LAB - 1

1) Hotel Management System

Problem statement:- Automated Hotel Management System

Many hotels still rely on manual systems to manage room bookings, check-ins, billing, guest information, etc. These outdated methods are error prone, time consuming.

Hotel staff struggle to keep track of room availability, guest history, etc in real-time.

Rephrase

SRS

Introduction

Hotel Management system is used for keeping track of rooms availability, billing processes, etc.

Purpose:- Manage hotel operations including room bookings, check-in/check-out, billing and reporting

Scope:- Supports front desk operations, room inventory, guest management, payment processing and reporting.

General Description

standalone system or part of an enterprise hotel management suite.
It includes a backend database, Email and SMS notification services.

Functional requirements (Add)

-> Room Management : editing room details (Add/update/delete), availability status.
-> Booking Management : create, modify cancel bookings.
-> Check-in/checkout : Recording guest arrival, departure, update room status.
-> Billing operations : keeping track of billings and organizing.

Non Functional Requirements

-> Performance : Handling of bookings without any lag
-> security : secure user authentication and payment processing
-> Reliability : Data backup and recovery
-> Usability : Intuitive UI for front desk.

Maintenance

Interface Requirements

User Interface

Web based interface for staff & management with dashboards.
Mobile application for ease of use.

Hardware Interface

Integration with model specific key using appropriate digital locks.

Performance Requirements

-> Booking engine must reflect real-time room availability
-> Database operations should execute faster under standard load.

Preliminary schedule and Budget

	Weeks	
	Duration	Est Cost
Requirement analysis	1 ~~month~~ week	₹ 5000
System Design	1 month	7000 ₹
Implementation	3 months	25,000 ₹
Testing	1 month	8000 ₹
Deployment	1 month	5000 ₹

2) Credit Card Processing system

Problem statement :-

secure Credit Card processing system

To ensure real-time transaction processing, fraud prevention and full compliance with financial security.

SRS

Introduction

1.1) Purpose -> To automate the entire process of credit card handling & securities.

-> Scope :- The system will handle card approvals, payments, fraud detection, etc.

-> Overview -> A secure & efficient system for credit card users & banks.

General description

The system allows customers to used credit credit card services very smoothly.

Functional Requirements

- Transaction processing
- User authentication
- Fraud detection system
- Bill generation

Interface Requirements

- Secure login for customers & admin
- Transaction history display
- Low error rate.

Performance Requirements

- High processing speed
- 24/7 system availability
- Minimum failure rate.

Design Constraints

- Requires secure encryption
- Must follow banking regulations

Non functional attributes

- Security & reliability
- Scalability for larger user base.
- Cross platform.

Preliminary schedule and Budget

Requirements analysis	Duration - 3 weeks	Cost: 20000 ₹
System Design	4 weeks	30000 ₹
Development	12 weeks +2000	120000 ₹
Testing	6 weeks	40000 ₹
Deployment	2 weeks	150000 ₹
Total	27 weeks	360000 ₹

Library Management system

Problem statement

We need a software to handle book records, issues records, member data & return/borrow of books.

SRS

Introduction

Purpose -> To automate book return, issue, & record management libraries.

Scope -> The system will manage book catalog, members & borrowing transaction

Overview -> A digital solution to library management.

General description

The system will maintain details of books, members & issue/return records. It will reduce manual work & save time.

Functional requirements.

- Book search & catalog management.
- Member registration & records
- Book issue & return tracking
- Report generation.

Interface requirements

- Login for librarian & admin.
- Search options for books.
- Database for records.

Performance requirements

- Quick search & updates
- Concurrency control
- Fast startup

Design constraints

- Works on local computers / web based
- Requires database system.

Non functional attributes

- Data security & reliability
- Easy to use for librarians
- Scalability for large libraries

Preliminary schedule & Budget

Phase	Duration (in weeks)	Cost
Analysis	2	2000
System design	4	3000
Development	8	3000
Total	14	8000

Stock maintainance system

Problem statement

A software for stock maintainance system

SRS

Introduction

Purpose: To maintain & manage stock records effiently saving time & efforts.

scope: The system helps organisations track available stocks, update sales/purchase details & generate reports.

Overview: The software provides automated stock management for businesses.

General description

The system will maintain track of available stocks, generate reports & update stock details, which will reduce manual labour & save time.

Functional requirements

- Add new stock item
- Update stock on sales/purchase
- Generate daily/monthly reports
- Notify store keeps

Interface requirements

- UI for admin / staff.
- Stock search option.
- Database for records.

Performance requirements

- Must handle atleast 2000 transactions/day.
- Response time < 2 seconds
- High Fault-tolerance.

Design constraints

- Should be cross platform
- Concurrency control

Non Functional requirements

- Data security & encryption
- Backup & recovery support
- Scalable for huge user database

Preliminary, schedule & Budget

Phase	Duration in weeks	Cost
Analysis	2	2000
Development	4	3000
Testing	2	1000
Total	8	6000

Passport Automation System

Problem statement

A software for passport automation system

SRS

1) Introduction

Purpose :- To automate passport authentications, applications, verification & issuance.

Scope: The system allows users to apply online, schedule appointments, upload documents, track status & raise queries.

Overview :- A web based solution that streamlines passport services.

General description

The system will maintain passport status & will deal with passport related services, hence reducing time & manual labour.

Functional requirements

- User login/registrations
- Online application submissions
- Document verification
- Status tracking

Interface requirements

- Web interface for users & officials
- SMS / Email service
- Database connectivity

Performance Requirements

- Should handle 100000 concurrent applications.
- Response time < 2 seconds.

Design Constraints

- Government security standard compliance.
- Cross platform compatible.

Non functional requirements

- security :- data encryption
- Backup & recovery support
- Scalability for huge database

Preliminary, schedule & budget

Phase	Duration in weeks	Cost
Analysis	4 weeks	2000
Development	5 weeks	5000
Testing	3 weeks	2000
Total	12 weeks	9000