

1. SRS document on Hotel Management System

Introduction

The Hotel Management System provides ease of access to bookings and cancellation by customers.

Purpose:

The purpose of Hotel Management System's SRS Document is to provide a base, a blueprint of the whole system. Making the project more understandable regarding the working of the system, user expectations, and the initial cause of the project.

Scope:

The HMS has a wide scope covering tourism, catering, airlines, clubs etc. making it a promising career option.

Overview:

The HMS project is intended for Booking of rooms easily through an online platform where, the receptionist, manager and customer all use the platform and make everyday process easier.

General Description:

The main perspective of this project is to provide an online platform for booking of hotel rooms with secure payment options and easily done.

Functional Requirements:

- * Reservation and booking
- * Check-in / check-out
- * Food and restaurant service
- * Availability of rooms
- * User authentication
- * Feedback

Interface Requirements:

- User Interfaces
 - * Device with input/output functionalities with a web browser
- Software Interfaces
 - * any operating system (preferably windows)
 - * any database storing program software installed
 - * any development end (programming language)

Performance Requirements:

- * Time it takes for the system to respond
- * Efficiency of the System
- * Transaction handling
- * Data Storage
 - A handle more number of concurrent users.
- * Optimal Resource Utilization.

Design Constraints

These are the limitations or restrictions placed on designing and implementation of a software system.

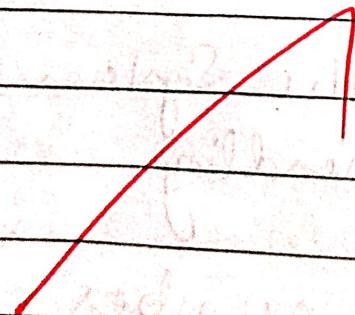
- * Specific programming language
- * assumed to always be developed under the windows operating system
- * Integrating with existing systems
- * Reporting Capabilities
- * User roles and permissions

Non Functional Attributes

- * secure data & payments
- * reliable backups
- * Easy to use and maintain.

Schedule & Budget

These are the rough estimate of time required for the project, and the budget (cost) to complete it.



2. SR & Job documentation on Credit Card Processing
Problem Statement:
Manual and outdated credit card processing methods cause delays, transaction errors, frauds, disputes, customers demand quick, secure and reliable payment options, while businesses require accurate transaction tracking and fraud detection.

System Documentation Requirements

Introduction:

Purpose and Objectives:

The purpose of this document is to define the requirements for a credit card processing system. It explains why the system is needed, its objectives, and how it ensures secure and efficient processing of credit card transactions.

Scope:

The system ensures secure authorization, authentication, and settlement of credit card payments for merchant and customer. It ensures real-time validation of cards, fraud detection and accurate transaction logging. The system will support online and point-of-sale transactions.

Overview:

The system provides a secure platform for processing payments. It integrates with banks, payment gateways, and merchant

applications for approval or decline transactions based on card details and account status.

General Description

Objectives:

- Authenticate card holder details
- Process payments quickly and reliably
- Reduce fraud and maintain accurate transaction records

Users

- Merchants: Initiate transactions
- Customers: Make payments
- Banks and Payment Gateways: Validate and settle payments

Functional Requirements

- User authentication.
- Transaction authorization.
- Payment Settlement.

- Fraud detection.
- Transaction history retrieval.

Integration Requirements

- Merchant interface for initializing and tracking transactions.
- Payment gateways API for secure communication with banks.

- Database Interface: For storing card details, logs, and receipts.

Performance Requirements

- * Each transaction must be processed in < 30 seconds.
- * Handle 300 concurrent transactions.
- * Maintain 99.99% uptime for uninterrupted processing.

Design Constraints

- * must comply with PCI-DSS standards for data security.
- * Use SSL/TLS encryption for data transmission.
- * Support major credit cards (Visa, Mastercard, AMEX, etc.)

Non Functional Requirements

- * Security: End-to-end encryption and decryption.
- * Reliability: Continuous uptime with automated failovers.
- * Scalability: Support for increasing transaction volumes.
- * Usability: Simple integration for merchants.

Preliminary Budget and Schedule

Schedule

Requirement analysis

1 week

Design & Architecture

1 week

Development will go over 3 weeks

Testing & Security almost 2 weeks

Deployment 1 week

Total 6 weeks

* Budget

Development 3 weeks at £150 per week

Security Testing 2 weeks at £500 per week

Deployment 1 week at £20,000

Maintainance 3 weeks at £30,000

Total budget is £218,000

Estimated completion date 12th July 2022

Final delivery date 19th July 2022

With a potential delay of 1 week due to

any hardware issues.

Estimated time required for each task

3. SRS document on Library Management System

Problem Statement:

A library management system is required to automate book cataloging, borrowing, returning and record management to reduce manual errors and improve efficiency.

SRS Document:

Introduction

Purpose

The purpose of this document is to define the requirements of LMS. It serves as a guide for developers, testers, librarians and administrators to design, implement and maintain a system that automate library operations such as cataloging, borrowing, returning and fine management.

Scope:

The LMS is a digital solution that manages a library's resources efficiently. It will handle book cataloging, member registrations, borrowing/return transaction fee calculations and generate reports for administrators. The system will provide role-based access for students, librarians and administrators.

General description

The LMS automates library operations like cataloging, member registration, borrowing, return, fine calculation. It provides real-time book availability, search functionality, and reporting tools, ensuring efficient and secure access for students, librarians, and admins.

Functional Requirements

- * allows librarians to add, update and delete book records
- * allows students to search for books by title, authors or subject.
- * allows members to borrow or return books
- * calculate fines
- * maintain borrowing history for each member
- * support role-based access

Interface Requirements

- User Interface

- * student - Search catalogue, borrowing history
 - * Librarian - Issue / return books, manage inventory.
 - * Admin - generate reports, configures system
- Hardware Interface - Barcode / RFID scanner
- Software Interface - Database, MySQL, library catalog APIs.

- ## Communication Interface - LAN, Internet

Performance Requirements:

- * support at least 200 concurrent users.
 - * process borrowing/return transactions within 2 seconds
 - * support database of at least 100000 book records.
 - * provide 99.9% uptime.

Design Constraints

- * most support common OS
 - * Develops using java with SQL backend.
 - * Comply with institutional IT policies for data security.

Non Functional Attributes

- * Security - Role based access control, encrypted member data.
 - * Usability - Simple and intuitive interface for all users.
 - * Scalability - Support expansion for multi-bean libraries

Preliminary Schedule & Budget

* Schedule

Requirement Analysis

Week

System Design

1 week

Development

Page 13

Testing

1 week

Deployment

③ Sales

| + Budget | |
|-------------|------------|
| Development | ₹ 1,50,000 |
| Testing | ₹ 40,000 |
| Deployment | ₹ 20,000 |
| Maintenance | ₹ 25,000 |
| Total | ₹ 2,35,000 |

4. SRS document on Stock Maintenance

System will be better & will control +
minimize management cost.

Problem Statement

Manual stock management often results
in errors like tracking, overstocking and
stockouts, so a Stock maintenance
system is needed to automate
inventory recording, monitoring and
reporting.

SRS documentation will include:

Introduction

Purpose

This document defines the requirements
for the Stock maintenance System (SMS).

It provides details for developers, testers,
administrators and business stakeholders
to design, implement and maintain a
reliable system that manages inventory
efficiently.

The SMS is a web and desktop based

~~System~~ designed to automate inventory
management for businesses. It will track
stock levels, handle purchases and sales
records, send alerts for stock shortages
or surpluses and generate reports.

The system will improve efficiency,
reduce errors and support decision
making for managers.

Overview

- * System type : web desktop application.
- * Users: Stock keepers, managers, admins
- * Functions: Stock entry, update, tracking, alert, reporting
- * Benefits: Reduced stock losses, improved visibility, better resource utilization.

General Description

The SIS automates inventory operations by recording incoming and outgoing stock, updating stock levels in real time, and generating alerts for low or excess stock. It supports role-based access for storekeepers and managers, provides detailed reporting on sales and stock levels, and ensures efficient and error-free management of inventory.

Functional Requirements

- * Allow entry and update of stock items
- * Record incoming and outgoing stock
- * Display real-time stock levels
- * Send alerts when stock is low or exceeds defined thresholds
- * Support role-based access.

Interface Requirements

- * User Interface
- * Stockkeeper: Stock entry / update
- * Manager: Reporting, alerts
- * Admin: User and System Configuration

* **Hardware Interface:** Barcode/RFID Scanner, Webcam or auto-label printers.

* **Software Interface:** Database (MySQL), reporting tools

* **Communication Interface:** LAN for internal use, Internet for remote access.

Performance Requirements

- * Process inventory updates within 1 second.
- * Handle up to 5000 stock records efficiently.
- * Generate 25-50 concurrent users without performance issues.

Design Constraints

Tech Stack

- Frontend: HTML, CSS, JavaScript
- Backend: Java | PHP | Python
- Database: MySQL
- Must support multi-user role based access.
- Should comply with data accuracy and reliability standards.

Non Functional Attributes

* **Security:** Unauthorized access for admins and staff.

* **Reliability:** Accurate and upto date stock data.

* **Scalability:** can handle growing product catalog

* **Usability:** Simple, intuitive interface for quick operations.

* Maintainability: Easy updates for new features or modules

Preliminary Budget and Schedule

Schedule: 1 week - 1 week

Requirement analysis - 1 week

Design - 1 week

Development - 2 weeks

Testing - 1 week

Deployment - 1 week

The total budget is £22,000

Budget

Development £11,20,000

Testing £2,30,000

Deployment £1,20,000

Maintenance £20,000

Total budget is £1,90,000

5. Passport Automation System

Problem Statement

The traditional passport application and issuance process is often slow, error prone and burdened with manual paperwork. Applicants face long queues, delays in verification and lack of transparency in applications status. Passport offices struggle with handling large volumes of applications, verifying documents and ensuring secure data management.

Introducing

Purpose

The purpose of this document is to define the functional and non-functional requirements for PAS. The system is designed to streamline the process for applying, verifying and issuing passports. It will reduce manual intervention, minimize processing delays and provide applicants with a user friendly platform to track their applications.

Scope

The model will send notifications at each stage of processing and ensure high level of security for sensitive applicant data.

Overview

The PAIS will be web based and mobile accessible system with role based access for applicants, passport offices and administrators.

General Description

- * Users and their roles
- * System Environment
- * Assumptions
- * Dependencies

Functional Requirements

- * User Registration and authentication
- * Application Management
- * Payment processing
- * Appointments Scheduling
- * Verification and approval
- * Application tracking and notification
- * Report and analysis

Interface Requirements

- * User interface
 - 1. Application dashboard
 - 2. Official dashboard
 - 3. Admin dashboard

Hardware Interface

- * Biometric devices for fingerprint / iris scan
- * Barcode / QR Scanners
- * Software interface
 - 1. Database: MySQL / Oracle
 - 2. Frontend: HTML / CSS

Part 3. Backend: Java / Python

Performance Requirements

- * System must handle 10000+ concurrent users
- * Each application transaction should complete in < 3 seconds

Design Constraints

- * must comply with government regulations for data security.
- * Data must be encrypted at rest and during transition
- * must support multi-language interface

Non Functional Attributes

- * Security: Encrypted data storage and secure authentication.
- * Reliability: Zero data loss during processing
- * Usability: Simple and intuitive for non-technical users
- * Scalability: Should support increasing user demand.
- * Maintainability: Easy updates for new passport policies.

Preliminary Schedule and Budget

Schedule

Requirement Analysis

1 week

Design

1 week

Development

2 weeks

Testing

1 week

Deployment and test 1 week
Total 6 weeks

| | |
|-------------|-------------|
| Engineering | 3 man month |
| Budget | £1,50,000 |
| Development | £1,50,000 |
| Testing | £40,000 |
| Deployment | £30,000 |
| Maintenance | £30,000 |
| Total | £2,50,000 |