

B.M.S. COLLEGE OF ENGINEERING BENGALURU
Autonomous Institute, Affiliated to VTU



Lab Record

Software Engineering and Object-Oriented Modeling

Submitted in partial fulfillment for the 6th Semester Laboratory

Bachelor of Engineering
in
Computer Science and Engineering

Submitted by:

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1BM21CS047

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Mar-June 2024

B.M.S. COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND

ENGINEERING



CERTIFICATE

This is to certify that the Object-Oriented Analysis and Design(22CS6PCSEO) laboratory has been carried out by D Revanth (1BM21CS047) during the 6th Semester Mar-June-2024.

Signature of the Faculty Incharge:

Surabhi S (Assistant Professor)

Department of Computer Science and Engineering
B.M.S. College of Engineering, Bangalore

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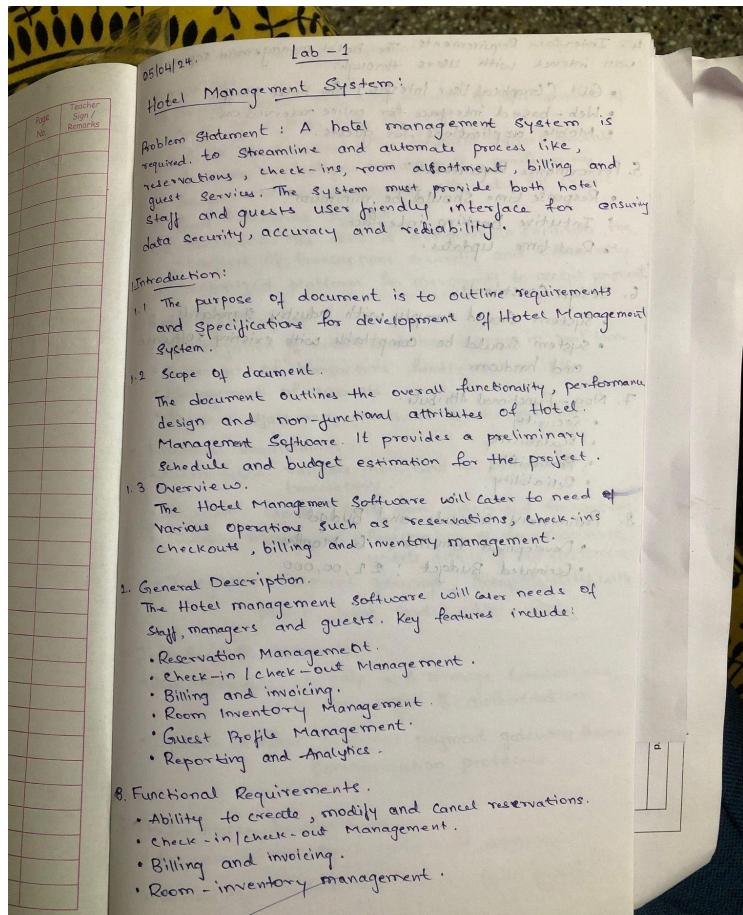
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1. Hotel Management System

1.1 Problem Statement

A hotel management system should be designed to streamline and automate various processes involved in managing a hotel, including reservations, check-ins, billing, etc. The system should provide an efficient and user-friendly interface for both hotel staff and guests while ensuring data security, accuracy, and reliability.

1.2 SRS-Software Requirements Specification



4. Interface Requirements: The hotel management software will interact with users through:

- GUI (Graphical User Interface) for hotel staff.
- Web-based interface for online reservations.
- Mobile applications for guests.

5. Performance Requirements:

- Response time should be minimum.
- Intuitive booking interface.
- Real-time updates.

6. Design Constraints:

- System should comply with industry standards.
- System should be compatible with existing software and hardware.

7. Non-Functional Attributes:

- Security
- Scalability
- Portability
- Reliability

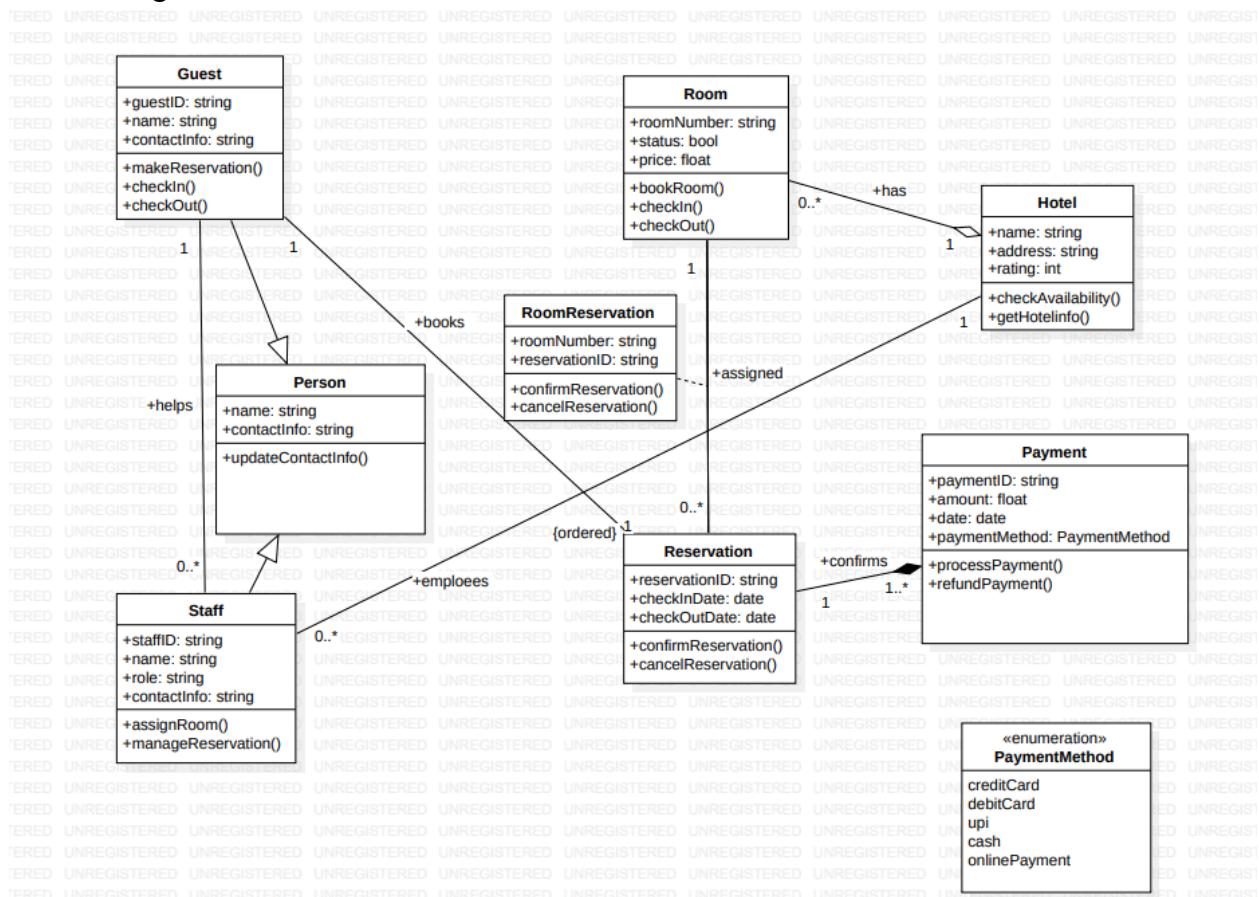
8. Preliminary Schedule and Budget:

- Development timeline: 6 Months.
- Estimated Budget: £1,00,000

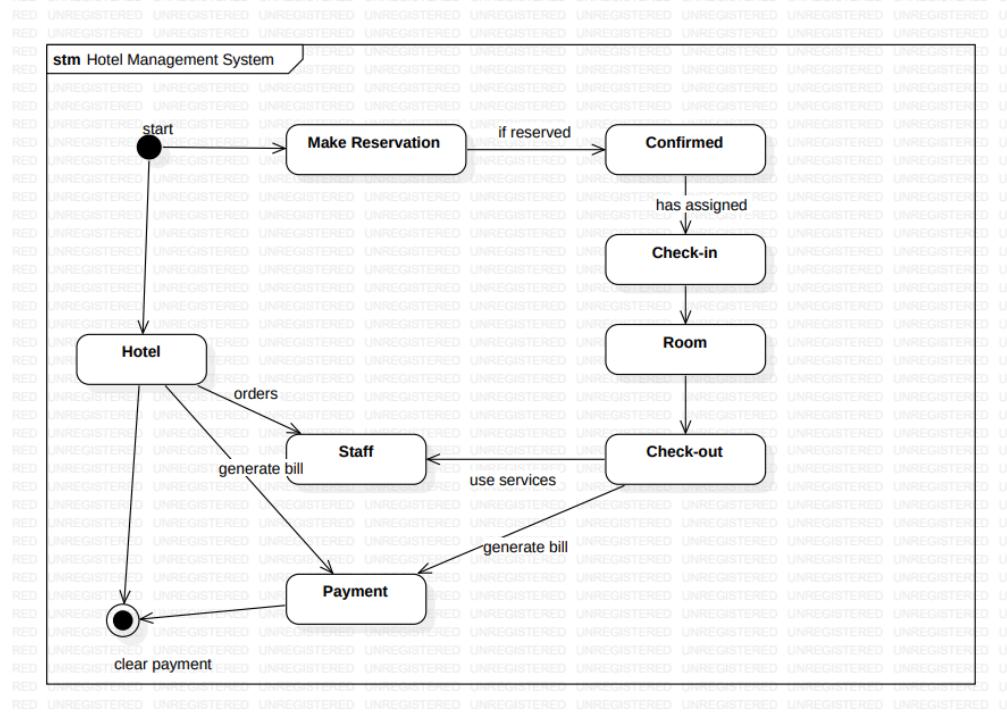
II. Core

1. Introduction
2. General
3. Functional
4. Interface
5. Performance
6. Resources
7. Non-functional
8. Preliminary

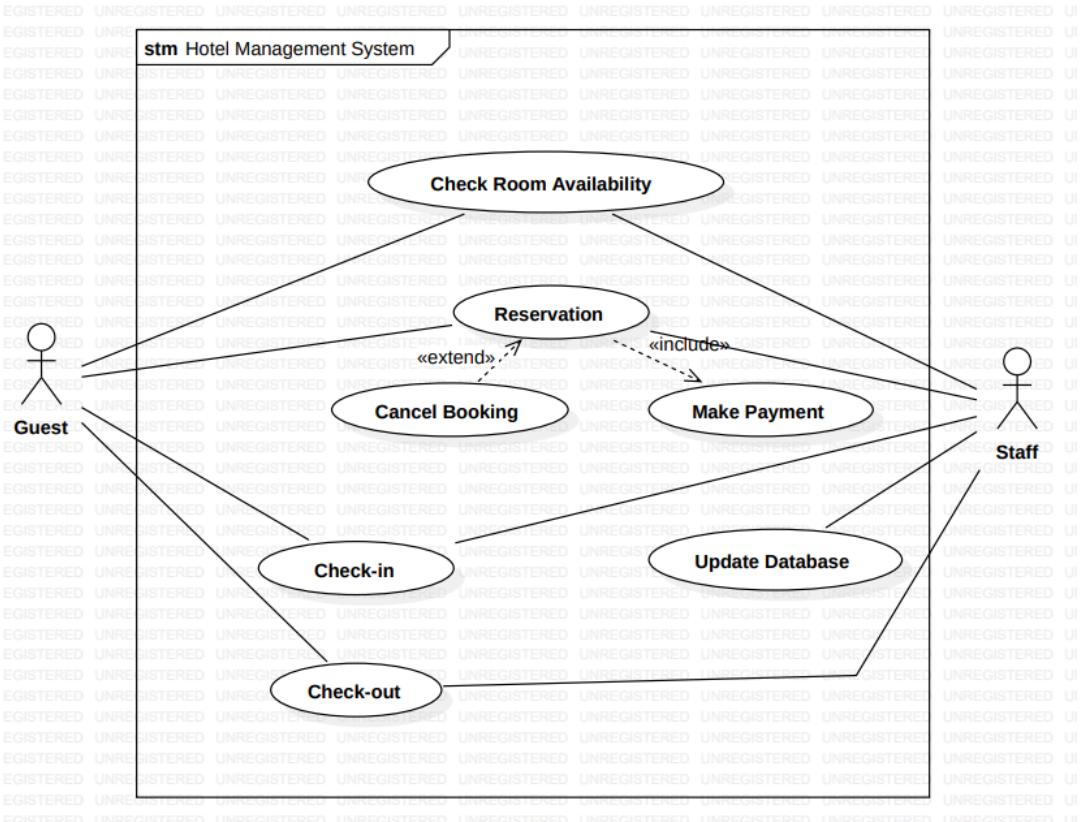
1.3 Class Diagram



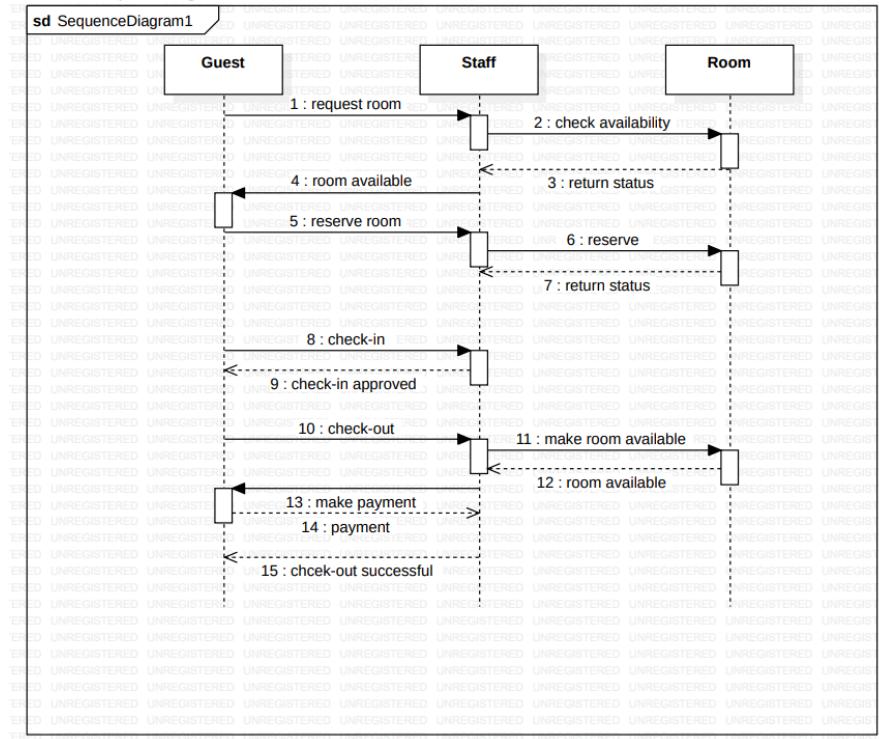
1.4 State Diagram



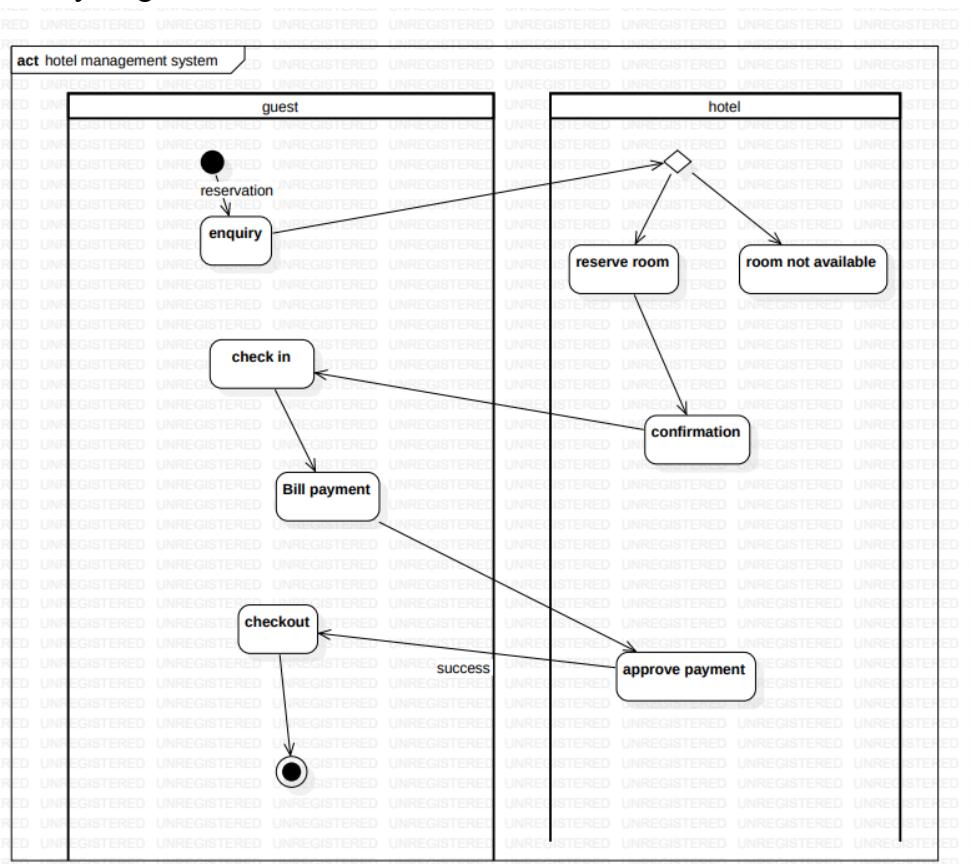
1.5 Use Case Diagram



1.6 Sequence Diagram



1.7 Activity diagram

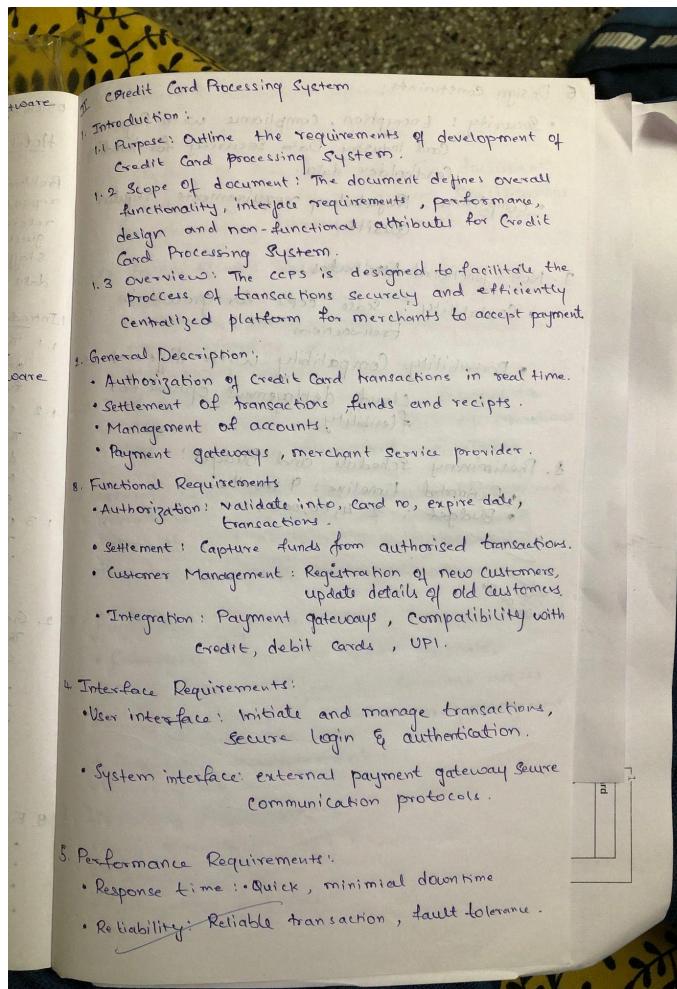


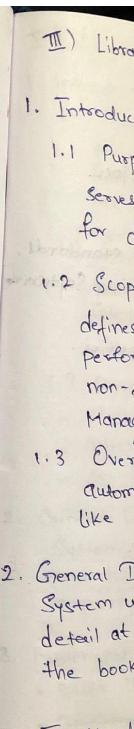
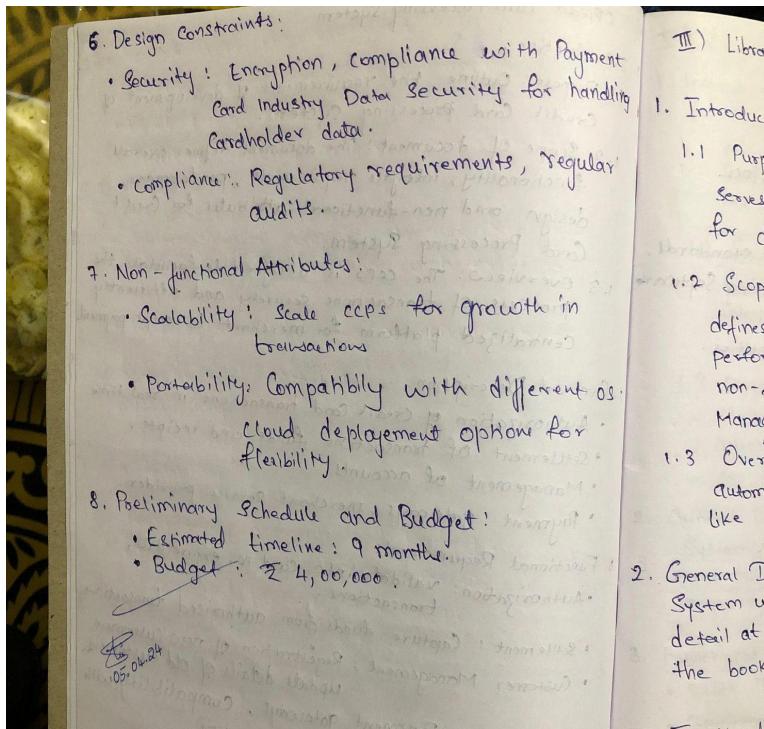
2. Credit Card Processing System

2.1 Problem Statement

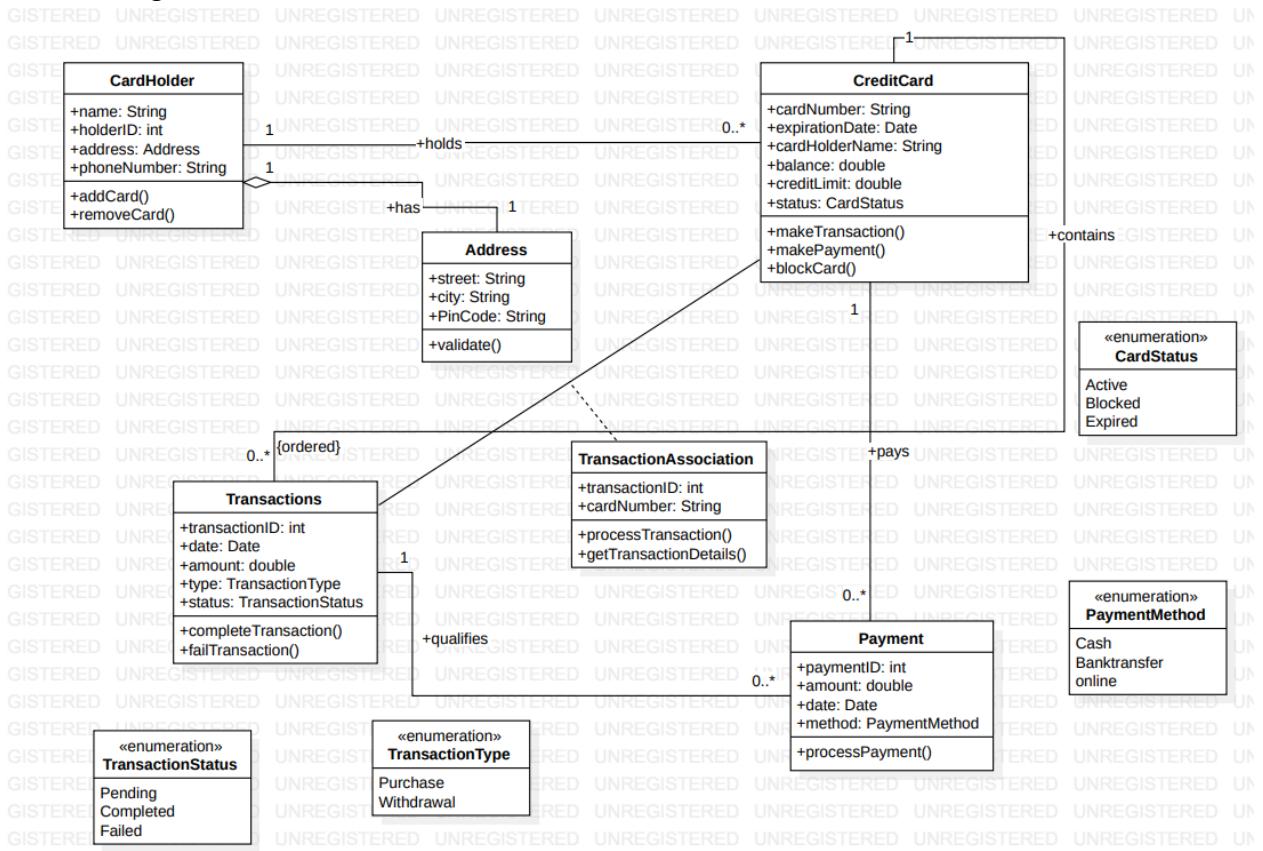
The existing card processing system lacks efficiency and security measures, leading to potential fraud risks and customer dissatisfaction. An upgraded credit card processing system is imperative to ensure seamless transactions, enhance security, and maintain customer trust.

2.2 SRS-Software Requirements Specification

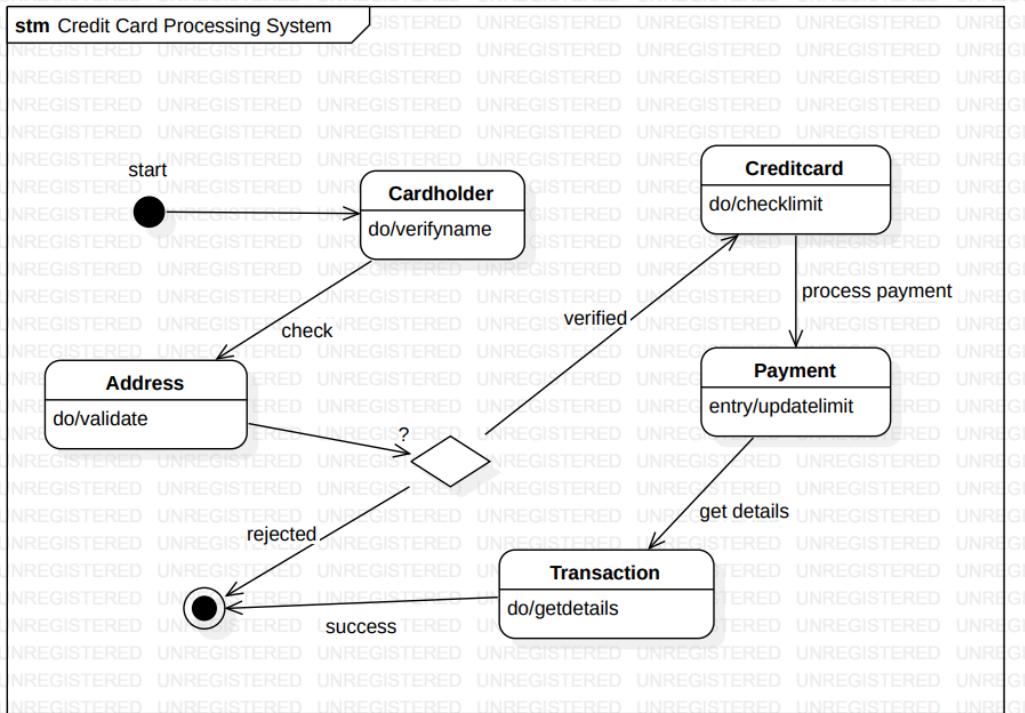




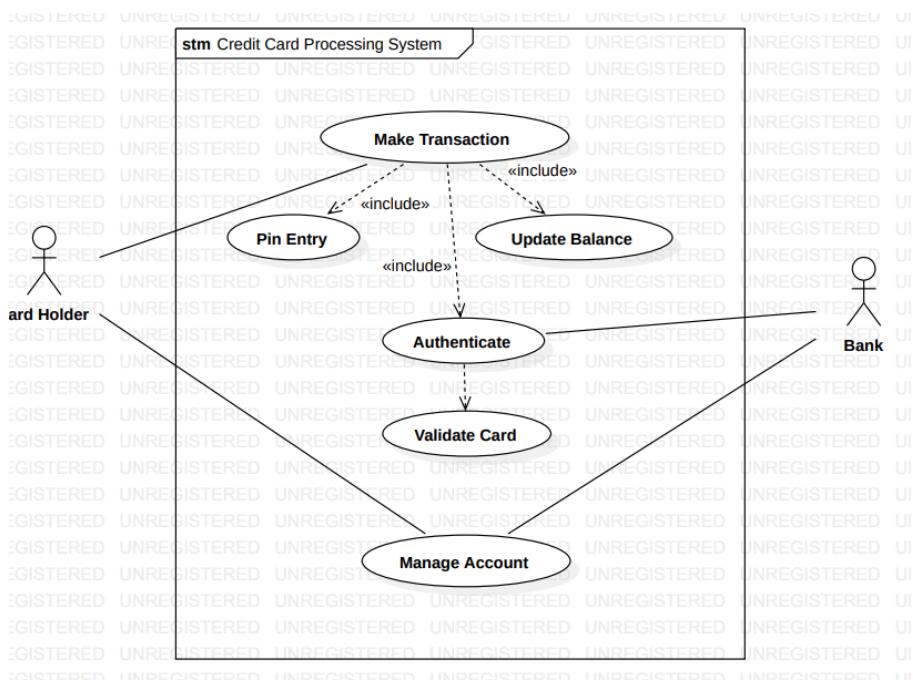
2.3 Class Diagram



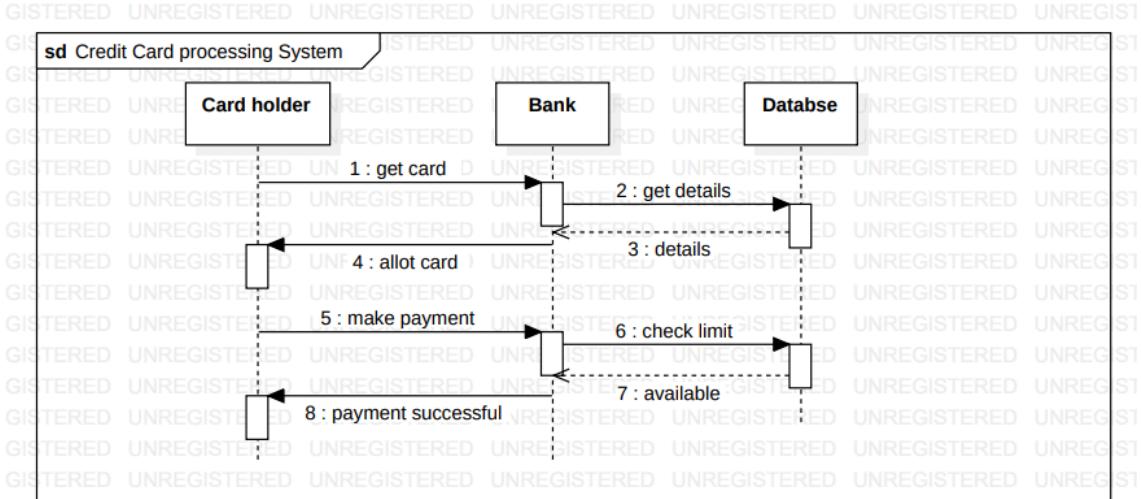
2.4 State Diagram



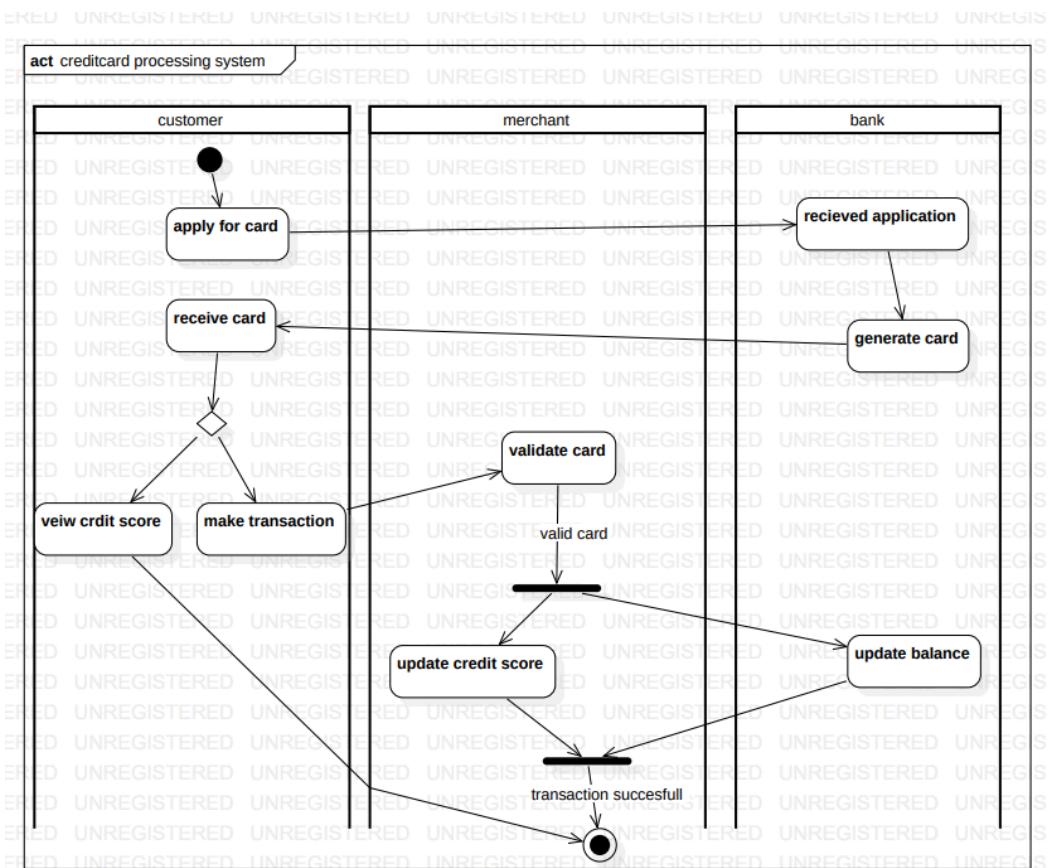
2.5 Use Case Diagram



2.6 Sequence Diagram

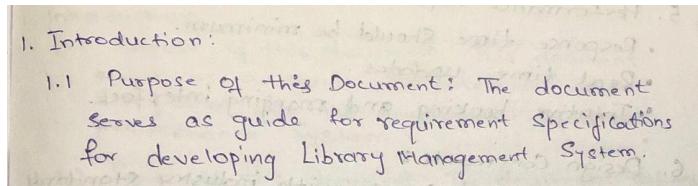


2.7 Activity diagram

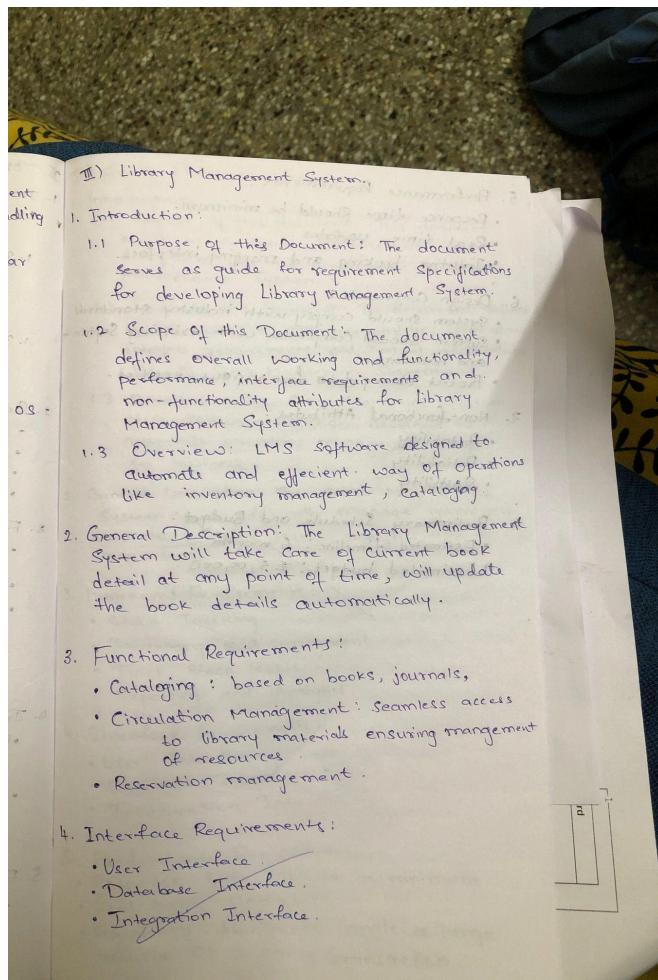


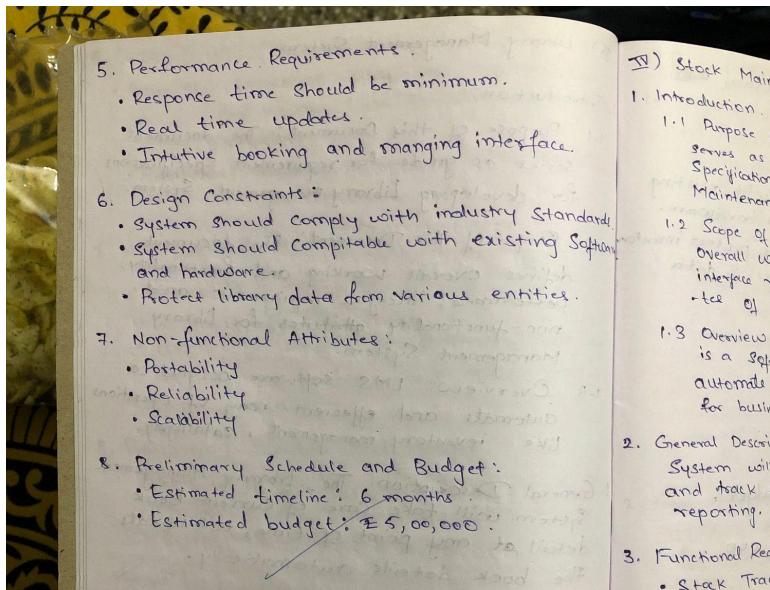
3. Library Management System

3.1 Problem Statement

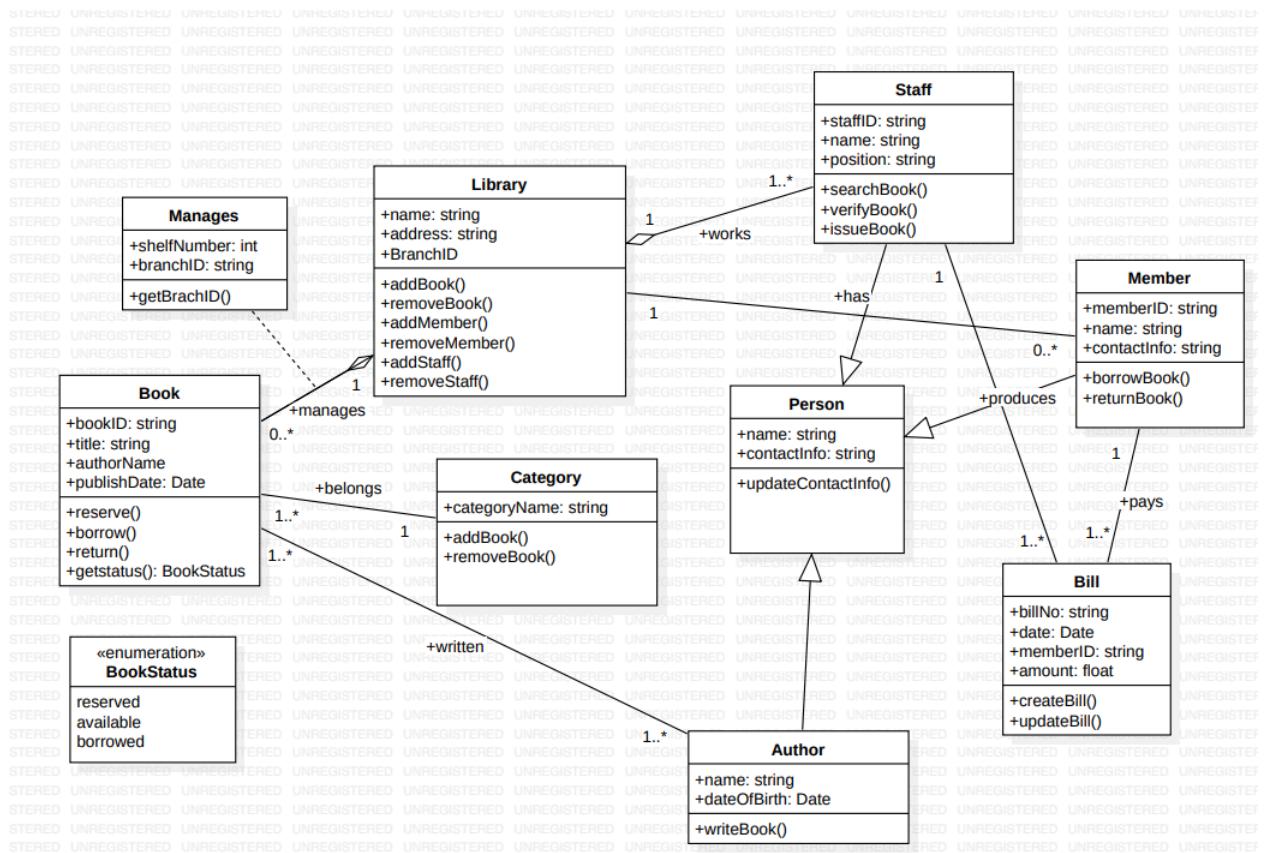


3.2 SRS-Software Requirements Specification

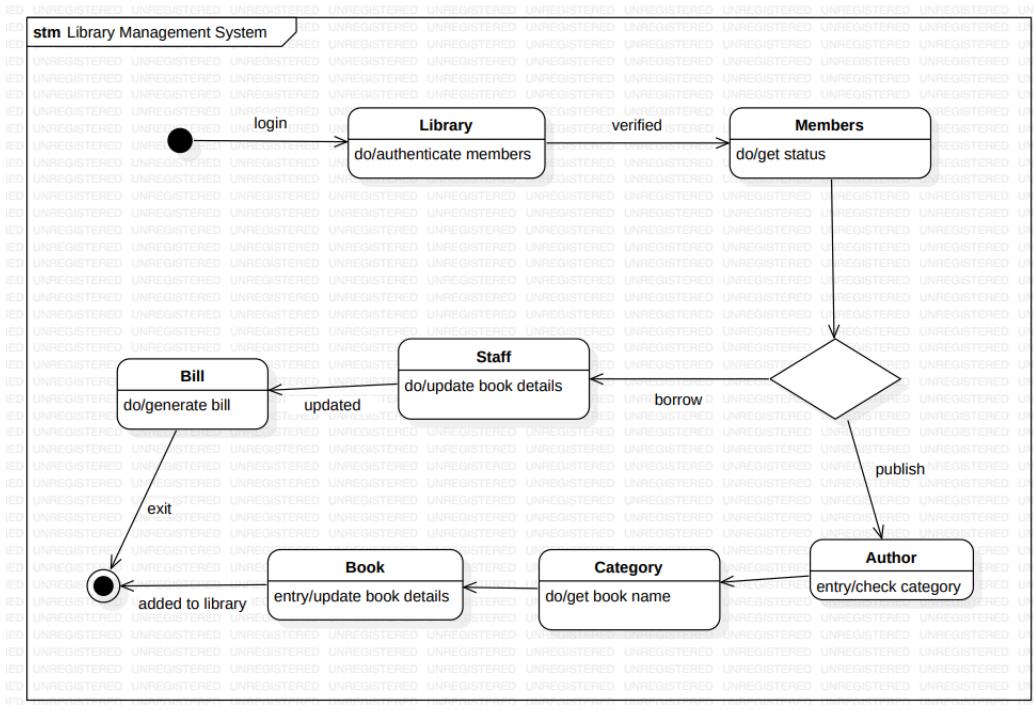




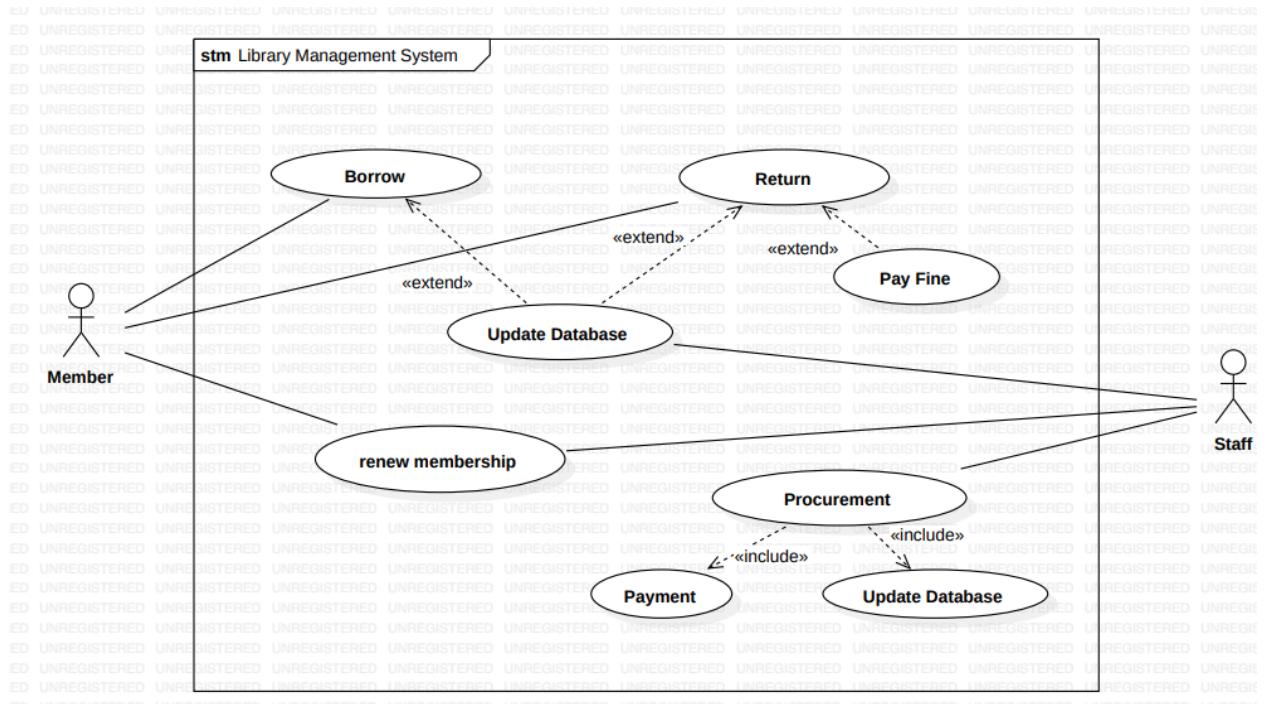
3.3 Class Diagram



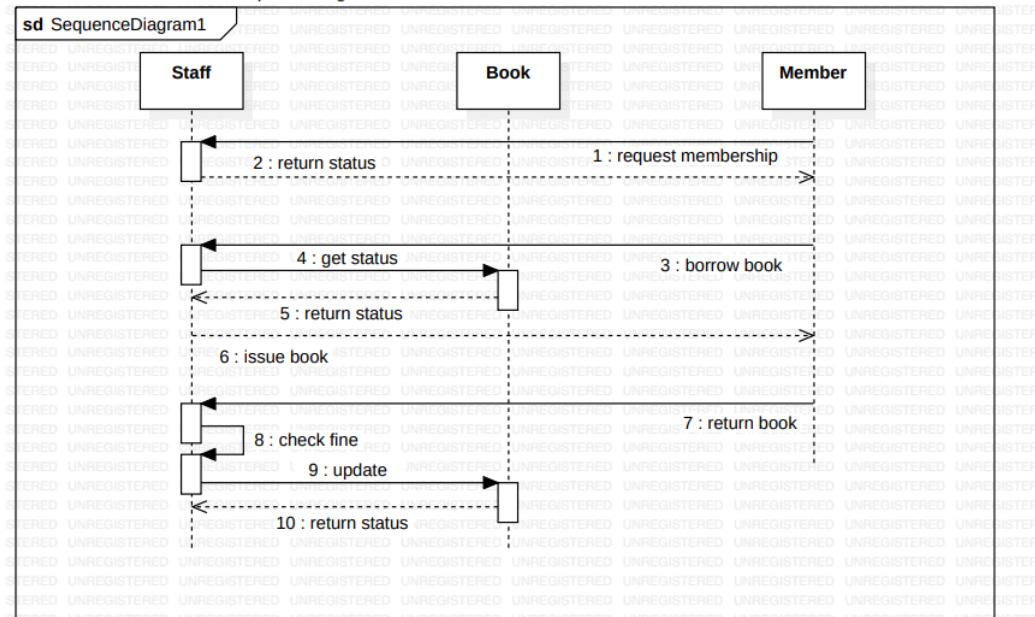
3.4 State Diagram



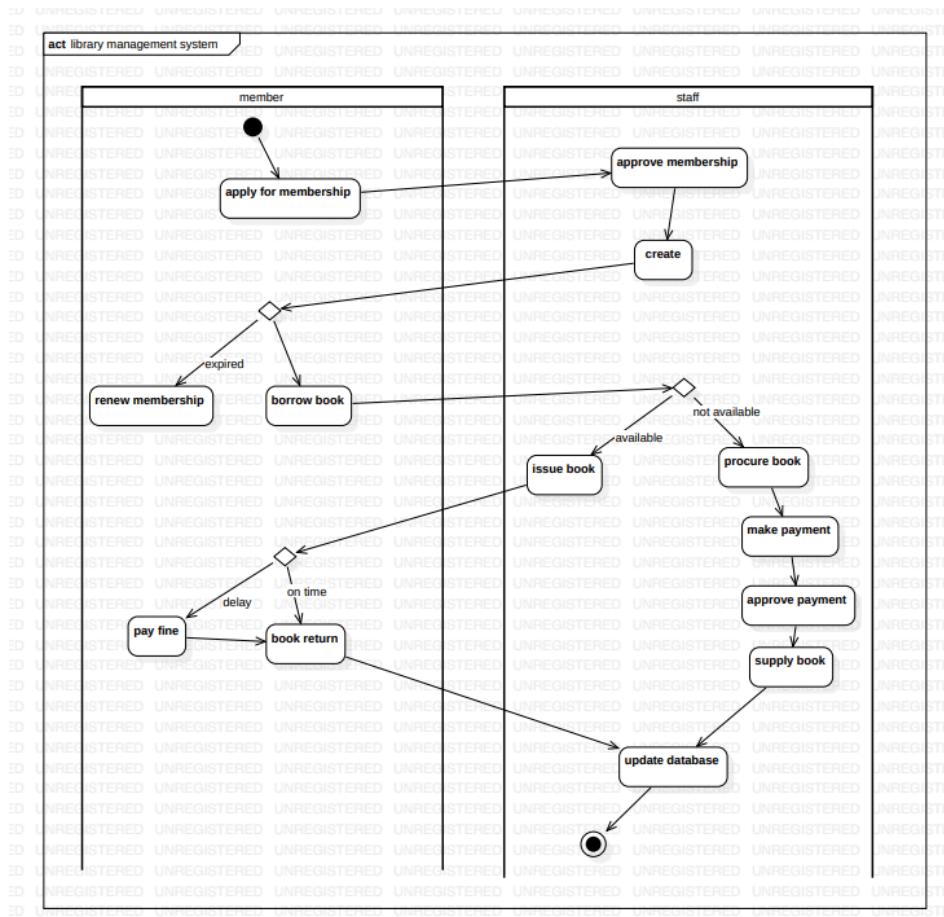
3.5 Use Case Diagram



3.6 Sequence Diagram



3.7 Activity diagram

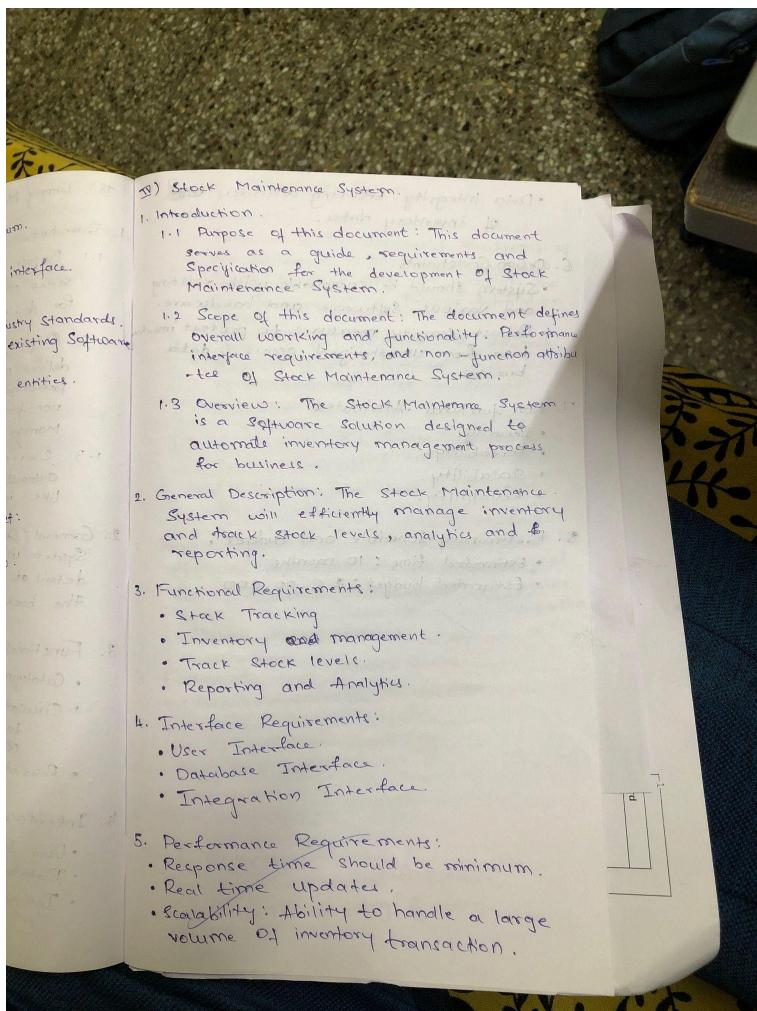


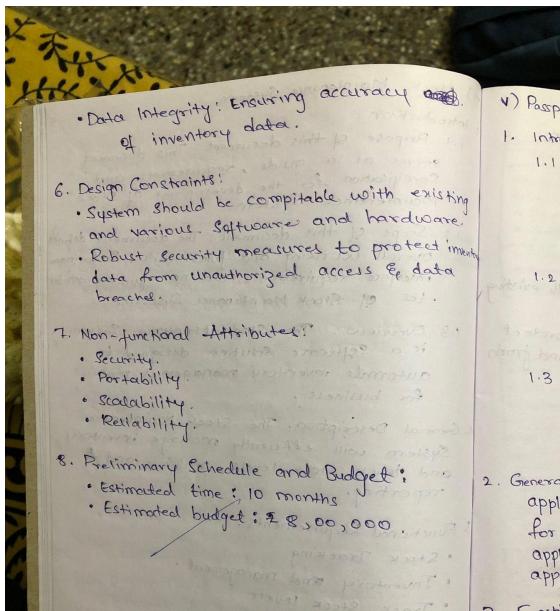
4. Stock Maintenance System

4.1 Problem Statement

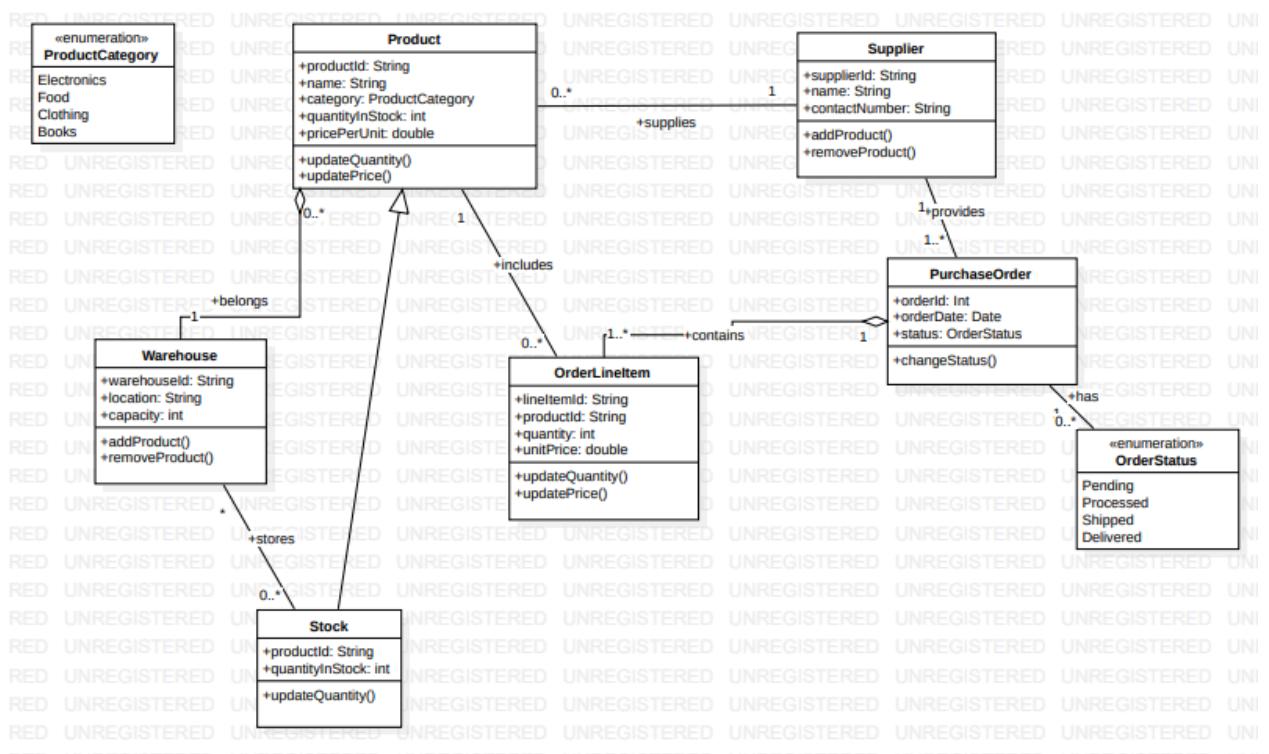
Create a stock management system named Bystim for a small business that effectively manages inventory. The system should track stock levels, handle product information, process sales transactions, generate reports, and manage analysis. Emphasize usability, scalability, and adherence to industry-standard engineering principles.

4.2 SRS-Software Requirements Specification

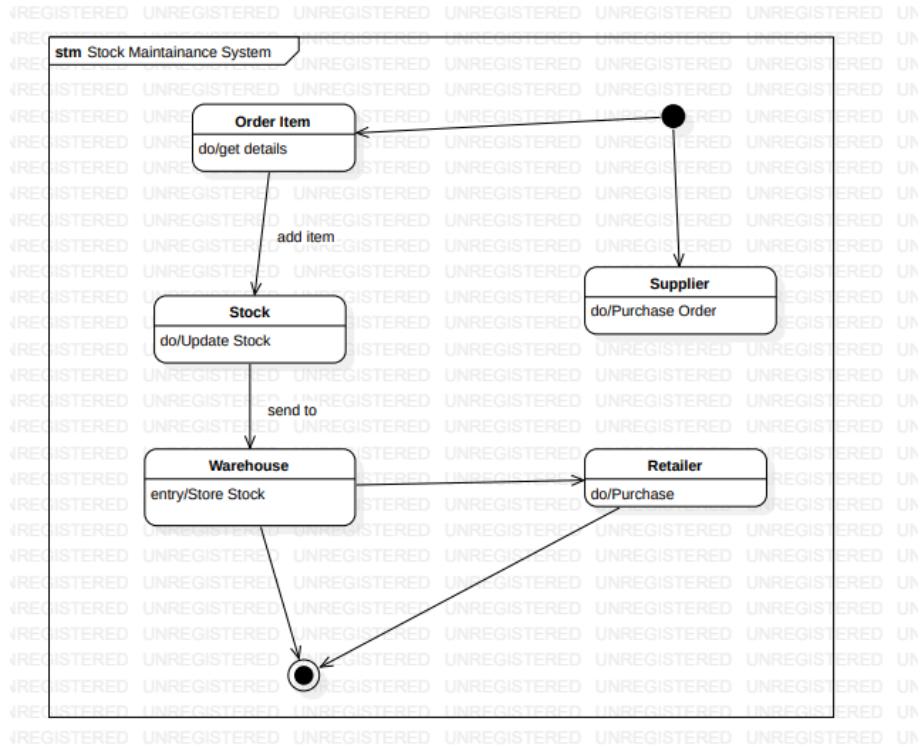




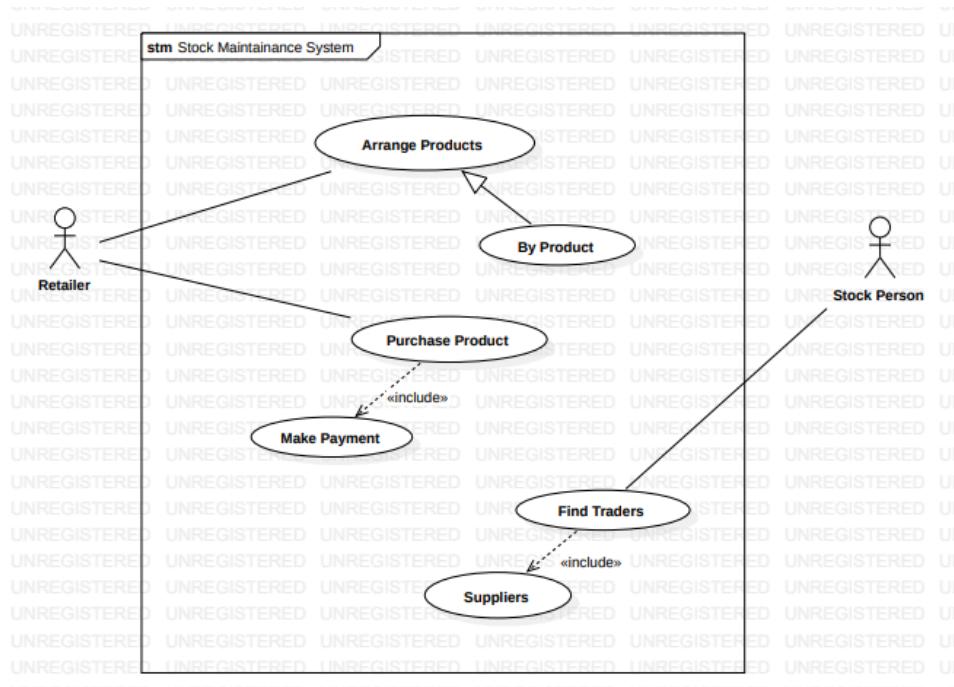
4.3 Class Diagram



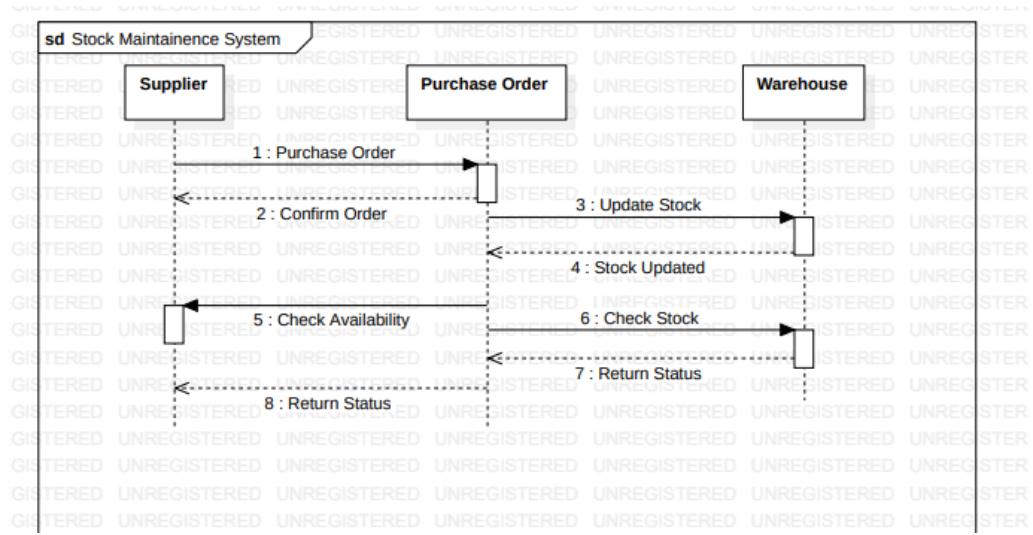
4.4 State Diagram



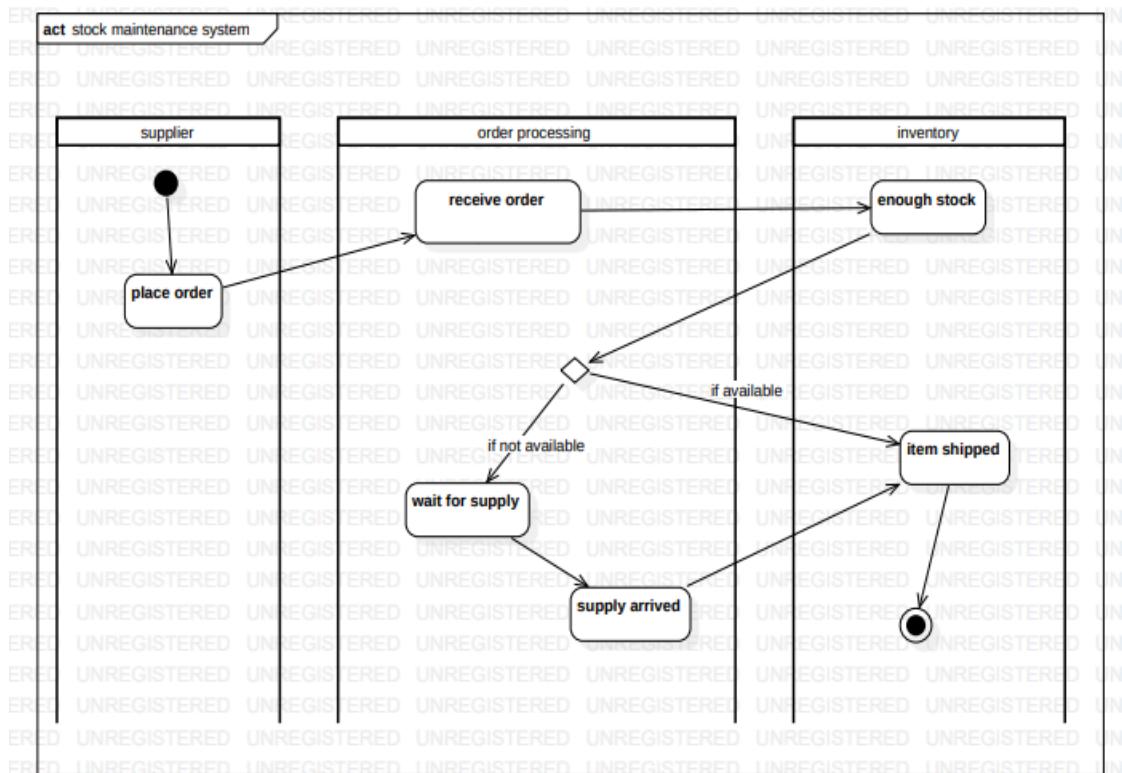
4.5 Use Case Diagram



4.6 Sequence Diagram



4.7 Activity diagram

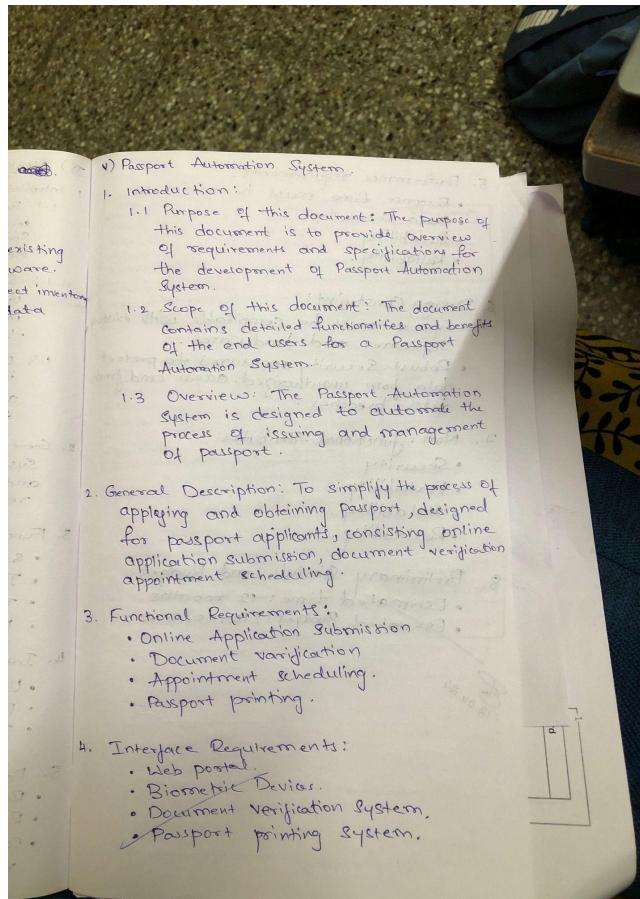


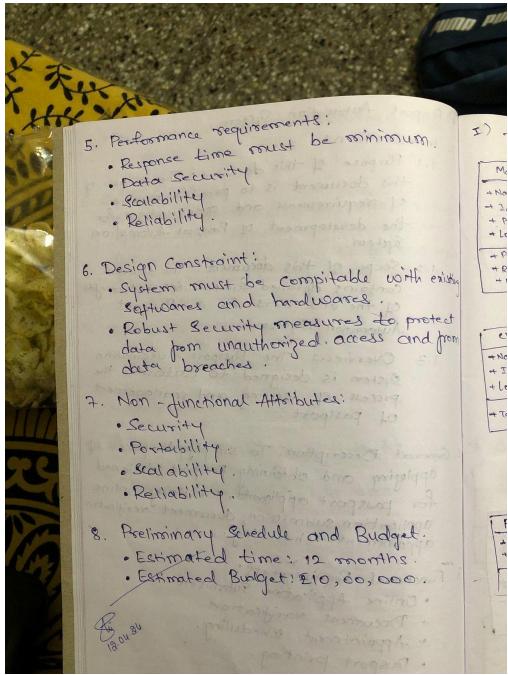
5. Passport Automation System

5.1 Problem Statement

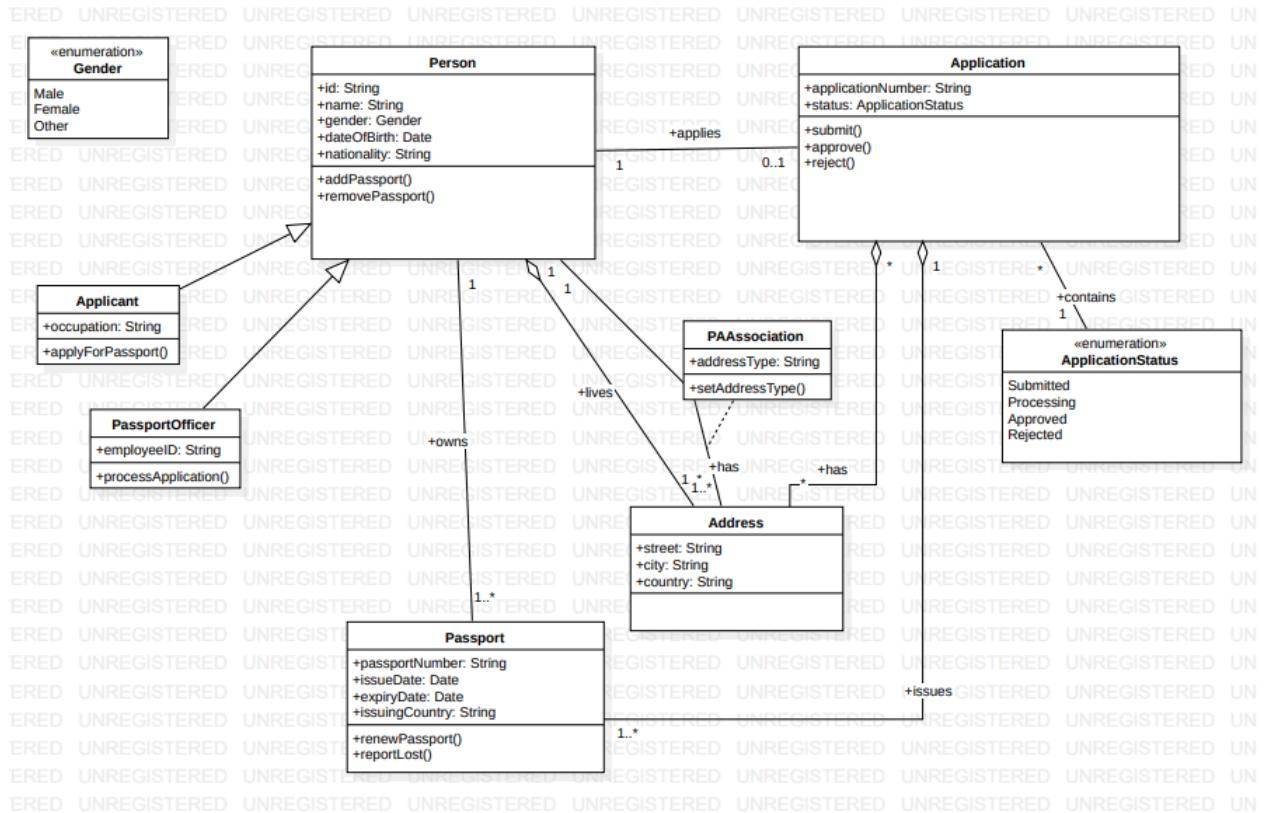
Develop a passport automation system to streamline application submission, appointment scheduling, and status tracing.

5.2 SRS-Software Requirements Specification

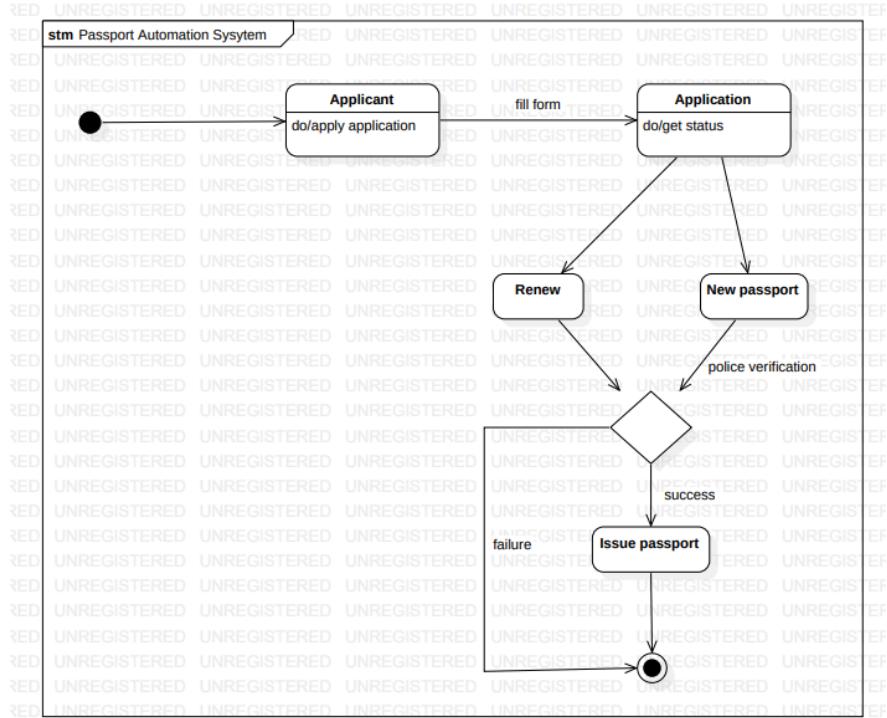




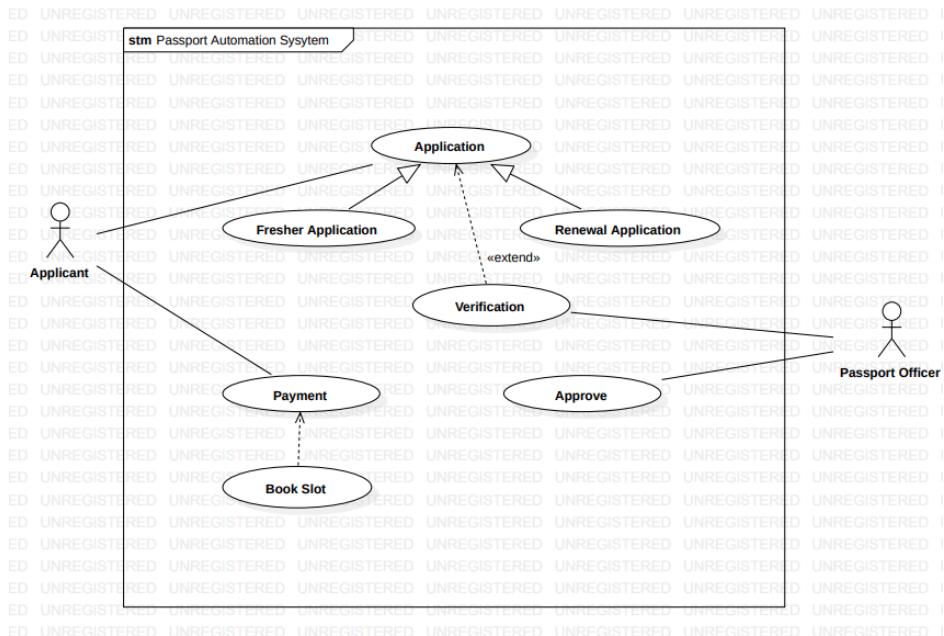
5.3 Class Diagram



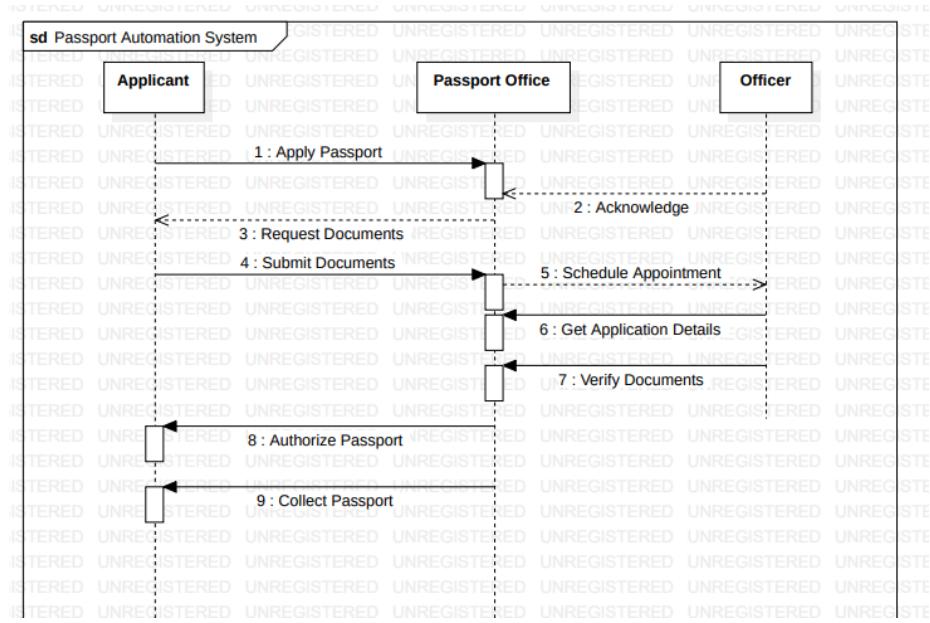
5.4 State Diagram



5.5 Use Case Diagram



5.6 Sequence Diagram



5.7 Activity diagram

