A Project report on

# HOSTEL MOBILE MANAGEMENT SYSTEM(PDH)

Submitted in partial fulfillment of the requirement for the Final year award of the degree


## DEPARTMENT OF COMPUTER APPLICATIONS

**Of**

**DON BOSCO COLLEGE,**

**YELAGIRI HILLS, TIRUPATTUR, TAMIL NADU**

**(Affiliated to Thiruvalluvar university)**

Submitted By

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**(35820U09022)**

Under the guidance of

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External Guide

**DON BOSCO COLLEGE**

**Department of Bachelor of Computer application**


**CERTIFICATE**

*This is to certify that the project work entitlied*

**HOSTEL MOBILE MANAGEMENT(PDH)**

*Submitted in the partial fulfilment of the Requirement*

*for the award of the degree of*

*Department of Computer Applications of the*

*Don Bosco College [Co-Ed], yelagiri hills,*

*Tirupattur, Tamil nadu*

*bonafide work carried out by*

**DAVID SAGAYA ALEX S**

**35820U09022**

*during the academic year 2022-2023*

**Signature of the Guide**

Asst. Prof. Baskar,

Department of Computer Applications

**Signature of the HOD**

**Prof.SATHISH**

HOD,

Department of Computer Applications

External Viva

**Name of the Examiner** **Signature with date**

## Declaration

I, DAVID SAGAYA ALEX S , student of the 6th sem BCA, **DON BOSCO COLLEGE [Co-Ed]**, bearing the USN **35820U09022** , hereby declare that the project entitiled **"HOSTEL MOBILE MANAGEMENT SYSTEM(PDH)"** had been carried out by me under the supervision of External Guide and Internal Guide **Asst. Baskar , Department of Computer Application** and submitted in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Computer Applications by the **Don Bosco College [Co-Ed]** during the academic year 2022-2023. The report has not been submitted to any other universityor institute for the award of any degree or certificate.

Place: TIRUPATTUR DAVID SAGAYA ALEX S

Date: (**35820U09022**)

## ACKNOWLEDGEMENT

I would like to thank all those who are involved in this endeavor for their kind cooperation for its successful completion. At the outset, I wish to express my sincere gratitude to all those people who have helped me to complete this project in an efficient manner.

I offer my special thanks to my external project guide and to my Internal Project guide, Asst. Prof. Baskar, Department of Computer Applications, Don Bosco College[Co-Ed], Yelagiri Hills, Tirupattur without whose help and support throughout this project would not have been this success.

I am thankful to Dr. Thaddeus S, Principal, Don Bosco College [Co-Ed], Yelagiri Hills, Tirupattur for his kind support in all respect during my study. I would like to thank external project guide who gave opportunity to do this project at an extreme organization Most of all and more than ever, I would like to thanks my family members for their warmness, support, encouragement, kindness and patience. I am really thankful to all my friends who always advised and motivated me throughout the course.

DAVID SAGAYA ALEX S

(35820U09022)

## Table Content

**PROBLEM DESCRIPTION DOCUMENT**

ROLL NO: B20221
NAME: David Sagaya Alex S
GUIDE: Asst. Baskar
PROJECT TITLE: Hostel Mobile Management (PDH)

**Existing System:**

Additionally, there may be a lack of accountability and accuracy in the manual process of collecting and tracking mobile devices for students. This can lead to lost or misplaced devices, incomplete records, and difficulty in keeping track of which students have permission to use their mobile devices. Overall, the existing system may be inefficient and lead to errors. There is a confusion about who submitted the mobile and who didn't. Asking for permission becomes difficult, the concern person won't be available all the time.

Those who have got permission for the mobile and tracking the record is difficult.

The existing system for mobile management in hostels often relies on a manual process that can be prone to errors and inefficiencies. Students may have to ask for permission to use their mobile devices, which can be time-consuming and sometimes result in confusion. Additionally, the responsibility for tracking which students have permission to use their devices and for collecting and returning the devices may be unclear or may fall on different individuals, leading to lost or misplaced devices and incomplete records. These issues can make it difficult for hostel staff to maintain accurate records and ensure that students are using their devices appropriately.

Overall, the existing system may be unreliable and time-consuming, potentially leading to frustrations for both students and hostel staff.

**Proposed System:**

By implementing a mobile management system in your hostel web application, you can simplify the process of mobile submission and attendance tracking. This will not only reduce confusion but also improve efficiency and accountability. Additionally, having a centralized system for requesting and tracking mobiles can help save time and effort for both students and hostel staff. The submitting of mobile and checking with attendance becomes easy through my software. In my software itself anyone who belongs to the place can ask for permission and have their mobile for some period of time. It will be easy to keep track on mobiles those who are having it.

With the proposed mobile management system, students and staff can easily request permission to use a mobile device and the system will keep track of the mobile devices that are checked out. This will reduce confusion and make it easier to identify who has a mobile device at any given time. The system will also streamline the attendance process by allowing students to submit attendance through their mobile devices. This will save time and effort for both the students and staff as they will not have to manually submit attendance. Additionally, the mobile management system can be integrated with the hostel web application to provide a centralized platform for all activities related to mobile device management. This will allow for easy tracking of the status of mobile devices, checking in and out of devices, and monitoring device usage.

**PROJECT PROPOSAL**

**PROFORMA OF PROJECT PROPOSAL – SEMESTER**

**a. Title of the Project**

Hostel Mobile Management (PDH)

**b. Problem description**

**i. Overview**

The project will be helpful to keep track on mobiles of students .

**ii. Objectives of the project**

- Maintaining the records related to students and mobiles
- Requesting for mobile

**iii. Available Input**

- Students' details
- Students' mobile details in year wise

**iv. Expected Output**

- Mobile can be tracked with attendance(Name list)
- Hard copy is not necessary
- Students can see their details using username and password

**v. Process Logic**

User has to login and enter their details in the form and can save it. With the help of admin login , submission of mobile can be marked. If anyone needs mobile means, he can request for mobile in that software itself, it will intimate the concern person who can approve the request.

**vi. Stakeholders**

PDH hostel

**vii.End Users**

PDH students, Wardens and Director

**c. Proposed Solution**

- It can help to request for mobile.
- The tracking of mobile submission becomes easy.
- If the mobile is missed or stolen with the help the details stored in the website, we can raise a complain and find the mobile.

**d. Limitation of the project**

- It can support are by above 150 students at the same time.

- Admin can not delete any record through website , it is possible only through database.

**e. Environment**

**i. Tools Used**

**Front end:** HTML, CSS, JAVASCRIPT, Bootstrap

**Back end:** PHP, MySQL

**Platform:** Android, Windows, Linux, MacOS

**Editors:** Visual Studio Code

**Server:** Localhost , 000WebHost

**Documentation:** MS-word

**ii. Hardware Requirements**

- Android Mobile

**iii. Other Requirements**

- Concern persons' details

**f. Name and address of the client**

PDH, Guezou Nagar Athanavoor,

Yelagiri Hills, Tirupattur Dt,

Tamil Nadu, INDIA - 635 853

**g. Future Enhancements**

This website can be improved and merged with attendance maintenance, outing register .

**SYSTEM STUDY**

**SYSTEM STUDY**

**1. Introduction**

**i. introduce your organization**

Name:: PDH

Place:: Yelagiri Hills, Tiruppatur DT

**ii. explain the general system**

The system is collecting mobile from students and having their count in paper , and also requesting for mobile as paper.

**iii. if existing system available describe it**

Always using paper to write a request letter and waiting for long time to get permission for mobile for any cause and also everyday the count of mobiles should be informed to the concern person.

**iv. explain the problem**

While asking for mobile the person has to stand for long time , sometime the request would be rejected , so it is waste of time.

The count of mobiles may not be known for the following day.

**v. suggest the solution**

My project will reduce the time for requesting(not standing in front of Father room) for mobile and the record can be tracked everyday.

**2. List of Modules**

**i. list down the module names**

1. Login
2. Register (if the details of student is not there)
3. Update (if the details mismatch)
4. Attendance (for mobile submission)
5. Request for mobile
6. Add user module

**3. Description of Modules**

**module no**

Totally there 5 main modules

**module name and description**

1. **Login** – Used to login and check who is logging in.

2. **Register** – If there is no detail about the student and his mobile that need to be registered by the student.

3. **Update –** If the details of the student mismatches he can change it.

4. **Attendance –** The attendance can be taken to know how many has submitted their mobile and not submitted.

5. **Request –** The student can request for mobile.

6. **Post-** Admin can post a message that can be displayed in all the dashboards

**Activities**

**Activity 1**

**Activity Name:** Student Registration

**Purpose:** To register students for mobile management system

**Entry Criteria:** The student has a valid email address and is currently enrolled in the hostel

**Input:** Student's personal information, email address, hostel room number

**Output:** Student's account in the mobile management system is created

**Exit Criteria**: Student can now access the mobile management system

**Activity 2**

**Activity Name:** Mobile Request

**Purpose:** To allow students to request for a mobile device

**Entry Criteria:** Student is registered in the mobile management system

**Input:** Mobile device request information, reason for request

**Output:** Request is recorded and sent to the relevant personnel for processing

**Exit Criteria:** Request is processed and a mobile device is allocated to the student

**Activity 3**

**Activity Name:** Mobile Attendance Submission

**Purpose:** To allow students to submit their attendance using the mobile management system

**Entry Criteria:** Student is registered in the mobile management system and has a mobile device

**Input:** Attendance information, including date and time of submission

**Output:** Attendance data is recorded and stored in the system

**Exit Criteria:** Attendance data is processed and made available to relevant personnel

**Activity 4**

**Activity Name:** Mobile Device Collection

**Purpose:** To allow students to return mobile devices to the system

**Entry Criteria:** Student has finished using the mobile device or is leaving the hostel

**Input:** Mobile device return information

**Output:** Mobile device is collected and checked for any damages

**Exit Criteria:** Mobile device is deemed to be in good condition and made available for allocation to another student

**Activity 5**

**Activity Name:** Mobile Device Maintenance

**Purpose:** To maintain and repair mobile devices in the system

**Entry Criteria:** Mobile devices are reported to be faulty or damaged

**Input:** Mobile device maintenance or repair request

**Output:** Mobile device is repaired or replaced as necessary

**Exit Criteria:** Mobile device is in good working condition and made available

**Activity 6**

**Activity name:** Post

**Purpose:** Admin can post a message that can be displayed in all the dashboards

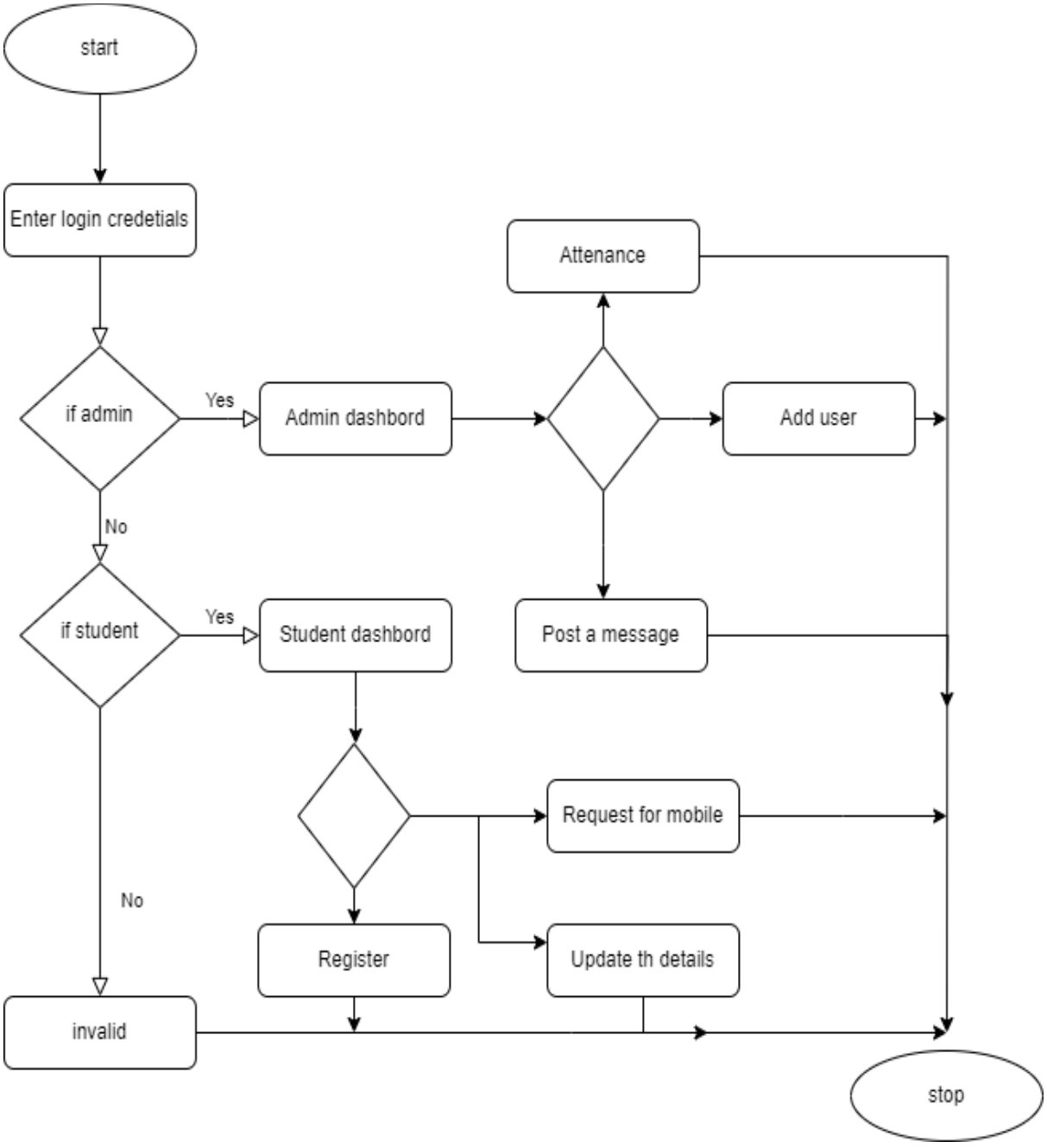
**Entry Criteria:** Message can be a wrong one

**Input:** Information from admin or warden or staffs

**Output:** Information will be displayed in dashboard

**Exit Criteria:** System should work properly and should handle low internet too.

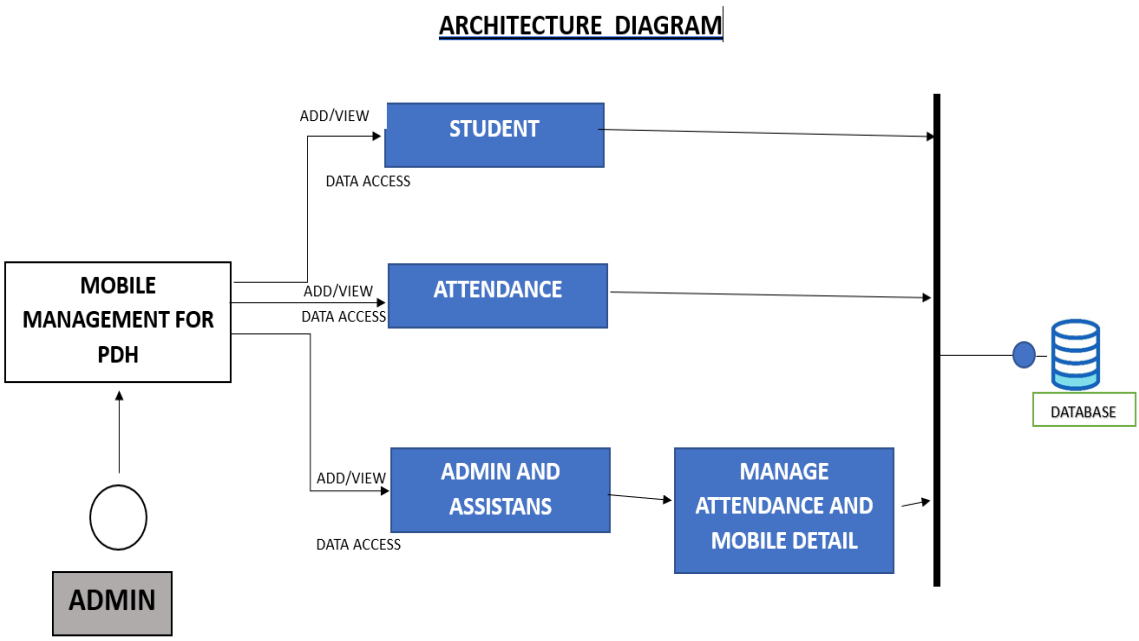
4. **Data Flow Diagram**



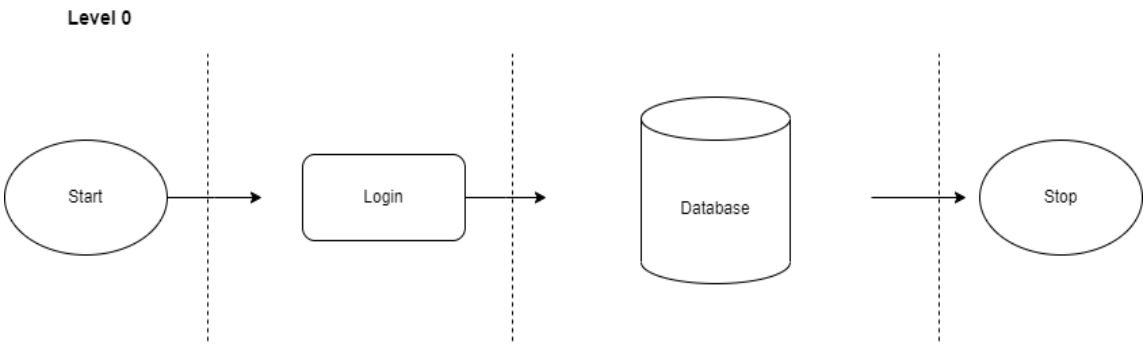
# SYSTEM DESIGN

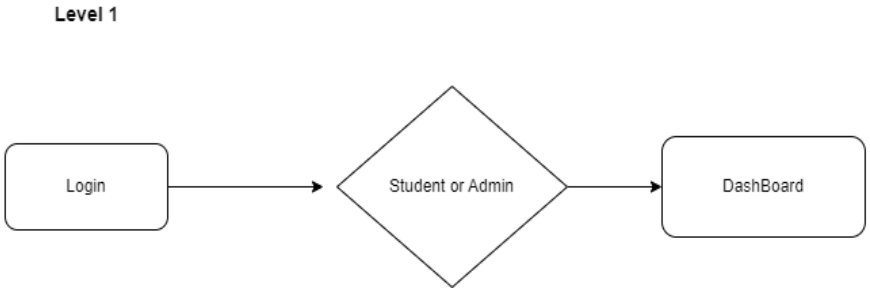
## SYSTEM DESIGN (includes Process, Class, Data Base, User Interface, Reports)

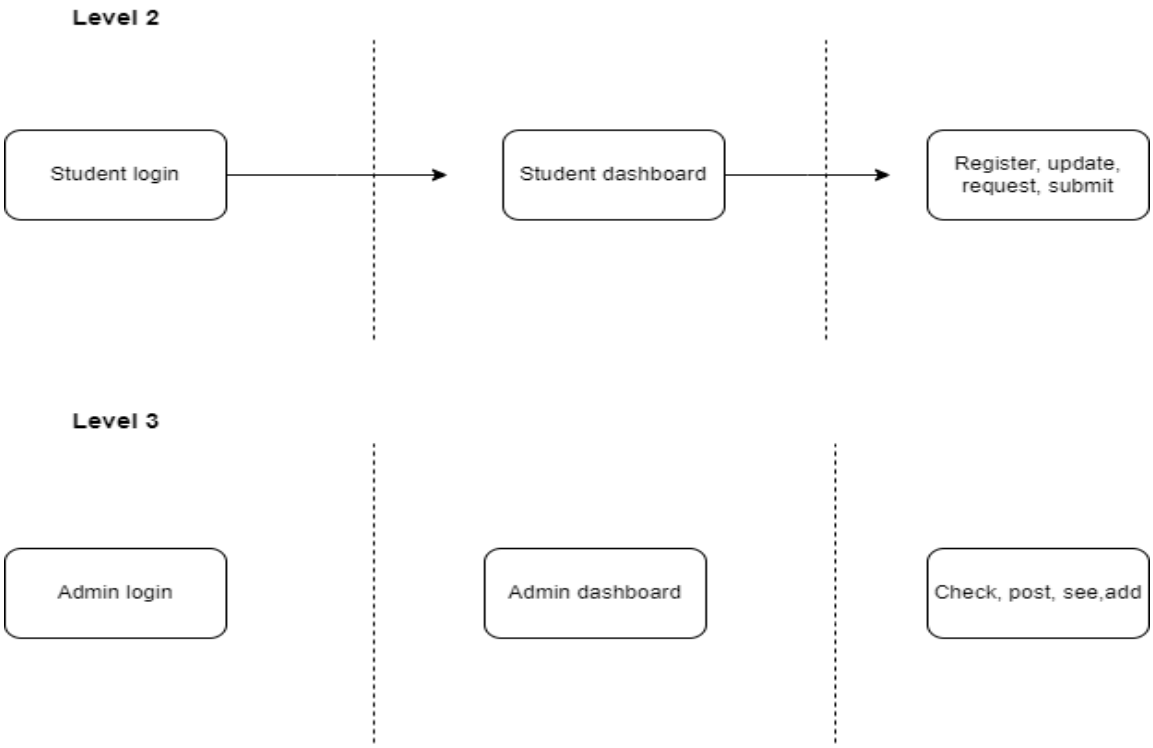
### 1. Architectural Diagram



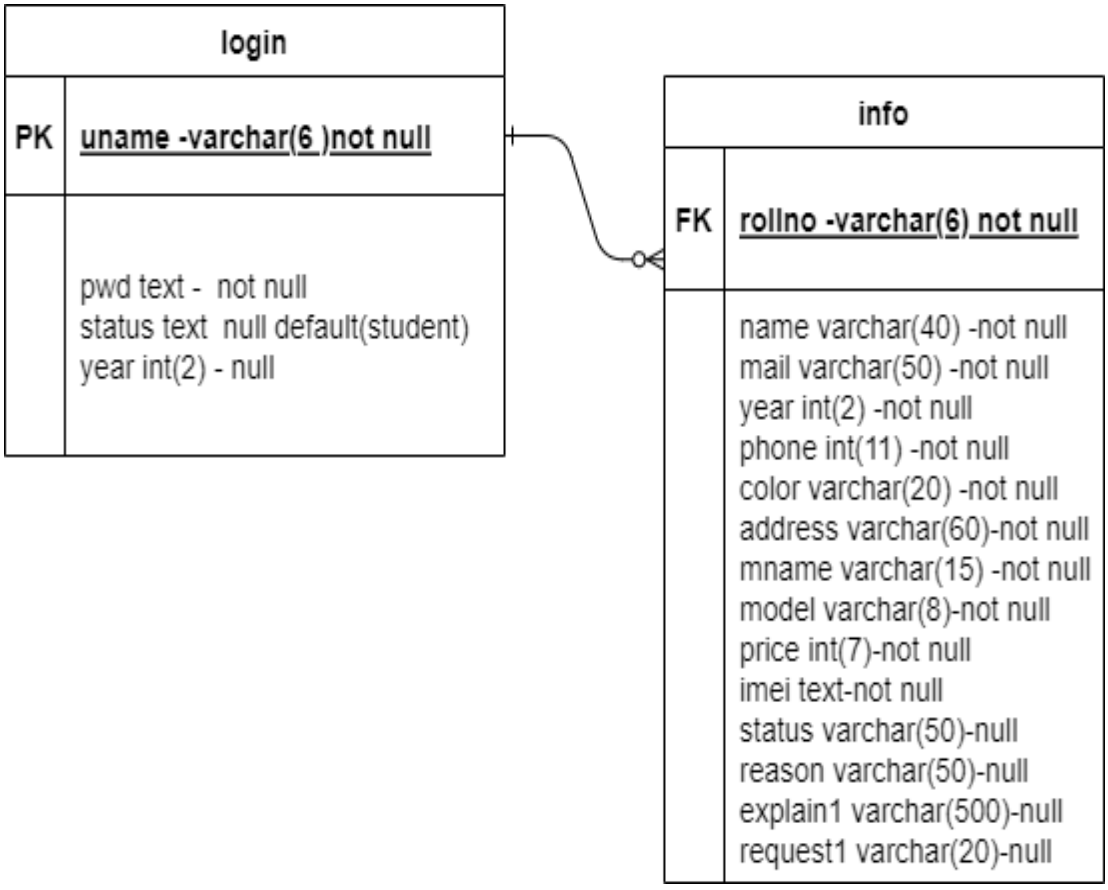

### 2. Process Design






**3. Database design: ER Diagram.**



## 4. Description of Database Tables

**Table Name**: login

**Description:**

| # | Name | Type | Collation | Attributes | Null | Default | Comments |
|---|---|---|---|---|---|---|---|
| ☐ | 1 | uname | varchar(6) | utf8mb4_general_ci | | Yes | *NULL* |
| ☐ | 2 | pwd | text | utf8mb4_general_ci | | Yes | *NULL* |
| ☐ | 3 | status | text | utf8mb4_general_ci | | No | 'student' |

**Primary Key:** (*uname*)

**Foreign Key:** (*uname*) references req(*rollno*)

**Table Name:** info

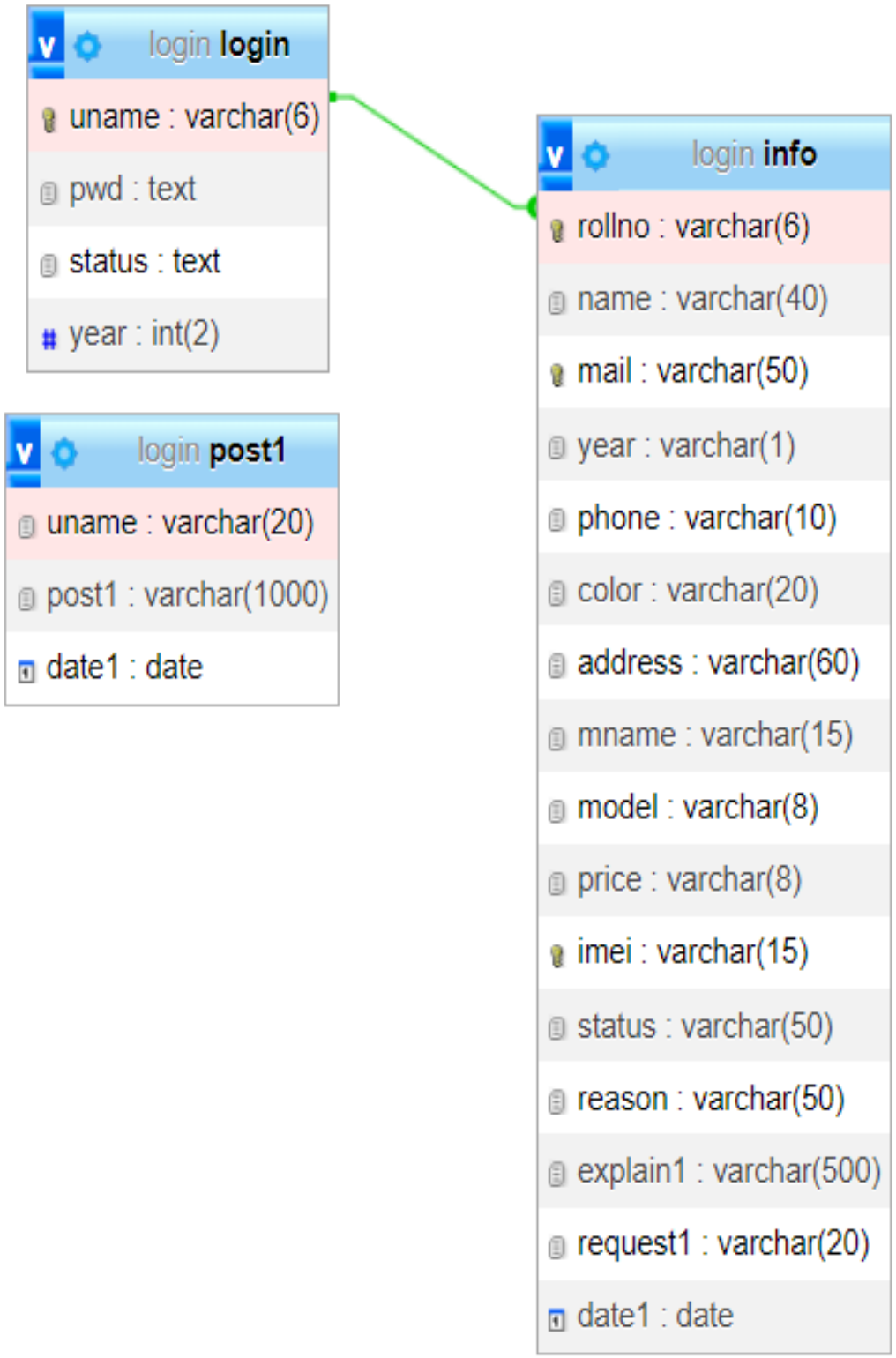
**Description:** It holds all the details related to the students and their mobiles

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---|---|---|---|---|---|---|---|---|
| 1 | rollno | varchar(6) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 2 | name | varchar(40) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 3 | mail | varchar(50) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 4 | year | int(2) | | | No | *None* | | | Change Drop More |
| 5 | phone | int(11) | | | No | *None* | | | Change Drop More |
| 6 | color | varchar(20) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 7 | address | varchar(60) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 8 | mname | varchar(15) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 9 | model | varchar(8) | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 10 | price | int(7) | | | No | *None* | | | Change Drop More |
| 11 | imei | text | utf8mb4_general_ci | | No | *None* | | | Change Drop More |
| 12 | status | varchar(50) | utf8mb4_general_ci | | Yes | absent | | | Change Drop More |
| 13 | reason | varchar(50) | utf8mb4_general_ci | | Yes | *NULL* | | | Change Drop More |
| 14 | explain1 | varchar(500) | utf8mb4_general_ci | | Yes | *NULL* | | | Change Drop More |
| 15 | request1 | varchar(20) | utf8mb4_general_ci | | Yes | *NULL* | | | Change Drop More |

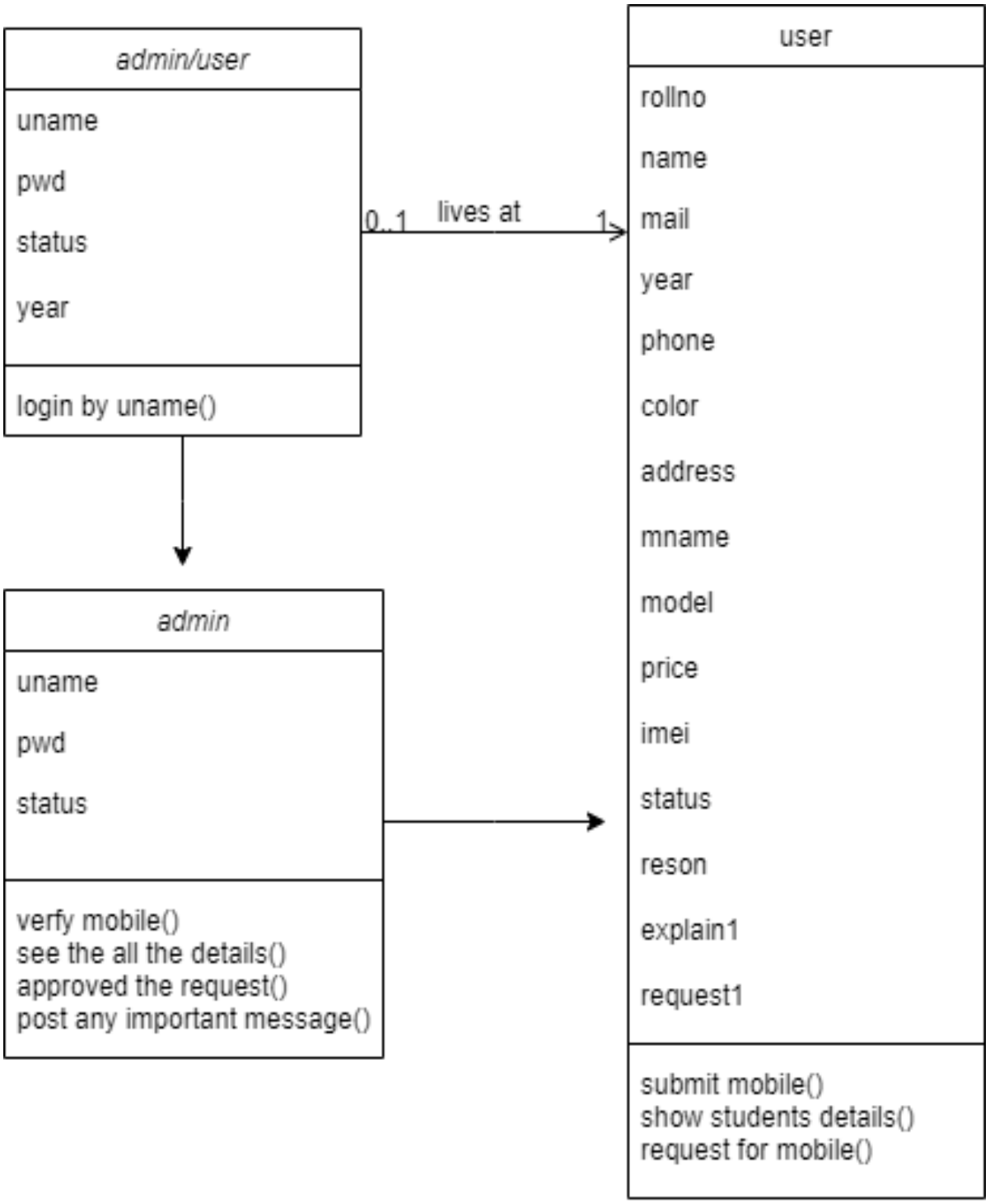
**Primary Key:** (*uname*)

**Foreign Key:** (*uname*) references req(*rollno*)

**Relationship Diagram:**



**Class Design**



## 5. Form Design

This can be used for every form to be designed for the project

### 1. Form

The form should have input fields for capturing the required data and should provide appropriate validation to ensure data accuracy. The form should also have buttons for submitting the form data and resetting the form fields. The design of the form should be user-friendly, intuitive, and consistent with the overall look and feel of the hostel web application. The form should adhere to any applicable design standards and guidelines.

.

### 1.1 Menu Option

For the mobile management for hostel web application, the menu option for accessing the form could be located under the "student" section of the main menu. The initial form display all the detail is that the form should be located centrally within the main MDI executable window.

### 1.2 References

none

### 1.3 Parameters

User name or the roll no must be passed form one page to all the pages.

### 1.4 Screen Layout

The bitmap image of the screen layout is included here.

### 1.6 Processing

#### 1.6.1 Initial Entry Processing

All initial processing/ startup processing that needs to be done for the functionality should be mentioned in this section.

Minimally the following must appear.

- Any List Box must have its sort order defined
- Any Form must have its initial position defined
- The default Tab sequence round fields in a form must be defined

#### 1.6.2 Subsequent processing

Login->Home page->request, update, register.
Login->Home page->view, approve, check mobiles, post information

#### 1.6.3 Termination Processing

Just click log out to terminate the process and leave the website.

## 6. Report Design

### 1. Report

Student details those who submitted can be taken as pdf

## 1.1 Overview

This report specifically focuses on the process of attendance for mobile submission, collecting details about students, and requesting mobiles. The report is necessary because it provides a detailed overview of the mobile management process, including its purpose, inputs, outputs, and various activities involved. The report is intended to be used by hostel administrators and staff who are responsible for managing the mobiles and attendance records of students.

**Functionality:**

For the mobile management for hostel web application, the data required for the report includes attendance data, student details, and mobile request details. The attendance data would include the date, time, and location of the submission. Student details would include the name, student ID, and contact information. Mobile request details would include the requested mobile model, duration of request, and reason for request.

The data for this report is likely to be found in the application database, which stores all information related to attendance, student details, and mobile requests

There are no specific limitations or additional requirements for this report, but adherence to standard database protocols and security measures is necessary to ensure the confidentiality of the information. Additionally, the report should be designed to integrate seamlessly with the existing system and be compatible with any future updates or modifications.

**Input Parameters**

**Roll number:** the user can input a specific roll number to view attendance records for that particular student

**Date range:** the user can input a start and end date to filter the attendance records within that range

**Reporting Data**

**Student:** This table would contain information about all the students enrolled in the hostel including their name, ID, contact details, etc.

**Attendance:** This table would contain the attendance records of each student including their ID, date, and status (present/absent).

**Mobile Submission:** This table would contain the records of mobile submissions by students including their ID, date, and mobile details (make, model, etc.).

# SUPPLEMENTARY SPECIFICATION

**Supplementary Specification**

## 1. Introduction

The purpose of this Supplementary Specification is to capture the system requirements that are not readily captured in the use cases of the use-case model for the mobile management system for hostel web application. The scope of this document includes legal and regulatory requirements, quality attributes of the system to be built, and other requirements such as operating systems and environments, compatibility requirements, and design constraints.

This Supplementary Specification defines the technical requirements, non-functional requirements, and constraints that must be considered when designing and developing the mobile management system for hostel web application. It provides an overview of the system requirements and outlines the standards that must be followed in the development of the system.

This document will be used by the development team as a guide for the implementation of the mobile management system for hostel web application. It will also serve as a basis for testing and validation of the system to ensure that it meets the requirements specified in this document.

### 1.1 Purpose

The purpose of this Supplementary Specification is to capture the system requirements that are not readily captured in the use cases of the use-case model. It includes legal and regulatory requirements, quality attributes, and other requirements such as operating systems and environments, compatibility requirements, and design constraints. The document is intended to provide a comprehensive understanding of the system requirements for the development team and stakeholders involved in the project.

### 1.2 Scope

The scope of this Supplementary Specification is to capture system requirements for the mobile management module of the hostel web application project. The module is intended to allow students to submit their attendance through mobile devices, as well as request for mobiles and provide related details. This document will outline the specific requirements and constraints related to this module. It is associated with the overall hostel web application project and will influence the design and development of the mobile management module.

### 1.3 Overview

The Overview section provides a brief summary of the contents and organization of the Supplementary Specification document. It helps the reader to understand what the document contains and how it is structured. This section typically includes a high-level overview of the system requirements, as well as an explanation of the various sections and

their contents. It serves as a roadmap for the reader to navigate the document and find the information they need.

## 2. Functionality

**Attendance submission:** The system should allow students to submit their attendance using their mobile devices. The submission should be recorded in the database.

**Collecting student details:** The system should allow students to input their personal information such as name, contact information, and emergency contact information. The information should be recorded in the database.

**Requesting for mobiles:** The system should allow students to request mobile devices from the hostel management. The request should be recorded in the database.

**Mobile management:** The system should allow the hostel management to manage the mobile devices, including tracking the availability, allocation, and maintenance of the mobile devices.

**Security:** The system should have appropriate security measures to ensure the confidentiality and integrity of the data.

**User management:** The system should allow the hostel management to manage the user accounts, including creating new accounts, updating account information, and deleting accounts.

**Reporting:** The system should allow the generation of reports on various aspects such as attendance, mobile device allocation, and maintenance.

## 3. Usability

- Anyone can learn the process easily so the training time would be very minimum.
- If the user learns it , that would become very handy.

## 4. Reliability

- Fault tolerance – specify the expected behavior of the system in the presence of failures (hardware or software) and the recovery mechanisms that must be provided.
- Mean Time Between Failure (MTBF) – the expected time between system failures , is one hour
- Mean Time To Repair (MTTR) –the expected time it will take to repair the system when a failure occurs ,is one hour
- Data integrity –the requirements for data correctness, consistency, and completeness, as well as error detection and recovery mechanisms.
- Error handling –the requirements for handling errors, exceptions, and abnormal situations, including logging, notification, and recovery mechanisms would be handled by the developer.

• Robustness – the ability of the system to operate correctly in the presence of unusual or unexpected inputs, conditions, or events should be fast.

**5. Performance**

• The system should be able to handle a minimum of 100 concurrent users.

• The response time for attendance submission should not exceed 5 seconds.

• The response time for collecting details from students should not exceed 10 seconds.

• The system should be able to handle a minimum of 50 attendance submissions per minute.

• The system should be able to handle a minimum of 50 student detail submissions per minute.

**6. Supportability**

The system must be designed with error handling and recovery mechanisms to minimize downtime and facilitate problem resolution.

The system must be designed to minimize dependencies on external libraries or components to reduce the risk of compatibility issues and facilitate updates and maintenance.

The system must have clear documentation that explains its architecture, functionality, and maintenance procedures to facilitate support and maintenance by both internal and external stakeholders.

The system must be designed to allow for easy upgrades and version control to facilitate future maintenance and updates.

**7. Design Constraints**

- The system must be designed using PHP, html, CSS, bootstrap language.
- The system must adhere to the MVC (Model-View-Controller) architectural pattern.
- The system must use a specific database management system, such as MySQL.
- The system must be designed and developed using an agile development methodology

**8. Online User Documentation and Help System Requirements**

The documentation should be easily accessible from the application interface.

The documentation should be comprehensive and cover all the functionalities and features of the application.

The documentation should be written in clear and concise language to facilitate understanding by users.

The documentation should be regularly updated to reflect any changes or updates made to the application.

**9. Purchased Components**

Here are no purchased components to be used with the system.

## 10. Interfaces

### 10.1 User Interfaces

The user can see the details about the mobile , mobile submission and can request for mobile.

**Mobile Interface:** The application should be compatible with mobile devices, specifically Android and iOS platforms. The interface should allow students to submit their attendance using their mobile devices and allow hostel authorities to request mobile devices from students.

**Database Interface:** The application should be able to interface with a database system to store and retrieve student attendance and mobile device information. The database system should be compatible with MySQL.

**Web Interface:** The application should have a web-based interface for hostel authorities to manage attendance and mobile device requests. The interface should be compatible with commonly used web browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

### 10.2 Hardware Interfaces

- Mobile
- PC

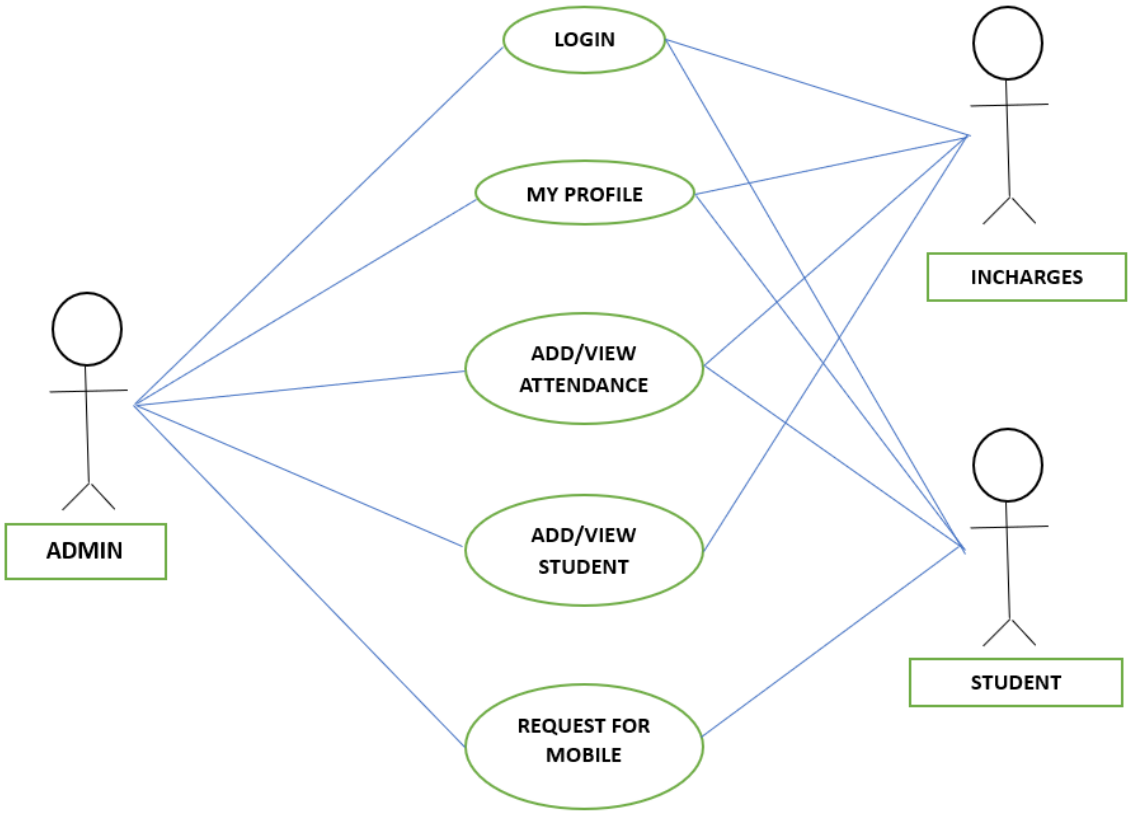
### 10.3 Software Interfaces

No third-party apps can be used in this only the true process can be done.

### 10.4 Communications Interfaces

There is no communication in the website.

## 11. Use case Diagram



**USE CASE SPECIFICATION**

**Use Case Specification**

Use-Case Specification: Requesting for Mobiles

**I**

**1. Use-Case Name:**

**Requesting for Mobiles**

**Brief Description:**

This use case describes the process by which a student can request for a mobile device from the hostel management through the mobile management web application.

**Actors:**

- Student
- Hostel Management

**2. Flow of Events**

**2.1 Basic Flow**

- The student navigates to the "Request Mobile" section of the mobile management web application.
- The student selects the type of mobile device they require (e.g. smartphone, feature phone).
- The student provides a reason for the request and any additional information (e.g. duration of need, specific features required).
- The student submits the request.
- The hostel management receives the request and reviews it for approval.
- If approved, the hostel management assigns a mobile device to the student and notifies them of the pickup location.
- The student picks up the mobile device from the assigned location and signs a release form.
- The student returns the mobile device to the same location at the end of the approved period.

**2.2 Alternative Flows**

- If the request is not approved, the hostel management provides a reason for the rejection and notifies the student.
- If the assigned mobile device is not available at the pickup location, the hostel management provides an alternative pickup location.
- If the student fails to return the mobile device at the end of the approved period, the hostel management may charge a penalty fee and/or take disciplinary action.

**3. Special Requirements**

- The mobile management web application must be able to handle the submission and approval of mobile device requests.
- The hostel management must have a process in place for assigning and tracking mobile device distribution.
- The hostel management must have a secure location for storing and distributing mobile devices.
- The hostel management must have a process for tracking the return of mobile devices and enforcing penalties for non-compliance.

**4. Preconditions**

- The student must be registered and logged into the mobile management web application.
- The student must have a valid reason for requesting a mobile device.
- The hostel management must have mobile devices available for distribution.

5. Postconditions

- The student has been assigned a mobile device for the approved period.
- The hostel management has record of the assigned mobile device and its return date.

**6. Extension Points**

None

**II**

**1. Use-Case Name: Mobile Attendance**

Brief Description: This use case describes the process of taking attendance using a mobile device in the hostel web application.

**Actors**:

- Student
- Hostel Warden

**2. Basic Flow of Events:**

- The student logs in to the hostel web application on their mobile device.
- The student selects the attendance feature in the hostel web application.
- The hostel web application displays a list of available classes for the current day.
- The student selects the class they are currently attending.
- The hostel web application confirms the student's attendance and displays a success message.
- The hostel warden can view the attendance records for each class on their dashboard.

**2.1 Alternate Flows:**

- If the student is not able to access the attendance feature due to technical issues, they can inform the hostel warden who can mark their attendance manually.
- If the hostel web application is unable to confirm the student's attendance due to technical issues, the student can inform the hostel warden who can mark their attendance manually.

**3. Special Requirements:**

- The mobile device must have a stable internet connection to access the hostel web application and mark attendance.
- The hostel web application must have the necessary security measures in place to ensure that attendance records are accurate and secure.

**4. Postconditions:**

- The attendance records for each class are updated in the hostel web application.

**5. Preconditions:**

- The student must have access to a mobile device.
- The student must have a valid login to the hostel web application.
- The hostel warden must have a valid login to the hostel web application.
- The hostel warden must have access to the attendance feature of the hostel web application.

III

**1. Use-Case Specification: View Student Details**

**Use-Case Name:**

View Student Details

**2. Brief Description:**

This use case allows the admin or hostel staff to view all the details of a particular student in the hostel.

**Actors:**

- Admin
- Hostel staff(with admin access)

**3. Basic Flow of Events:**

- The user selects the option to view student details.
- The system displays a list of all students in the hostel.
- The user selects a particular student from the list.
- The system displays all the details of the selected student, including their name, age, gender, contact information, room number, and any other relevant information.

**3.1 Alternative Flows:**

- If there are no students in the hostel, the system displays a message indicating that there are no students to display.
- If the user does not have the necessary permissions to view student details, the system displays an error message and the use case terminates.

**4. Preconditions:**

- The user must be authenticated as an admin or hostel staff.
- The user must have the necessary permissions to view student details.

**5. Postconditions:**

- The user has successfully viewed the details of a particular student in the hostel.

**6. Extension Points:**

None.

**VISION**

**Vision**

## 1. Introduction

**Introduction:**

The purpose of this document is to outline the vision and high-level requirements for the development of a hostel management web application. The application aims to streamline hostel management processes by enabling attendance submission through mobile devices, collecting student details, and facilitating mobile device requests.

**Scope:**

The scope of this project is to develop a web application that simplifies hostel management processes. The application will allow students to submit attendance through their mobile devices, enable staff to collect and store student details, and allow students to request for mobile devices when necessary.

**Definitions:**

**Hostel Management**: The process of managing student accommodation and related services in a hostel or dormitory.

**Web Application:** A software application that runs on a web server and is accessed through a web browser.

**Mobile Device:** A portable electronic device such as a smartphone or tablet.

**Acronyms and Abbreviations:**

None

**References:**

None

**Overview:**

This Vision document outlines the objectives and requirements for the development of a hostel management web application. It provides an overview of the purpose and scope of the project, along with definitions and acronyms. The following sections will provide more detail on the features, user interface, user roles, functionality, technical details, deployment, and maintenance of the web application.

## 2 Positioning

### 2.1 Problem Statement:

The current attendance system for the hostel is manual and time-consuming, leading to errors and inaccuracies in attendance records. Additionally, students frequently lose or misplace their mobile phones, making it difficult for hostel staff to contact them in case of emergencies. This project aims to solve these problems by providing a mobile management system that allows students to submit attendance through their mobile phones, and also enables hostel staff to collect and manage student phone details in an efficient and effective manner.

### 2.2 Product Position Statement:

For: Hostel administrators and students

Who: Need an efficient and convenient way to manage attendance and mobile phone details The Mobile Management System is a software application That enables students to submit attendance through their mobile phones, and also allows hostel administrators to collect and manage student phone details in a secure and organized manner. Unlike manual attendance systems and other mobile management solutions, Our product is user-friendly, cost-effective, and provides real-time data and analytics for improved decision making. It also offers a comprehensive mobile request system, making it easy for students to request for new phones or replacements.

## 3. Stakeholder and User Descriptions

**Stakeholders:**

1. Hostel administrators: They are responsible for managing and maintaining the hostel facilities, including attendance tracking and mobile phone management. They need a system that is easy to use, efficient, and provides accurate data for decision-making.
2. Students: They need a reliable way to submit attendance, manage their mobile phone details, and request replacements or new phones when necessary. They also need to be able to receive important notifications and alerts from hostel staff.
3. Developer: They are responsible for implementing and maintaining the system, ensuring its security and stability, and providing technical support to users.

**Users:**

1. Hostel staff: They will use the system to manage attendance records, collect and manage student phone details, and send notifications and alerts to students.
2. Students: They will use the system to submit attendance, manage their mobile phone details, and request new phones or replacements when necessary.

### 3.3 User Environment

- Unique environmental constraints include the need for a mobile-friendly interface for students to submit attendance and manage their mobile phone details, as well as the need for secure and reliable internet connectivity in the hostel. Hostel staff may also need to access the system from multiple devices or locations, such as a desktop computer in the hostel office or a mobile device while on the move.

- The system should be compatible with a range of devices and platforms, including desktop computers, laptops, tablets, and mobile phones. It should also be compatible with different operating systems, such as Windows, iOS, and Android.

### 3.4 Key Stakeholder or User Needs

| Need | Priority | Current Solution | Proposed Solutions |
|---|---|---|---|
| Broadcast messages | High | Staff must manually inform students of any changes or updates to hostel policies or procedures. This can be time-consuming and ineffective, as some students may miss the message or forget the information. | A message that can be used by staff to send messages to all or selected groups of students in the hostel. The system should allow staff to schedule messages in advance, and should include read receipts and the ability to follow up with individual students who have not read the message. Students should also be able to view past messages in a message archive. |
| Mobile phone management | High | Currently, there is no system in place to manage student mobile phone details or enforce hostel policies around mobile phone usage. | A mobile management system that allows students to submit their mobile phone details and agree to hostel policies around mobile phone usage. The system should also allow staff to track students' mobile phone usage and enforce policies if necessary. |

| Need | Priority | Current Solution | Proposed Solutions |
|---|---|---|---|
| Attendance tracking | Medium | Currently, attendance is tracked manually on paper or in a spreadsheet. This can be time-consuming and prone to errors, and can make it difficult for staff to quickly identify patterns or trends in attendance. | An attendance tracking system that allows students to submit their attendance using a mobile device. The system should include automatic reminders for students who have not submitted attendance, as well as reports and analytics for staff to identify patterns or trends in attendance. |

## 4. Product Overview

### 4.1. Product Perspective

The hostel management web application is a stand-alone product that will be accessible through a web browser. It will interface with a database management system that will be used to store information about including their personal information, room assignments, and billing information. The web application will also interface with a mobileapplication that will allow students to submit attendance and request the use of hostel-provided mobiles.

**Product**

- Manage hostel resident information, including personal information and room assignments
- Manage billing information and payment processing for hostel fees
- Manage hostel inventory, including mobile devices and other shared resources
- Allow students to submit attendance via a mobile application
- Allow students to request the use of hostel-provided mobiles via a mobile application
- Provide reporting and analytics on hostel usage and billing information

**Assumptions and Dependencies**

- The web application will be hosted on a cloud-based server.
- The database management system will be a commercially available product.
- The mobile application will be developed by a third-party vendor and will interface with the web application via APIs.
- The project team assumes that the hostel will provide sufficient resources, including staff and hardware, to support the implementation and ongoing use of the web application.

## 4.2 Summary of Capabilities

| Major Benefits | Supporting Features |
|---|---|
| Efficient mobile attendance submission | Mobile submission interface, automatic attendance tracking |
| Simplified student data collection | Customizable data collection forms, easy data entry |
| Request mobiles for students | Mobile request form, notification system |
| User-friendly interface | Intuitive navigation, clear labeling |
| Secure data management | Encrypted storage, access control |
| Comprehensive reporting | Attendance records, student data analysis |
| Integration with hostel web application | Seamless data exchange, shared user database |

## 5.. Requirements

### 5.1 System Requirements

- Operating System: The web application should be accessible from any modern web browser such as Google Chrome, Mozilla Firefox, Microsoft Edge, or Safari. It should support multiple platforms such as Windows, Mac OS, and Linux.
- Hardware: The hardware requirement for the system is minimal. It should be able to run on any modern computer or mobile device with internet connectivity.
- Network: The web application should be accessible over the internet and should support both wired and wireless networks. It should be designed to work efficiently even on slow network connections.
- Database: The web application requires a backend database to store the user data and attendance records. The database should be secure, reliable, and scalable to support multiple users and concurrent transactions.
- Security: The web application should implement appropriate security measures such as user authentication, role-based access control, data encryption, and secure data transmission to protect against unauthorized access, data theft, and other security threats.

### 5.2 Performance Requirements

1. Response Time: The system should respond to user actions within 3 seconds or less, even under peak load conditions.
2. Throughput: The system should be able to handle at least 100 requests per minute.
3. Availability: The system should have an uptime of at least 99.9%.
4. Reliability: The system should have a low failure rate, with a maximum of one failure per month.
5. Scalability: The system should be designed to handle an increasing number of users and data over time, without significant degradation in performance.
6. Security: The system should be secure and protect sensitive user data, with appropriate measures in place to prevent unauthorized access or data breaches.
7. Compatibility: The system should be compatible with various operating systems, browsers, and devices commonly used by the target users.

### 5.3 Environmental Requirements

- Operating system: Specify the operating system(s) on which the application will run, such as Windows, MacOS, or Linux.
- Hardware requirements: Specify the hardware requirements for the application to run, such as processor speed, memory, and storage.
- Network requirements: Specify the network requirements, such as bandwidth and latency, if the application relies on network connectivity.
- Security requirements: Specify any security requirements, such as encryption, authentication, and access control.
- User environment: Specify the user environment, such as the type of device used to access the application, screen size, and input methods (keyboard, mouse, touch screen, etc.).
- Error handling and recovery: Specify the expected error conditions and how the application should handle them, including error messages and recovery procedures

## 6. Product Features

**Mobile request system:** The system can allow students to request permission to use their mobile devices and specify the duration of usage.

**Attendance tracking:** The system can automatically mark the attendance of students based on the submission of their mobile devices.

**Notification system:** The system can send notifications to students regarding the status of their mobile device requests and reminders for submission.

**Reporting system:** The system can generate reports on mobile device submissions and attendance records of students for administrative purposes.

**User management:** The system can provide options for the administrator to manage user accounts and access permissions.

## 7. Test cases:

| Test Case No#: | TC1 | | | | | | |
|---|---|---|---|---|---|---|---|
| **Scenario:** | s1 | | | | | | |
| **Description:** | **d1** | | | | | | |
| **No#** | **Procedure** | **Test Condition** | **Test Data** | | | **Expected Result** | **Status** |
| 1 | uname, pwd | if status==admin | uname | pwd | status | Admin dashboard | TRUE |
| 2 | uname, pwd | if status==student | uname | pwd | student | student dashboard | TRUE |

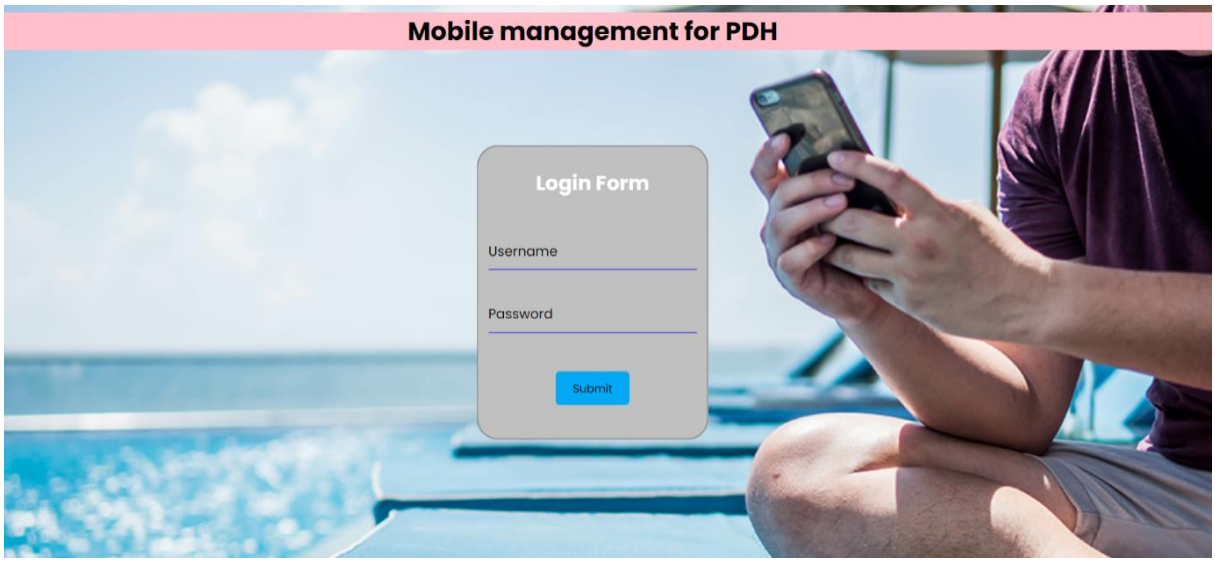
| Test Case No#: | TC2 | | | | | | |
|---|---|---|---|---|---|---|---|
| **Scenario:** | s2 | | | | | | |
| **Description:** | **d2** | | | | | | |
| **No#** | **Procedure** | **Test Condition** | **Test Data** | | | **Expected Result** | **Status** |
| 1 | register | if no details exist enter | uname | | | recorded | TRUE |
| 2 | register | if uname mismatches | uname | | | don't update | TRUE |

| Test Case No#: | TC3 | | | | | | |
|---|---|---|---|---|---|---|---|
| **Scenario:** | s3 | | | | | | |
| **Description:** | **d3** | | | | | | |
| **No#** | **Procedure** | **Test Condition** | **Test Data** | | | **Expected Result** | **Status** |
| 1 | mobile submission | if submitted | uname | | | verified | TRUE |
| 2 | mobile submission | if not submitted | uname | | | absent | TRUE |

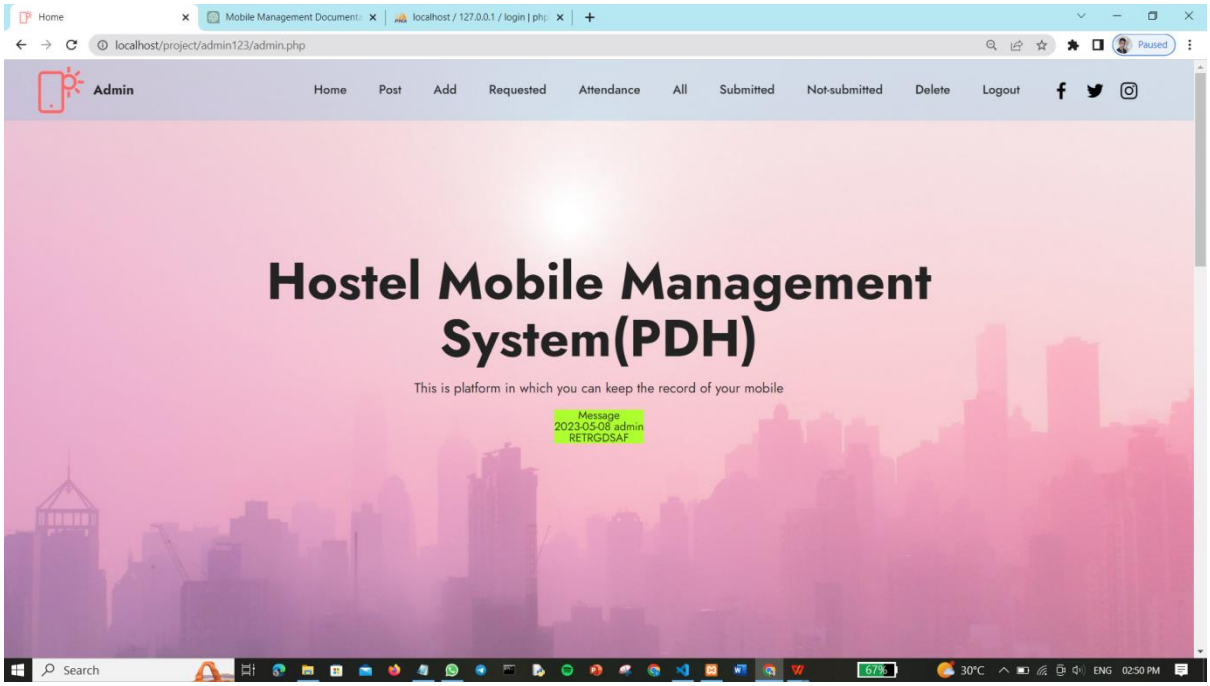
## SCREENSHOTS AND CODING

**Screenshots and codlings**

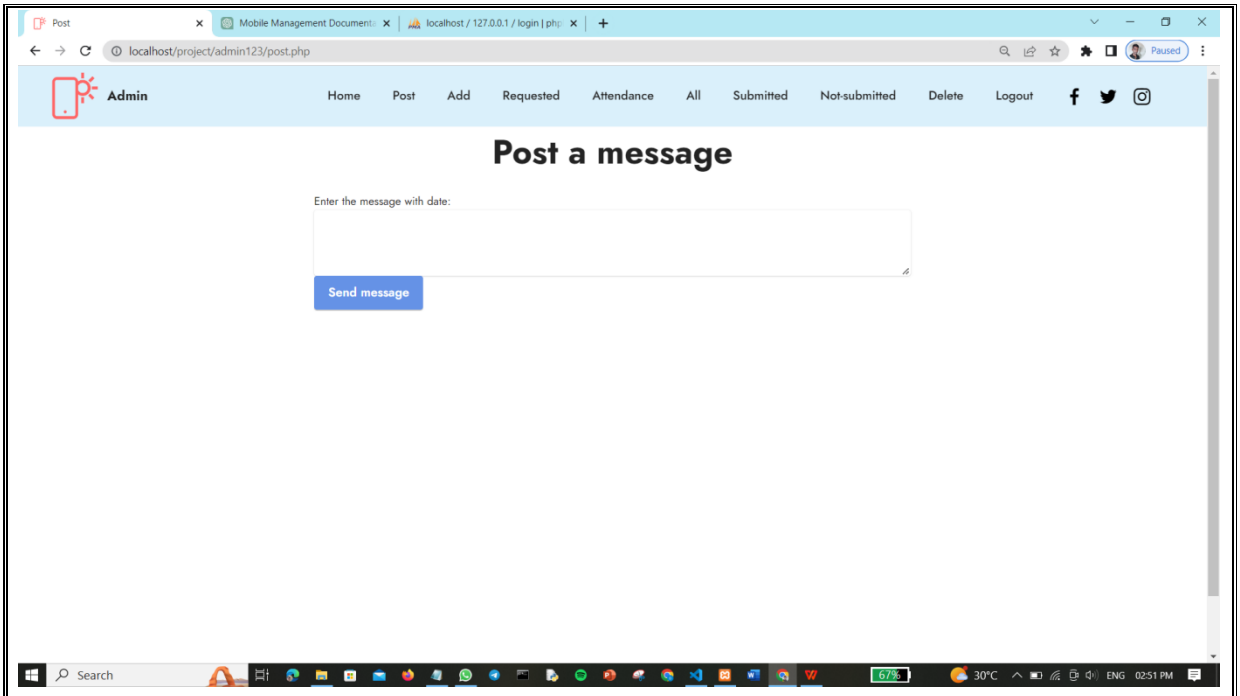
## Login page:



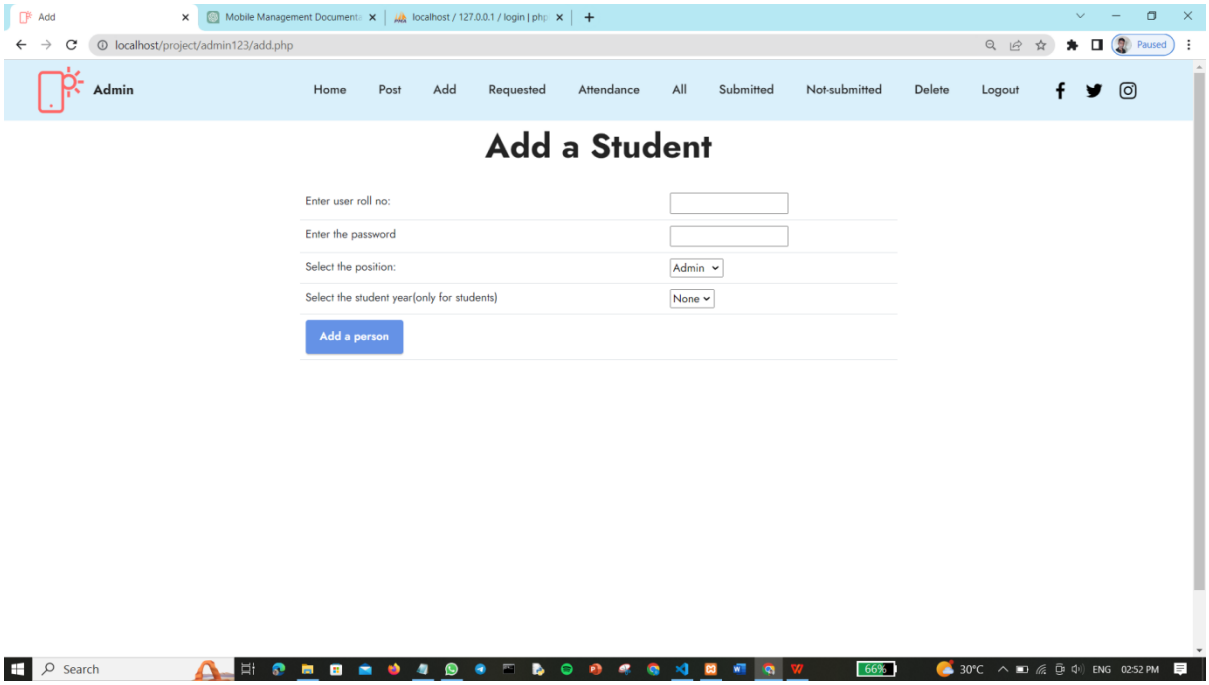

## Admin page



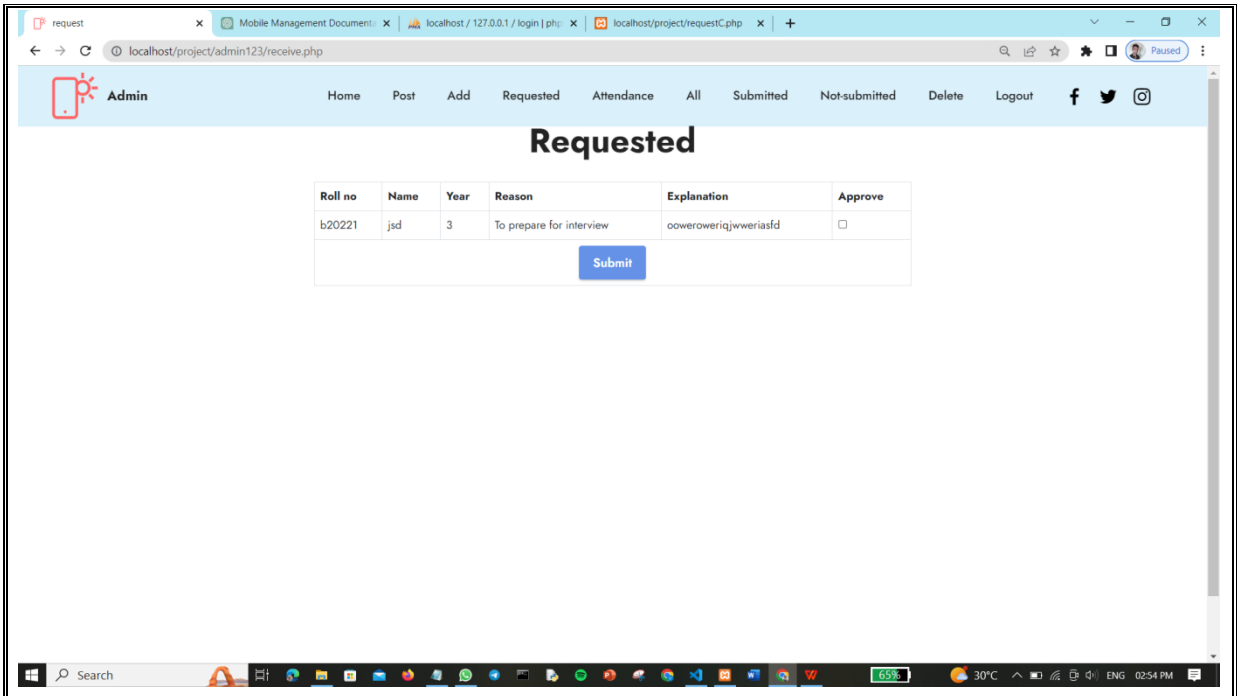

## Post a message:



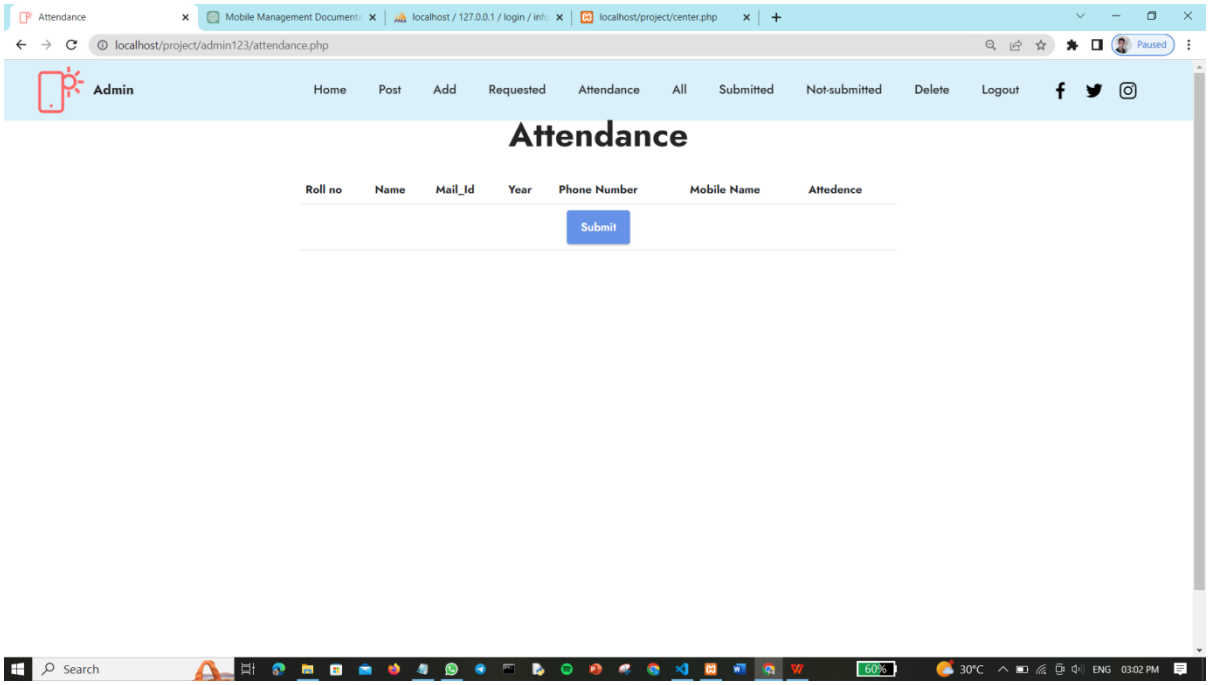

## Add a new user



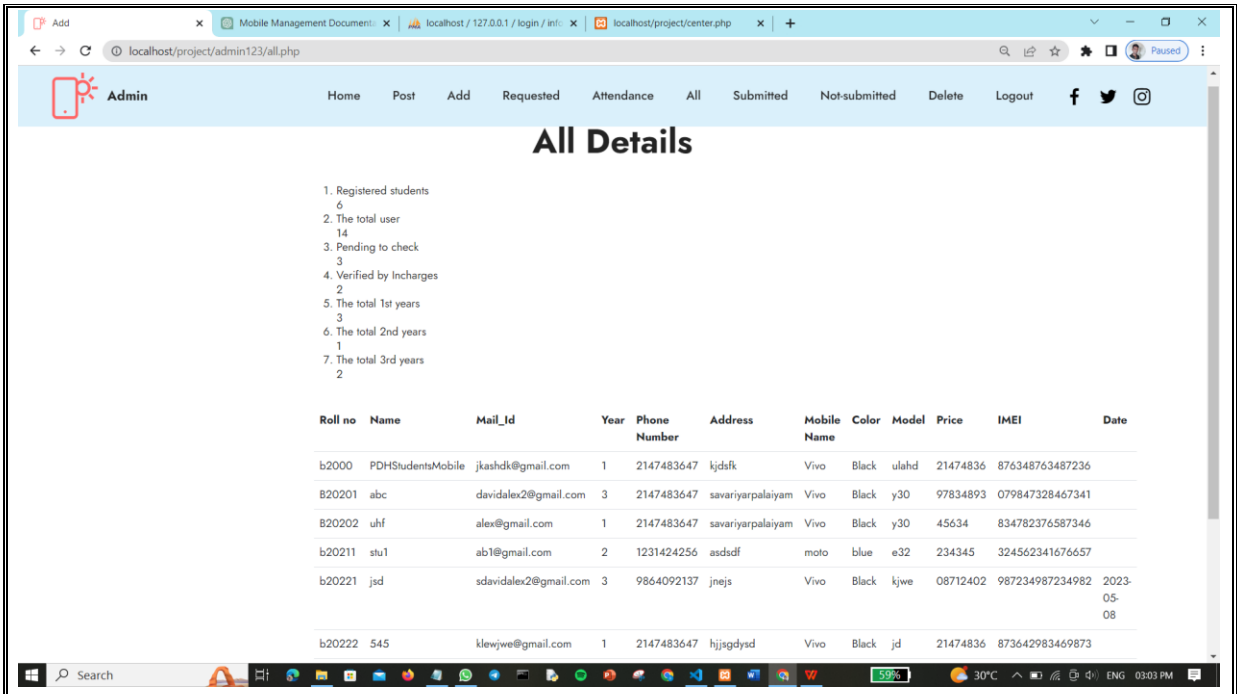

## Requested for mobile:



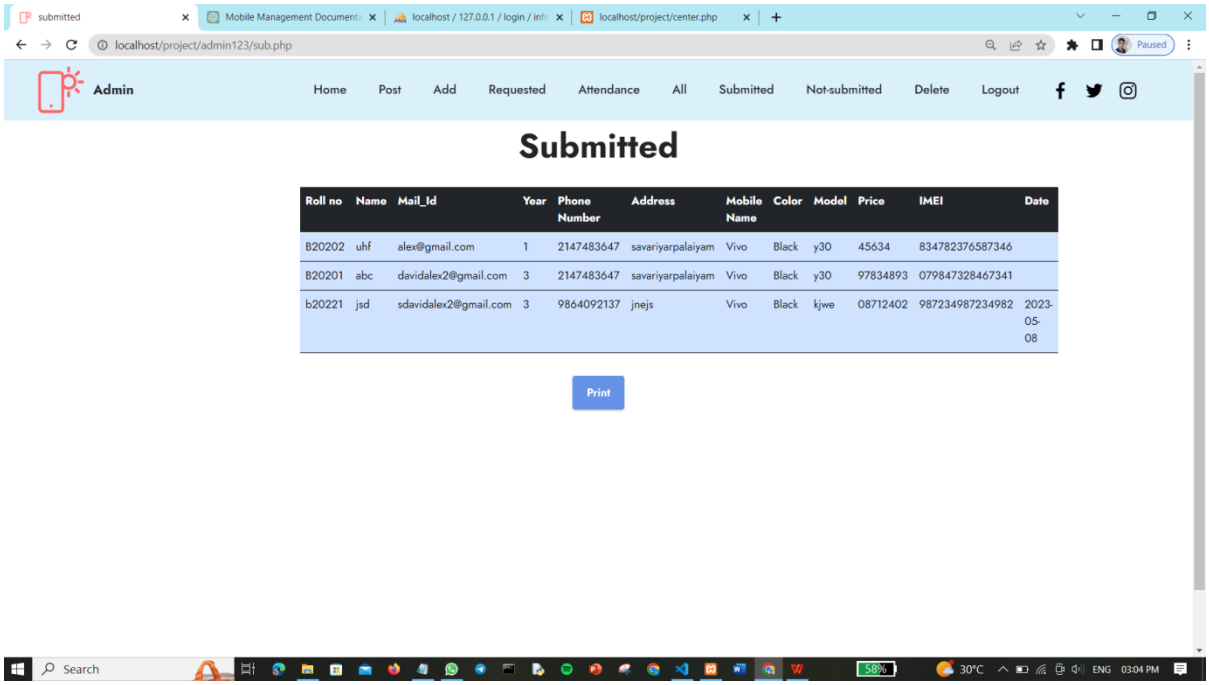

## Attendance:



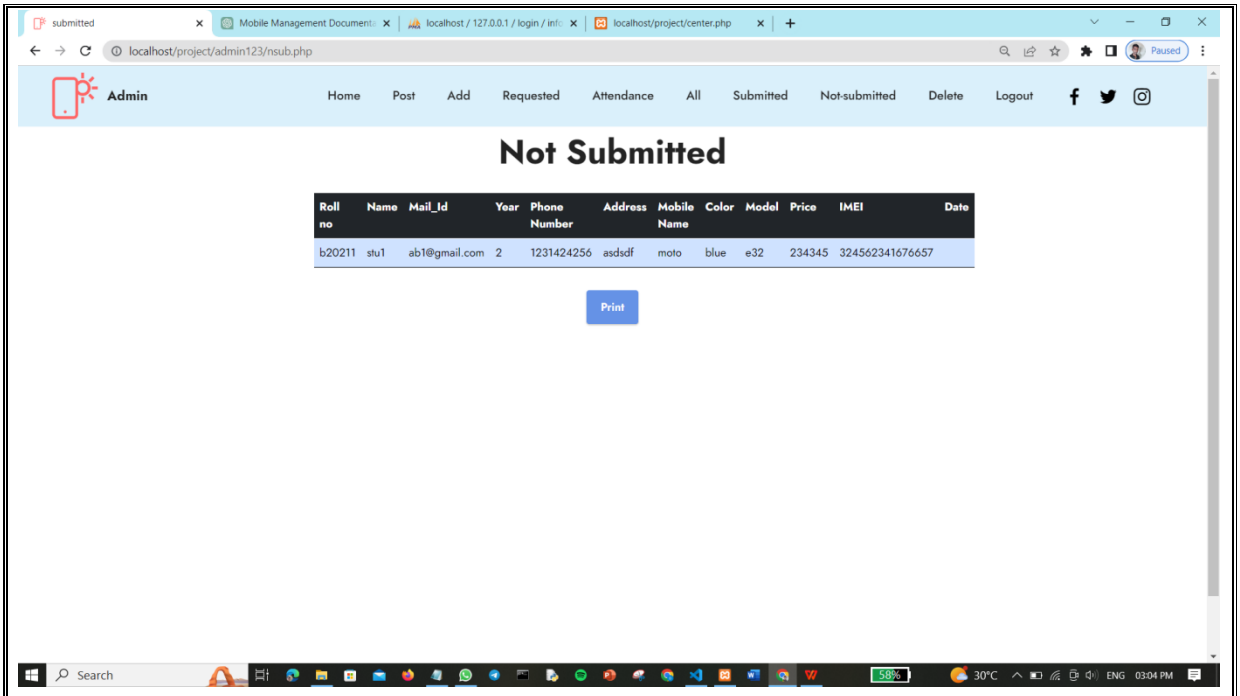

## All details of the student



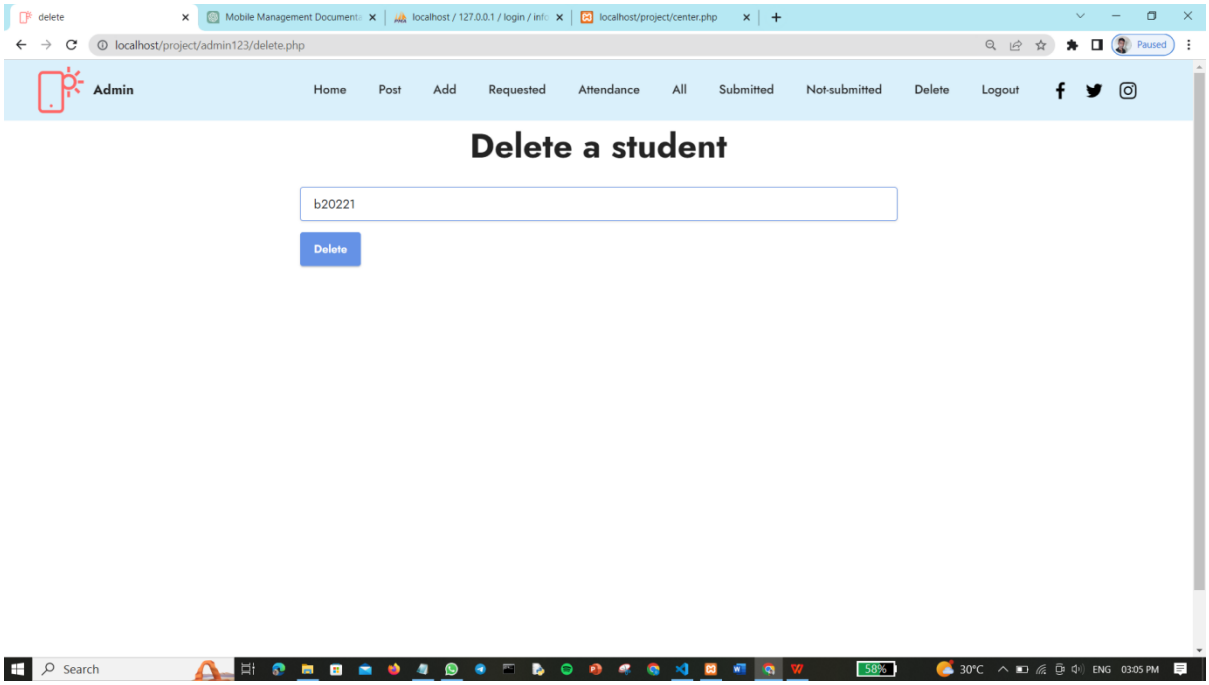

## Submitted:



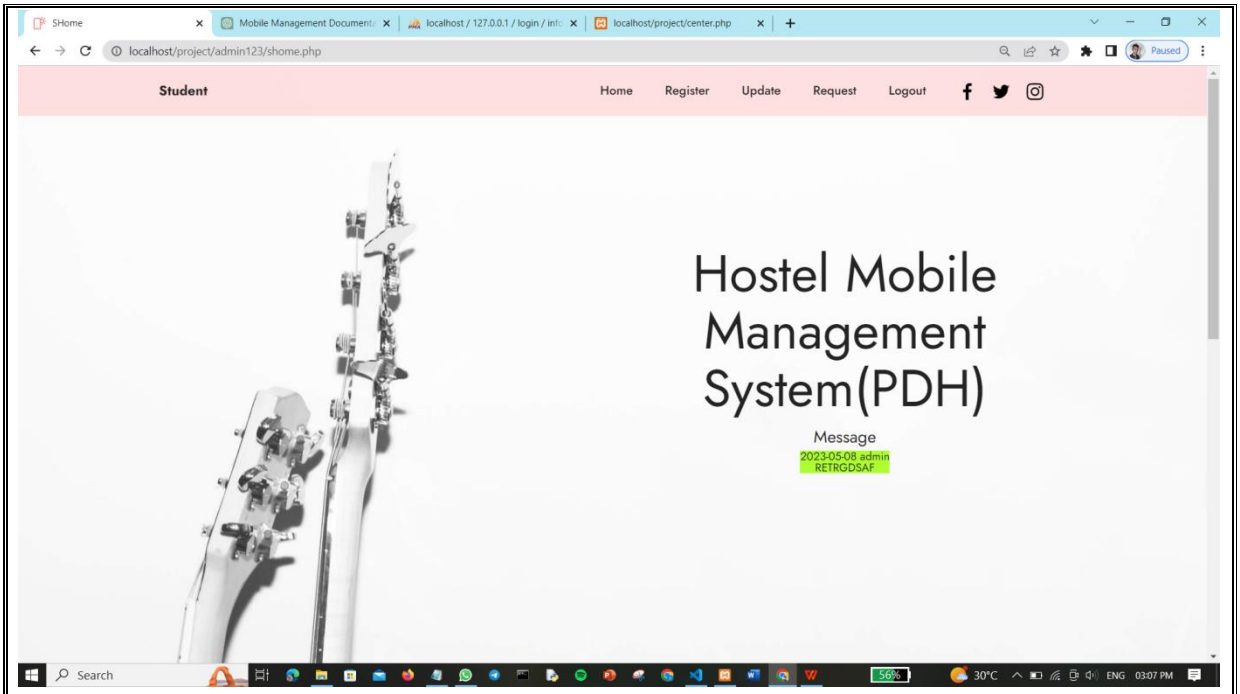

## Not submitted:

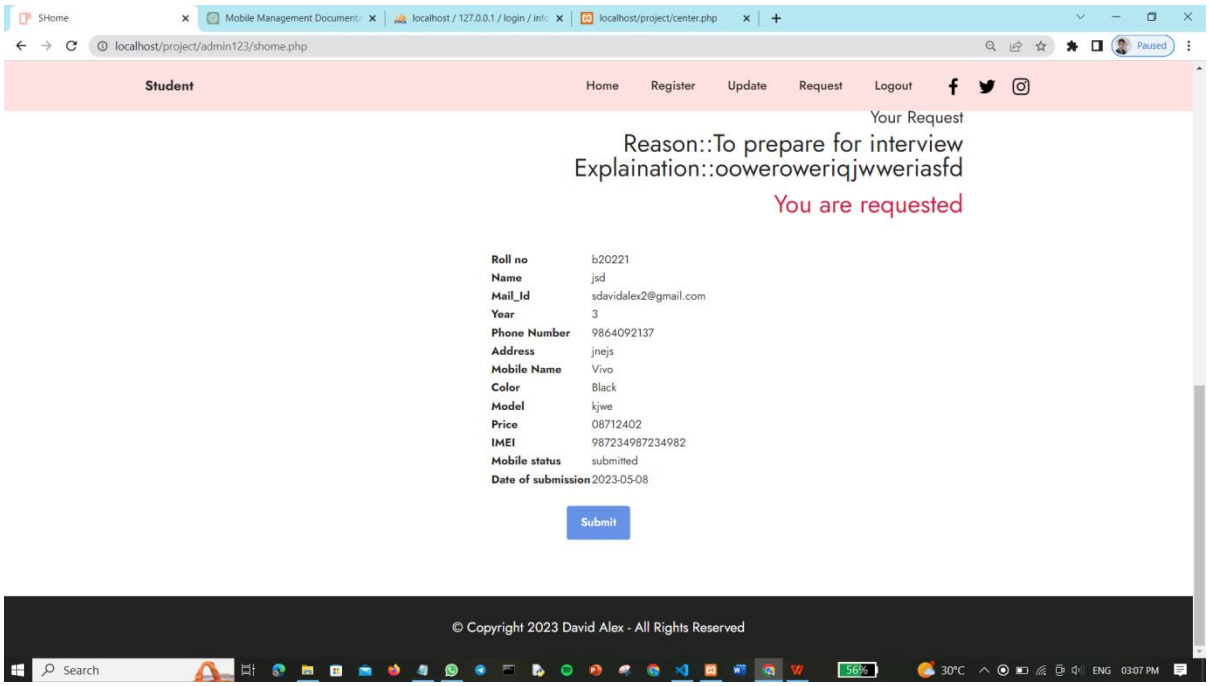



## Delete:

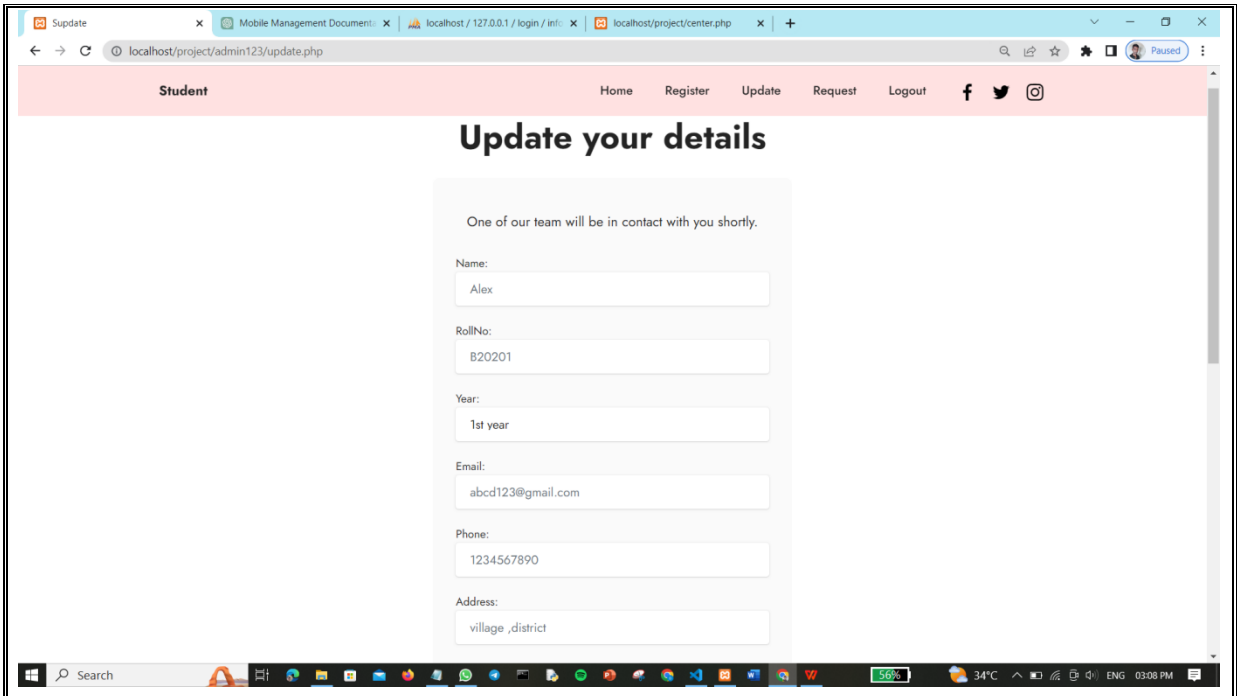



## Student dashboard:

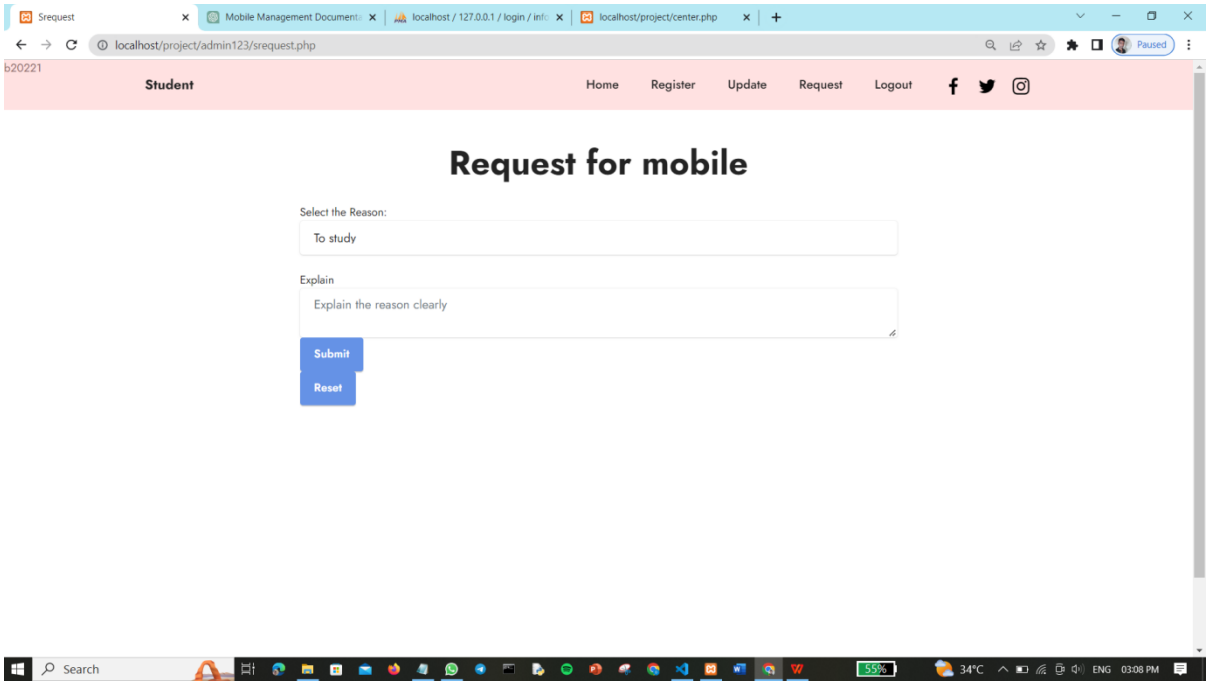



**Register the details**




**Request for mobile:**




**Login page:**

```
<?php
session_start();
$err="";
$_SESSION['login'] = false;
$conn = mysqli_connect("localhost","root", "","login");
if (!$conn) {
die("Connection failed: " . mysqli_connect_error());
}
if(isset($_POST['submit'])) {
```

```
// Process login formj
if (count($_POST)>0) {
$username = $_POST["username"];
$password = $_POST["password"];
$_SESSION['username']=$username;
//$status=$_POST["status"];
$sql = "SELECT * FROM login WHERE uname='$username' AND pwd='$password'";
$result = mysqli_query($conn, $sql);
$resval = $result->fetch_assoc();
if(mysqli_num_rows($result) == 1 && $resval["status"] == "admin")
{
$_SESSION['login'] = true;
header("Location: adminC.php");
exit();
}
else if(mysqli_num_rows($result) == 1 && $resval["status"] == "student"){
$rs = mysqli_query($conn,"select * from info");
if($rs){
$_SESSION['login'] = true;
header("Location: center.php");
exit();
}
else{
header("Location: register.php");
exit();
}
}
else {
$err="Invalid username or password!!";
}
}
}
?>
<!DOCTYPE html>
<html>
<head>
<title>Login Form</title>
<style>
@import
    url('https://fonts.googleapis.com/css2?family=Poppins:ital,wght@0,400;0,500;0,700;1,3
    00&display=swap');
*{
font-family: 'Poppins', sans-serif;
}
body {
margin: 0;
padding: 0;
```

```
font-family: sans-serif;
background-image: url("PhoneIndex.jpg");
background-color: bisque;
background-size: cover;
}
fieldset{
border-radius:25px;
background-color:silver;
}
.login-box {
width: 280px;
position: absolute;
top: 50%;
left: 50%;
transform: translate(-50%,-50%);
color: white;
}
.login-box h2 {
text-align: center;
margin-bottom: 40px;
}
.login-box .user-box {
position: relative;
}
.login-box .user-box input {
width: 100%;
padding: 10px 0;
font-size: 16px;
color: black;
margin-bottom: 30px;
border: none;
border-bottom: 1px solid blue;
outline: none;
background: transparent;
}
.login-box .user-box label {
position: absolute;
top: 0;
left: 0;
padding: 10px 0;
font-size: 16px;
color: black;
pointer-events: none;
transition: .5s;
}
.login-box .user-box input:focus ~ label,
.login-box .user-box input:valid ~ label {
```

```
top: -20px;
left: 0;
color: #03a9f4;
font-size: 12px;
}
.login-box .err-box input[type="text"] {
color:silver;
border:none;
background-color: silver;

}

.login-box input[type="submit"] {
background: transparent;
border: none;
outline: none;
color: black;
background: #03a9f4;
padding: 10px 20px;
cursor: pointer;
border-radius: 5px;
margin-bottom: 30px;
}

</style>

</head>
<body><center>
<h1 style="background-color: pink;font-size: 30px;">Mobile management for PDH</h1>
<div class="login-box">

<fieldset>
<h2>Login Form</h2>
<form action="" method="post" onsubmit="">
<div class="user-box">
<input type="text" name="username" required="">
<label>Username</label>
</div>
<div class="user-box">
<input type="password" name="password" required="">
<label>Password</label>
</div>
<div class="err-box">
<label >
<?php
echo "<p style=color:black>$err</p>";
?>
```

```
</label>
</div>
<input type="submit" name="submit" value="Submit">
</form>
</fieldset>
</div>
</center>
</body>
</html>
```

**Conclusion:**

Implementing a mobile management system in the PDH hostel web application would bring several benefits to the hostel's mobile device management. Firstly, the proposed system would simplify the process of mobile submission and attendance tracking. This would help reduce confusion among the students and the hostel staff about who has submitted their mobile and who hasn't. Moreover, the system would make it easier for anyone in the hostel to request permission to use their mobile device and keep track of it, thus improving efficiency and accountability.

The proposed system would also allow the hostel's admin to post messages to all the students through the dashboard. This would streamline communication and make it easier for the admin to inform the students about important updates and announcements.

In conclusion, implementing a mobile management system in the PDH hostel web application would lead to a more organized and efficient process of mobile device management. The system would simplify the process of requesting permission to use a mobile device, keep track of it, and improve communication between the admin and the students. Ultimately, this would lead to a better experience for everyone involved in the management of mobile devices in the hostel.

**References:**

**Websites used for documentation**

**1. Google**

**2. Stackoverflow.com**

**3. W3schools.com**

**4. Diagram.net**