

Delivery Management case Study

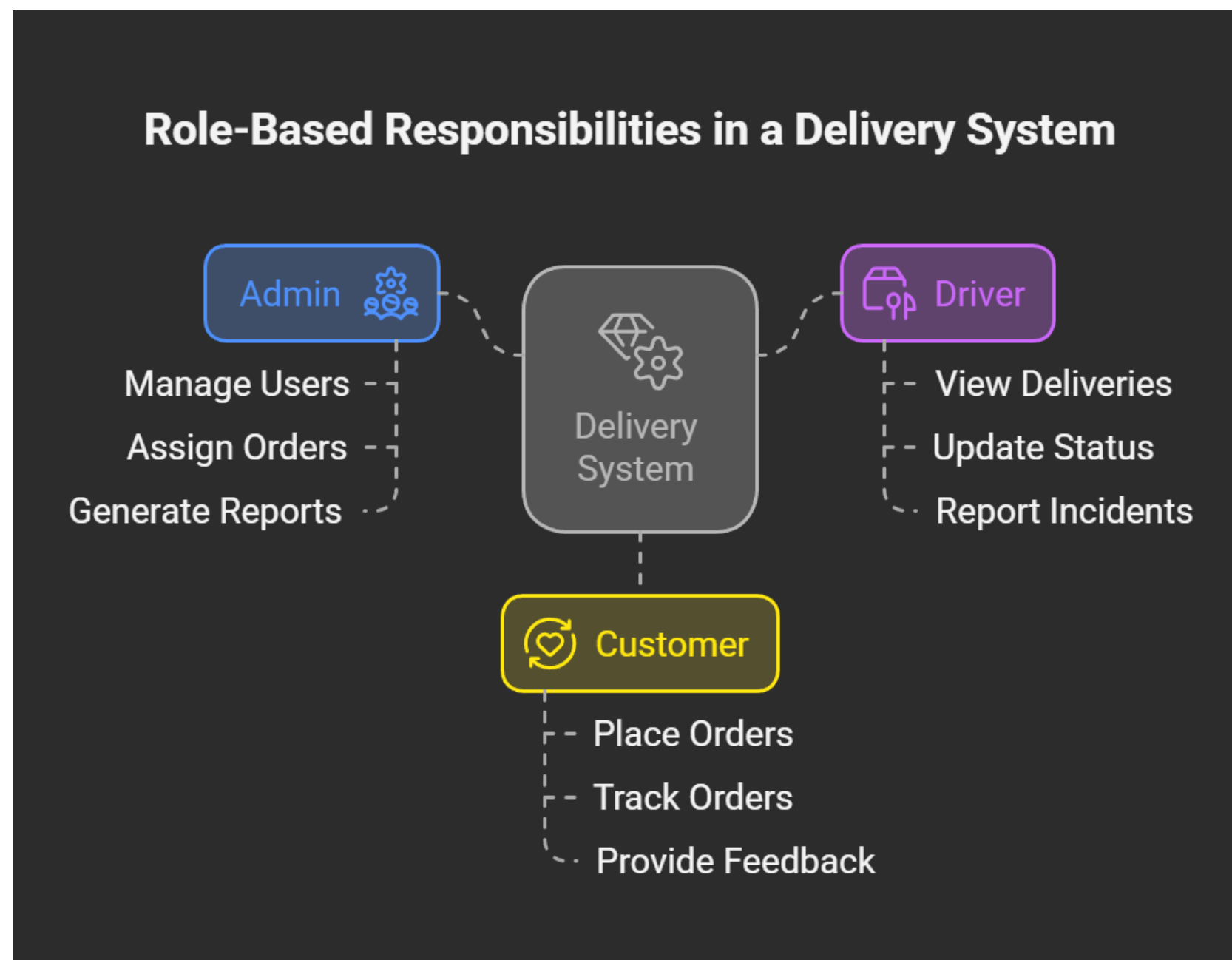
The document provides an in-depth overview of a Delivery Management System, detailing its structure, workflow, and functionality. It includes flowcharts to illustrate the step-by-step process of order placement, shipment, and delivery. Additionally, Entity-Relationship (ER) diagrams define the database schema, showing relationships between key entities like users, orders, and delivery agents. Use case diagrams are also incorporated to depict user interactions, outlining different roles such as customers, administrators, and delivery personnel. This document serves as a comprehensive guide for understanding the system's architecture and operations

Use Case Diagram

The use case diagram outlines the interactions between users and the system. Below are the primary actors and their respective use cases:

- Actors:
 - Admin
 - Driver
 - Customer
- Use Cases:
 - User Module:
 - Sign up / Log in
 - Place a delivery request
 - View order status
 - Track delivery
 - Cancel order (if permitted)
 - Give feedback on delivery
 - Admin Actions:
 - Manage customers & drivers
 - Assign orders to drivers
 - View and generate reports (delivery performance, customer feedback)
 - Manage incidents reported by drivers
 - Driver Actions:
 - Log in to dashboard
 - View assigned deliveries
 - Update delivery status (Out for Delivery, Delivered)
 - Report incidents (if any)
 - View delivery history

Delivery management Use Cases



1)Admin

- Manage Users (Add/Edit/Delete Customers & Drivers)
- Assign Orders to Drivers
- Generate Reports

2)Driver

- View Assigned Deliveries
- Update Delivery Status
- Report Incidents

3)Customer

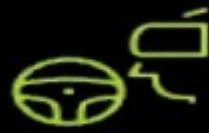
- Place Orders
- Track Orders
- Provide Feedback

User Roles



Admin

A role responsible for managing the system.



Driver

A role that operates ZXS vehicles for transport.



Customer

A role that purchases or uses services.

Admin Actions Sequence



Manage Customers & Drivers

Admin oversees customer and driver profiles



Assign Orders to Drivers

Admin allocates delivery tasks to drivers



View and Generate Reports

Admin analyzes delivery and feedback data



Manage Incidents Reported by Drivers

Admin addresses and resolves driver-reported issues

Driver Dashboard Interaction Sequence



Log in to dashboard

Driver accesses the dashboard to begin



View assigned deliveries

Driver checks current delivery tasks



Update delivery status

Driver updates the status of deliveries



Report incidents

Driver reports any issues encountered



View delivery history

Driver reviews past delivery records

Customer Interaction Sequence



Sign up / Log in

Customer initiates access to the system



Place a delivery request

Customer requests delivery service



View order status

Customer checks current order status



Track delivery

Customer monitors delivery progress



Cancel order (if permitted)

Customer cancels order if allowed



Give feedback on delivery

Customer provides feedback on delivery

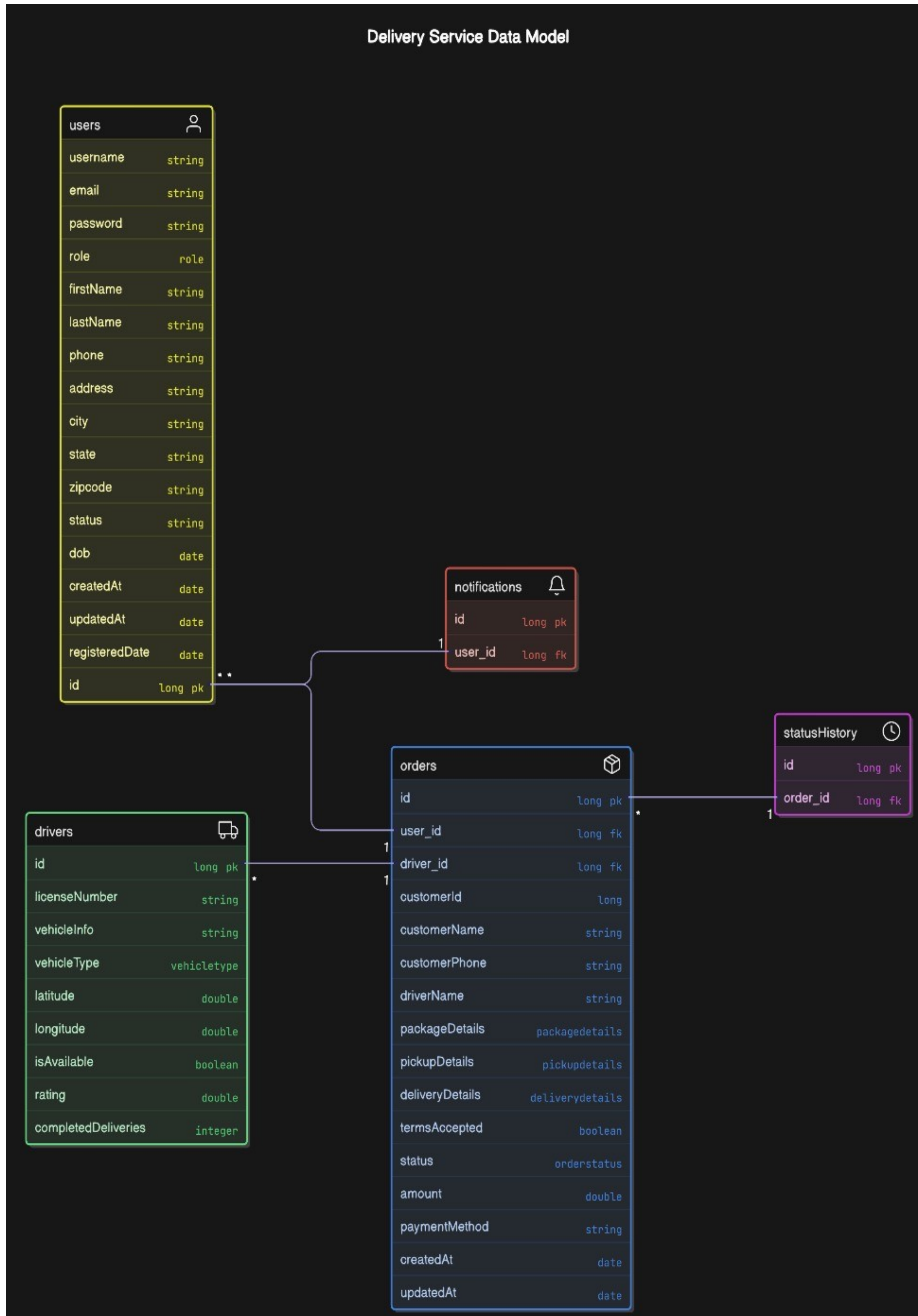
Flow Diagram

The flow diagram illustrates the user journey through the application, detailing the steps from the home page to various functionalities.



Entity-Relationship (ER) Diagram

The ER diagram represents the data model of the delivery application, showcasing the relationships between different entities.



Conclusion :

The Delivery Management System is a well-structured solution designed to streamline logistics and enhance operational efficiency. Through the use of flowcharts, ER diagrams, and use case diagrams, the document provides a clear visualization of the system's functionality, database design, and user interactions. By integrating these elements, the system ensures smooth order processing, real-time tracking, and effective coordination between customers, delivery agents, and administrators. This structured approach enhances reliability, scalability, and overall performance, making it a robust solution for modern delivery operations.