MED-DRIVE

(WEB APPLICATION SOFTWARE)

PROJECT REPORT

BACHELOR OF TECHNOLOGY

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ABSTRACT

About 2 years into the fight against ceaseless Corona Virus, India has already seen a populace that has largely put up a brave face in fighting against and coping up with the adversity. Yet one of the common and the most vital services which people struggled to organize in the middle of the epidemic were ambulances. Reasonably ill COVID patients who needed immediate medical assistance were unable to find ambulance facility links in the middle of the unverified data. Families had to make their own arrangements including paying exorbitant amounts to private ambulance operators to take the sick to hospital. Our project can be a relief and can provide assistance to thousands of people. It can be a one click away solution and resolve one of the prime problems encountered by the public during the Corona wave.

This platform will act as a single hub providing an option to view and select the booking of ambulances in different locations. The proposed system will render full aid for 24X7 Ambulance services with a multi-user portal on each separate note. GPS- based technology staging for quick and secure initial point medicinal attentiveness. It is one of the key features of our project which provides full support of nearby available ambulances shown on the active tracking projection with various peculiarities. It can automatically take live location, total distance and time-taken to reach from source to destination with full zoom-in feature.

The homepage provides information about the availability of ambulances, ambulance live tracking, multi-users portal, email assistance and easy payment options. Med-drive provides 24x7 assistance from nearby locations with contact details of ambulance operators accompanied by profile details and model of the ambulance. One can register their vehicle by logging into the website and after authentication from the admin, the vehicle will be reflected in the list and can be booked by the user. This site also provides Email support for any technical issue and seamless communication with staff. Our system will allow users to compare prices of various listed ambulance services and can also track their movement through GPS tracking. Other than offline payment means, the online payment method (Razor Pay) is used for fees and payroll purposes which make payments efficient and fast. According to the location, a list of available or nearby ambulances will be displayed. The ambulance information and driver’s contact details will also be provided and they can be contacted through a single click.

Admin Panel monitors all the information of the project, from managing testimonials of our users to managing vehicles and service providers, every single information is managed by the admin Panel. Number of users accessing our services and all their queries are handled here.

Through this application, our ultimate goal is to provide a platform which not only consist of the same group of coordinated functions, tasks, or activities for the benefit of the users but also provide certain functionalities that can be used by Private/Govt. hospitals, local ambulance drivers and all those who want help in such crucial times.

ACKNOWLEDGEMENT

It gives me an immense pleasure to dedicate this section as a tribute to those who always stood by us as strong supporters and acted as torchbearers for us.

To start with, we would like to thank Dr. Akhilesh Das Gupta Institute of Technology and Management for giving us an opportunity to implement this project. Moreover, we would like to thank the head of our IT Department, Dr. Prashant Singh for providing the necessary facilities required for this project. We would also like to thank our Project Mentor Dr. Meenakshi Yadav whose guidance and care made the project successful.

Lastly, we thank our almighty parents and friends for their constant encouragement and support without which this project would not have been possible.

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1.1.1 WHAT IS WEB DEVELOPMENT?

Web development refers to the building, creating, and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet i.e., websites.

1.1.2 WHAT IS FULL STACK WEB DEVELOPMENT?

Full-stack web development means the development of the front end and back end. The full-stack web developer should have knowledge of web design, web development, database, and website debugging.

A full-stack developer has the expertise to develop client and server-side web applications and should have database management skills also. Full-stack web developers are well versed in redesigning, building, and speeding up an entire website design and development phase.

Additionally, the responsibilities of full-stack web developers are to search for the web development trends like blockchain, deep learning, and multi-cloud depending upon the projects.

1.1.3 TYPES OF WEB APPLICATION?

- **Static web application: -** A Static Web Application is any web application that can be delivered directly to an end user's browser without any server-side alteration of the HTML, CSS, or JavaScript content.
- **Dynamic web application: -** A dynamic website or dynamic web page contains information that changes, depending on the viewer, the time of the day, the time zone, the viewer's native language, and other factors.
- **Web Applications with a Content Management System: -** A web content management system (WCMS) is a type of content management system (CMS) that provides an organization with a way to manage digital information on a website through creating and maintaining content without prior knowledge of web programming or markup languages.
- **E-commerce Web Application: -** An e-commerce web application, is a website that allows you to buy and sell tangible goods, digital products or services online and this brings out the need for demand and supply of goods and services. Transactions have been going on all over the world for centuries, locally, and across locations.

1.1.4 WHY WEB APPLICATION?

Unlike desktop or client-server applications, web applications can be accessed anywhere using a web browser such as Microsoft Explorer, Google Chrome, or Apple Safari. The user can determine which machine or machines he will use to access the web application. Web applications are updated centrally so that the applications are always up to date. Security can also be applied centrally.

1.2 PROJECT INSIGHTS

1.2.1 FRONT-END & BACK-END

Front-End and Back-End: Frontend and Backend are two most popular terms used in web development. These terms are very crucial for web development but are quite different from each other. Each side needs to communicate and operate effectively with the other as a single unit to improve the website's functionality.

1.2.2 FRONT-END LANGUAGES USED IN OUR WEBSITE:

HTML:

The **Hyper Text Markup Language**, or **HTML** is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

I. **Bootstrap:** Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

II. **Tailwind:** **Tailwind** is unapologetically modern, and takes advantage of all the latest and greatest **CSS** features to make the developer experience as enjoyable as possible. We've got first-class **CSS** grid support, composable transforms and gradients powered by **CSS** variables, support for modern state selectors like: focus-visible, and tons more.

JavaScript:

JavaScript (JS) is a lightweight interpreted or JIT-compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat.

1.2.3 BACK-END LANGUAGES USED IN OUR WEBSITE:

PHP AND MYSQL:

This is very useful in case you have a webserver, and you want to access its data on your android application. MYSQL is used as a database at the webserver and PHP is used to fetch data from the database. Our application will communicate with the PHP page with necessary parameters and PHP will contact MYSQL database and will fetch the result and return the results to us.

1.3 SOFTWARES USED IN MAKING OF OUR WEBSITE

XAMPP SNAPSHOT:

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible.

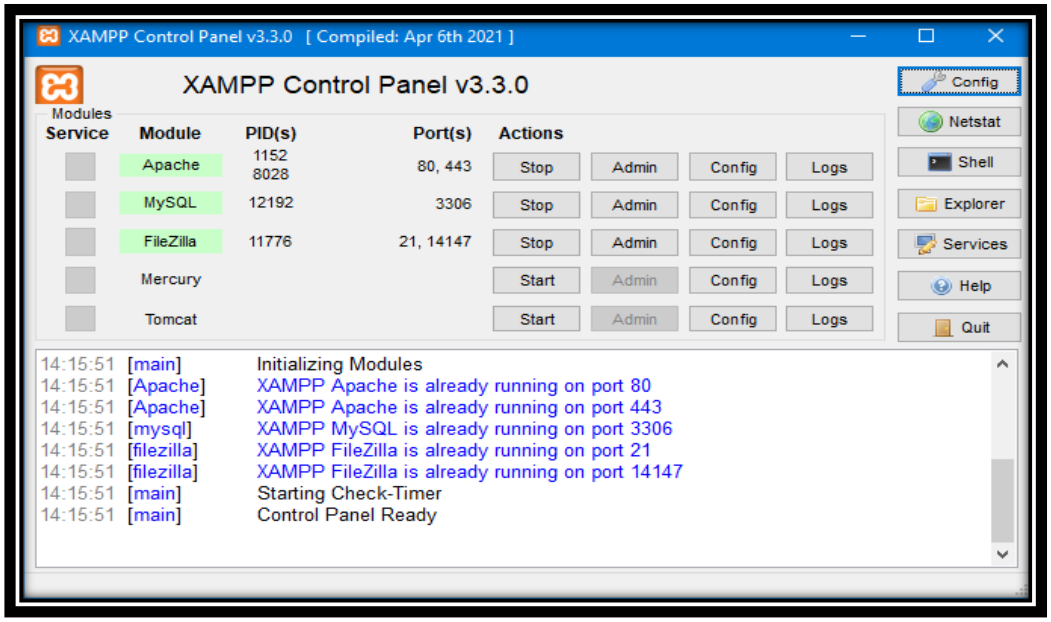


Fig. 1.1 Xampp Server

MYSQL SNAPSHOT (PHPMYADMIN):

PhpMyAdmin:

PhpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web. phpMyAdmin supports a wide range of operations on MySQL and MariaDB. Frequently used operations can be performed via the user interface, while you still have the ability to directly execute any SQL statement

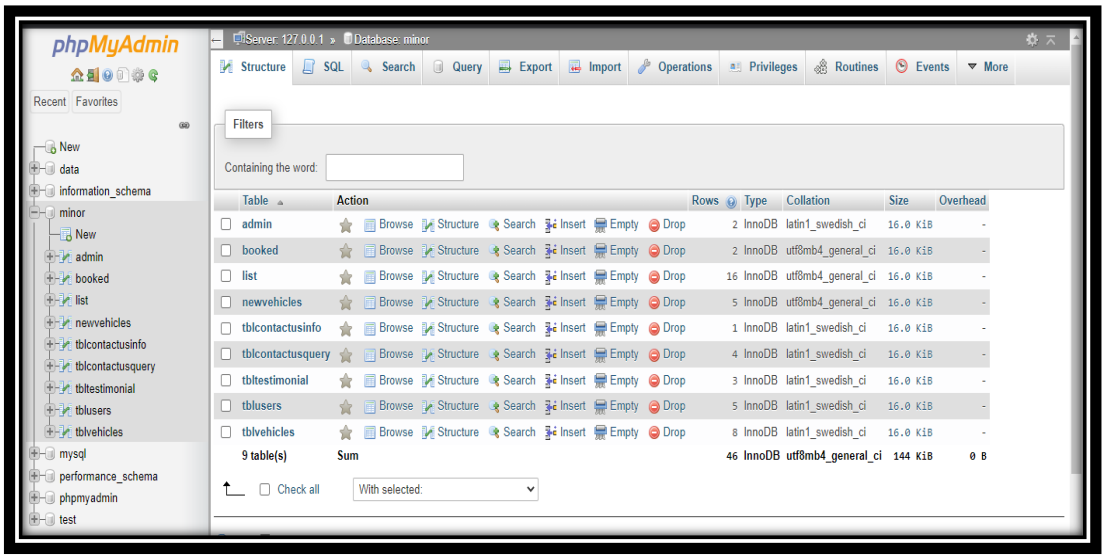


Fig. 1.2 PhpMyAdmin

POSTMAN:

Postman is a collaboration platform for API development. Postman's features simplify each step of building an API and streamline collaboration so you can create better APIs—faster.

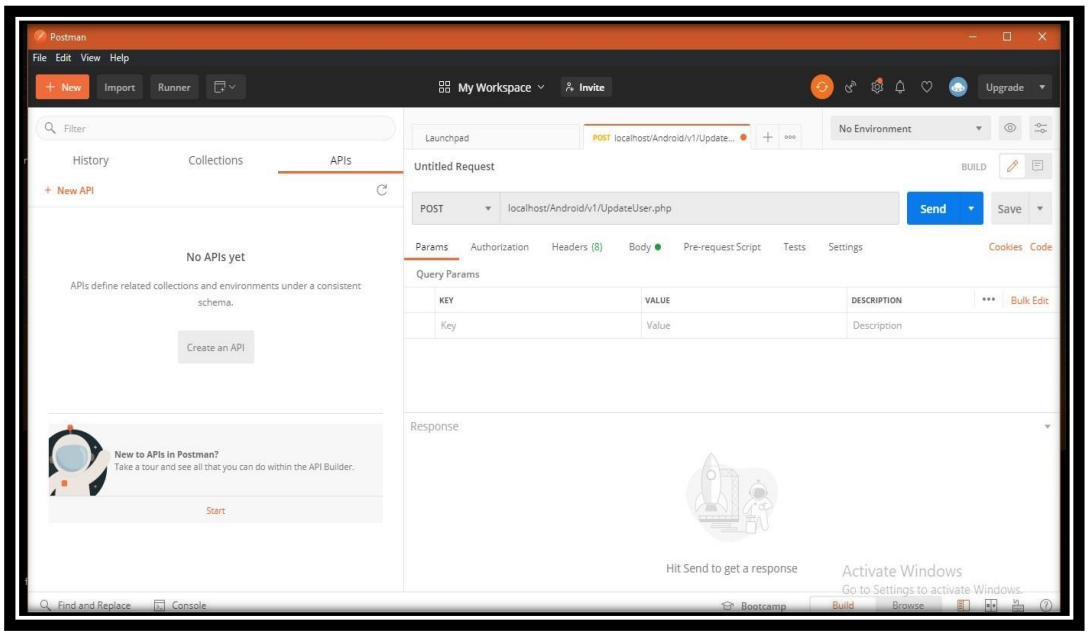


Fig. 1.3 Postman

VISUAL STUDIO:

Visual Studio Code is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

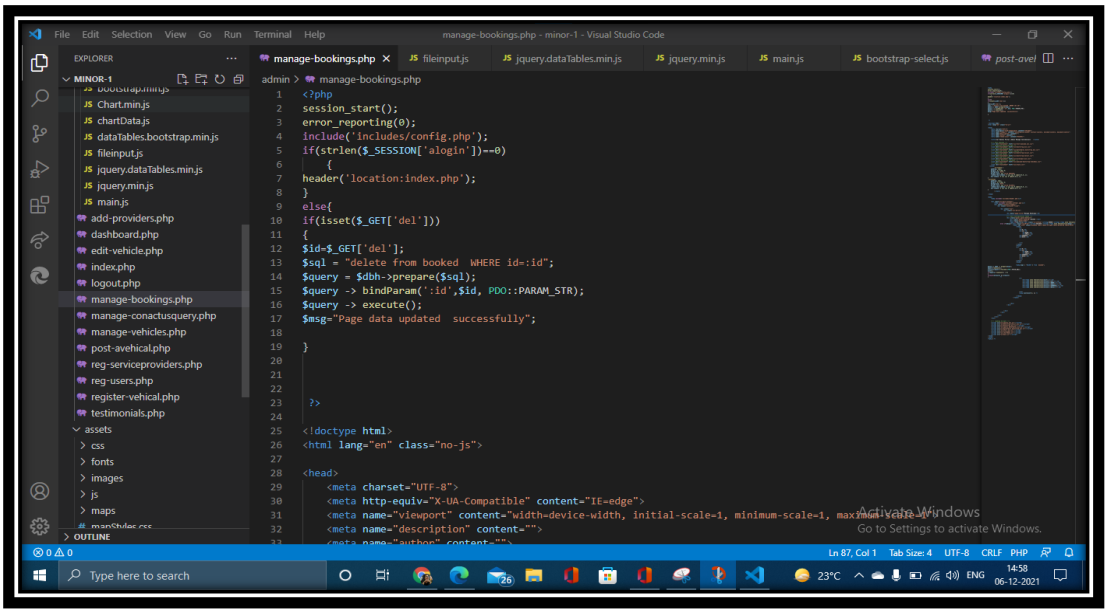


Fig. 1.4 Visual Studio Code

LITERATURE SURVEY

Under the critical influence of pandemic, we all suffered from lack of medical resources and information regarding medical help. Many people faced life-changing happenings within a short period, without holding precise information. On the one hand, there were complaints that ambulances were not responding on time for emergencies, and on the other, the ambulance drivers were unable to attend the family members of patients managing to get admission at hospitals due to lack of beds.

A recent literature survey carried out in Delhi by Med-Drive in fall of 2021, indicated that the majority percent of respondents are dissatisfied with the present-day medical infrastructure in Delhi. The disappointment amongst citizens was associated with unavailability of authentic data, technology backwardness, overpaid services and personal data security. When people were questioned regarding evident platforms that provided all the resources in a single click, around 89 percent of them didn't have the knowledge about such facilities. In addition to this, over 57 percent of people experienced ambulance bills to be vague and less defined than in other medical specialties. Furthermore, 85 percent people acquainted with the infected felt that digitalizing the existing services by inculcating technologies such as live location availability and online payment methods can reduce the response time and provide reassurance to the loved ones. In the midst of this havoc, the rapid unfurling of false information regarding the health facilities placed a lot of people in a situation where they were deprived of basic sense of security. About 68 percent of citizens felt unsafe as they had to solicit and share their personal data with unauthorized services just to get assistance.

From the data evaluated, about 63 percent of respondents suggested that reply time with a well-connected system of reservation, live-tracking, and ambulance availability is the need of the hour. The preliminary statistics discussed above highlights the importance of introducing new strategies regarding the ambulance management system in response to the upcoming pandemic waves.

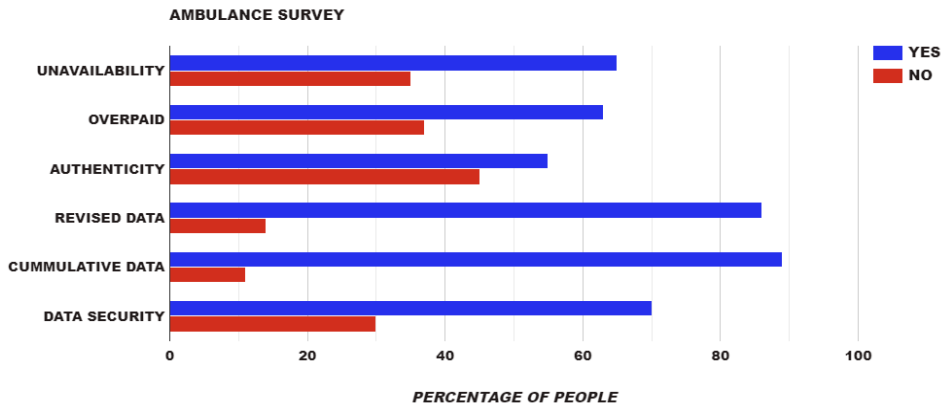


Fig. 2.1 Ambulance Survey Bar Chart

FEASIBILITY STUDY

2.1 Technically feasible:

Initially Med-Drive will be hosted in a free web hosting space, but for later implementation it will be hosted in a paid web hosting space with sufficient bandwidth. Bandwidth required in this application is very low, since it does not incorporate any multimedia aspect.

2.2 Economically feasible:

Med-Drive uses freely available development tools and provides the system as an open-source system. Only the Maintenance Cost will be charged from the system users. No cost will be charged from the potential customers. Bug fixes and maintaining tasks will have an associated cost.

2.3 Operationally feasible:

Resources required for this project includes:

- Programming Device (laptop & desktop)
- Hosting Space (Freely available)
- Programming tools (free open-source server)

There is going to be only one API which will reduce the number of hits in the database. We are building the project on Windows platform which is capable of making & testing of the software product. As basically windows versions are preferred mostly in workplaces so it will be easy to consult the problems that arise or the required improvements.

2.4 Behaviorally feasible:

The users of the application will adapt the changes as their waiting for bookings will get auto-cancelled. They will also get an opportunity of selecting the bookings and also can book in chains thus changes done will be reflected in both the placed boxes.

2.5 Schedule feasible:

Scheduling the project in a well-mannered way, we have a time of nearly 2 months to complete this web-based project. Having 4 members working under this project group two of which will do the designing & the other 2 members will deal with the other parameters included in the project.

2.6 Legally feasible:

The project is legally & ethically for the Citizens of India throughout. The project is being designed including the study concerning contracts, liability, violations and legal other traps frequently unknown to the technical staff. The data processing system complies with data protection act and the user data is kept secured so the project is legally feasible.

METHODOLOGIES & PLANNING

3.1 Strategy

The first phase of this project was to define a strategy for evolving the idea into a successful web application.

In this Phase, we tried to:

- Identify our users
- Assess resources, objectives and capabilities
- Research the competition
- Established the Web App goals
- Select platform for our Web App

3.2 Analysis and Planning: -

We divided the project in four following parts: -

- Creating DFD diagrams for better understanding of various intersection of features
- Planning the UI/UX of the project using Adobe XD
- Planning to connect front-end with the back-end using PHP and database.
- Analyzing multiple tables required for every aspect of the feature.

A data flow diagram (DFD) is a graphical representation of the flow of data through an information system. It shows how information is input to and output from the system, the sources and destinations of that information, and where that information is stored.

Context Level Diagram: (0 level diagram)

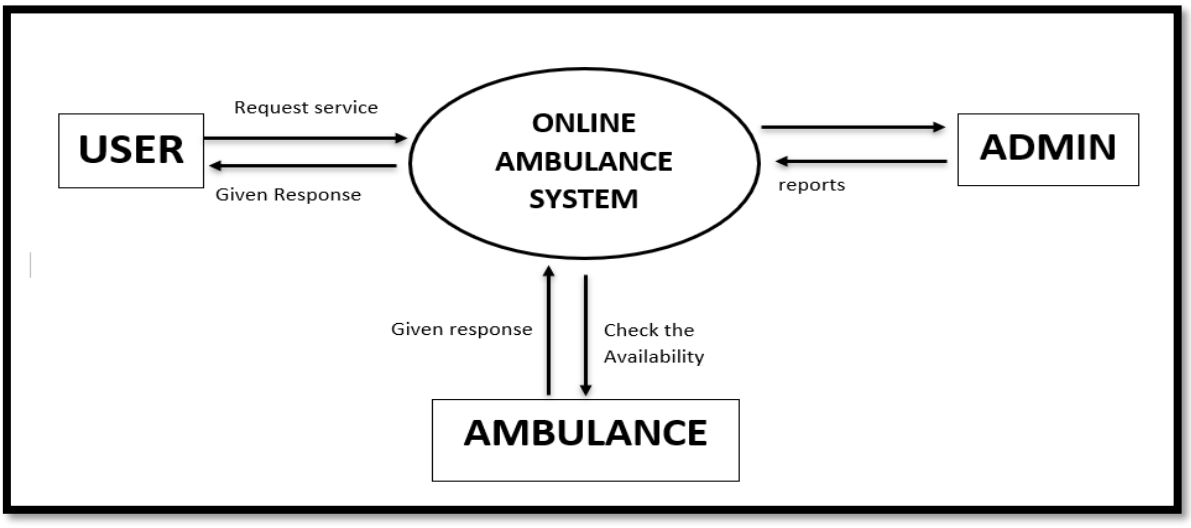


Fig. 3.1 Level-0 DFD

Level 1 DFD:

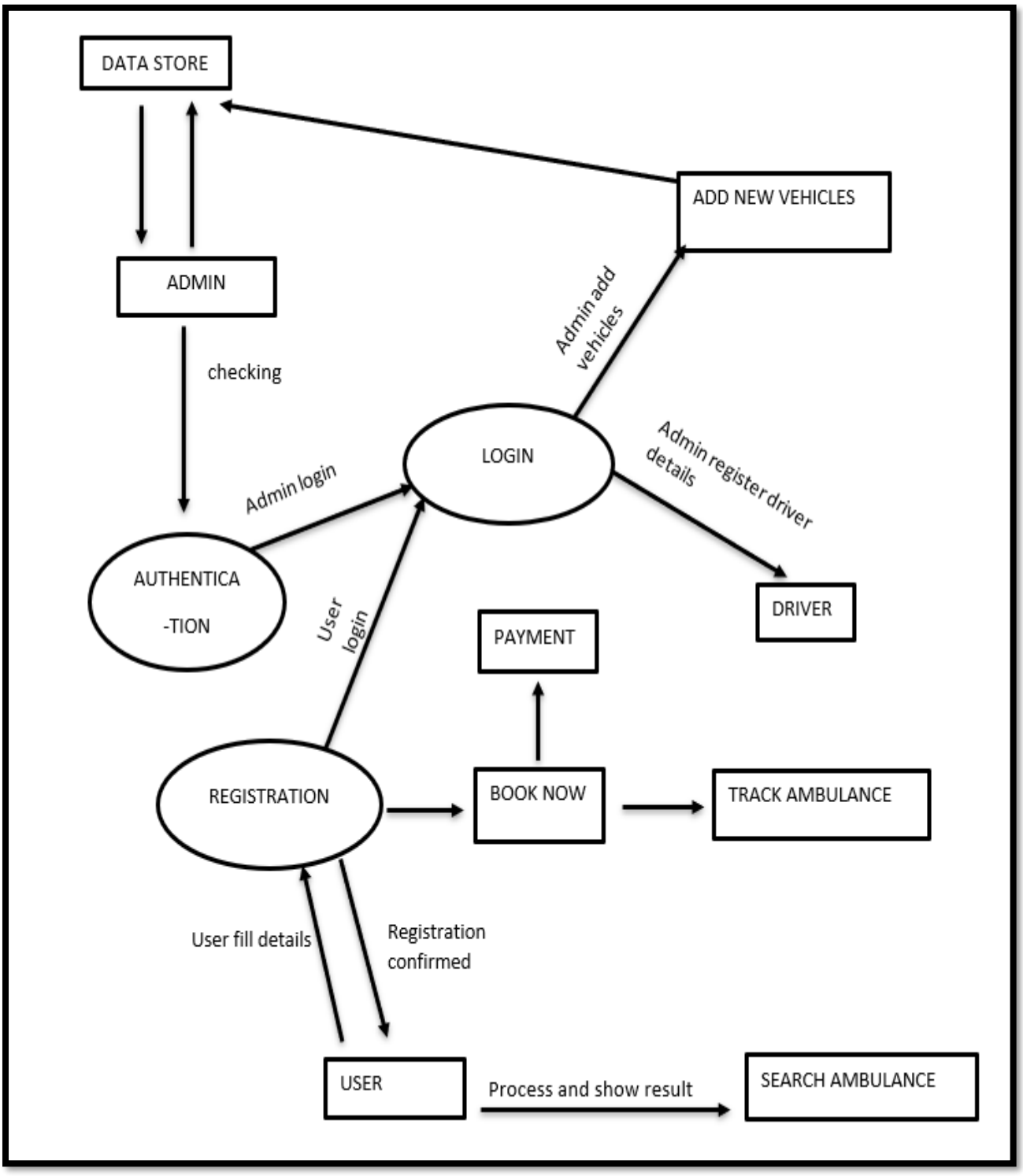


Fig. 3.2 Level-1 DFD

Flowchart for User Panel:

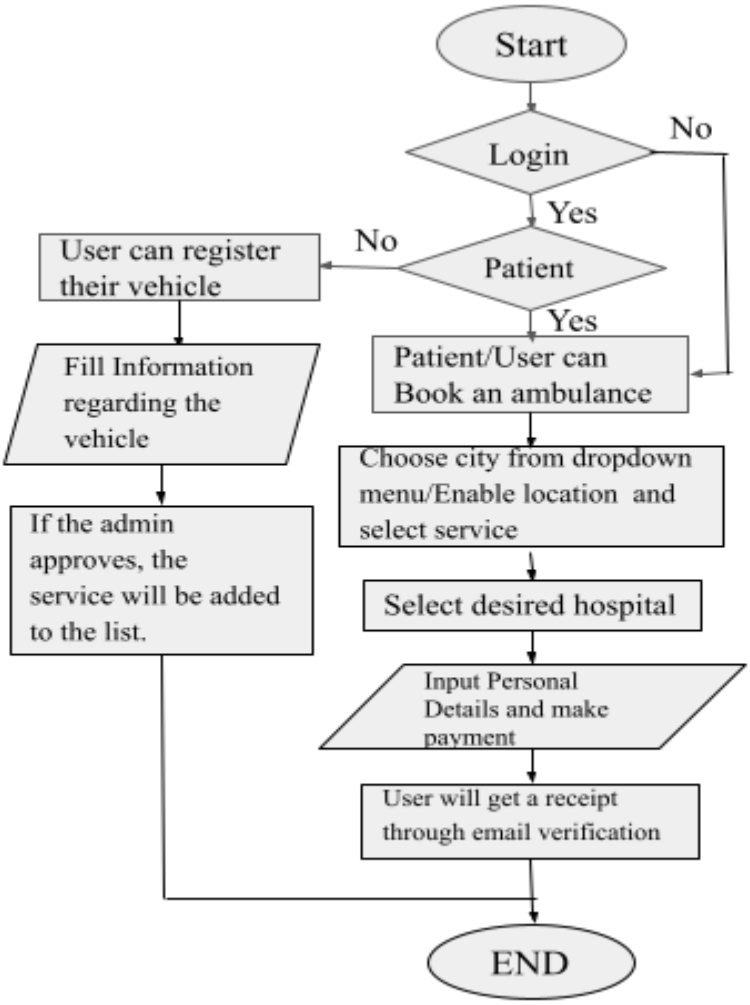


Fig. 3.3 Flowchart for User Panel

Flowchart for Admin Panel:

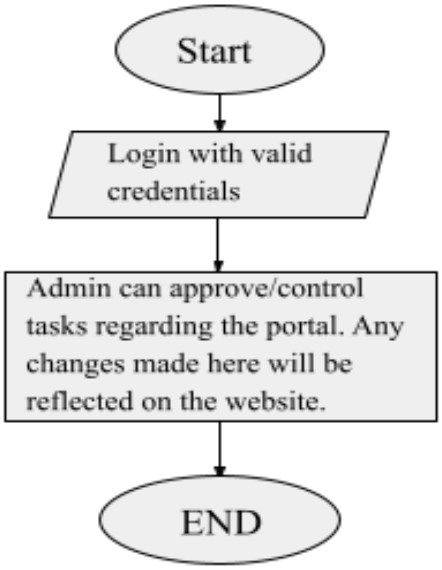


Fig. 3.4 Flowchart for Admin Panel

3.3 UI/UX Design

The purpose of a Web App design is to deliver a seamless and effortless user experience with a polished look. The goal of our project was to create excellent user experiences making it more interactive, intuitive, and user-friendly. We tend to use the following methodologies for an interactive UI/UX design:

- Information Architecture and Workflows
- Wireframes
- Style Guide
- Mock-ups
- Prototypes

3.4 Web App

- Connected the front end with backend technologies.
- Supporting enterprise-grade features like massive data storage and online transactions.

3.5 Testing

- Implementing the thorough quality assurance (QA) testing during web development executes the functionality steady, convenient, and protected.
- To assure comprehensive QA testing of the website, it needs to fix test cases that direct all aspects of web testing.

3.6 Deployment & Support

- Hosting the application online with a unique domain name for global access.
- While preparing the website needs preparing the Metadata including: -
    a. Website's Title
    b. Portrayal
    c. Classification
    d. Keywords
    e. Launch Domain
- Once created through XAMPP, this went through a review process which took few primes depending on the quality, followed by improvements guidelines.

RESULT ANALYSIS

SNAPSHOTS OF OUR PROJECT:

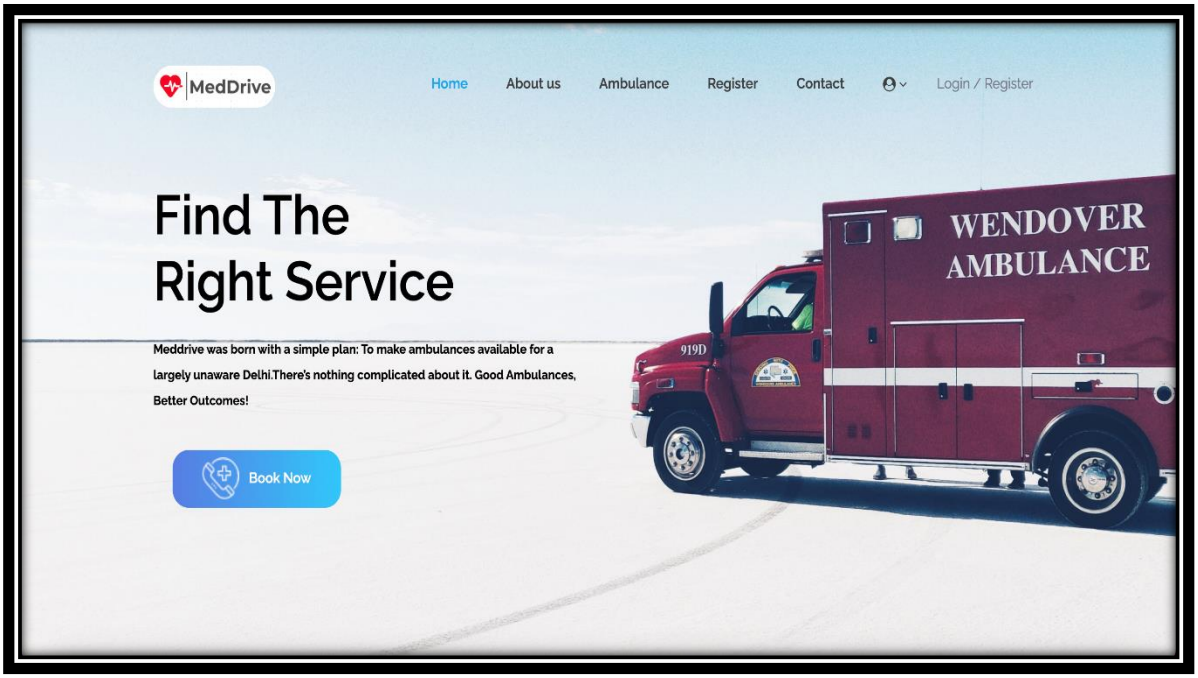


Fig. 4.1

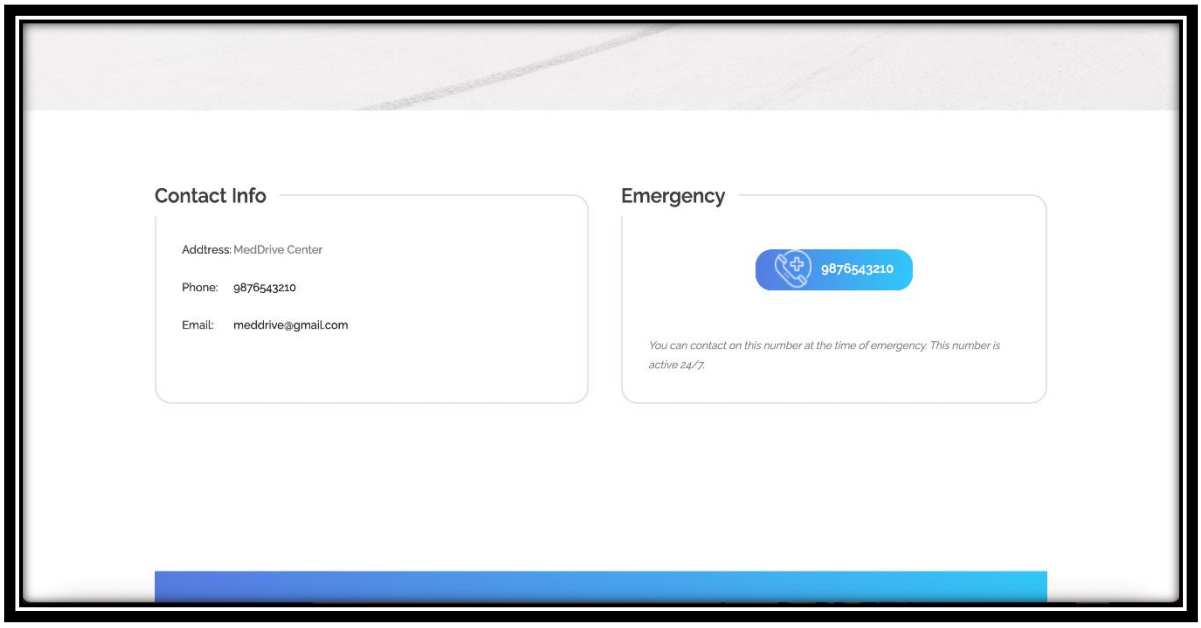
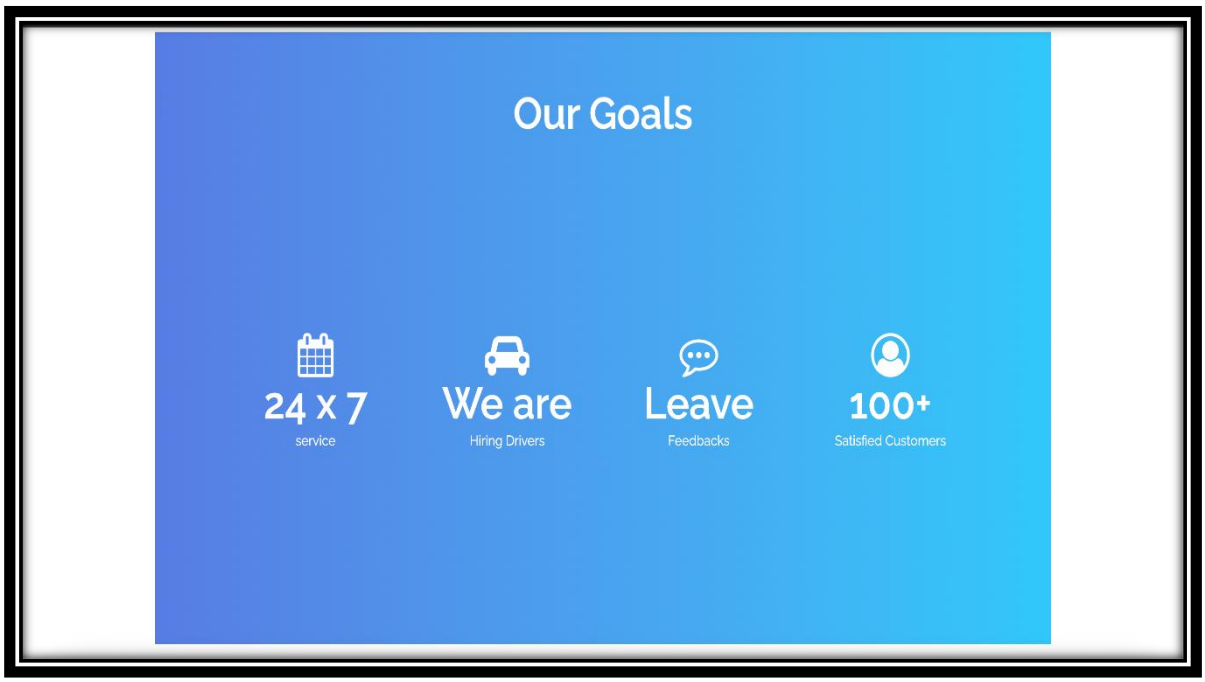


Fig. 4.2



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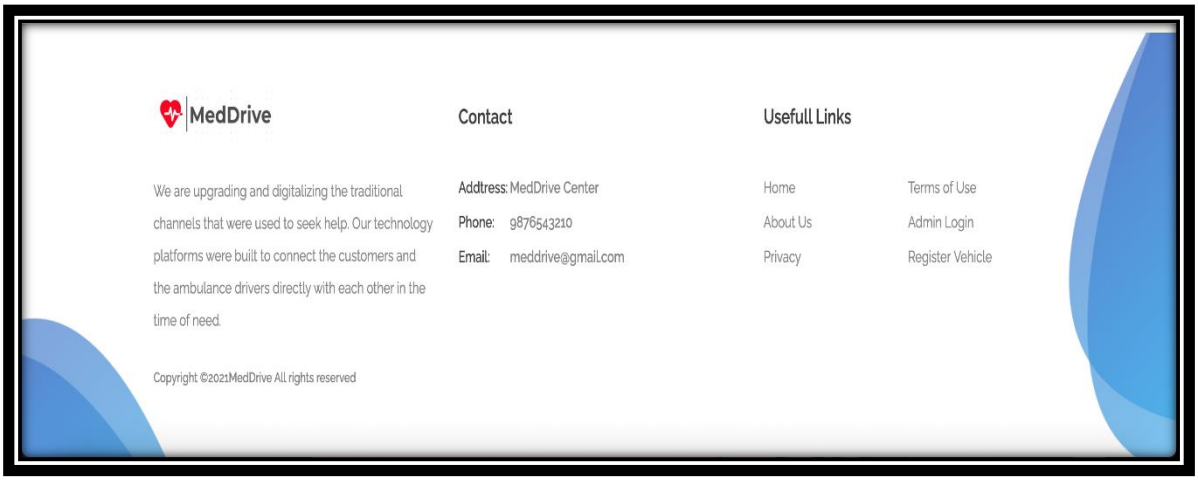

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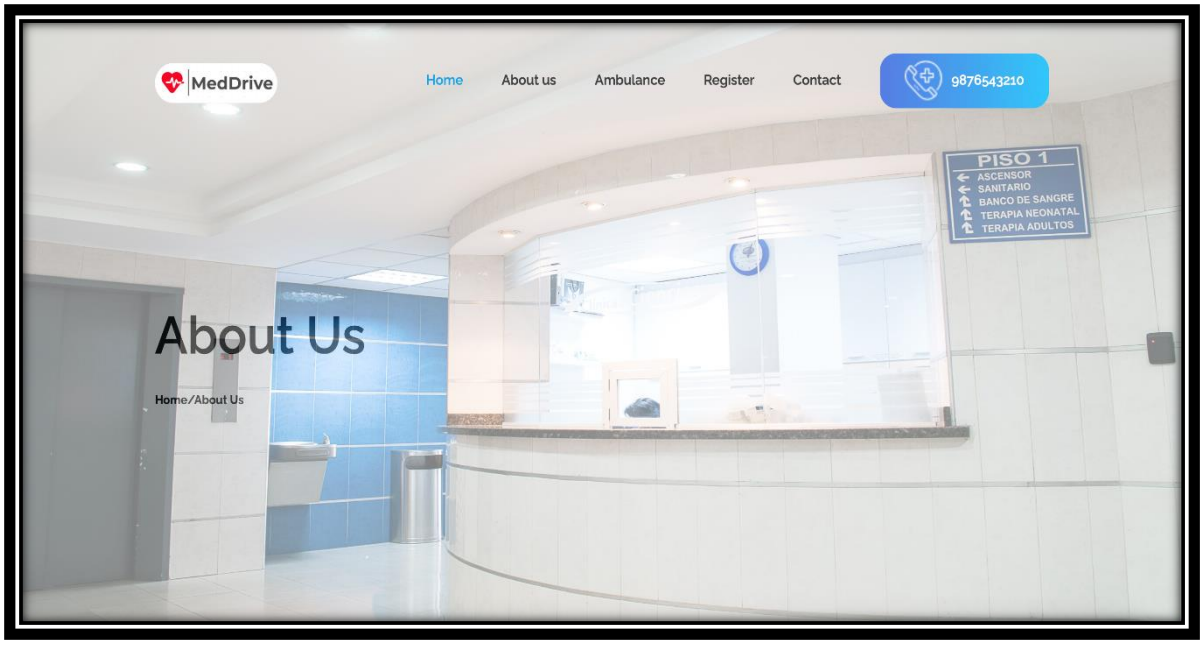

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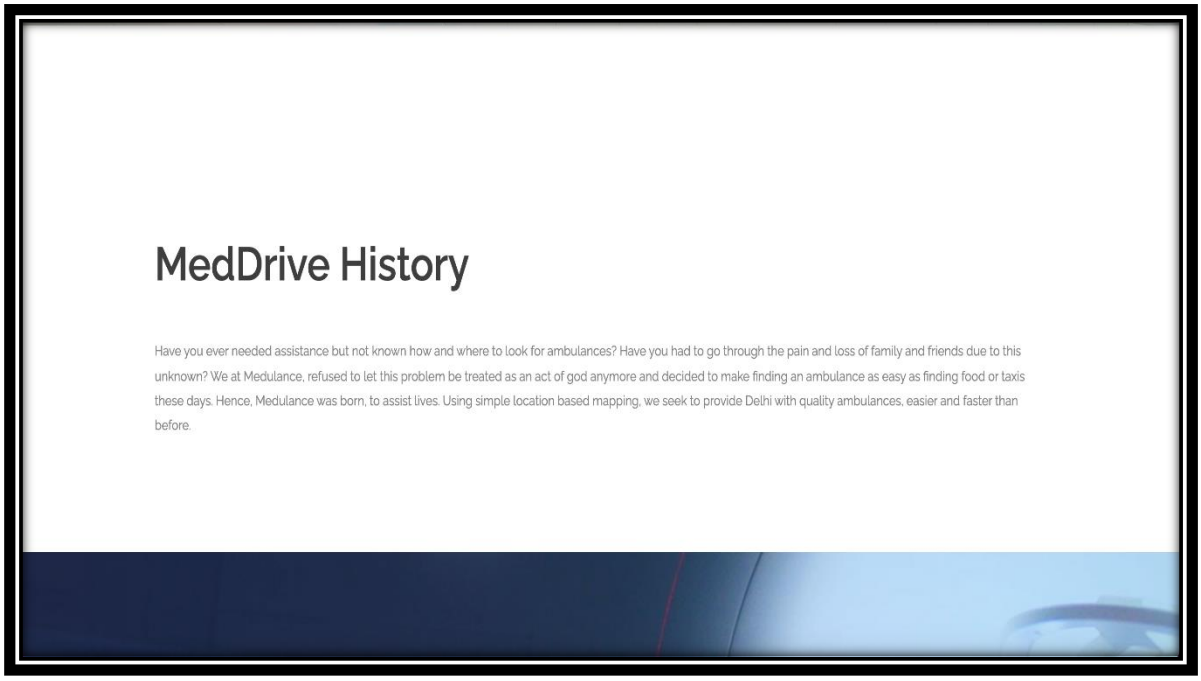

MedDrive History
Have you ever needed assistance but not known how and where to look for ambulances? Have you had to go through the pain and loss of family and friends due to this unknown? We at Medulance, refused to let this problem be treated as an act of god anymore and decided to make finding an ambulance as easy as finding food or taxis these days. Hence, Medulance was born, to assist lives. Using simple location based mapping, we seek to provide Delhi with quality ambulances, easier and faster than before.

Fig.4.6

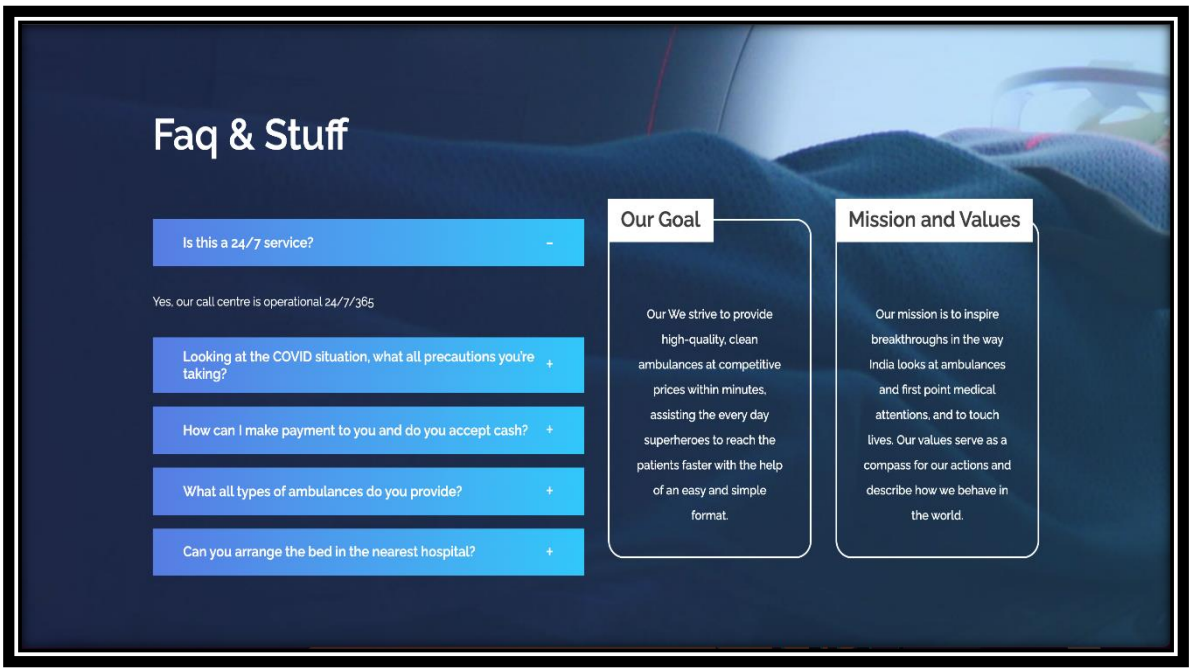

Faq & Stuff
Is this a 24/7 service?
Yes, our call centre is operational 24/7/365
Looking at the COVID situation, what all precautions you're taking?
How can I make payment to you and do you accept cash?
What all types of ambulances do you provide?
Can you arrange the bed in the nearest hospital?
Our Goal
Our We strive to provide high-quality, clean ambulances at competitive prices within minutes, assisting the every day superheroes to reach the patients faster with the help of an easy and simple format.
Mission and Values
Our mission is to inspire breakthroughs in the way India looks at ambulances and first point medical attentions, and to touch lives. Our values serve as a compass for our actions and describe how we behave in the world.

Fig. 4.7

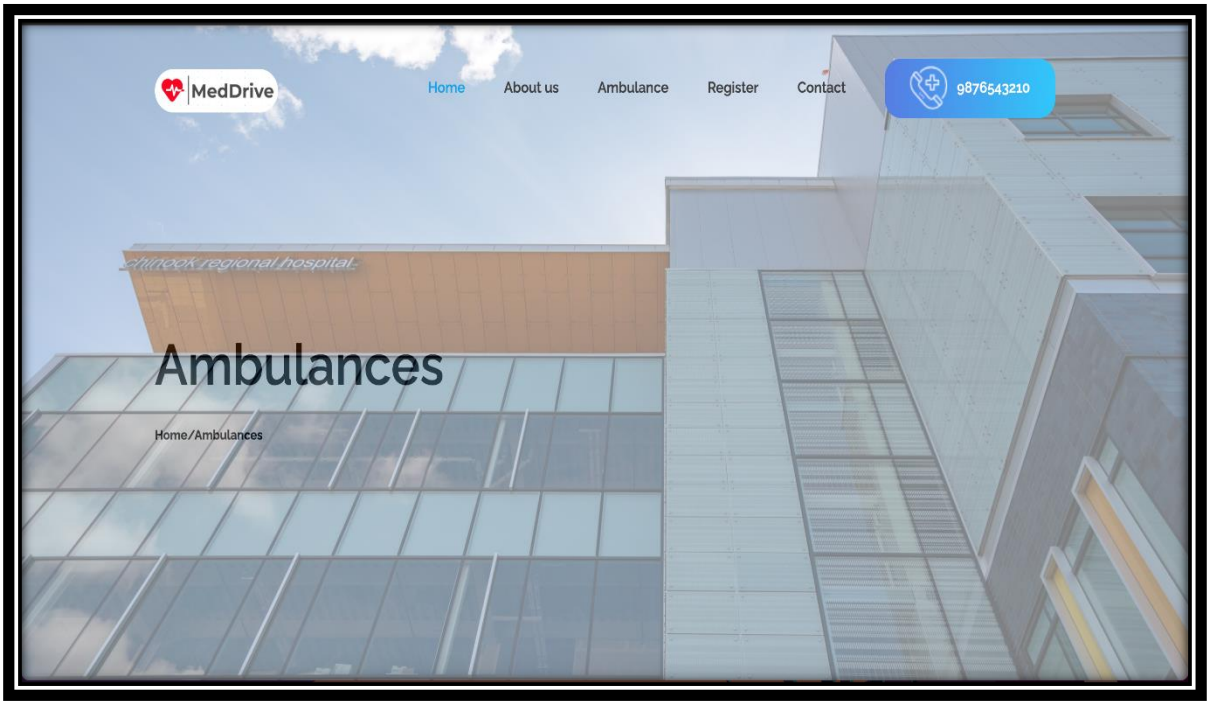
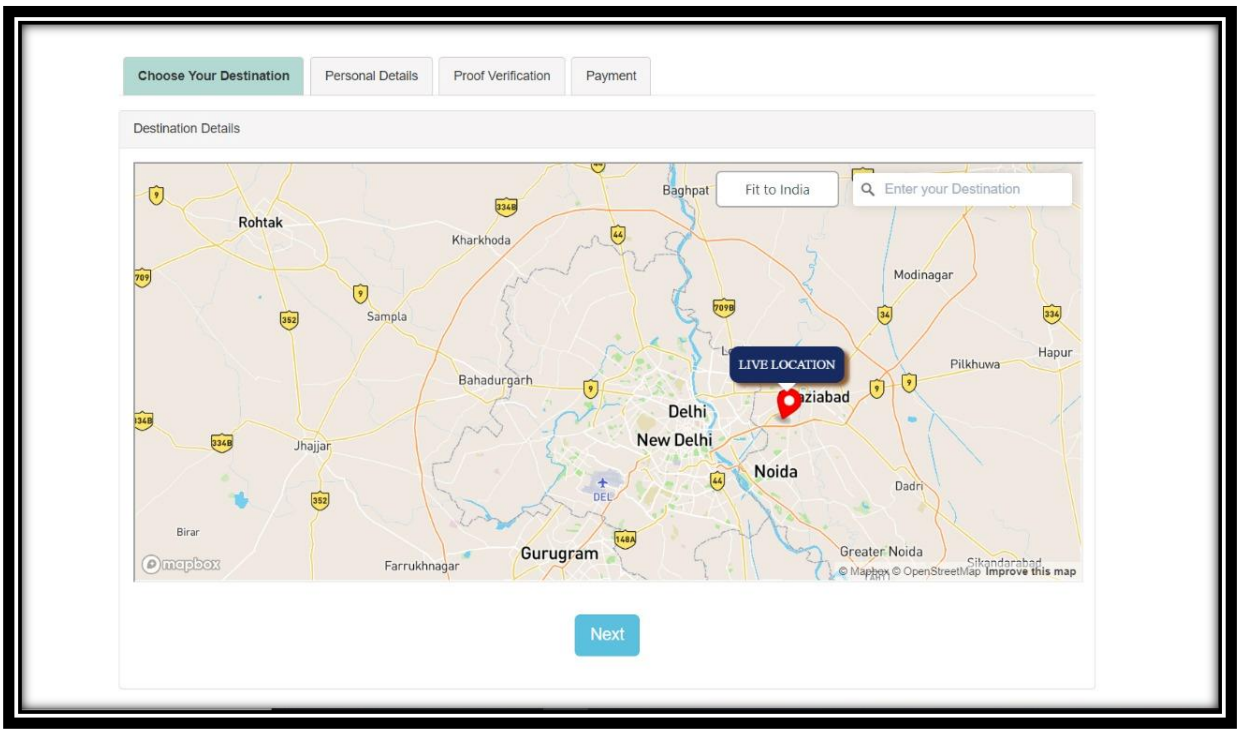


Fig. 4.8

ID	NAME	PHONE	COST	TYPE OF SERVICE	LOCATION	AVAILABLE	ACTION
2	MOOLCHAND HOSPITAL	(313) 555-5735	2400	PRIVATE HOSPITAL	DELHI	YES	BOOK NOW
3	MAX HOSPITAL	(171) 555-2222	5000	PRIVATE HOSPITAL	DELHI	YES	BOOK NOW
4	APOLLO HOSPITAL	(503) 555-9931	12000	PUBLIC HOSPITAL	DELHI	YES	BOOK NOW
5	GANGA RAM HOSPITAL	(204) 619-5731	6500	PRIVATE HOSPITAL	DELHI	YES	BOOK NOW
6	P.D GARG PVT HOSPITAL	(480) 631-2097	3000	PERSONAL/PRIVATE SERVICE	DELHI	NO	BOOK NOW
7	SANTOKH HOSPITAL	(0172)508-8088	2000	PUBLIC HOSPITAL	CHANDIGARH	YES	BOOK NOW

Fig. 4.9



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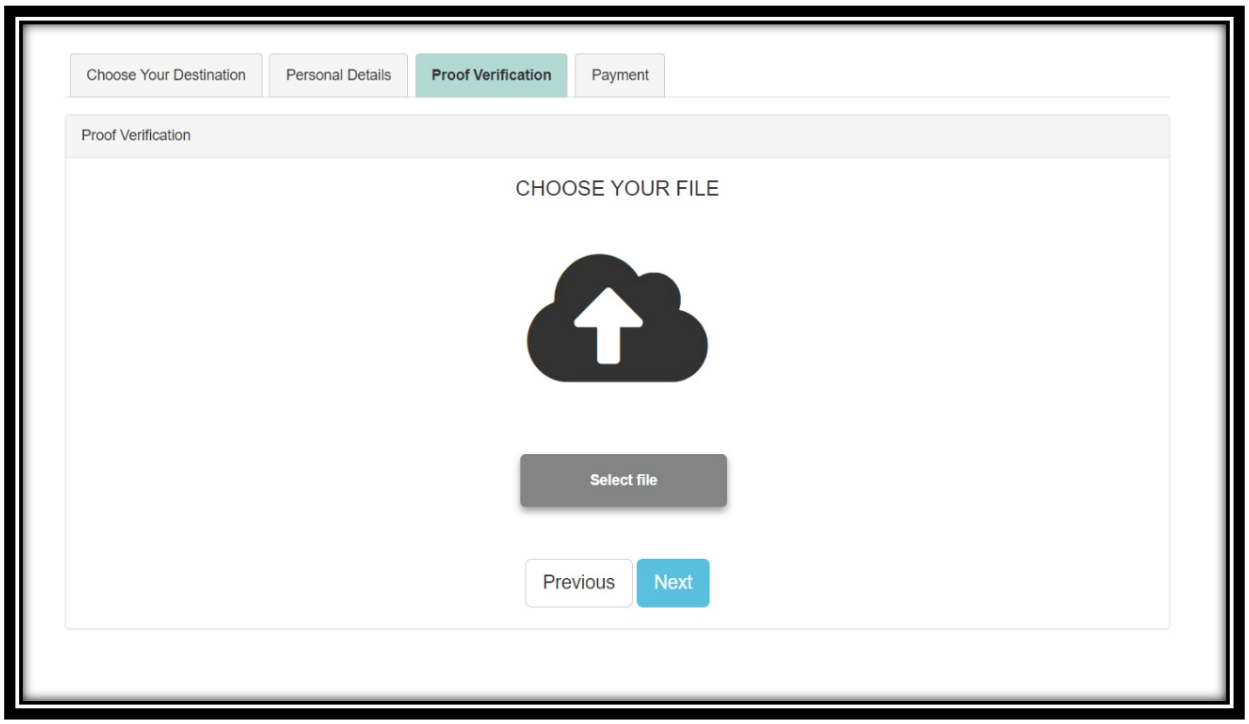

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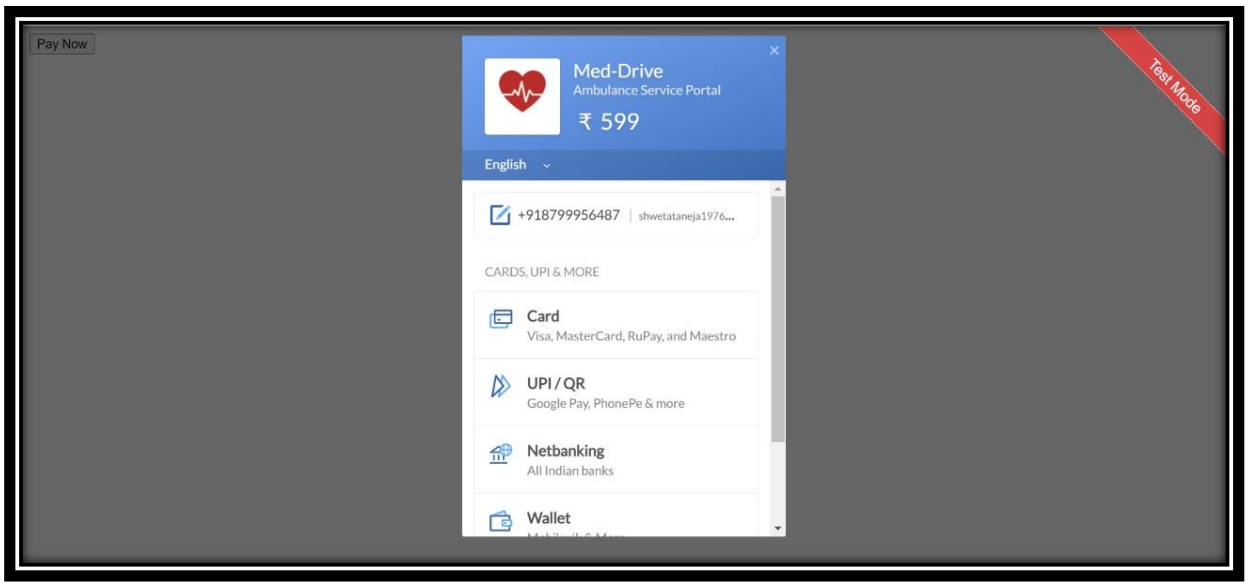
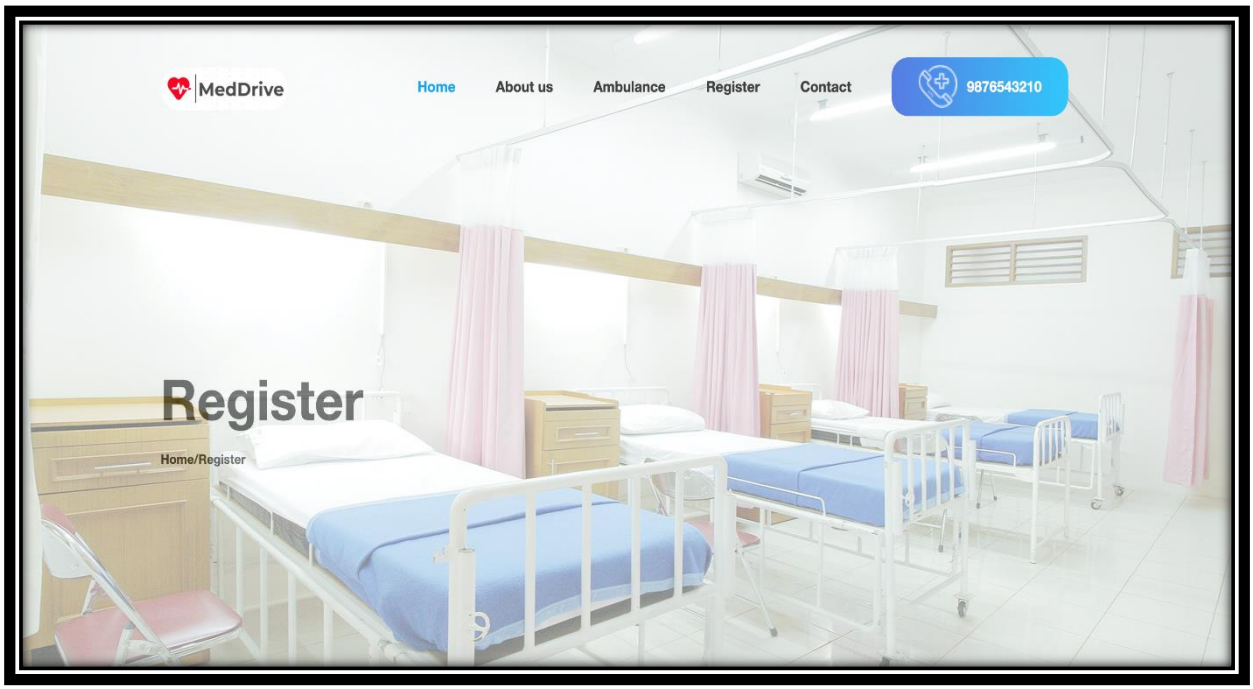


Fig. 4.12



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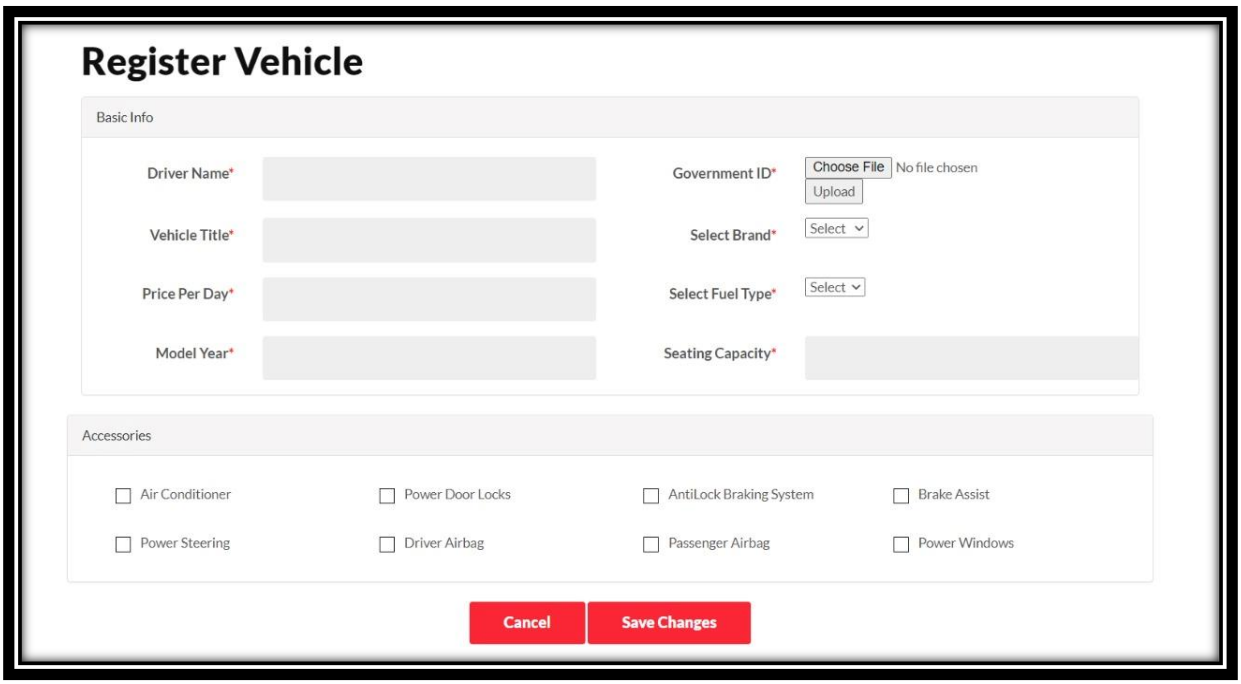

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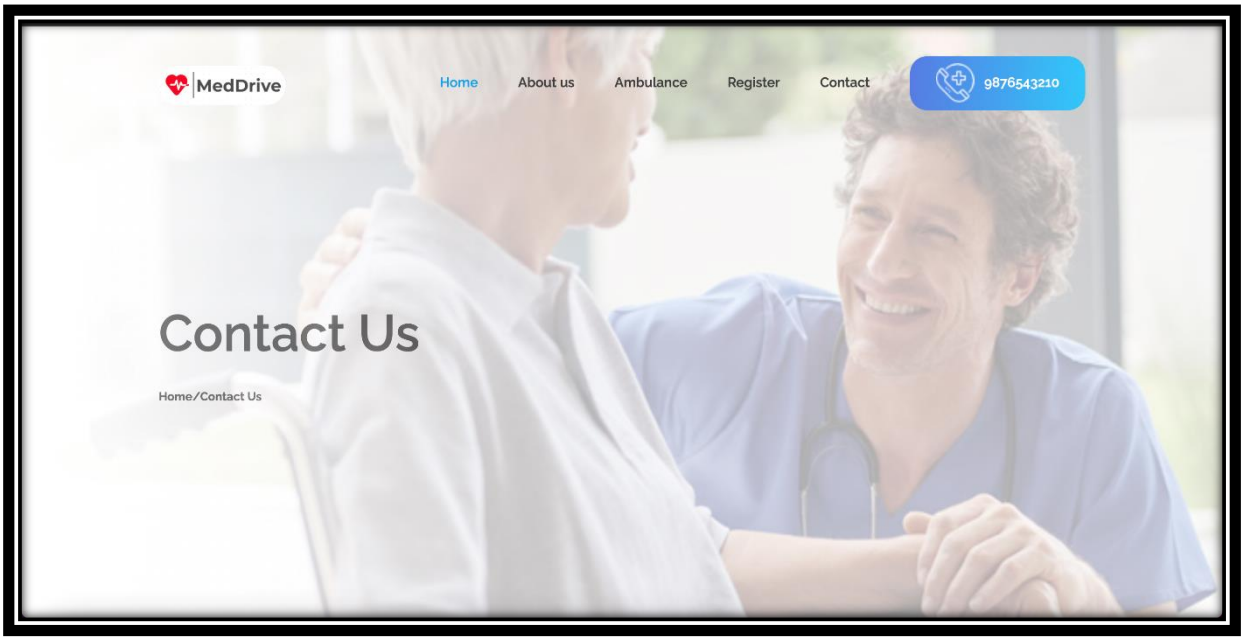


Fig. 4.15

Fig. 4.16

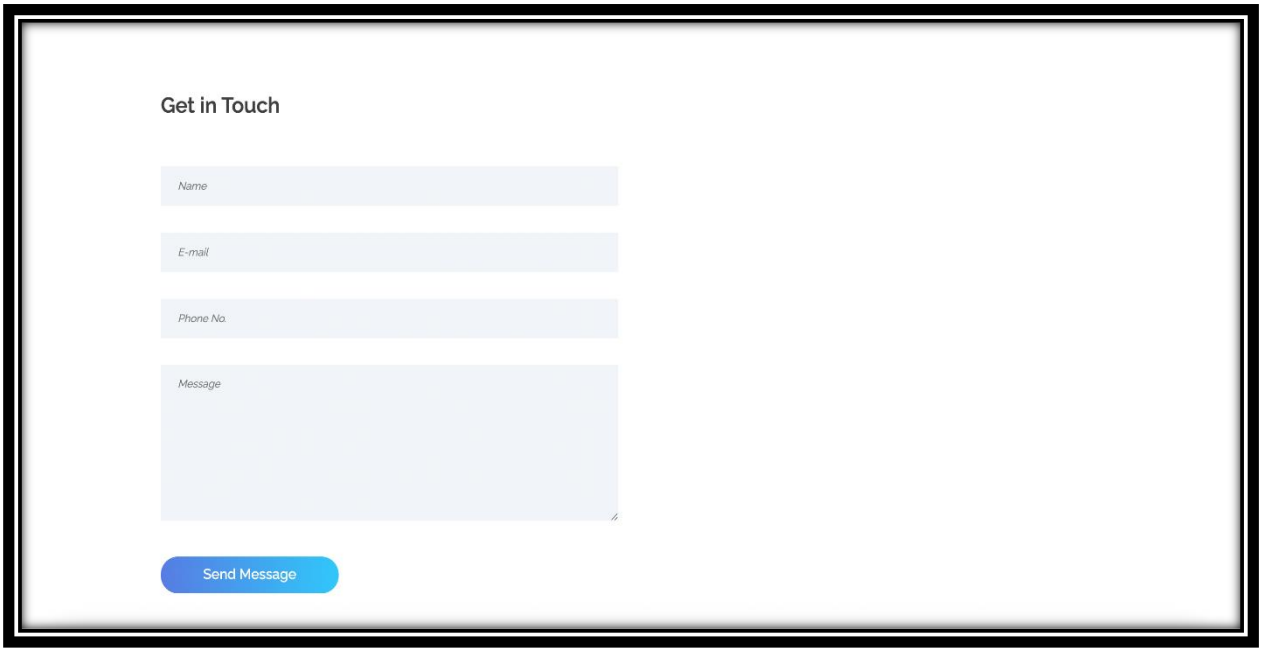
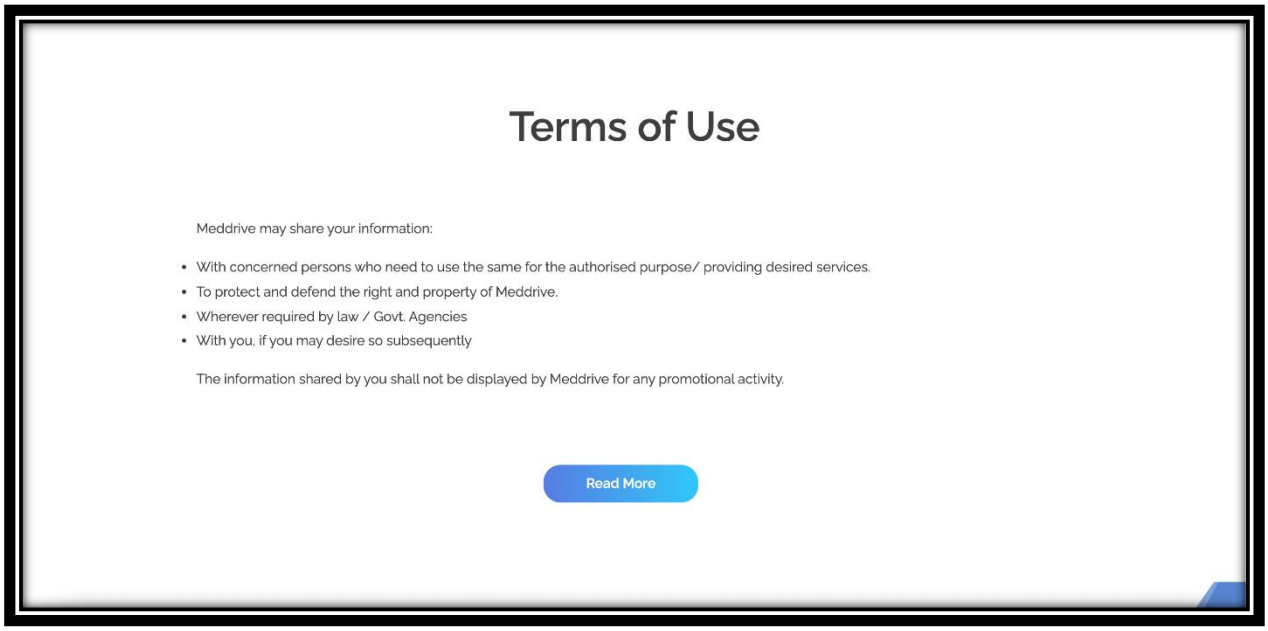


Fig.4.17

Fig. 4.18

Fig.4.19



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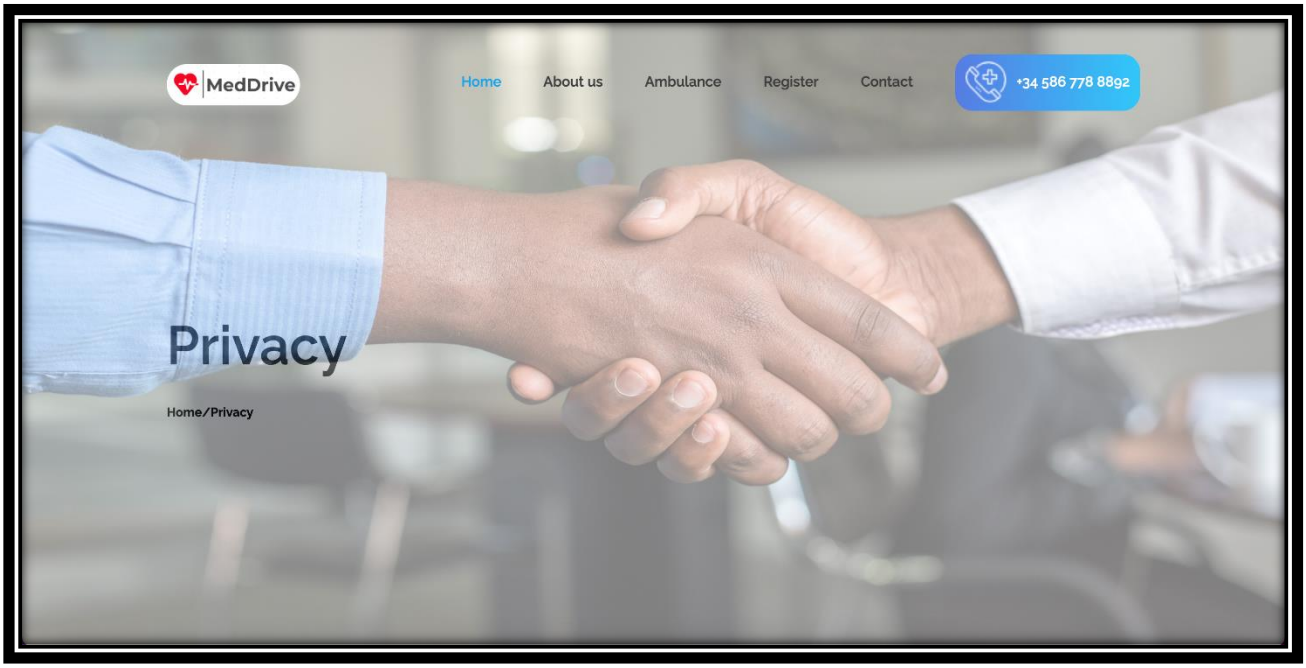

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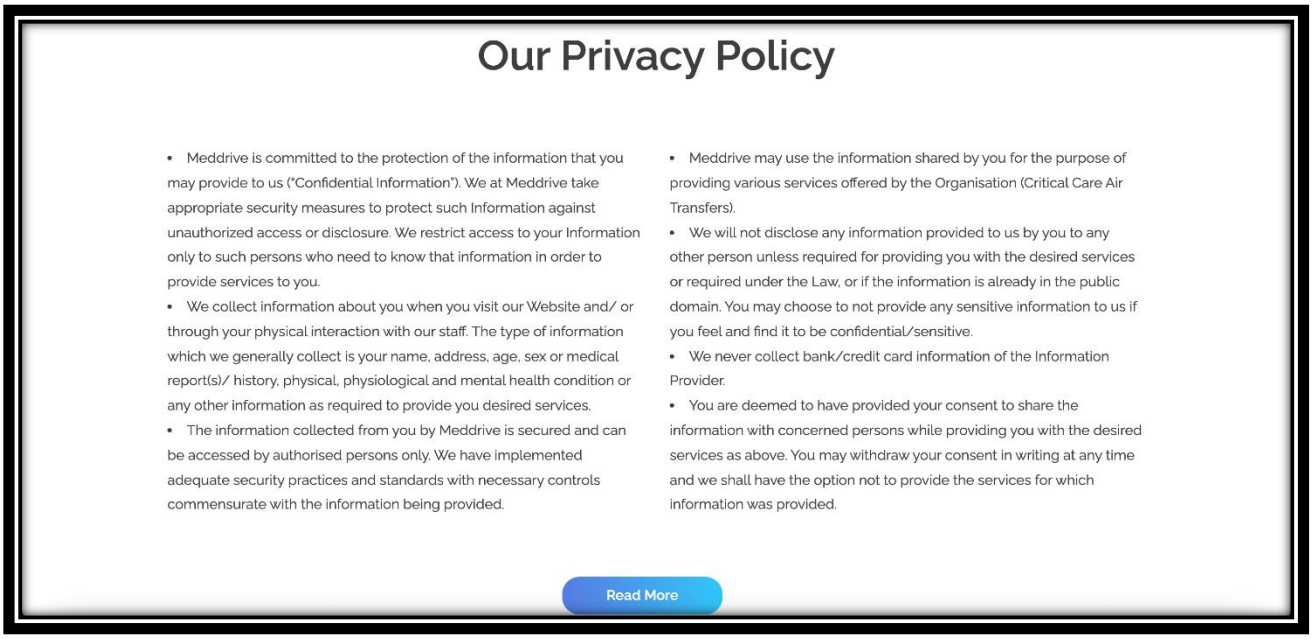

Fig. 4.22

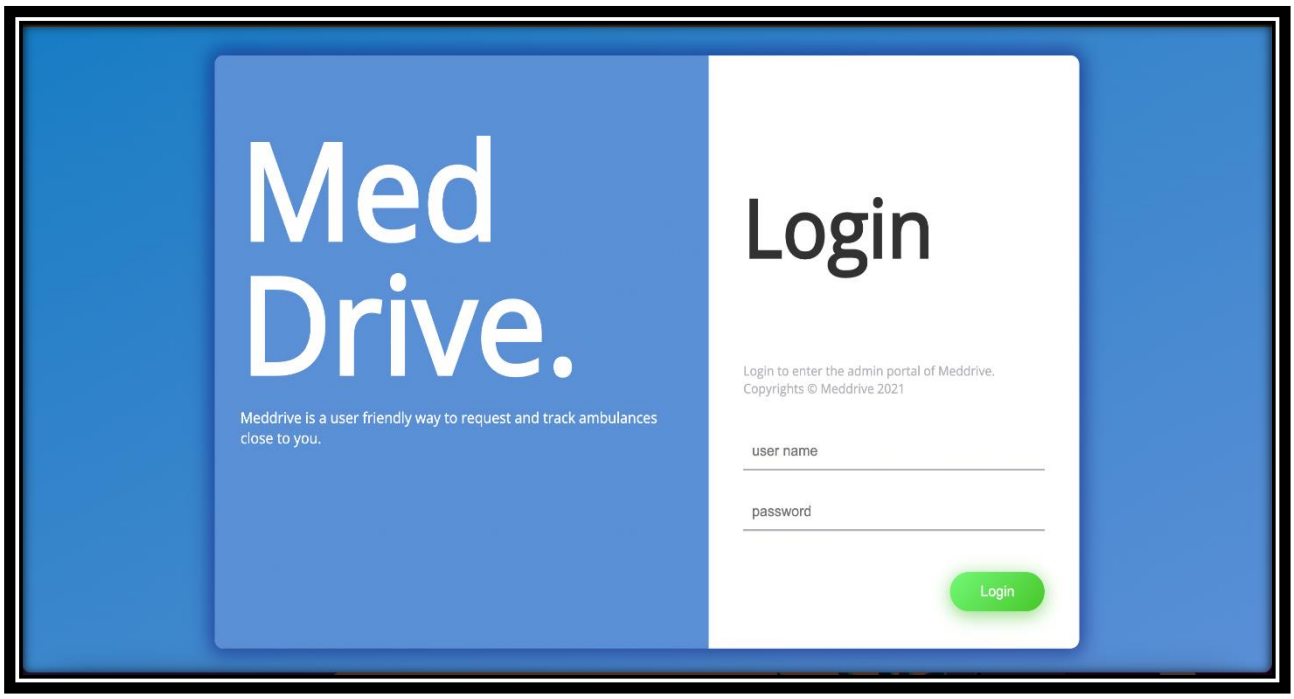

Fig. 4.23

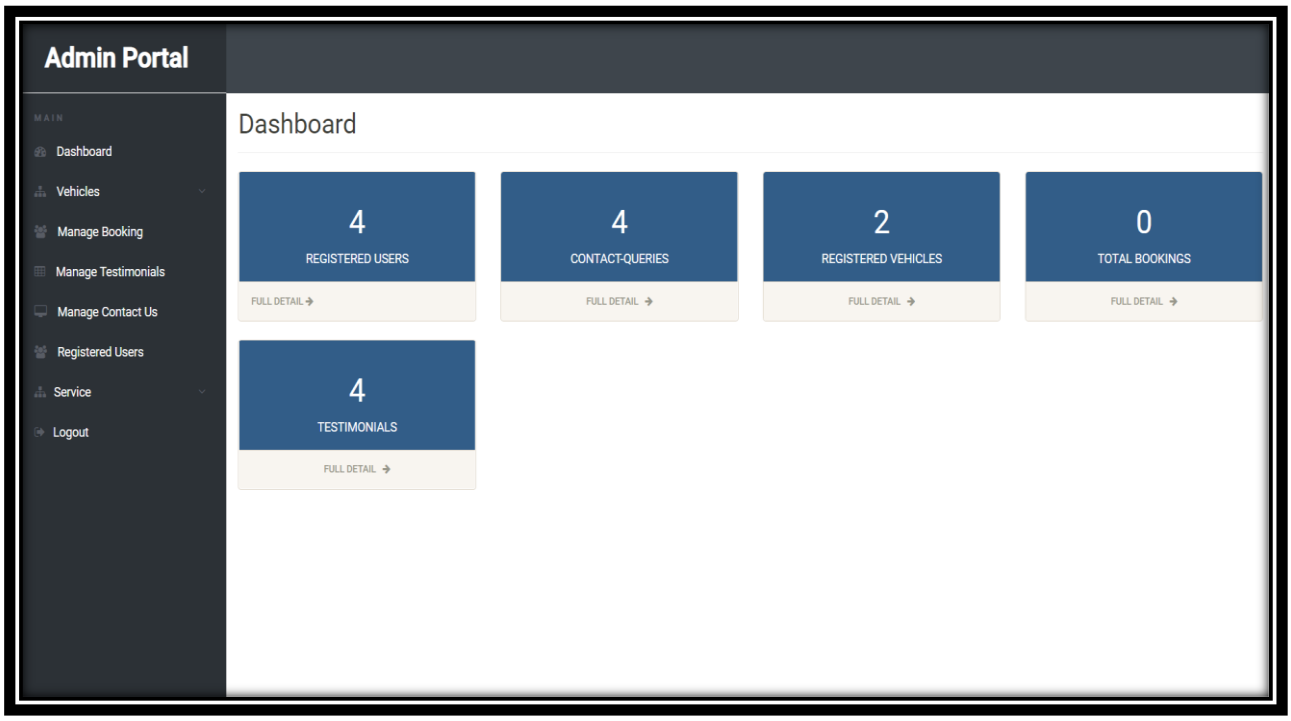

Fig. 4.24

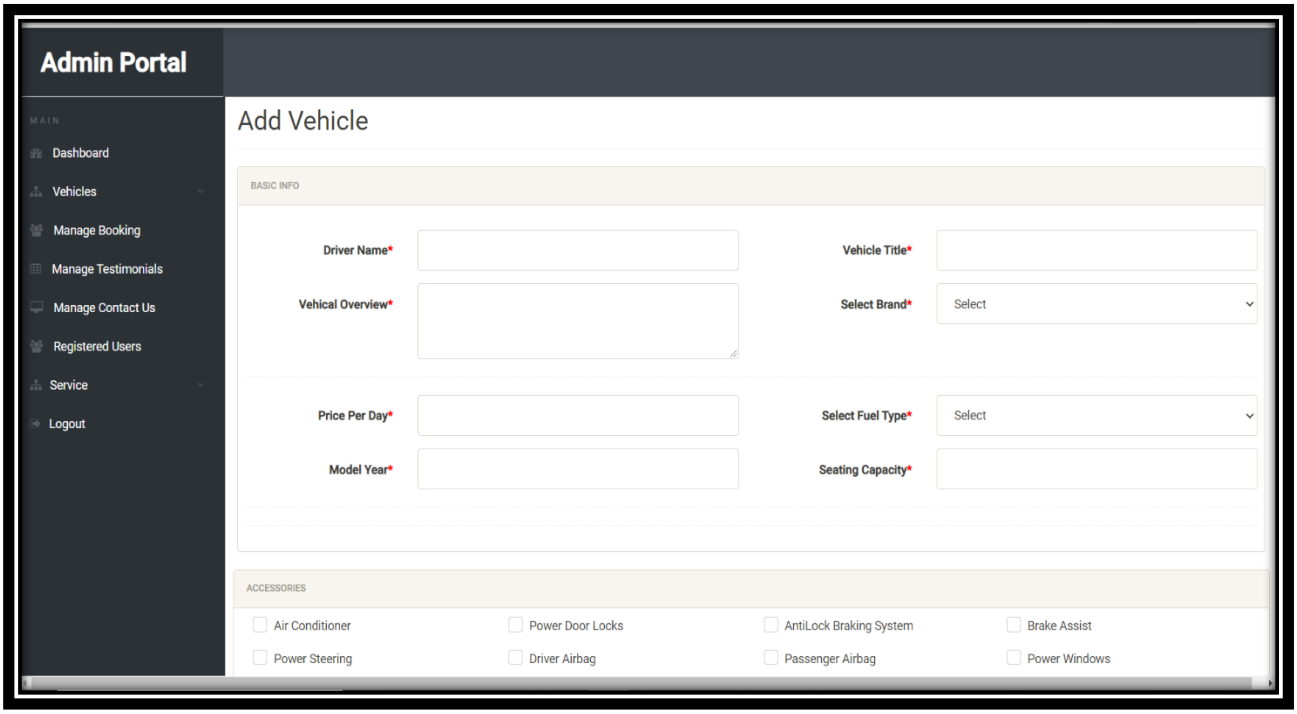

Fig. 4.25

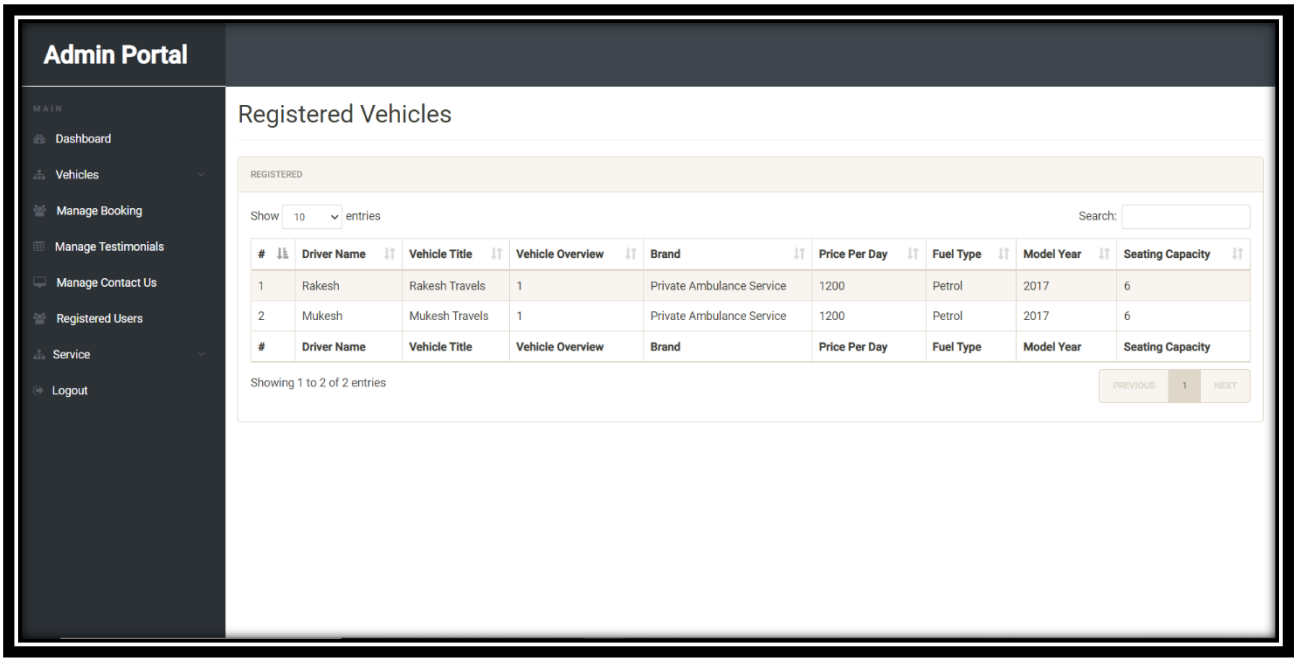

Fig. 4.26

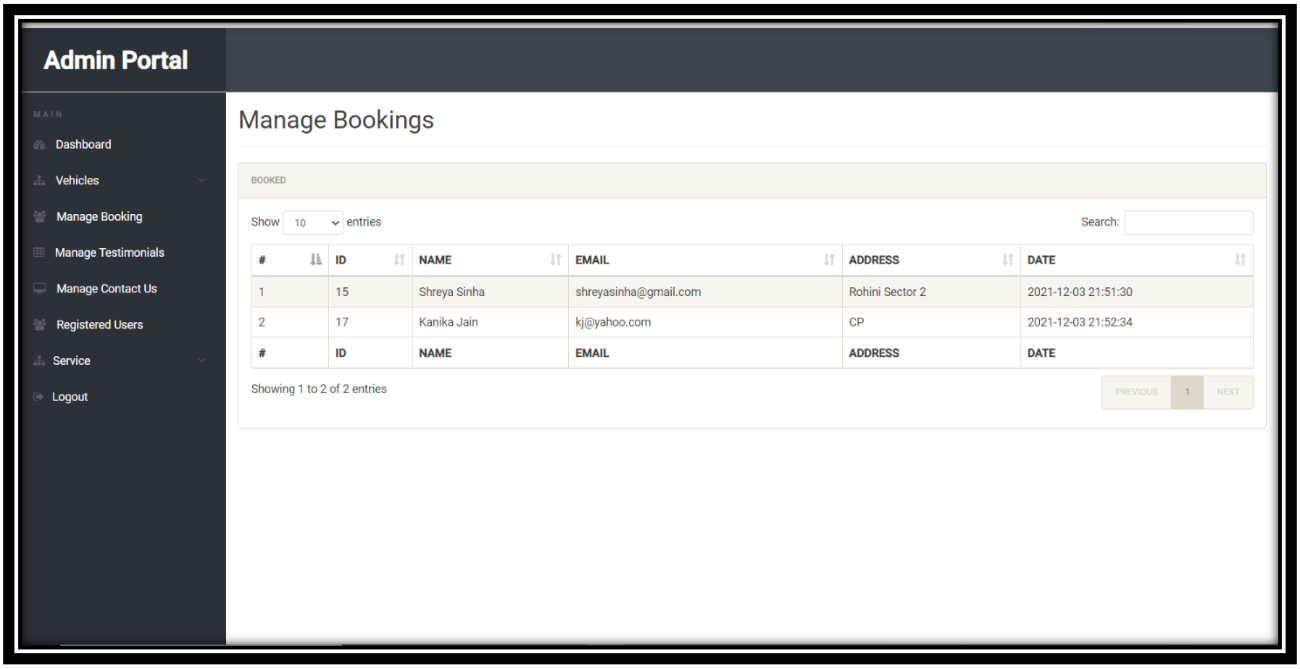

Fig. 4.27

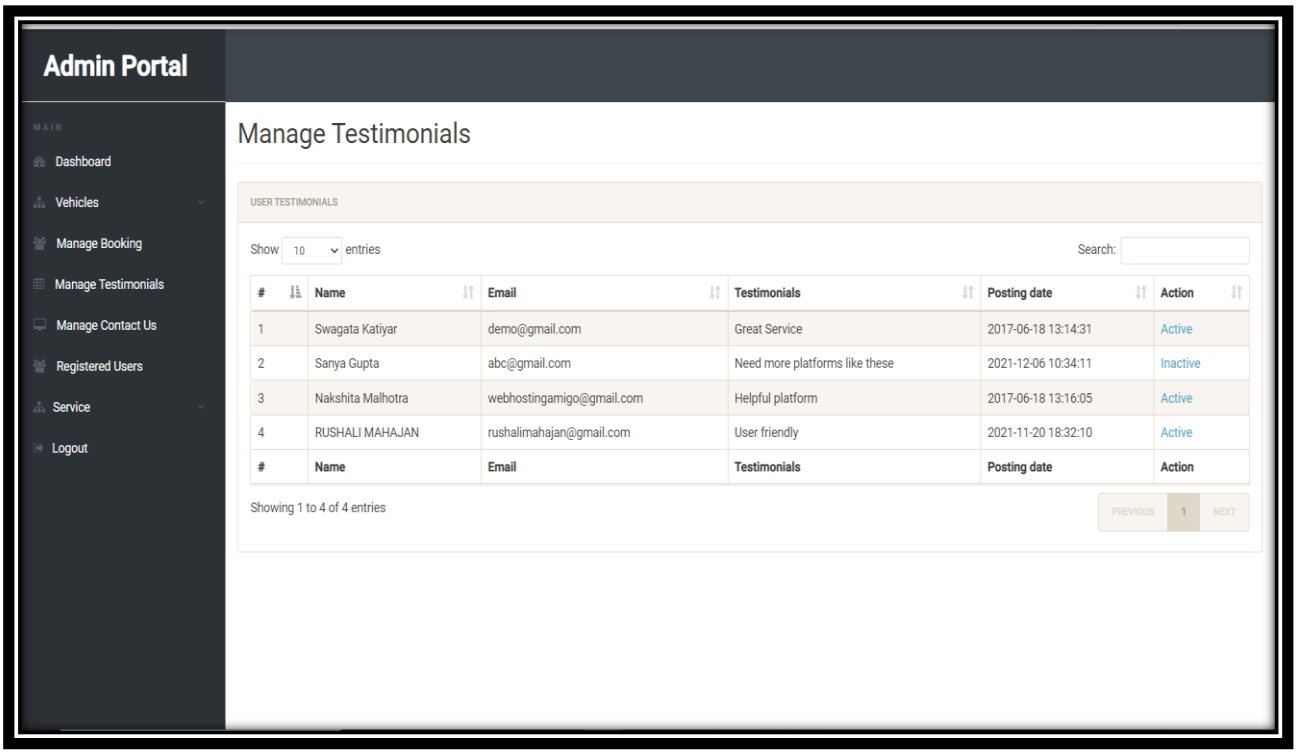

Fig. 4.28

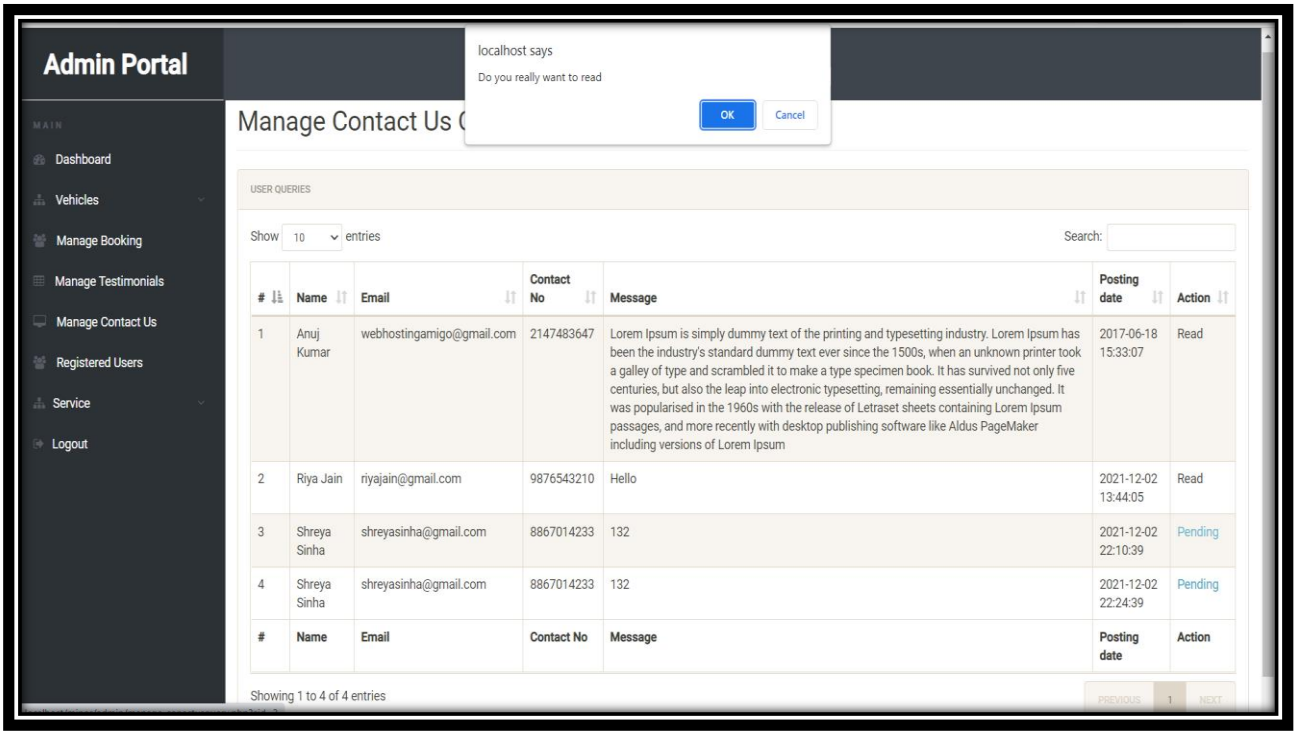

Fig. 4.29

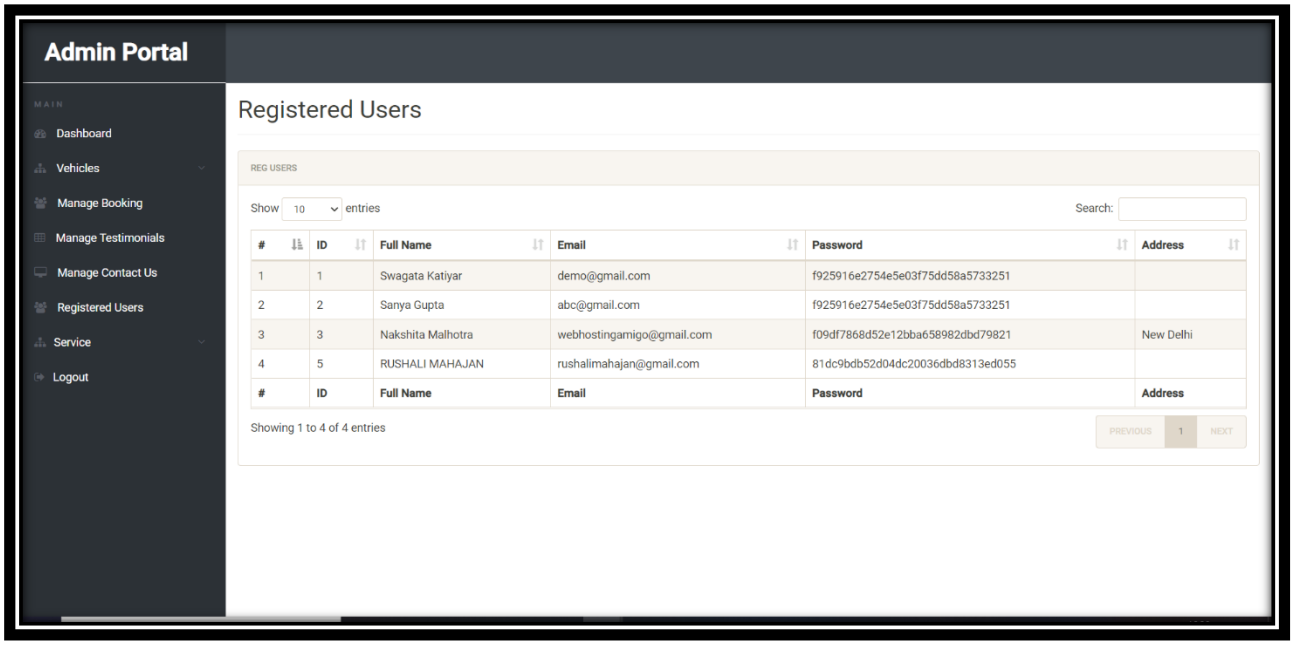

Fig. 4.30

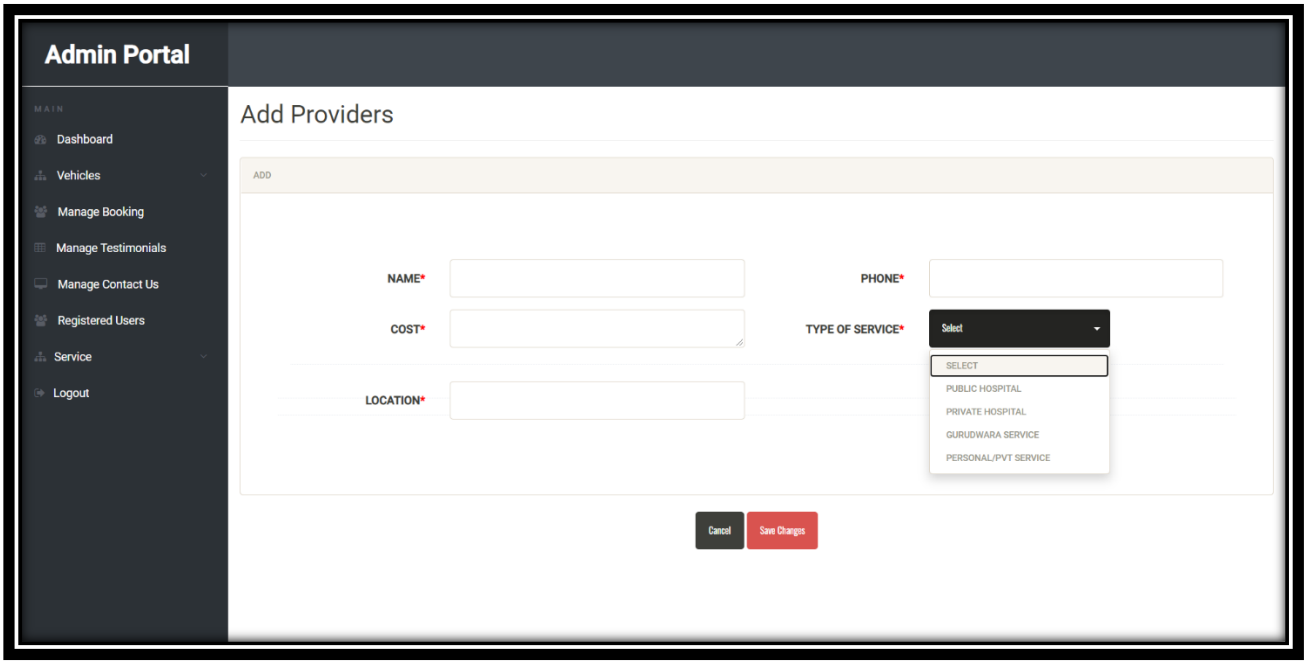

Fig. 4.31

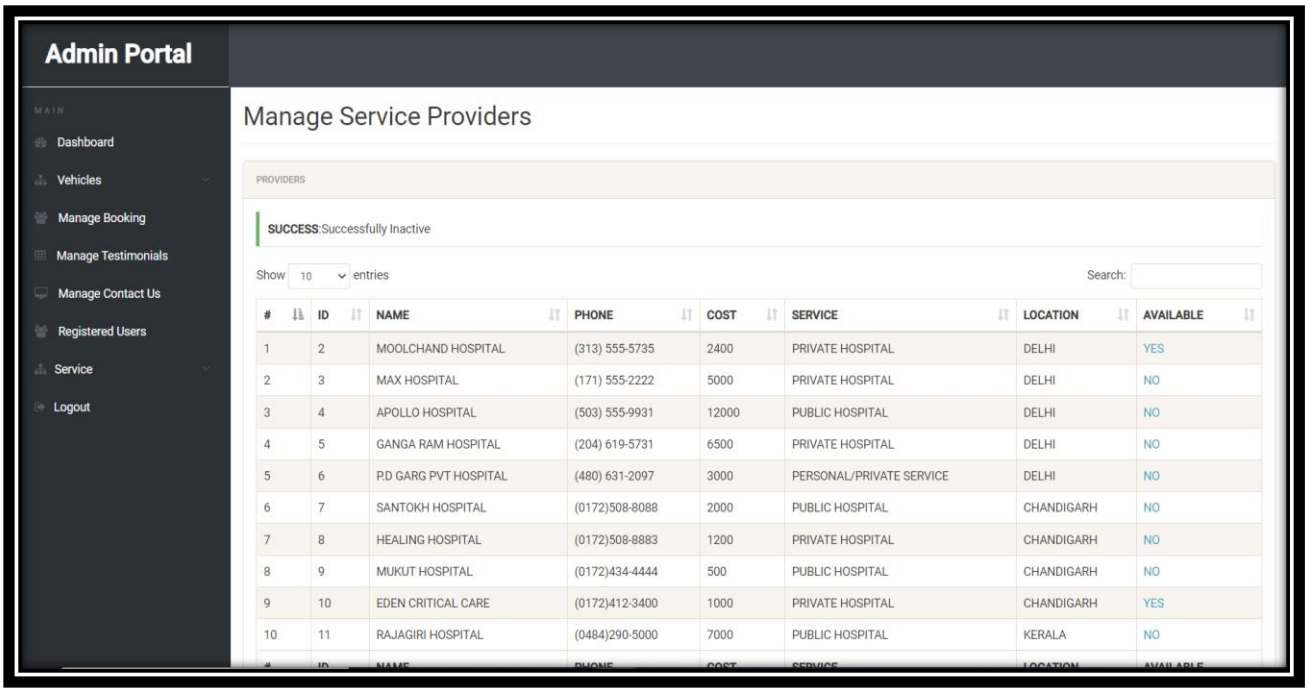

Fig. 4.32

SCOPE OF THE PROJECT

The Internet and globalization have already helped many of us tackle this epidemic virtually while maintaining distance. Through our project, we intend to bring a little ease to the society by providing a better management of data and to present a platform which can help save lives of many. As said earlier, we hope that no one may have to use this application, but practically, as need for nation we should stand together strong and be prepared for the worst. This project could be a one click away solution to many upcoming problems.

It can decrease overcrowding at the hospital’s emergency contacts and reduce queues. Besides, the official ambulance services and the common public can also come together and provide the facilities to help the community. Hence, work gets divided and the ratio of patients to resources might come at ease. This is a time for all of us to contribute and lend a hand. As long as there's unity, there's strength. The five separate fingers are five independent units, close them and the fist multiplies strength. This project is important not just to society, but also to us as individual students. It will help us to implement various technologies we learnt during the course of our bachelor studies and combine them into one practical implementation. We as a nation can learn from our previous mistakes and be ready with the best medical and technical support we can gather for the future. The prototype we envisioned during the primary aspect of the project has been successfully achieved and is up and running as a web application. This web application gives you a one snap interface to book these ambulances based on the need of the hour and has been designed to meet the features mentioned earlier.

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