

OOM LAB

<u>Sl.No</u>	<u>Date</u>	<u>Title</u>	<u>Sign</u>
1.	30/9/24	SRS	L N
2.	14/10/24	Class Diagram, (Incomplete). Advance Concepts (Incomplete).	2/10/24
3.	14/10/24	UML diagrams	
4.	2/12/24	State Models	
5.	16/12/24	Use case diagram	P M 23/12/24
6.	16/12/24	Sequence diagram	
7.	23/12/24	Activity diagram.	

LAB - 1

# Software Requirement Specification (SRS)

## i) Introduction

- 1.1 Purpose of the document
- 1.2 scope of this document
- 1.3 Overview.

## 2) General description

- 3) Functional Requirement
- 4) Interface Requirement
- 5) Performance Requirement
- 6) Design constraints
- 7) Non-functional Attributes
- 8) Preliminary schedule & Budget.

## ii) Credit Card System

Purpose - Main aim is to define the requirements, constraints & budget of the credit card system.

Scope - In this document the overall working of the credit card system & its main objectives such as account creation, management, user transaction etc. The system aims to enhance user experience, security & efficiency.

Overview - The credit card system makes it easier for the user to manage their credit card transactions. Applying for credit card, managing their credits cards, transaction history, paying bills etc is made convenient.

- General description -
- \* User registration & Acc credentials.
  - \* Applying for credit cards.
  - \* Managing card limits.
  - \* Managing transactions & paying bills
  - \* Cancellation of cards / Accounts
  - \* Notification / customer care (help)

→ Functional Req -

- \* Apply for card - User can create account & apply for required card.
- \* Transaction - User can track the transaction history.
- \* User can delete / cancel the card.
- \* User can seek help from customer care.
- \* EMI options -

→ Interface Req -

- \* Requirements like web page, App
- \* API
- \* Backend for data storage (transaction history)

→ Performance Req -

- \* Maintaining the server for smooth transactions.
- \* Response time.

→ Design constraints -

- \* HTML, CSS, JS, Bootstrap & APP dev for website / app.
- \* JS, SQL for backend data storage
- \* UI/UX design.

- Non-functional Attributes -
- \* Security - Data of the user & transaction must be stored securely.
  - \* Reliability - The software quality & features must be updated at all time.
  - \* Unauthorized access / fraud detection.
  - \* Scalability
  - \* Portability.

→ Preliminary Schedule & Budget -

Total duration - 6 months from initiation to deployment.

Milestone - Req. specification : 1 week

Design Phase - 2 weeks

Development phase - 4 months

Testing phase - 1 month.

Budget - Development cost - ₹ 5,00,000

Testing cost : ₹ 1,00,000

Maintenance cost : ₹ 1,00,000 / year.

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## → Hotel Management System:-

Purpose - To define the requirements, constraints and budget of hotel management system.

Scope - In this document the overall working of the hotel management system and its main objective such as acc creation, management user experience, security & efficiency.

Overview - The hotel management system will help the user to book, manage or get help regarding the hotels. This system also helps to maintain the track of the history of the hotel booking history.

General description -

- \*) User registration & acc credentials.
- \*) Room booking
- \*) Managing the history
- \*) Managing transaction & paying bills
- \*) Cancellation of account / Booking.
- \*) Notification (customer care / help).

Functional Req

- \*) Login / Logout
- \*) Payment management
- \*) Notification
- \*) Room Booking

Interface Req

- \*) Requirements like webpage, App
- \*) API
- \*) Backend for data storage
- \*) location access

Performance Req

- \*) Maintaining the servers for smooth working
- \*) Payment response time
- \*) Payment security / functionality.
- \*) Scalability

Design Constraints :-

- \*) HTML, CSS, JS, Bootstrap & APP dev for website app.
- \*) JS, SQL for backend data storage
- \*) UI/UX design.

Non-functional Req -

- \*) Security - Data of the user & transaction must be stored securely.
- \*) Reliability - The software quality & feature must be updated at all times.
- \*) Unauthorized access / fraud detection
- \*) Scalability
- \*) Portability

Preliminary schedule & Budget :-

Total duration - 6 months from initiation to deployment

Milestone - Req specification - 1 week

Design phase - 2 weeks

Development phase - 4 months

Testing phase - 1 month.

Budget - Development cost - ₹ 15,00,000

Testing cost - ₹ 2,50,000

Maintenance cost - ₹ 3,00,000.

## Library Management System

Purpose - To define the requirements, constraints and budget of Library Management System.

Scope - In this document the overall working of the library management system and its main objective such as book creation management user experience, security & efficiency.

Overview - The library management system will help the user to search books, buy, return books and also manage the track of the books taken & returned. And also maintain the track of the books.

### General description -

- \*) User registration & acc credentials.
- \*) Book Buying
- \*) Managing history
- \*) Managing transaction & paying bills.
- \*) Cancellation of account / Booking.
- \*) Notification / customer care (help).

### Function Req -

- \*) login / logout
- \*) Payment management
- \*) Notification
- \*) Book return management
- \*) Book storage management.

### Interface Req -

- \*) Requirement like webpage, App
- \*) API
- \*) Backend for data storage
- \*) Book details (in order).

### Performance Req -

- \*) Maintaining the server for smooth working
- \*) Payment response time
- \*) Payment security.

### Design constraints -

- \*) HTML, CSS, JS, Bootstrap & APP dev for website / app.
- \*) JS, SQL for backend data storage
- \*) UI / UX design.

### Non-functional Req -

- \*) Security - data of the user & transaction must be stored securely
- \*) Reliability - The software quality & feature must be updated at all times.
- \*) Scalability
- \*) Portability

### Preliminary schedule & Budget :-

Total duration - 3 months.

Milestone - Req specification - 1 week

Design phase - 2 weeks / week

Development phase - 2 months

Testing - 2 weeks

Budget - Development cost - ₹ 10,000

Testing cost - ₹ 25,000

Maintenance cost - ₹ 50,000

## → Stock Market management system

Purpose - To define the req, constraints and budget of the ~~the~~ stock management system.

Sope - In this document the overall working of the stock management system and its main objective such as acc creation, management, user experience, security & efficiency.

Overview - The stock management system will help the user to buy, sell, the stock, and also look at the graph of the stock market. User can also have a history of their past transaction.

### General description -

- \*) User registration & acc credential
- \*) Buy, sell stock (storage stock)
- \*) Managing history
- \*) Managing storage
- \*) Notification / customer care (help)

### Function Req -

- \*) ~~Logout~~ search item
- \*) Add items
- \*) ~~sep~~ Categorize the items
- \*) Tracking

### Interface Req -

- \*) Required webpage, backend, Data storage
- \*) location access
- \*) Data storage

### Performance Req -

- \*) Maintaining the server for smooth working
- \*) Fast response time
- \*) efficient data management.

### Design constraints

- \*) HTML, CSS, JS → frontend
- \*) SQL, JS, → backend
- \*) ~~DBMS~~ Data Base management system

### Non-functional Req -

- \*) Security
- \*) Reliability
- \*) Scalability
- \*) Large database
- \*) Portability

### Preliminary schedule & Budget -

Total duration - 3 months

Milestone - Req specification - 1 week

Design phase - 1 week

Development phase - 2 month

Testing - 2 weeks.

Budget - Dev cost - 2,00,000 €

Testing - € 50,000

Maintain cost - ₹ 1,00,000.

## 5) PassPort Automation systems

Intro -

Purpose - The passport automation sys streamline the process of passport application, verification, issuance & renewal.

Slope - This system allows user to apply for new passport, renew existing one, schedule appointment & track the status of their applications.

Overview - The passport automation sys that uses to use all services. It will facilitate the verification & issuance of passport. This doc gives the summary of the functional & non-functional requirements.

2) General description - The passport automation sys will be a web based application accessible to both applicants & government officials. It will automate various stages of the passport. includes application verification, fee payment, & document issuance. Integration with external government sys will ensure real-time verification & tracking.

3) functional Req -

\*) Application must be able to submit personal details, upload req documents & pay application fee online & also to track the application status.

- \*) Automating the document verification process & integrates with police & immigration databases for background checks
- \*) The application must be notified when the passport generating process is completed

### 4) User Interface Req

- \*) Must provide user friendly form & for filling out applications, uploading documents scheduling appointment & tracking status.
- \*) The govt official must be able to manage & verify applications, schedule appointment & issue passport.

### 5) Design constraint -

- \*) The system must be in data protection laws & must ensure secure storage & handling of personal data.
- \*) The sensitive data like biometric info must encrypted & the authorized person can be assured.

### 6) Performance Requirement

- \*) Scalability - It must be capable of handling large number of application
- \*) Application submission must be processed as early as possible
- \*) Must ensure high uptime for uninterrupted access to the system.

## 7) Non-functional Req

- \* Security - Multifactor authentication for applicants & officials
- \* Usability - easy to use interface for both user with minimal training required for new user.

## 8) Preliminary schedule & budget

Schedule - Review specification & analysis - 4 weeks

System Design - 6 weeks

Development : 12 weeks

Testing : 3 weeks

Deployment : 2 weeks

Budget - 50 lacs.

14/10/24

classmate

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①

Hotel Management System

Identifies 5 classes

- 1) Association names
- 2) {Bags, } Sequences, Ordering &
- 3) Association end names
- 4) Multiplicity
- 5) Generalization
- 6) Association class.

①

Hotel Management System

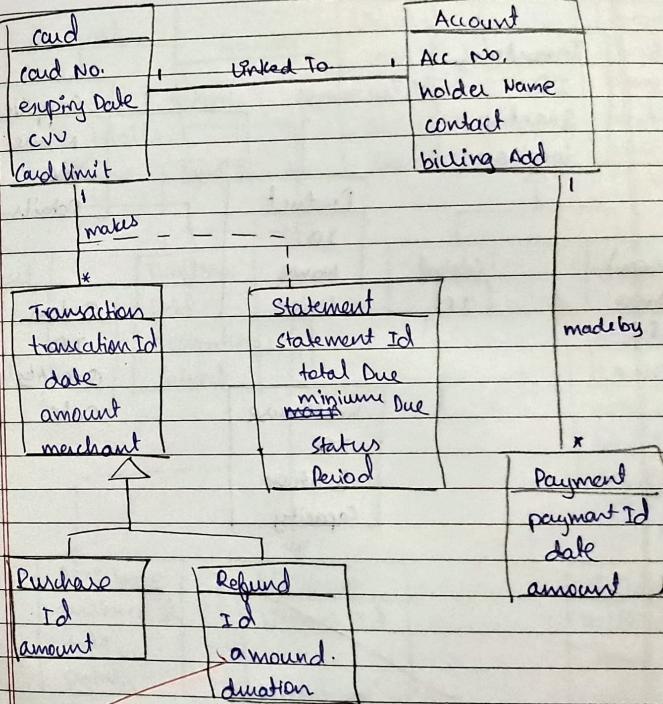
Guest	1 makes *	Reservation
guest Id		reservation Id
Name		Check In date
Contact		Check out date

BILL
bill Id
amount
billing Date

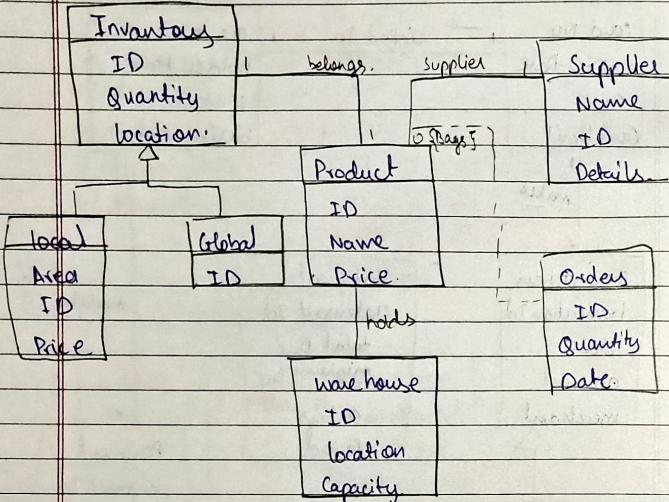
Payment
payment Id
amount
date

ROOM
room Id
room Type
rate

Single Room	Delux Room
Max occupancy	Max occupancy
Floor	Floor
No. of pp	No. of pp

Credit Card System

## Stock management system



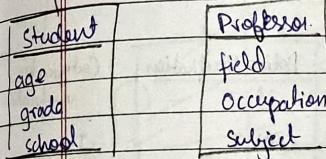
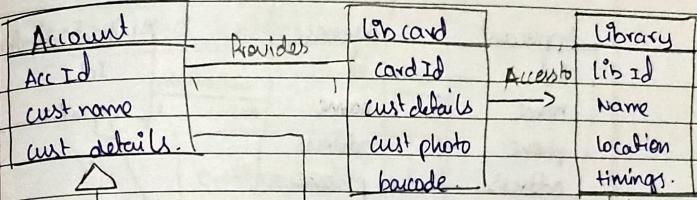
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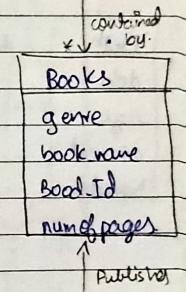
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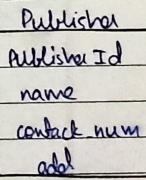
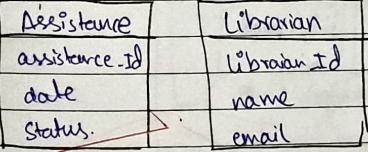
## Library Management System



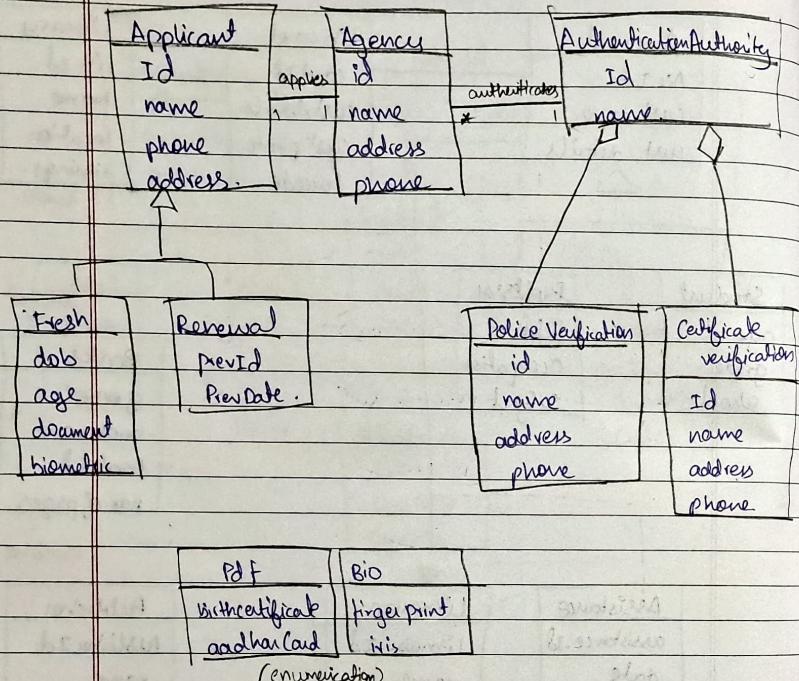
Assists



Publisher

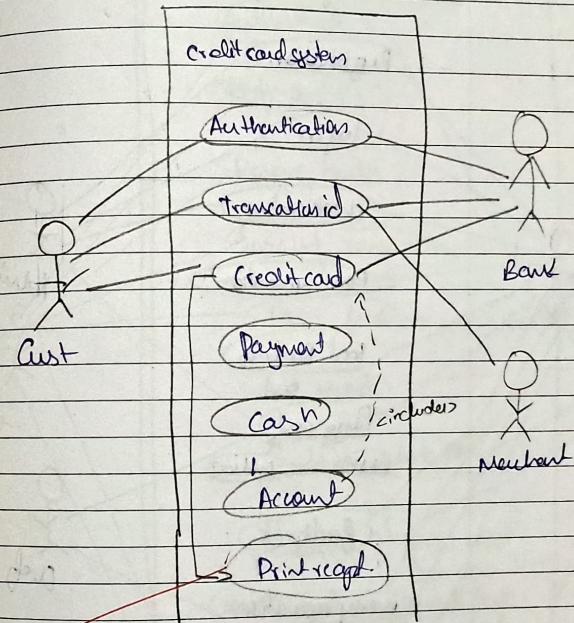


## Passport management System

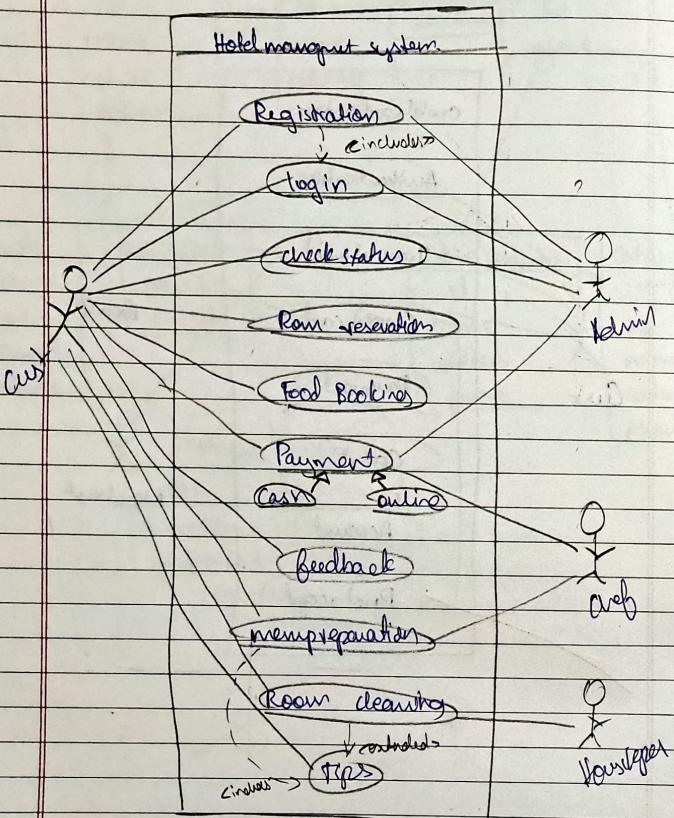


Use case diagrams

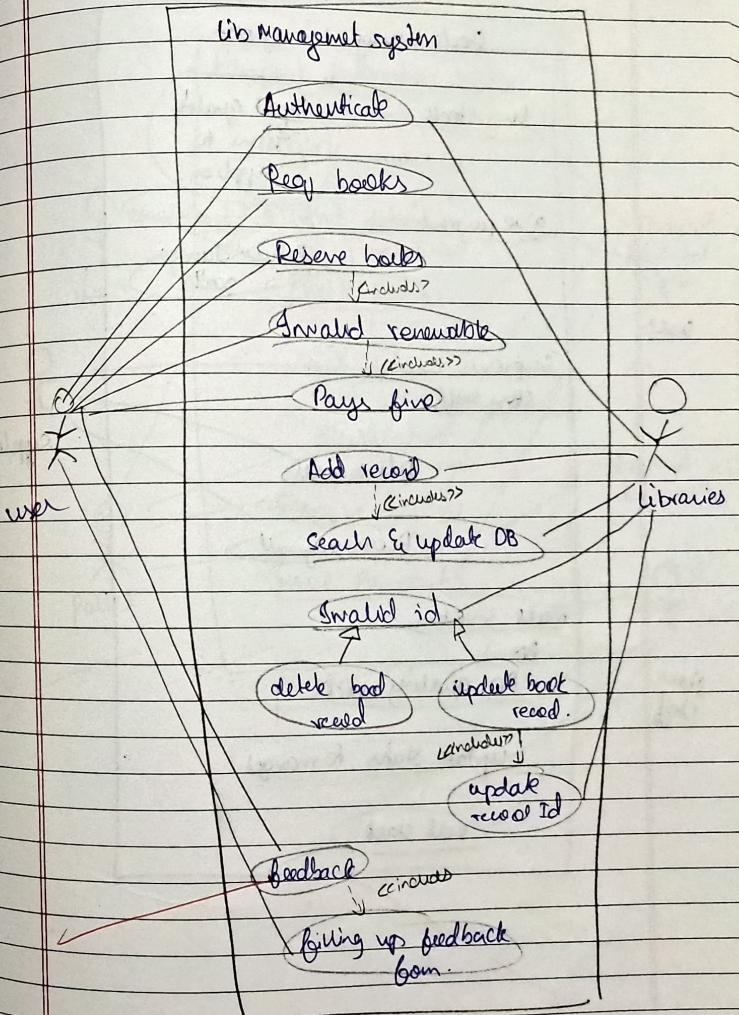
## Credit Card System



② Hotel management system

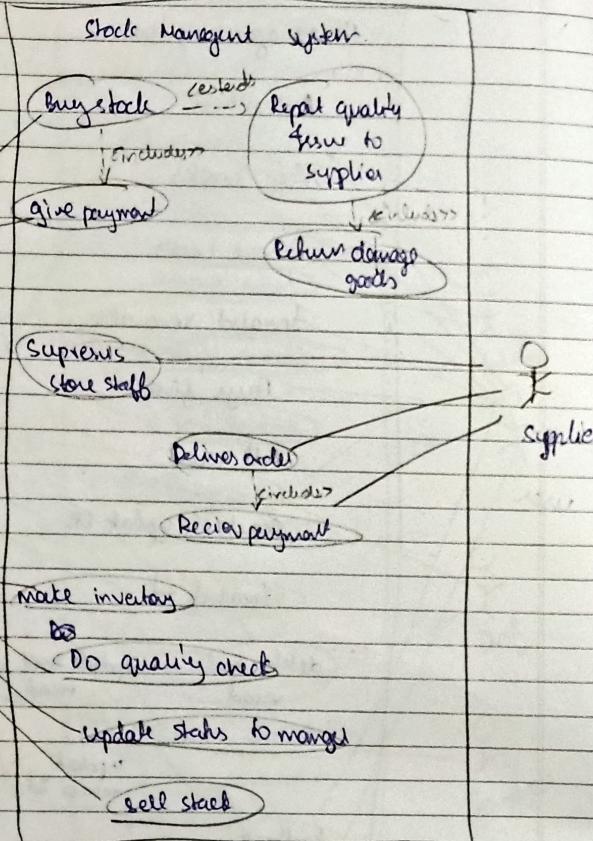


③ Library management system



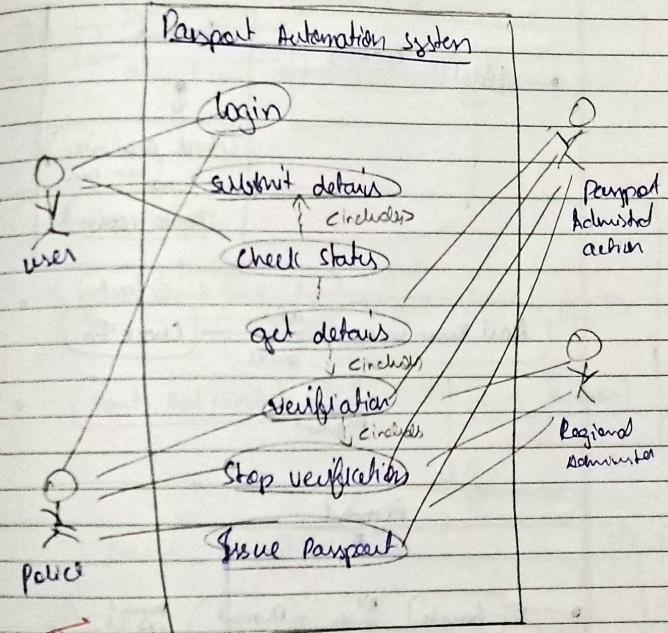
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## Stock Management system



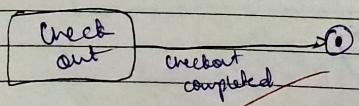
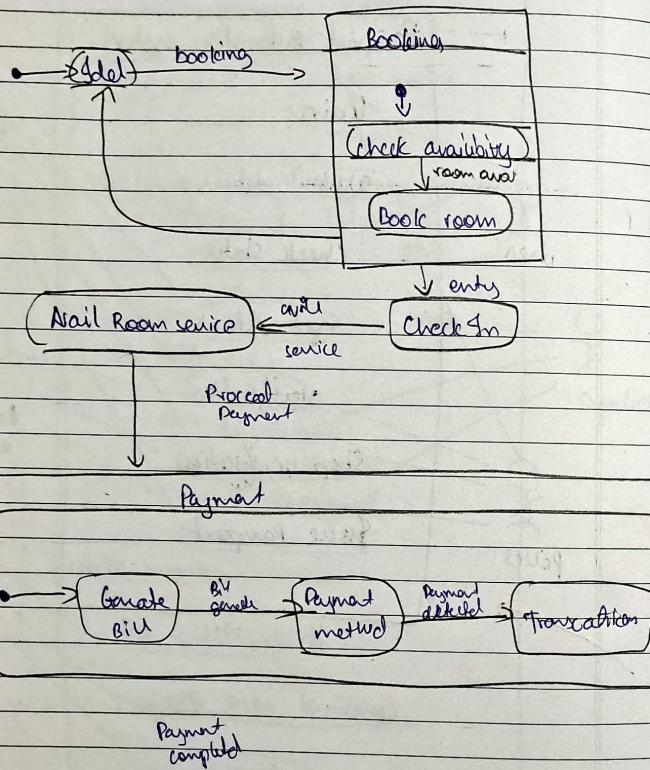
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## Passport Automation System

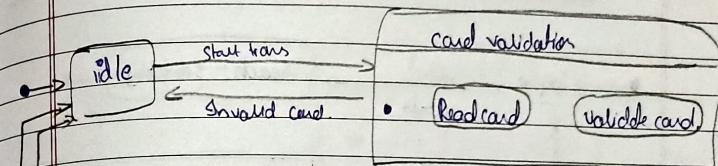


## State diagrams

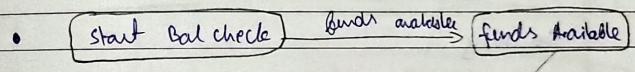
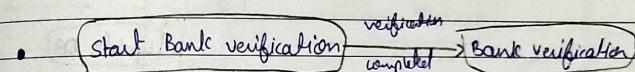
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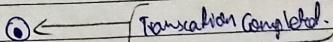
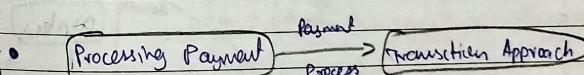
### 2) Credit card system -



### Authorization

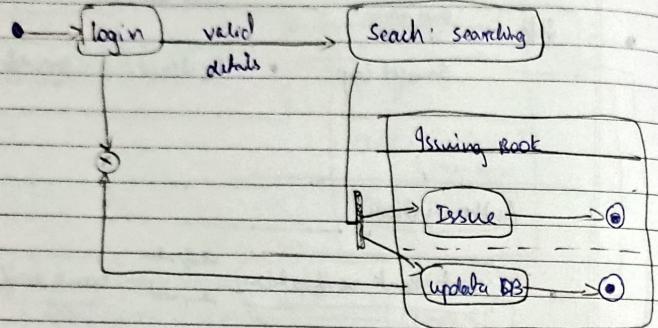


### Process Transaction

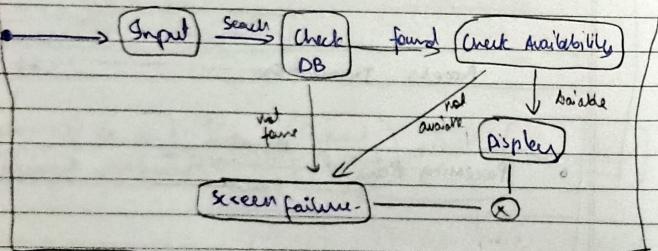


Transaction completed

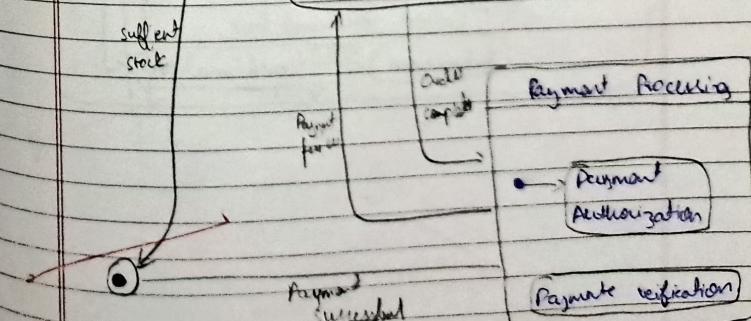
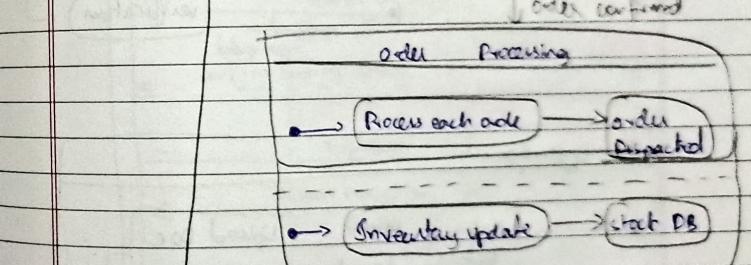
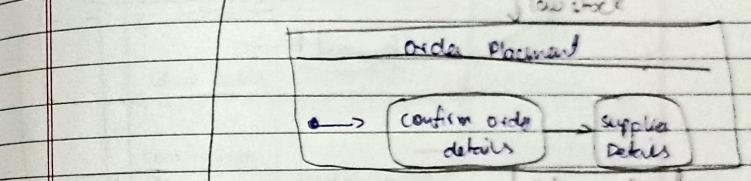
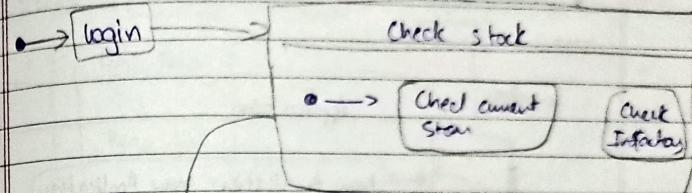
### ③ Library Management System



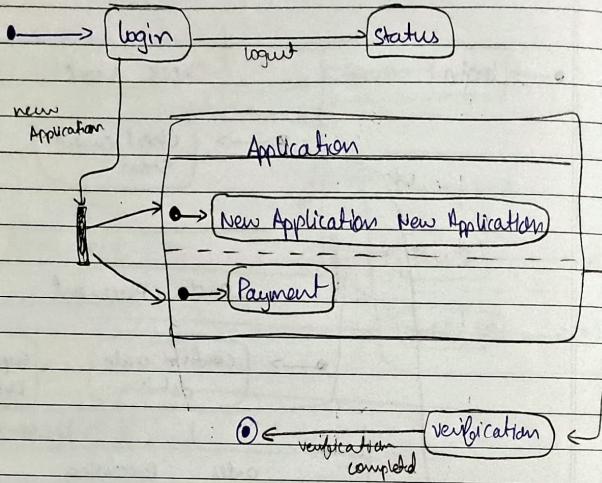
Searching



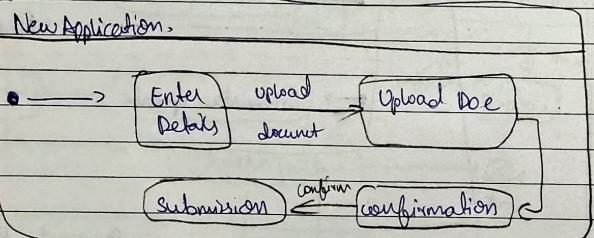
### ④ Stock Maintenance System



(3) Passport Automation system

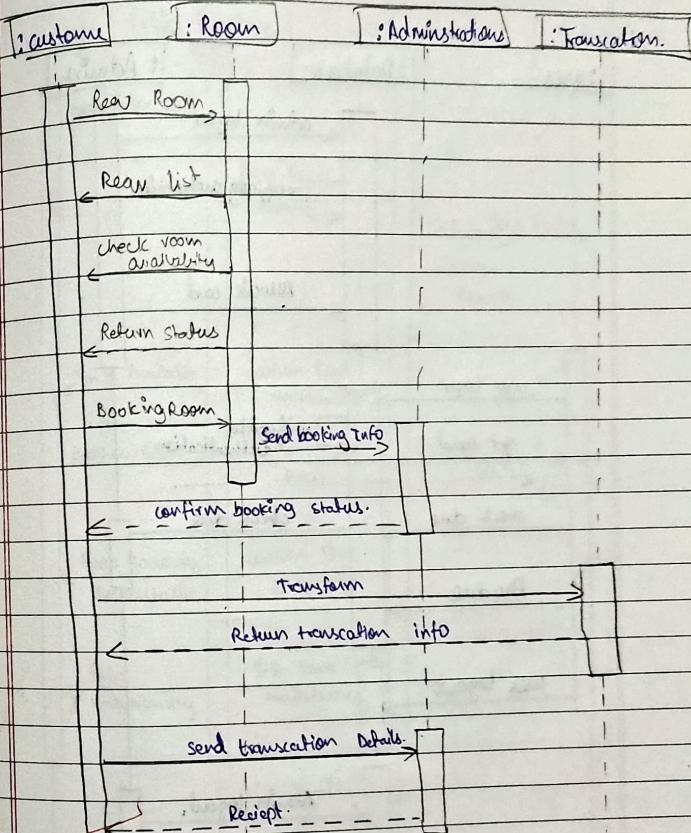


New Application.

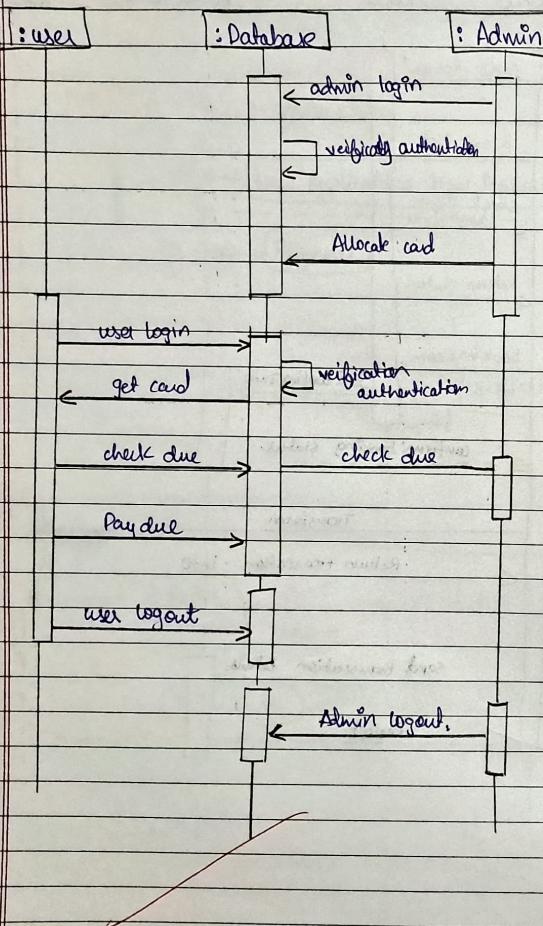


Sequence Diagram

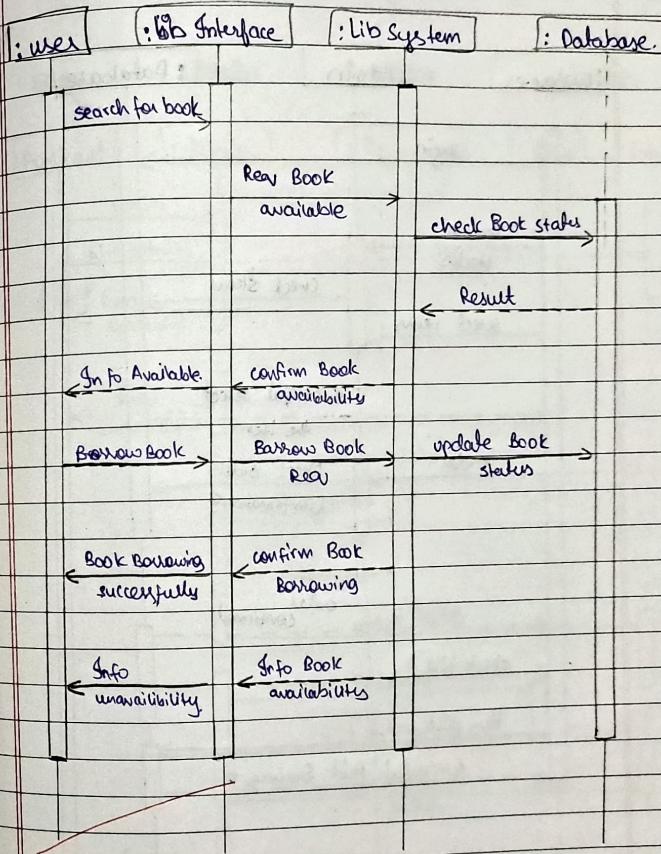
1 Hotel Management System:



② Credit card Processing System

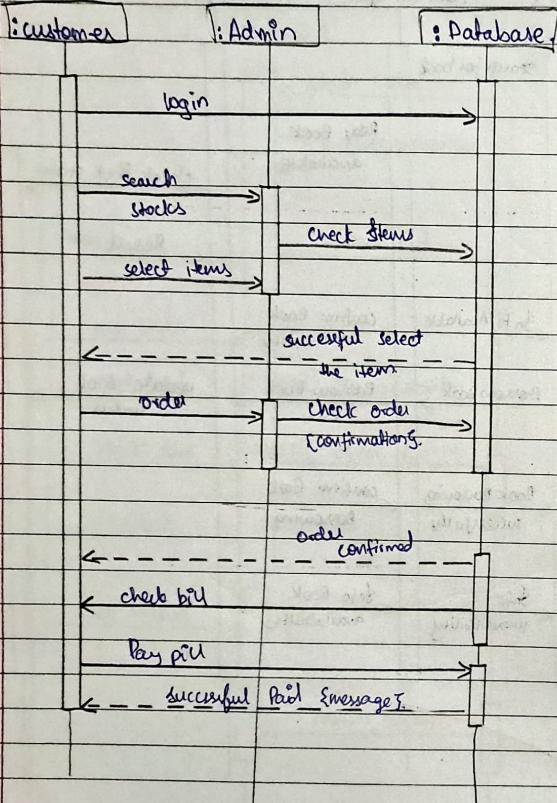


③ Library Management System



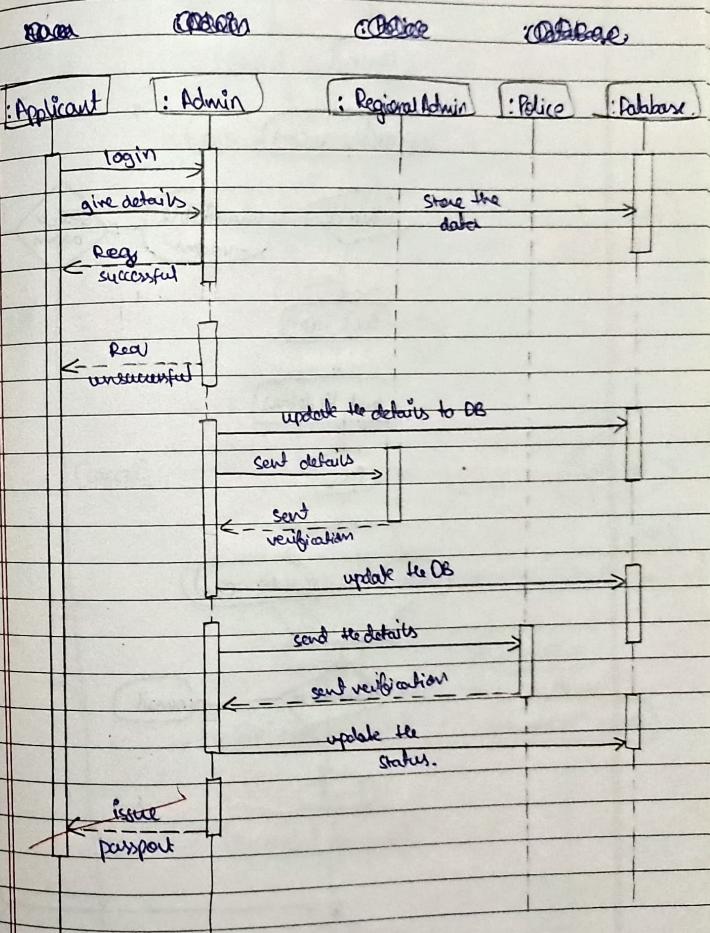
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## Stock Maintenance System



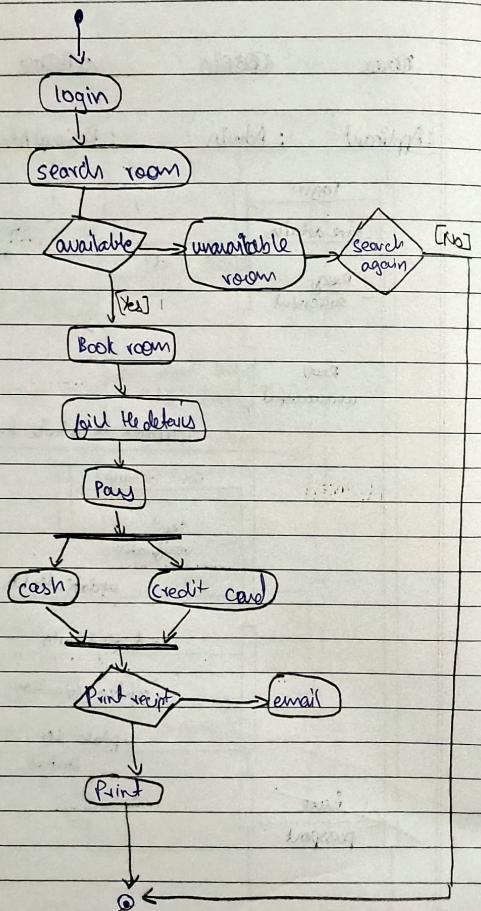
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## Passport Automation System

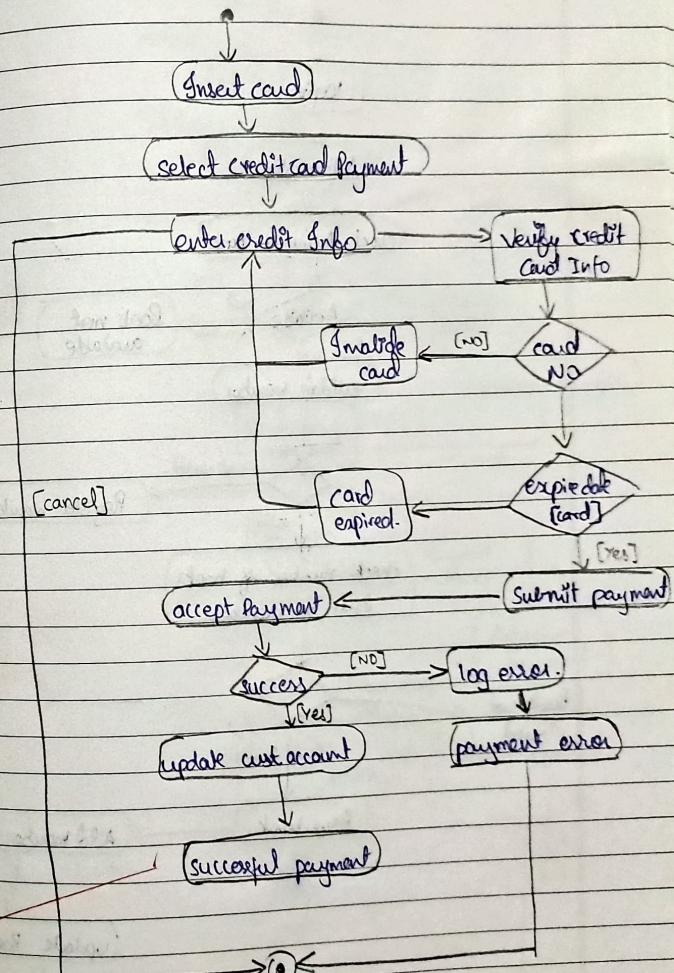


## Activity Diagram

### ① Hotel Management System

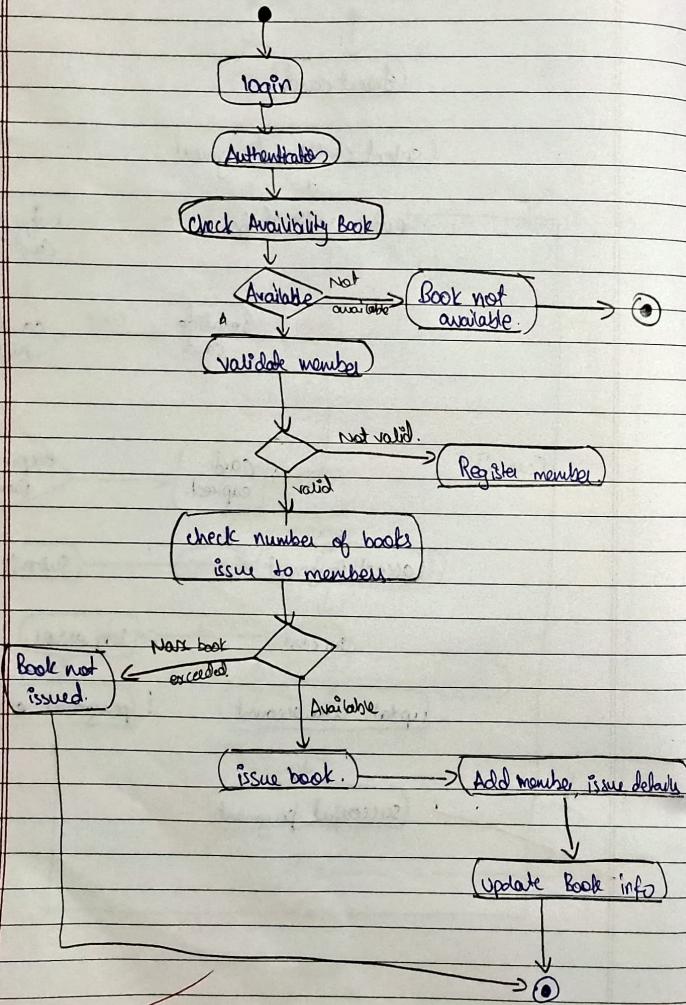


### ② Credit Card Processing System



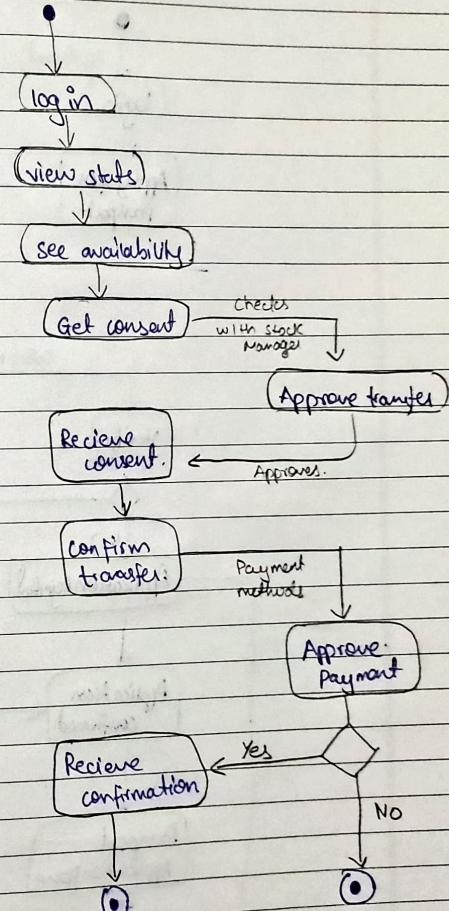
(3)

### Library Management System



(4)

### Stock Maintenance System



## (5) PassPort Automation System

