

## ❖ 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
```