

EXPERIMENT 3

AIM:

To design a **Class Diagram** for an **Online Airline Reservation System** that models key functionalities such as user authentication, class management, waiting list handling, reservation holds, and deadline tracking.

PROCEDURE:

1. Identify Key Classes

From the activities listed, the main classes are:

- **User:** Represents customers and administrators accessing the system.
- **Admin:** Handles administrative tasks like managing classes, waiting lists, holds, and deadlines.
- **Login:** Manages authentication for users and admins.
- **Flight Class:** Represents different flight classes (e.g., Economy, Business).
- **Waiting List:** Manages passengers waiting for ticket confirmation.
- **Hold:** Represents reserved tickets for a limited time.
- **Deadline:** Tracks deadlines for reservations or payments.

2. Define Class Attributes and Methods

User Class:

- Attributes: UserID, Name, Email, Password.
- Methods: Register(), Login(), SearchFlight(), BookFlight().

Admin Class:

- Attributes: AdminID, Name, Email, Password.
- Methods: ManageClasses(), ManageWaitingList(), ManageHolds(), ManageDeadlines().

Login Class:

- Attributes: Username, Password, Role (User/Admin).
- Methods: Authenticate(), Logout().

Flight Class:

- Attributes: ClassID, Name (Economy, Business), Availability, Price.
- Methods: UpdateClassDetails(), CheckAvailability().

Waiting List Class:

- Attributes: ListID, FlightID, PassengerID, Status (Waiting/Confirmed).

- Methods: AddToWaitingList(), UpdateStatus().

Hold Class:

- Attributes: HoldID, FlightID, PassengerID, ExpiryTime.
- Methods: CreateHold(), ReleaseHold().

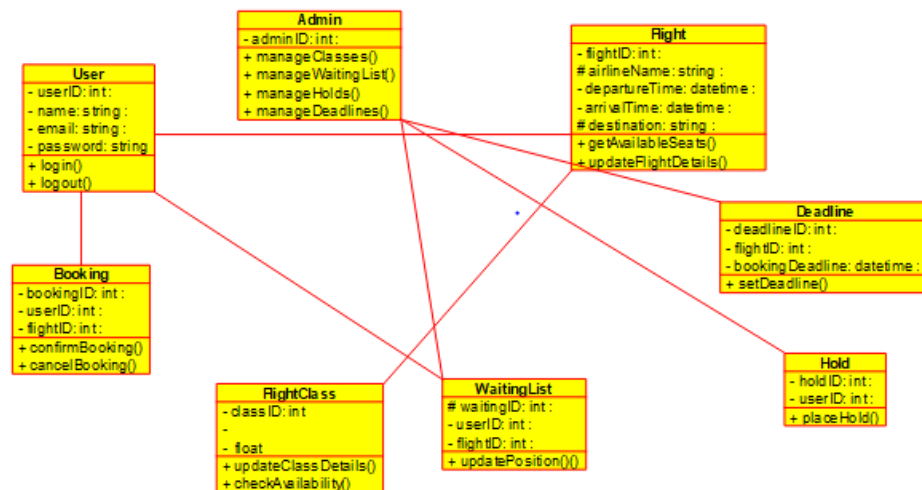
Deadline Class:

- Attributes: DeadlineID, Description, DueDate.
- Methods: SetDeadline(), UpdateDeadline().

3. Define Relationships

- **User** logs in through the **Login** system.
- **Admin** has the privilege to **Manage Classes, Waiting Lists, Holds, and Deadlines**.
- **Flight Class** is related to **Waiting List** and **Hold** for reservation and availability purposes.
- **Deadlines** are managed globally by the **Admin**.

OUTPUT:



RESULT:

The Class Diagram for the **Online Airline Reservation System** is successfully designed. It includes classes like **User**, **Admin**, **Login**, **Flight Class**, **Waiting List**, **Hold**, and **Deadline**, clearly representing their attributes, methods, and relationships. This diagram effectively models the system's workflow and ensures clarity in its design and functionality.