**DRIVER BUDDY: NEARBY DRIVER SUGGESTION APP**

**1. Introduction**

* Finding nearby drivers for personal cars can be challenging.
* **Driver Buddy** uses **GPS location tracking** to suggest available drivers.
* The system includes three modules: **User, Driver (Mobile App), and Admin (Web Application).**

**2. Objectives**

* Develop a real-time driver suggestion system using **GPS**.
* Provide a **User-friendly mobile app** for booking drivers.
* Enable **Drivers** to accept ride requests.
* Implement an **Admin web portal** for system management.
* Ensure accuracy, security, and reliability in driver-user matching.

**3. Technologies Used**

* **Programming Languages:** Kotlin, Java (Android), Swift (iOS), Python (Backend)
* **Frameworks & APIs:** Google Maps API, Firebase, REST APIs
* **Database:** Firebase Firestore, MySQL
* **Cloud Services:** AWS, Google Cloud

**4. Methodology**

1. **User Location Detection:** Fetch GPS location from the user.
2. **Driver Availability Check:** Identify nearby available drivers.
3. **Matching Algorithm:** Suggest the best driver based on distance and ratings.
4. **Ride Booking:** User sends request, driver accepts/rejects.
5. **Admin Dashboard:** Manage users, drivers, and bookings.
6. **Testing & Optimization:** Ensure seamless performance.

**5. Existing System**

**Disadvantages:**

* **Manual Booking Process:** Users rely on phone calls or third-party services.
* **Lack of Real-time Tracking:** No live updates on driver availability.
* **Limited Security & Verification:** No proper driver authentication mechanism.
* **Inefficient Matching:** Users often experience delays in finding drivers.

**6. Proposed System**

**Advantages:**

* **Automated Driver Matching:** Uses GPS-based real-time tracking.
* **Secure & Verified Drivers:** Ensures user safety through authentication.
* **Seamless Booking Process:** Users can book drivers instantly via the app.
* **Live Tracking & Notifications:** Provides real-time location updates.

**7. System Modules**

**User Module (Mobile App)**

* Register/Login
* View available drivers
* Book a ride
* Track driver in real-time
* Payment integration
* Ride history

**Driver Module (Mobile App)**

* Register/Login
* Update availability status
* Accept/Reject ride requests
* Navigation to user location
* Earnings summary

**Admin Module (Web Application)**

* Manage Users and Drivers
* Monitor ride requests and transactions
* Generate reports and analytics
* Handle user complaints and feedback

**8. Feature Scope**

* **Real-time GPS Tracking:** Ensures accurate driver-user matching.
* **Secure Login & Authentication:** Uses OTP and encrypted credentials.
* **Rating & Reviews:** Allows users to rate and review drivers.
* **Automated Notifications:** Instant updates for ride requests and confirmations.
* **Multi-Payment Options:** Supports cash, card, and digital wallets.
* **Admin Dashboard:** Comprehensive management and analytics tools.

**9. Conclusion**

* **Driver Buddy** bridges the gap between car owners and nearby drivers.
* Provides a **convenient, real-time, and secure** driver-hiring solution.
* Ensures **efficiency, transparency, and ease of use** for all stakeholders.

**Thank You!**