Proposal of Room Booking System

A Project by the Team One (MAL2020)

Prepared by: Azizul Hakim

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 realtime 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

Zulkamal – Backend Developer 2

Iman Haqimi – Frontend Developer 1

Kai Lun– Frontend Developer 2

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 realtime.

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

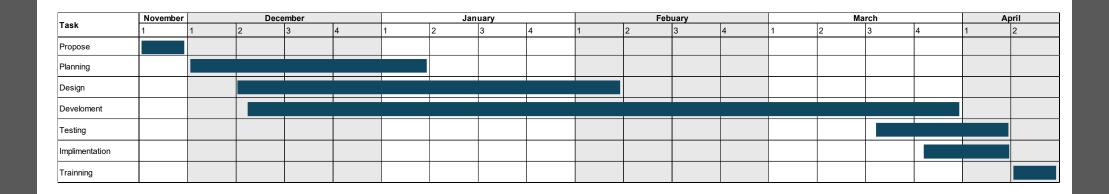
In-Scope Activities:

- 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



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.