

~~Software Requirement Specification (SRS) for Hotel Management System.~~

Introduction

1.1 Purpose of the Document

This SRS (Software Specification Requirements) specification document encompasses the entire development process of the Hotel Management System, from defining the system's objectives and functionalities to outlining the design constraints and non-functional attributes. It will provide a clear understanding of the system's capabilities, limitations and the expected outcome. It serves as a guide for the functional and non-functional requirements.

1.2 Scope of the Document

The scope of the document encompasses the entire development process of the Hotel Management System, from defining the system's objectives and functionalities to outlining the design constraints and non-functional attributes. Key areas covered in this document include functional requirements, performance requirements, design constraints, non-functional attributes and preliminary schedule and budget.

1.3. Overview

The Hotel Management System is designed to streamline the operations of a hotel, from managing reservations and guest information, to handling financial transactions and inventory control. The system will provide a user-friendly interface for hotel staff, enabling efficient and accurate management of various aspects.

2. General description

2.1 User characteristics

The primary users of the system will be hotel staff, including:

- Front desk staff
- Housekeeping staff
- Management personnel

2.2 Features

Key features of the Hotel Management system include:

• Reservation management: Creating, modifying, and canceling reservations.

• Guest information management: Storing and updating guest details, preferences and history.

• Room management: Tracking room availability, occupancy status, and maintenance requirements.

• Financial management: Handling billing, payments and reporting.

• Inventory management

• Reporting and analytics

2.3 Benefits

- Increased efficiency and productivity
- Improved guest satisfaction
- Enhanced decision-making capabilities
- Reduced operational costs

3 Functional Requirements

3.1 Reservation Management

- Create and manage reservations
- Check room availability
- Assign rooms to guests
- Modify or cancel reservation
- Generate reservations confirmations and invoices

3.2 Guest Information Management

- Store and update guest contact information
- Record guest preferences
- Maintain guest history

3.3 Room Management

- Track room status
- Assign housekeeping staff
- Manage Pricing

3.4 Financial Management

- Process payment
- Generate invoices and receipts
- Track revenue and expenses

3.5 Inventory management

- Track supplies and equipment levels
- Order and manage inventory

4 Interface Requirements

4.1 User Interfaces

- Intuitive and user-friendly interface
- Clear and consistent navigation

4.2 System Interfaces

- Integration with property management system
- Integration of payment gateways
- Integration with point-of-sales

5. Performance Requirements

- Fast response times for critical operations
- Scalability
- Availability

6. Design constraints

- Compliance with industry standards, (e.g. PCI DSS for payment processing)
- Adherence to data privacy regulations
- Integrate with existing hotel systems and infrastructure

- Non-functional attributes
 - security: protection against unauthorized access, data breaches, and malware
 - reliability: high system uptime and minimal downtime
 - portability: Ability to run on different hardware and software platforms.
 - scalability: ability to handle increasing workload

5. Preliminary Schedule and Budget

- Project timeline: 12 months
 - key milestones:
 - Requirement gathering and analysis: 2 months
 - Design and development: 6 months
 - Testing and quality assurance: 2 months
 - Implementation and deployment: 1 month
 - Maintenance and support: ongoing

Budget

Overall budget: ₹5,000,000

~~Cost Breakdown~~

Development: ₹3,000,000

Testing: ₹500,000

Implementation: ₹500,000

Maintenance and support: ₹1,000,000

24/09/24

Credit Card Processing System

1. Introduction

1.1 Purpose of this document

This document outlines the requirements for the credit card processing system, serving as a blueprint for the development team. It ensures that the final product meets the specified functional and non-functional requirements.

1.2 Scope of this document

The scope of this document covers functional requirements, interface requirements, performance requirements, security requirements, non-functional attributes, preliminary schedule and budget.

1.3 Overview

The credit card processing system is designed to facilitate secure and efficient credit card transactions. It will integrate with various payment gateway and provide user friendly interface for merchants to process payments and manage transactions.

2. General Description.

The primary use of the system will be merchants and customers. Key features of the credit card processing system include payment authorization, payment capture, refund processing, chargeback management and transaction reporting.

Benefits

The system will provide a secure and reliable payment processing by reducing fraud risk.

3. Functional Requirements

3.1 Payment Authorization

- Integrate with multiple payment gateways
- Validate credit card information

3.2 Payment Capture

- Capture authorized transactions
- Generate receipts and invoices
- Handle partial payments

3.3 Transaction Reporting

- Generate reports on transaction volume, revenue, refunds
- Provide analytic to support business decision

4. Interface Requirements

4.1 User Interface

- user friendly interface
- Integration with ~~accounting~~ point of sales system

7.2 System Interfaces

- Integration with payment gateways
- Integration with accounting software

5. Performance

- Fast transactions
- High system availability
- Scalability to handle volumes

6. Security Requirements

- Compliance with payment card industry data security standard
- Encryption of sensitive data
- Prevention of fraud and unauthorized access

7. Non Functional Attributes

Reliability

Scalability

Maintainability

8. Budget and Schedule

8.1 Project timeline : 12 months

Requirement analysis gathering

and analysis : 2 months

Development : 6 months

Testing : 2 months

Maintenance : Ongoing

8.2 Overall Budget

Overall Budget : € 59,00,000

Development : € 2,500,000

Testing : € 500,000

Implementation : € 500,000

Maintenance : € 500,000

5/10/2024

MAINT

01/10/2024

Library Management System

1. Introduction

1.1 Purpose of this Document

This document outlines the objectives and necessary necessity of the Library Management System (LMS) project. It serves as a comprehensive guide for stakeholders to understand the system's requirements, functionality, and overall value proposition.

1.2 Scope of this Document

The document details the operational goals of the LMS, providing an overview of its capabilities and expected outcomes. It addresses the development cost, estimated timeline, and the benefits it offers to users and stakeholders, ensuring clarity and alignment among all parties involved.

1.3 Overview

The LMS is designed to streamline library operations, including cataloging, circulation, and user management. It aims to enhance the efficiency of library services and improve user experience through automated processes.

2. General Description

The LMS is tailored for librarians, library staff and patrons, enabling them to interact seamlessly with library resources.

User Management: Registration, membership management, and user profile.

Catalog Management: Adding, updating, and searching for library material.

Circulation: Check-out and return processes, tracking overdue items.

Reporting: Generation reports on usage statistics and inventory.

3. Functional requirements

The system's functional requirements include:

1. User Registration and Authentication: users must be able to register and log in securely.

2. Catalog Search and Browsing: users should be able to search for materials by title, author, or genre.

3. Circulation Management: Functions for checking out and returning materials.

4. Fines Management: Calculation of fines for overdue items.

5. Reporting Tools: Generation of various reports.

4. Interface Requirements

- The LMS will feature a user interface for professors and staff, designed for navigation.
- A database interface for data storage and retrieval.

5. Performance requirement

- support at least 100 concurrent users without performance degradation
- return search results quickly
- maintain uptime of 99.5%

6. Design constraints

- use open source technologies for development
- compatibility with existing hardware and software

7. Non-Functional Attributes

- security
- Reliability of the ~~software~~ system
- Scalability

8. Preliminary schedule and Budget

8.1 Project Timeline: 12 months

Requirement gathering and analysis: 2 months

Development: 6 months

Testing: 2 months

Maintenance: ongoing

8.2 Budget

Overall Budget: € 50,00,000

Development: € 35,00,000

Testing: € 5,00,000

Maintenance: € 10,00,000

01/10/24

Stock maintenance system

1. Introduction

1.1 Purpose of this document

This document is aimed at outlining the requirements and details of stock Maintenance system. It will provide a comprehensive understanding of the system's functionalities, design, constituents and performance expectations.

1.2 Scope of the document

The scope of the document includes an overview of the Stock Maintenance System, highlighting its objectives, core functionalities and the expected benefits to users and business.

1.3 Overview

The Stock Maintenance System will enable efficient tracking, management and reporting of inventory levels. It is designed to support business in maintaining stock levels, real-time data and generate exports.

2. General Description

- Users can track stock levels, set reorder points and monitor stock movement
- The users are typically inventory managers or business owners who require quick access to accurate data
- Alerts for low-stock
- Reporting tools to track stock usage trends

- ### 3. Functional Requirements
- Automatically update stock levels after every sale/stock addition
 - Notify users when stock levels fall below a specified threshold
 - Generate reports showing stock levels fall below specified threshold
 - Generate reports showing stock levels, usage trends, and stock valuation

4 Interface Requirements

- A web-based/desktop interface for users to interact with the system. It should be intuitive and responsive.
- The system will integrate with shared memory systems for faster access.

5 Performance requirements

- Stock updates should reflect within 1 second of transaction completion.
- The system must use minimal memory.
- The maximum acceptable error rate for data processing is 0.01%.

6 Design constraints

- A specific ~~minimizing~~ optimization algorithm must be used for stock forecasting.
- The system must run on hardware with a minimum of 4GB RAM and a dualcore processor.

Non-Functional Attributes

- The system must have secure login and encryption
- The system should be easily portable across different devices
- The system should be scalable

8. Schedule and Budget

8.1 Schedule

Research

Requirement gathering and analysis: 2 months

Development: 6 months

Testing: 2 months

Maintenance: 2 months

8.2 Budget

Overall Budget: £ 50,00,000

Design and Planning £ 2,50,000

Development £ 35,00,000

Testing £ 10,00,000

Deployment £ 2,50,000

01/10/24

Passport Automation System

1. Introduction

1.1 Purpose of the Document

The document outlines the requirements for Passport Automation System, which will automate and streamline the process of passport application verification and issuance. The primary aim is to document all functional and non-functional requirements.

1.2 Scope of the document

The document will describe the system's objectives, its overall functionalities, and the benefits it will bring to both applicants and the government agency responsible for passport processing.

1.3 Overview

The passport automation system will automate the passport application process, reducing manual work and processing time. It will allow users to apply for passports online, track status and receive notifications.

2. General Description

- Online passport application and appointment scheduling
- Automated verification process, reducing manual errors
- Real-time application tracking for users
- Secure storage and handling of sensitive applicant data

3. Functional Requirements

- Online Application Submission
- Status Tracking of passport applicants
- Document Verification of submitted documents
- Appointment Scheduling for verification and biometrics
- Passport Issuance and dispatchment

4. Interface Requirements

- A web based interface for users that is responsive and user friendly
- Integration with national database

5. Performance requirements

• Processing time: Application should be processed within 10 min of submission.

The system must handle large volume of data.

The acceptable error rate for data processing and verification is 0.05%.

6. Design constraints

A government approved algorithm for biometric authentication must be used.

The system must be compatible with government infrastructure.

7. Non-Functional Attributes
- Data security is critical for such system
 - The system should be accessible from different devices
 - The system should have 99.9% uptime

8. Preliminary Schedule and Budget

8.1 Schedule

Requirement gathering and analysis 2months

Development 6months

Testing : 2months

Maintenance 2months

8.2 Budget

Overall Budget : ₹ 50,00,000

Design : ₹ 5,00,000

Development : ₹ 25,00,000

Testing : ₹ 15,00,000

~~Deployment~~ : ₹ 5,00,000