

# Hotel Management System

## Introduction.

- 1.1 Purpose: To automate hotel operations like booking, check in/out billing.
- 1.2 Scope: Customers can book rooms, staff can manage reservations.
- 1.3 Overview: Modules - Customer, Staff, Admin

## 2. General Description.

The system manages room bookings, availability, billings & customer data.

Clerks: Customers, Receptionists, Administrators.

## 3. Functional Requirements.

Search & book rooms.

Manage check in / check-out.

Generate invoices automatically.

Cancel bookings.

Generate reports.

## 4. Interface Requirements.

Web/ Mobile GUI

Database.

Payment gateway.

## 5. Performance Requirements.

Process booking < 3s.

Support 500 user at once.



## 6. Design Constraints.

Must use relational DBMS.

Work on standard browsers.

## 7. Non-functional attributes.

Security with auth & every Reliable.

Easy to use

## 8. Preliminary.

Time: 12 weeks.

Cost: £ 1,50,000.

# Credit Card Processing System

## Problem Statement

Manual handling of credit card transaction increases the risk of fraud error & delays.

### 1. Introduction

Purpose: To process credit card payments securely.

Scope: Authorize transactions, detect fraud, maintain records.

Overview: Modules - Customer, Merchant, Bank

### 2. General description

Handles real-time payments & history.

Users: Customers, Merchants, Bank admin.

### 3. Functional requirements

Authorize transactions.

Verify user identity.

Store transaction history.

Handle refunds.

Generate settlement reports.

### 4. Interface Requirements

API for merchants.

Web / APP for customers.

### 5. Performance requirements

Process transaction in < 5s

Support 1000 TPS

6. Design Constraints  
PCI DSS Compliance  
Must Run on secure servers.
7. Non-functional Attributes  
High security.  
Reliable.
8. Preliminary Schedule  
Time: 14 weeks  
Cost ₹ 2,00,000

# Library Management System

## Problem Statement

Managing library books manually is inefficient with difficulties in tracking fine & reservations.

## 1. Introduction

Purpose: To automate library operations.

Scope: Book cataloging, Issue / return, fine calculation, reports.

Overview: Modules - Student, Librarian, admin.

## 2. General Description

Tracks books, borrower & overdue fines.

Users: Students, Librarians, admin.

## 3. Functional Requirements

Search & reserve books.

Issue & return books.

Calculate fines automatically.

Add / remove books.

Generate usage reports.

## 4. Interface Requirements

Barcode scanner Integration.

Web / mobile Interface.

## 5. Performance Requirements

Queries must respond in 2s.

Handle 200 concurrent users.

6. Design requirements  
Must use DBMS.  
Work on Standard browser.
7. Non-functional attributes  
Secure  
Easy-to-use interface.
8. Preliminary Schedule & Budget  
Time: 10 weeks  
Cost  $\approx$  1,20,000.

# Stock Maintenance System

## Problem statement.

Manual stock management often results in shortages, overstocking, and errors. An automated system is needed for accurate stock control.

### 1. Introduction

Purpose : To automate stock tracking & supplier management.

Scope : Stock in/out, reorder alerts, supplier database.

Overview : Store manager, staff, Admin.

### 2. Functional requirements

update stock in real-time.

generate low-stock alerts.

store supplier details.

generate reports.

Create purchase orders.

### 3. Interface requirements

Web-based system.

Database backend.

### 4. Performance requirements

Real time updates.

Handle 10,000 items.

### 5. Design constraints

Relational DBMS.

Web-based platform.

7. Non-functional attributes :

Reliable

Secure role-based access

8. Preliminary Schedule

Time : 9 weeks

Cost : 1,00,000

## 5. Passport Automation System

### Problem Statement :

The manual passport process is slow and error-prone. Applicants need a fast, transparent and online system for applications verification.

### 1. Introduction

Purpose : To automate passport application & verification.

Slope : Online application, verification, appointment, tracking.

Overview : Modules : Applicant, Passport admin

### 2. general description

Handle applications, verification & status

Users : Applicants, officers, admins.

### 3. Functional Requirements

Submit passport applications online  
Verify documents with external database.

Book appointments.

Track status online

generate reports.

### 4. Interface requirements

~~Web~~ portal + mobile app.

Govt ID verification integration.

## 5. Performance requirements

Handles 10,000 concurrent users

Respond within 5s

## 6. Design constraints

Must comply with govt IT Act

Secure payment integration

## 7. Non-functional attributes

Secure

Available 24/7

## 8. Preliminary schedule & Budget

Time: 16 weeks

Cost: ₹ 2,50,000

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