



One Drive – Bus Management System

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ABSTRACT:

The document indicates daily living can be negatively impacted by problems with Bus Management Services, which is quite important. In order to ensure more dependable and efficient Bus Management Services, it is crucial to address the little, immediate issues that individuals encounter on regular basis while traveling. This project is ideally suited to enhance bus services and facilitate travel for people. The user receives location integration via message, timetable watching, seat arrangement viewing, and bus driver, conductor and hygiene feedback. Considering the need to handle recently emerging issues in a traveler's everyday life.

Keywords: Bus Management Services, Feedback, Location, Seat arrangements, User, Admin, Passenger.

Introduction:

In this chapter, we delve into the fundamental aspects of Bus Management System. In an era characterized by technological advancements and the ever-growing demand for efficient public transportation systems, the development and implementation of a Bus Management System (BMS) with integrated services such as location, schedule management, viewing bus seat arrangements, and feedback services have become imperative. This chapter provides a comprehensive overview of the key components and objectives of the proposed Bus Management System, highlighting the need for an innovative and streamlined approach to enhance the overall passenger experience and operational efficiency. This report delves into the details of the system's architecture, functionality, and anticipated benefits, providing a roadmap for the successful implementation of the Bus Management System with integrated live location, schedule management, bus seat viewing, and feedback services.

Literature Survey:

There are several existing Bus Management Systems (BMS), Bus pass systems, Bus reservation systems that are used by transit agencies and companies worldwide. [1] As the existing Systems are time consuming processes to find the information about the bus schedule as departure and arrivals from source to destination for the passengers. It is difficult to communicate with the regarding sectors. Mainly in existing systems there are lots of Ticket reservation systems and there is no focus on the services of bus or feedback etc. those small problems are a gap in existing system and recent application on which we are working. [2] The user interfaces of existing system are typical and a bit confusing. Few Existing systems only show route information about bus or the live location of bus so that passengers can decide when to leave for bus and board and they don't provide any other facilities. Traditional bus management systems doesn't take user feedbacks in a proper way and few systems don't have this feature in it. So, this highlights the proposed system in all ways. There aren't any proper control or administration by admin for buses or users and this leads to various drawbacks in existing systems like:

- No proper application for this.
- No proper tracking of bus.
- No Proper response to user/passenger.
- Overcrowding. Etc.

[3] Few systems are only developed for the students facilities which won't help other people who travel daily and it is one of the drawback of existing systems.

Methodology:

"One Drive" adopts a modular and scalable architecture, allowing for flexibility in adapting to evolving requirements. This section will dissect the layers of the system, from the frontend interfaces that passengers interact with to the backend infrastructure that processes and manages data. One of the guiding principles of the design methodology is a user-centered approach. The system is crafted with a deep understanding of the needs and expectations of its primary stakeholders: bus operators navigating the routes, administrators overseeing the fleet, and passengers seeking a convenient and reliable transportation experience.

Design Methodology:

The main purpose of doing this project is in day-to-day life many students/people face the problem of not boarding bus on time or few times bus doesn't wait on bus stop so we are adding the additional feature of live location of bus so that user can know where the bus has been reached and user can reach the bus stop on time. People might always not be aware of the bus schedule but this application will help you to know the bus schedule. The main objective of the project is to reduce the manual work of the people.

We have been developing this project to reduce the manual work of the people (Travelers) easier in daily life to reach their destinations on time from source. User/ traveler who logins into the application are able to view the schedule of buses, locations, etc. It is very helpful for old age people as they cannot go to the bus terminal for enquiry every time. This application will also take care of the feedback and the opinion about the bus, bus drivers. Etc. Admin can see that who has registered and logged in into the app. Admin can update the schedule as per the changes in time, date and route of buses.

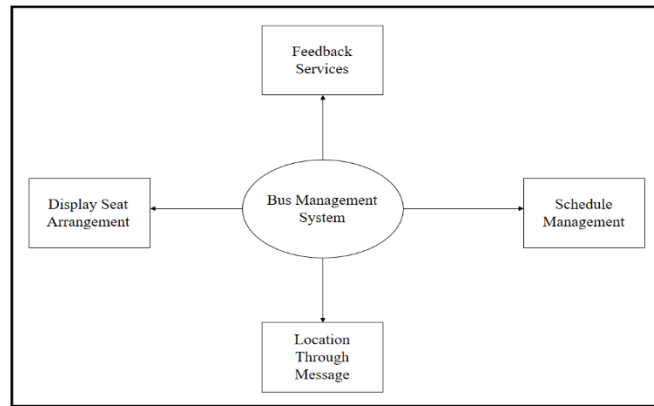


Fig 1. DFD Level 0 Diagram

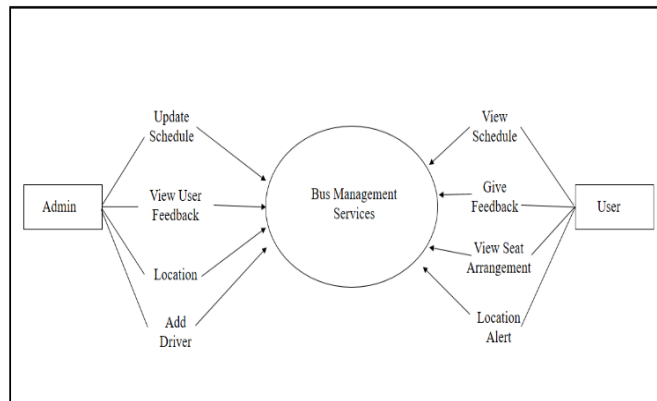


Fig 2. DFD Level 1 Diagram

System Design:

We now begin a thorough examination of the methodical architecture and functionality that form the core of the One Drive Bus Management System, building upon the groundwork established in the design process chapter. The details of how the conceptual design becomes a real, reliable, and scalable technology that can completely change the bus management industry are covered in detail in this chapter. The theoretical framework is turned into a workable reality during the System Design stage. One Drive is a bus management system that has been painstakingly created to handle the intricacies of city transportation. An overview of the main parts, how they work together, and the design concepts that govern the system's architecture are given in this section. The One Drive Bus Management System is built on a complex architecture that coordinates user interactions, information flow, and system operations is at the core of the One Drive Bus Management System. This section breaks down the architectural elements, starting with the frontend interfaces that display information to users and ending with the backend servers that manage data processing. Gaining an understanding of these elements is essential to appreciating the smooth functionality that One Drive offers in the bus management space. Any successful bus management system must prioritize efficient data processing and flow. By utilizing an extensive data processing pipeline, One Drive facilitates information sharing across busses, administrators, and passengers. This section explains how data moves through the system, including how it is collected, analysed, and shared to improve operational effectiveness and decision-making. Interfaces for users act as a link. The intermediary between technology and end users is provided by user interfaces. This section delves into the design considerations that mold One Drive's user interfaces, guaranteeing a smooth and user-friendly experience for administrators, bus operators, and passengers. Every interface, from mobile apps to interactive dashboards, is expertly designed to improve accessibility and usability.

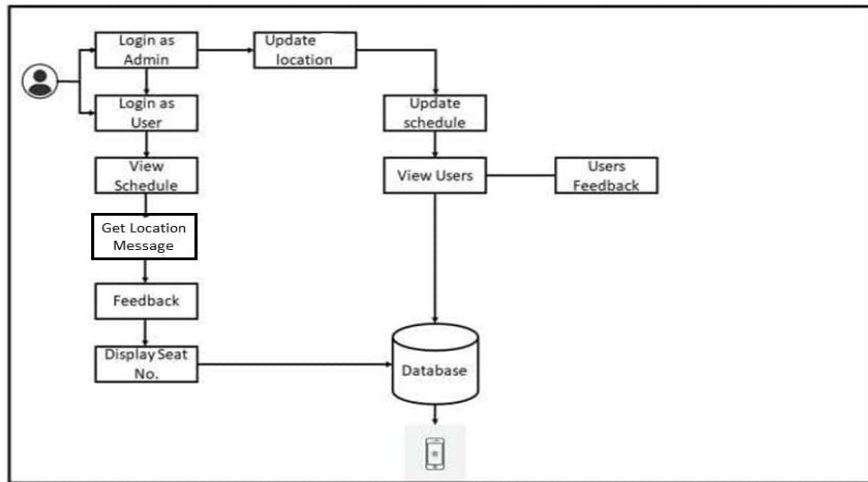


Fig 3. System Architecture

Result:

Snapshots:-



Fig 4. Main Page

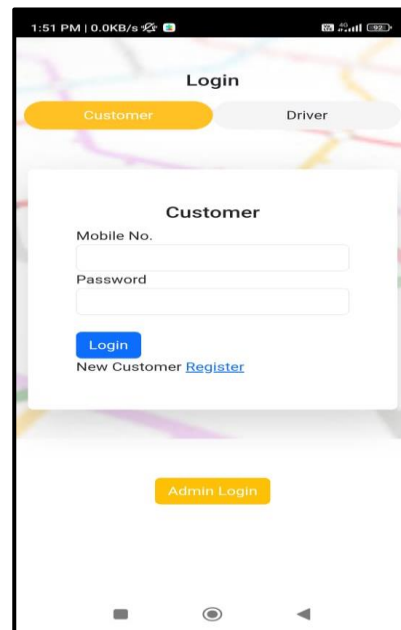


Fig 5. Login Page

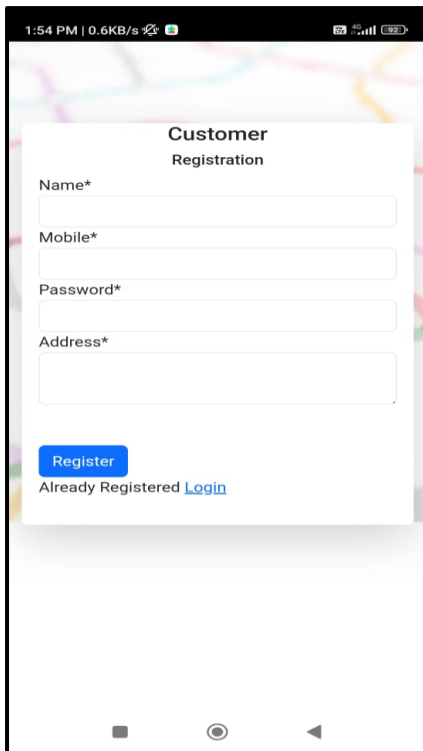


Fig 6. Customer Registration

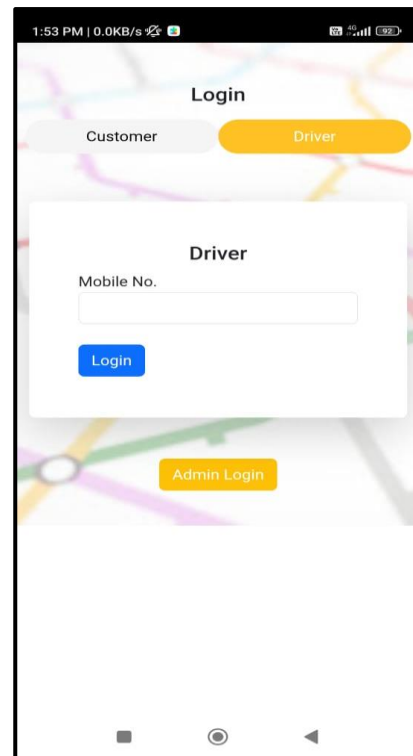


Fig 7. Driver Registration

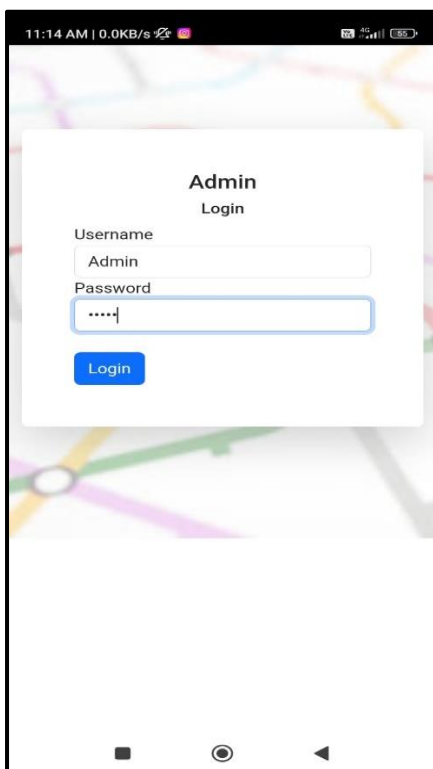


Fig 8. Admin Registration

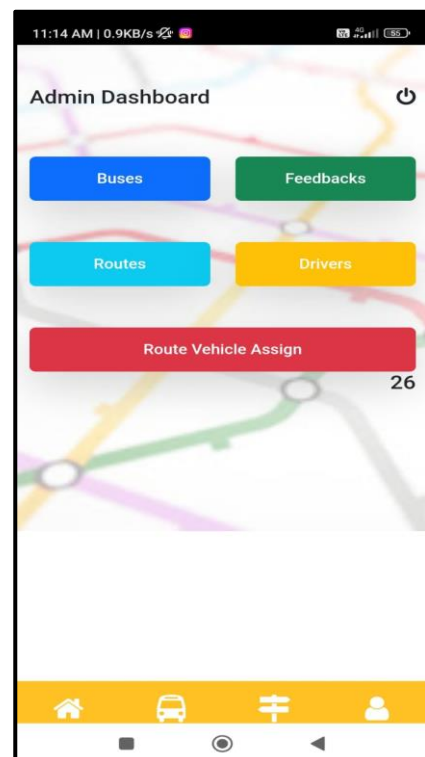


Fig 9. Admin Dashboard

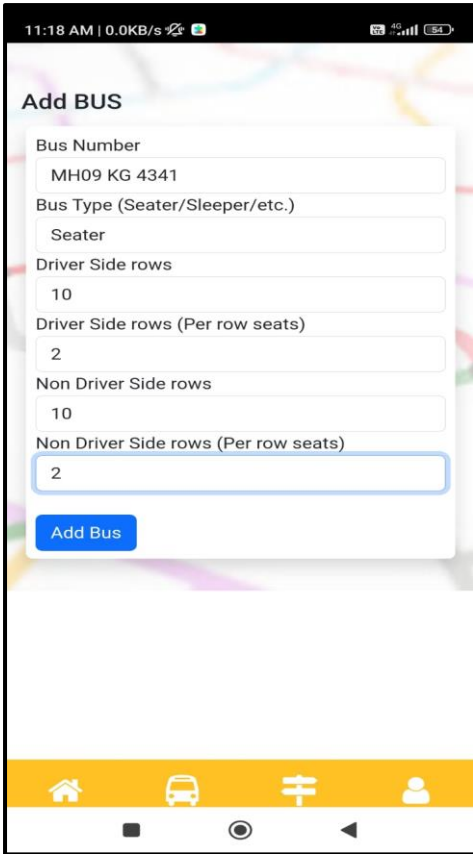


Fig 10. Bus Adding page

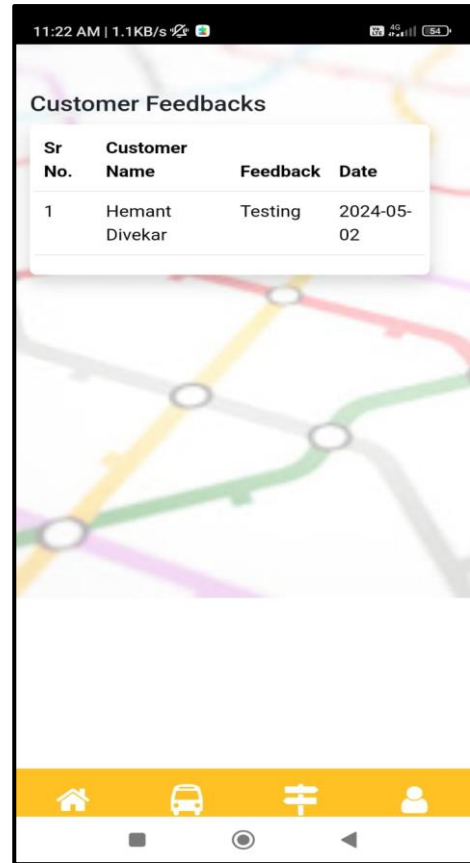


Fig 11. Customer Feedback page

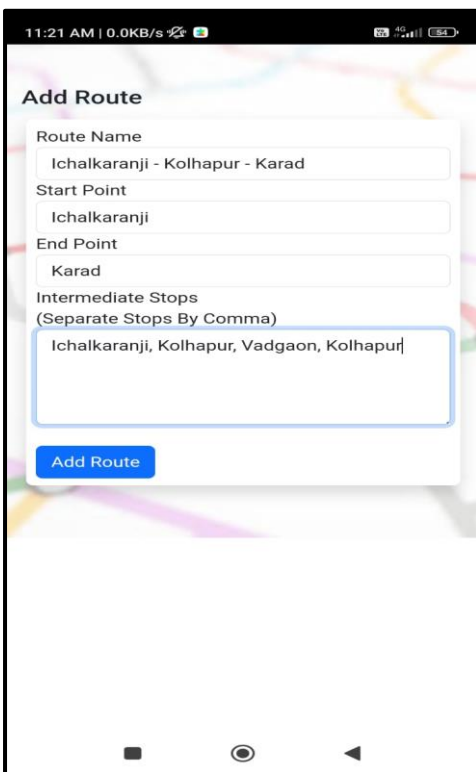


Fig 12. Add Route Page

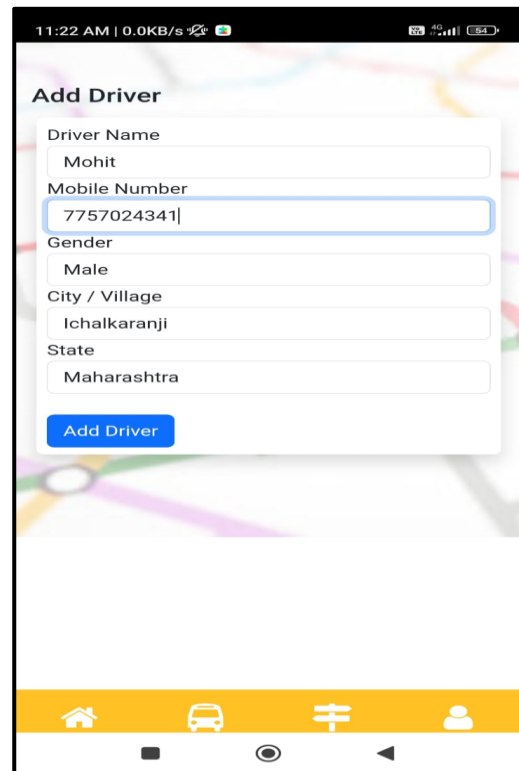


Fig 13. Add Driver Page

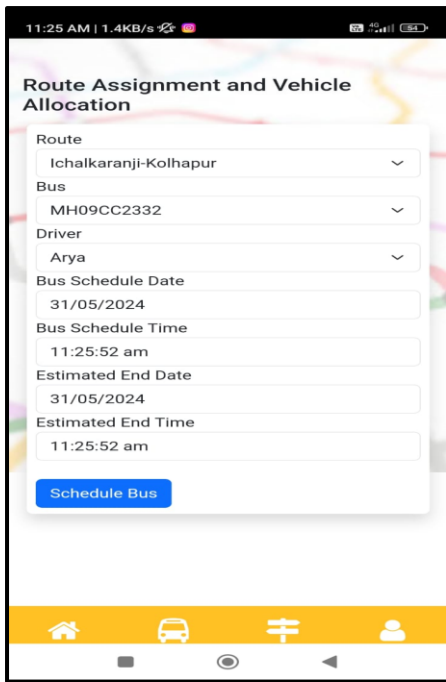


Fig 14. Route And Vehicle Allocation

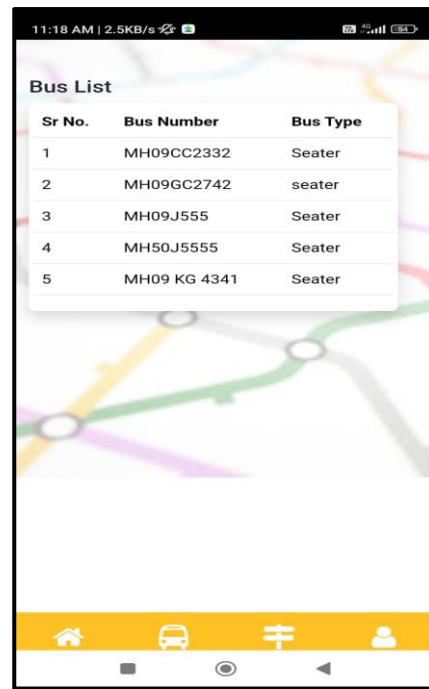


Fig 15. Bus List



Fig 16. Route List

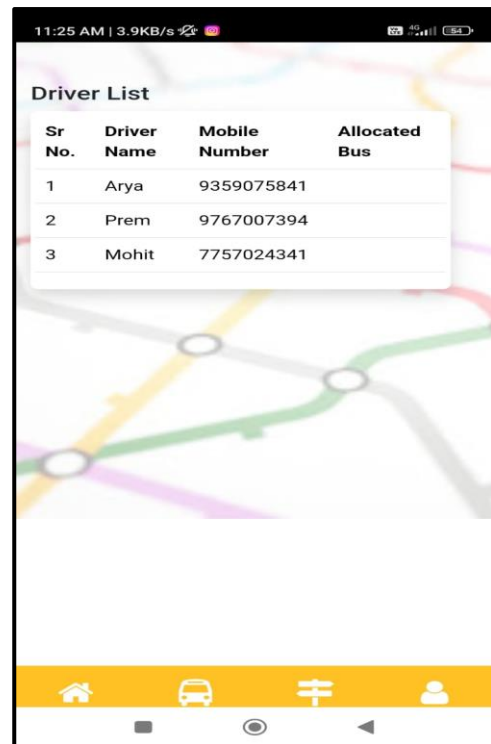


Fig 17. Driver List

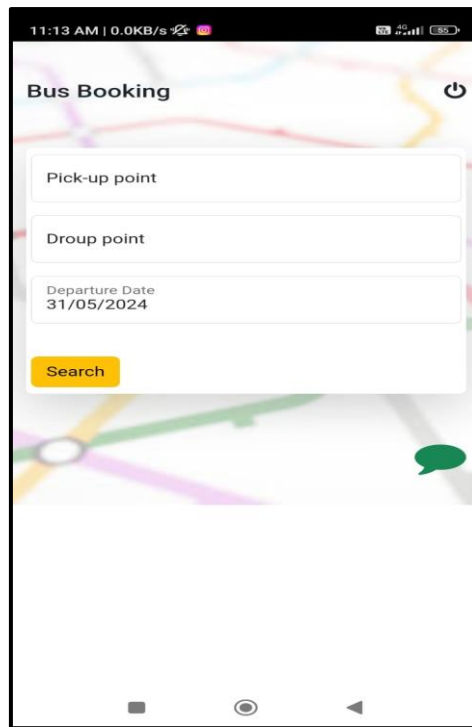


Fig 18. Bus Booking

Conclusion:

An important step toward effective and user-friendly public transit is represented by the design of BMS. The system creates a strong basis for improved passenger experiences by smoothly integrating functions including timetable management, feedback services, seat configurations, and bus tracking via SMS. Looking ahead, we see a lot of room for development and progress. The incorporation of novel technologies, coupled with a dedication to user-centered design and an emphasis on sustainability, positions the BMS for future development into an advanced, data-driven solution. This system has the ability to not only meet but also surpass the changing requirements of contemporary public transportation through ongoing innovation and cooperation, helping to create a more interconnected, safe, and ecologically conscious urban mobility landscape.

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