

SOFTWARE REQUIREMENT SPECIFICATIONS

HOSTEL MANAGEMENT SYSTEM

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Definition of Terms, Acronyms and Abbreviations

HMS	Hostel Management System
RS	Requirements Specifications

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1. Introduction

1.1 Purpose of Document

- The purpose describes all the requirements and explains the system's functions of the Hostel Management System.
- This SRS will be used by the project team, manager, developers, to understand what the system should do and how it should work.

1.2 Project Overview

- This project is about developing a software based Hostel Management System that helps manage hostel activities in an organized and digital way.
- The software will be used by hostel staff and students to manage rooms, fees, and attendance easily.
- The main goal is to make everything faster and simpler.

1.3 Scope

- The Hostel Management System will provide login access to all the entities that involve also covers track of students, rooms, attendance, and fees all in one place.
- The system does not include physical hostel management and all offline operations like electricity/utility bills.

2. Overall System Description

2.1 User characteristics

- Student: Basic computer/mobile knowledge
- Warden: Moderate computer knowledge
- Accountant
- Mess In-charge
- Admin

2.2 Operating environment

The system will operate or run on any computer or laptop with a modern web browser such as **Google Chrome** or **Microsoft Edge**.

2.3 System constraints

- User Constraint: Only UOS enrolled participants have an access
- Cultural Constraint: Support English language
- Environmental Constraint: Good internet speed

- Software Constraint: Windows, Browser
- Hardware Constraint: Work on Computer and Laptop.
- Legal Constraint: Separate hostel buildings for girls and boys.

3. External Interface Requirements

3.1 Hardware Interfaces

It's just a web based software:

- The system does not require any special hardware.
- It will run on a standard computer or laptop with basic specifications.
- A printer may be used to print reports or fee receipts.

3.2 Software Interfaces

- The Hostel Management System connects with **Windows 10, MySQL** and web browsers like **Chrome** and **Edge**.
- The system exchanges data such as student info, room details, and fee records through HTTP/HTTPS and SQL queries.
- Give responses by using Gmail.

3.3 Communications Interfaces

- Internet connection required
- HTTP/HTTPS protocols
- Gmail

4. Functional Requirements

Functional requirements explain what the system should do.

1. Registration Module:

The system should:

- Allow a new student to create an account by entering basic details like name, email, CNIC and phone number.
- Allow the students to edit or update their personal information if needed.
- After registration, the registered student login using username and password.
- Allow the admin to view all registered students.

2. Student Module:

The system shall allow the student (UOS enrolled student):

- To create an account and log in.
- To submit a hostel admission form.
- To request a room.
- To view their allocated room details.
- To view and pay hostel fees.
- To check the monthly mess menu.

- To submit complaints.
- To view complaint status.

2. Warden Module:

The system shall allow the warden to:

- View all student applications.
- Approve or reject admission requests (Gmail).
- Allocate and manage rooms.
- Mark student attendance.
- Handle student complaints.
- Update hostel rules and notices.

3.Room Module:

The system shall show the:

- Floor Number.
- Room's ID.
- Room Types (Single, Double, Quad)
- Room's status (Occupancy & Vacancy)

4. Accountant Module:

The system shall allow the accountant to:

- Generate student fee reports.
- Record fee payments.
- Update fee charges.

5. Mess In-charge Module:

The system shall allow the mess in-charge to

- Upload the daily menu.
- Record mess attendance.
- View the list of students enrolled in the mess.
- Generate mess reports.

6. Admin Module:

The system shall allow the admin to:

- Create, update, or delete user accounts.
- Manage hostel data (rooms, floors, capacity).
- Backup and restore system data.
- Monitor system activity logs.

5. Non-functional Requirements

5.1 Performance Requirements

- The system should load each page within 2–3 seconds under normal usage.
- The database should respond quickly to search, view, and update operations.
- The system should store and manage hostel records efficiently.
- In case of any failure or crash, the system will be able to restore operations.

5.2 Safety Requirements

- The system should prevent loss of data during failures or crashes.
- Regular data backups must be maintained by the admin.
- The system should show warnings for invalid or incorrect operations.
- Sensitive information should not be deleted without confirmation.

5.3 Security Requirements

- Only registered users should be able to log in.
- Every user should have a proper role (student, warden, admin, etc.) and see only their allowed features.
- Passwords and personal data should be kept safe.
- Unauthorized users should not access hostel records.

5.4 User Documentation

- Basic instructions will be given on how to use the system.

6. Assumptions and Dependencies

It is assumed that:

- Users have basic knowledge of using a computer/laptop.
- Users will have internet access.
- Students provide valid information.
- The database server remains active.
- The system depends on a stable network.

7. References

- Class lecture notes and instructions provided by the course instructor.
- The book “SE - Roger Pressman” studied during the course.
- Basic information from the internet about hostel management systems.
- Examples of SRS formats shared by the course instructor.

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8. Appendices
