Software Requirements Specification (SRS) for Hotel Management.

1. Introduction

1.1 Purpose: This document outlines the requirements for the Hotel Management System setting a comprehensive guide for all users. It details the system functionalities, interface & constraints, ensuring clarity on its objective.

1.2 Scope: This document covers the overall functionality, interfaces and constraints.

1.3 Overview: The HMS is designed to automate and streamline hotel operation, including reservation & improve ~~hotel~~ customer satisfaction

2. General Description: Assists hotel staff and guests featuring roles like front desk, managers and guests. key function includes room booking, billing reporting and inventory management, restaurant etc.

3. Functional Requirement.

- User Registration/Login: Secure account management
- Room Reservation: Search and book based on availability.
- Check-in/Check out: Automated process.
- Billing: Generate ~~and~~ invoices for services
- Reporting: occupancy, revenue ~~and feedback~~ and feedback report.

~~Software Requirements specification (SRS) for Hotel~~

4. Interface Requirements.
- UI: Web based interface for guests and staff.
- API Integration: For payment and third party services.
- Data Exchange: JSON for internal data sharing.

5. Performance Requirements:
- Response Time: < 2 seconds.
- Concurrent users: 100 users.
- Data Handling: Manages up to 10,000 record efficiently.

6. Design Constraints.
- Tech Stack: Use React, NodeJS, MySQL.
- Compliance: Adhere to GDPR.

7. Non-Functional Attributes.
- Security: Encryption for user data.
- Scalability: Future expansion support
- Reliability: 99.9% uptime.
- Usability: Intuitive UI.

8. Schedule and Budget
- Duration: 6 months.
- Cost: $150,000.

Credit Card Processing System:

Introduction.

Purpose: Describes requirements for secure credit card processing compliance and performance.
Scope: Manages transactions, reduces frauds and ensures PCI DSS compliance, and performance
Overview: Securely handles electronics payment and integrates with payment gateways.

General Description

Supports merchants and customers, providing function like transaction processing, fraud detection and reporting.

Functional Requirements.

Transaction Processing: Authorize, capture, refund
Fraud detection: Algo to detect suspicious activity.
User Authentication: Secure login for merchants/ customers.
Reporting: Transaction and analytics reports.

Interface Requirements

API Integration: Payment gateway communication
UI: merchant dashboard for transaction.
Data format: XML / JSON for exchange.

5. Performance Requirements
- Transaction Speed : < 3 seconds.
- Load Handling: 500 Transaction / second.
- Error Rate : Max 0.01%.

6. Design Constraints.
- Compliance : PCI DSS standard.
- Tech stack : Specified programming tools.
- Database : Secure transaction data storage.

7. Non Functional Attributes.
- Security : Encryption for transaction data :
- Reliability : 99.99% uptime.
- Scalability : Handle increasing volume
- Maintainability : Modular code for updates.

8. Schedule and Budget
- Duration : 4 months.
- cost : $100,000

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LIBRARY MANAGEMENT SYSTEM.

1) Introduction.

1.1) Purpose of this Document: The aim of the document is to provide a detailed description of Library Management System. This will help in the management of the library resources.

1.2) Scope of this Document.

The scope of this document is to manage the functionalities.

i) cataloging.
ii) user registration and management.
iii) Transactions / lending
iv) Fine calculation.

1.3) Overview

The document is structured to include system features, functional & non functional requirements and user roles.

2) General Description.

The LMS (Library Management System) is designed to streamline library operations, including book inventory management, user registration & transaction processing. search who borrowed which book etc

The LMS is a web base application. which will be accesible, via modern web browsers and utilize a central database (MySQL) for efficient data management

It will comply with the data regulations and accessibility standards. to ensure user friendly interactions

3. Functional Requirements.
   i) User Registration & Authentication.
   ii) Book catalog management.
   iii) Member Management.
   iv) Loan Returning Process
   v) Reporting & Analytics.

4. User Interface Requirements.
   i) General Design : Easy to use / navigate.
   ii) Accessibility : to follow guidelines. so that all individuals with disability can use.
   iii) User Roles : each user has different roles.
   iv) Search Functionality: ability to search required books.
   v) Responsive design : the web app can be used in multiple devices.

5. Performance Requirements : The LMS must meet following criteria.
   i) Response Time : User actions must be complete in 2 seconds.

ii) Concurrent users: This site must support at least 100 users without performance degradation

iii) Data Retrival: search results must be displayed in 1 sec

iv) Error Rate: The maximum acceptable rate for error is 1%.

6. Design constraints

6.1) Technology Stack: The system must be developed using specific tech

6.2) User Interface: must be compatible with modern web browsers.

6.3) Data Security: must comply with data protection regulation

7. Non Functional Attributes

- Security → data must be protected.
- Portability → deployable on multiple platforms.
- Reliability → uptime of 99.5%.
- Scalability → support future enhancement.
- Data Integrity →

8. Preliminary Schedull and Budget.

8.1) The timeline: The estimated project duration is of 6 months.

~~8.2)~~ Req gathering - 1 month
Design - 1 month
Development - 3 months.
Testing & Deployment - 1 month.

8.2) Budget. : cost of $50,000

STOCK MAINTENANCE SYSTEM.

1) Introduction,

1.1) Purpose of thisdocument:
To allow user to view the stocks and have a clear view of system functionality, objectives and system constraints.

1.2) Scope of this Document:
covers overall working of the SMS. It shows the value of the system to the users, such as warehouse managers and int inventory match.

1.3) Overview
designed to manage inventory levels, track stock movents, provide tools to records stock performance & reports for decision making.

2. Grenoral Description.
Stock maintenance System aims to enhance invetory management using.

2.1) User objectives: Seek effective way to manage stocks levels, monitor inventory useage.

2.2) User Characteristic: Users include warehouse managers, inventory clerks etc.

2.3) Features: Stock trading, automated alerts for low stocks, report capabilities

2.4) Benefits: Improved accuracy in stock management.

2.5) Importance: To make sure there is minimum no overstock or understock stock outs.

3) Functional Requirements

3.1) User Authentication

3.2) Stock news.

3.3) Stock Report generation.

3.4).

4) Interface Requirements.

4.1) General design: is easy to navigate.

4.2) Accessibility: is to follows regulation. for the ease of use for disabled people.

4.3) Search functionality: The ability to search the required stock. etc..

4.4) Responsive design: to able to use. in multiple devices.

5) Performance Requirement

It is able to find the stocks in a small amt of time and is able to have a very small percentage of error. concurrent users must be possible ~~in at the~~

6) Design Constraint-: It must use the specific technology while being developed. and must be compatibility in multiple devices. and comply of data protection.

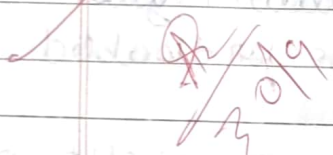
7. Non-Functional Attributes.

The data must be secured, it should be portable and deployable on multiple web browsers. It should be able to support enhancement. and be reliable 99.5% times.

8. Preliminary Schedule and Budget.

Timeline: It will take around 8 months for the complete project with requirement gathering, design, development Testing and deployment

Budget ~~is of order~~ : $90,000.



PASSPORT AUTOMATION SYSTEM.

1) Introduction.

1.1) Purpose of the document.
To allow the user to understand, and have a clear view of the passport automation system functionalities, objectives and system constraints.

1.2) Scope of document.
shows the value of document. to the ~~user~~ user, ~~such as workhouse managers~~ such as

1.3) Overview: The system will streamline passport - related services, from application submission to delivery, improving user experience and operational efficiency.

2. General Description
The system is designed to assist citizen, government officials, and passport office staff by automating, verification, and renewals. The goal is to reduce manual errors, cut down processing time, and provide transparency in the application process.

3. Functional Requirements..
- ~~User Requirem~~ Registration/Login: Secure account creation and login for applicants and staff.
- Passport Application: Online submission of passport application with document uploads.

Status Tracking: Application can track the status of their application.
Verification Process: Automated verification workflows for documents and identity.
Renewal Process: Streamlined passport renewal of existing for existing users.
Notification: SMS/email alerts for applicat updates

4. Interface Requirements.
4.1) User Interface: Web-based platform for citizen and passport officials.
4.2) API Integration: Integration with national ID databases, payment gateways, and postal services for delivery tracking.
4.3) Data Exchange: Secure transmission of sensitive data using XML/JSON.

5. Performance Requirements.
- Response Time: System should respond within 2-3 seconds for most operations.
- Concurrent Users: Support up to 500 concurrent users.
- Data Management: Handle records for up to 1 million applicants.

6. Design Constraints
- Technology Stack: Use of modern frameworks like Angular/React for front end and Java/Python for back-end.
- Database: Use of secure database
- Compliance: Must adhere to government

regulations and data protection laws.

7. Non-Functional Attributes.
- Security: Encryption for personal and sensitive information, following national cybersecurity standards.
- Scalability: Support future increases in users and application volumes.
- Reliability: 99.9% uptime ensures continuous service availability.
- Usability: Intuitive interface for all users types (citizens, officers).

8. Schedule and Budget.
- Estimated Duration: 6-8 months for development and testing
- Project cost: $200,000 covering development testing and deployment.

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