

Hostel Management System for Hinthada University

Khant Si Thu Win

Student, 2nd year, D.C.Sc.

University of Computer Studies, Hinthada

Supervised By

Daw Khaing Thazin Nwe

Faculty of Information Science

University of Computer Studies, Hinthada

Abstract. The Hostel Management System is designed to support efficient administration of student accommodation at Hinthada University. The system provides core functions such as student applications, room allocation, payment tracking, and leave management through a centralized online platform. Administrators and wardens can easily manage hostel records, while students can conveniently apply for rooms, track payments, and submit leave requests. By reducing paperwork and minimizing errors, the system enhances transparency and improves operational efficiency in hostel management.

Keywords: hostel management, leave, payment, student application.

INTRODUCTION

Managing student accommodation in universities is a challenging task that is often carried out through traditional and manual processes. This project introduces a Hostel Management System for Hinthada University to streamline these processes and make services more accessible to students and staff. Built with PHP and JavaScript, the system allows students to apply for hostel rooms, manage payments, and submit leave requests from online. Hostel wardens and administrators can oversee hostel occupancy, approve leave requests, assign rooms, and maintain payment records with greater ease. The system reduces administrative workload, improves data accuracy, and fosters better communication between students and staff. With its user-friendly interface and role-based access, the Hostel Management System contributes to more effective and reliable management of university residential facilities.

PROBLEM

Managing student accommodation at universities is a complex task that is often carried out through traditional and manual processes. At Hinthada University, the hostel management process involves handling student applications, room allocation, fee collection, and leave approval, all of which require significant paperwork and manual effort. This traditional approach is time-consuming, labor-intensive, and prone to human errors.

Manual record-keeping makes it difficult to track room availability, monitor payments, and manage student information effectively. Retrieving or updating records can also be challenging, especially when documents are misplaced or damaged. As the number of students increases each year, these issues lead to delays, inefficiencies, and reduced transparency in hostel operations.

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Therefore, there is a need to develop an online Hostel Management System for Hinthada University. Such a system would centralize records, automate key processes, and provide role-based access for students, wardens, and administrators. By reducing paperwork and improving data accuracy, the system will streamline hostel management, save time, and deliver more reliable services to both students and staff.

APPROACH

The Hostel Management System for Hinthada University is designed with three main roles: Admin, Hostel Warden, and Student. Each role has specific privileges and responsibilities to ensure smooth hostel operations. On the hostel warden side, new hostel wardens must first register to create an account and can log in with their credentials. They can access hostel features only after being assigned to a hostel by the admin. Once assigned, hostel wardens can manage hostel operations efficiently view occupancy and student records, track payments, oversee rules and announcements, approve or reject leave requests, and maintain visitor logs. This integrated interface centralizes key responsibilities, enabling hostel wardens to supervise hostel activities effectively and securely.

On the admin side, administrators log in with their credentials to access a dashboard that provides a comprehensive overview of hostel management. Admins can assign rooms, manage student records, monitor payments, assign wardens, oversee hall tutors and staff, and update announcements, rules, and regulations. This centralized interface enables efficient supervision of all hostel operations, with the option to securely log out after completing tasks. Figure 1 shows the system flow diagram for hostel warden and admin.

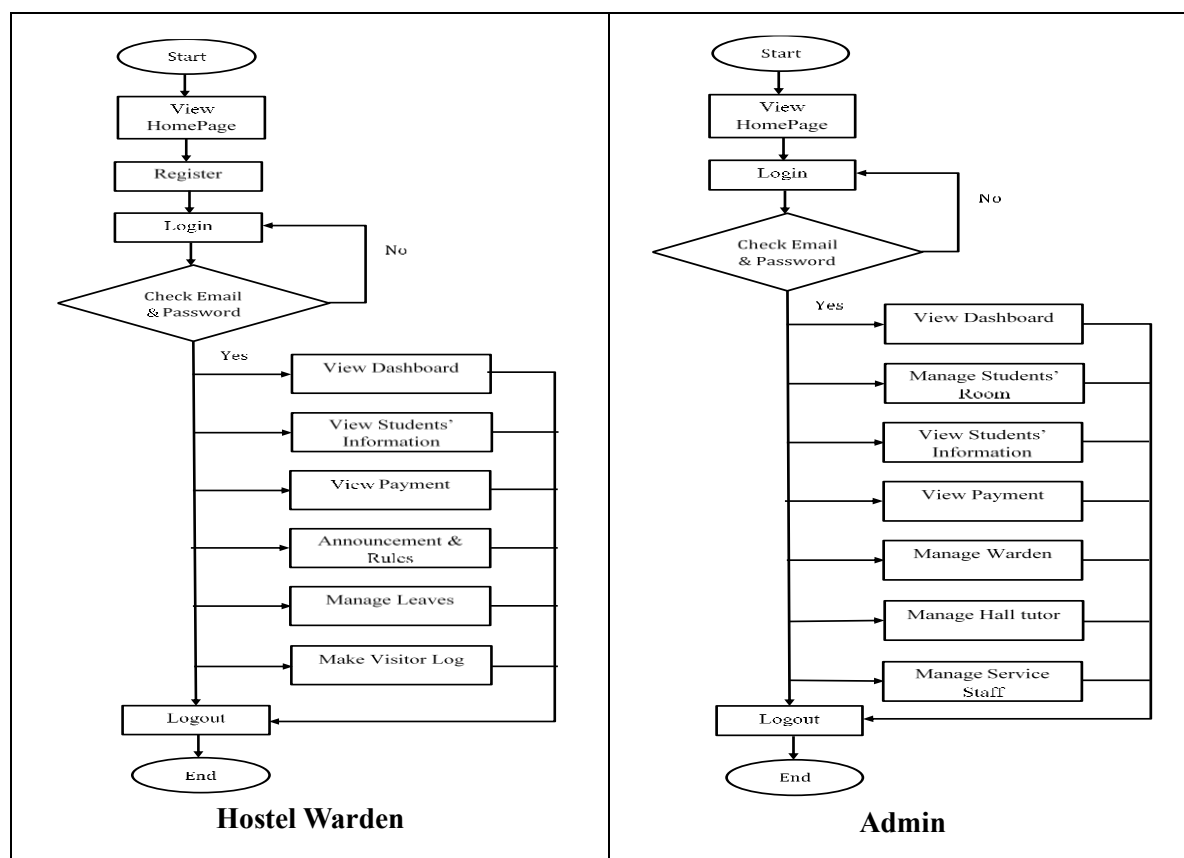


Figure 1: System Flow Diagram for Hostel Warden and Admin

On the student side, new users register once to create an account and submit their hostel applications simultaneously. After registration, they can log in to view their assigned room and hostel, check payment status, make payments, and submit leave requests online. This integration streamlines the process by combining account creation and hostel application in a single step. Figure 2 shows the system flow diagram for student.

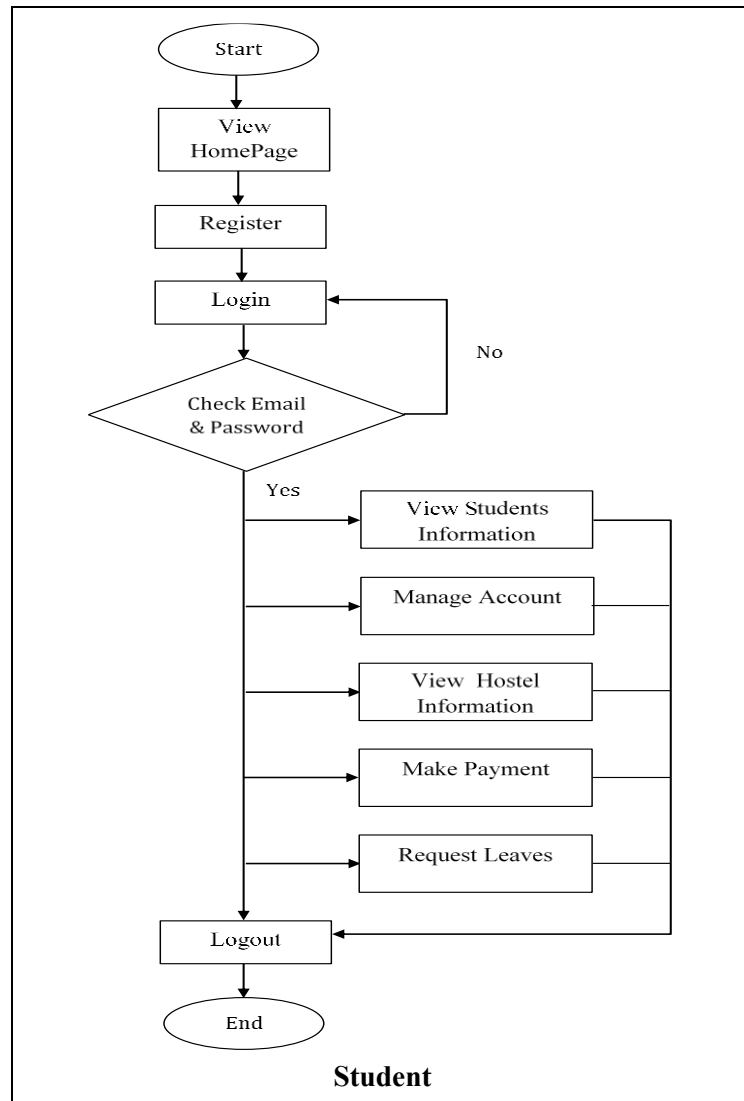


Figure 2: System Flow Diagram for Student

In the design of the Hostel Management System, an Entity-Relationship (ER) diagram has been created to represent the data architecture and the relationships among the various entities in the system. The database contains twelve tables: Students, Admin, Hostel Wardens, Hostels, Rooms, Payments, Leave_Requests, Visitor_Logs, Hall_Tutors, Hostel_Staff, Hostel_Rules and Hostel_Announcements. This diagram helps visualize how data flows between entities and ensures that all relationships are properly structured for efficient querying and data integrity. It serves as a blueprint for database implementation and future system maintenance. By clearly defining the attributes and primary keys of each table, the ER diagram also helps prevent data redundancy and maintain consistency across the system. The ER diagram for the Hostel Management System is shown in Figure 3.

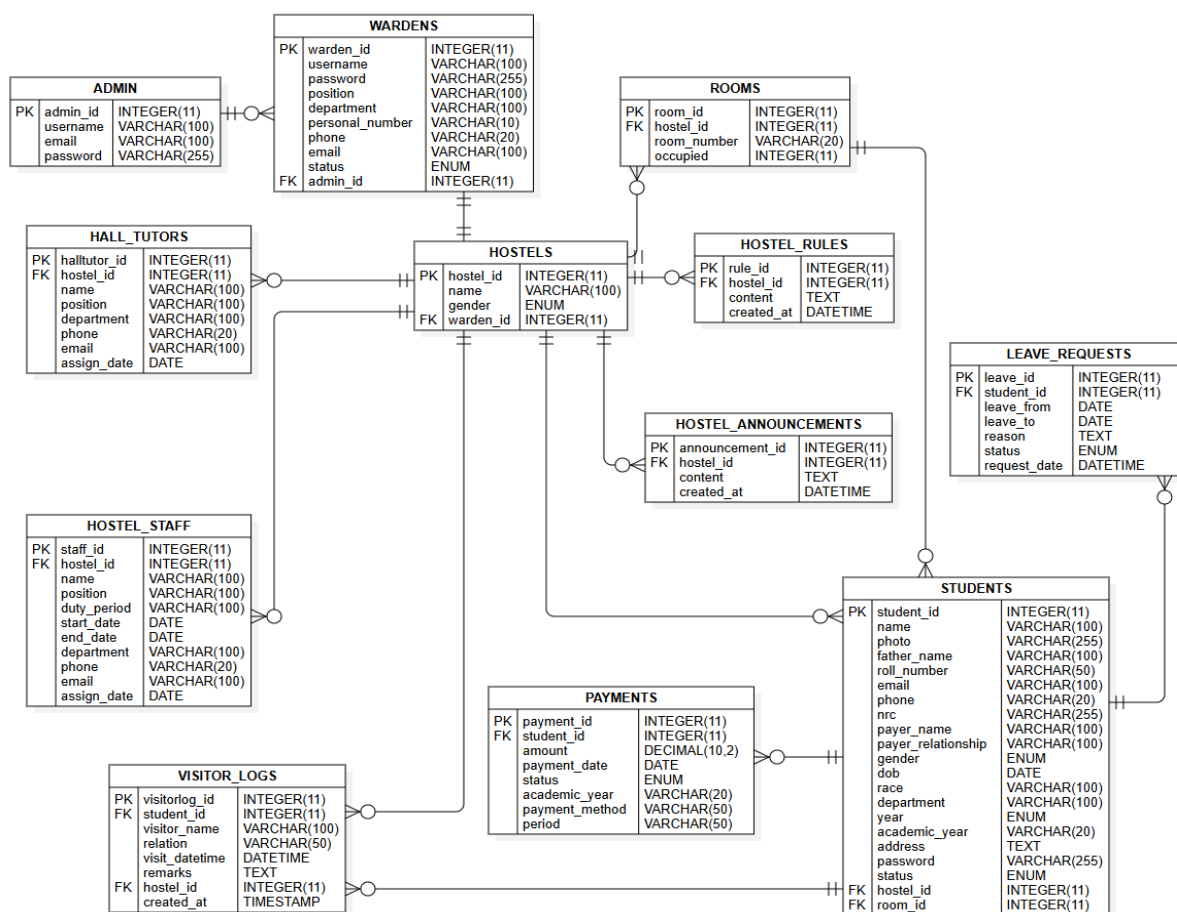


Figure 3: Database Design

RESULTS

The Hostel Management System for Hinthada University provides a centralized platform for student accommodation where students can register, apply for hostels, make payments, and request leave from online. Hostel wardens monitor occupancy, track payments, and manage visitor logs, while administrators assign rooms, manage records, oversee hostel wardens and staff, and maintain rules. The system also generates reports on occupancy, payment status, and hostel activities, enabling data-driven decision-making. Automated notifications and reminders help students stay updated on deadlines, dues, and approvals, reducing delays and errors. Its secure, role-based access ensures that sensitive information is protected, while the intuitive interface allows users with varying technical skills to navigate the system easily. By integrating all these functions into one platform, the system enhances operational efficiency, improves communication between students and staff, and ensures a smooth, well-organized hostel experience at the university.

Moreover, the Hostel Management System streamlines administrative tasks by reducing manual paperwork and minimizing human errors. It allows for easy tracking of student records, payment histories, and room allocations, which saves time and improves accuracy. The system also supports better planning and resource management, as administrators and hostel wardens can quickly identify vacant rooms, monitor hostel capacity, and prepare for upcoming student intakes. By providing a transparent and organized workflow, the system fosters accountability among staff and ensures that students receive timely

assistance. Overall, it not only simplifies day-to-day operations but also contributes to a safer, more structured, and efficient living environment for all hostel residents. Figure 4 shows the implementation of the system.

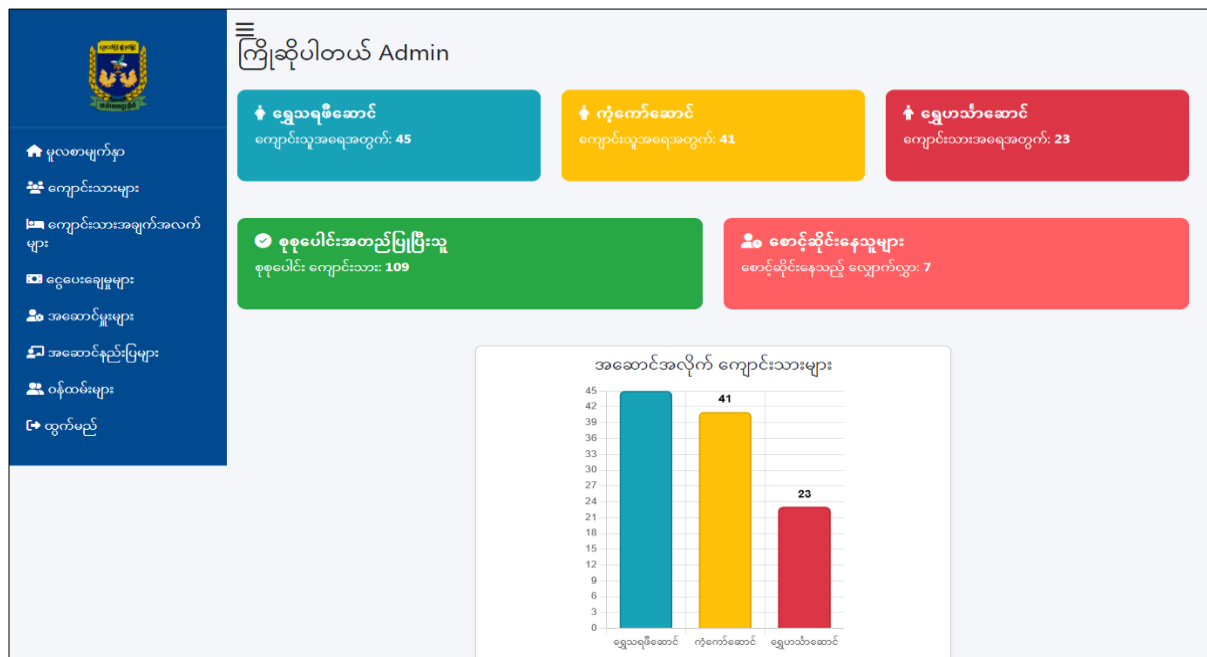


Figure 4: Implementation of the System

CONCLUSION

The Hostel Management System developed in this project successfully meets its objectives by providing a user-friendly, efficient platform for hostel operations. It supports key processes such as student registration, administrator-controlled room allocation, and secure payment management, built on MVC architecture for maintainability and scalability. Students benefit from a streamlined process for payments and related tasks, while the system overall improves operational efficiency and enhances the hostel experience at Hinthada University.

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