

Hotel Management System

Problem Statement:

The Hotel Management System is a tool for booking rooms of hotel through online process by the customers. It can maintain customer details and automate the process of billing. The customer can see the room, cost, facilities etc before booking and there is complete transparency between the customer and their service.

Software Requirement Specification (SRS)

1) Introduction:

1.1. Purpose of this document:

This Hotel Management system software requirement specifications main objective is to provide a base for the foundation of the project. It gives a comprehensive view of how the system is supposed to work and what is to be expected by end user. It provides a blueprint to upcoming new developers and maintenance team to assist in maintaining and modifying this project as per required changeability.

1.2. Scope of this document

The world is changing so as the scope of hotel management. Today, hotel management is not only confined to hotels but had gone deep into tourism, catering, airlines, clubs, etc making it a very promising career options. It has

3 end users, customers, receptionist and Hotel manager. It consists of booking Management system, DBMS server and Report Generator. It simplifies everyday process of hotel, secure transactions, quick retrieval of information, ease of use, quick recovery of errors, fault tolerance are some benefits.

1.3. Overview

This Hotel Management system will improve the efficiency and accuracy of hotel operations leading to enhanced guest satisfaction and improved revenue management.

2) General Description:

- The objective is to create a user-friendly system that streamlines hotel operations and enhances the guest experience.
- Reservation Management: Allows guests to make reservations online or in person, quickly and efficiently.
 - Guest Services: Provides check-in and checkout functionalities, service, etc.
 - Billing: Generate invoices, process payments.

3) Functional Requirements:

- Allow users to register/login
- Allow users to make room reservations

- Allow users to manage room service orders
- System will generate bills for guests in payment management system
- Manager access
- Receptionist access

4) Interface Requirements:

- Integration with payment gateway
- Intuitive booking interface, easy navigation

5) Performance Requirements:

- able to handle a large number of concurrent users
- Respond to user actions within reasonable time frame
- Backup and recovery mechanisms to prevent data loss

6) Design Constraints:

- Designed to comply with industry standards and regulations
- Scalable to accommodate future growth

7) Non-Functional Attributes:

- Security
- Portability
- Reliability
- Usability
- Application compatibility
- Data Integrity

- Scalability
- Capacity

8) Preliminary Schedule and Budget:

- Estimate 6 months to complete
- Budget: including development, testing and implementation cost

Manager	Inventory	Reception
+Name: string	+Type: String	+Id: int
+Id: int	+Status: string	+Name: string
+PhoneNo: int	UpdateInventory()	+TelNo: int
+PurchaseInventory(): public	: public	+Address: string
+RecordComplaints()		+CheckRoomAvail(): public
+ManageStaff()		+BookRoom(): public
		+GenerateBill(): public

Owner	Customer	Rooms
+ID: int	+ID: int	+RoomNo: int
+Name: string	+Name: string	+Location: string
+PhoneNo: int	+TelNo: int	+GuestInfo(): public
+ViewComplaints()	+Address: string	+CheckIn(): public
+ViewGuestInfo()	+RoomNo: int	+CheckOut(): public
+ViewRoomInfo()	+GuestInfo()	+UpdateRoom(): public
+ViewBill()	+CheckIn()	
+ViewFoodItem()	+CheckOut()	
	+PayBill(): public	
	+OrderFood(): public	

FoodItem	Bill
+Id: int	+BillNo: int
+Name: string	+CustomerName: string
UpdateFoodItem(): public	+GenerateBill(): public

2 Credit Card Processing:

Problem Statement -

This system is inefficient and lacks the necessary features to meet the demands of modern merchant. It is prone to errors and security vulnerabilities, leading to potential fraud and financial losses. There is a need for new credit card processing system that's secure, reliable and user-friendly with features such as real-time transaction processing, comprehensive reporting and robust fraud detection system mechanism.

Software Requirement Specification (SRS)

Introduction

1.1 Purpose of the document

This document aims to outline the requirements and specifications for the development of a credit card processing software.

1.2 Scope of the document

This document defines the overall working and main objectives of the system.

1.3 Overview

It is designed to streamline and automate the process of handling credit card transactions. It provides a platform to accept, manage transactions.

1) General description: The software facilitates secure transaction between merchants and customers. Key features include:

- Transaction Processing
- User characteristics
- Secure payment processing
- Fraud detection

2) Functional Requirements -

- Authorization
- Transaction logging
- Fraud detection
- Reporting
- Refund Processing

3) Interface Requirements -

- Payment Gateways
- POS systems
- Merchant Dashboards

4) Performance Requirements -

- Response time should be milliseconds
- High scalability, for handling huge transactions
- Low error rate

5) Design Constraints -

- Compliance
- Adhering to industry standards such as PCI DSS for secure handling of payment card device.

7) Non functional Attributes -

- Scalability
- Reliability
- Portability
- Data Integrity

8) Preliminary Schedule and Budget -

The initial version of the project plan includes a timeline for development and estimated budget requirement around 6 months time.

Classifications:

Merchant	Customer	Bank
+ ID: int	+ CardNo: Integer	+ Name: char
+ Password: int	+ PIN: int	+ BranchCode: int
+ acceptTransaction()	+ viewBalance()	+ validateUser()
+ viewBalance()	+ performTransaction()	+ validateMerchant()
+ cancelTrans()	+ validateUser()	+ approveTrans()
+ cancelTrans()	+ enterPIN()	+ cancelTrans()

3. Library Management System -

Problem Statement -

The current manual system of library management is inefficient and prone to errors. There is lack of centralized system. We need a LMS that can streamline library operations, improve user access to resources and enhance overall efficiency. The proposed LMS aims to provide libraries with a user friendly interface for managing library resources and empower users with ready access to search, borrow & return books.

Software Requirement Specification (SRS)

1) Introduction -

1.1. Purpose of the document :

The document serves as a guide for the requirement specifications for developing library management system (LMS).

1.2. Scope of the document :

The document defines the overall working and main objectives of LMS.

1.3. Overview :

LMS is a software designed to automate and streamline library operations like circulation, cataloging, inventory management.

2) General Description -

- User characteristics → designed based on size & requirements of library

- Objective of user
- Cataloguing, circulation management, patron registration.

3) Functional Requirements -

- Cataloging → Based on books, journals, multimedia
- Circulation management
- Reservation and Hold management

4) Interface Requirements -

- User Interface
- Database Interface
- Integration Interface

5) Performance Requirements -

Response Time

Scalability

Reliability

Data Integrity

6) Non-Functional Attributes -

Security

Portability

Reliability

Scalability

7) Preliminary Schedule & Budget -

There are multiple phases such as Requirement gathering, Design & Architecture, development, Testing and Quality Assurance, Deployment.

4) Stock Maintenance System -

Problem Statement -

Create a stock management system for a retail business that efficiently manages inventory. The system should track stock, handle product information, process sales transactions, generate reports and manage users. Emphasize usability, scalability and adherence to software engineering principles.

Software Requirement Specification (SRS)

1) Introduction -

1.1 Purpose of the document -

This document serves as a guide outlining the requirements and specification for the development of a stock management system (SMS).

1.2 Scope of the document -

The document defines the overall working and various objectives of SMS.

1.3 Overview -

The SMS is a software solution designed to automate and streamline inventory management processes for business.

2) General Description -

- Objective of \rightarrow To efficiently manage inventory, track stock levels
- Features & benefits \rightarrow stock tracking, inventory replenishment, reporting, analysis and forecasting

3) Functional Requirements -

- Stock Tracking
- Inventory Replenishment
- Reporting and analysis

4) Interface Requirements -

- User Interface
- Database Interface
- Integration Interface

5) Performance Requirements -

- Response Time
- Scalability
- Reliability
- Data Integrity

6) Non-Functional Attributes -

- Security
- Portability
- Reliability
- Scalability

7) Design Constraint -

- Software Compatibility \rightarrow Ensuring compatibility

with various OC & DBMS.

• Data Security → Implementation of robust security measures to protect inventory data from unauthorized access & data breaches.

8) Preliminary Schedule and Budget -

We have the following schedule goals -
Requirement Gathering, Analysis, Design & Architecture, Development, Testing and Quality Assurance, Deployment and Launch, Post Launch Support

The approx time will be 6 months with an budget estimate of 300,000.

5) Passport Automation System -

Problem Statement -

Develop a passport automation system to streamline application submission, appointment scheduling and status tracking. Prioritize user friendly interface, data security and adherence to SE&OOM principles.

Software Requirement Specification(SRS)

1) Introduction

1.1. Purpose of the document -

The purpose of this document is to provide a comprehensive overview of the requirements & specification for the development of passport Automation system (PAS).

1.2. Scope of the document -

This document defines the scope of the PAS, detailing its intended functionalities and benefits to the end users.

1.3. Overview -

The PAS is designed to streamline and automate the process of passport issuance and management.

2) General Description -

Objective of user → To simplify and expedite

The process of applying for and obtaining passports

- User characteristics → Designed for passport applicants, government officials
- Features and Benefits → Online application submission, appointment scheduling, document verification.

3) Functional Requirements

- Online Application Submission
- Appointment scheduling
- Document verification
- Passport Printing

4) Interface Requirements

- Web Portal
- Biometric Devices
- Document verification system
- Passport Printing system

5) Performance Requirements

- Response Time
- Scalability
- Reliability
- Data Security

6) Design Constraints

- Regulatory compliance
- System Integration
- Data Privacy

7) Non Functional Attribute

- Security
- Portability
- Reliability
- Scalability

8) Preliminary Schedule and Budget

The steps are -

Requirement gathering - 2 weeks, Design & Architecture - 4 weeks, Development - 12 weeks, Testing and Quality Assurance - 4 weeks, Deployment and Launch - 2 weeks and Post Launch Support

Around 6 months time and budget of 200000 to 300000