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SRS for Hotel Management System

Problem statement: To design system that automate hotel operation such as reservation, billing, housekeeping and improving customer experience

1 (1) Introduction -

• purpose of document
It is to outline the requirements and specifications for development of hotel management system. It will provide clear understanding of project objectives, scope and deliverables.

• Scope of document
This document defines the overall working and main objectives of Hotel Management System. It includes description of development cost and time req for the project.

• 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 and management, providing features such as room booking, guest profiles and financial reporting. It will be accessible to users with varying level of technical expertise.

(3) Functional requirements -

• Reservation management: allow users to reserve room online or through desk and generate reservation confirmation and send notification to guests

- Room management - assign rooms to guests based on availability and preferences and track room status in real time
- Guest management - Maintain guest profiles with personal info, preferences & booking history & facilities guest check in and check out
- Billing invoicing - Generate accurate bills for room charges, additional services & taxes & Accepting various payment methods & generate invoices

(4) Interface Requirement -
- User interface -
intuitive and user friendly interface for hotel staff and guests & accessible with browsers, mobile devices & desktop applications
- Integration Interface -
Integration with payment gateways for secure transactions Integration with third party booking platforms for channel reservation management

(5) Performance requirement -
- response time - The system should respond to user actions within 2 sec
- Scalability - Handle a minimum of 1000 concurrent users during peak hours
- Data integrity - ensure data consistency and accuracy across all modules

(6) Design constraints -
Hardware limitation - The system should be compatible with computers, printers, POS terminals
Software dependencies - Utilize a relational database management system for data storage

(7) Non functional attributes
- Security - implement robust authentication and authorisation mechanism to protect sensitive data
- reliability - Ensure high availability and fault tolerance to minimize system downtime
- Scalability - Design the system to accomodate future growth and expansion
- Portability - support multiple platform and devices for user accessibility
- Usability - The system shall have a user friendly interface with clear navigation

(8) Preliminary schedule and Budget. The development of Hotel Management System is estimated to take 6 month with a budget of $100,000. This includes project planning development testing and deployment phases

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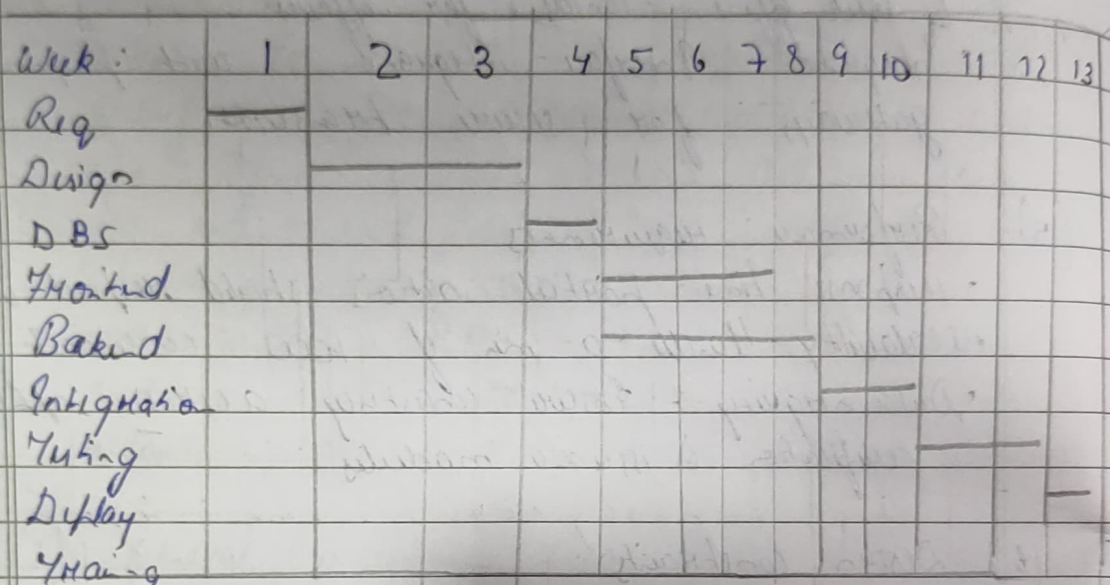
Timeline chart
H/MS



Effort estimation & cost calculation

Total LOC ≈ 10,300
Productivity rate ≈ 2500 LOC/person-month
Effort = LOC / Productivity = 10300/2500 = 4.12 ~ 5 person-months

Total cost = Effort * cost per person
= 5 x 75,000 = 3,75,000

SRS for credit card processing system (CCPS)

(1) Introduction -
- Purpose - to outline the requirements and specification for development of credit card processing system
- Scope - It defines the overall working and main objectives of CCPS. It includes cost & time required for project
- Overview - The CCPS is a secure software solution for transaction authorization, clearing, settlement & reporting.

(2) General description -
The system will serve merchants and provide features such as card validation, authorization routing, batch settlement, fraud check & financial reporting.

(3) Functional requirements -
- Authorization & validation - validate card number, expiry, and CVV
- clearing and settlement - capture authorized transaction and batch them for settlement.
- refunds & chargebait - Initiate partial / full refunds
- Fraud management - Apply rule-based and velocity checks, trigger alerts & hold/deny transactions
- Reporting & statements - provide merchant statement, fees & summaries

(4) External requirements -
- User interface - intuitive and user-friendly web-console for merchants and operations
- Integration interface - integration with payment networks for secure transactions

(5) Performance requirements -
- Response time - The system should respond to authorization requests within 2 secs
- Scalability - Handle min of 1000 concurrent transactions during peak hours
- data integrity - ensure consistency & accuracy

(6) design constraints -
Hardware - compatible with standard hardware and HSM
- software dependency - utilize and an RDBMS

(7) Non-functional requirements -
- Security - strong authentication, authorization and encryption of cardholder data
- reliability - High availability & fault tolerance
- Scalability - designed for horizontal scaling
- Portability - support multiple platforms & devices
- usability - clean navigation

(8) Preliminary schedule & Budget -
approx 6 months, $120,000 includes planning, development, verification & deployment

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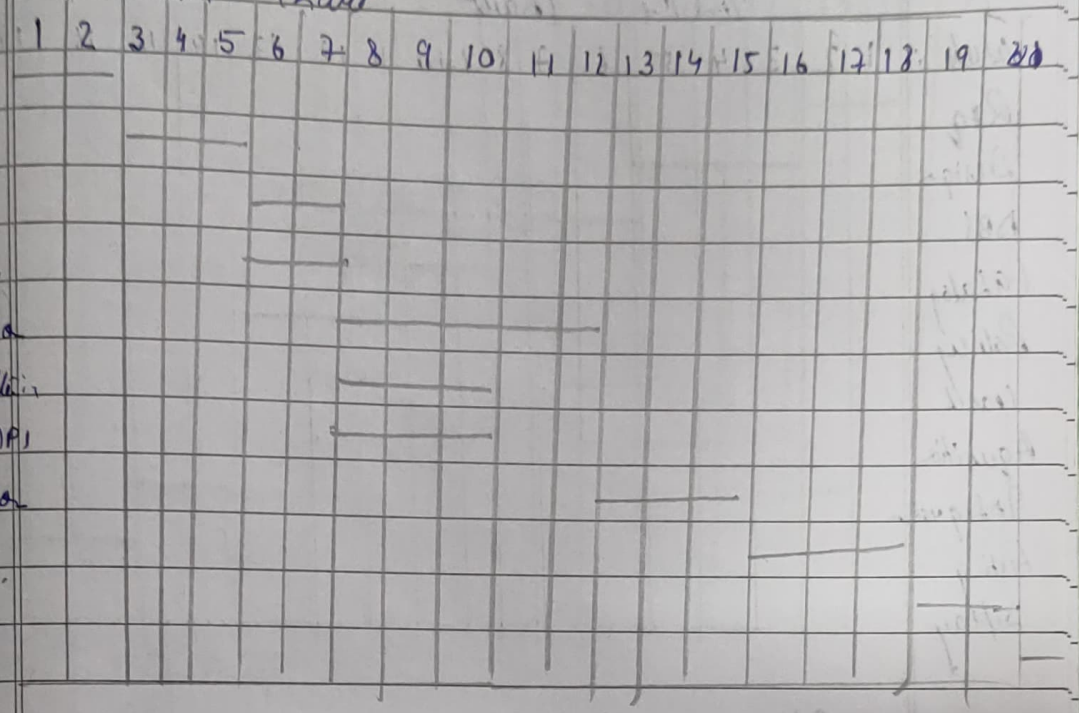
Credit Card Processing system

Timeline chart



Effort estimation

Total LOC = 15,200

Productivity = 1000 LOC

Effort = LOC / Productivity = 15200 / 1000 = 15.2 ≈ 16 person-months

Cost = Effort x cost

= 16 x 75,000 = ₹ 12,00,000

Problem statement: We are developing a system that is automated to securely process credit card payment, verify transaction, detect fraud and maintain account records in real time. It'll handle authorization, authentication, billing, fraud detection, refund, reporting, fast, secure, error free transaction for customers & merchants.

SRS for library Management System

(1) Introduction -
- Purpose - to outline the requirements and specification for development of LMS scope and deliverables
- Scope - defines the overall working and main objectives of LMS including cost and time estimate
- Overview - The LMS streamlines cataloging member management circulation fines & reporting

(2) General description - The system will support librarians members and admins with features such as catalog search, reservations / holds, overdue processing & analytics, It will be usable by non technical staff.

3) Functional requirement
- Catalog & search - Maintain bibliographic records, availability status
- Membership management - Register members and manage profiles, validity & categories
- Circulation - Issue/return and renew with due date calculation
- Fines & payment - Calculate fine for overdue & record payments

(4) Interface requirements
(1) User Interface - Intuitive web UI for librarians and members frontend for self service
(2) Integration Interface - support import/export via MARK/CSV

(5) Performance requirements
- Response time - typical search and circulation action should respond within 2 secs.
- Scalability - support at least 1000 concurrent users during peak campus hours
- Integrity - Enforce integrity for items, members & transactions

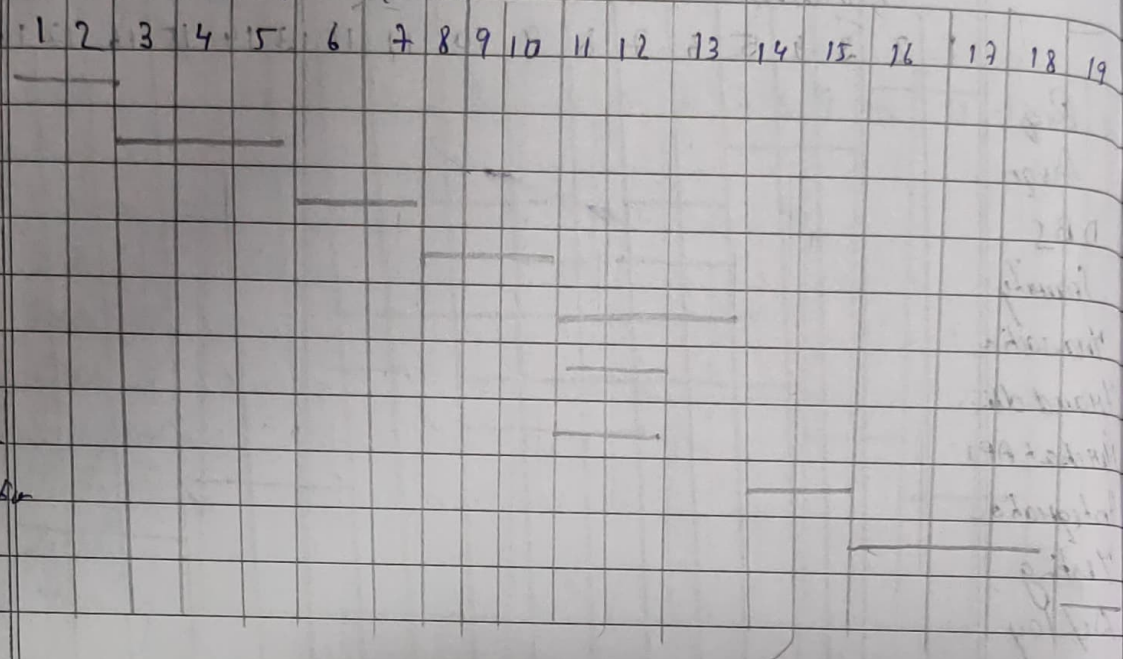
(6) Design constraints -
- Hardware limitations - work with standard PCs, barcode, printers & scanners
- Software dependencies - RDBMS for data storage, web stack.

(7) Non functional attributes
- Security - role based access control
- Reliability - Backups / restore and minimal downtime during maintenance
- Portability - Multiplatform browser support
- Usability - User navigation
- Reusability - Modularization of circulation, catalog

(8) Preliminary schedule and budget - estimated duration 4 months, budget $ 70,000

Library Management System,

Time line Chart



Effort estimation

Total LOC = 10600

Productivity = 1000 LOC

Effort = LOC / productivity = 10.6 ≈ 11

Cost = Effort * Cost per person

= 11 * 75000

= 7 82500 ₹

Problem Statement :

Develop a system to manage cataloging, member registration, lending / returns, reservation, fine, digital resources.

SRS for Stock Maintenance System (SMS)

(1) Introduction :
- Purpose - to outline requirements and specifications for a SMS detailing objectives, scope & deliverables
- Scope - define the overall working and main objective of inventory control
- Overview - The SMS manages stock levels, item masters, suppliers, goods receipts & consumption/sales tracking

(2) General description - The system supports storekeepers, purchasing staff and managers with features such as reorder alerts, batch/lot tracking, valuation reports & supplier performance

(3) Functional Requirements
- Item & warehouse management - maintain item master categories, units and locations, track & record & available quantity
- Procurement - create purchase requisition & purchase orders, record goods receipts with supplier batch expiry and cost
- Stock movements - Issues / transfers / adjust stock, record ie reasons & approvals
- Alerts & Replenishment - Reorder point calculation & low stock alerts
- Reporting - Stock valuation, ageing / consumption alerts

(4) Interface requirements -
User interface - interactive dashboards for stock status & alerts & accessible in a browser mobile device
- Integration Interfaces - Integration with barcode scanners / POS systems

(5) Performance requirements -
- Response time - stock lookup and transaction posts should respond within 2 seconds
- Scalability - Supports at least 1000 concurrent users
- Data integrity - Enforce transaction integrity

(6) Design constraints
Hardware limitations - compatibility with standard desktop, label printers barcode devices
- Software dependency - RDBMS

(7) Non functional attributes -
- Security - authentication / authorization & least privilege access to stock area
- Reliability - ~~right~~ availability
- Scalability - scale across multiple warehouse branches
- Portability - Multi platform browser support
- Usability - Role - specific views
- Reusability - Modular components for items - procurement and reporting

(8) Preliminary, schedule & Budget - Estimated duration 5 months, estimated budget $ 85,000

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Stock Management system — Timeline chart

weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Req Design															
DBS															
Cataloging															
Registration															
Borrow fines															
report															
implementation															
display															

Effort estimation.

Total LOC

Productivity

Effort = LOC / productivity

Cost = Effort * cost per person-month.

Problem statement: Develop a system to track stock, monitor sales, prevent shortage, avoid overstock, automated with billing. System allows multiuser access, real time update.

SRS for Passport Automation System (PAS)

(1) Introduction -
- Purpose - To outline the requirements and specification for a passport automation system
- Scope - Define overall workflow and major activities for end to end passport application, verification, status tracking including fee & schedule
- Overview - The PAS is a secure solution enabling multi-application documents uploads, appointment scheduling, biometric capture

(2) General description - The system will be used by applicant, verification officer & administration supports role based processing document verification for payments & dispatch tracking.

(3) Functional requirements
(1) Applicant services - user registration, profile management & application form submission, Doc upload with validation.
(2) Verification & processing - officer work queues for document review and application scrutiny, record police verification status and remarks.
(3) Biometric & photo handling - capturing & storing biometric reference ID's Quality checks & secure transfer to central system system.
(4) Notification & tracking - Real time status updates via mail / SMS

(4) Interface requirements
- User Interface - user friendly portals for applicants & back office console for officers
- Integration Interface - integration with payment gateways for secure transaction

(5) Performance requirements
- Response time - portal actions should respond within 2s
- Scalability - Handle a min of 1000 concurrent users
- Data integrity - Ensure consistency across application verification & issuance modules

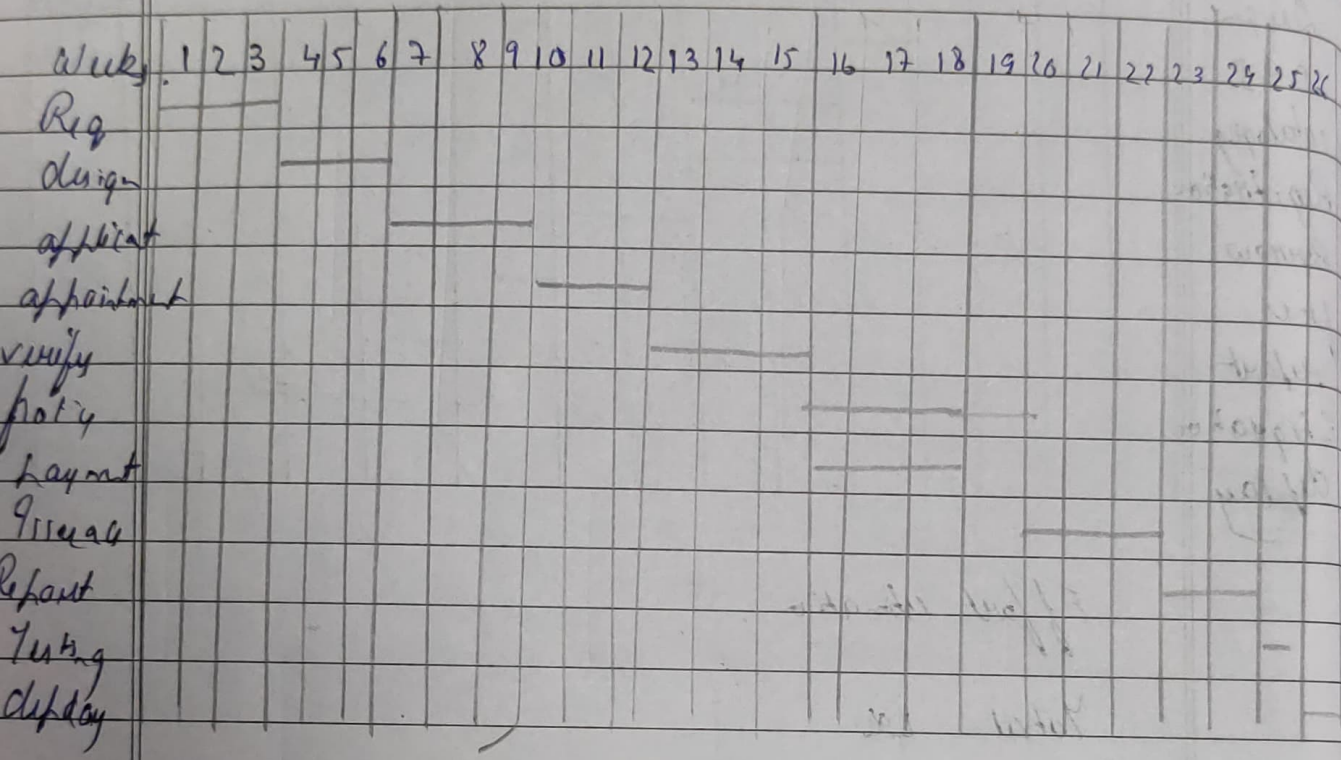
(6) Design constraints
- Hardware limitation - compatible with standard office hardware & biometric capture
- software dependencies - RDBMS

(7) Non-functional attributes
- Security - Robust authentication / authorization
- Reliability - High availability & disaster recovery
- Scalability - architecture to accomodate growing applicant volumes & new centers
- Portability - Multiplatform browser support for broad accessibility
- usability - User navigation, progress indicators, form validation

(8) Preliminary schedule & Budget - Estimated duration 6 months budget: $ 110,000

PassPort Automation System

Month Timeline Chart



Effort estimation and cost calculation

Total LOC =

Productivity

Effort = LOC / productivity =

Cost = effort * cost per person-month

Problem statement: Develop a system that'll digitalize and to end operations like registration, application filling, document upload, appointment, biometric, fee payment, police verification, Division's, tracking & dispatch. tracking & grievance with security availability.