System Requirements Specification for Room Allocation Management System

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1 Introduction

1.1 Purpose

The purpose of this System Requirements Specification (SRS) is to document the requirements for the Room Allocation Management System. This system will be used to manage room allocations and stock details for trainees, guests, and staff at the police academy. The SRS provides a detailed description of the system's functionalities and constraints, ensuring that all stakeholders have a clear understanding of the project's scope and objectives.

1.2 Scope

This document outlines the functional and non-functional requirements for the Room Allocation Management System. It includes detailed descriptions of the system's functionalities, user roles, and operational environment.

1.3 Definitions, Acronyms, and Abbreviations

- SRS: System Requirements Specification
- UI: User Interface
- DB: Database

1.4 References

- Project Charter
- Stakeholder Requirements Document

2 Overall Description

2.1 Product Perspective

The Room Allocation Management System is designed to streamline the process of managing room allocations and stock details for trainees, guests, and staff at the police academy. It interfaces with existing databases and user interfaces to provide a comprehensive solution.

2.2 Product Functions

The Room Allocation Management System will provide the following main functions:

- Manage Block Rooms: Incharge Officers will be able to enter and manage room details for their respective blocks.
- Manage Stock Details: Incharge Officers will be able to add and manage stock details for each room.
- View Graphical Representation: Admins will be able to view graphical representations of room allocations and stock details.
- Manage Users and Rooms: Super Admins will be able to add, delete, and assign roles to users, as well as modify room structures.

2.3 User Classes and Characteristics

The system will be used by the following user classes:

- Incharge Officer: Responsible for managing room allocations and stock details for their block.
- Admin: Responsible for viewing graphical representations of room allocations and stock details.
- Super Admin: Responsible for managing users and room structures.

2.4 Operating Environment

The system will operate in a standard web environment with the following requirements:

- Web browser (Chrome, Firefox, Safari)
- Internet connection
- Database server (MySQL, PostgreSQL)

2.5 Design and Implementation Constraints

- The system must comply with data protection regulations.
- The system must be designed to be scalable and maintainable.

2.6 Assumptions and Dependencies

- The system will be integrated with existing databases.
- The system will be accessed via a web interface.

3 Functional Requirements

3.1 Incharge Officer Functions

3.1.1 Manage Block Rooms

- The Incharge Officer will select their block from a list of available blocks.
- The system will display a form for entering room details such as occupancy, condition, and other relevant information.
- The Incharge Officer will enter the room details and save them.
- The system will confirm that the details have been saved.

3.1.2 Manage Stock Details

- The Incharge Officer will select their block and a specific room from a list of available rooms.
- The system will display a form for adding stock details such as pillows, beds, curtains, bed sheets, and pillow covers.
- The Incharge Officer will enter the stock details and save them.
- The system will confirm that the stock details have been saved.

3.2 Admin Functions

3.2.1 View Graphical Representation

- The Admin will select the type of report they want to view.
- The system will generate and display a graphical representation of room allocations and stock details.

3.3 Super Admin Functions

3.3.1 Manage Users and Rooms

- The Super Admin will be able to add, delete, and assign roles to users.
- The Super Admin will be able to modify room structures (e.g., modify room details).

4 Non-Functional Requirements

4.1 Performance Requirements

- The system should respond to user actions within 2 seconds.
- The system should handle up to 100 concurrent users.

4.2 Security Requirements

- The system must implement robust authentication and authorization mechanisms.
- The system must comply with data protection regulations (e.g., GDPR, CCPA).

4.3 Software Quality Attributes

- The system must be reliable, maintainable, and user-friendly.
- The system must follow best practices for software development.

4.4 External Interface Requirements

- The system will interface with existing databases.
- The system will be accessed via a web interface.

5 Other Requirements

- The system must include comprehensive documentation.
- The system must provide training materials for users.