GREEN DRIVE

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Abstract: As the world evolves towards becoming more environmentally conscious, more people are opting to buy electric automobiles. Users of electric cars often have a difficult time finding charging stations. The systems now in use for identifying charging stations are often outdated, unreliable, and provide only limited information on location and availability. Anxiety over the car's range and difficulties in owning an electric vehicle might be the result of lengthy charging times and ambiguity. These problems can be solved with an app that locates and books charging stations for electric vehicles.

Keywords: Electric vehicle, Green Drive, Android,

I. INTROUDCTION

Those who own electric vehicles can benefit from the Android Electric Vehicle (EV) Charging Point Finder and Booking App. The proliferation of electric vehicles has led to an increase in the need for charging stations.Theprogramme is an attempt to find a solution to this issue by offering a comprehensive solution to discover and reserve electric vehicle charging spots. The proliferation of electric vehicles is dependent on charging stations. Even if there are more charging outlets available, owners of electric vehicles are nonetheless concerned about infrastructure. This programme seeks to address this difficulty by offering a user interface that is intuitive and simple to navigate in order to discover and reserve electric vehicle charging sites. This Android app is essential for people who drive electric cars. It will find and reserve charging stations for electric vehicles. The increasing popularity of electric cars has promptedworries about the availability of charging stations. Users are able to quickly locate and reserve a nearby charging outlet with the assistance of this app. This app is for owners of electric vehicles who require access to charging facilities.Thisprogramme is useful for a variety of purposes, including both personal a fleet of electric vehicles are all able to make use of it [1].

SCOPE:
Anyone who needs to travel short distances quickly and conveniently can use the app. This includes commuters, students, tourists, and anyone else who needs to get around a city quickly and easily.

OBJECTIVES:

1.   To provide users with a fast and convenient way to rent bikes and scooters for short distance travel.
2.   To ensure safe and secure rentals with operator-verified QR code scanning.
3.   To provide a user-friendly interface that is easy to use and navigate.

II.   LITERATURE SURVEY

PRESENT SYSTEM

Travel plans for owners of electric cars who charge their vehicles at home have to take into account both the vehicle's range and the amount of time it takes to charge. Charge the battery of the electric vehicle before you leave the house. If the battery in an electric car runs out, the driver will be stranded and inconveniently delayed until the car can be charged again [1].

This is especially problematic for the user if they are on an isolated road or in a location with a limited number of charging options. Drivers of electric cars who have run out of battery power may also experience range anxiety. Because of this, the individual may experience stress and anxiety, which may impact their travel and activities.

The ability to charge a device at home is convenient and cost-effective, but it may not be sufficient for lengthy journeys or unexpected detours. There is a possibility that owners of electric cars may need to charge their vehicles at public charging stations [2].

Disadvantages of Present System

There are several disadvantages of depending on public or private means of transport for commuting inside the city, including:

1.   Unreliable schedules: Public transport schedules may not always be reliable, leading to missed appointments or late arrivals.
2.   Overcrowding: Public transport systems can often be overcrowded during peak hours, making travel uncomfortable and stressful.
3.   Congestion: Private transport options such as cars and taxis can contribute to traffic congestion, leading to increased travel time and delays.
4.   Limited flexibility: Public transport routes may not cover all areas of the city, limiting flexibility in travel plans.
5.   Cost: Private transport options such as cars and taxis can be expensive, particularly for daily commutes.
6.   Environmental impact: Private transport options such as cars contribute to pollution and environmental degradation.

III.   PROPOSED SYSTEM

The solution under consideration makes it easier for owners of electric vehicles to locate charging stations, schedule charging times, and manage their charging sessions. Charge stations will be easier to find for owners of electric cars thanks to this software. Additionally, the app gives information about charging stations.

Trips and charging times are more easily organized for people who own electric cars. Additionally, the software will enable owners of electric cars to secure charging sites in advance, allowing them to avoid having to wait in queue.

The strategy that has been proposed will make it possible to reduce the negative effects of the existing system. Users of electric cars may alleviate range anxiety and reduce the number of times they need to stop at a charging station by planning their trips and charging schedules with the information provided by charging stations. The project also helps cut down on wait times at charging stations by enabling owners of electric vehicles to schedule their charging sessions in advance.

By making it easier and more convenient to charge electric cars, the planned infrastructure would promote the usage of these vehicles and lead to a reduction in the consumption of fossil fuels.
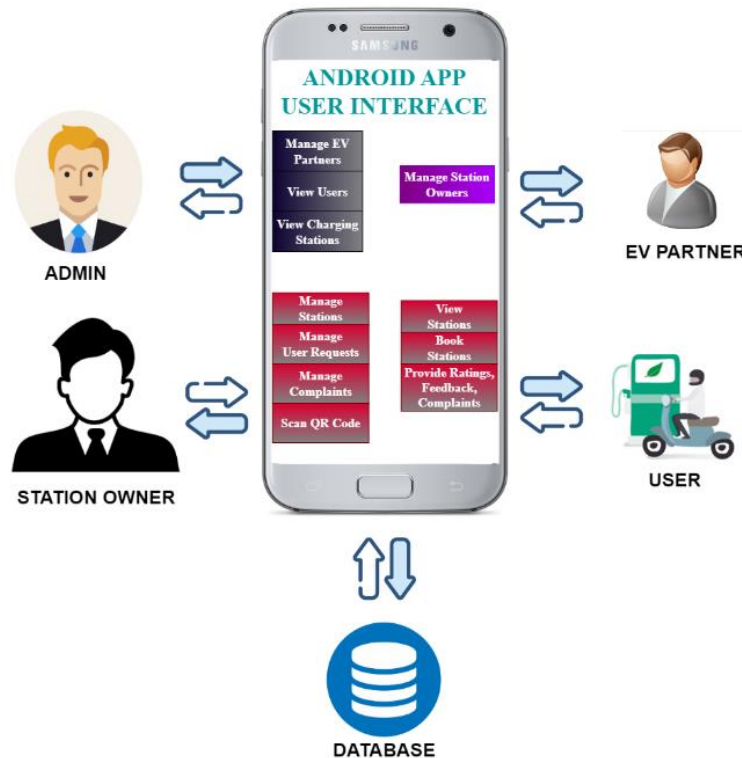
System Architecture

IV. METHODOLOGY

QR code technology, short for Quick Response code technology, is a two-dimensional barcode system that was developed in 1994 by Denso Wave, a subsidiary of the Japanese company Denso Corporation. QR codes are designed to store information in a machine-readable format and have become widely popular due to their ability to store a large amount of data compared to traditional barcodes.

The structure of a QR code consists of a matrix of black and white squares, which can be scanned and interpreted by various devices, such as smartphones, tablets, or dedicated QR code scanners. The information encoded within the QR code can be anything from simple text, URLs, contact information, to more complex data like Wi-Fi login credentials, payment information, and app download links.

V. LIMITATIONS

1. Coverage and Availability: The app's effectiveness heavily relies on the availability of real-time data on charging station locations and their availability. If the app's database is not up-to-date or lacks comprehensive coverage, users may still struggle to find suitable charging stations.

2. User Adoption: The success of the app depends on widespread adoption by electric car owners. If only a small percentage of users utilize the app, it may not have a significant impact on addressing the overall charging station locating problem.

3. Dependence on Internet Connectivity: The app requires a stable internet connection to function properly. In areas with poor network coverage, users may face difficulties in accessing real-time information about charging stations.

4. Platform Compatibility: Depending on the development of the app, it may not be available for all mobile platforms (iOS, Android, etc.), limiting its accessibility to a subset of users.

5. **Charging Speed and Wait Times:** While the app can help locate charging stations, it cannot control the charging speed or predict wait times, which can still lead to longer charging periods and potential inconvenience.

VI. CONCLUSION

The Electric Vehicle Charging Point Finder and Booking App is a user-friendly application that makes it easier for owners of electric vehicles to locate and book charging sites. Users are able to rapidly identify the nearest charging point and reserve it in advance using the search option that this app provides. Other features of the app, such as the ability to pay, get alerts, ratings, and reviews, help to make it a complete answer to all of your questions regarding charging points. For owners of electric vehicles, the application is designed to make the process of locating and reserving charging outlets as uncomplicated and as convenient as possible.

VII. FUTURE ENEHANCEMENT

There are several potential future enhancements

1. Green Energy Integration: Incorporate information about charging stations powered by renewable energy sources. This feature can help environmentally conscious users find charging stations that align with their sustainability goals.

2. Smart Notifications: Send users notifications about charging station availability, charging progress updates, and nearby charging events. This can keep users informed and help them optimize their charging routines.

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