Date 24.9.24

Lab - 1

1. SRS for Hotel management system :-

1. Introduction :-

1.1 Purpose of This Document :-

- This document aims to outline the requirements for the Hotel management system (HMS). It serves as a guide for stakeholders, developers and Testers to ensure all aspects of the system are addressed.

1.2 Scope of This Document :-

- The HMS will streamline hotel operations, including room-booking, check-in/check-out processes, billing, and customer management.
- The document provides an overview of system features, estimated development costs, and timeframes. The total development cost is estimated at ₹ 150,300,000 with a timeline of 6 months.

1.3 Overview :-

- The HMS is designed to manage various aspects of hotel operation efficiently.
- Key functionalities include room management, reservation handling, guest check-in/out, and reporting tools for management.

2. General Description :-

2.1 User Objectives :-

Users aim to manage reservations, track room availability, process payments, and generate reports efficiently.

2.2 User Characteristics

Users include hotel staff (receptionists, managers) and guests using online booking features.

2.3 Features and Benefits :-

- Reservation Management : Simplifies booking process
- Check-In/Out : Streamlines guest arrival and departure.
- Reporting Tools : Provides insights into occupancy and revenue.
- Customer Management : Maintains guest profiles for better service.

2.4 Importance :

The aims enhance operational efficiency, customer satisfaction, and revenue management.

3 Functional Requirements :-

- Room Reservation :- User can book room based on availability.
- Check In/Out :- Streamlines guest arrival and departure.
- ~~Reporting Tools :- Provide insights~~
- Billing System : Automatically calculates charges and generates invoices.
- Reporting Module :- Generate daily occupancy reports and financial summaries.

4 Interface Requirements :-

User Interface : Web based UI for staffs and mobile access for guests.
API : Integration with third-party services for payment processing.
Database Interface :- Connection to a SQL database for data storage.

5. Performance Requirement :-

Response time :- Must process reservations within 2 second.
memory usage :- Should not exceed 500MB under peak load.
Error rate :- Maximum allowable error rate of 0.5%.

6. Design constraints :-

Technology stack :- Must use a specified set of technologies
(eg :- React for frontend, Node.js for backend).
Hardware limitation : Must run on existing server infrastructure.

7. Non-functional attributes :-

Security :- Must comply with data protection regulation (e.g DPR)

Portability :- Should be accessible on multiple devices (PC, tablet, smartphone).

Scalability :- Must support up to 500 concurrent users.

8. Preliminary Schedule and Budget :-

Development Duration : 6 month

Budget :- ₹1,500,00,000

Classmate
Date
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# II Credit card Processing System :-

## 1.1 Purpose of this Document :-

This document specifies the requirements for the Credit card Processing System (CCPS) to facilitate secure and efficient credit card transactions.

## 1.2 Scope of this Document :-

⇒ CCPS will provide functionalities for processing credit card transactions, fraud detection, and reporting. The

⇒ The estimated cost for development is ₹ 20,00,00,000 with a project timeline of 8 months.

## 1.3 Overview

↳ The CCPS is designed to handle various credit card transaction securely, ensuring compliance with industry standards.

# 2. General Description :-

## 2.1 User Objectives :-

Users want to process transactions efficiently, manage chargebacks, and access transaction reports.

## 2.2 User characteristics :-

Users include merchants, payment processors, and customer support representatives.

## 2.3 Features and Benefits :-

↳ Transaction Processing :- Fast and secure processing of credit card transactions.

↳ Fraud Detection :- Real-time monitoring and alerts for suspicious activities.

↳ Reporting Tools :- Comprehensive reporting on transactions and chargebacks.

2.4 Importance :-
CCPS ensures secure transaction, improves customer trust, and minimizes financial loss due to fraud.

3. Functional requirement :-
- Transaction Authorization :- Process card transaction and return approval/denial.
- Chargeback management :- Allow merchants to handle disputes.
- Reporting :- Generate reports on transactions.

4. Interface requirement :-
- Web Interface
- API integration
- Payment Gateway

5. Performance requirement :-
- Transaction Processing time
- Memory Usage
- Error Rate

6. Design constraints :-
- Compliance :- Must Adhere To PCI-DSS standards for security.
- Supported Platforms.

7. Non-Functional Attributes :-
- Security
- Reliability
- Scalability

8. Preliminary Schedule and Budget :-
- Development Duration : 8 months
- Budget :- ₹ 20,00,00,000

III Library Management System:-

1. Purpose of this Document
   - Purpose of this SRS document is to outline the requirements for the Library Management System.
   - It serves as a guideline for developers, stakeholders and project managers to ensure a shared understanding.

1.2 Scope of this Document:-
This document details the functionalities of Library manage system, providing clarity on user needs and implementations.

1.3 Overview
The Lib Manage system is designed to manage library operations, including book lending, returns, user registrations and inventory management.

2. General Description:-

2.1 User objective:-
User need to efficiently manage library operations, track book inventory and facilitate user interactions.

3. Functional Requirements:-
   - Cataloging: Add, update and delete books.
   - Member Management: Register and maintain user accounts.
   - Borrowing / Returning:- Process book loans and return.

4. Interface Requirements:-
   - Web Interface for user interaction
   - API's for integration with existing systems.

5. Performance Requirements:-
   - Support upto 500 simultaneous user.
   - Search results should appear within 2 second.

6. Design Constraints :-
   - Must use Java and My SQL.
   - Must comply with library data management standards.

7. Non-Functional Attributes :-
   - Security measures to protect user data.
   - Scalability for future library growth.

8. Preliminary Schedule and Budget :-
   - Estimated Duration :- 6 months
   - Estimated Budget :- $ 150,000

IV Stock Maintenance System :-

1.1 Purpose of This Document :-

↳ This SRS document outlines the requirements for the stock main sys providing a clear understanding of its functionalities.

1.2 Scope :-

This document details the functionalities of the stock main sys, focusing on inventory management, optimal stock levels, and automation of reorder process.

1.3 Overview :-

The stock main sys designed to manage inventory levels, track stock movement, and automate reorder process.

2. General Description :-

↳ Intended users are warehouse managers and procurement staff. It will provide features for tracking stock levels and generating reports.

3. Functional Requirements

↳ User must input stock levels and item details
↳ The system must notify users when stock levels are low
↳ Users must be able to generate reports on inventory.

4. Interface Requirements :-

↳ User interface for desktop and mobile access
↳ Integration with accounting software.

5. Performance Requirements :-

↳ Process inventory updates within 1 second
↳ Generate reports within 5 seconds.

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6. Design Constraints :-

a) Limited to specific cloud provider for hosting.
b) Must adhere to industry security standards.

7. Non-Functional Attributes

a) Reliability must ensure 99.9% uptime
b) The application should be portable across different operating system.

8. Preliminary Schedule and Budget :-

a) Estimated Duration : 4 months
b) Estimated Budget :- $100,000

# I Passport Automation system :-

## 1.1 Purpose :-

The purpose of this SRS document is to outline the requirements for the Passport Automation sys, ensuring a clear understanding of its functionalities.

## 1.2 Scope :-

This document details the functionalities of the Passport Automation system, focusing on automating the passport application process.

## 1.3 Overview :-

The passport Automation Sys is designed to streamline the processing of passport application and enhance user experience.

## 2. General Description :-

Target user include passport applicants and administrative staff. It aim to enhance transparency and streamline the application workflow.

## 3. Functional Requirements :-

- Users must be able to submit application online.
- The system must provide updates on application status.
- Admin user must verify documents and approve application.

## 4. Interface Requirements :-

- Web Portal for applicants
- Admin dashboard for managing applications.

5. Performance Requirements:-

- Handle up to 1000 concurrent application.
- Document verification should be completed within 30 seconds.

6. Design constraints :-

- Must integrate with national ID verification system.
- Should comply with data protection regulations.

7. Non-Functional Attributes :-

- Scalability to handle increase in application volume.
- Data integrity to ensure accuracy in applicant information.

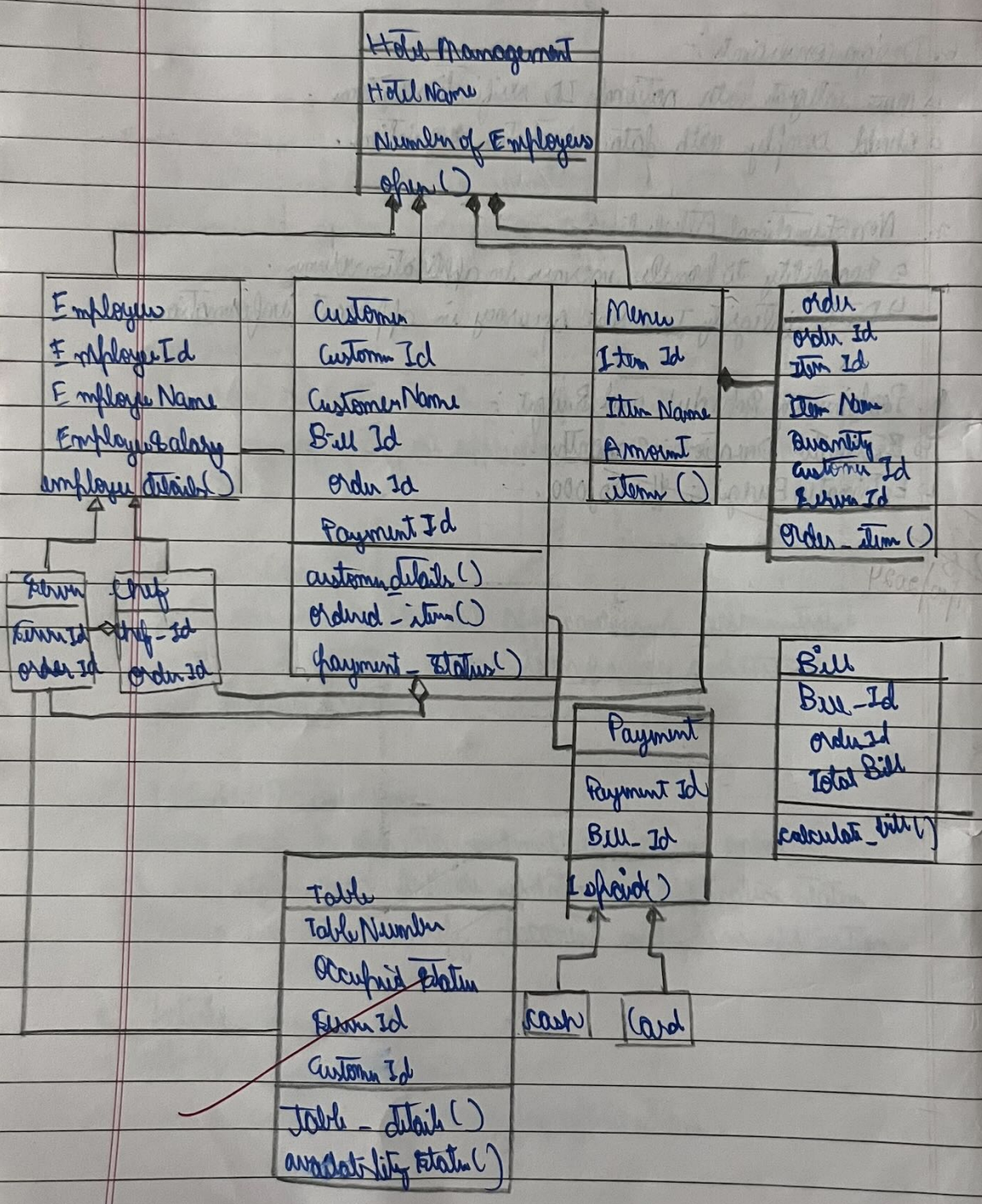
8. Preliminary Schedule and Budget :-

- Estimated Duration :- 8 months.
- Estimated Budget :- $200,000.

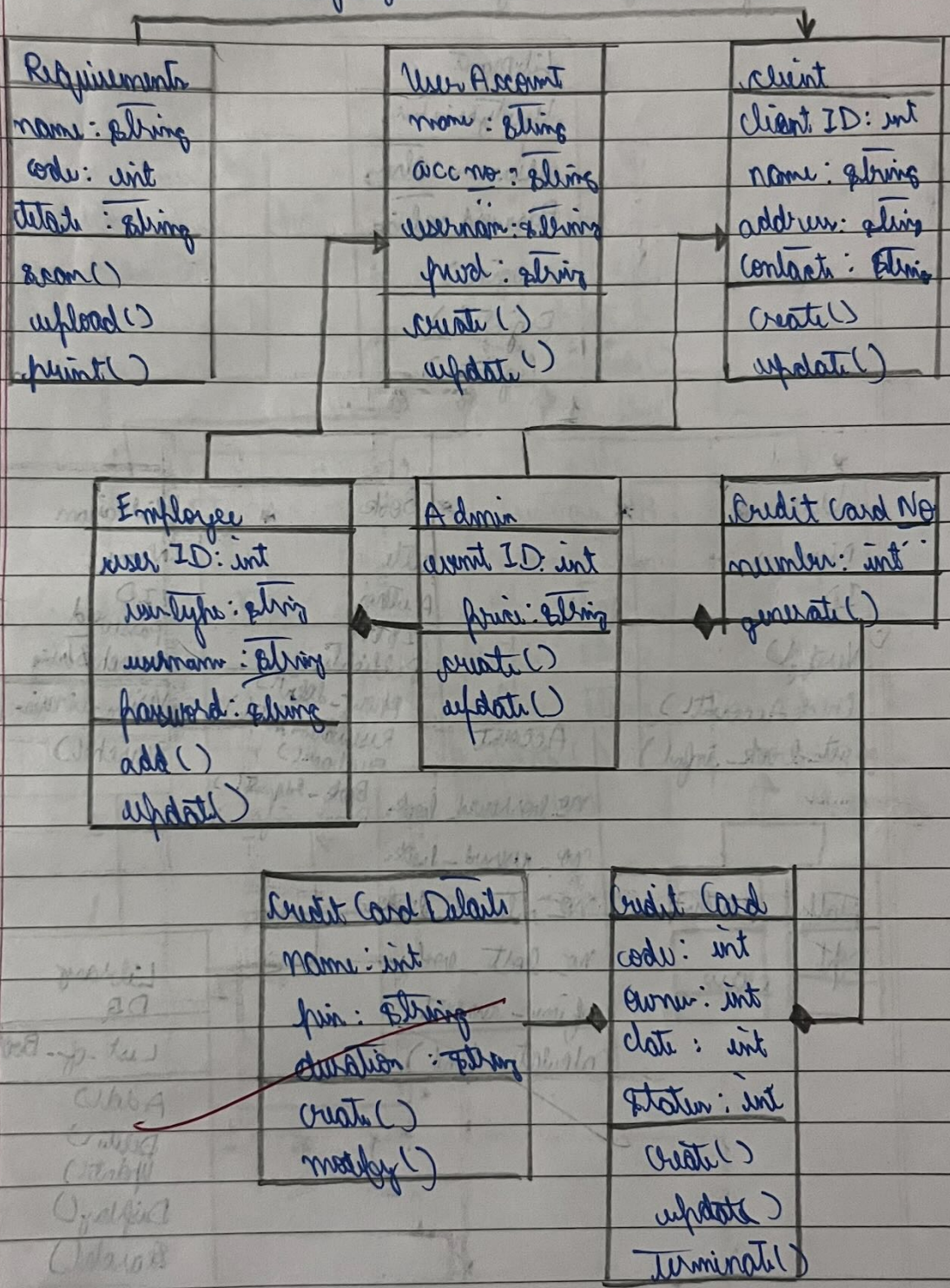
11/10/2024

Class Diagrams :-

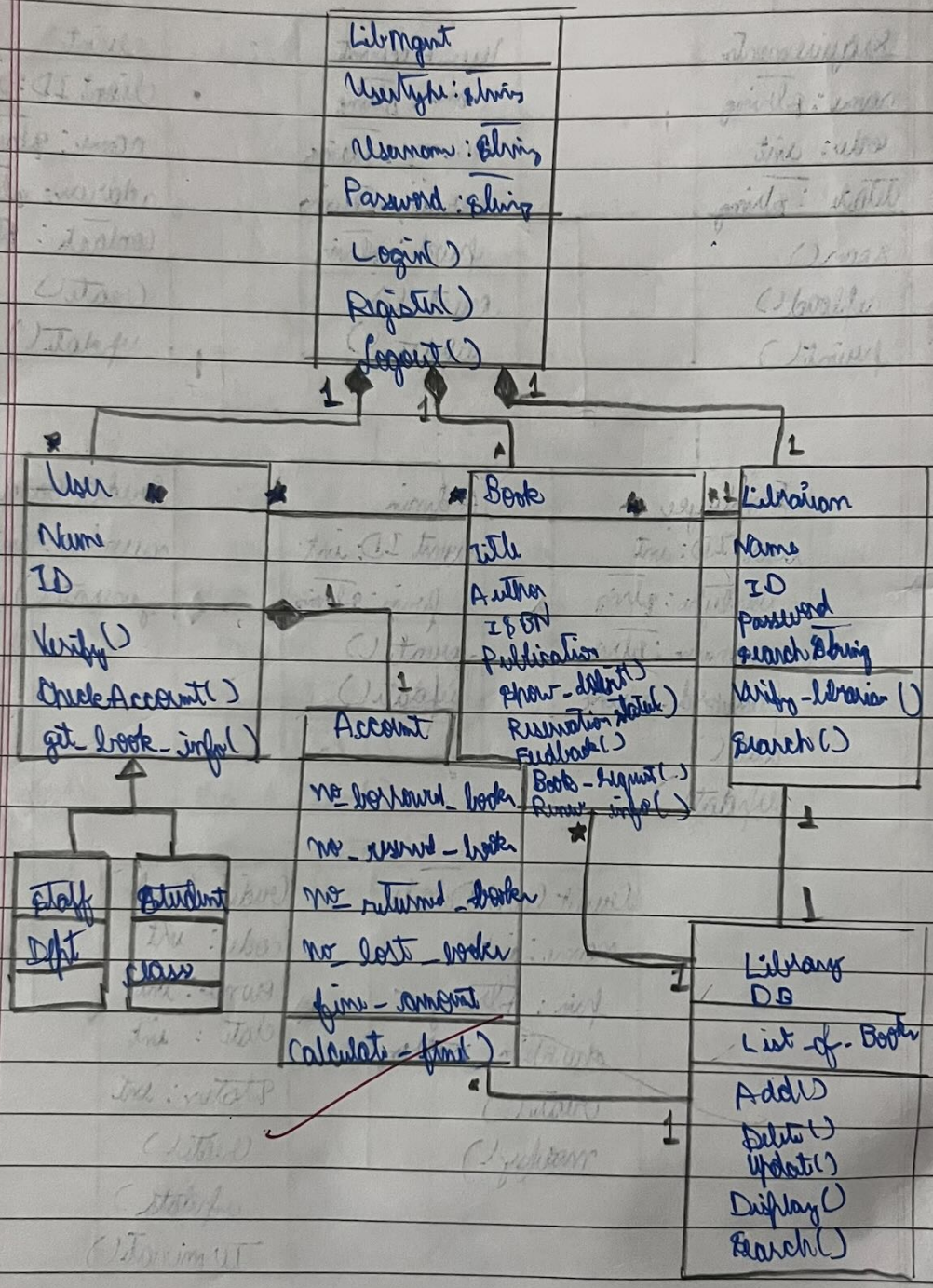
1. Hotel Management System :-



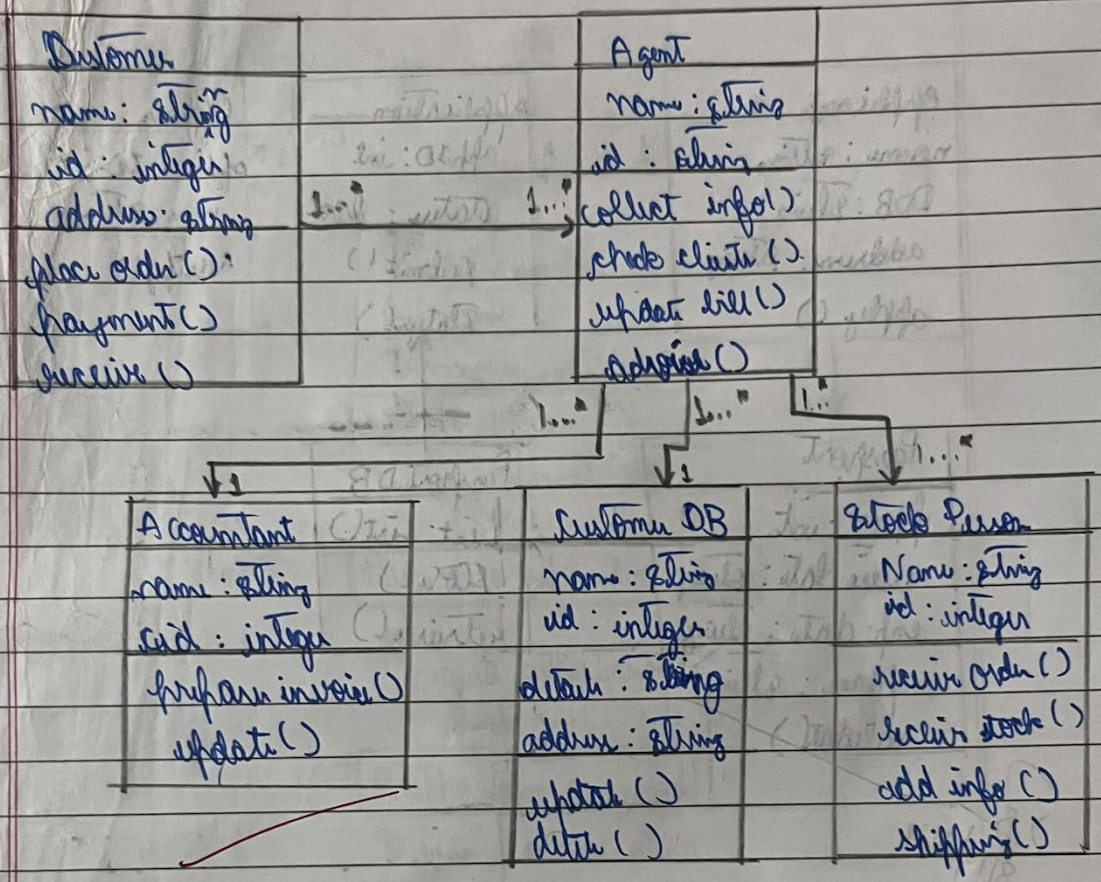
2. Credit Card Processing System :-



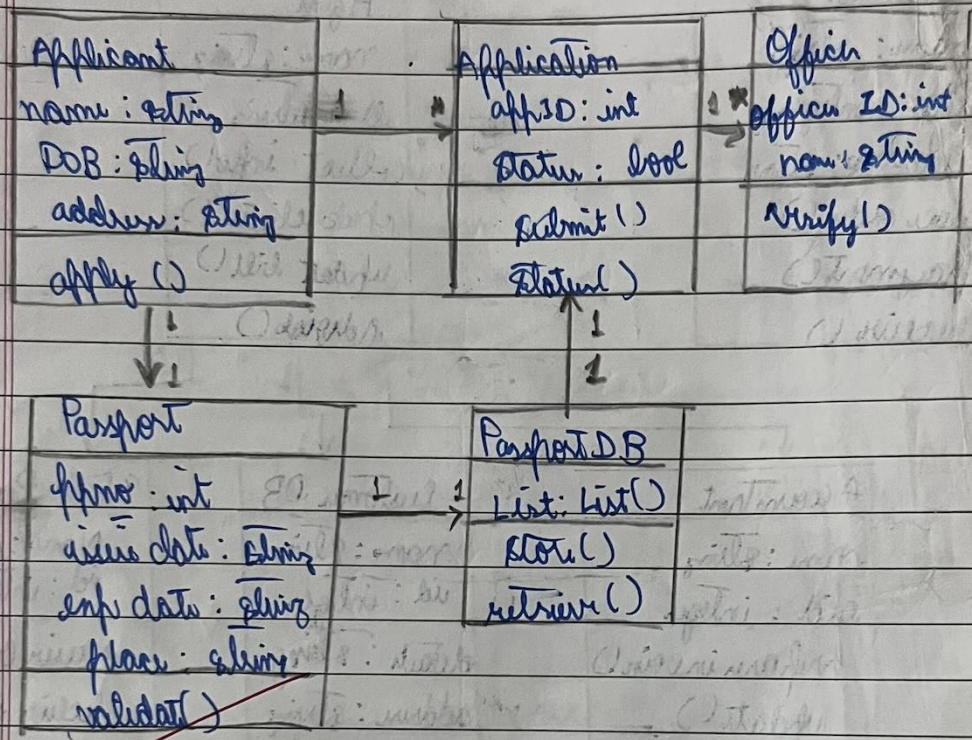
3. Library Management System:-



4. Stock Maintenance System :-



5. Passport Automation System :-

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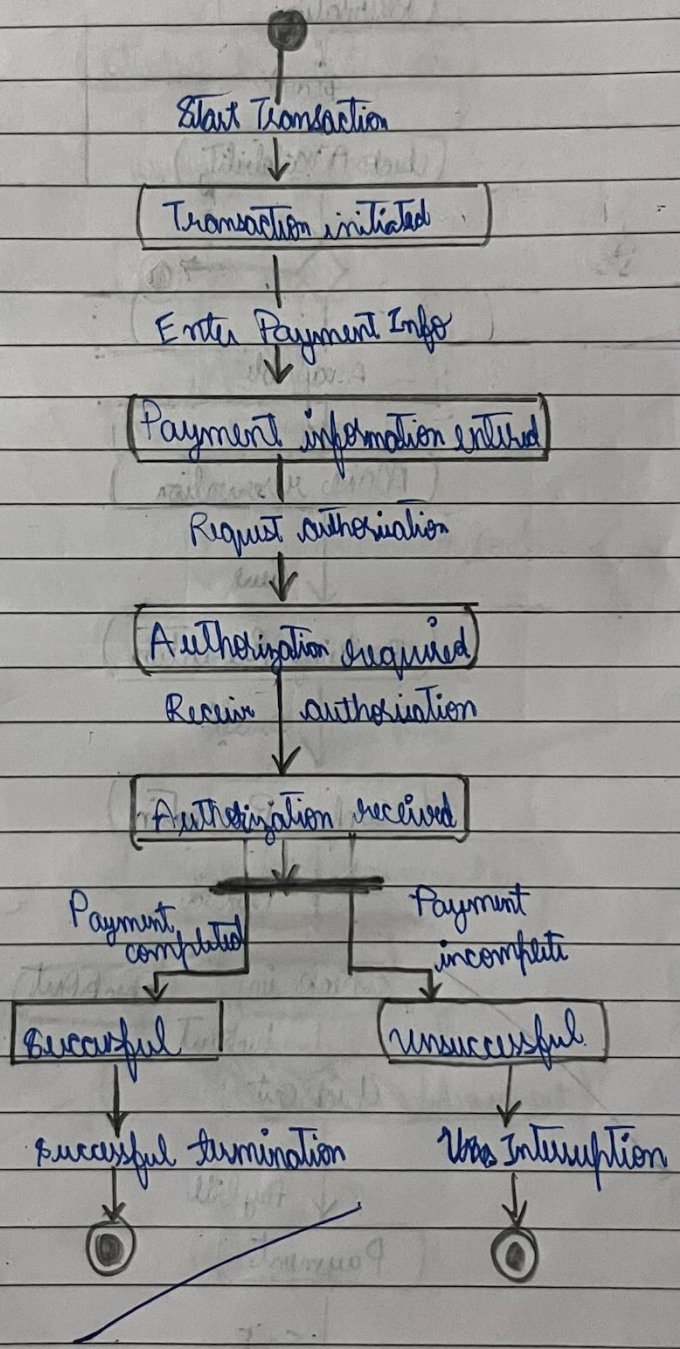
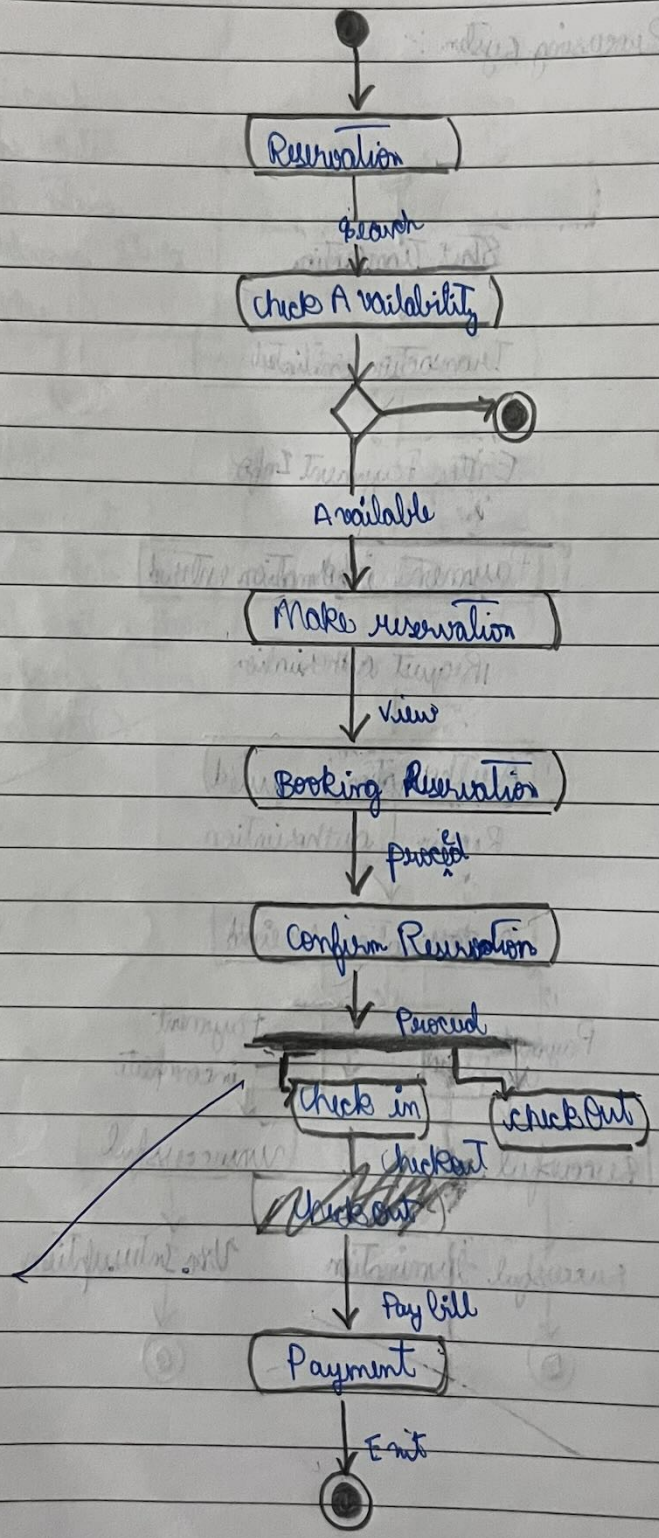
## State Diagram :-

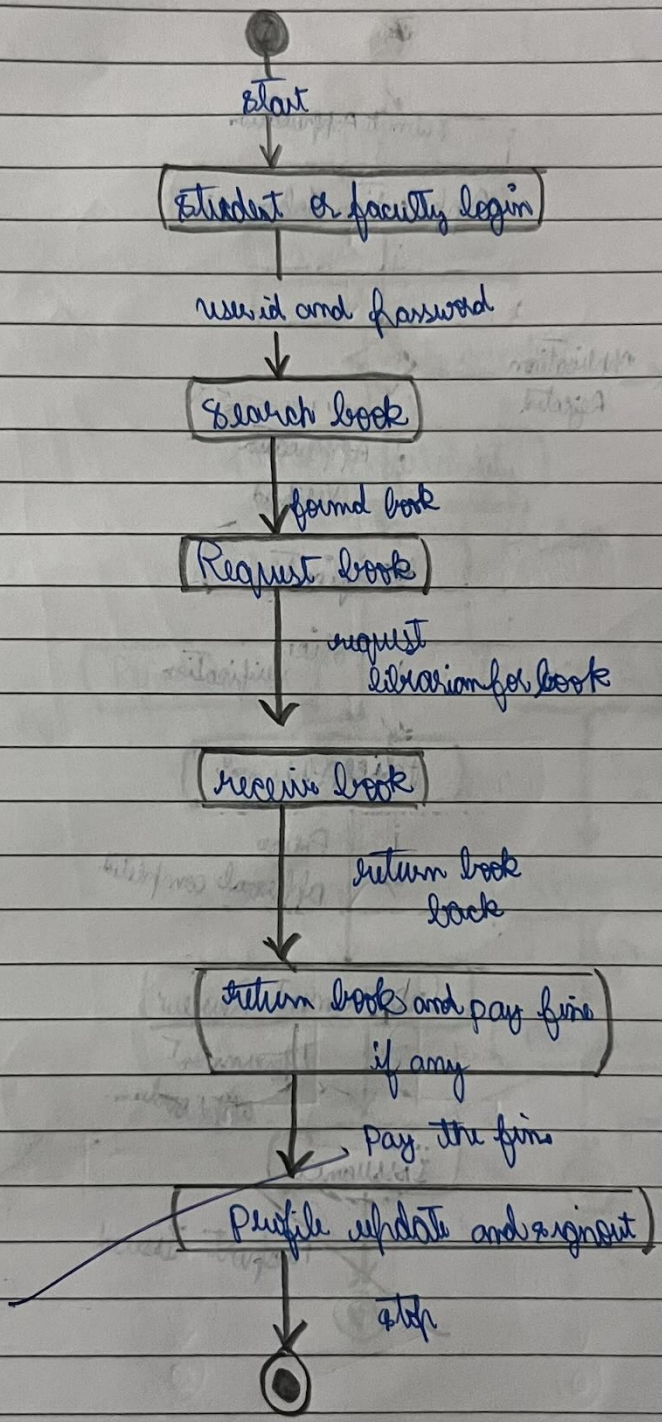
1. Credit Card Processing System :-



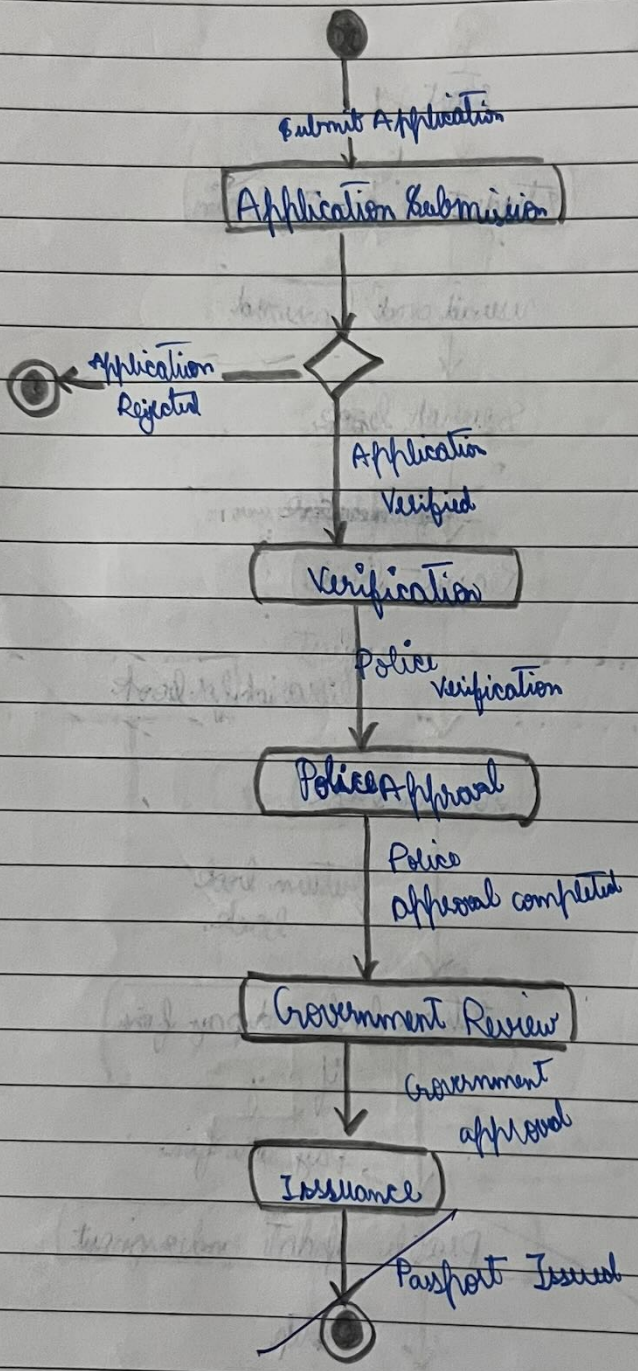
2. Hotel Management system :-



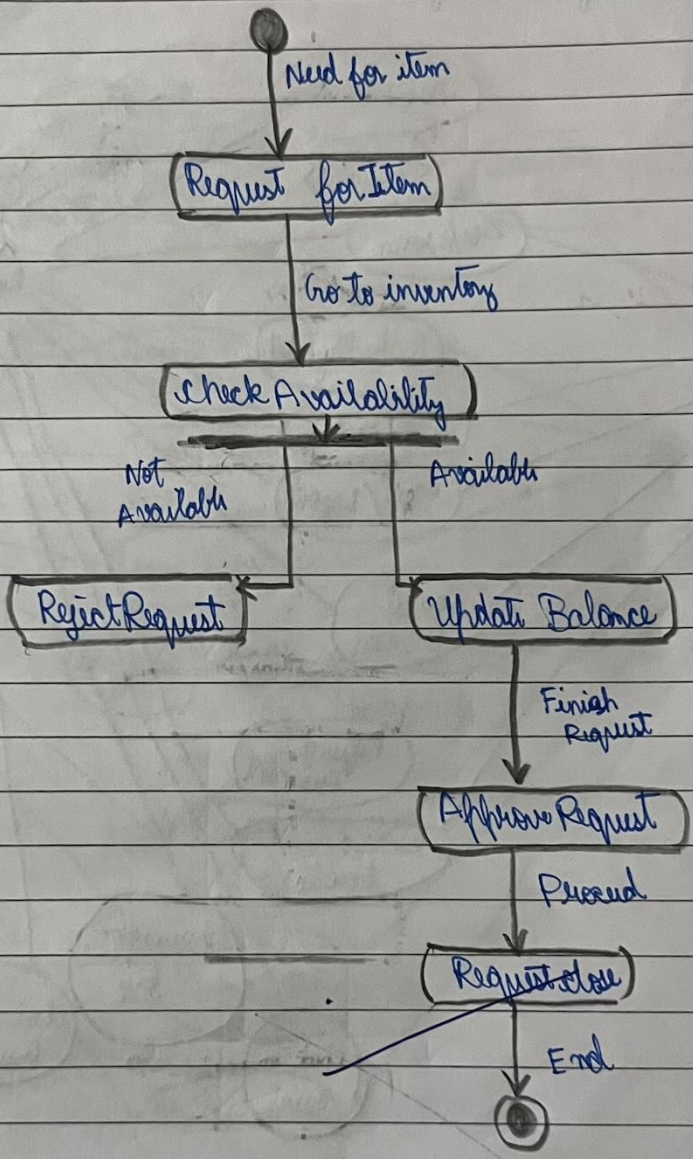
3. Library Management System :-



4. Passport Automation system :-



5. Stock maintenance System :-

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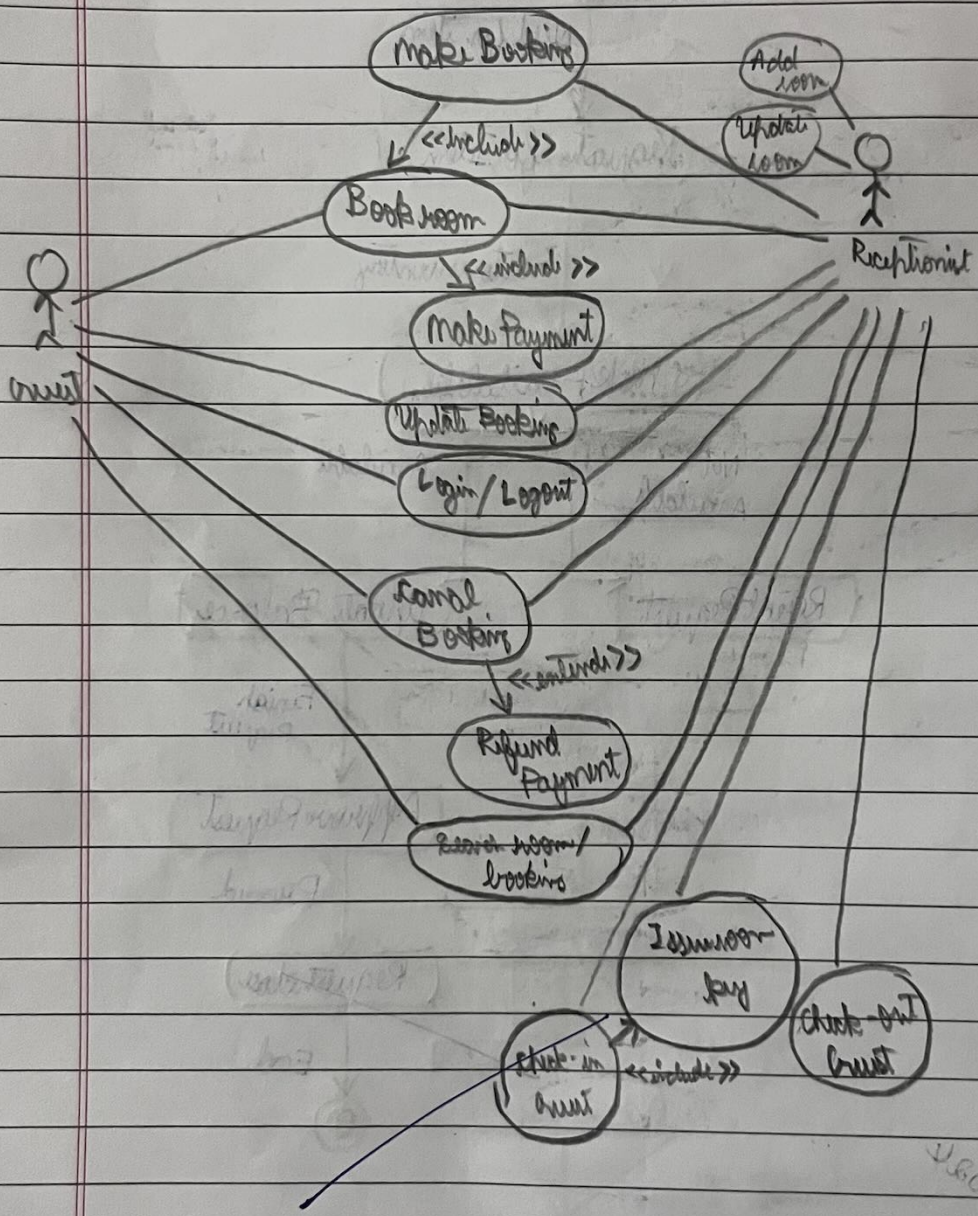
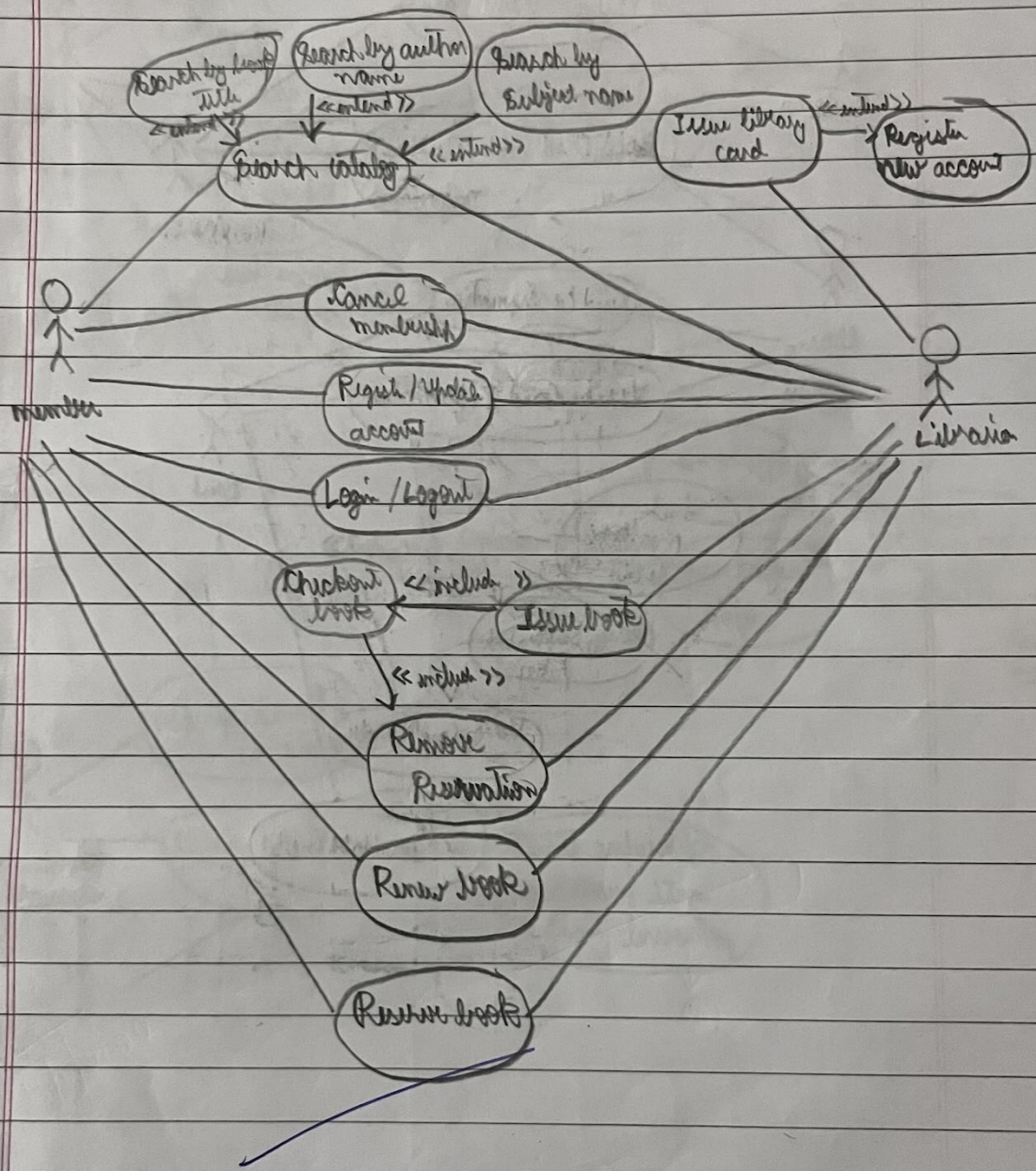
# Use Case Diagram

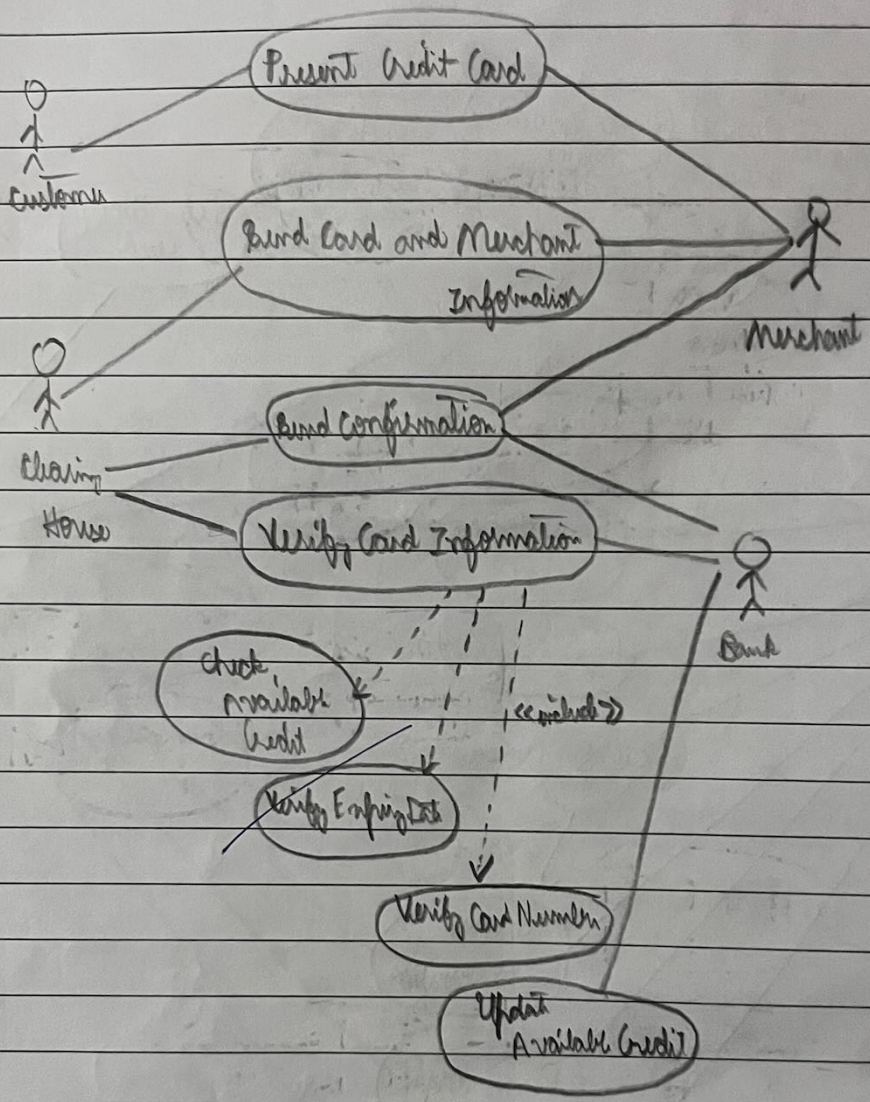
## 1. Hotel Management System :-



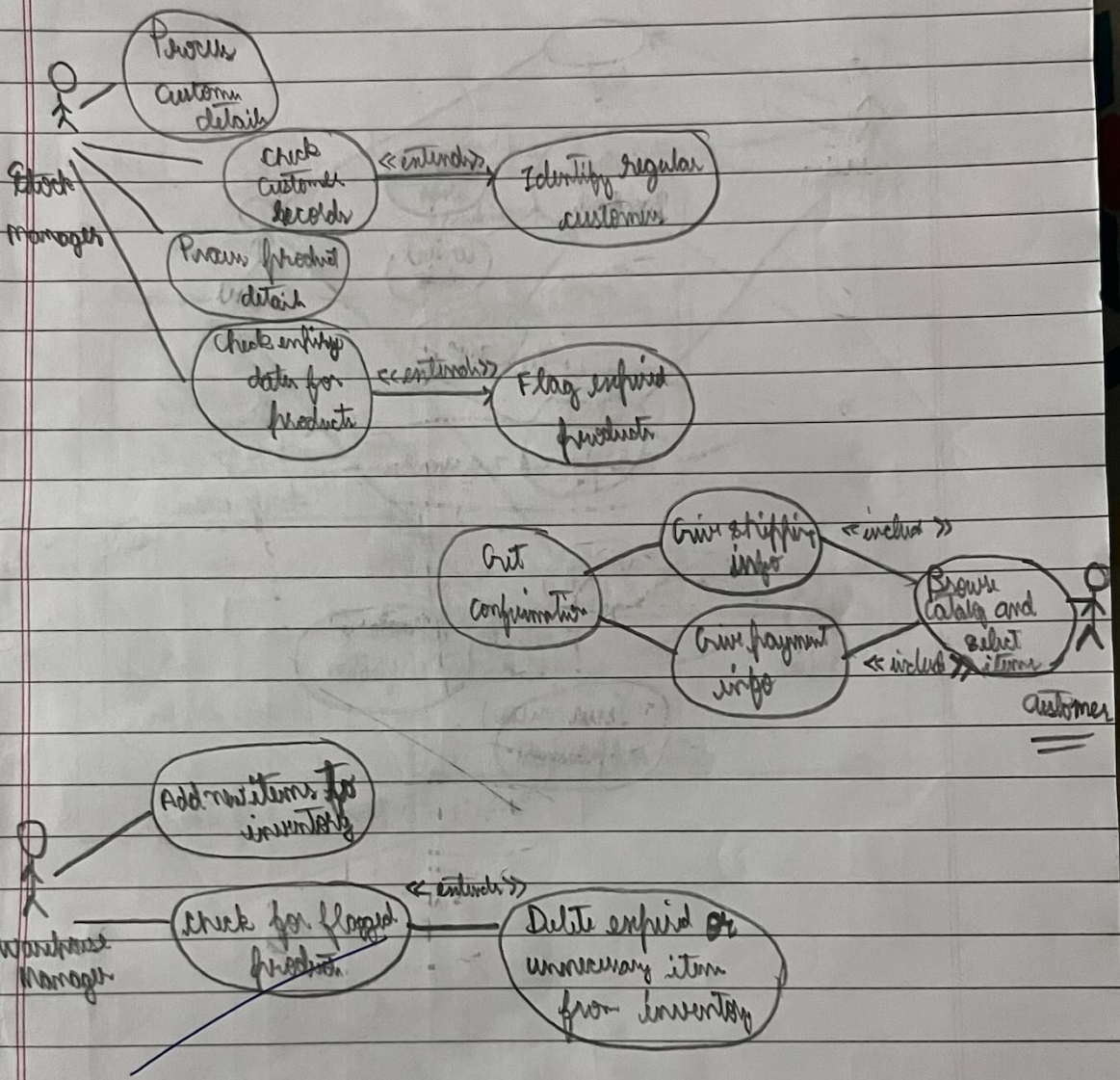
2. Library Management System:-



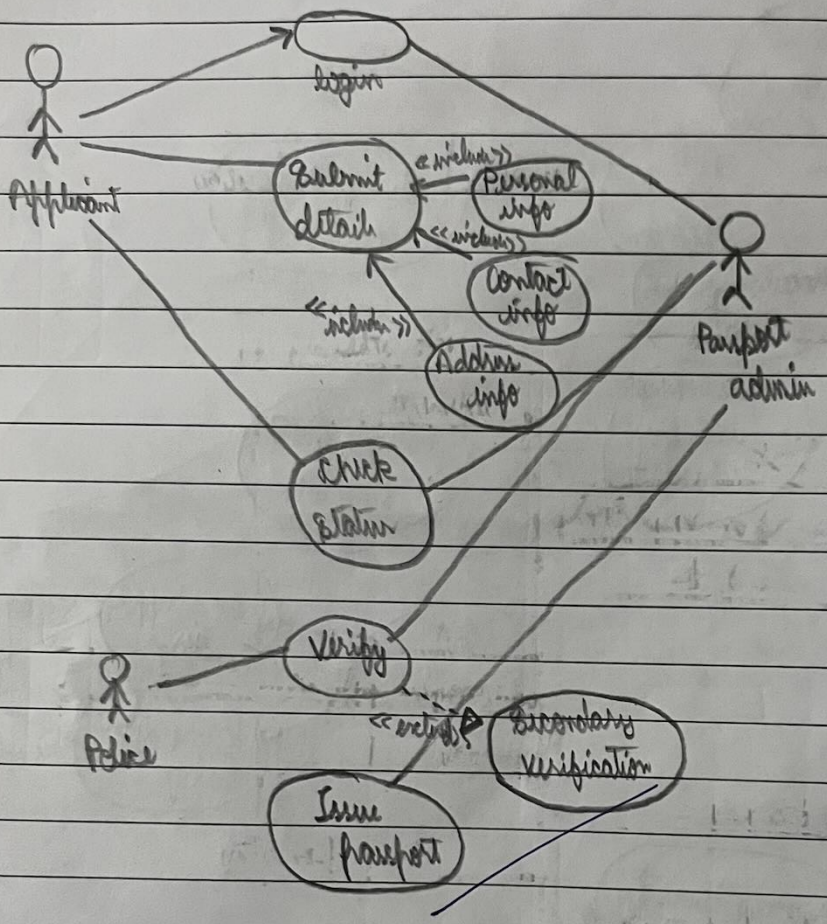
③ CreditCard Processing System :-



④ Stock Management system :-

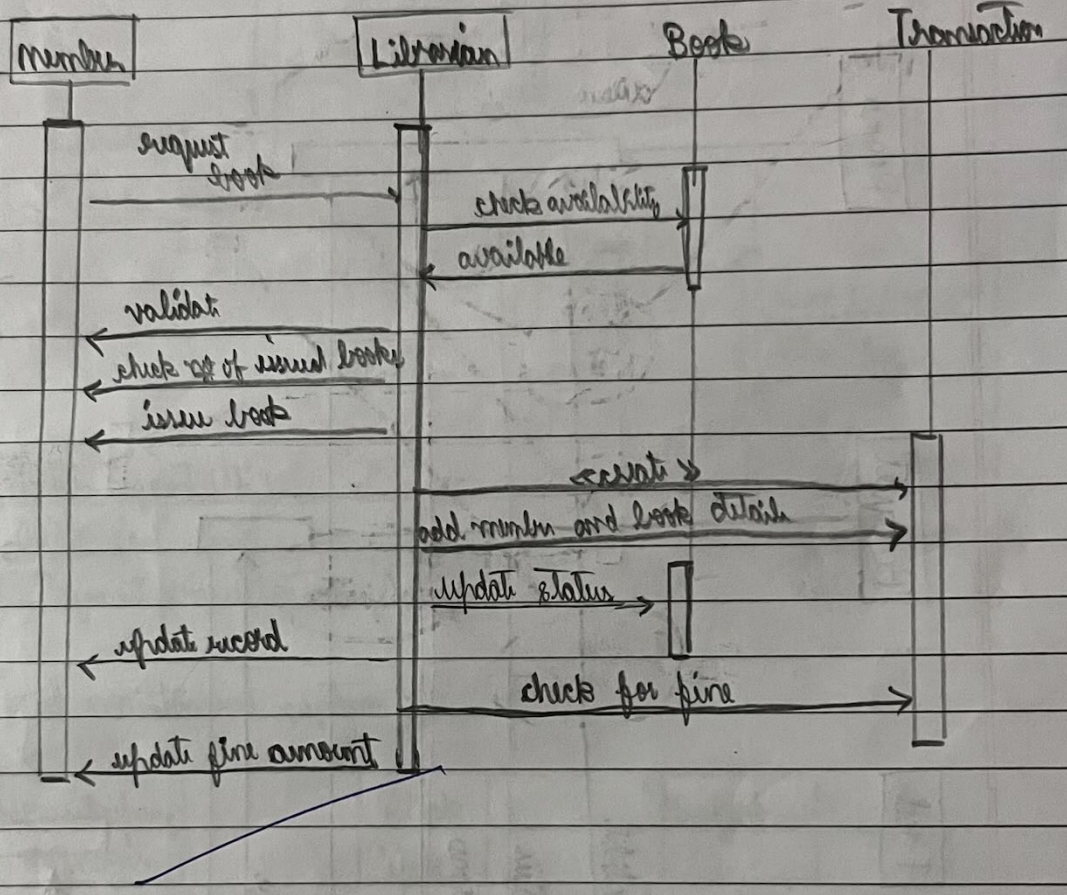


5. Passport Automation system :-

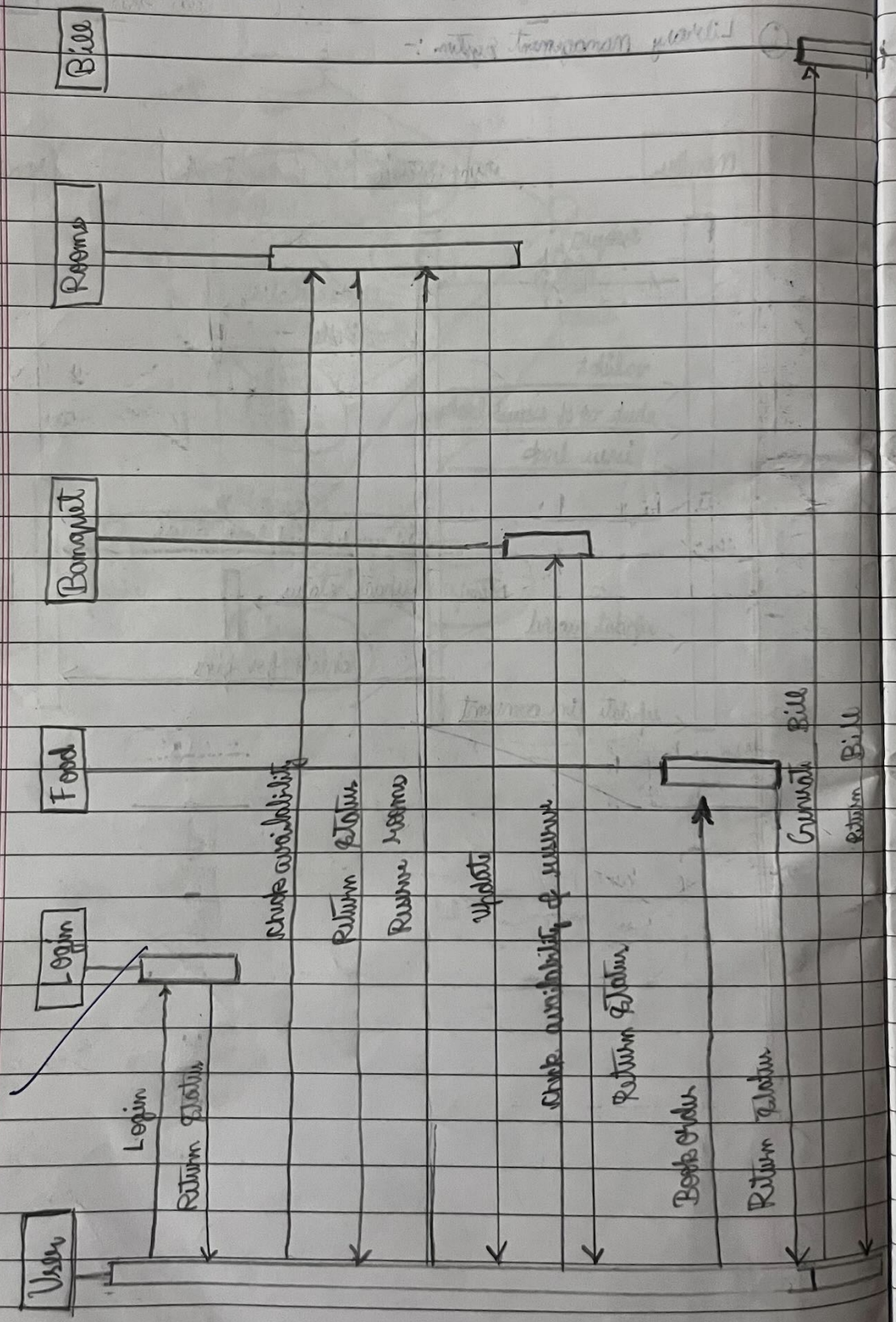


# Sequence Diagrams

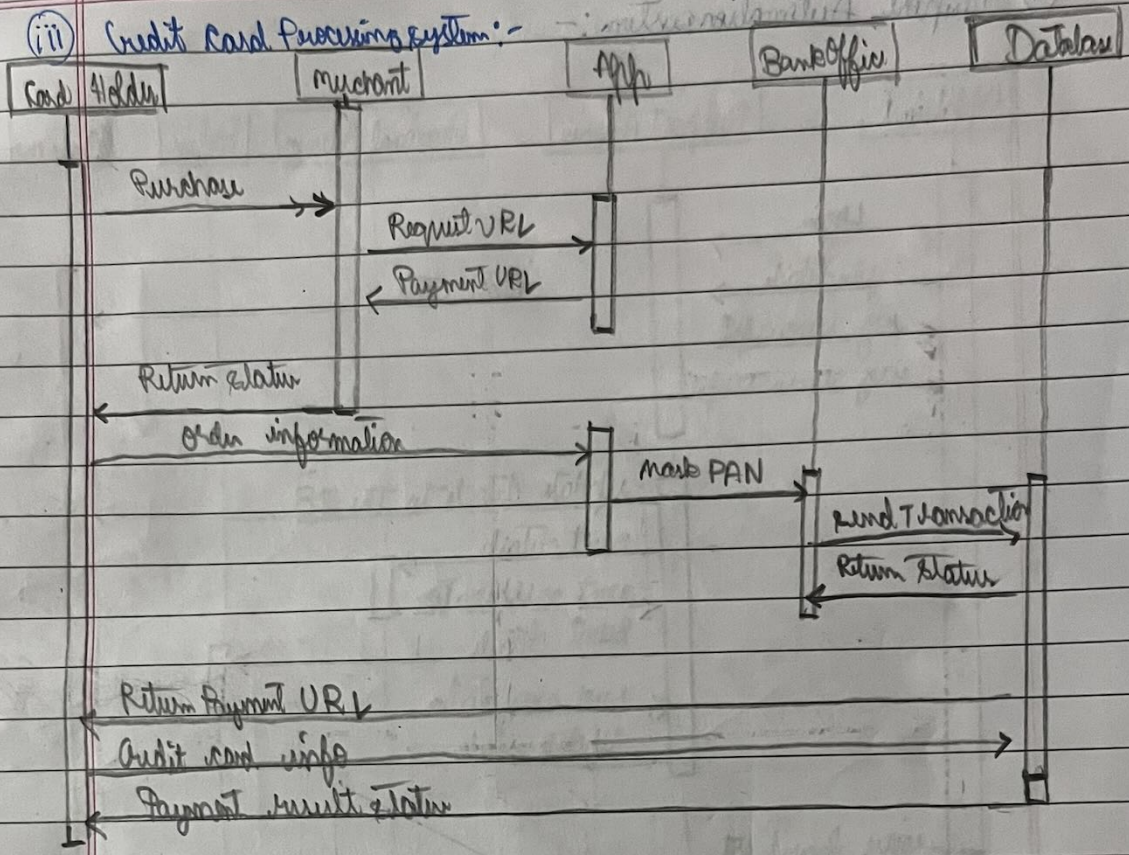
① Library Management System :-



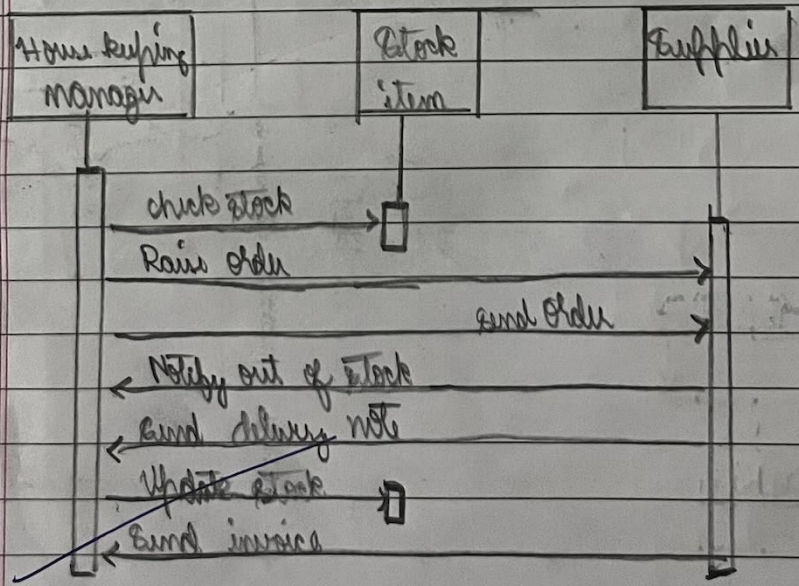
2. Hotel Management System:-

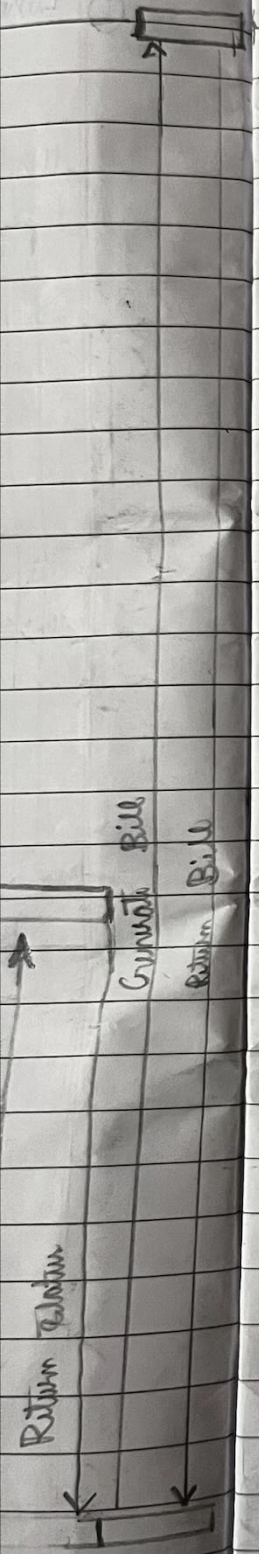


(iii) Credit Card Processing system :-

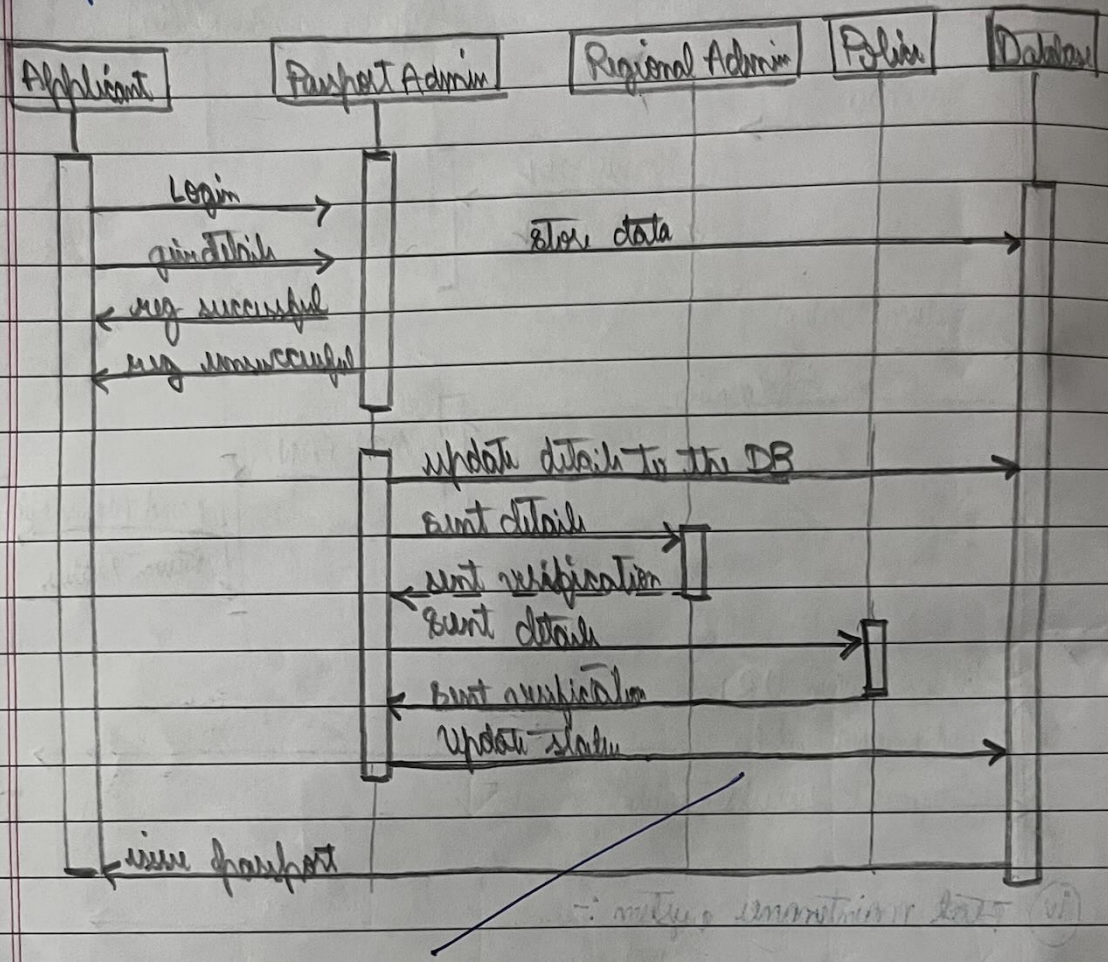



(iv) Stock maintenance system :-



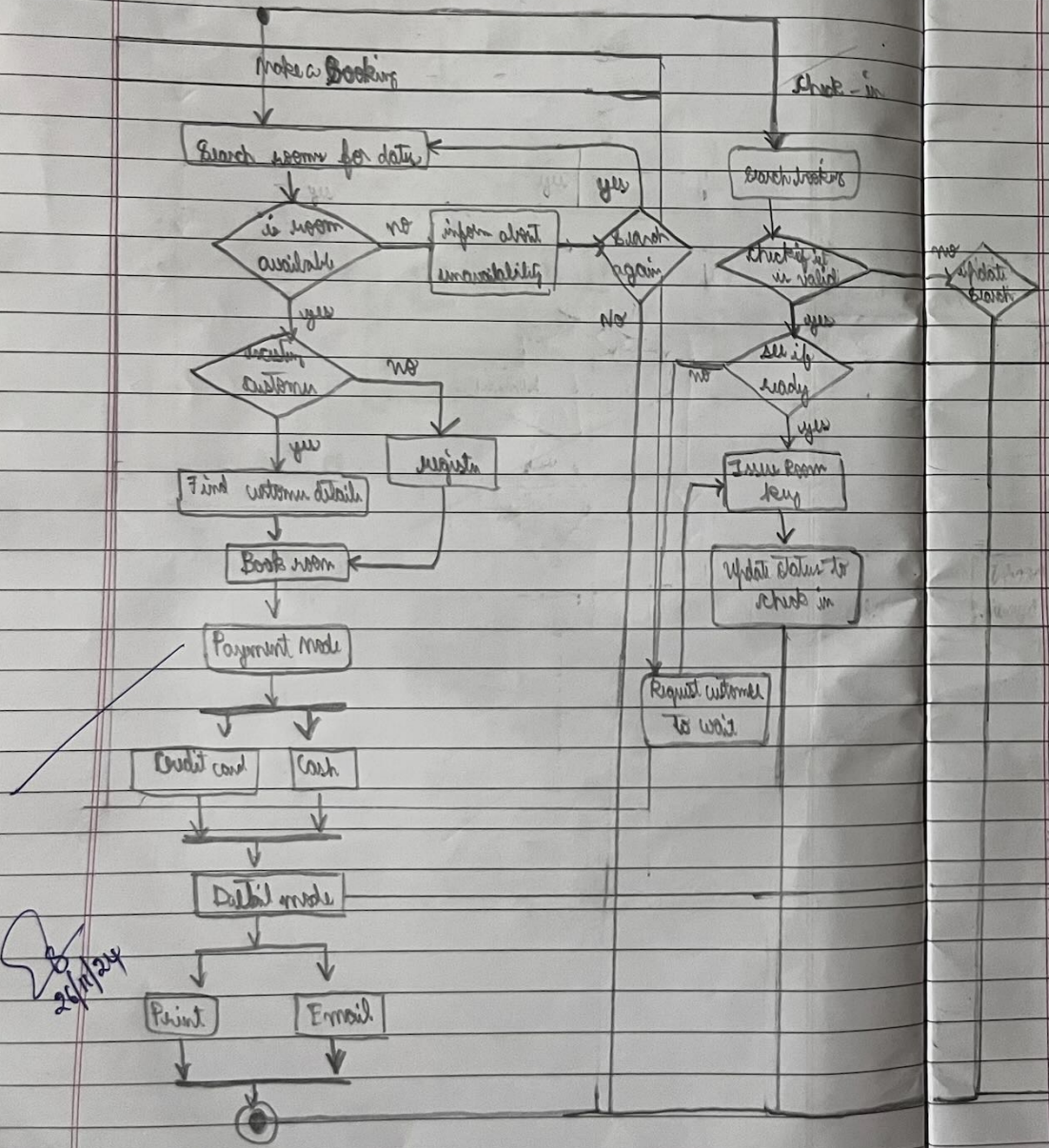



(v) Passport Automation system :-



# Activity Diagram

① Hotel Management System :-

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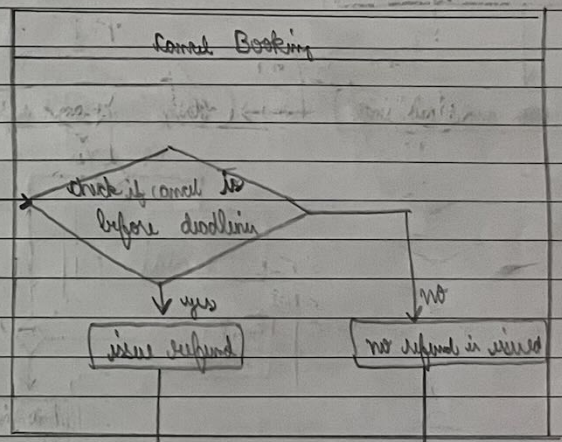
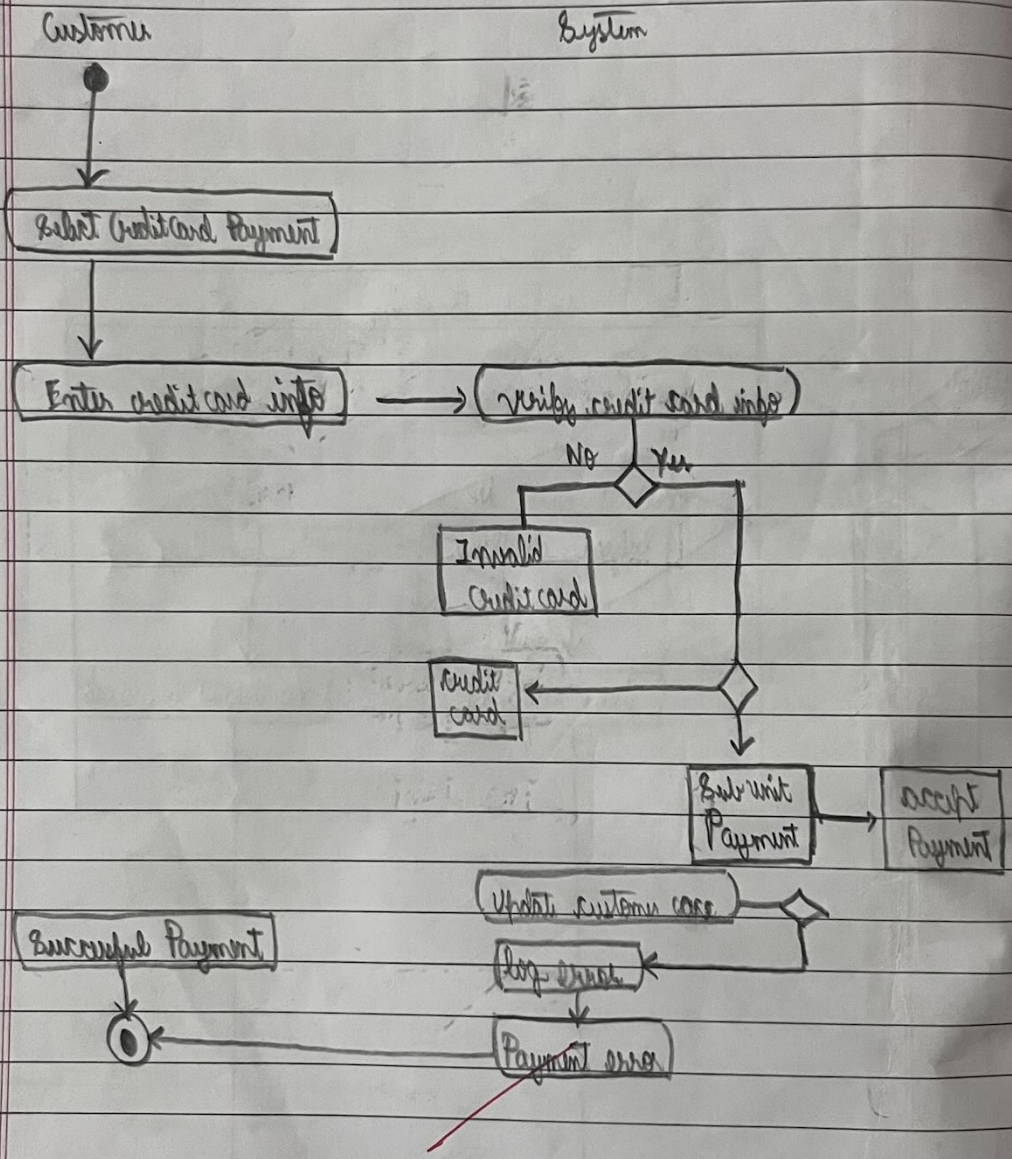
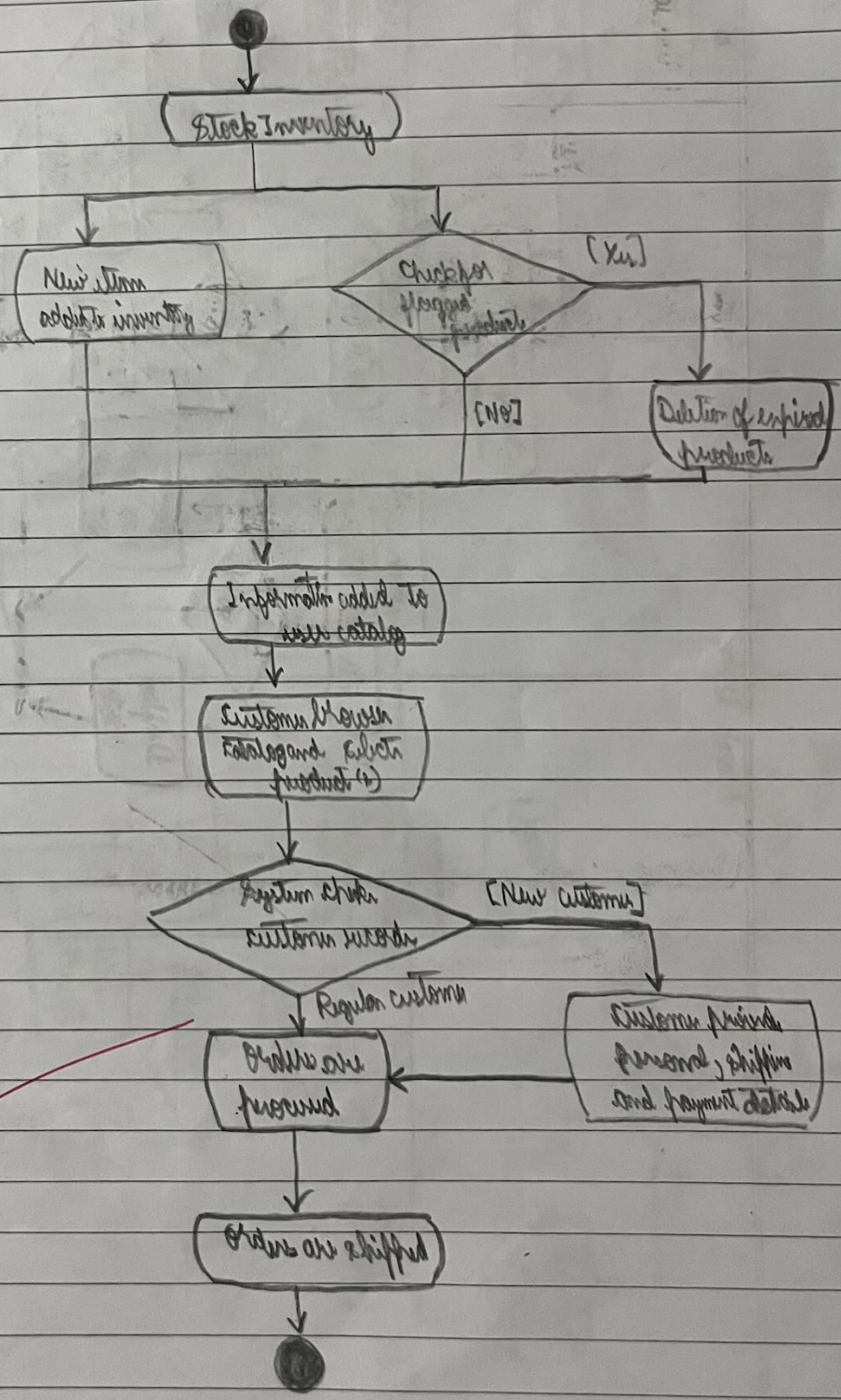


* Credit Card Management System

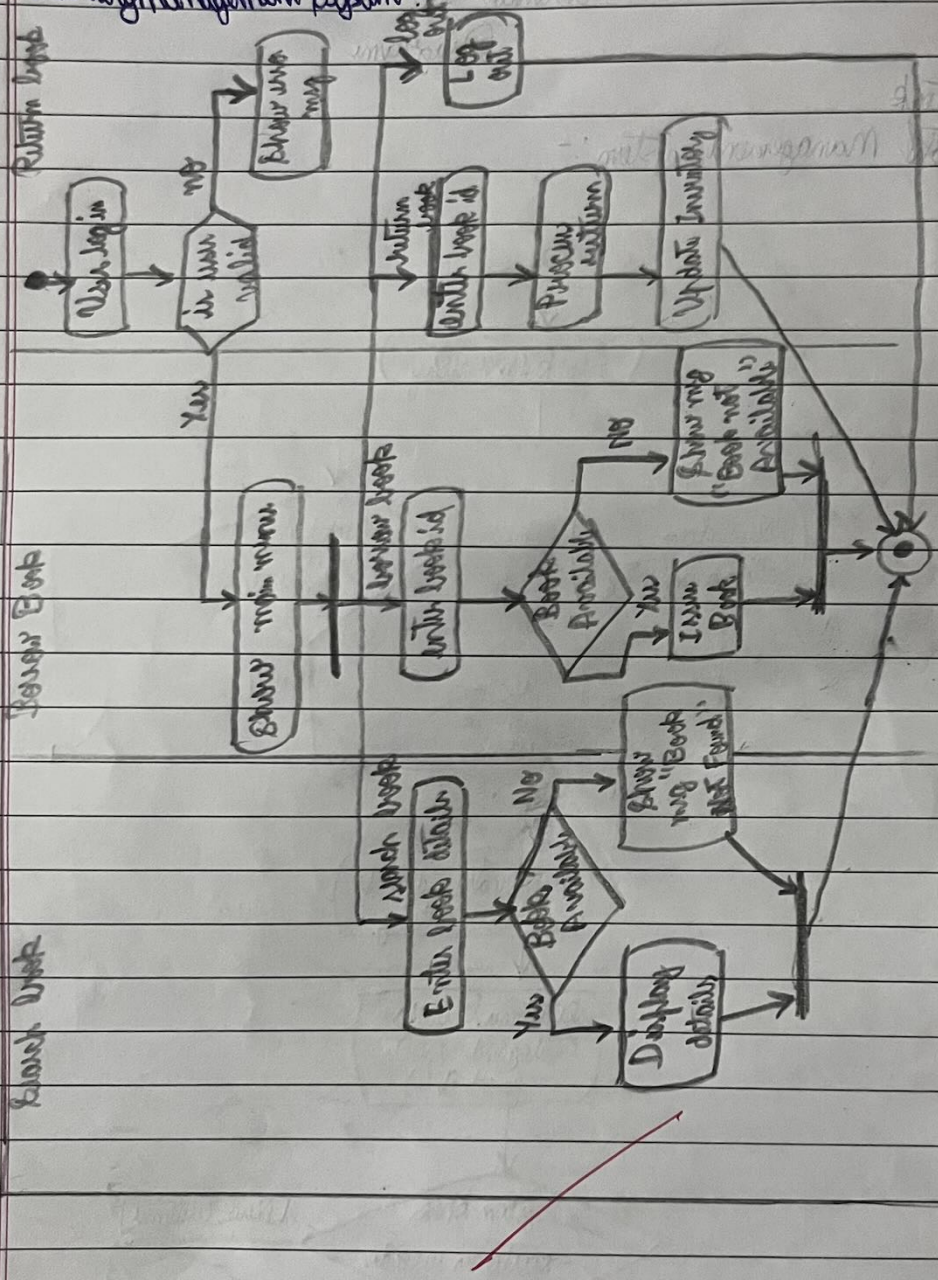


# Advanced Use-case Diagram

* Stock Management system :-



* Library Management System :-



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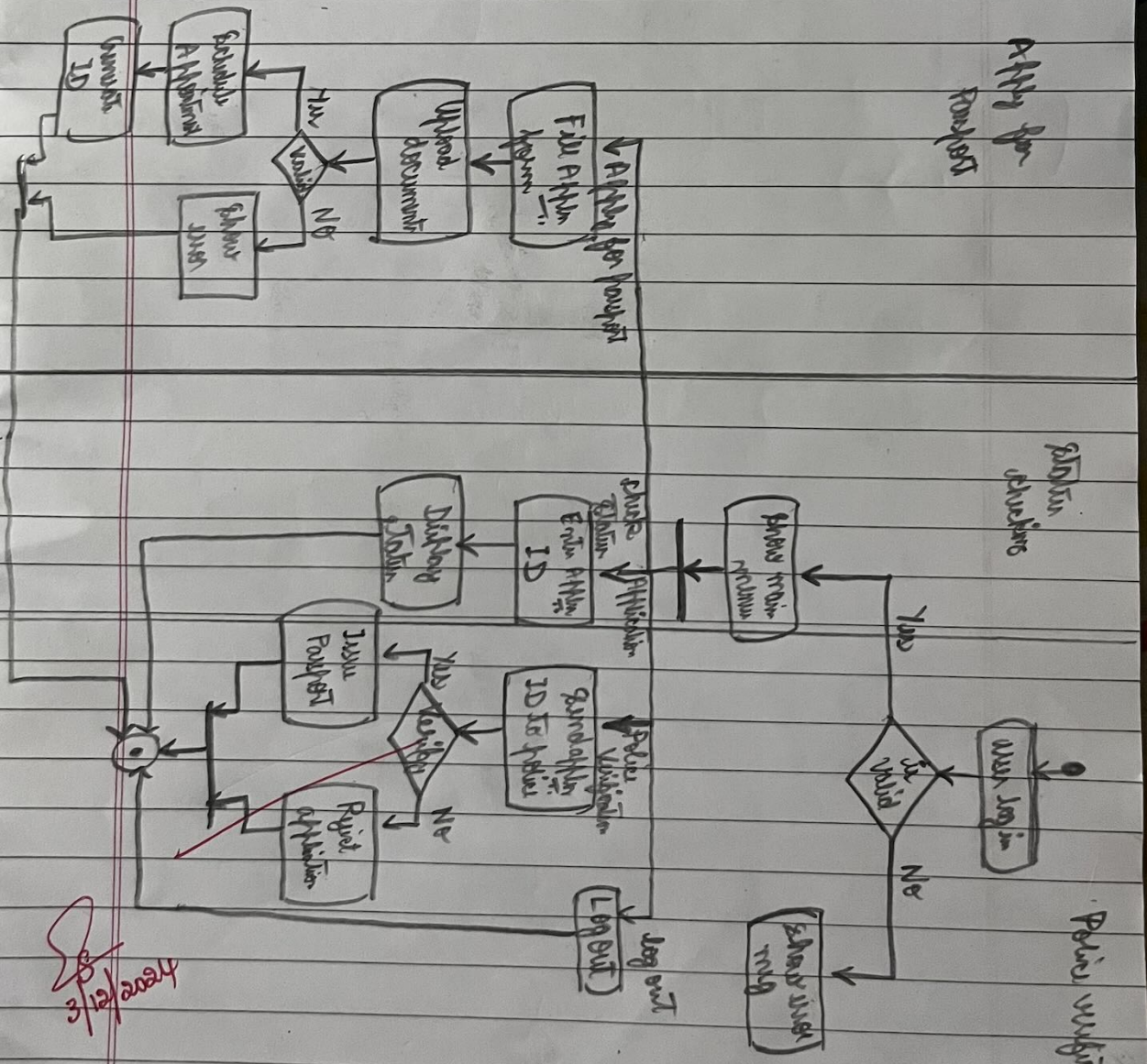
* Passport Automation System :-

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