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① Hotel Management System :-

Functional Requirements

* Room Booking Management :-

The customer must be able to check room availability and book rooms in real-time from the system. (Rooms have multiple options AC/non AC, Delux/normal room, family rooms, dormitory) with room cancellation facility.

* Online payment processing :-

The system should support secure payment gateways for online transactions.

* Guest profile management :-

The system must create, update and manage guest profiles with their stay history and preferences.

* Room Service Request :-

Guests should be able to request room services (food ordering, housekeeping) through the system.

* Event-based booking :-

Customers can book conference rooms, banqueting hall / party hall based on some events.

* Multiple language support

* Feedback and review System:

should allow guests to leave a feedback and rate their stay after the checkout.

* Complaint system:

guests should be able raise any complaints during their stay regarding any "inevitable inconvenience" with the hotel.

Non-functional requirements:

- 1) Performance
- 2) Scalability
- 3) Availability
- 4) Usability
- 5) Security
- 6) Data Backup
- 7) Maintainability
- 8) Quick Response time

Domain Requirements:

- 1) Compliance with Hospitality Registrations.
- 2) Mandatory IP verification.
- 3) Hotel chain Integration

Scope: the system will automate room bookings, guest management and staff operations for efficient hotel management.

problem statement: Hotels struggle with manual processes that lead to inefficiencies in managing bookings and guest services.

1. Functional Requirements: It provides real-time access to room availability and booking management.

2. Performance Requirements: processing speed: reservations should be confirmed within 5 seconds.

3. Design constraints: system integration: Must integrate with existing internal POS and external booking platform.

4. Preliminary scheduling and Budget:

- Time: 7 months

- Initial Budget: £250,000

- cost of design: £12,000

- development: £26,000

- testing: £10,000

- maintenance: £8,000

(2) Credit Card Processing System :-

Scope :- system will handle secure, real-time credit card transactions for merchants & cardholders, ensuring industry standards, ie. PCI-DSS.

problem statement :-

systems face issues with transaction delays, fraud, and lack of security. Impersonating both merchants and customers during credit card transactions.

3. functional requirements :-

core functions : authorize transactions, check fraud, generate transaction receipts.

4. Interface Requirements :-

- API Integration : Integrates with external banking and payment gateways.

5. Performance Requirements :-

Process time : transactions should be processed within 3 seconds.

6. Design Constraints :-

compliance : must comply with PCI-DSS security standard.

7. Non functional Attributes:

Reliability: Ensure system uptime 99.9% to handle continuous transactions.

8. Functional Requirements:

8 General Description:

- Function: Transaction processing, payment validation, fraud monitoring.
- Features: Payment authorization, real-time fraud alert alerts, and transaction logs.
- Benefits: Increased transaction speed, enhanced security, minimized fraud risks.

9. Preliminary Schedule and Budget:

Time: 9 months

Budget: ₹ 70,000

SRS and design: ₹ 14,000

development: ₹ 38,000

testing: ₹ 12,000

maintenance: ₹ 8,000

Library Management System

1. Introduction:

Purpose: To design a system that automates the management of library resources; allowing for easy tracking of books, user activities, accounts, and transactions.

Scope: Support cataloging of books

Borrowing, returning, and membership management.

Overview: Web-based platform to search books, reserve them, and borrow them.

Librarians can also manage inventory, track and handle user data.

2. General Description:

Function: Facilitate book cataloging, user registration, book borrowing/return, and penalty management for overdue bookings.

Features:

- Users can search for books using various interfaces
- Notification system
- Barcode scanning support

Benefits:

- Reduces manual labour

- fast search

- efficient management in registration and transactions

3. Functional Requirements:-

- Book management
- User management
- Transaction management
- Search functionality
- Penalty calculation

4. Interface Requirements:-

- User Interface :- Easy to use, dashboard, search for management panel.

Database Interface :- SQL, database management, storing of books, system, and user records.

5. Performance Requirements:- Response time, capacity

Error Rate: maintain a low error rate

6. Design Constraints:-

- Technology stack: MySQL and ReactJS

- Hardware : should be deployable on a server with 8GB RAM.

7. Non-functional attributes:-

Security, Scalability, Reliability

8. Preliminary Schedule and Budget:-

time: development to be completed in 3 months

Budget: ₹ 40,000, development, maintenance, testing, training, and deployment.

SRS + design: ₹ 8,000

development: ₹ 22,000

testing: ₹ 6,000

maintenance: ₹ 4,000

Stock Maintenance :-

1. Introduction

- purpose : system that manages and monitors stock levels, real-time information availability of goods

- scope : handle stock inventory, predict levels, provide reports

- overview : A cloud-based, inventory management centralized view of stock helps generate orders automatically

2. General description :

Function :- system will manage inventory, track stock usage.

Features :- Real-time monitoring, automated supplier management.

Benefits :- minimizes overstock/understock, improved accuracy.

3. Functional Requirements

core Function's : Track stock, generate reports, auto-generate purchase orders.

4. Interface Requirements

Real-time updates : immediate stock data reflection

5. Performance Requirements

Fast access to display stock levels, supplier details

6. design constraints

cloud deployment: system hosted on cloud platform

7. non-functional Attributes:

security - ensure stock data integrity with
relational database, encryption standards, security

8. Preliminary Schedule and Budget

Time: 3 months

Budget: ₹ 50,000

SRS & Design: ₹ 30,000

Testing: ₹ 8,000

mainframe, ₹ 8,000

hosting, ₹ 10,000

development, maintenance, management, development,
quality control, testing

storage facilities, maintenance and updates,
future technology

new location, Germany, other software
modules

development, maintenance, management, development,
quality control, testing

new office, management, maintenance, development,
quality control, testing

Passport Automation

1. Introduction:

purpose: Automate the passport application process for increased efficiency.

scope: Online Application, status tracking, and appointment scheduling.

overview system provides a streamlined process for booking passport, appointment and track their passport status.

2. General Description:

Function: Application submission, document upload, status tracking

Features: Form submission, real-time updates, appointment scheduling.

Benefits: Faster processing, enhanced user convenience.

3. Functional Requirements:

core functions: Submit application, schedule appointment, track progress

4. Interface Requirements:

Mobile & Web: Responsive UI for users and officials.

5. Performance Requirements:

Efficiency: Process applications in under 7 minutes.

6. Design Constraints:

Compliance: Adhere to government data protection laws.

7. Non-functional Attributes:

Scalability: Handle peak load periods seamlessly.

8. Preliminary Schedule and Budget:

Timeline: 8 months

Budget: ₹60,000

(SRS, etc) ₹12,000

Development: ₹30,000

Testing: ₹10,000

Maintenance: ₹8,000

Training

Deployment

Business

Facilities

Software

Clearance

Transfer

Planning

~~Cost Estimation~~

~~Resource Allocation~~

~~Task Planning~~

~~Start Date~~

~~End Date~~

~~Dependencies~~

~~Opportunities~~

~~Risks~~

~~Contingency~~

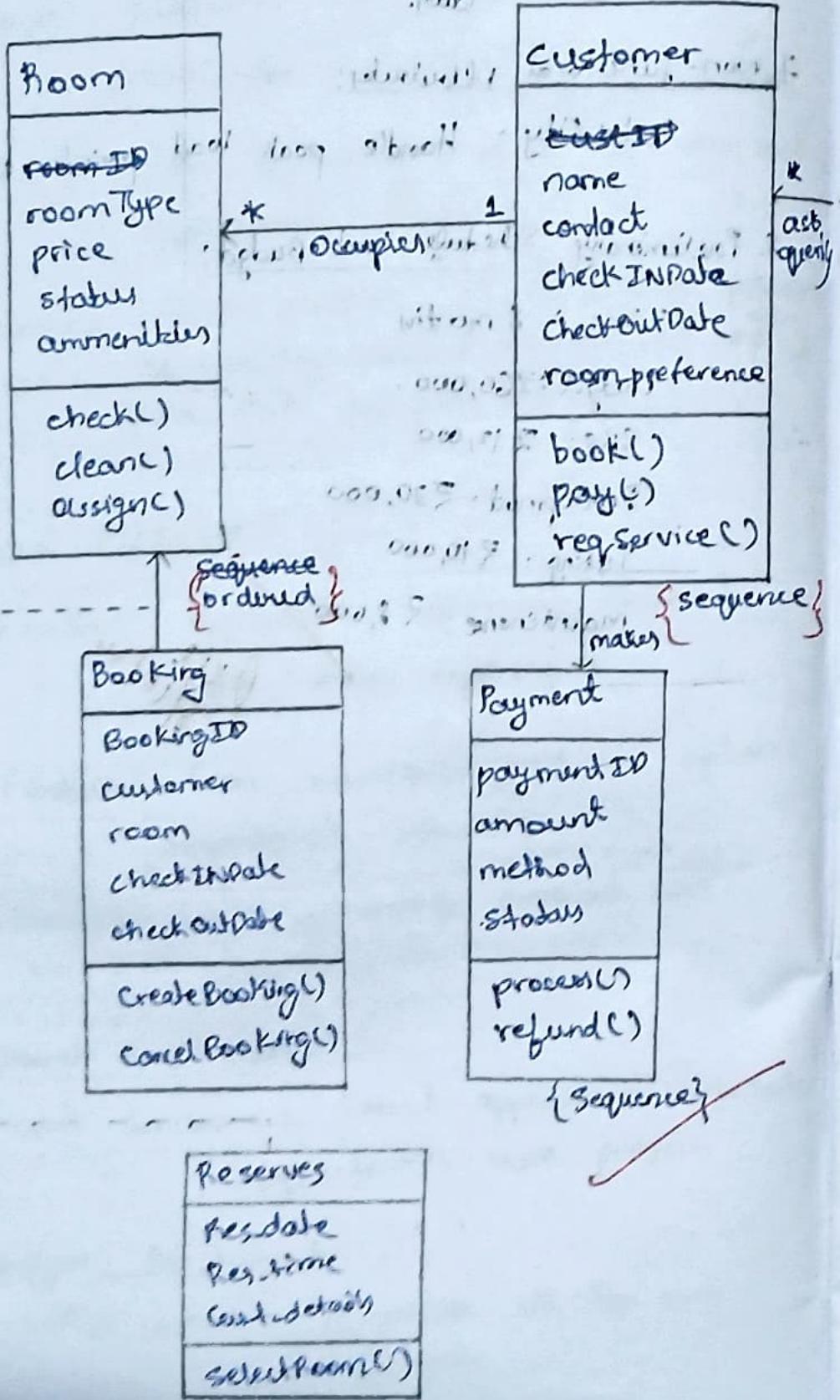
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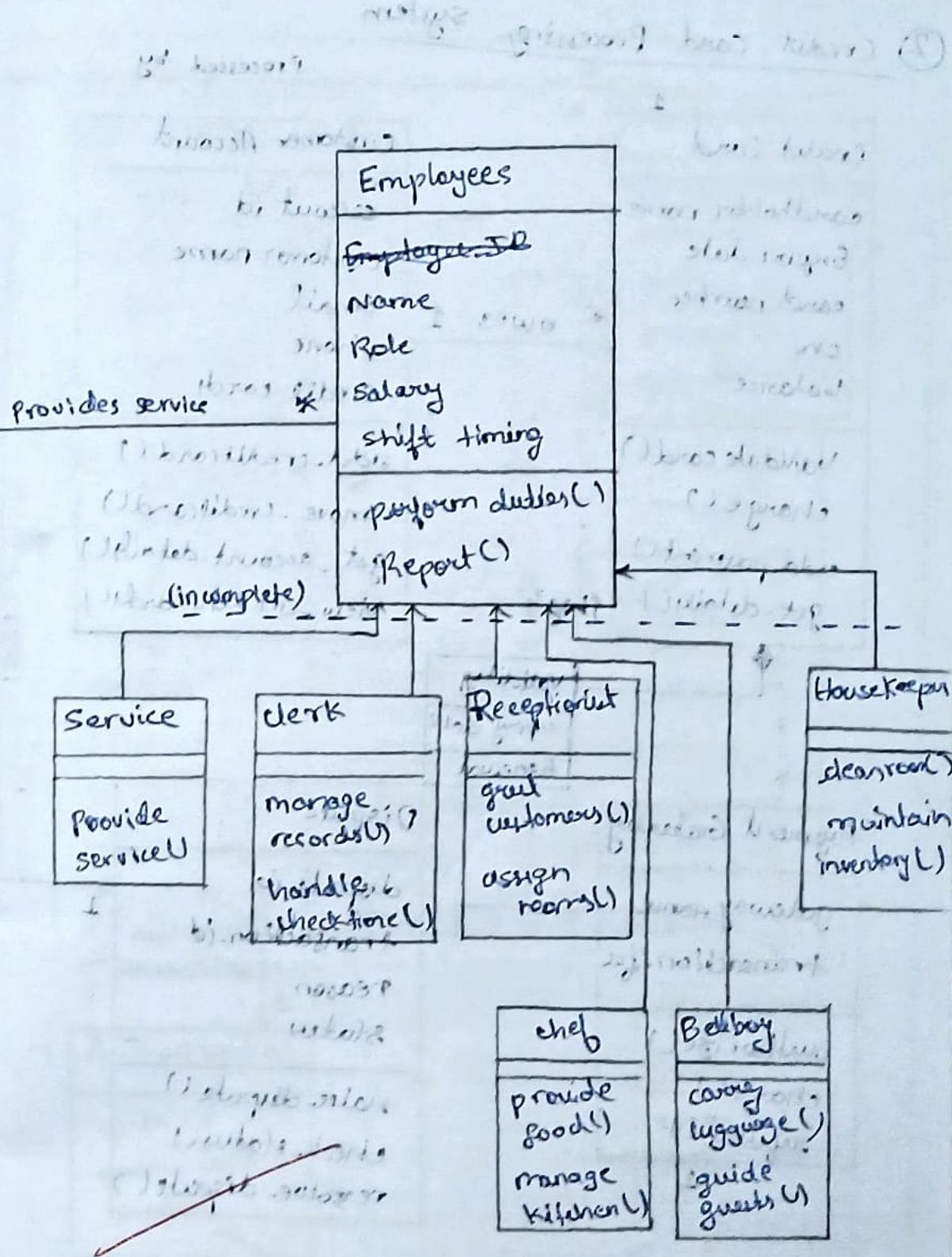
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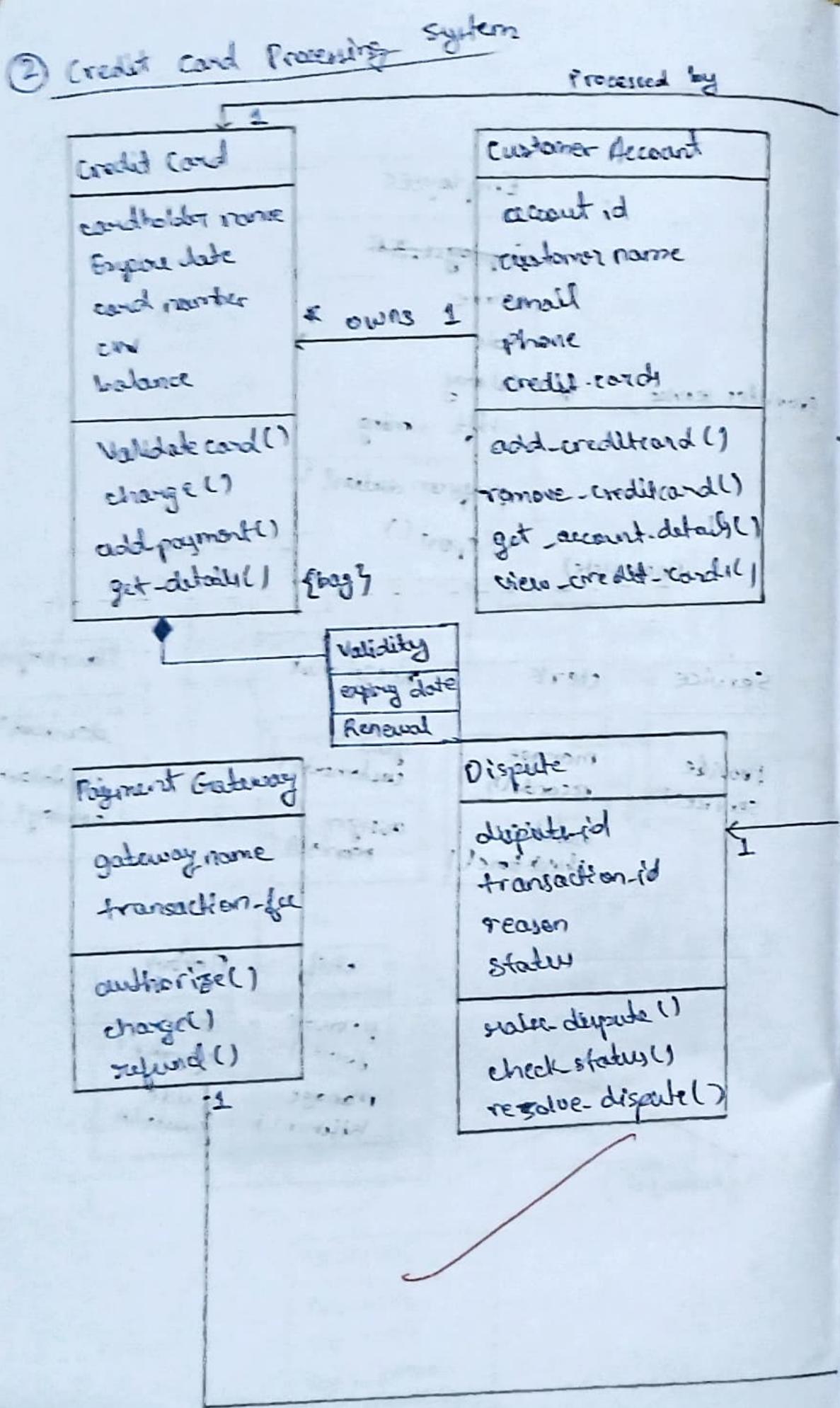
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~~Stakeholders~~

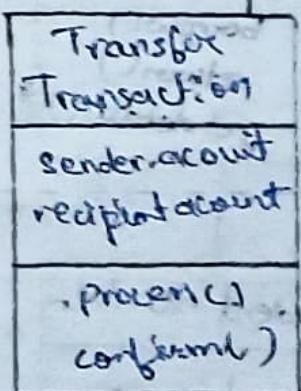
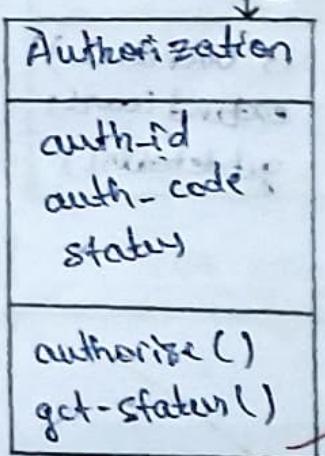
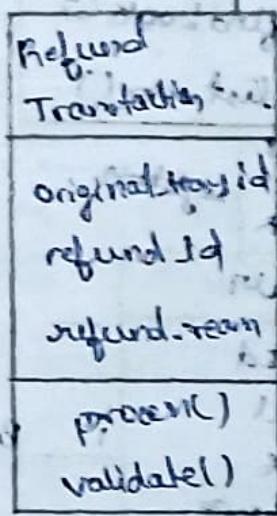
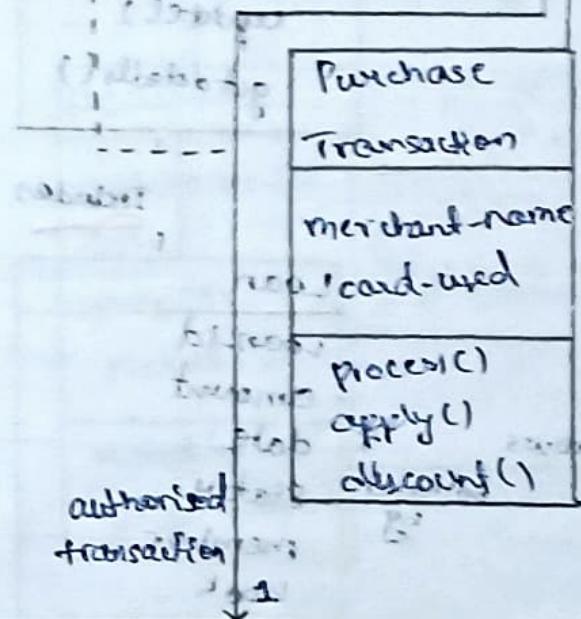
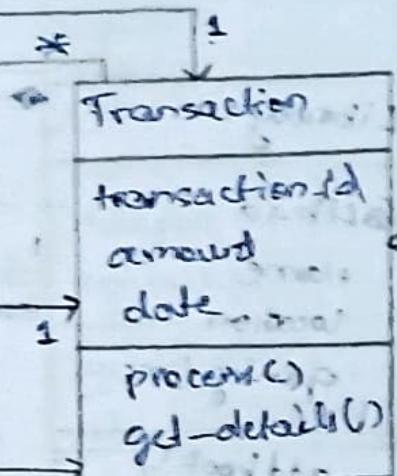
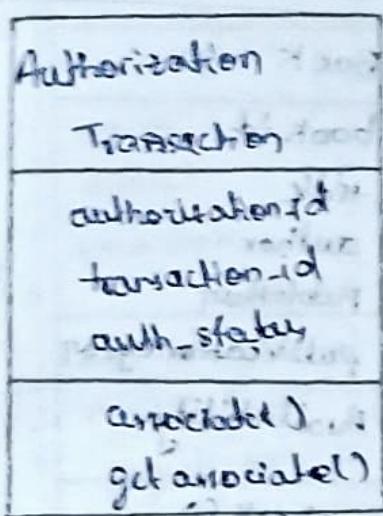
① Hotel Management System



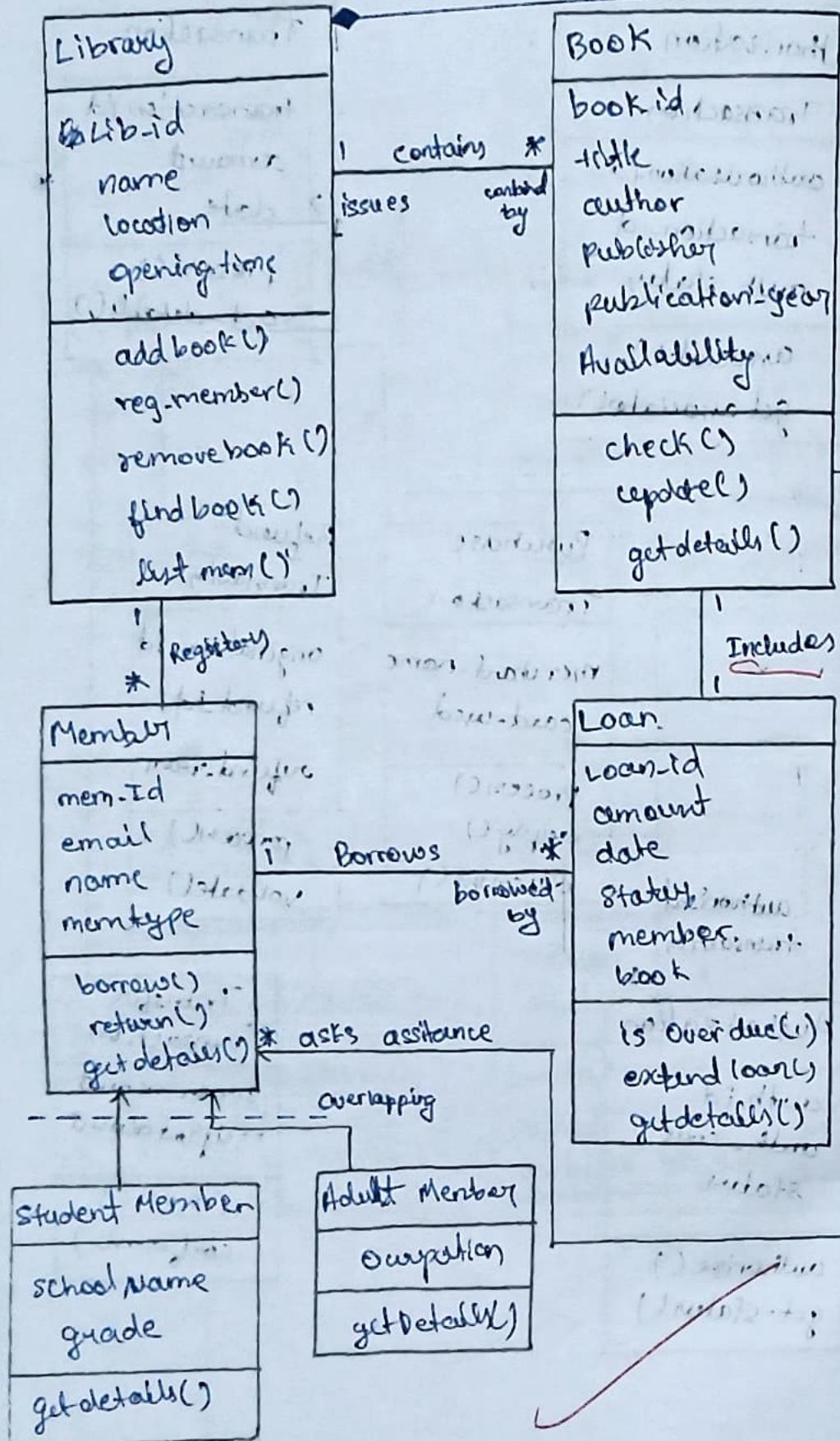


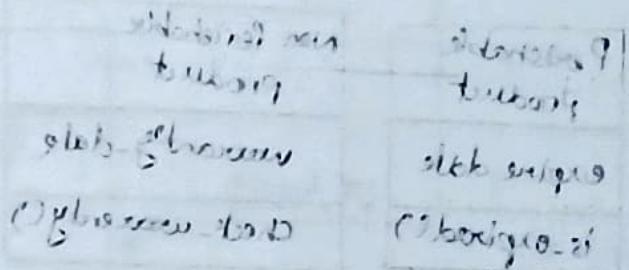
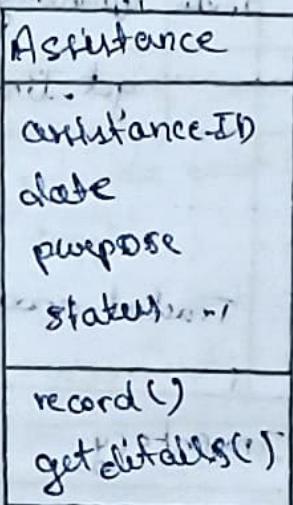
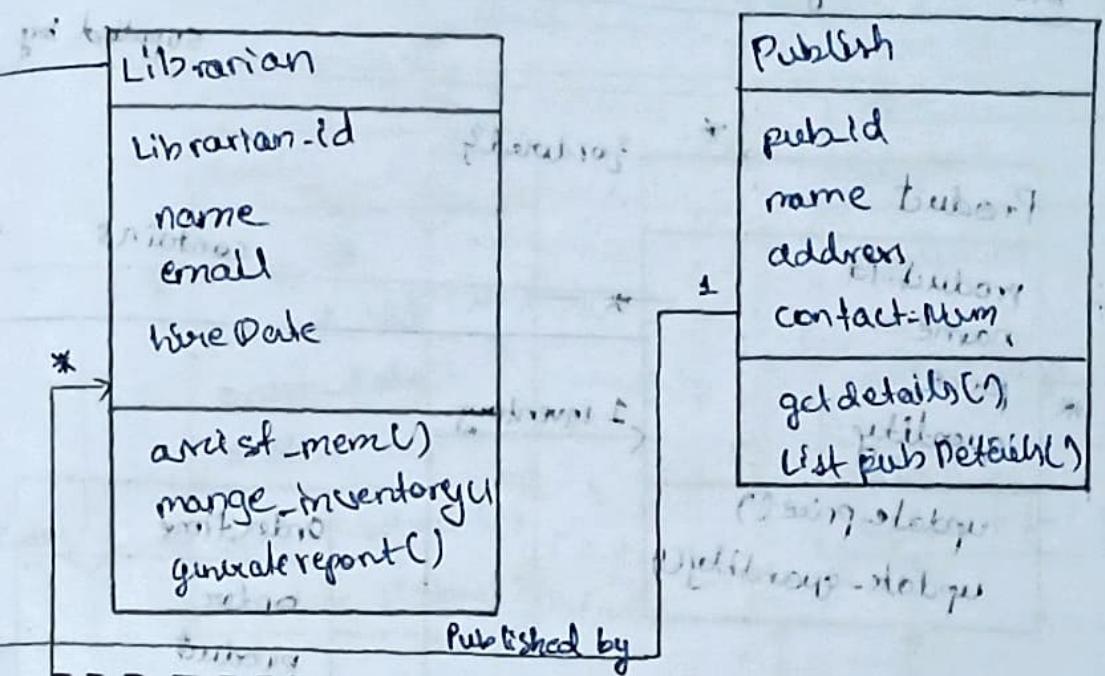


Raised against



③ Library Management System





Booking

Book

Customer

Needs

Needs

Needs

Needs

Customer

Needs

Needs

Needs

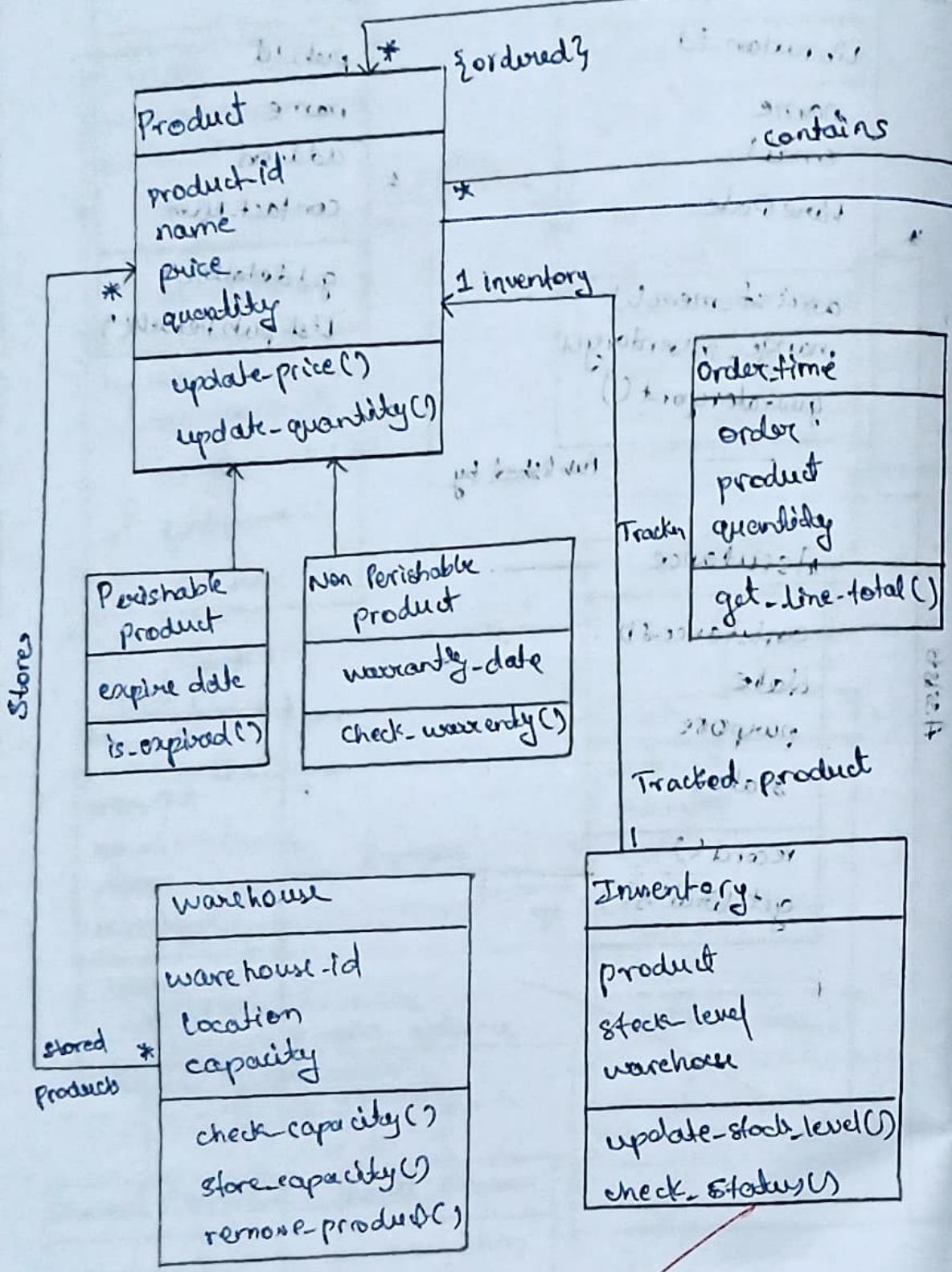
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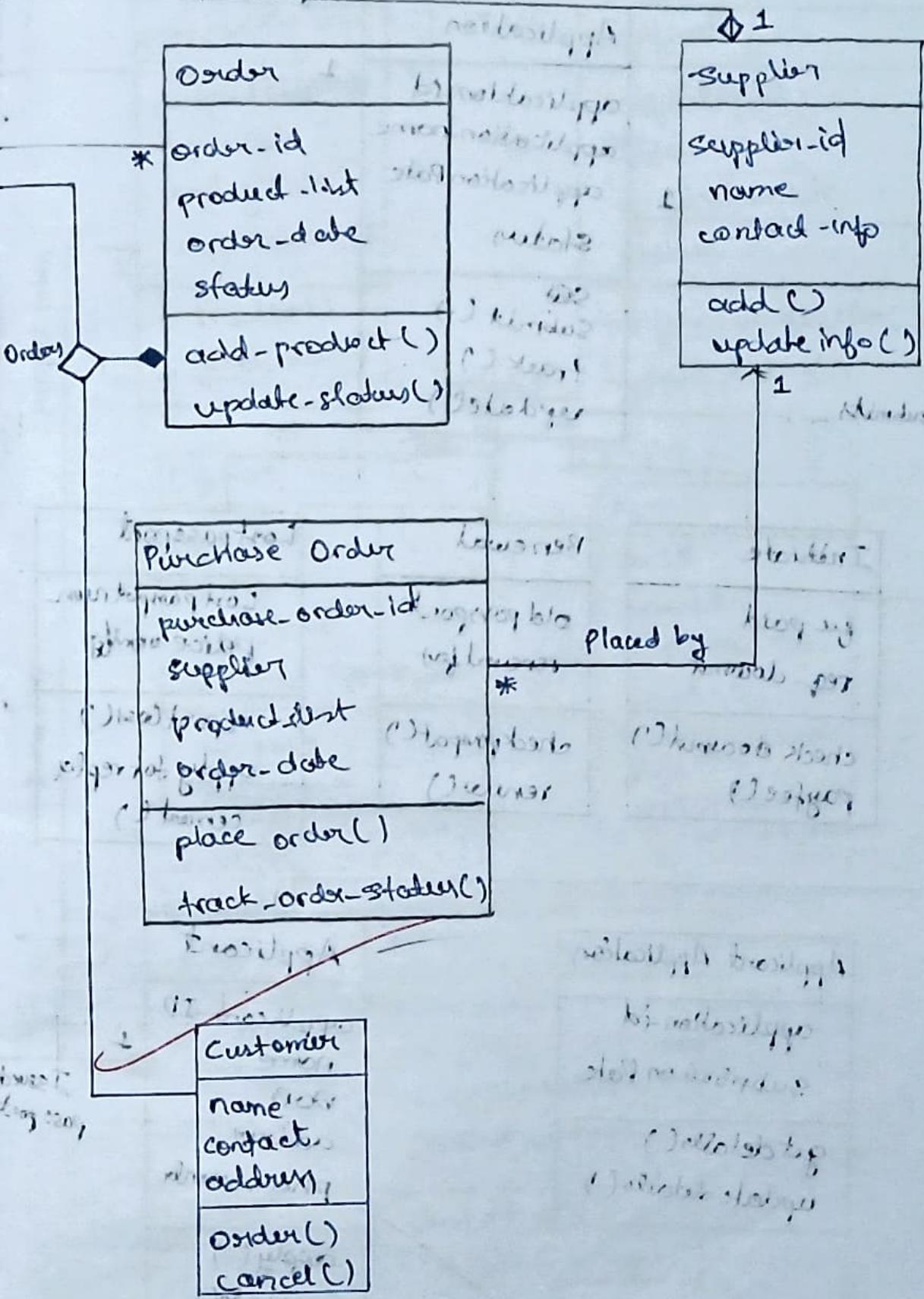
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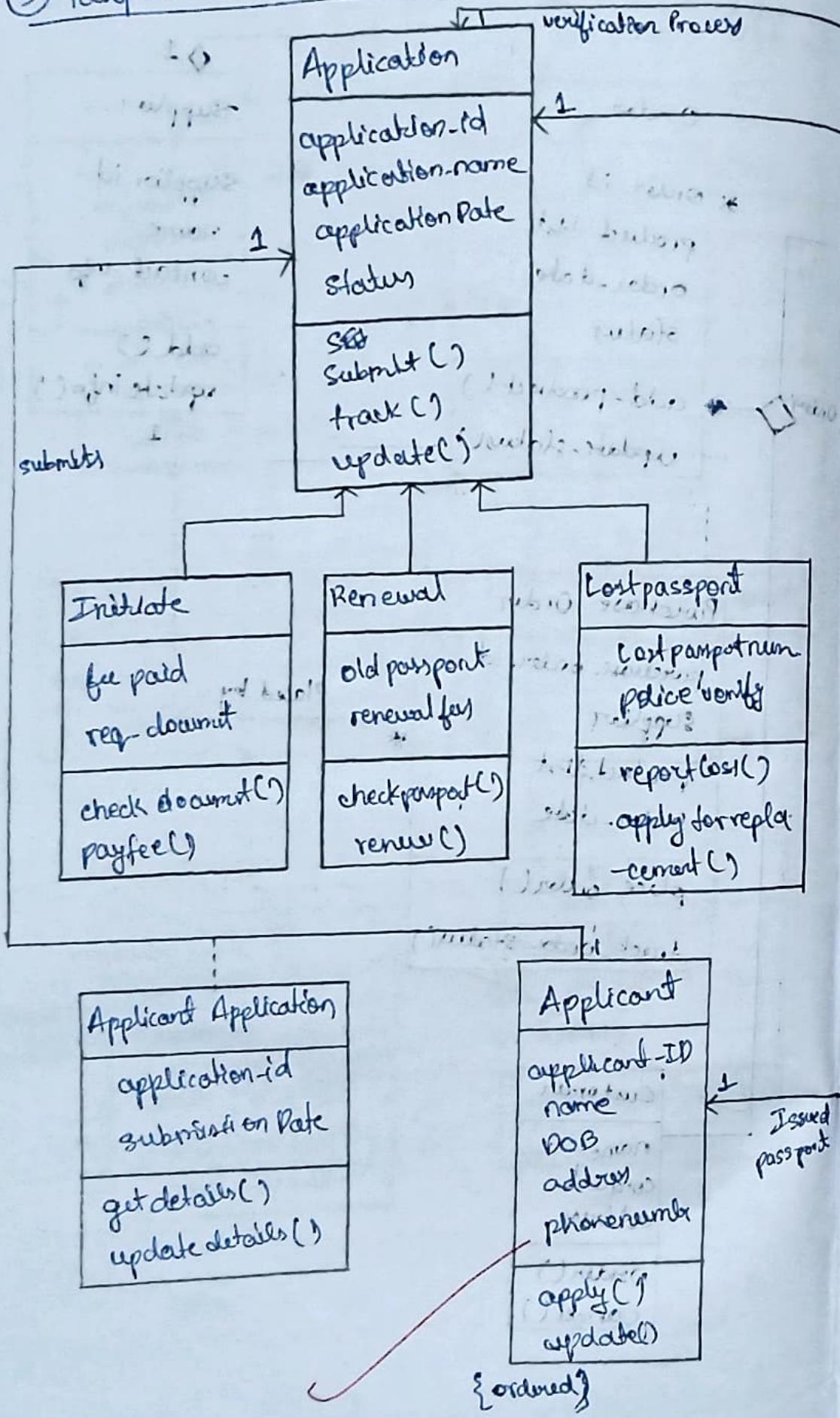
④ Stock Management System

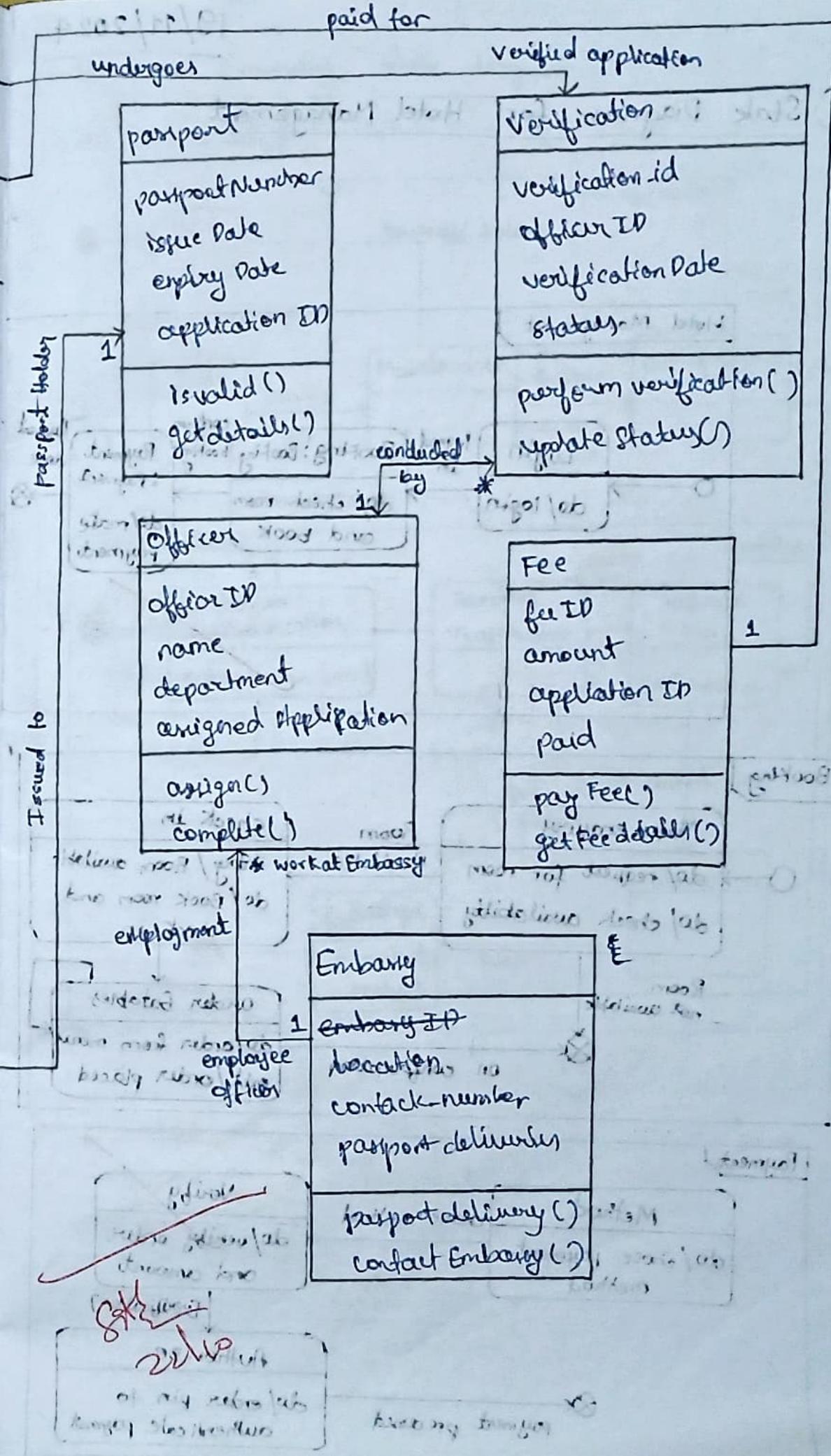
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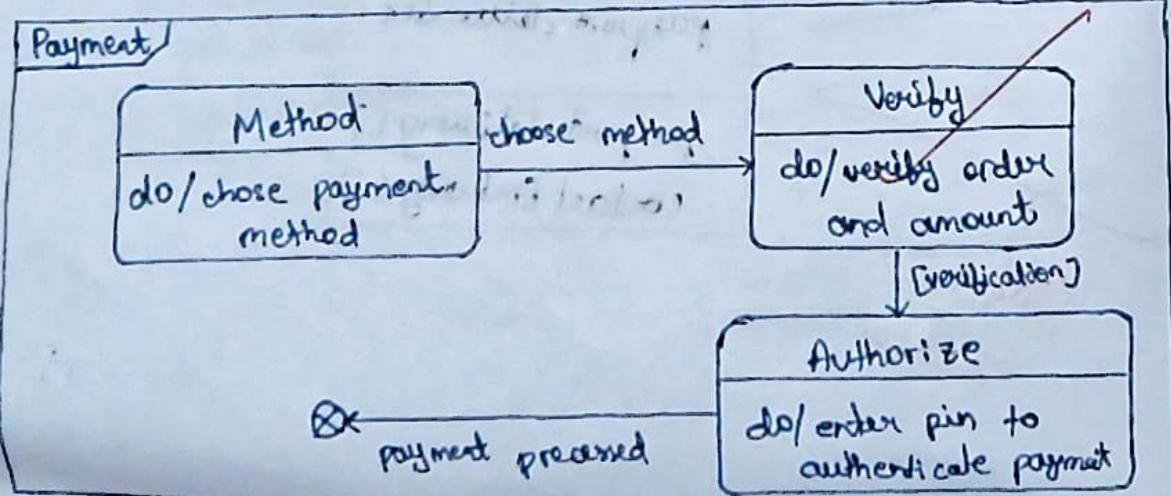
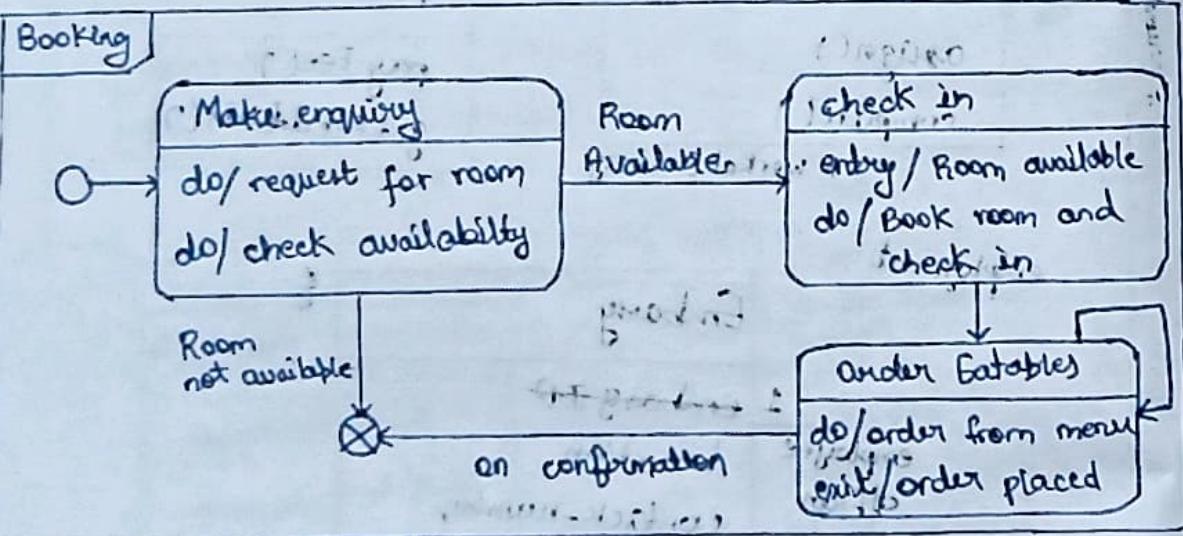
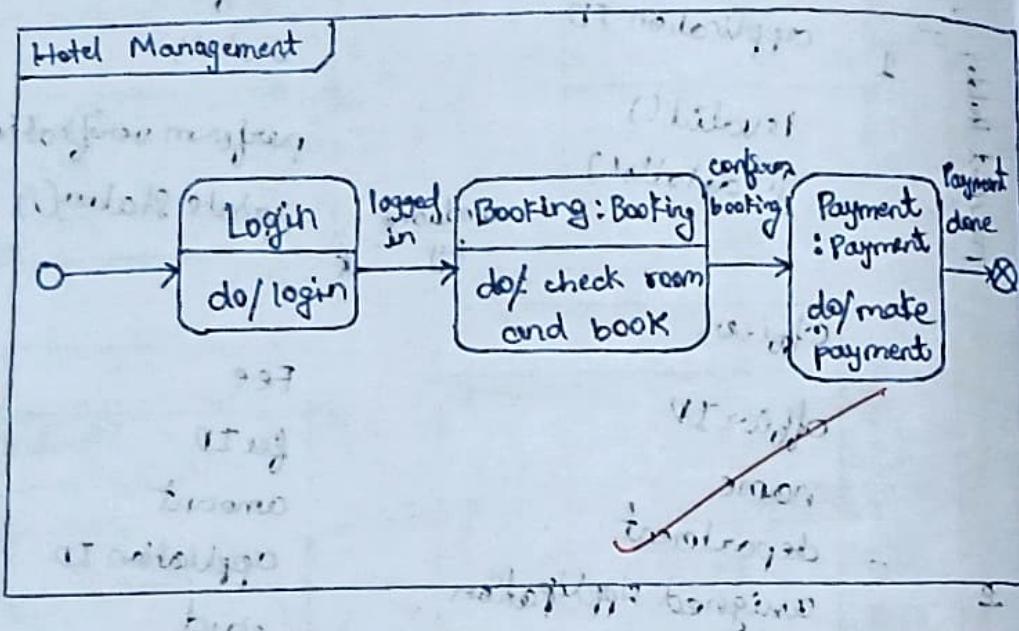


⑤ Passport Automation System

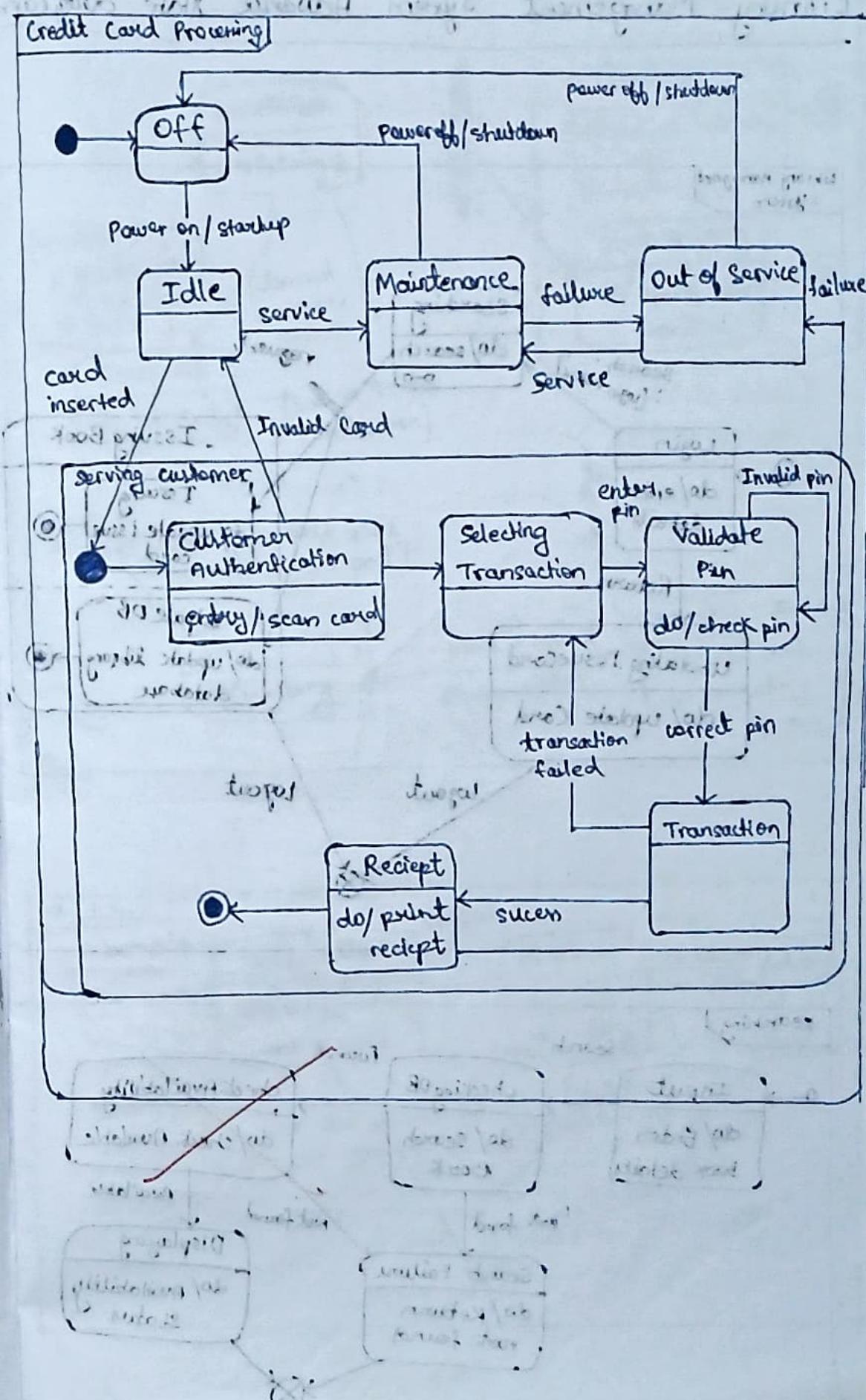




① State Diagram for Hotel Management

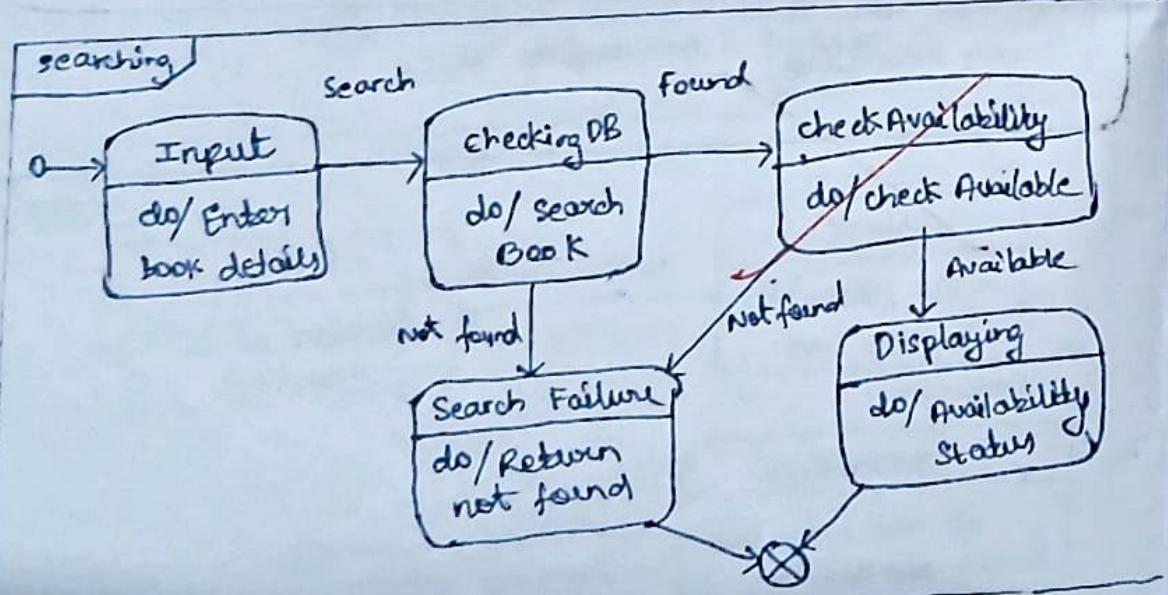
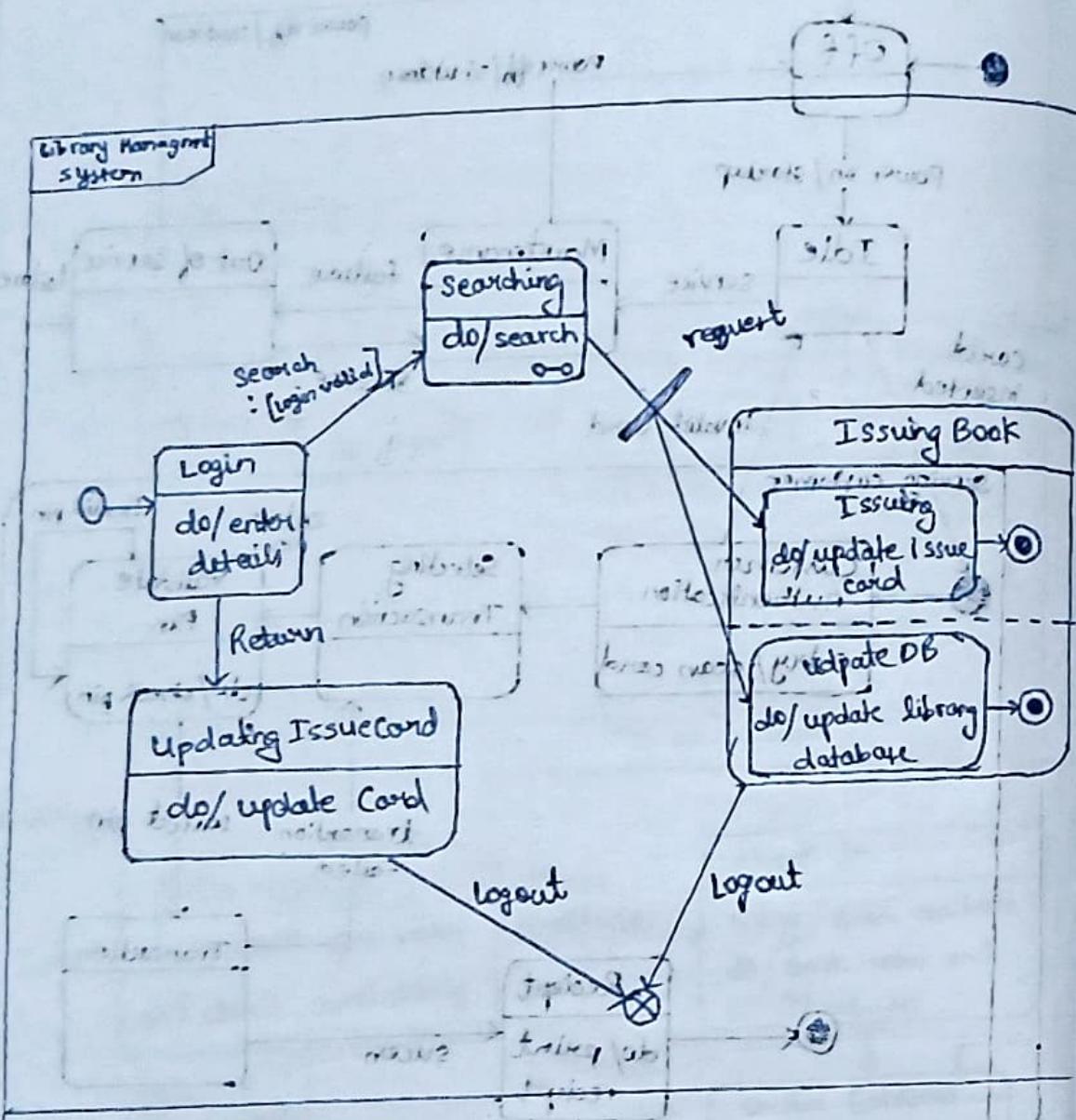


2 credit card Processing State diagram



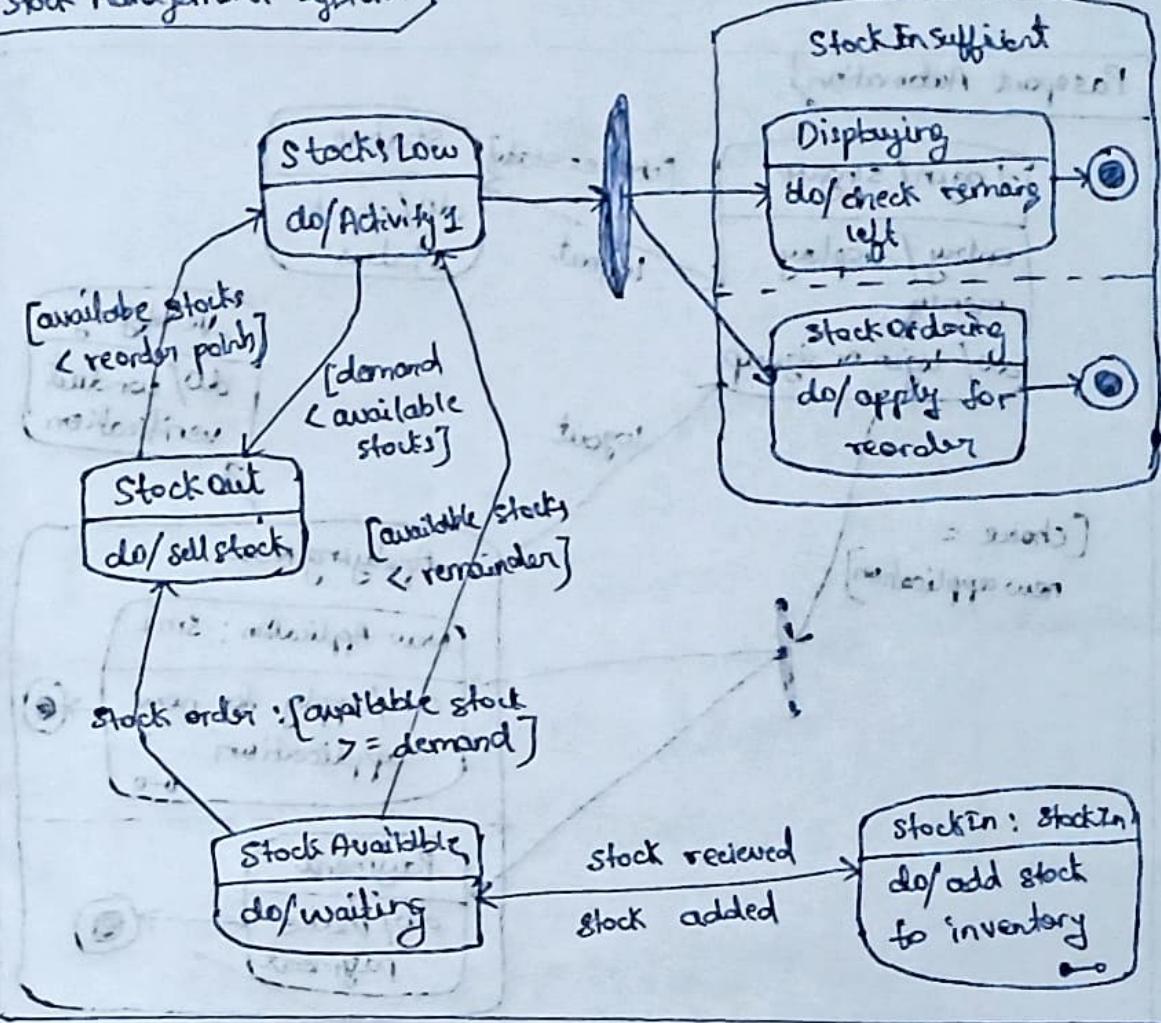
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Library Management System Advance state diagram

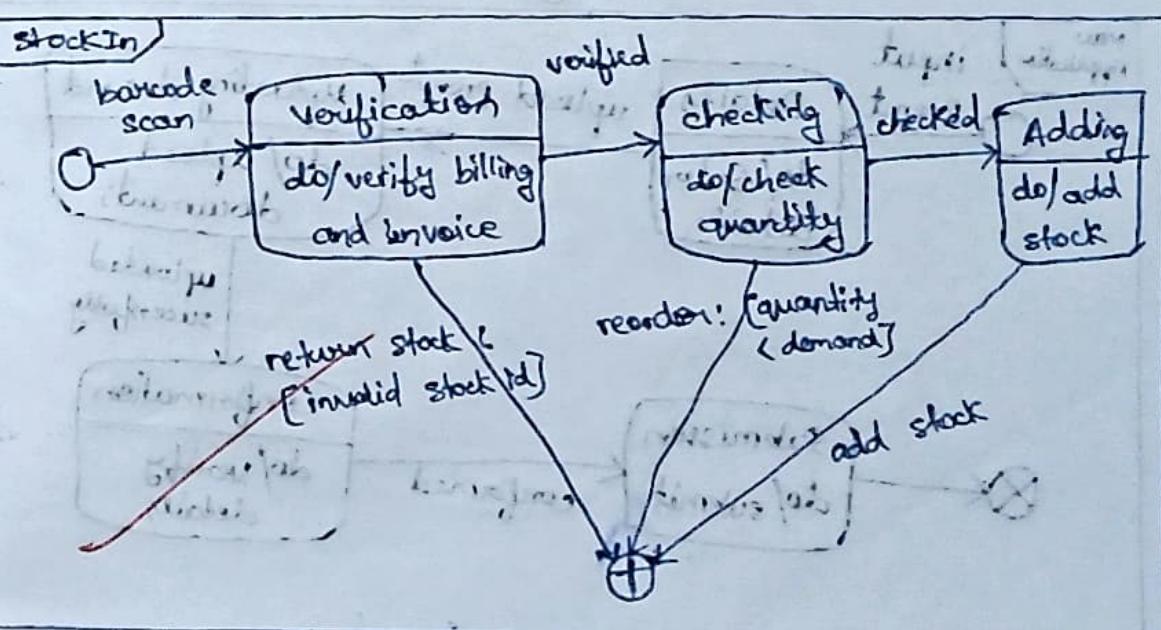


④ Stock management system

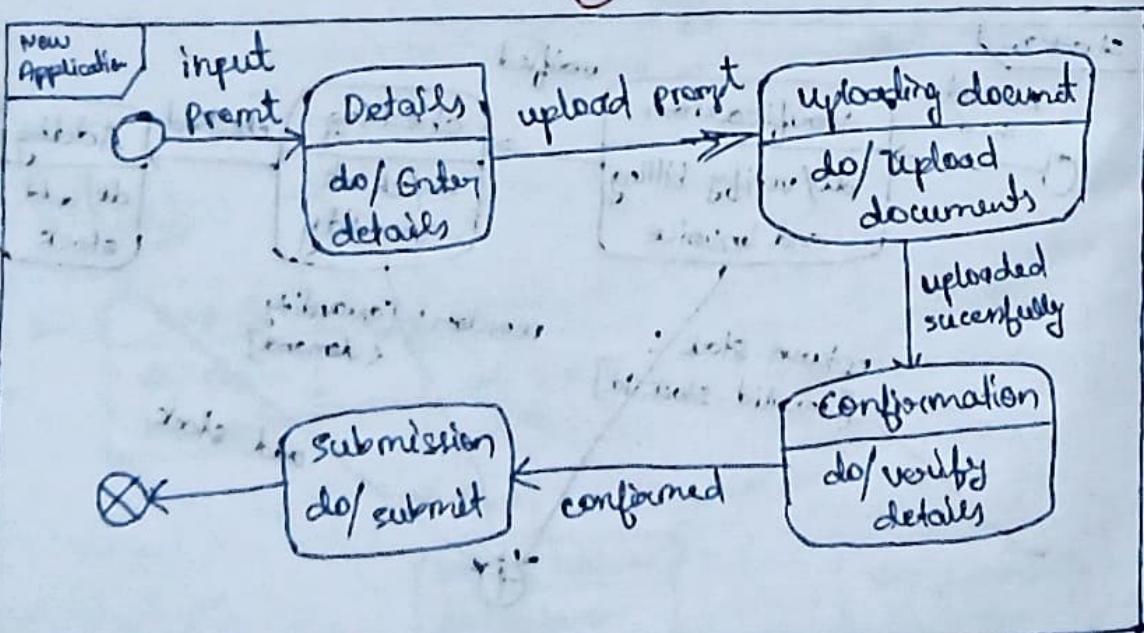
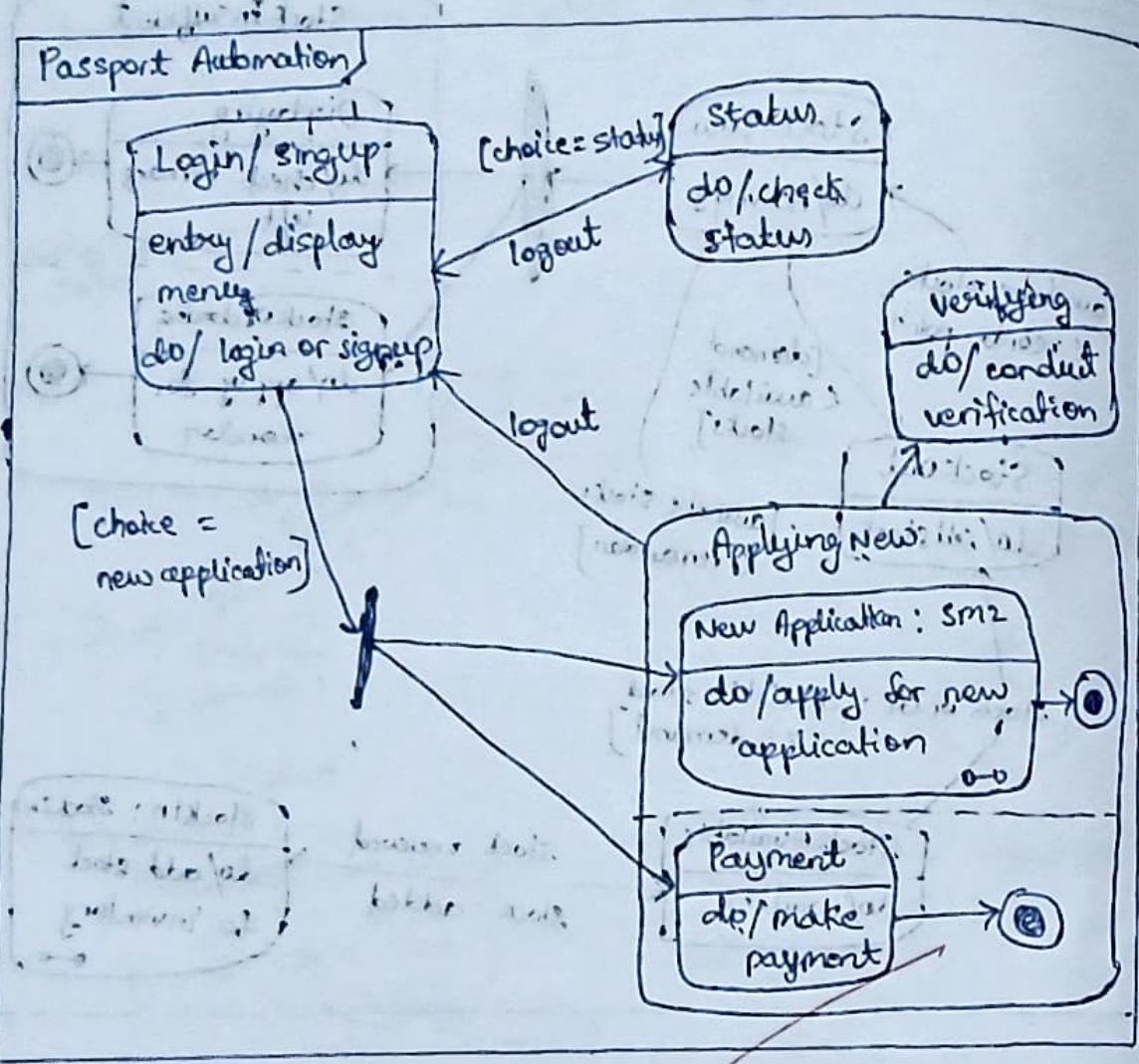
Stock Management System



StockIn



⑤ Passport Automation :-



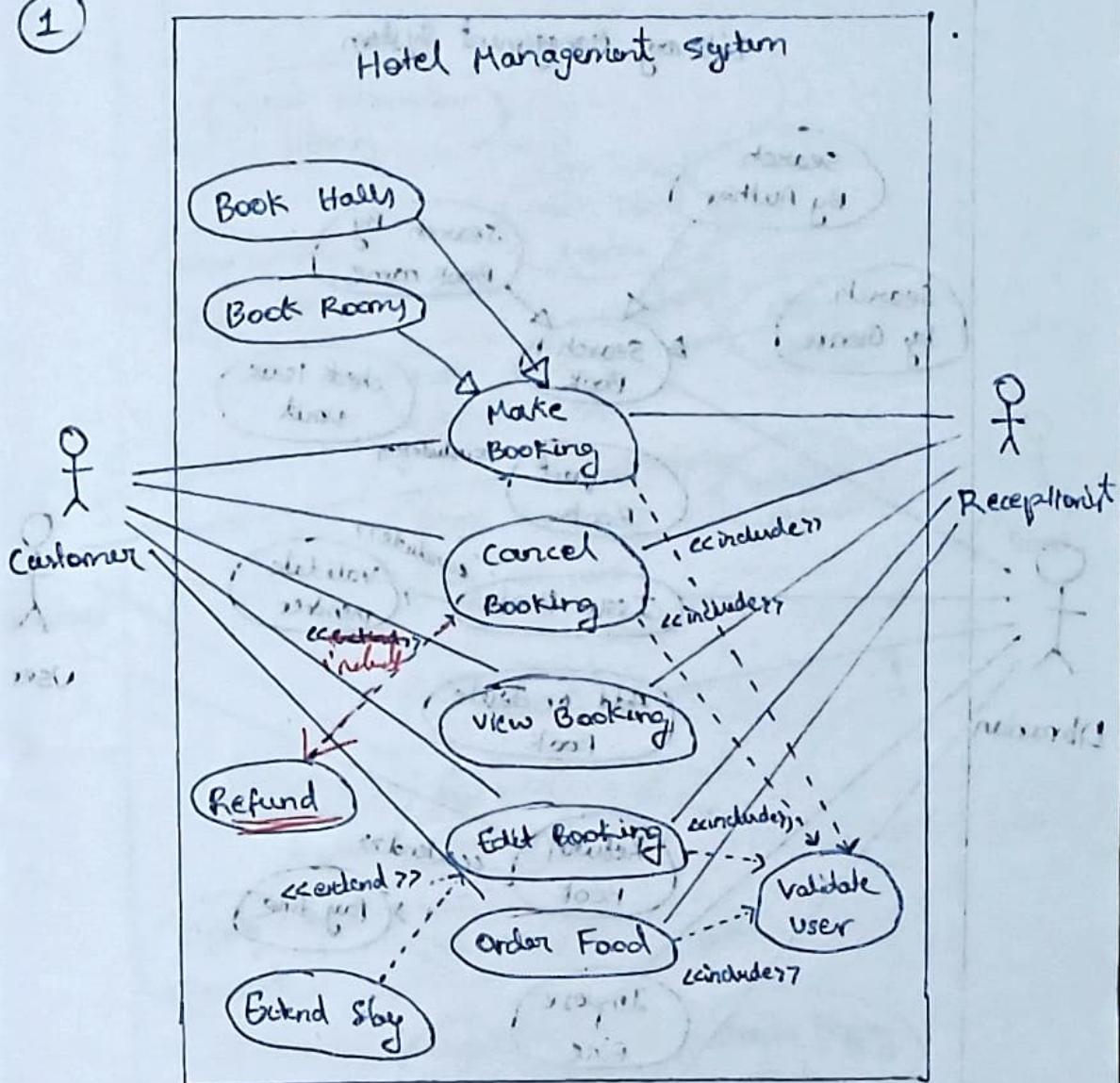
After
3/12

Advance use case diagram

26/11/2024

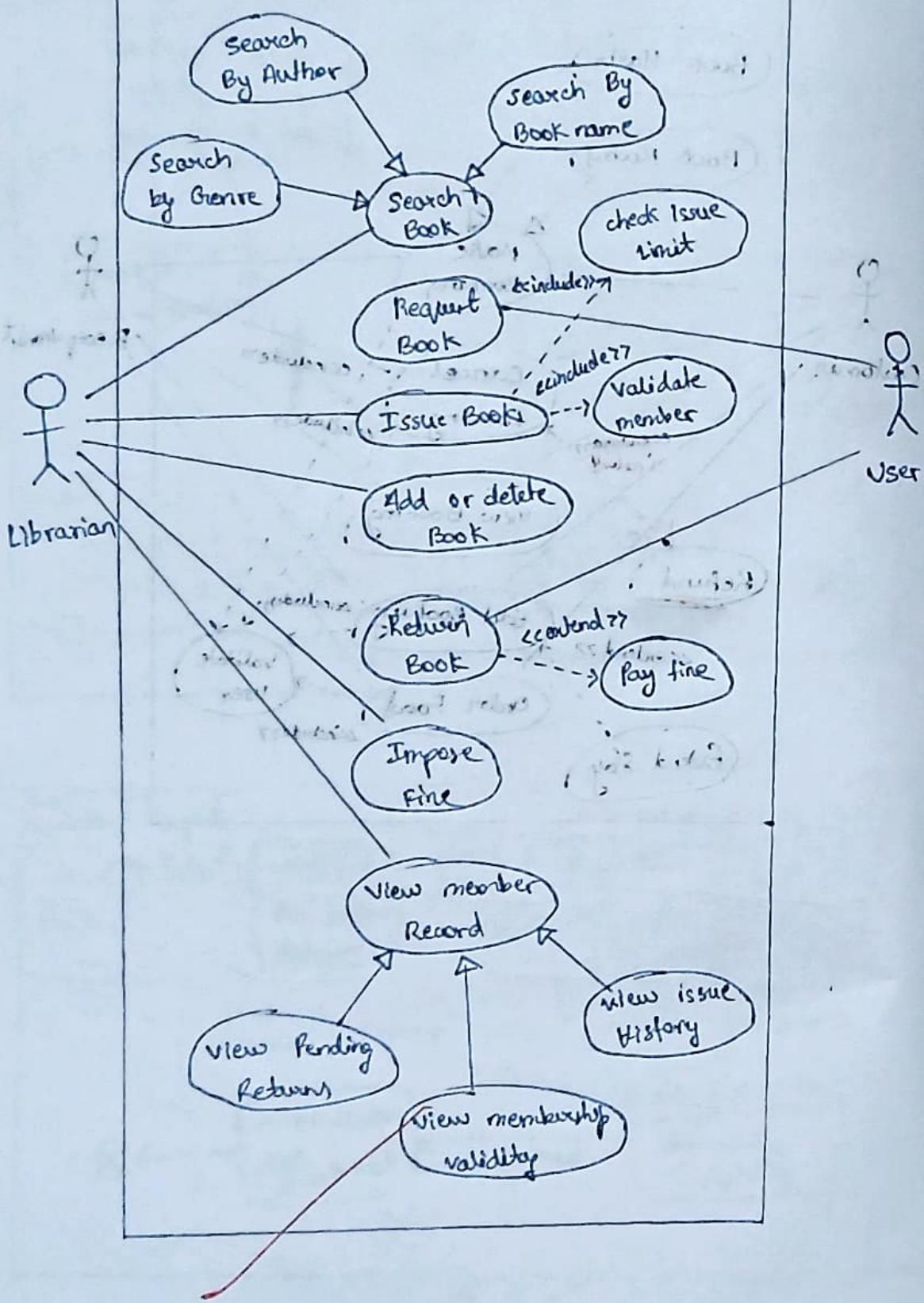
Hotel management system

1

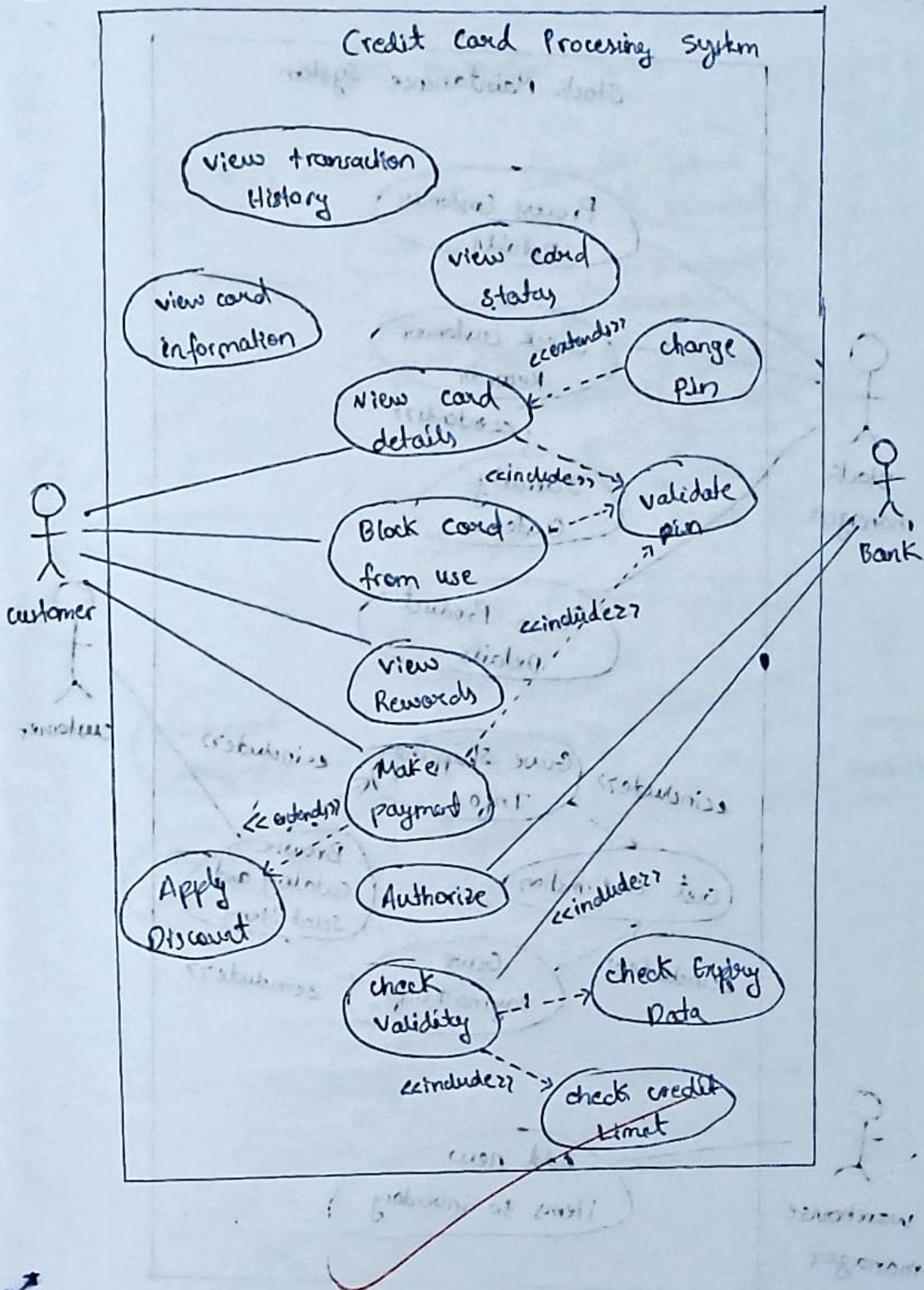


⑨ Library management system

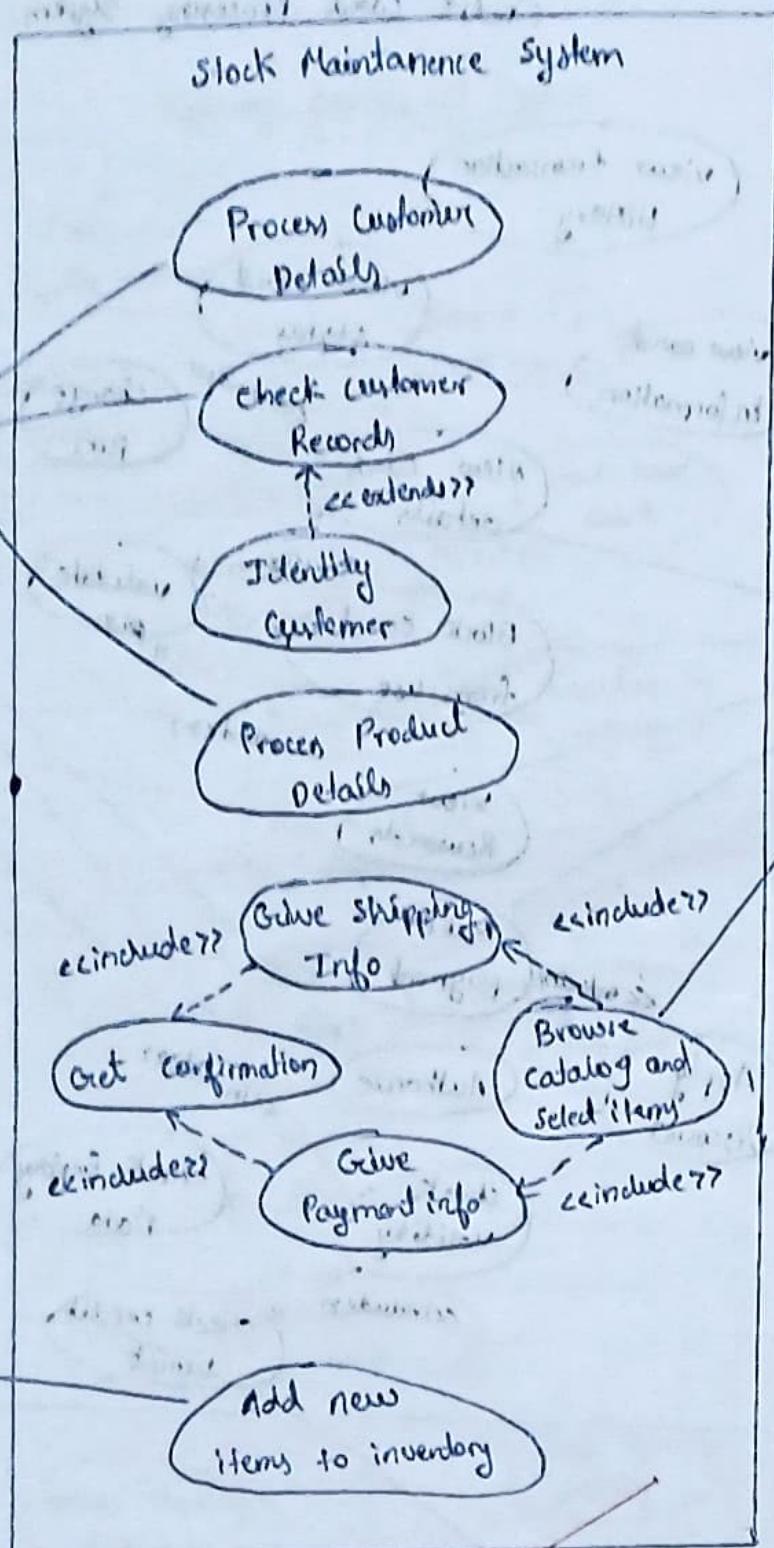
Library Management System



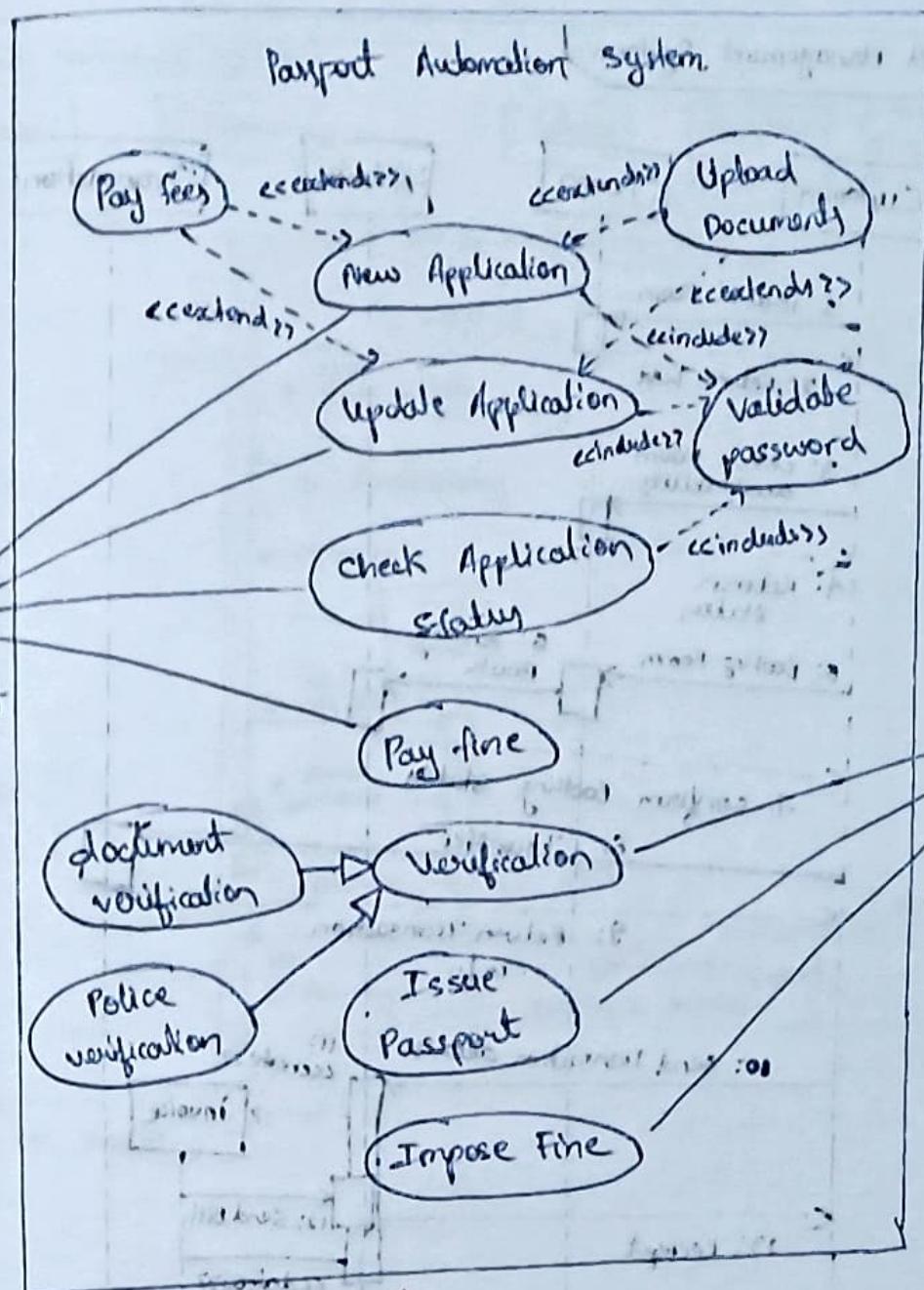
3 credit card processing system



④ stock maintenance system

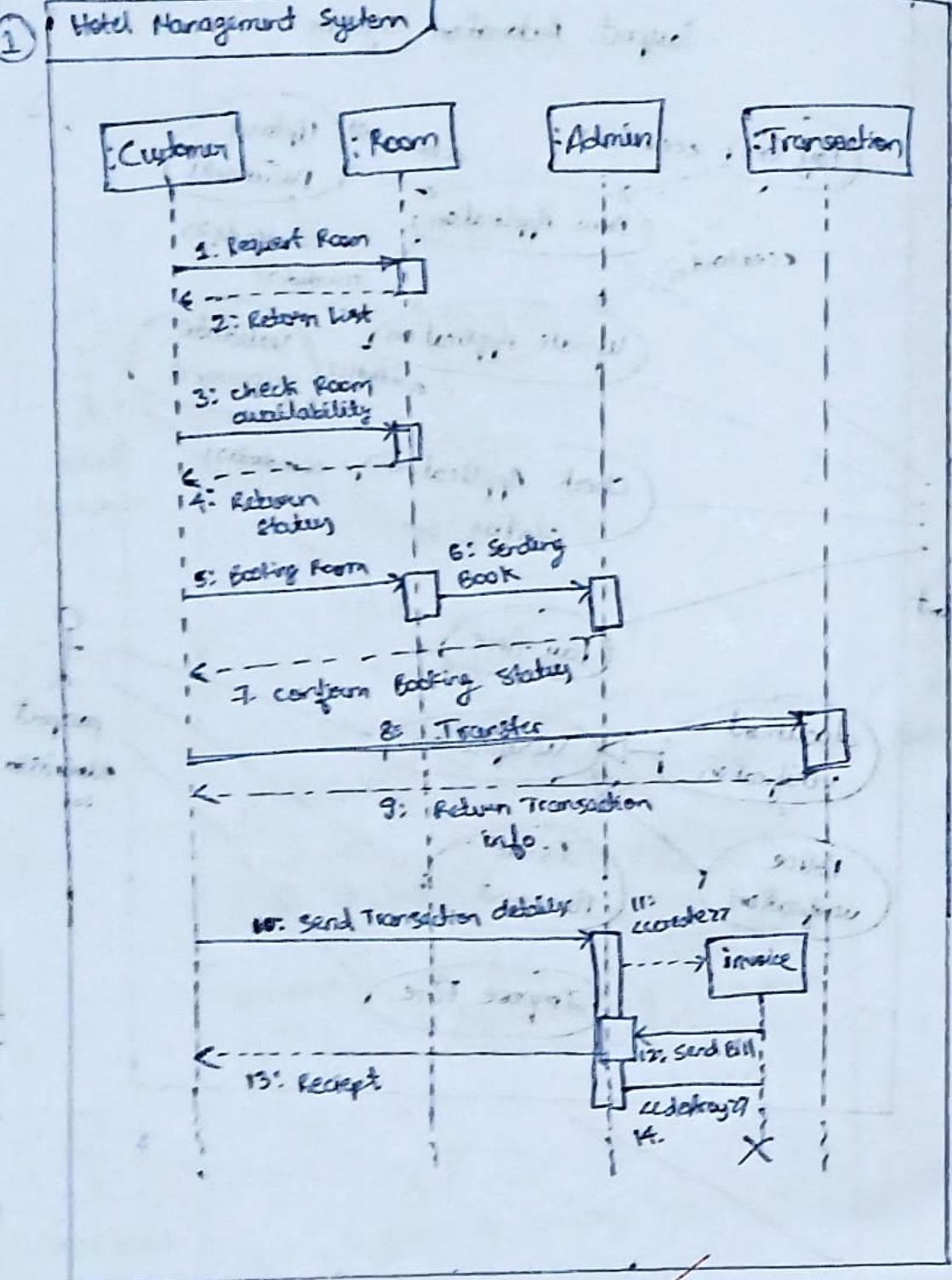


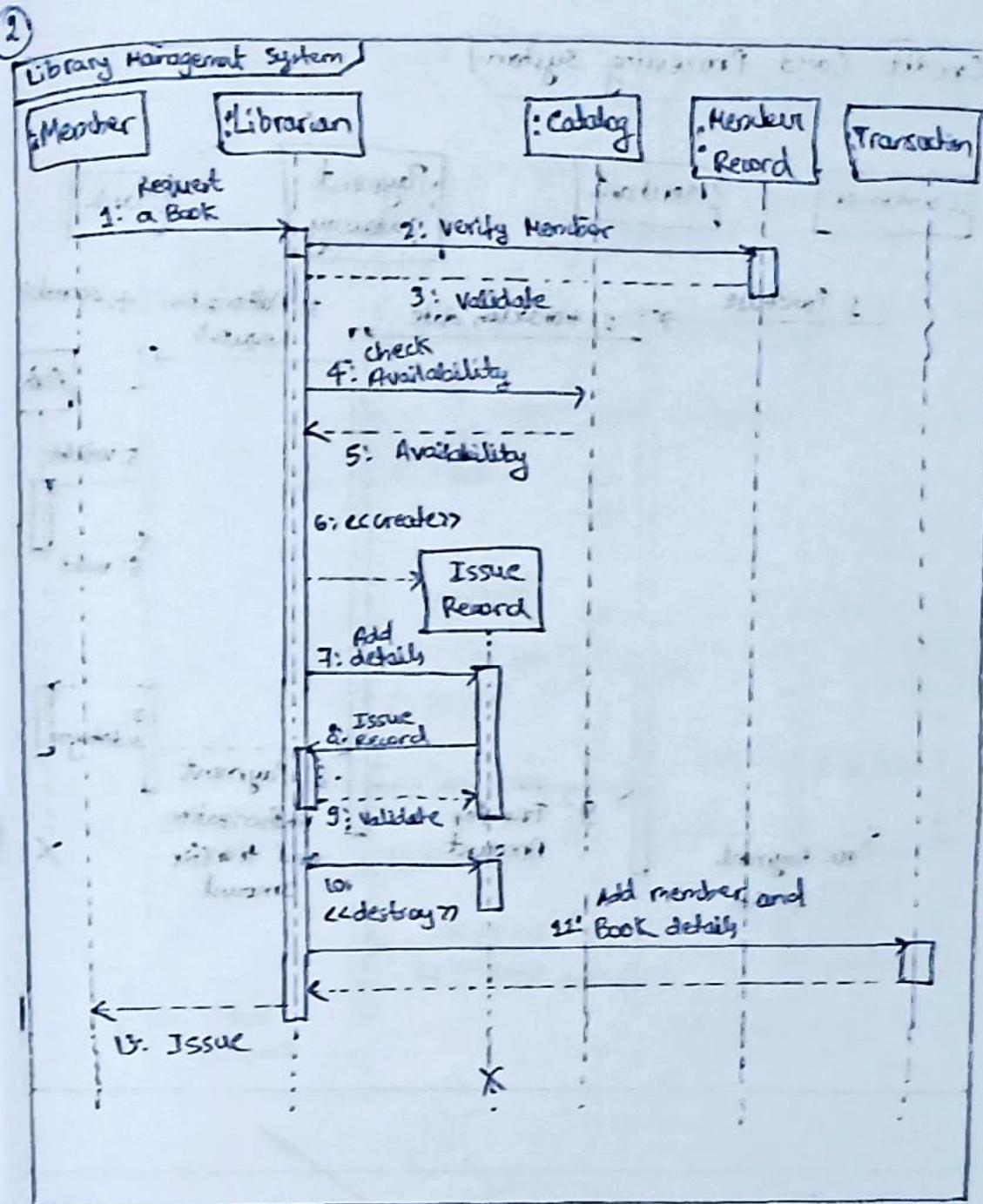
(5) Passport automation system.



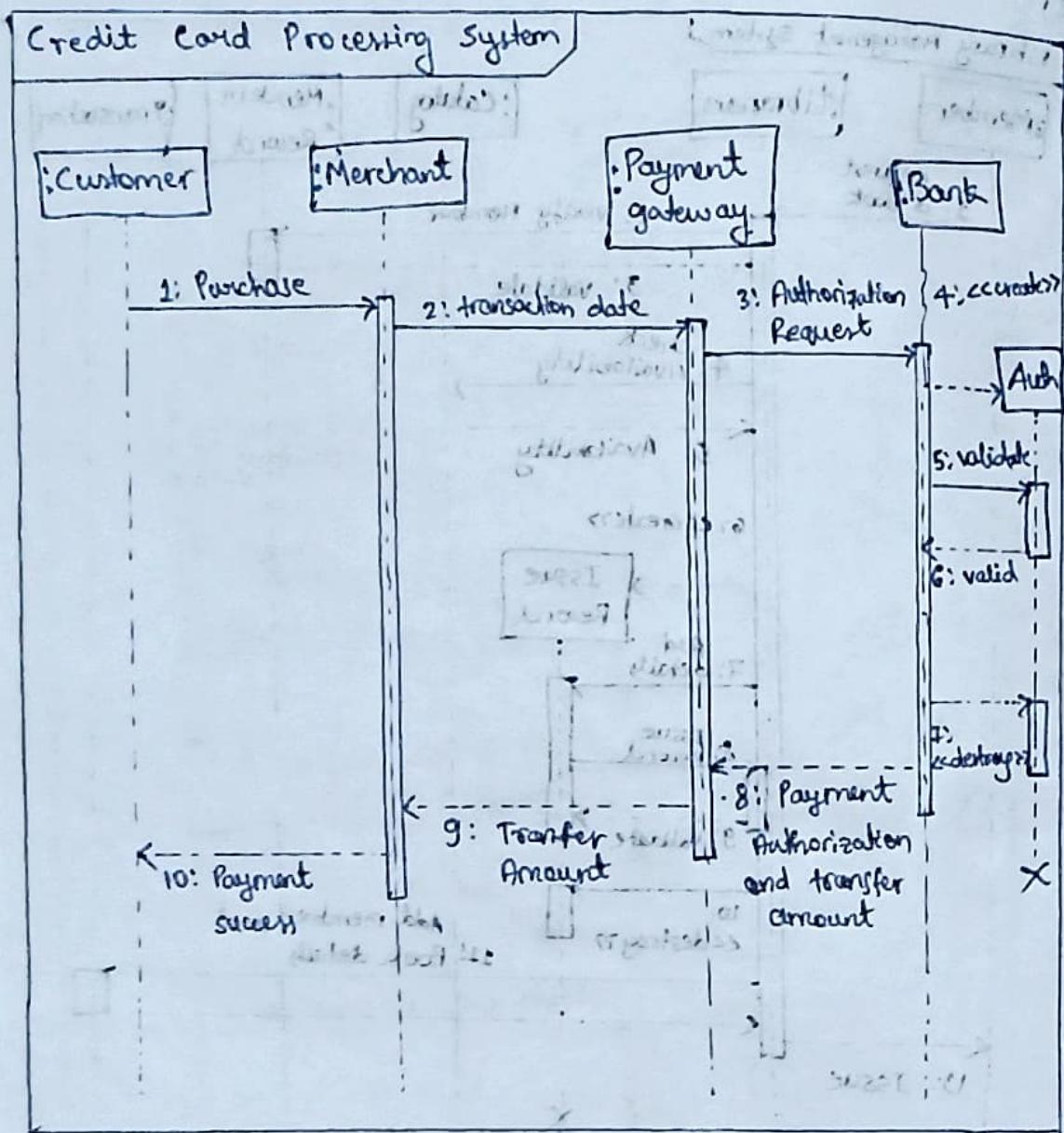
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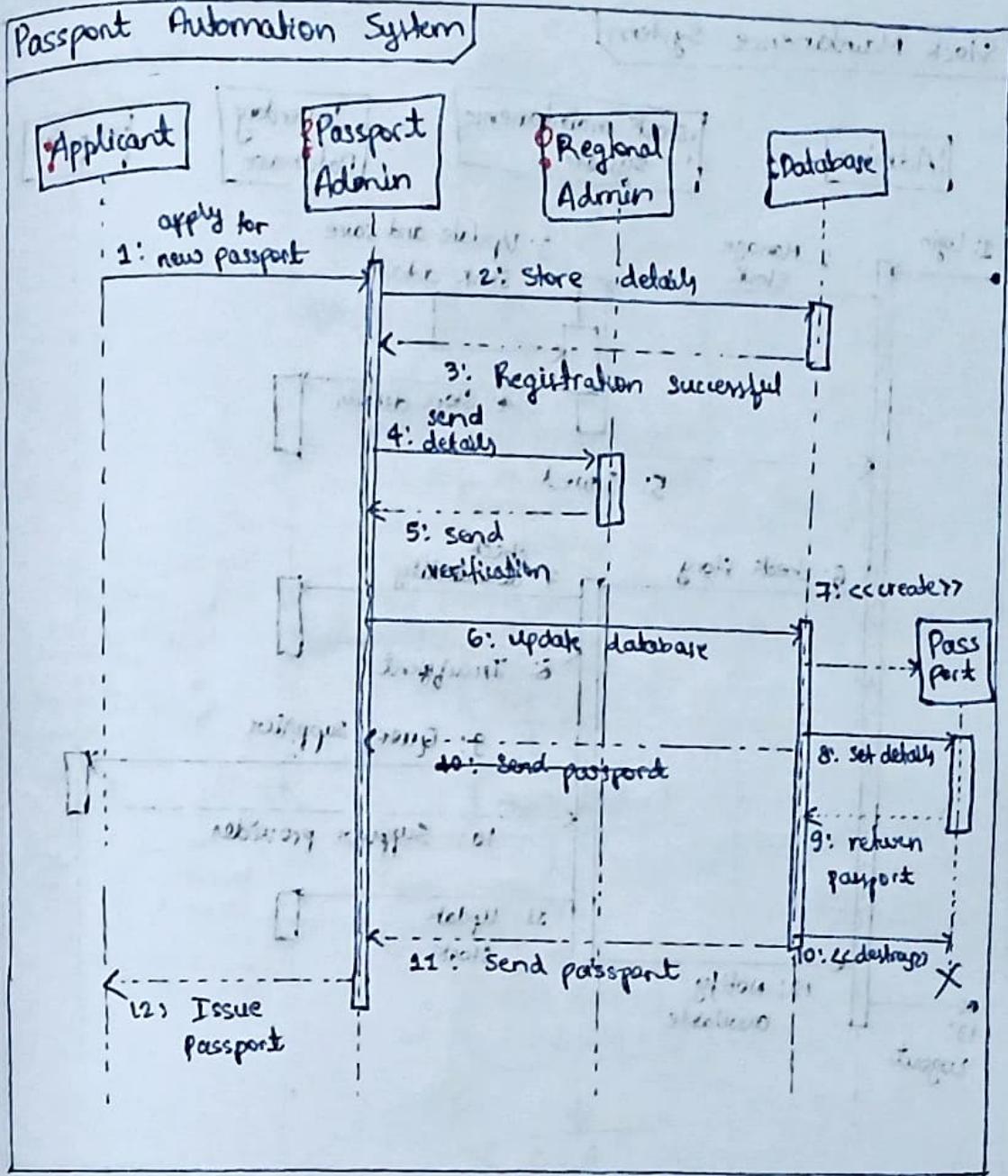
Advanced Sequence Diagrams



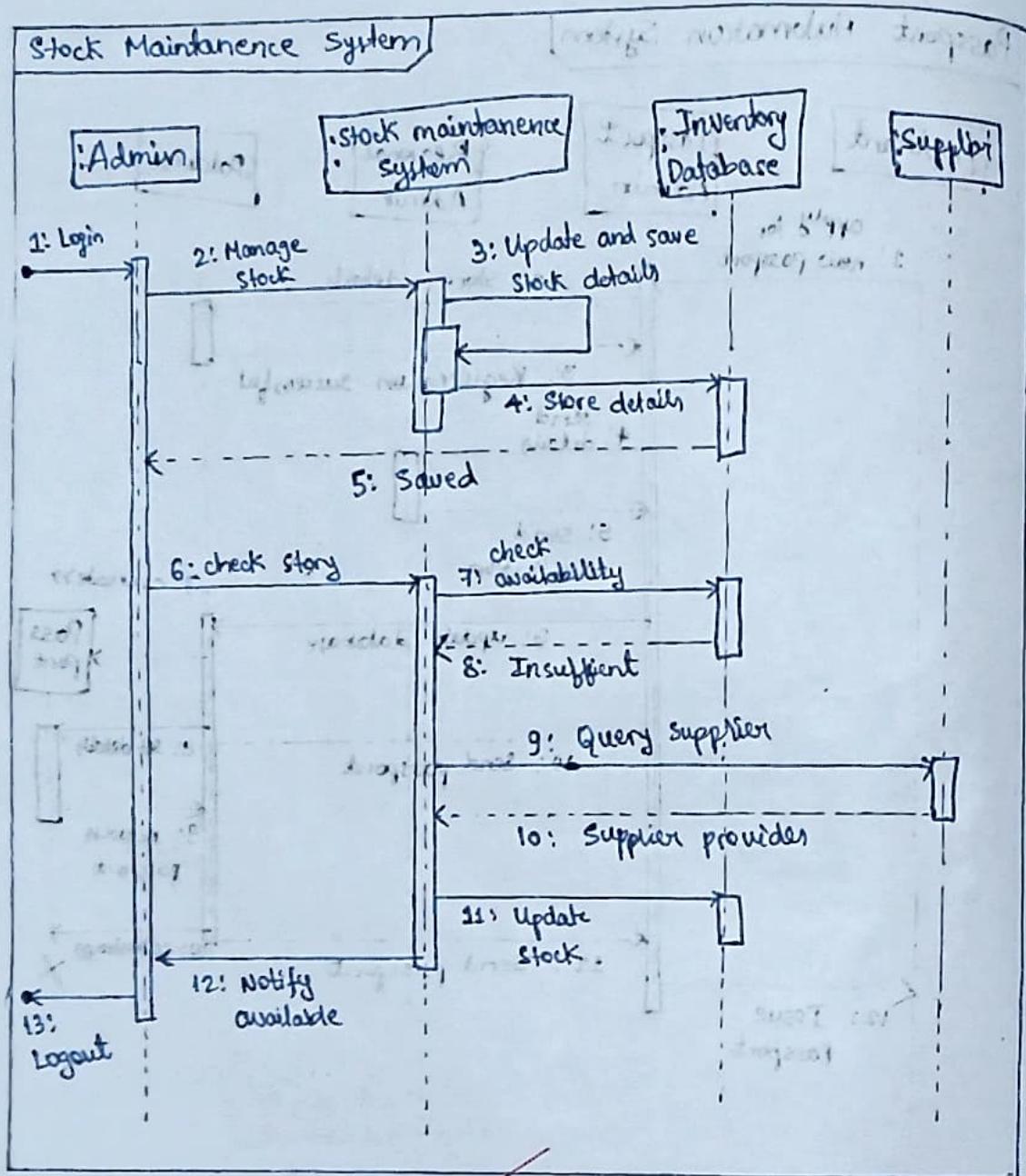


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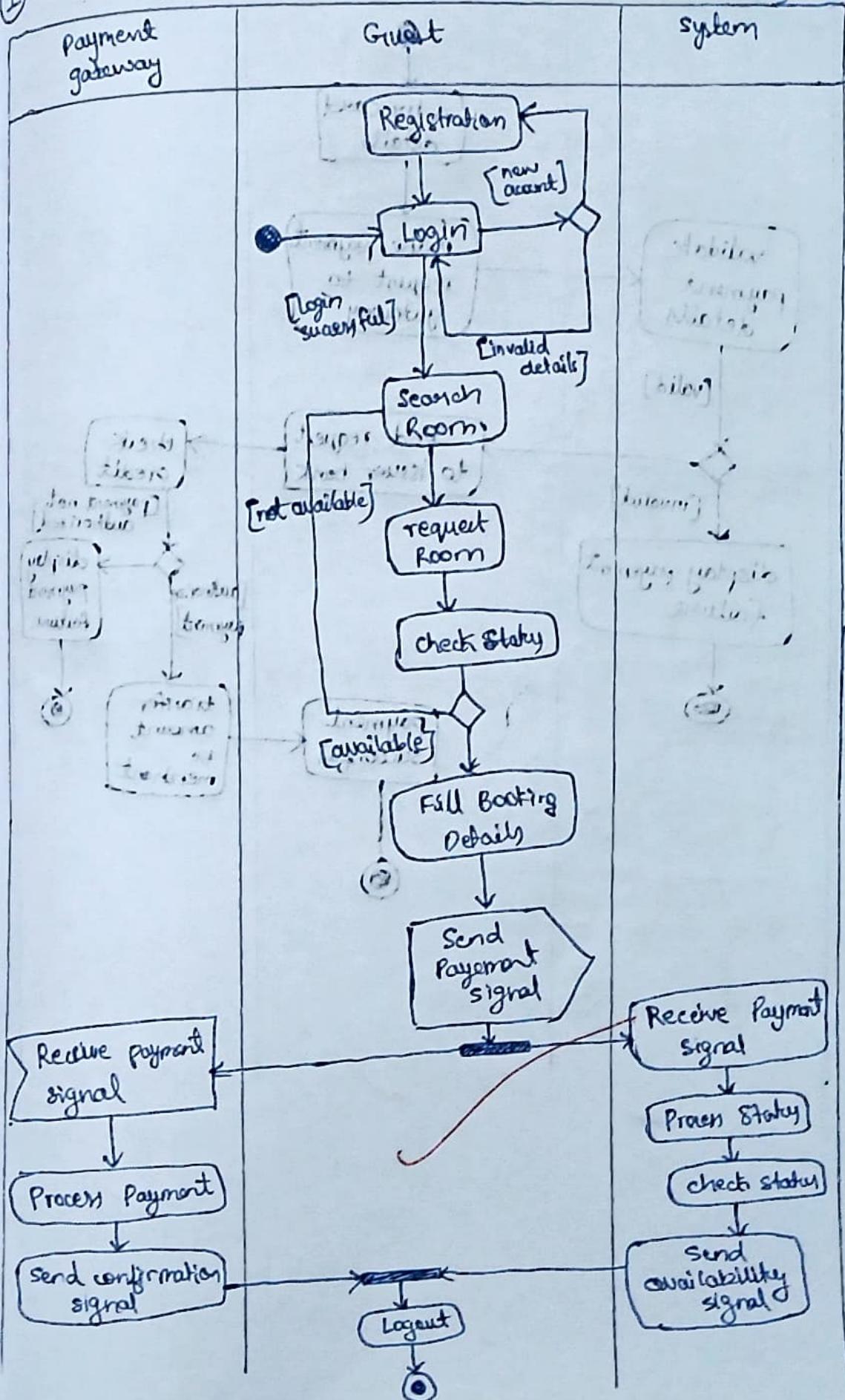
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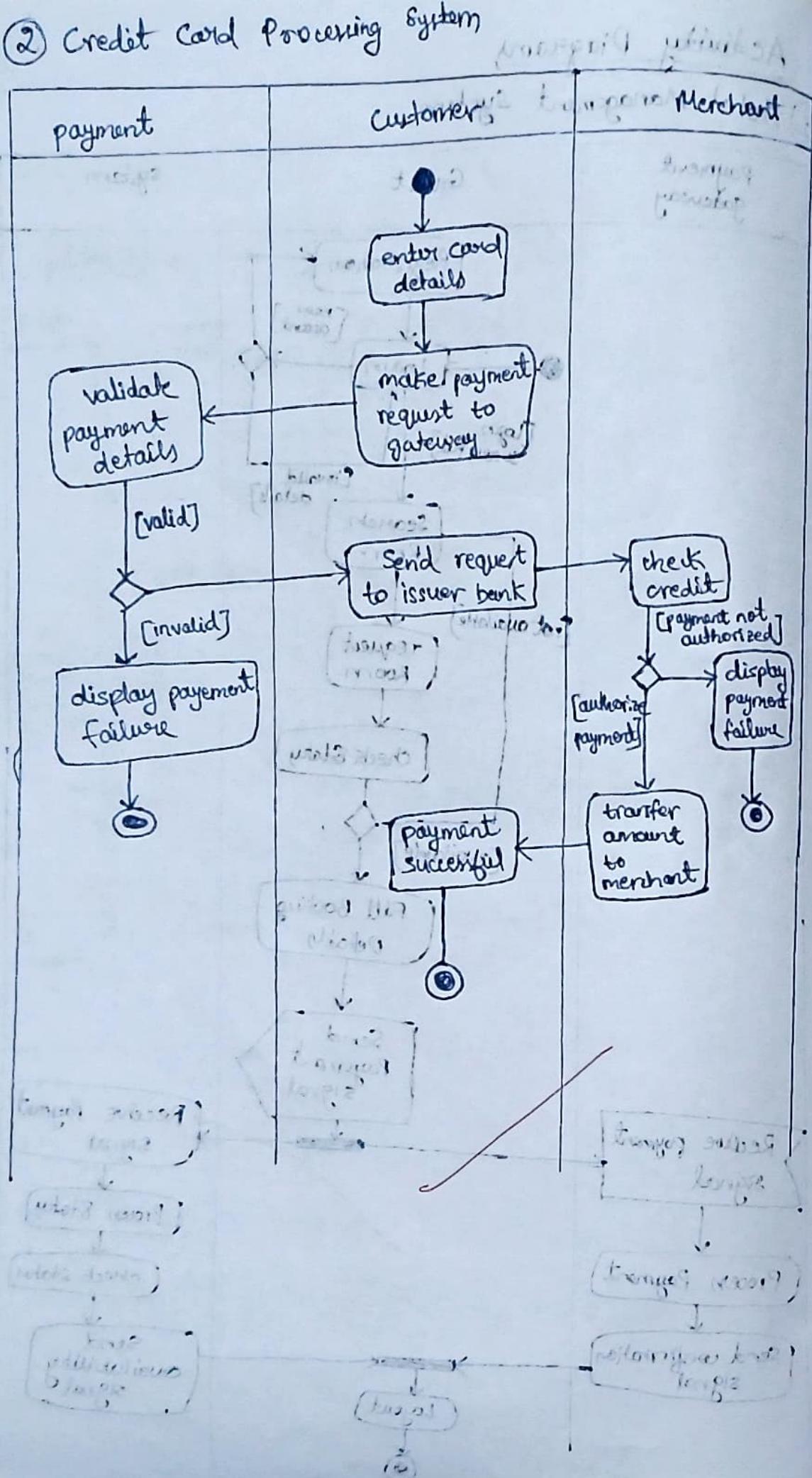


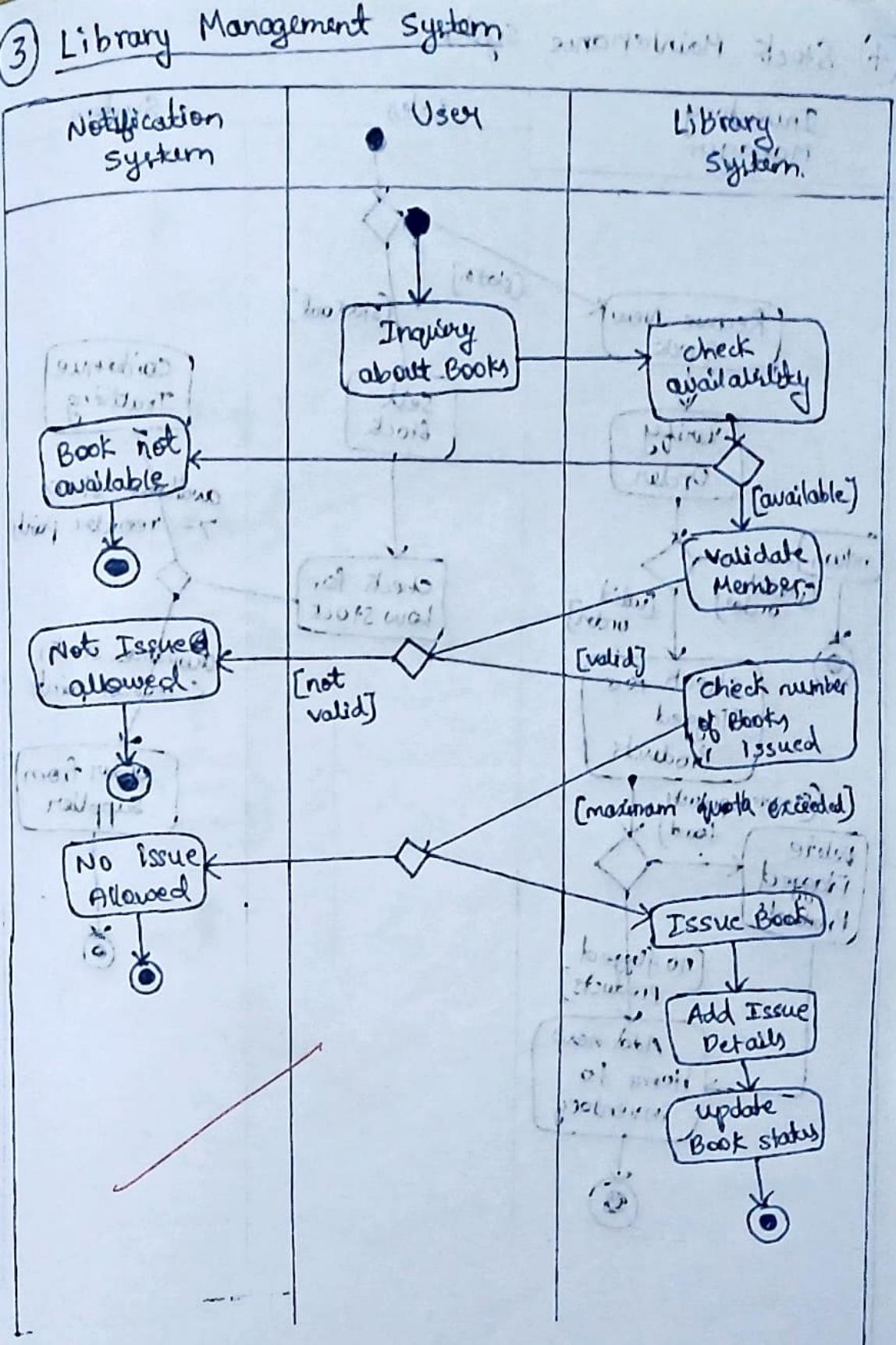
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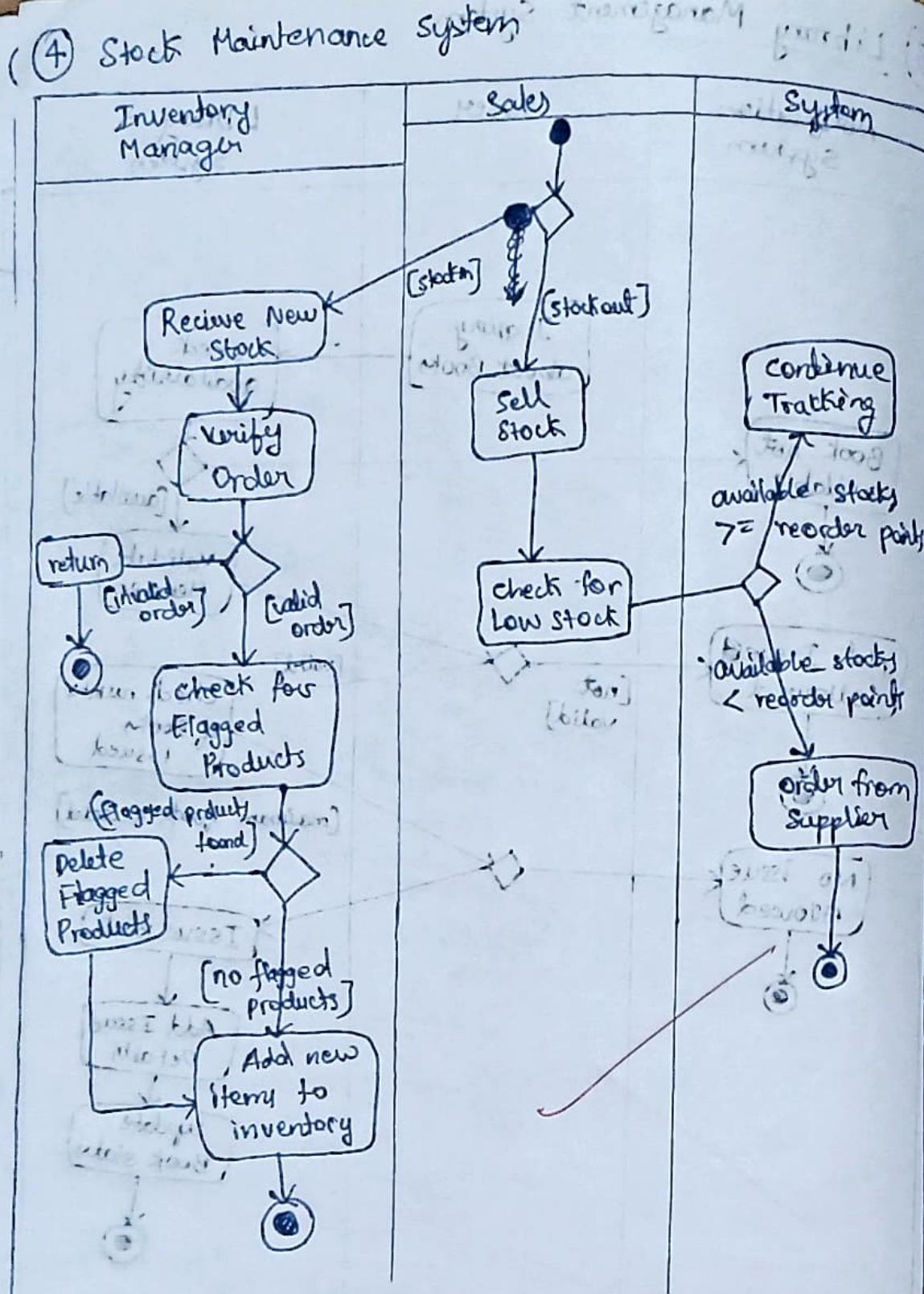
Activity Diagrams

① Hotel Management System









⑤ Passport Automation System.

