

5/4/24

Lab - 4

1) Hotel Management System (HMS) Software Requirements Specification (SRS):

Goal: Develop a Software Interface for HMS.

1) Introduction:

- Purpose of this Document: To provide a comprehensive understanding of the requirements and functionalities of the Hotel Management System.
- Scope of this Document: Describes the intended users, features, and benefits of the HMS, along with development cost and time estimated.
- Overview: Gives a brief summary of the HMS, outlining its primary functions such as room booking, check-in/out, and billing.

2) General Description:-

- Goal: Make hotel operations smoother, improving both efficiency and guest satisfaction.
- Users: Front desk staff, housekeeping, and guests.
- Features:
 - (i) Room booking: Guests can book online or at the front desk.
 - (ii) Check in/out: Makes checking in and out easier for guests.
 - (iii) Inventory Management: Keeps track of available rooms, housekeeping status, and amenities.
 - (iv) Billing: Handles invoices, payments and accounts.
- Significance: Boosts guests happiness, revenue and resources management.
- Users: Hotel staff and guests, each with different access levels.

3) Functional Requirements:

- Room Booking: Users search for available rooms, select and book based on preferences.
- Check in/out: Front desk staff check-in guests, assign rooms, and issue keys; guests check-out and settle bill.
- Inventory Management: System updates room availability, tracks amenity inventory.
- Billing: Generates invoices, integrates with payment gateways.

4) Interface Requirements:-

- User Interface: Easy to use interfaces for staff and guests, accessible via web or mobile.
- Payment Integration: Links with secure payment gateways like Gpay, Paypal etc.
- Communication: Email notifications for booking confirmation, reminders, and feedback requests.

5) Performance Requirements:-

- Response Time: Quick system response to user actions.
- Availability: System operates 24/7, with maintenance notifications.
- Scalability: Handles high demand during busy time effectively.

6) Design Constraints:-

- Hardware / Software Limitation:
- Compatibility with existing hardware and software infrastructure.

- Support for multiple platforms (Windows, MacOS, ios, Android).
- Regulatory Compliance:
 - Compliance with data protection regulations and industry standards.

7) Non-Functional Attributes:

- Encryption : Protects sensitive data.
- Access Control : Limits unauthorized access.
- Reliability : Reliable with failover mechanisms.
- Usability : Intuitive interfaces.
- Scalability : Scales with user base growth.

8) Preliminary Schedule and Budget:-

- Schedule : Timeline for development, testing, deployment, phases.
- Budget : Cost estimates for development, licenses, infrastructure.

HMS can range from \$20,000 to \$100,000 more, advanced systems with extensive features and customization option can cost upwards \$1,00,000 to several hundred thousand dollars.

II) Software Requirements Specification (SRS) for Credit Card Processing System

Goal: The goal is to streamline credit card processing system's to facilitate smooth transaction while ensuring security and compliance with industry standards.

1) Introduction:

- Purpose :- Outlines specifications and requirements for Credit Card Processing System (CCPS) development.
 - Serves as a comprehensive guide for stakeholders, developers, and users.
- Scope :- Defines objectives and value of CCPS.
 - Describe secure and efficient handling of credit card transactions.
 - Outlines development cost and time.
- Overview :-
 - CCPS facilitates secure and efficient processing of credit of credit transactions.
 - Provides centralized platform for merchants to accept credit payments.
 - Ensure compliances with industry standards and regulations.

2) General Description :

CCPS facilitates :

- Real-time authorization of credit card transactions.
- Settlement of transactions and receipt generation.
- Management of customer accounts and payment methods.
- Integration with payment gateways and merchant services.

3) Functional Requirements :

- Authorization : Verify credit card information and authorize transactions.
- Settlement : Capture-funds and generate receipts.
- Customer Management : Register/Update accounts and manage payment methods.
- Integration : Integrate with payment gateways, support various payment methods.

4) Interface Requirements :

- User Interface : Intuitive for merchants, secure login.
- System Interface : Integration via APIs, secure data transmissions.

5) Performance Requirements :

- Response Time : Quick authorization and payment processing.
- Reliability : Minimal downtime, fault-tolerance.

6) Design Constraints:

- Security: PCI-DSS compliance, encryption.
- Compliance: GDPR, ECPA adherence, regular audits.

7) Non-Functional Attributes:

- Scalability: Scale to handle increased transactions.
- Portability: Compatible across platforms, cloud deployment.

8) Preliminary Schedule and Budget:

- Development estimated at 9 months \$100000 bud.
- Phases: Requirements, design, implementation, testing, deployment.

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III) Library Management System's software Requirement Specifications (SRS)

Goal: The Library Management System aims to make running the library easier, help people find books quickly, and ensure everyone has a good time using the library.

1) Introduction:

- purpose: Guides development team, stakeholders, and project participants by outlining objectives and scope.
- Scope: Describes Library Management System's main goals, benefits to customers and stakeholders, and estimated development parameter.
- Overview: Offers a brief summary of the Library Management System, including its purpose and key features.

General Description:

A Library Management System is a software that helps manage library operations. It includes functions like cataloging books, managing users, handling transactions, and generating reports.

Functional Requirements:

1. Cataloging books
2. Managing users
3. Handling circulation transactions
4. Generating reports.

Interface Requirements:

User interfaces for interacting with the system and system interfaces for integration with external databases and hardware.

Performance Requirements: Quick response time, scalability and system reliability, even under heavy load.

Design Constraints: Adherence to platform compatibility, hardware limitations, and external standards or regulations.

Non-Functional Attributes: Attributes like security, reliability, portability and scalability.

Preliminary Schedule and Budget :-

Initial plan for development, including timeline, phases (requirements gathering, design, implementation, testing, deployment), costs, and timeframes.

IV) Software Requirements Specification (SRS) for. Passport Automation System :

Introduction :

Purpose : To define specifications and requirements for the development of a Passport Automation System.

Scope : To describe the overall objectives and scope of the Passport Automation System.

Overview : Designed to streamline and automate passport application, processing and management procedures.

General Description : The Passport Automation System allows users to register, submit passport application online, schedule appointments, process payments, and receive their passports.

Functional Requirements :

- User Registration
- Application Submission
- Application Processing
- Payment Processing.

- Appointment scheduling
- Passport Issuance.

Interface Requirements:

- Intuitive user interface
- Integration with payment gateways and external systems.

Performance Requirements:

- Quick response time
- Scalability for handling a large volume of applications

Design Constraints:

- Platform compatibility
- Integration with external systems for data exchange.

Non-Functional Attributes:

- Security with robust authentication and encryption.
- Reliability with backup and recovery mechanisms
- Usability with an intuitive interface & clear error messages

Preliminary Schedule and Budget:

- Development estimated at 6 months, \$60,000 budget.

4) Software Requirements Specifications (SRS) for Stock Maintenance System:

Introduction:

- Purpose: Define specifications and requirements for stock maintenance system development.
- Scope: Describe system's objectives, including efficient stock inventory management and improved tracking of stock levels.
- Overview: Introduce Stock Maintenance System for managing stock entry, tracking, movement, and reporting.

General Description: The Stock Maintenance System manages stock inventory, including stock entry, tracking, movement, and reporting.

Functional Requirements:

- Stock Entry: Add, edit & delete stock items with details.
- Stock Tracking: Monitor stock levels and rec. alerts for low stock.

- Stock Movement:
- Reporting: Generate reports on stock-related activities

Interface Requirements:

- User Interface: Intuitive interface for easy navigation.
- System Interface: Integration with barcode scanners & external systems.

Performance Requirements:

- Response Time: Quick response time for stock queries
- Scalability: Ability to handle growing stock items and transactions.

Design Constraints:

- Platform Compatibility: Compatible with various operating systems.
- Hardware Limitations: Optimized for desktop and mobile devices.

Non-Functional Attributes:

- Security: Implementation of access controls and encryption.

- Reliability: Reliable backup and recovery mechanisms.
- Performance: Efficient performance for concurrent users and large datasets.

Preliminary Schedule and Budget:

- Development estimated at 4 months, \$40,000 budget.

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