

Proposal of Room Booking System

A Project by the Team One (MAL2020)

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Introduction

- Ensuring seamless operations in-room management necessitates an efficient booking system. However, the current manual booking process has many challenges. For example, difficulties in managing reservations, frequent scheduling conflicts, and limited access to real-time room availability. To address these issues, we propose the development of a specialized room booking system. This system will streamline the booking process, provide real-time updates on availability, and enhance administrative efficiency for each user and administrator.





Problems Statement

- The manual room booking process's a lot of problems schedule problems, and inefficiencies frustrate users and administrators. Reservation tracking is time-consuming and error-prone because of the lack of a centralized system. An automated and secure booking system is being implemented as part of this project to address these issues. Created to guarantee the college's smooth and error-free operations.

Objective



To provide users with real-time room availability checks.



To enable seamless room bookings with instant confirmation.



To offer administrative tools for managing and tracking reservations.

Team Members

Azizul Hakim – Developer and Documentation

Firdaus Ukasyah – Backend Developer 1

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User Requirements

- General Users:
 - Real-time availability checker.
 - Booking functionality with confirmation.
 - Booking history access.
- Administrators:
 - Notifications for bookings.
 - Tools for booking management and reporting.
 - Create user account and permission management.



Technical Requirements



Install in Local network.



Users can make a room booking from the system.



Provide email notification to administrators and users.



User-friendly interface for both users and administrators.

Key Features of the Booking System



Users:

Check room availability in real-time.

Book rooms with immediate confirmation.

Access personal booking history.



For Administrators:

Notifications for new bookings.

Centralized booking management dashboard.

Automated usage reports.



Security & Accessibility:

User authentication for data protection.

Encrypt the data.

Role-Based Access Control (RBAC)

System security

User Authentication:

- Password hashing, secure sessions.

Input Validation:

- Sanitize and validate all inputs.

RBAC:

- Implement roles and permissions.

Encryption:

- Encrypt sensitive data before storage.

Secure File Handling:

- Validate uploads and sanitize filenames.

CSRF Protection:

- Use tokens to secure forms.

Scope Project

In-Scope Activities:

- Design and develop the room booking system.
- Provide training and documentation for administrators.

Out-of-Scope Activities:

- Integration with external systems.
- Mobile application development.

Gant Chart

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Why This System Matters



Saves time and
reduces scheduling
conflicts.



Centralizes booking
management for
administrators.



Enhances user
experience with
seamless interactions.



Improves overall
operational efficiency.