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On Road Vehicle Breakdown Help Assistance Web Application

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ABSTRACT

The On Road Vehicle Breakdown Application proposes a solution to the common challenge faced by individuals experiencing vehicle breakdowns in remote areas. Unlike existing systems, this application connects registered users with certified mechanics through a secure platform. By offering a comprehensive database of approved mechanics, users can quickly locate assistance regardless of their location. This initiative aims to address the prevalent issue of inaccessible vehicle repair services in remote areas, ensuring prompt and reliable assistance for motorists in need.

Keywords: Vehicle Breakdowns, Remote Assistance, Certified Mechanics, Mobile Application, Roadside Support

I. INTRODUCTION

Introducing our advanced Vehicle Management System, a comprehensive desktop application tailored to streamline your vehicle service operations. This cutting-edge platform empowers company staff to effectively manage customer orders and swiftly locate mechanics across different regions.

Admin privileges provide full control over user and mechanic details, allowing for seamless management and oversight. Users benefit from the convenience of accessing nearby mechanics in emergency situations, facilitating prompt assistance when needed.

Mechanics, eager to provide their services, can promptly respond to user requests, ensuring efficient service delivery. Upon completion, mechanics share service details with the admin for accurate billing.

Our platform not only simplifies the process for users but also optimizes the workflow for mechanics, reducing time and costs associated with traditional service methods.

Experience the future of vehicle service management with our innovative application, designed to enhance efficiency, convenience, and cost-effectiveness for all stakeholders involved.

II. METHODS AND MATERIAL

Authentication: This sub-module manages the authentication process, ensuring that only authorized individuals can access the administrative functionalities of the system. Admins are required to provide valid login credentials to authenticate their identity.

Manage Mechanics: Admins have the authority to oversee and administer registered mechanics within the system. This includes tasks such as reviewing mechanic profiles, approving new registrations, and blocking or suspending accounts if necessary.

Manage Users: Within this sub-module, admins can view and manage user accounts. They have the capability to monitor user activity, address user queries or issues, and ensure the smooth functioning of user-related processes.

Feedback Management: Admins are responsible for managing feedback received from both users and mechanics. They can access feedback submissions, analyze feedback data, and take appropriate actions based on user or mechanic reviews.

III. RESULTS AND DISCUSSION

A comparative analysis is conducted between the existing system and the proposed system to evaluate performance improvements. The proposed system introduces enhancements that address existing challenges, resulting in a more efficient and effective solution. It is observed that the proposed system leads to a significant improvement in performance metrics.

By implementing the proposed concept, approximately 70% increase in performance is achieved. This enhancement signifies the effectiveness of the proposed system in overcoming limitations present in the existing system. With improved performance, users can expect enhanced functionality, reliability, and overall user experience, thereby fostering greater satisfaction and utility.

IV. LITERATURE SURVEY

Firstly, Sai-Chand, Emily-Moylan, S. Travis-Waller, and Vinayak-Dixit conducted a thorough examination of the frequency of vehicle breakdowns and incidents where vehicles were left stranded on roads. Their research involved the compilation and analysis of a comprehensive dataset spanning 4.5 years. By scrutinizing various traffic events, their study aimed to provide insights into the patterns and causes of vehicle breakdowns [1].

Another notable contribution comes from Miss-Harsha-Supare, Miss-Kanchan-Yadav, MissDivya-Solav, Mr. Aniket-Budhbaware, and Mr. SahilDaronde, who proposed the Breakdown Alliance Station. This collaborative initiative involves multiple stakeholders, including individuals, vehicle repair centers, and on-road assistance systems. By fostering cooperation among these entities, the Breakdown Alliance Station seeks to enhance the efficiency and accessibility of roadside assistance services [2].

V. DATABASE COLLECTION

The database plays a crucial role in storing and managing all records related to mechanic shop details and user information within the application. By maintaining a centralized database, it becomes easier to access and retrieve data as needed. Users can utilize the database to search for nearby mechanic shops, which are stored with relevant details such as location, services offered, and contact information.

User details, as well as business owner details, are stored in the database to facilitate user management and business operations. Admins have access to view and manage these records, including providing

approval for registered businesses. Additionally, admins monitor user feedback to assess the quality of service provided by mechanic shops, ensuring accountability and continuous improvement

VI. FUTURE ENHANCEMENT

In the future, several enhancements can be implemented to further improve the functionality and usability of the application:

1. Categorization of Vehicle and Spare Parts Shops: Implement a feature to categorize vehicle and spare parts shops according to the specific vehicle models. This will enable users to easily find relevant spare parts for their vehicles, thereby saving time and enhancing convenience.

2.Integration of Additional Services: Expand the application's services by adding a list of hospitals and fuel stations. This will provide users with comprehensive assistance in case of emergencies or other needs while on the road.

VII. CONCLUSION

In conclusion, the On Road Vehicle Breakdown Application offers a convenient solution for drivers encountering vehicle breakdowns. Instead of relying on manual methods or seeking help from strangers, users can efficiently locate nearby mechanics through the application based on their current location. This streamlined process saves users time and ensures prompt assistance, ultimately enhancing their travel experience.

Overall, the On Road Vehicle Breakdown Application serves as a valuable tool for drivers, offering them peace of mind and efficient solutions during unforeseen mechanical issues on the road.

V. REFERENCES

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