DATABASE MANAGEMENT SYSTEM LAB

PROJECT REPORT

PROJECT NAME: RIDE SHARING PLATFORM

SUBMITTED TO:

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CLASS SECTION: A

1. Introduction

The "Ride Sharing Platform" is a web based project using PHP, SQL, Blade, Laravel, and XAMPP. It allows passengers to book rides and registered drivers to offer transport services through a single platform. The passenger selects a destination, books a ride, and is picked up by a driver who then drops them at the specified location. After the ride, the passenger pays the fare, which is divided between the driver and the platform administrator who manages and operates the web application. The system efficiently handles data related to users, rides, payments, and admin operations using a relational database, showcasing the practical use of database design, queries, and transaction management in a real-world scenario.

2. Objectives

- To design and implement a web-based ride booking system using PHP, SQL, Laravel, and XAMPP.
- To enable passengers to register, log in, and book rides with ease.
- To allow drivers to register, accept ride requests, and manage ride details.
- To store and manage user, driver, ride, and payment data efficiently using a relational database.
- To facilitate secure and accurate fare transactions between passenger, driver, and admin.

3. System Architecture

1) **User Module (Passenger):**
   Allows passengers to register, log in, book rides, view ride history, and make payments.
2) **Driver Module:**
   Enables drivers to register, accept or reject ride requests, view assigned rides, and track earnings.
3) **Admin Module:**
   Provides administrative control over the platform, including user and driver management, ride monitoring, and revenue tracking.
4) **Ride Management System:**
   Handles ride requests, status updates (pending, accepted, completed), ride scheduling, and route tracking.
5) **Payment System:**
   Manages fare calculation, fare distribution between driver and admin, and transaction history.
6) **Authentication and Authorization:**
   Ensures secure login and role-based access control for passengers, drivers, and admin.
7) **Database (SQL):**
   Stores and manages all data related to users, drivers, rides, payments, and admin activities.
8) **Web Interface (Laravel + PHP):**
   Provides user-friendly interfaces for interaction between front-end users and back-end services.
9) **Local Server Environment (XAMPP):**
   Hosts the application locally during development and testing phases.

4. Implementation

The Ride Sharing Platform is implemented using Laravel (PHP framework) for backend logic, SQL for database management, and XAMPP as the local server environment. The system begins with the registration and login functionalities for three roles: passenger, driver, and admin**.** Once authenticated, passengers can book a ride by selecting their pickup and destination points. This ride request is stored in the database and made visible to available drivers. Drivers can then accept or reject the ride request through their dashboard. Upon acceptance, the ride status is updated in the database, and the driver's details are shared with the passenger.

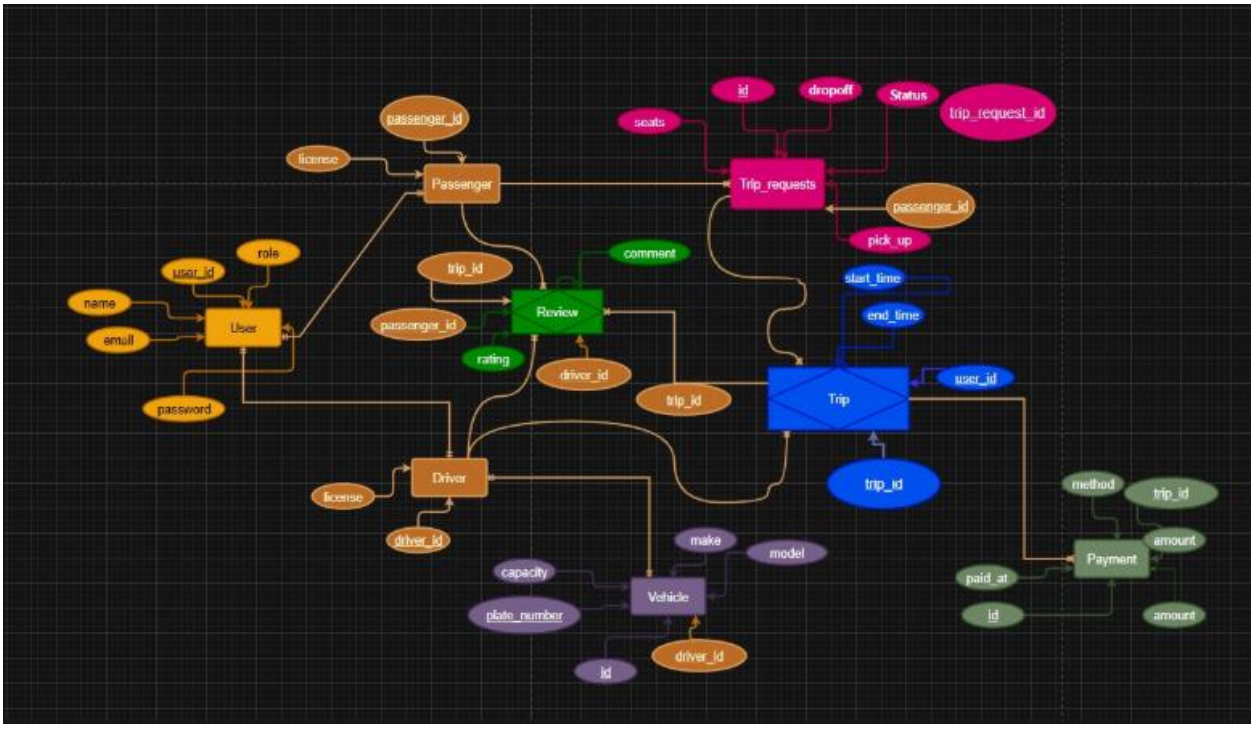
During the ride, the system updates the ride status in real-time (e.g., route, completed). After the ride is finished, the payment module calculates the fare based on distance or fixed rates and records the transaction. A percentage of the total fare is automatically allocated to the admin as commission. The admin panel allows management of all users, drivers, ride histories, earnings, and system settings.

Laravel is used to handle operations securely and efficiently. The user interface is developed with Blade templates in Laravel, ensuring responsiveness and ease of use. The entire application runs locally on XAMPP for development and testing purposes.

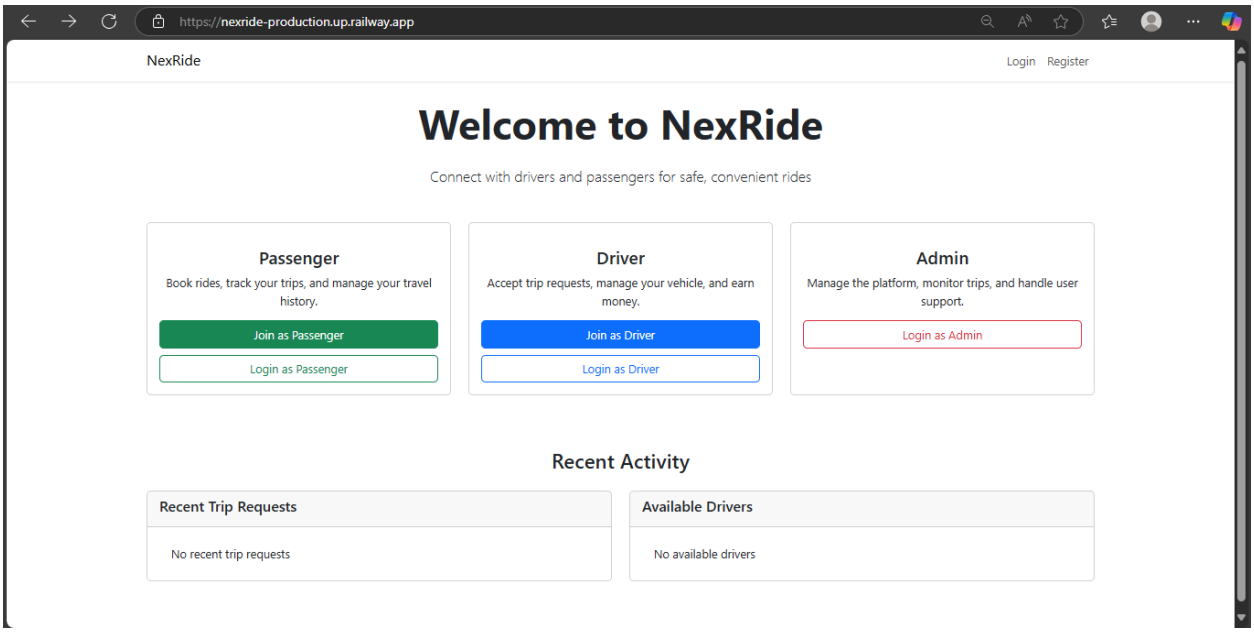
5. Features

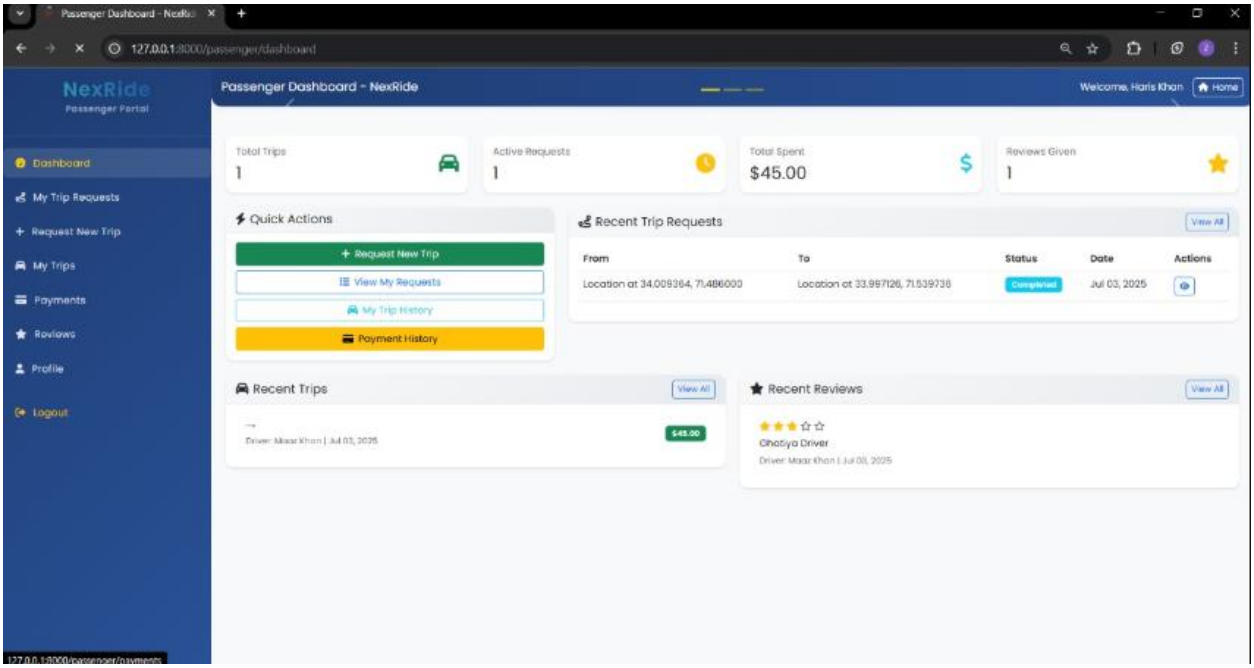
- **User Registration and Login:**
  Separate registration and secure login system for passengers, drivers, and admin.
- **Ride Booking:**
  Passengers can book rides by selecting pickup and drop-off locations.
- **Driver Ride Management:**
  Drivers can view, accept, or reject ride requests and update ride status (e.g., in progress, completed).
- **Fare Calculation and Payment System:**
  Automatic fare calculation after ride completion with digital payment record storage.
- **Admin Panel:**
  Admin can manage users, drivers, rides, and monitor system-wide earnings and performance.
- **Real-Time Status Updates:**
  Live updates for ride status and driver availability.
- **Ride History:**
  Passengers and drivers can view their past rides and related payment details.
- **Commission Management:**
  Admin receives a fixed percentage from each ride fare, automatically handled by the system.

6. Enhance ER Diagram:



7. Output:

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NexRide
Passenger Portal
Passenger Dashboard - NexRide
Welcome, Haris Khan
Home
Dashboard
My Trip Requests
Request New Trip
My Trips
Payments
Reviews
Profile
Logout
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Active Requests
1
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Quick Actions
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Payment History
Recent Trip Requests
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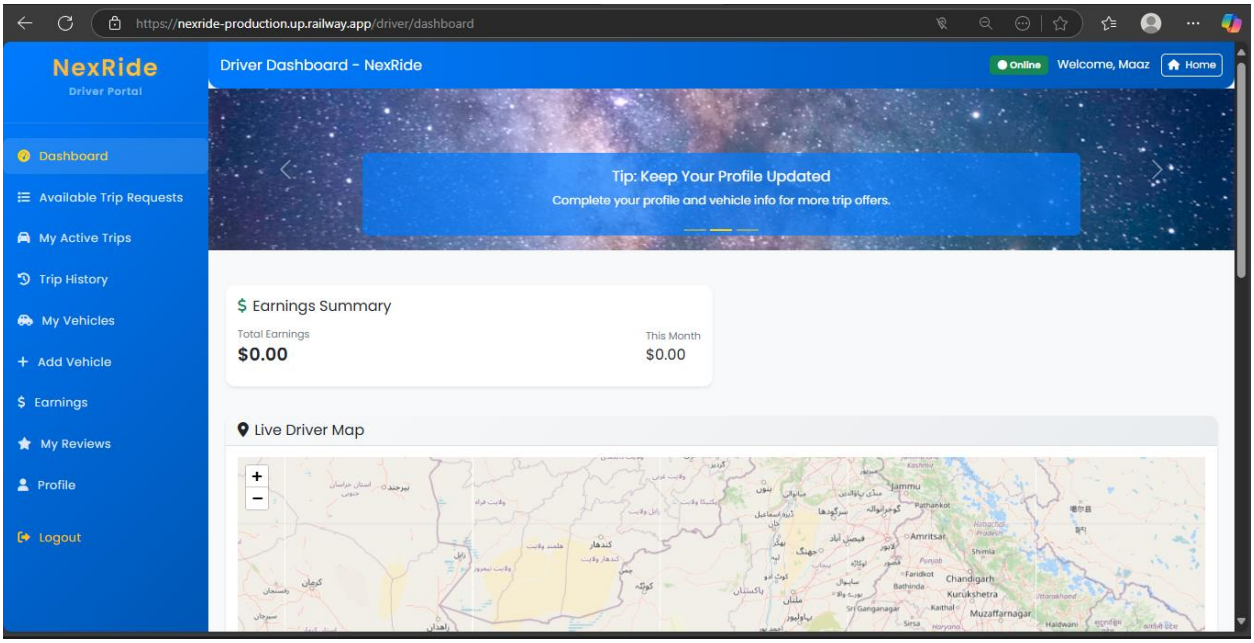
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NexRide
Driver Portal
Driver Dashboard - NexRide
Online
Welcome, Maaz
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Dashboard
Available Trip Requests
My Active Trips
Trip History
My Vehicles
Add Vehicle
Earnings
My Reviews
Profile
Logout
Tip: Keep Your Profile Updated
Complete your profile and vehicle info for more trip offers.
Earnings Summary
Total Earnings
$0.00
This Month
$0.00
Live Driver Map
Jammu
Amritsar
Chandigarh
Kurukshetra
Muzaffarnagar
Faridkot
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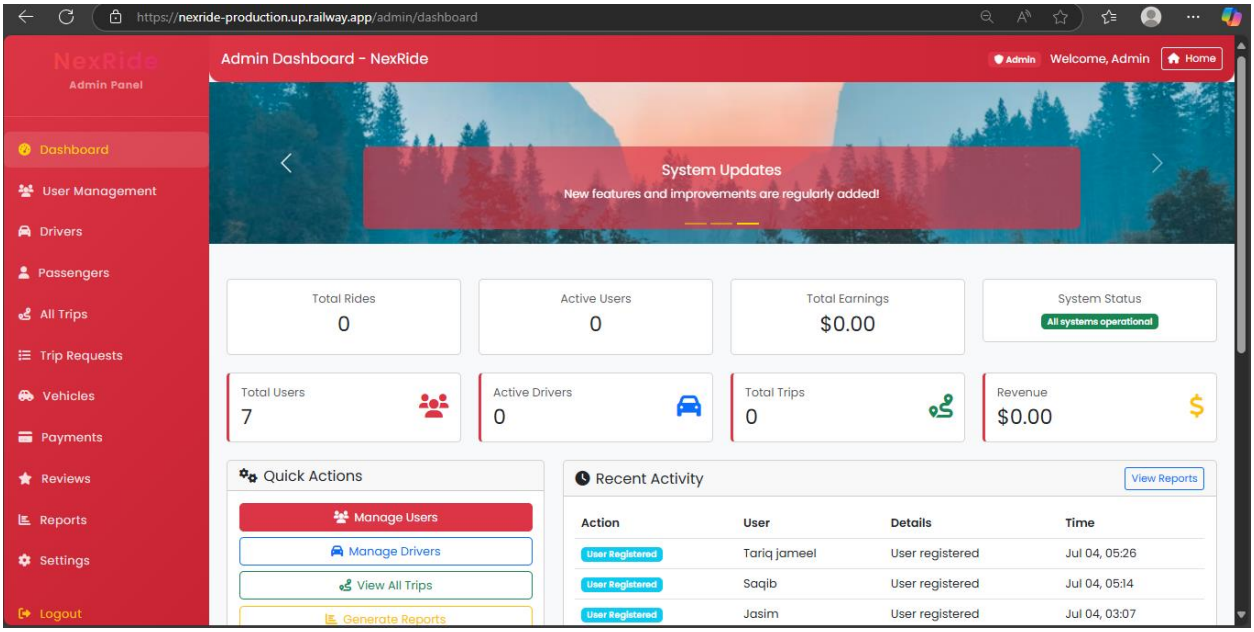
Sri Ganganagar
Sirsa
Haldwani



8. Conclusion

The Ride Sharing Platform is a functional web based system that demonstrates the practical use of database management in real-life applications. Developed using PHP, SQL, Laravel, and XAMPP, it allows passengers to book rides, drivers to manage trips, and admins to oversee operations and earnings. The project ensures secure data handling, smooth transactions, and user role management, providing a solid foundation for future improvements like real-time tracking and mobile integration.