

Task 11

16/10/26

Use case:- Passport Automation System.

aim: To analyze, design and Implement a Passport Automation System using UML diagrams and Software Engineering principles.

Problem definition:-

The Passport Automation System is developed for a government agency that handles a large number of Passport Applications, Renewals, and Replacements. The system aims to simplify and automate the process of Passport issuance, enhance security, reduce manual errors, and ensure compliance with regulatory standards.

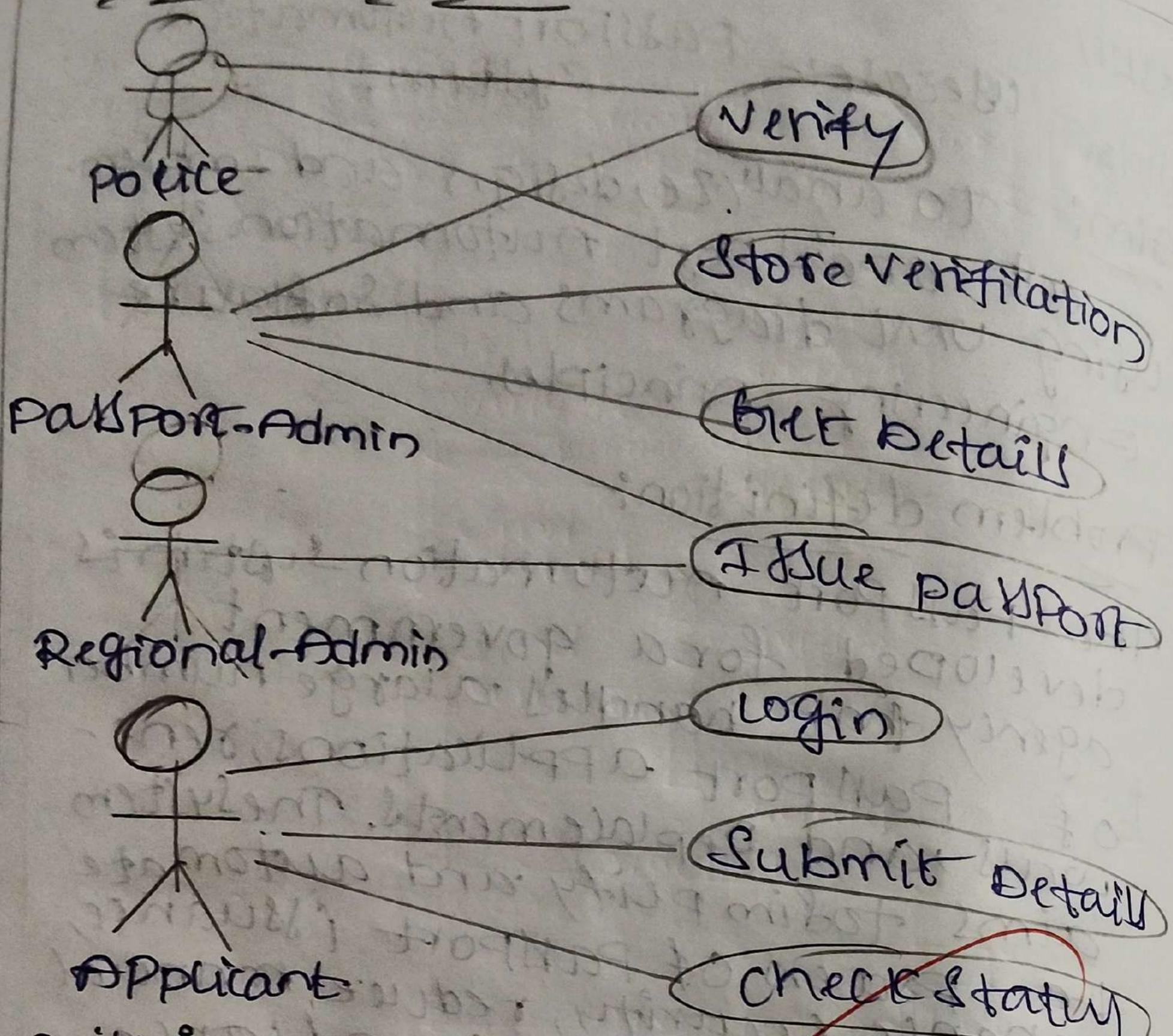
SRS Document

1 Introduction

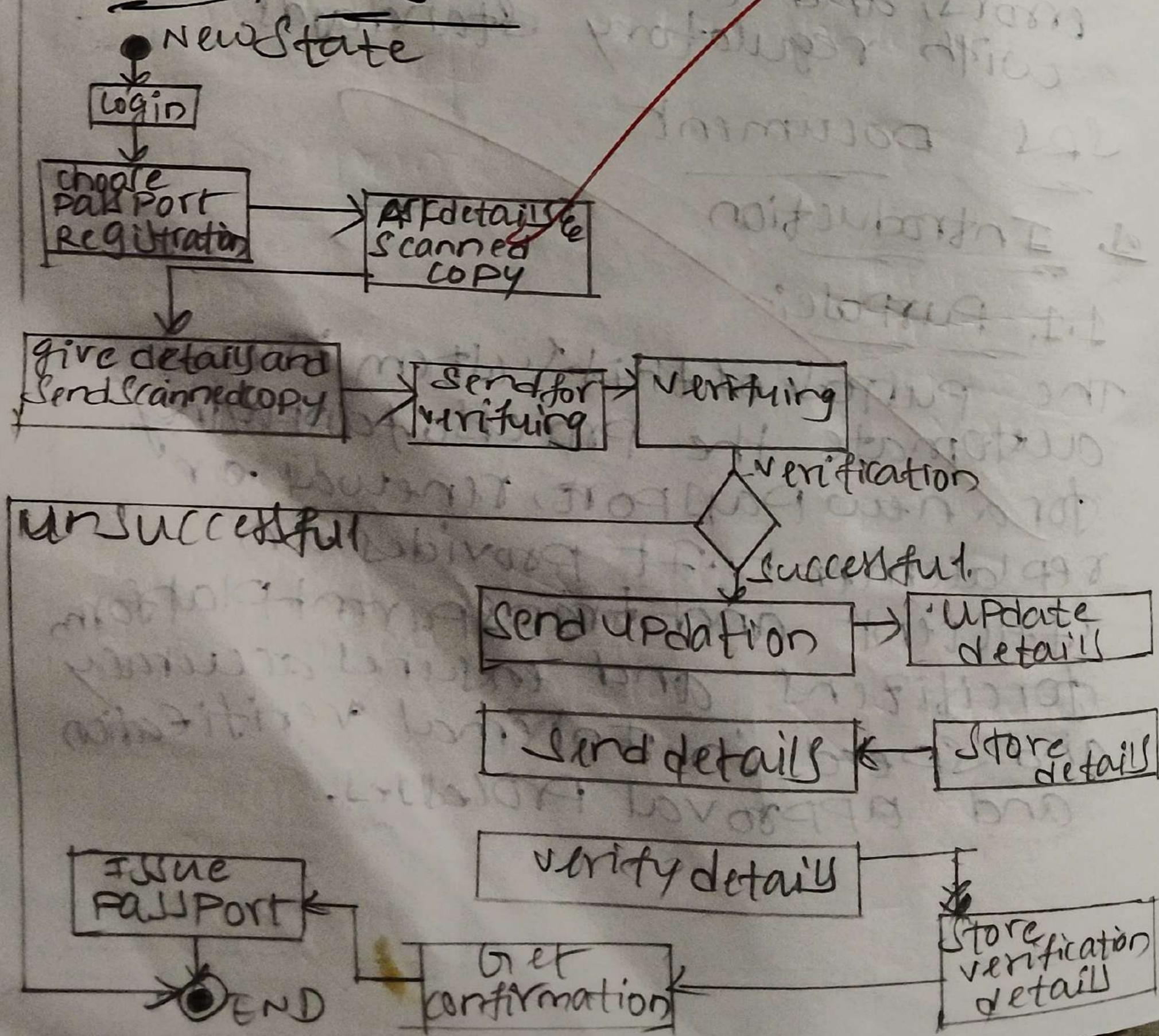
1.1 Purpose:-

The purpose of this system is to automate the process of applying for a new Passport, renewal or replacement. It provides an efficient and transparent platform for citizens and ensures accuracy and speed in internal verification and approval procedures.

use case diagram:-



Activity Diagram:-



1.2 Scope:-

- * Allows applicants to submit passport application online.
- * facilitates document verification, biometric data collection, and status tracking.
- * Automates communications b/w different government departments
- * Ensures data security and prevents identity fraud.

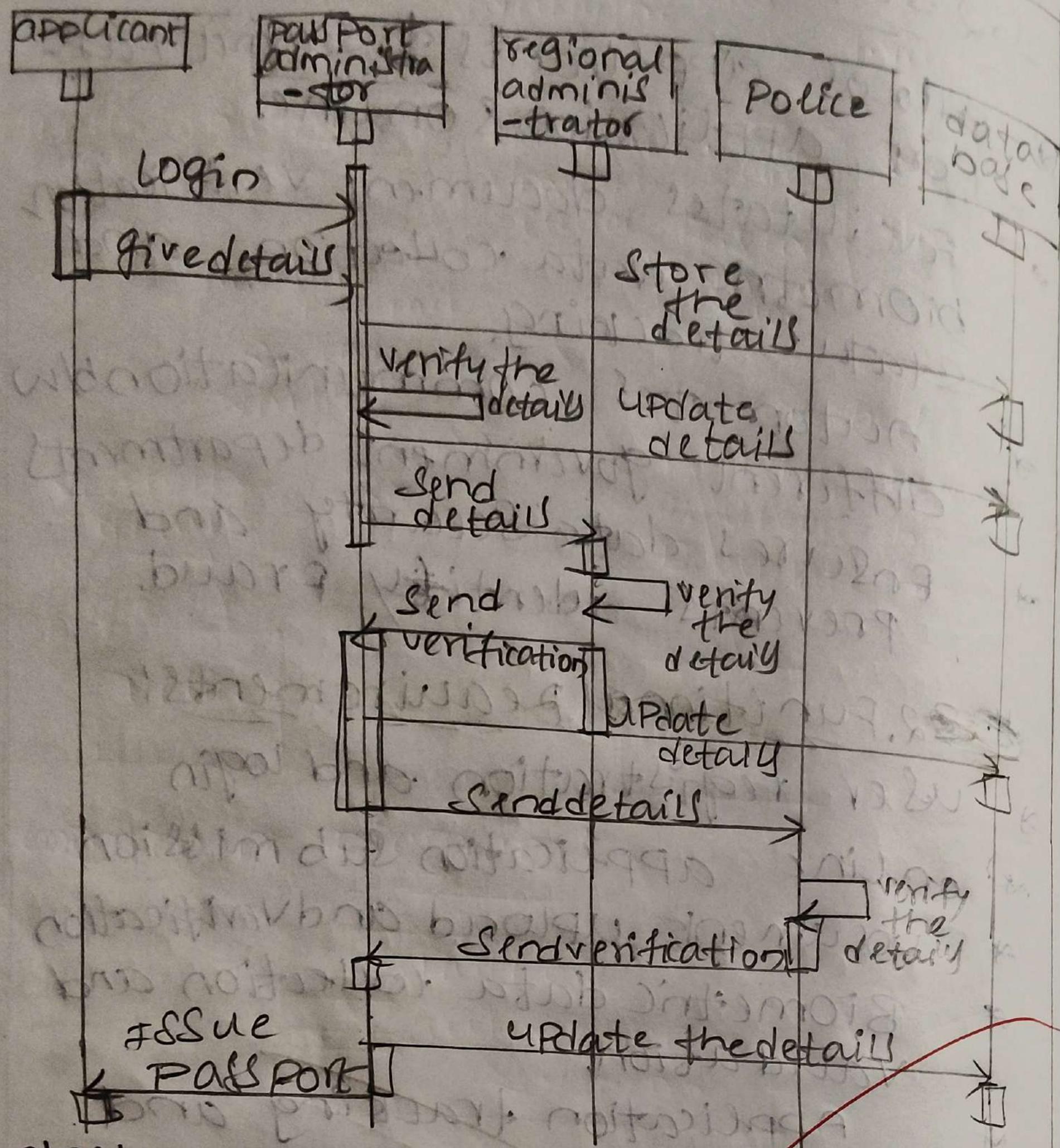
2. Functional Requirements:-

- * User registration and login
- * Online application submission
- * Document upload and verification
- * Biometric data collection and validation.
- * Application tracking and status update.
- * Payment gateway for processing fees.
- * Officer dashboard for approval workflow.
- * Notification system (SMS/Email)

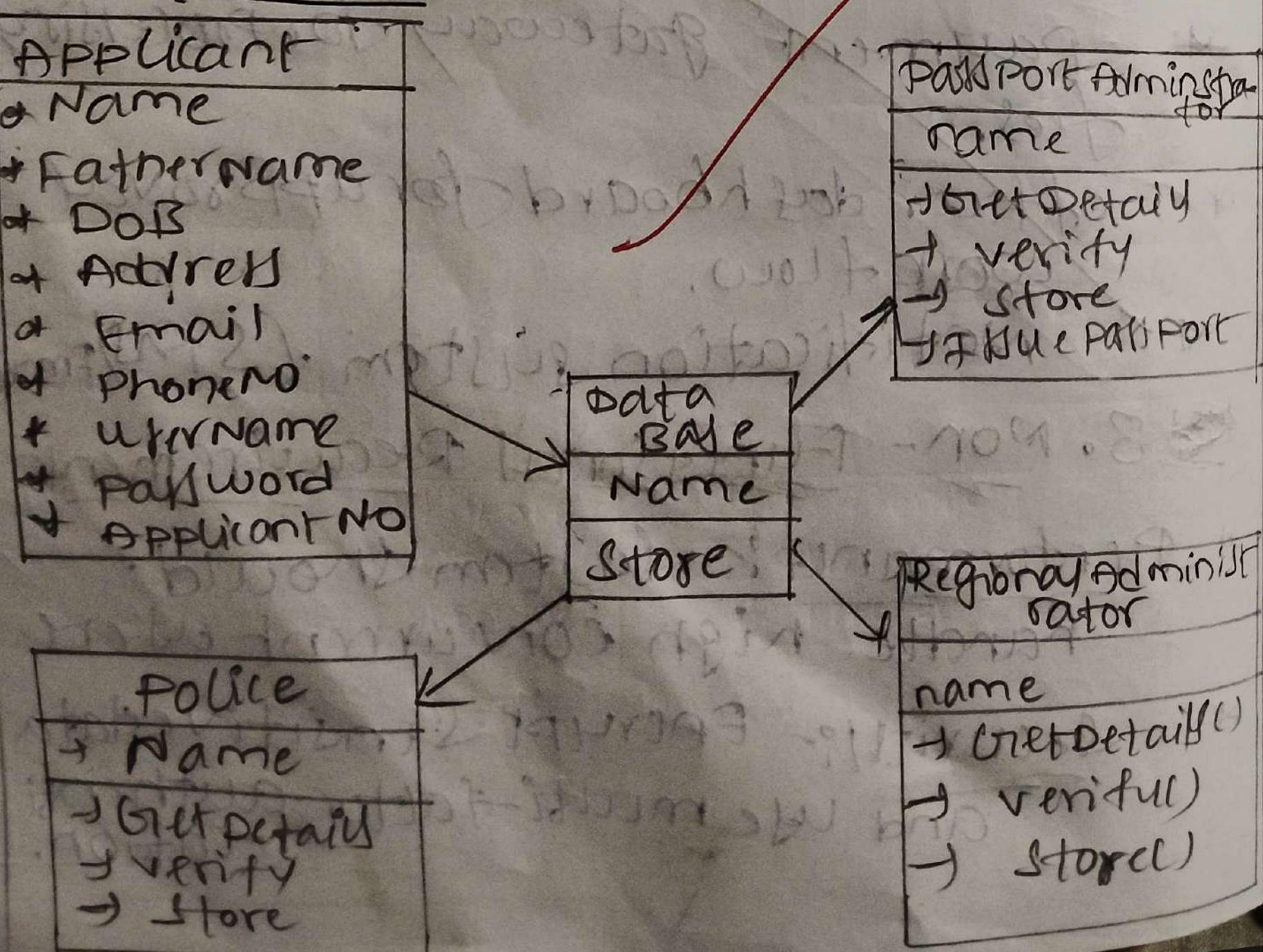
3. Non-Functional Requirements

- * Performance - System should handle high concurrent users
- * Security - Encrypt sensitive data and use multi-factor authentication.

Sequence Diagram



Class Diagram



availability:
24x7 access for users

- * usability: Simple and user-friendly interface
- * scalability: Able to accommodate growing number of users.

(v) Glossary for Passport Automation System.

* Applicant: Person applying for a Passport.

* Applicant ID: Unique number for each Passport request.

* Biometric Data: Fingerprints and facial scan used for identity verification.

* Document verification: Checking submitted documents for authenticity.

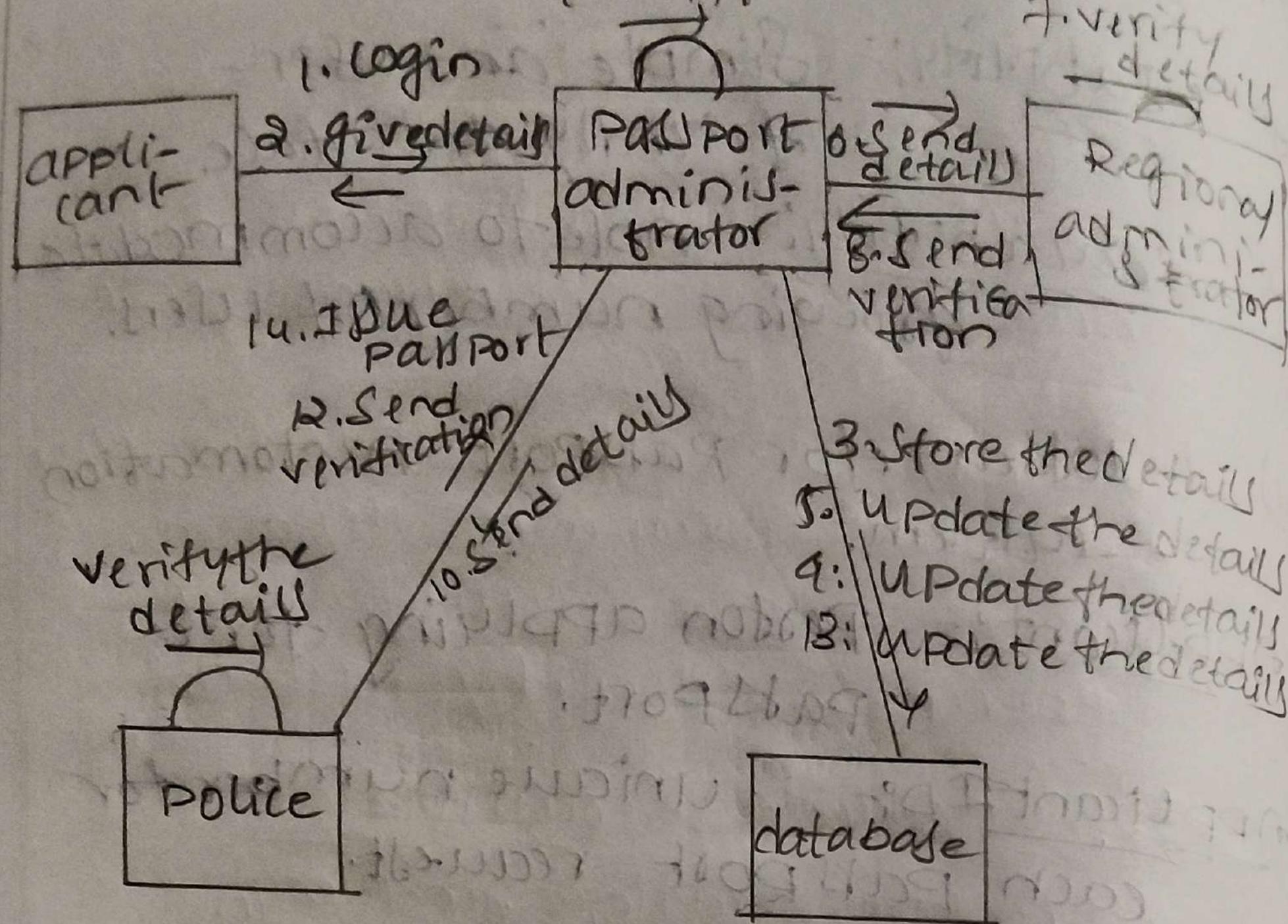
* Admin Dashboard: Internal portal for staff to manage applications.

* Status Tracking: Real-time updates on application progress.

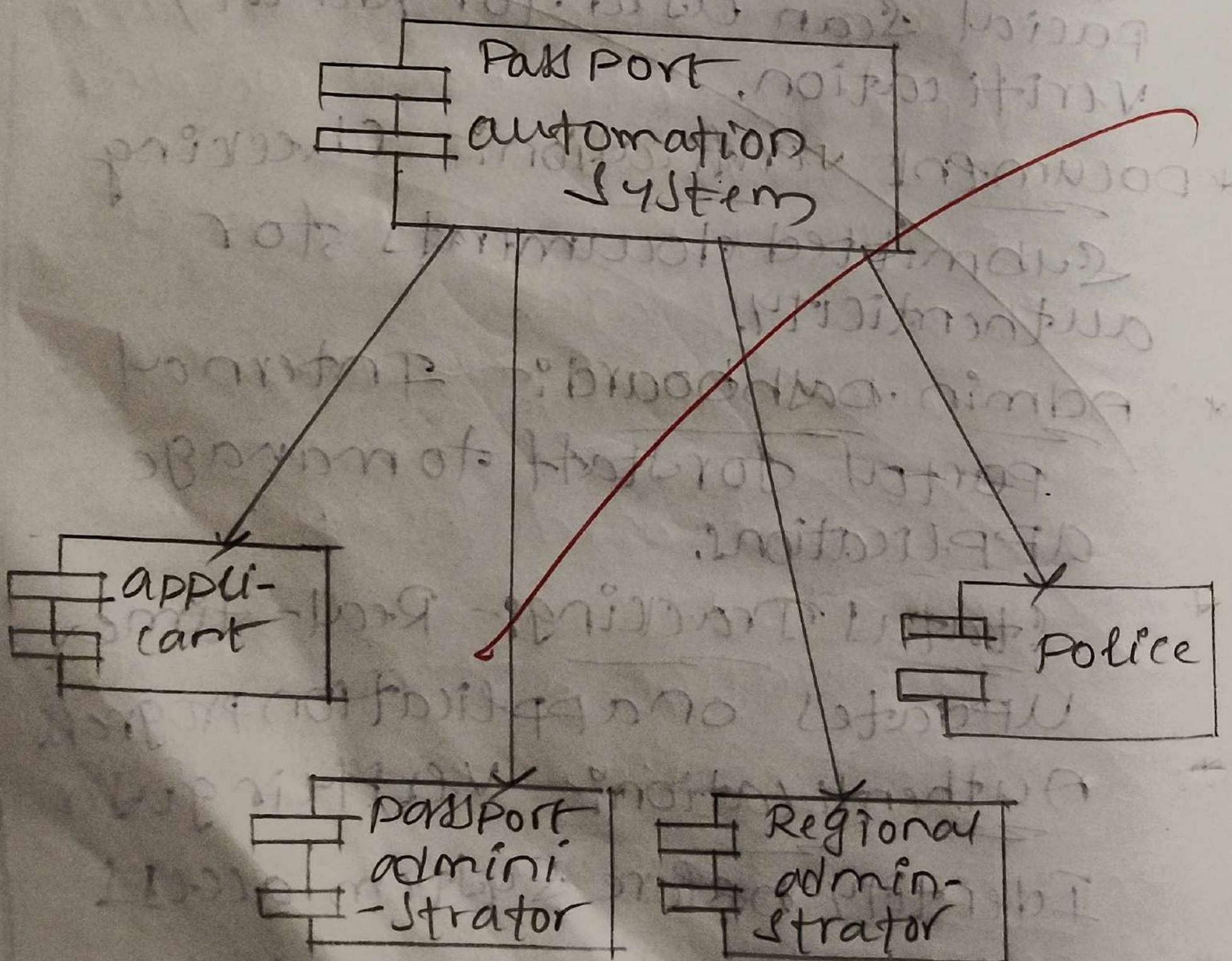
* Authentication: Verifying user Identity before system access.

* Fraud detection: Tools to prevent identity theft and fake document.

collaboration diagram:



component diagram:



Implementation phase:-

① Front-End Implementation:-

The front end provides an interactive interface for applicants and officials.

② Back-End Implementation:-

The Back-end manages data flow, business logic, and communication between user and the database.

③ Database Implementation:-

→ Database stores all user and passport related information.

④ Security Implementation:-

→ User authentication using password encryption (MD5/SHA-256)

→ Role-based access control for applicants and officials.

→ Biometric data encryption to prevent

→ Logging and audit trails for every transaction.

⑤ Integration and Testing:-

→ Integration of all modules into a unified system.

⑥ Deployment:-

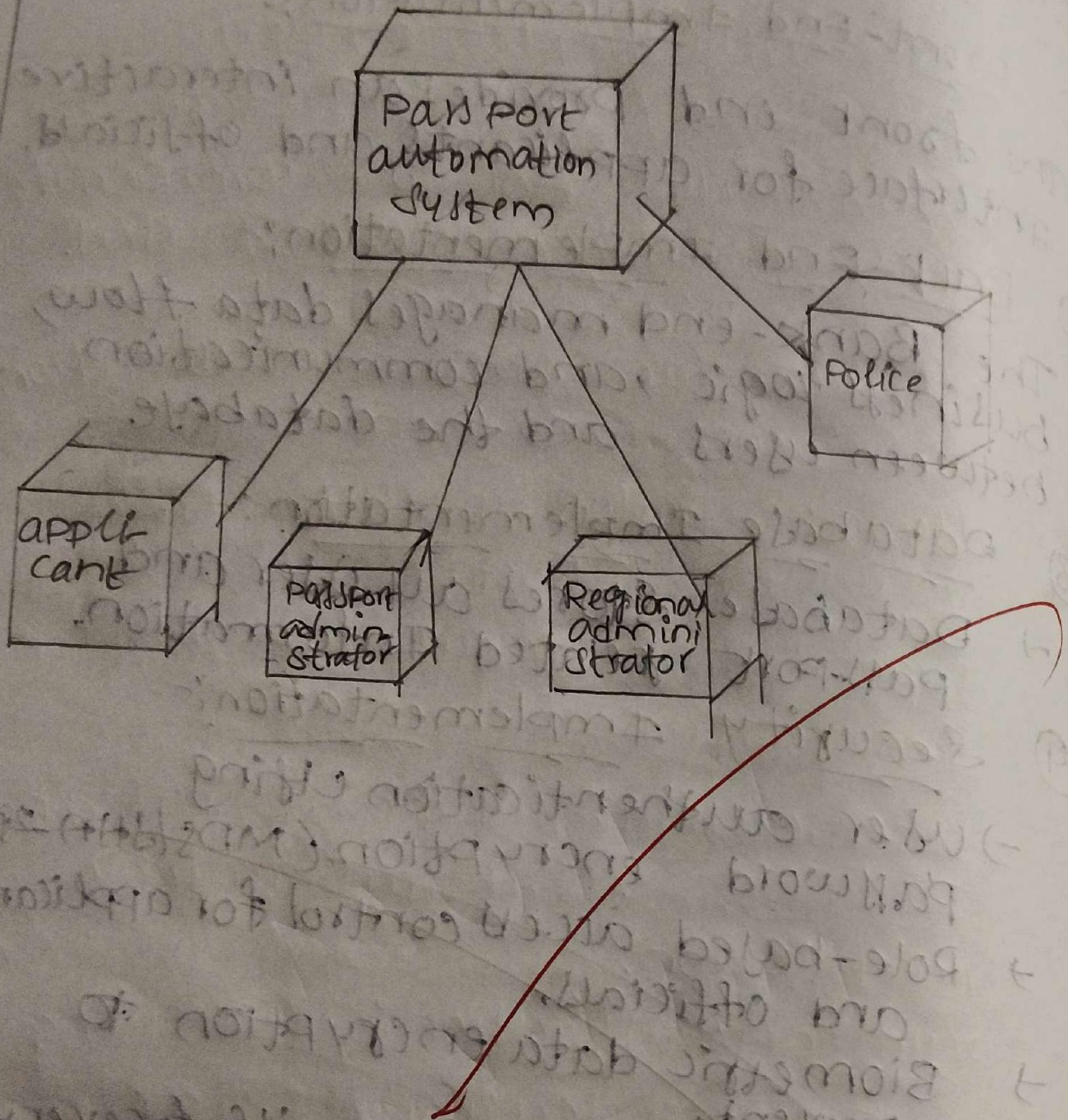
→ The System is hosted on a secure web server.

⑦ Maintenance:-

→ Regular updates to security patches

→ Monitoring performance and fixing bugs.

Deployment diagram



| MARKS | |
|-------------------------|----------|
| EX No. | 11 |
| PERFORMANCE (5) | 5 |
| RESULT AND ANALYSIS (5) | 5 |
| VIVA VOCE (5) | 6 |
| RECORD (5) | 5 |
| TOTAL (20) | 20 |
| SIGN WITH DATE | 10/10/12 |

Result:- The implementation of the PAIS Port Automation System provides an efficient and reliable environment for PAIS Port processing, reducing manual errors and improving citizen satisfaction.