

# Passport authentication

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## Introduction:-

- Purpose: It is designed to securely verify the identity of individual using a passport as a primary identification document. The system <sup>ensure</sup> that passports presented are genuine & minimizing the risk of fraud.
- User

The system will be used by government agencies, immigration departments, & airports to authenticate passports efficiently. The system will focus on reading passport data, validating it with centralized database.

## Overview:-

The PAS will follow the following flow:

- Scan & extract passport information using OCR & MRZ data
- Validate the extracted data against an authoritative database or passport chip for verification.

- General Description: Users: Border control officers, immigration officers, bank officials & airport security personnel.
- Modules: Passport scanning, data extraction, logging

## Functional Requirements:

→ Passport scanning

→ Data Extraction

→ Database validation

→ Facial Recognition

→ Alert System.

## → Interface Requirements :-

- UI :- A simple, user-friendly interface for operator to quickly scan & authenticate passports.
- API :- Facilitate integration with other systems.
- Admin Interface :- Provide access to system settings, monitoring, and reporting.

## → Performance Requirements :-

- Response Time :- The system should authenticate 35 seconds. (within 30 seconds of a valid passport).
- Capacity :- Should handle concurrent processing of at least 50 passport authentication per second.

## → Design Considerations :-

- Compliance :- Must comply with International Standard such as ICAO Doc 9303 for machine readable travel documents & security standards.
- Scalability :- The system should be scalable to handle increasing no. of passports & user loads.

## → Non-Functional Attributes :-

- Security :- Use encryption for all data transmitted between passport reader & server.
- Reliability :- High reliability if required.
- Maintainability
- Usability.

## Preliminary Schedule

- ⇒ Planning & Requirement Gathering : 2 weeks
- ⇒ Design & Prototyping : 3-4 weeks
- ⇒ Development - 8-10 w
- ⇒ Testing & Quality Assurance - 3 w
- ⇒ Deployment : 2 w.
- ⇒ Total Estimated Duration - 18-20 w

## Budget :-

- ⇒ Development Team Costs :- \$ 80,000
- ⇒ Hardware Costs : \$ 10,000
- ⇒ S/W Licenses : \$ 5,000
- ⇒ Maintenance Costs : \$ 15,000

Total Project Budget Estimate : \$ 105,000

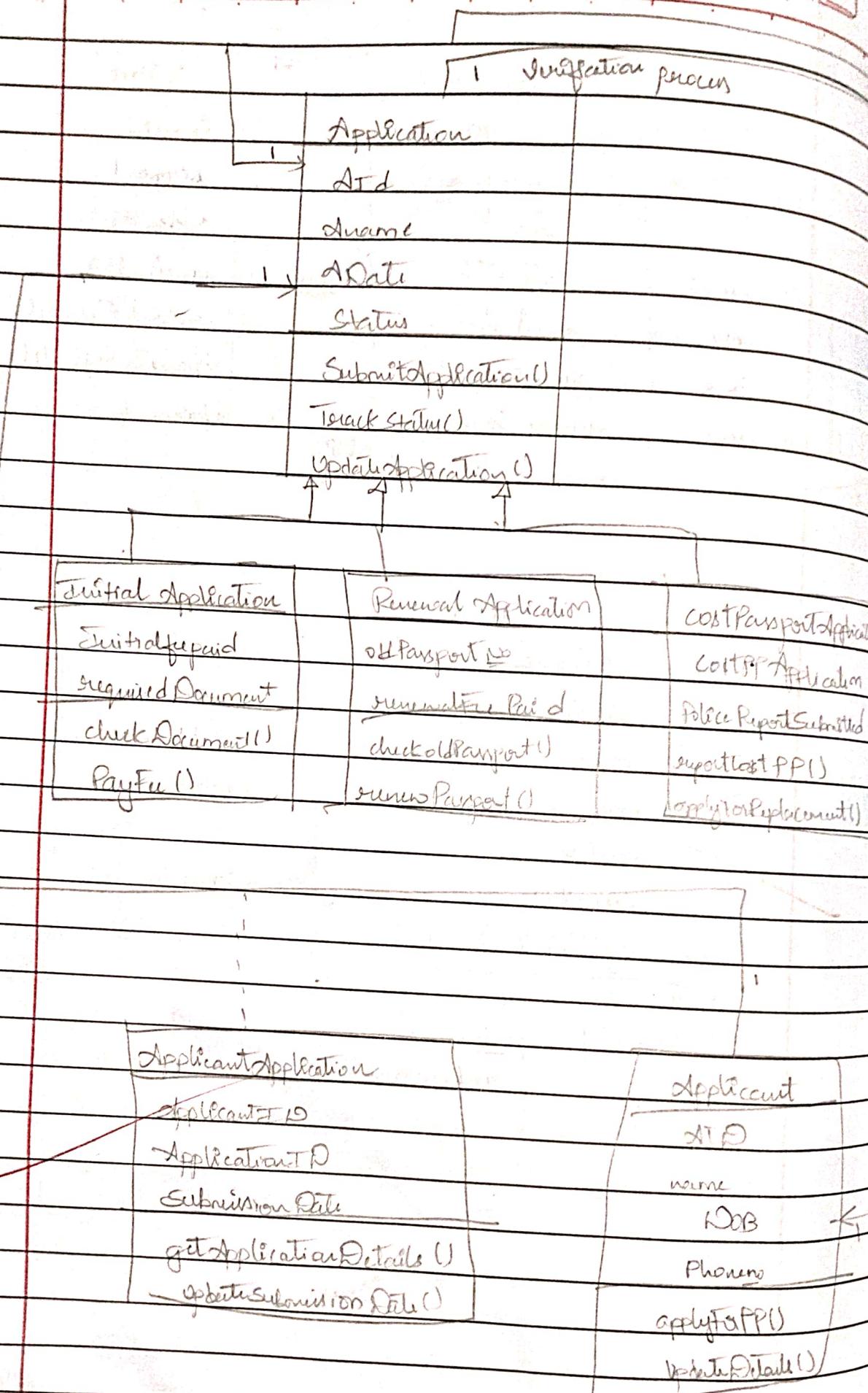
Aug 2012

# Passport Authentication System

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paid for

indugon

verified application

	Passport
PNo	
IssueDate	
expiryDate	
isValid()	
	getPassportDetails()

	Verification
ZIP	
OfficeID	
IP	
Status	
	performVerification()
	updateStatus()

conducted By

	Officer
OfficeID	
name	
department	
assigned application	
	assignApplication()
	cancelApplication()

	Fee
FIP	
amount	
ApplicationF	
Paid	
	payFee()
	getFeeDetails()

\* workEmbassy

Engagement

	Embassy
GID	
Location	
ContactNo	
PassportDelivery	
processDelivery()	
contactEmbassy()	

Embassy  
officerSerial  
Passport

# Stock Maintenance System (SMS)

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## Introduction:

- Purpose :- The purpose of the (SMS) is to streamline & automate the process of tracking & managing inventory levels, orders, & sales in real-time.
- Scope:- The system will be used by retail store, warehouse, & e-commerce platform to maintain stock levels & track products from suppliers to consumers. It will key functions such as stock monitoring, order processing, & report generation.
- Overview:- SMS will be a web or desktop-based application that allows users to:
  - Add, remove & update inventory data.
  - Track stock levels in real-time.
  - Create reports for restock analysis, monitoring, & sales.
  - Handle stock transfer b/w different locations.

- General Description:
  - Users:- Store manager, warehouse operator & inventory clerk.
  - Inventory management, Order processing, Reporting.
  - Technology Stack:- Can use MERN stack (MongoDB, React for web based or Java for desktop-based systems).
- Security:- Role-based access control (Admin, Manager).

- Functional Requirements:
  - Inventory management:- Ability to add, edit & delete items from stock.
  - Stock monitoring:- Real-time update on stock availability & alert when inventory levels are low.
  - User Roles:- Different roles with specific access levels (Admin, Manager, Clerk).

## → Interface Requirements :-

- UI :- A user-friendly, responsive web-based interface with simple navigation for non-technical users.
- Admin Interface :- More detailed, with functionality for stock adjustments, report generation, & supplier management.
- API :- RESTful API's for integrating the stock system with 3rd-party platforms such as e-commerce & accounting SW.

## → Performance Requirements :-

- Response Time :- The system should respond within 2 seconds for inventory queries & order generation.
- Availability :- The system should have 99.9% uptime to ensure availability for stock management.

## → Design Constraints :-

- Scalability :- The system should be scalable to accommodate additional users & stock items as the business grows.
- Data Storage :- Relational or NoSQL database should be able to handle large datasets & fast retrieval.

## → Non-Functional Attributes :-

- Security :- Use encryption for sensitive data like supplier details & financial records.
- Reliability :- System must be reliable with minimal downtime.
- Usability :- The system should be intuitive & easy to use, requiring minimal training.

→ Preliminary Schedule :-

- Planning & Requirements Gathering : 2 weeks
- Design & Prototyping : 3 weeks
- Development : 5-8 weeks
- Testing & QA : 3 weeks
- Deployment : 1 week
- Total Estimated Duration : 15-17 weeks.

Budget :-

→ Development Team Costs : \$ 50,000

HW costs : \$ 5000

SW ~~costs~~ Licenses : \$ 2000

Maintainance costs : \$ 10,000

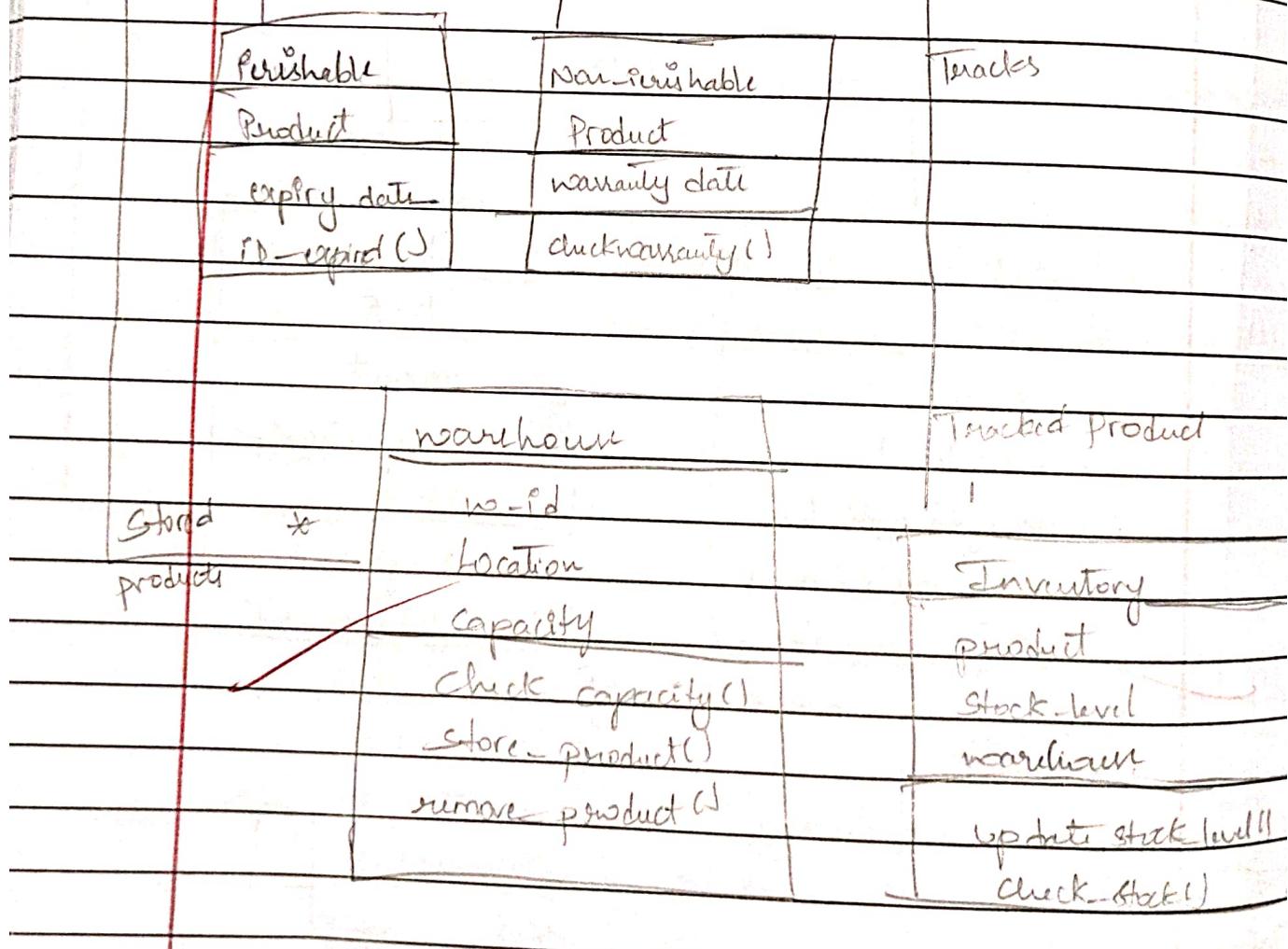
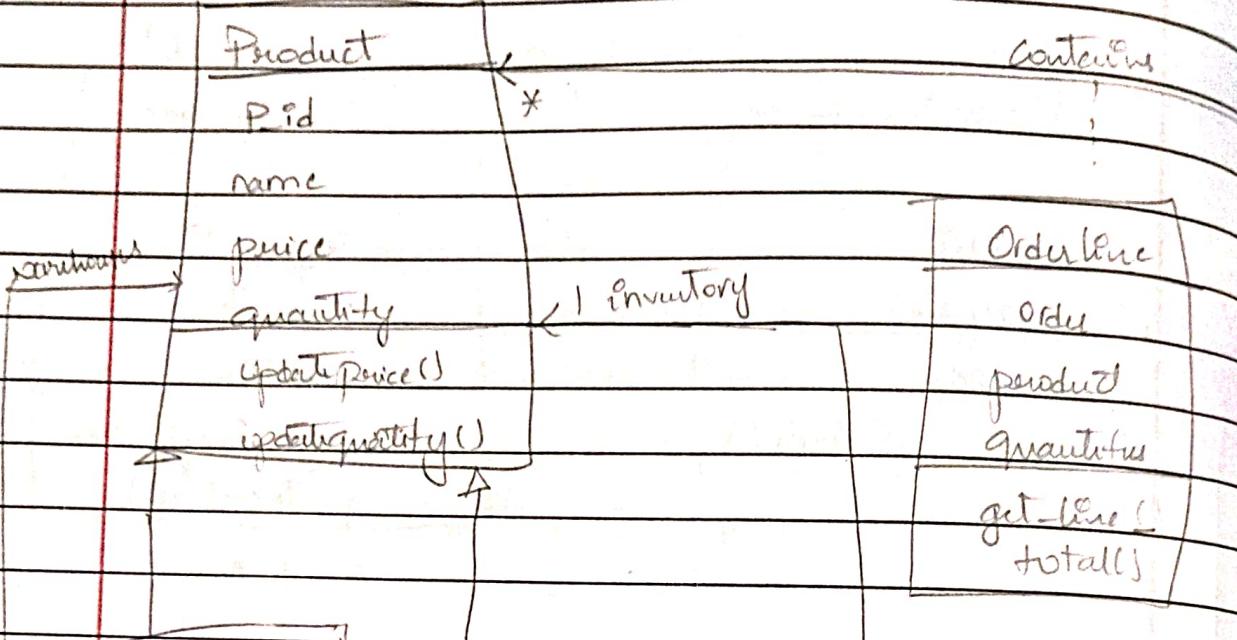
Total Initial Budget Estimate : \$ 67000

# 5) Stock Management System

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Supplied by



	Order	
*	O-id	
	product-list	
	order-data	
	status	
	add-product()	
	update-order()	
		Supplier
		S-id
		name
		contact-info
		edit-supplier()
		update-contact()
		Information

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	Purchase Order
	P-o-id
	Supplier
	product-list
	order-data
	place-order()
	track-order-status()

dry storage

Lab  
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Passport Voucher authentication  
Library

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## → Library Management

### → Introduction

- Purpose of Library Management:
  - The purpose of LMS is to simplify & automate various tasks related to the administration & operation of a library.

Facilitate easy access to vast collection of books & resources

### Scope:

- Cataloging
- Member management
- Lending management

### Reporting & Analytics

### Overview

It consists of several modules that work together to handle library functions. It is designed to streamline the management of library resource & enhance the user experience for both staff & members.

### General description:

- It is software designed to automate & manage the operations of library.
- Catalog management: Manage the operations of library. It helps book lending & borrowing, catalog & resource tracking.
- Catalog management
- Member management
- Transaction management
- Report generation

### 3) Functional Requirements

- User management
- Book management
- Search & Discovery
- Borrowing recovery.
- Fine & Penalty management

### 4) Interface Requirements

It describe the interaction b/w user & system, as well as external systems.

- UI → web Based Interface
- Administrative Interface
  - or Dash board
  - or Role based access
- External Interface
  - Integration with other systems.
  - Online Payment gateway.

### 5) Performance Requirements: It ensure that the system functions efficiently under normal & peak loads, ensuring a smooth user experience.

- Response Time
- Scalability
- Availability
- Fault Tolerance

### 6) Design constraints: They are limitations or restrictions that the system must develop.

The constraints include

- Hardware constraints
- Software constraints
- Regulatory constraints

→ Time constraints

7) Non-functional :- It refers to the quantity attr.

- Entity of the system.

They focus on efficiency, reliability, maintainability.

→ Performance

→ Security

→ Maintainability

→ Usability.

8) Preliminary Schedule & Budget :-

→ Week 1 :- Project Initiation

→ Week 2 :- Requirements Gathering

→ Week 3 :- Design and Architecture

→ Week 4 :- Develop

→ Week 5 :- Testing

→ Week 6 :- Deployment

→ Week 7 :- Maintenance & Support.

Estimate Budget breakdown

I) Software & Tool cost 10,000

II) Hardware cost 15,000

III) Training & Troubleshooting & Documentation 5000

IV) Maintenance cost 5000

V) Contingency Fund 11,000

Total estimated budget for the project is ₹ 36,500/-.

# Library Management System

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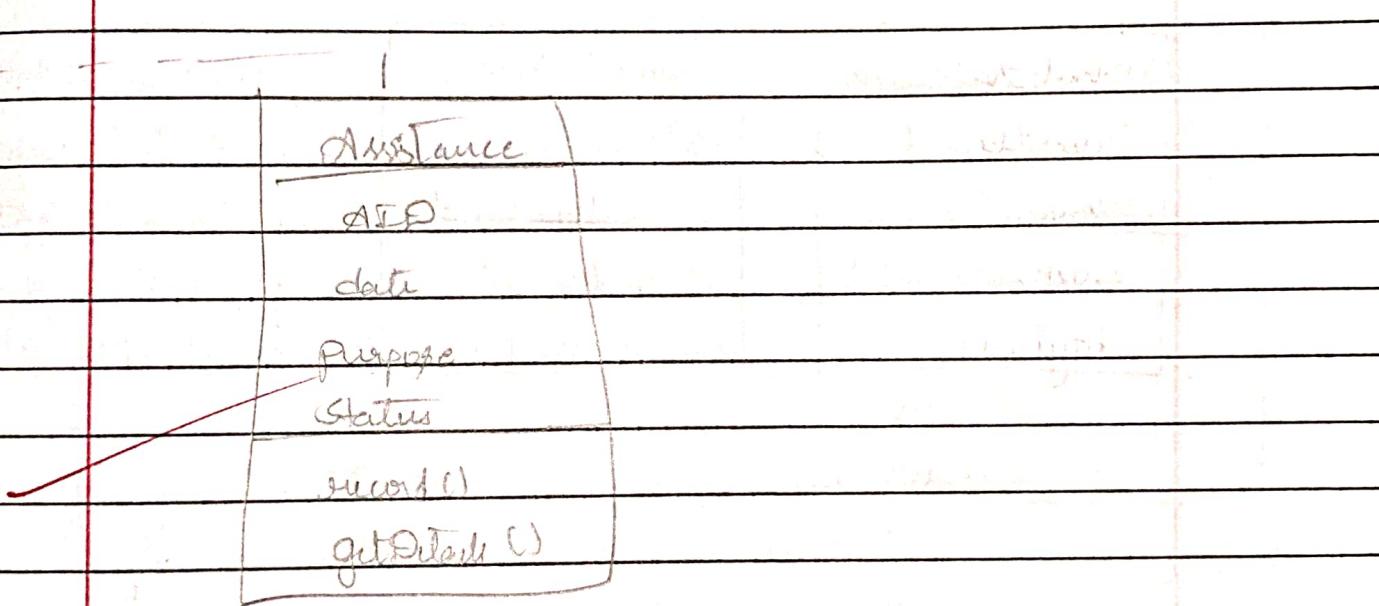
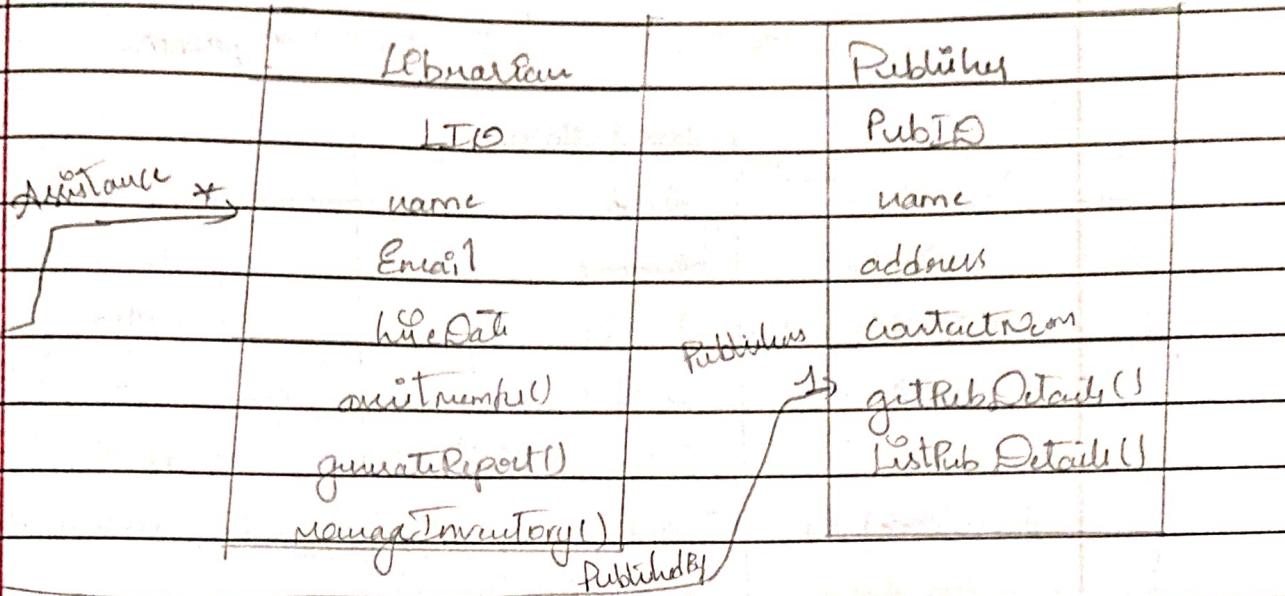
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Library		Book
LibID		Book.ID
name	1	contains
location		x
addBook()		Title
regMember()		Author
removeBook()		Publisher
findBook()		Availability
	1	getDetail()
register		checkavailability()
*		Includes

Member		Loan
MemID		LoanID
Email	1	Borrows *
name		amount
borrowbook()		date
returnBook()		status
getMembershipDetails()		isOwed()
*	*	extendLoan()
		getDetails()

Student Member	Adult Member
School Name	Occupation
Grade	getDetails()
getDetails()	



## → Hotel Management System :-

Problem Statement → They require efficient management to handle daily operations, such as which involve managing reservations, customer service availability of room, arranging the staff, scheduling their work, over room booking, delayed checkout, Empoyer management of billings Empoyer management in parking.

Goal is to develop some basic required operations are

→ Customer Management

→ Billing and Payment

→ Room booking

→ Highly automated parking management

→ Food management

→ Super-

→ Reservation Management:- Handle booking,

reservation, cancellation & modifications.

→ Staff Management:- Proper Training to the staff & handle & maintain them.

→ Room Management:- Managing room availability & maintenance & pricing.

→ Billing & Payment processing:- Handle invoice payments & manage transactions

### Functional Requirements :-

→ User Management:- Create, delete & update accounts

→ Role based access for different type of user (Manager)

→ Reservation Management:- Create, delete & modify Reservations  
→ Send mails to the booking guests.

→ Billing & Payment: Generate Invoice of guest, manage payment

→ Check in / check out on time management.

### Non-Functional Requirements

→ Performance: The system should handle multiple users at the same time without any degradation in its efficiency.

→ Availability: System should available to all customers even if crowded at the same time.

→ Security: It should validate customers data & keep secure from any threats & scams & safeguard the user information.

→ Backup & Recovery: The system should have backup & recovery of user data when the system should crash.

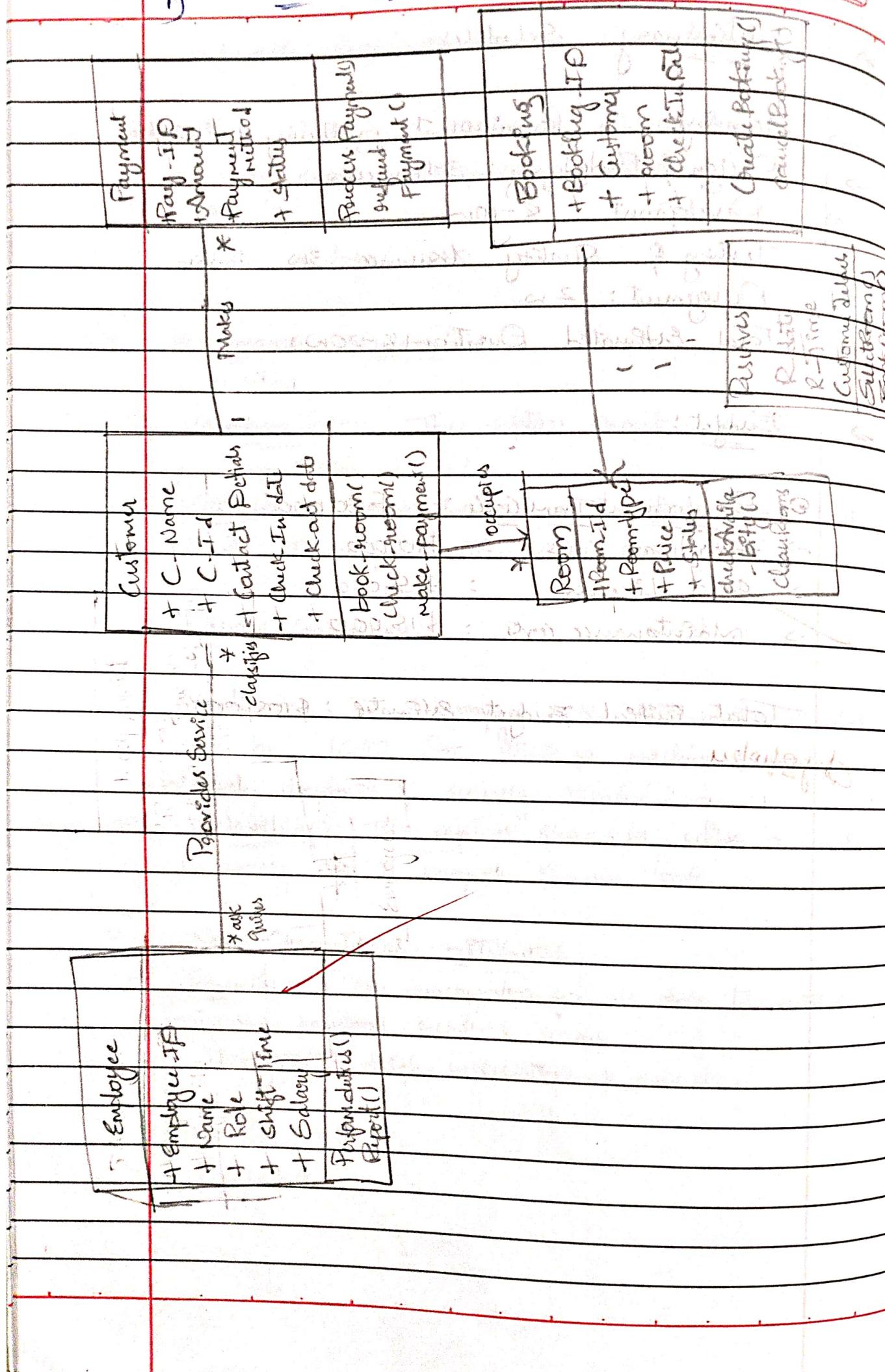
### Domain Requirements

Booking Policies: Management should implement the policies for the user bookings, check-in / check-out & for other services that include booking.

J

class diagram

for TMS:-



Credit Card:

Problem Statement: The current credit card service has been experiencing a decline in customer satisfaction, resulting in lowered churn rates & reduced market competitiveness. Feedback from user indicates concern regarding transaction processing times, hidden fees, & technical support.

Key Challenges:-

- Transaction speed
- Fee Transparency
- Security concern.

Scope:-

It aims to provide customers with a reliable, secure & user friendly.

- Card features:-  
\* Multiple card options (e.g.; standard, rewards, secured).

Contactless payment capabilities

- Transaction Management
  - Real time transaction alert
  - Detailed monthly statements
- Security Measures
  - \* EMV chip Technology

Functional Requirements

- User account management:- Allow user to apply for a credit card, update their password details & view their credit history.
- Card Issue & maintenance:- User can view their credit card no, expiry date, issue date & CVV securely.
- Transaction Processing:- The system must authorize,

transactions in real time during point sale - ~~safe~~

online purchases after the store's network

Billing & payment Features

Customer Database & Cardholder Information

Non-Functional Requirements

→ Security :- 

- Data Encryption
- Access Control

→ Performance :- 

- Transaction Processing time
- Security scalability

→ Maintainability :- 

- Monitoring & alerts
- Modularity

→ Domain Requirements

→ Card issue & management :- 

- Credit card check
- card Activation.

→ Transaction Process

• Authorization

• Transaction validation

obj notes

## 2] Credit Card processing:-

