

## ❏ Project Name: OlaLite – Console-Based Cab Booking System

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### 💡 Overview:

A feature-rich, menu-driven Java console app simulating an Ola/Uber-like experience. It allows users to register, log in, book rides, rate them, manage favourite locations, and view ride history.

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### 💻 Core Technologies Used:

- Java (OOP, Collections, Exception Handling)
  - Console UI with Unicode icons & formatting
  - Method-driven modular design
  - Realistic logic simulation (cab availability, fare calculation)
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### 📁 Main Modules:

1. **User Management:**
    - Sign up / Log in
    - Password and email validation
    - Role-based menu (Admin / User)
  2. **Cab Booking:**
    - Choose cab type: Micro, Mini, Prime
    - Fare calculation (per km basis)
    - Distance input
    - Confirmation screen with pickup/drop, cab, fare
  3. **Favourite Locations:**
    - Add/remove/view favourite places
    - Use saved favourites for pickup/drop
  4. **Cab Availability Simulation:**
    - Randomly show available cabs by type
    - Estimated Arrival Time (ETA) shown
    - Prevent booking if type is unavailable
  5. **Ride History & Rating:**
    - List all past rides with full details
    - Rate each completed ride (1.0–5.0)
    - Store feedback in ride record
  6. **Exception Handling:**
    - Custom exceptions for booking failures
    - Graceful input handling
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## OOP Design:

- User class with user info and favourite locations
  - Ride class with all ride data (id, fare, rating, etc.)
  - Booking Service class to handle booking logic
  - User Service for user authentication and management
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## Extra Features:

-  Smart favourite location reuse
  -  Ride rating after completion
  -  Real-time cab availability simulation
  -  ETA display based on cab type
  -  Clean, formatted console UI with icons
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### OLALite Folder Structure

OLALite/

```
|
|
|— models/
|   |— User.java
|   |— Ride.java
|
|— services/
|   |— UserService.java
|   |— BookingService.java
|
|— exceptions/
|   |— BookingException.java
|
|
|— Main.java
```