understand at first glance.
- Embedded account management and some other module is needed to be implemented.
- Students will not get any mobile SMS notification for confirmation or rejection.

1.6 Iterative Process Model

For this project we have used Iterative process model. In Iterative model, iterative process starts with a simple implementation of a small set of the software requirements and iteratively enhances the evolving versions until the complete system is implemented and ready to be deployed. The basic idea behind this method is to develop a system through repeated cycles (iterative) and in smaller portions at a time (incremental).

1.6.1 The Feature of Iterative Process Model

- Requirements of the complete system are clearly defined and understood.
- Major requirements must be defined; however, some functionalities or requested enhancements may evolve with time.
- There are some high risk features and goals which may change in the future.
- Better suited for large and mission-critical projects

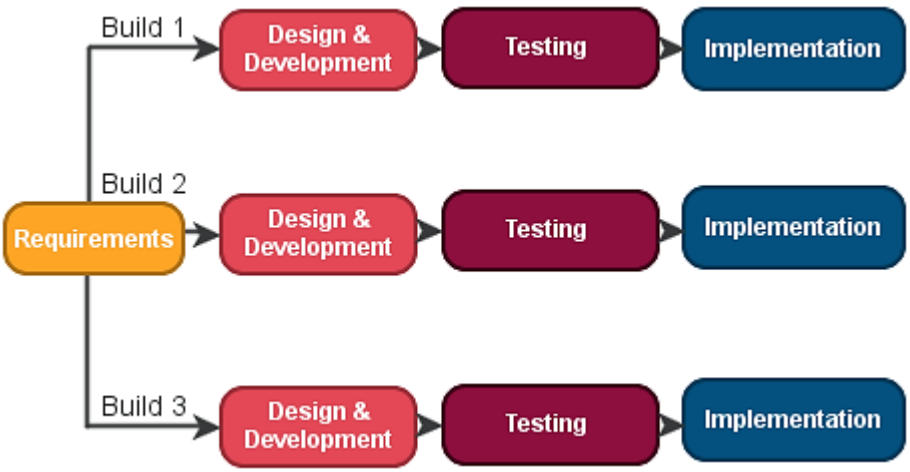

*Figure 1. 1:**Diagram of Iterative process model***

1.6.2 Advantages of Iterative Process Model

- Some working functionality can be developed quickly and early in the life cycle.
- Results are obtained early and periodically.
- Parallel development can be planned.
- Progress can be measured.
- Easier to manage risk.

1.7 Feasibility Study

Feasibility study determines whether that solution is feasible or achievable for the user or not. This means that the tasks that we will perform are worth enough or not. There are three major areas of investigation and generating ideas about a new system. On studying the feasibility of the system, three major considerations are dealt with, to find whether the automation of the system is feasible.
It is to serve as a decision document. It has three questions to answer. Since, the present system is manual all the work is done in papers and ink by hand so it is much costly and difficult to use and to operate and it is also time consuming. So our automated computerized student admission system is much feasible, in cost, time, and efforts as compare to the previous manual system. It is economically feasible, it will only require a single operator to operate the system, who is responsible for entering the data into the database via a user interface provided to him, who can also able to show all the data in html tabular form so to provide information regarding the students who are either taken admission or to take admission, since it requires only a single person to operate the system thus reduces the cost to operate the system. It is technically feasible, since the whole system is designed into the latest technologies like ASP.NET and MS access and SQL server which are the most recent technologies to develop web based systems and design databases. It uses the latest hardware technologies like P4 Systems so. It is Behavioral feasible, since the system is providing a attractive user interface to the operator/end user, so he feel very easy to work onto it. Response to operator/end user is very fast and very good. Since, as we mentioned above that it requires much less amount of cost, it uses computer work so it is very fast to operate and it is very easy for user to work on it.

1.7.1 Technical Feasibility

This project is technically feasible because for making this project the require technology is available. Like software and hardware.

1.7.2 Economic Feasibility

This project is economically feasible because the total personnel cost, time, software and hardware cost for making this project is less than the client budget which is much profitable.

1.7.3 **Operational Feasibility**

This project is operationally feasible because the actual or target user are able to use the project nicely. Project interface is much user friendly and mostly it’s faster and accurate than the previous system.

Chapter 2: Requirement Engineering

2.1 Requirement Analysis

2.1.1. Hardware Requirements

1. A minimum of Pentium 4 with a speed of 1.3 GHz.
2. A minimum RAM capacity of at least 512MB.
3. Hard disk capacity of at least 100mb free space.

2.1.2. Software Requirements

1. Windows 7 and above.
2. Xampp Server.
3. Web Browser (Firefox or Chrome)

2.1.3. Functional Requirements

1. student registration Form and application will be created and managed by admin and will be displayed to the frontend.
2. Application will be accepted by admin.
3. Students can choose their subjects and apply according to their own choice

2.1.4 Non Functional Requirement

1. Admin can log in by using username and password.
2. Student can log in by using username and password.
3. Only Admin can maintain the whole system.
4. Admin can remove applications and students record.
5. This system support only Windows 7/8/10

2.1 Cost Estimation

2.2.1. Personnel Cost

Table 2. 1: ***Personnel Cost***

Name	Working Hours	TK/Hour	Total(Tk)
Hasan Ahmed	80	500	40,000
Ismail Hossain	76	500	38,000
Sabiha Sultana	50	450	22,500
Md. Mehedi Hasan Real	50	450	22,500
Md. Eyalid Onim	30	400	12,000

2.2.2 Hardware Cost

*Table 2. 2:**Hardware Cost***

Name	Quantity	Unit Rate	Total(Tk)
CPU	1	15000	15000
Monitor	1	7000	7000
Keyboard	1	350	350
Mouse	1	250	250

2.2.3 Software Cost

*Table 2. 3: **Software Cost***

Name	Quantity	Unit Rate	Total(Tk)
Licensed software	1	80,000	80,000

2.2.4 Other Cost

*Table 2. 4: **Other Cost***

Name	Quantity	Unit Rate	Total(Tk)
Electricity Bill	3 Months	-	10,000
Office Rent & Maintenance	3 Months	20,000	60,000

2.2.5 Total Cost

Total Estimated Cost	271,600

Chapter 3: Analysis and Design

3.1 Use Case Diagram (UCD)

In order to achieve the highest understanding of the project next there will be illustrations containing various cases of system .The system functionality are shown in use case diagram.

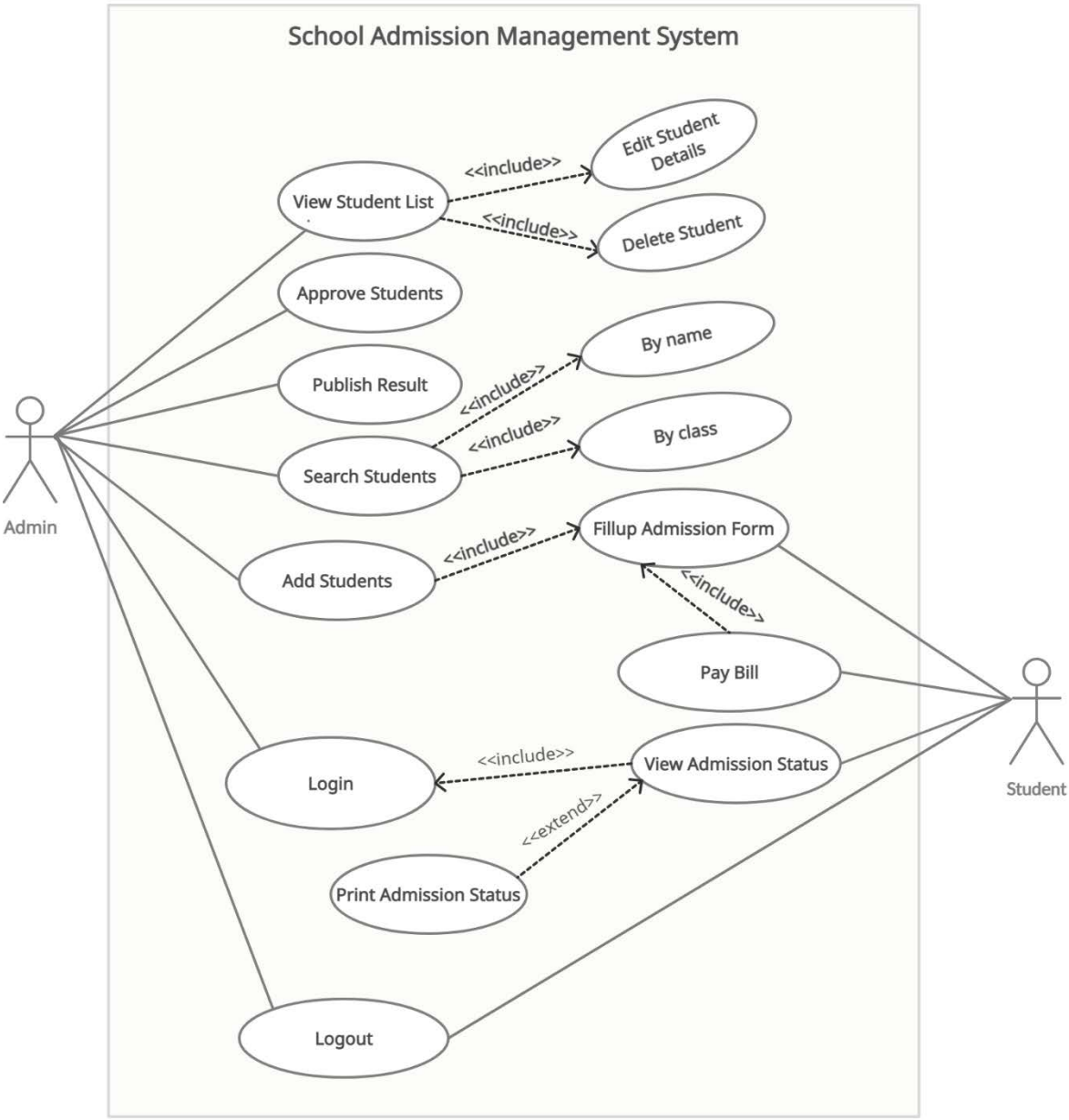

Figure 3. 1:: ***Use Case Diagram (UCD) of Development of SAMS***

3.2 Entity Relationship Diagram (ERD)

The Entity Relationship Diagram (ERD) enables a software engineer to specify the data objects that are input and output from a system, the attributes that define the properties of these objects and their relationship. It provides an excellent graphical representation of the data structures and relationship. In this project, Entity Relationship Diagram has been used to visualize the conceptual data model of Development of School Admission Management System. That is drawn below:

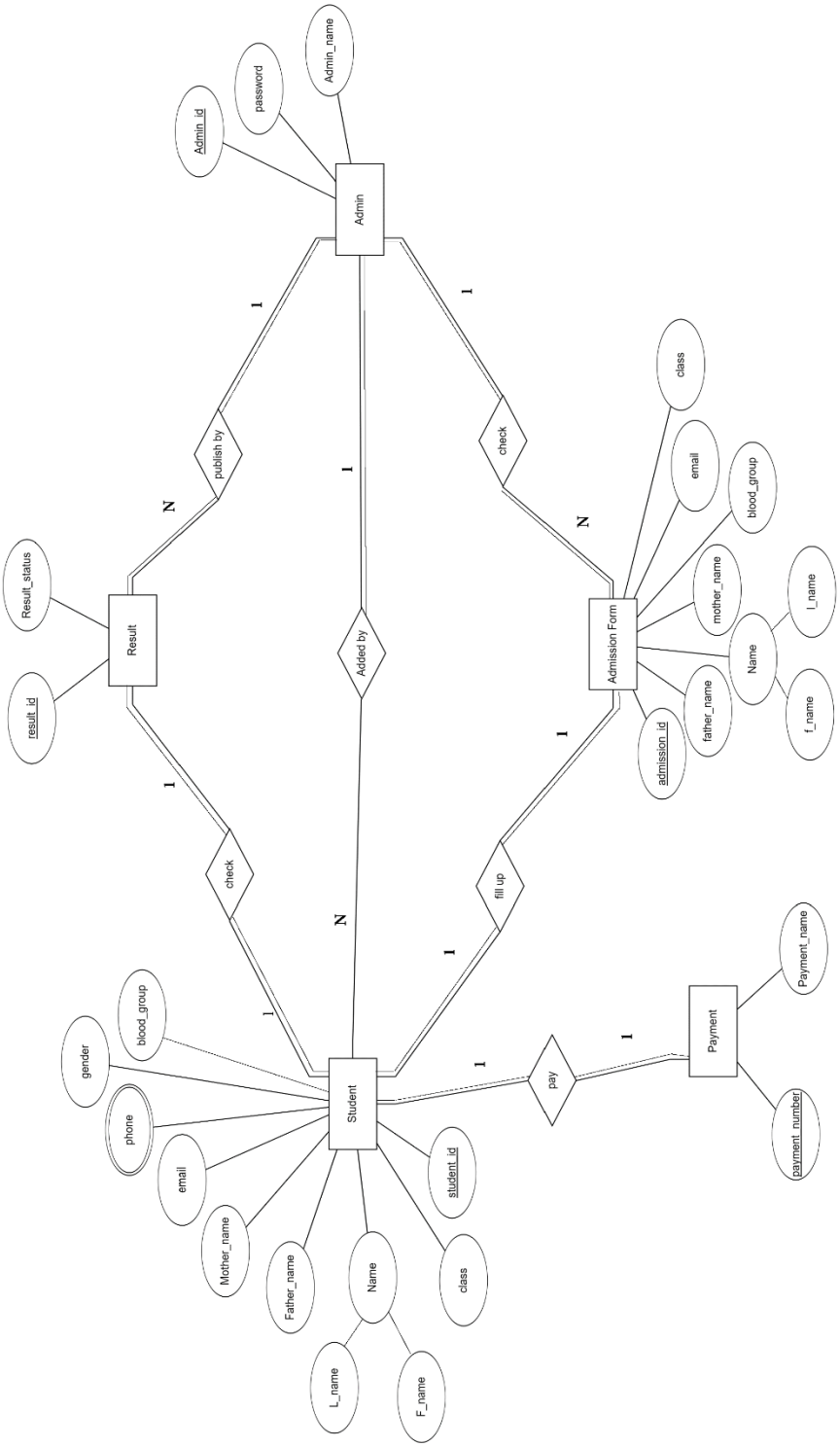

Figure 3. 2: ***Entity Relationship Diagram (ERD) of Development of SAMS***

3.3 Data Flow Diagram (DFD)

Data flow diagram is the graphical representation of the process of the content management system. It will show all processes of this project. In this software, to design the system, Data Flow Diagram (DFD) has been used which is a graphical representation of the depict information move from input to output. The DFD may be sued to represent a system or software at any level of abstraction.

3.3.1 Context Level Diagram

A Context Level Diagram (CLD) in software engineering and systems engineering is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it. Context level diagram of our system is given below:

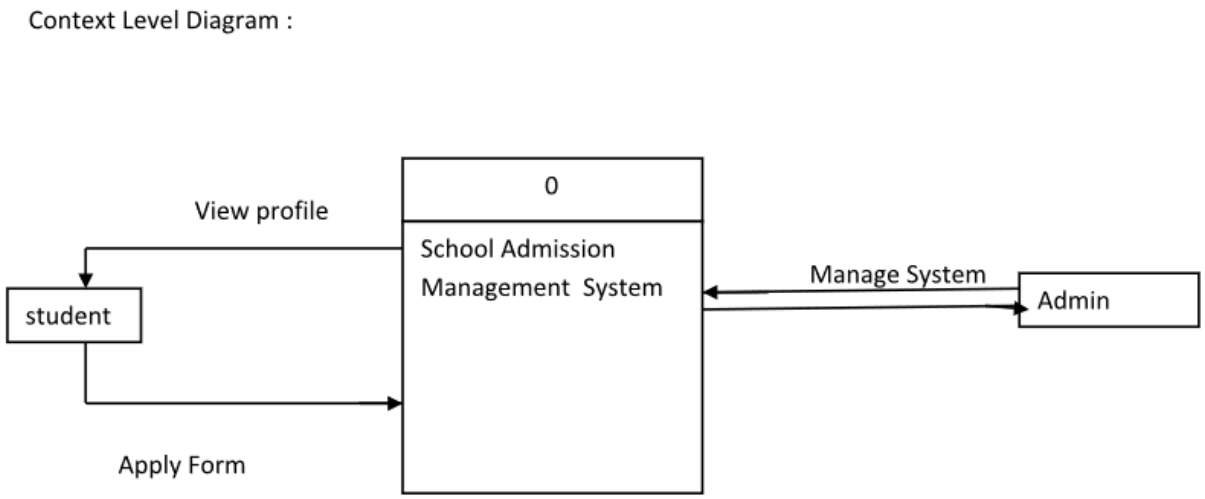

Figure 3. 3: ***Context Level Diagram of Development of SAMS***

3.3.2 Level 1 Diagram

The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. Level 1 diagram of our system is given below:

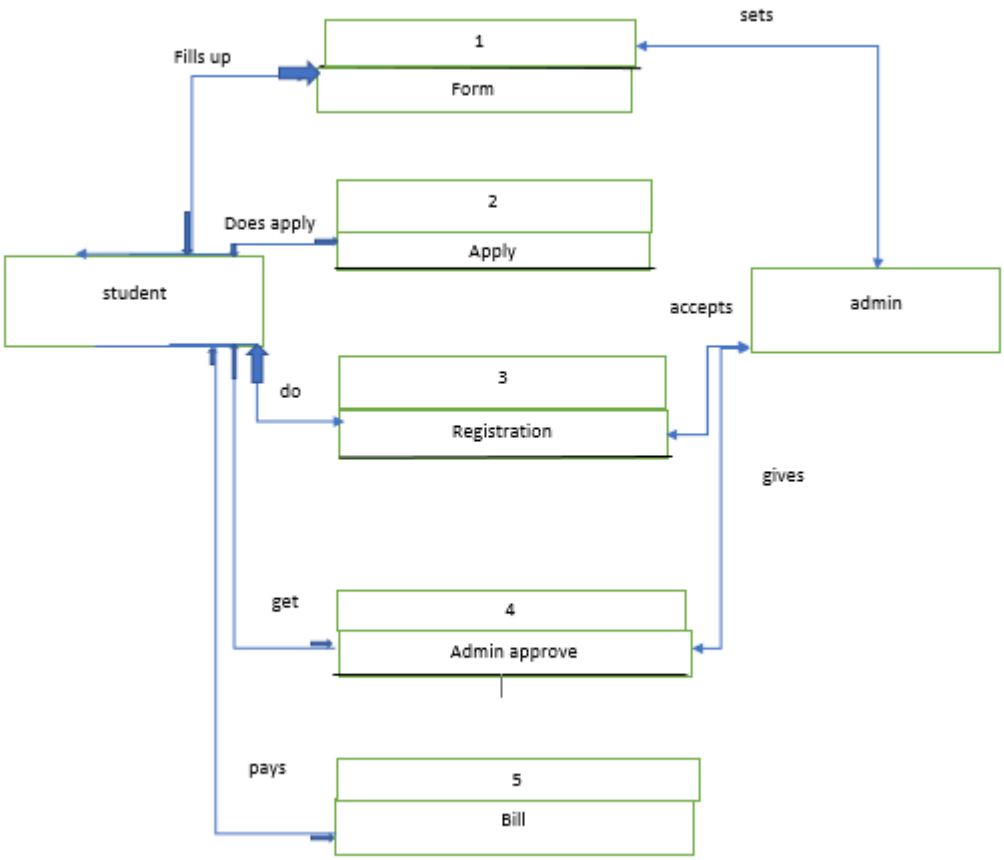

Figure 3. 4: ***Level 1 DFD of Development of SAMS***

3.3.3 Level 2 DFD of Process 1 (Form)

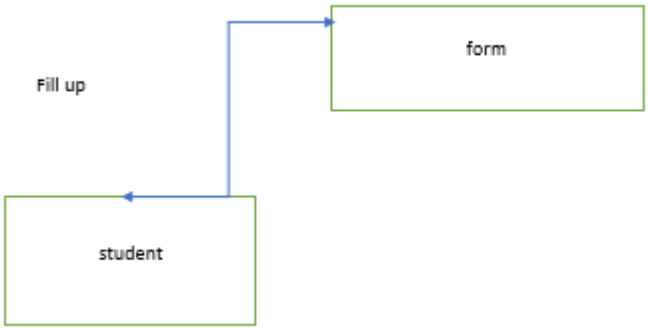

*Figure 3. 5:**Level 2 DFD of Process 1***

3.3.4 Level 2 DFD of Process 2 (Apply)

*Figure 3. 6:**Level 2 DFD of Process 2***

3.3.5 level 2 DFD of Process 3 (Registration)

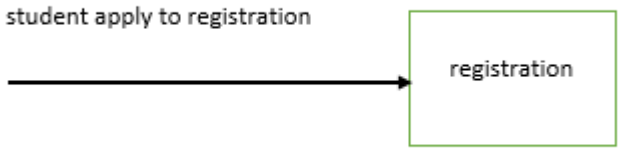

*Figure 3. 7:**Level 2 DFD of Process 3***

3.3.6 Level 2 DFD of Process 4 (Approval)

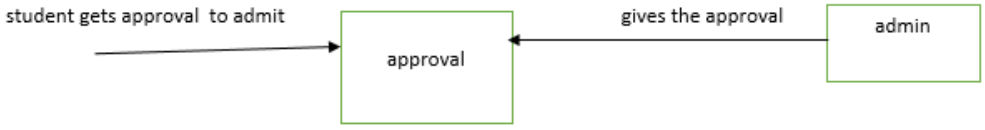

*Figure 3. 8:**Level 2 DFD of Process 4***

3.3.7 Level 2 DFD of Process 5 (Bill)

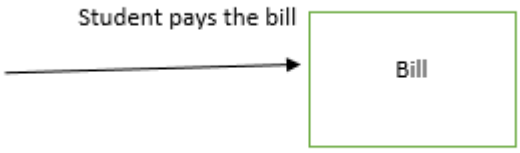

*Figure 3. 9:**Level 2 DFD of Process 5***

Chapter 4: Risk Engineering

4.1 Risk Management

A risk is a potential problem that might or might not happen. It is necessary to analyze the potential risks in a project. If the risks of a software project are not properly analyzed and estimated, many problems can plague the software project. Risk analysis and management are a series of steps that help a software team to understand and manage uncertainty. There are different categories of risks that should be considered in any software project. The following categories of risks have been considered in this software project.

Project Risks: These risks threaten the project plan. If these risks become real, it is likely that the project schedule will slip and that costs will increase. Project risks identify potential budgetary, schedule, personnel, resource, customer and requirement problems and their impact on the software project.

Technical Risks: These risks threaten the quality and timeliness of the software to be produced. If a technical risk becomes a reality, implementation may become difficult or impossible. Technical risks identify potential design, implementation, interface, verification and maintenance problems.

Business Risks: These risks threaten the viability of the software to be built. The business risks can be market risks, building a system that no one really wants. Strategic risks, building system that no longer fits into the overall business strategy for the company.

4.2 The RMMM Plan

4.2.1 Risk Identification

Table 4. 1: ***Risk Identification***

Risk type	Possible risks
Technology	Unintentional defects in software may arise. Lack of implementation for organization.
People	It is relatively difficult to find skilled staff Required training for staff is not available.
Organizational	There is some restriction in project budget
Tools	OS crash or Browser crash may happen Hard Disk crash may happen.
Requirement	Changing of user requirement may increase the system budget. Changing of user requirements may reduce the speed of project development.
Estimation	The time required to develop the software is not sufficient.

4.2.2 Risk Analysis

Table 4. 2: ***Risk Analysis***

Risk	Probability	Impact
Unintentional defects in software may arise	Low	Serious
Lack of implementation for organization	Moderate	Tolerable
It is relatively difficult to find skilled staff	High	Catastrophic
Absence of member during project period.	Low	Tolerable
Required training for staff is not available.	Moderate	Tolerable
There is some restriction in project budget.	Low	Serious
OS crash or Browser crash may happen	Moderate	Serious
Hard Disk crash may happen	Moderate	Serious
Changing of user requirements may increase the system budget.	High	Tolerable
Changing of user requirements may reduce the speed of project development.	Moderate	Catastrophic
The time required to develop to develop the software is not sufficient.	Moderate	Tolerable

4.2.3 Risk Planning

Table 4. 3: ***Risk Planning***

Risk	Strategy
Lack of implementation for organization.	Modifying the system with more implementation.
It is relatively difficult to find skilled staff.	Train the member well for developing the project.
Absence of member during project period.	Take the responsibility if one is absent for sickness.
OS crash or Browser crash may happen.	Use stable OS and update antivirus regularly.
Hard Disk crash may happen.	Backup the project in a secure cloud server.
Defective component.	Replace defective potential component with bought in component of know reliability.
Requirements changes.	Replace defective potential component with bought in component of know reliability.
The time required to develop to develop the software is not sufficient.	Proper maintain of project time for develop the system.

4.2.4 Risk Monitoring

- ❖ A re-planning of the project occurs. New task schedule and milestones are defined. Staffs work on their assigned jobs within the new timeframe.
- ❖ In order to prevent this from happening, the software will develop with the end user in mind.
- ❖ The user interface will design in a way to make use of the program convenient and pleasurable.
- ❖ Meetings (formal and informal) will be held with the stakeholders regularly. This insures that the product we are producing solves a problem.
- ❖ The development cost of the software may increase by 20%. Consult with the System Analyst during the system analysis, design and testing phase of the software project.
- ❖ Proper coding grammar is followed to make sure that the codes are easily understandable and reusable.

Table 4. 4: ***: Project Risk (P01)***

Project Risk (P01)	Date: 01-12-2018
Name	**Changes the requirements**
Probability	Low (18%)
Impact	Marginal (2)
Description	Company may change their requirements
Mitigation & Monitoring	Requirements are redefined by the company due to time or business needs. Meeting will be held with the company regularly. This insures that the product we are producing solves a problem.
Management	Emergency meeting between both parties to identify new project requirements and goals.
Status	Not occur

Table 4. 5: ***: Project Risk (P01)***

Business Risk (B01)	Date: 01-12-2018
Name	**Insufficient Budget**
Probability	Moderate (35%)
Impact	Marginal (2)
Description	If the budget is low project may not complete.
Mitigation & Monitoring	The project needs server that is costly to set-up. We find several alternative streaming services to reduce the budget risk.
Management	Refinement in project goal. A new plan for regulate the budget.
Status	Problem resolved.

Table 4. 6: ***: Technical Risk (T01)***

Technical Risk (T03)	Date: 23-8-2018
Name	**Hard Disk Crash**
Probability	High (60%)
Impact	Tolerable (3)
Description	Hard Disk can be crash.
Mitigation & Monitoring	We should take proper follow up of computers. We also take regular data backup every day, We can use IPS to stop unexpected shutdown.
Management	If our hard disk has been crashed then we will restore backup.
Status	The risk has not been faced yet.

Table 4. 7 ***: Technical Risk (T02)***

Technical Risk (T01)	Date: 20-07-2018
Name	**Lack of Experience**
Probability	Low (20%)
Impact	Tolerable (3)
Description	Lack of members experience
Mitigation & Monitoring	The development cost of the software may increase by 20%. Consult with the System Analyst during the system analysis, design and testing phase of the software project.
Management	Though the development cost is increased by 20%, the project is still feasible. Set appointment for formal meeting with the System Analyst to solve different problems of each of the phases.
Status	The risk has not been arisen yet.

Chapter 5: Coding

5.1 Database Tables

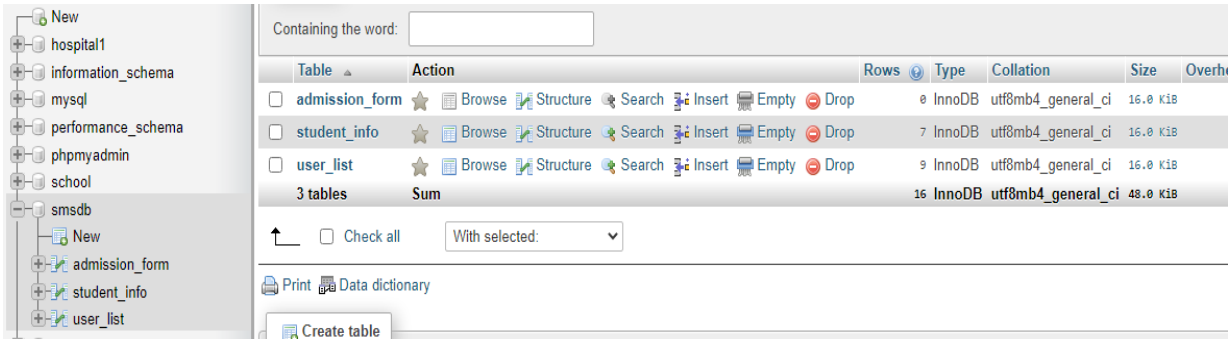

Figure 5. 1: ***List of tables of SAMS database***

Database Table for "admission_form"

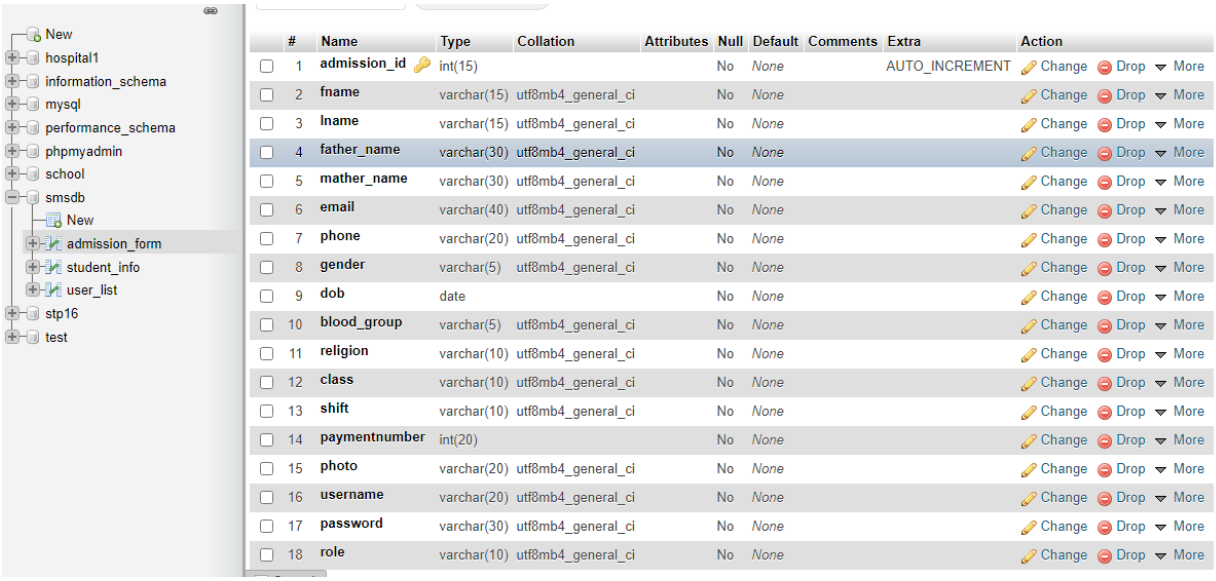

Figure 5. 2: ***Database Table for admission form***

Database Table for “student_info”

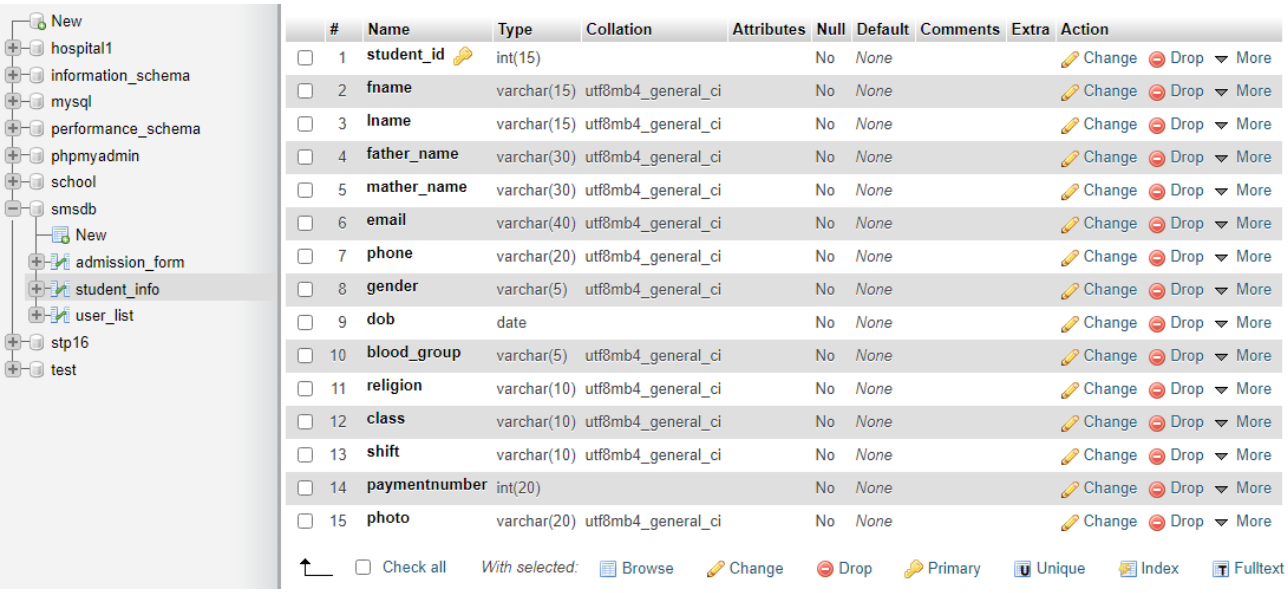

*Figure 5. 3:**Database Table for student_info***

Database Table for “user_list”

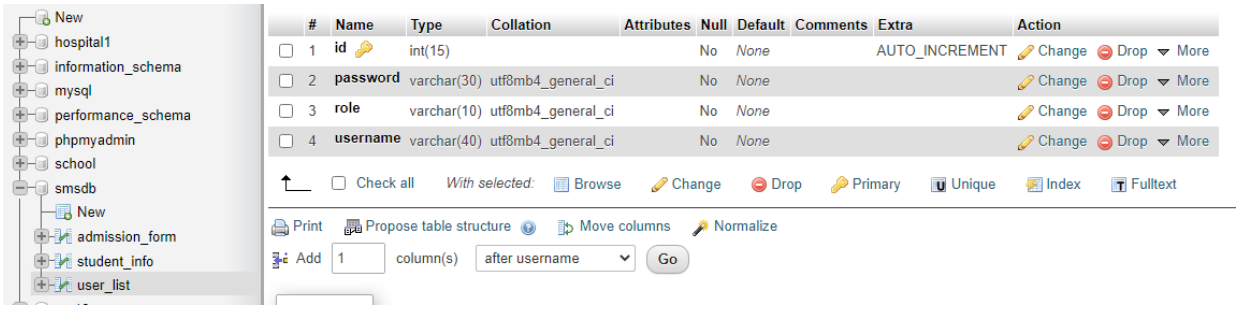

*Figure 5. 4**: Database Table for user_list***

5.2 User Interface

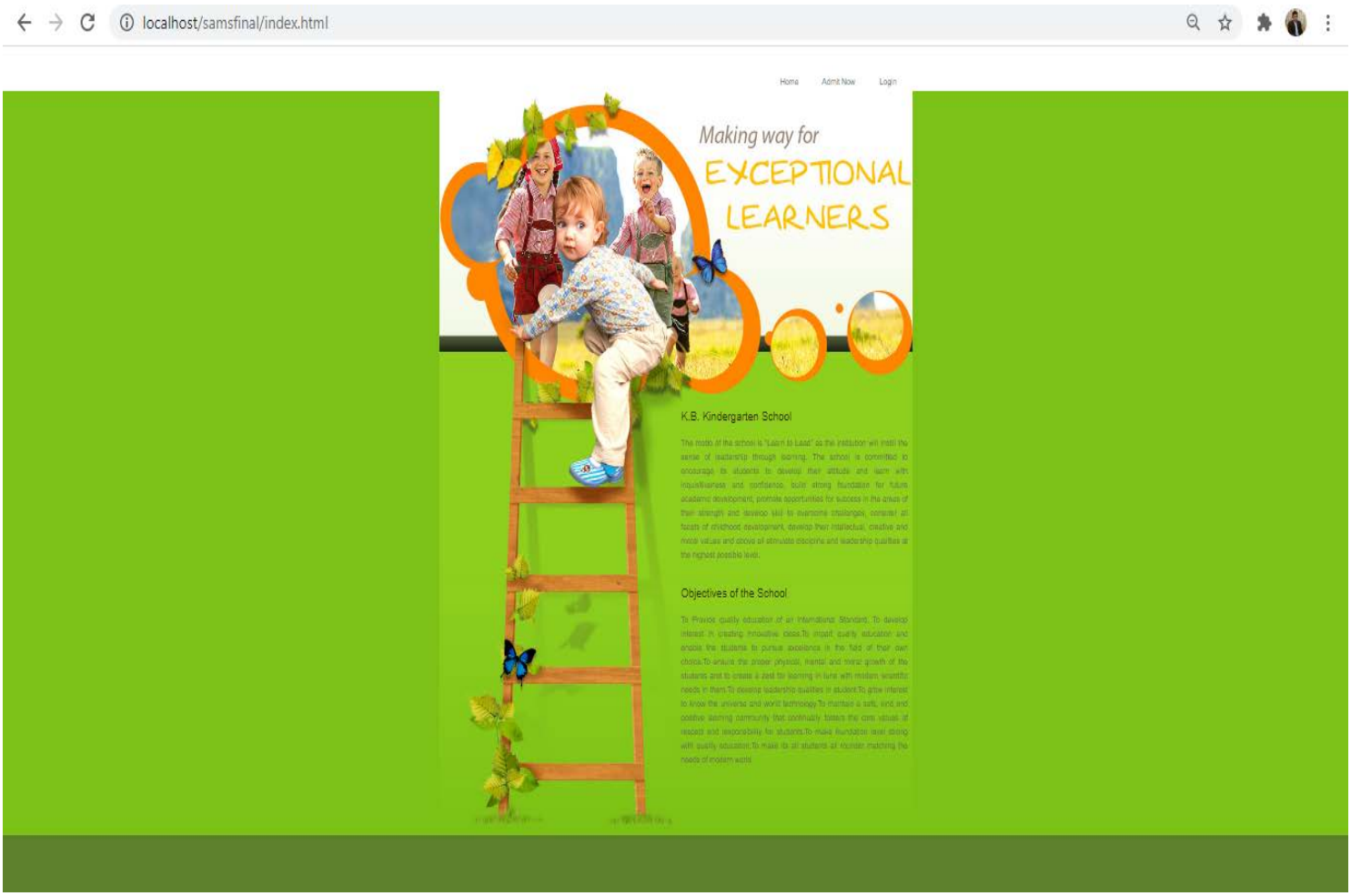

Figure 5. 5:Home Page

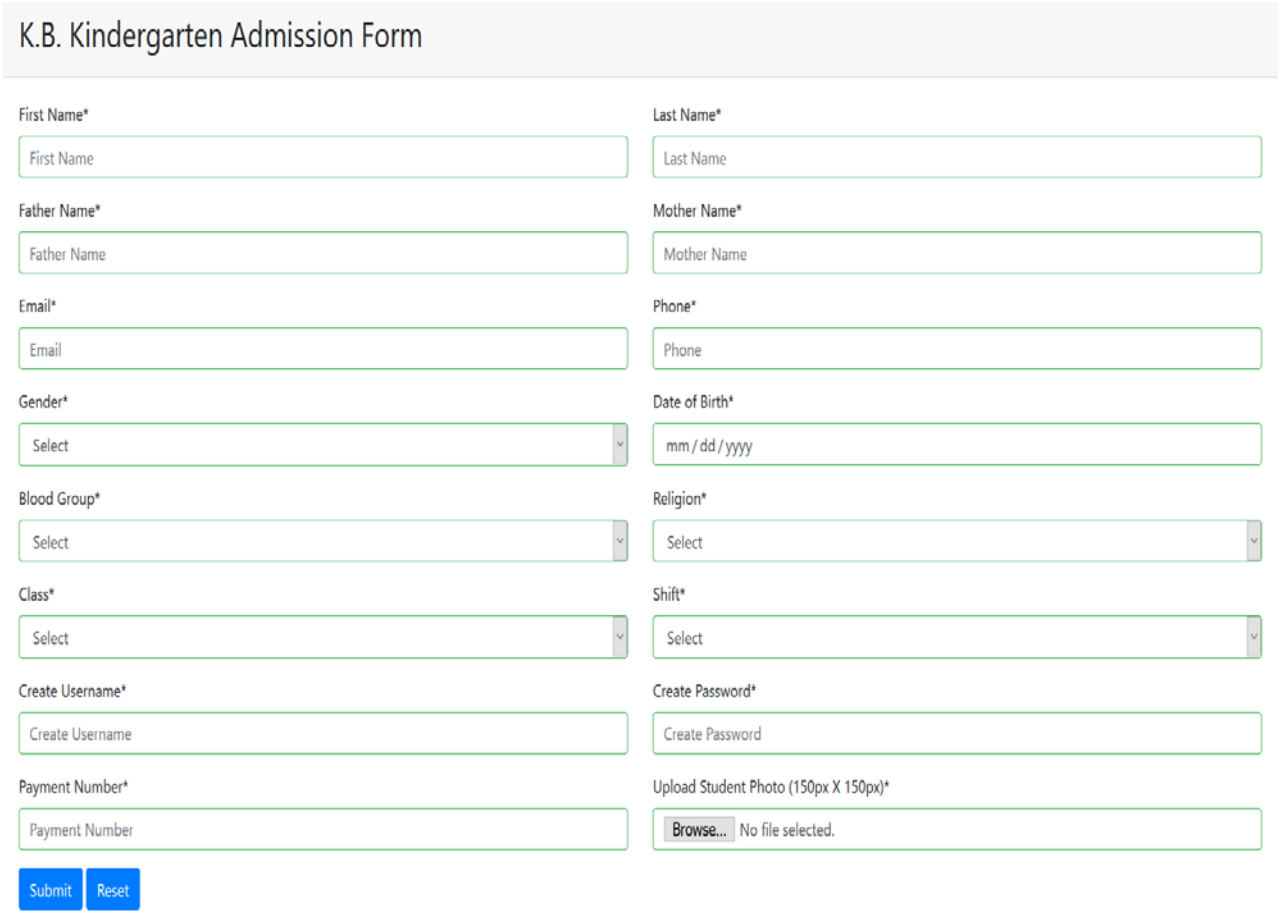

Figure 5. 6: ***Admission Form***

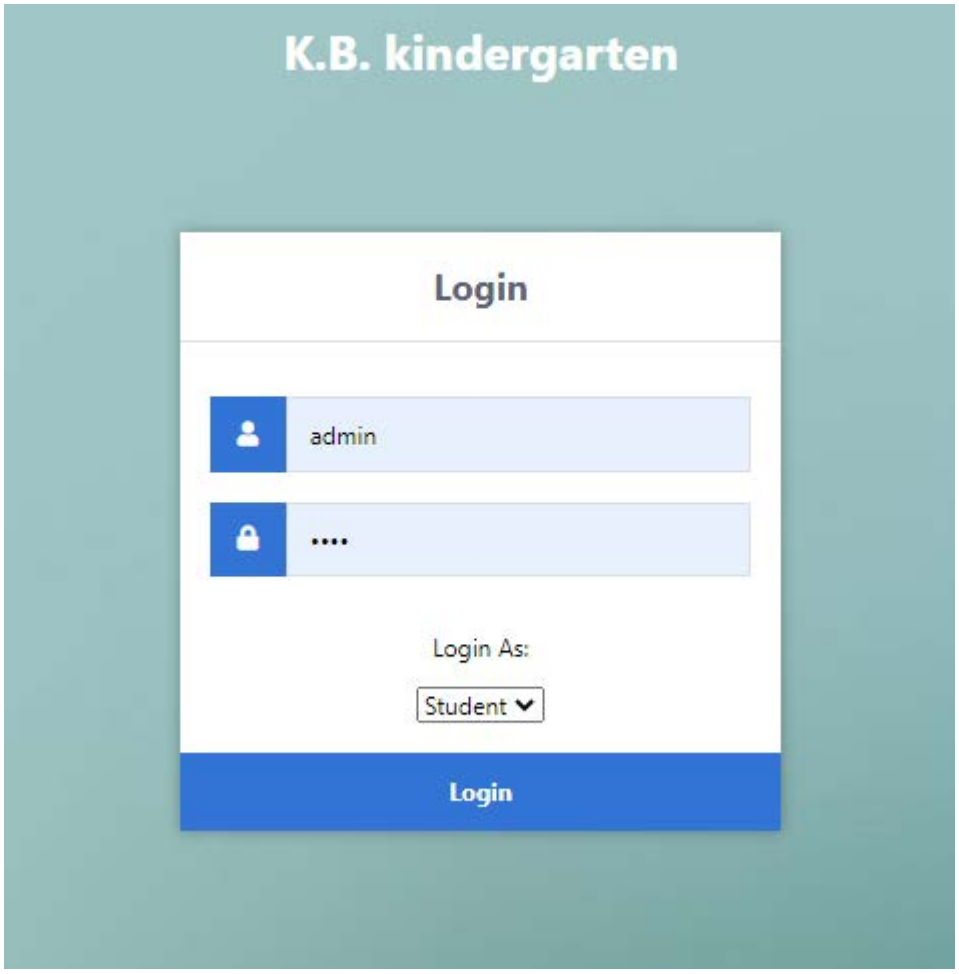

*Figure 5. 7****: Admin Login Page***

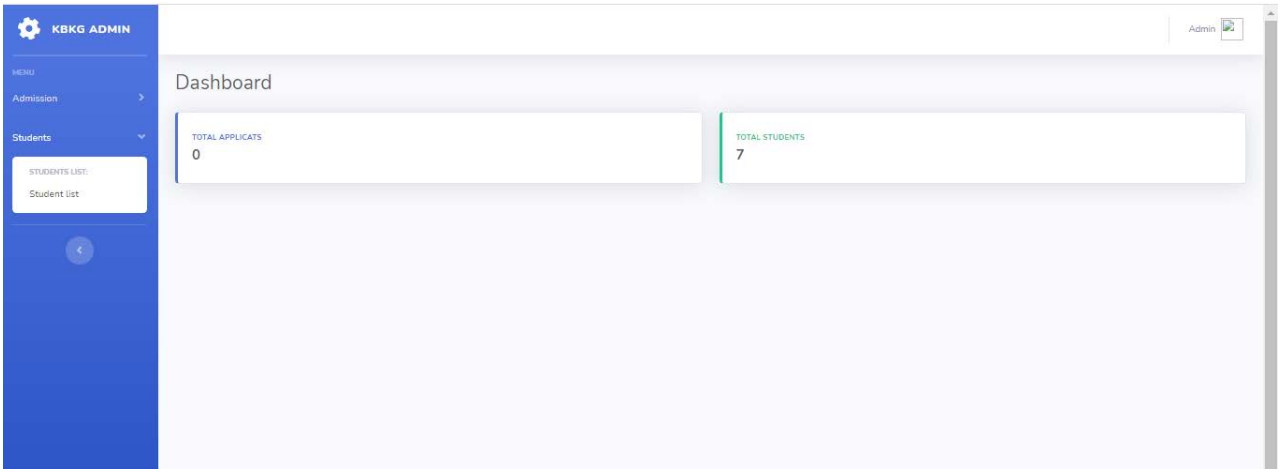

*Figure 5. 8**: Admin Dashboard***

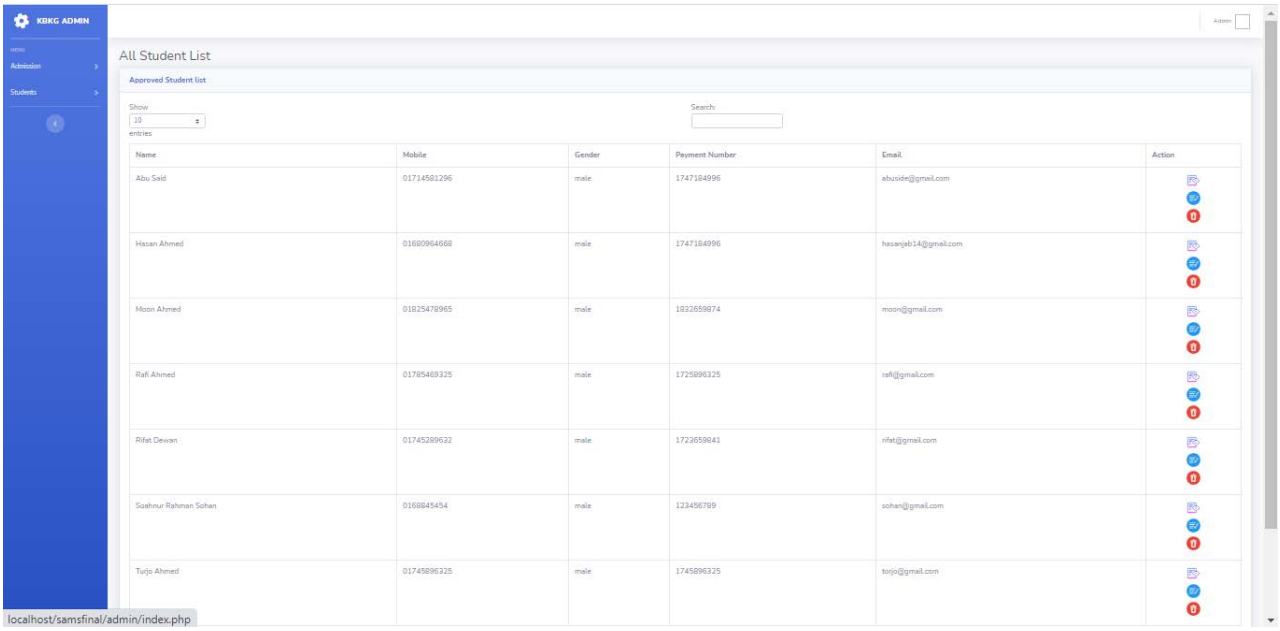

*Figure 5. 9**: Student View – Update - Delete - Search***

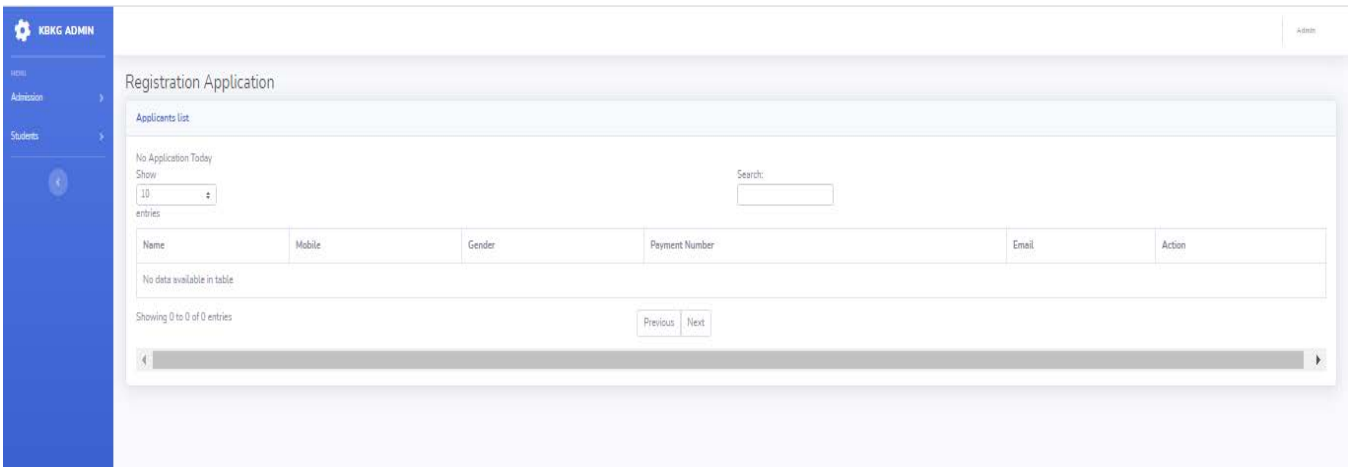

Figure 5. 10: ***Admin View – Approve***

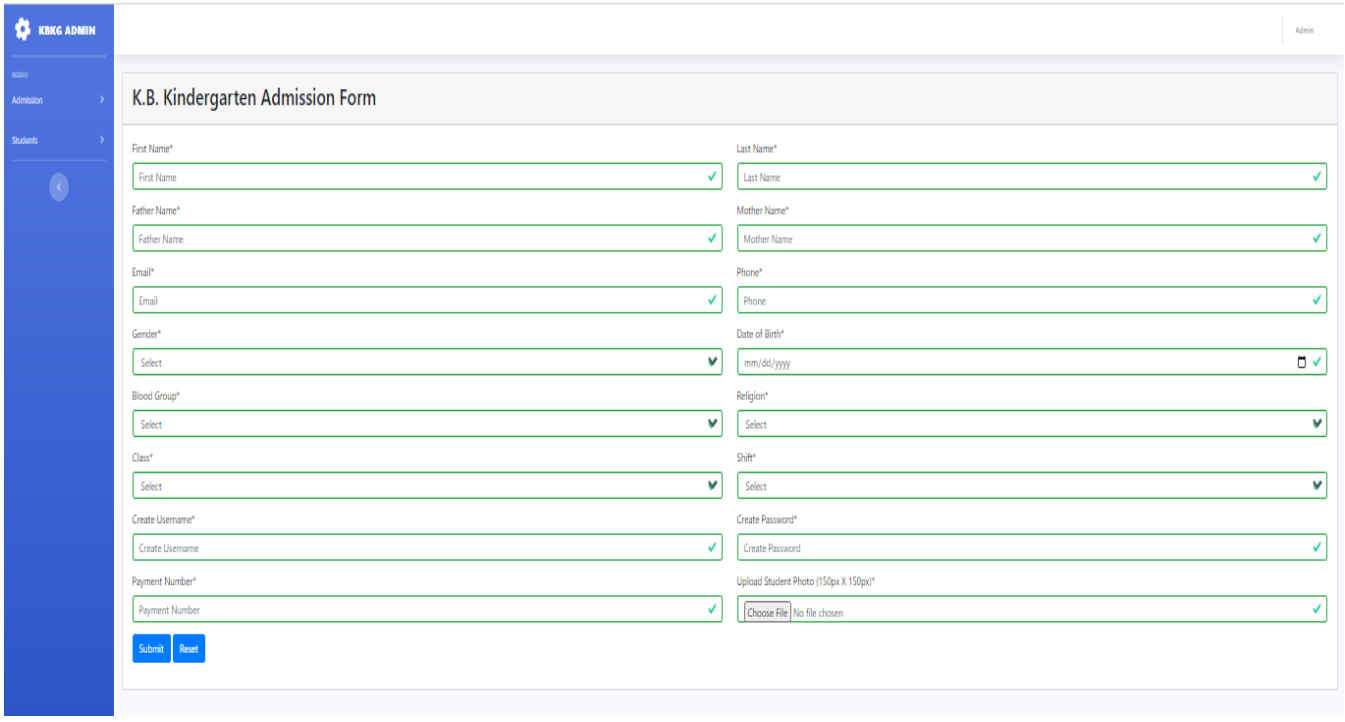

Figure 5. 11: ***Admin Add Student***

Figure 5. 12: ***Student Login***

Figure 5. 13: ***Student Approval or Rejection Confirmation Page***

Chapter 6: Quality Assurance

6.1 System Quality Management

A quality management software system that is automated and connects all departments is essential for a regulated or ISQ-compliant company. A QMS or a TQM (total quality management) system can connect each phase in a products development lifecycle with every department in a company. This gives everyone an opportunity to provide feedback. Automated, routing, with escalation, ensure the rapid responses to inputs needed from the department. By building quality into products as opposed to forcing QA to bear the burden of the responsibility, everyone wins, engineering, regulatory, QA, manufacturing, sales and marketing

The quality of software is assessed by a number of variables. These variables can be divided into external and internal quality criteria. External quality is what a user experiences when running the software in its operational mode. Internal quality refers to aspects that are code-dependent, and that are not visible to the end-user. External quality is critical to the user, while internal quality is meaningful to the developer only. Some quality criteria are objective, and can be measured accordingly. Some quality criteria are subjective, and are therefore captured with more arbitrary measurement.

Quality Assurance Process

Quality Assurance makes sure the project will be completed based on the previously agreed specifications, standards and functionality required without defects and possible problems. Its monitors and tries to improve the development process from the beginning of the project to ensure this.it is oriented to ‘’prevention’’.

System Testing Methods

- **Black - Box Testing:** Black-box testing which is also known as behavioral testing focuses on the functional requirements of the software. It enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program. Black-box testing method will be applied to test the modules of LMS.

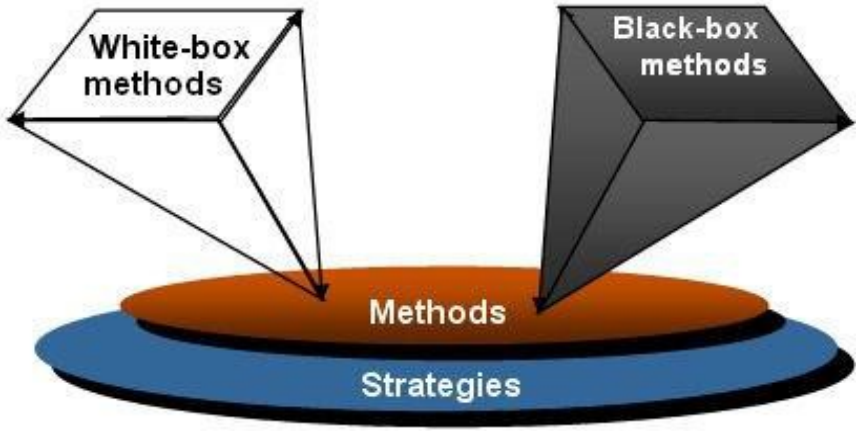

*Figure 6. 1**: System Testing***

White Box Testing: White-box testing, which also known as glass-box testing, is a test case design method that uses the control structure of the procedural design to derived test cases. Using white-box testing methods, software engineer can derive test cases that,

1. Guarantee that all independent paths within a module have been exercised at least once.
2. Exercise all logical decisions on their true and false sides
3. Execute all loops at their boundaries and within their operational bounds
4. Exercise internal data structures to ensure their validity.

6.2 System Testing Design

Table 6. 1: ***Testing Scenario No: 01***

Scenario	Login testing scenario of our system
Input's	Username and password of admin for login
Desired Output's	When enter username, password then get access level define.
Actual Output's	For login our system works properly.
Verdict	Getting result from desired outputs and actual outputs decided this system is successful for login.

Table 6. 2: ***Testing Scenario No: 02***

Scenario	Student info insert testing scenario of our system
Input's	Admin insert student details
Desired Output's	Student info will show for accept or reject.
Actual Output's	We check this process and get actual outputs
Verdict	Our system is worked correctly and successfully.

Table 6. 3: ***Testing Scenario No: 03***

Scenario	Information insert testing scenario of our system
Input's	Students insert their info
Desired Output's	Start time will add into db
Actual Output's	We check this process and get actual outputs
Verdict	Our system is worked correctly and successfully.

Table 6. 4: ***Testing Scenario No: 04***

Scenario	Update students info testing scenario of our system
Input's	Admin insert new information about existing student.
Desired Output's	Update report will show
Actual Output's	Our desired output access to actual and practical output. So, this is successful.
Verdict	Our system is worked correctly and successfully.

Table 6. 5: ***Testing Scenario No: 05***

Scenario	Final result generation testing scenario of our system
Input's	Students will request to generate result.
Desired Output's	After login system will generate a result.
Actual Output's	Our desired output access to actual and practical output. So, this is successful.
Verdict	Our system is worked correctly and successfully.

Chapter 7: Conclusion

7.1 Future Plan

This software is a web application. By this software, a school can manage it's admisison process. Admin of school can issue admission . By this limited time we can develop the core features of this system but in
future it can be possible to add more features e.g.

- Online payment gateway
- More backend and database security
- More user friendly interface
- More module will be included.
- Mobile SMS notification (for student)
- Change password module for admin
- Make a report for the student admission

7.2 Conclusion

Our project is only a humble venture to satisfy the needs in Development of School Admisison Management System. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the organizer.

The objective of software planning was to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.

Although we could not include all the functionality that we thought to include in this software, we worked hard to make it fully functional in this small amount of time. As our knowledge of programming grows by time, we shall look to make it a better one in every possible way. We hope this software project serve well to its benefactor and give idea to programmer about an automated Programming Contest Management and related problems.

We thank our Supervisor and Coordinator to supporting us by giving user requirements, valuable advices to accomplish project goal. We believe we can use this experience in our future career as well.

7.3 Contribution Table

*Table 7. 1**: Contribution table of SAMS project***

SL.	ID Number	Name	Contribution
1.	18203010	Md. Mehedi Hasan Real	Developing the existing system and preparing chapter- 6 of report.
2.	18203012	Md. Eyalid Onim	Preparing requirement engineering and cost estimation (chapter-2 of report) of project.
3.	18203030	Ismail Hossain	Drawing ERD diagram, chapter – 1 and 2 of report.
4.	18203038	Sabiha Sultana	Preparing gantt chart, chapter- 5 and 8 of report.
5.	18203044	Hasan Ahmed	Managing whole team, Preparing presentation, Preparing formal parts, Chapter-3, 4 and 7of report.

Chapter 8: Bibliography

8.1 References

1. Apache Friends. (2020). What is XAMPP? *apachefriends.org*.
2. The PHP Group. (2020). PHP. *PHP.net*.
3. W3School. (2020). HTML Introduction. *W3School*.
4. Wikipedia. (2020). CSS. *wikipedia.org*.
5. Wikipedia. (2020). JavaScript. *wikipedia.org*.
6. Wikipedia. (2020). MySQL. *wikipedia.org*.