Visvesvaraya Technological University
Belagavi, Karnataka-590018

A MINI PROJECT REPORT

On

STUDENT DATABASE MANAGEMENT SYSTEM

Submitted

in partial fulfilment requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

by

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CERTIFICATE

This is to certify that Rohan S Bhat(4CB19CS086) and Vijayananda T Hegde(4CB19CS122) have successfully completed the project work on '**STUDENT DATABASE MANAGEMENT SYSTEM**' and submitted in partial fulfillment of the requirements of 5th Semester B.E., Computer Science and Engineering, prescribed by the VISVESVARAYA TECHNOLOGICAL UNIVERSITY during the academic year 2021-2022. It is verified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of mini project work prescribed by
Bachelor of Engineering Degree.

Project Guide **Prof. Verdine Noronha** **Assistant Professor**	**HOD** **Dr. Demian Antony D'Mello** **Professor**

Name of the Examiners	**Signature with Date**
1.	
2.	

ACKNOWLEDGEMENT

We are indebted to our **Principal, Dr. Ganesh V. Bhat** and management of

Canara Engineering College for providing an environment with all facilities that helped us in completing our mini project.

We are extremely grateful to **Dr. Demian Antony D' Mello, Head of Computer Science & Engineering Department** for his moral support and encouragement.

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We thank all the teaching and non-teaching staff of Department of Computer Science & Engineering for their kind help.

Last but not the least; we would like to add some personal note. If there is a driving force that kept us going, and what has not changed it is the constant support and blessing of our parents, family and friends. There is no doubt, in spite of my strenuous efforts error might remain in mini project. Naturally, we alone take full responsibility for any lack of clarity, occasional erratum or inexactness that may occur.

Rohan S Bhat 4CB19CS086

ABSTRACT

Student Management System is software which is helpful for college authorities. In the current system all the activities are done manually. Its time saving and scalable. Our Student Management System deals with the various activities related to the Students.

In the software we can add student and this can be done by faculty. Faculty has the power to add new student and can edit the students details entered. Faculty can add students record ,attendance status with department wise. Faculty can search details and attendance status with respective roll numbers of students.

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CHAPTER 1

INTRODUCTION

1.1 PURPOSE:

This Software is for the automation of Student Database Management. It maintains student details:

- Administrator Level

The Software includes:

- Student details.
- Course details.
- Marks details.

1.2 SCOPE:

- This can be used in any School, College, Universities for maintaining student details and their test results.
- This student management system is usefull for getting all details quickly from database so that can get details of student quickly.
- Faster Attendance Management System
- Student Information
- Monitoring Students details

CHAPTER 2

REQUIREMENT SPECIFICATION

2.1 Functional Requirements:

The project student database management system is a website which includes functionalities :

- Every user needs to sign-up to the website by providing email, username and password.
- After signing up, the user can access the website by logging in whenever required.
- Faculty can also search student after logged in.
- User can check the student history.

2.2 Non-Functional Requirements:

- **Access Security**: The extents to which the system is safeguarded against deliberate and intrusive faults from internal and external sources.
- **Accessibility**: The extent to which the software system can be used by people with the widest range of capabilities to achieve a specified goal in specified content of use.
- **Confidentiality**: The degree to which the software System protects sensitive data and allows only authorized access to the data.
- **Efficiency**: The extent to which the software system handles capacity, throughput, and response time.
- **Reliability**: The extent to which the software system consistently performs specified functions without failure.

2.3 Hardware Requirements:

- Computer with a 1.1 GHz or faster processor
- Minimum 2GB of RAM or more
- 2.5 GB of available hard-disk space
- 5400 RPM hard drive
- 1366 × 768 or higher-resolution display

2.4Software Requirements:

- Frontend- HTML, CSS
- Backend-MYSQL, PYTHON FLASK
- Operating System :Windows 10
- Google Chrome
- XAMPP (Version-3.7)

2.5Software Tools Used:

The project is mainly divided into 2 parts, Frontend and Backend.

2.5.1 Frontend:

The frontend is designed using HTML and CSS to make the user interface attractive and responsive. We have also used Bootstrap v4.5 for certain components such as modals, dismissible alerts and also for cards. A resume template has also been designed using HTML and CSS for resume generation.

2.5.2 Backend:

The backend part of the project is implemented using Nodejs as server side programming language, MySQL has been used for creating database and tables. This was possible by making use MySQL workbench for easy operating of database and table creation.

CHAPTER 3 DATABASE DESIGN

3.1 Entity Relationship Diagram:

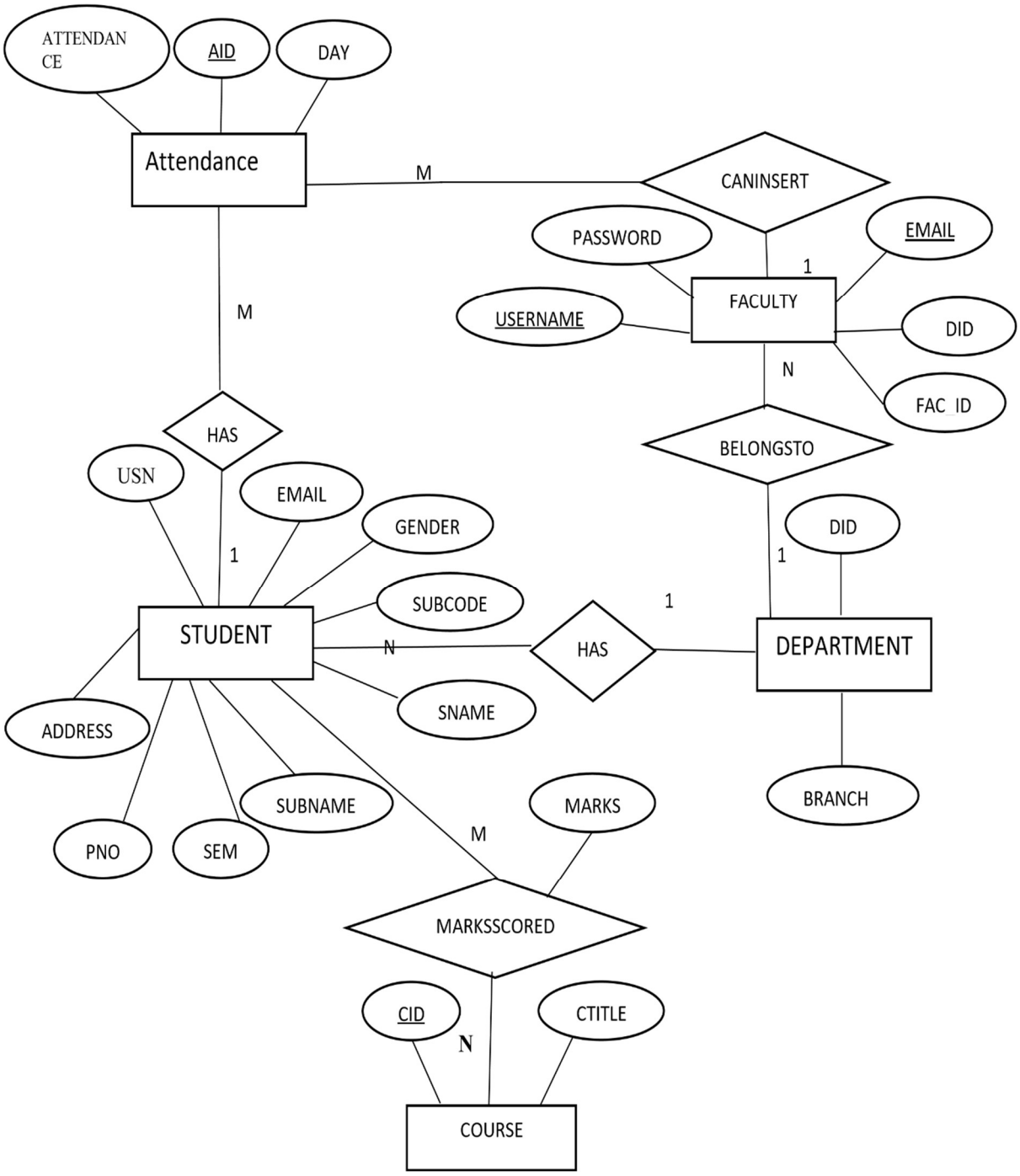

Figure 3.1: ER DIAGRAM FOR STUDENT DATABASE

An **Entity Relationship** (**ER**) **Diagram** is a type of flowchart that illustrates how "entities" such as people, objects or concepts relate to each other within a system. In software engineering, an ER model is commonly formed to represent things that a business needs to remember in order to perform business processes.

3.2 Relational Schema:

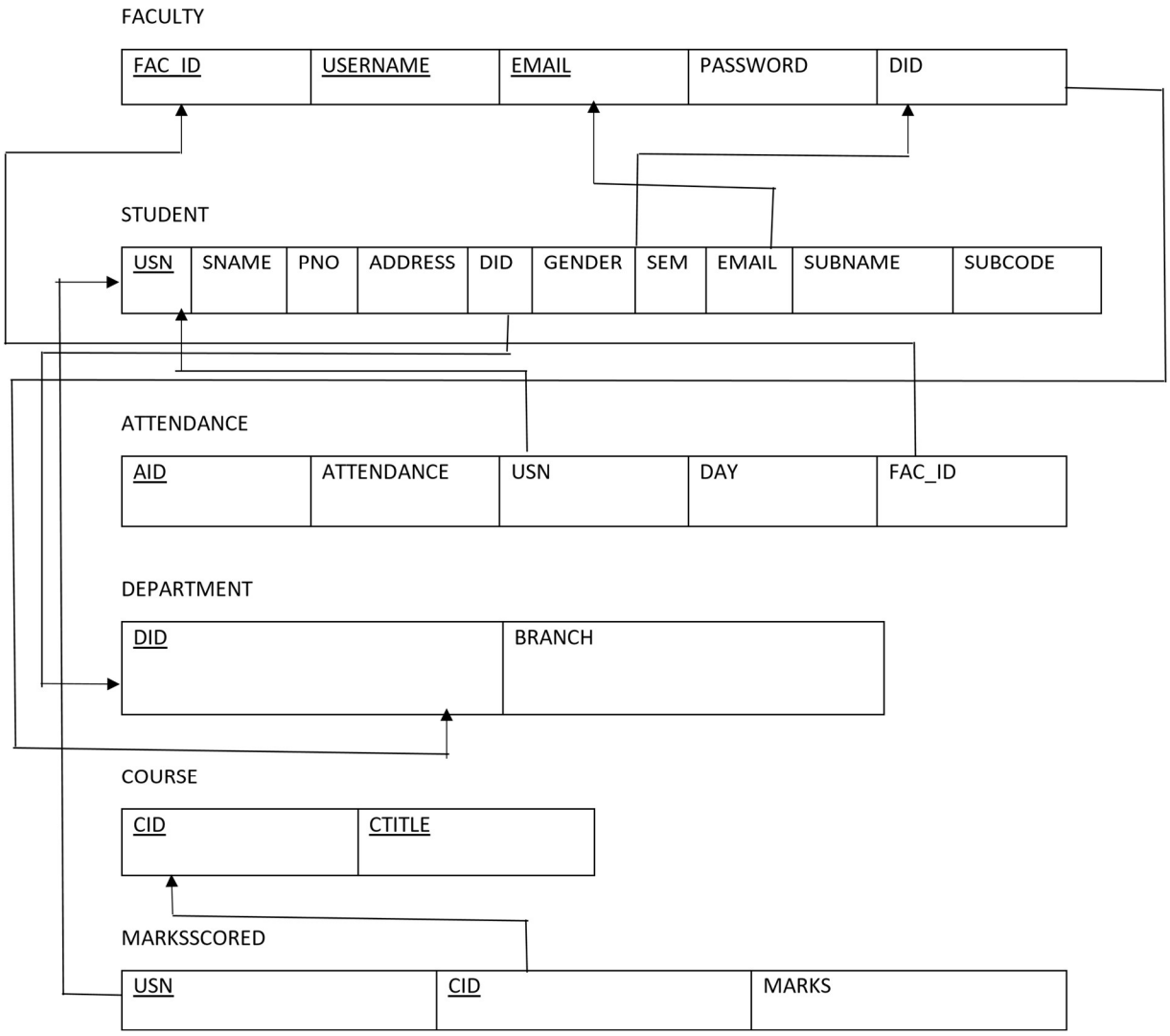

Figure 3.2: RELATIONAL SCHEMA FOR STUDENT DATABASE

Relational schema refers to the meta-data that describes the structure of data within a certain domain. It is the blueprint of a database that outlines the way its structure organizes data into tables.

CHAPTER 4 IMPLEMENTATION

4.1 TABLE DESIGN:

The project requires many relations to store data and retrieve it. These relations are defined as tables in SQL using CREATE TABLE statements. The following are the tables defined in our project.

COURSE table:

```
--
-- Table structure for table `course`
--

CREATE TABLE `course` (
  `cid` varchar(50) NOT NULL,
  `ctitle` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

ATTENDANCE table:

```
--
-- Table structure for table `attendence`
--

CREATE TABLE `attendence` (
  `aid` int(11) NOT NULL,
  `rollno` varchar(20) NOT NULL,
  `attendance` int(100) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

DEPARTMENT TABLE:

```
--
-- Table structure for table `department`
--

CREATE TABLE `department` (
`did` int(11) NOT NULL,
`branch` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

STUDENT TABLE:

```
--
-- Table structure for table `student`
--
CREATE TABLE `student` (
 `id` int(11) NOT NULL,
`rollno` varchar(20) NOT NULL,
`sname` varchar(50) NOT NULL,
 `sem` int(20) NOT NULL,
`gender` varchar(50) NOT NULL,
`branch` varchar(50) NOT NULL,
`email` varchar(50) NOT NULL,
 `address` text NOT NULL
'subcode'varchar(50) NOT NULL,
'subname'varchar(50) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

`

MARKS TABLE:

```
--
-- Table structure for table `viewmarks`
--

CREATE TABLE `viewmarks` (
`rollno` int(11) NOT NULL,
`cid` varchar(52) NOT NULL,
`marks`int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

FACULTY TABLE:

```
--
-- Table structure for table `faculty`
--

CREATE TABLE `faculty` (
`id` int(11) NOT NULL,
`fac_id` int(11) NOT NULL,
`username` varchar(50) NOT NULL,
`email` varchar(50) NOT NULL,
`password` varchar(500) NOT NULL,
`did` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

4.2 DATABASE CONNECTIVITY:

We have used MySQL function to connect with the database.

CHAPTER 5

USER MANUAL

- If you are new to the website, then click on signup button and fill all the required information.
- Login to the website using the username and password.
- When user successfully logged-in, will get into a home page where user can search for the required student,
- When user searches for a student, will get all the information of that particular from database
- The user can also find whether that course is available .
- The user can also find whether that faculty details.
- User can also check history

CHAPTER 6

SCREENSHOTS

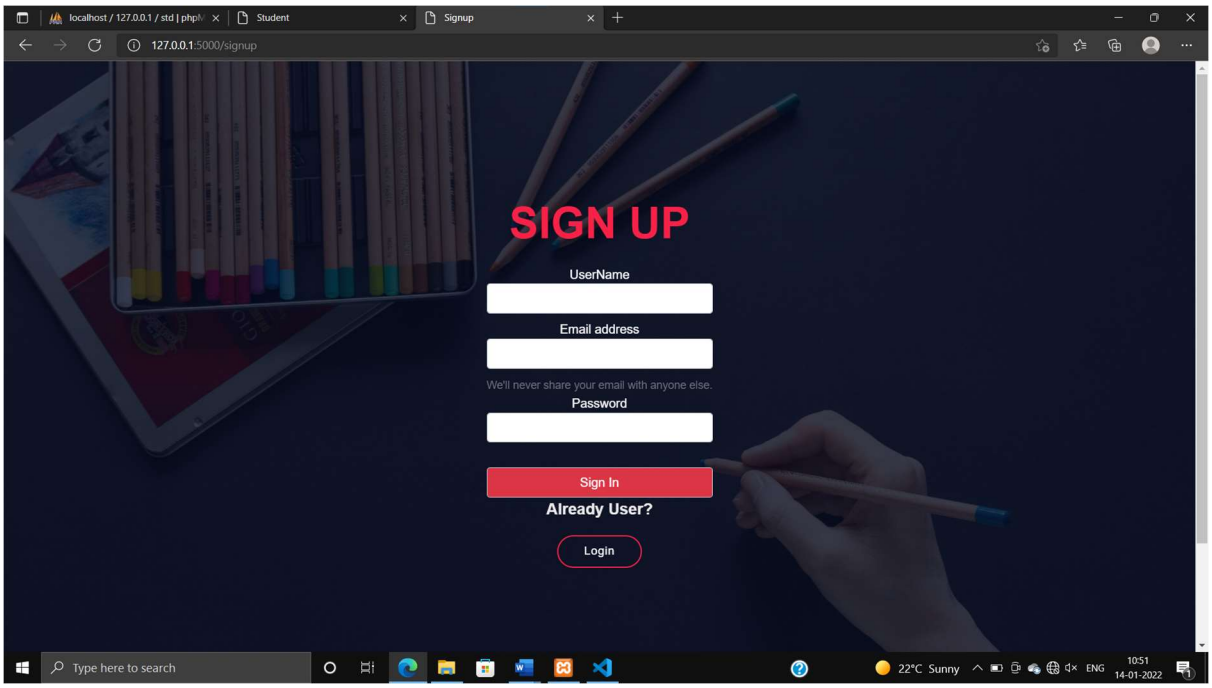

FIGURE 6.1: **Signup** – On page load the user will have an option to login or signup.

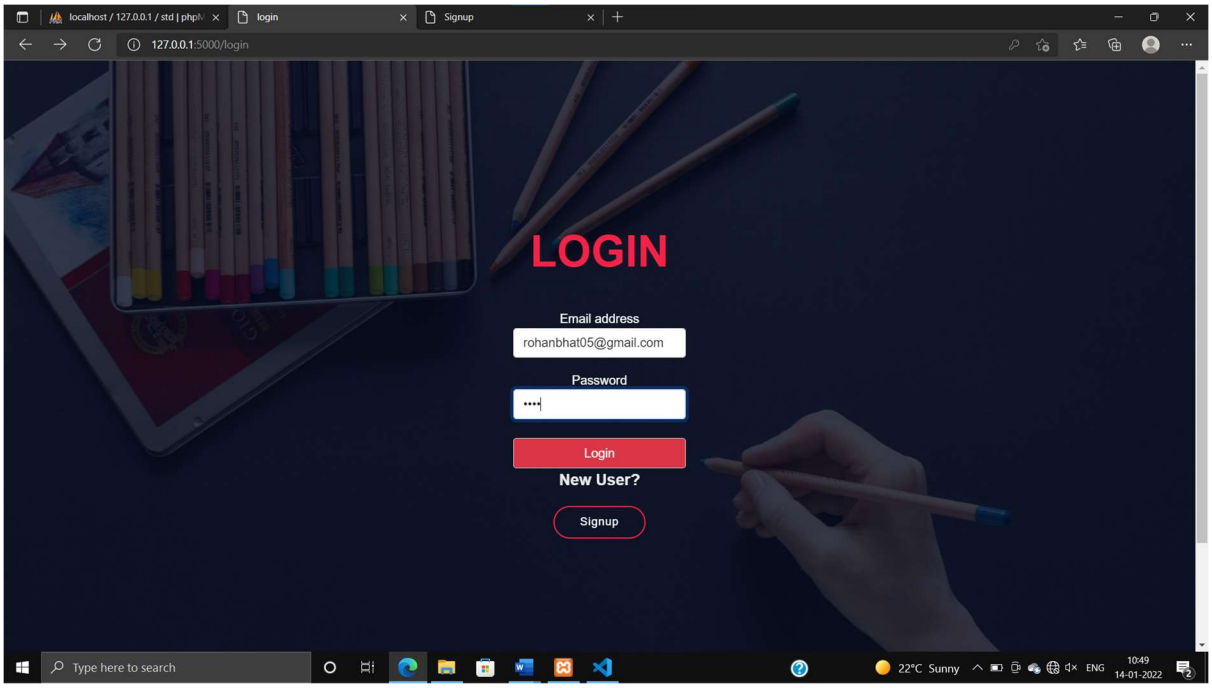

FIGURE 6.2: **Login** – If the user already has an account in our database, the user can directly

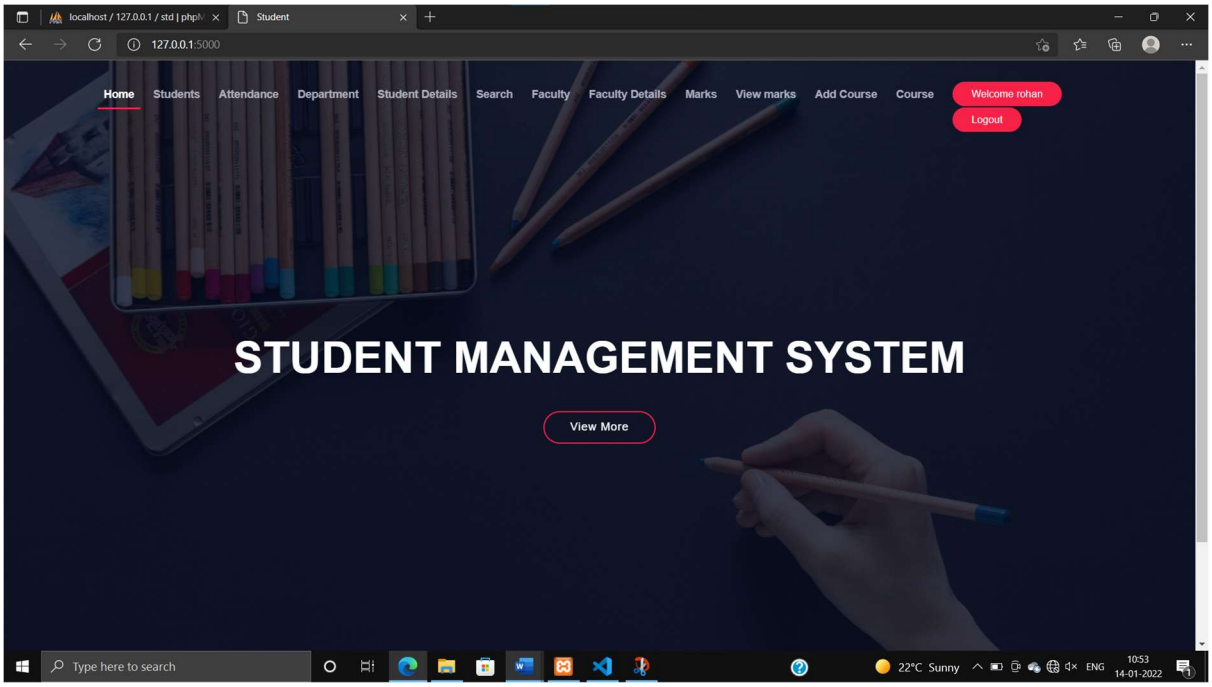

FIGURE 6.3: **Homepage** – Where the user can search for students

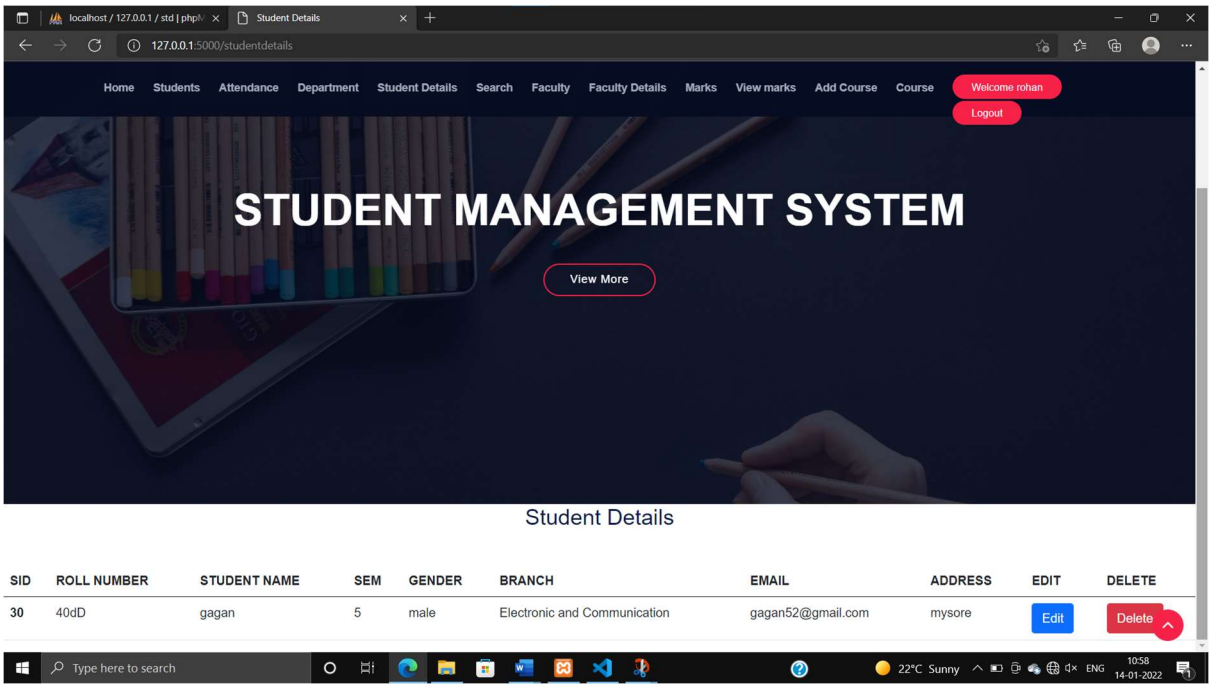

FIGURE 6.4: **Student Details** – This page shows the details of student

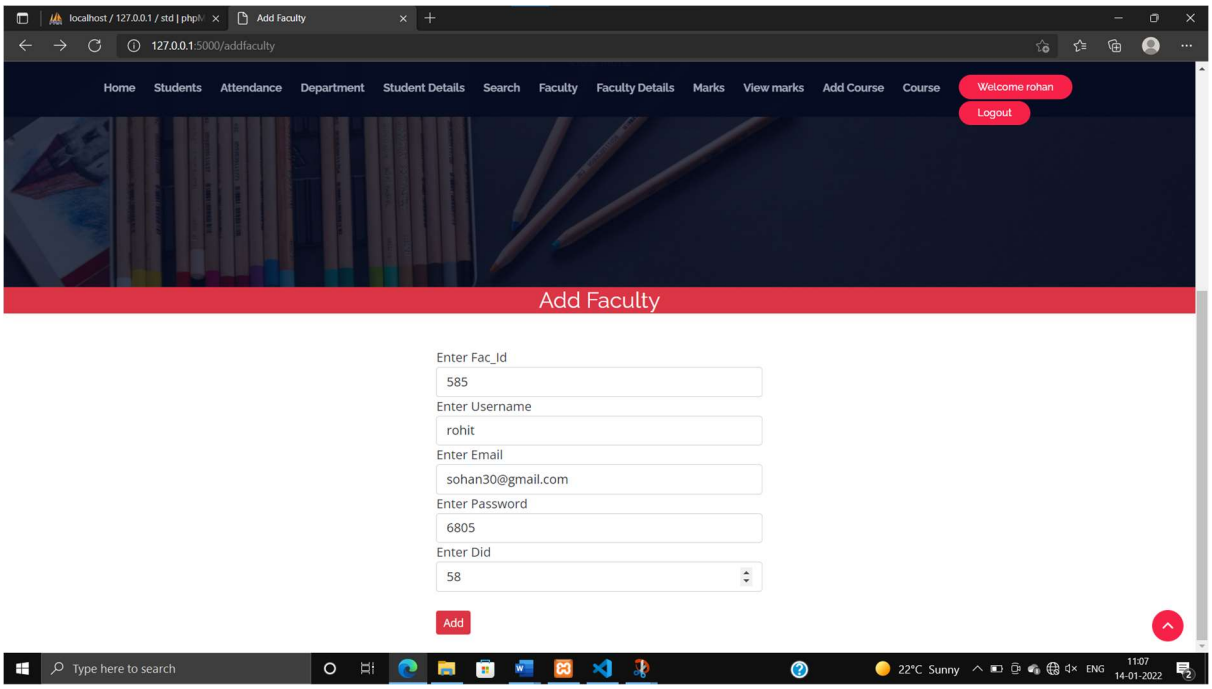

FIGURE 6.5: **Faculty Details**– This page shows you the faculty details

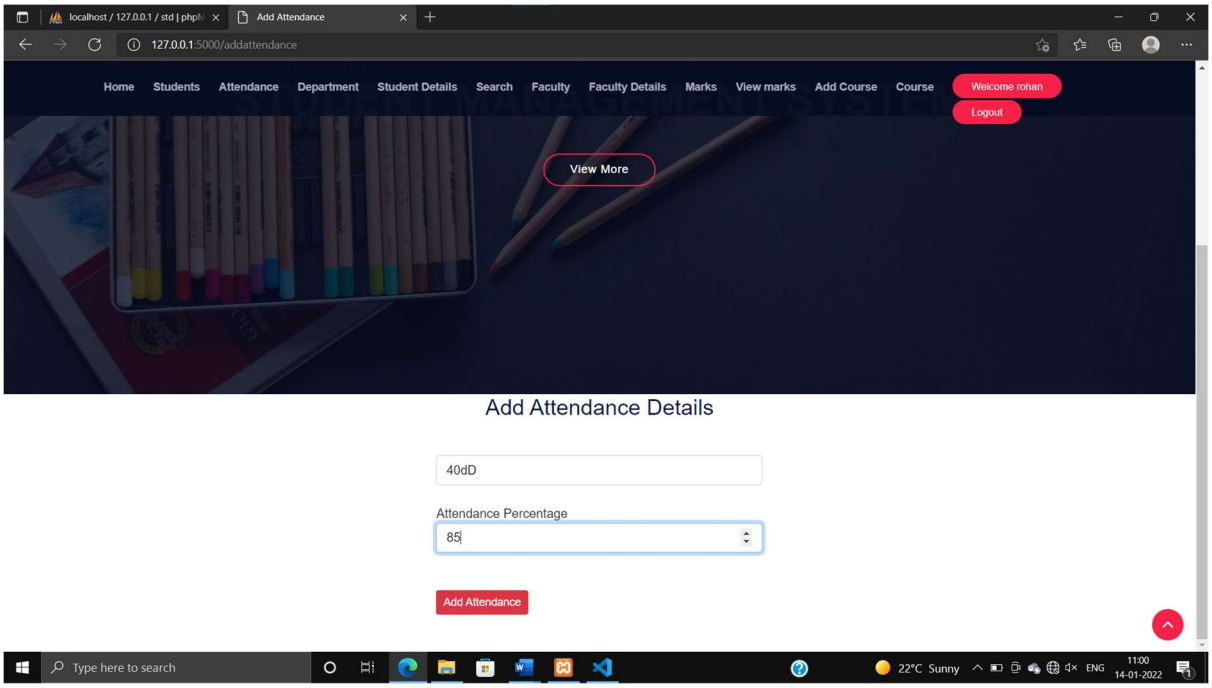

FIGURE 6.6: **Attendence Page** – The user can see student attendence

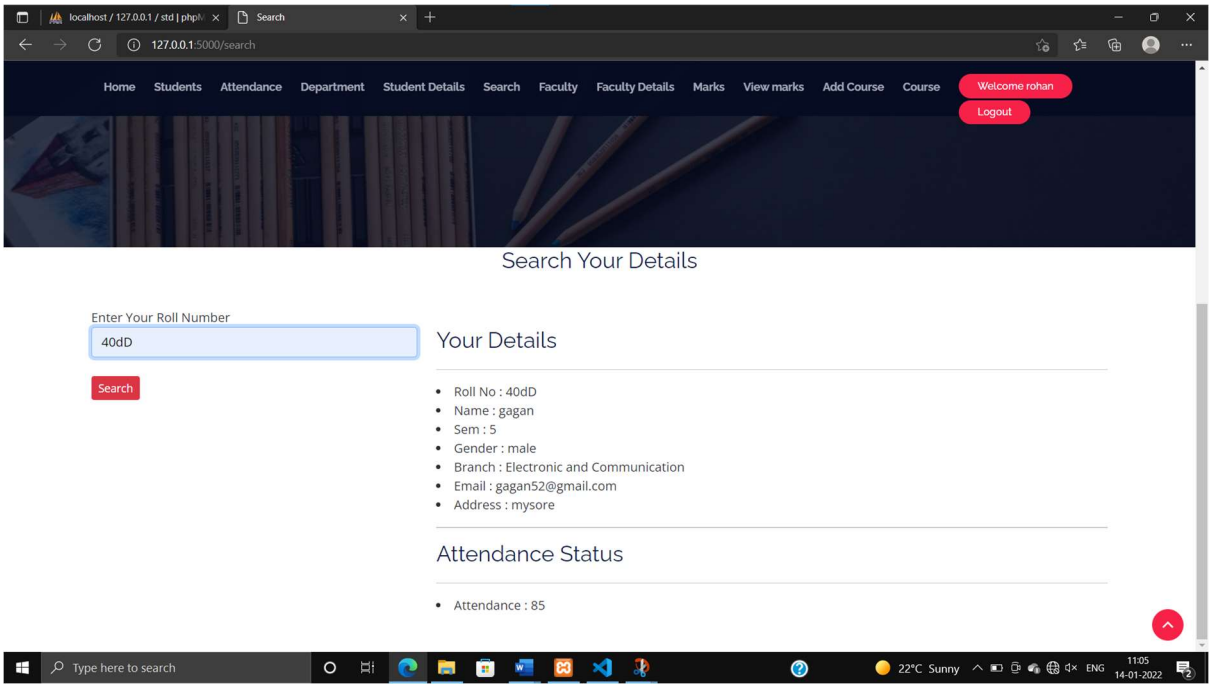

FIGURE 6.7: **Search Page** – This page shows students history.

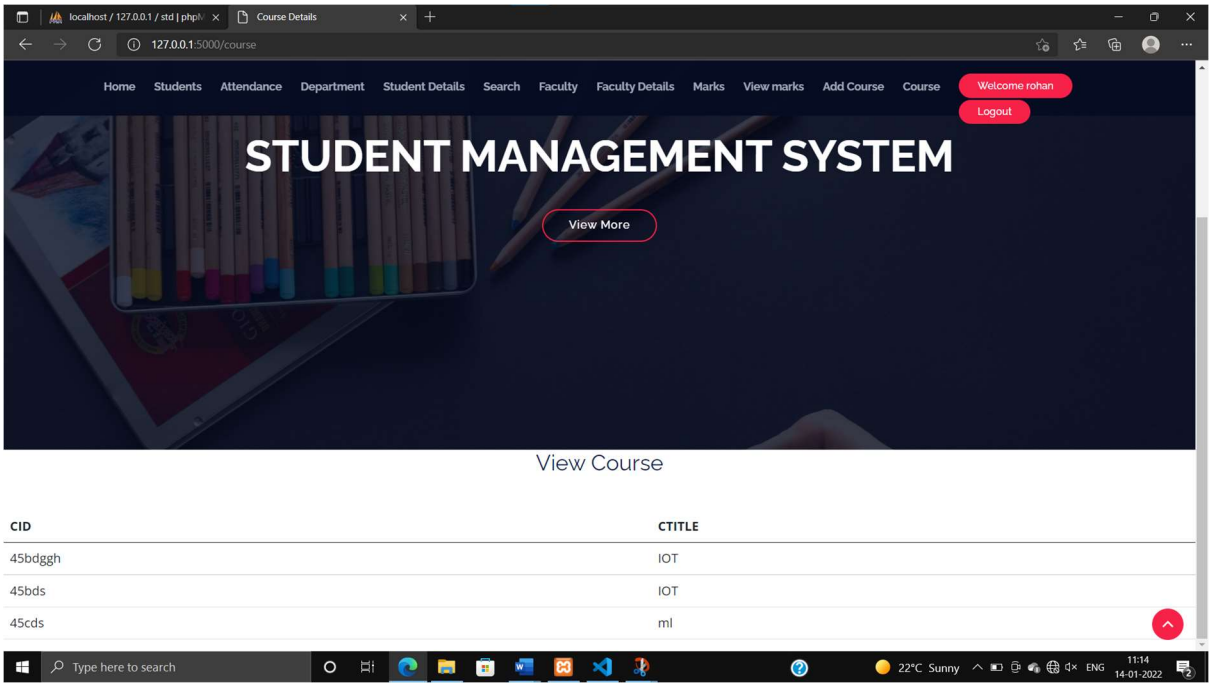

FIGURE 6.8: **Course Page** – This page shows course.

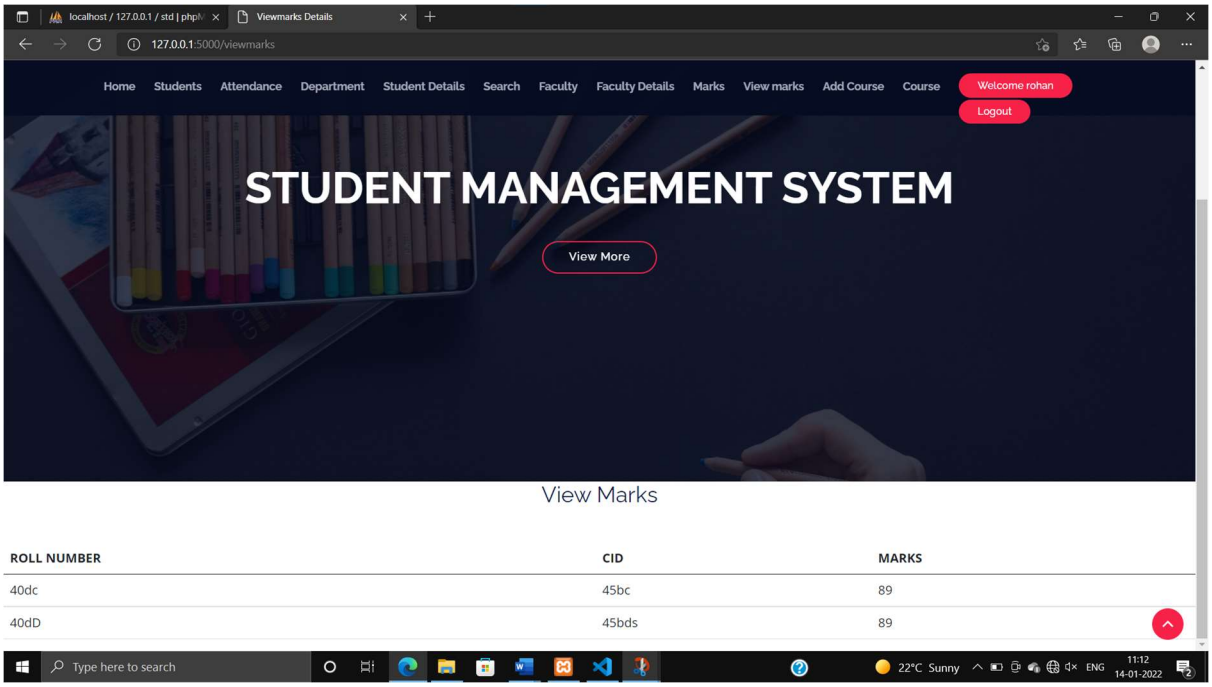

FIGURE 6.8: **Marks Page** – This page shows course.

CHAPTER 7

CONCLUSION AND SCOPE FOR FUTURE WORK

STUDENT MANAGEMENT SYSTEM successfully implemented based on online data filling which helps us in administrating the data user for managing the tasks performed in students. The project successfully used various functionalities of Xampp and python flask and also create the fully functional database management system for online portals.

Using MySQL as the database is highly beneficial as it is free to download, popular and can be easily customized. The data stored in the MySQL database can easily be retrieved and manipulated according to the requirements with basic knowledge of SQL.

BIBLIOGRAPHY

Links:

- https://www.youtube.com
- https://www.google.com