

Lab-1

Hotel Management System

problem statement

To design & develop a hotel management system to automate all activities with little human interaction

SRS documentation

1) Introduction

1.1 purpose

Defining requirement for HMS. It illustrates complete declaration & mature declaration for development of system

1.2 scope

system allows customers to generate receipts, book food to their rooms, check in/check out, book their lounge for a specific time & book rooms. This particular system will reduce human error & improve efficiency

1.3 Overview

It's a centralized application accessible by staff, customers & management. It'll handle reservations, guest records, billing & generating reports

2) General description

- users: hotel staff, managers, customers & admin
- users characteristics:
 - customer requires simple booking interface
 - staff needs basic computer knowledge
 - managers need detailed reports

Features

online/offline booking, billing, reporting & staff schedules

Benefits

accuracy increase, proper management, saving time & proper customer service

3) functional requirements

- room booking & cancellation
- room & customer check in/check out
- automated billing
- customer information storage
- staff schedules
- request management

4) Interface requirements

- user Interface: web-based dashboard for staff/admin & mobile friendly interface for customers
- software interface: database, payment gateway, email/SMS service
- communication: Internet connectivity for online bookings & shared database for sync

5) Performance requirements

- supports atleast 100 users
- response time < 3 secs. for all major operation
- database queries should return results in a very less time
- system uptime $\geq 99.9\%$

6) design constraints

- runs on windows/Linux/MacOS
- supports all web browsers
- comply with PCI DSS for payment security
- database backup needed oftenly

7) Non-functional attributes

- Security: Encrypted storage & secure login
- portability: can be used on both mobile & web device
- reliability: data consistency maintained during failures
- scalability: expansion supported

8) Preliminary schedule & budget

Schedule

- requirement analysis - 3w
- design - 4w
- development - 4w
- Testing - 4w
- deployment - 2w

Total ~ 23 w (6 months)

Budget estimate

- development: $\sim ₹ 22$ Laks
- infrastructure: $\sim ₹ 66$ laks
- annual maintenance: $\sim ₹ 4.5$ laks