DEPARTMENT OF COMPUTER ENGINEERING & APPLICATIONS
Institute of Engineering & Technology

PROJECT REPORT FILE

PROJECT NAME: EVRC

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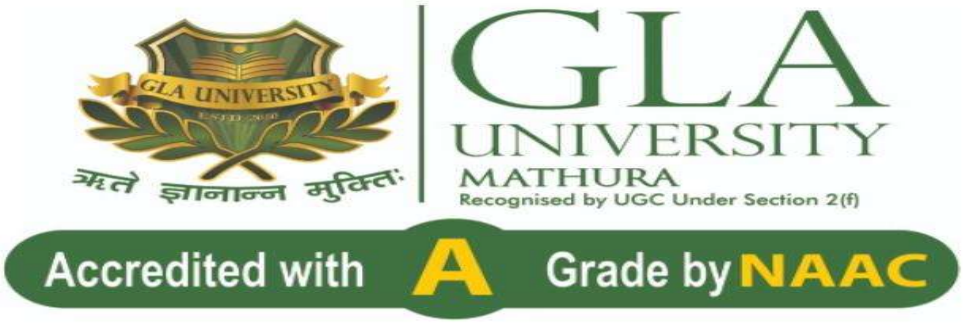
Submitted to :

Ms. Madhu

Technical Trainer



DEPARTMENT OF COMPUTER ENGINEERING & APPLICATIONS
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CERTIFICATE OF COMPLETION

This is to certify that the project report entitled "EVRC" has been successfully completed by our 'EVRC' project team (Mayank Kumar Shrivastva, Himanshu Dubey, Shakya Vaibhav Ajay Kumar, Aryan Kumar Singh) as a part of 'EVRC', under the guidance of Ms. Madhu.

The project report has been completed to the best of their knowledge and satisfaction. It is a reflection of their hard work, dedication, and commitment to achieving their goals.

We congratulate Mayank Kumar Shrivastva, Himanshu Dubey, Shakya Vaibhav Ajay Kumar, Aryan Kumar Singh on their successful completion of the project and wish them all the best for their future endeavors.

Date: 25-April-2023

Signature:

Mr. Rohit Agrawal

Head of the CSE Department

Signature

Ms. Madhu

Technical Trainer, CSE Department

GLA University, Mathura

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ABSTRACT

This project report describes the development of an integrated system that combines electronic vehicle charging and car booking on rent. The system is designed to provide an environmentally friendly transportation solution to users who are looking for a more sustainable alternative to traditional fossil fuel-powered vehicles.

The proposed system is composed of two main modules: an electric vehicle charging station and a car rental service. The charging station is equipped with a smart charging system that can communicate with electric vehicles and regulate the charging process according to the vehicle's battery capacity and charging requirements. The car rental service, on the other hand, enables users to book electric cars on rent for a specified period of time.

The system is built using a combination of hardware and software technologies, including IoT devices, cloud computing, and mobile applications. The proposed system is expected to have a positive impact on the environment by reducing the use of fossil fuels and lowering carbon emissions.

This project report provides a detailed description of the system's architecture, implementation, and testing. The results show that the system is capable of providing a seamless and convenient experience for users while promoting sustainable transportation practices. The report concludes by discussing the potential impact and future scope of the proposed system in the context of the growing demand for sustainable transportation solutions.

INTRODUCTION OF 'EVRC'

The increasing concern over the depletion of fossil fuels and the alarming levels of carbon emissions have prompted a shift towards sustainable transportation solutions. Electric vehicles are one such solution that has gained considerable attention in recent years. However, the lack of proper infrastructure for charging and the high cost of electric vehicles have been significant barriers to their widespread adoption.

To address these challenges, we have developed an integrated system called EVRC that combines electronic vehicle charging and car booking on rent. The system aims to provide a convenient and sustainable transportation solution to users who are looking for an alternative to traditional fossil fuel-powered vehicles.

EVRC is designed to provide a seamless and user-friendly experience, allowing users to book electric cars on rent and access charging stations conveniently. The system employs a combination of hardware and software technologies, including IoT devices, cloud computing, and mobile applications, to provide a comprehensive solution that meets the needs of both electric vehicle users and car rental services.

In this project report, we provide a detailed description of the EVRC system's architecture, implementation, and testing. The report highlights the system's unique features, including its smart charging system, seamless booking process, and environmental benefits. We also discuss the potential impact and future scope of the

proposed system in the context of the growing demand for sustainable transportation solutions.

Overall, EVRC is a promising solution that addresses the challenges faced by electric vehicle users and car rental services. We believe that the proposed system has the potential to promote sustainable transportation practices and reduce carbon emissions, ultimately contributing to a greener and more sustainable future.

Literature review & Background study

- What is EV charging?

EV charging refers to the process of recharging an electric vehicle's battery using an electric charging station. The charging process is similar to refueling a traditional gasoline-powered vehicle, but instead of filling up a gas tank, the battery is replenished with electricity. EV charging can occur at various locations such as homes, workplaces, public charging stations, and on-the-go charging stations. Charging times can vary depending on the type of charger and the battery size of the vehicle. EV charging is a critical component of the transition towards a more sustainable and environmentally friendly transportation system that relies less on fossil fuels.

- Goal of “EVRC Project”

The goal of the EVRC project is to create a comprehensive and sustainable electric vehicle charging and car booking system. The project aims to provide a user-friendly platform that enables individuals to conveniently and easily book electric vehicles for rent and access electric vehicle charging stations. This system will promote the adoption of electric vehicles and reduce carbon emissions associated with traditional gasoline-powered vehicles. The EVRC project will focus on creating a network of charging stations in convenient locations, developing efficient booking and payment systems, and providing exceptional customer service to users. The ultimate goal is to create a

sustainable and efficient transportation system that benefits both individuals and the environment.

- What is the problem facing with fueled (petrol and diesel) vehicles? How it is overcome with electronic vehicles?

One of the main problems with fueled vehicles is their contribution to air pollution and greenhouse gas emissions, which can have negative impacts on human health and the environment. In contrast, EVs produce zero emissions and have a much smaller carbon footprint, making them a more environmentally friendly option.

Another problem with fueled vehicles is their dependence on fossil fuels, which are finite resources that contribute to climate change. EVs, on the other hand, can be powered by renewable energy sources such as solar or wind power, reducing dependence on fossil fuels.

Fueled vehicles also tend to be less energy-efficient than EVs. They have lower energy conversion rates, which means they require more energy to travel the same distance. This can result in higher fuel costs for drivers. EVs, on the other hand, have higher energy conversion rates and require less energy to travel the same distance, making them a more cost-effective option in the long run.

Overall, electric vehicles offer several advantages over fueled vehicles, including reduced emissions, reduced dependence on fossil fuels, and increased energy efficiency. These advantages make EVs a more sustainable and efficient mode of transportation that can help to overcome many of the problems associated with fueled vehicles.

DESIGN FLOW & PROCESS

The basic idea was to make the website so friendly so that everyone can gain knowledge cheaply and easily using front-end technology. This project covers all the major kind of course so that more and more people can easily learn. A simple design of E-Learning. It is an interactive website we provide assistance through the mail. The technology used is HTML, CSS, JS, and PHP.

HTML stands for Hyper Text Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between web pages. A markup language is used to define the text document within the tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.

Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page. It describes how a webpage should look: it prescribes colors, fonts, spacing, and much more. In short, you can make your website look however you want. CSS lets developers and

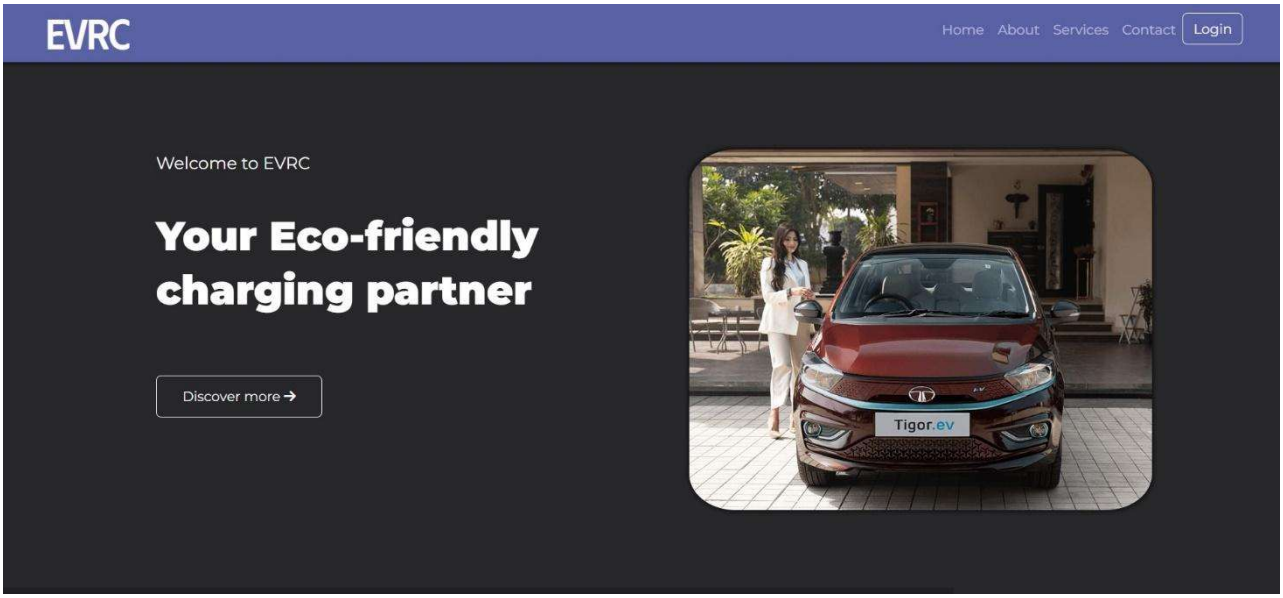
designers define how it behaves, including how elements are positioned in the browser.

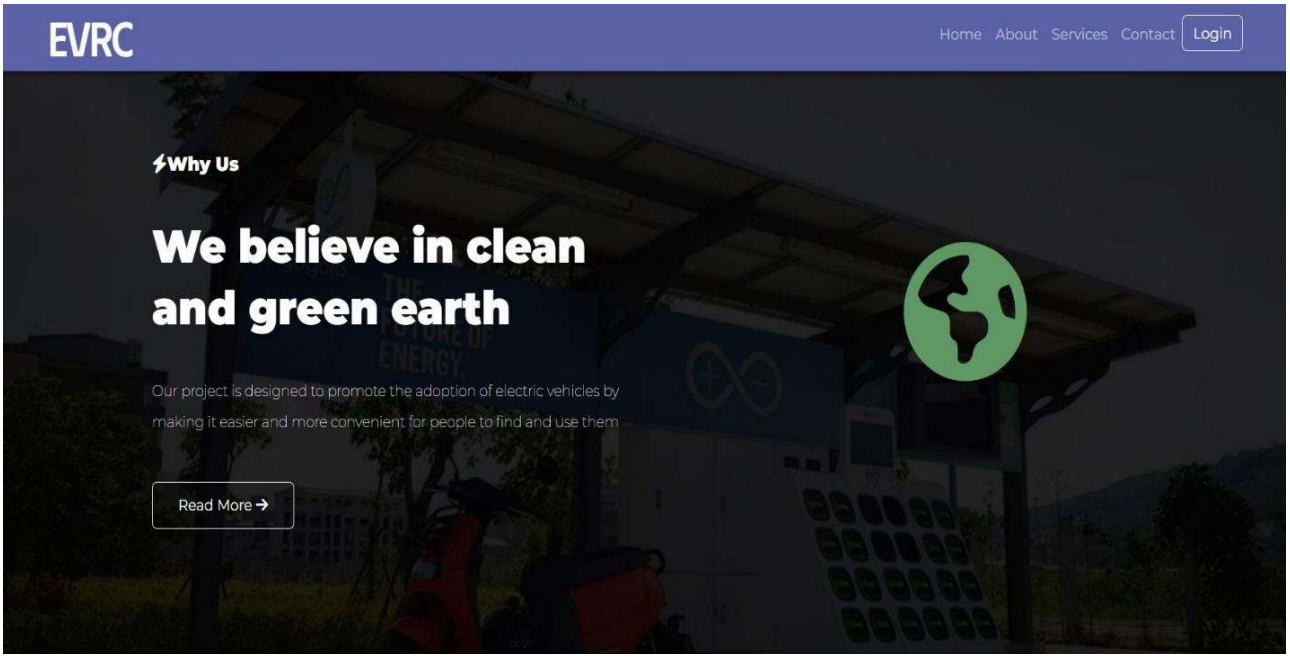
Java script is a scripting language used to enhance the functionality of the browser. Java script is integrated with HTML and navigator 2.02. Java script facilitates the developer with properties related to document windows, frames, loaded documents and link. The J2EE platform specifies the logical application components within a system and defines the role played in the development process.

The term PHP is an acronym for PHP: Hypertext Preprocessor. PHP is a server-side scripting language designed specifically for web development. It is open-source which means it is free to download and use. It is very simple to learn and use. The files have the extension ".PHP".

Result & validate code

HOME PAGE:





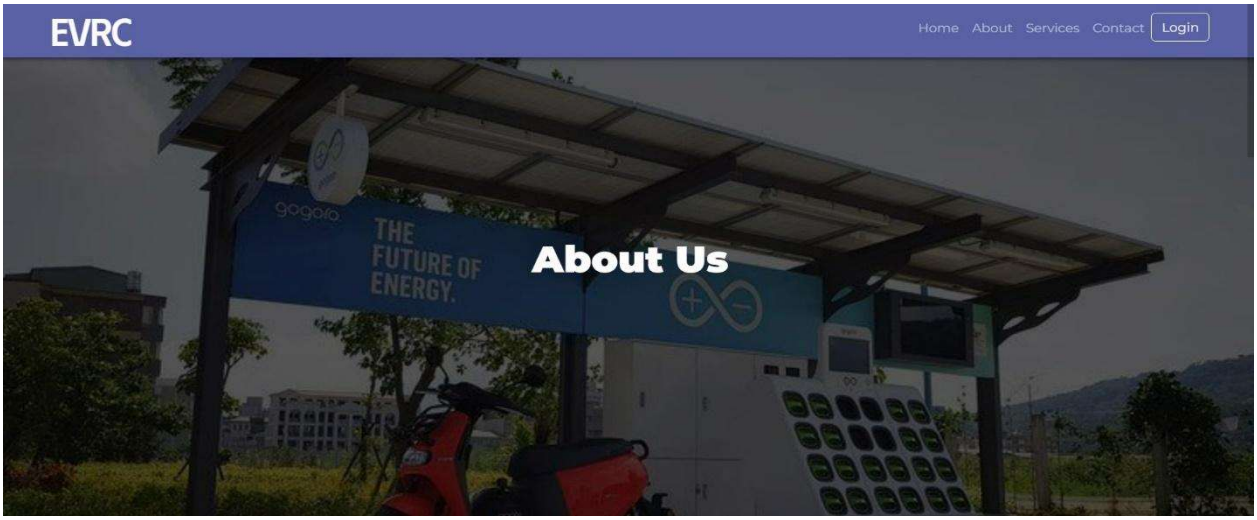
Home page code:

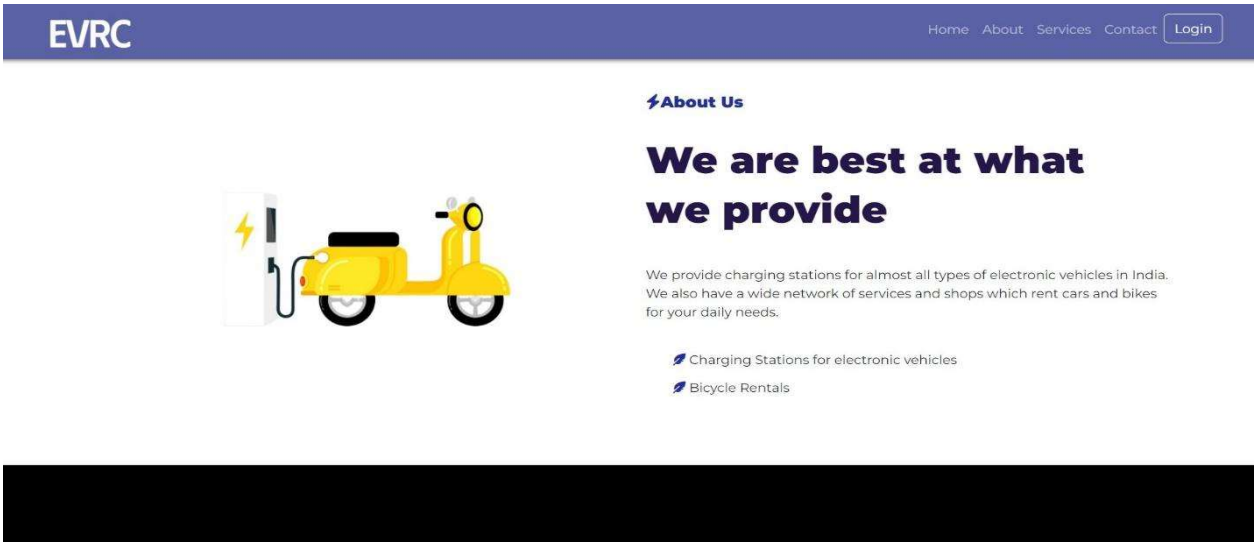
```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <link rel="icon" href="images/placeholder.png">
    <link rel="stylesheet" href="https://unpkg.com/aos@next/dist/aos.css" />
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/css/bootstrap.min.
css" rel="stylesheet"

integrity="sha384-KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJO
Z" crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/js/bootstrap.bundle
.min.js"

integrity="sha384-ENjdO4Dr2bkBIFxQpeoTz1HIcje39Wm4jDKdf19U8gI4ddQ3GYNS7NTKfAdVQSZ
e"
        crossorigin="anonymous"></script>
    <link rel="preconnect" href="https://fonts.googleapis.com">
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
    <link
href="https://fonts.googleapis.com/css2?family=Montserrat:wght@100;400;900&family
=Phudu&display=swap"
        rel="stylesheet">
    <script src="https://kit.fontawesome.com/a31224cfff.js"
crossorigin="anonymous"></script>
    <link rel="stylesheet" href="css/styles.css?v=<?php echo time(); ?>">
    <title>EVRC</title>
</head>

<body>
    <div id="wrapper">
    <section id="title">

        <!-- Navigation  -->

        <?php   include "navigation.html"; ?>

        <!-- Title -->

        <div class="container top-container">

            <div class="row">
                <div class="col-lg-6 title-cols">
                    <h5 data-aos="fade-right" data-aos-duration="1000"
data-aos-mirror="true">Welcome to EVRC</h5>
```

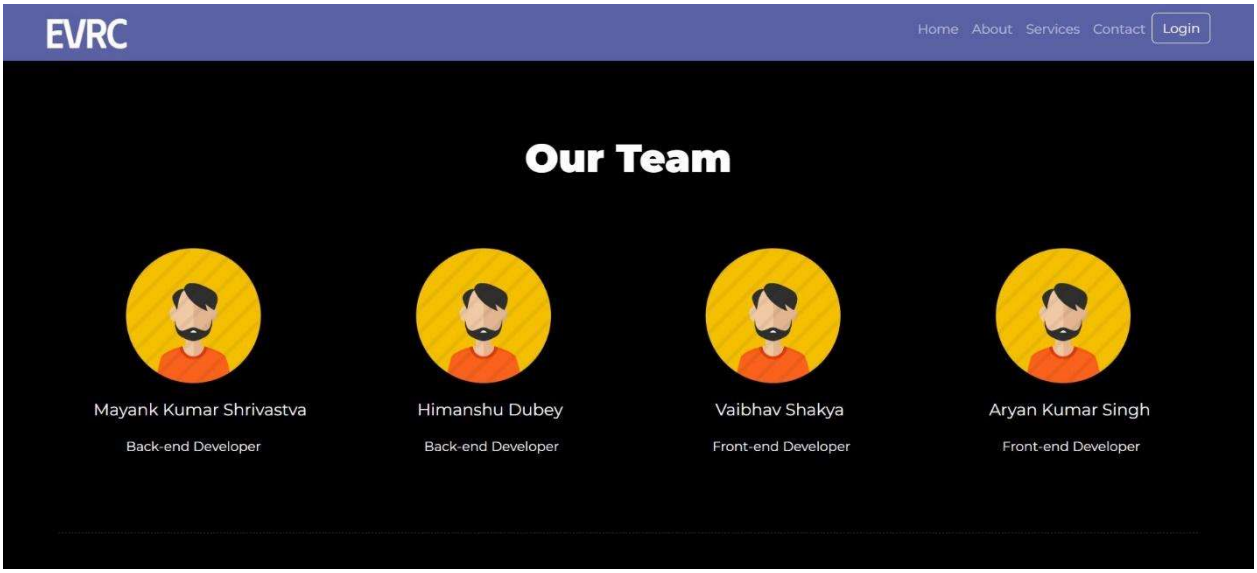
```
                    <h1 data-aos="fade-up" data-aos-duration="1000"
data-aos-mirror="true">Your Eco-friendly charging partner</h1>
                    <a href="about.php"><button data-aos="fade-in"
data-aos-duration="1000" data-aos-mirror="true" type="button" class="btn
btn-outline-light" id="title-button">Discover more <i
                                class="fa-solid fa-arrow-right"></i></button></a>
                </div>
                <div class="col-lg-6 title-cols">
                    <img data-aos="fade-left" data-aos-duration="1000"
data-aos-mirror="true" id="title-img" src="images/titleImage.png"
alt="Electric-vehicle-img">
                </div>
            </div>

        </div>

    </section>
 <section id="why-section">
        <div class="container.fluid why-container">

            <!-- <img src="images/scooterCharging.jpg" alt="" class="why-bg
img-responsive"> -->

            <div class="row why-content">

                <div class="col-lg-6">
                    <h5 id="why-h5" data-aos="fade-right"
data-aos-duration="1000" data-aos-mirror="true"><i class="fa-solid
fa-bolt"></i>Why Us</h5>
                    <h1 data-aos="fade-left" data-aos-duration="1000"
data-aos-mirror="true">We believe in clean and green earth</h1>
                    <p id="why-p" data-aos="fade-up" data-aos-duration="1000"
data-aos-mirror="true">
                        Our project is designed to
                        promote the adoption of electric vehicles by making it
easier and more
                        convenient for people to find and use them
                    </p>
                    <a href="services.php"><button data-aos="fade-in"
type="button" class="btn btn-outline-light" id="why-button"
data-aos-duration="1000" data-aos-mirror="true">Read More <i
                        class="fa-solid fa-arrow-right"></i></button></a>
                </div>
                <div class="col-lg-6" id="earth-logo" data-aos="fade-in"
data-aos-duration="1000" data-aos-mirror="true">
                    <i class="fa-solid fa-earth-americas" style="color:
#609966;"></i>
                </div>

            </div>

        </div>
```

```
</section>
```

About us:





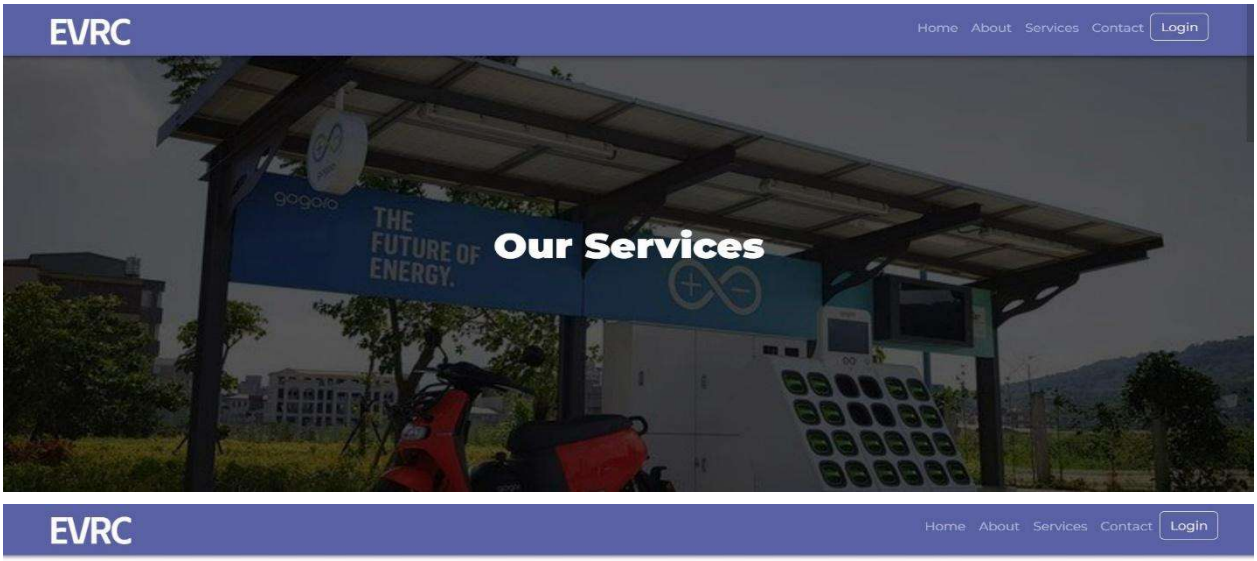


About us code:

```
<section id="about-section">

        <div class="container about-container">
            <div class="row">
                <div class="col-lg-6" id="about-image">
                    <img data-aos="fade-right" data-aos-duration="1000"
id="about-img" src="images/Scooter.png" alt="Scooter-img">
                </div>
                <div class="col-lg-6">
                    <h5 class="about-h5" data-aos="fade-left"
data-aos-duration="1000" data-aos-mirror="true"><i class="fa-solid
fa-bolt"></i>About Us</h5>
                    <h1 class="about-h1" data-aos="fade-right"
data-aos-duration="1000" data-aos-mirror="true">We are best at what we
provide</h1>
                    <p data-aos="fade-up">We provide charging stations for almost
all types of electronic vehicles in India. We also have a
                        wide network of services
                        and shops which rent cars and bikes for your daily needs.
                    <ul class="about-ul">
                        <li data-aos="fade-right" class="about-ul-li"
data-aos-duration="1000" data-aos-mirror="true"><i class="fa-solid
fa-feather-pointed" style="color: #242f9b"></i>
                            Charging Stations for electronic vehicles</li>
                        <li data-aos="fade-left" class="about-ul-li"
data-aos-duration="1000" data-aos-mirror="true"><i class="fa-solid
fa-feather-pointed" style="color: #242f9b"></i>
                            Bicycle Rentals</li>
```

```
                    </ul>
                    <a href="about.php"><button data-aos="fade-in" type="button"
class="btn btn-primary read-button" data-aos-duration="1000"
data-aos-mirror="true">Read More <i
                                class="fa-solid fa-arrow-right"></i></button></a>
                    </p>
                </div>
            </div>
        </div>

    </section>
```

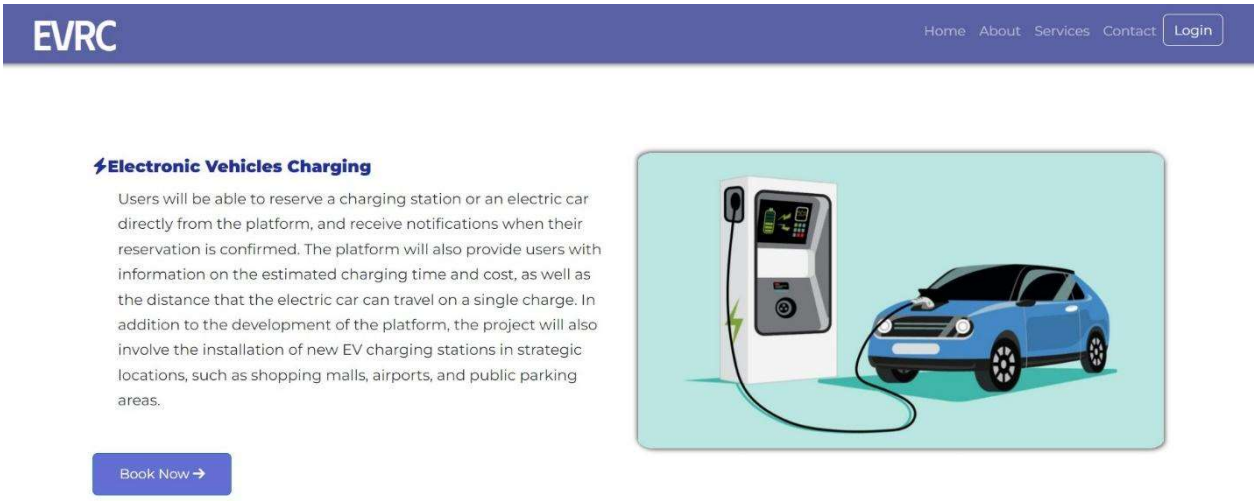
Service page:



⚡Electronic Vehicles Rental

The EV charging station and car booking project is a comprehensive solution designed to make it easier for people to transition to electric vehicles. The project includes the development of a platform that allows users to find and book electric cars in their area. The platform will be designed to be user-friendly and accessible, , even for people who may not be familiar with electric vehicles or the charging process. The platform will feature a map that shows the location of available charging stations and electric cars, along with real-time availability information.

Book Now →

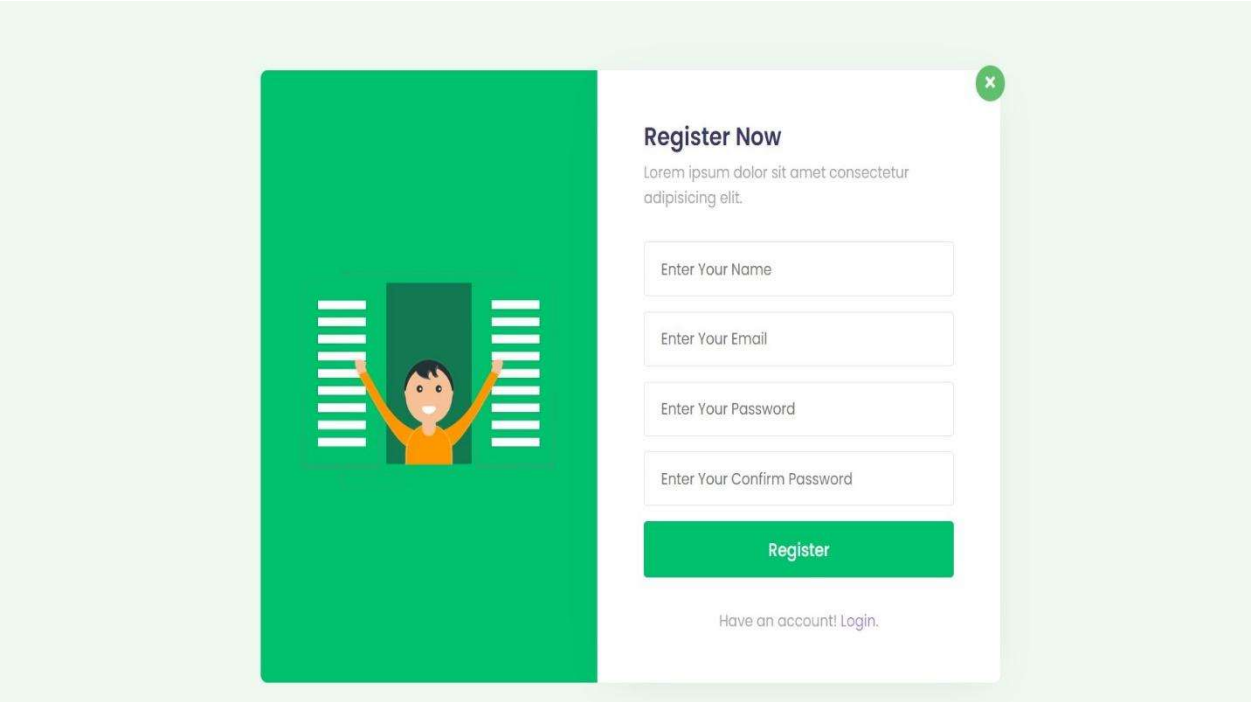


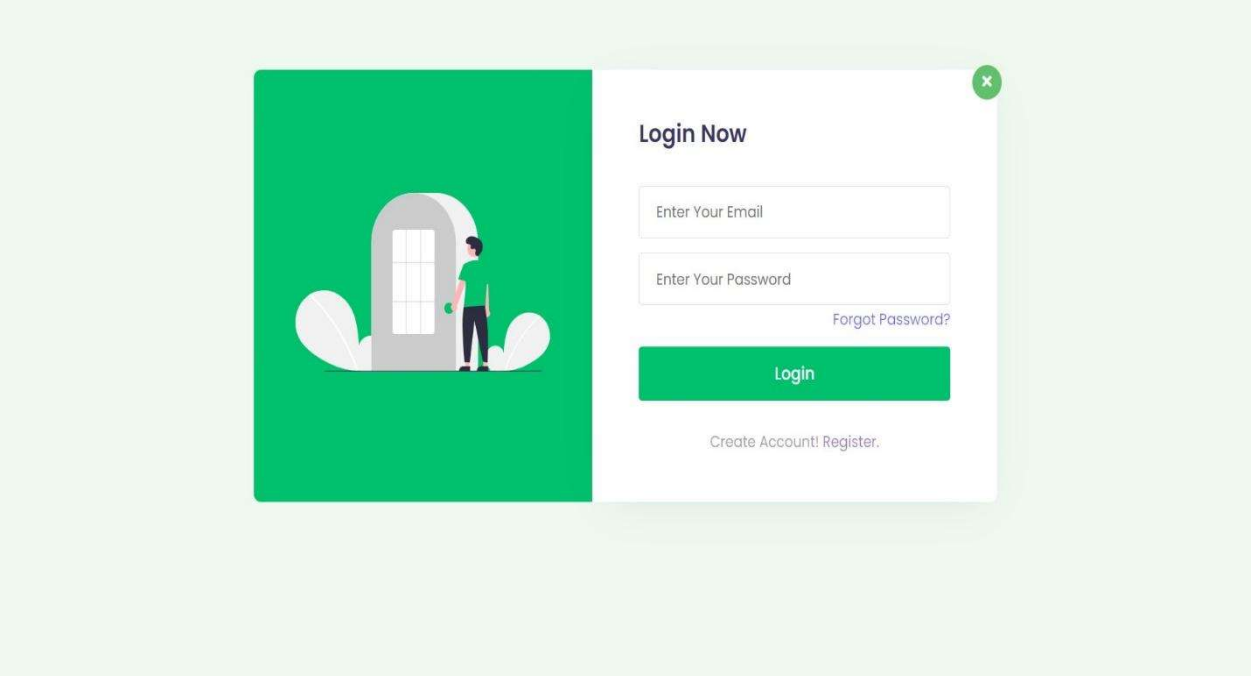
Service page code:

```
<section class="Services" id="Services">
        <div class="heading">
            <span>Best Services</span>
            <h1>Explore Out Top Deals <br> From Top Rated Dealers</h1>
        </div>
        <div class="services-container">
            <div class="box">
                <div class="box-img">
                    <img src="img/AARGO Charging Station.png" alt="">
                </div>
                <h1>AARGO Charging Station</h1>
                <h3>Location: Kosi Kalan </h3>
                <h3>Charging Timeing : 24 Hours </h3>
                <h3>Address: Asli Pappu Dhaba, Near Kotwan Police Chowki, Up
Border, Kosi Kalan, Uttar Pradesh 281403 </h3>
                <h2>charges: 1Rs per min </h2>
                <a href="../user/login" class="btn">Book A Slot</a>
            </div>
            <div class="box">
                <div class="box-img">
                    <img src="img/Yahhvi Charging Station.png" alt="">
                </div>
                <h1>Yahhvi Charging Station</h1>
                <h3>Location: Vrindavan </h3>
                <h3>Charging Timeing : 24 Hours </h3>
                <h3>Address: Brij Healthcare , Attala Chungi, Vatsalya Gram,
Vrindavan, Uttar Pradesh 281121</h3>
                <h2>charges: 0.90Rs per min </h2>
                <a href="../user/login" class="btn">Book A Slot</a>
```

```
        </div>
        <div class="box">
            <div class="box-img">
                <img src="img/Saraswat Motors .png" alt="">
            </div>
            <h1>Saraswat Motors Station</h1>
            <h3>Location: Lohvan </h3>
            <h3>Charging Timeing : 24 Hours </h3>
  <h3>Address: Lohvan, Raipur Mai Banger,  Chungi, Uttar Pradesh 281204 </h3>
            <h2>charges: 1.2Rs per min </h2>
            <a href="../user/login" class="btn">Book A Slot</a>
        </div>
    </div>
</section>
```

Register and Login page:





Register and Login page codes:

Register page code:

```
<section class="w3l-mockup-form">
        <div class="container">
            <!-- /form -->
            <div class="workinghny-form-grid">
                <div class="main-mockup">
                    <div class="alert-close">
                        <span class="fa fa-close"></span>
                    </div>
                    <div class="w3l_form align-self">
                        <div class="left_grid_info">
                            <img src="images/image2.svg" alt="">
                        </div>
                    </div>
                    <div class="content-wthree">
                        <h2>Register Now</h2>
                        <?php echo $msg; ?>
                        <form action="" method="post">
```

```
                        <input type="text" class="name" name="name"
placeholder="Enter Your Name" value="<?php if (isset($_POST['submit'])) { echo
$name; } ?>" required>
                        <input type="email" class="email" name="email"
placeholder="Enter Your Email" value="<?php if (isset($_POST['submit'])) { echo
$email; } ?>" required>
                        <input type="password" class="password"
name="password" placeholder="Enter Your Password" required>
                        <input type="password" class="confirm-password"
name="confirm-password" placeholder="Enter Your Confirm Password" required>
                        <button name="submit" class="btn"
type="submit">Register</button>
                    </form>
                    <div class="social-icons">
                        <p>Have an account! <a
href="index.php">Login</a>.</p>
                    </div>
                </div>
            </div>
        </div>
        <!-- //form -->
    </div>
</section>
```

Login page code:

```
<section class="w3l-mockup-form">
    <div class="container">
        <!-- /form -->
        <div class="workinghny-form-grid">
            <div class="main-mockup">
                <div class="alert-close">
                    <span class="fa fa-close"></span>
                </div>
                <div class="w3l_form align-self">
                    <div class="left_grid_info">
                        <img src="images/image.svg" alt="">
                    </div>
                </div>
                <div class="content-wthree">
                    <h2>Login Now</h2>

                    <?php echo $msg; ?>
                    <form action="" method="post">
```

```
                            <input type="email" class="email" name="email"
placeholder="Enter Your Email" required>
                            <input type="password" class="password"
name="password" placeholder="Enter Your Password" style="margin-bottom: 2px;"
required>
                            <p><a href="forgot-password.php"
style="margin-bottom: 15px; display: block; text-align: right;">Forgot
Password?</a></p>
                            <button name="submit" name="submit" class="btn"
type="submit">Login</button>
                        </form>

                    </div>
                </div>
            </div>
            <!-- //form -->
        </div>
    </section>
```

CONCLUSION & FUTURE WORK ON EVRC PROJECT

From the information provided, it seems that the EVRC project involves developing a system for electronic vehicle charging and car booking on rent. While it's difficult to draw a comprehensive conclusion without more details about the project, here are some potential key takeaways and areas for future work:

Conclusion:

- The EVRC project has the potential to promote sustainable transportation by facilitating electric vehicle use and car-sharing.

- The project likely involves significant technical and logistical challenges, such as developing a reliable charging infrastructure and implementing a seamless booking system.
- The success of the project will likely depend on factors such as user adoption, convenience, and cost-effectiveness.

Future work:

- Conduct user research to understand the needs and preferences of potential EVRC users and incorporate their feedback into the system design.
- Develop partnerships with electric vehicle manufacturers, charging infrastructure providers, and rental car companies to expand the reach and impact of the project.
- Explore innovative business models, such as partnerships with local governments or advertising sponsorships, to help fund and sustain the project.
- Continuously monitor and evaluate the system's performance, user satisfaction, and impact on environmental sustainability, and make adjustments as needed.