



School Management System

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Abstract

Education system forms the backbone of every nation. And hence it is important to provide a strong educational foundation to the young generation to ensure the development of open-minded global citizens securing the future for everyone. Advanced technology available today can play a crucial role in streamlining education-related processes to promote solidarity among students, teachers, parents and the school staff.

Education is central to development. It is one of the most powerful instruments for reducing poverty and inequality and lays a foundation for sustained economic growth. With this aim currently our government has given special emphasis to the educational sector and school improvement activities such as continuous professional development for teachers, training and upgrading teachers and capacitating schools with manpower and materials are among the major actions which have been taken in both primary and secondary schools.

In order to facilitate and simplify these actions one of the major tool is to have automated school management system. School Management System(SMS) consists of tasks such as registering students, attendance record keeping to control absentees, producing report cards, producing official transcript, preparing timetable and producing different reports for teachers, parents, and officials.

Automation is the utilization of technology to replace human with a machine that can perform more quickly and more continuously. By automating SMS documents that took up many large storage rooms can be stored on few disks. Transcript images can be annotated. It reduces the time to retrieve old transcripts from hours to seconds. However, the school system in the government schools of Pakistan is not automated and the record officers generate transcripts and reports manually and the school administrators use their experienced knowledge of miss and hit approaches to prepare timetables.

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Chapter 1

Introduction

1.1 Introduction

Now a days education plays a great role in development of any country. Many of education organizations try to increase education quality. One of the aspects of this improvement is managing of school resources. School Management System carried on by any individual or institution engaged in providing a services to students, teachers, guardians and other persons are intermediary that performs one or more of the following functionalities Student Admission, Employee Registration, Student List, Employee List, Student Attendance, Employee Attendance, Student Routine, Result Management, Payroll & Accounts. School Management System (SMS) is such a service which provides all services for an educational institute to make your life easier and faster by assuring its performance. Easy User Management System, Easy Admission Process, Easy Attendance System[1].

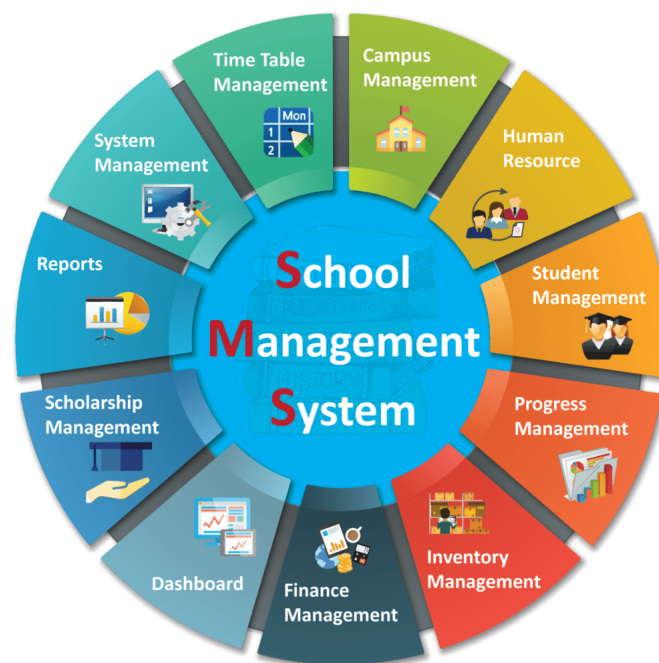


Figure 1.1: School Management System

SMS is a system that will provide you a birds eye view of the functioning of the entire educational institution. By using the latest technologies and helps to make

decision making a lot faster, effective and easier than ever before and will improve the overall quality of education of the institution. The implementation of the system was done using PHP, html and SQL Server technologies, allowing system to be run in Windows OS. SMS managed education institution by simplifying and automating processes and addressing the needs of all stake holders helping them to be more efficient in their respective roles.

1.2 Objectives

The objective of this project describes how the aim of the project can be achieved. The objectives of the projects are as follows:

- To choose appropriate methodology to follow for the development of School Management System.
- To enhance the use and efficiency of authorized School management system.
- To provide easy, safe, effective and attractive interface design that will be easy to navigate.






1.3 Project Scope






Developments in information technology have been impacting upon educational organizations, schools management have been using management system in order to improve the efficiency of administrative. In management system, in order to ensure the efficiency and effectiveness of school administration the design of right management system come to be key issue. The system that the author is aiming to develop is a school management system that will help to keep track of all data with better and reliability of a computerized system. The proposed school management system will come out with enhance functions and features which the current system does not possess, these functionalities will be explained in detail in the next coming chapter [1].






The proposed system will control, manage data and process to support administrators, student, teachers, and secretaries. Other features that the proposed system will provide is proper security, which means the system, will be more secured that only the authorized personnel can access the system. The system restricted that the student cannot access the system only the authorized users can access the system. These features empower the administrators, teachers and secretary to spend less time managing administrative works and to avoid data redundancy and loss of data and other problems involve in the current system. Information processing and sharing saves a significant amount of paper in the school. The new features will add value to organization and improve the schools image[2].

1.4 Features of Web-Based School Management System

Following table will let us know about the different features of the web-based school management system.

 <p>Multi Login</p>	<p>Multi login support in which different people can login.</p> <ul style="list-style-type: none"> • Admin • Teacher • Students • Parents
 <p>Student Management</p>	<p>Will manage student's affair</p> <ul style="list-style-type: none"> • Attendance • Marks • Classes • Fee • Exams • Grades
 <p>Teacher Management</p>	<p>Will manage teacher's details</p> <ul style="list-style-type: none"> • Classes • Marks Entry • Salary • Timetable • Exams
 <p>Attendance Management</p>	<p>Attendance management will also be done</p> <ul style="list-style-type: none"> • Attendance chart • Present • Absent
 <p>Salary Management</p>	<p>Will manage salary of teachers and other administration</p> <ul style="list-style-type: none"> • Total salary • Monthly salary • Yearly salary

 <p>Timetable Management</p>	<p>Timetable will also be set by the web and can be easily available to everyone</p> <ul style="list-style-type: none"> • Teachers • Students • Parents
 <p>Exam Management</p>	<p>Exams management will also be the part of our project</p> <ul style="list-style-type: none"> • Exam's creation • Grades • Classes • Timetable
 <p>Petty Cash Management</p>	<p>All the other petty cash management will also be done</p> <ul style="list-style-type: none"> • Fines • Prizes
 <p>Event Management</p>	<p>Event management is also part of the project</p> <ul style="list-style-type: none"> • Event notification • Event details • Event arrangement details • Roles and organization
 <p>Notification Management</p>	<p>Notification management of different things will also be done.</p> <ul style="list-style-type: none"> • Event • Fee • Exams • etc.

 <p>Online Chat</p>	<p>An online chat platform will also be provided in which student, teacher and parents can also communicate with each other.</p>
 <p>Classroom Management</p>	<p>Classroom management from their availability for every class will be also mentioned.</p>
 <p>Grade Management</p>	<p>Grade management including</p> <ul style="list-style-type: none"> • every exam marks • every class marks • every subject mark
 <p>Subject Management</p>	<p>Subjects will also be managed by the web base school management system</p>
 <p>Invoice Management</p>	<p>All the invoice management will also be done by the system.</p>

1.5 Report Breakdown

In this introduction chapter we have given an overview about the project, objectives of our projects, features which are the part of our project. In the chapter number two, we will provide a details about the tools/platform, hardware and software requirement specifications, in third chapter, We will describe how the database of the project is being implemented, in fourth chapter we will briefly discuss how the user interface of the project is being designed, and fifth chapter will contain the results, conclusions and future directions.

Chapter 2

Literature Review

In the chapter 1 we have given the introduction of our project, motivation behind doing that, project scope, Features of Web-Based School Management System and a report break down. Our introduction chapter is giving a complete overview of this project. This chapter is about studies and literatures that are related to the School Management that extended the knowledge related to our project idea, guide us to improve and develop our proposed system more effectively.

2.1 Literature Survey

This is a new attempt to speed up the process of managing data in an educational institute. The existing systems are time-consuming and there are many difficulties faced by the administrator to get information about each and everyone within the organization. Presently in many institutions, most of the tasks are carried on manually such as Employee Registration, Student List, Employee List, Student Attendance, Employee Attendance, Student Routine, Result Management etc,. There are many difficulties faced by instructors, parents, administration, and students for carrying out data related to different activities.

2.2 Introduction to Database Management System

DBMS stands for Database Management System. We can break it like this DBMS= Database +Management System. Database is a collection of data and Management System is a set of programs to store and retrieve those data. Based on this we can define DBMS like this: DBMS is a collection of inter-related data and set of programs to store and access those data in an easy and effective manner. Database system are basically developed for large amount of data. When dealing with huge amount of data, there are two things that require optimization: Storage of data and retrieval of data.

According to the principles of database systems, the data is stored in such a way that it acquires a lot less space as the redundant data(duplicate data) has been removed before storage. Along with storing the data in an optimized and systematic manner, It is also important that we retrieve the data quickly when needed. Database system ensures that data is retrieved as quickly as possible.

2.3 Applications of Database Management System

The development of computer graphics has been driven both by the needs of the user community and by the advances in hardware and software. The applications of database are many and varied; it can be divided into four major areas:

1. Hierarchical and network system
2. Flexibility with relational database
3. Object oriented application
4. Interchanging the data on the web for e-commerce

Chapter 3

Proposed Methodology

In the previous chapter, we have discussed the theories that support this project related to the School Management System. In this chapter we will proposed our methodology for this project while giving details about proposed methodology ER diagram, database implementation, software being used in this project.

3.1 Proposed Methodology

The proposed School Management System (SMS) will dealt with all this issues that the current system is facing all the process are suggested to be executed more efficiently and effectively without any difficulties.

All the processes and operations in the current school management system are executed manually inform of paper. This makes all the process difficult to the school administrators, teachers and other officials to carry out. All the records of students, staffs and many other important data related to the school are kept indifferent files. There is a need to rehabilitate their system to computerized school management system so that that they will efficiently carry their work without any difficulties.

The proposed system will remove the all the manual process of ,updating record, searching data eliminate registering student and teachers, forming classes ,assigning teachers , entering student exam details, generating time table, uploading student result, and many other functionalities needed by the end users. By automating the system, it will extremely improve the way school function, which will also improve efficiency and managerial effectiveness[1].

There is also high risk of losing data in the current manual system because school management use to store all their data in the same place but different files.This problem will be address by introducing new feature in to the proposed SMS that will enable the administrator to store information about, students, teachers, subject, exam details, and time table, attendance and so on, and also the teacher will be able to enter students marks and so that back up can be done when any data lost etc. All this features will be simplified in an easiest way so that they will carry out their workloads efficiently without any difficulties.

3.2 Entity Relation Diagram

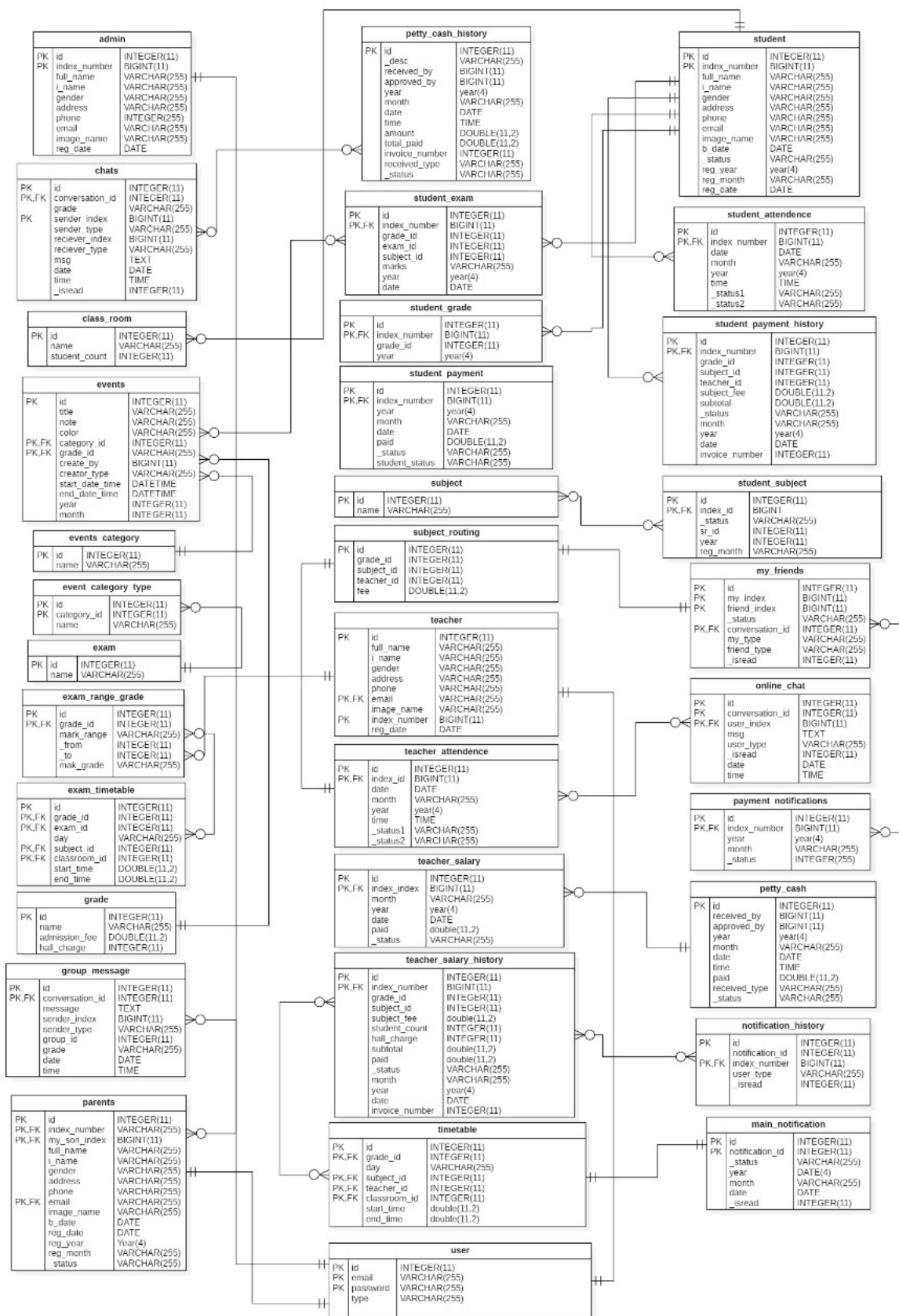


Figure 3.1: Entity Relation Diagram of SMS

3.3 Tools/Platform, and Softwares

Following are the software and their requirements which we have used for this project.

3.3.1 MySQL Workbench CE 8.0

MySQL Workbench is a visual database design tool that integrates SQL development, administration, database design, creation and maintenance into a single integrated development environment for the MySQL database system. It is the successor to DBDesigner 4 from fabFORCE.net, and replaces the previous package of software, MySQL GUI Tools Bundle.



Figure 3.2: MySQL Logo

3.3.2 HTML

The HyperText Markup Language, or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.



Figure 3.3: HTML Logo

3.3.3 PHP

PHP is a general-purpose scripting language geared towards web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally

stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Preprocessor.



Figure 3.4: PHP Logo

3.3.4 XAMPP

XAMPP (/ˈzmp/ or /ˈ?ks.mp/) 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. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible.



Figure 3.5: XAMPP Logo

3.4 Project Working Manual

Following steps will provide a complete guide to run your project using XAMPP.

1. Download XAMPP and install that. <https://www.apachefriends.org/download.html>
2. Search XAMPP Control Panel in the search bar and open that.

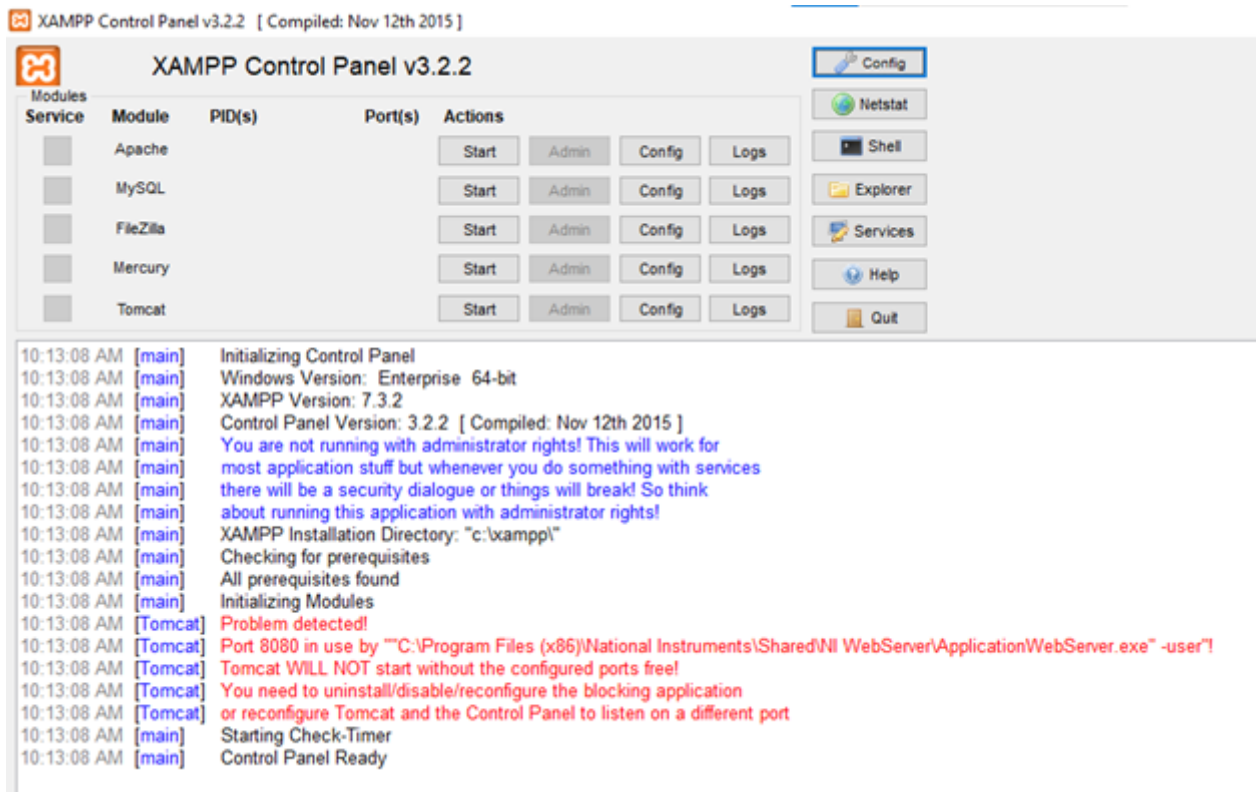


Figure 3.6: XAMPP Control Panel View

3. Start Apache and MySQL.

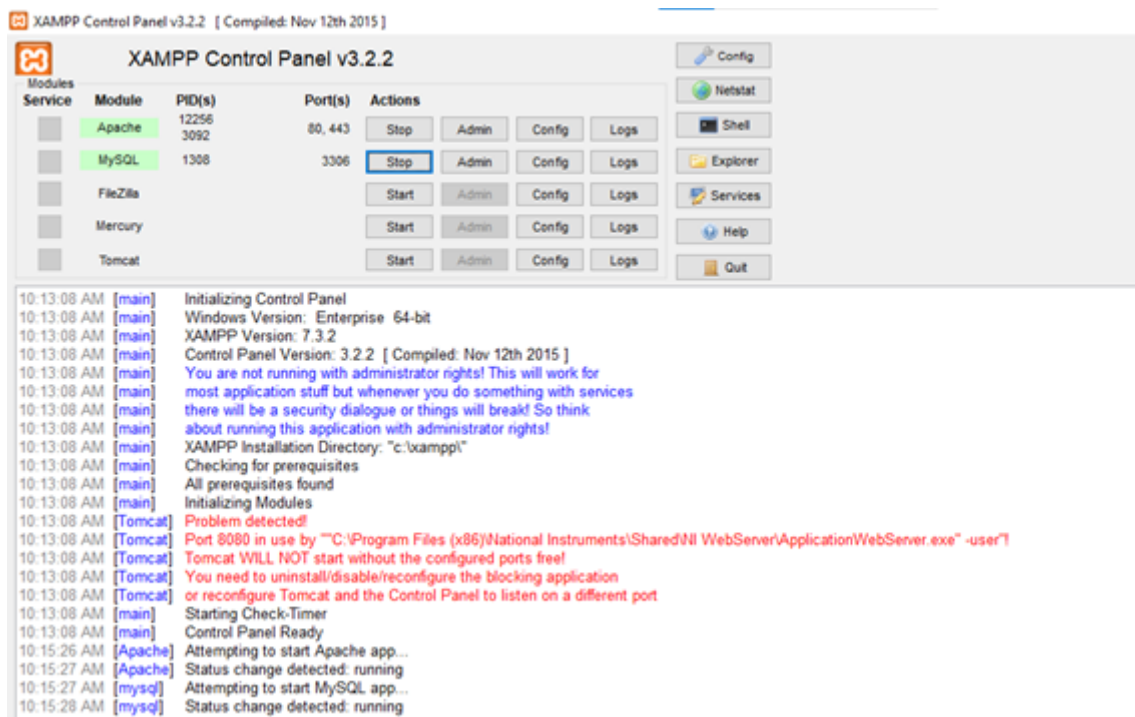


Figure 3.7: XAMPP Control Panel View

4. If MySQL doesn'tt start, Search services on search bar.

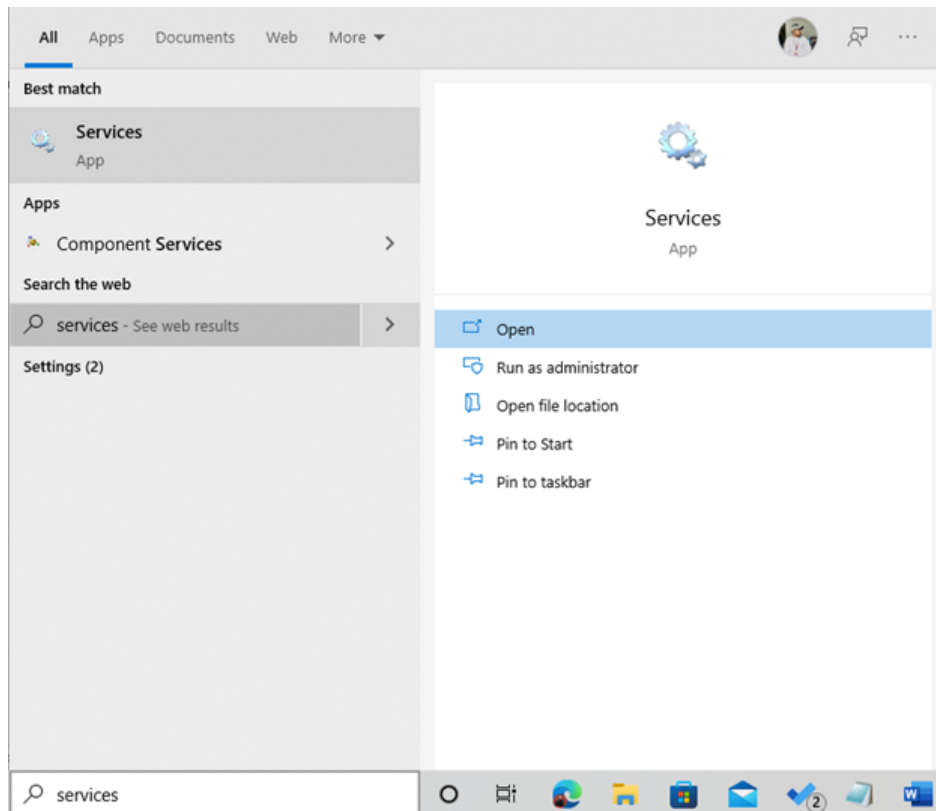


Figure 3.8: Search Panel View

5. Search mySQL, right click on that and stop from there.

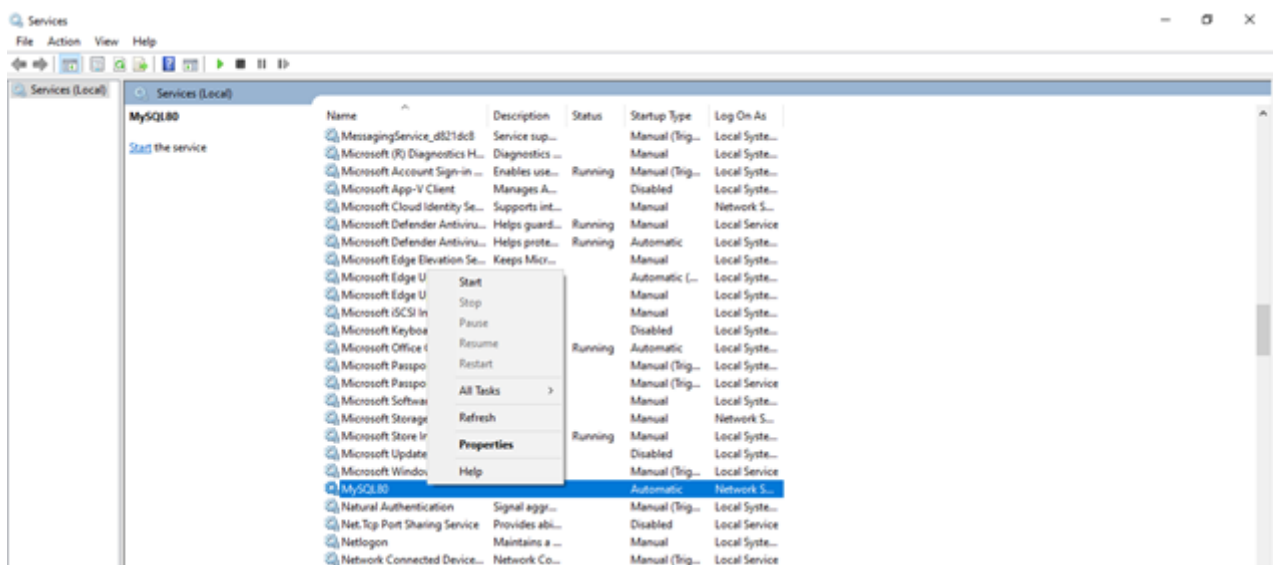


Figure 3.9: Services Panel View

6. Go back to XAMPP Control Panel and Start Apache and MySQL.

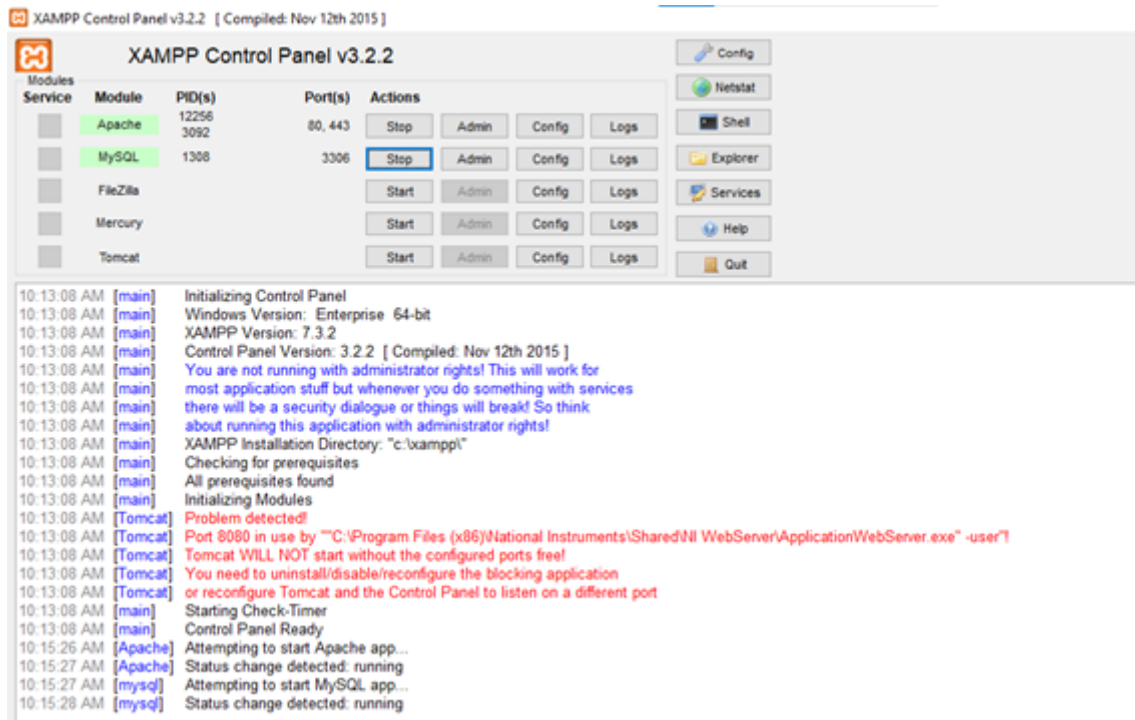


Figure 3.10: XAMPP Control Panel View

7. Find the project folder and copy from there.

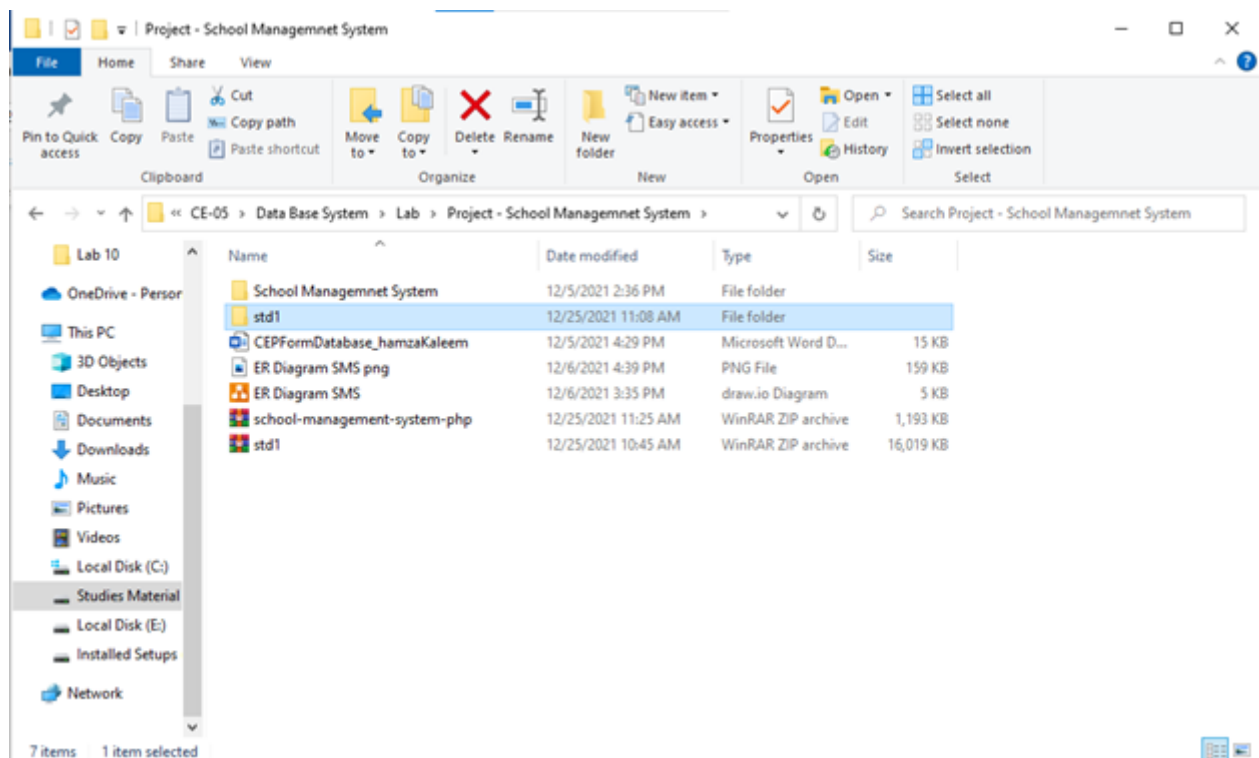


Figure 3.11: File Location to be Copied

8. Go to xampp folder where you installed this, than go to htdocs and paste the project file there.

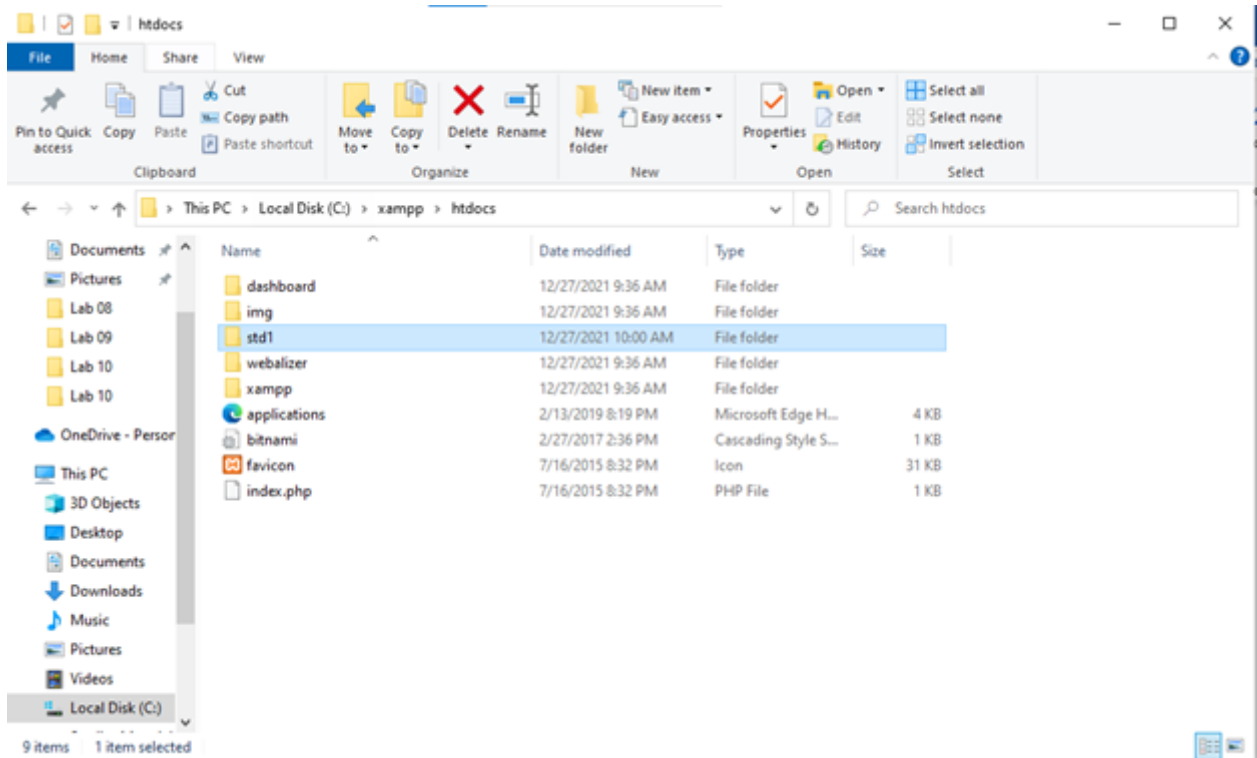


Figure 3.12: Destination File Location

9. Open any browser and search <http://localhost/phpmyadmin/>

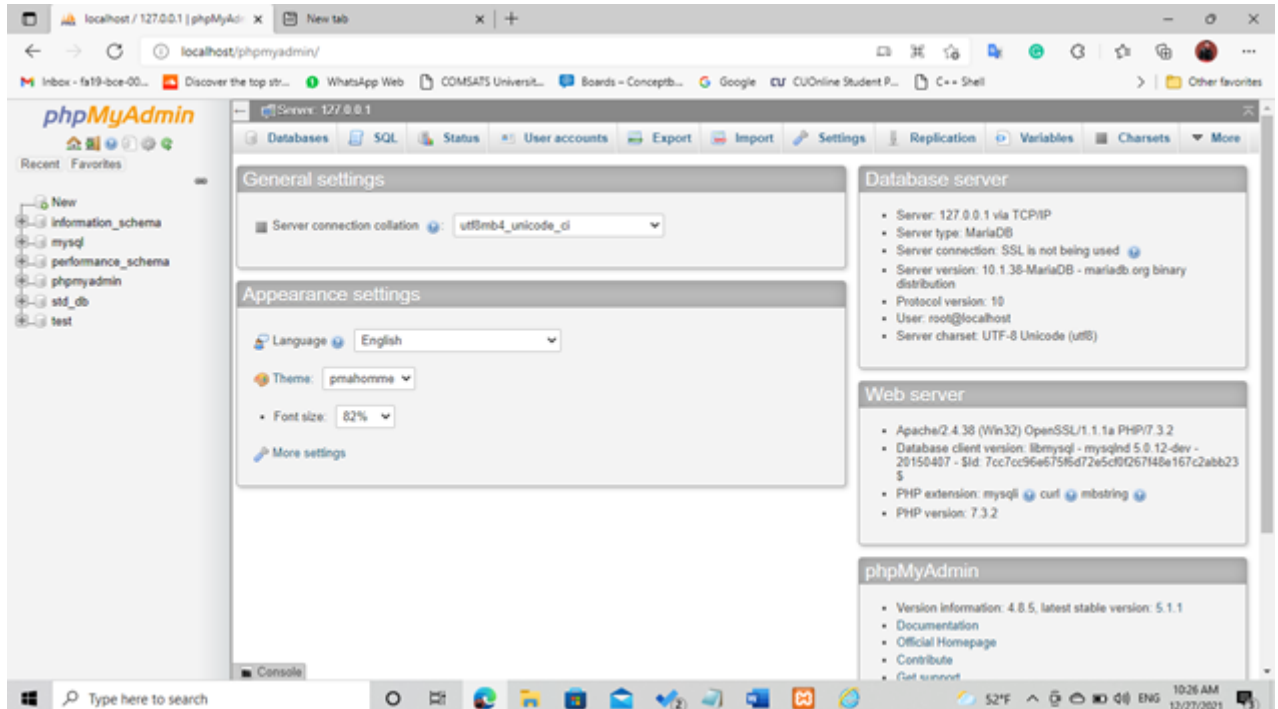


Figure 3.13: phpmyadmin view

10. Click on the databases

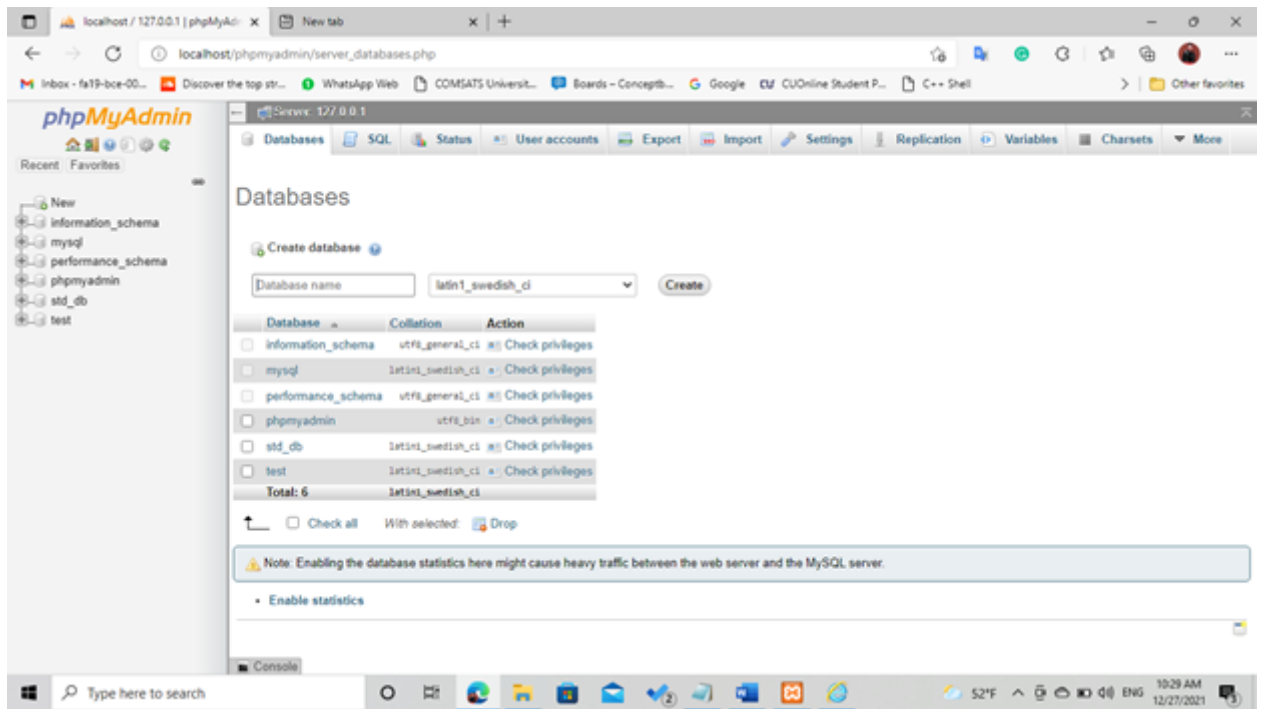


Figure 3.14: phpmyadmin Database view

11. Enter the name of the database of the project and press create e.g., std_db

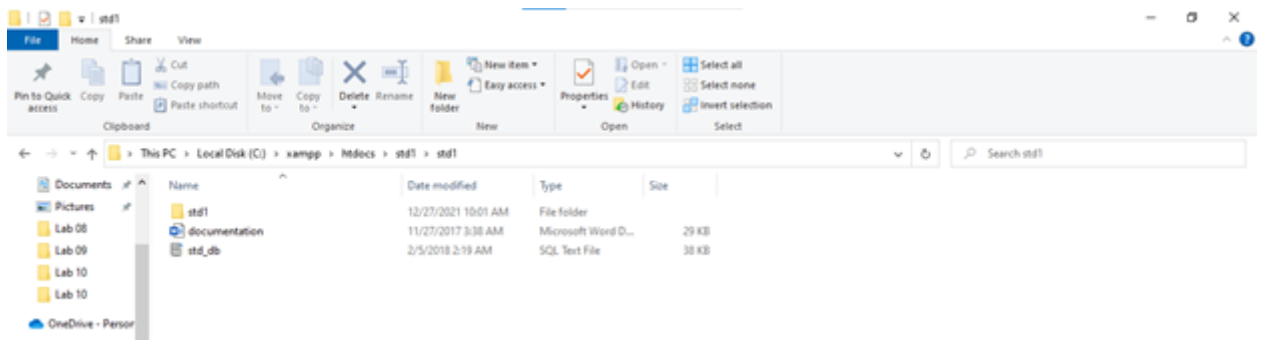


Figure 3.15: phpmyadmin view

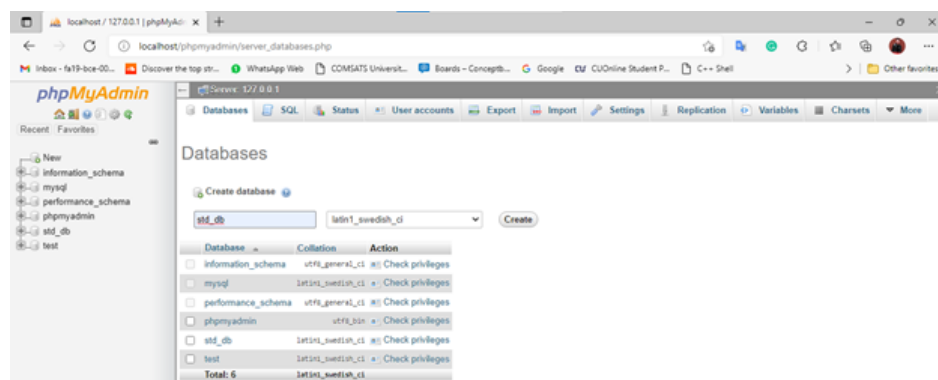


Figure 3.16: phpmyadmin view

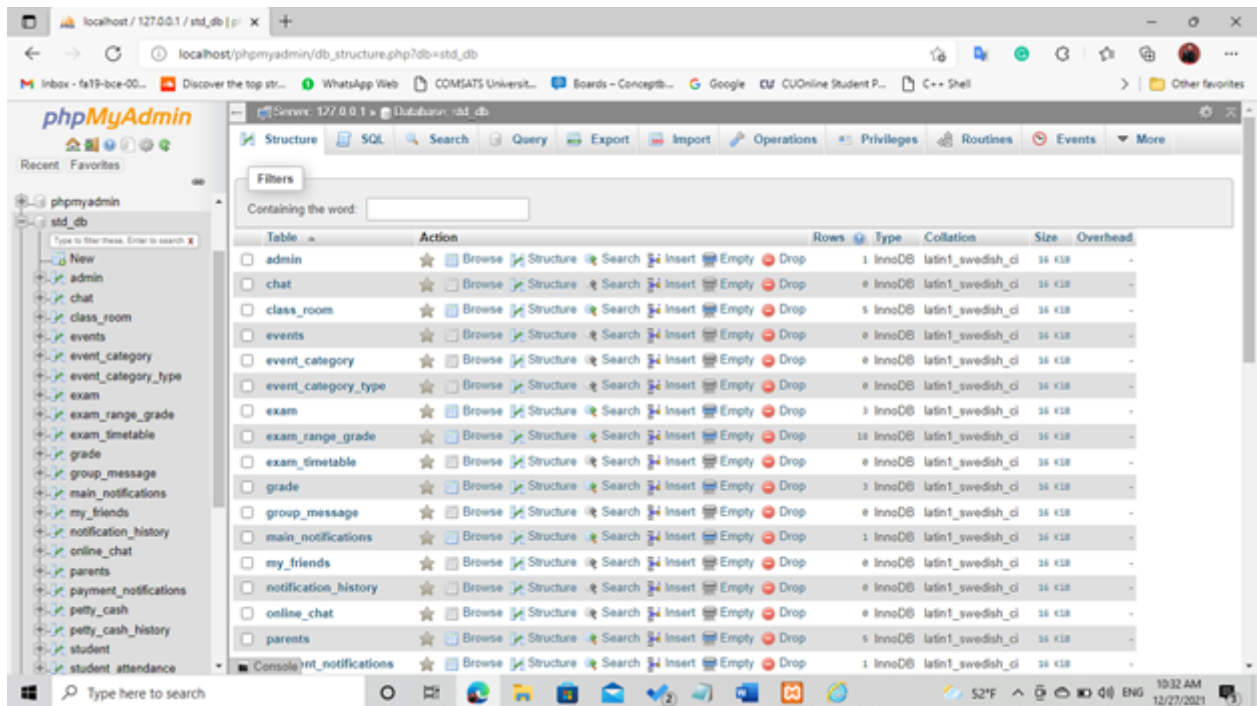


Figure 3.17: phpmyadmin view

12. Click on the import

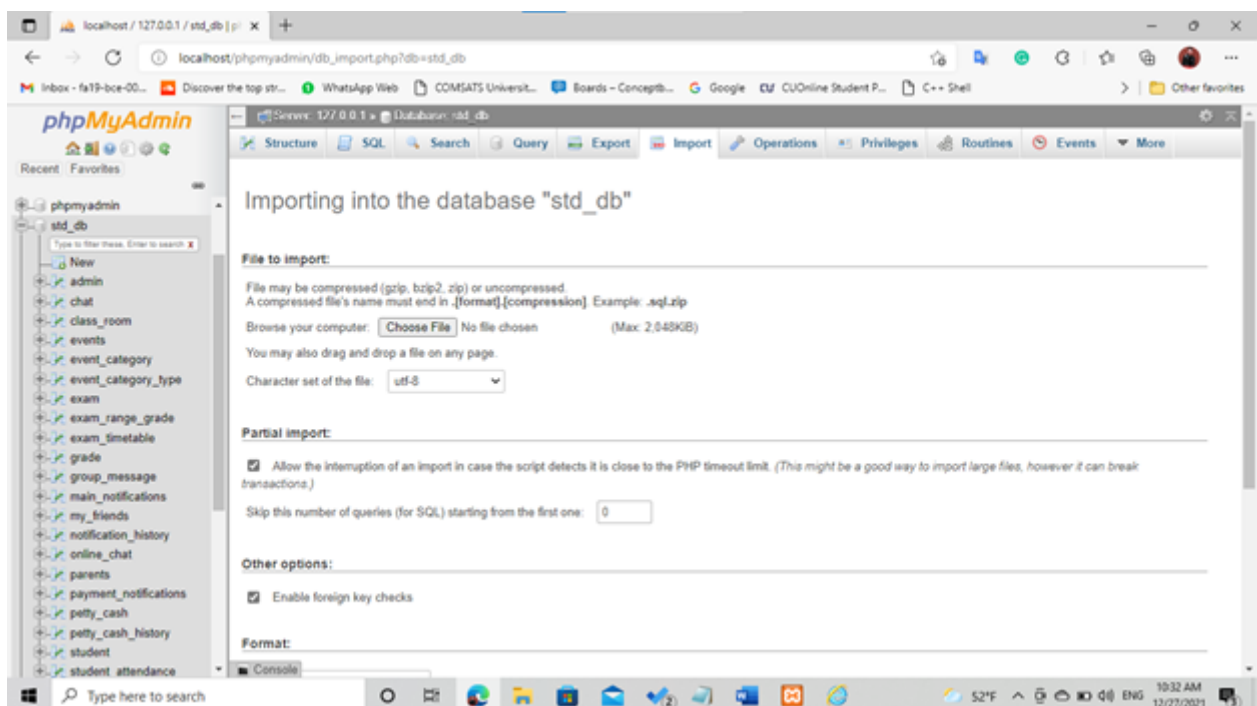


Figure 3.18: phpmyadmin view

13. Choose the same database file and import this

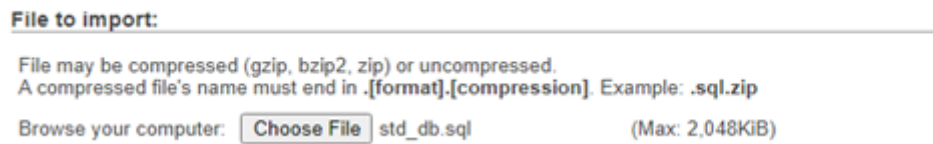


Figure 3.19: phpmyadmin view

14. Scroll down and press on the go

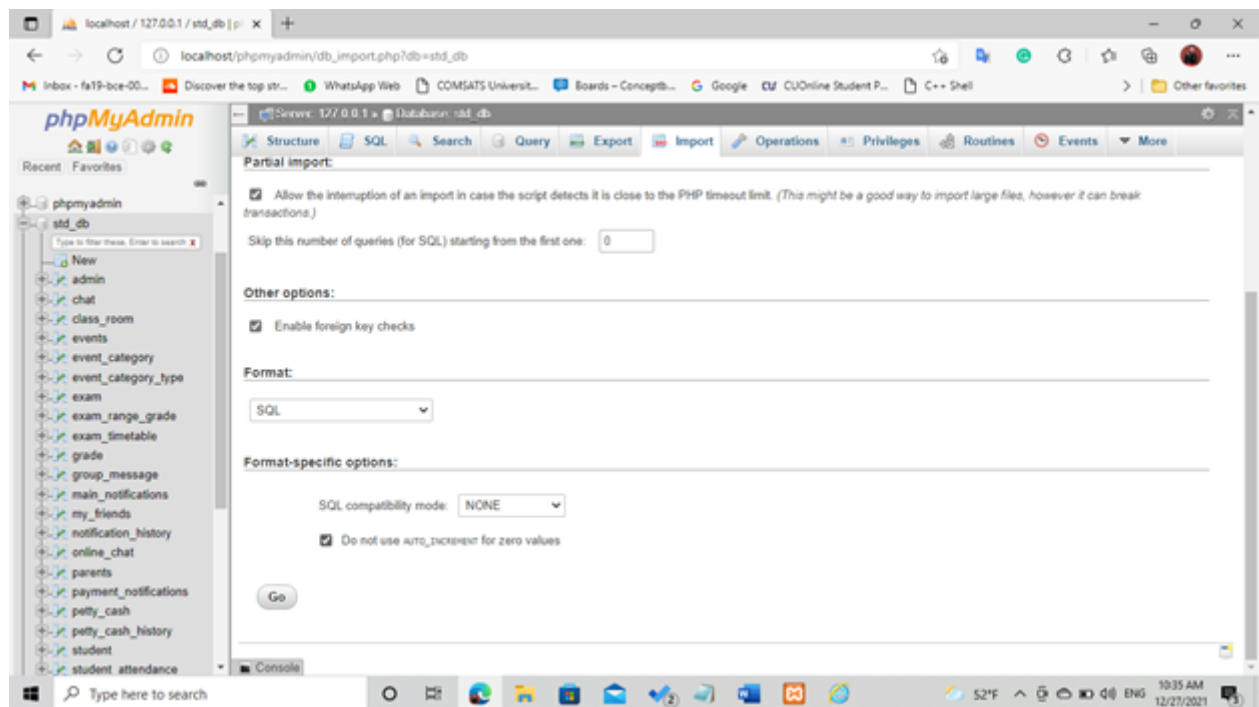


Figure 3.20: phpmyadmin view

15. Open a new tab and search localhost/projectFoldername e.g., localhost/std1

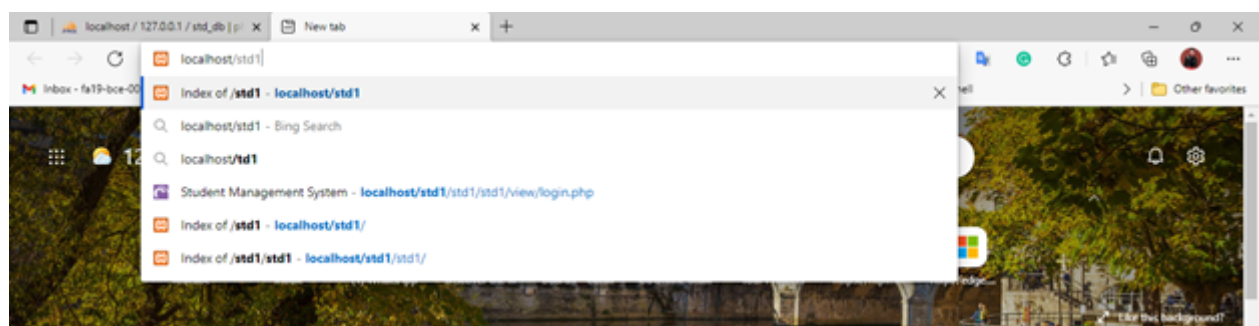


Figure 3.21: localhost/std1 view

16. Click on the project name again.



Figure 3.22: localhost/std1 view

17. Here you go

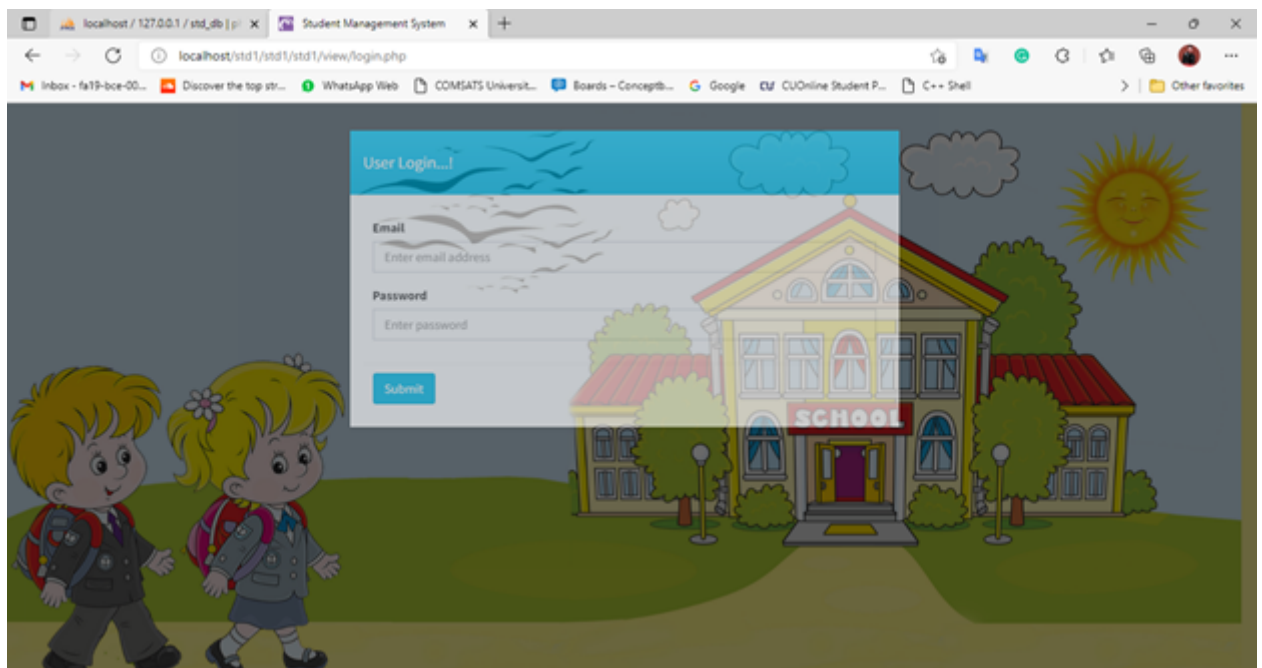


Figure 3.23: Project Front Page

Chapter 4

Results

In the previous chapter, we have discussed the methodology and the software we have used to implement this code. In this chapter we are presenting the result of our project.

4.1 Home Page

Home page of the project is shown in the following figure.

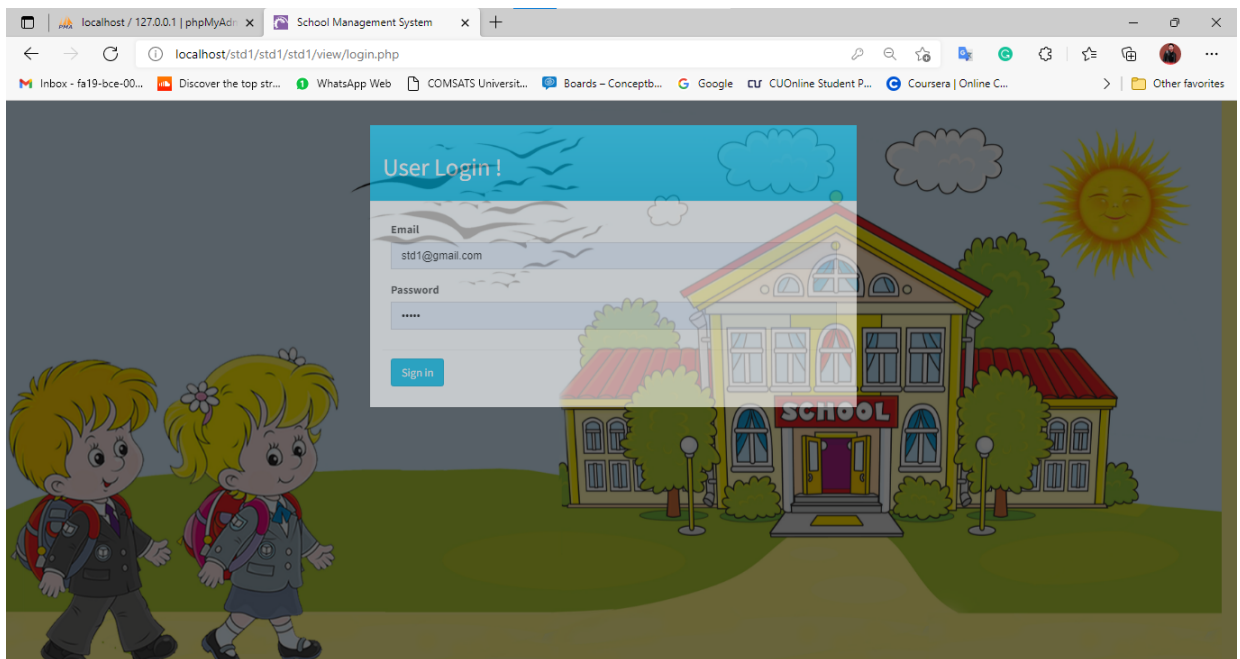


Figure 4.1: Home Page of SMS

As we have mentioned in our project feature that it is providing multi login so home page of the school management system is providing us following four (4) login options:

1. Admin
2. Teacher
3. Student

4. Parents

4.2 Admin

We have two admin at the moment but we can add more as much as we want.

1. email:admin1@gmail.com, password: 12345
2. email:admin2@gmail.com, password: 12345

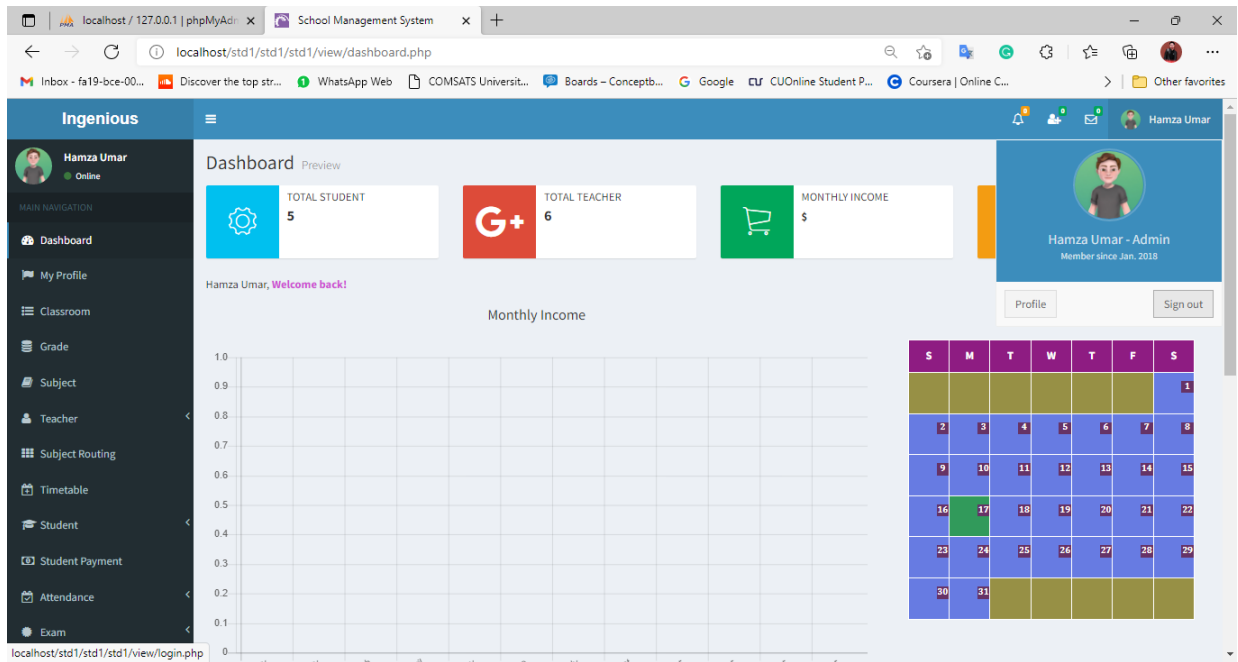


Figure 4.2: Admin View

Admin have all the access on the web base school management system and can add and edit everything on the web.

4.3 Teacher

Teacher is having access on the tabs mentioned on the left side of the screen. We have some teachers at the moment but we can add more as much as we want.

1. email:t1@gmail.com, password: 12345
2. email:t2@gmail.com, password: 12345
3. email:t3@gmail.com, password: 12345
4. email:t4@gmail.com, password: 12345
5. email:t5@gmail.com, password: 12345
6. email:t6@gmail.com, password: 12345

Following figure is showing a teacher login view.

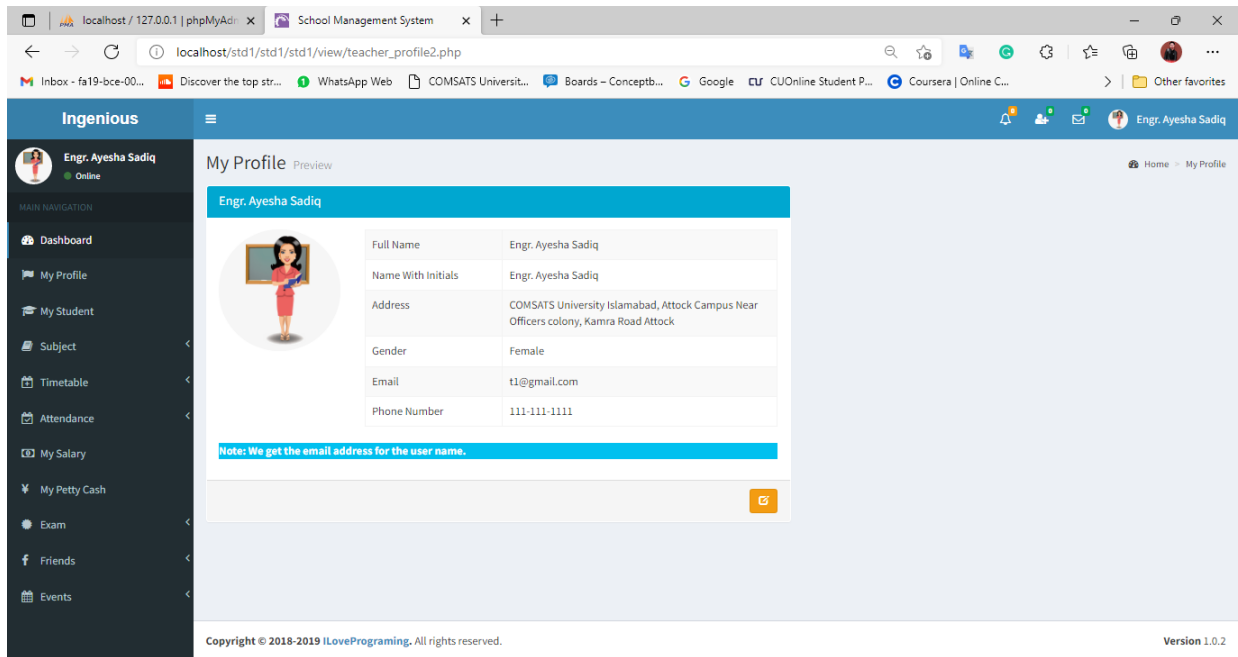


Figure 4.3: Teacher View

4.4 Student

A student view is showing in the following figure, a student have some access to the resources given to them by developers. We have some students at the moment but we can add more as much as we want.

1. email:std1@gmail.com, password: 12345

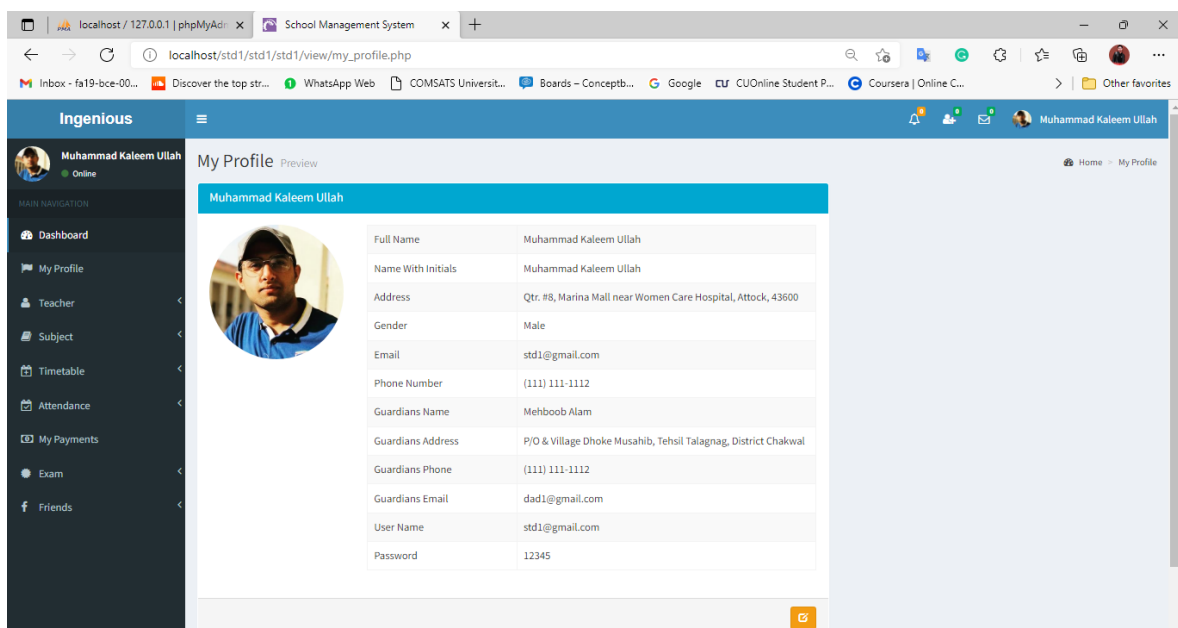


Figure 4.4: Student View

4.5 Parents

A parent's view is showing in the following figure. We have some parents at the moment but we can add more as much as we want.

1. email:dad1@gmail.com, password: 12345

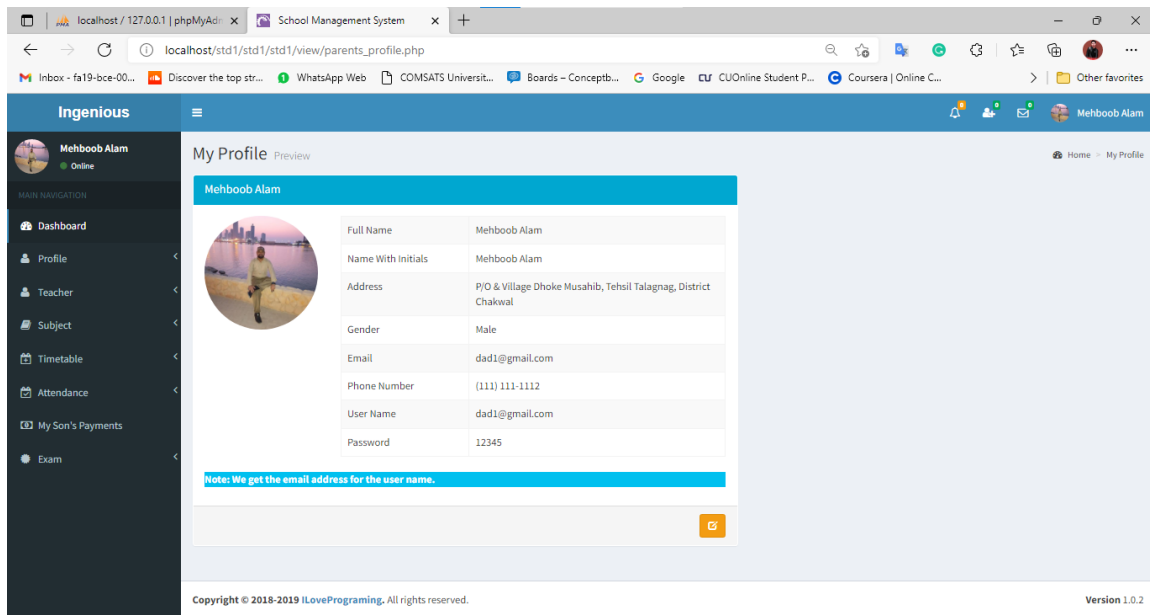


Figure 4.5: Parent View

4.6 PHP Admin View

A phpmyadmin view is showing in the following figure. We can add, edit and can delete at this platform.

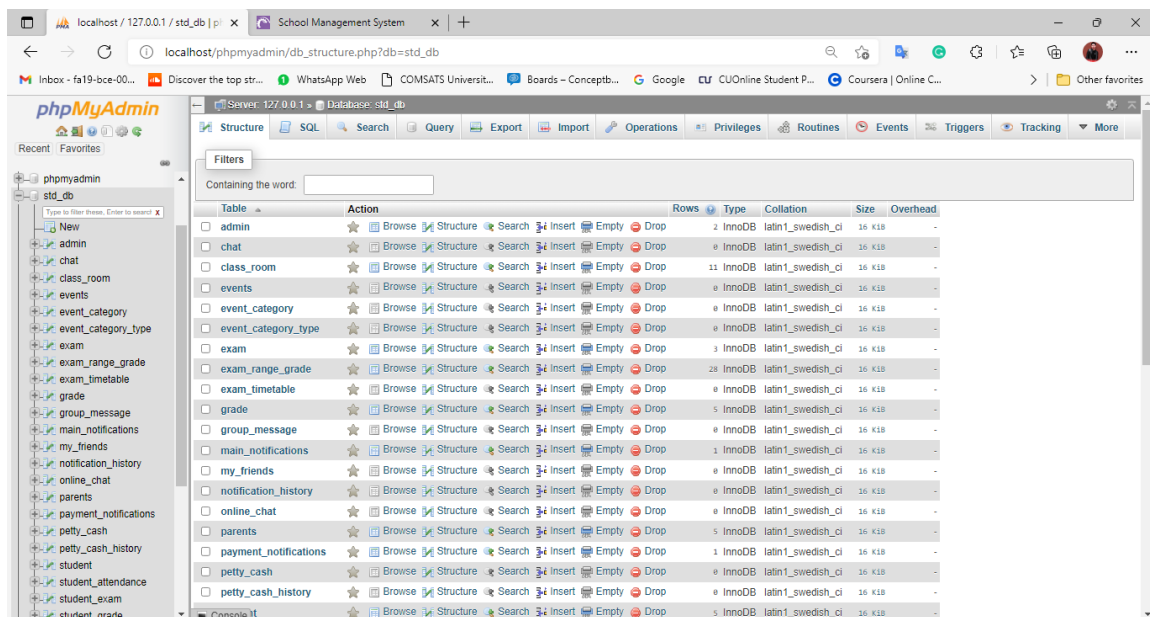


Figure 4.6: phpAdmin View

Chapter 5

Conclusion and Future Work

5.1 Conclusion

In conclusion, a database is a far more efficient mechanism to store and organize data than spreadsheets; it allows for a centralized facility that can easily be modified and quickly shared among multiple users. Having a web based front end removes the requirement of users having to understand and use a database directly, and allows users to connect from anywhere with an internet connection and a basic web browser. It also allows the possibility of queries to obtain information for various surveys. Due to the number of users reading and modifying student data in the department, it is an ideal use for such a system.

5.2 Strengths of The Proposed System

Some of the proposed system functions and features will be describe in this section:

1. The most important feature of the proposed system is security, which will provide more security to the system such as login with username and password, the system will not allow any user to access the system unless they have user ID and password.
2. The proposed system will provide function of registering student in to the system by the administrator.
3. The proposed system will provide function where by the administrator can add new secretary and new teacher in to the system.
4. The proposed system provides function where by the teacher can enter student marks in to the system and calculate student grade. However, the proposed system includes so many other features which are not presented in the current system.
5. The Proposed system comes with the function of generating students report card.
6. The proposed system comes with the function of creating time table as well as printing the time table

5.3 Future Work

In this report, we have reported a novel idea to design School Management System. But as there is always room for improvement, this idea can be improve more following are the future work for this SMS.

1. We can create an app which will deal the management of the school institutions.
2. We can create that app to make it work for the off line use as well as.
3. We can create this in more efficient way to fully utilize other requirement of the school management.

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