**Functionality requirements for the mobile app**

**1. User Registration and Authentication**

* Users (drivers and passengers) can register using email, phone number, or social media accounts.
* Secure login and authentication, including password recovery options.
* Two-factor authentication (2FA) for added security.

**2. Driver and Passenger Profiles**

* Drivers can create profiles with personal details, vehicle information, and required documents (insurance, MOT, background checks).
* Passengers can create profiles with personal details, preferred payment methods, and ride preferences.
* Profile management for both drivers and passengers, allowing updates to details and viewing ride history.

**3. Ride Booking Interface**

* Simple user interface for passengers to book rides by setting pick-up and drop-off locations.
* Option to schedule rides in advance or book instantly.
* Display estimated fare before confirming the ride.
* Ability to modify or cancel bookings.

**4. Real-Time Notifications**

* Push notifications and SMS alerts for ride confirmations, driver arrival, trip start, and trip completion.
* Notifications for surge pricing or any fare changes during the booking process.
* Alert passengers and drivers for updates like promotions or system maintenance.

**5. GPS and Real-Time Tracking**

* GPS-enabled map interface for passengers to track their ride in real-time.
* Real-time navigation for drivers to the passenger pick-up location and drop-off point.
* Estimated time of arrival (ETA) display for passengers.

**6. Fare Calculation and Pricing**

* Dynamic fare calculation based on distance, time, and real-time conditions (e.g., surge pricing during peak hours).
* Display of fare estimate before ride confirmation.
* Final fare adjustment for waiting times, traffic, or route deviations.

**7. Payment Processing**

* Integration with multiple payment gateways to support credit/debit cards, digital wallets, and cash payments.
* Option for passengers to save payment details securely for future use.
* Transaction history and digital receipts available for passengers after each trip.
* Support for refunds and promotional discounts.

**8. Ratings and Feedback System**

* After each ride, passengers and drivers can rate each other.
* A feedback system that allows users to provide comments or suggestions after the trip.
* Display of cumulative ratings on driver and passenger profiles to encourage high-quality service.

**9. In-App Communication**

* Secure in-app messaging and calling between drivers and passengers.
* Anonymized phone numbers to protect privacy.
* Notifications to facilitate easy communication (e.g., driver informing about delays or route changes).

**10. Customer Support and Dispute Resolution**

* In-app customer support system with live chat, email, or call options.
* Ability to report issues related to ride quality, lost items, or fare disputes.
* Easy access to FAQs and support documentation within the app.

**11. Driver Scheduling and Availability**

* Drivers can set their availability status (online/offline) to accept ride requests.
* Option for drivers to schedule their availability in advance.
* Notifications for drivers about ride requests and peak demand periods.

**12. Ride Sharing and Multi-Passenger Booking**

* Option for passengers to share rides with others going in the same direction to reduce costs.
* Ability to book rides for others (e.g., family members or friends) while tracking their ride status.

**13. Driver and Vehicle Management**

* Driver dashboard showing ride history, earnings, and performance ratings.
* Notification reminders for vehicle maintenance, insurance renewals, and MOT check deadlines.
* Option to upload and update vehicle documents through the app.

**14. Safety and Security Features**

* Emergency SOS button for passengers and drivers, with real-time alerts to local authorities or emergency contacts.
* Driver and passenger identity verification during registration to ensure a safe environment.
* Option for passengers to share trip details (driver info and route) with trusted contacts for safety.

**15. Localization and Multi-Language Support**

* Multi-language interface based on the user’s region and preferences.
* Localization of fare, regulations, and payment options based on the user's location.

**16. Surge Pricing Alerts**

* Inform passengers about surge pricing before confirming rides during high-demand periods.
* Option for passengers to opt-in for notifications when surge pricing ends.

**17. Loyalty and Referral Programs**

* In-app loyalty programs for passengers to earn points, discounts, or ride credits for frequent usage.
* Referral system to incentivize both drivers and passengers to invite new users, with rewards for successful referrals.

**18. Real-Time Data Analytics for Drivers**

* Dashboard with real-time ride demand insights (peak hours, high-demand areas) to help drivers maximize earnings.
* Earnings summary for daily, weekly, and monthly income tracking.

**19. Admin and Support Integration**

* Admin features to monitor real-time app activity and resolve disputes between drivers and passengers.
* Escalation to higher-level support for issues that require manual intervention (e.g., payment discrepancies).

**20. Legal and Regulatory Compliance**

* Compliance with UK transportation laws, GDPR, and data protection standards.
* Notifications to drivers regarding license, insurance, and other document expirations.

**21. Performance Monitoring**

* Continuous app performance monitoring to ensure responsiveness and reliability, especially during booking and payment processes.