ZENDRIVES

A

Human-Computer Interface Course Project Report

in partial fulfilment of the degree

Bachelor of Technology
in
School of Computer Science & Artificial Intelligence

By

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Under the guidance of

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Submitted to

School of Computer Science and Artificial Intelligence

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the **Human-Computer Interface - Course Project** Report entitled **"ZENDRIVES"** is a record of bonafide work carried out by the student(s) K. HARSHAVARDHAN, J. LOKESH bearing Roll No(s) 2303A51406, 2303A51642 during the academic year 2024-25 in partial fulfillment of the award of the degree of *Bachelor of Technology* in **School of Computer Science & Artificial Intelligence** by the SR UNIVERSITY, Ananthasagar, Hasanparthy, Hanumakonda.

Lab In-charge   **Head of the Department**

Faiza Iram   **Dr.M.Sheshikala**
Assistant professor (CSE&AI)   Assoc.prof&HOD(CSE & AI)
SR University,   SR University,
Ananthasagar,Hanamakonda.   Ananthasagar,Hanamakonda.

ACKNOWLEDGMENT

We owe an enormous debt of gratitude to our project guide **Ms. Faiza Iram, Assistant Professor** as well as Head of the CSE Department **Dr. M. Sheshikala, Associate Professor** for guiding us from the beginning through the end of the Project with their intellectual advices and insightful suggestions. We truly value their consistent feedback on our progress, which was always constructive and encouraging and ultimately drove us to the right direction.

We wish to take this opportunity to express our sincere gratitude and deep sense of respect to our beloved **Vice Chancellor, Prof. Deepak Garg,** for his continuous support and guidance to complete this project in the institute.

Finally, we express our thanks to all the teaching and non-teaching staff of the department for their suggestions.

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ABSTRACT

ZenDrives is a user-centric car rental solution designed to offer unmatched convenience and reliability. With a focus on streamlining the rental process, ZenDrives provides a seamless platform where users can effortlessly browse, compare, and book vehicles tailored to their needs. Whether for daily commutes, family trips, or business travel, ZenDrives ensures accessibility, affordability, and quality service. Equipped with a diverse fleet of well-maintained vehicles and intuitive digital tools, ZenDrives redefines the car rental experience, making transportation easy and stress-free for everyone.

OBJECTIVE

ZenDrives aims to revolutionize the car rental experience by developing a platform that is intuitive, efficient, and customer-centric. The platform's objective is to simplify the process of browsing, booking, and managing car rentals, making it accessible for users of all technical backgrounds. The design will feature a modern and responsive layout, ensuring seamless functionality across devices, including smartphones, tablets, and desktops.

The homepage will serve as a welcoming entry point, featuring a prominent search bar for vehicle availability and rental options, along with highlights of featured vehicles, deals, and customer testimonials. A dedicated "Vehicles" page will allow users to browse a wide range of vehicles, equipped with filters for price, type, and features. Clicking "View Details" will navigate to a detailed vehicle page showcasing specifications, photos, and rental terms. A secure login and registration system will allow users to manage their bookings, save preferences, and view transaction history.

The platform will be built using HTML, CSS, and JavaScript for the frontend, with internal JavaScript for interactivity like popups and dynamic content updates. The backend will leverage technologies like Node.js or Python (Django/Flask) to handle booking logic, user authentication, and database management, ensuring reliability and scalability. Advanced features like real-time availability updates, payment integration, and user feedback collection will further enhance the platform. ZenDrives' mission is to provide a stress-free, reliable car rental solution for modern travelers, delivering convenience at every step.

Existing System

The current car rental systems often lack the flexibility and user-friendliness that modern customers expect. Many rely on outdated, non-intuitive interfaces that make browsing and booking vehicles cumbersome. Users may encounter issues like limited filter options, unclear pricing details, and lack of transparency in vehicle specifications. Additionally, mobile accessibility is often inadequate, with some systems failing to provide a responsive design. Customer support and post-booking management, such as modifying or canceling bookings, can also be inefficient or unavailable. These challenges create a fragmented user experience, leaving customers dissatisfied and frustrated with the process.

Proposed System

The proposed ZenDrives system addresses these limitations by providing a seamless, fully-featured, and customer-centric car rental platform. The design will include a responsive and modern interface, ensuring smooth usability on all devices. A comprehensive vehicle search and filtering system will allow users to browse by type, price, features, and availability effortlessly. Clear, detailed information on each vehicle, including specifications, pricing, and terms, will enhance transparency. ZenDrives will incorporate features like user-friendly booking management, enabling customers to modify, cancel, or extend bookings easily. Integrated payment gateways will support multiple secure payment methods. The system will also include real-time availability updates and notifications, improving reliability and trust. By leveraging advanced web technologies, ZenDrives aims to deliver a streamlined, scalable, and efficient solution, setting a new standard in the car rental industry.

Software Requirements

1. **Frontend Development:**
   - **Languages:** HTML, CSS, JavaScript
   - **Frameworks/Libraries:** React.js or Angular (optional for dynamic components)
   - **Design Tools:** Adobe XD, Figma, or Sketch for UI/UX design

2. **Backend Development:**
   - **Languages:** Node.js, Python (Django/Flask), or PHP
   - **Database:** MySQL, PostgreSQL, or MongoDB for managing user and vehicle data
   - **Payment Gateway Integration:** Razorpay, PayPal, or Stripe for secure transactions

3. **Hosting and Deployment:**
   - **Web Server:** Apache or Nginx
   - **Cloud Platforms:** AWS, Microsoft Azure, or Google Cloud for scalability
   - **Version Control:** GitHub or GitLab for code repository and collaboration

4. **Other Tools:**
   - **Code Editor:** Visual Studio Code, Sublime Text, or IntelliJ IDEA
   - **Testing Tools:** Postman for API testing, Selenium for frontend testing
   - **Monitoring:** Google Analytics, New Relic for performance tracking

Hardware Requirements

1. **Development Machines:**
   - Minimum: Intel i5 processor, 8GB RAM, 256GB SSD
   - Recommended: Intel i7 or equivalent, 16GB RAM, 512GB SSD

2. **Servers:**
   - **For Hosting:**
     - Minimum: Quad-core CPU, 16GB RAM, 500GB SSD storage
     - Recommended: Octa-core CPU, 32GB RAM, 1TB SSD storage
   - **Cloud Servers:** High availability instances from AWS (e.g., t3.large), Azure, or Google Cloud

3. **Network Requirements:**
   - Reliable internet connection with a minimum speed of 50 Mbps for development and testing.

ELEMENTS USED IN THE PROJECT

User Interface (UI) Elements:

1. **Navigation Bar:** Links for Home, Vehicles, Details, About Us, Contact Us, Login/Register.

2. **Search Bar:** Allows users to search for vehicles by location, type, or price.

3. **Buttons:**
   - "View Details" for individual car information.
   - "Book Now" for initiating the rental process.
   - "Login" and "Register" for user authentication.

4. **Filters:** Dropdowns or sliders to filter cars by price, type, brand, or availability.

5. **Modals/Popups:**
   - Login/Register forms in popups.
   - Confirmation dialogues for bookings.

6. **Car Cards:**
   - Display vehicles with images, name, price, and a "View Details" button.

Additional Elements:

1. **Responsive Design:** Ensures usability on mobile, tablet, and desktop devices.

2. **Icons:** Use of font libraries like Font Awesome or Material Icons for visual cues.

3. **Analytics Tools:** Google Analytics for tracking user activity.

4. **Security Measures:**
   - SSL/TLS for secure data transmission.
   - CAPTCHA for form submission security.

IMPLEMENTATION

CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>

    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Zen Drives | HomePage</title>
    <link rel="icon" type="image/x-icon" href="Assets/Favicon.jpeg">
    <link href='https://fonts.googleapis.com/css?family=Inter' rel='stylesheet'>
    <link href='https://fonts.googleapis.com/css?family=Work Sans' rel='stylesheet'>
    <link rel="stylesheet" href="index.css">
    <link href='https://unpkg.com/boxicons@2.1.4/css/boxicons.min.css' rel='stylesheet'>

</head>
<body>

    <header>
      <nav>
        <div class="Logo">
          <a href="index.html"><img src="Assets/Logo.png"></a>
        </div>
        <ul>
          <li><a href="index.html"><b>Home</b></a></li>
          <li><a href="Vehicles.html">Vehicles</a></li>
          <li><a href="Details.html">Details</a></li>
          <li><a href="AboutUs.html">About Us</a></li>
          <li><a href="ContactUs.html">Contact Us</a></li>
          <li><a href="#" id="loginRegisterLink">Login | Register</a></li>
          <li><a href="tel:+916305649797"><i class='bx bxs-phone phone'></i></a><a
href="tel:+916305649797">   <b>Need Help? +91 630 564 9797</b></a></li>
        </ul>
      </nav>
    </header>

    <div class="Hero" id="Hero">

      <img src="Assets/Hero.png">
      <div class="text"><h1><b>Drive Your Dream,</b></h1></div>
```

```html
<div class="text1"><h1><b>Anytime!</b></h1></div>
<div class="text2"><h5>Unlock the freedom of the open road with <b>Zen Drives</b></h5></div>
<div class="text3"><h5>wide range of rental options, from economy to luxury vehicles.</h5></div>
<a href="Vehicles.html"><button class="b1">View all cars</button></a>


<div class="booking-form">
    <h2>Book your car</h2>
    <form>
        <select id="cartype" name="cartype" required>
            <option value="">Car type</option>
            <option value="All Vehicles">All Vehicles</option>
            <option value="Sedan">Sedan</option>
            <option value="Cabriolet">Cabriolet</option>
            <option value="Pickup">Pickup</option>
            <option value="SUV">SUV</option>
            <option value="Minivan">Minivan</option>
        </select>

        <select id="PlaceOfRental" name="PlaceOfRental" required>
            <option value="">Place of rental</option>
            <option value="Warangal">Warangal</option>
            <option value="Hanamkonda">Hanamkonda</option>
            <option value="Miyapur">Miyapur</option>
            <option value="GachiBowli">GachiBowli</option>
            <option value="Abids">Abids</option>
            <option value="Charminar">Charminar</option>
        </select>

        <select id="PlaceOfReturn" name="PlaceOfReturn" required>
            <option value="">Place of return</option>
            <option value="Warangal">Warangal</option>
            <option value="Hanamkonda">Hanamkonda</option>
            <option value="Miyapur">Miyapur</option>
            <option value="GachiBowli">GachiBowli</option>
            <option value="Abids">Abids</option>
            <option value="Charminar">Charminar</option>
        </select>

        <input type="text" id="rental-date" name="rental-date" placeholder="Rental date" required>
        <i class='bx bxs-calendar calendar-icon1'></i>

        <input type="text" id="rental-date" name="return-date" placeholder="Return date" required>
        <i class='bx bxs-calendar calendar-icon2'></i>
        <a href="Vehicles.html"><button class="b2">Book now</button></a>
```

```html
        </form>

    </div>
  </div>
<script>
    const loginRegisterLink = document.getElementById('loginRegisterLink');
    const loginPopup = document.getElementById('loginPopup');

    loginRegisterLink.addEventListener('click', async (event) => {
        event.preventDefault();
        try {
            const response = await fetch('Loginpage.html');
            if (response.ok) {
                loginPopup.innerHTML = await response.text();
                loginPopup.style.display = 'flex';
                addCloseFunctionality();
            } else {
                console.error('Failed to load Loginpage.html:', response.status);
            }
        } catch (error) {
            console.error('Error loading Loginpage.html:', error);
        }
    });

    function addCloseFunctionality() {
        const closeBtn = document.querySelector('.close');
        if (closeBtn) {
            closeBtn.addEventListener('click', () => {
                loginPopup.style.display = 'none';
            });
        }

        window.addEventListener('click', (event) => {
            if (event.target === loginPopup) {
                loginPopup.style.display = 'none';
            }
        });
    }
</script>
```

```css
<style>
html {
    scroll-behavior: smooth;
}

* {
    margin: 10;
    padding: 10;
    box-sizing: border-box;
}

header {
    margin-top: 2.5%;
}

.Logo img {
    height: 150px;
    width: 150px;
}

a {
    text-decoration: none;
    color: #000000;
    transition: color 0.3s ease;
    font-family: 'Inter';
}

li {
    list-style: none;
}

nav {
    background-color: #fff;
    position: sticky;
    top: 0;
    padding: 0 85px;
    display: flex;
    align-items: center;
    justify-content: space-between;
    height: 85px;
}

nav ul {
    display: flex;
```

```css
    gap: 50px;
}

.Hero {
    position: relative;
    text-align: center;
    margin: 20px 0;
    width: 100%;
}

.text h1{
    position: absolute;
    color: rgb(0, 0, 0);
    left: 12%;
    top: 20%;
    font-size: 60px;
    font-family: Georgia, 'Times New Roman', Times, serif;
    font-weight: bolder;
}

.text1 h1{
    position: absolute;
    color: rgb(0, 0, 0);
    left: 12%;
    top: 30%;
    font-size: 60px;
    font-family: Georgia, 'Times New Roman', Times, serif;
    font-weight: bolder;
}
.text3 h5{
    position: absolute;
    color: rgb(0, 0, 0);
    left: 12%;
    top: 47.5%;
    font-size: 13px;
    font-family: 'Work Sans';
    font-weight: lighter;
}

.phone {
    color: #664343;
    font-size: large;
}
</style>
```

DESIGN:

ZEN DRIVES

Home   Vehicles   Details   About Us   Contact Us   Log in | Register

Need help?
+91 630 564 9797

Drive Your Dream, Anytime!

Unlock the freedom of the open road with **Zen Drives** wide range of rental options, from economy to luxury vehicles.

View all cars

Book your car

Car type
Place of rental
Place of return
Rental date
Return date

Book now

Availability

Zen Drives is committed to being there for you with our round-the-clock availability, so you're never stranded without the perfect vehicle.

Comfort

Your comfort is our priority at Zen Drives. Each car in our fleet is meticulously maintained and equipped with modern features, giving you the perfect blend of luxury and convenience for any journey.

Savings

Get the best deals without compromising on quality or comfort at Zen Drives. Enjoy premium vehicles at budget-friendly rates, tailored to your needs.

1 Seamless Booking Experience

Zen Drives offers a user-friendly interface that allows customers to quickly and easily book the perfect car for their needs.

2 Flexible Rental Plans

Zen Drives offers a variety of flexible rental plans to suit different customer needs.

3 Wide Selection of Vehicles

Zen Drives provides a diverse fleet of vehicles, catering to different customer preferences and needs.

4 Exclusive Savings and Discounts

Zen Drives offers exclusive deals and savings options to ensure customers get the best value for their money.

Facts In Numbers

These numerical facts highlight the scale, reliability, and convenience of your service to build trust and engage customers.

250+ Cars   **10k+** Customers   **7+** Years   **15+** Locations

Download mobile app

Available on iOS and Android, our app makes booking a car simple and fast. Manage your reservations, access exclusive discounts, and find nearby locations with ease. Get real-time updates on your vehicle and enjoy a seamless rental experience.

App Store   Google Play

Affordable, Reliable, Luxurious – All in One Place!

Enjoy hassle-free rentals with our easy booking system, flexible options, and top-notch customer service.

City   Search

ZEN DRIVES

Address
Warangal, Telangana, 506731

Email
ZenDrives@gmail.com

Phone
+91 630 567 9797
+91 951 182 9152

From business trips to weekend getaways, Zen Drives ensures you get there in comfort and style.

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Vehicles
Sedan
Cabriolet
Pickup
Minivan
SUV

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ZEN DRIVES
CAR RENTAL

Select a vehicle group

All vehicles | Sedan | Cabriolet | Pickup | Suv | Minivan

Mercedes
Sedan

2589/-
per day

Automat · PB 95 · Air Conditioner

View Details

Mercedes
Sport

3199/-
per day

Manual · PB 95 · Air Conditioner

View Details

Mercedes
Sedan

2654/-
per day

Automat · PB 95 · Air Conditioner

View Details

Porsche
SUV

3245/-
per day

Automat · PB 95 · Air Conditioner

View Details

Toyota
Sedan

1642/-
per day

Manual · PB 95 · Air Conditioner

View Details

Porsche
SUV

3200/-
per day

Automat · PB 95 · Air Conditioner

View Details

Mercedes
Van

3500/-
per day

Automat · PB 95 · Air Conditioner

View Details

Toyota
Sport

3000/-
per day

Manual · PB 95 · Air Conditioner

View Details

Maybach
Sedan

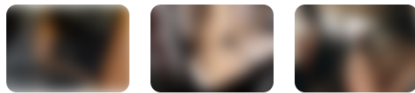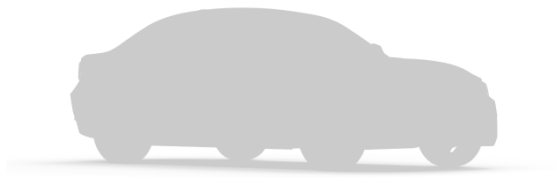**4000/-**
per day

Automat · PB 95 · Air Conditioner

View Details

Toyota   Ford   Mercedes   Jeep   BMW   Audi

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CAR RENTAL

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Why settle for ordinary when you can have extraordinary? At Zen Drives, we make sure you get behind the wheel of a car that matches your style, personality, and journey ahead.

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BMW

2800/- / day

Technical Specification

Gear Box Automat	**Fuel** Petrol	**Doors** 2
Air Conditioner Yes	**Seats** 5	**Distance** 50000

Rent a car

Car Equipment

- ✓ ABS
- ✓ Air Bags
- ✓ Cruise Control

- ✓ ABS
- ✓ Air Bags
- ✓ Air Conditioner

Other cars

View All →

Mercedes
Sedan
2500/-
per day

Automat   PB 95   Air Conditioner

View Details

Mercedes
Sport
2890/-
per day

Automat   PB 95   Air Conditioner

View Details

Mercedes
Sedan
2600/-
per day

Automat   PB 95   Air Conditioner

View Details

About Us

Where every mile feels exceptional.

Variety Brands

At Zen Drives, we offer a wide range of vehicles from top global brands, ensuring that our customers have access to the best in quality, comfort, and style.

Awesome Suport

At Zen Drives, we believe that excellent support is key to a great rental experience. Our dedicated customer service team is always here to assist you, ensuring that your journey is smooth from start to finish.
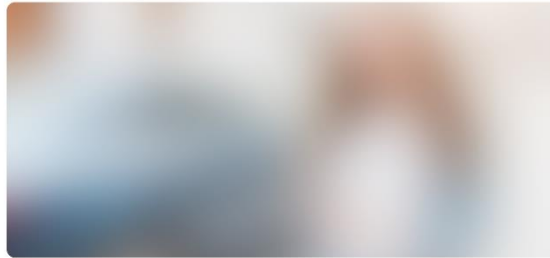
Maximum Freedom

At Zen Drives, we believe that freedom is key to every great adventure, and that's why we offer a car rental experience designed to give you the flexibility and convenience you deserve.
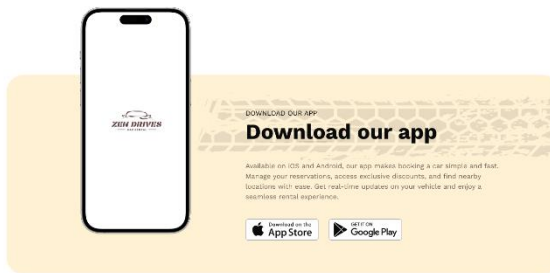
Flexibility On The Go

At Zen Drives, we understand that plans can change in an instant, and flexibility is key when you're on the move. That's why we offer a car rental service designed to adapt to your needs, wherever you are.
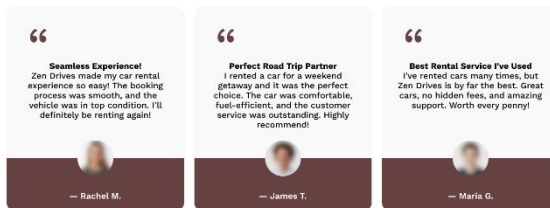

10k+	250+	7+
Happy customers	Count of cars	Years of experince

DOWNLOAD OUR APP

Download our app

Available on iOS and Android, our app makes booking a car simple and fast. Manage your reservations, access exclusive discounts, and find nearby locations with ease. Get real-time updates on your vehicle and enjoy a seamless rental experience.

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Reviews from our customers

Seamless Experience!
Zen Drives made my car rental experience so easy! The booking process was smooth, and the vehicle was in top condition. I'll definitely be renting again!

— Rachel M.

Perfect Road Trip Partner
I rented a car for a weekend getaway and it was the perfect choice. The car was comfortable, fuel-efficient, and the customer service was outstanding. Highly recommend!

— James T.

Best Rental Service I've Used
I've rented cars many times, but Zen Drives is by far the best. Great cars, no hidden fees, and amazing support. Worth every penny!

— Maria G.

Top Car Rental Questions

How do I book a car with Zen Drives? ⌃

Booking a car is simple! Just visit our website or download the app, choose your pickup location, select your vehicle, and complete the booking in a few easy steps.

What do I need to rent a car? ⌃

Are there any additional fees?... ⌃

What happens if I need to extend my rental? ⌃

Can I cancel my reservation? ⌃

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Freedom, flexibility, and luxury are just a click away with Zen Drives. From the moment you book to the moment you return, we make every aspect of your rental experience seamless and stress-free.

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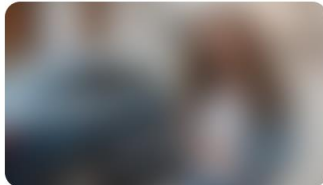
Email
ZenDrives@gmail.com
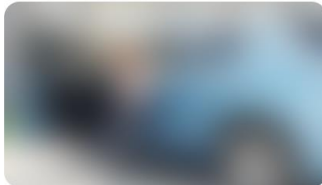
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At Zen Drives, your comfort and convenience are our top priorities. We take the stress out of car rentals so you can focus on the thrill of the journey.

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Create account or sign in

✕

⊞	Continue with Microsoft

G	Continue with Google

— or —

Email   i

Next

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ZEN DRIVES
CAR RENTAL

Debit/Credit Card Details

Payment Methods	VISA	RuPay»	⬤⬤	P

Name on card

Eg. Harshavardhan

Card number

xxxx xxxx xxxx xxxx

Expiry Date

Month ⌄   Year ⌄

CVV

Code   ⊙

Continue

CONCLUSION:

ZenDrives is designed to redefine the car rental experience by offering a seamless, reliable, and customer-focused platform. By addressing the challenges of existing systems, such as lack of transparency, limited accessibility, and outdated interfaces, ZenDrives ensures that users can easily browse, book, and manage car rentals. The integration of modern web technologies, a responsive and visually appealing design, and secure payment systems ensures a hassle-free experience across devices.

With its commitment to innovation and user satisfaction, ZenDrives aims to set a new benchmark in the car rental industry, combining technology and convenience to meet the dynamic needs of modern travelers. This project not only demonstrates technical and design expertise but also highlights the potential of leveraging technology to enhance everyday services and improve customer satisfaction.