The Smart Ambulance Services

A PROJECT REPORT

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Under the guidance of,

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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

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PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Project report **"The Smart Ambulance Services"** being submitted by "**Mahammadanis M Sb**", "**ANAS Ahmed**", "**Rayavarapu Sravan**", "**Ganesh**", bearing roll number(s) "**20211LCS0016**", "**20201CSE0778**", "**20201CSE0776**", "**20201CSE0724**", in partial fulfilment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.

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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **The Smart Ambulance Services** in partial fulfilment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. Prasad P S, Assistant Professor , School of Computer Science And Engineering , Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

Efficient and impactful public service delivery, such as healthcare provision, is crucial in contemporary society, particularly in rural areas. Residents in these regions expect consistent access to public services; however, these services are not always readily available. This paper examines the challenges associated with developing an online booking system for ambulances. The difficulties range from inadequate communication, poor road infrastructure, and unstructured addresses to the absence of ambulances, resulting in preventable loss of lives. The paper conducts a comprehensive review and proposes solutions for the effective implementation of the online booking system. Drawing on the findings from the literature review, we designed and executed a framework model utilizing versatile application technologies to provide practical services to patients during emergency situations. The aim is to reduce hospital queues and long waiting times for an ambulance through location-based services. By employing this application, lives in rural areas can be simplified, preventing loss of lives by ensuring a prompt response from the appropriate healthcare providers during crises.

The primary focus of this project is to safeguard and enhance personal safety. Thus, the objective of this initiative is to enable users to seek help quickly and conveniently. Additionally, a secure PIN is employed to ensure identity verification and prevent anonymous or malicious attacks.

ACKNOWLEDGEMENT

First of all, we indebted to the **GOD ALMIGHTY** for giving me an opportunity to excel in our efforts to complete this project on time.

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CHAPTER-1
INTRODUCTION

1.1 Motivation

The global focus on improving ambulance services aims to enhance patient safety and enroute capabilities for optimal care during emergencies. Addressing safety concerns and comfort issues in ambulance design involves analyzing current incidents, consulting EMS personnel, and researching potential obstacles to patient care. Identifying specific design flaws allows engineers to formulate problem statements and propose solutions, ultimately contributing to the overall advancement of ambulance technology. The investigation includes input from various sources, such as online surveys, face-to-face conversations, and visits to emergency facilities, ensuring a comprehensive understanding of the challenges faced by ambulance crews.

1.2 Problem statement

Traffic congestion is a pressing issue in Indian urban areas, resulting in increased delays, fuel consumption, and environmental pollution. The problem stems from intense traffic demand during peak hours and unexpected road capacity reduction due to accidents. Recurrent congestion, often caused by traffic incidents during peak hours, requires sustainable solutions. While expanding road capacity is considered, recent flyover constructions in Hyderabad, such as at Secretariat, Narayanaguda, and Masab Tank, have not effectively alleviated congestion and, in some cases, led to disruptions in traffic flow (Reddy J.S., 2006).

1.3 Purpose/Goal

The primary goal of this thesis is to develop a prototype for the Ambulance Service using GIS when road accidents occur. This Ambulance Management System (AMS) integrates GIS (ArcGIS9.1 network analyst, GPS/GSM) to address routing and accident location challenges during both normal and peak hours. The objectives of the system include:

- Identifying accidents on the road network.
- Real-time identification of ambulance locations on the road network using GPS coordinates.
- Determining the fastest routes for all ambulances to reach the accident site.
- Analyzing which ambulance can promptly reach the accident site compared to others.
- Once the fastest route from the nearest ambulance to the accident location is determined, calculating the quickest route from the accident site to the nearest hospital.
- In cases of multiple accidents on the road network, finding the fastest routes for ambulances to reach all accidents.
- Identifying the fastest routes from all accidents to promptly reach the hospital.
- Addressing the challenge of congested roads during peak hours and determining optimal ambulance travel routes.

1.4 Scope

The OUR AMBULANCE TEAM SYSTEM ensures constant updates to the database. The citizens of India possess a UNIQUE IDENTITY for AMBULANCE BOOKING FROM HOME. Given that everyone may need to book an ambulance at some stage, the participants include the government of India. The implementation of online systems and machines in the backend significantly decreases manual work, reduces errors, and introduces automation.

CHAPTER-2

LITERATURE SURVEY

The paper discusses healthcare challenges in rural Mafikeng, South Africa, where inadequate facilities and transport services impact residents. Issues include poverty, lack of essential public services, substandard transportation, and the absence of Emergency Medical Services (EMS). A keyword-based search explores emergency medical services, focusing on ambulance provision in rural areas during emergencies. Existing systems, such as an Ant Colony Optimization algorithm for ambulance routing, are examined as potential solutions to improve healthcare accessibility in rural regions.

Paper Title: Vehicular Sensor Networks with Android Smartphones for Road Surface Monitoring

Authors: Girts Strazdins, Artis Mednis, Georgijs Kanonirs, Reinholds Zviedris, and Leo Selav

Description: Android stands out as one of the most widely adopted smartphone platforms, with its popularity continually on the rise. Recognized for its openness and flexibility, Android provides software developers with seamless access to phone hardware and a robust software API. This paper envisions Android smartphones evolving into a potent and extensively used participatory sensing platform. The focus of this study is the evaluation of Android smartphones concerning road surface quality monitoring. We conducted assessments of various pothole detection algorithms using Android phones equipped with a sensing application while driving in an urban environment.

Paper Title: System for Accident Detection with SMS Notification

Authors: Supriya Vidhate, Mamta Tadavi, Manisha Jagtap, Rajratan Janrao

Description: In the contemporary world, highway accidents have become a frequent occurrence. Numerous lives are lost each year due to inadequate medical care following accidents. Currently, there is no effective method for timely notification of the correct authorities to potentially save lives. Our project involves the development of a device designed to not only detect car accidents but also promptly notify the relevant authorities as soon as an accident occurs.

Paper Title: Utilizing QR Code and Mobile Application to Enhance Service Processes in Thai Hospitals

Authors: Chayakrit Charoensiriwath, Navaporn Surasvadi, Suporn Pongnumkul, Thunyasit Pholprasit

Description: Overcrowding in Thai public healthcare facilities presents a significant challenge. Limited resources, including a scarcity of doctors, nurses, and medical devices, contribute to this problem. Various strategies have been attempted to alleviate hospital overcrowding.

Paper Title: Cloud Computing and Accident Handling Systems
Authors: Jabar H Yousif, Dinesh Kumar Saini
Description: This study investigates the current challenges in cloud computing solutions for life-critical systems, specifically car accident systems in the Gulf region. The Gulf region faces a high death rate due to car accidents, exacerbated by inadequate accident handling facilities.

Paper Title: Evaluation of Medication Adherence Apps and Creation of a Web-based Resource
Authors: Seth Heldenbrand, Bradley C. Martin, Paul O. Gubbins, Kristie Hadden, Catherine Renna, Rebecca Shilling, Lindsey Dayer
Description: This research aims to assess the features and health literacy levels of existing medication adherence apps. The goal is to create a searchable website aiding healthcare providers and patients in identifying high-quality adherence apps. Medication nonadherence remains a significant issue leading to poor health outcomes and unnecessary healthcare expenses.

Paper Title: Accident Detection in Vehicular Networks Through OBD-II Devices and Android-based Smartphones
Authors: Jorge Zaldivar, Carlos T. Calafate, Juan Carlos Cano, Pietro Manzoni
Description: This paper proposes an Android-based application utilizing On-Board Diagnostics (OBD-II) interfaces to monitor vehicles and detect accidents. The integration of smartphones with vehicles aims to enhance user experiences and provide new functionalities while driving.

Paper Title: GPS-based Tracking and Health Parameter Detection
Authors: Shivali Walvekar and Kinjal More
Description: This study focuses on displaying the current location of ambulances and patients' health parameters on an LCD display, simultaneously sending this information to the hospital.

Paper Title: Intelligent Accident Detection and RF Communication
Authors: Bhandari Prachi, Dalvi Kasturi, and Chopade Priyanka
Description: This web-based application shows the nearest ambulances, clinics, and pharmacies to the user. Sensors in vehicles contribute to automatic accident detection, promptly notifying the ambulance.

Research Study by Abelsson et al. (Reference [12])
Description: Abelsson et al. conducted a study describing specialist ambulance nurses' perceptions when assessing patients exposed to severe trauma. The study emphasized the importance of preparedness for emergencies, confidence in leadership, and continuous professional knowledge development.

Research Study by Bruce et al. (Reference [13])
Description: Bruce et al. explored the experiences of nurses receiving patients brought into the hospital as emergencies by ambulance crews. The study analyzed the handover and triage

process, emphasizing the vital interplay between prehospital and hospital personnel for patient care. Prehospital reporting was perceived as a crucial dialogue for planning, symbolizing the handover, and presenting both ideal and non ideal scenarios.

CHAPTER-3

RESEARCH GAPS OF EXISTING METHODS

There are several existing methods for booking an ambulance service. These include calling the emergency number or contacting a local ambulance service provider directly, using a mobile application, and booking online through a third-party platform. Some hospitals and healthcare facilities offer a booking system on their website, and some insurance companies have partnerships with ambulance service providers to streamline the booking process. It's important to note that the availability and pricing of ambulance services can vary depending on the location and provider.

3.1 GIS

3.1.1 GIS role in Transport

Geographical Information System (GIS) serves as a tool for storing and analyzing spatial information, with a distinctive focus on the analysis of geographic data, unlike other systems that primarily handle the representation or storage of such information [Cowen, D.J 1988]. In today's context, various disciplines, including remote sensing, geography, civil engineering, cartography, topology, geodesy, photogrammetry, ecology, architecture, and computer science, utilize Information Technology (IT) to process geographic information [Pons & Perez 2003].

3.1.2 Database role in GIS-T

Establishing spatial databases for GIS-based transportation stands out as one of the most resource-intensive tasks in terms of both economic investment and time commitment. The process, as outlined by Pons & Perez in 2003, involves several key steps:

These components include:

Locational Component: Specifies the position of data within a geographic space.
Thematic Component: Identifies the type of geographic attributes present in a specific location.
Temporal Component: Accounts for the thematic aspect of a location at a particular point in time.
The integration of GPS (Global Positioning Systems), video logging, remote sensors, signal communication systems, and cellular telephones (GSM, VHF) into GIS has triggered a substantial revolution in geo-localization techniques, as highlighted by Farrell & Barth in 1999.

3.1.3 GIS and transport related fields of applications (GIS-T)

GIS plays a vital role in three key areas of transportation, according to Pons & Perez (2003):

Transport Planning:

GIS is essential for accessibility studies, multimodal transport analyses, comprehensive transport planning, environmental impact assessment, pollution control, risk planning, and the

construction of new roads.

Fleet and Logistical Management:

GIS is utilized in route planning for car navigation, meteorological hazard control, traffic management, passenger assistance, vehicle fleet control, and emergency management.

Management of Infrastructure:

GIS is predominantly used in operational research as a data feeder for mathematical models, providing metrics for emergency services districting and location problems. Integrating mathematical formulations into GIS data models addresses complexities in Arc routing problems, bringing new paradigms to transportation planning, though challenges remain in handling temporal data within applications [Erkut E 2001, Goodchild MF 2000].

3.2 Global Positioning System

The applications of the Global Positioning System (GPS) are widespread across scientific fields like topography, geodesy, hydrography, photogrammetry, and transportation [Mintsis. G et al, 2004]. Efficient transportation of people and goods is pivotal for a country's economic well-being.

In India, incorporating GPS/GIS technology in road and railway transportation can enhance operational efficiency and contribute to safety in both natural and man-made disasters. The applications of GPS/GIS in land transportation are categorized into four main groups [Mintsis. G et al, 2004]:

1. Vehicle Fleet Management
2. Data Collection and Mapping Using GPS
3. Incident Management
4. Vehicle Navigation Systems

3.2.1 Fleet management

GPS serves various purposes, including:

- Identifying the closest ambulance to the accident site.
- Locating the nearest police jeep to the crime scene.
- Estimating the time and distance for a bus or train to reach the station.

The Bangalore Metropolitan Transport Corporation (BMTC) developed a GIS/GPS-based Intelligent Transport System to monitor their vehicle movements cost-effectively [Kharola1 S.P et al]. This system converts GPS-provided latitude and longitude into the nearest location, generating a log-sheet that illustrates the bus's location on the road network at periodic intervals in map form. A sample output is provided below.

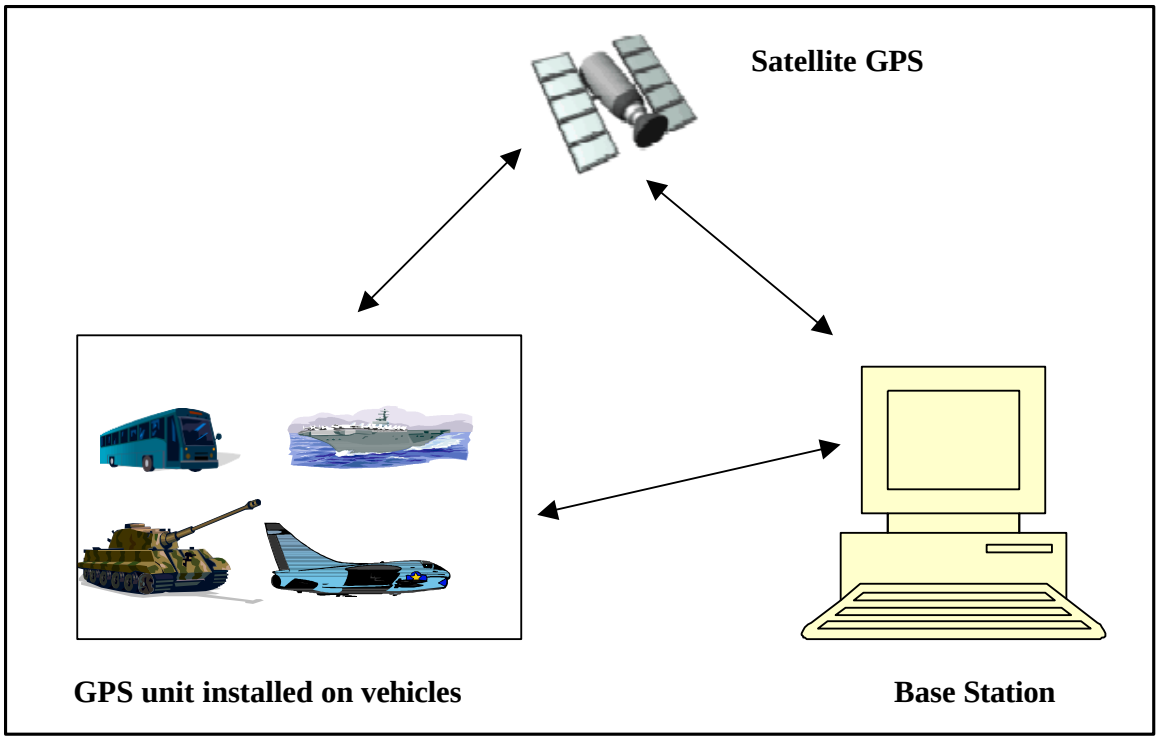

Figure 3.2.1: GPS for Vehicle tracking System

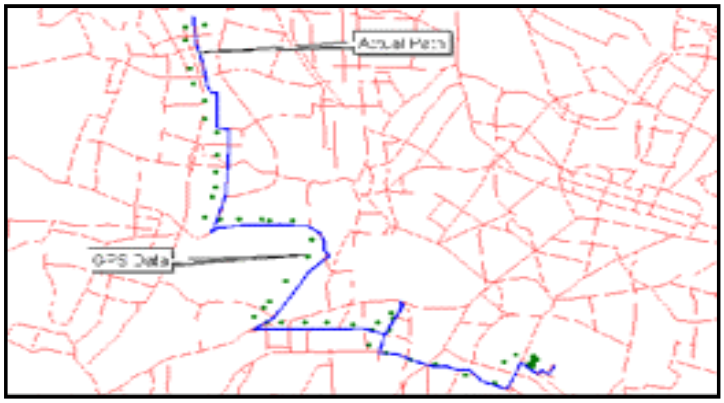

Figure 3.2.2: Road map of GPS tracking

3..2.2 Data collection and mapping

The paragraph highlights the significance of GPS technology in data collection and mapping, focusing on a project carried out by the Faculty of Civil Engineering at Aristotle University of Thessaloniki in Greece. The project, named "Satellite GPS," utilized GPS units installed on vehicles for mapping the road network, particularly on the National Highway connecting Thessaloniki and Athens. The method employed was pseudo-kinematics, demonstrating the suitability and cost-effectiveness of GPS/GIS for both small and large-scale

road network mapping. Another project in June 1990 utilized Differential GPS (DGPS) to achieve 1-3 meters accuracy in road location information while driving at 60 km/hr. Additionally, a project by the Faculty of Rural & Surveying Engineering aimed to develop a tool for mapping and monitoring the railway network for the Hellenic Railway Organisation.

3.2.3 Incident management

The surge in urban living has contributed to a spike in population, traffic, and accidents. GPS technology plays a vital role in incident management and road network monitoring. Proposed research in Greece advocates for GPS in incident management, emphasizing its role in tracking emergency vehicles efficiently [Lakakis .K, 2000]. It is pivotal for accurately locating accident sites on road networks. The integration of GPS/GIS is effective in creating precise thematic maps, identifying "black spots" with a high incidence of road incidents [Mintsis. G et al, 2004]. The Intelligent Transportation System (ITS) involves components like Traffic Inspection and Motorist Information. GPS/GIS is applied in transporting hazardous materials, providing crucial vehicle positioning information for safe fleet management [Tzinieris .G & Delikaraoglou .D, 1992].

3.2.4 Vehicle navigation

The vehicle navigation system guides drivers to their destinations, while vehicle location systems (VLS) manage fleets by transmitting GPS data to a central station. Paris demonstrates improved public transportation with GPS-based vehicle location systems, enhancing passenger information and service security [Zarazaga-Soria et al, 2000]. A study on visual-manual destination entry with OEM GPS navigation was conducted in various traffic conditions [Chiang .P, 2004]. The TravTek test in 1993 aimed to provide in-vehicle navigation with real-time traffic information [V. Inman et al, 1996].

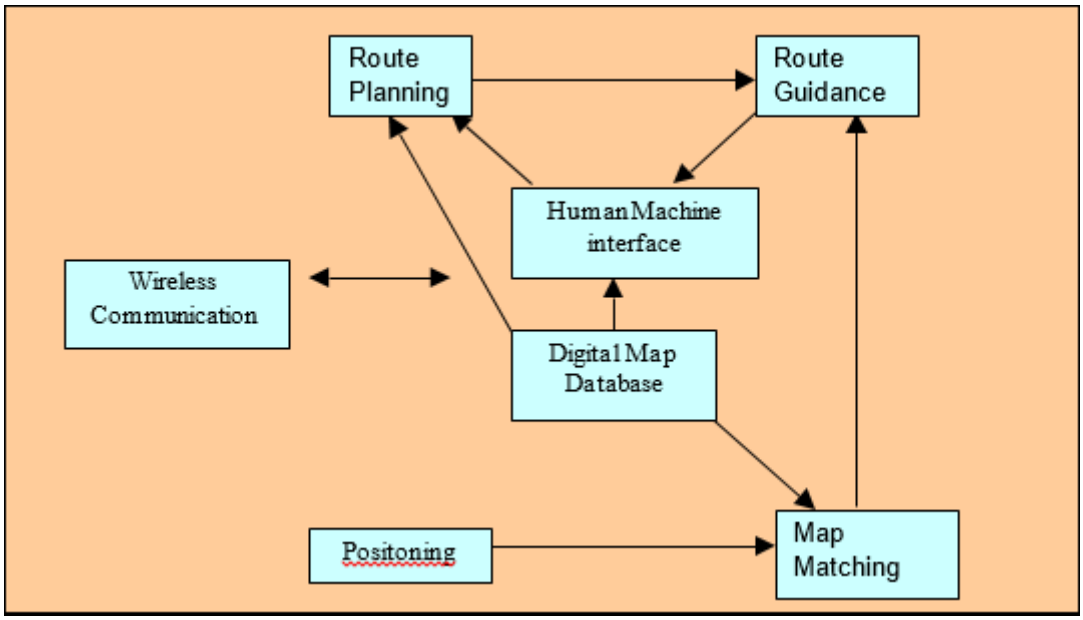

Figure 3.2.4: Basic modules for a location and navigation system

3.2.5 Transport of hazardous Materials

GPS satellites are vital for accurately locating vehicles, with applications extending to hazardous material transportation security. Post 9/11, the Hazardous Material Safety and Security Technology Operation Test, conducted by the Department of Transportation, focused on identifying vulnerable transportation areas. In the U.S., daily transport of hazardous materials, including 300,000 petroleum product units, is facilitated by GPS, offering precise cargo tracking. The system employs a display unit for two-way communication, automatically transmitting vehicle positions to a dispatcher center. Companies like BASF Corp. use GPS systems for real-time monitoring of tank cars carrying hazardous materials, enhancing security and fleet efficiency. Tracking devices with GPS and chlorine sensors, such as Lat-Lon's RailRider, enable authorities to monitor and trace tank cars. The GPS-transmitted data aids GIS operators in emergency response, allowing them to locate nearby facilities on digital maps, with data encryption ensuring security.

3.2.6 Limitations of GPS

Since the removal of Selective Availability (SA) after May 2000, which was a primary source of errors during positioning, there have been improvements in GPS accuracy. However, GPS-based Automatic Vehicle Location (AVL) systems encounter challenges, particularly in

urban areas where large buildings obstruct satellite signals, leading to poor signal quality. This issue can be addressed by integrating additional sensors with GPS devices.

Another drawback is the time it takes for a GPS receiver to initiate (cold start) and achieve the MS location fix, which can be a significant delay in emergency services and various applications. Additionally, concerns about size, cost, and power consumption pose limitations on the widespread implementation of GPS technology.

3.3 Global System for Mobile Communication (GSM)

In the contemporary commercial landscape, cellular communication systems are widely adopted, with GSM, developed by ETSI, playing a pivotal role. GSM, a mobile telecommunication standard, is designed for a pan-European digital land mobile system, emphasizing users in motor vehicles [Rahnema Moe 1993]. It offers a potent messaging service, facilitating roaming through automatic network location detection. The transport industry favors 'telegeomonitoring,' a technology blending geographical information systems and telecommunication, especially for monitoring hazardous material transportation [Boulmakoul Azedine 2005].

In transportation, environmental monitoring, focusing on population and Hazmat monitoring, prioritizes GIS. The integration of telecommunications and positioning systems is critical for effective environmental monitoring. Telegeomonitoring is extensively utilized in dynamic guidance and fleet management, as illustrated in Figure 3.3.

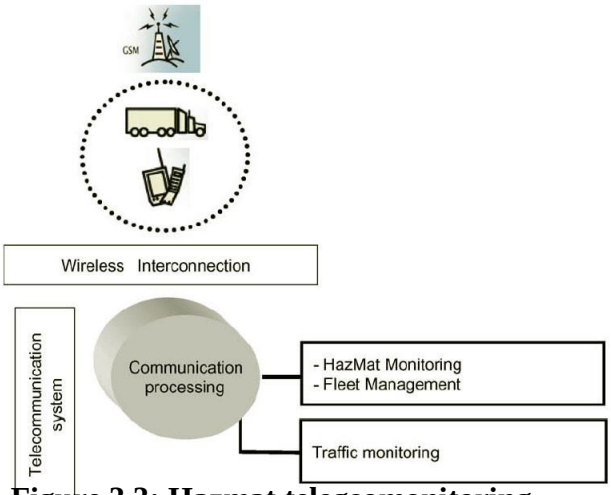

Figure 3.3: Hazmat telegeomonitoring

GIS, GPS, and GSM technologies are integrated across logistics, transportation, defense, power distribution, and urban planning, providing location-based information on digital maps. A Web GIS-based GPS Vehicle Monitoring System [Qimin et al, 2003] employs a three-tier architecture to monitor real-time vehicle locations on an electrical map online. GSM, chosen for its high frequency, capability, reliability, extensive coverage, and open interface, serves as the communication platform in GPS-based vehicle monitoring systems. The development process is depicted in Figure 3.3.1.

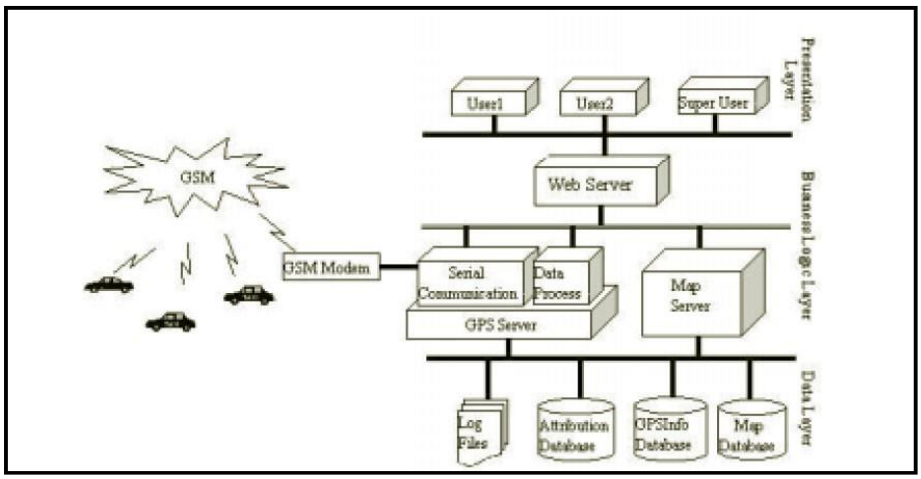

Figure 3.3.1: GSM/GPS/GIS based System Architecture

The Modular Mobile Dispatching System (MMDS), incorporating GIS, GPS, and GSM technologies, includes a GIS database, GPS receiver, GSM communication module, and other I/O devices for dispatching vehicles. During emergencies, drivers use MMDS [Hsiung et al 2003], receiving aid within four minutes of calling the center via GSM. The call center operator employs GIS to map the driver's location, dispatching ambulances through GSM notifications. GIS-based route navigation is facilitated through the database, illustrated in Figure 3.3.2.

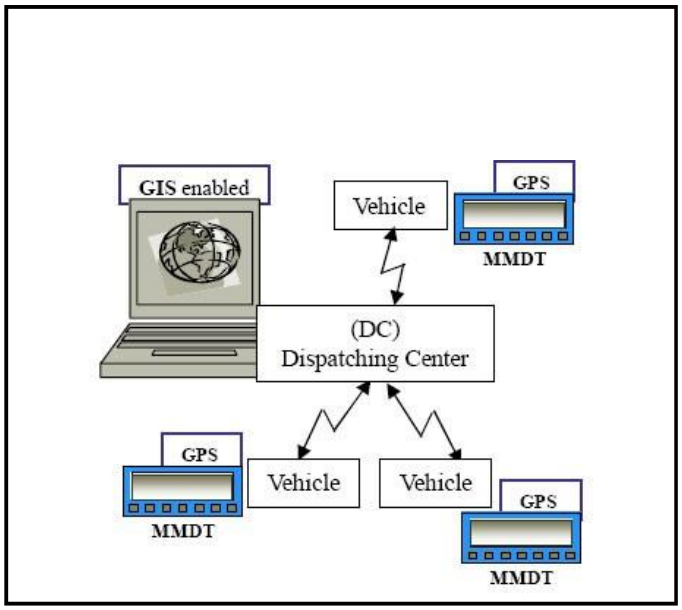

Figure 3.3.2: Modular Mobile Dispatching System (MMDS)

A project focusing on AMBULANCE research and development was initiated in collaboration with the European Commission as part of the Health Telematics program [Pavlopoulos et al 1998]. This system leverages GSM technology, ensuring coverage of over 95%. The project is structured into two modules:

- The mobile unit located at the ambulance site
- The consultation unit situated at the hospital site

The operations of the mobile and consultation units are illustrated in figure 2.11.

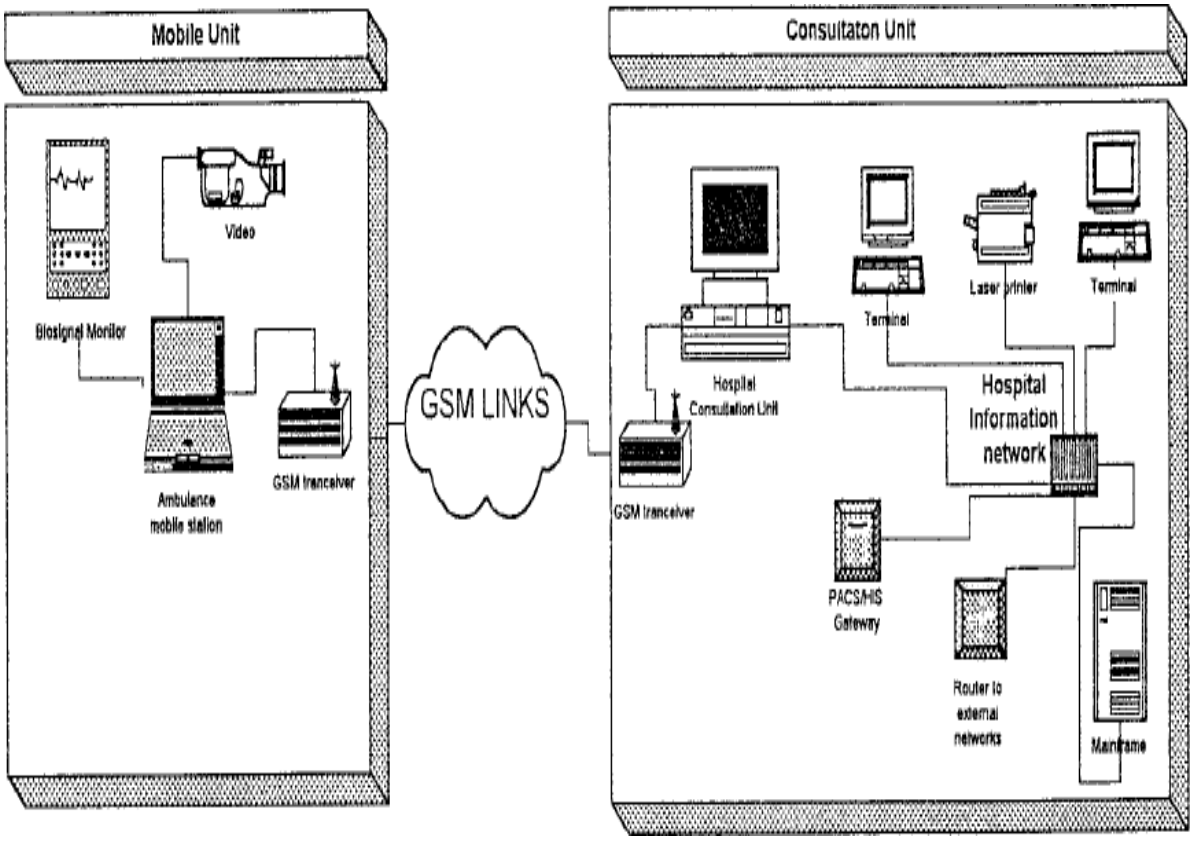

Figure 3.3.3: AMBULANCE Service architecture

CHAPTER-4
PROPOSED METHODOLOGY

4.1 PROPOSED SYSTEM

The envisioned system aims to facilitate the efficient booking of ambulances equipped with the necessary medical support, both within the ambulance and from the hospital. It addresses existing drawbacks by providing the precise location of the patient using Google Maps, coupled with essential patient information. Currently, there are instances where ambulances with advanced equipment and medical support systems are reserved for non-emergency cases, inadvertently impacting the urgency required. Conversely, during emergencies, non-emergency-type ambulances might be dispatched, leading to mismatches between the requester's needs and the ambulance provided.

The proposed system introduces the capability to pre-book ambulances for specific cases such as pregnant women, senior citizens, or disabled patients, ensuring their convenient transportation to the hospital. The World Health Organization (WHO) recommends a ratio of at least 1 ambulance per 80,000 people in any city. However, in the case of the national capital, Delhi, the current ratio is alarming, with only 1 ambulance for every 150,000 people [3]. This deficiency exacerbates the imbalance in the availability of emergency-type ambulances.

Lives are often lost due to inadequate and unreliable emergency medical services. Additionally, the absence of ambulance availability, lack of patient medical history, and real-time updates to the en-route doctor contribute to worsening patient conditions upon reaching the hospital. The existing system also grapples with issues like ambulance driver refusals, behavioral problems, or unfamiliarity with the destination.

To address these challenges, the proposed web application includes features to differentiate between emergency and non-emergency ambulance requirements during booking. On the hospital side, the system efficiently manages ambulance requests, assigning them to qualified drivers. Importantly, in the proposed system, once a driver is assigned duty by the hospital, they have no authority to refuse the assignment.

A. Client Side

- Reserving an ambulance for both emergency and non-emergency medical services.
- Sending requests to all hospitals in the vicinity.
- Receiving driver information and contact details from the hospital.
- The IoT-based sensors continually update the patient's pulse rate and temperature, alerting the doctor to variations until the patient reaches the hospital, facilitating continuous monitoring of the patient's status.
- Real-time tracking of the ambulance.

B. Driver Side

Availability Management:

- Maintain an updated and accurate schedule indicating availability for ambulance service duty.
- Acknowledge and confirm acceptance of assignments within the stipulated timeframe.

Dispatch Communication:

- Respond promptly to communication from the hospital or the central dispatch system.
- Confirm receipt of details regarding the pick-up location, patient information, and destination.

Navigation and Routing:

- Utilize GPS and mapping tools for efficient route planning and navigation to reach the designated location.
- Follow the recommended or assigned route to ensure timely arrival at the pick-up and drop-off points.

Vehicle Maintenance:

- Regularly inspect and maintain the ambulance vehicle to ensure it is in good working condition.
- Report any malfunctions or issues promptly to the appropriate authorities.

Patient Interaction:

- Exhibit professionalism and empathy when interacting with patients during transportation.
- Provide necessary assistance in safely loading and unloading patients from the ambulance.

Emergency Response:

- Adhere to protocols for emergency cases, ensuring swift and safe transport to the hospital.
- Coordinate with medical personnel to facilitate immediate attention upon arrival.

Communication with Hospital:

- Maintain open and clear communication with the hospital or dispatch center during transit.
- Provide regular updates on the estimated time of arrival and any unexpected delays.

Documentation:

- Keep accurate records of each trip, including patient details, time of pick-up, and arrival at the destination.
- Ensure all necessary documentation is completed for each assignment.

Adherence to Policies:

- Follow all guidelines and policies set by the ambulance service provider and relevant health authorities.
- Adhere to traffic rules and regulations for safe and legal operation of the ambulance.

Professionalism:

- Uphold a professional demeanor and prioritize the well-being and comfort of the patient.
- Represent the ambulance service provider positively in all interactions.

4.2 METHODOLODY

The technologies employed in developing the suggested system include PHP in conjunction with the Google Maps API, XAMPP Server, as well as both Frontend and Backend components.

A. Authentication

Authentication is initiated by entering a username and password upon accessing the application. Users are required to log in before utilizing the app, and if an individual is not yet registered, they must complete the registration process. During the first-time registration, users need to provide all the requested details and a valid mobile number for verification purposes. The registration form encompasses fields for the user's name, username, password, blood group, date of birth, gender, unique identification number, and other relevant information. While optional, users may choose to submit a medical report during registration by uploading it. Successful registration is contingent upon completing all the necessary information.

B. Ambulance Location

This module facilitates the provision of the user's current location when sending an ambulance request and also enables the user to track the location of the ambulance.

C. Booking Request

This module manages the ambulance request, including details such as the type of booking (emergency or non-emergency), the number of casualties, symptoms (e.g., fever, cold), a photo capturing the user's location for a precise understanding of the patient's condition, and the option to upload a medical report (if available). In case a medical report was not provided during registration or if there is a new report, the user can upload it. Capturing a photo is essential for assessing the patient's condition and verifying the authenticity of the request. Subsequently, the user submits the request, which is then broadcast to all nearby hospitals. The user must wait until receiving an alert confirming the successful

dissemination of the request to nearby hospitals. Once a hospital accepts the request, it becomes unavailable to other hospitals. The hospital gains access to all user details and, based on the specified parameters, dispatches an ambulance to the user, providing the driver's name andcontactnumber.

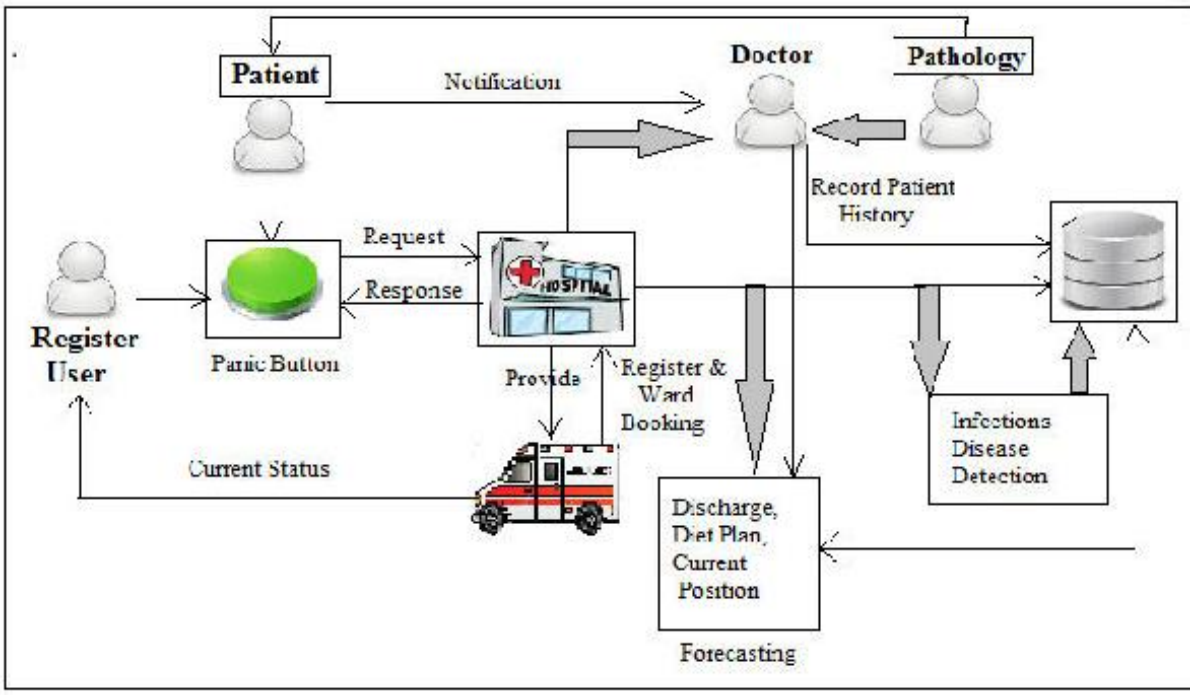

Fig. 4.2 Block Structure of Ambulance booking

CHAPTER-5
OBJECTIVES

An online ambulance booking system is designed to facilitate the process of booking ambulance services through digital channels. The primary objectives of such systems include improving convenience and accessibility for patients, providing timely response from emergency services, and Enhancing operational efficiency for ambulance service providers. The system can also help reduce the burden on emergency call centers, provide accurate invoicing, and improve record keeping and billing procedures.

In today's fast-paced world, access to timely emergency medical services is paramount. The project's primary objectives center around revolutionizing ambulance booking through an intuitive web application. By focusing on diverse ambulance types, scheduling convenience, payment integration, visual availability, and automated cancellation processes, our initiative aims to transform the landscape of emergency healthcare

The objectives of this project is to:

- **Booking ambulances with different types using our application web in your chosen location:**

  The cornerstone of this project lies in the seamless booking of various ambulance types through a user-friendly web application. By leveraging advanced technology, individuals can effortlessly navigate through different ambulance categories, catering to specific medical needs. Whether it's basic transport or specialized care, our platform ensures accessibility and choice in emergency situations.

- **Helps to get all desired schedules.**

  Scheduling complexities often hinder prompt access to emergency services. Our project addresses this by streamlining the scheduling process, enabling users to acquire their desired ambulance schedules with ease. Through a user-centric interface, individuals can select preferred timings, reducing waiting times and ensuring timely

medical assistance

- **Provide a single platform to book ambulance & do the payment**

Centralizing ambulance bookings and payment procedures onto a single platform simplifies the often convoluted process. Our application eliminates the hassle of navigating multiple systems, providing a seamless experience from booking to payment. This consolidation promotes efficiency, transparency, and ease of access for users seeking urgent medical assistance.

- **Availability a pictorial representation of which s are still available could be seen.**

Visual representation is a powerful tool in decision-making. Our project integrates a pictorial display showcasing the availability of ambulances. This intuitive feature enables users to visualize and select available ambulance slots, ensuring informed decision-making during emergencies. This graphical representation enhances user experience, making the booking process efficient and intuitive

- **Automating the cancellation of redundant systems is available.**

Redundant systems and canceled bookings often pose administrative challenges. Our project introduces an automated cancellation system to alleviate this issue. By leveraging automation, redundant bookings are efficiently managed and canceled, optimizing ambulance availability and ensuring resources are allocated effectively.

In conclusion, this project aims to redefine the paradigm of emergency medical services by introducing a comprehensive and user-centric ambulance booking platform. By encompassing diverse ambulance types, scheduling convenience, payment integration, visual availability, and automated cancellation processes, our initiative strives to enhance accessibility, efficiency, and reliability in emergency healthcare.

CHAPTER-6

SYSTEM DESIGN & IMPLEMENTATION

6.1 SYSTEM DESIGN

6.1.1 USE CASE DIAGRAM OF AMBULANCE SERVICE

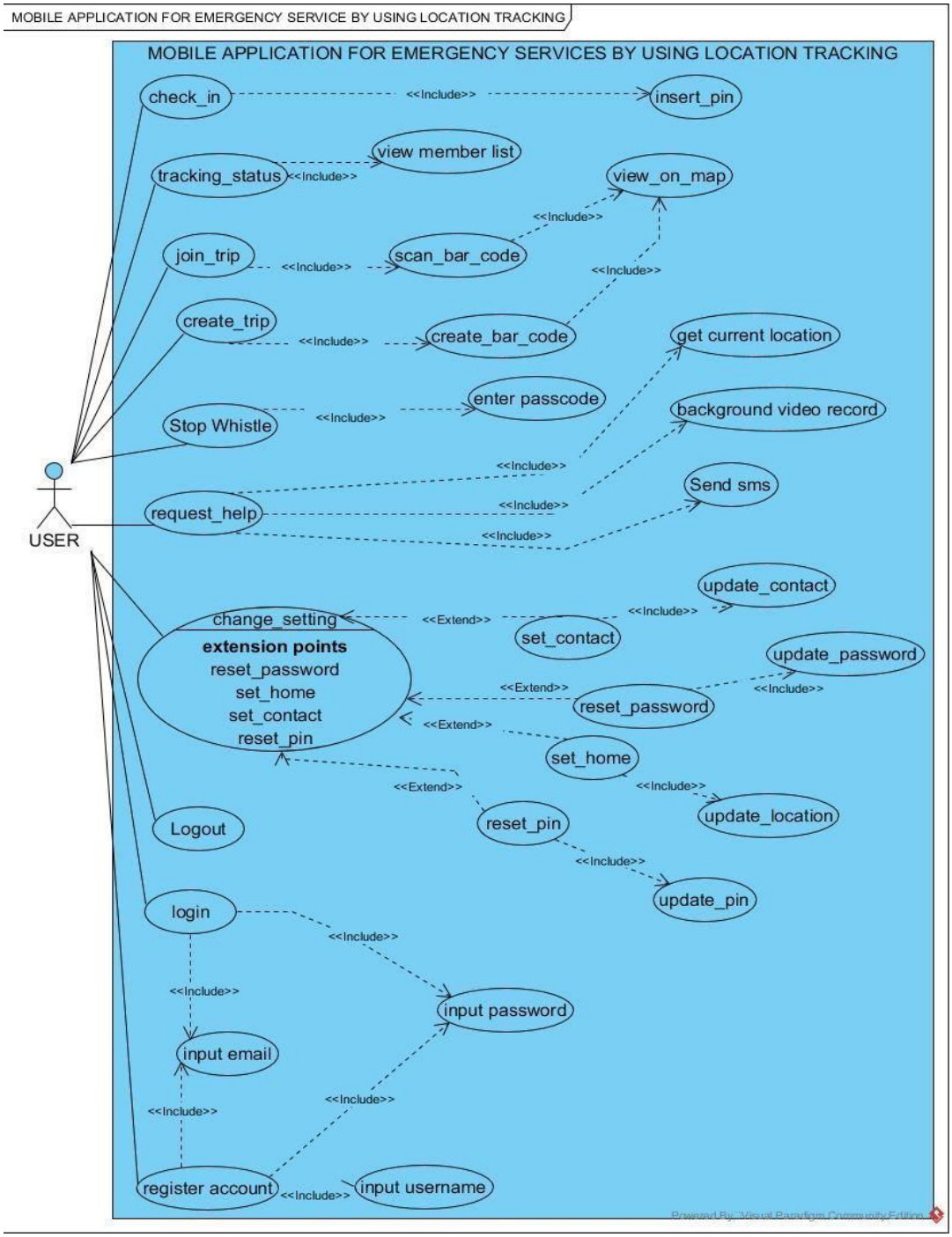

Fig. 6.1.1 Use case diagram for user ambulance booking

The interactions between an actor and the system are illustrated in the use case diagram, showcasing the expected behavior of the system. The user can perform various tasks within the mentioned use case, as depicted in Figure 4-1-F1. Some functions may have an extend or include relationship. In instances of an include relationship, the user must undertake that action to utilize the function. On the other hand, in cases of an extend relationship, it is optional.

6.1.2 ACTIVITY DIAGRAM

LOGIN ACTIVITY DIAGRAM

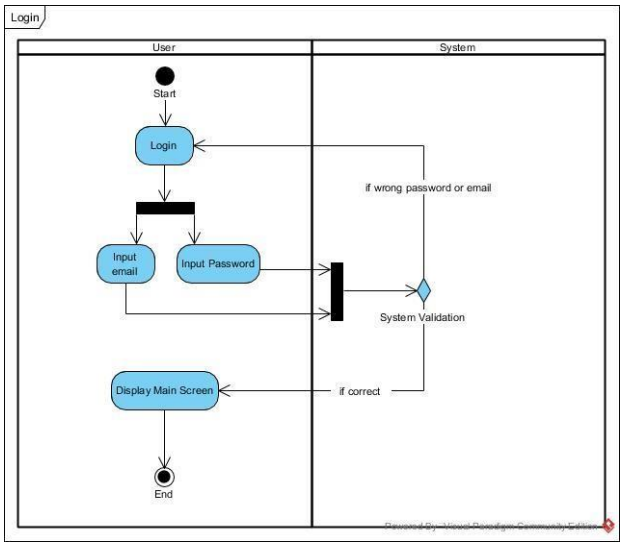

Fig. 6.1.2a Login activity diagram

Within the login activity diagram, the user is required to input their email address and password upon selecting "login" for the system to perform validation. In the event of an incorrect password or email entry, the system will redirect to the login screen; otherwise, it proceeds to the main screen of the application.

REGISTER ACTIVITY DIAGRAM

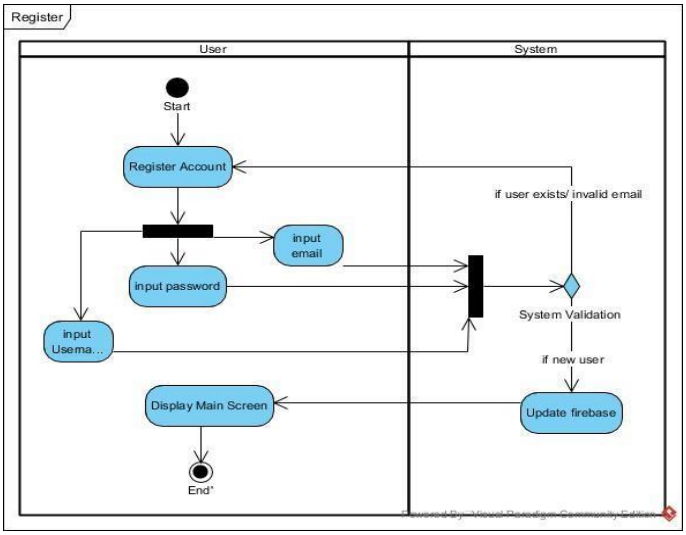

Fig. 6.1.2b Register Activity diagram

Within the register activity diagram, it is mandatory for a user who is not currently a member to create an account. The registration process involves entering an email address, username, and password. The system performs a verification check to determine if the user already exists, prompting them to re-register if necessary. Upon successful registration, the system updates Firebase and navigates the user back to the main screen.

REQUEST ACTIVITY DIAGRAM

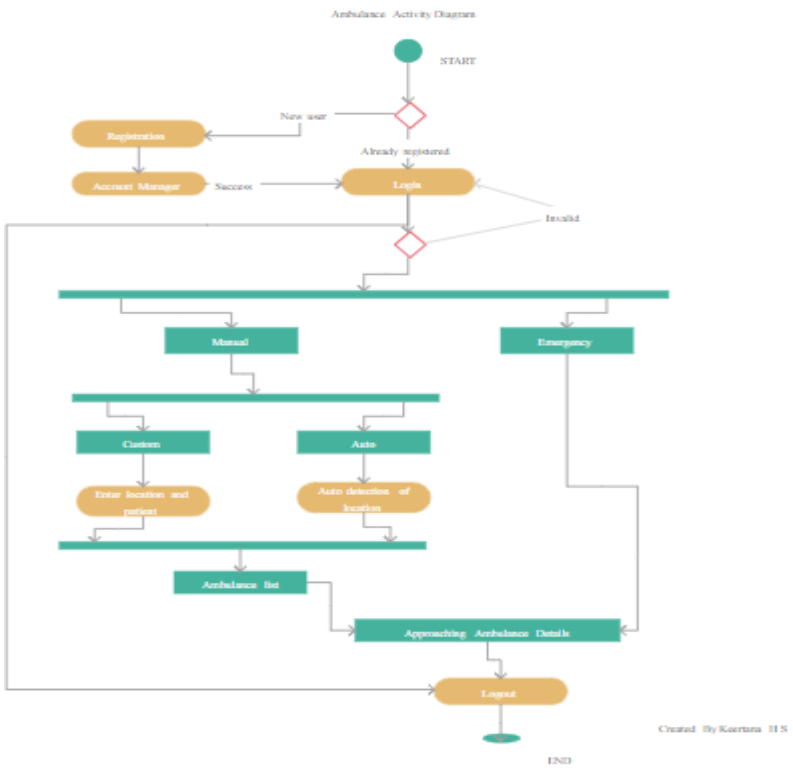

Fig. 6.1.2c Request activity diagram

The sequential sequence of steps required to request an ambulance using the web-based platform is depicted in this activity diagram. The process starts with the user requesting an ambulance. From there, it goes through the steps of picking the type of ambulance, verifying the selection, selecting the date and time, paying, verifying the payment, and, at the end, providing the user a confirmation.

The system will alert the user to the missing information needed to complete the booking if they fail to select an ambulance type or offer a schedule, as illustrated by the decision points in the diagram.

RESET PASSWORD ACTIVITY DIAGRAM

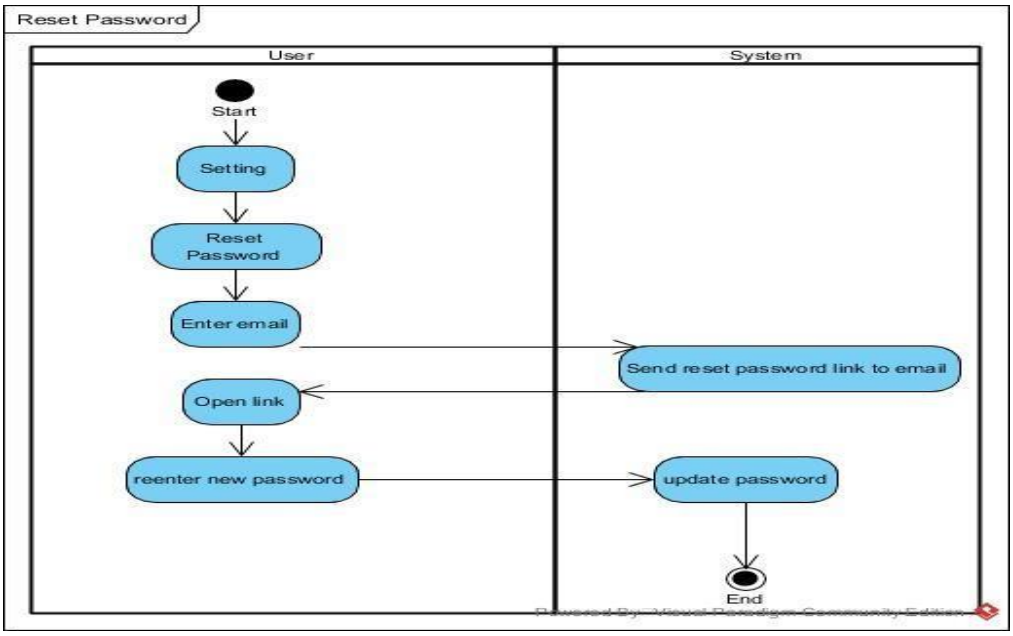

Fig. 6.1.2.d Reset password activity diagram

In the reset password action diagram, users are prompted to input their email address upon clicking the reset password button. Subsequently, the system dispatches a link to the designated account, where users are required to open it and provide their new password. Following this, the system updates their Firebase password accordingly.

6.1.3 CLASS DIAGRAM

CLASS DIAGRAM FOR AMBULANCE SERVICE SYSTEM

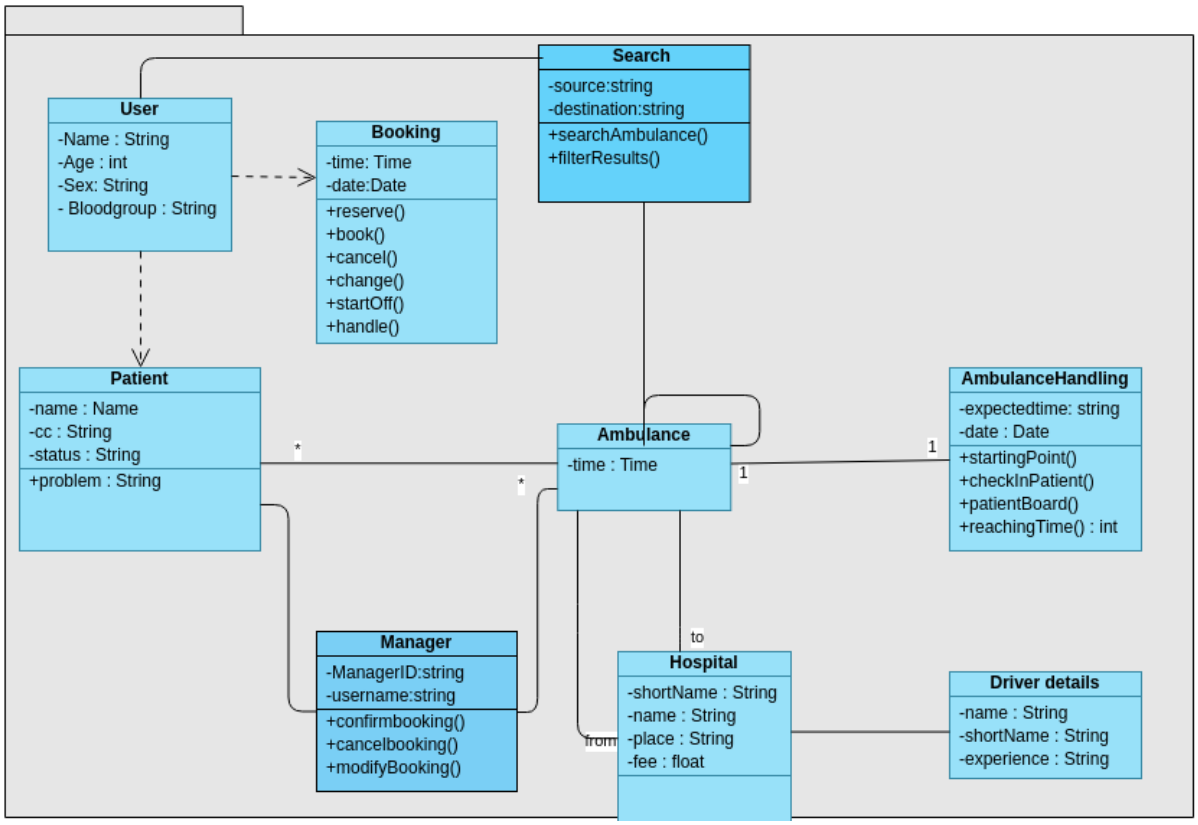

Fig. 6.2 Class diagram for Ambulance Service System

System Administration:

Ambulances and users are managed via the system.

You can schedule and cancel ambulance rides.

Bookings can be made and canceled by users.

Emergency vehicles:

Possess categories (e.g., advanced, basic).

Possess statuses of availability.

Have timetables with precise dates and timings.

Schedules:

Include the times and dates that ambulances are available.

Ability can be indicated as available or booked.

Users:

Possess distinct phone numbers, emails, IDs, and usernames.

Able to make new reservations and cancel those they already have.

6.1.4 DATA FLOW DIAGRAM

CONTEXT LEVEL DIAGRAM (0 LEVEL DIAGRAM)

Commonly known as DFD level 0, this illustration presents the entire system encapsulated within a singular entity, denoted as a bubble. The incoming and outgoing arrows symbolize input and output data. The process labeled as the "Online Ambulance Booking System" is showcased, featuring inputs and outputs such as login, ambulance information, booking details, status, and payment. The user, in this context, directly engages with the input/output parameters and receives affirmative or negative responses.

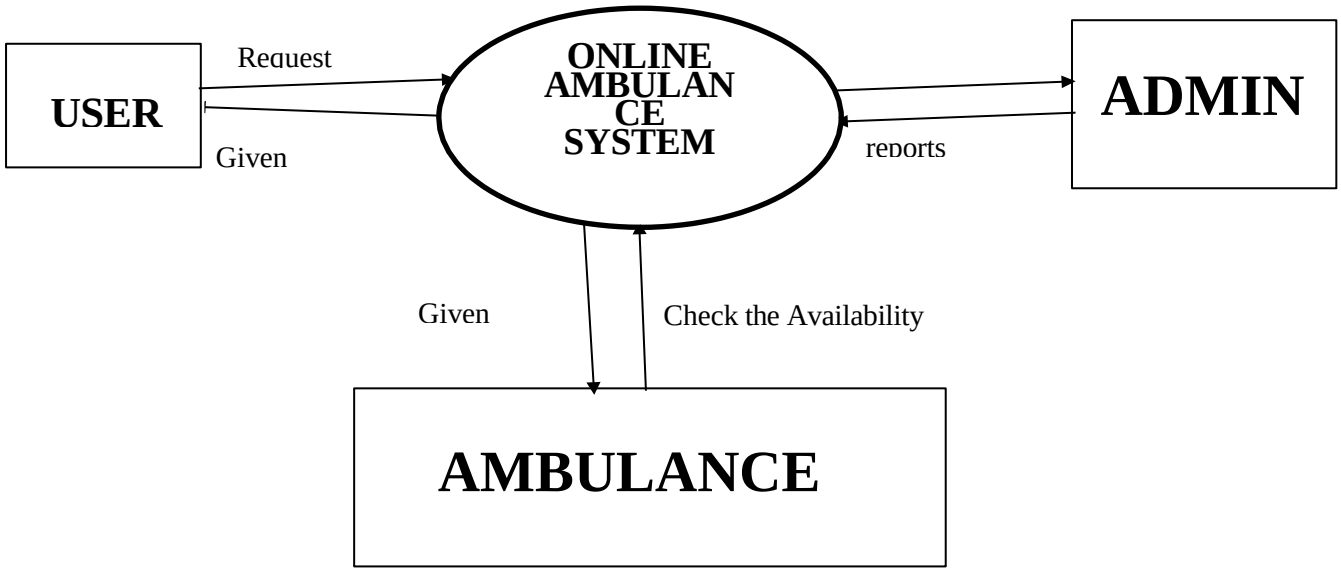

Fig. 6.3.a CONTEXT LEVEL DIAGRAM (0 LEVEL DIAGRAM)

LEVEL 1 DFD

In level 1 DFD, we will go over the system's overview and the corresponding databases that each process will use to retrieve data and carry out various tasks. Bubbles at Level 1 can range from 1.1 to 1.7, which is the maximum.

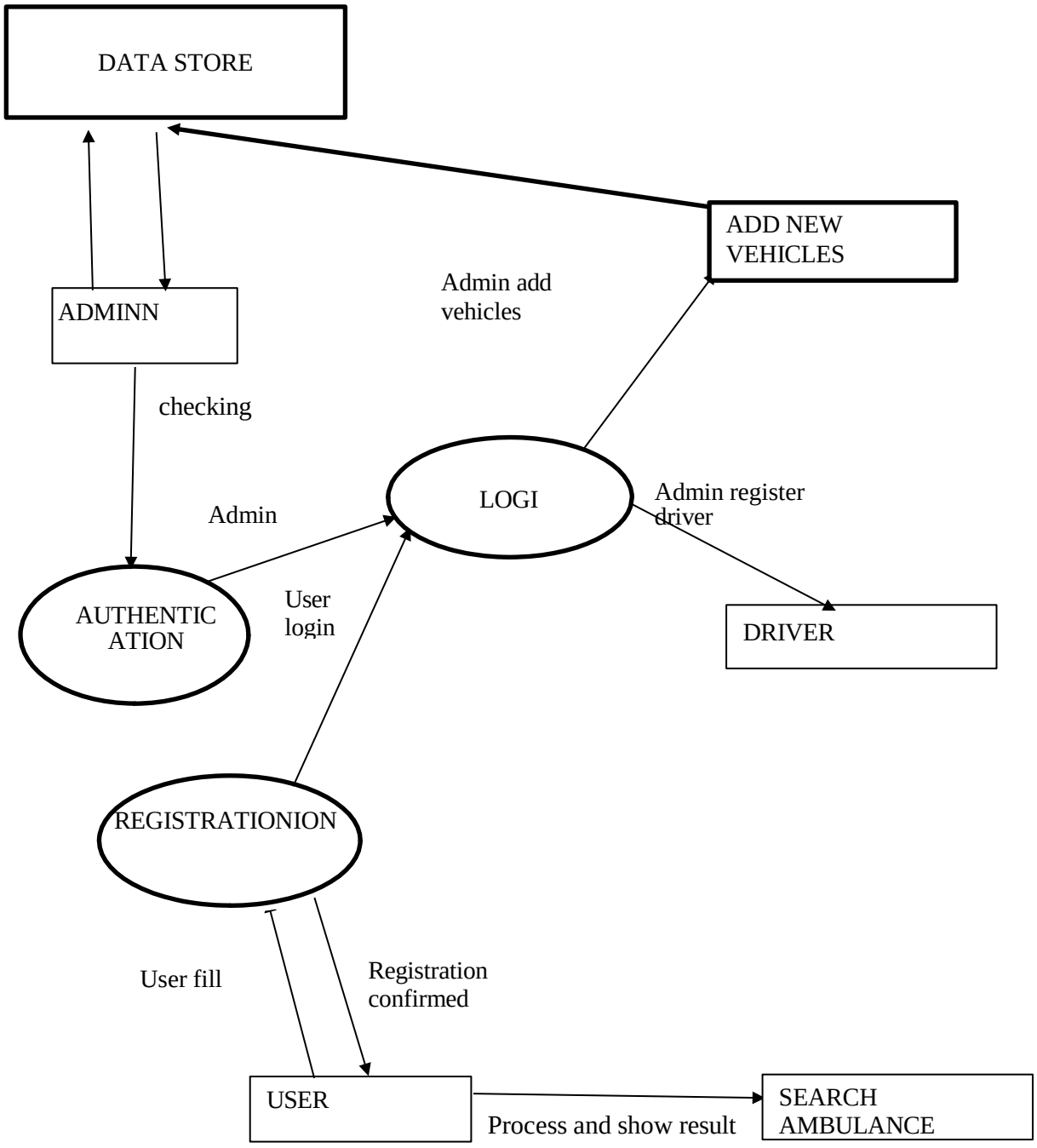

Fig. Level 1 DFD

6.1.5 ENTITY RELATIONSHIP DIAGRAM

ER DIAGRAM FOR AMBULANCE SERVICE SYSTEM

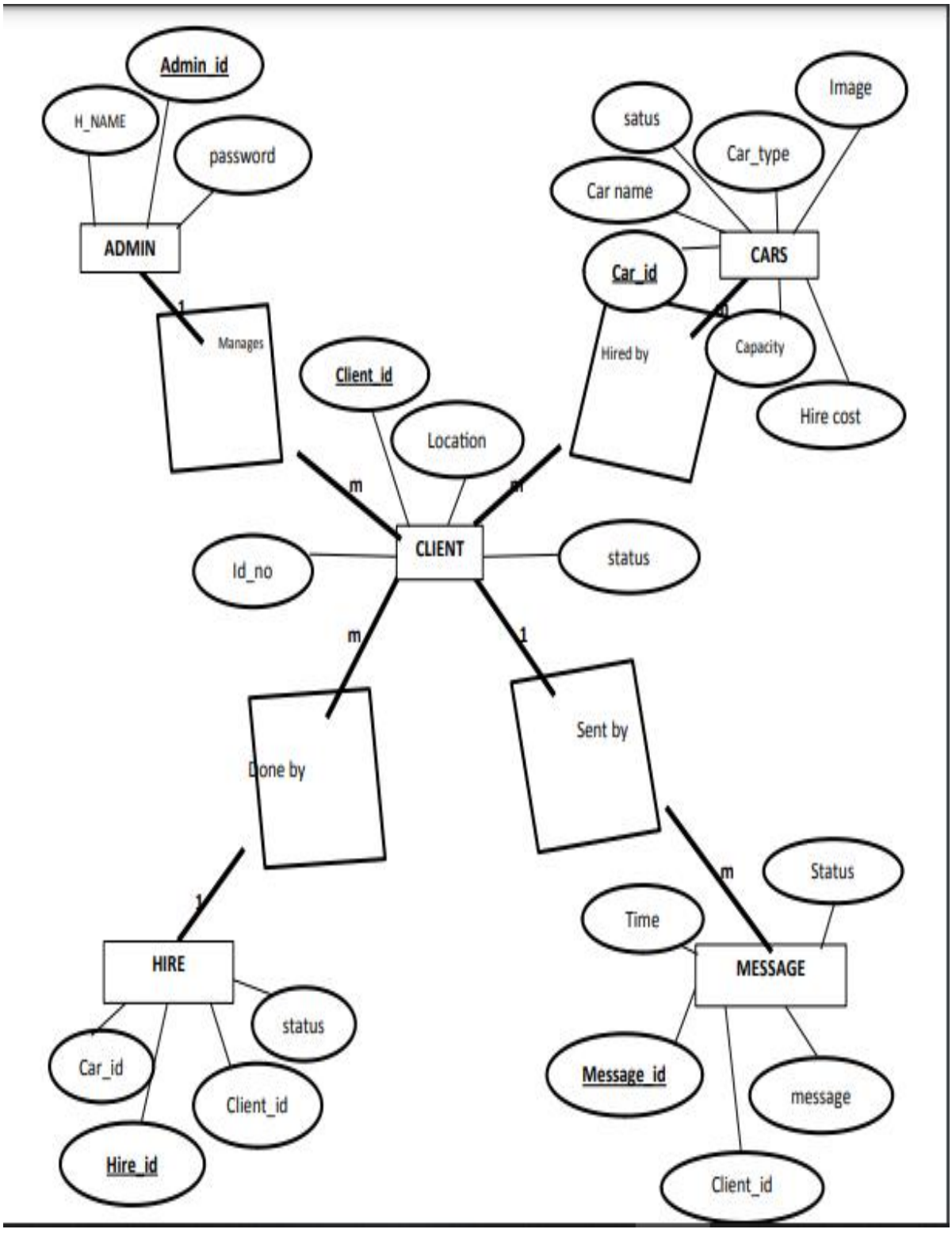

Fig.6.1.5 ER diagram for Ambulance Service System

6.1.6 DATA DICTIONARY

CLIENT:

Column Name	TYPE	DEFAULT VALUE	MANDATORY	UNIQUE	SIZE
CLIENT ID	Alpha Numeric		YES	YES	6
PASSWORD	Alpha numeric		YES	YES	6
CLIENT NAME	String		YES		15
GENDER	String	NULL			6
MOBILE NUMBER	Numeric	0	YES		12
EMAIL ID	Alpha Numeric	0	YES		15
ADDRESS	Alpha Numeric	NULL			20
NATIONALITY	String	INDIAN			10
DATE OF BIRTH	Alpha Numeric	0			10

Table 6.1.6.a Data Dictionary of Client

CAR AND DRIVER

COLOUMN NAME	TYPE	DEFAUT VALUE	MANDATORY	UNIQUE	SIZE
CAR ID	Alpha Numeric		YES	YES	10
CAR NAME	Alpha Numeric		YES		15
CAR NO	Alpha Numeric		YES	YES	10
DRIVER ID	Alpha Numeric		YES	YES	10
DRIVER NAME	STRING		YES		10
CAR TYPE	NUMERIC		YES		10

Table 6.1.6.b Data Dictionary of Driver

6.2 IMPLEMENTATION

6.2.1 FEASIBILUTY STUDY

The purpose of the feasibility study, which is the initial stage of project analysis, is to determine whether or not the project is developable. Talking about the various requirements that a project must meet, including all risk factors—financial, operational, technical, economic, and time-related.

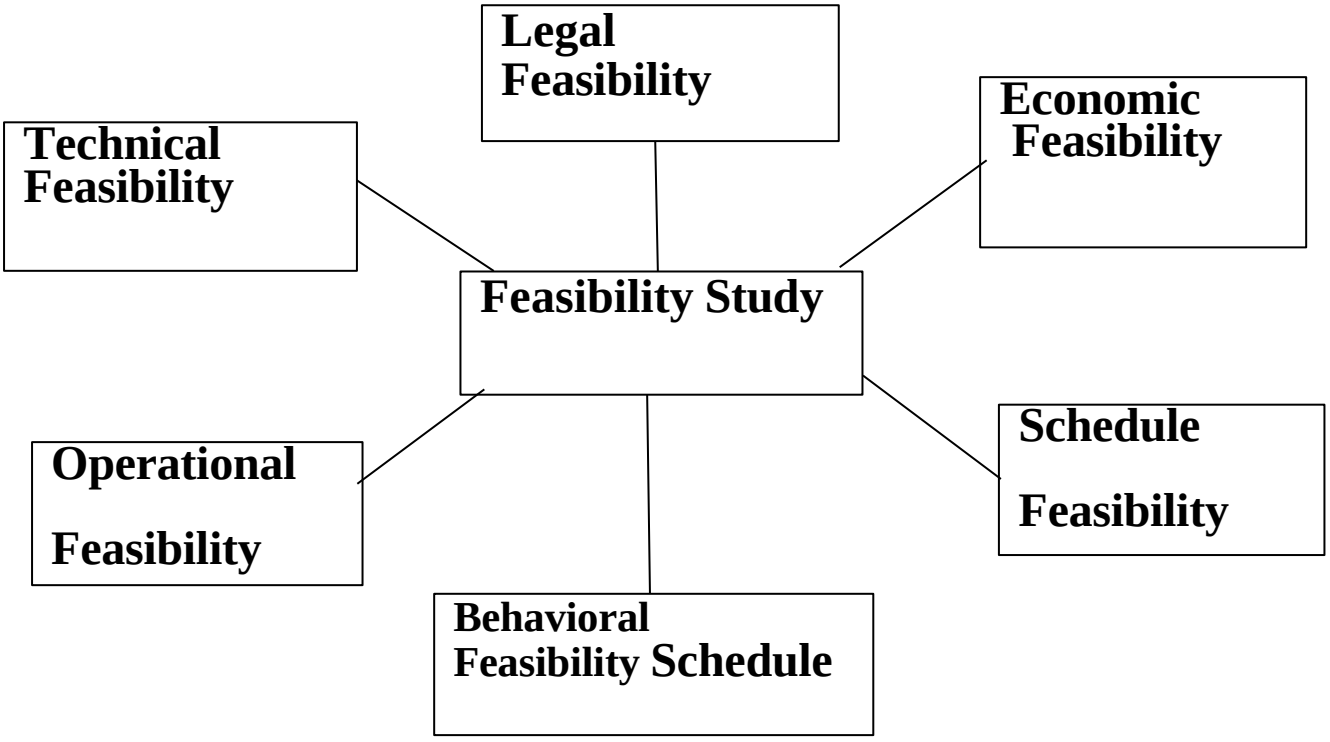

Fig.6.2.1 Feasibility Study

- HTML
- CSS
- JAVASCRIPT
- PHP
- PHPMySQLServer(XAMPP)

The necessary technical skills are manageable, and all of the technologies are publicly available. The ease of integrating these technologies and the time constraints of product

development are matched.

The website will be hosted for free at first, but it will eventually be implemented in a premium web hosting environment with enough bandwidth. This application uses relatively little bandwidth because it doesn't have any multimedia features.

The project is TECHNICALLY FEASIBLE from these angles.

ECONOMICAL FEASIBILITY

The Project Online Ambulance Booking System is an open source system that makes use of publicly available development tools. The only amount that system users will be paid is the maintenance cost, i.e.

The free open source JSP software libraries are utilized in this system.

Since Online Ambulance Booking System is a web application, hosting will be required. The system requires relatively little bandwidth to run this application because it does not support multimedia data transfer. The system will adhere to the guidelines for freeware software. There will be no fees assessed to prospective clients. The cost of maintaining and fixing bugs will be incurred. The local population with a high number of emergencies will initially represent the possible market space.

OPERATIONAL FEASIBILITY

To undertake this project, essential resources comprise:

- Programming devices (laptops & desktops)
- Hosting space (freely available)
- Programming tools (free open-source server)
- Skilled individuals for programming, designing, and planning

The project necessitates proficient members for effective planning and execution under suitable supervision. Development is undertaken on the Windows 10 platform, offering the capability to create and test software. Opting for Windows aligns with common office preferences, facilitating communication for any arising issues or necessary modifications. Enhancements to the software's usability and user experience will be implemented from the backend. As the project meets all these criteria, it is poised for successful realization.

SCHEDULE FEASIBITY

We have around 6 months to finish this web-based project, if we schedule the work properly. This project group consists of FOUR people, two of them will handle the designing and coding while the remaining three will handle the other project parameters. Therefore, if the project is well-planned, the allotted time will allow for its appropriate construction. These considerations make the project SCHEDULE FEASIBLE.

LEGAL FEASIBILITY

Throughout, the initiative is ethically and legally for the citizens of India. The project is being created, and part of that includes a study on contracts, liabilities, violations, and other legal pitfalls that the technical staff is often unaware of. The project is legally feasible because the data processing system conforms with the Data Protection Act and user data is kept secure.

BEHAVIOURAL FEASIBILITY

Users of the application will adjust to the changes when their reservations are automatically canceled. Additionally, they will have the option to choose which reservations to make and can make several reservations at once, meaning that any modifications they make will appear in both boxes. With a few more features to make it more user-friendly, the system is nearly identical to the current one. The following are the main obstacles or risk factors:

Factors	Explanation
Inadequate estimation of project time, cost, scope and other resources.	We have gone through the scope, time & cost requirements of the project including the other resources needed.
Unrealistic Schedule	The timing or schedule is being checked under the schedule feasibility.
Unrealistic Budget	There is no much cost to build the project, as we have seen in the financial & economic feasibility.
Unclear Project Scope	The introductory section of the project documentation clearly outlines the project's scope, providing a well-defined and practical perspective.
Insufficient Resources	There are enough members to complete the project in accordance with time. Another important resource is having machines that is also not insufficient.

Table 6.2.1.a Behavioral Feasibility

6.2.2 SOFTWARE REQUIREMENT AND SPECIFICATION (SRS)

INTRODUCTION

This document aims to outline the overall software requirements for the "Online AMBULANCE BOOKING System" in a precise and comprehensive manner. The features and functionalities described in this document will exclusively constitute the final product. Those involved in the development, testing, implementation, or utilization of the product should not presume any additional functionality or feature. If there is a need for specific additional features, a formal modification request must be submitted, leading to the creation of a new version of this document and/or the product.

PURPOSE

The features that the "Online Ambulance Booking System" software program will offer are detailed in this specification paper. It also lists the different necessary restrictions.

USER INTERFACE

Which the system is going to follow. The product's end users, the testing team, and the development team are the target audience for this document.

SYSTEM INTERFACE

The application will feature a user-friendly interface with a menu-based design. The screens provided will include:

- Display Screen
- Login or Sign-up Screen
- Menu and Booking Screen

6.3 LANGUAGES AND TOOLS ARE USED

- HTML
- CSS
- JAVASCRIPT
- PHP

- PHPMySQLServer(XAMPP)

The required technical skills are within reach, and all the technologies are publicly accessible. The integration of these technologies aligns with the time constraints of product development.

Initially, the website will be hosted for free, but it will later transition to a premium web hosting environment with sufficient bandwidth. The application, being devoid of multimedia features, consumes relatively minimal bandwidth.

From a technical standpoint, the project is feasible in these aspects.

6.3.1 HTML

HTML, an acronym for Hypertext Markup Language, serves as a tool for creating web pages through a markup language. It amalgamates Hypertext and Markup language, where Hypertext establishes connections between web pages, and Markup language outlines the structure of the web pages by annotating the text within tags. This markup language involves adding notes to the text for machine comprehension and manipulation. Notably, most markup languages, including HTML, are designed to be easily readable by humans, employing tags to specify how text manipulation should occur.

6.3.2 CSS

Cascading Style Sheets, commonly known as CSS, is a straightforwardly designed language with the purpose of streamlining the task of enhancing the visual appeal of web pages. CSS grants the ability to apply styles to web pages and, notably, allows this process to be independent of the HTML that constitutes each web page. Its function revolves around detailing the appearance of a webpage, specifying elements such as colors, fonts, and spacing, offering a comprehensive means to customize the visual aspects of a website. In essence, CSS empowers users to tailor the look and behavior of their websites as desired. Unlike HTML, which employs tags, CSS utilizes rulesets. While being easily learnable and comprehensible, CSS provides robust control over the presentation of an HTML document.

6.3.3 JavaScript

JavaScript is recognized as a lightweight, cross-platform, single-threaded, and interpreted compiled programming language, often referred to as the scripting language for webpages. Renowned for its role in webpage development, JavaScript finds application beyond browsers in various non-browser environments. Operating as a weakly typed language with dynamic typing, JavaScript serves both client-side and server-side development purposes. It embodies characteristics of both imperative and declarative languages. JavaScript encompasses a standard library featuring objects such as Array, Date, and Math, alongside a foundational set of language elements, including operators, control structures, and statements.

6.3.4 PHP

PHP, which stands for PHP: Hypertext Preprocessor, is a server-side scripting language crafted explicitly for web development. As an open-source language, PHP is freely available for download and usage, featuring a straightforward learning curve. PHP files are identifiable by the ".php" extension. Initially inspired by Rasmus Lerdorf, who contributed to subsequent versions, PHP operates as an interpreted language, eliminating the need for a compiler.

6.3.4 XAMPP

XAMPP, a freely available and open-source cross-platform web server, derives its name from Cross-Platform, Apache, MySQL, PHP, and Perl. Serving as a popular choice, XAMPP enables developers to write and test their code on a local webserver. Developed by Apache Friends, XAMPP allows public access to its source code for revision or modification. The package encompasses MariaDB, Apache HTTP Server, and interpreters for PHP and Perl, supporting various programming languages. Thanks to XAMPP's straightforward deployment, developers can easily install a WAMP or LAMP stack on an operating system, with the added advantage of loading common add-in applications like WordPress and Joomla.

6.3.4 MySQL

MySQL stands out as an open-source relational database management system (RDBMS) widely utilized in conjunction with PHP, developed, distributed, and supported by Oracle Corporation.

- Information within a MySQL database finds its storage in tables, comprising columns and rows.
- Operating on a server, MySQL serves as a database system.
- Suited for applications of varying scales, MySQL proves ideal for both small and large-scale implementations.
- Recognized for its rapidity, reliability, and user-friendly nature, MySQL is a database system that seamlessly employs standard SQL.
- MySQL is adaptable, compiling on numerous platforms to accommodate diverse needs.

CHAPTER-7
TIMELINE FOR EXECUTION OF PROJECT
(GANTT CHART)

We have around 6 months to finish this web-based project, if we schedule the work properly. This project group consists of FOUR people, two of them will handle the designing and coding while the remaining three will handle the other project parameters. Therefore, if the project is well-planned, the allotted time will allow for its appropriate construction.

1. **Project Initiation (Month 0-1)**
    1. Define project goals and objectives.
    2. Identify key stakeholders and form a project team.
    3. Secure funding and resources.
2. **Market Research and Analysis (Month 0-1)**
    1. Conduct market research to understand the current ambulance service landscape.
    2. Identify competitors and potential partners.
    3. Determine target regions and demographics.
3. **Concept and Requirements (Month 1-2)**
    1. Develop a concept for the smart ambulance service.
    2. Define the technical and functional requirements.
    3. Create a preliminary budget and project plan.
4. **Technology Selection and Procurement (Month 1-2)**
    1. Choose the necessary hardware and software components.
    2. Procure or develop the technology required for the service.
5. **System Design and Development (Month 2-3)**
    1. Develop the smart ambulance service infrastructure.
    2. Create a mobile app or web portal for users.
    3. Integrate real-time tracking, communication, and data analysis features.
    4. Perform initial testing and quality assurance.

CHAPTER-8
OUTCOMES

The Outcomes of an online system for reserving ambulances can have a big influence on a lot of different things.

Timeliness and Availability:

- **Improved Access:** By enabling users to quickly and easily book ambulances using a web-based platform, it improves access to emergency medical services.
- **Timely Response:** Allows consumers to request ambulance services quickly and avoids the usual delays associated with phone-based reservations, which leads to speedier response times.

Effectiveness and Resource Allocation:

- **Optimal Resource Allocation:** By offering automated scheduling and real-time availability, the system may maximize ambulance utilization by making sure resources are used effectively.
- **Decreased Administrative Overhead:** By automating booking procedures, employees may concentrate on more important work by bearing less administrative load.

Improved User Experience:

- Convenience: Offers an easy-to-use interface for scheduling, paying, and monitoring, improving consumers' experiences while

CHAPTER-9
RESULTS AND DISCUSSIONS

Results

Enhanced Accessibility: By utilizing an intuitive web platform, users can access emergency services more easily and depend less on conventional phone-based systems.

Simplified Procedures: Automating the booking, scheduling, and payment processes minimizes administrative work and maximizes the use of available resources.

Better Response Times: By offering real-time availability and streamlining communication between users and service providers, the system enables faster ambulance dispatch.

Data Insights and Analytics: By producing useful data on customer preferences, periods of high demand, and service consumption, the system facilitates data-driven decision-making and the improvement of services.

User Experience Improvement: Users are better able to make educated decisions during emergencies because to the platform's openness on ambulance availability, types, and schedule.

Operational Efficiency: Reducing manual processes and allocating resources more effectively increase operational efficiency, which may eventually result in lower costs.

DISCUSSION POINTS

The intended audience for this proposed system encompasses individuals across various generations, including teenagers, Generation X, and Generation Y. While the application strives to be user-friendly for all generations, those with limited familiarity with web applications may encounter challenges, potentially finding the interface somewhat intricate during use.

User Adoption and Accessibility Issues: There may be questions about how user-friendly a system is for a variety of user demographics, such as individuals with low levels of internet access or technological expertise.

Data Security and Privacy Issues: In order to foster user trust, it is imperative to address data security and privacy issues and ensure compliance with healthcare standards and legislation.

Service Scalability and Resource Management: The system's capacity to grow with rising demand and efficiently allocate resources during peak hours may be the main topics of discussion.

Technological Upgrades and Maintenance: In order to remain competitive, ongoing technological improvements force debates about system upgrades, maintenance, and the incorporation of new features.

Cooperation with Stakeholders: To enhance service options and coverage, talks about joint ventures with ambulance services, healthcare providers, and IT vendors are crucial.

User Input and Ongoing Development:

FUTURE SCOPE

Features like geo-location tracking and the range of service availability has the scope to be improved eventually and with respect to the provisions granted or requested from the original creators of the first ever 24x7 Online Ambulance Booking Facility.

Apart from that it’s an ambulance service that aims to reach out as a ray of hope for the masses.

CHAPTER-10
CONCLUSION

These days, mobile or web applications are far more advantageous than any other system because everyone always has them at their fingertips.

People can open and access any application at any time, which makes online or mobile applications more useful in today's world. Therefore, it is a good idea to book ambulance services—both emergency and non-emergency—using an online or mobile application. When a patient is brought to the hospital, this application makes medical emergency services much more beneficial because it allows for prompt treatment or efficient medical care to be provided in the least amount of time due to the patient's symptoms, medical report, and biostatistics (heartbeat, pulse rate, and body temperature) that are recorded during booking.

The prototype we envisioned during the initial phase of the project has been successfully implemented and is up and running as a software application. This software application has been designed to meet the features mentioned earlier. The page designing has been done using HTML, CSS and PHP.

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APPENDIX-A

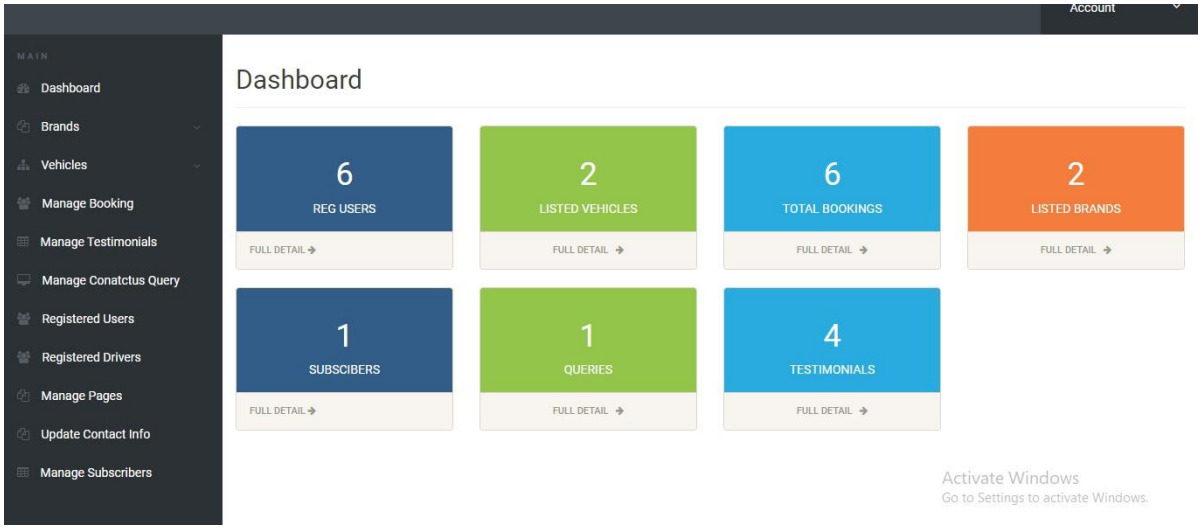
PSUEDOCODE

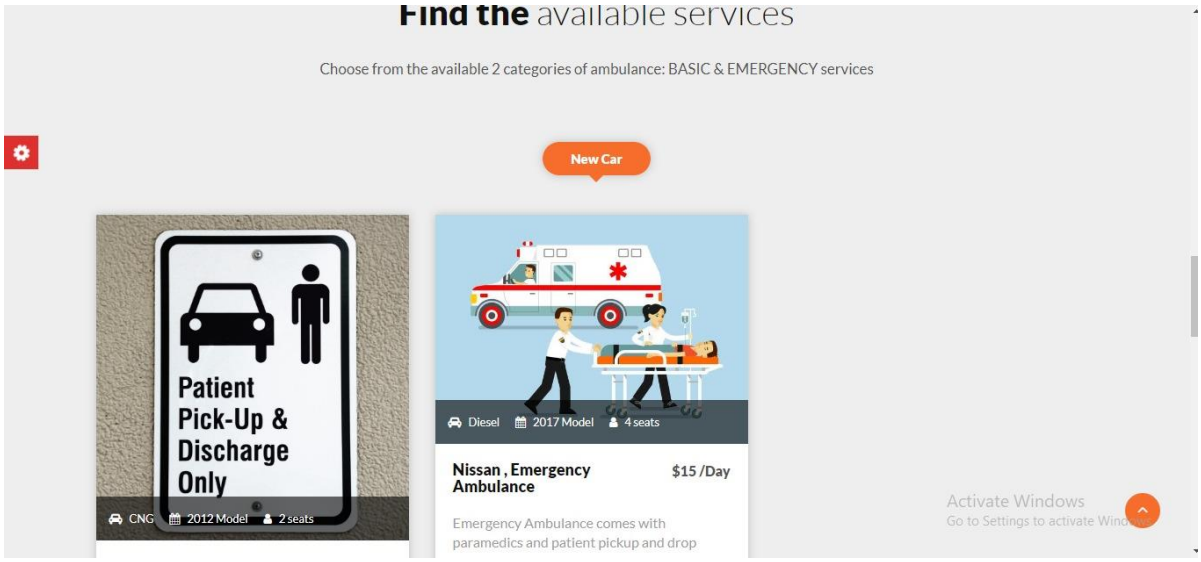
```
BEGIN
  // Include necessary meta tags, stylesheets, and external resources
  HEAD
    // Include color switcher
    INCLUDE('includes/colorswitcher.php')
    // Include header
    INCLUDE('includes/header.php')

    // Get the page type from the URL parameter
    pagetype = GET_PARAMETER('type')

    // Fetch page details from the database
    sql = "SELECT type, detail, PageName FROM tblpages WHERE type=:pagetype"
    query = PREPARE_STATEMENT(sql)
    BIND_PARAMETER(query, ':pagetype', pagetype, PDO::PARAM_STR)
    EXECUTE_QUERY(query)
    results = FETCH_ALL(query, PDO::FETCH_OBJ)

    // Check if there are results
    IF ROW_COUNT(query) > 0 THEN
      FOR EACH result IN results
        // Page header section
        SECTION("page-header aboutus_page")
          // Include page header content
        END_SECTION

        // About us section
        SECTION("about_us section-padding")
          DIV
            SECTION_HEADER("text-center")
              H2 = htmlentities(result->PageName)
```

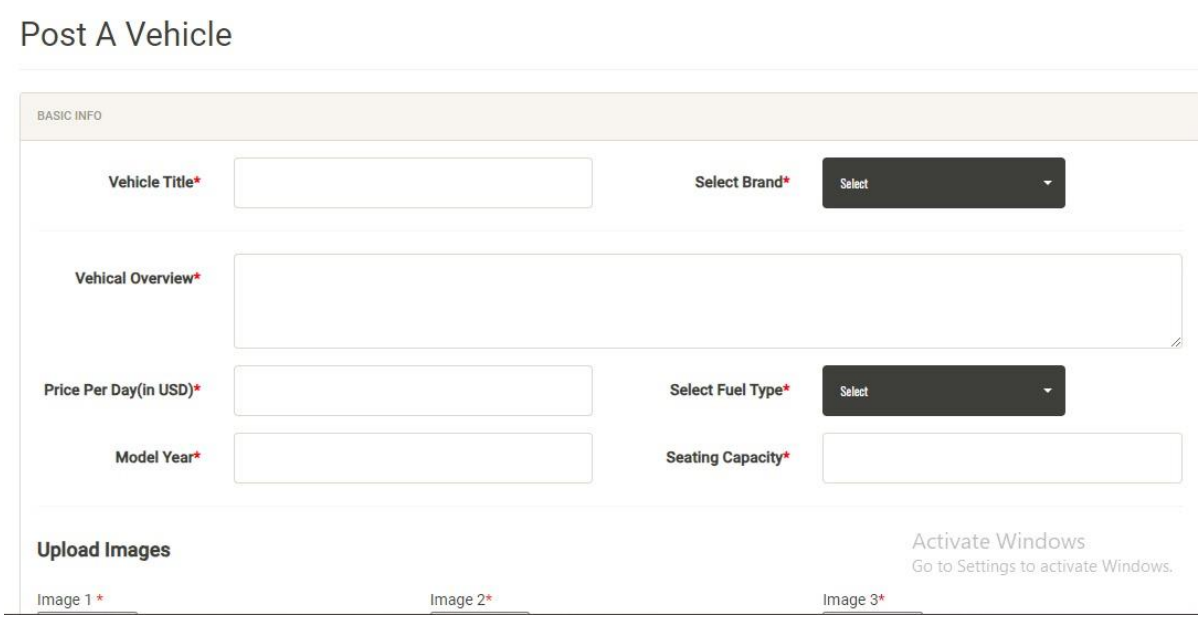
```
                P = result->detail
              END_SECTION_HEADER
            END_DIV
          END_SECTION
        END_FOR
      END_IF
END
```

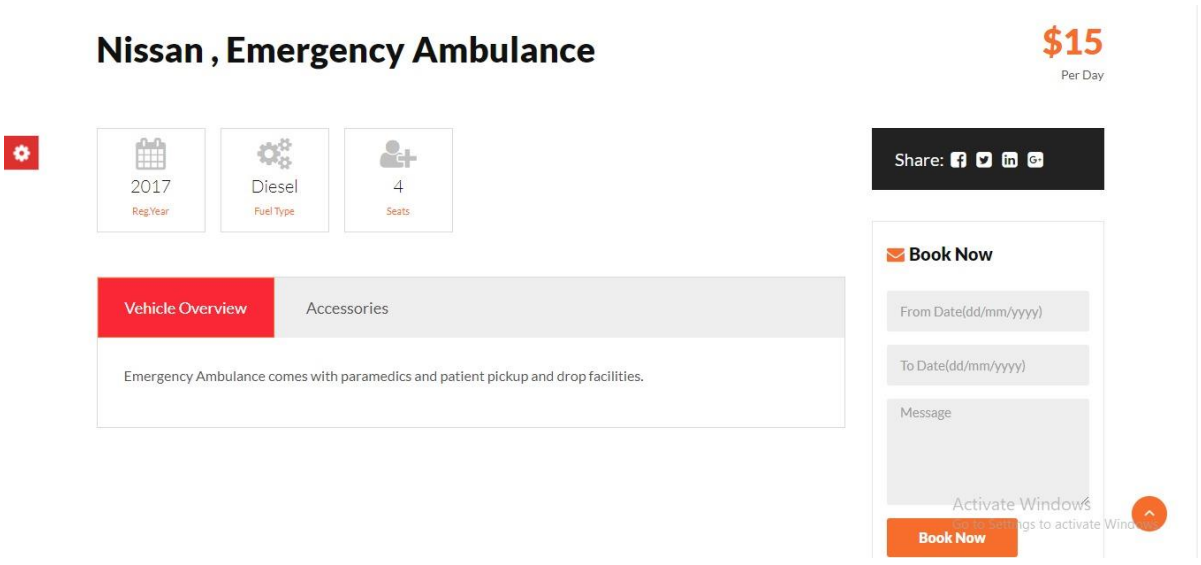
APPENDIX-B

SCREENSHOTS




Find the available services
Choose from the available 2 categories of ambulance: BASIC & EMERGENCY services
New Car
Patient Pick-Up & Discharge Only
CNG
2012 Model
2 seats
Diesel
2017 Model
4 seats
Nissan , Emergency Ambulance
$15 /Day
Emergency Ambulance comes with paramedics and patient pickup and drop
Activate Windows
Go to Settings to activate Windows.

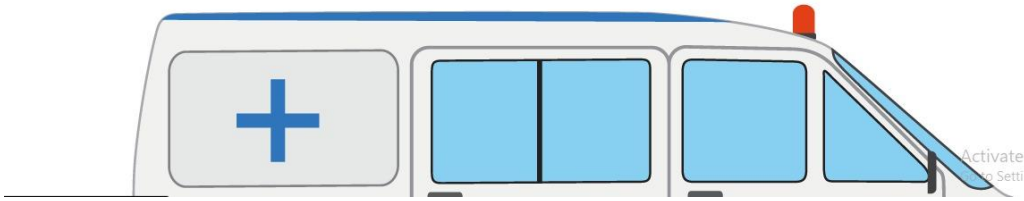

Post A Vehicle
BASIC INFO
Vehicle Title*
Select Brand*
Select
Vehical Overview*
Price Per Day(in USD)*
Select Fuel Type*
Select
Model Year*
Seating Capacity*
Upload Images
Activate Windows
Go to Settings to activate Windows.
Image 1 *
Image 2*
Image 3*


Nissan , Emergency Ambulance
$15
Per Day
2017
Reg.Year
Diesel
Fuel Type
4
Seats
Share:
Book Now
Vehicle Overview
Accessories
Emergency Ambulance comes with paramedics and patient pickup and drop facilities.
From Date(dd/mm/yyyy)
To Date(dd/mm/yyyy)
Message
Activate Windows
Book Now

FOR SUPPORT MAIL US : info@example.com

SERVICE HELPLINE CALL US: 1800-5050-9999

LOGIN / REGISTER



Price Per Day(in USD)*

Select Fuel Type* Select

Model Year*

Seating Capacity*

Upload Images

Image 1 * Choose File No file chosen

Image 2* Choose File No file chosen

Image 3* Choose File No file chosen

Image 4* Choose File No file chosen

Image 5 Choose File No file chosen

ACCESSORIES

- Air Conditioner
- Power Door Locks
- AntiLock Braking System
- Brake Assist
- Power Steering
- Driver Airbag
- Passenger Airbag
- Power Windows
- CD Player
- Central Locking
- Crash Sensor
- Leather Seats

Cancel Save changes

Update Contact Info

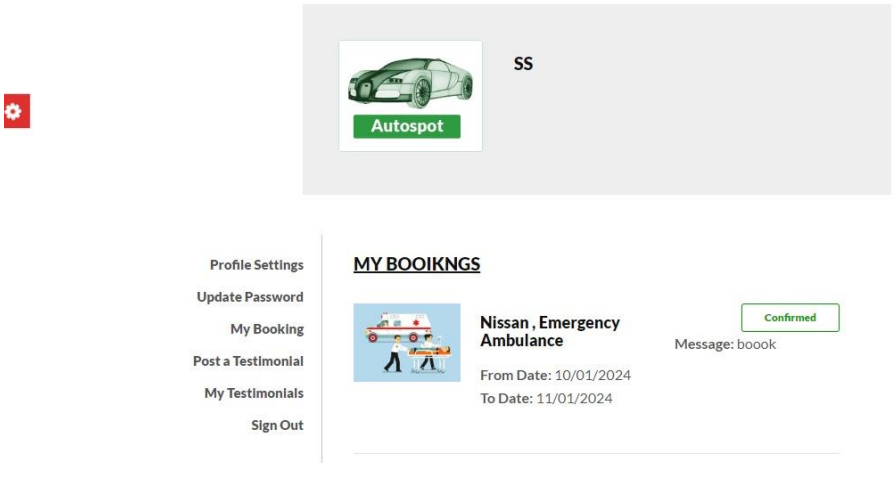
FORM FIELDS

Address Bangalore,Karnataka

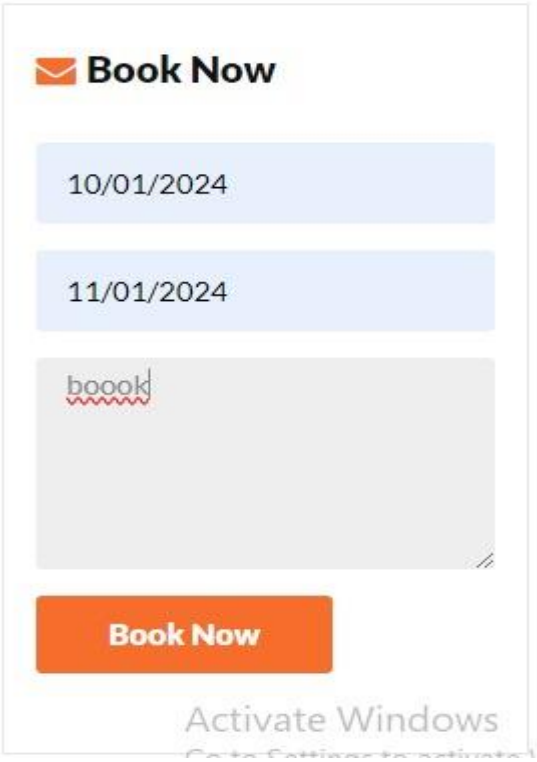
Email id demo@demo.com

Contact Number 18005050999

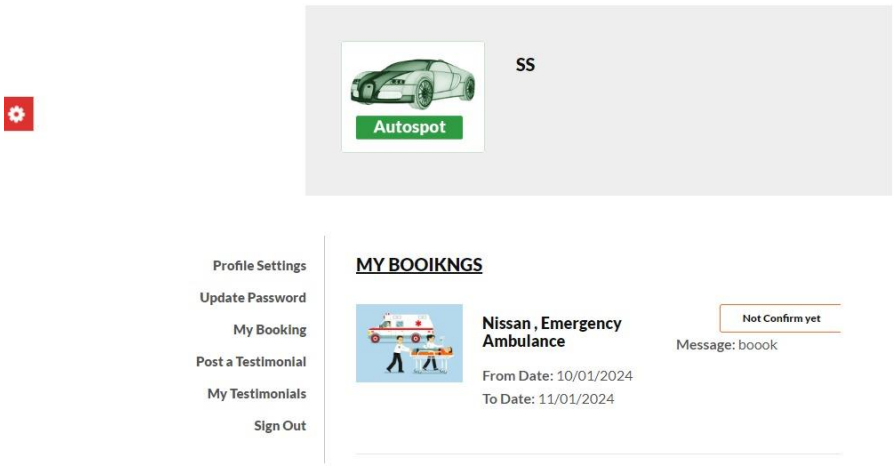
Update

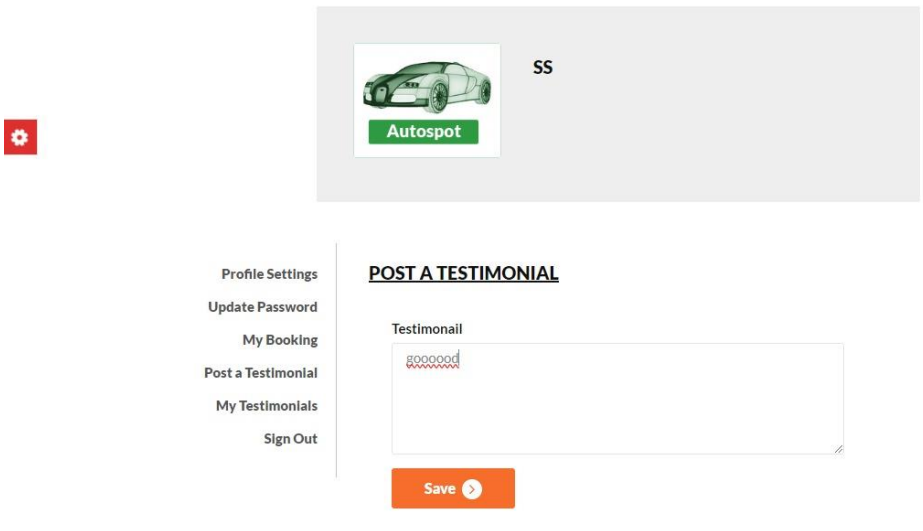


3	SS	Nissan , Emergency Ambulance	10/01/2024	11/01/2024	boook	Confirmed	2024-01-10 02:39:15	Confirm / Cancel




localhost says
Booking successfull.
OK


SS
Autospot
Profile Settings
Update Password
My Booking
Post a Testimonial
My Testimonials
Sign Out
MY BOOIKNGS
Nissan , Emergency Ambulance
From Date: 10/01/2024
To Date: 11/01/2024
Not Confirm yet
Message: boook
Activate Windows
Go to Settings to activate Windows.


SS
Autospot
Profile Settings
Update Password
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Post a Testimonial
My Testimonials
Sign Out
POST A TESTIMONIAL
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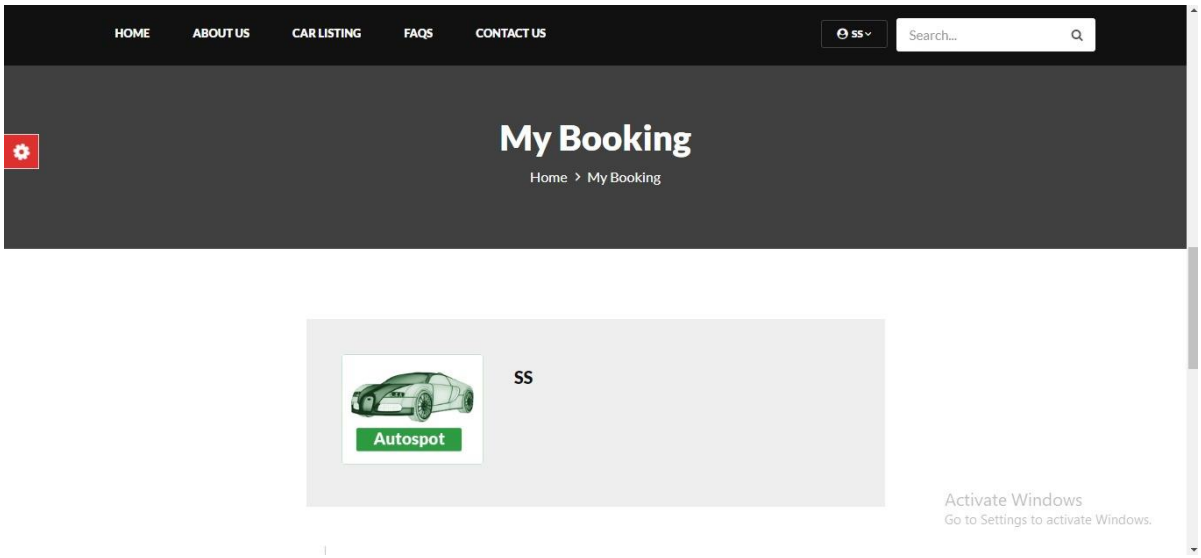
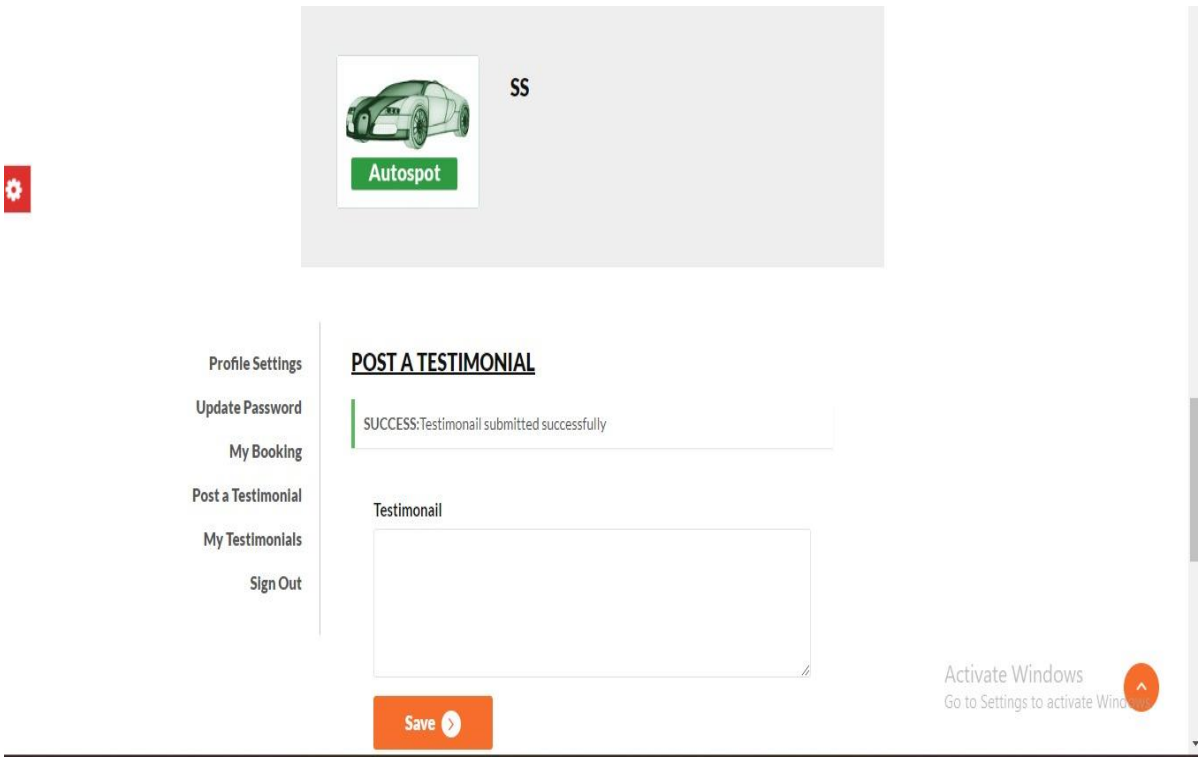
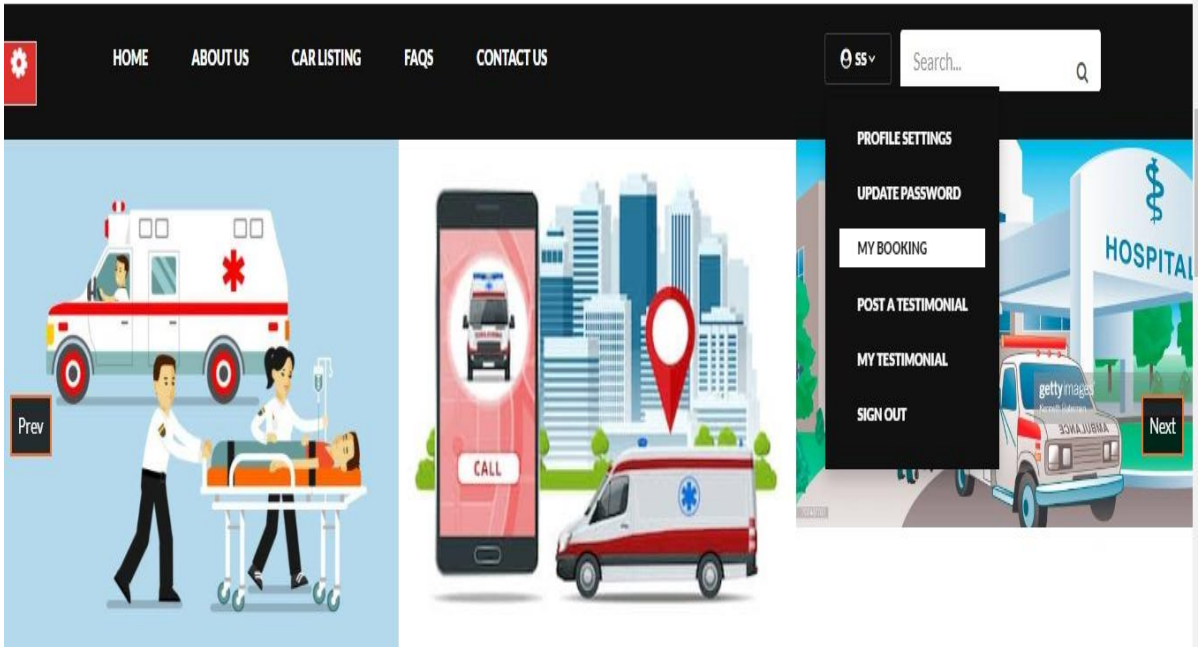
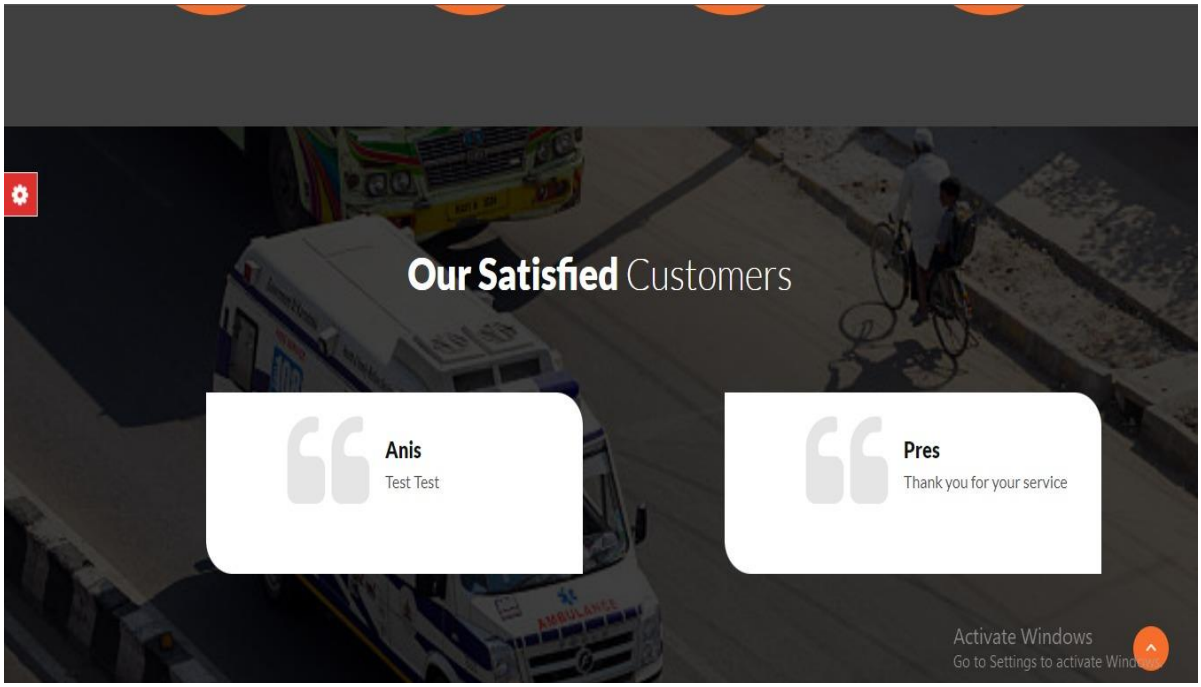
Save
Activate Windows
Go to Settings to activate Windows.


HOME
ABOUT US
CAR LISTING
FAQS
CONTACT US
SS
Search...
My Booking
Home > My Booking
Autospot
SS
Activate Windows
Go to Settings to activate Windows.


Autospot
SS
Profile Settings
Update Password
My Booking
Post a Testimonial
My Testimonials
Sign Out
POST A TESTIMONIAL
SUCCESS:Testimonail submitted successfully
Testimonail
Save
Activate Windows
Go to Settings to activate Windows.


HOME
ABOUT US
CAR LISTING
FAQS
CONTACT US
Search...
PROFILE SETTINGS
UPDATE PASSWORD
MY BOOKING
POST A TESTIMONIAL
MY TESTIMONIAL
SIGN OUT
Prev
CALL
Next


Our Satisfied Customers
Anis
Test Test
Pres
Thank you for your service
Activate Windows

APPENDIX-C

ENCLOSURES

1.Conference Paper Presented Certificates of all students.

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Certificate of Acceptance & Publication

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The advent of online ambulance booking service systems marks a significant step forward in healthcare accessibility and emergency response. By leveraging technology, these systems contribute to a more efficient, responsive, and data-driven healthcare ecosystem. Ultimately, the positive impact on society is undeniable, as lives are saved, and health care systems become more adaptable to the evolving needs of communities. As we continue to embrace technological advancements, the synergy between online ambulance booking services and healthcare will undoubtedly play a pivotal role in shaping the future of emergency medical services.