

1. Introduction

Purpose of this Document:- The purpose of this Document is to outline the requirements and specifications for the development of a Hotel Management system. It will provide a clear understanding of the Project objectives, scope, & deliverables.

Scope of this Document:- This document defines the overall working and main objectives of the Hotel Management system. It includes a description of the development cost and time required for the project.

Overview:- The Hotel Management System is a software solution designed to streamline hotel operations, including reservation management, guest check-in/check-out, room assignment, billing & reporting.

2. General Description:- The Hotel Management System will cater to the needs of hotel staff and management, providing features such as room booking, guest profiles, inventory management and financial reporting. It will be accessible to users with varying levels of technical expertise.

3. Functional Requirements:-

Reservation Management: Allow users to make room reservations online or through the front desk.

- Generate reservation confirmations and send notifications to guests.

Room Management:-

- Assign rooms to guests based on availability and preferences.
- Track room status (clean, occupied, vacant) in real time.

Guest Management:-

- Maintain guest profiles with personal information, preferences and booking history.
- Facilitate guest check-in and check-out processes.

Billing and Invoicing:-

- Generate accurate bills for room charges, additional services, and taxes.
- Accept various payment methods & generate invoices for corporate clients.

4. Interface Requirements:-

User Interface:-

- Intuitive & user friendly interface for hotel staff & guests.
- Accessible via web browsers, mobile devices & desktop applications.

Integration Interfaces:-

- * Integration with payment gateways for secure transactions.
- * Integration with third party booking platforms for seamless reservation management.

5. Performance Requirements:-

Response Time:-

The system should respond to user actions within 2 seconds.

Scalability:-

Handle a minimum of 1000 concurrent users during peak hours.

Data Integrity:-

Ensure data consistency & accuracy across all modules.

6. Design Constraints:-

Hardware Limitations:-

The system should be compatible with standard hotel hardware (computers, printers, POS terminals).

Software Dependencies:-

- * Utilize a relational database management system (e.g. MySQL) for data storage.
- * Use programming languages & frameworks conducive to UML modeling (Java, Spring Boot).

7. Non-Functional Attributes

Security:-

- * implement robust authentication & authorization mechanisms to protect sensitive data.

Reliability:-

- * ensure high availability & fault tolerance to minimize system downtime

Scalability:-

- * Design the system to accommodate future growth and expansion

Portability:-

- * support multiple platforms & devices for user accessibility.

Usability:-

- * The system shall have a userfriendly interface with clear navigation.

Reusability:-

- * The system shall use modular code design to facilitate future enhancements and maintenance.

Compatibility:-

- * The system shall be compatible with common web browsers (chrome, firefox, safari 7.8 Data Integrity)
- * The system shall ensure accurate & consistent data storage and retrieval.

8. Preliminary Schedule and Budget:-

The development of the Hotel management system is estimated to take 6 months with a budget of \$100,000. This includes project planning, development, testing and deployment phases.

Cost Estimate

Credit Card Processing System

1. Introduction

Purpose of this Document:

The purpose of this document is to describe the requirements and specifications of a credit card processing system. This document explains the objectives, scope and deliverables in a simple way so that developers and users can understand the overall working of the system.

Scope of the Document

This document defines the working and goals of the credit card processing system. It includes features like transaction authorisation, fraud detection, billing and report generation. It will also mention the cost and time required for development.

Overview

The credit card processing system is software designed to handle credit card payments securely and efficiently. It will allow merchants to process customer payments, verify transactions, manage accounts and generate financial records.

2. General Description

The System will be useful for banks, merchants and customers. It will include functions like transaction authorization, payment settlement, fraud detection and billing. The System is designed to be secure, user-friendly and accessible for both technical and non-technical users.

3. Functional Requirements

Transaction Processing:-

- * Authorize transactions instantly
- * Validate card details and account balance
- * Handle refunds and cancellations.

Fraud Detection:-

- * Detect suspicious transactions using rules.
- * Alert administrators about possible fraud.

Account Management:-

- * Maintain customer credit card profiles.
- * Manage credit limits and outstanding balances.

Billing and Reporting

- * Generate monthly bills for customers.
- * Provide transaction history report for merchants and banks.
- * Accept multiple payment modes for clearing bills.

4. Interface Requirements

User Interface:-

- * Simple and clear interface for customers, merchants and bank staff.
- * Accessible via web browser.

Integration Interfaces:-

- * Integration with payment gateways.
- * Support for third party merchant.

5. Performance Requirements:

- * The System should process transactions within 3 seconds.
- * Support at least 5000 concurrent transaction during peak hours.
- * Ensure accurate recording of every transaction without loss.

6 Design Constraints

- * Should run on standard bank servers and POS terminals.
- * Should use relational database
- * Prefer secure programming languages like Java.

7. Non-functional Requirements

- * Security: Use encryption and authentication to protect card details.
- * Reliability : ensure high availability to minimize failed transactions.
- * Scalability :- Design for future expansion with more users & merchants.
- * Data Integrity:- Store and retrieve transaction data accurately & consistently.

3. Preliminary Budget and Schedule:

The development of Credit Card Processing System is estimated to take 8 months with a budget of atleast \$150,000. This includes planning, development, security testing and deployment.

Library Management System

1. Introduction

Purpose of this Document:

The Purpose of this document is to explain the requirements of the Library Management System. It will describe the features, scope and objectives in a simple manner so that the working of the Project is easily understood.

Scope of this Document

This document covers the working of a library Management System that will automate the process of issuing, returning and managing books. It will also handle member records, fines and book inventory. Time and cost of development are also considered.

Overview

The Library Management System is a software designed to simplify library operations. It will help librarians manage books, keep track of issued/returned books, handle fines and generate useful reports.

General Description

The System will be useful for librarians, students & faculty members. It will

automate manual tasks like book issue, return & record keeping. It will also provide easy search options & maintain data accurately.

3. Functional Requirements

Book Management

- * Add, update or delete books from library database.
- * Track availability of books in real time.

Member Management

- * Maintain member records
- * Issue library cards & manage memberships.

Issue and Return

- * Allow issuing of books to member.
- * Track due dates & calculate fines for late returns.

Search and Reservation

- * Provide search by title, author or subject.
- * Allow members to reserve book online if unavailable.

Reports

- * Generate reports on issued books, fines, & available stock.

4. Interface Requirements

User Interface:-

Easy to use interface for members & librarians & Access through web browser.

Integration Interfaces:-

Barcode Scanner integration for quick book entry

5. Performance Requirements

- System should respond to search queries within seconds.
- Should handle atleast 500 user at a time.

6. Design Constraints

- Compatible with standard PCs, barcode scanner & printer.
- Use of relational database.

7. Non-functional Requirements

- Security - Protect member details
- Reliability - ensure system is available during library working hours.
- Usability - simple interface so even new users can understand easily.

Data Integrity: - Keep accurate record of books, issues & fines.

8. Preliminary Schedule & Budget

The development of the library Management system is estimated to take 5 months with a budget of \$80,000. This includes planning, development, testing & deployment phases.

A

1. Introduction

Purpose of this Document

The purpose of this is to describe the requirements & specifications. It will outline the goals, features & deliverables so that the developers & users can easily understand the Project.

Scope of this Document

It update stock levels in warehouses or shops. It will help reduce manual errors, monitor inventory levels and generate reports.

- * Generate alerts when stock goes below

Sales and Purchase Records

- * Record sales transactions & update stock automatically.
- * Maintain purchase history from supplier.

Reports

- * Generate daily/weekly stock reports.

User Management

- * Different access rights for admin, staff & managers.

4. Interface Requirements:

User Interface

- * easy to use dashboard for stock overview.
- * support for both desktop & mobile browsers.

Integration Interfaces

- * Integration with barcode Scanner for fast entry.

5. Performance Requirements

- * System should update stock records with 2 second & handle atleast 2000 stock items & 500 users at a time.

6. Design Constraints

- * Should run on standard PCs, barcode Scanners & printers.
- * Database is relational.

7. Non-functional Requirements

- * Security: User authentication to avoid unauthorized access.
- * Reliability: System should not lose data even if power failure.
- * Scalability: Capable of expanding to branches.

8. Preliminary Schedule and Budget

The development of stock management system is estimated to take 6 months with a budget of \$90,000 - \$110,000. This includes planning, development, testing and deployment.

Passport Automation System

1. Introduction

Purpose of this Document:-

It will explain the objectives, scope & features so that developers & users can understand the system.

Slope of this Document:-

It will help citizens apply for efficiently. & manage track & receive passports help passport office staff applications.

Overview

It will allow online application submission, document verification, appointment scheduling & tracking of passport status.

2. General Description

The system will be useful of citizens applying for passports & staff managing applications

3. Functional Requirements

Application Submission

* citizens can fill & submit passport application form online.

Appointment Scheduling

* schedule appointments at passport offices for verification.

Verification & Approval

Staff can verify documents & application details.

4. Interface Requirements

User Interface

Simple and easy to use web interface.

Integration Interface

SMS & email services for notifications.

5. Performance Requirements

* The system should respond to user actions within 3 seconds

* should handle at least 5000 concurrent users during peak application period

6. Design Constraints

- * Should run on standard PCs or laptops
- * Offices & support online access
- * Database is relational

7. Non-functional requirements

- * Security → Secure login for staff & citizens
- * Reliability → high availability to ensure continuous service.

8. Preliminary Schedule and Budget

The system is estimated to take 9 months with a budget of \$200,000. This includes planning, development, testing, deployment & staff training.

Tabular

weeks

budget break

req - 2 week - 10,000