

HOSTEL ROOM ALLOTMENT SYSTEM

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INTRODUCTION

- The current hostel allotment system is manual, time-consuming, and prone to errors, causing confusion for both students and administrators.
- This project aims to develop a web-based system that automates room allotment, shows real-time room availability, and simplifies data management.
- It will make the process faster, more transparent, and reduce the workload on hostel staff.

Existing System

- Most colleges still use spreadsheets or old databases for hostel allotment ,which is slow and error-prone.
- Student preferences and room capacities are not managed properly.
- Students can't see rooms or know roommates before moving in.
- Existing web portals are basic, lacking real-time updates ,automation, and proper communication features.

Disadvantages of Existing System

- Manual Process
- No Real-Time Updates
- Poor Preference Handling
- Lack of Transparency

Proposed System

- Automated Room Allocation.
- Student Registration and Authentication.
- Real-Time Room Availability Tracking.
- Interactive Dashboard for Students.
- Admin Management Panel.
- Email Notification System.

Advantages of Proposed System

- Time-Saving & Efficient.
- Error-Free Allocation.
- Transparency & Fairness.
- Easy Access to Information.
- Better Record Management.
- Scalability & Flexibility.

Project Objectives

- Automate the hostel room allotment process.
- Avoid errors like duplicate or wrong allocations.
- Provide dashboards for both students and admins.
- Track room availability in real time.
- Ensure fair and transparent room distribution.

Technologies Used

- Frontend:

- HTML5

- CSS3

- JavaScript

- Backend:

- Python

- Django Framework

- Database:

- SQLite

Modules

- Authentication Module.
- Student Management Module.
- Room Management Module.
- Room Allotment Module.
- Dashboard Module.

Authentication Module

- Role-Based Secure Access.
- Login Verification.
- Password Management.
- Session Handling.
- Routing Logic.



Hostel Allotment System

Seamless Hostel Room Allocation

Our platform ensures hassle-free, accurate, and transparent room allocation for students and admins alike.

Next →

Home Page





HostelOps Dashboard

"Authorize personnel only. Keep hostel data safe and organised"

Admin Login

Username:

Enter your username

Password:

Enter your password

Login



Student Login

Username:

A text input field with a placeholder 'Registered Email'.

Password:

A text input field with a placeholder 'Enter your password'.

Hallticket No:

A text input field with a placeholder 'Hallticket No'.

Login

[Get Login Details or Forgot Password?](#)

A modal window titled 'Student Login' containing three text input fields for 'Username', 'Password', and 'Hallticket No', followed by a large orange 'Login' button and a link to 'Get Login Details or Forgot Password?'.

Student Module

- Personalized Dashboard
- Room Information Access
- Profile Management
- Motivational Tips / Academic Info
- Secure & Simple Navigation

Student Panel

[View Details](#)

[Room Details](#)

[3D Room View](#)

[Edit Profile](#)

[Logout](#)

Student Dashboard

Personal & Room Info

Name

Chandana

Roll Number

23011A0516

Branch

CSE

Admission Year

2023

Email

annadichandana462006@gmail.com

Phone

6305692594

Room No

201

Allocated On

21 Apr, 2025

 [Edit Profile](#)

 **Tip of the Day:** Stay productive and keep learning!

Name

Chandana

Roll Number

23011A0516

Branch

CSE

**Admission Year**

2023

Email

annadichandana462006@gmail.com

Phone Number

6305692594

Save Changes

Room Details

Your Room Number: 201

Your Roommates:

| S. No | Name | Roll Number | Department | Email | Phone Number |
|-------|----------|-------------|------------|--------------------|--------------|
| 1 | harshini | 23011A0517 | mech | harshini@gmail.com | 6302507057 |

 Student Information Personal Details

Name
Chandana

Roll Number
23011A0516

Branch
CSE

Year
3

Email
annadichandana462006@gmail.com

Phone
6305692594

 Room Allocation

Room Number
201

Allocated On
21 Apr, 2025

Admin Module

- Student Management
- Room Management
- Automated Room Allotment
- Visualization Dashboard
- Admin Dashboard

Admin Dashboard

 **Hostel Admin Dashboard**

Welcome, Admin!

[Logout](#)

 **All Students**

View registered students in the hostel system

 **Room Status**

Monitor availability and occupancy of rooms

 **Add Room**

Create and manage room capacity for students

 **Allot Rooms**

Assign rooms to eligible students based on availability

 **Add / Edit Students**

 **Room Overview**

Visual summary of bed occupancy by room

Registered Students Data

 Registered Students

| Name | Roll No | Branch | Year | Email | Phone | Room |
|-------------------|------------|--------|------|--------------------------------|------------|---------|
| Chandana | 23011A0516 | CSE | 3 | annadichandana462006@gmail.com | 6305692594 | 201 |
| shreehitha | 23011A0538 | cse | 3 | shreehitha123@gmail.com | 7685433445 | tv-room |
| Kavyasri | 23011A0539 | cse | 3 | kavyasri290406@gmail.com | 7989625989 | 419 |
| suchitra | 23011A0566 | cse | 3 | suchitrad3004@gmail.com | 6789187271 | 402 |
| Ashwitha Devasani | 23011A0520 | CSE | 3 | ashdevasani02@gmail.com | 6302507056 | 419 |
| akshara | 23011A0544 | cse | 3 | 26akshara.k@gmail.com | 9391248415 | 439 |
| sirichandana | 23011A0546 | ece | 4 | sirichandana566@gmail.com | 7685433445 | 108 |
| harshini | 23011A0517 | mech | 3 | harshini@gmail.com | 6302507057 | 201 |

Managing Student Data

Manage Students

+ Add New Student

| Name | Roll No | Branch | Year | Edit |
|-------------------|------------|--------|------|--|
| Chandana | 23011A0516 | CSE | 3 |  Edit |
| shreehitha | 23011A0538 | cse | 3 |  Edit |
| Kavyasri | 23011A0539 | cse | 3 |  Edit |
| suchitra | 23011A0566 | cse | 3 |  Edit |
| Ashwitha Devasani | 23011A0520 | CSE | 3 |  Edit |
| akshara | 23011A0544 | cse | 3 |  Edit |
| sirichandana | 23011A0546 | ece | 4 |  Edit |
| harshini | 23011A0517 | mech | 3 |  Edit |
| manjula | 23011A0550 | ece | 4 |  Edit |
| ayesha fathima | 23011A0567 | cse | 3 |  Edit |

Add Student

Name:

Rollno:

Branch:

Admission year:

Email:

Enter Your Email address

Phonenumber:

Password:

Add Student

Edit Student

Name:

Chandana

Rollno:

23011A0516

Branch:

CSE

Admission year:

2023

Email:

annadichandana462006@gmail.com

Enter Your Email address

Phonenumber:

6305692594

Password:

psAZfiHQ

Update Student

Room Details

Room Details

| S.No | Room No  | Occupied  | Remaining  | Total Beds  | Status  |
|------|---|--|---|--|--|
| 1 | 201 | 2 | 1 | 3 |  Partially Occupied |
| 2 | 202 | 0 | 2 | 2 |  Empty |
| 3 | 402 | 1 | 3 | 4 |  Partially Occupied |
| 4 | 439 | 1 | 2 | 3 |  Partially Occupied |
| 5 | tv-room | 1 | 3 | 4 |  Partially Occupied |
| 6 | 346 | 0 | 5 | 5 |  Empty |
| 7 | 219 | 0 | 3 | 3 |  Empty |
| 8 | 234 | 0 | 5 | 5 |  Empty |
| 9 | 220 | 0 | 3 | 3 |  Empty |
| 10 | 217 | 0 | 3 | 3 |  Empty |

Room Allotment Module

- Smart Room Assignment
- Capacity Check
- One-to-One Mapping
- Real-Time Updates
- Error Prevention

Allot Rooms to Students

 Select Students

 Select Room

Unallocated Students

| Select | Name | Roll No | Branch | Year |
|--------------------------|----------------|------------|--------|------|
| <input type="checkbox"/> | manjula | 23011A0550 | ece | 4 |
| <input type="checkbox"/> | ayesha fathima | 23011A0567 | cse | 3 |

Available Rooms

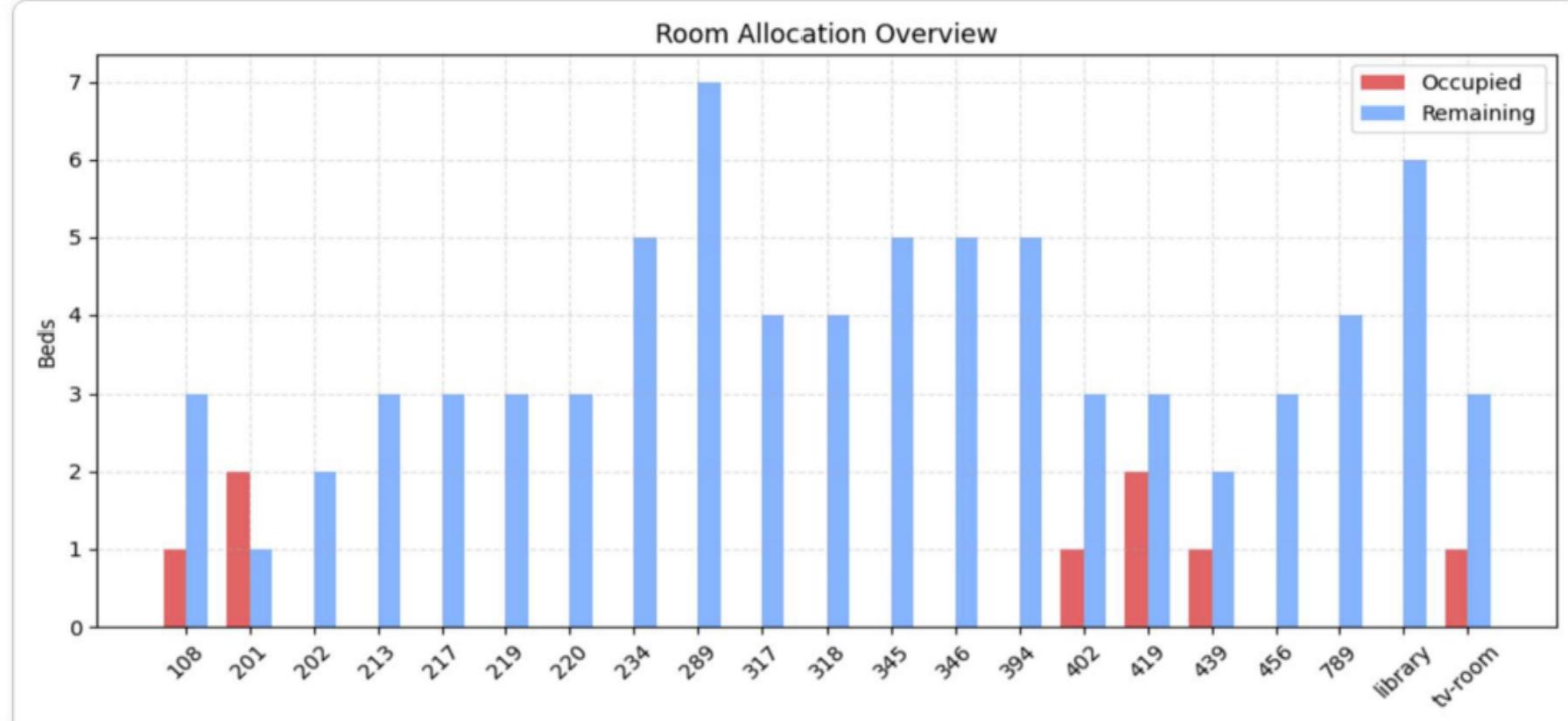
| Select | Room No | Occupied | Remaining | Total | Status |
|-----------------------|---------|----------|-----------|-------|-----------|
| <input type="radio"/> | 201 | 2 | 1 | 3 | Available |
| <input type="radio"/> | 202 | 0 | 2 | 2 | Available |
| <input type="radio"/> | 402 | 1 | 3 | 4 | Available |
| <input type="radio"/> | 439 | 1 | 2 | 3 | Available |
| <input type="radio"/> | tv-room | 1 | 3 | 4 | Available |
| <input type="radio"/> | 246 | 0 | 5 | 5 | Available |

Visualization Module

- Interactive Charts.
- Room Overview at a Glance.
- Data-Driven Decisions.
- Integrated with Dashboard.
- Visual Alerts.



Room Allocation Overview



Email Module

- Password Reset Support.
- Secure Email Verification.
- Django Email Integration.
- User-Friendly Flow.
- Account Recovery Made Easy.

Registered Email

Registered Email:

annadichandana462006@gmail.com

Hallticket No:

23011A0516

Submit

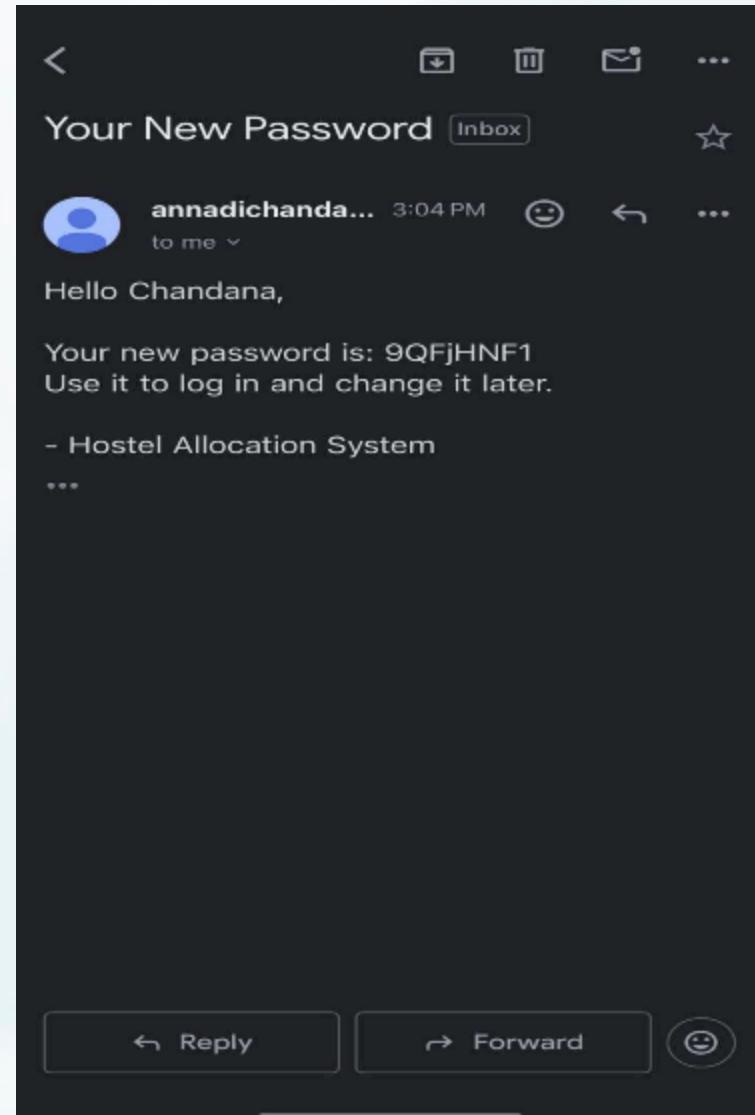


Check Your Email

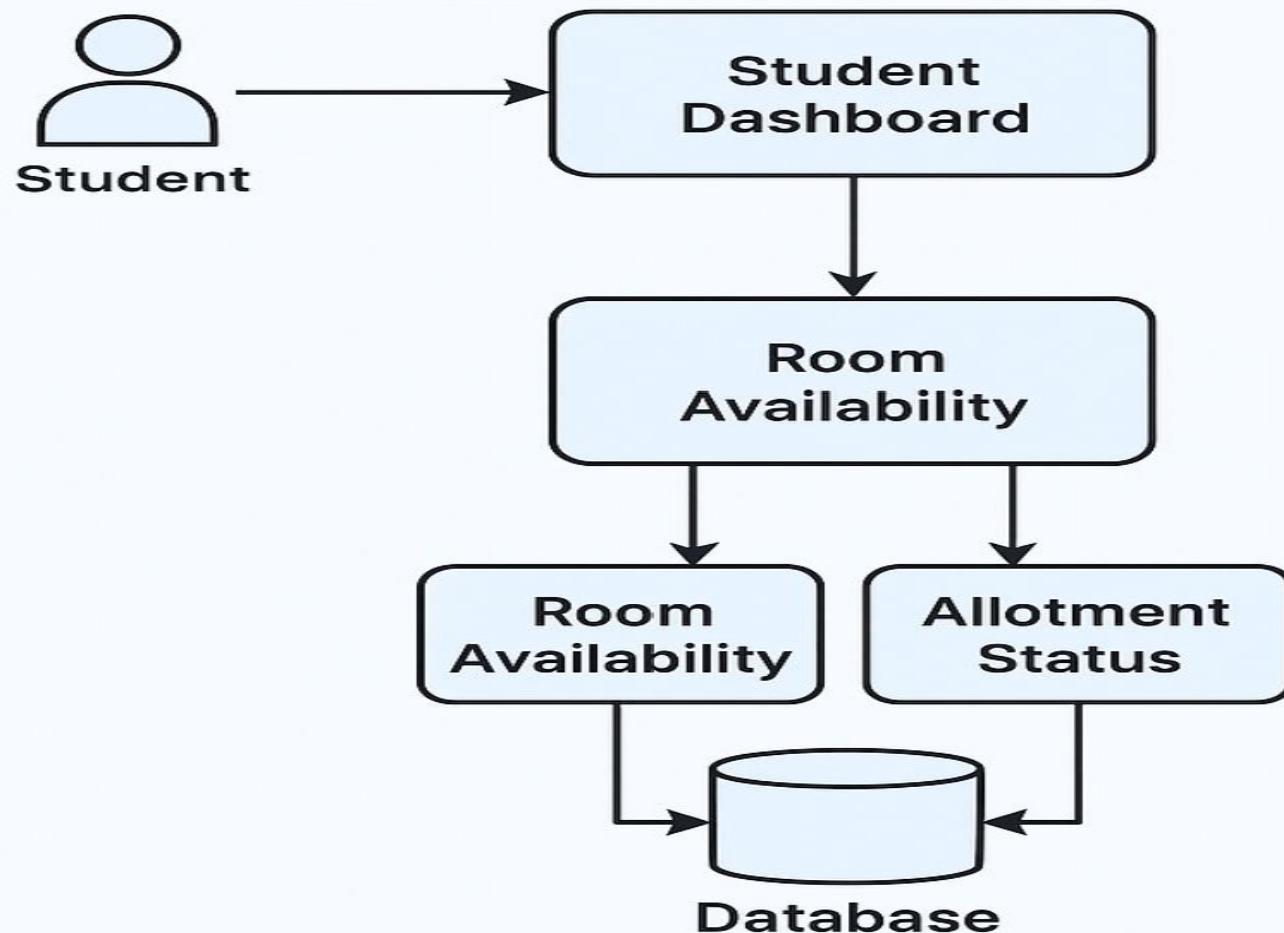
If the email you entered is registered with us, a new password
has been sent to your inbox.

Please use the new credentials to log in. Don't forget to check
your spam or promotions folder too.

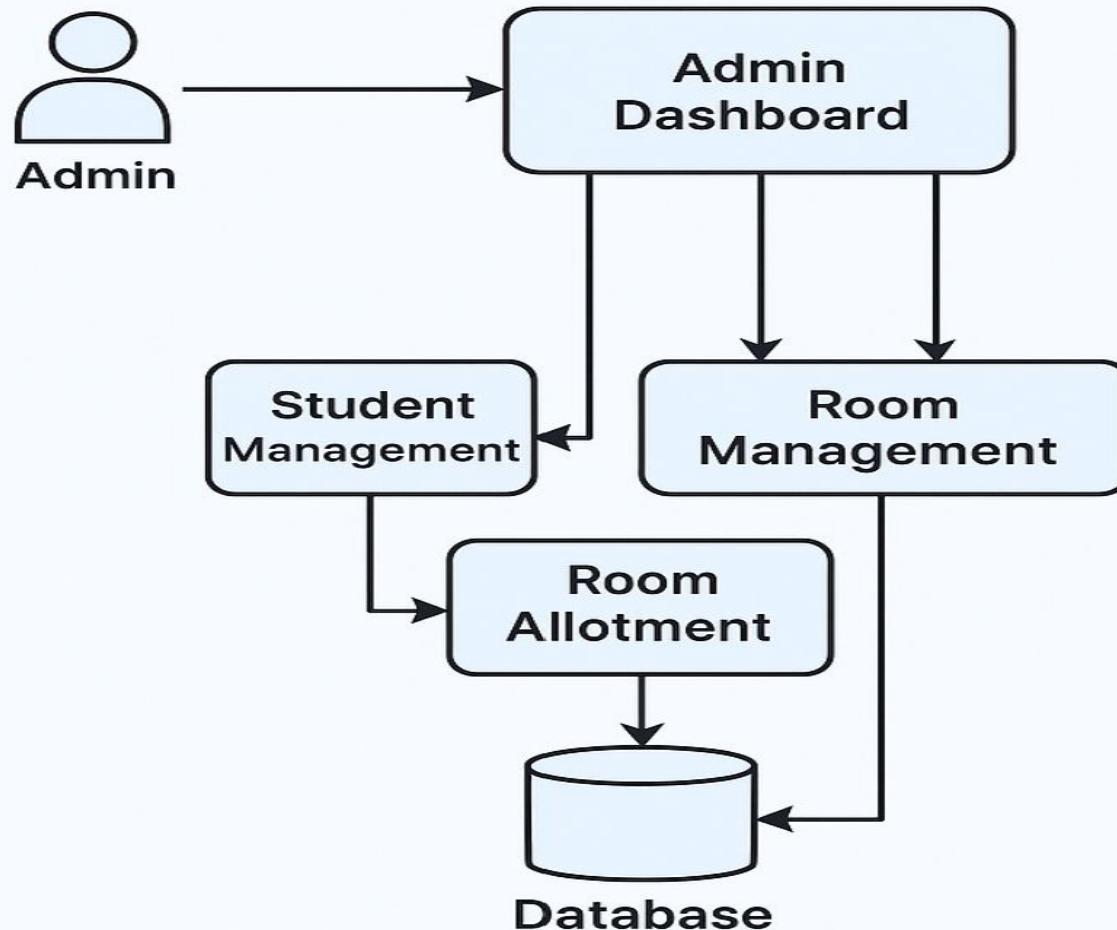
[Back to Login](#)



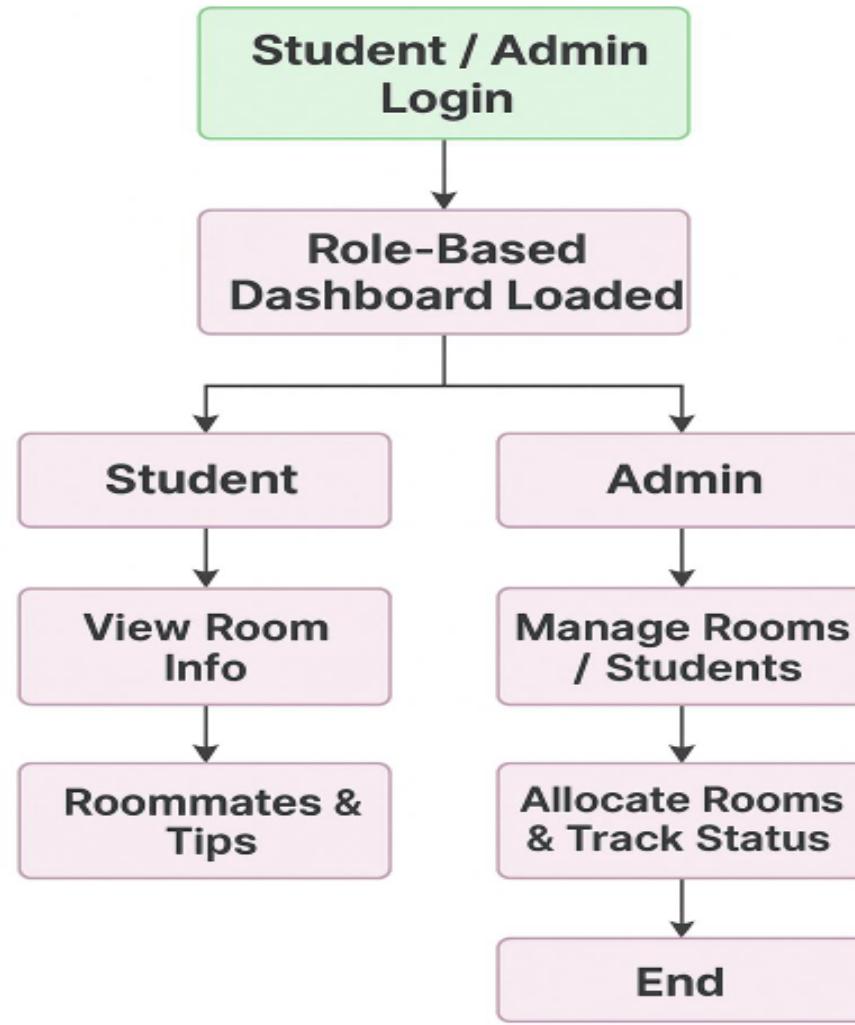
Student System Design



Admin System Design



Flow Diagram



Future Scope

- AI-Based Smart Allotment
- Multi Hostel Management
- Real-Time Notifications
- Advanced AR/3D Room Tours
- Admin Analytics Dashboard

Conclusion

- Manual work and errors are reduced.
- Allotment process is automated.
- Easy access for students and admins.
- Data is safely stored and managed.
- Fair and user-friendly system.

Thank You