| | Marwadi University |
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| **Marwadi University** **Faculty of Engineering and Technology** **Department of Information and Communication Technology** | |
| **Subject: Capstone Project** | **Ideation and Stakeholder Needs Analysis** |
| **Project : - Galaxy Hostel** | **Date: 25-09-2025** **Enrolment No: 92310133001** |

# Introduction

- Galaxy Hostel Website is purely based for the hostel students as well as for the wardens and admins so that they can not only know how many users are there but also get the details they want easily. The main reason behind making this project is very clear. Being hostel students ourselves, we know about the timings, rules, and regulations of the hostel, but some new students are not aware of them. Because of that, the idea of creating this project came up.

- I also noticed that the warden of Galaxy Hostel usually comes to each floor and every room to take attendance using pen and paper. While this method is fine, technology has evolved, and that is the main reason behind creating this site. With this website, admins can not only manage data but also keep track of student complaints and attendance online, along with the gate pass system.

# Problem Statement

- In Galaxy Hostel, wardens and admins currently manage student activities like attendance, gate passes, and complaints manually. For example, wardens visit each floor and room every day to take attendance using pen and paper. While this works, it becomes time-consuming, inefficient, and difficult to maintain as the number of students increases.

- New students also often face confusion regarding hostel timings, rules, and regulations because there is no proper system to guide them. At the same time, admins face challenges in keeping track of student details, attendance records, gate pass approvals, and complaints in an organized way. Everything is handled manually, which not only slows down the process but also makes it harder to manage as the hostel grows.

- This created a clear need for a digital platform that could streamline the entire process and make it faster, transparent, and more efficient for students, wardens, and admins.

# Stakeholder Identification and Need Analysis

❖ The Galaxy Hostel Website has **3 main stakeholders**:

1. **Students**
   - **Requirements**
     - A simple and reliable platform to mark attendance, request gate passes, submit complaints, and check hostel rules and timings.
     - Easy access to hostel-related information without depending on wardens or manual notices.
   - **Challenges**
     - Manual attendance wastes time and is inconvenient.
     - Gate passes are handled on paper, which can be misplaced or delayed.
     - New students are often unaware of hostel regulations.
     - Complaints are difficult to track when reported verbally.

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2. **Wardens**
   - **Requirements**
     - A structured way to manage attendance, track gate passes, and resolve student complaints without visiting every floor/room daily.
   - **Challenges**
     - Manual record-keeping is time-consuming and error-prone.
     - Difficult to monitor students' presence and gate pass history efficiently.
     - Lack of centralized access to all student data.
3. **Admin/Management**
   - **Requirements**
     - A manageable system that provides real-time student data, attendance reports, and complaint records.
     - Ability to oversee and control overall hostel activities digitally.
   - **Challenges**
     - Manual systems make it hard to generate reports and maintain transparency.
     - Difficult to ensure consistency and accountability across large student numbers.
     - No structured digital platform for monitoring hostel activities.

## Ideation of Solution

- ➢ Based on stakeholder needs, the solution is a **web-based hostel management platform** supported by an **AI Assistance Chatbot**. The system is divided into three role-based modules:

1. **Student Module**
   - Login to mark daily attendance online.
   - Request gate passes digitally and track approval status.
   - Submit complaints through the system for faster resolution.
   - Access hostel rules, timings, and updates directly.
   - Use the **AI Assistance Chatbot** to ask common queries about rules, timings, or processes.
2. **Warden Module**
   - View real-time attendance records without physically visiting each room.
   - Approve or reject gate pass requests.
   - Monitor and resolve complaints submitted by students.
   - Communicate directly with students through the system.
3. **Admin/Management Module**
   - Oversee all student, warden, and hostel-related data from a single dashboard.
   - Generate attendance and gate pass reports.
   - Monitor complaint history and resolution progress.
   - Manage users and ensure smooth operation of the system.

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## Relevance to ICT Domain

- **Software Engineering**: Full-stack web app (frontend + backend + database + authentication + AI chatbot).
- **Information Systems**: Manages student data, attendance, complaints, gate passes, and role-based access.
- **Cloud/Databases**: Stores student profiles, attendance logs, complaint records, and gate pass requests securely.
- **Security**: Implements secure authentication, encryption, and role-based access control to protect sensitive data.
- **Artificial Intelligence**: Includes an AI Assistance Chatbot to answer hostel-related FAQs and reduce workload for wardens/admins.