PROJECT REPORT

On

"HOSTEL MANAGEMENT SYSTEM"

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Technology (B.Tech)

In the department of

Computer Science & Engineering

Submitted by:

SAYANKA SIKHAR BARMAN (ET18BTHCS001)
ROHIT KUMAR SINGH (ET18BTHCS009)
MUSHTAQ MOHD REJOWAN (ET18BTHCS035)
ARPITA GOGOI (ET18BTHCS046)
UDIT KASHYAP BARMAN (ET18BTHCS047)

Under the Guidance of

Dr. BARNANA BARUAN
(Associate Professor)
Department of IT, CSE

School of Engineering & Technology

The Assam Kaziranga University, Jorhat, Assam

Jan 2022 – Apr 2022

CERTIFICATE

This is to certify that the project report entitled ***"HOSTEL MANAGEMENT SYSTEM"***, submitted to the School of Engineering & Technology (SET), **KAZIRANGA UNIVERSITY, JORHAT** in partial fulfillment for the completion of **Semester- 8th** of the degree of **Bachelor of Technology** in the department of **Computer Science & Engineering**, is a record of bonafide work carried out by **Mr. Sayanka Sikhar Barman (ET18BTHCS001), Mr. Rohit Kumar Singh (ET18BTHCS009), Mr. Mushtaq Mohd Rejowan (ET18BTHCS035), Ms. Arpita Gogoi (ET18BTHCS046), Mr. Udit Kashyap Barman (ET18BTHCS047)**, under our guidance.

All help received by us from various sources have been duly acknowledged.

No part of this report has been submitted elsewhere for award of any other degree.

_____

Mentor: Dr. BARNANA BARUAH
(Associate Professor)

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mentioning of the people whose constant guidance and encouragement made it possible. We take pleasure in presenting before you, our project, which is the result of a studied blend of both research and knowledge.

We express our earnest gratitude to our Mentor – Dr. Barnana Baruah (Department of IT, CSE), for their constant support, encouragement and guidance. We are grateful for their cooperation and valuable suggestions.

Finally, we express our gratitude to all other members who are involved either directly or indirectly for the completion of this project.

DECLARATION

We, the undersigned, declare that the project entitled 'Home Automation Using Android, being submitted in partial fulfillment for the award of Bachelor of Engineering Degree in Electronics and Communication Engineering, affiliated to Kaziranga University, is the work carried out by us.

Sayanka Sikhar Barman
(ETBTHCS001)

Rohit Kumar Singh
(ET18BTHCS009)

Mushtaq Mohd Rejowan
(ET18BTHCS035)

Arpita Gogoi
(ET18BTHCS046)

Udit Kashyap Barman
(ET18BTHCS047)

ABSTRACT

Hostel Management system is a website that is developed for managing various activities in the hostel. Amidst covid, the necessity of having an online system of managing activities has increased a lot. The traditional process of paperwork takes time and lot of storage. This project replaces the traditional system and avoids the problems which occur during the traditional way of work.

Identification of the drawbacks of the existing system leads to the designing of a computerized system that will be compatible with the existing system and is friendlier and more graphically user interaction oriented.

Table of Contents

Chapter	Title	Page
	Title Page	
	Certificate	
	Acknowledgement	
	Declaration	
	Abstract	
	Table of Contents	
1	Introduction	
	1.1 Problem Definition	6
	1.2 Purpose and Scope of the Project	6
	1.3 Overview of Responsibilities	6
2	Requirement Analysis	7
3	Tools and Technologies Used	8
4	Implementation	10
	4.1 Architecture	10
	4.2 ER and Schema of the Database	11
	4.3 Working of the Project	12
	4.4 Database Screenshots	20
5	Setup Instructions	25
	5.1 Sublime Text	25
	5.2 XAMPP	26
	5.3 phpmyadmin	28
6	Conclusion	29
	References	29

CHAPTER 1 INTRODUCTION

1.1 Problem definition

This system is designed in favor of the hostel management which helps them to save the records of the students about their rooms and student related information. There is a lot of repetitive work such as registration, fees payment, verifying information, arranging the students according to the courses, room numbers, etc.

We can improve the efficiency of the system by designing a user-friendly site that requires minimum effort and input. We can improve the efficiency of the hostel management process especially for the campus hostels.

1.2 Purpose and Scope of the project

In this era of contactless virtual meetings, it would be very helpful for finding different ways of avoiding physical visits by preventing the long queues of registration and manual work. With a click of a button, the application would store and retrieve the record of the students and maintain the data.

1.3 Overview of Responsibilities of a developer

- Provide a responsive and stunning user interface
- Authentication and validation of students and admin
- Storing of data in a database
- Functionality for viewing and editing rights
- Management of records and retrieval
- To avail any information, whatever and whenever needed
- Reduce the cost of maintenance

CHAPTER 2 REQUIREMENT ANALYSIS

There are various platforms available in the market for hosting a website. There are few free platforms that provide very less security whereas the paid platform provides more security.

- *Hardware resources:* Server (Cloud based or Physical)
- *Software Resources:* Browser (Chrome, Firefox, Microsoft Edge latest versions)
- Database: MySQL
- Programming Languages: HTML, CSS, JavaScript, PHP, MySQL

CHAPTER 3 TOOLS AND TECHNOLOGIES USED

The Technologies and languages used to develop the website are as follows:

1. **IDE**
   - Sublime Text
     Sublime Text is a commercial source code editor. It supports many programming and markup languages. It has enhanced features of using plug-ins, community-built and maintained under free-software licenses.
2. **Languages**
   - HTML/CSS
     HTML (Hyper Text Markup Language) is the standard markup language for documents designed to be displayed in web browser. Web browsers receive the HTML documents from a web server or local storage and render the documents into multimedia pages.
     CSS or Cascading Style Sheets is used for presentation of a document written is a markup language. It enables the separation of presentation and content. It adds styles such as fonts, colors, spacing to Web Documents
   - JavaScript
     It is a programming language that has dynamic typing, prototype-based object orientation and first class functions. It has Application Programming Interfaces (APIs) for working with text, dates, regular expressions, standard structures and the document object model. It is used both on client side and server side. It enables web pages to have interactive elements.
   - PHP
     It is usually processing on a web server. It was originally called Personal Home Page. Now it stands for Hypertext Preprocessing. It is a server scripting language and a powerful tool for making dynamic and interactive web pages. It could be embedded into html, making it easier to add functionality to web pages without needing to call external files for data. The current version is PHP 8.1.
3. **Server**
   - XAMPP
     It is a free and open-source cross platform web server solution stack package developed by Apache. XAMPP stands for “XAMPP Apache + MariaDB + PHP + Perl”. Since most web server deployments use the same components as XAMPP, it makes transitioning from a local test server to live server possible.
4. **Database**
   - MySQL
     MySQL database service is a fully managed database service to deploy cloud native applications. It is an open-source relational database management system. SQL stands for Structured Query Language. It is used to other programs to implement applications that need database capability. It is written in C and C++. Its SQL parser is written in yacc, but it uses home-brewed lexical analyzer.
   - phpMyAdmin

PhpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web, phpMyAdmin supports a wide range of operations on MySQL and MariaDB. The frequently used operations such as managing databases, tables, columns, relations, indexes, users, permissions etc. can be performed via the user interface, while you still have the ability to directly execute any SQL statement.

CHAPTER 4 IMPLEMENTATION

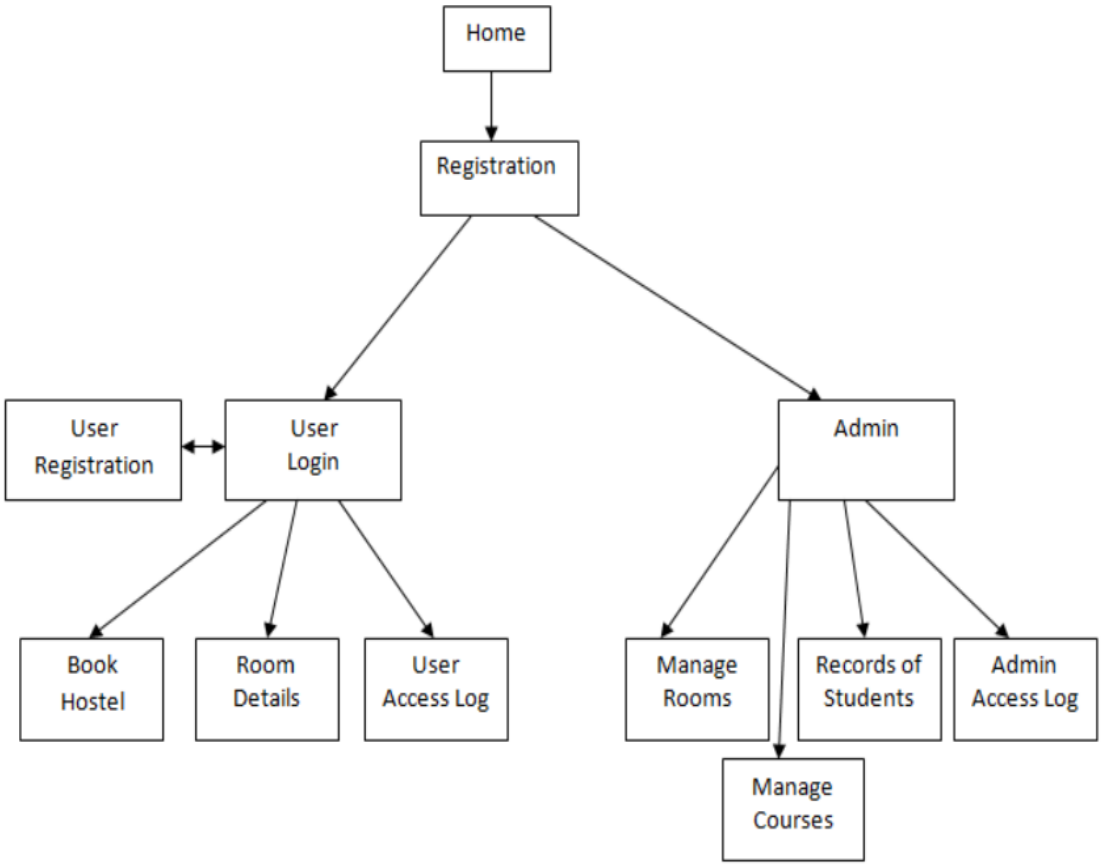
The purpose of the application is to manage the activities during the registration and manage the booking of the rooms, courses.

Basic things that are captured in the database are:

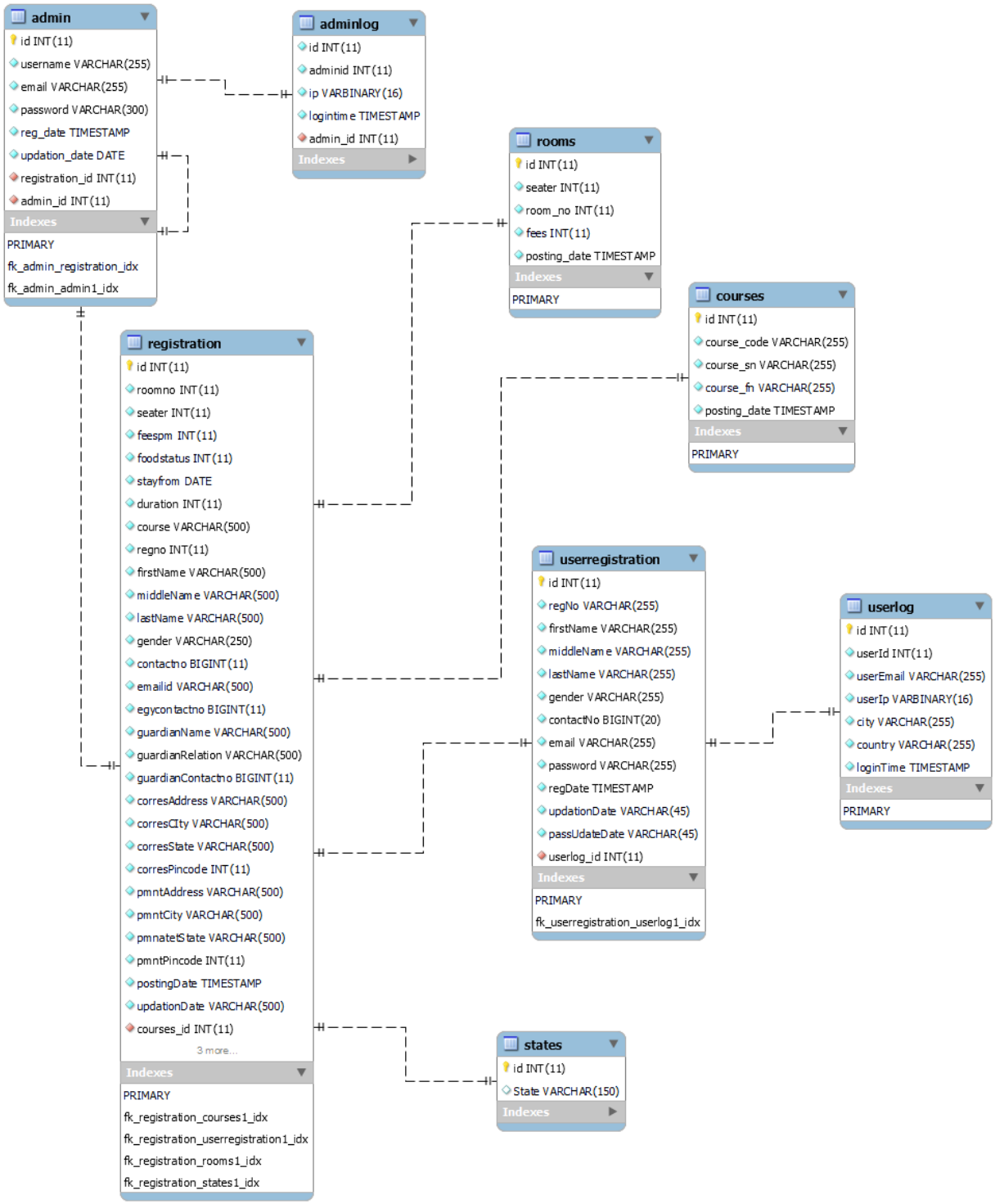
- Student credentials and admin credentials
- Passwords
- Student details that include parents name, address and contact details
- Allotment of rooms
- Managing the courses

4.1 Architecture

The basic architecture is as follows:



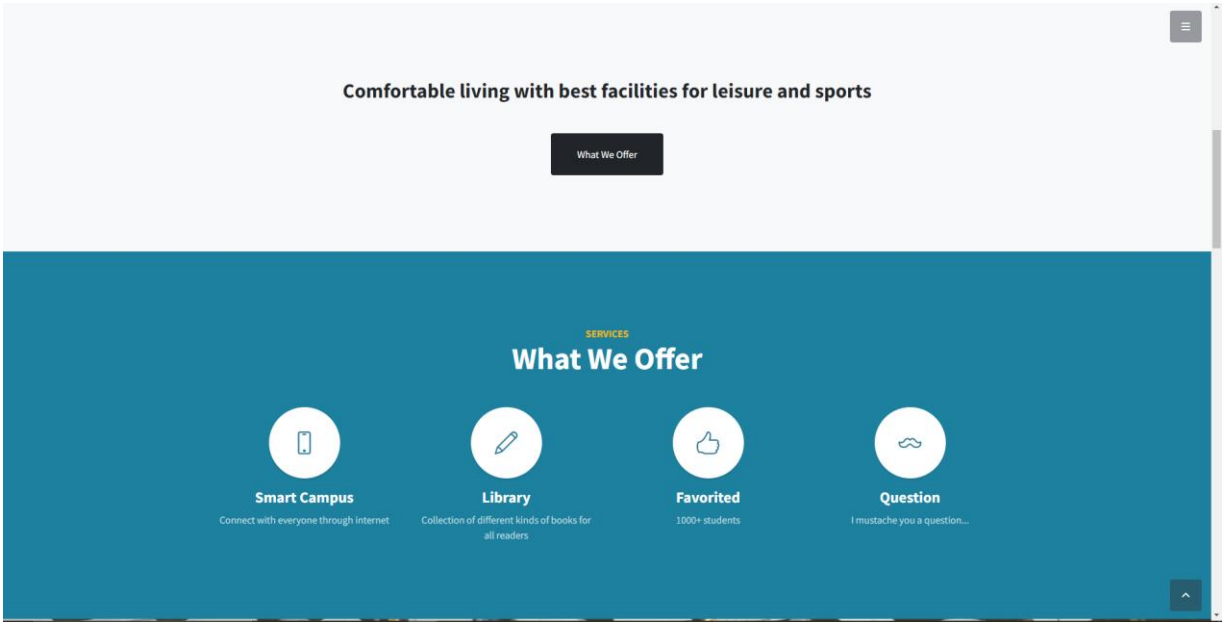
4.2 The ER and Schema of the database



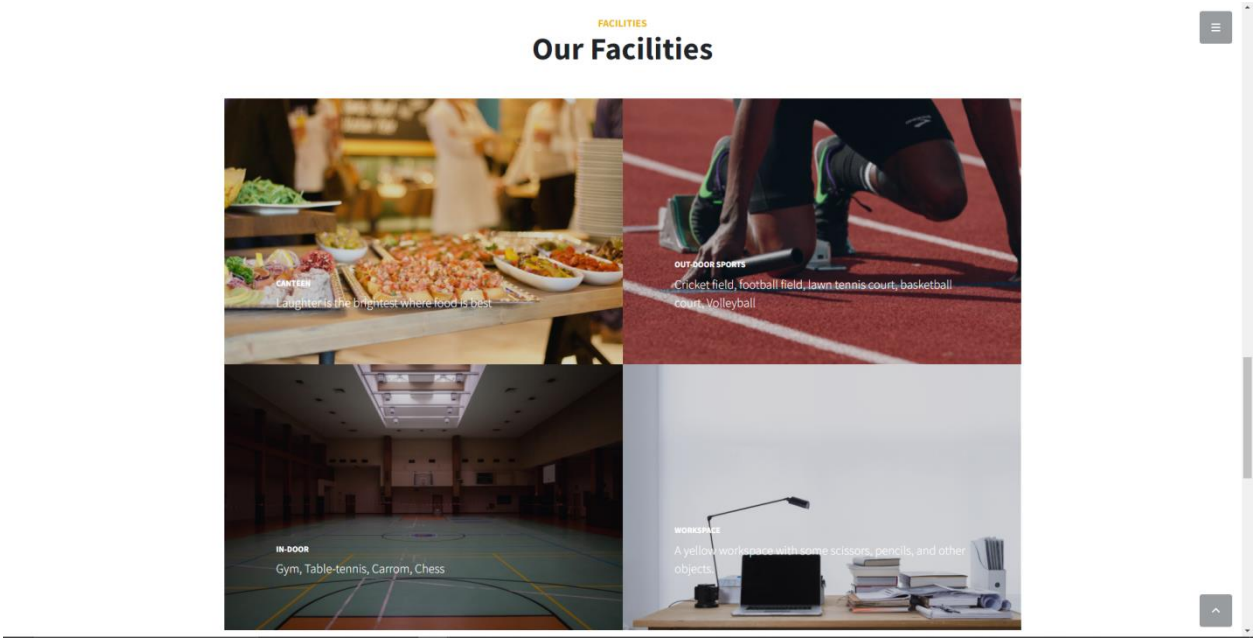
4.3 Working of the Project

1) Home Page - #home

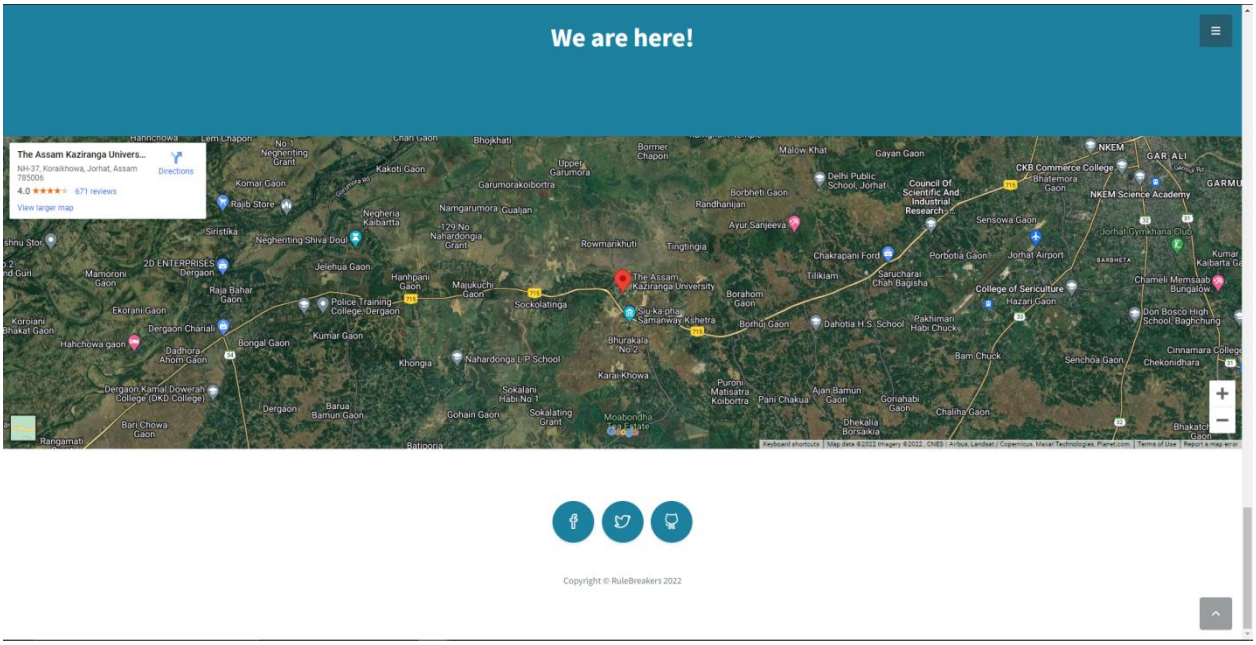
2) Home page - #about us



3) Home page - #services

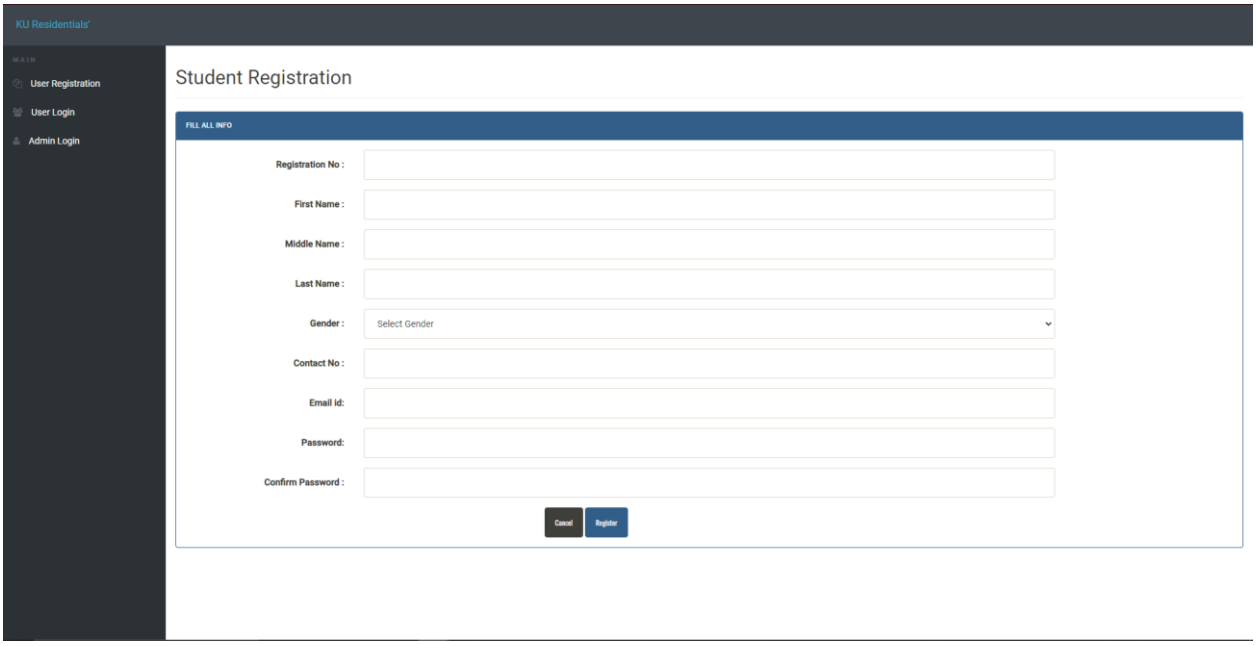


4) Home page - #contact

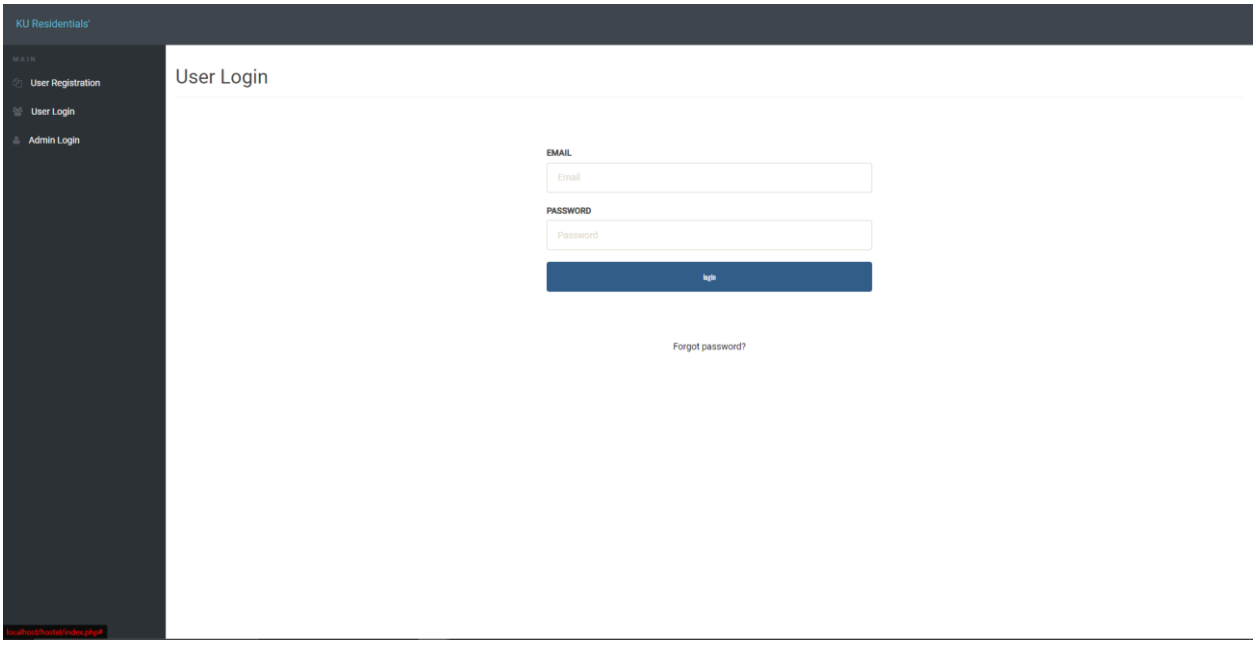


5) Home page - #sidebar

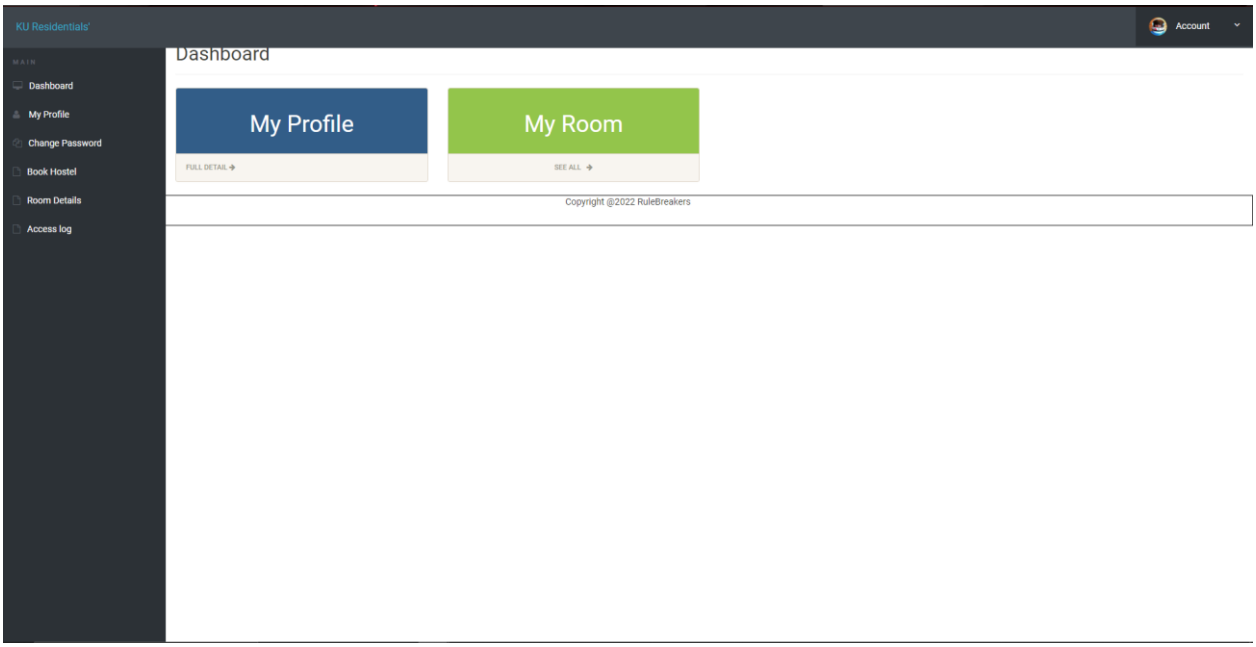
6) Form page - #registration of user



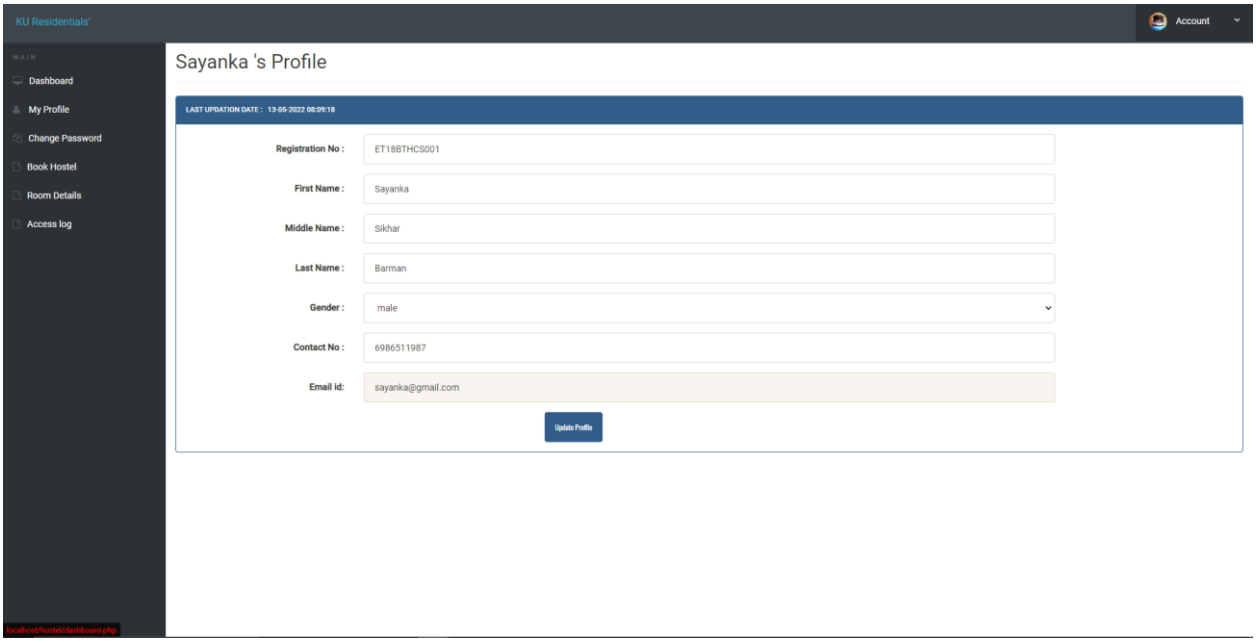
7) Form page - #user login



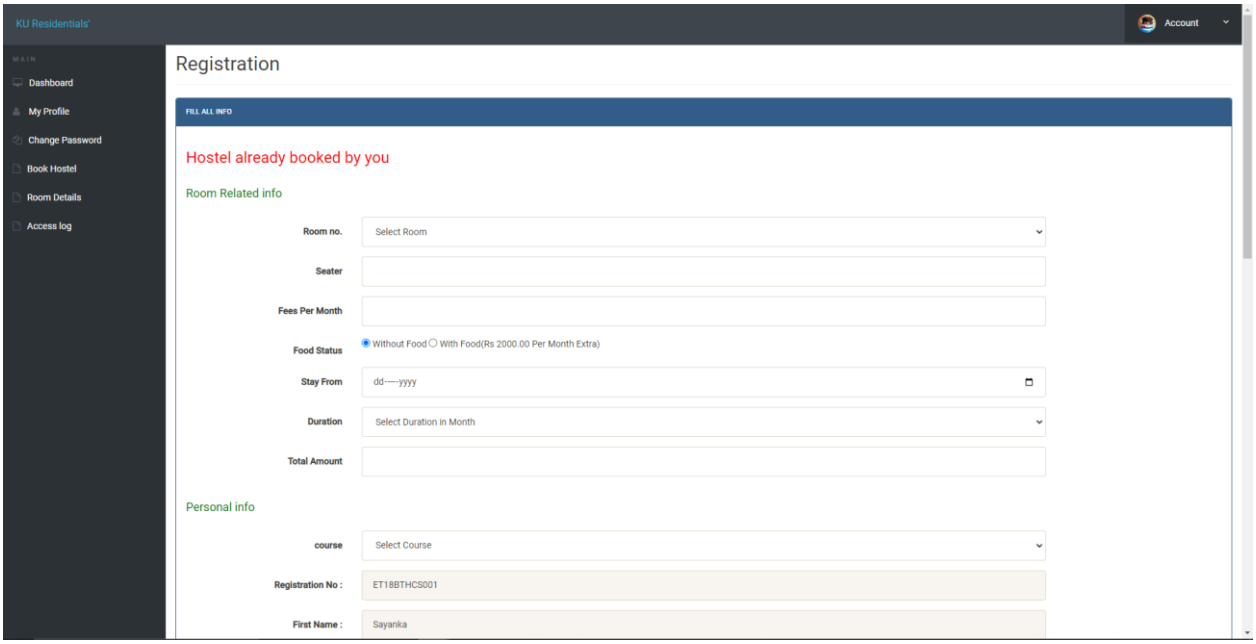
8) Landing page - #User Account



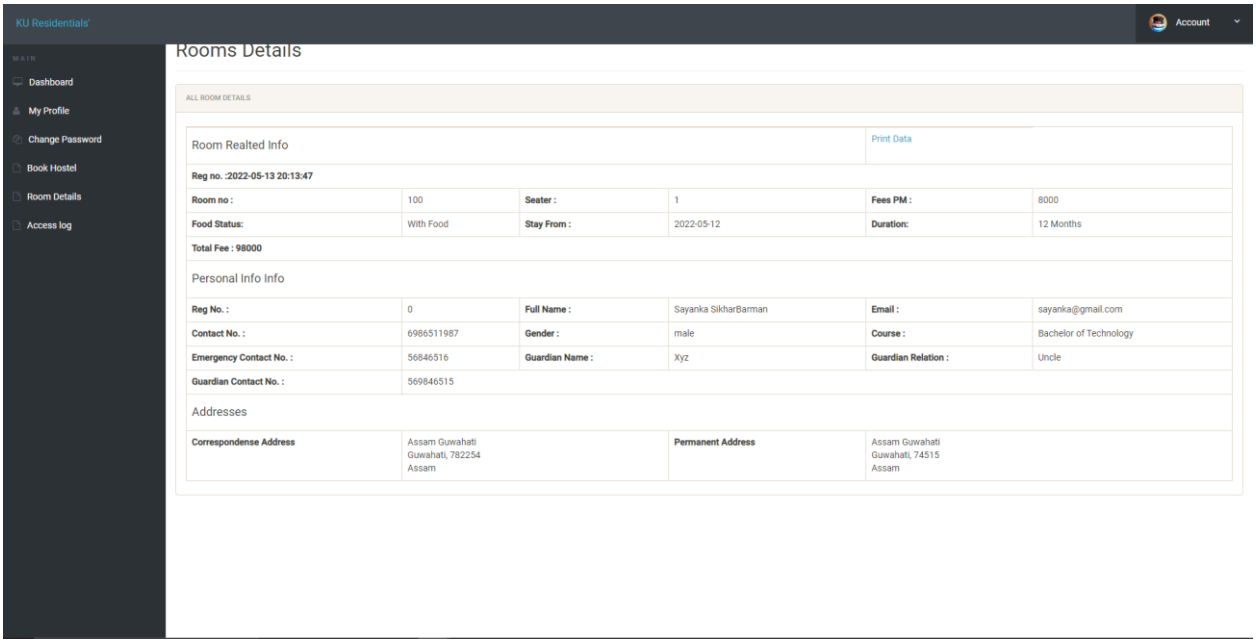
9) Landing page - #user profile



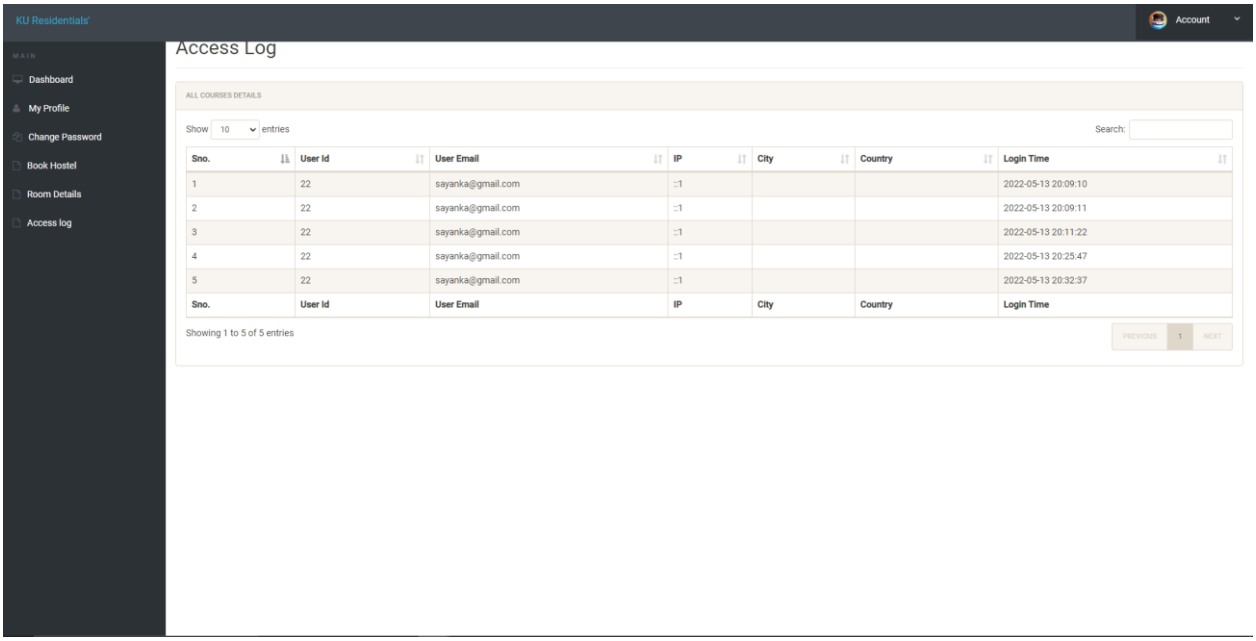
10) Page - #Book Hostel



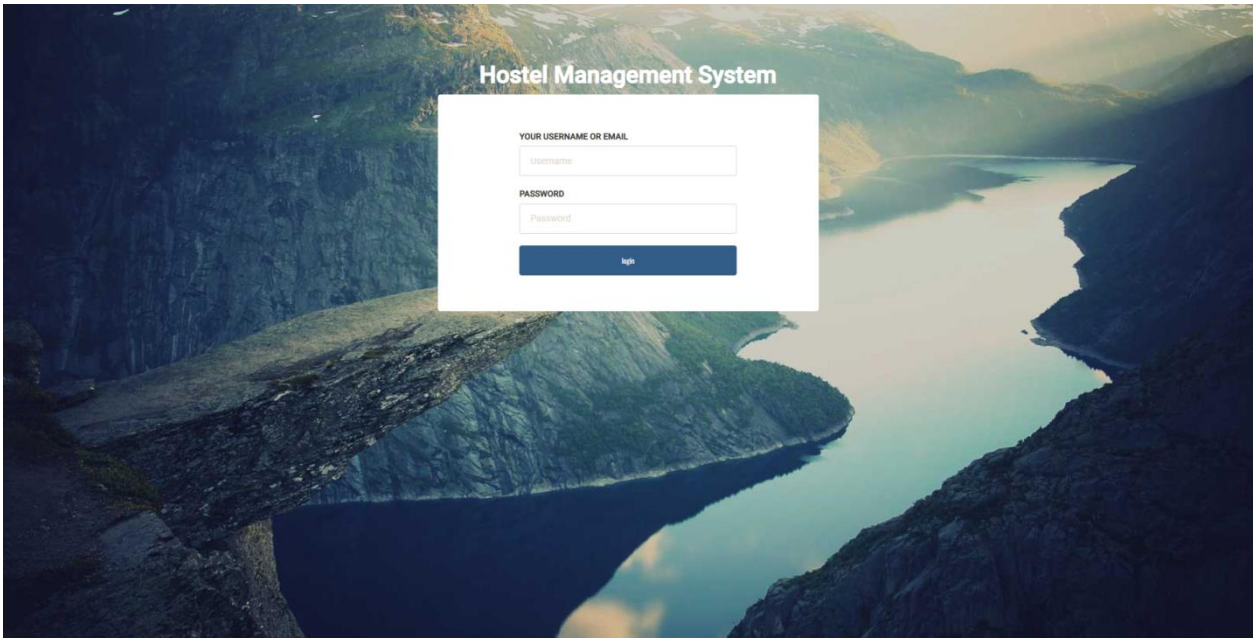
11) Page - #Room details



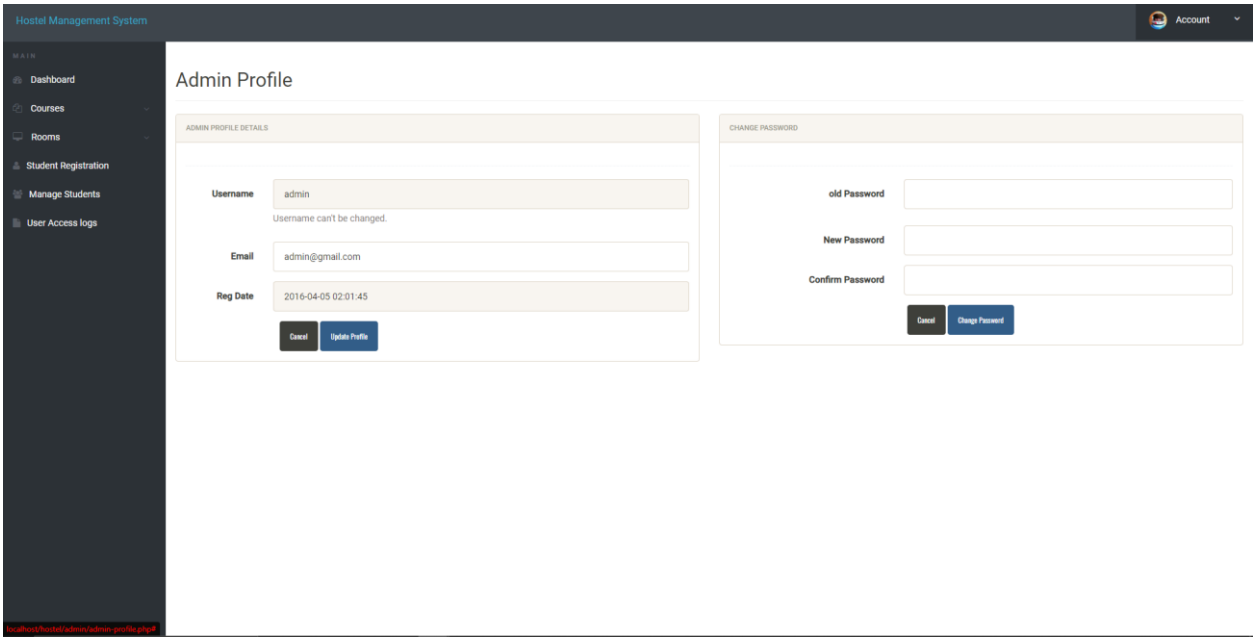
12) #User Access Log details



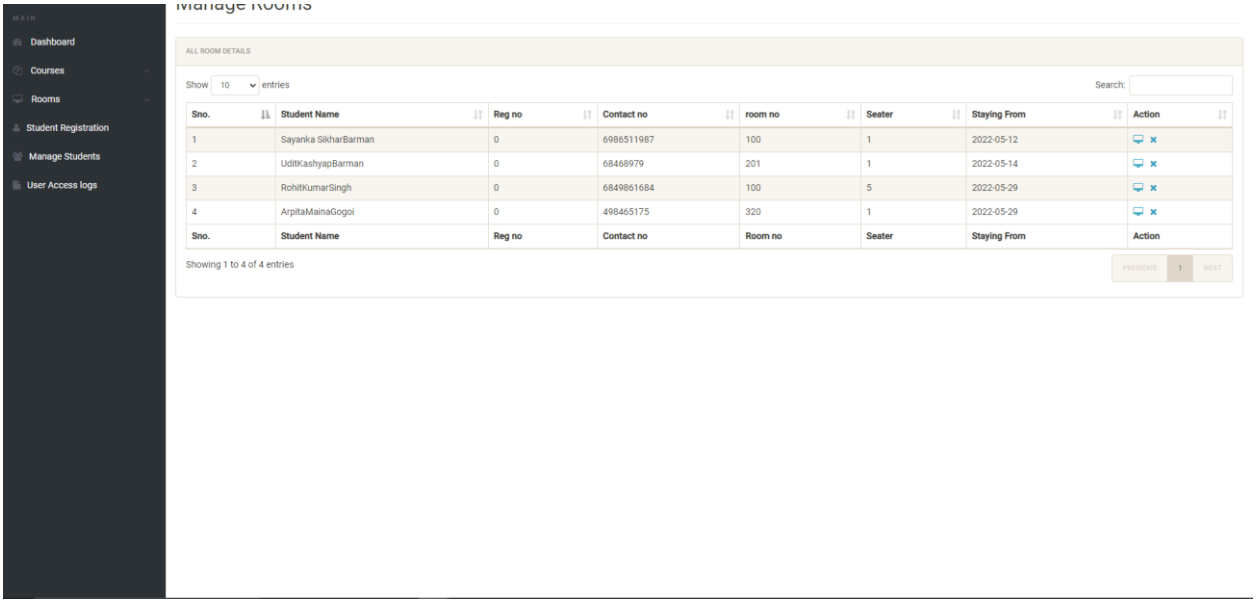
13) #Admin Login Page



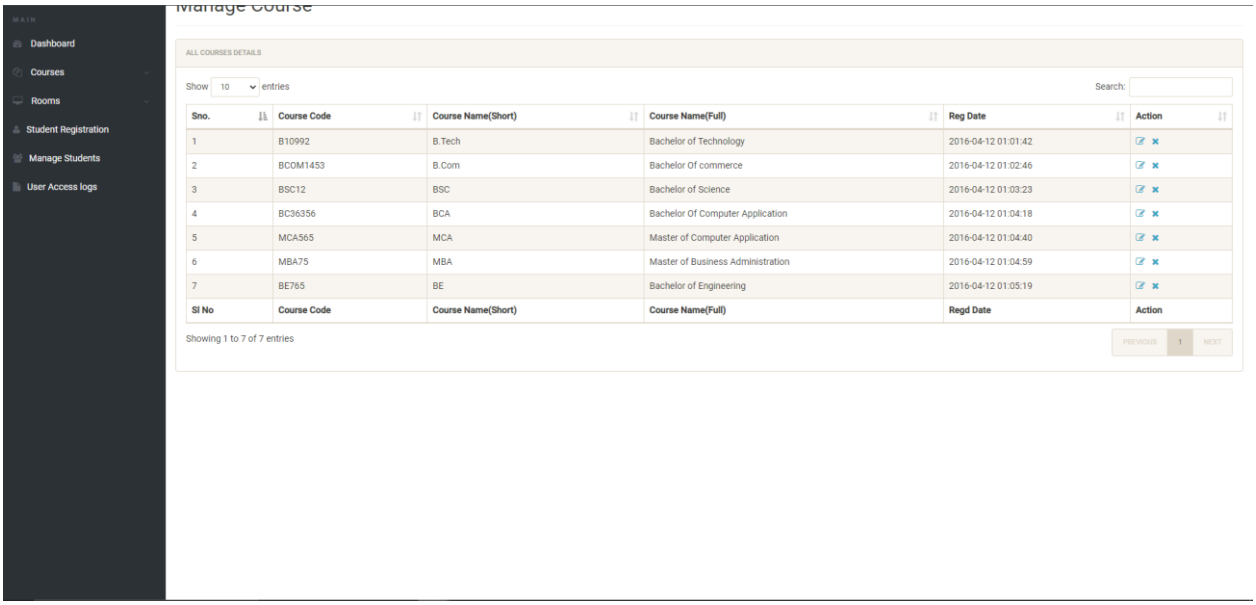
14) #Admin Profile page



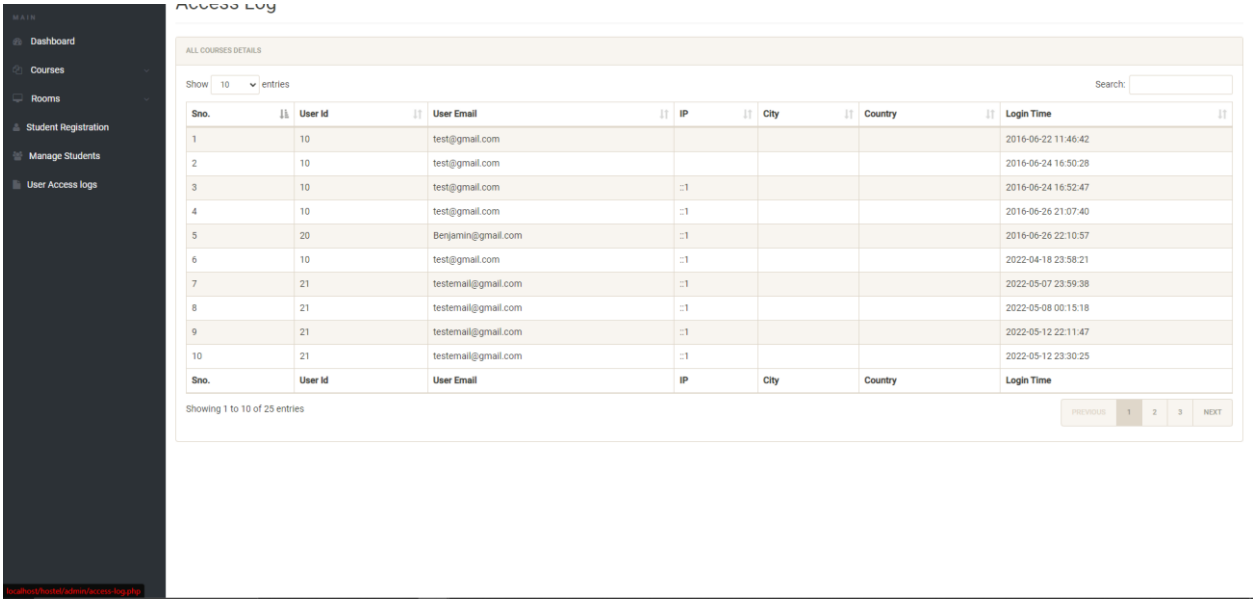
15) #Manage Students page



16) #Manage Courses



17) #Admin Access log details



Sno.	User Id	User Email	IP	City	Country	Login Time
1	10	test@gmail.com				2016-06-22 11:46:42
2	10	test@gmail.com				2016-06-24 16:50:28
3	10	test@gmail.com	::1			2016-06-24 16:52:47
4	10	test@gmail.com	::1			2016-06-26 21:07:40
5	20	Benjamin@gmail.com	::1			2016-06-26 22:10:57
6	10	test@gmail.com	::1			2022-04-18 23:58:21
7	21	testemail@gmail.com	::1			2022-05-07 23:59:38
8	21	testemail@gmail.com	::1			2022-05-08 00:15:18
9	21	testemail@gmail.com	::1			2022-05-12 22:11:47
10	21	testemail@gmail.com	::1			2022-05-12 23:30:25
Sno.	User Id	User Email	IP	City	Country	Login Time

4.4 Databases Screenshots

1) Databases

admin	Browse	Structure	Search	Insert	Empty	Drop	1	InnoDB	latin1_swedish_ci	16.0 KiB	-
adminlog	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	latin1_swedish_ci	16.0 KiB	-
courses	Browse	Structure	Search	Insert	Empty	Drop	7	InnoDB	latin1_swedish_ci	16.0 KiB	-
registration	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	latin1_swedish_ci	16.0 KiB	-
rooms	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	latin1_swedish_ci	16.0 KiB	-
states	Browse	Structure	Search	Insert	Empty	Drop	36	MyISAM	latin1_swedish_ci	2.8 KiB	-
userlog	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	latin1_swedish_ci	16.0 KiB	-
userregistration	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	16.0 KiB	-
8 tables	Sum						61	InnoDB	utf8mb4_general_ci	114.8 KiB	0 B

2) Admin

Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

```
SELECT * FROM `admin`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

←T→	id	username	email	password	reg_date	updation_date
Edit Copy Delete	1	admin	admin@gmail.com	Test@1234	2022-04-29 02:01:45	2022-05-07

Check all *With selected:* Edit Copy Delete Export

Show all | Number of rows: 25 Filter rows: Search this table

3) Courses Database

Showing rows 0 - 6 (7 total, Query took 0.0007 seconds.)

```
SELECT * FROM `courses`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

←T→	id	course_code	course_sn	course_fn	posting_date
Edit Copy Delete	1	B10992	B.Tech	Bachelor of Technology	2016-04-12 01:01:42
Edit Copy Delete	2	BCOM1453	B.Com	Bachelor Of commerce	2016-04-12 01:02:46
Edit Copy Delete	3	BSC12	BSC	Bachelor of Science	2016-04-12 01:03:23
Edit Copy Delete	4	BC36356	BCA	Bachelor Of Computer Application	2016-04-12 01:04:18
Edit Copy Delete	5	MCA565	MCA	Master of Computer Application	2016-04-12 01:04:40
Edit Copy Delete	6	MBA75	MBA	Master of Business Administration	2016-04-12 01:04:59
Edit Copy Delete	7	BE765	BE	Bachelor of Engineering	2016-04-12 01:05:19

Check all *With selected:* Edit Copy Delete Export

4) Registration Database

Showing rows 0 - 3 (4 total, Query took 0.0009 seconds.)

```
SELECT * FROM `registration`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

	id	roomno	seater	feespm	foodstatus	stayfrom	duration	course	regno	firstName	middleName	lastName	gender	contactno	emailid	egycontactno	guardianName	guardianRelat
Edit Copy Delete	6	100	5	8000	0	2022-05-10	5	Bachelor of Technology	78461548	Sayanka	Sikhar	Barman	male	44651	sayanka@gmail.com	0	XYZ	Mother
Edit Copy Delete	7	100	5	8000	1	2022-05-10	4	Bachelor of Engineering	108061211	Arpita		Gogoi	female	654618	arpita@gmail.com	8285703354	xyz	mother
Edit Copy Delete	8	112	3	4000	0	2016-06-27	5	Bachelor of Science	102355	Udit	Kashyap	Barman	male	84796565	udit@gmail.com	87986156	xyz	xyz
Edit Copy Delete	9	132	5	2000	1	2016-06-28	6	Bachelor of Engineering	86798455	Rohit	Kumar	Singh	male	953486486	rohit@gmail.com	8798451	demo	demo

Check all With selected: Edit Copy Delete Export

5) Rooms Database

Showing rows 0 - 4 (5 total, Query took 0.0006 seconds.)

```
SELECT * FROM `rooms`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

Click the drop-down arrow to toggle column's visibility.

	id	seater	room_no	fees	posting_date
Edit Copy Delete	1	5	100	8000	2016-04-12 04:15:43
Edit Copy Delete	2	2	201	6000	2016-04-12 07:00:47
Edit Copy Delete	3	2	200	6000	2016-04-12 07:00:58
Edit Copy Delete	4	3	112	4000	2016-04-12 07:01:07
Edit Copy Delete	5	5	132	2000	2016-04-12 07:01:15

6) Names of states Database

Showing rows 0 - 24 (36 total, Query took 0.0182 seconds.)

```
SELECT * FROM `states`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> | Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

←T→	id	State
Edit Copy Delete	1	Andaman and Nicobar Island (UT)
Edit Copy Delete	2	Andhra Pradesh
Edit Copy Delete	3	Arunachal Pradesh
Edit Copy Delete	4	Assam
Edit Copy Delete	5	Bihar
Edit Copy Delete	6	Chandigarh (UT)
Edit Copy Delete	7	Chhattisgarh
Edit Copy Delete	8	Dadra and Nagar Haveli (UT)
Edit Copy Delete	9	Daman and Diu (UT)
Edit Copy Delete	10	Delhi (NCT)
Edit Copy Delete	11	Goa
Edit Copy Delete	12	Gujarat
Edit Copy Delete	13	Haryana
Edit Copy Delete	14	Himachal Pradesh
Edit Copy Delete	15	Jammu and Kashmir
Edit Copy Delete	16	Jharkhand
Edit Copy Delete	17	Karnataka
Edit Copy Delete	18	Kerala
Edit Copy Delete	19	Lakshadweep (UT)
Edit Copy Delete	20	Madhya Pradesh

7) Database of User logs

Showing rows 0 - 4 (5 total, Query took 0.0008 seconds.)

```
SELECT * FROM `userlog`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

←T→	id	userId	userEmail	userIp	city	country	loginTime
Edit Copy Delete	1	10	sayanka@gmail.com				2022-05-11 11:46:42
Edit Copy Delete	2	10	rohit@gmail.com				2022-05-09 16:50:28
Edit Copy Delete	4	10	arpita@gmail.com	::1			2022-05-11 16:52:47
Edit Copy Delete	5	10	test@gmail.com	::1			2016-06-26 21:07:40
Edit Copy Delete	6	20	udit@gmail.com	::1			2016-06-26 22:10:57

Check all *With selected:* Edit Copy Delete Export

8) User Registration Database

Showing rows 0 - 2 (3 total, Query took 0.0010 seconds.)

```
SELECT * FROM `userregistration`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

				id	regNo	firstName	middleName	lastName	gender	contactNo	email	password	regDate	updationDate	passUdateDate
Edit	Copy	Delete	10	108061211	Sayanka	Sikhar	Barman	male	684651	Sayanka@gmail.com	1234	2022-04-30 09:51:33	23-04-2022 11:04:15	22-04-2022 05:16:49
Edit	Copy	Delete	19	102355	Udit	Kashyap	Barman	male	6786786786	udit@gmail.com	6786786786	2022-05-12 22:03:36	23-04-2022 11:04:15	22-04-2022 05:16:49
Edit	Copy	Delete	20	586952	Rohit	Kumar	Singh	male	8596185625	rohit@gmail.com	8596185625	2022-05-12 22:10:07	23-04-2022 11:04:15	22-04-2022 05:16:49

Check all *With selected:* Edit Copy Delete Export

Chapter 5 Setup Instructions

5.1 Sublime Text

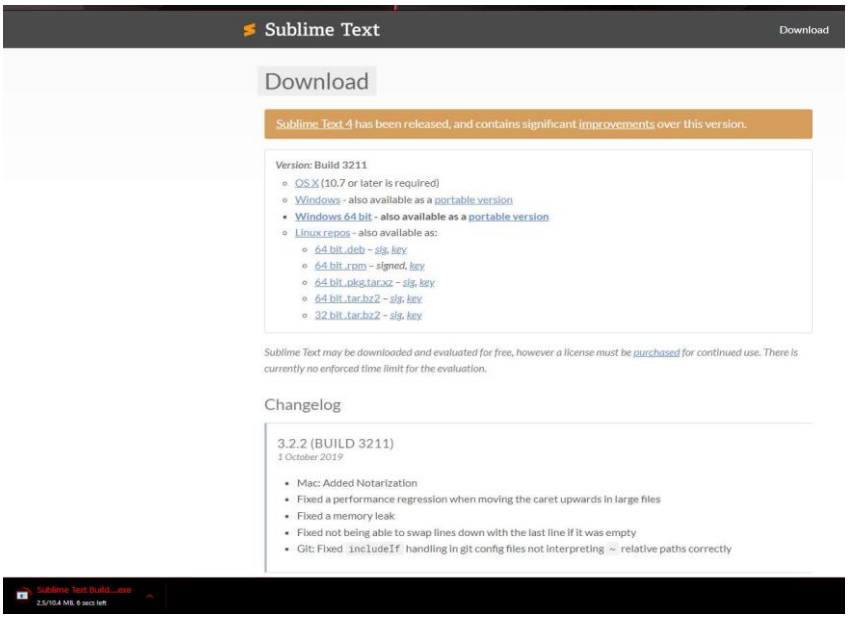
Firstly, we will open chrome and search for Sublime text that will act as an IDE for developing our project. There are Popular IDEs such as VS Code, ATOM, Net Beans, etc. We have selected Sublime text because it is small in size and can be easily installed.

1. **System Requirements:**
   - Sublime text is available for Windows and Linux distributions.
   - As we are using Windows, we will opt for windows versions
   - It also offers Windows 64-bit version.
   - Version: Build 3211

We can now proceed to download and install process.

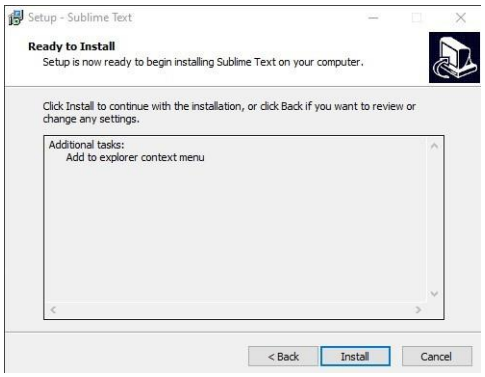
2. **Download**

Click on the Windows 64-bit. The installer file will be downloaded.



3. **Install**

Open the installer file and click on install. Sublime text will get installed.



4. Open Sublime Text from start menu.

5.2 XAMPP

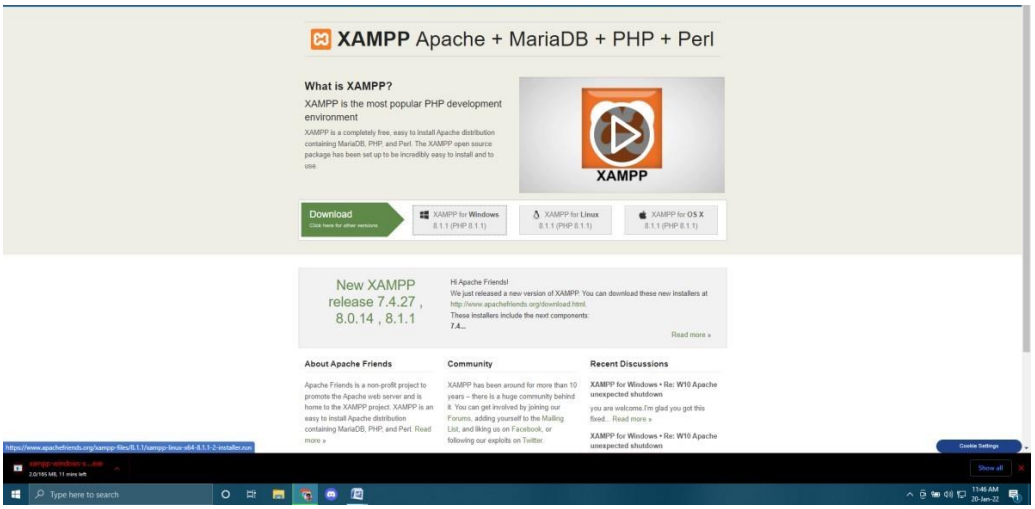
XAMPP is the most popular PHP development environment

1. **System Requirements**

   XAMPP is available for Windows, Linux, and OS X

2. **Download**

   Click on <u>XAMPP for Windows 8.1.1 (PHP 8.1.1)</u>

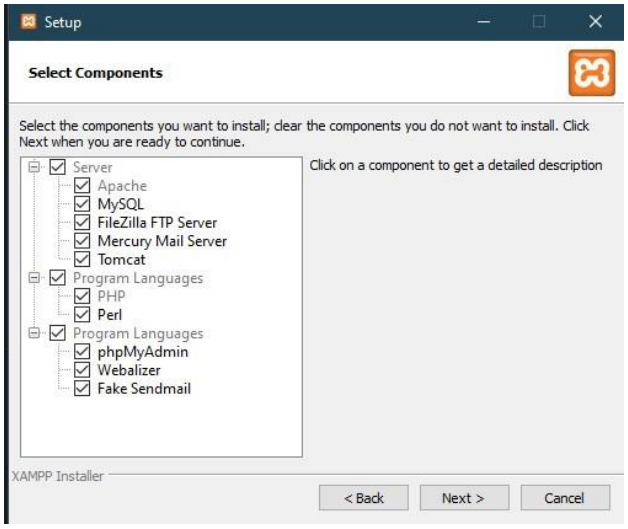


3. **Install**

   Open the installer file and Install XAMPP.

   We select all the packages as most of them will be used during project development.

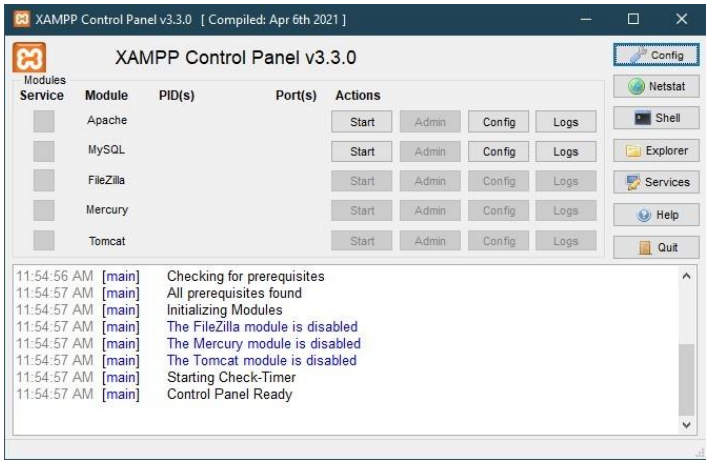
   Click on next and then install XAMPP.



4. **Open**

   a. Open XAMPP control panel

   b. A panel will pop up which will have options to start local server.



We need to start Apache and MySQL servers for initializing PHP and MySQL environment.

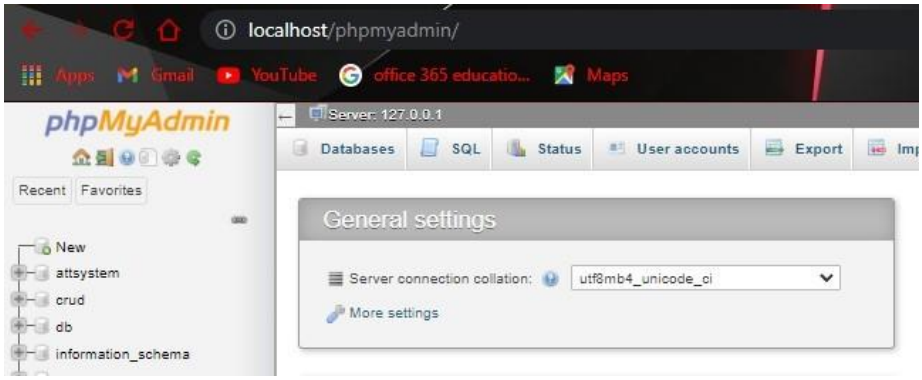
5.3 phpMyAdmin

It has an intuitive web interface with the support for most SQL features.

1. **System Requirements**
   a) A web Server of any kind
   b) MySQL or MariaDB 5.5 or newer
   c) Browser that supports JavaScript, cookies, and Bootstrap 4.5
   d) PHP 7.2.5 or newer
   e) JSON support, hash, ctype, SPL extensions

2. **Download**
   a) Go to phpMyAdmin.net
   b) Click on Download 5.1.1
   c) Extract the downloaded zip file.

3. **Open**
   a) To open phpMyAdmin we need to open browser first
   b) Then in the address bar type: localhost/phpMyAdmin
   c) The phpMyAdmin server will open in the browser.



The phpMyAdmin has inbuilt packages for PHP and MySQL so we do not have to install them separately.

Chapter 6 Conclusion

To conclude the description about the project: The project developed using PHP and MySQL is based on the requirement specification of the user and the analysis of the existing system with flexibility for future enhancement.
Using the web decreases the usage of physical resources such as paper, human resource etc. It becomes simpler to store records for longer period of time and easy to access.

References

1. **Sublime text:**
   a. https://www.sublimetext.com/
   b. https://en.wikipedia.org/wiki/Sublime_Text
2. **XAMPP**
   a. https://www.apachefriends.org/index.html
   b. https://en.wikipedia.org/wiki/XAMPP
3. **phpMyAdmin**
   a. https://www.phpmyadmin.net/
   b. https://www.phpmyadmin.net/downloads/
4. **Others**
   a. https://en.wikipedia.org/wiki/HTML
   b. https://www.w3.org/Style/CSS/Overview.en.html
   c. https://en.wikipedia.org/wiki/CSS
   d. https://en.wikipedia.org/wiki/JavaScript
   e. https://www.w3schools.com/js/