

# **HOSTEL PAL : A ONE CLICK SOLUTION TO ALL YOUR HOSTEL PROBLEMS**

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## **DECLARATION**

We hereby declare that this submission is our own work and that, to the best of our knowledge and beliefs, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma from a university or other institute of higher learning, except where due acknowledgment has been made in the text.

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## **CERTIFICATE**

This is to certify that the work titled “**HOSTEL PAL: A ONE CLICK SOLUTION TO ALL YOUR HOSTEL PROBLEMS**” submitted by **Ayush Mittal, Mitul Jain, Mudit Garg** in partial fulfillment for the award of degree of B. Tech of Jaypee Institute of Information Technology, Noida has been carried out under my supervision. This work has not been submitted partially or wholly to any other University or Institute for the award of any other degree or diploma.

Dr. Alka Singhal

08-05-2023

## **ABSTRACT**

Managing the student's hostel facility process at Jaypee Institute of Information Technology, Noida is a complex and time-sensitive task. This development work deals with the problems of managing and providing hostels facilities to students in Jaypee Institute of Information Technology, Noida and to avoid the problems which occur when carried out manually.

The aim of this project work "HOSTEL PAL: A ONE CLICK SOLUTION TO ALL YOUR HOSTEL PROBLEMS" is to develop a web based system to provide a comprehensive and efficient solution for resolving daily life problems faced by hostlers. HOSTEL PAL would automate various tasks such as complaints management, cleaning services, e-notice, online interaction, laundry management, maintenance services etc. This would reduce the workload on hostel staff, allowing them to focus on providing better services to students.

The system would also enable students to access their hostel-related information online, such as mess menu, academic calendar and hostel rules and regulations. This would provide greater transparency and convenience, while reducing the need for manual communication between students and hostel staff.

## TABLE OF CONTENTS

ABSTRACT		4
LIST OF FIGURES		7
<b>CHAPTER 1</b>	<b>INTRODUCTION</b>	<b>8-9</b>
	1.1 PROBLEMS FACES	8
	1.2 PROBLEM STATEMENT	9
	1.3 AIM & OBJECTIVE OF PROJECT	9
<b>CHAPTER 2</b>	<b>BACKGROUND RESEARCH AND ANALYSIS</b>	<b>10-11</b>
	2.1 EXISTING SYSTEM	10
	2.2 DISADVANTAGES OF EXISTING SYSTEM	10
	2.3 PROPOSED SYSTEM	11
	2.4 ADVANTAGES OF PROPOSED SYSTEM	11
<b>CHAPTER 3</b>	<b>REQUIREMENT ANALYSIS</b>	<b>12-13</b>
	3.1 FUNCTIONAL REQUIREMENT	12
	3.2 HARDWARE REQUIREMENT	12
	3.3 SOFTWARE REQUIREMENT	13
<b>CHAPTER 4</b>	<b>DETAIL DESIGN</b>	<b>14-17</b>
	4.1 USE CASE DIAGRAM	14
	4.2 CLASS DIAGRAM	15
	4.3 ACTIVITY DIAGRAM	16
	4.4 SEQUENCE DIAGRAM	17

<b>CHAPTER 5</b>	<b>IMPLEMENTATION</b>	<b>18-22</b>
<b>CHAPTER 7</b>	<b>CONCLUSION AND FUTURE WORK</b>	<b>22-23</b>
	7.1 CONCLUSION	22
	7.2 LIMITATIONS OF PROJECT	22
	7.3 FUTURE SCOPE	23

## LIST OF FIGURES

<b>Fig No</b>	<b>Topic Name</b>	<b>Page No</b>
1	USE CASE DIAGRAM	8
2	CLASS DIAGRAM	9
3	ACTIVITY DIAGRAM	10
4	SEQUENCE DIAGRAM	10
5	DASHBOARD	10
6	NOTICE BOARD	10
7	SERVICES	11
8	COMPLAINTS	11
9	ABOUT US	11
10	SHOW COMPLAINTS	11



# **CHAPTER 1**

## **INTRODUCTION**

Hostel by definition is an establishment which provides cheap food and lodging for specific group of people, it is also seen as a home for students when staying away from their home. It has large well ventilated dormitories and single rooms and is situated in the school premises. Providing clean and calm hostel accommodation is one of the key responsible for college management.

### **1.1 PROBLEMS FACED**

Providing facilities to hostlers can be a challenging task for hostel managers and staff. Some of the problems they may face include:

- Lots of manual work: Almost all of the work done in hostels is done manually on pen and paper which leads to a lot of chaos and loss of data.
- Maintenance issues: Hostel facilities require regular maintenance to ensure they are in good condition. However, maintenance can be costly and time-consuming, and neglecting it can lead to health and safety concerns.
- Varying Timetables: All students living in hostels have slightly different timetables which leads to everyone requiring different facilities at different times.
- Managing resources: Hostel managers and staff must manage their resources effectively, including utilities, food, and other supplies. This can be challenging, particularly if there are limited resources available.
- Meeting diverse needs: Hostel managers must cater to the diverse needs of their residents, including their cultural, religious, and dietary requirements.

Overall, providing facilities to hostlers can be a challenging task, and hostel managers and staff must be proactive and creative in finding solutions to the various problems they may face. It is essential to prioritize the needs of the residents and ensure that they have a comfortable and safe living environment.

## **1.2 PROBLEMS STATEMENT**

The growing number of students in higher institutions all over the world has posed a lot of accommodation problems on the part of students and school management. At Jaypee Institute Of Information Technology, Noida the whole process of hostel management is done manually. The few hostels that exist in the college are not properly managed. Most often, the overall process is time consuming and requires a lot of effort, students face a lot of difficulty in acquiring facilities and records are unsecured and often lost due to manual method of storage using hard cover notes. These and many more form the statement of the problem that necessitated this research work.

## **1.3 AIM AND OBJECTIVE OF PROJECT**

The aim of the project work is to develop hostel management software that will manage the hostel activities of Jaypee Institute Of Information Technology, Noida.

The main objectives of the research include:

- Online complaints registration (Wifi, Carpenter, Electrician)
- Online service request (Room cleaning, Laundry)
- Online interaction
- Notice Board
- View Complaint register
- To upgrade from manual means of student's hostel management

## **CHAPTER 2**

### **BACKGROUND RESEARCH AND ANALYSIS**

#### **2.1 EXISTING SYSTEM**

The population of students gaining admission to higher institutions is increasing on a yearly basis. This is putting enormous pressure on the facilities in these institutions. Adopting the conventional manual scheduling methods to the facility management job is the common practice in most institutions here in the developing world. This method is characterized by numerous drawbacks, some of which are human error, low security, data redundancy, difficulty in management, difficulty in data update, difficulty in record keeping, difficulty in data recovery in case of disaster etc.

#### **2.2 DISADVANTAGES OF EXISTING SYSTEM**

The existing system is characterized but not limited to the following inefficiencies:

- The current system makes the retrieval of information very difficult because of the large volume of file one has to sort through to retrieve or have access to one's file.
- The current system lacks adequate security because unauthorized users can have access to information which makes it inefficient.
- The current system is vulnerable to natural disasters like flood, fire outbreak and rodent attack of files which will cause loss of information.
- The current system lacks a computer-based database for the storage of files which makes these files occupy the physical storage space.
- Lots of time is devoted to the filling of forms in logic for easy retrieval of information.
- There is insufficient manpower to cope with the growing population

## **2.3 PROPOSED SYSTEM**

The alternative solution to these problems is development of an online hostel management system; the hostel management system will eliminate the problems encountered in the manual system. If implemented, it will play a great role such as:

- Increase efficiency: the computerized system formulates accurate efficiency, faster and effective way of processing hostel activities, with the intervention of computer
- Error free: the new system with the computer intervention in processing, errors will be avoided or eliminated.
- Speed: the new system offers the students affairs officer and the management an opportunity to retrieve and sort files in the shortest possible time compared to the manual method.
- Reliability: delay is completely faced out on the retrieval of record about hostel using the computerized system

The proposed system which is a web-based that can be launched on the internet or run on a server is a robust system which interconnects all the departments and personnel involved in the student's management and allocation process in a network. The system also has a robust database for the storage of information in all places where student data needs to be stored.

## **2.4 ADVANTAGES OF PROPOSED SYSTEM**

- The proposed system will automate the hostel management process thereby eliminating the loopholes associated with the current system.
- The use of passwords will be incorporated to maintain and ensure data security and integrity.
- The online connection of all the departments and the relevant personnel involved in the allocation process will help users to locate and view information faster and use applications that are relevant to their roles and responsibilities.
- The new system is cost effective because information can be accessed through web browsers rather than maintaining physical documents which will help to save money on printing, duplicating of documents as well as document maintenance overhead.

## **CHAPTER 3**

### **REQUIREMENT ANALYSIS**

To be used efficiently, all computer software needs certain hardware components or other software resources to be present on a computer. These prerequisites are known (as computer) system requirements and are often used as a guideline as opposed to an absolute rule.

#### **3.1 FUNCTIONAL REQUIREMENT**

<b>FUNCTIONAL REQUIREMENT</b>	<b>DESCRIPTION</b>
USER LOGIN	Only the students of Jaypee Institute should be able to log in
ONLINE COMPLAINTS REGISTRATION	Students should be able to file complaints about wifi, carpentry, electric appliances
ONLINE SERVICE REQUEST	Students should be able to request room cleaning service and laundry service
NOTICE BOARD	Students should be able to view notices like academic calendar, mess menu etc.
ONLINE INTERACTION	Students should be able to interact with each other online.

#### **3.2 HARDWARE REQUIREMENT**

- RAM: 4 GB
- Storage: 500 GB
- CPU: 2 GHz or faster
- Architecture: 32-bit or 64-bit

### **3.3 SOFTWARE REQUIREMENT**

- HTML, CSS, JAVASCRIPT
- REACT JS
- EXPRESS JS
- NODE MAILER (NODE JS)
- FIREBASE

## CHAPTER 4

### DETAILED DESIGN

#### 4.1 USE CASE DIAGRAM

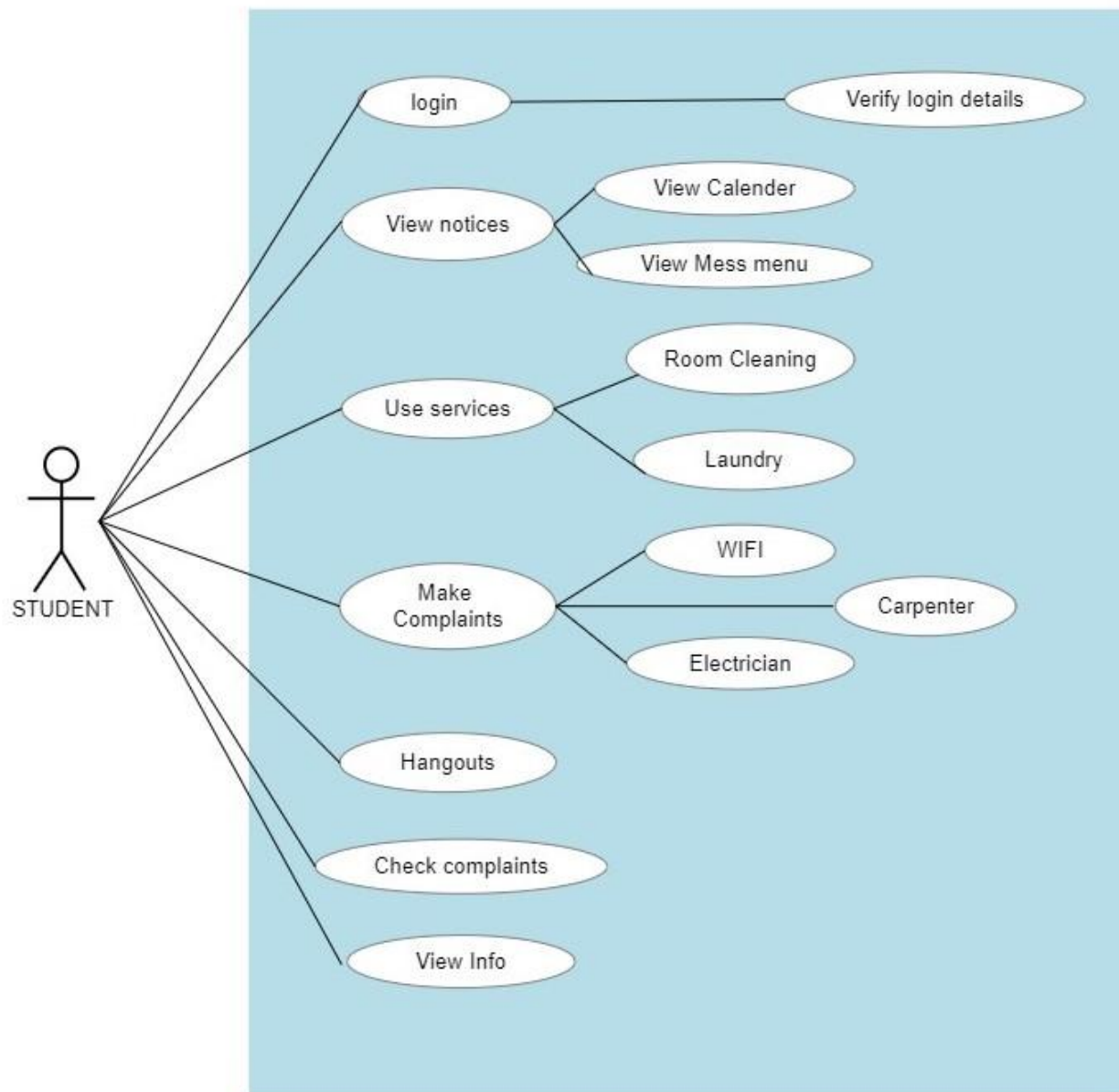


Fig1: USE CASE DIAGRAM

## 4.2 CLASS DIAGRAM

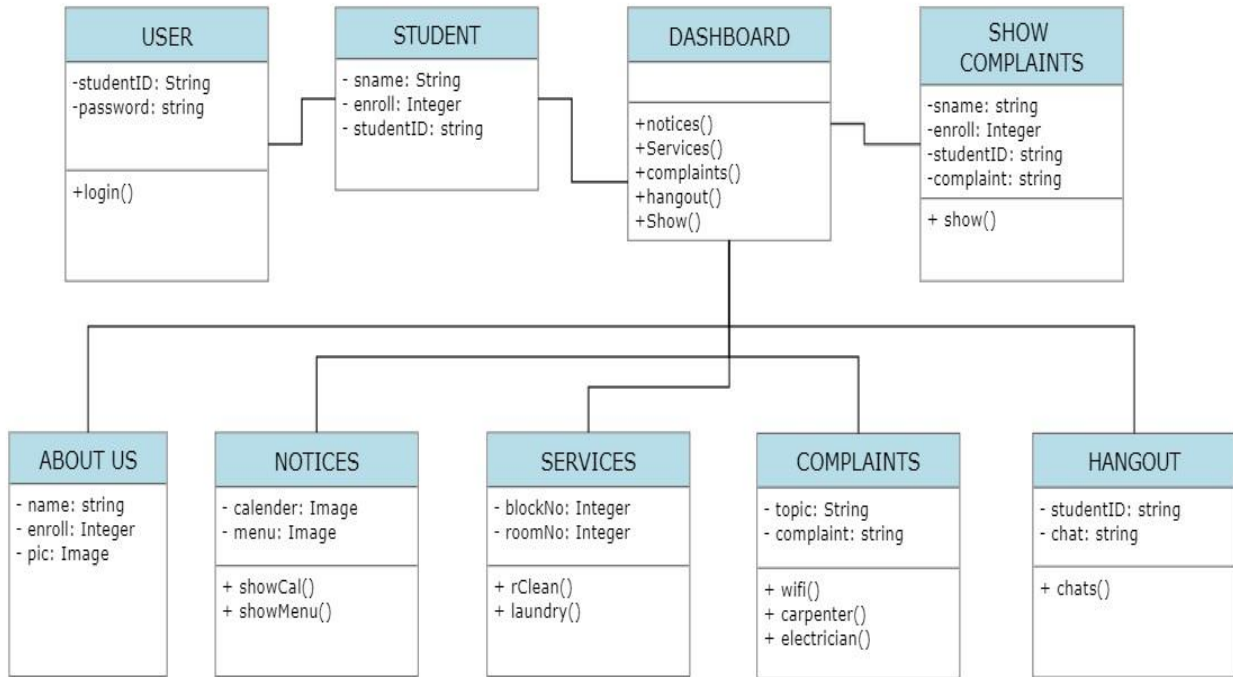


Fig2: CLASS DIAGRAM



### 4.3 ACTIVITY DIAGRAM

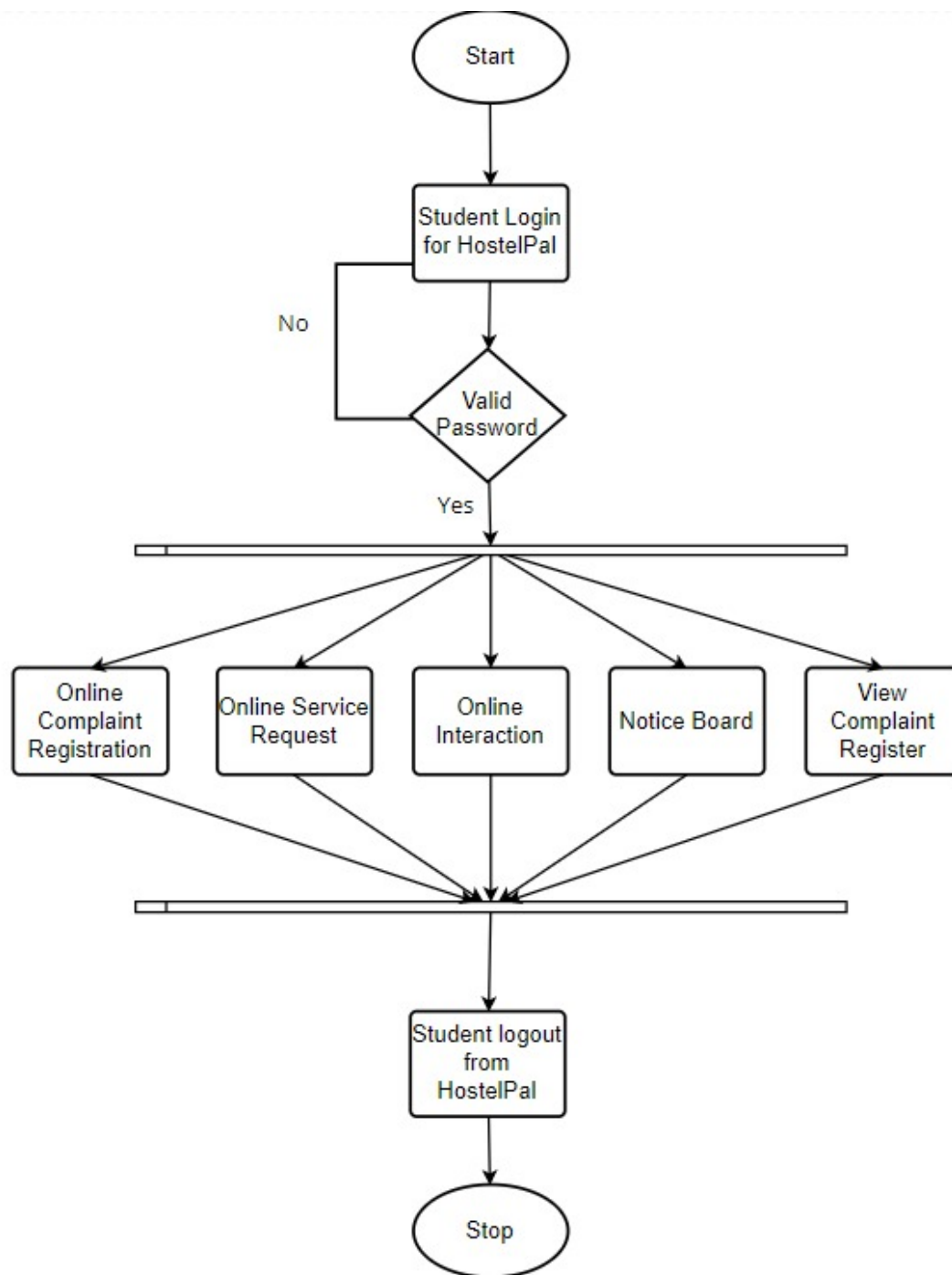


Fig3: ACTIVITY DIAGRAM

## 4.4 SEQUENCE DIAGRAM

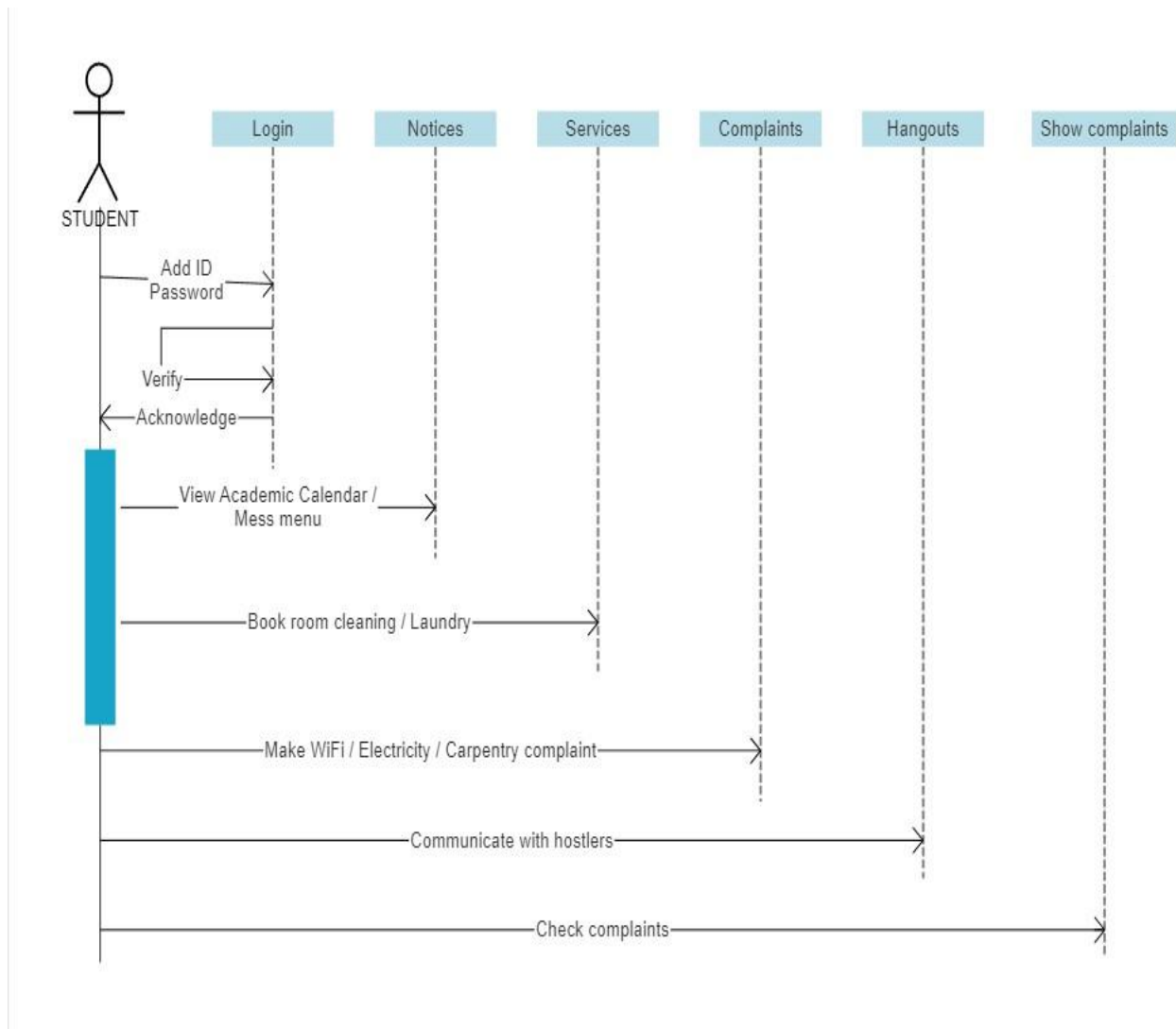


Fig4: SEQUENCE DIAGRAM

## CHAPTER 5

### IMPLEMENTATION

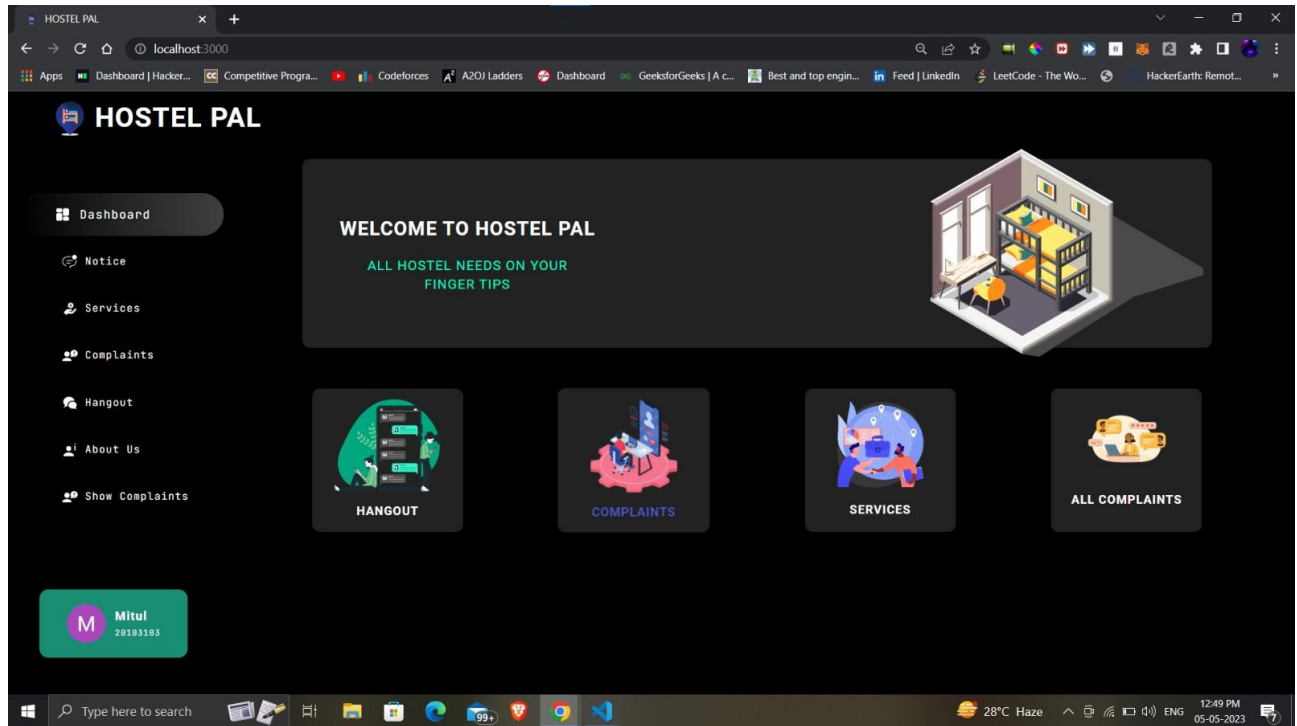


Fig5: DASHBOARD

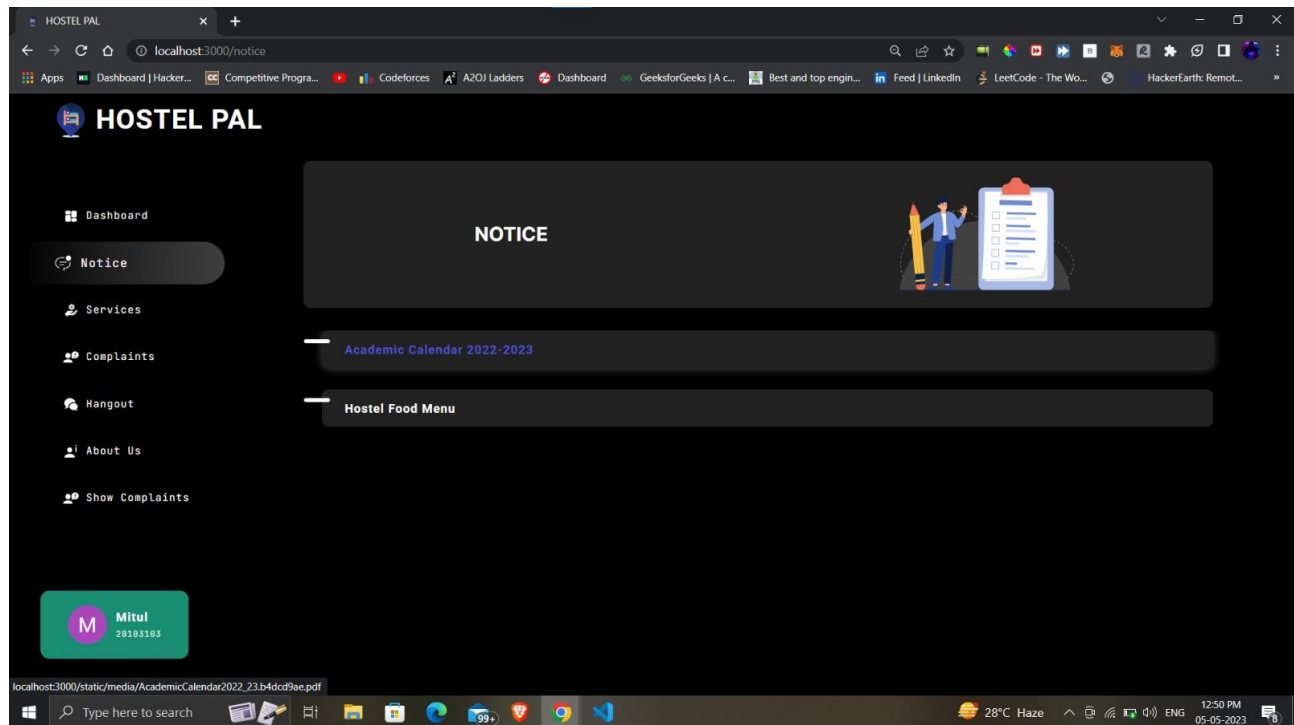


Fig6: NOTICE BOARD

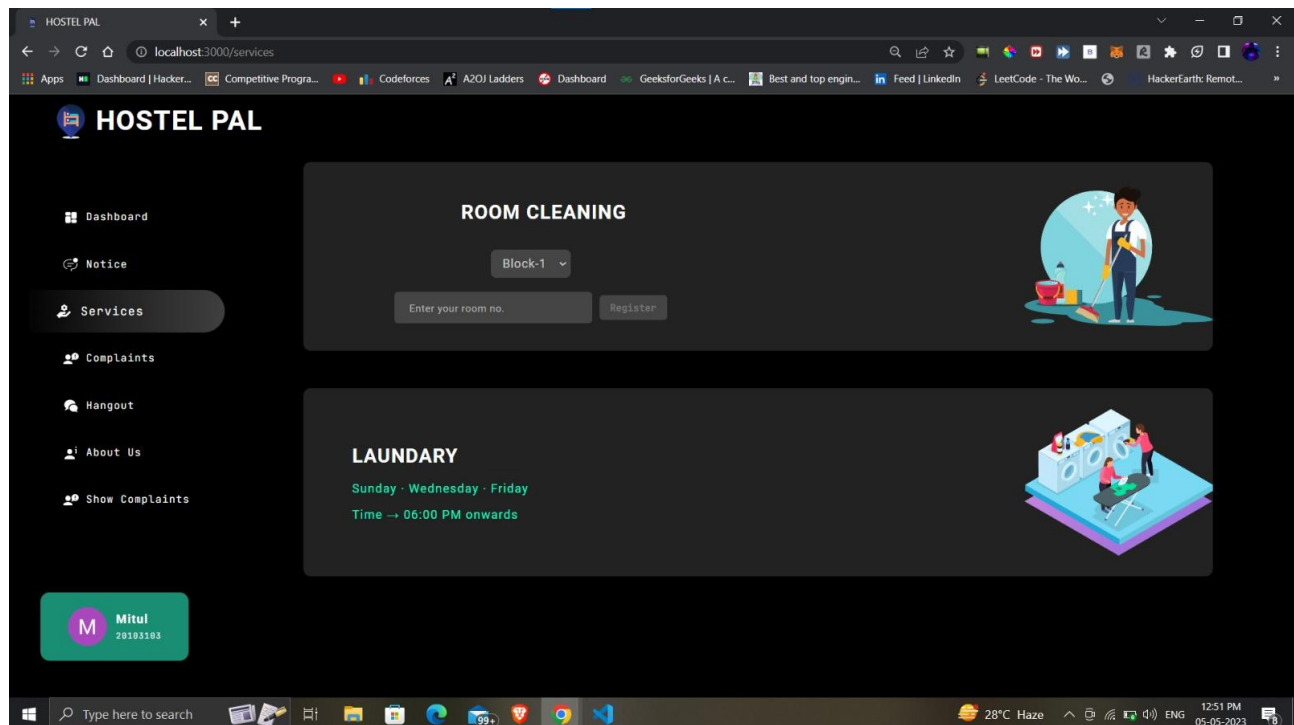


Fig5: SERVICES

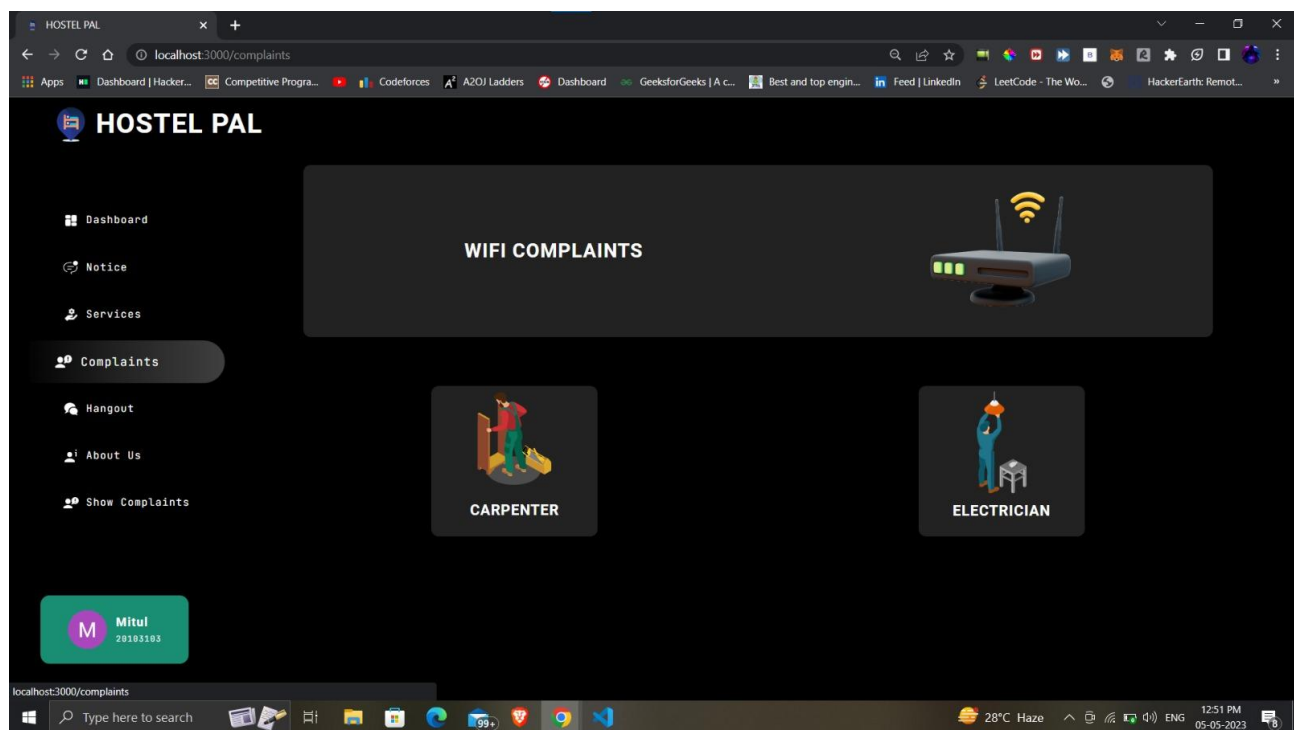


Fig5: COMPLAINTS

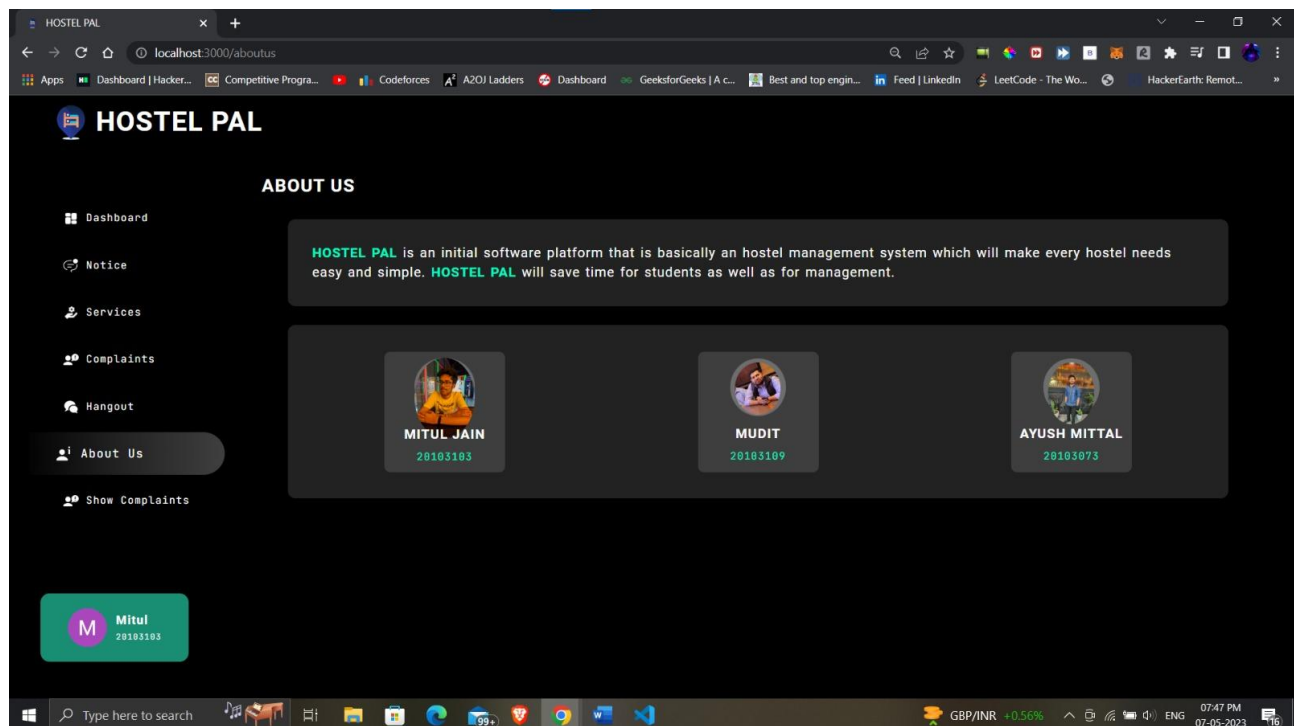


Fig6: ABOUT US

**HOSTEL PAL**

Dashboard Notice Services Complaints Hangout About Us Show Complaints

**COMPLAINTS**  
SHOW COMPLAINTS

NAME	ENROLL	EMAIL	COMPLAINT
USH MITTAL	A	20103073@mail.jit.ac.in	Nemo Bhujya khaana band kr
Ayush	20103073	20103073@mail.jit.ac.in	Mera WIFI khatam hogya
Mitul	20103103	20103103@mail.jit.ac.in	Respected, I would state that the room 3 in Block-1 hostel was not cleaned properly
Mitul	20103103	20103103@mail.jit.ac.in	not working

**Mitul**  
20103103

Type here to search 34°C Haze 07:48 PM 07-05-2023

Fig7: SHOW COMPLAINTS

## **CHAPTER 7**

### **CONCLUSION AND FUTURE WORK**

#### **7.1 CONCLUSION**

This project work titled “HOSTEL PAL: A ONE CLICK SOLUTION TO ALL YOUR HOSTEL PROBLEMS” developed, is based on the requirement specification of the users and the analysis of the existing system. Identification of the drawbacks of the existing system leads to the designing of the computerized system that will be compatible with the existing system, the proposed system is more user friendly and more GUI oriented. This research project was able to build a hostel management system for Jaypee Institute Of Information Technology to manage the processes involved in the hostel such as complaints management, cleaning services, e-notice, online interaction, laundry management, maintenance services etc.. Having a robust database, it stores every information related to hostels. So also the online application of hostels by students is made possible.

The main objectives of the research include:

- Online complaints registration (Wifi, Carpenter, Electrician)
- Online service request (Room cleaning, Laundry)
- Online interaction
- Notice Board
- View Complaint register
- To upgrade from manual means of student’s hostel management.

#### **7.2 LIMITATIONS OF THE PROJECT**

Some of the limitations of the proposed system are:

- The system can’t handle online payment of student’s hostel fee and maintenance fee.
- The system cannot handle other hostel issues such as attendance because the existing system does not have one.

### **7.3 FUTURE SCOPE**

Due to time constraints and lack of resources, an area such as online payment of accommodation and maintenance fee was not incorporated. This online payment facility will enable students to pay their hostel fee online without necessary going to the bank or coming to school with teller after paying at the bank, therefore it will go a long way reducing the stress from the overall process



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