SCHOOL ATTENDANCE SYSTEM

DATABASE PROJECT REPORT

SUBMITTED BY

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As part of the Course **Database Systems– CS52**

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Sept 2022 – Dec 2022

RAMAIAH
Institute of Technology

CERTIFICATE

This is to certify that **DANISH MAHAJAN** have completed the **"SCHOOL ATTENDANCE SYSTEM"** as part of Database Project. We declare that the entire content embodied in this B.E. 5th Semester report contents are not plagiarized.

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Evaluation Sheet

Sl. No	USN	Name	Research Content understanding and Coding (10)	Demo & Report submission (10)	Total Marks (20)
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CONTENT ABSTRACT:

Over the years the manual attendance management has been carried across most of educational institutions. To overcome the problems of manual attendance, we have developed “Web based attendance Management System and Mobile Android Version”. Attendance Management System is based on web server, which can be implemented on any computer or Android Phone.

In This application, PHP is a server sides language, MySQL and PHP is used as back-end design and HTML, CSS and JavaScript are used as front-end tools. The system communicates with database residing on a remote server. It calculates automatically, the attendance percentage of students Without any manual paper-based work.

The system facilitates the end users with interactive design and automated processing of attendance management. With the effective use, any Institute can apply the “Attendance Management System” for conducting quick attendance and getting better results in less time.

Introduction

Attendance Management System is software developed for daily evaluation of students in their continuous assessment record, and performance in accordance with the principle of the institution. It is facilitated to access the performance and information of attendance of a particular Student in a particular semester of study. The information is sorted by the teachers, instructors and advisors, as provided by the student for a particular day throughout a complete semester. This system will also enable the evaluation of student regular presence in various lectures which will determine the eligibility of the student to sit for a semester examination. Attendance Management System basically has two main modules for proper functioning

• First module is handled by the user which can be a teacher or Instructor. This user has a right of making daily attendance, updating, editing and generating reports to the students.

• Second is handled by a user which is the student, he has less privilege to the access of the system; the student can only view his own record by providing his username and password. He will be able to see the percentage of his attendance as well as his results. If any comment or change of class schedule the student can see in his own profile only.

Background, motivation and scope

Background and motivation:

School attendance is a list of names in every class that use for all teachers to take their student attendance in every day. This is to help teachers to enter the attendance of student. However, in school now is lack of new technology by using in online attendance system.

School Attendance Management System is a web computing system that can be used in order to gain the data of student attendance in school. The system will be able to store list of student name in systematic and collect the number of attendances for each student. This new system will replace the old approach the attendance management and increase efficiency of work done using an appropriate tools and technique. This system must conduct all the basic function likes add name of student and collect number of attendances

Finally, the system will provide high ability to store student name into database so it will be stored in a more organized manner. The system can be helpful to the teacher using the keyboard without using the paper and pen to write the names of student and it will help out the management in managing the work.

Objectives

Generally, the objective to develop the new system is to replace the manually management system for school attendance, which not efficient to be used in today's environment. For the main objectives of this project have been identified as follows:

a) To design a management school attendance system that can make via online.

b) To implement the web computing in the system.

c) To develop the functional of the system in helping the user to manage the class attendance

Scope

The intention of developing Attendance Management System is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the desired reports automatically at the end of the session or in the between of the session as they require. This project is basically a desktop application which means self, Contained software runs on the system on which it has been installed under the user control and it will work for a particular institute or college only

Methodology

Research Methodology

Main methodology activities held during the research is acquiring information and knowledge about school attendance system through reading books, and researches that were previously done in related area. All the research materials were obtained over the internet, Wikipedia and other websites. Next step taken is reading, comprehending and analyzing literature review and matching information obtained. This research emphasizing school attendance system, which include usability, user-friendly interface, reliability, costing and meeting needs of target users

Project Activities

In order to fully use MySQL server technology, it is essential to make sure that the database is well designed. The files names chosen to label all the tables created within the database attempt to reflect the table's purpose and, therefore, contribute to well-design system. The intimal step in designing was to decide, according to the requirements and specifications of the project, which tables should be created, and what type of information each one should hold.

Requirements

XAMPP Server

XAMPP is often used for web, development and internal testing, it also can be used for serving live websites.

Xampp Server is available freely in two versions that is 32 and 64 bits. Keep in mind that Wamp server 2.5 is not compatible with Windows XP, SP3, and Windows Server 2003. Its older versions are available on Source Forge.

Apache

The Apache HTTP Server, informally called Apache, is the world's most popular web server software that in 2009 it became the first web server software to serve more than 100 million websites. The Apache development began in early 1995 and originally based on the NCSA HTTPserver. Apache is developed and maintained by an open community of developers under the patronage of the Apache Software Foundation. Mostly used on a Unix-like system, the software is also available for a vast variety of operating systems, including Microsoft Windows, Open VMS, NetWare and TPF.

MySQL

SQL stands for Structured Query Language. MySQL is an open-source Relational Database Management System (RDBMS); it is a popular database for use in web applications, and is a central part of the greatly used LAMP (Linux, Apache, MySQL, Perl/PHP/Python) open-source web application software stack. MySQL is used by many applications like, WordPress, Joomla, TYPO3, Drupal, MyBB, phpBB, MODX and other software. Numerous large scale websites including Google, YouTube, Facebook, Twitter, and Flickr are also using MySQL. On all platformsexcluding Windows, MySQL sends with no GUI (Graphical User Interface) to administer MySQL databases or managing the data held within the databases. Users may install MySQL Workbench by downloading separately or simply may use the command line tools. Numbers of third-party GUI tools are also available.

PHP

It stands for PHP: Hypertext Pre-processor but, originally stood for Personal Home Page. It is a server-side scripting language that designed for web development, as

well as used for general purpose language. It was created in 1994 by Rasmus Lerdorf, in the present time the reference execution of PHP is produced by the PHP group.

PHPMYADMIN:

It is an open source tool and also, it is free written in PHP, XHTML, CSS, and JavaScript planned to manage the administration of MySQL by using of a web. It is able to perform various missions like creating, modifying databases, tables, fields, executing SQL statements or managing and supervise users.

PhpMyAdmin is being translated into 72 languages in order to make the usage easy to a wide domain of people and it supports both LTR and RTL languages.

Following is some features of the

phpMyAdmin, It is web interface
It administrates multiple severs
It is able to create PDF graphics of the database layout
Importing data from SQL and CSV
Export data to different formats such as SQL, PDF, CSV, XML
and others It works with various Operating Systems

The Sublime Text 3 editor

Sublime Text is a cross platform source code editor written in C++ and python. It originally supports plenty of programming and markup languages, and its functionality can be increased via users with plugins.

It is downloaded from www.sublimetext.com/3, site.

HTML AND CSS

HTML stands for Hypertext Markup Language and CSS stands for Cascading Style Sheets are the crucial technologies for creating web pages. HTML supplies the structure of the page, and CSS the layout, for diversity of devices. Together with scripting and graphics, HTML and CSS are the fundamental of building Web Applications and Web pages.

HTML provides designers and developers the following facilities,

- To design forms for directing transactions with remote services, for use in making reservation, searching for information, ordering products, and others
- Retrieving online information through hypertext links.
- To include video and sound clips, spread sheets, and other applications straight intheir documents

Designer can publish online documents with text, headings, tables, photos and others.CSS describes the Web pages presentation, involving layout, colours, and fonts. CSS is separate from HTML, and their separation makes it easy to preserve and maintainsites, share style sheets across pages, and accommodate pages to various environments.

Frameworks

Bootstrap

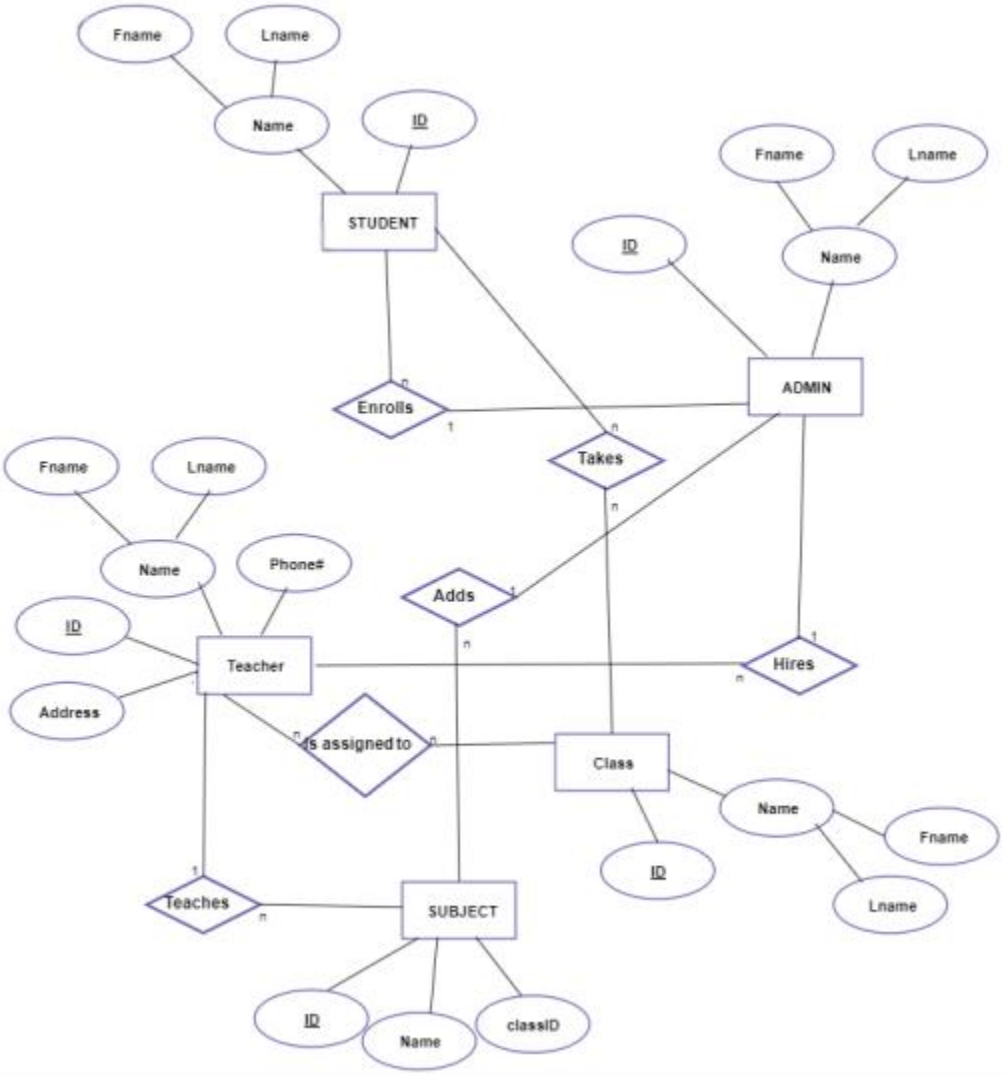
Bootstrap is front-end framework and collection of tools and mechanisms for building web applications. It consists of HTML and CSS based design templates for navigations, forms, buttons, typography, and other interface elements, and also JavaScript extensions.

Bootstrap is free and open source, and its purpose is to make easy the development ofdynamic websites and web applications. It is the most starred project on GitHub, with more than 85,000 stars and 34,000 forks.

JavaScript Framework(jQuery)

jQuery is JavaScript library intended to make simple the client-side scripting of HTML. It is themost popular JavaScript framework, which is free and open-source software licensed under the MIT License.

ER DIAGRAM


Fname
Lname
Name
ID
STUDENT
Fname
Lname
ID
Name
ADMIN
Enrolls
Takes
Fname
Lname
Name
Phone#
Adds
ID
Teacher
Hires
Address
Is assigned to
Class
Name
Fname
ID
Lname
Teaches
SUBJECT
ID
Name
classID

Database Normalization

1NF:

Table structure for STUDENT:

FNAME	LNAME	SID	EMAIL
DANISH	MAHAJAN	1	danish@gmail.com
DANISH	MAHAJAN	1	mahajan@gmail.com
HARRY	VERMA	2	harry@gmail.com

Table structure for TEACHER:

FNAME	LNAME	SID	EMAIL
ABC	XYZ	1	abc@gmail.com
ABC	XYZ	1	xyz@gmail.com
HARRY	VERMA	2	harry@gmail.com

Table structure for class:

CID	FNAME	LNAME
1	Operating	System
1	Database	System

2NF:

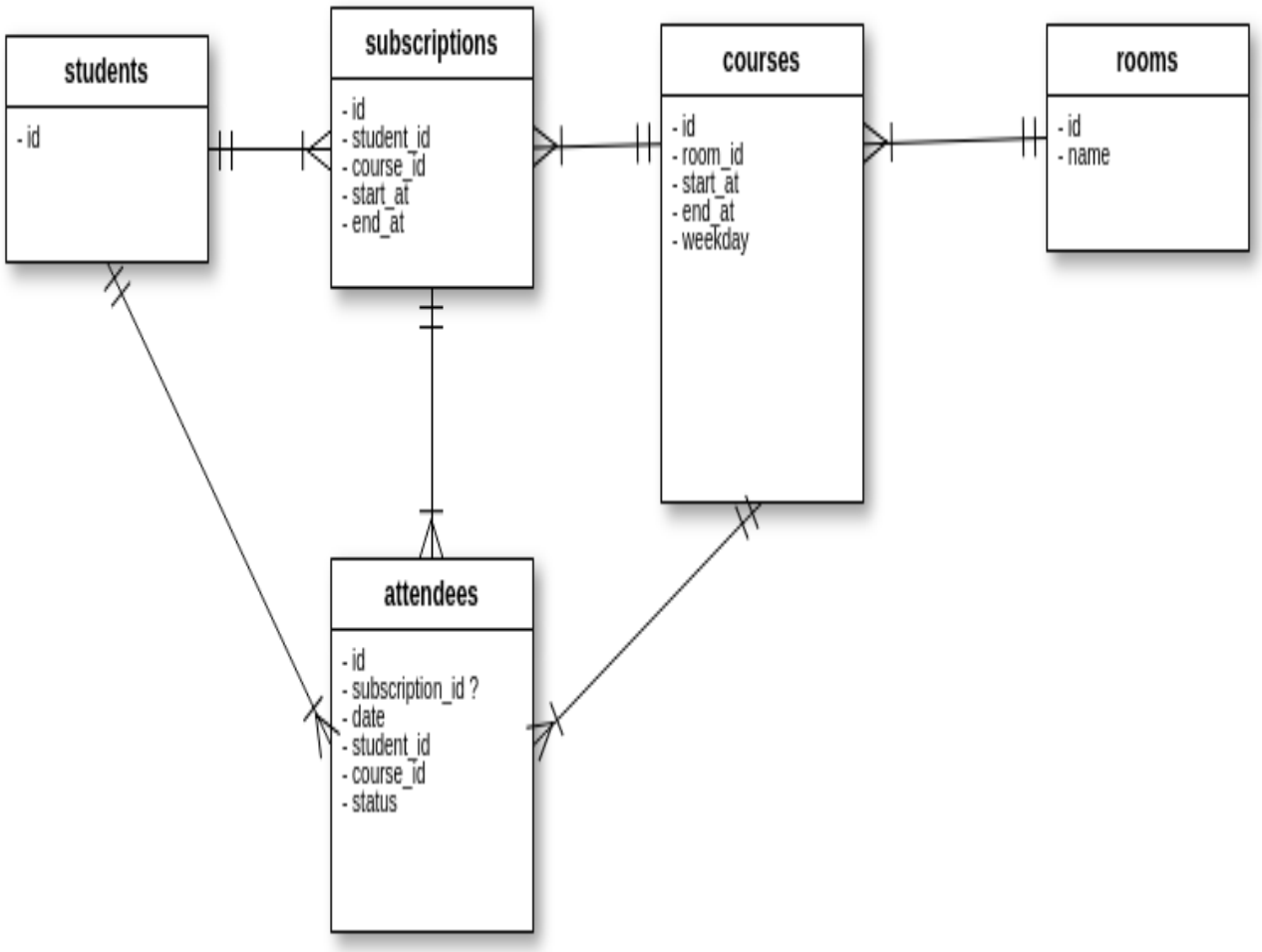
Table structure for STUDENT:

FNAME	LNAME	SID
DANISH	MAHAJAN	1
DANISH	MAHAJAN	1
HARRY	VERMA	2

Table structure for TEACHER:

FNAME	LNAME	SID
ABC	XYZ	1
ABC	XYZ	1
HARRY	VERMA	2

Relation database design:



DATA DIRECTORY -

Table structure for STUDENT:

Column	Type	Null	Description
FNAME	Varchar(25)	No	Front name
LMNAME	Varchar(25)	No	Last name
SID	Int(10)	Primary key	Student id
EMAIL	Varchar(25)	No	Email
ADDRESS	varchar(25)	No	Address of student

Table structure for TEACHER:

Column	Type	Null	Description
FNAME	Varchar(25)	No	Front name
LMNAME	Varchar(25)	No	Last name
TID	Int(10)	Primary key	Teacher id
EMAIL	Varchar(25)	No	Email
ADDRESS	varchar(25)	No	Address of Teacher

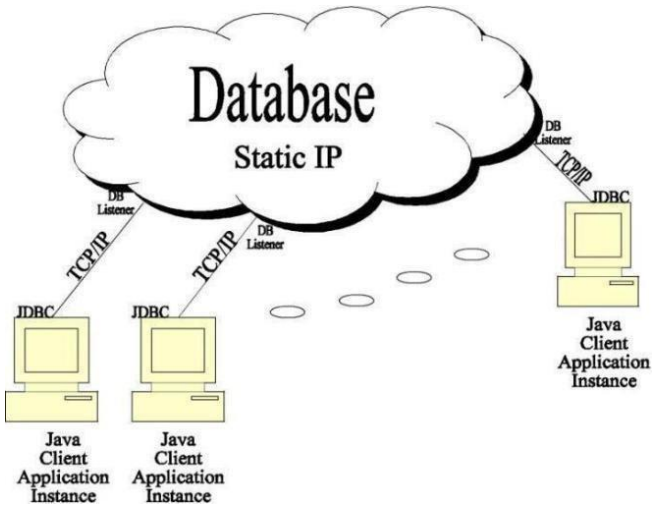
Table structure for CLASS:

Column	Type	Null	Description
CID	Int(10)	Primary key	CLASS ID
LNAME	Varchar(25)	No	Last name
FNAME	Varchar(25)	No	Front name

Table structure for SUBJECT:

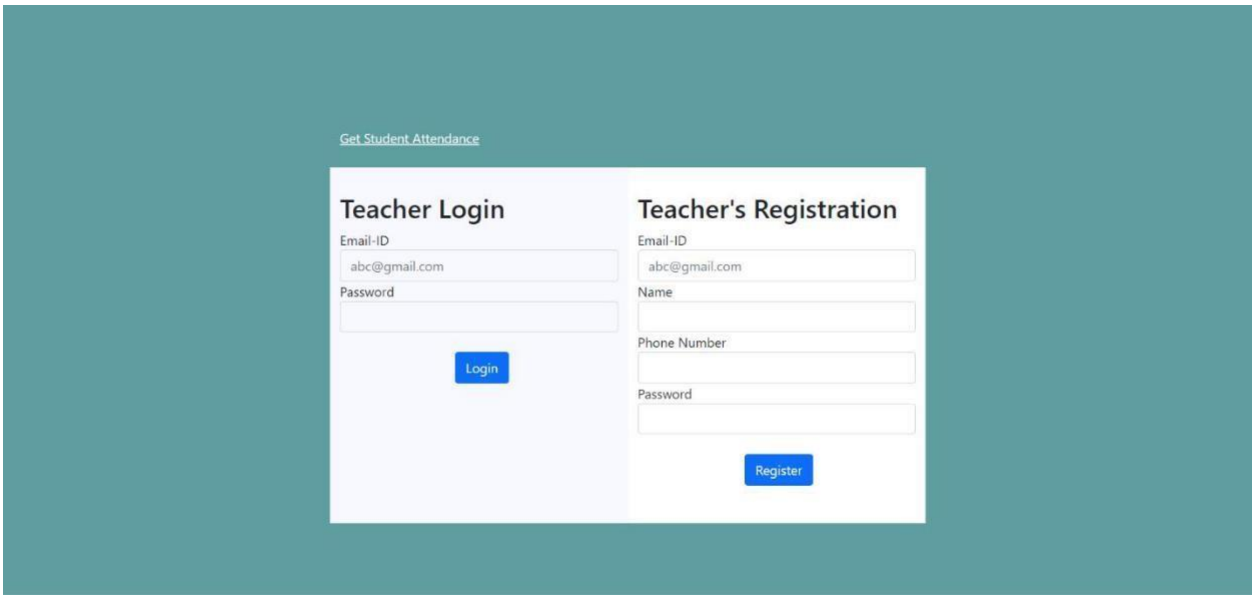
Column	Type	Null	Description
ID	Int	Primary key	Subject ID
NAME	Varchar(25)	No	Name
CID	Int(10)	Foreign key	Class Id

Graphical Representation of Project

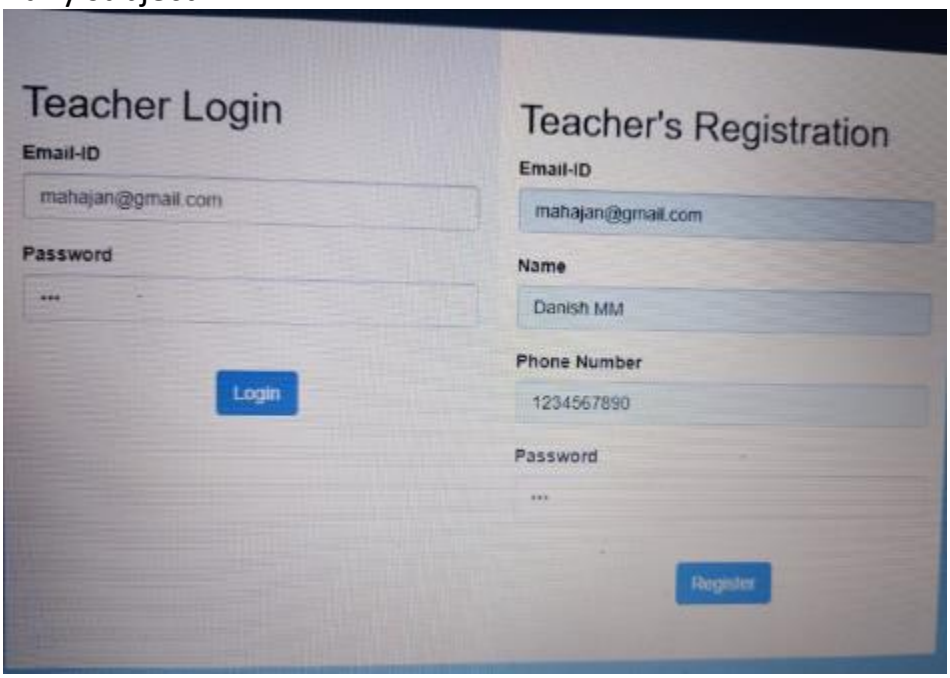


PROPOSED SYSTEM(FRONT-END)

Register



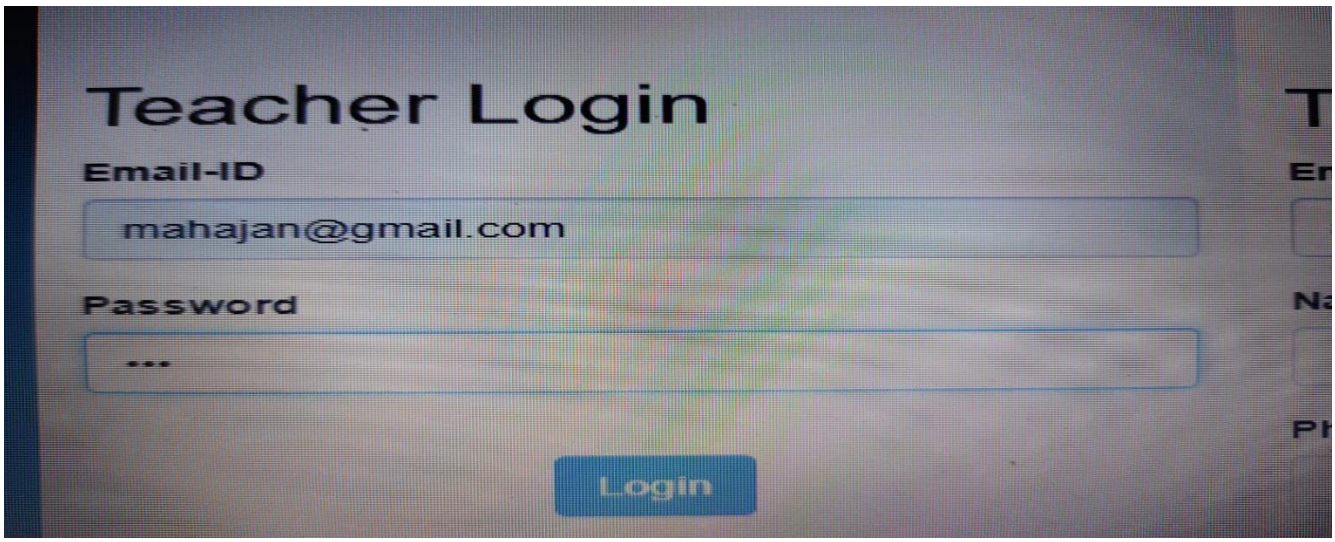
This the home page of the proposed system which consists of 3 button : teacher's account regisistration, teacher's login and a link to get student's attendace in any subject.



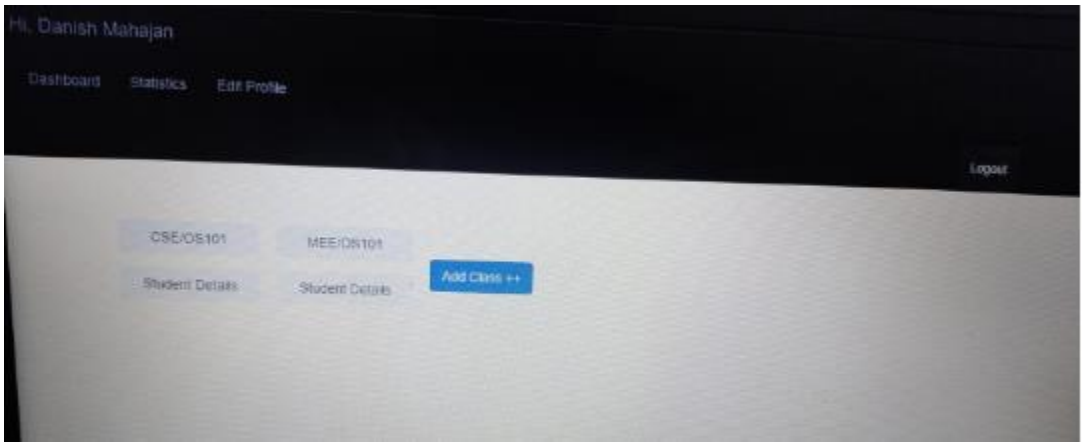
The teacher has to enter his/her email-ID, name, phone number and password. The promptmessage will show if your registration was successful or not. After successful registration they have to login in their account.

Login:

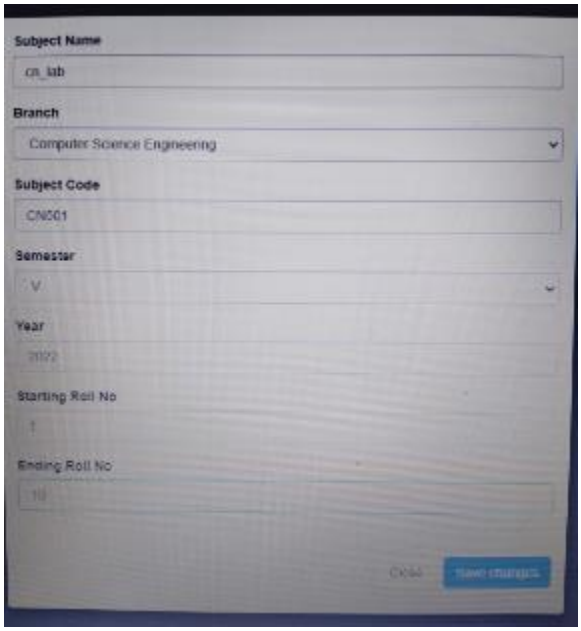
After login teacher's dashboard will be shown, which looks like this. It has 3 links on the navbar i.e. statistics(to get the overall result), edit profile and logo



Add class



The dashboard also shows all the classes which the teacher's takes with respective branch and
student details. Teacher can also add new class by entering the following details.

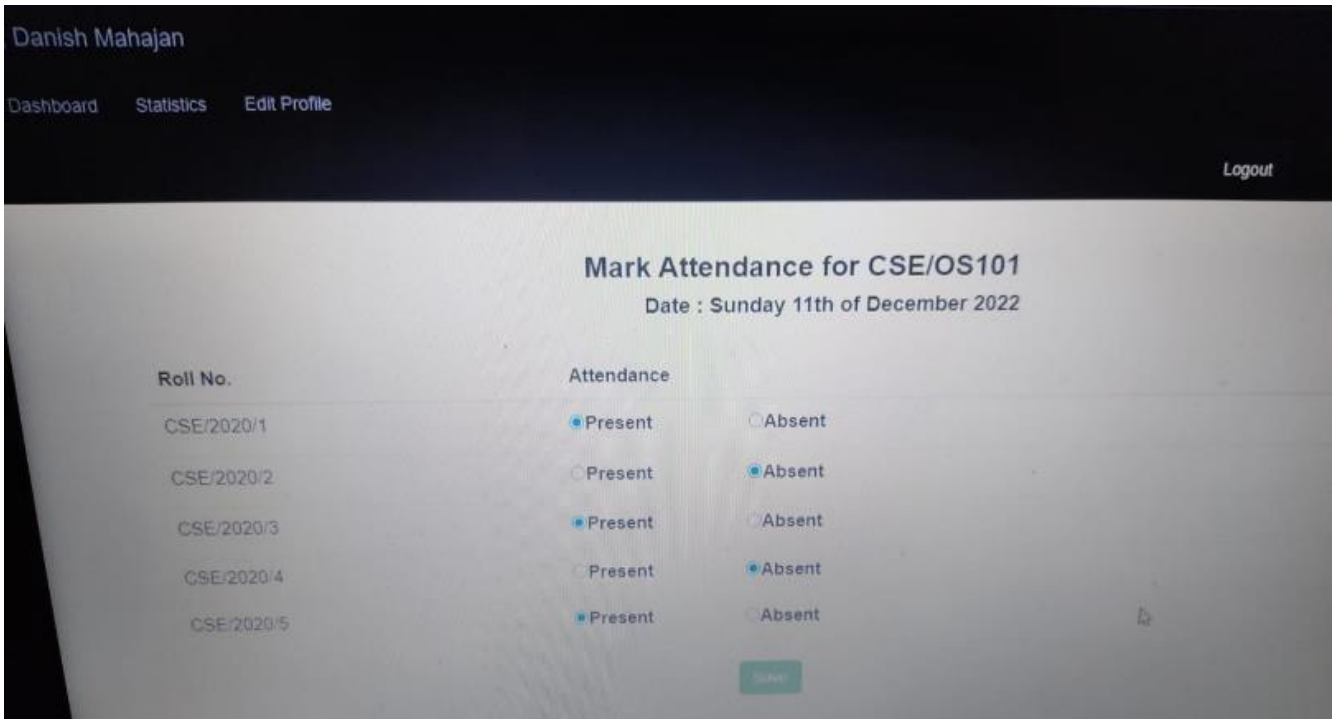


Here, Teachers ID is fixed and is given by mysql.

Now to mark the attendance in a class, respective class button should be clicked, and it willshow an interface like this.

Mark Attendance

The attendance is marked on present or absent radio button.

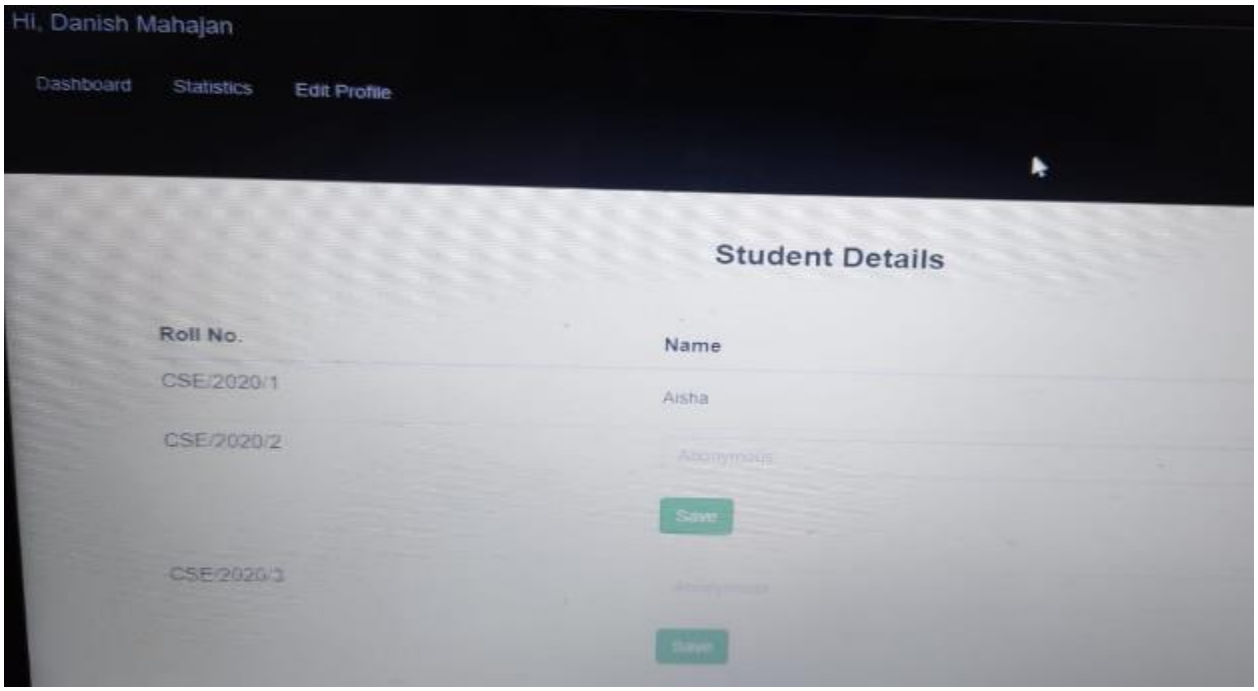


This shows the data is successfully saved in the database.

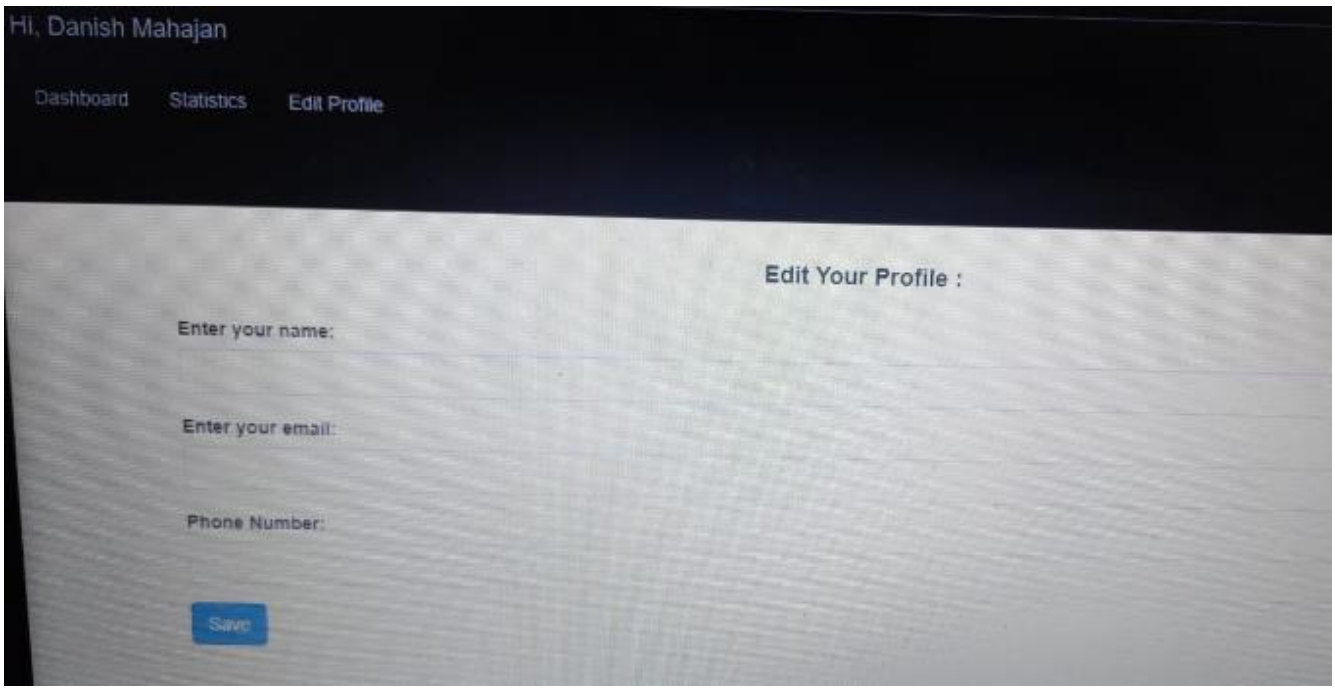
In the Student Detail button, the name of the student is shown along with their Roll No.Teacher can also Save their name if not present.

Save Student Details

The Edit Profile feature in the navbar, will allow the teacher to edit his/her data.

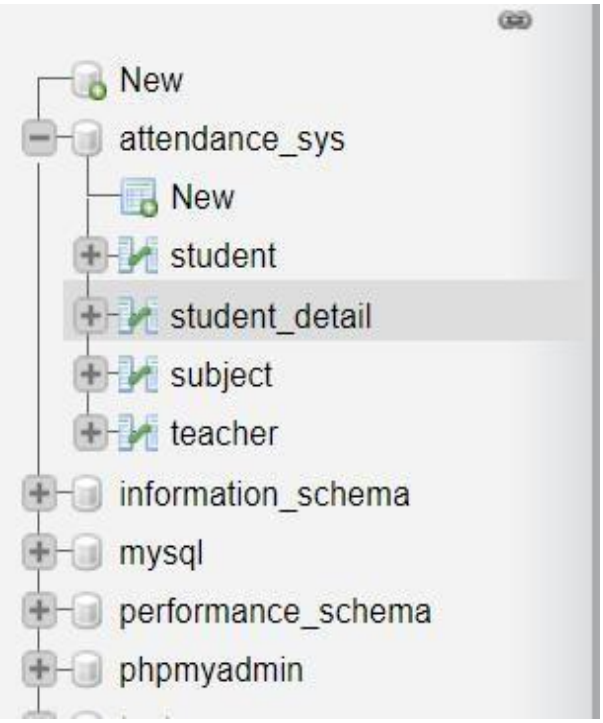


Edit Profile

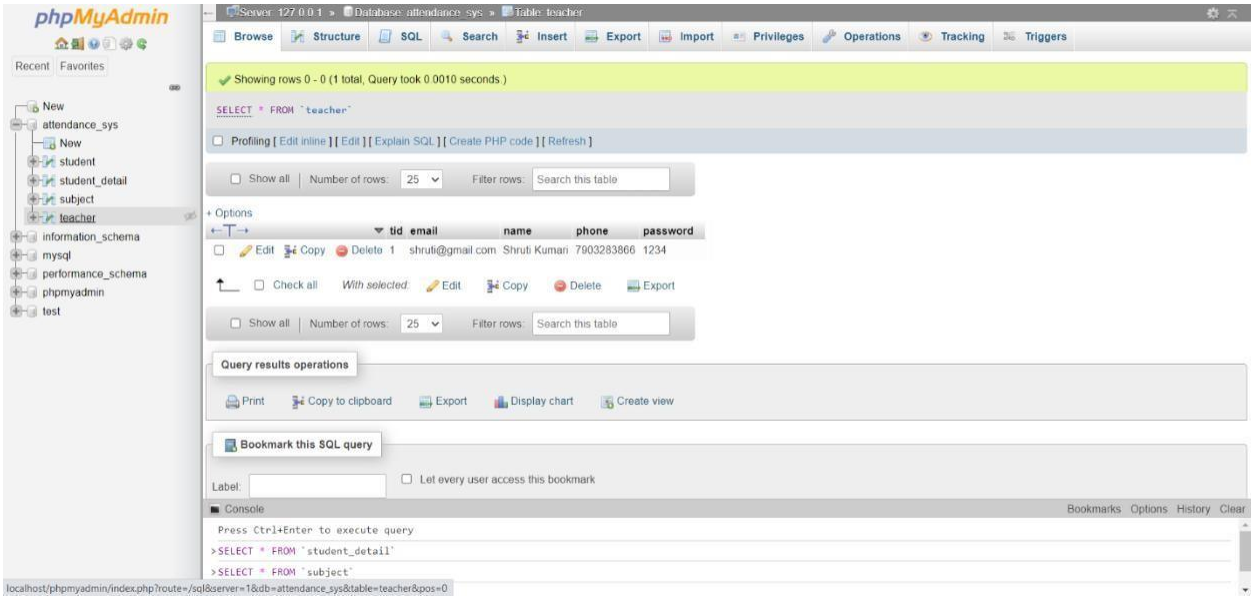


PROPOSED SYSTEM(Back-End)

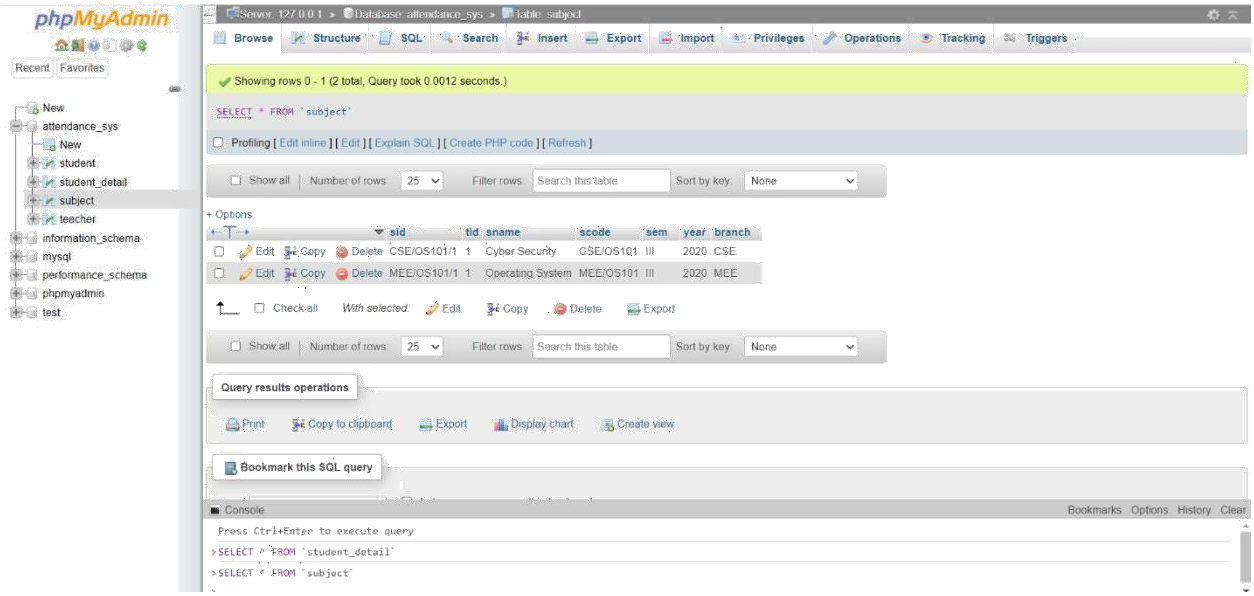
To achieve the flow of data and data processing task, I have created a database named attendance_sys and inside this database four entities have been created, mentioned below,Attendance Database is:



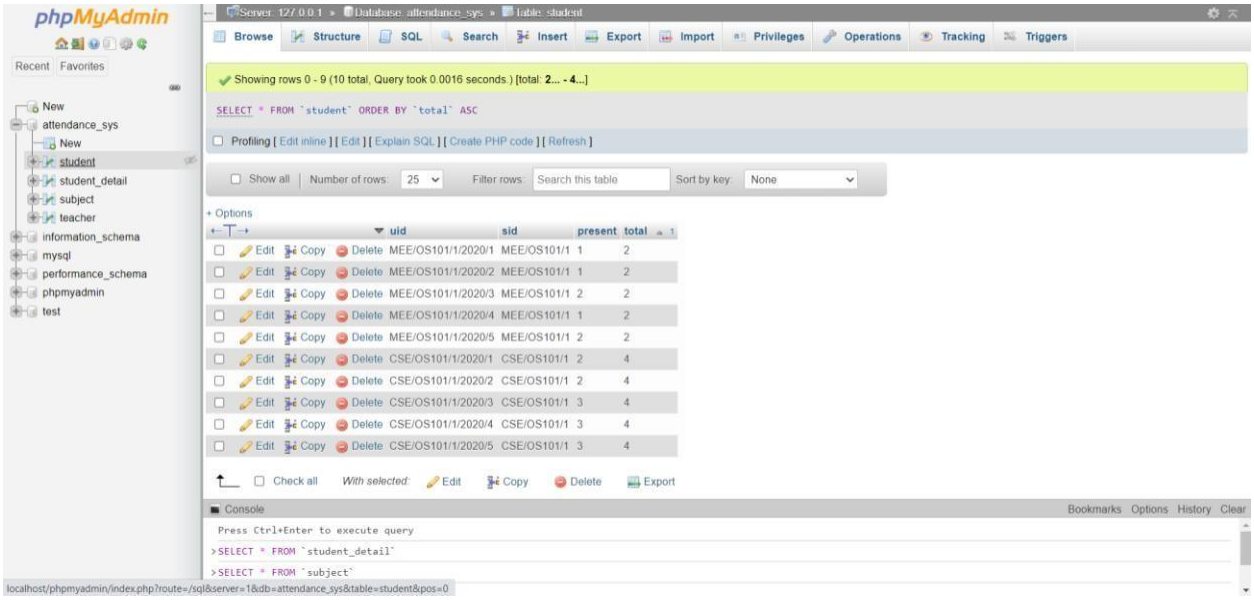
Teacher entity



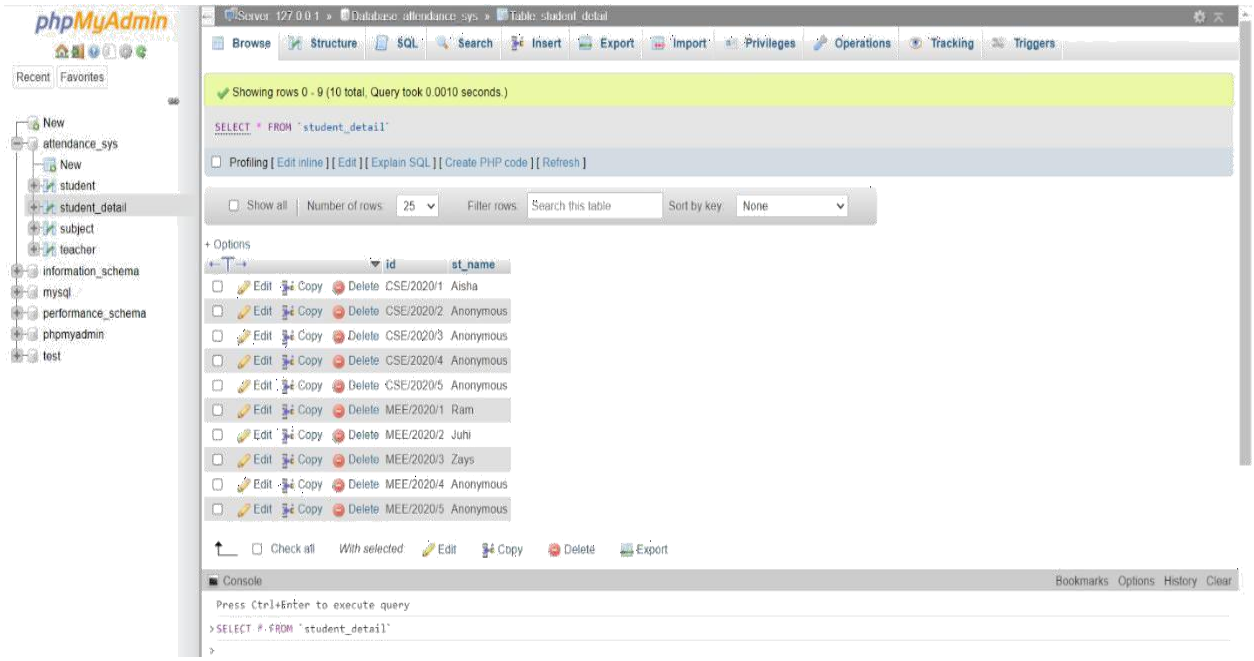
Subject entity



Student entity



Student Detail entity



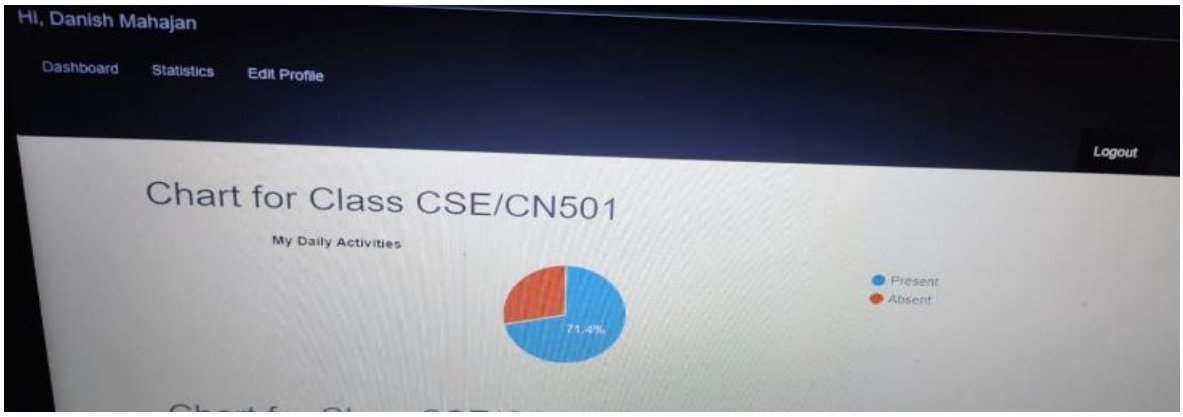
Here are glimpses of the code.

```
CREATE TABLE `student` (
  `uid` varchar(255) NOT NULL,
  `sid` varchar(255) NOT NULL,
  `present` int(11) NOT NULL DEFAULT 0,
  `total` int(11) NOT NULL DEFAULT 0
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `student`
--

INSERT INTO `student` (`uid`, `sid`, `present`, `total`) VALUES
('CSE/OS101/1/2020/1', 'CSE/OS101/1', 2, 4),
('CSE/OS101/1/2020/2', 'CSE/OS101/1', 2, 4),
('CSE/OS101/1/2020/3', 'CSE/OS101/1', 3, 4),
('CSE/OS101/1/2020/4', 'CSE/OS101/1', 3, 4),
('CSE/OS101/1/2020/5', 'CSE/OS101/1', 3, 4),
('MEE/OS101/1/2020/1', 'MEE/OS101/1', 2, 3),
('MEE/OS101/1/2020/2', 'MEE/OS101/1', 2, 3),
('MEE/OS101/1/2020/3', 'MEE/OS101/1', 3, 3),
('MEE/OS101/1/2020/4', 'MEE/OS101/1', 2, 3),
('MEE/OS101/1/2020/5', 'MEE/OS101/1', 3, 3);
**********************************************************************************
**********************************************************************************
```

```
include('home.php');
if(isset($_POST['email']))
{
  $name = $_POST['name'];
  $email = $_POST['email'];
  $phone = $_POST['phone'];

  $query1 = "update teacher set name = '$name' where tid = $x ";
  mysqli_query($con,$query1);
  $query2 = "update teacher set email = '$email' where tid = $x ";
  mysqli_query($con,$query2);
  $query3 = "update teacher set phone = '$phone' where tid = $x ";
  mysqli_query($con,$query3);
  $_SESSION['email'] = $email;
  header('location:dashboard.php');
}
```

RESULT AND ANALYSIS

There are 2 reports generated, one is the overall report of the students in a class the otheris the report of each student in the respective classes.



The overall report can be accessed by the teacher by clicking on the Statistics link, it will generate the average attendance and attendance of each student in tabular form.

Student can also get their attendance in each subject by entering the details

Conclusion

In this work ,the web based attendance management system is developed using PHP server-side language and CSS,HTML ,JavaScript for designing which is fully meet the system's goals.

This system overcome many limitations incorporated in attendance, this system saves a great amount of time and reduces errors which may occur during attendance calculation.
The system I have developed is fully responsive which can be used in mobile, tabletsand different operating systems. Some other benefits are,

Automated and web-based for easy accessibily

- It is a dynamic and flexible system
- It excludes paperwork and the possibility of making mistakes while using paper for taking attendance
- It is very user friendly and handy
- The records of current and previous can be available in prompt and an immediate.

Future work

I will make some future improvement in my project by making this Biometric Attendance System in order to make more advanced and increase its reliability and effectiveness. Biometrics is automated technique of identifying a person behavioural or physiological characteristic.

A fingerprint scanner has two basic tasks which are,

- It requires to get an image of a person finger.
- It requires identifying and diagnosing that whether the pattern of ridges and valleys incurrent image matches the pattern of ridges and valleys of previous scanned images.

Unique characteristics of every fingerprint are filtered and saved as a mathematical representation. The image of fingerprint will not be saved, only sequence (series) of binary code, that is used for verification is saved the algorithm can't be transformed to an image, so no one can duplicate any one's fingerprint