Library Management System

Date
Page

Problem Statement :

The problem that a library management system aims to solve is the efficient management of library operations including cataloging and organizing books, managing members registration, handling book checkout and returns, tracking overdue books and generating reports.

1. Introduction

1.1 Purpose of this Document :

To outline the requirements and specifications for development of a library management system.

1.2 Scope of this document :

This document defines the overall functionality interface requirements. contains and non-functional attributes of the Library management system.

1.3 Overview

Design to automate and streamline various operations within a library, including cataloging, circulation,

membership management and reporting. It aims to improve efficiency, enhance user experience and facilitate better management of library resources.

2. General Description:

The LMS will take care of the needs of librarians, library staff and members. Will feature intuitive interfaces.

3. Functional Requirements:

Functional requirements describe the specific functions of capabilities that the library management system must perform.

4. Interface Requirements:

LMS will interact with users via:

- GUI for library staff.
- Web based interface for online catalog search.

5. Performance Requirements:

- Response time for catalog search.
- System uptime
- Concurrent user support : Minimum 50 users
- Data processing speed: Realtime updates for book availability and transaction.

05-04-24 HOTEL MANAGEMENT SYSTEM

Problem Statement :

The problem that the Hotel Management System aims to solve is the efficient management of hotel operations, guest check-in / check-out, room allocation, billing, inventory management and staff scheduling.

Software Requirement Specifications

1. Introduction :

1.1 Purpose of this Document :

To provide a comprehensive understanding of requirements and functionalities of the HMS.

1.2 Scope of this Document :

Describe the intended users, features, and benefits of the HMS along with development cost and time estimates.

1.3 Overview:

Gives a brief summary of the HMS, outlining its primary function such as room booking, check-in & billing.

2. General Description:

To automate and streamline hotel operations, improving efficiency and guest experience. Allows guests to book rooms online or through the front desk. Facilitates the check in/out process for guests. Tracks room availability, housekeeping status and ammenities. Enhance guest satisfaction, increase revenue and optimises resource utilization.

3. Functional Requirements:

- Room Booking:

Users can search for available rooms based on criteria such as date, room type and occupancy. Users can select rooms and proceed with the booking process.

- Checkin/out:

Front desk staff can assign rooms, check in guests and issue room keys. Guests can check-out, settle bills and receive invoices.

- Inventory Management:

System automatically updates room availability based on reservations

Date
Page

and housekeeping status.

4. Interface Requirements:

Interactive interfaces for staff and guests, accessible via web browsers or mobile apps.

Integration with payment gateways (paypal, Gpay) for secure online payments.

Email notifications for booking confirmation, reminders and

5. Performance Requirements:

System should respond promptly to user requests with minimal latency. System should be available 24/7 with scheduled maintanence.

6. Design Constraints

Compatibility with existing hardware and software infrastructure support for multiple platforms compliance with data protection regulations and industry standards.

7 Non-functional Attributes:

- Encryption of sensitive data.
- Role based access control to restrict unauthorized access.
- Intuitive user interfaces with clear navigation and helpful tooltips.

8. Preliminary schedule and Budget:

- Schedule
- Estimated timeline for development, testing and deployment phases.
- Budget: cost estimates for development resources software license and infrastructure.

Date
Page

Credit Card Processing (CCP).

Problem Statement:

The existing credit card processing system lacks efficiency and security measures, leading to potential fraud risks and customer dissatisfaction. An upgraded credit card processing system is imperative to ensure seamless transaction, enhance security and maintain customer trust.

1. Introduction

1.1 Purpose of this document.

The purpose of CCP functionality is to enable seamless and secure payment transactions for hotel reservations, booking and other services offered by the hotel.

1.2 Scope of this Document:

This section outlines the requirements and specifications for integrating credit card processing capabilities into various software. It includes handling payment authorization, processing transactions and generating payment receipts.

1.3 Overview

The credit card processing functionality will allow guests to make payments using credit or debit cards for services rendered by various software.

It will integrate with payment gateway service to securely process transaction.

2. General Description

The credit card processing system facilitates the following functions:

- Authorization of credit card transaction in real time.
- Settlement of transactions, including capturing funds and generating receipts.

3. Functional Requirements:

Payment Authorization
- Validate credit card information provided by guests.

Transaction Processing:

- Initiate payment transactions securely through integrated payment gateway services.

- Transaction Status Monitoring:

- Provide real-time updates on transaction status
- Handed error or exception during transaction processing securely.

4. Interface Requirements:

The credit card processing functionalities will interact with:

- payment gateway API's for trans-processing.

- Email service for sending payment receipts to guests.

5. Performance Requirements:

- Transaction processing time < 5 seconds.
- Secure transmission of credit card data using encryption protocols.
- PCI DSS for handling card holder data.

7. Non-functional attributes:

- Security: Encryption of credit card data during transmission and storage

- Reliability: Fault tolerant architecture to ensure uninterrupted payment processing.

8. Preliminary Schedule and Budget:

The integration of credit card processing functionality is estimated to take 2 months with an additional budget of $2000.

Date
Page

Passport Automation System

Problem Statement :

The current passport issuing process is plagued by long wait time, inconsistent service quality, leading to a frustrating exp. among applications and delays in travel plan. Introducing a passport automation system is critical to streamline.

1. Introduction

1.1 Purpose of this document:
To define specifications and requirements for the development of passport automation system.

1.2 Scope of this document:
To describe the overall objectives and scope of the passport automation system.

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

2. General Description:
The passport automation system

is a digital platform designed to modernize and streamline the passport issuing process.

3 Functional Requirement:

- User Registration:

Register user of unique login credentials and provide options for individual or family accounts.

- Application Submission:

Allows electronic submission of passport applications and validate application details.

- Appointment Scheduling

Allow users to schedule appointment and provide available time slots.

- Passport Issuance

Generate passport document upon approval and print passports with security features.

Date
Page

4. Interface Requirements:

- Intuitive interface for easy navigation
- Clear display of application status and appointment details.

5. Performance Requirements

- Quick response time for user interaction
- Minimal downtime for system maintenance.
- Handle large volume of app and transactions.

6. Design Constraints

- Compatibility with various device and browsers.
- Compliance with industry standards.

7. Non-functional Attributes

- Security
  Robust authentication mechanisms
  Encryption of sensitive data.
- Reliability
  Backup and recovery mechanism.
  Continuous monitoring for error detection.

8. Preliminary schedule and Budget

The development cost is estimated to be $60000 and total development time is estimated to be 6 months.

Date
Page

STOCK MAINTANENCE SYSTEM

Problem Statement:

The current stock maintenance system is manual and prone to errors, leading to inaccuracies in inventory tracking, stock shortage of operational inefficiencies.

- Implementing an automated stock maintanence system is important to streamline stock management process.

1. Introduction

1.1 Purpose of this document
To define specifications and requirements for the development of stock main system.

1.2 Scope of this document:
To describe the overall objectives and scope of the stock maintanence system

1.3 Overview
Designed to facilitate the management of stock for business.

2. General Description:

The stock maintanence system is a

digital platform designed to automate and streamline the management of inventory. It facilitates accurate management of inventory.

3. Functional Requirement

- Stock entry
  Ability to add, edit and delete stock items from inventory database.
- Stock tracking

  Realtime monitoring of stock levels, including available quantity and location of stock.
- Reporting

  Generation of reports to provide insights into stock-related activities including stock levels by item, stock movement history, inventory valuation.

4. Interface Requirements:

- Intuitive and user friendly interface for easy navigation and data entry.
- Clear displ
- Integration
- for effici
  tracking.

5. Performanc

- Quick resp
  related q
- Minimal d
  maintenan
- Ability t
  of stocks

6. Design C

- Compatibili
  and web
- Compliance
  for data

7. Non funct

- Security
  Implement
  and en
  protect

Date
Page

- Clear display of stock info.
- Integration with bar code scanners for efficient stock entry and tracking.

5. Performance Requirements:

- Quick response time for stock related queries.
- Minimal downtime for system maintanance.
- Ability to handle large volume of stocks.

6. Design constraints

- Compatibility with various OS and web browser.
- Compliance with industry standard for data storage and security.

7. Non functional Attributes

- Security
  Implementation of user control and encryption mechanism to protect sensitive stock data.

. Reliability:

Reliable backup and recovery mechanism to prevent dataloss.

. Performance:

Efficient performance to handle concurrent users of large data base.

8. Preliminary Schedule and Budget.

The development of this system is estimated to take approx 6 months with a budget of $ 40,000.

24.05.24