Volume 9, Issue 4, April – 2024 International Journal of Innovative Science and Research Technology
ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24APR2102

Ambulance Booking System

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Abstract:- This abstract introduces an Ambulance Booking System designed to streamline emergency response processes. The system accommodates patients, ambulance drivers, and hospitals through a user- friendly website interface. Users register and log in to access functionalities tailored to their roles: patients can book ambulances based on availability and hospital proximity while viewing detailed ambulance listings. Ambulance drivers can view patient requests, accept them, and update their status upon completion. The system efficiently manages multiple requests, displaying remaining patients when a driver is on duty and marking accepted requests accordingly. Additionally, hospitals maintain driver records, facilitating seamless management and coordination within the emergency response network.

Keywords:- *Ambulance Booking System, Booking Process, Ambulance List, Status Updates, Request Handling.*

I. INTRODUCTION

A. Overview

The Ambulance Booking System aims to optimize emergency response by providing a user-friendly platform for patients, ambulance drivers, and hospitals. Users can register and log in to book ambulances based on availability and proximity to hospitals, while drivers can efficiently handle requests and update statuses. The system manages multiple requests, displays remaining patients for on- duty drivers, and enables hospitals to maintain driver records for seamless emergency coordination. Ultimately, it strives to save lives by enhancing resource utilization and response efficiency.

B. About the Project

The Introduction of the Ambulance Booking System marks a significant step towards enhancing emergency response efficiency.

In response to the critical need for streamlined processes, this system has been meticulously crafted to cater to the diverse needs of patients, ambulance drivers, and hospitals.

Through an intuitive website interface, users are empowered to register and access role-specific functionalities with ease. Patients gain the ability to swiftly book ambulances based on availability and proximity to hospitals, while also being equipped with comprehensive ambulance listings for informed decision-making. Ambulance drivers, on the other hand, are provided with a platform to view and accept patient requests, subsequently updating their status upon completing each task. The system's adept handling of multiple requests ensures optimal utilization of resources, displaying remaining patients to drivers actively on duty and marking accepted requests for efficient tracking. Furthermore, hospitals play a pivotal role in maintaining driver records, fostering seamless management and coordination across the emergency response network. Through the integration of these features, the Ambulance Booking System stands poised to revolutionize emergency response procedures, prioritizing swift and effective assistance in times of crisis.

C. Scope

The Ambulance Booking System streamlines emergency response by providing a user-friendly platform for patients, ambulance drivers, and hospitals. Users register and log in to access role-specific features: patients book ambulances based on availability and hospital proximity, while drivers view and accept requests, updating their status upon completion. The system efficiently manages multiple requests, displaying remaining patients for drivers on duty and ensuring accurate tracking. Hospitals maintain driver records for seamless coordination within the emergency response network.

II. LITERATURE WORK

- Chavan Pragati, R. Thosar Mrunal, M. Panchal Sudha, and D. Bandel Pooja authored the paper titled "Ambulance Service" published in the International Journal of Advance Research and Innovative Ideas in Education in 2019. The study likely explores advancements in ambulance services, potentially focusing on improving response times, patient care, or operational efficiency within emergency medical services.

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- Muhd Zafeeruddin Bin, Mohd Sakriya, and Joshua Samual authored "Ambulance Emergency Response Application," published in the International Journal of Information System and Engineering in April 2016. This paper is likely dedicated to the development or evaluation of an emergency response application tailored for ambulance services, aiming to enhance communication, navigation, or overall effectiveness in emergencies.
- Devender Maureen S. Van, William Bradley Glisson, Ryan Benton, and George Grispos contributed to "Understanding De- Identification of Healthcare Big Data," likely published in an American journal. This work may delve into the intricacies of de-identifying healthcare data, addressing privacy concerns, compliance with regulations such as HIPAA, and the potential applications of de-identified data in healthcare research and analytics
- "Implementing Open-Source Software [4]S.J. Barbeau, M.A. Labrador, P.L. Winters,R. Pérez, and N.L. Georgi authored "= Location API 2.0 for J2ME–A new standard location for Java- enabled mobile phones" published in Computer Communications in 2008. This paper likely introduces and discusses Location API 2.0, exploring its features, capabilities, and potential impact on location-based services in Java-enabled mobile phones.
- R. Cooke authored "The Role and Impact of Transport on Rural Communities Accessing the State Health Care System in South Africa," likely published by the Rural Health Advocacy Project in 2013.
- This study may examine the challenges and implications of transportation on rural communities access to healthcare services in South Africa, potentially proposing solutions or policy recommendations to address disparities.
- Phillips, F. Schroth, G.M. Palmer, S.G. Zielinski, A.P. Smith, and Cunningham are associated with "= Location-based services," a patent filed with Google Patents in 2010. This patent likely pertains to innovations in location-based services, possibly introducing novel methods, algorithms, or systems for providing location-based information or enhancing user experiences in location- aware applications.

➢ *Problem Solving*

The current emergency response system needs a streamlined process for ambulance booking, resulting in inefficiencies and delays in patient care. Patients, ambulance drivers, and hospitals need help with fragmented communication and coordination, leading to suboptimal utilization of resources and prolonged response times. There is a pressing need for an integrated Ambulance Booking System that caters to the specific needs of each stakeholder, enabling efficient booking, tracking, and management of ambulance services. This system must address the challenges of availability, proximity, and real-time updates while ensuring seamless coordination between patients, drivers, and hospitals to enhance the overall effectiveness of emergency response operations The current emergency response system needs a

A. Architecture

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III. PROPOSED SYSTEM

The proposed Ambulance Booking System is envisioned to revolutionize emergency response operations by integrating seamless interactions among patients, ambulance drivers, and hospitals. Through an intuitive website interface, users will be empowered to register and access role-specific functionalities, enhancing efficiency and accessibility. Patients will be able to swiftly secure ambulance services based on availability and hospital proximity, facilitated by comprehensive ambulance listings. Ambulance drivers will have the capability to efficiently manage patient requests, promptly accepting and updating their status upon completion, thereby optimizing resource allocation. The system's robust architecture enables the simultaneous management of multiple requests, providing real-time updates on remaining patients when drivers are on duty, and marking accepted requests for streamlined operations. Furthermore, hospitals will maintain comprehensive driver records, fostering enhanced coordination and management within the emergency response network, ultimately ensuring timely and effective assistance during critical situations.

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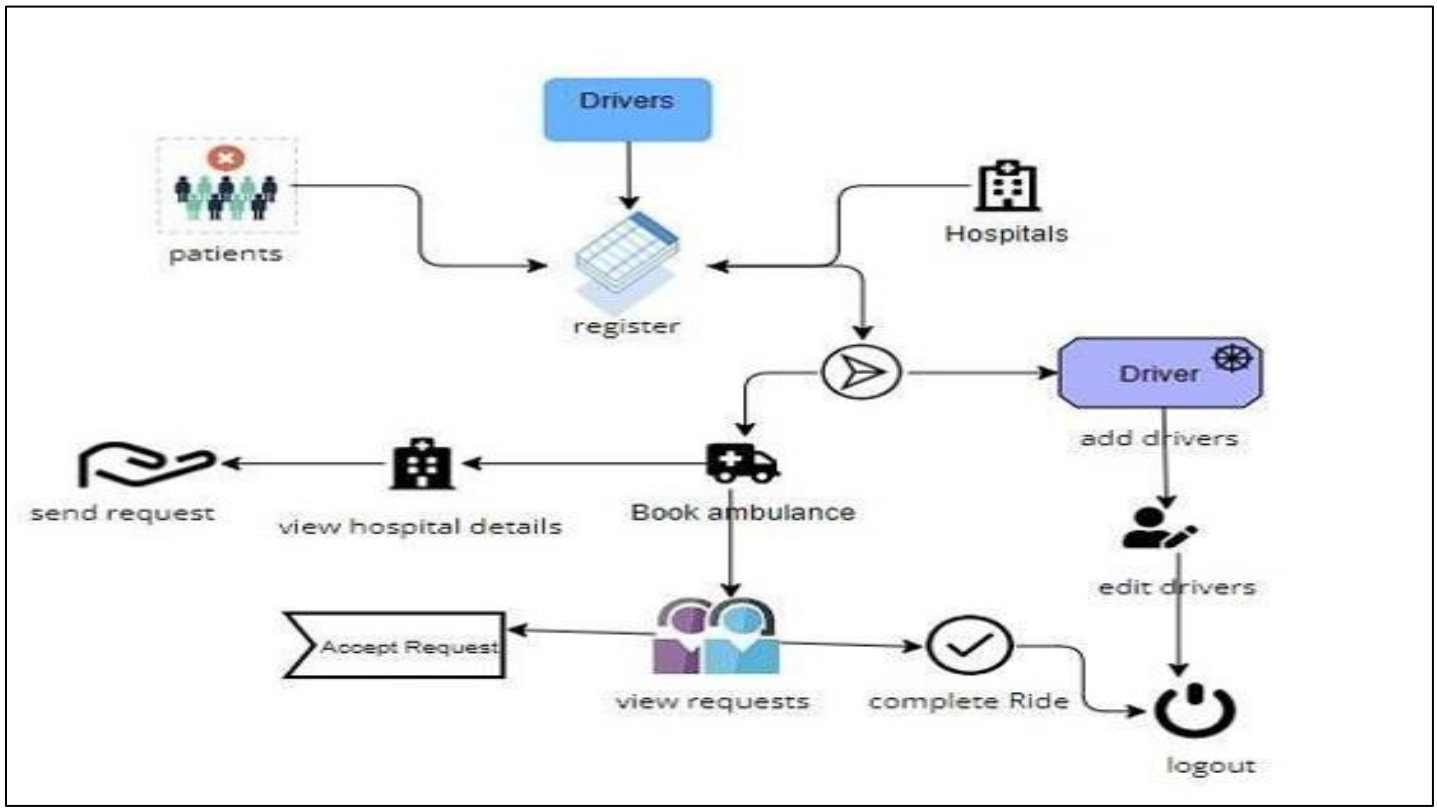

Fig 1: Architecture of Ambulance Booking System

B. Workflow

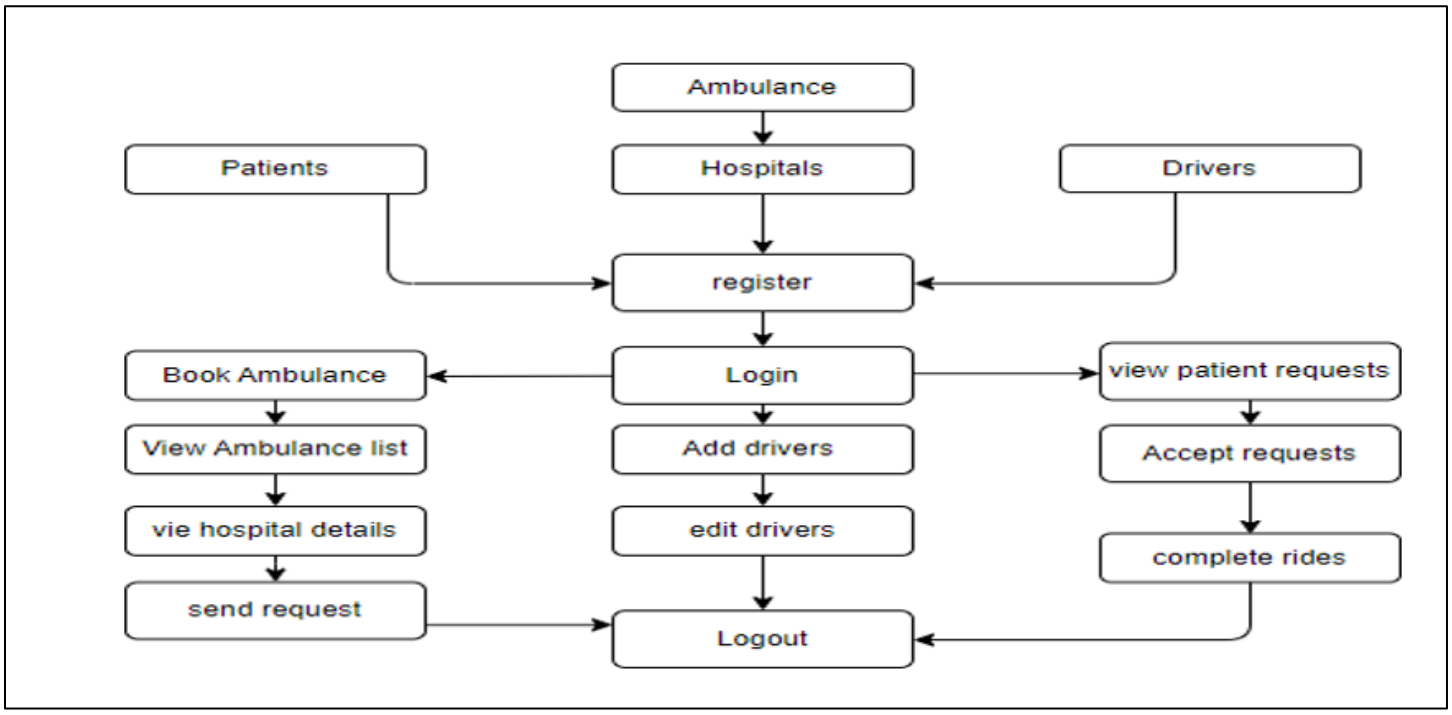

Fig 2: Work Flow of Ambulance Booking System

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IV. METHODOLOGY

A. Patient Module:

The patient first register into this website and login with their credentials.Once logged in they can see the list of Ambulances, Depending on the availability of Ambulances he/she can book the Ambulance.

B. Ambulance Driver Module:

The ambulance driver module in an ambulance booking system is designed to assist and streamline the tasks and responsibilities of the ambulance crew during emergency response operations. In these Ambulance driver Module Ambulance driver view incoming requests from patients. Ambulance driver can accept or reject patient requests based on availability and location. In these module its show the update status of Ambulance Driver (e.g., En Route, On Site, Completed) of the assigned ambulance trip.

C. Hospital Module:

The hospital module maintains a database of ambulance drivers associated with the hospital or contracted by the hospital for emergency response services. This database includes information such as driver names, contact details, license information, certification status, and other relevant credentials.

V. RESULTS AND ANALYSIS

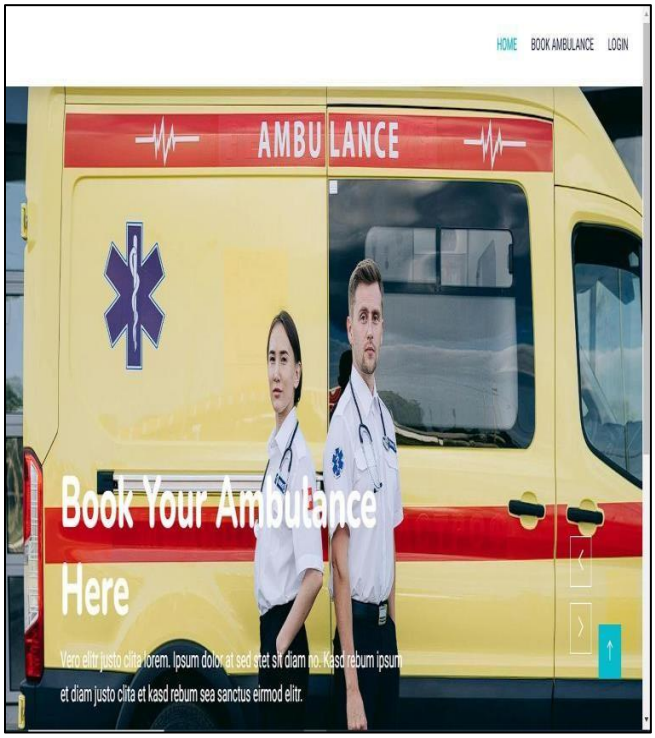

Fig 3: The above Page Shows the Home Page for all the Patients, Ambulance Drivers, Hospitals where they can Enter Details for their Perspective Modules

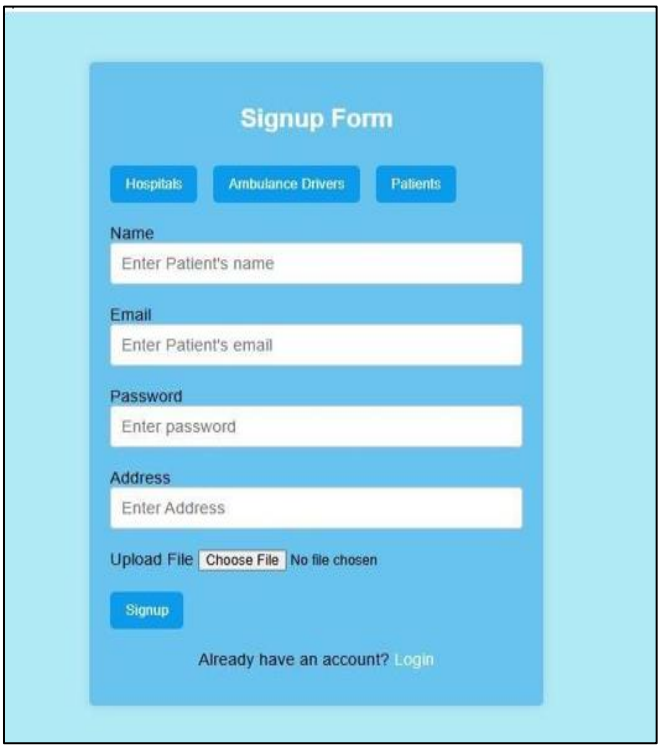

Fig 4: The Above Page Shows the Register Page of Patients Where the Patient Can Register and Login with Their Credentials

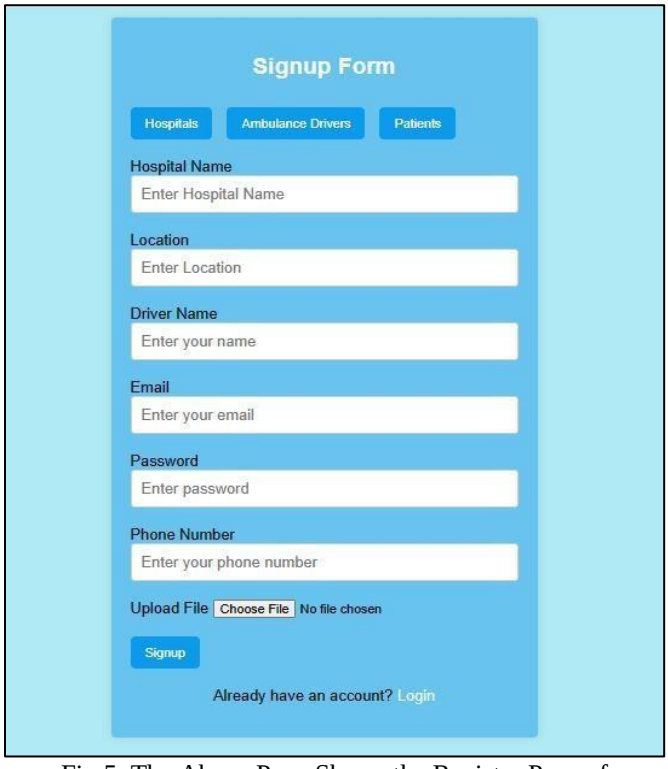

Fig 5: The Above Page Shows the Register Page of Ambulance Driver where the Driver can Register and Login with their Credentials

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24APR2102

Fig 6: The Above Page Shows the Register Page of Hospital where the Hospital can Register and Login with their Credentials in this Page Hospitals can also Add their Servies

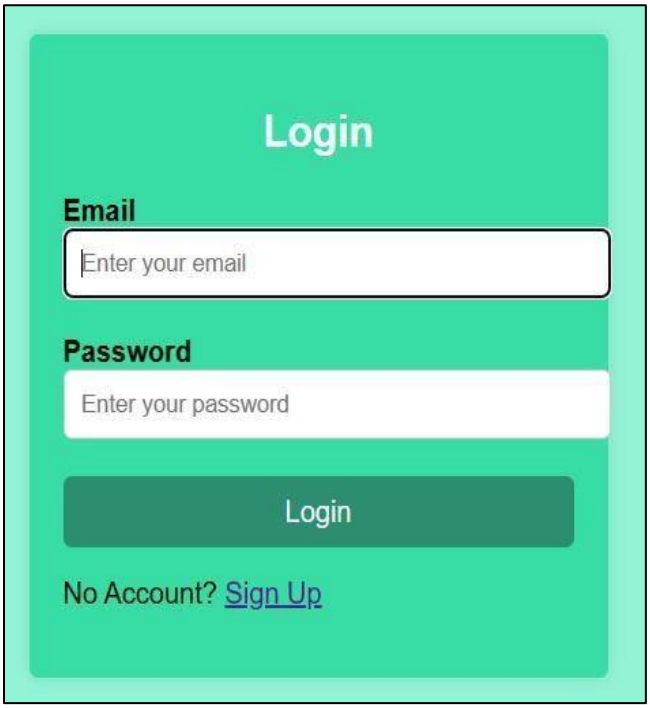

Fig 7: The Above Page Shows the Login Page for Patients, Ambulance Drivers and Hospitals they can Login with their Persepective Credentials

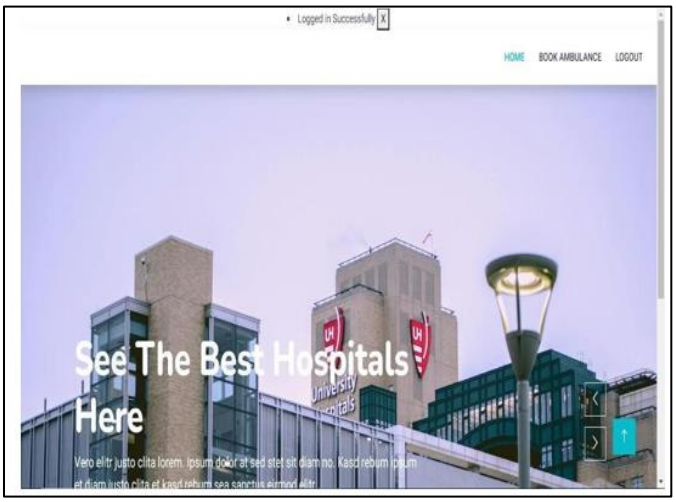

Fig 8: The above page shows after login of Patients, Ambulance Drivers, Hospitals

Fig 9: The Above Page Shows the Ambulance Drivers List and also Shows the Availability of Ambulance Drivers

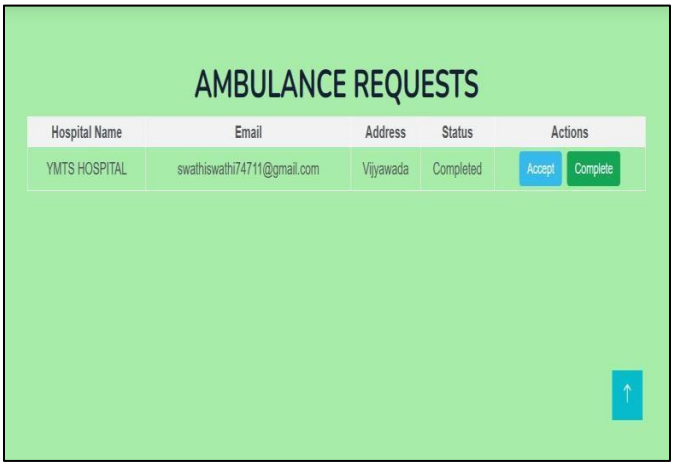

Fig 10: This Page Shows the Request of Patients for Booking Ambulance. The Ambulance Driver Acceptpatients Request

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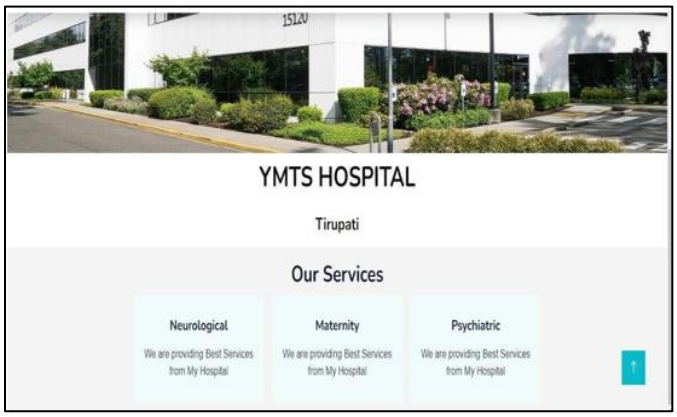

Fig 11: This Page Shows the Hospital Details and their Servies

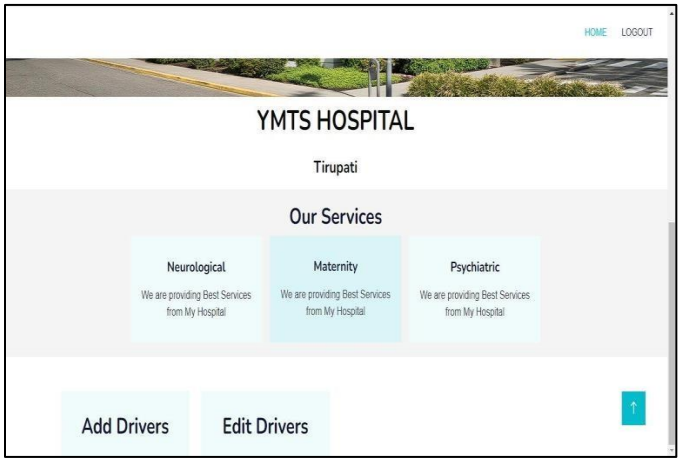

Fig 12: This Page Shows the Hospital Where Hospital Admin Add and Edit the Ambulance Driver Details

Fig 13: This Page Shows add the Details of Driver

Fig 14: This Page Shows Edit the Details of Driver

VI. CONCLUSION

In conclusion, the Ambulance Booking System represents a crucial advancement in optimizing emergency response operations. By seamlessly integrating patients, ambulance drivers, and hospitals through a user-friendly online platform, the system enhances accessibility and efficiency in booking ambulances and managing requests. Through tailored functionalities for each user role, it ensures swift and informed decision-making, ultimately improving the overall response time during critical situations. The system's ability to manage multiple requests and provide real-time updates fosters effective resource allocation and coordination, contributing to the goal of saving lives and ensuring seamless emergency management. Overall, the Ambulance Booking System is a vital tool in modernizing and enhancing emergency response networks.

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