

1. Key Testing Areas for the Scheduled Rides Feature

A. Functional Testing

1. Ride Scheduling Flow

- Ability to schedule a ride from “now” up to the maximum allowed lead time (7 days in this case).
- Validation of time inputs (e.g., preventing scheduling in the past or beyond 7 days).
- Selection of pickup and drop-off locations (including edge cases like unclear addresses or remote areas).

2. Notifications

- Users should receive notifications 30 minutes before and 5 minutes before the scheduled ride.
- Ensure notification triggers are correct even if the user changes time zones or if Daylight Savings Time transitions occur.
- Verify that notifications display the correct information (driver details, pickup location, etc.).

3. Driver Acceptance

- Drivers should see upcoming scheduled rides in their queue.
- Verify that the driver receives reminders/alerts closer to the pickup time.
- Validate that the driver’s view correctly shows scheduled rides in chronological order and handles time conflicts.

4. Cancellation & Penalty

- Confirm that users can freely cancel up to 30 minutes before the scheduled pickup time.
- Verify that a penalty fee applies (and is billed correctly) when cancelling less than 30 minutes beforehand.
- Edge cases:
 - Cancellation exactly at the 30-minute mark.
 - Multiple cancellations in a row.
 - Ensuring the penalty fee is waived if the driver is late or if there are system errors.

5. Payment & Billing

- Check how the fare estimate and final cost are presented for a scheduled ride.
- Verify that penalty fees are charged automatically if cancellation happens too late.
- Ensure different payment methods (credit card, wallet, etc.) work seamlessly.
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B. Usability & UX Testing

1. UI Clarity

- The scheduling interface should be user-friendly and intuitive (date/time picker, map pin, ride options, etc.).
- Clear labeling on penalty fees, timeline for scheduling, and driver acceptance status.

2. Error Handling & Messaging

- Display helpful error messages for invalid times or incomplete location data.
- Provide clear guidance when a ride cannot be scheduled due to driver unavailability or system downtime.

3. Accessibility Testing

- Make sure that any scheduling forms and notifications are accessible to users with visual, hearing, or motor impairments.
- Test with screen readers and assistive technologies.

C. Performance & Reliability

1. Load & Stress Testing

- Check how the system handles a high volume of scheduled rides and notifications simultaneously.
- Ensure the database and backend can manage the scheduling load efficiently.

2. Network Resilience

- Validate behavior under poor or unstable network conditions.
- Test for seamless user experience if a user schedules a ride offline, then reconnects.

D. Security & Compliance

1. Data Protection

- Confirm that ride details, user and driver personal data, and payment details remain secure.
- Validate encryption for personal and payment data.

2. Authentication & Authorization

- Only authenticated users can schedule rides.
- Drivers see only their assigned rides and relevant information.

3. Regulatory Compliance

- Check region-specific laws around advance scheduling, cancellation fees, and data storage.

2. Attractive (Value-Added) Features for Any Taxi/Ride-Sharing Application

While the “Scheduled Rides” feature is a substantial addition, there are several other features that enhance user experience, driver satisfaction, and business growth:

1. Multiple Destination Stops

- Allow riders to add more than one stop in a single trip (e.g., picking up friends or running errands).

2. Real-Time Driver/Vehicle Tracking

- Live map view showing the driver’s location in relation to the user’s pickup spot.
- Improves trust and user engagement.

3. Ride-Pooling and Cost-Splitting

- Allow users heading in the same direction to share rides, reducing costs and carbon footprint.
- Split fares automatically among co-passengers.

4. In-App Communication

- In-app chat or call features that protect user/driver privacy (mask phone numbers).
- Helpful for quick updates (e.g., “I’m at the lobby”).

5. Driver Ratings & Reviews

- Collect user feedback to maintain service quality.
- Show average driver rating and highlight top-rated drivers.

6. Emergency/SOS Button

- Quick access to emergency services or pre-stored contacts if users/driver feels unsafe.
- Optionally share ride progress and location with family/friends in real-time.

7. Loyalty & Rewards Programs

- Offer points, discounts, or coupons for frequent usage.
- Encourage repeat usage and provide promotional codes for referrals.

8. Personalized Ride Preferences

- Option for riders to specify preferences (e.g., “quiet ride,” “temperature settings,” “no chatting,” “music on/off”).

9. Eco-Friendly Ride Options

- Include an option to choose electric or hybrid vehicles.
- Display estimated carbon savings for eco-conscious users.

