3).Make an Online Airline Reservation System. The activities of the Online Airline Reservation system are listed below user, admin, LOGIN, MANANGE CLASSES, MANANGE WAITING LIST, MANAGE HOLDS, MANAGE DEADLINES, LOGOUT, using this has a step-by-step process draw a CLASS diagram.

Aim

To draw a UML class diagram for an Online Airline Reservation System that represents the structure and relationships between different components like User, Admin, Flight, Reservation, and related management activities such as managing classes, waiting lists, holds, and deadlines.

Procedure

Step 1: Identify the main classes

- **User**
- **Admin**
- **Flight**
- **Reservation**
- **Class Management**
- **Waiting List**
- **Hold Management**
- **Deadline Management**

Step 2: Define attributes and operations for each class

- **User**: User ID, Name, Contact, login(), logout()
- **Admin**: Admin ID, manage Classes(), manage Waiting List(), manage Holds(), manage Deadlines()
- **Flight**: Flight ID, Source, Destination, Departure Time, manage Flight Details()
- **Reservation**: ReservationID, Date, Status, createReservation(), cancelReservation()
- **ClassManagement**: ClassType, SeatCount, manageClassDetails()
- **WaitingList**: ListID, PassengerDetails, addPassenger(), removePassenger()
- **HoldManagement**: HoldID, FlightID, manageHold()
- **DeadlineManagement**: DeadlineID, ReservationDeadline, manageDeadlines()

Step 3: Establish relationships among classes

- **User** has an association with **Reservation**.

- **Admin** is responsible for managing **ClassManagement**, **WaitingList**, **HoldManagement**, and **Deadline Management**.
- **Flight** is associated with **Reservation** and **Class Management**.

Step 4: Draw class diagrams using UML symbols

- Use rectangles to represent classes.
- Define attributes and operations within each class.
- Connect classes using association, aggregation, or composition relationships as required.

Step 5: Mark multiplicities (1, , *1*..) on associations

- A **User** can have multiple **Reservations**.
- A **Flight** can have multiple **Class Management** entries.

Step 6: Label all components clearly and ensure logical structure

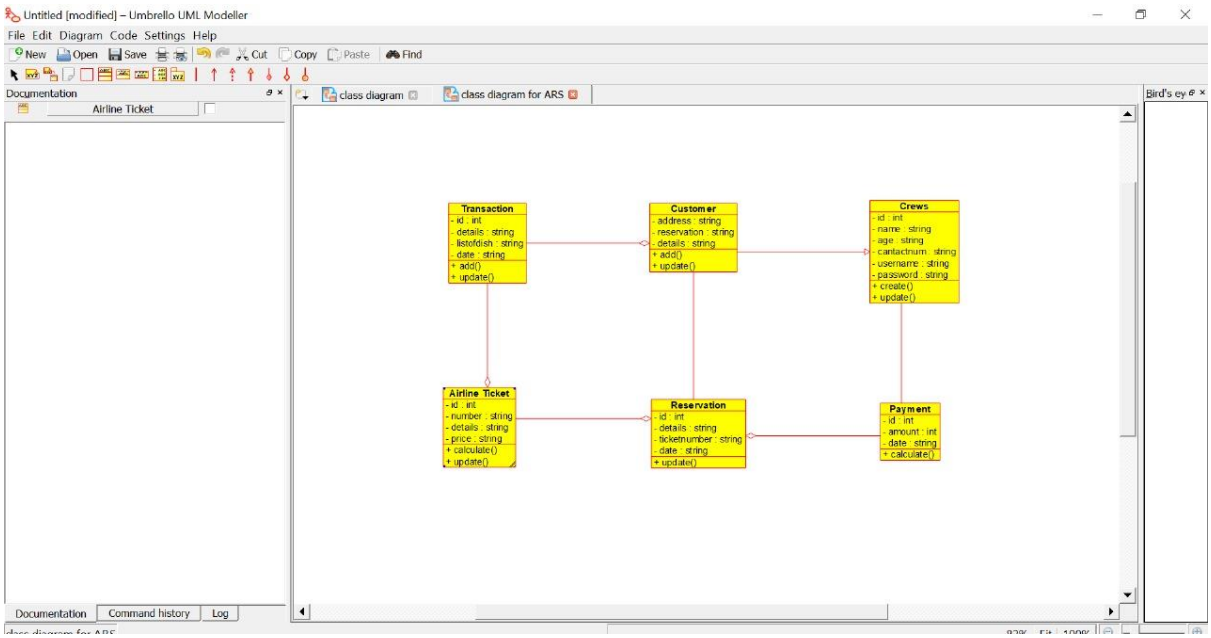
- Organize and group related components for better clarity.

Step 7: Verify and review the diagram

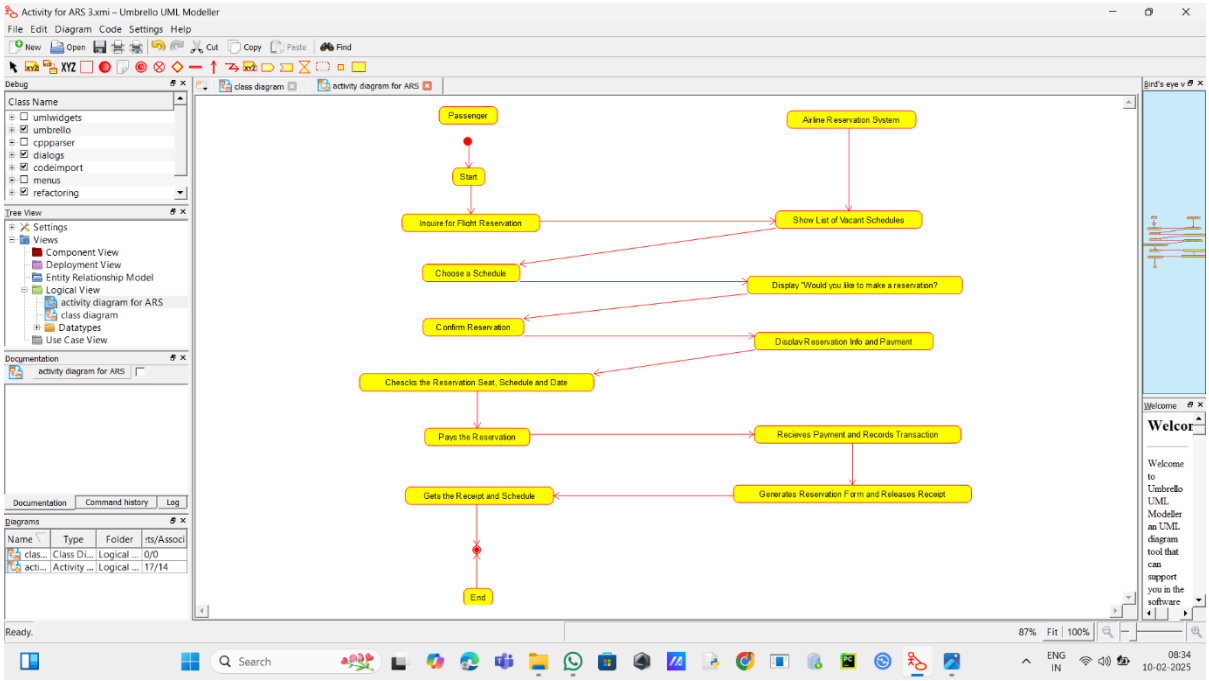
- Ensure all activities are correctly represented and relationships are accurately depicted.

OBSERVATION:

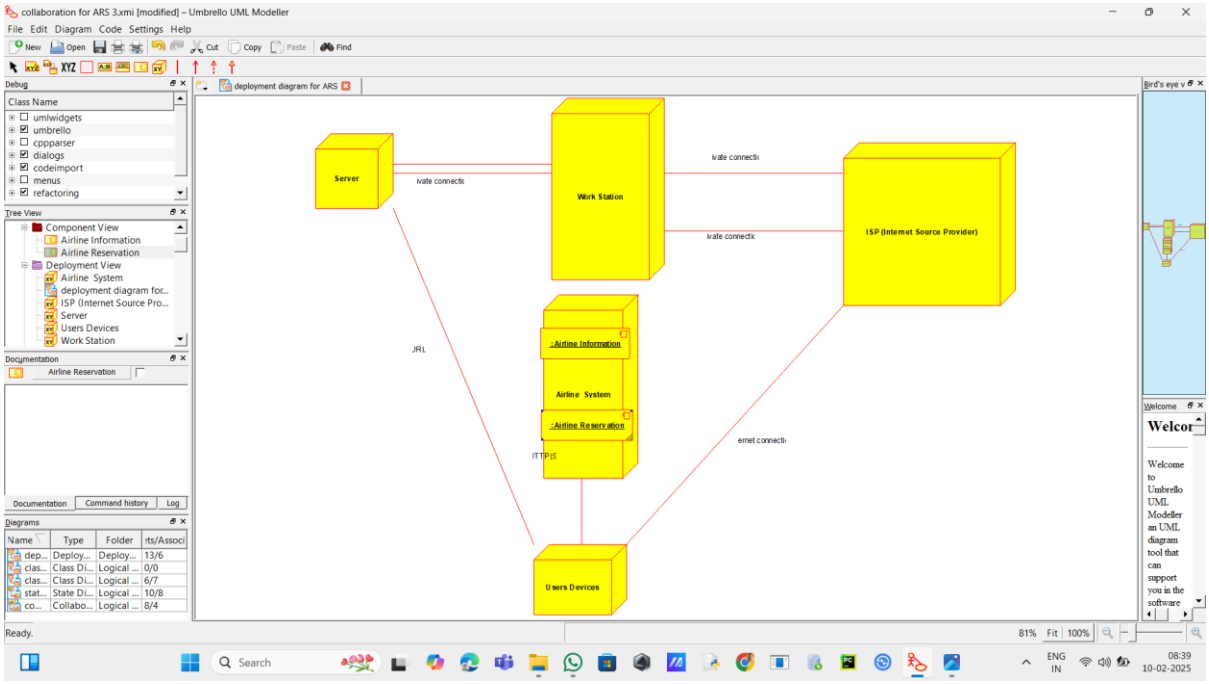
CLASS DIAGRAM:



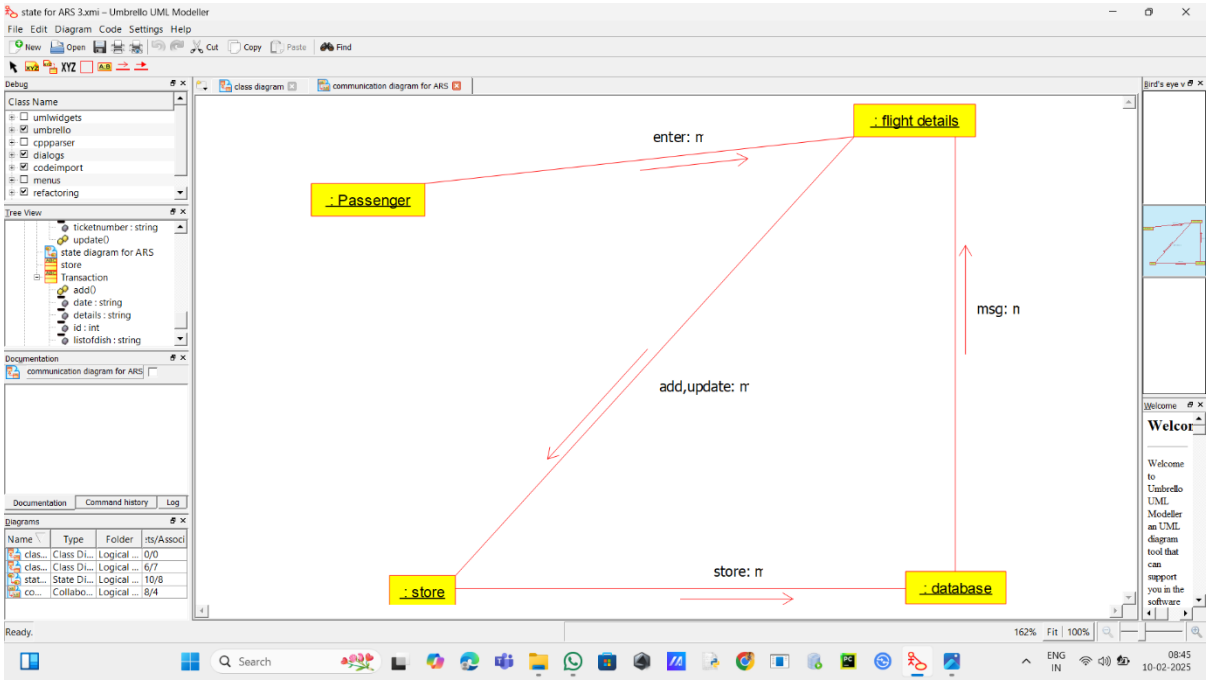
ACTIVITY DIAGRAM:



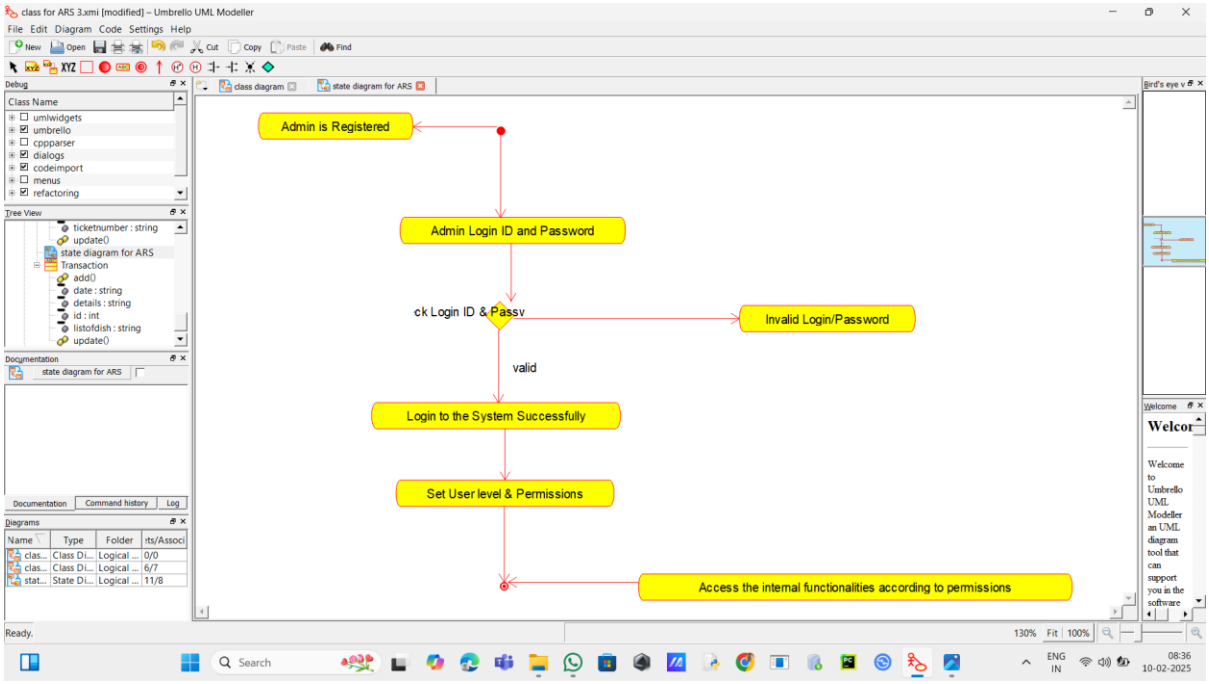
DEPLOYMENT DIAGRAM:



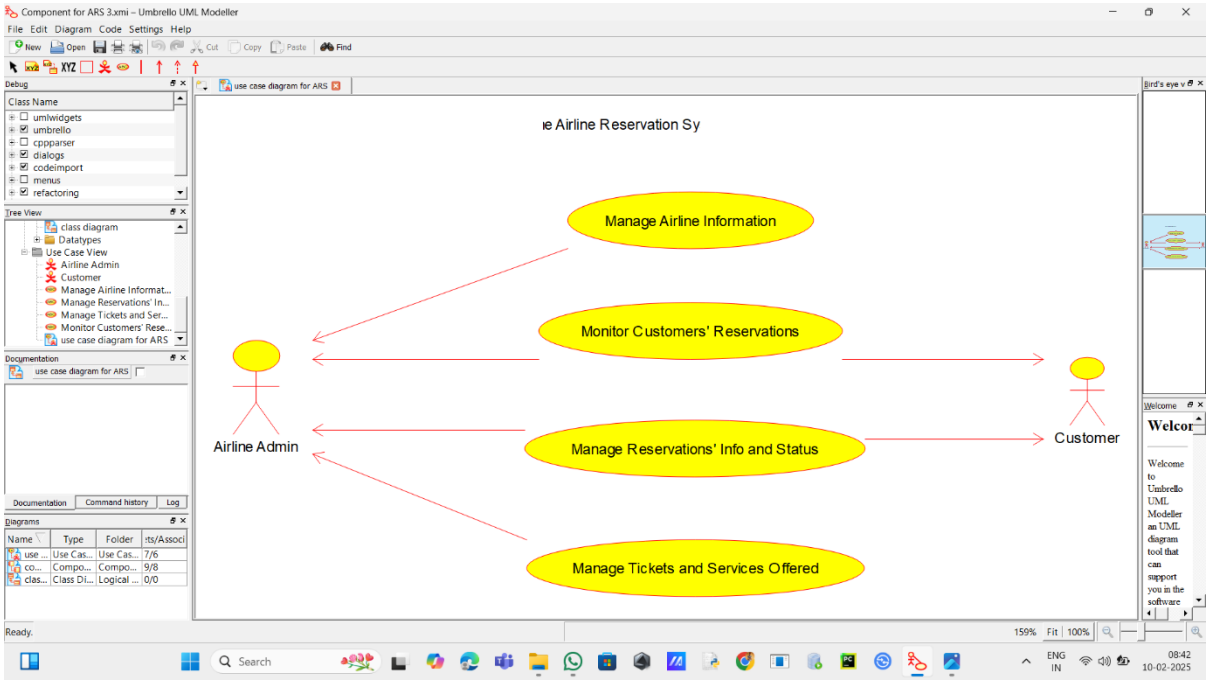
SEQUENCE DIAGRAM:



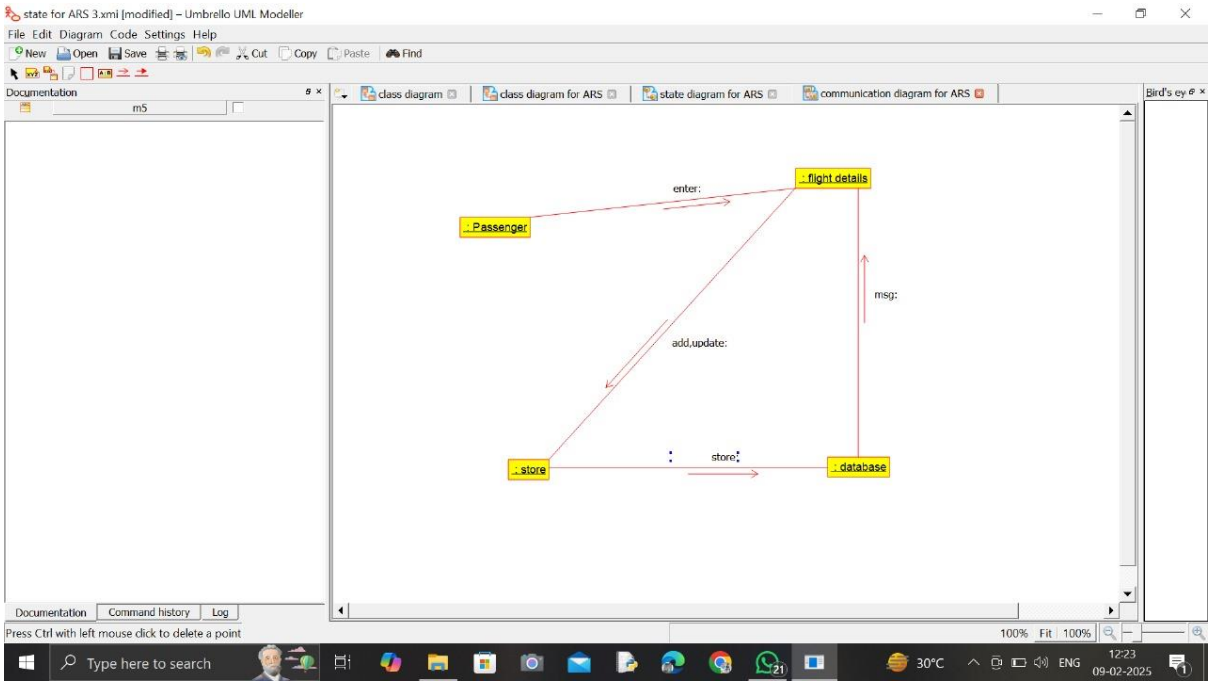
STATE DIAGRAM:



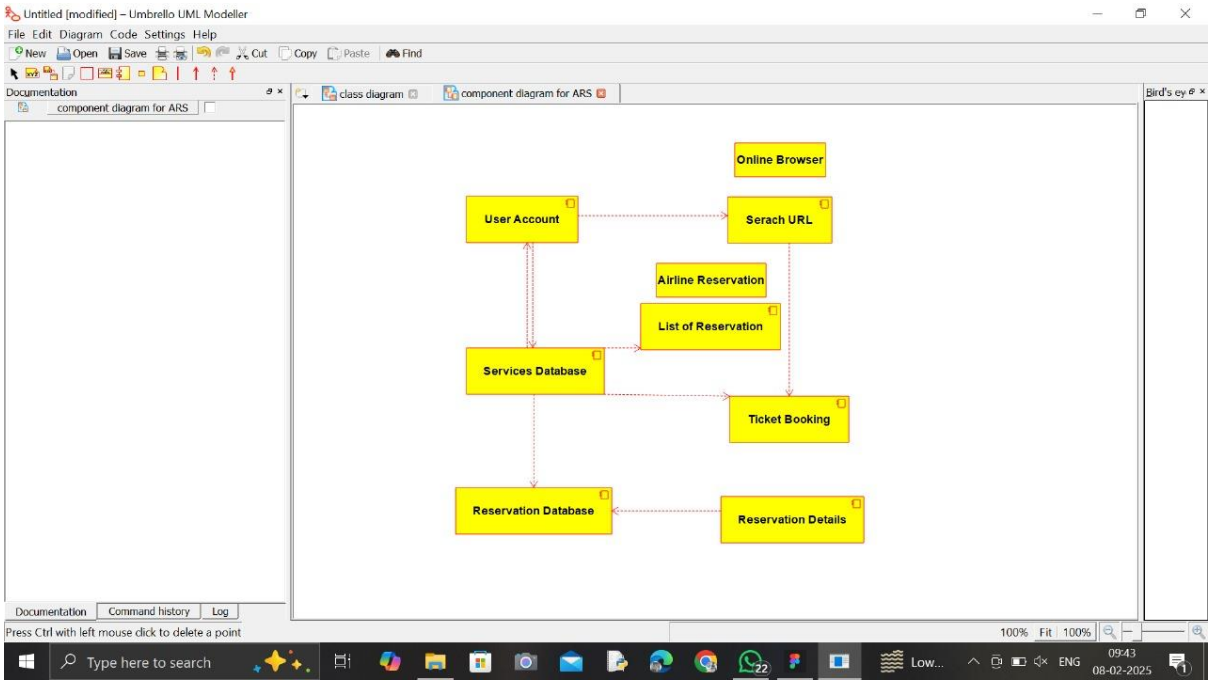
USE CASE DIAGRAM:



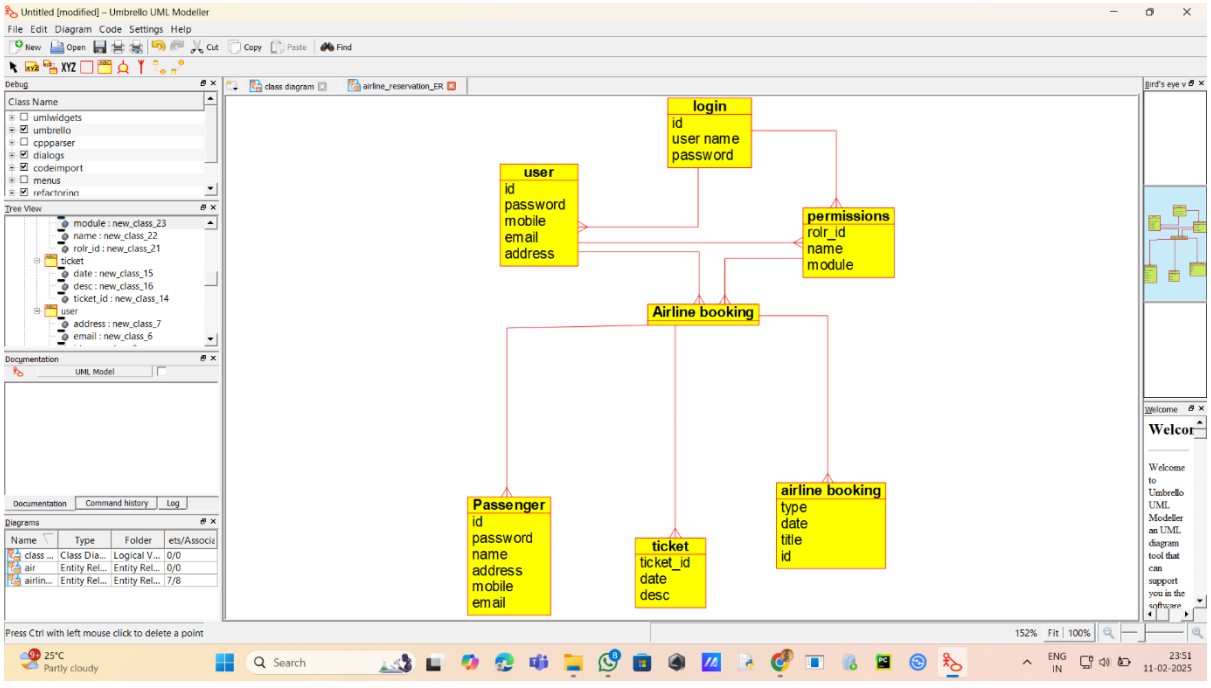
COMMUNICATION DIAGRAM:



COMPONENT DIAGRAM:



ER DIAGRAM



Result

The UML class diagram represents the core structure and interactions of the Online Airline Reservation System, covering all functionalities such as login, class management, waiting list management, and reservation handling.