

Vehicle Service System Using Mobile Application

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ABSTRACT

With the rapid increase in the number of Vehicles, maintaining and servicing Vehicles has become an essential requirement for Vehicle owners. Traditional Vehicle service systems require customers to physically visit service centers, which often results in long waiting times, lack of transparency in service status, and difficulty in finding nearby service providers.

To address these issues, this paper proposes a **Vehicle Service System using a Mobile Application** that connects Vehicle owners with nearby service centers through a digital platform. The system allows users to register, log in, and easily book Vehicle services by selecting their Vehicle type, describing the problem, and choosing a nearby service provider.

The application also provides service history tracking, service status updates, and communication between users and service providers. On the business side, service centers can manage bookings, update service progress, and maintain customer records.

The proposed system improves convenience, reduces waiting time, and enhances transparency in Vehicle servicing. It also helps service providers manage customer requests efficiently and improves overall service management.

Keywords: Vehicle Service System, Mobile Application, Service Booking, Vehicle Maintenance, Android Application, Service Management System.

I.INTRODUCTION:

The number of Vehicles on the road is increasing rapidly due to urbanization and improved transportation facilities. Regular maintenance and timely servicing of Vehicles are essential for ensuring safety, efficiency, and longer Vehicle life. However, traditional Vehicle service processes are often inconvenient and time-consuming.

In conventional systems, Vehicle owners must visit service centers physically to check availability, book services, or inquire about service status. This process can lead to long waiting times and poor service management.

With the advancement of **mobile technology and Android applications**, many daily activities are now performed digitally. Mobile applications provide a convenient platform for users to access services anytime and anywhere.

The Vehicle Service System using Mobile Application

aims to simplify the Vehicle servicing process by providing a digital interface for both customers and service providers. Users can book services, track service history, and receive updates about their Vehicle service status.

Service providers or mechanics can manage service requests, update repair status, and maintain records through the application. This system improves communication between customers and service providers while making the entire Vehicle servicing process more efficient and organized.

II. LITERATURE REVIEW:

Traffic congestion management has been an Vehicle service management has become an important area in the automobile industry due to the increasing number of Vehicles and the demand for efficient service management systems.

Earlier systems relied on manual booking and paper-based records for service management. These methods were inefficient, prone to errors, and difficult to maintain. Researchers and developers have introduced digital service management systems to improve efficiency.

Several studies have proposed **online Vehicle service booking systems**, where customers can book appointments through websites. These systems reduce waiting time but often lack real-time updates and mobile accessibility.

Recent developments focus on **mobile- based Vehicle service applications** that allow users to book services, track service progress, and receive notifications. Mobile applications provide better accessibility and user experience compared to traditional web-based systems.

Some systems also integrate **location-based services** to help users find nearby service centers and mechanics. This approach improves convenience for Vehicle owners and helps service providers reach more customers.

However, many existing systems focus only on service booking and lack features such as service history tracking, business account management, and real-time communication between customers and service providers.

The proposed **Vehicle Service System** addresses these limitations by providing a mobile application with dual interfaces for users and service providers, along with features such as service booking, service tracking, and service history management.

III. SYSTEM ARCHITECTURE:

The proposed Vehicle Service System consists of four main components:

1. **User Mobile Application**
2. **Service Provider Interface**
3. **Database System**
4. **Service Management Module**

The **User Mobile Application** allows Vehicle owners to create an account, log in, and book Vehicle services. Users can enter Vehicle details, select service type, describe the Vehicle problem, and choose nearby service centers.

The **Service Provider Interface** is used by mechanics or service centers to manage incoming service requests. Service providers can view bookings, update service status, and maintain customer service records.

The **Database System** stores all the important information such as user accounts, Vehicle details, service requests, and service history.

The **Service Management Module** processes service bookings and updates service progress. It ensures smooth communication between users and service providers.

This architecture ensures efficient service booking, service tracking, and record management within the system.

IV. FEEDBACK LOOP

A feedback loop plays an important role in improving the quality of services in the Vehicle Service System.

In this system, feedback is collected from users after the completion of Vehicle servicing. Users can rate the service and provide feedback about the quality of service provided by the service center.

This feedback helps service providers identify areas of improvement and maintain better service standards. It also helps new users choose reliable service providers based on ratings and reviews.

By continuously collecting feedback and improving services, the system ensures better customer satisfaction and service quality.

IV. CONCLUSION

The **Vehicle Service System using Mobile Application** provides an efficient and convenient solution for managing Vehicle servicing activities. The system allows users to easily book services, track service history, and receive updates through a

mobile application.

Service providers can manage customer requests, update service progress, and maintain service records efficiently. The integration of user and service provider interfaces improves communication and service management.

Overall, the proposed system reduces waiting time, improves service efficiency, and enhances the Vehicle servicing experience for both customers and service providers.

Future improvements may include features such as real-time service tracking, online payment integration, and AI-based Vehicle maintenance suggestions.

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