e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:07/Issue:03/March-2025 Impact Factor- 8.187 www.irjmets.com

VEHICLE SERVICE AND REPAIR MANAGEMENT SYSTEM

Prof. Radika. P. Malu[*1], Mudassir Khan[*2], Darshan. R. Marodkar[*3], Zaid Khan[*4], Yash. A. Biyani[*5]

[*1]Assistant Professor, Department Of Computer Science Engineering, PRPCEM, Amravati, Maharashtra, India.

[*2,3,4,5]UG Student, Department Of Computer Science Engineering, PRPCEM, Amravati, Maharashtra, India.

DOI : https://www.doi.org/10.56726/IRJMETS70026

ABSTRACT

The Vehicle Service and Repair Management System is a software solution designed to streamline and automate the process of vehicle servicing and repair. This system helps service centers manage customer appointments, track vehicle repair history, assign mechanics, generate service reports, and handle billing efficiently. It eliminates manual paperwork, reduces errors, and improves customer satisfaction by providing timely service updates and reminders.

The system features a user-friendly interface that allows customers to book appointments online, receive service estimates, and track the progress of their vehicle repair. Additionally, it provides service centers with a database to store vehicle and customer details, helping in better resource allocation and inventory management. By integrating features like automated notifications, invoicing, and service history tracking, this system enhances operational efficiency and transparency.

Overall, the Vehicle Service and Repair Management System aims to modernize traditional service workflows, reduce turnaround time, and improve service quality, ultimately benefiting both customers and service providers.

I. INTRODUCTION

Social In today's fast-paced world, where vehicles have become an integral part of our daily lives, the need for efficient, reliable, and convenient vehicle service and repair solutions is more significant than ever. The motivation behind our project lies in addressing the common challenges faced by vehicle owners, service centers.

We aim to provide an efficient, reliable, and convenient solution that improves the vehicle service and repair experience. This system seeks to empower vehicle owners with a user-friendly platform for service requests, scheduling repairs, and maintenance tracking. Simultaneously, it helps service centers streamline their operations, manage service requests efficiently, and enhance customer satisfaction

The role of social media in e-commerce extends beyond marketing and brand awareness. It serves as a vital sales channel through social commerce, where users can discover, browse, and purchase products without leaving the platform. Features such as Instagram Shopping, Facebook Marketplace, and TikTok Shop streamline the shopping experience, reducing friction and increasing conversion rates. Additionally, influencer marketing and user-generated content play a significant role in influencing purchasing decisions, as consumers tend to trust recommendations from people they follow and admire.

II. LITERATURE SURVEY

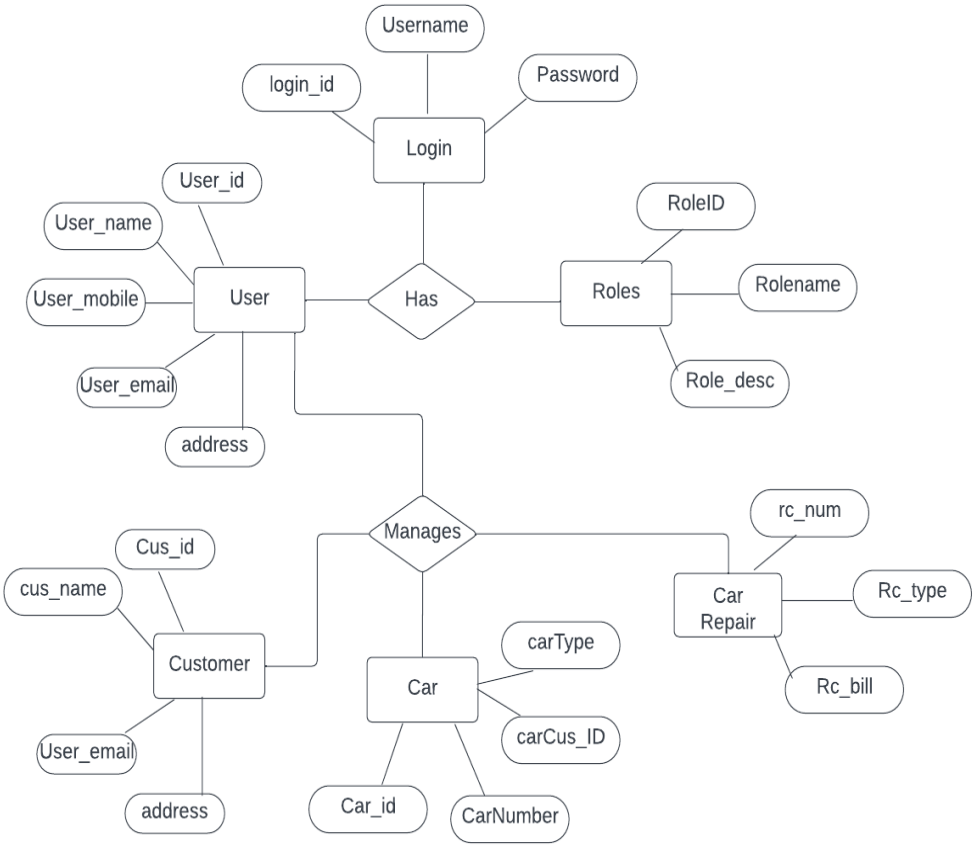
The Vehicle Services and Repair Management System (VSRMS) is designed to streamline vehicle servicing, maintenance, and repair operations. Several studies have explored similar management systems.

Earlier, vehicle maintenance relied on manual record-keeping and direct customer interactions. These systems faced challenges such as misplaced records, difficulty in tracking service history, and inefficient scheduling. Studies show that manual systems resulted in increased downtime for vehicles due to delays in service scheduling and miscommunication between service providers and customers.

The introduction of computerized databases improved service tracking and inventory management. Research highlights the role of early digital service systems in reducing errors and enhancing workflow efficiency.

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:07/Issue:03/March-2025 Impact Factor- 8.187 www.irjmets.com

Modern VSRMS solutions incorporate cloud-based technologies and IoT (Internet of Things) to enhance vehicle diagnostics, real-time monitoring, and automated scheduling. Studies indicate that IoT-enabled predictive maintenance reduces repair costs and improves vehicle lifespan.



ER Diagram

III. PROPOSED WORK

The proposed Vehicle Services and Repair Management System aims to Enable customers to book appointments, track service history, and receive updates. Provide an admin dashboard for service providers to manage appointments and inventory. Implement an intelligent scheduling system that allocates service slots efficiently. Send automated notifications for service reminders and repair updates. Maintain a centralized database for customer records, service history, and invoices. Ensure secure access to past records for both customers and service providers. Allow real-time diagnostics through IoT-enabled devices to predict maintenance needs. Reduce unexpected breakdowns and optimize service efficiency.

IV. RESULTS AND DISCUSSION

The implementation of the **Vehicle Services and Repair Management System (VSRMS)** has shown significant improvements in streamlining vehicle maintenance and repair operations. One of the most notable outcomes is the **automation of appointment scheduling**, which eliminates the traditional method of customers having to visit service centers or call multiple times to book an appointment. With the system in place, customers can seamlessly schedule their service through the web or mobile application, selecting a convenient time slot that is automatically assigned based on availability.

Additionally, **multi-language support** can be introduced to make the system more accessible to users in different regions, particularly in non-English-speaking areas. Another possible future application is **fleet management**, where businesses that own multiple vehicles (such as logistics companies) can use the system to monitor servicing schedules and track maintenance records efficiently.

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:07/Issue:03/March-2025 Impact Factor- 8.187 www.irjmets.com

V. CONCLUSION

In conclusion, The Vehicle Services and Repair Management System aims to revolutionize the vehicle maintenance industry by integrating digital solutions. By offering automated booking, real-time service tracking, and an efficient management dashboard, the system enhances both customer experience and operational efficiency. Future enhancements may include AI-based diagnostics and IoT integration for predictive maintenance, making vehicle servicing smarter and more proactive.

VI. REFERENCES

[1] Singh, R., & Sharma, A. (2023). Digital Transformation in Vehicle Service Management: A Review of Modern Approaches. International Journal of Automotive Technology.

[2] Kumar, S., & Patel, D. (2022). Implementation of Online Vehicle Service Booking Systems: Challenges and Opportunities. IEEE Transactions on Smart Mobility.

[3] Brown, J., & Wilson, M. (2020). The Role of Digital Payment Solutions in Automotive Service Industry. Journal of Financial Technology in Automotive Services.

[4] Gupta, V., & Rao, P. (2021). Automated Vehicle Repair Management Systems: Enhancing Efficiency through Digital Solutions. Journal of Transportation and Technology.

[5] ISO 9001:2015. (2015). Quality Management Systems – Requirements. International Organization for Standardization (ISO).