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FACULTY OF TECHNOLOGY & ENGINEERING
DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY & RESEARCH (DEPSTAR)

Department of Computer Engineering
PROJECT – II[CE-268]
External Review - 1

Auto-Rickshaw Booking Website

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What is Apni Riksha ?

"Apni Riksha" is a mobile web-based auto rickshaw booking system built using the MERN stack. It connects students, local residents, and auto drivers, providing a simple and efficient way to book rides.

Why This Project?

- Many students and locals struggle to find rickshaws, especially during rush hours and emergencies.
- There is no dedicated platform for rickshaw bookings in smaller towns and college areas.
- Auto drivers lack a digital system to find rides efficiently and increase their income.

Our Goal and Vision

- Create an easy-to-use online booking platform for quick and hassle-free rides.
- Enable auto drivers to get more ride opportunities and manage earnings.
- Integrate live tracking & real-time updates for better user experience.

PROBLEM

First Problem

Difficulty in finding rickshaws, especially during peak hours.

Second Problem

No quick booking option for urgent or emergency situations.

Third Problem

Lack of a dedicated platform connecting passengers and auto drivers.

EXISTING SOLUTIONS & LIMITATIONS

-  Ride-Hailing Apps (e.g., Ola, Uber)
-  Manual Booking (calling local drivers)
-  On-Spot Hiring (finding rickshaws on the road)
-  Local Stand-Based Booking (rickshaw stands with offline queues)

Limitations of Existing Solutions

-  Not focused on auto-rickshaws in small towns & college areas.
-  High commission fees reduce driver earnings.
-  No real-time availability for urgent rides.
-  Lack of tech adoption among local rickshaw drivers.

FUTURE SCOPE & ENHANCEMENT'S

1

Online Payments:
Integration of UPI, Paytm,
and GPay for cashless
transactions.

2

Expansion: Scaling the
service to nearby cities
and towns.

3

AI-based Features: Smart
ride suggestions based
on demand patterns.

4

Multilingual Support:
Enhancing accessibility
for diverse users.

Functional Requirements

01. **User Management**
Register, log in, update profile, and reset passwords securely.

02. **Booking System**
Search, book, and cancel rickshaws with driver notifications.

03. **Ride Fare Estimation**
Calculate and display estimated ride fare based on distance.

04. **Admin Management**
Admins manage users, drivers, rides, fares, and ensure security and smooth operations.

05. **Ride Status Updates**
Track ride progress with status changes and notifications.

06. **Ride History**
View past rides, fares, and download invoices

Non-Functional Requirements

01. **Performance**
System should respond within 3 seconds and handle 1000+ users.

02. **Security**
Encrypt data, hash passwords, and enable secure authentication.

03. **Usability**
Simple, user-friendly UI with easy navigation.

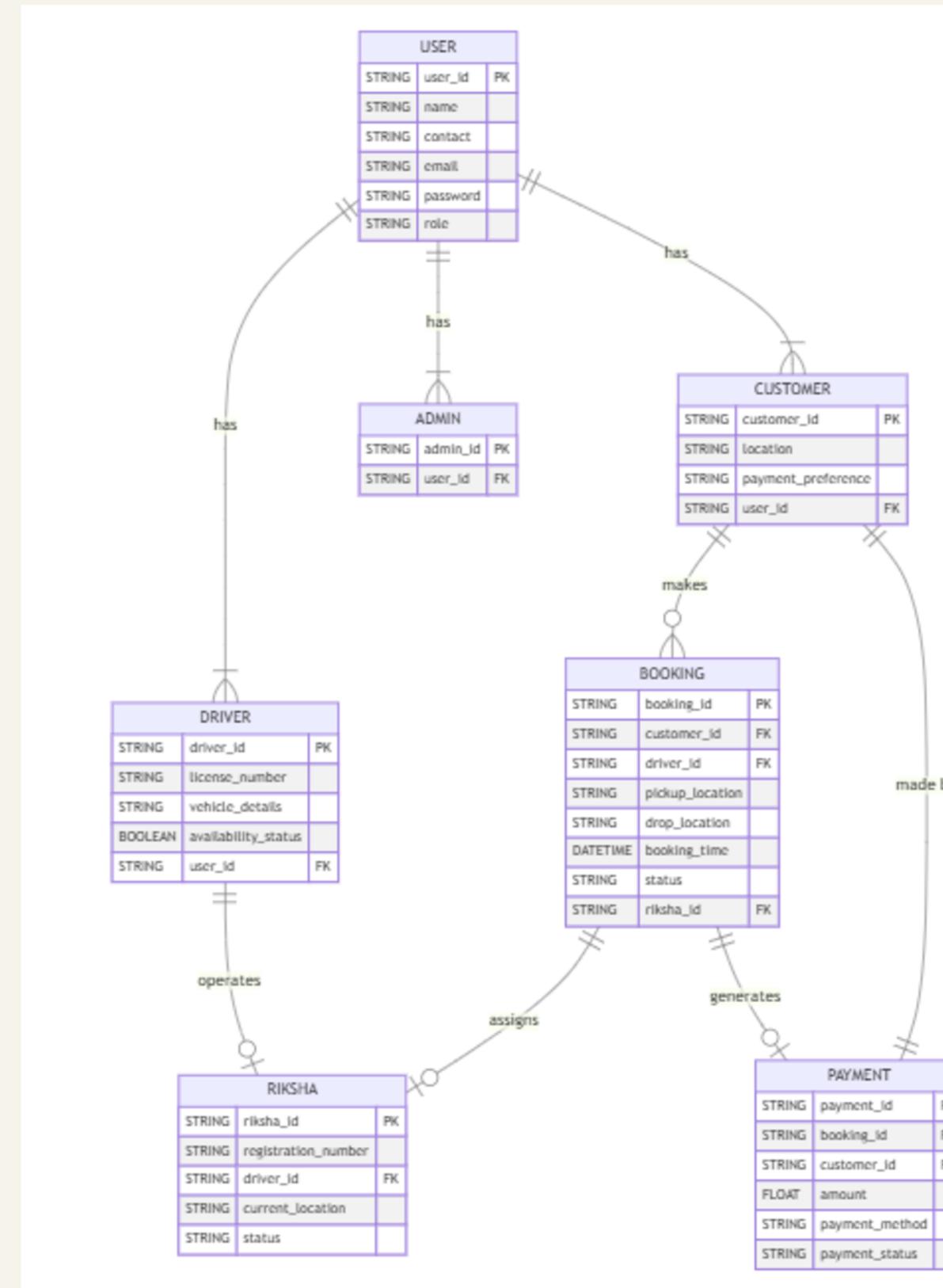
04. **Scalability**
Support increasing users and future feature upgrades

05. **Maintainability**
The system should be easy to update, debug, and enhance without major downtime.

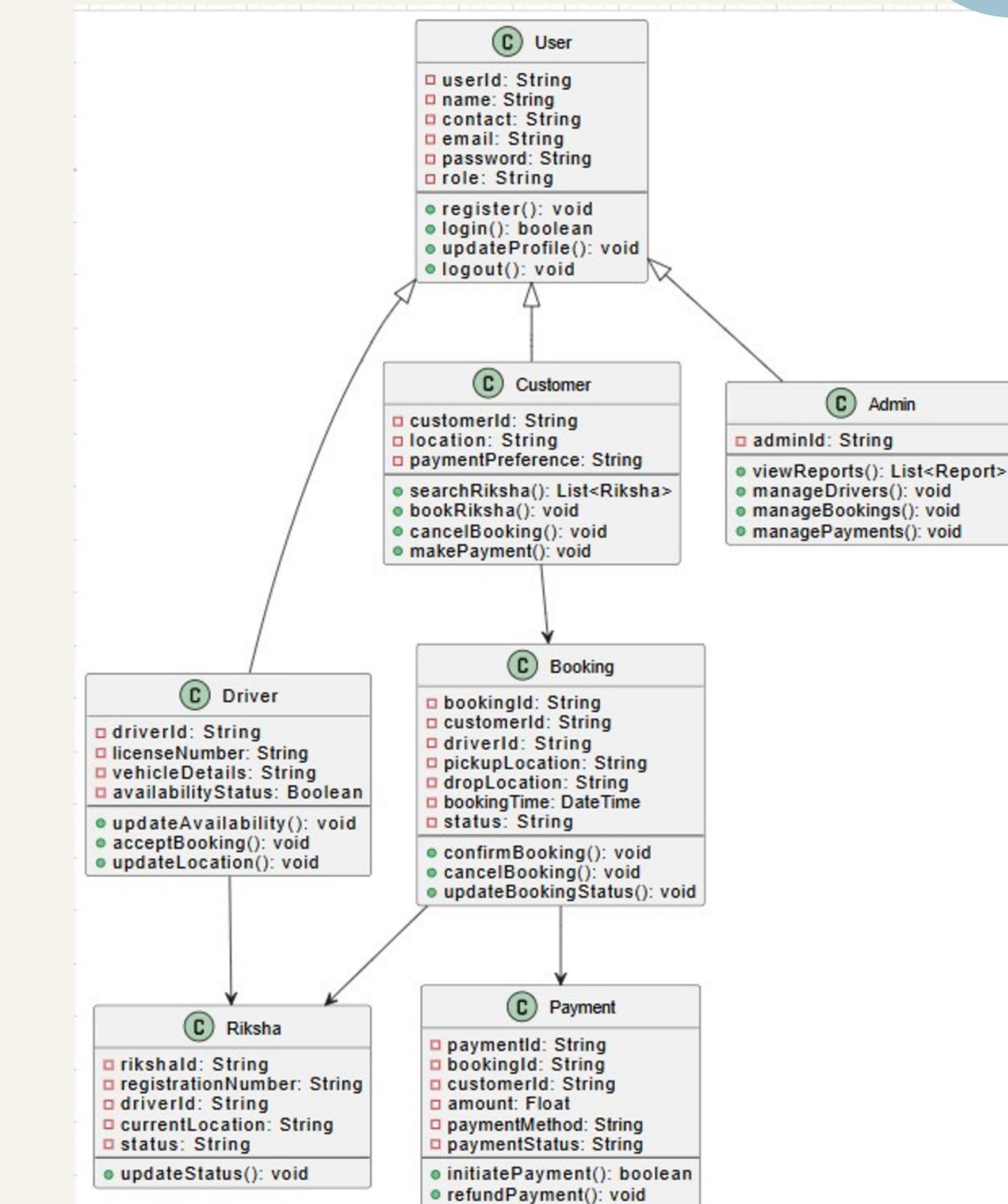
06. **Compatibility**
The website should work smoothly across different browsers and mobile devices

Project Diagrams

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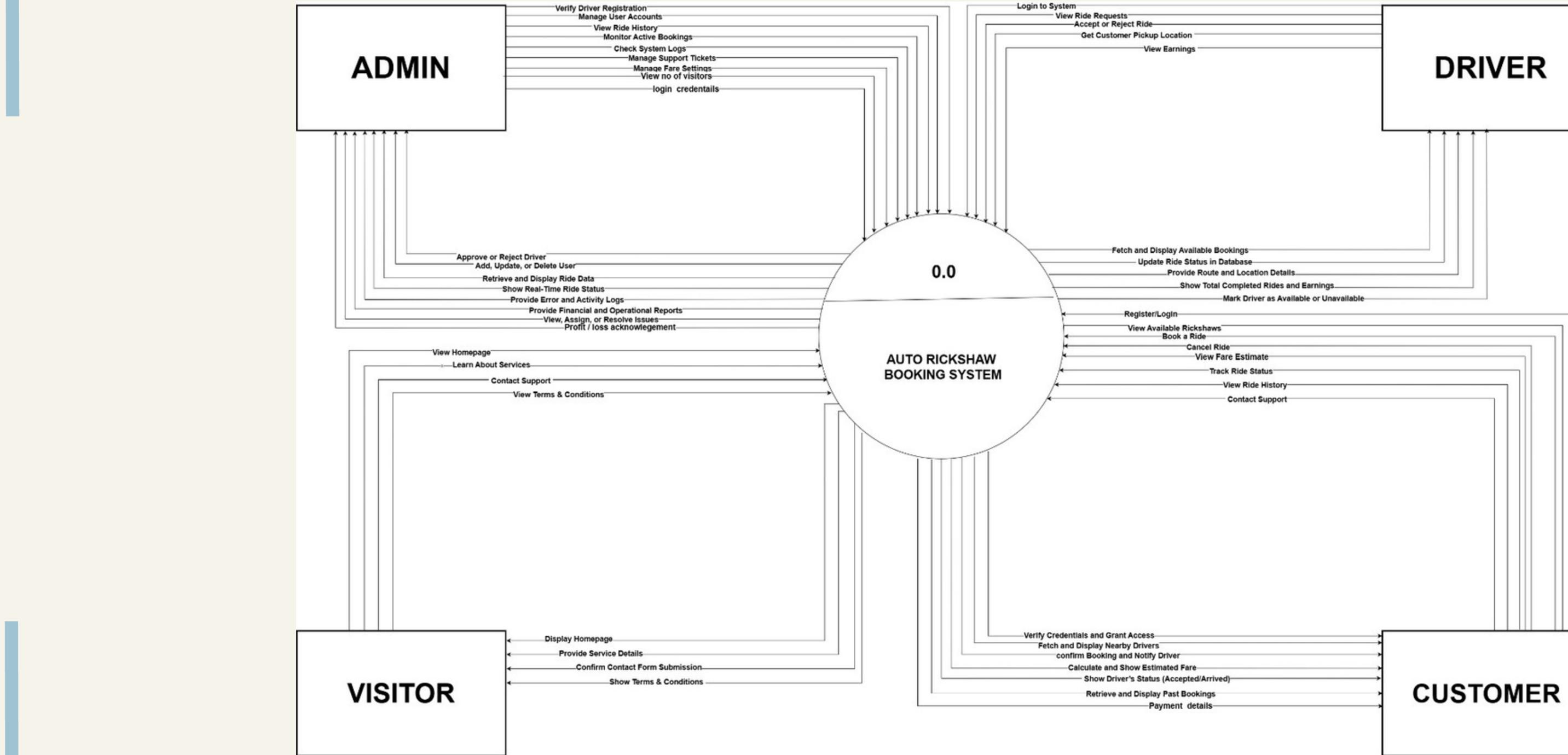


ER DIAGRAM



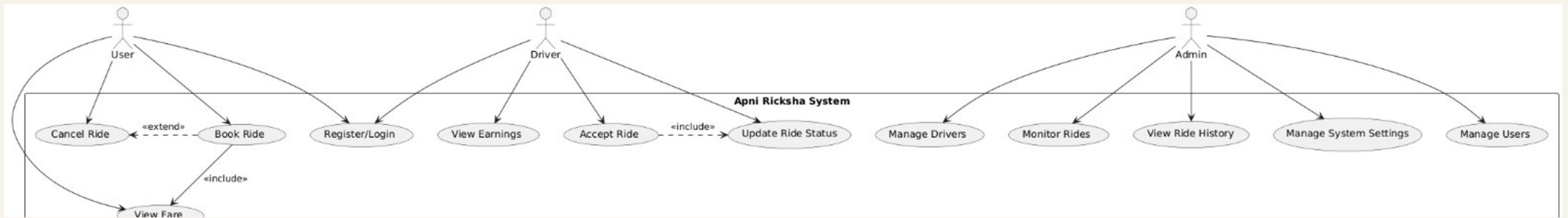
UML DIAGRAM

Project Diagrams



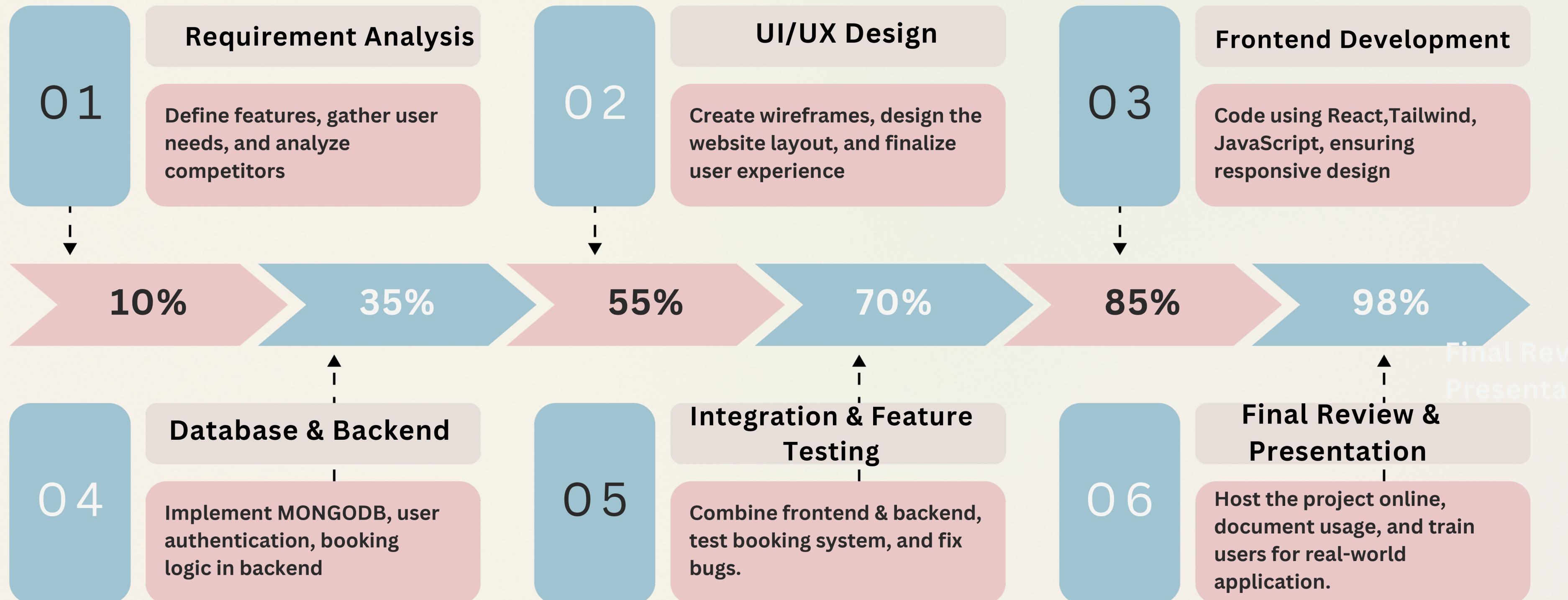
DATA FLOW DIAGRAM

Project Diagrams



USE CASE DIAGRAM

PROJECT TIMELINE



TECHNOLOGY STACK

FRONTEND

React js , tailwind , css

BACKEND

NODE.JS , EXPRESSJS.JS

DATABASE

MONGODB

API

POSTMAN, SOCKET IO, MAPS API

VERSION CONTROL

GIT, GITHUB

RESULT & IMPACT

1.

Improved Accessibility:
Easy rickshaw booking for
students and locals.

2.

Faster Response Time:
Reduced waiting time,
especially in emergencies.

3.

Driver Benefits: Increased
income opportunities and
flexible working hours.

4.

Tech- Integration: Real-time
tracking and secure payments
enhance user experience.

CONCLUSION

Apni Rikshaw aims to modernize traditional rickshaw services by offering a seamless, mobile-based booking platform. By integrating technology with the everyday transportation needs of rural and urban users, the system ensures convenient, accessible, and affordable rides. This initiative not only enhances passenger convenience but also provides better income opportunities for rickshaw drivers, fostering a more connected and efficient transport ecosystem.



THANK YOU

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