1) Hotel Management System

=> (1)(2) Develop a problem statement:

A new hotel needs a reliable & efficient system to manage reservations, rooms, billing, housekeeping & guest interaction. As a newbie to this business, generate a proper Hotel Management System for my hotel.

=> (2) Develop a complete IEEE standards SRS document.

1. Introduction

1.1) Purpose of this Document

- This Hotel Management System (HMS) Software requirement Specification (SRS) main objective is to provide a base for the foundation of the project.
- This document defines the blueprint for the HMS. It serves as a reference for developers, managers & stakeholders

1.2) Scope of this Document

- The HMS is designed to automate hotel operations such as customer, room, billing & staff management.
- The system will be web-based, & the duration & cost of project will be based on lines of code (LOC)

1.3) Overview:

- It is a modular system consisting of booking, billing, staff management. It'll integrate third-party payment gateway for billing
- The system will reduce conventional system & improve efficiency & management for Hotels.

2. General Description

- The HMS is a new self-contained software product which is developed for efficiency & remove manual system
- The system will provide user friendly functions & attractive interface for Customer, Staff & Admin (stakeholder)

3. Functional Requirement.

~~Booking~~

FR1 : Staff can assign rooms based on availability & type

FR2 : View-Edit booking

FR3 : Register, views & update customer data.

FR4 : Track check-in/check-out status

FR5 : Add/Edit/Delete/Assign Roles to staff.

FR6 : Generate invoice & update database.

FR7 : Integrate Payment Gateway for online payment.

4. Interface Requirements

4.1) User Interface

- Simple, interactive dashboards for staff and admins.
- Accessible via browsers, desktops, & mobile devices.

4.2) Integration Interfaces:

- Secure integration with payment gateways.
- Optional integration with third-party booking portals.

5. Performance Requirements:

5.1) Response Time

- The system should respond to user requests within 1-2 seconds.

5.2) Scalability.
- Must support at least 1000 concurrent users during peak usage.

5.3) Data Integrity
- Maintain accurate & consistent data across all system modules.

6. Design Constraints:

6.1) Hardware Limitations:
- Compatible with standard hardware (computer, printer, POS terminal)

6.2) Software Dependencies
- Use relational DBMS (MySQL/SQLite) for data storage.
- Implent with backend framework such as Node.js or PHP & front-end with HTML, Tailwind, JQuery.

7. Non-Functional Attributes:

7.1) Security:
- Strong authentication & authorization to protect sensitive data.

7.2) Reliability:
- Ensure system availability with minimal downtime and daily backups.

7.3) Scalability:
- Allow the system to expand with increasing hotel operations

7.4) Portability:
- Accessible across multiple platforms and devices.

7.5) Usability:
- Provide a clean and user-friendly interface

7.6) Reusability:
- Follow modular coding standards to support maintenance & upgrades.

7.7) Compatibility:

- Compatible with modern web browsers & android versions

7.8) Data Integrity:

- Accurate & consistent information across all transactions.

8. Preliminary Schedule and Budget.

The HMS will be delivered in 6 months with a total cost of $100,000.

Scope is 5 modules, ~4000 LOC, costed $25/LOC (i.e. 5x800x25 = 100,000)

Budget covers planning, development, QA, & development

Gchart - Week