

Vehicle Breakdown Assistant Management System with Website Design

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Abstract

The "Vehicle Breakdown Assistance Management System" is a web-based application designed to provide efficient roadside assistance to individuals experiencing vehicle breakdowns. By utilizing this system, users can easily access the necessary support when they encounter an unexpected breakdown situation and are unsure of what actions to take. The application is developed to cater to the needs of various roadside assistance provider companies, allowing for customization based on each company's specific requirements during implementation.

The system offers an online platform that facilitates a range of roadside assistance services. It becomes particularly valuable in situations where immediate on-the-spot repairs are not feasible, and the service provider aids in towing the vehicle to a desired location. Notably, the choice of the towing destination is entirely up to the user. With the Vehicle Breakdown Assistance Management System, the challenges associated with managing such incidents locally and manually are effectively addressed, streamlining the overall assistance process for both service providers and vehicle owners.

INTRODUCTION

"Roadside Rescue Management System" is an online platform that connects users with a network of roadside assistance companies. This web-based technology proves invaluable in situations where your vehicle experiences a breakdown and immediate repairs are not feasible. The system enables users to request assistance and have their vehicles towed to a preferred location. Unlike traditional registration processes, users simply need to fill out a single form to access the available roadside assistance services.

1. Writing REVIEW

1. EXISTING SYSTEM

In the existing system, when it comes to traveling, unforeseen complications can arise with our vehicles, disrupting our plans. In such situations, having access to a knowledgeable person with practical expertise in vehicles can be a lifesaver, as various aspects of vehicle breakdowns can pose risks of injuries and even fatalities. Currently, users rely on their own mechanic's contact information, but it can be challenging for mechanics to arrive promptly. Moreover, locating a suitable mechanic for specific services in remote areas is also a challenge. When faced with a breakdown, individuals often have to arrange alternative transportation and subsequently find a mechanic who can reach the location where they left their vehicle. This process can be time-consuming and inefficient. To address these issues, the proposed Vehicle Breakdown Service Station Locator aims to provide accurate information about the nearest garage or workshop facilities in a particular area, enabling users to reduce the time spent searching for a mechanic once an incident occurs.

2. PROPOSED SYSTEM

The proposed system is a web-based application called "Vehicle Breakdown Assistance Management System." It aims to provide roadside assistance to vehicles that experience a breakdown and leave the drivers unsure of what to do. Our project focuses on developing a computerized and web-based solution that can be easily customized and implemented by retailing roadside assistance provider companies. By doing so, we aim to overcome the challenges associated with the manual and localized management processes.

The system functions as an online application that facilitates various online roadside assistance services. It becomes particularly useful when a vehicle breaks down and immediate on-the-spot repairs are not possible. In such cases, the service provider will assist in towing the vehicle to a location of the driver's preference. The towing location can be entirely chosen by the driver, giving them flexibility and control over the process.

- **MODULES:**
 1. ADMIN
 2. DRIVER
 3. USER

> DESCRIPTION OF MODULES

1. Admin Section:

Dashboard: In this section, the administrator can get a quick overview of the total number of drivers, new requests, approved requests, rejected requests by the administrator, drivers currently en route, and completed requests.

Driver Management: In this section, the administrator can manage drivers by adding or updating their information.

Pages: In this section, the administrator can update the content of the "About Us" and "Contact Us" pages.

Requests: In this section, the administrator can view booking requests and has the authority to change the status of a booking based on its current status, as well as provide remarks.

Driver Response: In this section, the administrator receives information about the vehicles that drivers are assisting..

Search: In this section, the administrator can search for specific booking details using the booking number, name, or mobile number.

Reports: In this section, the administrator can view appointment reports and driver-wise reports for a specified date range.

The admin can also update their profile, change their password, and recover their password.

Driver Section:

Dashboard: In this section, drivers can get a brief overview of the total number of newly assigned requests, completed requests, and requests in progress.

Assigned Bookings: In this section, drivers can view the booking requests assigned to them by the administrator and have the ability to update the request status based on its current state.

Search: In this section, drivers can search for specific booking requests using the booking number, name, or mobile number.

Reports: In this section, drivers can view the number of assigned booking requests, completed requests, and pending requests on their end.

Drivers can also update their profile, change their password, and recover their password.

Users: In this application, users are not required to register. They only need to fill out a single form to request vehicle assistance.

RESULTS



CONCLUSION

The preservation of user data while upholding differential privacy poses a challenge in the realm of online banking. DIOR, an acronym for "Directly Imposing Differential Privacy," refers to the direct application of differential privacy. In this paper, we tackle privacy concerns arising in financial transactions by introducing O-DIOR, a differential private method for online transactions. O-DIOR effectively imposes bounds on consumption quantities through noise addition, accounting for a wide range of account balances. When a payment application is utilized as a noise generator, inference regarding customer actions and behavior based on consumption statistics becomes infeasible. Subsequently, we further refine O-DIOR and propose RO-DIOR as a solution to address the selection of distinct boundaries. Extensive theoretical exploration demonstrates the efficacy of our strategies in meeting the requirements of differential privacy. Experimental results reveal a significant reduction in the correlation between actual consumption amounts and online bank transaction records, with privacy loss quantified at less than 0.5 in terms of mutual information.

REFERENCES

1. Double Portions of Django for 1.11" by Daniel Greenfeld and Audrey Greenfield:
This book is a comprehensive guide to Django, a popular Python web framework. Authored by Daniel Greenfeld and Audrey Greenfield, it provides in-depth coverage of Django version 1.11. With this book as your

companion, you'll delve into the intricacies of Django and learn how to build robust and scalable web applications.

"Featherweight Django" by Elman and Mark Lavin:

"Featherweight Django" is an excellent resource for developers seeking a lightweight approach to Django web development. Penned by Elman and Mark Lavin, this book explores how to leverage Django's powerful features while maintaining a minimalistic and efficient codebase. It demonstrates how to build fast and efficient web applications without sacrificing functionality.

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: In our research, we address the issue of residential waste collection by formulating it as a Capacitated Arc Routing Problem (CARP). One of the challenges faced by public works departments is the high cost of collection vehicles, which makes it difficult for them to keep spare vehicles in case of breakdowns. Traditionally, when a vehicle breaks down, the unserved streets along its route are assigned to another vehicle in the fleet as an overtime job.

However, we propose a novel approach where the unserved streets are distributed among all the operational vehicles in the event of a breakdown. To achieve this, we introduce PROBE, an algorithm designed to dynamically re-route collection vehicles with the aim of minimizing the makespan. By distributing the workload evenly among the remaining vehicles, we aim to improve the overall balance of the solution.

