Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	14 APRIL 2025
Team ID	SWTID1742640402
Project Name	MyRide
Maximum Marks	4 Marks

Solution Requirements:

Functional Requirements

1. **User Authentication**
   - Passengers and drivers can sign up/login via email/phone with OTP or JWT verification.
2. **Ride Booking**
   - Input pickup/destination locations with fare estimates.
   - Schedule rides for future times.
3. **Real-Time Tracking**
   - Live driver GPS updates on an interactive map (Google Maps API).
   - Estimated arrival time (ETA) display.
4. **Payments**
   - Multiple options: UPI, cards, wallets, or cash.
   - Digital receipts sent post-ride.
5. **Safety Features**
   - SOS button to share live location with emergency contacts.
   - Ride details (driver info, vehicle) accessible mid-trip.
6. **Admin Controls**
   - Manage users/drivers, resolve disputes, and view analytics.

Non-Functional Requirements

- **Performance**: <3s page load time, real-time tracking updates every 10s.
- **Security**: End-to-end encryption (HTTPS), JWT for API auth, and rate-limiting.
- **Scalability**: Supports 10K+ concurrent users with load-balanced Node.js servers.
- **Offline Support**: Cache ride details for poor-network areas (PWA).
- **Compliance**: GDPR-compliant data storage and privacy controls.