

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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DATABASE MANAGEMENT REPORT
“CAR SERVICE MANAGEMENT PROJECT”

Submitted in Partial fulfillment of the Requirements for the V Semester of the Degree of

BACHELOR OF ENGINEERING
in
Information Science and Engineering

Submitted by
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Under the Guidance of
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2023-2024



DEPT. OF INFORMATION SCIENCE & ENGINEERING

Certificate

This is to certify that the **Database Management System** work entitled “Car Service Management” has been carried out by Prajakta Mishra (1CR21IS112) bonafide student of **CMR Institute Of Technology**, Bengaluru in partial fulfillment for the award of the Degree of **Bachelor of Engineering in Information Science and Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2023-24**. It is certified that all corrections/suggestions indicated for the Internal Assessment have been incorporated in the report deposited in the departmental library. This project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

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ACKNOWLEDGEMENT

Any work of significance requires a great deal of effort and time put into it. But a factor of even greater importance is efficient guidance and encouragement. In spite of all my dedicated work, this internship would not have been possible without continuous help and guidance provided by people who gave their unending support right from when this idea was conceived.

I would like to thank to **Dr. Sanjay Jain**, Principal, CMRIT, Bangalore, for his constant co-operation and support throughout this Internship tenure.

I would like to thank **Dr. Jagadishwari V, Associate Professor & Head**, Department of Information Science and Engineering, CMRIT for her constant guidance and support during this Internship period.

I would like to thank my guide, **Prof. Rakesh , Assistant Professor**, Department of Information Science and Engineering, CMRIT for her constant guidance that helped me in completing the Internship work successfully.

Last but definitely not the least I would like to thank **My Family** and **Friends** who have always supported me in every path of the Internship work.

PRAJAKTA MISHRA
(1CR21IS112)



DECLARATION

I, **PRAJAKTA MISHRA**, bearing **1CR21IS112**, student of fifth semesters B.E in Information Science and Engineering from CMR Institute of Technology, Bangalore, hereby declare that this Project titled “**CAR SERVICE MANAGEMENT**” was carried out by me.

I have done the work assigned to me during the period and all the contents about work assigned are prepared and presented by me. The fifth semester **DATABASE MANAGEMENT SYSTEM** has been done by me under the supervision of **Prof. RAKESH** , Department of ISE, Internal Guide, CMR Institute of Technology, Bangalore.

This work is submitted to Visvesvaraya Technological University in partial fulfilment of the requirement for the award of degree of Bachelor of Engineering of Technology in Information Science and Engineering during the academic year 2023-2024.

Place: Bangalore

PRAJAKTA MISHRA
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CHAPTER 1

INTRODUCTION

The Car Service Management System is a revolutionary project aimed at modernizing and simplifying transportation solutions for the digital age. In a world characterized by rapid urbanization and increasing mobility needs, traditional transportation models often fall short in meeting the diverse requirements of today's travelers. This project seeks to address these challenges by providing a comprehensive platform that seamlessly integrates taxi booking and car rental services, offering users unparalleled convenience and flexibility in their travel arrangements.

At its core, the Car Service Management System is driven by a commitment to enhancing the overall travel experience for individuals and businesses alike. By leveraging cutting-edge technology and innovative design principles, the system aims to streamline the process of accessing transportation services, reducing friction points and inefficiencies in the booking process. Whether users require a quick ride across town or a long-term rental for an extended trip, the platform caters to a wide range of needs, ensuring that every journey is as smooth and hassle-free as possible.

One of the key objectives of the project is to bridge the gap between traditional transportation services and emerging mobility trends. As cities become increasingly interconnected and digitalized, there is a growing demand for integrated transportation solutions that can adapt to changing needs and preferences. The Car Service Management System positions itself as a versatile and agile platform that can evolve alongside shifting market dynamics, offering users a future-proof solution that remains relevant in the ever-changing landscape of urban mobility.

Moreover, the introduction of the Car Service Management System is expected to have far-reaching implications for urban transportation infrastructure and sustainability efforts. By promoting shared mobility options and optimizing resource allocation, the system has the potential to reduce traffic congestion, lower carbon emissions, and alleviate strain on existing transportation networks. This not only benefits individual users by providing more efficient and eco-friendly travel options but also contributes to broader societal goals of building more livable and sustainable cities.

In conclusion, the Car Service Management System represents a paradigm shift in the way transportation services are accessed, managed, and experienced. By offering a unified platform for taxi booking and car rental services, the project addresses the evolving needs of modern travelers while paving the way for more efficient, accessible, and sustainable urban mobility solutions. As the project continues to unfold, it is poised to reshape the future of transportation, unlocking new opportunities for innovation, economic growth, and societal progress.

CHAPTER 2

SCOPE OF THE PROJECT

The scope of the Car Service Management System project encompasses the development of a comprehensive and user-friendly web-based application that integrates two primary functionalities: taxi booking and car rental services. The application will provide users with a centralized platform to access transportation services, streamlining the booking process and enhancing overall convenience. By offering a seamless and intuitive interface, the system aims to cater to the diverse needs of travelers, whether they require immediate taxi rides or longer-term car rentals.

In addition to facilitating bookings for individual users, the project will also include administrative functionalities to manage various aspects of the transportation services. This includes functionalities such as managing drivers, vehicles, bookings, customer data, and financial transactions. By providing robust administrative tools, the system empowers service providers to efficiently manage their operations and ensure a smooth and reliable service experience for users.

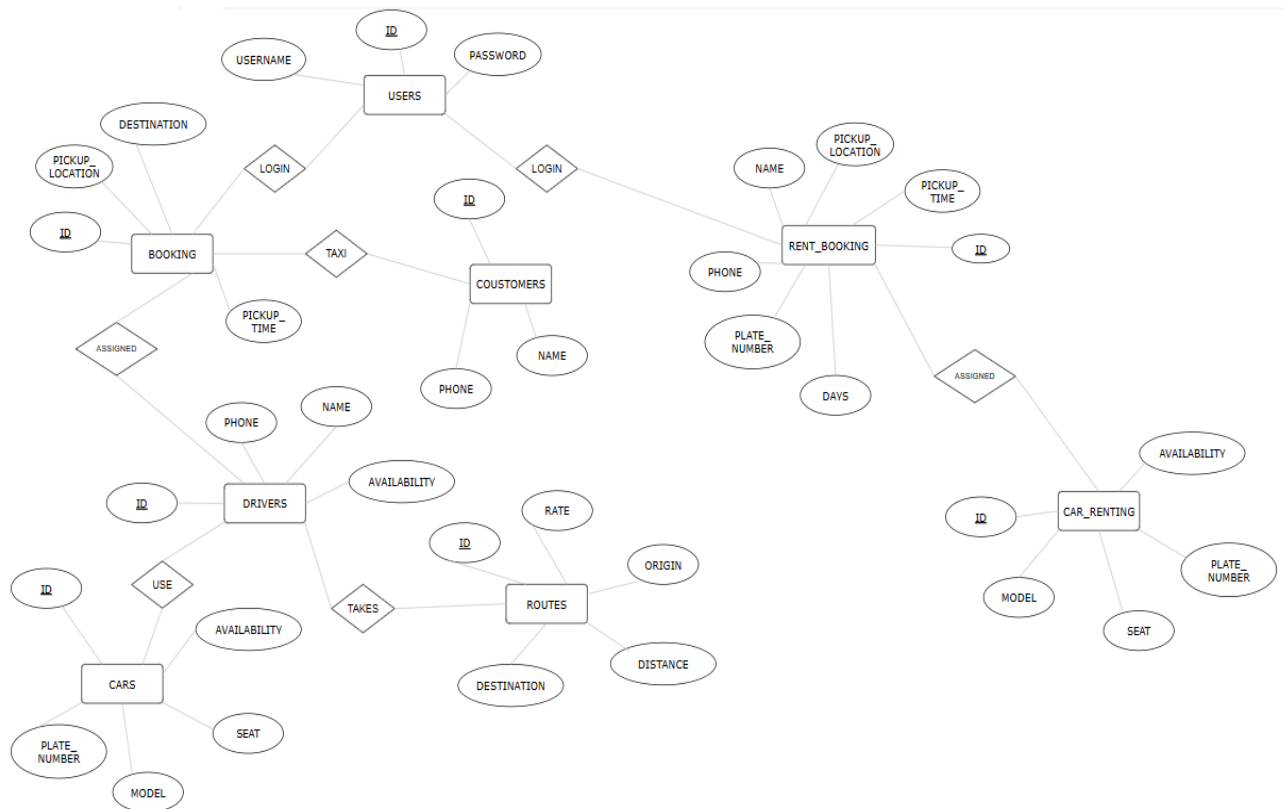
Furthermore, the scope of the project extends to the implementation of advanced features and functionalities to enhance the overall user experience. This includes features such as real-time tracking of vehicles, secure payment processing, automated notifications and alerts, user feedback mechanisms, and integration with mapping services for route optimization. These features are designed to offer users greater convenience, reliability, and peace of mind when using the Car Service Management System.

Moreover, the project will prioritize scalability, security, and reliability to accommodate future growth and meet the evolving needs of users and stakeholders. This includes implementing robust backend infrastructure, employing industry-standard security protocols to protect user data, and conducting thorough testing to ensure the stability and performance of the application under various load conditions. By prioritizing these aspects, the project aims to deliver a robust and dependable platform that can scale seamlessly to meet the demands of a growing user base.

Overall, the scope of the Car Service Management System project is ambitious yet focused, aiming to deliver a comprehensive and user-centric transportation management solution. By combining taxi booking and car rental services into a single platform, the project seeks to redefine the way people access and experience transportation services, offering greater convenience, efficiency, and reliability to users across diverse travel scenarios.

CHAPTER 3

ER-DIAGRAM



CHAPTER 4

RELATED WORK AND IMPACT

In the realm of transportation management, numerous platforms and services have emerged to address the growing needs of travelers and commuters. Existing taxi booking applications such as Uber, Lyft, and Grab have revolutionized the way people hail rides, offering on-demand transportation services with the tap of a button. Similarly, car rental companies like Hertz, Avis, and Enterprise have provided users with the flexibility to rent vehicles for short or long-term use, catering to a wide range of travel needs and preferences.

The emergence of these platforms has had a profound impact on urban mobility, transforming the way people move within cities and beyond. By leveraging technology to optimize resource allocation and improve service efficiency, these platforms have made transportation more accessible, affordable, and convenient for users worldwide. Additionally, they have contributed to reducing traffic congestion, lowering carbon emissions, and promoting shared mobility solutions, aligning with broader societal goals of sustainability and environmental stewardship.

Despite the success of existing transportation platforms, there remain opportunities for further innovation and improvement. One area where the Car Service Management System aims to make a significant impact is in integrating taxi booking and car rental services into a single, unified platform. By offering users a comprehensive solution that caters to both immediate transportation needs and longer-term travel requirements, the project seeks to streamline the booking process and enhance overall convenience for travelers.

Furthermore, the Car Service Management System is poised to have a positive impact on the transportation industry by empowering drivers and service providers with tools and resources to optimize their operations. By providing administrative functionalities for managing drivers, vehicles, bookings, and customer data, the system enables service providers to operate more efficiently and deliver a higher level of service to users. This, in turn, can lead to increased job opportunities, improved service quality, and greater economic prosperity within the transportation sector.

Overall, the Car Service Management System represents a significant step forward in the evolution of transportation management technology. By building upon the successes of existing platforms and introducing new innovations, the project has the potential to revolutionize the way people access and experience transportation services, driving positive societal and environmental impacts in the process. As the project progresses, it will continue to shape the future of urban mobility and contribute to building more sustainable and inclusive transportation ecosystems.

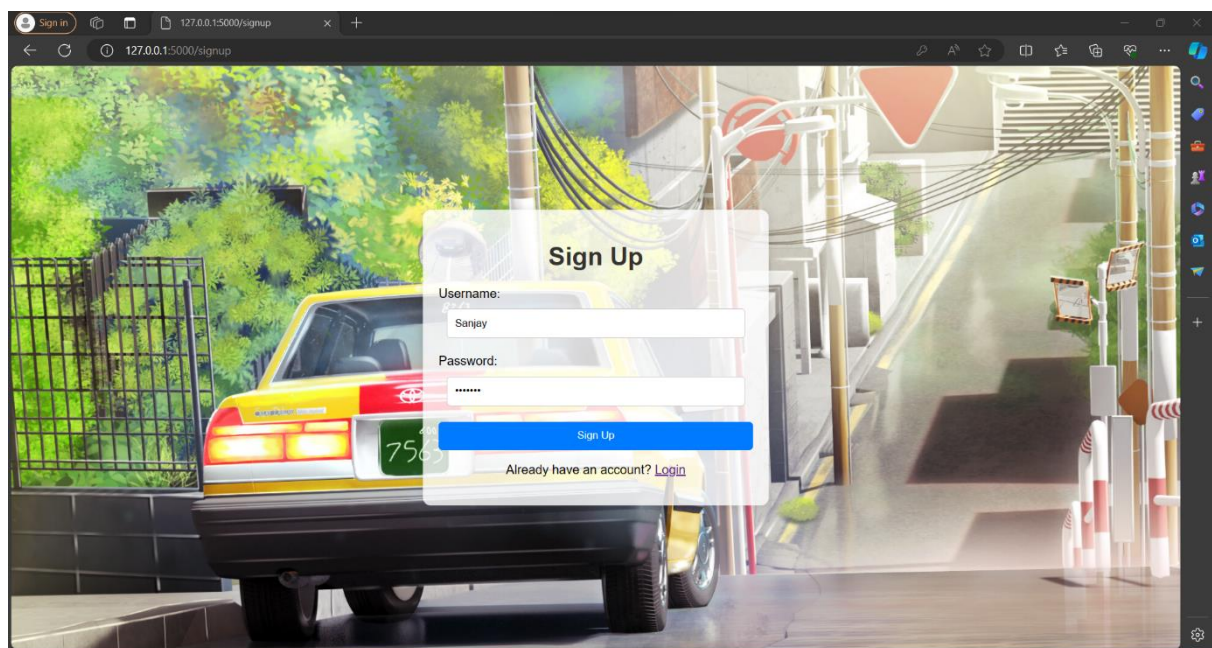
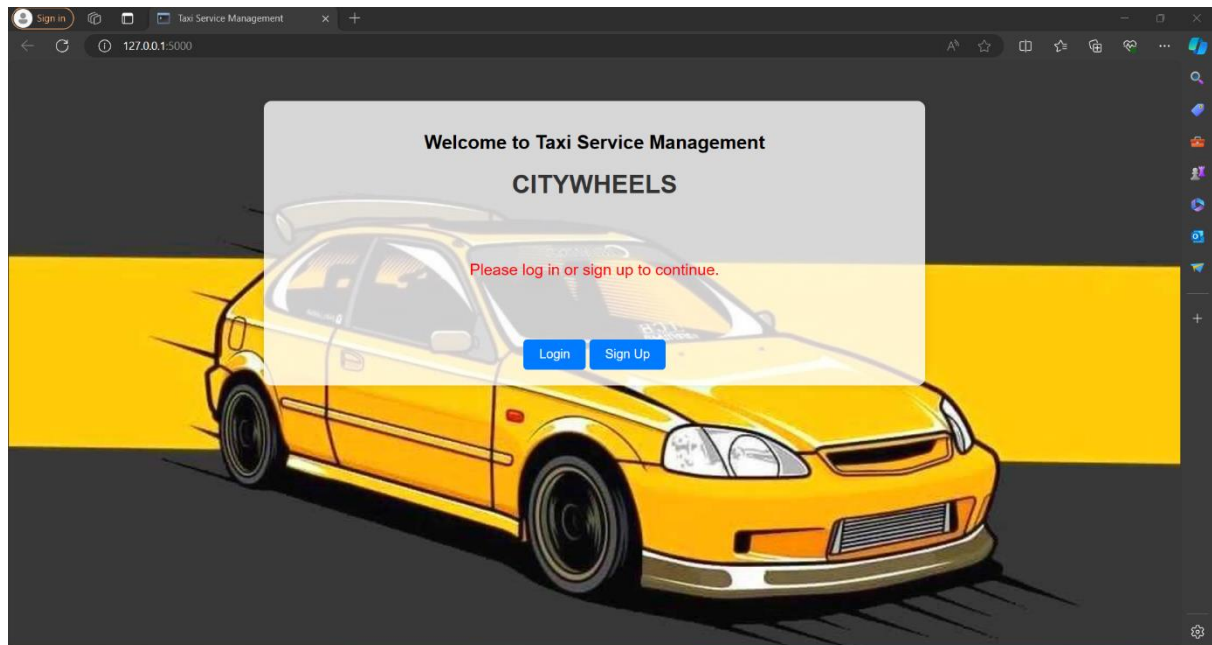
CHAPTER 5

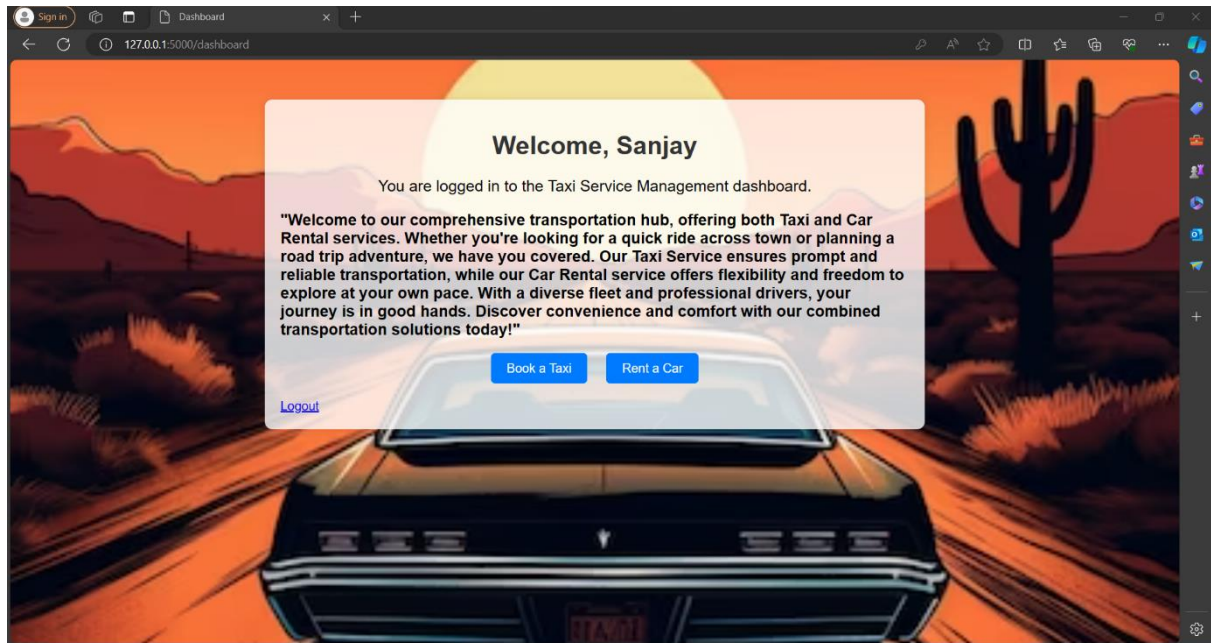
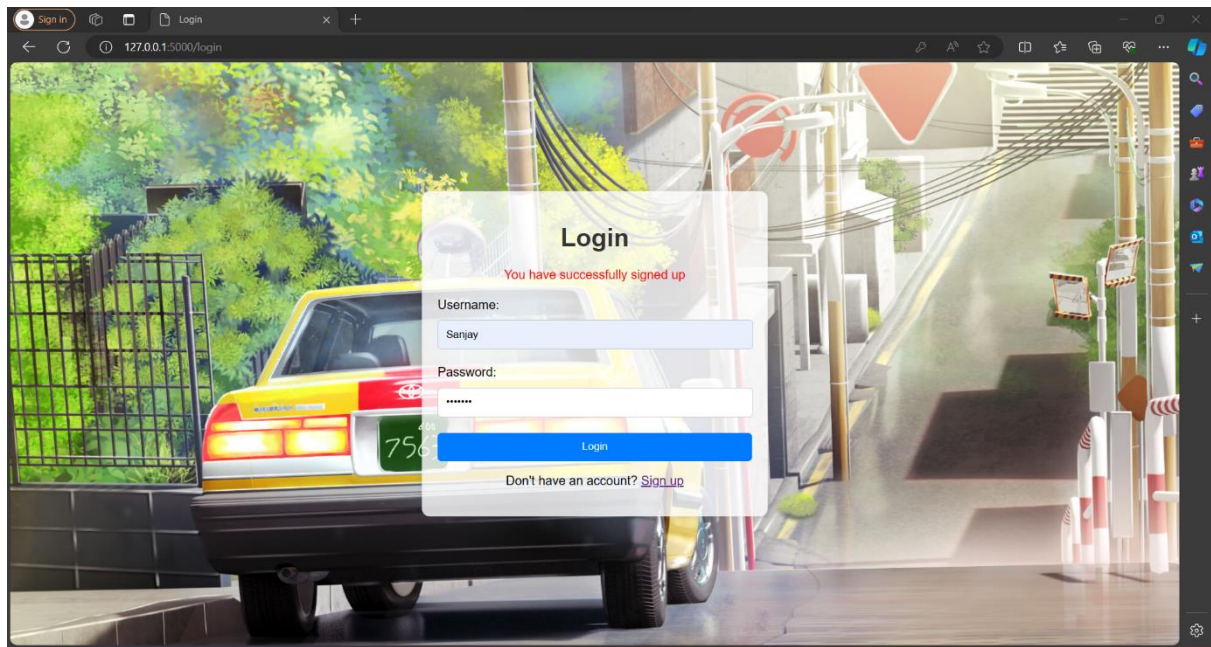
CAR SERVICE MANAGEMENT

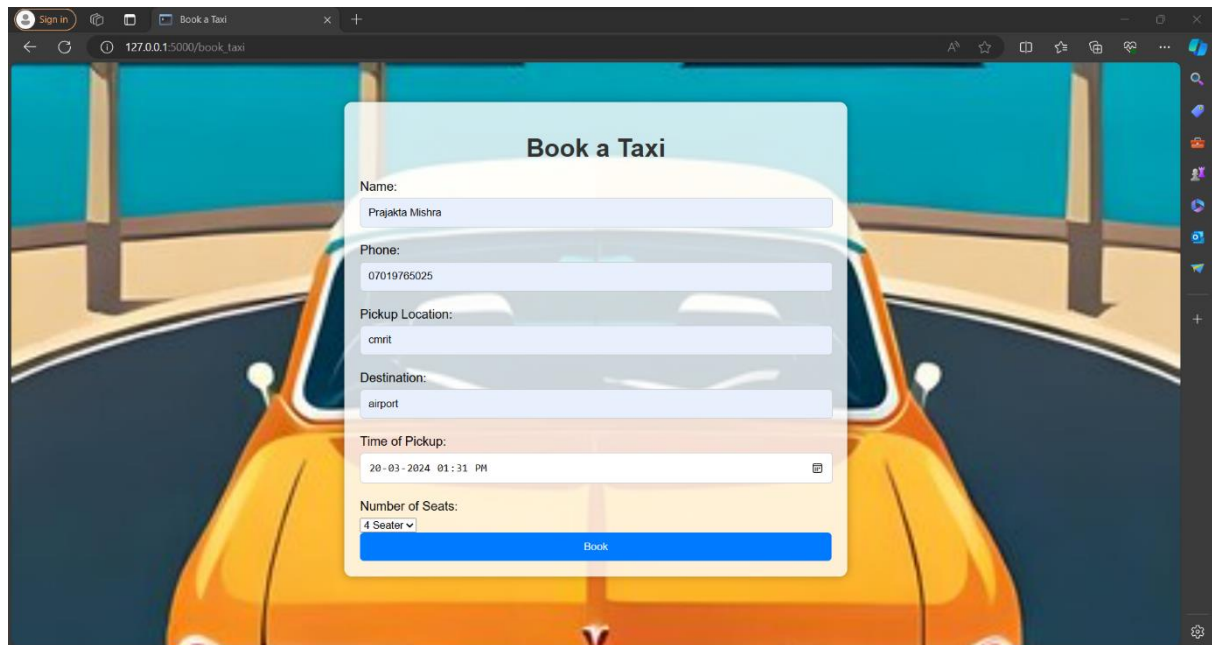
5.1 TECNOLOGIES USED

1. **HTML (HyperText Markup Language):** HTML is used for creating the structure and content of the web pages in your application. It defines the layout, text, images, forms, and other elements that users interact with in their web browsers.
2. **Python:** Python is used as the backend programming language for your application. It handles the server-side logic, such as processing user requests, interacting with the database, and generating dynamic HTML content to be sent back to the client's web browser.
3. **SQLite Database:** SQLite is a lightweight and self-contained relational database management system that is integrated directly into your Python application. It is used to store and manage data persistently, such as user accounts, booking details, driver information, car listings, and other relevant data for your taxi service management system.

In summary, with HTML for frontend development, Python for backend logic, and SQLite for database management, you have a simple yet effective technology stack for building your taxi service management project. This stack allows you to create dynamic web applications with a responsive user interface, robust server-side functionality, and persistent data storage capabilities, all while keeping the development process straightforward and manageable.



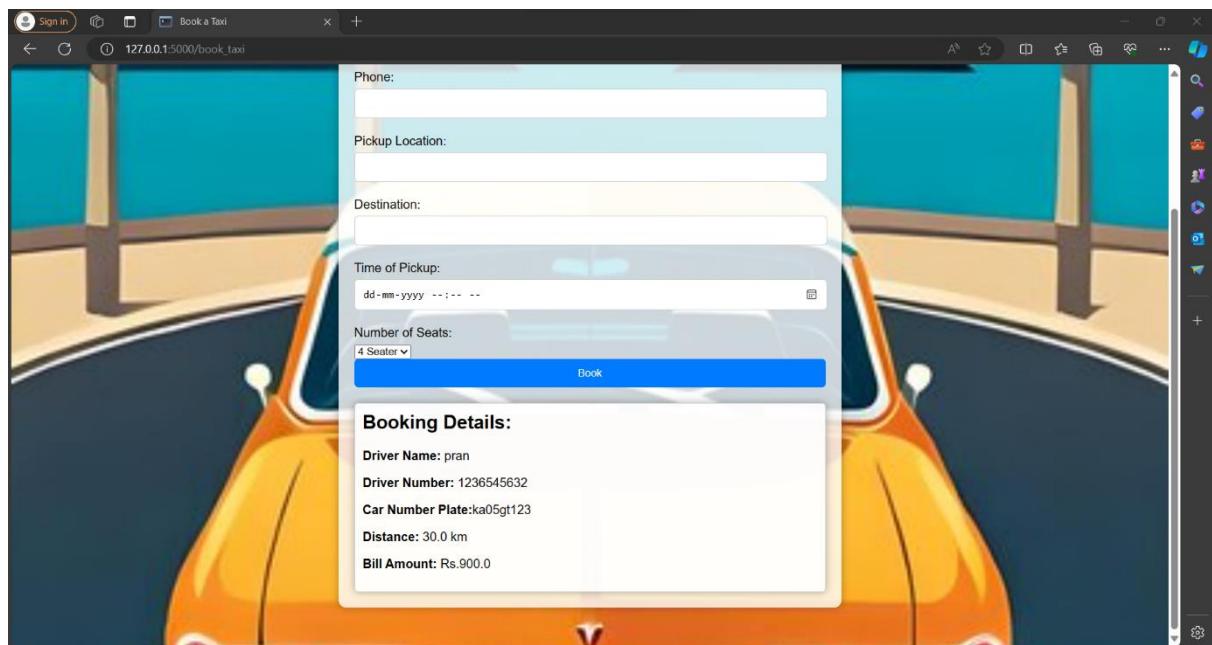




The screenshot shows a web browser window with the URL `127.0.0.1:5000/book_taxi`. The page features a background illustration of a yellow taxi. A central form titled "Book a Taxi" contains the following fields and values:

- Name:
- Phone:
- Pickup Location:
- Destination:
- Time of Pickup:
- Number of Seats:

A blue "Book" button is located at the bottom of the form.



The screenshot shows the same web browser window, but the form is now displaying the booking details. The form fields are empty, and a "Booking Details" section is visible at the bottom:

Booking Details:

- Driver Name: pran
- Driver Number: 1236545632
- Car Number Plate: ka05gt123
- Distance: 30.0 km
- Bill Amount: Rs.900.0

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000/rent_car'. The page features a background illustration of a coastal road with a car. A white form titled 'Rent a Car' is centered on the page. The form contains the following fields and values:

- Name: rachna
- Phone: 05647382919
- Number of Seats: 7 Seater (dropdown menu)
- Pickup Location: marathahalli
- Pickup Time: 02-04-2024 10:00 AM
- Number of Days: 10

A blue 'Rent' button is located at the bottom of the form.

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000/rental_confirmation'. The page features a background illustration of an orange car with a 'RENT-O-CAR' license plate, with money falling around it. A white confirmation box is centered on the page, containing the following text:

Rental Confirmation
Your car rental has been confirmed.

Your rental car details:

- Car ID: 204
- Car Model: suv
- Plate Number: ka05ms761
- Name: rachna
- Phone: 05647382919
- Pickup Location: marathahalli
- Pickup Time: 2024-04-02T10:00

CHAPTER 6

IMPACT ANALYSIS

Upon successful implementation, the Car Service Management System is expected to yield a multitude of outcomes and impacts that will significantly influence the transportation landscape. Firstly, the system will offer users unparalleled convenience and accessibility to transportation services, allowing them to seamlessly book taxis or rent cars with just a few clicks. By streamlining the booking process and integrating multiple services into a single platform, users can expect a smoother and more efficient travel experience, whether for daily commutes, business trips, or leisure outings.

Secondly, the project's emphasis on user experience and advanced features is poised to enhance overall satisfaction and trust among users. With real-time tracking capabilities, secure payment processing, and user feedback mechanisms, the system prioritizes reliability, transparency, and safety. Users can feel confident in their travel arrangements, knowing that they have access to up-to-date information and robust support throughout their journey. This increased confidence is expected to foster greater user loyalty and engagement with the platform over time.

From a societal perspective, the Car Service Management System has the potential to have a transformative impact on urban mobility and environmental sustainability. By promoting shared transportation options, optimizing route efficiency, and reducing the need for private car ownership, the system can help alleviate traffic congestion, reduce carbon emissions, and improve air quality in urban areas. Additionally, by offering alternatives to traditional car ownership models, the system contributes to building more resilient and inclusive transportation ecosystems that benefit communities and the environment alike.

Furthermore, the project's impact extends beyond individual users to encompass broader economic and societal benefits. By empowering drivers and service providers with tools and resources to optimize their operations, the system stimulates economic growth, job creation, and entrepreneurship within the transportation sector. Additionally, by fostering a culture of innovation and collaboration, the project encourages partnerships and synergies among stakeholders, leading to more robust and sustainable transportation solutions in the long run.

In conclusion, the outcome of the Car Service Management System project is expected to be far-reaching and multifaceted, with impacts ranging from improved user experiences and environmental sustainability to economic growth and societal resilience. By leveraging technology, innovation, and collaboration, the project aims to address the evolving needs of modern travelers while contributing to the development of more efficient, accessible, and sustainable transportation ecosystems. As the project continues to unfold, its positive impacts are poised to resonate across communities, cities, and regions, shaping the future of transportation for generations to come.

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CHAPTER 7

CONCLUSION

In conclusion, the Car Service Management System represents a significant advancement in transportation technology, offering a comprehensive and user-centric solution to the evolving needs of modern travelers. Through the integration of taxi booking and car rental services into a unified platform, the project aims to streamline the booking process, enhance convenience, and improve overall accessibility to transportation services. By prioritizing user experience, advanced features, and sustainability, the system has the potential to revolutionize the way people access and experience transportation, paving the way for more efficient, inclusive, and environmentally-friendly mobility solutions.

Moving forward, the success of the Car Service Management System will depend on its ability to adapt and evolve in response to changing market dynamics, technological advancements, and user feedback. Continued investment in research, development, and innovation will be crucial to maintaining the system's relevance and competitiveness in the rapidly evolving transportation landscape. Additionally, ongoing collaboration with stakeholders, including users, service providers, and policymakers, will be essential to ensure that the system remains aligned with the needs and priorities of its diverse user base.

Moreover, the impact of the Car Service Management System extends beyond individual journeys to encompass broader societal and economic benefits. By promoting shared mobility options, reducing traffic congestion, and fostering entrepreneurship within the transportation sector, the system contributes to building more sustainable, resilient, and equitable transportation ecosystems. As cities continue to grapple with the challenges of urbanization and mobility, projects like the Car Service Management System offer a promising path forward towards creating more livable, connected, and sustainable communities.

In summary, the Car Service Management System represents a pivotal step towards reimagining the future of transportation. By leveraging technology, innovation, and collaboration, the project has the potential to transform the way people move within and between cities, unlocking new opportunities for efficiency, accessibility, and sustainability. As the project continues to evolve and scale, its positive impacts will resonate across communities, driving positive change and shaping the future of urban mobility for generations to come.

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