CAB MANAGEMENT SYSTEM

A MINI-PROJECT REPORT

Submitted by

ABIRAMI P L 220701007

AKIELESH B 220701021

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BONAFIED CERTIFICATE

Certificate that this mini project “CAB MANAGEMENT SYSTEM” is the bonafied work of “ABIRAMI P L (2116220701007)”, “AKIELESH B(2116220701021)” who carried out the project work under my supervision.

SIGNATURE

Dr. N DURAIMURUGAN,

Associate Professor,

Computer Science & Engineering

Rajalakshmi Engineering College

Thandalam, Chennai -602105

Submitted for the End semester practical examination to be held on _____

INTERNAL EXAMINER EXTERNAL EXAMINER

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ABIRAMI P L(220701007)

AKIELESH B(220701021)

ABSTRACT

The CAB Management System is a web-based application designed to simplify and automate the operations of booking and managing transportation services. It offers a streamlined solution for users, drivers, and administrators, ensuring effective coordination and efficient resource management. The system incorporates features tailored to the specific needs of each user role, promoting seamless interaction and reliability.

Users can log in to book transportation services by providing essential trip details, such as the pickup and drop-off locations. The system automatically processes these requests and matches them with available service providers to ensure prompt service. Drivers, on the other hand, can access their dedicated portal to view and accept booking requests. This enables real-time tracking and optimal resource allocation, reducing idle time and improving user satisfaction.

For administrators, the system provides comprehensive tools to manage the platform effectively. These tools allow them to oversee users and drivers, manage available transportation resources, track booking statistics, and monitor the overall performance of the system. By incorporating real-time data management and activity monitoring, the platform enhances operational efficiency and decision-making.

The CAB Management System is designed with a focus on user experience, security, and scalability. By utilizing a range of web technologies, the system ensures dynamic functionality, robust data handling, and responsiveness across devices. This project demonstrates the potential of technology-driven solutions in addressing the challenges of modern transportation management, providing a reliable and efficient platform for all stakeholders.

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CHAPTER 1

1.1 INTRODUCTION

The CAB Management System is a web-based application designed to facilitate seamless and efficient transportation service management. With the increasing reliance on digital platforms for daily operations, this system aims to provide a user-friendly interface for booking, managing, and monitoring cab services. The platform bridges the gap between users, drivers, and administrators by offering distinct login portals and tailored functionalities for each role.

This system eliminates the traditional challenges of manual cab booking processes, such as mismanagement, delays, and lack of transparency. It integrates modern web technologies to ensure real-time data processing, secure transactions, and scalability. The CAB Management System not only simplifies the booking process for users but also enhances operational efficiency for drivers and administrators, making it a comprehensive solution for modern transportation needs.

1.2 SCOPE OF THE WORK

The CAB Management System aims to provide an integrated platform for efficient transportation service management, focusing on the needs of three primary stakeholders: users, drivers, and administrators. The system allows users to book cabs easily through a web interface, matching them with available drivers in real-time to ensure quick and efficient service. Drivers can log in to view and accept booking requests, optimizing their time and reducing idle periods. For administrators, the system offers comprehensive tools to manage resources, such as adding or removing drivers and cabs, and monitoring bookings and user data. The system ensures efficient resource allocation, real-time tracking of bookings, and smooth interaction between all parties. Additionally, the platform is designed to be scalable, allowing future integration of features like payment gateways and ride tracking, making it a flexible solution for modern transportation needs

1.3 PROBLEM STATEMENT

The traditional cab booking and management process often lacks efficiency, transparency, and accessibility. Users face delays in finding cabs, while drivers struggle with irregular trip assignments and idle time. Administrators find it challenging to manage resources and monitor activities effectively without a centralized system.

To address these issues, a digital solution is needed to streamline booking, improve resource allocation, and enhance communication between users, drivers, and administrators. The CAB Management System aims to resolve these challenges by providing an automated, user-friendly platform that ensures efficient and reliable transportation services.

1.3 AIM AND OBJECTIVES OF THE PROJECT

Aim:

The primary aim of the CAB Management System is to create a user-friendly, efficient, and automated web-based platform for managing cab booking and transportation services. The system seeks to enhance the experience for users, drivers, and administrators by addressing traditional inefficiencies and ensuring seamless coordination among stakeholders.

Objectives:

1. Simplify Cab Booking: Provide users with an easy-to-use interface to book cabs quickly and conveniently.
2. Improve Driver Efficiency: Enable drivers to manage and accept bookings dynamically, reducing idle time and ensuring better utilization of resources.
3. Streamline Administration: Equip administrators with tools to manage drivers, cabs, and bookings effectively, including adding/removing resources and monitoring system activity.
4. Enhance Transparency: Ensure real-time communication and updates between users, drivers, and administrators for a smooth operational flow.

By achieving these objectives, the CAB Management System aims to provide a comprehensive solution to modern transportation challenges.

CHAPTER 2

1.2 SOFTWARE SPECIFICATIONS

Frontend

1. HTML: Structuring the web pages and content.
2. CSS: Styling and enhancing the visual design of the user interface.
3. Bootstrap: Providing responsive and mobile-friendly design components.
4. JavaScript: Adding interactivity and client-side scripting.
5. Angular: Building dynamic and single-page applications with efficient data binding.

Backend

1. PHP: Server-side scripting for handling logic and communication with the database.
2. JSON: Facilitating lightweight data interchange between client and server.

Database

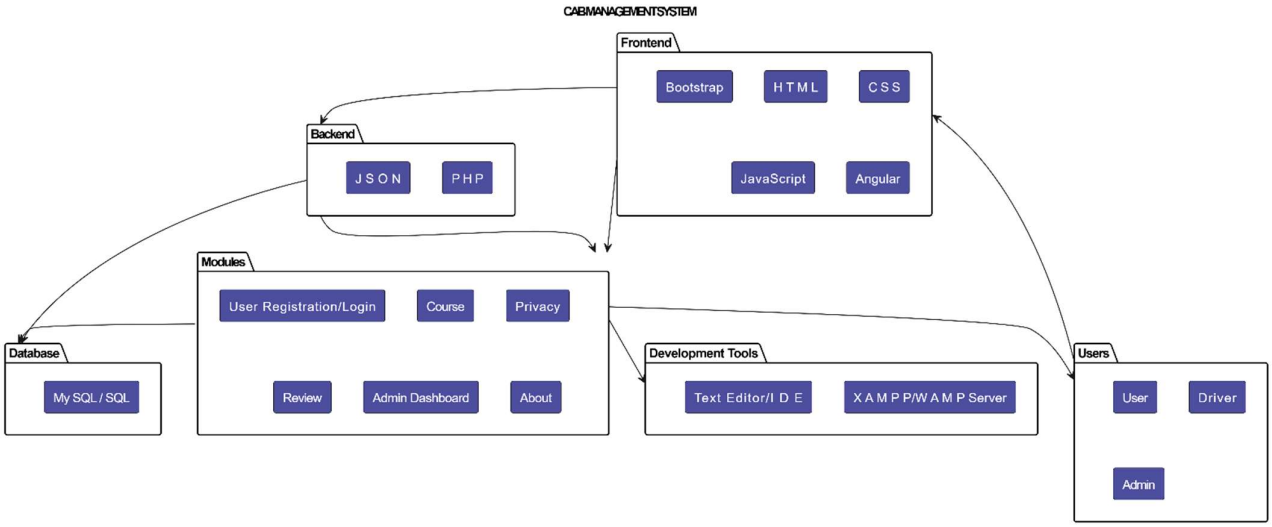
1. MySQL/SQL: Managing and storing data, including user details, bookings, driver information, and cab availability.

Development Tools

1. Text Editor/IDE: Visual Studio Code, Sublime Text, or any preferred editor for writing and managing code.
2. XAMPP/WAMP Server: Local server for testing the application during development.

CHAPTER 3

ARCHITECTURE DIAGRAM



The architecture diagram illustrates the interaction between key components of the Cab Management Application, including the user interface, backend services, driver and passenger modules, database, and third-party APIs. It highlights the seamless flow of data for booking, tracking, payment processing, and system management.

CHAPTER 4

MODULE DESCRIPTION

4.1. User Registration and Login Module:

The User Registration and Login Module allows users to create accounts and securely access the CAB Management System. New users can register with their details, while registered users log in using validated credentials. A password reset option ensures continued access. With session management and automatic logout for security, this module provides a reliable and user-friendly entry point to the platform.

4.2. Course Module:

The Course Module in the CAB Management System serves as an educational resource to help users, drivers, and administrators understand the system's features and functionalities. It provides tutorials, guidelines, and FAQs for effective use of the platform. This module ensures that all stakeholders can easily navigate and utilize the system, enhancing overall user experience and efficiency.

4.3. About Module:

The About Module provides an overview of the CAB Management System, including its purpose, features, and the problems it aims to solve. It introduces users to the system's functionality and highlights its key benefits, such as efficiency, user-friendliness, and scalability. This module helps users understand the platform's objectives and how it simplifies transportation management for all stakeholders.

4.4. Privacy Module:

The Privacy Module safeguards user data in the CAB Management System by enforcing secure storage, encryption, and restricted access. It outlines policies for handling personal information and ensures compliance with data protection standards, building user trust and ensuring confidentiality.

4.5. Review Module:

The Review Module enables users to rate and provide feedback on their cab experience. This helps gather insights to improve service quality and allows drivers and administrators to address user concerns effectively.

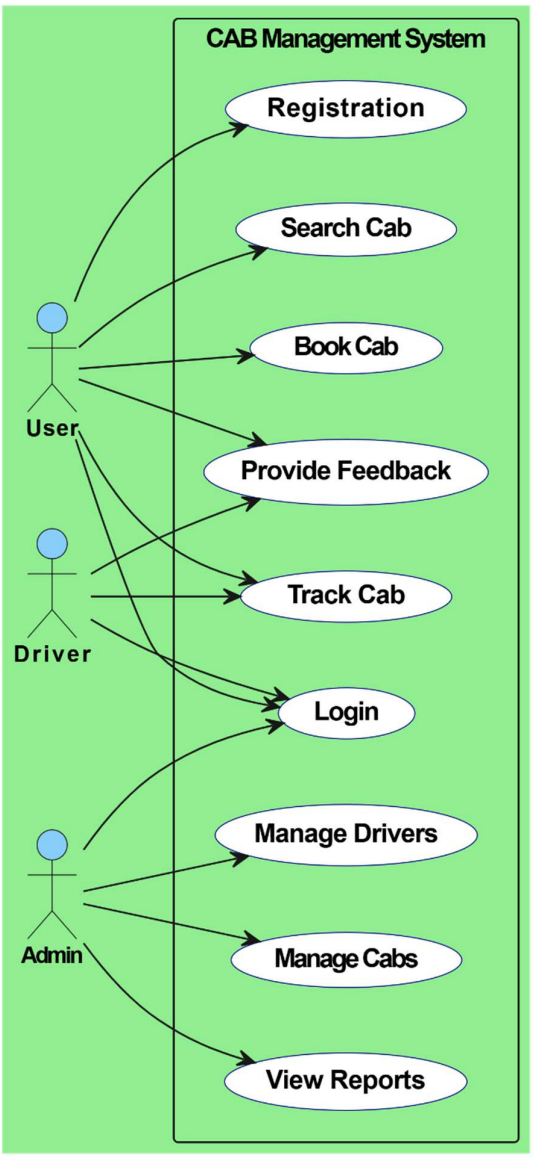
4.6. Admin Dashboard Module:

The Admin Dashboard Module allows administrators to manage drivers, cabs, and bookings. It provides real-time insights into system activity and performance, helping ensure smooth operations and efficient resource management.

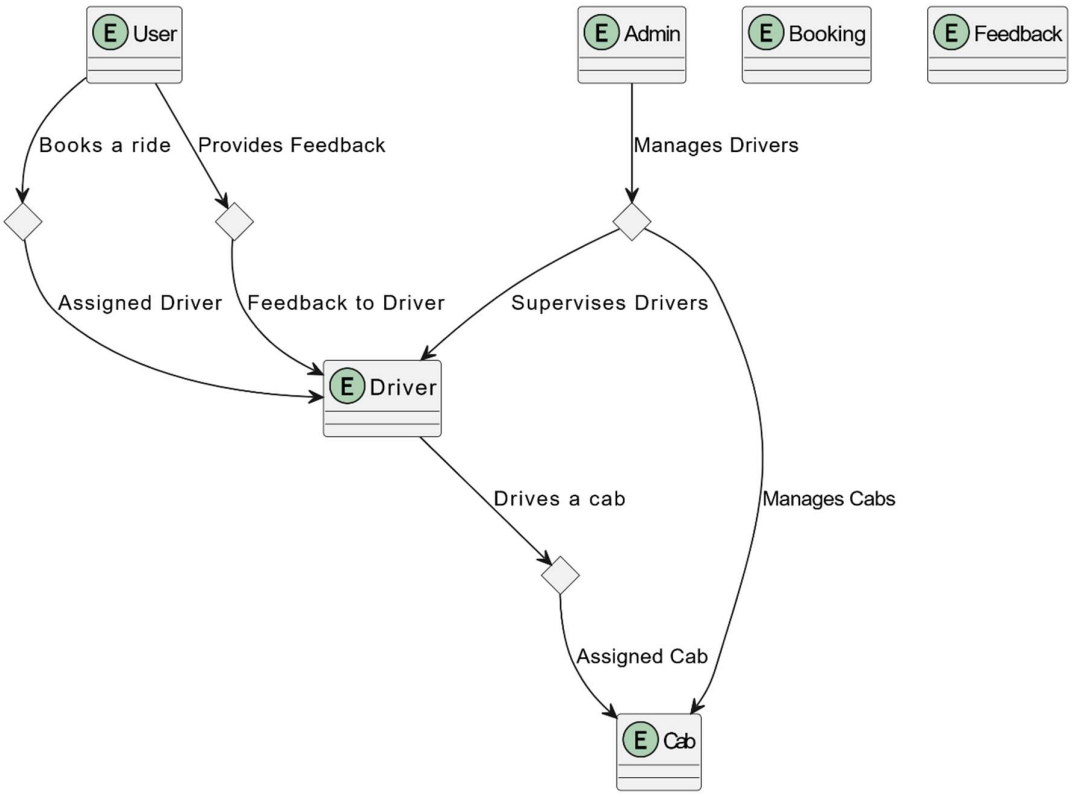
CHAPTER 5

SYSTEM DESIGN

5.1 USE CASE DIAGRAM

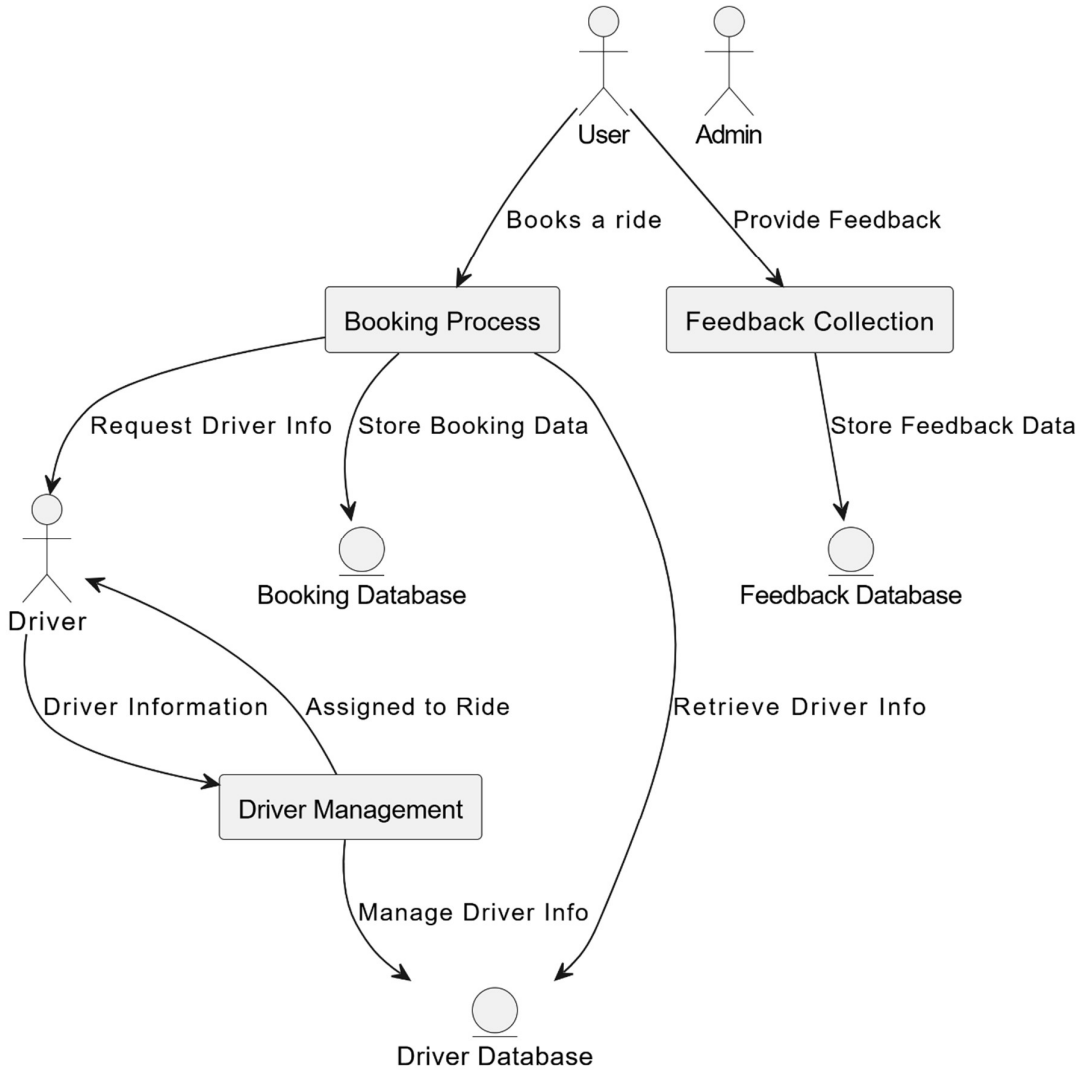


5.2 ER DIAGRAM



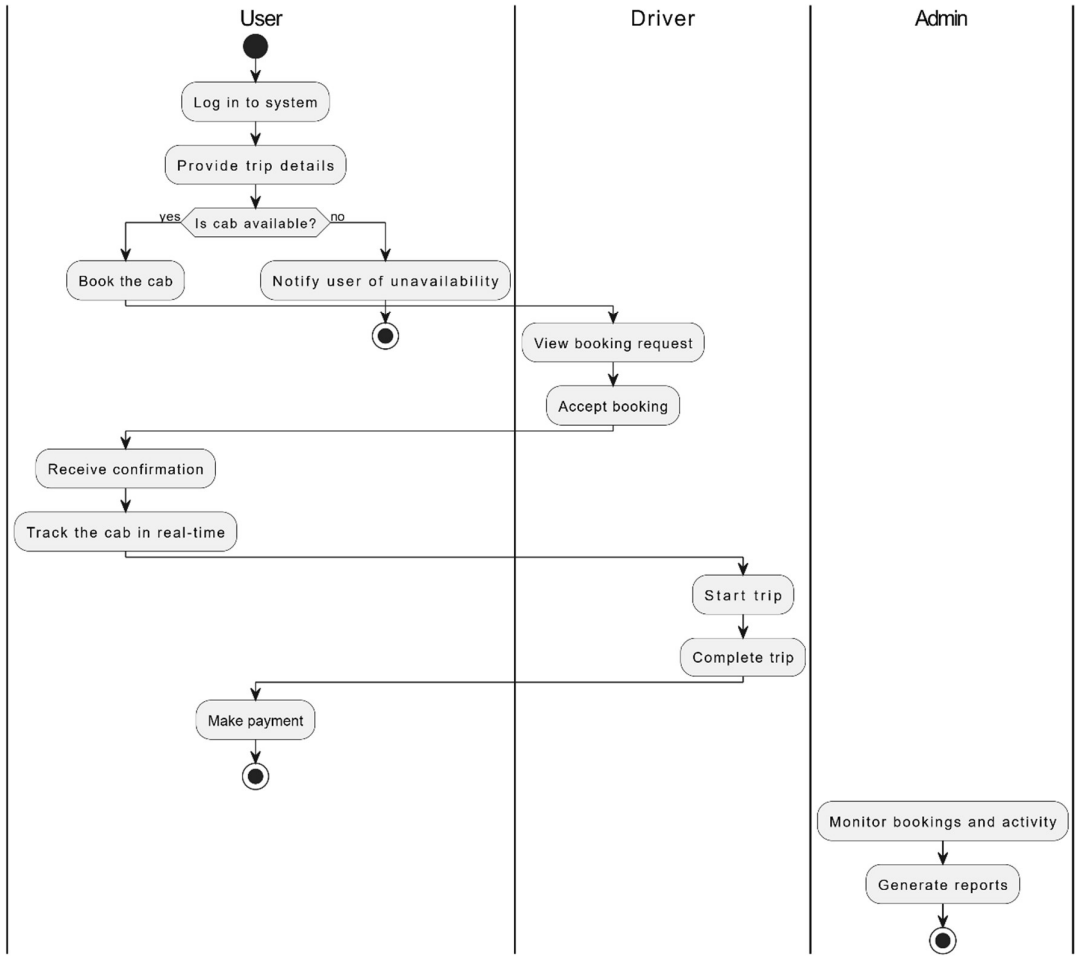
The ER diagram depicts the relationships between key entities in the Cab Management Application, such as Users, Drivers, Rides, Vehicles, and Payments, showcasing how data is interconnected within the system.

5.3 DFD DIAGRAM



The DFD diagram represents the flow of data within the Cab Management Application, detailing processes like ride booking, user authentication, payment processing, and real-time tracking, along with interactions between external entities and the system's data stores.

5.4 ACTIVITY DIAGRAM



The activity diagram illustrates the sequential workflow of the Cab Management Application, highlighting key processes such as user login, ride request, driver assignment, ride tracking, payment completion, and ride feedback.

CHAPTER 6

SCREEN SHOTS

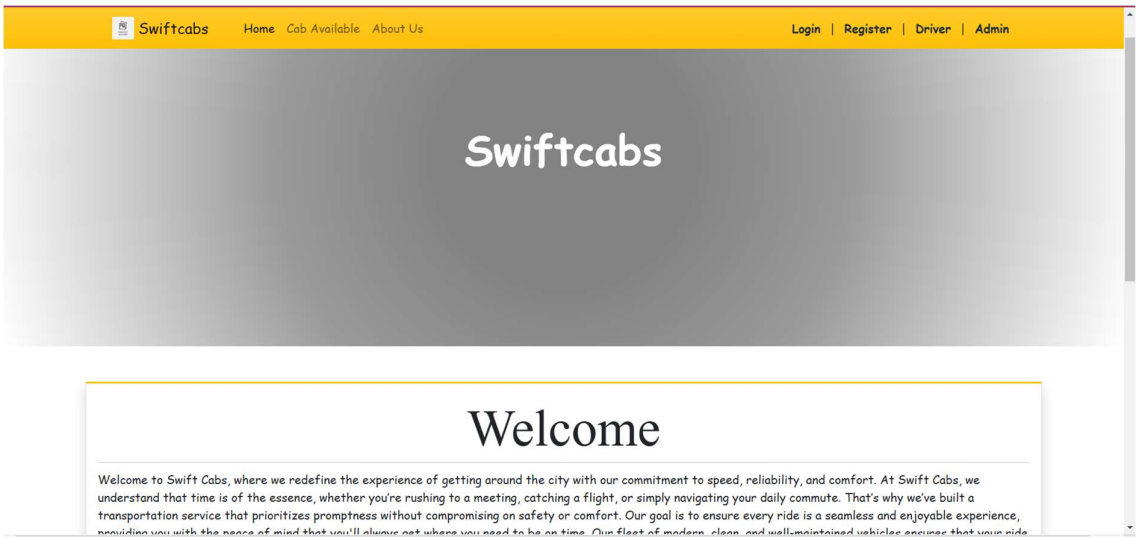


Fig. 6.1. Home Page

From this above figure this is the home page where the client can login.

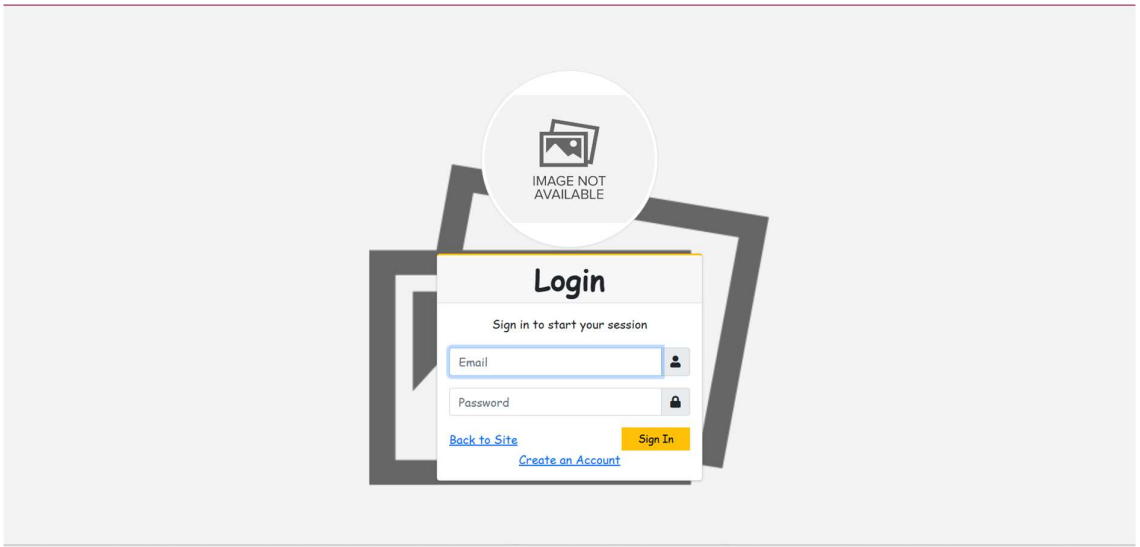


Fig. 6.2. Login page Section

From this above figure user can login the page by using their email

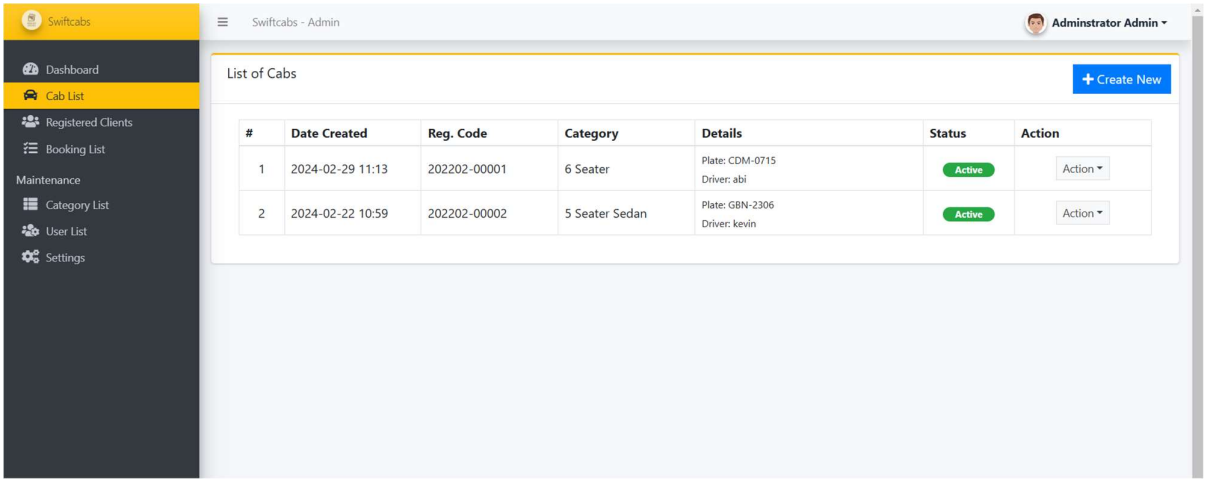


Fig.6.3. Admin cab list page

From this above figure admin can see the detailed information about the cab.

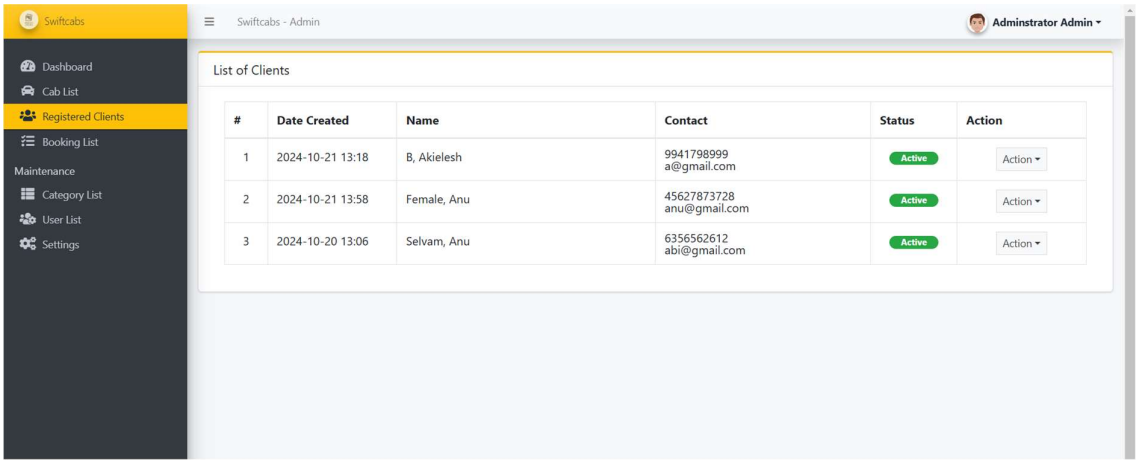


Fig. 6.4 registered client page

From this above figure Admin can see the detailed information about the Admin registered client.

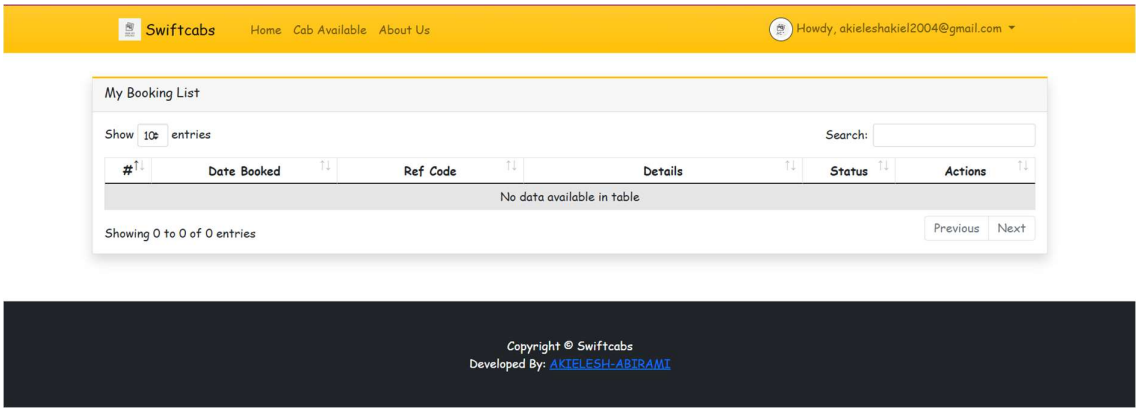


Fig. 6.5. client history page

From this above figure clint can see the details about the booking list till date.

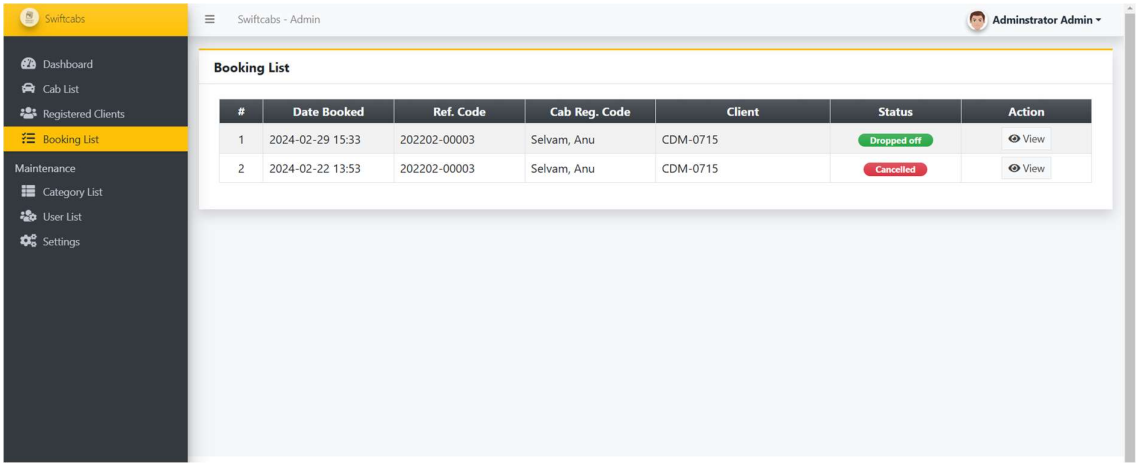


Fig.6.6. Booking list

From this above figure admin can see the current status of each one of the bookings .

CHAPTER 7

CONCLUSION

The CAB Management System effectively addresses the challenges associated with traditional transportation booking and management. By integrating advanced web technologies, the system provides a seamless and efficient solution for users, drivers, and administrators. The platform's core functionalities, such as real-time cab booking, driver management, and administrative oversight, ensure a smooth and efficient operation, optimizing resource allocation and enhancing the overall user experience.

The system’s modular approach, with distinct features for user registration, driver interaction, and admin control, ensures ease of use for all stakeholders. Secure data management, including encryption and privacy features, guarantees the safety and confidentiality of user information. Furthermore, the scalability of the platform allows for future enhancements such as payment integration and advanced analytics.

The project successfully demonstrates the potential of web-based solutions in solving the inefficiencies of traditional transportation systems. It not only streamlines the booking process but also ensures better coordination, reduces operational delays, and enhances service reliability. The CAB Management System lays a solid foundation for further development, offering significant improvements in the management and delivery of transportation services.

In conclusion, the CAB Management System proves to be a robust, secure, and user-friendly platform that meets the modern demands of the transportation industry.

CHAPTER 8

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