Airport Ticket Management System Report

Al Imran (2122071642)

Md. Mubtasin Hasnat Shihab (2212374042)

Adib Gafur (2212243642)

Rahul Amin (2212665642)

Introduction

The aviation industry plays a crucial role in global transportation, enabling seamless movement of people and goods across different regions. Managing airport operations efficiently is essential for ensuring smooth travel experiences for passengers and effective coordination of flights. The Airport Ticket Management System is a software solution designed to address the complexities involved in managing flights, customer bookings, ticketing, and administrative tasks within an airport. The primary goal of this project is to develop a user-friendly and efficient system that automates various processes, reduces manual workload, and enhances overall customer satisfaction.

The Airport Management System is designed to streamline and enhance the operations of an airport by providing an efficient and user-friendly system for managing flights, customers, ticket bookings, and administrative tasks. This system enables users to search for available flights, book tickets, and process payments seamlessly. Additionally, it allows airport administrators to manage flight schedules and oversee customer transactions. The primary goal of the project is to facilitate a smooth and effective airport management process, reducing manual workload and improving customer experience.

Our project aims to create a comprehensive digital platform that allows customers to search for available flights, book tickets, and make payments seamlessly. At the same time, it provides administrators with tools to manage flight schedules, update flight details, and oversee customer transactions. By implementing this system, airports can ensure that their operations run smoothly, reducing errors and enhancing efficiency.

Objectives

The key objectives of this project include:

- Developing an efficient and user-friendly Airport Management System.
- Automating flight bookings, ticket purchases, and payment processes.
- Providing an administrative dashboard for flight and user management.
- Enhancing customer experience by offering a seamless booking process.

- Ensuring security and reliability in data management and transactions.

Scope of the Project

In Scope

- User registration and authentication.
- Flight management (adding, updating, removing flights).
- Flight search and booking functionalities.
- Secure payment processing.
- Ticket management for customers.
- Admin functionalities for overseeing bookings and transactions.

Out of Scope

- Real-time flight tracking.
- Airline crew and staff management.
- Physical airport operations such as baggage handling.

End Users

The primary end users of this system include:

1. **Customers**: Individuals who want to book flights, view available schedules, and make payments for their tickets.
2. **Administrators**: Airport personnel responsible for managing flight schedules, updating flight information, and overseeing customer transactions.
3. **Airport Staff**: Employees who may require access to flight details and customer records for operational efficiency.

Functional Requirements

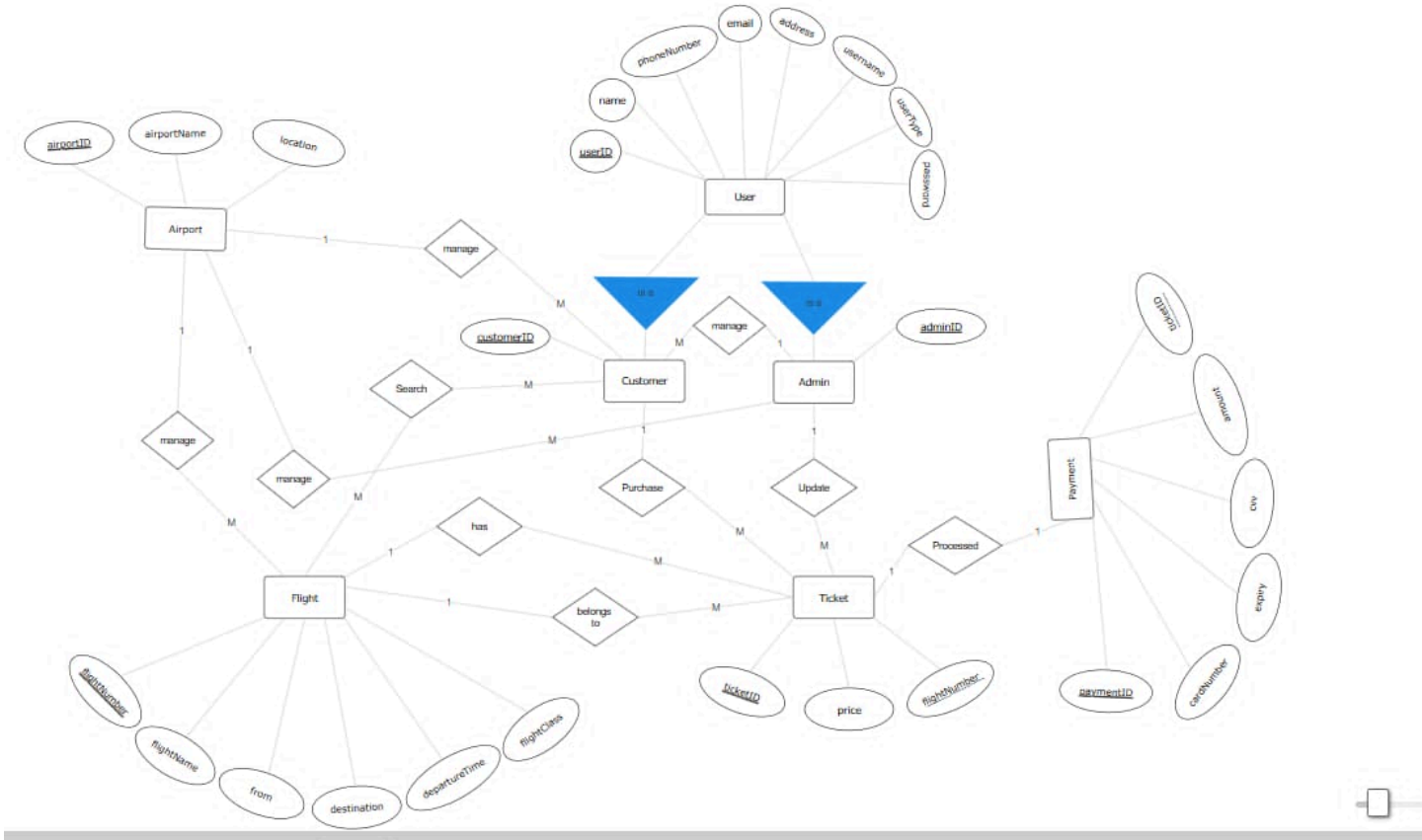
1. **User Registration and Authentication**: Customers and administrators must be able to register and log in securely.

2. **Flight Management**: Administrators should be able to add, update, and remove flights from the system.
3. **Flight Search and Booking**: Customers should be able to search for flights based on destination, class, and schedule and book tickets accordingly.
4. **Payment Processing**: The system should support secure payment processing for ticket purchases.
5. **Ticket Management**: Customers should be able to view and manage their purchased tickets.
6. **Admin Dashboard**: Admins should have a dashboard to oversee flights, bookings, and customer activities.

Non-Functional Requirements

1. **Security**: User credentials and payment transactions must be securely encrypted to prevent unauthorized access.
2. **Scalability**: The system should be able to handle multiple user requests simultaneously.
3. **Reliability**: The system should ensure minimal downtime and provide accurate information.
4. **Usability**: A user-friendly interface should be implemented to enhance the experience for both customers and administrators.
5. **Performance**: The system should be optimized for quick response times and efficient data retrieval.

ER Diagram-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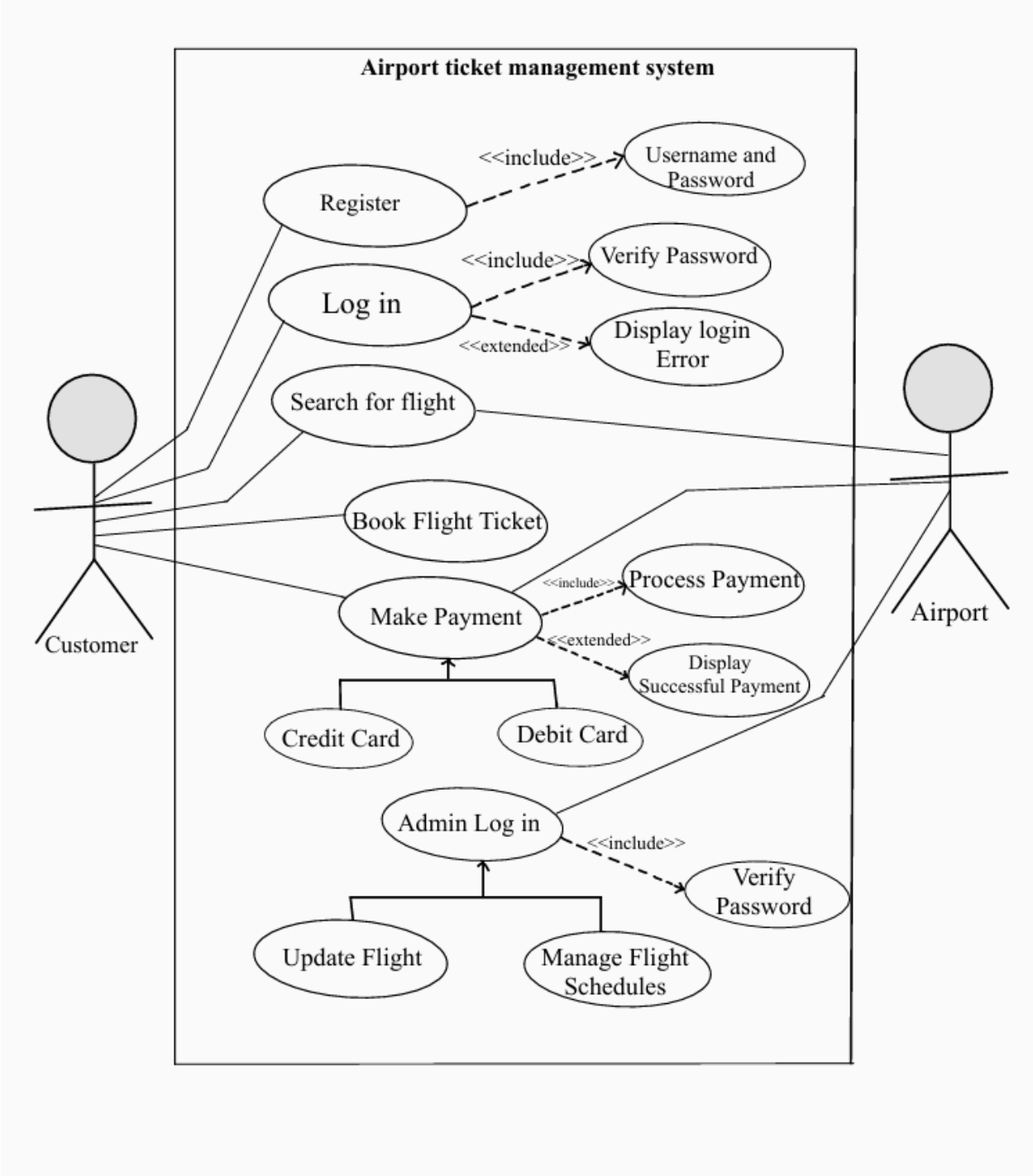
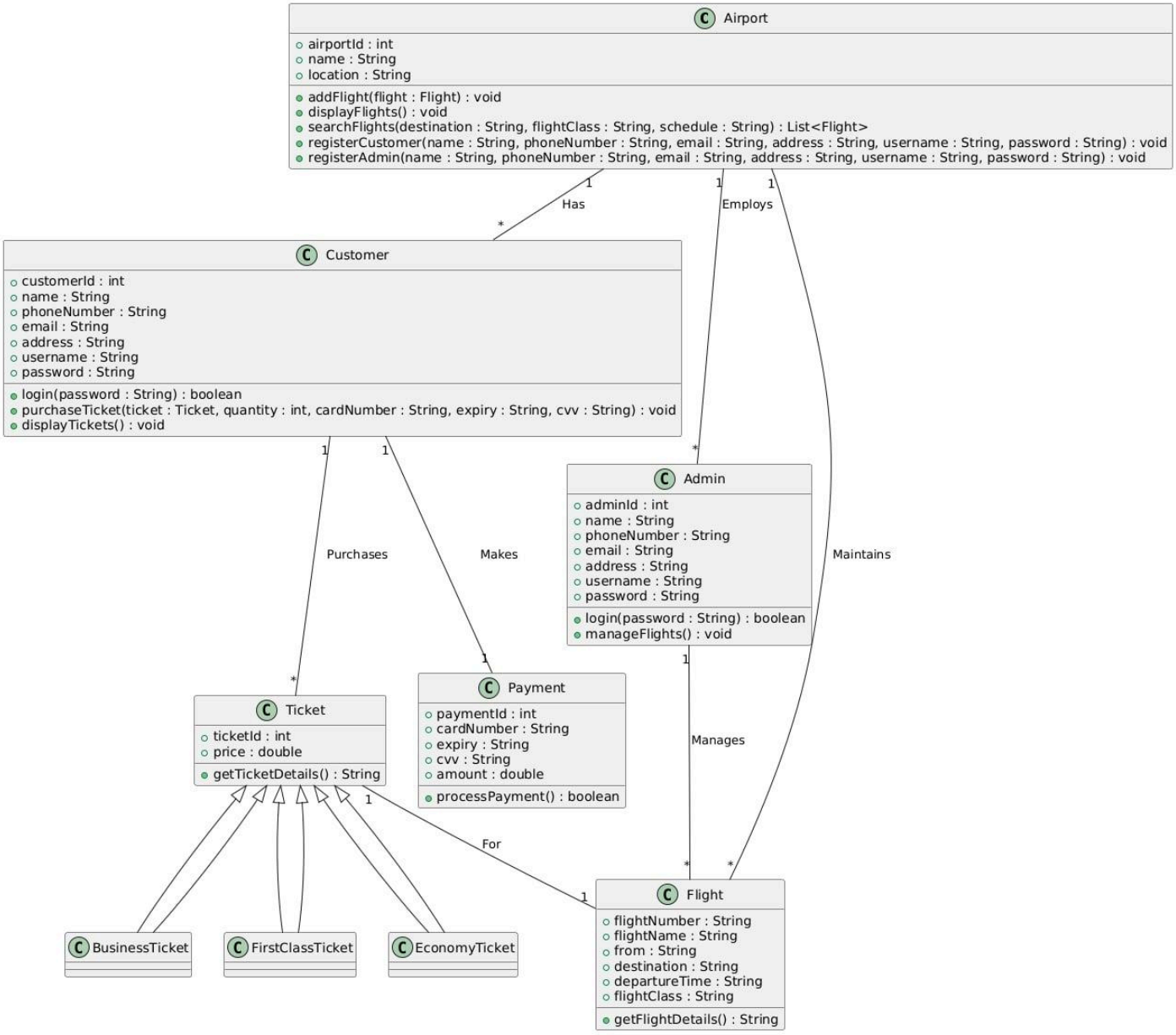
Use Case Diagram-



Class Diagram-



Sequence Diagram-