**DESIGN OF AIRLINE MANAGEMENT SYSTEM**

5.1.GUI

5.2. Static model – class diagram

A screenshot of a computer

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5.3.Dynamic model – sequence diagram

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5.4.Rationale of the detailed designs above

Static Class Diagram Rationale:

-Passenger Class:

* Represents passengers in the system.
* Contains attributes such as passengerID, name, and contactInfo to store passenger information.
* Has a one-to-many relationship with reservations, allowing passengers to have multiple reservations.

-Administrator Class:

* Represents system administrators.
* Contains attributes such as adminID, username, and password to manage administrator accounts.
* Includes operations for managing passengers and flights, as administrators need to have control over these aspects.

-Flight Class:

* Represents flight information.
* Contains attributes such as flightID, airline, origin, destination, and schedule details.
* Has a one-to-many relationship with reservations, allowing multiple reservations for a single flight.

-Reservation Class:

* Represents passenger reservations.
* Contains attributes like reservationID, passenger, flight, status, and bookingTime.
* Relates passengers to their reservations and flight bookings.

Sequence diagram Rationale:

User:

* Users provide their information to log in.
* The login page communicates user-entered information to the verification page.
* The verification page verifies the information from database page.
* Verification page communicates the validation status to the login page.
* User interaction with the authenticated system.

Admin:

* Admins provide their information to log in.
* Admins can change/edit flights, passengers, tickets and reservations.

5.5. Traceability from requirements to detailed design model

| **Requirement** | **Component in Detailed Design** |
| --- | --- |
| System Accessibility | - GUI components that allow user access |
|  | - User authentication system |
|  | - Database for user and system data |
|  | - Administrator functionality for user management |
| Passengers should view flight availability | - GUI components for viewing flight availability |
| Passengers should book flights online | - GUI components for flight booking |
| Passengers should cancel reservations | - GUI components for reservation management |
| Administrators should manage passenger bookings | - Administrator class and operations |
| Administrators should update reservation status | - Administrator class and operations |
| Flight Information Retrieval | - Interaction between Passenger and Airline System |
| Flight Selection | - Interaction between Passenger and Airline System |
| Booking Confirmation | - Interaction between Passenger and Airline System |