Hotel Management

Problem statement :-

web application for hotel reservation.

we will take the selection criteria from user and display the hotels list for user basing on the criteria.

Manual hotel management is slow, error-phone, and ineffi so an automated system is needed to handle bookings, bills and customer records effectively.

SRS (software requirement specification)

Introduction:

① purpose of the Document :

This document shows the need for a hotel management system. It explains why the system is required and what it will do for the hotel staff and customers.

② scope of the document :

The system will help in booking room managing check in/check out, billing and staff coordiation. It will save time, reduce errors, and improve customer satisfacation. It will also reduce paperwork and make dat access easier

③ overview : The system is a software product that has hotel services like reseravation, billing, customer details and staff records in one place.

2. General description.

The system will allow customers to book rooms. cancle bookings; and request services. staff can manage rooms: check guest details; generate bills. and handle payments. The system is important because it makes hotel management faster, accurate and user-friendly.

3. Functional Requirements.

- Room booking and cancellation
- check-in and check-out management.
- customer details storage.
- Room availability check.
- Billing and payment process.
- staff details management.
- Report generation (daily, monthly)

4. Interface requirements.

- user login for staff and admin.
- customer booking interface. (online / offline
- Payment gateway connection.
- Database connection for storing details.
- Report export in PDF / excel.

5. performance requirements

- Fast booking confirmation within seconds.
- secure data storage.
- handle multiple bookings at the same time.
- low error rate in billing

6.. Design constraints

- * works only on specific hardware/software environment
- * Internet connection required for online booking
- * Limited by database storage capacity.

7. Non-functional attributes

- * security (data protection, login authentication).
- * Reliability (system should work without crashes)
- * Scalability (support small to large hotels)
- * Portability (should work on desktop & mobile).
- * Usability (easy for staff to learn and use)

8. preliminary schedule and Budget: week

The Project will take about 3-4 months to develop. Cost depends on team size and resources, estimated around medium budget level.

→

component	Estimated cost	Remarks
Software development	2,00,000	coding, design te
Database setup	50,000	MySQL
Hardware & networking	80,000	servers; router
training & documentation	30,000	staff training m
Maintenance	60,000	Bug fixes & upd

Table

Credit card Process

problem statement :

Manual credit card handling is insecure and slo
so an automated system is needed to ensure safe . fast . gor
reliable transaction processing.

SRS

(1) Introduction :-

(i) purpose of this document :
This document explains why a credit card processing system is required and how it will help in secu processing
and fast payment handling.

(2) scope of this document :
The system will handle credit card payments verification, fraud detection, billing and transaction history.
It will improve security, reduce errors and allow smooth transaction for customer and merchants.

(3) overview :-
The system is software that process. this docume
of software requirement specification contains the function requireme
use case identification and the non - functional requirements.
The non - functional requirements would be focused at a greato
detail in a business based development environment.

2) General Description :
The system allows user to make payments using credits. It checks the card details, validates user identity
approves or rejects the transaction, and update records.
Merchants can track payments and customers can view
statements.

3. Functional requirements.

- Card verification (number, expiry.)
- secure authentication (PIN/OTP)
- payment approval or rejection
- Fraud detection and alerts.
- Billing and monthly statements.
- Transaction history storage
- Report generation for users/merchants.

4. Interface requirements.

- User interface for cardholders (web/mobile app)
- merchant interface for payment acceptance.
- Bank server connection for authorisation
- payment gateway integration
- Database for transaction storage.

5. Performance requirements:

- Transaction approval in less than 5 seconds
- Secure and error-free processing
- Handle thousands of transactions at once.
- High avilability (24/7 uptime).
- low failure rate.

6. Design constraints.

- Must follow banking/financial standards (PCI DSS)
- Require secure encryption for data transfer
- Dependent on internet and bank server
- Hardware & software must meet security needs

7. Non - Functional Attributes.

- security (data encryption, fraud prevention)
- Reliability (system should never lose data)
- scalability (support millions of users)
- portability (work on multiple devices / platforms)

8. preliminary schedule and Budget.

→ Development may take 5-6 months with a skill team

Budget	Weeks	cost (₹)
software development	4	2, 50,000
Database setup	1	10,000
hardware & networking	1	1, 00,000
security & Encryption	1	40,000
Licenses & tools	2	15,000

3. Library Management system

problem statement :-
" A system to manage books, members, and borrowing/returning in a library".

1 Introduction :-

-> purpose of this document :- The purpose of this document is to defin the requirements for the library management system. It explains why the sy is necessary. Its objectives, and how it will streamline library operations su as books issues. return. fine calculation, and user management

Scope of this document :- The library management system (LMS) is designe to automate library operations of students. staff and administrators. The system provides book management. User registration, issue / return. hand fine management, and report generation.

· overview : The LMS is a centralized software application that allows to access book availability, borrow and return books and manage rese admins can manage the library database. generate reports, and track inv

2. General description

The library management system allows students and staff to se borrow, reserve, and return books in an automated way. It replaces tradi manual method. ensuring efficiency, accuracy and reduced errors.

- Fast and efficient library transaction.
- centralized management of records.
- Automated fine calculation
- Easy report generation for administrator.

Functional Requirements

1. User management (Register, update & delete users & Assign roles)
2. Book managgements (Add, edit, delete and categorize books)
3. Book Search (Search by title, author, ISBN, or category)
4. Issue and return books (track borrow transaction)
5. Fine manggement (Auto-calculate fines for late returns)
6. Reservation system (Allow users to reserve books already issued)
7. Inventory management (track total number of books)
8. Reports generation
9. Notification system. (Emails / sms alerts for due dates)
10. Admin control panel.

Interface Requirements

- User interface : Simple, menu-driven interface for Ease of use.
- Hardware interface :- works on desktop and local servers.
- Software interface :- Support integration with database.

Performance requirements

- System must handle at least 200 concurrent users
- Search results should load in less than 2 seconds.
- Must support 24/7 availability with 99% uptime.
- Data accuracy and reliability must be maintaind.

Design constraints

- Must run on both windows & linux environments
- Should be developed using Java/python with SQL database.
- Limited by storage and network speed.

Non-functional attributes

- Security : Secure login and access control.
- portability : Runs on multiple platforms
- Reliability :- Data backup and recovery
- Reusability :- code modules can be reused
- Scalability :- system can handle future expansion

8. preliminary schedule and budget -

	Phase	Description	Duration	Estimat
1	Requirement analysis	Requirement gathering & feasibility study	2 weeks	20,000
2.	system Design	Database schema, UI design	3 weeks	30,000
3.	Development	Backend & frontend implementation	6 weeks	80,000
4.	Testing	Unit testing, integration testing & bug testing	3 weeks	2500
5.	Deployment.	—	2 weeks	15,000
6.	Training & support	—	2 weeks	10,000
	Total		18 weeks	1,80

Stock Maintenance System

Problem statement :- A System to manage Product details. tracks stock levels . and update inventory efficiently

1. Introduction :-

- purpose of this document : The purpose of this document is to outline the requirements for the stock maintenance system. This system is intended to automate the tracking updating and monitoring of stock levels within an organization .

2. Scope of this Document :- The SMS aims to Streamline stock management for warehouse, shops or industries. The system will keep records of items, supplier, transactions (inward and outward) and automatically update stock levels

- overview :- The SMS is a centralized software system that provides stock level monitoring, purchase/sales tracking, and alert notification. when items reach minimum thresholds. It supports report generation secure data management & future scalability to integrate with billing or accounting system

2. General Description

The stock maintenance system helps organizations efficiently manage stock by automating the recording of stock inflow (purchase) and outflow (sales/usage). It eliminates manual stock registers and enables real-time monitoring .

3. Functional requirements

1. Item management (Add, update, delete stock items)
2. supplier management (manage supplier details)
3. stock inward (purchases) (Record purchase transactions)
4. stock outward (sales / usage)
5. stock level monitoring .
6. Reporting system.

7 Alert & notification system.
8. User management.
9. Backup & recovery
10. Integration.

4. Interface requirements

- User interface : Easy to use dashboard with search & filter option
- Hardware interface :- supports desktops / servers in a LAN Environment
- Software interface :- Database (MySQL / oracle), integration with MS Excel / PD

5 Performance Requirement :

- System should support at least 500 stock items and 50 concurrent users
- Transactions (in/out) must update stock in less than 1 second
- Report should be generated in under 5 seconds.

6. Design constraints

- Must run on both windows and linux platforms
- Should be developed using Java / .NET / python with SQL database
- Limited by hardware storage capacity.

7. Non - functional Attributes

- Security :- Role - based access and password protection
- reliability : Database redundancy and backup .
- scalability :- can handle large stock databases
- usability :- simple navigation & reporting
- maintainability : Easy code updates & modifications.

8. Preliminary schedule and Budget.

Phase	Description	Duration	Estimated cost
1. Requirement analysis	Requirement gathering & feasibility study	2 weeks	25,000
2. System design	Database schema, UI design, architecture	3 weeks	35,000
3. Development	Backend & frontend implementation	6 weeks	90,000
4. Testing	unit testing, integration testing, bug fixes	3 weeks	30,000
5. Deployment	system installation and setup	2 weeks	20,000
6. Training & support	Training staff, maintenance & documentation	2 weeks	15,000
		18 weeks	2,15,0

Passport Automation system.

→ problem statement : . A system to automate passport applicat verification and issuance processes for citizens.

→ Introduction:

1.1. purpose of this document :. The purpose of this document is to defin requirements of the PAS. This system is designed to automate the entire Passport application and approval process, minimizing manual interventi It provides applicants with an easy, secure and transparent way to apply fo Passports, track their status, & receive notification about their applicatio Progress.

1.2. Scope of this document :-

The passport automation system will allow citizens to apply for ne passports, renewals and re-issues online. The system will handle data entry document submission, fee payment, scheduling of verification appointments a Status tracking.

1.3 Overview :-

The passport Automation system automates passport services by all . and police verification authorities It ensure security, transparency, and eff in the entire lifecycle of passport service - from application submission t issuance.

2. General Description

The passport Automation system automates passport services by allowing applicants to submit forms, upload documents, pay fees and tr application online. it also helps government authorities to verify details an records, and approve / reject applications efficiently.

Key Benefits :- * Easy and transparent application process
- * Real-time tracking of passport status
- * Reduced manual workload for passport offices
- * faster decision-making with online verification.

3. Functional requirements :

1. Applicant module :- .
   * Online registration and login
   * Application form submission (new/ renewal / re issue)
   * Upload of required documents
   * online fee payment (via credit /debit /UPI /net banking)
   * slot booking for document verification / biometrics
   * Application status tracking.

2. Admin module (passport officers) :
   * Review submitted applications .
   * Verify uploaded documents
   * Approve or reject applications
   * Manage appointments, and scheduling
   * Generate passports and dispatch notification

3. policy verification module :-
   * Access applications assigned for verification
   * Record verification details
   * update verification status online

4. Notification & Alert system :

5. Reports & Analytics .

6. Security & User management

7. Back up & Recovery .

4. Interface Requirements

-> User interface : web-based system accessible via browser & mobile devices

-> Hardware interface :. support government servers & biometric devices

-> Software interface :- Integration with Payment gateways , Policy verification databases . & Emails / SMS

5. Performance Requirements

* Must handle at least 5,000 concurrent users .
* passport status update in real-time .
* Reports generated within 10 seconds .

6. Design constraints :

* Must comply with government IT security standards
* only authorized personnel can access sensitive records
* should support multilingual interface

7. Non-functional Attributes

* Security: Data encryption, secure transactions.
* Reliability: 24/7 availability with 99% uptime
* Usability: user-friendly portal for applicants of all age groups
* Scalability: should supports increasing number of applicants annual.
* Maintainability: Easy updates for policy changes

8) preliminary schedule and Budget :

Phase	~~Description~~	Duration	estimated cost
> Requirement Phase		5 weeks	50000
2) system design		6 weeks	65,000
3) Development		8 weeks	25,000
4) Testing		7 weeks	30,000
5) Development		3 weeks	25,000
6) Training & support.		2 weeks	25,000
		28 weeks	220,000