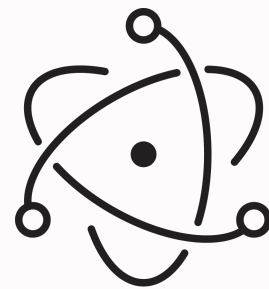


HOSTEL

E-HOSTEL MANAGEMENT



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Department of CSE

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Ramdayal (20103119)
Ravi Ranjan Kumar (20103122)

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Introduction

- Hostel management is an essential aspect of running a successful hostel. However, traditional manual processes can be time-consuming, error-prone, and inefficient. To address these challenges, we have developed an e-hostel management system that automates and streamlines the entire process.
- Our e-hostel management system is a powerful tool that simplifies hostel management for educational institutions, streamlines operations, and enhances the student experience.
- We believe that our solution has the potential to revolutionize the way educational institutions manage their hostels and look forward to sharing our progress with you.

"Technology is the key to streamlining hostel management processes and enhancing the student experience. By leveraging modern tools and techniques, we can create a more efficient and effective hostel management system that meets the needs of both staff and students."

"The literature review is the foundation of any research project, it sets the tone and direction for the entire study." - George A. Swan

Literature Review:

- We conducted a literature review on innovation in hostel management applications by researching various sources and examining existing systems in colleges.
- The review included studies such as "Hostel management system using cloud computing" by J. Patel, K. Patel, and M. Gohel,
- "Development of e-hostel management system" by D.V. Kulkarni and V.R. Patil, and
- "Design and implementation of e-hostel management system using ASP.NET and C#" by A.O. Adeyemo and O.A. Adesina.
- These studies highlight the potential of e-hostel management systems to streamline processes, improve student experiences, and enhance safety and security in hostel environments.

Research Gaps:

Some potential research gaps in e-hostel management could be:

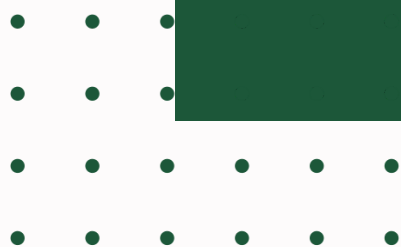
- Lack of studies on the impact of e-hostel management systems on student satisfaction and academic performance.
- Limited research on the integration of emerging technologies such as Internet of Things (IoT) and Artificial Intelligence (AI) in e-hostel management systems.
- Insufficient focus on the security and privacy concerns in e-hostel management systems.
- Few studies on the challenges and barriers faced in the implementation of e-hostel management systems in developing countries.
- Limited research on the financial implications of adopting e-hostel management systems for educational institutions.

Research gap refers to the area of knowledge or understanding within a field or subject that has not yet been explored, investigated or studied sufficiently.

Problem Statement

- The management of hostels for educational institutions can be a complex and time-consuming process, especially for large institutions, like us, that hosts hundreds or thousands of students.
- Traditional manual methods, such as using paper records and spreadsheets, can lead to errors, inefficiencies, and inaccuracies in data management.
- Hostel staff face challenges in managing student check-ins and checkouts, handling room allocations, and tracking student attendance.
- In addition, students often face difficulties in booking hostel rooms, getting information on room availability.
- Also, manual method for managing gate pass and attendance for hostel students can be time-consuming and cumbersome, causing inconvenience and delays for both students and hostel staff.

To address these challenges, there is a need for a comprehensive e-hostel management system that automates and streamlines the entire hostel management process. Such a system would improve efficiency, reduce errors, and provide real-time data to improve decision-making.



Methodology

The methodology for the e-hostel management project can be divided into several stages:

- **Requirement Gathering:** The initial stage involves gathering all the requirements and expectations of the system from the stakeholders. This includes understanding the needs of the students, hostel staff, and administration.
- **System Analysis:** In this stage, a detailed analysis of the requirements is done to identify the different components and functionalities that need to be included in the system.
- **System Design:** Once the requirements and analysis are complete, the system design phase begins. This involves creating a detailed design of the system, including the architecture, data flow, and user interface.
- **Implementation:** The implementation stage involves coding the system using the chosen programming language and database management system.
- **Testing:** Once the implementation is complete, thorough testing is performed to identify and fix any issues or bugs in the system.
- **Deployment:** After testing and bug fixing, the system is deployed to the live environment, and users are trained on how to use it.
- **Maintenance:** The final stage involves ongoing maintenance and support of the system to ensure its smooth operation and continued functionality.

Implementation:

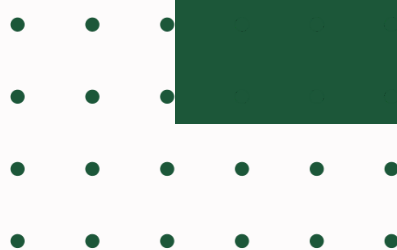
Implementing various features in a project involves the process of adding different functionalities and capabilities to the system.

To implement these features effectively, it is important to follow a systematic approach that involves gathering requirements, designing the system architecture, developing the code, testing, and deployment. It is also crucial to ensure that the implementation aligns with the project objectives and user needs.

A successful implementation of various features can result in a more robust and user-friendly system that meets the needs of its intended audience.

Following are the Tech stack:

- Frontend : HTML , CSS ,Tailwind CSS, Reactjs , JavaScript.
- Backend : MongoDB (Cloud based database) , Node.js , Express.js
- ML : face_recognition (dlib), opencv



Features:

Following are the features implemented in the e-Mega (Hostel management Website):

01



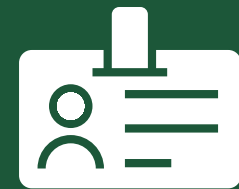
Online Booking

E-Attendance
System



02

03



E-Gate-Pass

Complaints



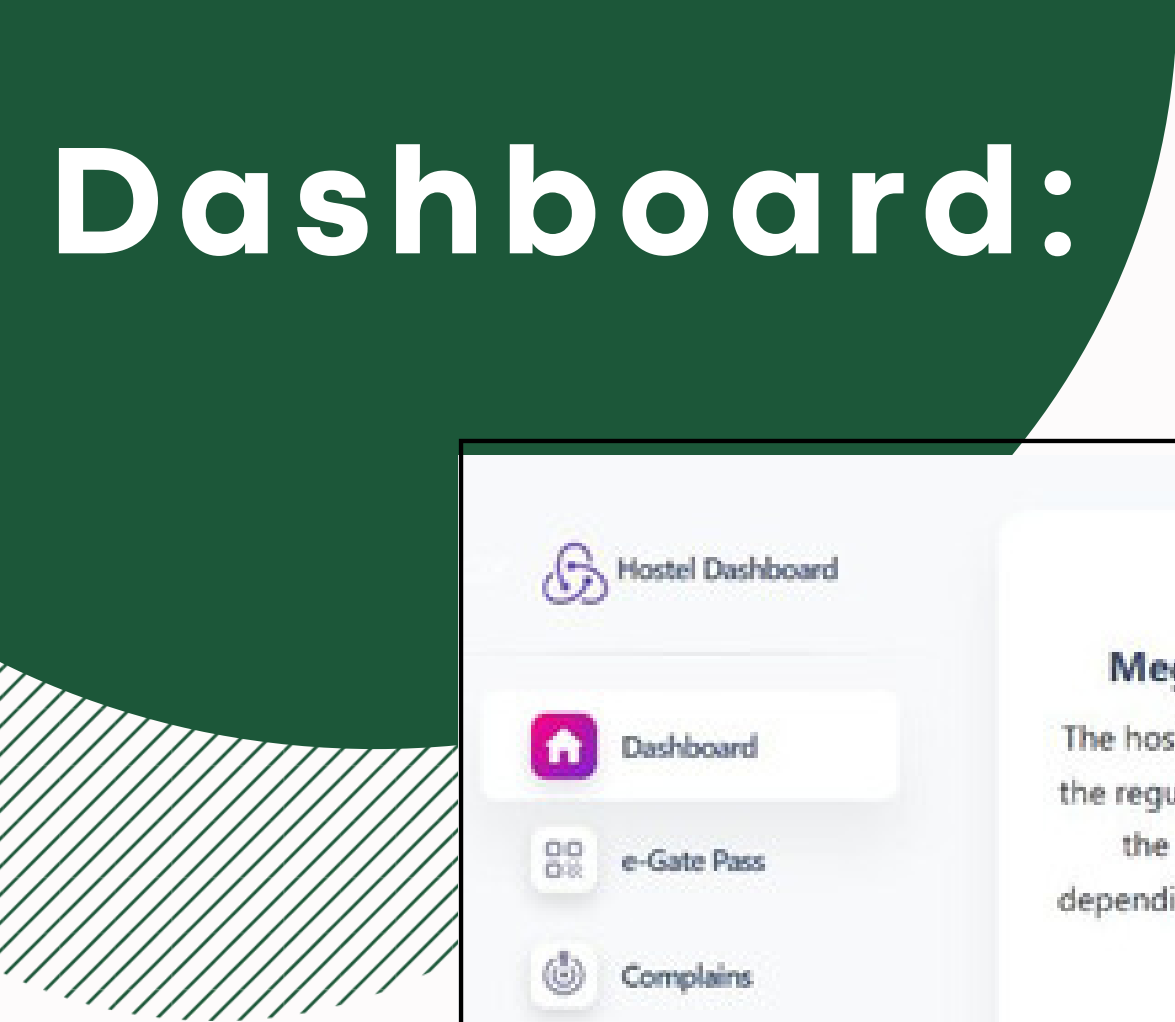
04

05




Announcements


and many more...





Dashboard:


Result Discussion:


 Hostel Dashboard


 Dashboard


 e-Gate Pass

 Complains

 e-Attendance

 Feedback

 Utility-Corner



Ramdayal

F-236


VIEW PROFILE

SIGN OUT

Welcome to
Mega Boys Hostels

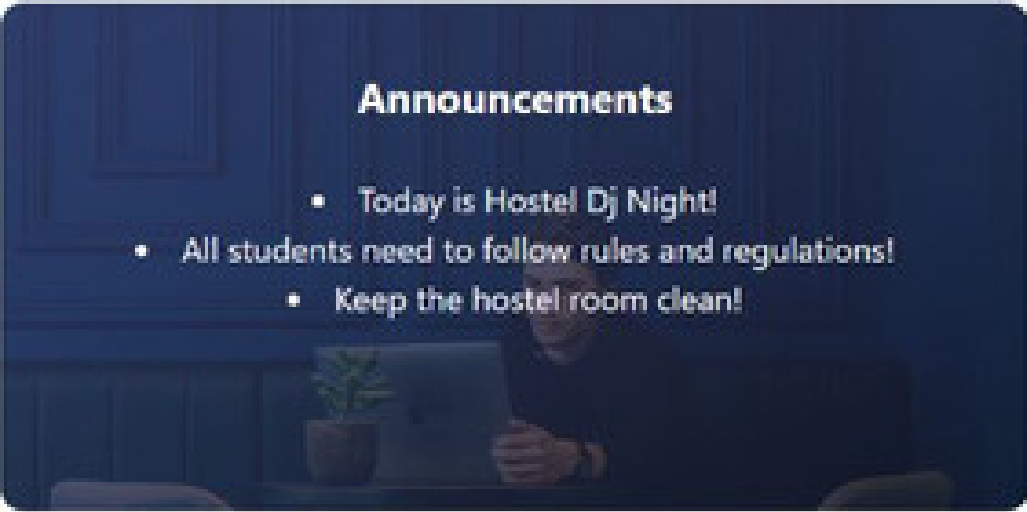
The hostel facility is available to the regular students who are on the rolls of the institute depending upon the availability.

Read More →



Announcements

- Today is Hostel Dj Night!
- All students need to follow rules and regulations!
- Keep the hostel room clean!



Select your room

Floor : Ground▼

Mega Boys Hostels

You have selected room number


Name : Ramdayal

Roll No. : 20103119

Room no : F-236

Floor : first

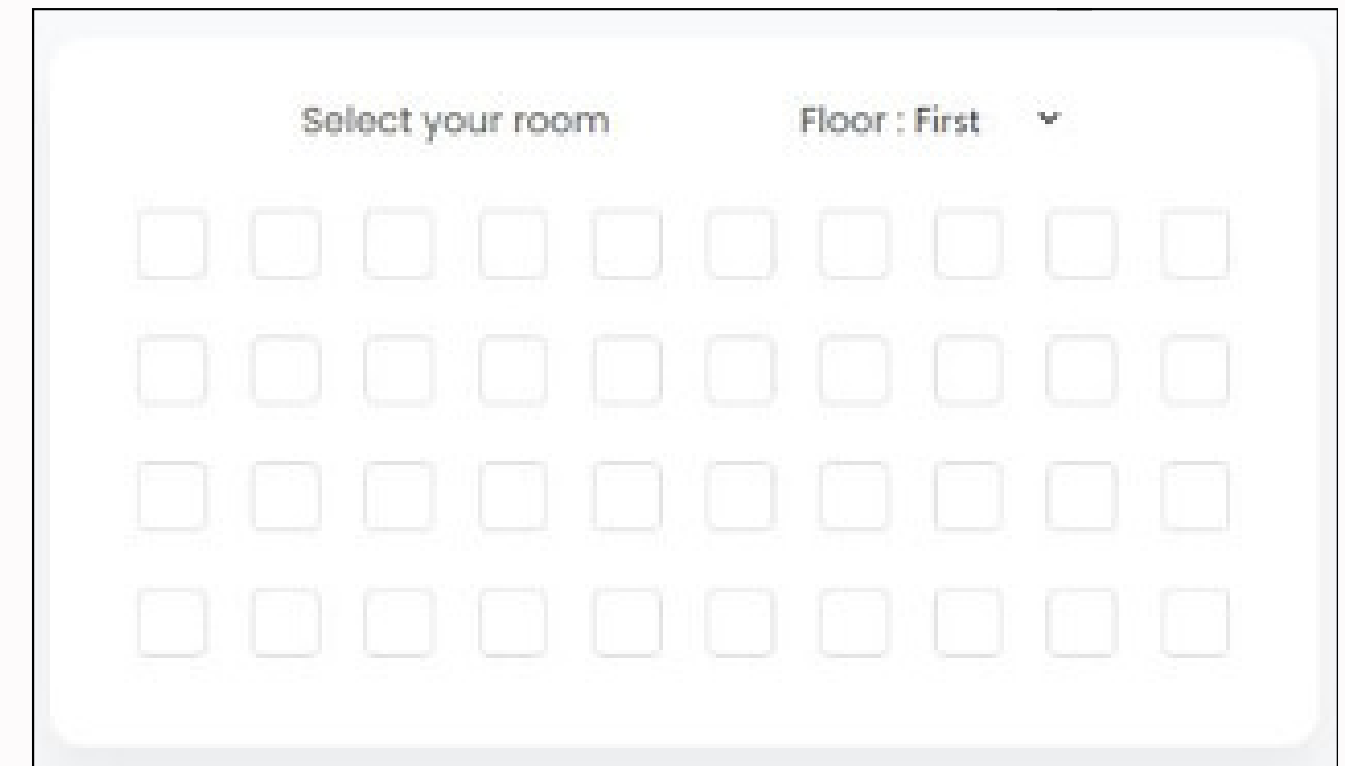
Next →



1

Online Room Booking:

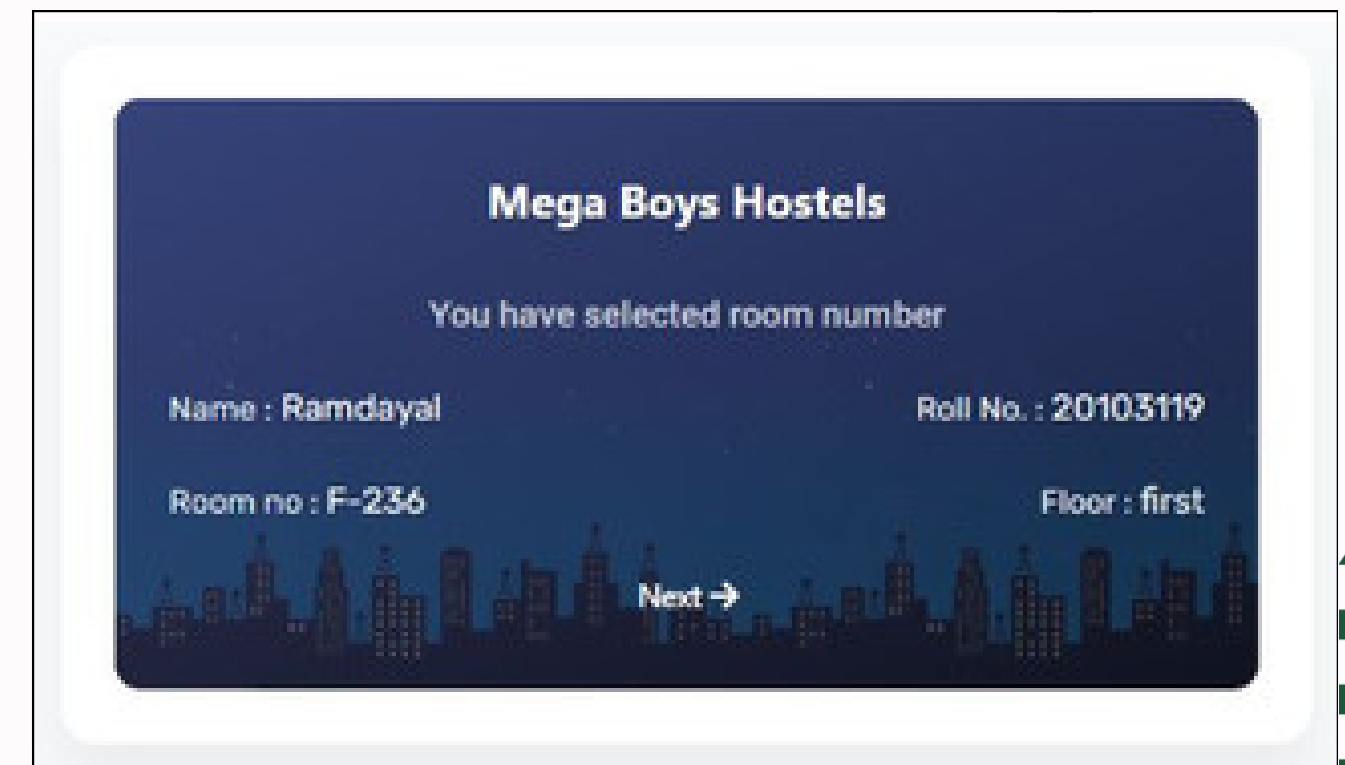
- Online room allotment is a feature of e-hostel management systems that allows students to select and book hostel rooms online, without the need for manual intervention from hostel staff.
- This process typically involves a user-friendly interface where students can select the type of room they want, view available options, and make a reservation by paying the required fees.
- Online room allotment systems can significantly reduce the workload of hostel staff by automating the room allocation process. They can also enhance the student experience by providing a more convenient and hassle-free booking process.
- Overall, online room allotment is a key feature of e-hostel management systems that can simplify the room booking process, reduce errors, and enhance the student experience.



Select your room

Floor : First

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Mega Boys Hostels

You have selected room number

Name : Ramdayal

Roll No. : 20103119

Room no : F-236

Floor : first

Next →

2

E-Gate Pass:

- E-gate pass is a feature of e-hostel management systems that allows students to generate gate passes online, without the need for manual intervention from hostel staff. Gate passes are typically required for students to exit and re-enter the hostel premises during non-curfew hours.

The screenshot displays the 'Hostel Dashboard' interface. On the left, a sidebar contains navigation links: Dashboard, Gate Pass (highlighted), Complaints, Feedback, and Attendance. Below the sidebar, a user profile for 'Ramdayal F-236' is shown with a 'VIEW PROFILE' button and a 'SIGN OUT' button. The main content area is divided into three sections: 'Gate Pass Rules', 'Gate Pass' application buttons, and a 'History' table.

Gate Pass Rules

- A gate pass can only be used once
- No gate pass will generated after 8PM
- Students on leave are can't mark their attendance
- You have return to hostel before 8PM otherwise fill leave form

Good Bye!

Gate Pass

Apply New

History

History

OUT DATE	OUT TIME	PURPOSE	IN DATE	IN TIME	PASS
25-02-2023	12:23	Shopping	25-02-2023	14:33	Download
12-02-2023	10:23	Movie	12-02-2023	12:10	Download

2

E-Gate Pass:

- With e-gate pass, students can generate gate passes online by logging into the e-hostel management system and providing relevant information such as expected-in date and time, purpose and mobile no.
- E-gate pass systems can significantly reduce the workload of hostel staff. With an e-gate pass system, students can generate gate passes at any time, without having to wait in line or fill out paper forms.
- In addition, e-gate pass systems can provide real-time information on student movements, allowing hostel staff to track student attendance and ensure the safety and security of students on campus.
- Overall, e-gate pass is a key feature of e-hostel management systems that can simplify the gate pass generation process, reduce errors, and enhance the student experience.

Gate Pass

Expected In Date	Expected In Time
<input type="text" value="dd-mm-yyyy"/>	<input type="text" value="--:--"/>
Purpose	Mobile
<input type="text" value="Shopping"/>	<input type="text" value="9876543210"/>
<div><button>Close</button><button>Submit</button></div>	

3

Complaints:

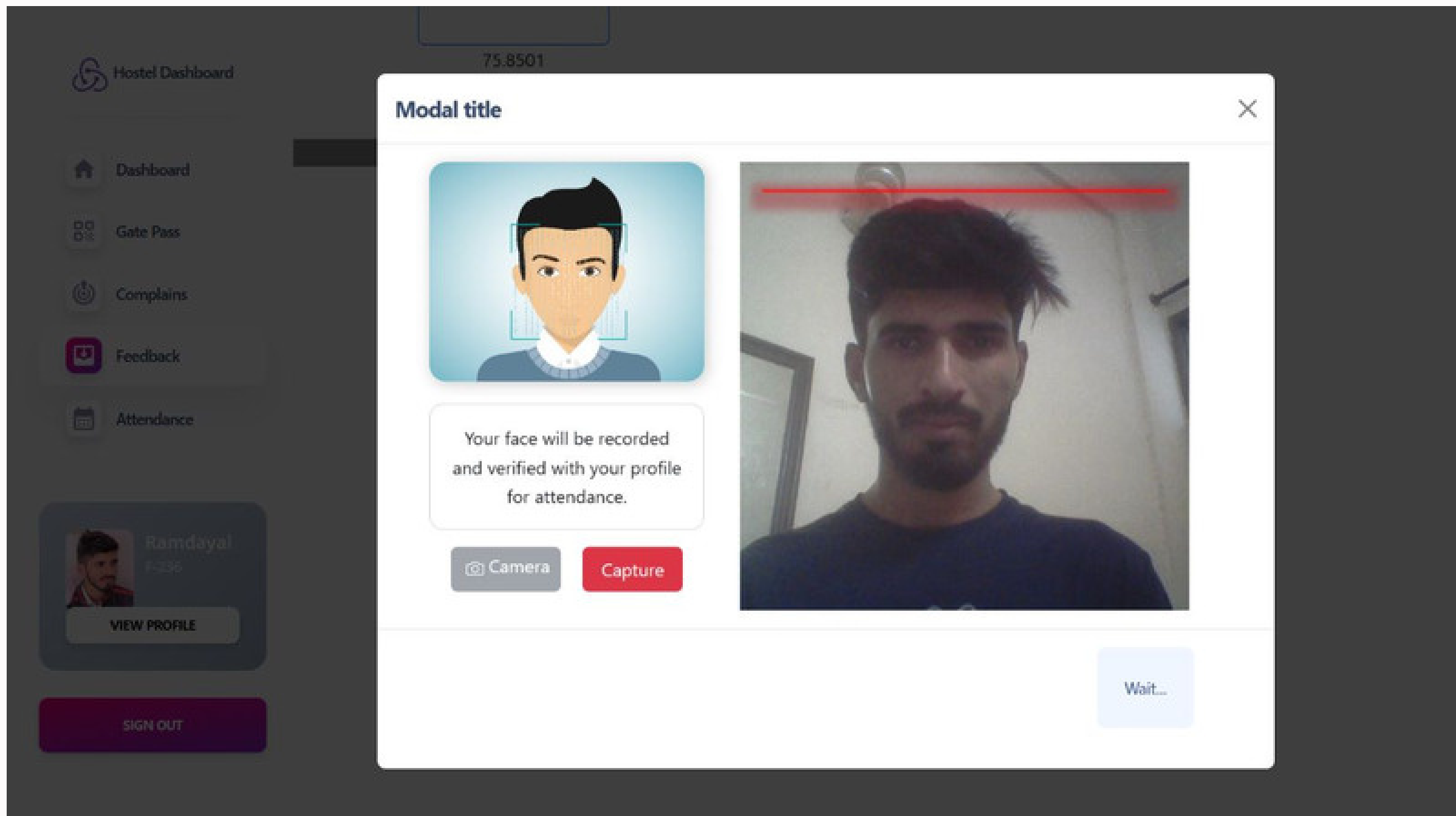
- Complaint management is an important aspect of e-hostel management systems. With an e-hostel management system, students can easily register complaints online, which can then be tracked and resolved by hostel staff.
- E-hostel management systems can also provide real-time updates to students on the status of their complaints and suitable action taken.

The screenshot displays a 'Hostel Dashboard' interface. On the left, a sidebar contains navigation links: Dashboard, Gate Pass, Complain (highlighted with a red icon), Feedback, and Attendance. Below these is a user profile for 'Ramdayal' with ID 'F-236' and a 'VIEW PROFILE' button. At the bottom of the sidebar is a 'SIGN OUT' button. The main content area is titled 'Complain' and features a table with columns: DATE, CATAGORY, DESCRIPTION, STATUS, and ACTION. A 'New Complain' modal is open in the center, containing a 'Catagory' dropdown menu (with 'Choose an option' selected), a 'Description' text input field, and 'Close' and 'Submit' buttons at the bottom.

4

Online Attendance:

- Online attendance is a feature of e-hostel management systems that allows hostel staff to track student attendance digitally. With an online attendance system, students can mark their attendance online, and hostel staff can view the attendance records in real-time.



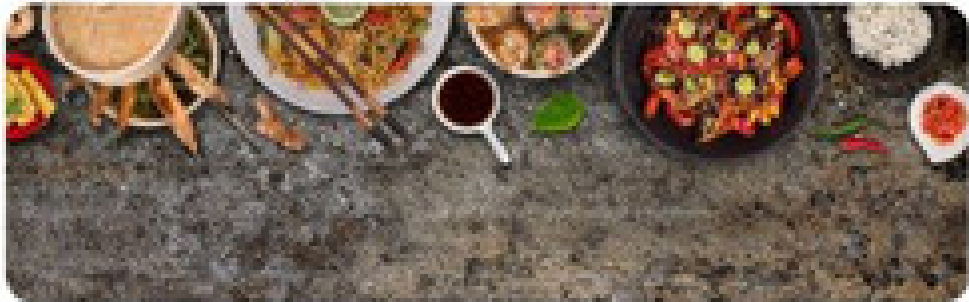
- We use Face recognition systems for attendance in online attendance systems.

Face recognition technology uses biometric analysis to identify and verify the identity of individuals based on their facial features. This technology can be integrated with online attendance systems, where students can mark their attendance by submitting a selfie of their face.

5





Announcements:

- Announcements can be used to inform students about upcoming events, changes in hostel rules or regulations, maintenance activities, mess details, or any other relevant information.
- With e-hostel management systems, announcements can be posted on the system's dashboard. This ensures that students receive the information promptly and can take appropriate action as necessary.
- Moreover, the use of an online announcement system can help reduce paper waste and eliminate the need for physical notices or posters. This can help save time and resources for hostel staff, as well as provide a more environmentally friendly option.



Mess Details

Active from Jan 23, 2023

 Last	 Used	 Left	 Total
₹4K	₹14K	₹10.5K	₹24.5K

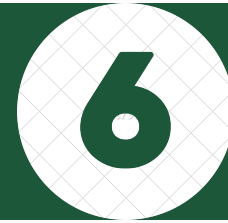
Announcements

Hi this minor project of Team e-mega


Our Aim to make e maga system for NITJ HOSTEL

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Hostel Reusable Portal:

- This portal allows students to post items such as mattresses, buckets, or any other reusable items that they may wish to donate or share with other students. This can help reduce waste and promote sustainability within the hostel community.
 - The feature can be designed with a specific section where senior students can post the items they no longer need, along with their descriptions and photos. Junior students can then access the section and browse through the available items, select the ones they need, and request them from the senior students.
 - To ensure the safety and quality of the items shared through this feature, hostel staff can moderate the postings and ensure that the items are in good condition before they are made available for sharing.
- 

Conclusion:

- The development of the e-Hostel Management System is a significant step towards the automation of hostel management processes.
- The system provides an efficient way to manage and monitor hostel facilities and services, thereby improving the quality of life for hostel residents.
- With the system in place, students can easily access and avail hostel services, file complaints, and communicate with the hostel management.
- Overall, the e-Hostel Management is a significant improvement over the traditional paper-based system, and it has the potential to transform the way hostels are managed.
- It provides a modern and user-friendly approach to hostel management that enhances the quality of life for students while also improving the efficiency and effectiveness of hostel administration.

HOSTEL

Future Goals:



Making our ML model more accurate so it can give accurate result.



Once it successfully work for NITJ hostel then we bring other collage's hostel.



Adding Live location Tracing to the Attendance system

References:

- ResearchGate for literature reviews.
- Web Development Tools: W3Schools, Tutorials Point.
- Stack Overflow.
- Hostel's Complaint Register.
- Students' Feedback.
- Hostel Notice Board and Chunk of Files.
- Wikipedia For Basic Introduction of Technology and Diagrams.

THE END

*Thank
you*