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SRS Document

(a) Hotel management System

1) Introduction :-

2) Purpose of the document :-

The purpose of this document is to define the requirements for the development of a Hotel Management System. This system is intended to automate hotel operations such as room booking, check in/ check out, billing, staff management and restaurants services. The SRS provides a detailed description of the system's functionalities, performance & constraints, serving as a reference for developers, testers & stakeholders.

3) Scope of the document :-

The HMS is designed to improve efficiency in hotel operations by reducing manual effort and minimal errors. The system will:

(i) Manage rooms reservations, availability & cancellations

(ii) Handle customers check in & check out

(iii) Generate billing & invoices automatically

(iv) Maintain customer records and history

(v) Provide tools for staff scheduling and management

(vi) Manage restaurant orders, integrate Restaurant bills with room bills, and maintain a record of restaurant sales

(vii) Generate reports such as occupancy rates

Revenue & Food Sales

⇒ 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 & 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 :-

3.1 Reservation management :-

Allow users to make room reservations online or through the front desk. Generate reservation confirmations & send notifications to guests.

3.2 Room Management :-

Assign rooms to guests based on availability and preferences. Track room status in real time.

3.3 Guest management :-

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

3.4 Billing & Invoicing :-

Generate accurate bills for room charges.

additional services, and taxes. Accept various payment methods & generate invoices for corporate clients.

4. Interface Requirements:-

4.1 User Interface:-

Intuitive & user friendly, Accessible via web browsers, mobile devices & desktop applications.

4.2 Integration Interfaces:

Integration with payment gateways for secure transaction. Integration with 3rd party booking platforms for seamless reservation management.

5. Performance Requirements:-

5.1 Response Time:-

The system should respond to actions within 2 seconds.

5.2 Scalability:-

Handle a minimum of 1000 concurrent users during peak hours.

5.3 Data Integrity:-

Ensure data consistency & accuracy across all modules.

6. Design constraints:-

6.1 Hardware Limitations:-

The system should be compatible with standard hotel hardware.

6.2 Software Dependencies

Utilize a relational dbms for data storage. Use UML modelling

7. Non Functional Attributes

- 7.1 Security :- ^{Robust} Authentication & authorization
- 7.2 Reliability :- High availability & fault tolerance
- 7.3 Portability :- Support multi platform & devices
- 7.4 Usability :- Easy & user friendly navigation
- 7.5 Reusability :- Modular code design.
- 7.6 Compatibility :- Common web browsers
- 7.7 Redundancy :- Safe & secure storage

8. Preliminary Schedule and Budget :-

The development of the Hotel Management System is estimated to take 6 months with a budget of ₹700,000. This includes project planning, development, testing & deployment phase of the HMS

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CREDIT CARD PROCESSING

Introduction

Purpose of this Document

The purpose of this document is to outline the requirements and specifications for the development of a credit card processing system. This document will provide a clear understanding of the project objectives, scope, and deliverables.

Scope of this Document

This document defines the overall working and main objectives of the credit card processing system. It will also include a description of the development cost and time required for the project.

Overview

The Credit Card Processing System is a software solution designed to securely & efficiently process credit card transactions. It will handle tasks such as transaction authorization, payment gateway integration, and financial reporting.

General Description

The credit card processing system will cater to the needs of businesses that accept credit card payments, providing features such as secure transaction, fraud detection and financial reporting. It will be accessible to users with varying levels of technical expertise.

3. Functional Requirements
3.1 Transaction Processing
• securely handle payments, refunds, voids & charges

3.2 Security Compliance
• Implement encryption & tokenization for sensitive data
• Compliance with PCI DSS
• Fraud detection mechanisms.

3.3 Reporting & Analytics
• Generating detailed reports on transactions, sales

4. Interface Requirements:-

4.1 User Interface
• Intuitive, userfriendly & easily accessible

4.2. Integration Interfaces

- Integration with various payment gateways for secure transaction processing.
- Integration with e-commerce platforms & accounting software

5. Performance Requirements :-

5.1 Response time < 1 sec.

5.2 Scalability 1000 concurrent users

5.3 Data Integrity.

6. Design Constraints.

6.1 Hardware limitations:
• Compatible with standard computers, POS terminals
• & card readers

6.2. Software Dependencies

- RDBMS for data storage
- High performance programming language & framework

7. Non-Functional Attributes

7.1. Security

7.2. Reliability

7.3. Scalability

7.4. Portability

7.5. Data Integrity

8. Preliminary Schedule & Budget

The development of CCPS is estimated to take 6-8 months with a budget of ₹ 1,00,00,000. This includes project planning, development, testing & deployment phases.

On 18/2/2018

(c) LIBRARY MANAGEMENT SYSTEMS

1. Introduction.

1.1 Purpose of This Document:-

The purpose of this document is to outline the requirements & specification for the development of a LMS. It will provide a clear understanding of the project objectives, scope, & deliverables.

1.2 Scope of this document.

This document defines the overall working & main objectives of the LMS. It includes a description of the development cost & time required for the project.

1.3 Overview

The LMS is a software solution designed to streamline library operations, including book cataloging, member management, borrowing & returning, & generating reports.

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2. General Description

The LMS will cater to the needs of Lib. Staff & members, providing various features. It will be accessible to users with varying levels of expertise.

3. Functional Requirements.

3.1 Book Management.

Add, update, remove, track books

3.2 Member Management.

Maintain profile, history & overdue records

- Book reservation
- Due dates & late fees

3.4. Reporting:

- Real time statistics on usage
- Reports on book circulation, popularity & overdue

4. Interface Requirements:

4.1. User Interface.

- Intuitive, user friendly & accessible

4.2. Integration Interfaces.

- Barcode scanners & payment gateways

5. Performance Requirements:

- 5.1. Response time < 2 sec
- 5.2. Scalability > 500 concurrent users
- 5.3. Data integrity & consistency

6. Design Constraints:

6.1. Hardware Limitations

- Compatible with Std. Lib. Hardwares

6.2. Software Dependencies

- RDBMS for data storage
- Modular design framework

7. Non - Functional Attributes

7.1. Security

Protect Member & Library data

7.2. Reliability

Minimized downtime

7.3 Portability
Multi platform & device compatibility

7.4 Data Integrity.
The system shall ensure accuracy &
consistent data storage & retrieval.

8. Preliminary Schedule & Budget.

The development of LMS is estimated to
take 4-6 months with a budget of
₹10,00,000. This includes project planning, dev,
testing & deployment phases.

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(d) STOCK MAINTENANCE SYSTEM

1. Introduction

1.1. Purpose of this Document:-

The purpose of this document is to outline the requirements & specifications for the development of a Stock Maintenance system.

It will provide a clear understanding of the project objectives, scope & deliverables.

1.2. Scope of this Document:

This document defines the overall working of the SMS. It includes description of the development cost & time required for the project.

1.3. Overview

The SMS is a software solution designed to streamline inventory operations, including tracking stock levels, managing product information, handling incoming & outgoing goods & generating reports.

2. General Description:-

The Stock SMS will cater to the needs of warehouse staff & management, providing features such as real-time inventory tracking, stock alerts, and financial reporting. It will be accessible to users with varying levels of technical expertise.

3. Functional Requirements

3.1. Inventory Management.

- Add, update, & delete records.
- Track stocks in real time.

- Manage categories & suppliers

3.2 Order Management.

- Process incoming order & update stocks
- Manage returns

4.3 Interface Requirements.

4.1 User Interface.

- Intuitive, user friendly & Accessible.

4.2 Integration Interfaces

- Integration with barcode scanners & RFID readers for efficient stock counting & tracking.
- Integration with e-commerce platforms.

5. Performance Requirements.

5.1 Response Time $< 2 \text{ sec}$.

5.2 Scalability ≥ 1000 concurrent users.

5.3 Data Integrity
Ensure data consistency & accuracy.

6. Design Constraints.

6.1 Hardware Limitations.

- The system should be compatible with standard warehouses hardware.

6.2 Software Dependencies.

- RDBMS for data storage.
- Use modular design.

Non Functional Attributes

- 1. Security
- 2. Reliability
- 3. Scalability
- 4. Probability
- 5. Usability
- 6. Data Integrity

Preliminary Schedule & Budget.

The development of the ~~the~~ SMS is estimated to take 6-8 months with a budget of ₹ 50,00,000. This includes planning, development, testing and deployment phases.

Passport Automation System

Introduction

Purpose of this Document

The purpose of this document is to outline the requirements & specifications for the development of PAS. It will provide a clear understanding of the project objectives, scope, and deliverables.

Scope of this Document

This document defines the overall working and main objectives of PAS. It includes a description of the development cost and the time required for the project.

Overview

The PAS is a software solution designed to streamline the passport application process, including application submission, document verification, appointment scheduling, and tracking features.

General Description

The PAS will cater to the needs of applicants and passport office staff providing features such as online application forms, document upload, and appointment management.

~~Functional Requirements~~

~~Application Management~~

- Provide a mechanism for uploading required document
- Enable staff to review & process applications

Appointment Scheduling

- Allow scheduling of appointments & manage appointment slots

Status Tracking

- Real time tracking system for applicants

Biometric Data Management

- Storing biometric data of applicants.
- Ensure data is linked to correct application & applicant profile.

Interface Requirements

User Interface

- Intuitive & user friendly & accessible

Integration interfaces

- Integration with national identity database for verification purposes.
- Integration with payment gateways for processing application fees.

Performance Requirements

Response Time < 2sec

Scalability > 5000 concurrent users

~~Data integrity~~

6. Design Constraints
- 6.1. Hardware Limitations
- The system should be compatible with standard hardware used in government offices.

- 6.2. Software Dependencies
- Utilize robust & secure RDBMS for data storage.
 - Use programming languages and frameworks suitable for high security, high traffic applications.

7. Non Functional Attributes

- 7.1. Security
- Implement robust authentication & authorization.
 - Ensure compliance with data privacy regulations.

7.2. Reliability :- Fault tolerance to minimize system downtime.

7.3. Scalability :- Accommodate future growth.

7.4. Portability :- Support multi platforms & devices.

7.5. Usability :- Clear navigation & instructions.

7.6. Reusability :- modular design

7.7. Compatibility :- common browsers

7.8. Data integrity

The system shall ensure accurate, consistent data storage and retrieval.

8. Preliminary Schedule & Budget

The development of the PAS is estimated to take 12-18 months with a budget of ₹ 8,00,00,000. This includes project planning, development, testing, security audits, and deployment phases.