

# **HOSPITAL FINDER**

**A PROJECT REPORT**

*Submitted by,*

**Mr. Mohammed Thousif B C - 20211CSE0388**

**Mr. Suresh G - 20211CSE0399**

**Mr. Ullas H R - 20211CSE0299**

*Under the guidance of,*

**Mr. Md Ziaur Rahman**

**Assistant Professor**

**School of Computer Science and Engineering,**

**Presidency University, Bengaluru**

*in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**At**



**PRESIDENCY UNIVERSITY**

**BENGALURU**

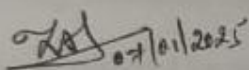
**DECEMBER 2024**

**PRESIDENCY UNIVERSITY**

**SCHOOL OF COMPUTER SCIENCE AND ENGINEERING**

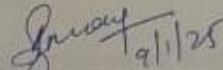
**CERTIFICATE**

This is to certify that the Project report "**Hospital Finder**" being submitted by Mohammed Thousif B C, Suresh G, Ullas H R, bearing roll numbers "20211CSE0388", "20211CSE0399", "20211CSE0299", in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.

 07/01/2025

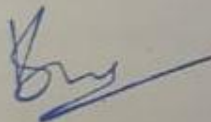
**MR. MD ZIAUR RAHMAN**

Assistant Professor  
School of CSE  
Presidency University

 9/1/25

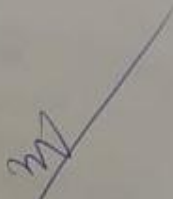
**DR. ASIF MOHAMMED**

Associate Professor & HoD  
School of CSE  
Presidency University



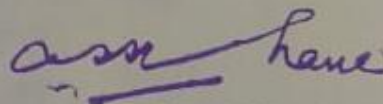
**Dr. L. SHAKKEERA**

Associate Dean  
School of CSE  
Presidency University



**Dr. MYDHILI NAIR**

Associate Dean  
School of CSE  
Presidency University

 Sameer

**Dr. SAMEERUDDIN KHAN**

Pro-VC School of Engineering  
Dean -School of CSE&IS  
Presidency University

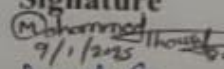
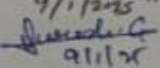
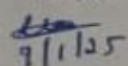
# PRESIDENCY UNIVERSITY

## SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

### DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **Hospital Finder** in partial fulfillment 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 **Mr. Md Ziaur Rahman, 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.

Name	Roll No	Signature
Mohammed Thousif B C	20211CSE0388	 9/1/2025 Thousif B C
Suresh G	20211CSE0399	 9/1/25
Ullas H R	20211CSE0299	 9/1/25

## **ABSTRACT**

The Hospital Finder app is an innovative and transformative solution designed to address one of the most pressing issues in healthcare ensuring timely and informed access to medical services during emergencies. The app tackles the challenge of navigating the complexities of healthcare systems, where delays and uncertainty can often have life-threatening consequences. By providing users with real-time, reliable information on critical aspects such as hospital bed availability, the presence of specialist doctors, emergency care facilities, and user reviews, the app empowers patients and their families to make fast, accurate decisions in urgent situations. This proactive approach not only enhances individual healthcare outcomes but also plays a vital role in optimizing the broader healthcare infrastructure.

A cornerstone of the Hospital Finder app is its robust and scalable backend architecture, which is powered by Java for dynamic data processing and Raw database for secure and efficient data storage. This combination ensures the app can handle vast amounts of hospital-related information without compromising on speed or accuracy. The use of Raw database as the database technology provides a secure framework for storing and updating hospital data, ensuring that users always have access to the most current information. The app's real-time updating mechanism allows users to stay informed about critical changes, such as shifts in bed availability or specialist schedules, which are often key to making life-saving decisions. The backend design also supports the app's ability to manage large traffic volumes, making it reliable even in high-stress, high-demand scenarios such as natural disasters or pandemic outbreaks.

In essence, the Hospital Finder app serves as a bridge between patients and healthcare providers, fundamentally transforming how medical emergencies are managed. It is not just a tool for finding hospitals; it is a comprehensive system designed to enhance decision-making, improve healthcare access, and save lives. By prioritizing user needs, leveraging advanced technology, and emphasizing data accuracy and privacy, the app ensures that patients receive the right care at the right time. Furthermore, its potential for future enhancements positions it as a long-term solution that can adapt to the evolving challenges of the healthcare landscape.

## ACKNOWLEDGEMENTS

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.

We express our sincere thanks to our respected dean **Dr. Md. Sameeruddin Khan**, Pro-VC, School of Engineering and Dean, School of Computer Science Engineering & Information Science, Presidency University for getting us permission to undergo the project.

We express our heartfelt gratitude to our beloved Associate Deans **Dr. Shakkeera L** and **Dr. Mydhili Nair**, School of Computer Science Engineering, Presidency University, and “**Dr Asif Mohammed**” Head of the Department, School of Computer Science Engineering, Presidency University, for rendering timely help in completing this project successfully.

We are greatly indebted to our guide **Mr. Md Ziaur Rahman**, Assistant Professor and Reviewer **Ms. Akkamahadevi**, Assistant Professor, School of Computer Science and Engineering, Presidency University for his inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

We would like to convey our gratitude and heartfelt thanks to the PIP2001 Capstone Project Coordinators **Dr. Sampath A K**, **Dr. Abdul Khadar A** and **Mr. Md Ziaur Rahman** and Git hub coordinator **Mr. Muthuraju V**.

We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

**Mohammed Thousif B C**

**Suresh G**

**Ullas H R**

**LIST OF TABLES**

<b>Sl. No.</b>	<b>Table Name</b>	<b>Table Caption</b>	<b>Page No.</b>
----------------	-------------------	----------------------	-----------------

## LIST OF FIGURES

Sl. No.	Figure Name	Caption	Page No.
1	Figure 1	login Page	32
2	Figure 2	Home Page	33
3	Figure 3	Registration Page	34
4	Figure 4	Lab Test Page	35
5	Figure 5	Lab Test Cart Items Page	36
6	Figure 6	Buy medicines Page	37
7	Figure 7	Buy medicine Details Page	38
8	Figure 8	Medicines Cart Page	39
9	Figure 9	Booking Details Page	40
10	Figure 10	Health Article Page	41
11	Figure 11	Health Article Details Page	42
12	Figure 12	Lab Test Details Page	43
13	Figure 13	Top Hospitals Page	44
14	Figure 14	Top Doctors Page	45
15	Figure 15	Booking Doctor Appointment Page	46
16	Figure 16	Doctors in Specific Field Page	47
17	Figure 17	Order Details Page	48
18	Figure 18	Hospital Finder Goals Page	50

# CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	
	ACKNOWLEDGMENT	
1	INTRODUCTION	1-4
	1.1 The Importance of Hospital Finder Application in Society	
	1.2 Modern Usage of the Application in Emergency Situations	
	1.3 Benefits and Challenges of Hospital Finder Application	
2	LITERATURE REVIEW	5-6
3	RESEARCH GAPS OF EXISTING METHODS	7-10
	3.1 Data Accuracy and Real-Time Updates	
	3.2 Limited Coverage in Rural and Remote Areas	
	3.3 Integration with Emergency Services	
	3.4 Personalization and AI Integration	
	3.5 User Experience and Accessibility	
	3.6 Data Privacy and Security	
	3.7 Interoperability with Healthcare Systems	



4	<p>PRAPOSED</p> <p>METHODOLOGY</p> <p>4.1 User Interface (UI) Layer</p> <p>4.2 Application Layer</p> <p>4.3 Database Layer</p> <p>4.4 API Layer</p> <p>4.5 External Services</p> <p>4.6 Security Layer</p> <p>4.7 Deployment Layer</p>	11-14
5	<p>OBJECTIVES</p> <p>5.1 Real-Time Hospital Information</p> <p>5.2 Filter by Medical Facilities and specialties</p> <p>5.3 User-Friendly Interface</p> <p>5.4 Data Privacy and Security</p>	15-16
6	<p>SYSTEM DESIGN &amp; IMPLEMENTATION</p> <p>6.1 Database Setup</p> <p>6.2 User Management</p> <p>6.3 Home Page with Features</p> <p>6.4 Order Management</p> <p>6.5 Integration of Functionalities</p> <p>6.6 Logout and Security</p>	17-20
7	<p>TIMELINE FOR EXECUTION OF PROJECT</p>	21
8	<p>OUTCOMES</p> <p>8.1 Real-Time Data Access</p> <p>8.2 User-Friendly Experience</p> <p>8.3 Increased Hospital Utilization</p>	22-23

8.4 Integration with  
Emergency Services

9	RESULTS AND DISCUSSIONS	24-27
	9.1 Improved Access to Healthcare Services	
	9.2 Enhanced Patient Experience	
	9.3 Optimized Resource Utilization	
	9.4 Faster Emergency Response	
	9.5 Data-Driven Decision Making	
	9.6 Increased Trust and Transparency	
10	CONCLUSION	28
11	REFERENCES	29
12	PSUEDOCODE	30-31
13	SCREENSHOTS	32-48

---

## CHAPTER-1

### INTRODUCTION

The Hospital Finder application is an innovative platform developed to streamline access to healthcare services during emergencies, providing a reliable and efficient solution for patients and their families. The app is designed to address common challenges in healthcare, such as delays in identifying appropriate facilities, overcrowding in hospitals, and lack of information about available resources. By offering real-time data on hospital bed availability, specialist doctors, emergency care facilities, and user reviews, the application enables users to make informed decisions swiftly, especially during critical situations when time is a determining factor in saving lives. This user-centric approach ensures that individuals can locate and access medical care tailored to their specific needs, eliminating uncertainty and reducing delays that can often prove detrimental in emergencies.

The backend architecture of the Hospital Finder app is built on robust technologies, utilizing Java for efficient data processing and MySQL for secure data storage and retrieval. This infrastructure ensures that the app can handle a vast database of hospitals and healthcare providers while delivering real-time updates on the availability of services. The seamless integration of data processing and storage ensures that users are presented with accurate and up-to-date information, even in high-traffic scenarios, such as during natural disasters or widespread medical emergencies. The app's design emphasizes reliability, enabling it to cater to a diverse user base and remain functional under demanding conditions.

One of the standout features of the Hospital Finder app is its intuitive and user-friendly interface, which has been meticulously crafted to provide a seamless experience for users of all ages and technical expertise. The app simplifies the process of finding healthcare facilities by offering advanced filtering options, allowing users to search based on specific criteria such as required treatments, specialties, and availability of critical care units. This dynamic filtering not only saves valuable time but also ensures that patients are directed to the most appropriate facilities for their unique medical needs. The app's clean and straightforward layout ensures that even in high-pressure situations, users can access the necessary information without confusion or delays, making it an indispensable tool during emergencies.

In addition to improving individual access to healthcare, the Hospital Finder app contributes significantly to the optimization of hospital resources. Overcrowding is a persistent issue in many healthcare facilities, often leading to inefficient use of resources and compromised patient care. By providing real-time information on hospital capacities, the app helps balance

patient loads across different facilities. This prevents unnecessary congestion in certain hospitals while ensuring that patients are not turned away due to lack of space. The app effectively facilitates better resource utilization, improving both the quality and efficiency of healthcare delivery.

Privacy and data security are also core aspects of the Hospital Finder app's design. In the healthcare sector, maintaining the confidentiality of user data is of paramount importance. The app employs robust encryption and adheres to stringent data protection standards to safeguard sensitive information, ensuring users feel secure while accessing its features. By maintaining high levels of transparency and reliability, the app builds trust among its users, encouraging widespread adoption and consistent use.

Looking towards the future, the Hospital Finder app envisions incorporating advanced functionalities to further enhance its utility and impact. Features such as predictive analytics could provide insights into hospital traffic trends, enabling users to anticipate delays and plan their visits more effectively. Integration with emergency response systems could add another layer of functionality, allowing the app to assist users in urgent situations by providing additional resources and guidance. These future enhancements aim to elevate the app's role from a reactive tool to a proactive system capable of anticipating and addressing the evolving challenges of healthcare access.

In summary, the Hospital Finder app is a groundbreaking solution designed to bridge the gap between patients and healthcare providers, ensuring timely and informed access to life-saving medical care. Its focus on real-time data, user-centric design, and system optimization makes it a transformative tool for modern healthcare challenges. By empowering individuals with accurate information and facilitating efficient resource allocation, the app not only improves patient outcomes but also enhances the overall functionality of healthcare systems. With its potential for future growth and adaptability, the Hospital Finder app represents a significant advancement in the way medical emergencies are managed, providing hope for a future where healthcare is more accessible, efficient, and responsive to the needs of all.

## **1.1 The Importance of Hospital Finder Application in Society**

The Hospital Finder application plays a transformative role in society by enhancing access to timely medical care during emergencies. By providing real-time information on hospital

availability, specialist services, and other critical resources, it reduces delays in receiving treatment, potentially saving lives. The app empowers individuals to make informed decisions by offering detailed hospital profiles tailored to their specific needs, ensuring better healthcare outcomes.

Beyond individual benefits, the app optimizes the utilization of healthcare resources by directing patients to underutilized facilities, reducing overcrowding at popular hospitals. This promotes a more balanced and efficient healthcare system. Its role in emergency preparedness, especially during disasters or public health crises, ensures faster response times and better coordination among healthcare providers. Additionally, the app's user-friendly design supports vulnerable populations, such as the elderly or those unfamiliar with healthcare systems, ensuring equitable access to care.

The application also has the potential to generate valuable insights into healthcare trends, aiding policymakers in addressing systemic gaps and planning future interventions. By integrating with emergency services and encouraging proactive health management, the Hospital Finder app contributes significantly to building a healthier and more resilient society.

## **1.2. Modern Usage of the Application in Emergency Situations**

The Hospital Finder app leverages modern technology to assist in swift and informed decision-making during emergencies. With real-time data on hospital services, bed availability, and specialists, users can quickly identify the most suitable facilities for their needs. Features like dynamic filtering and AI-driven recommendations streamline the process by analyzing user inputs and suggesting optimal options based on proximity and resource availability, ensuring timely care.

Integration with navigation systems, ambulance services, and emergency hotlines enhances its functionality, while crowdsourced feedback adds transparency about hospital performance. Offline access and wearable device integration further extend its utility, making the app reliable even in remote or low-connectivity areas. By reducing delays and simplifying emergency responses, the app proves invaluable in managing urgent healthcare scenarios efficiently.

### **1.3. Benefits and Challenges of Hospital Finder Application**

The Hospital Finder application offers several key benefits, primarily improving access to healthcare during emergencies. It provides real-time information on nearby hospitals, helping users make quick and informed decisions based on available resources, specialties, and bed availability. This can significantly reduce delays in emergency care, improving patient outcomes. Additionally, the app's ability to filter hospitals by specific needs, such as trauma care or ICU services, ensures that users are directed to the most suitable facility for their condition. Integration with navigation and emergency services further enhances its usability and effectiveness in critical situations.

However, the Hospital Finder app also faces challenges, particularly in terms of data accuracy and coverage. Real-time data can sometimes be unreliable due to hospital reporting delays or technical issues, leading to outdated or incomplete information. Another challenge is ensuring broad accessibility, as areas with poor internet connectivity or low smartphone penetration may not fully benefit from the app's features. Additionally, maintaining user privacy and securing sensitive health data are ongoing concerns, requiring robust security measures to prevent data breaches. Despite these challenges, the app offers a valuable tool for improving healthcare access in emergencies, with room for further development and refinement.

---

## CHAPTER-2

### LITERATURE SURVEY

**Amit Kumar** *Emergency Health Care Services in India: A Strategic Approach.*

**International Journal for Multidisciplinary Research**, Integrates pre-hospital and facility-based care using telemedicine and emergency response technologies.

Proposes a unified emergency surveillance system that integrates pre-hospital and facility-based care using telemedicine and emergency response technologies.

Fragmentation of healthcare services, lack of trained personnel, and insufficient infrastructure pose significant barriers to implementation. Faces barriers like service fragmentation, inadequate personnel, and insufficient infrastructure.

**Kartik Mishra** *Mobile Health Apps and the Future of Emergency Medical Care in India.* **Journal of Mobile Technology in Healthcare**, Employs AI-enabled mobile health apps to predict hospital crowding and recommend hospitals.

Utilizes mobile health apps with embedded AI algorithms to predict hospital crowding and suggest the best hospitals based on patient flow and emergency severity.

Data reliability is an issue due to the fragmented nature of the Indian healthcare system and the limited adoption of digital health technologies.

**Naveen Sharma** *Emergency Response Systems in India: Leveraging Mobile Applications for Faster Access to Healthcare.* **Journal of Emergency Medical Services**, Connects mobile apps to a centralized emergency network for ambulance dispatch and hospital guidance.

Mobile apps connected to a centralized emergency response network to dispatch ambulances and guide users to the nearest hospitals.

Limited access in areas without strong mobile networks, and the system is reliant on real-time ambulance availability, which can cause delays during high-demand periods.

**Shruti Desai** *Optimization of Hospital Selection Algorithms for Emergency Medical Care in Urban India.* **Journal of Applied Algorithms and Computation**, Develops algorithms to prioritize hospitals based on distance, specialties, and crowding.

Develops algorithms that prioritize hospitals based on distance, specialty, and crowding factors, providing users with the optimal choice in emergency scenarios.

Real-time data accuracy is challenging in urban environments due to traffic congestion and frequent hospital overcrowding.

**Suresh Patil** *Emergency Medical Care System Using GPS and Mobile Applications in Rural India.*

**Journal of Healthcare Informatics Research**, Implements a GPS-enabled emergency response system integrated with mobile apps and local healthcare centers.

Implements a GPS-enabled emergency response system for rural India, integrating mobile apps with local healthcare centers for faster emergency responses.

Lack of reliable internet connectivity in rural areas hinders the app's functionality, and local healthcare centers often face resource shortages.

**Anjali Bhatt** *The Role of Mobile Health Applications in Streamlining Emergency Medical Services in India.* **Journal of Health Technology**, Connects mobile health apps with a central dispatch system to locate nearby hospitals and ambulances.

Mobile health applications connected with a central dispatch system to alert users about nearby hospitals and ambulances in emergencies.

Heavy reliance on mobile connectivity and challenges in synchronizing real-time data between private and government hospitals.

**Zhao Jinxian et al** , Subway Shield Construction Evaluation. **Urban Infrastructure Journal**,

Proposes a knowledge management system (KMS) to enhance medical decision-making through shared expertise. Requires a high degree of collaboration across medical teams, which can be difficult to achieve in practice. Collaboration across medical teams is challenging in practice.

**Lin et al.**, Knowledge Management in Healthcare Systems. **Knowledge Systems Journal**

Uses a fuzzy theory-based model combined with the WSR methodology to evaluate the effectiveness of infrastructure projects like emergency hospitals.

The complexity of the model makes it difficult to apply quickly in real-time emergency situations.



---

## CHAPTER-3

### RESEARCH GAPS OF EXISTING METHODS

#### ➤ Data Accuracy and Real-Time Updates

One of the most pressing challenges in existing hospital finder applications is the lack of accurate, real-time data. Often, users rely on these apps during critical emergencies, only to discover that the information provided—such as bed availability, specialist availability, or specific medical services—is outdated or inaccurate. This creates frustration and delays, potentially putting lives at risk. The root cause lies in the static or manual nature of many existing systems, which fail to integrate directly with hospital databases. A dynamic, automated solution that syncs in real-time with hospital information systems is crucial to address this issue. By adopting advanced technologies such as cloud computing and APIs, applications can ensure that users receive up-to-date and reliable information. These improvements would enable better decision-making and significantly reduce delays in obtaining essential healthcare services.

Furthermore, real-time updates can enable users to respond proactively to changes in hospital capacity or availability. For example, if a hospital's critical care unit is full, a real-time system could instantly direct the user to the nearest facility with available capacity, ensuring timely intervention. Addressing this gap requires collaboration between app developers and healthcare providers to establish secure, automated data-sharing protocols. This would not only enhance the reliability of hospital finder applications but also foster greater trust among users. By ensuring the accuracy and timeliness of data, the applications could serve as truly dependable tools during emergencies.

#### ➤ Limited Coverage in Rural and Remote Areas

Another significant limitation of existing hospital finder applications is their restricted coverage, particularly in rural and underserved regions. In many cases, these applications either exclude hospitals in remote areas from their databases or provide outdated information due to challenges in data collection and maintenance. This creates a disparity in access to emergency healthcare, disproportionately affecting populations in these regions. Addressing this issue requires expanding the geographic scope of hospital finder applications and implementing mechanisms to include rural healthcare facilities in the database. Partnerships

with local healthcare providers, government agencies, and NGOs could play a crucial role in ensuring that data from these regions is captured accurately and updated consistently.

Moreover, innovative solutions such as decentralized data collection systems or mobile-based reporting tools for rural hospitals could help bridge the gap. These systems would enable smaller or remote facilities to input their data directly into the app, ensuring representation and accuracy. By including comprehensive data from rural areas, hospital finder applications can promote equity in emergency healthcare access. This would empower users in underserved regions to make timely, informed decisions and reduce the healthcare access divide between urban and rural populations.

#### ➤ **Integration with Emergency Services**

Effective coordination between hospital finder applications and emergency medical services is a critical but often overlooked aspect of modern healthcare systems. Current applications tend to operate in isolation, failing to integrate with emergency services like ambulance networks. This disconnect can lead to delays in patient transfers, miscommunication, or inefficiencies in resource utilization. Integration with emergency response systems, such as ambulance dispatch and paramedic services, could ensure faster and more coordinated care. For example, when a user selects a hospital, the app could simultaneously notify ambulance services, share patient details, and provide directions to the appropriate facility. Such integration would not only save time but also improve patient outcomes in life-threatening situations.

In addition to improving response times, integrating emergency services with hospital finder applications could allow for better resource allocation during large-scale emergencies, such as natural disasters or pandemics. Emergency systems equipped with real-time data on hospital capacities and patient locations could optimize routes and prioritize cases based on severity. This requires collaboration between developers, emergency service providers, and healthcare authorities to create a unified ecosystem that seamlessly connects users, hospitals, and medical responders. By addressing this gap, hospital finder applications could become indispensable tools for emergency management.

#### ➤ **Personalization and AI Integration**

While many hospital finder applications offer basic filtering options, they lack the advanced personalization capabilities needed to cater to individual user requirements. These systems typically provide generic recommendations based on proximity or availability, without

considering the patient's specific medical needs. Integrating artificial intelligence (AI) and machine learning (ML) algorithms could revolutionize the user experience by offering tailored suggestions. For example, AI could analyze a patient's medical history, current symptoms, or condition severity to recommend the most suitable hospital or specialist. This personalized approach would enhance decision-making and ensure that users receive care that aligns with their unique health requirements.

Moreover, AI could leverage real-time data from wearable health devices to provide proactive recommendations during emergencies. For instance, if a wearable device detects abnormal vitals, the app could instantly suggest nearby hospitals equipped to handle the situation. By incorporating AI-driven personalization, hospital finder applications could evolve from being reactive tools to proactive systems capable of anticipating and addressing user needs. Research in this area would not only improve the utility of these applications but also set new benchmarks for healthcare technology.

#### ➤ **User Experience and Accessibility**

The usability of hospital finder applications is a critical factor that determines their effectiveness, particularly in high-stress emergency scenarios. Many existing apps fail to cater to diverse user demographics, including elderly individuals or those who may not be tech-savvy. Complicated interfaces, cluttered layouts, and confusing navigation can hinder users from accessing the information they need during emergencies. A more inclusive approach to design is required, with a focus on accessibility and intuitive user experiences. Features like voice commands, multilingual support, and simplified workflows could make the applications more accessible to a broader audience.

Additionally, emergency situations often require rapid decision-making, and users should not have to struggle with technical barriers. A well-designed hospital finder app should present clear, actionable information in a minimal number of steps. Research into user behavior, particularly in stressful situations, could guide developers in creating interfaces that are both functional and easy to navigate. By prioritizing accessibility, these applications could ensure that users from all walks of life can benefit from their services, regardless of their technical expertise or physical capabilities.

➤ **Data Privacy and Security**

The increasing reliance on hospital finder applications raises serious concerns about data privacy and security. These apps often require access to sensitive personal and medical information, which, if mishandled, could lead to breaches and misuse. Many existing systems lack robust encryption techniques or secure data-sharing protocols, exposing users to potential privacy risks. Ensuring the confidentiality and security of user data is not only a legal obligation but also critical for maintaining trust. Developers must implement advanced encryption methods, secure authentication systems, and compliance with global data protection standards such as GDPR or HIPAA to safeguard user information.

Furthermore, transparency in data handling practices is essential to build user confidence. Clear policies regarding data collection, storage, and sharing should be communicated to users, ensuring they are aware of how their information is managed. Research into advanced security technologies, such as blockchain for data integrity and secure sharing, could further enhance the safety of hospital finder applications. By addressing these privacy concerns, developers can create platforms that users feel confident relying on, especially during emergencies.

➤ **Interoperability with Healthcare Systems**

Hospital finder applications often function as standalone tools, disconnected from larger healthcare systems such as electronic health records (EHRs) or health information exchanges (HIEs). This lack of interoperability limits their ability to provide comprehensive and accurate recommendations. Integrating these applications with national or regional healthcare systems could significantly improve their utility. For example, linking with EHRs could allow the app to consider a patient's medical history when recommending facilities or specialists. Similarly, integration with HIEs could provide a broader view of hospital resources, ensuring accurate and up-to-date information for users.

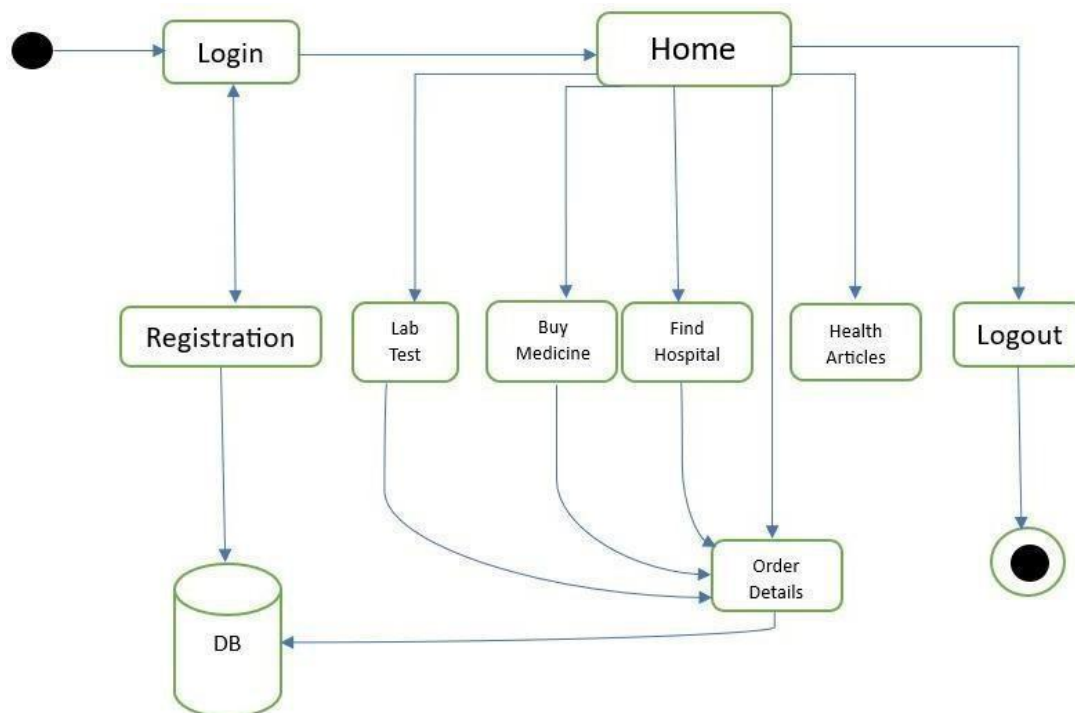
Interoperability would also enable seamless communication between hospitals, healthcare providers, and patients, reducing redundancies and improving care coordination. However, achieving this level of integration requires addressing technical and regulatory challenges, such as standardizing data formats and ensuring compliance with privacy laws. By fostering collaboration between app developers, healthcare providers, and policymakers, hospital finder applications could evolve into interconnected systems that enhance both individual care and overall healthcare efficiency.

---

## CHAPTER-4

### PROPOSED METHODOLOGY

#### Design Procedure:



**Fig 4.1 Architecture of Hospital Finder Application**

#### 4.1. Steps for Design Procedure

The design procedure of the Hospital Finder Application is structured into several layers, each responsible for specific tasks. These layers work collaboratively to ensure the application is user-friendly, efficient, secure, and scalable. Below is a detailed explanation of each layer

##### 4.1.1. User Interface (UI) Layer

**Components:** This layer contains all elements that users interact with, such as search bars for hospital queries, hospital listings with details, user profiles, and other visual interfaces. It ensures an intuitive and seamless experience for the user.

**Technologies:** Web Development: Technologies like HTML, CSS, and JavaScript are used to build responsive and dynamic interfaces. Frameworks such as React or Angular enhance the interactivity and speed of the application.

**Mobile Development:** Programming languages like Swift (iOS) and Kotlin/Java (Android) are employed to create dedicated mobile apps with optimized performance.

**Details:** The UI layer focuses on presenting data in a visually appealing format and capturing user inputs effectively. It ensures that users can easily search for hospitals, view their details, and interact with features like reviews or emergency contacts.

#### **4.1.2. Application Layer**

**Components:** This layer contains the core business logic that powers the application. It acts as a bridge between the user inputs and the data being processed.

**Technologies:** Backend frameworks like Node.js (JavaScript), Django (Python), or Spring Boot (Java) handle the application's core functionalities. These frameworks allow for scalability and efficient processing.

**Details:** This layer processes user requests and applies business logic, such as filtering hospitals based on their facilities, reviews, or specialties. For instance, if a user searches for cardiology services, the application layer evaluates the request and retrieves relevant results from the database. It also manages interactions with external services through APIs.

#### **4.1.3. Database Layer**

**Components:** This layer is responsible for storing and managing data such as hospital details, user profiles, and reviews. It ensures data consistency and quick retrieval.

**Technologies:** SQL Databases: MySQL or PostgreSQL are used for structured data storage.

NoSQL Databases: MongoDB or Firebase handle unstructured or semi-structured data for flexibility and scalability.

**Details:** The database schema is designed to optimize query performance, ensuring fast searches and updates. For example, hospital information might be indexed to allow quick retrieval when filtering by criteria like specialties or ratings.

#### **4.1.4. API Layer**

**Components:** This layer enables communication between the application and external or internal services.

**Technologies:** API protocols like RESTful APIs are used to handle requests and responses effectively.

**Details:** The API layer is responsible for sending and receiving data from external services. For instance, while Google Maps API is often used for location mapping, other APIs could manage notifications or analytics. This layer abstracts the complexities of external services and ensures seamless data exchange.

#### **4.1.5. External Services**

**Components:** Third-party services integrated to enhance the application's features.

**Examples:** Twilio: Used for sending SMS notifications, such as appointment reminders or emergency alerts.

**Other APIs:** Services providing additional functionalities like weather conditions or payment processing.

**Details:** External services enhance the app's capabilities without requiring in-house development. For instance, Twilio can be employed to notify users about hospital updates or appointment confirmations.

#### **4.1.6. Security Layer**

**Components:** This layer ensures the application is protected from security threats and safeguards user data.

**Technologies: Authentication:** Tools like OAuth and JWT (JSON Web Tokens) are used to verify user identity.

**Communication Security:** HTTPS and SSL/TLS ensure secure communication between the application and the server.

Details: The security layer focuses on protecting sensitive user data, including medical information and personal details. Measures like data encryption, secure API calls, and session management are implemented to prevent unauthorized access or breaches.

#### **4.1.7. Deployment Layer**

Components: The infrastructure where the application is hosted and maintained.

Technologies: Cloud Services: Platforms like AWS (Amazon Web Services), Azure, or Google Cloud Platform are used to deploy the application.

Details: This layer ensures that the application is scalable and reliable. It involves setting up servers, databases, and load balancers to handle varying user loads. Cloud services provide auto-scaling features to accommodate sudden spikes in traffic, ensuring uninterrupted service during emergencies.



---

## CHAPTER-5

### OBJECTIVES

#### Proposed Objectives for Hospital Finder

##### ➤ Real-Time Hospital Information

The Hospital Finder Application provides users with up-to-date and accurate information about nearby hospitals, empowering them to make well-informed decisions during emergencies or routine visits. The app displays key details about hospitals, such as their names, contact numbers, addresses, and current occupancy levels when available. This real-time access ensures that users are aware of the hospital's capacity to handle additional patients, enabling them to avoid overcrowded facilities. Moreover, the app provides operating hours, availability of emergency services, and other dynamic updates about hospital status. For instance, users can quickly determine if emergency departments are operational or temporarily unavailable. This feature is particularly critical during peak healthcare demand periods, such as pandemics or local emergencies. The app aims to reduce the time spent searching for hospitals and minimizes the frustration of visiting facilities that may not meet a patient's immediate needs. By centralizing and streamlining hospital-related information, the application ensures a smoother and more efficient healthcare-seeking process.

##### ➤ Filter by Medical Facilities and Specialties

Healthcare needs vary significantly from one individual to another, and the ability to find a hospital that caters to specific requirements is vital. The Hospital Finder Application addresses this by offering customizable search filters based on medical facilities and specialties. Users can refine their search to locate hospitals equipped with specialized services such as maternity wards, cardiac units, or departments for pediatrics, oncology, or orthopedics. This targeted approach ensures that patients are directed to the most appropriate healthcare providers for their conditions, avoiding unnecessary visits to facilities that may not meet their needs. Additionally, the app supports more granular searches, enabling users to find hospitals with advanced equipment like MRI machines or specialized treatments for conditions like cancer or neurological disorders. This feature not only enhances user convenience but also ensures timely access to essential medical care. By simplifying the process of matching patients with hospitals based on their unique requirements, the app contributes to better healthcare outcomes.

➤ **User-Friendly Interface**

Accessibility and simplicity are at the core of the Hospital Finder Application's design philosophy. The app features an intuitive and user-friendly interface, ensuring that people of all ages and technical abilities can navigate it effortlessly. Key functionalities, such as searching for hospitals or accessing details about medical services, are prominently displayed, minimizing confusion during critical moments. The design includes large, easy-to-read fonts, clear labels, and icons to guide users effectively. To further enhance the user experience, the app employs visual indicators, such as color-coded tags for different hospital specialties, allowing users to quickly identify relevant facilities. For example, maternity services may be marked with a specific color, while cardiac units may have another. This thoughtful design caters especially to users who may be under stress during emergencies, helping them make quick decisions without struggling to find essential features. Additionally, the app incorporates quick-action buttons for emergency situations, offering users a stress-free and efficient tool for accessing healthcare.

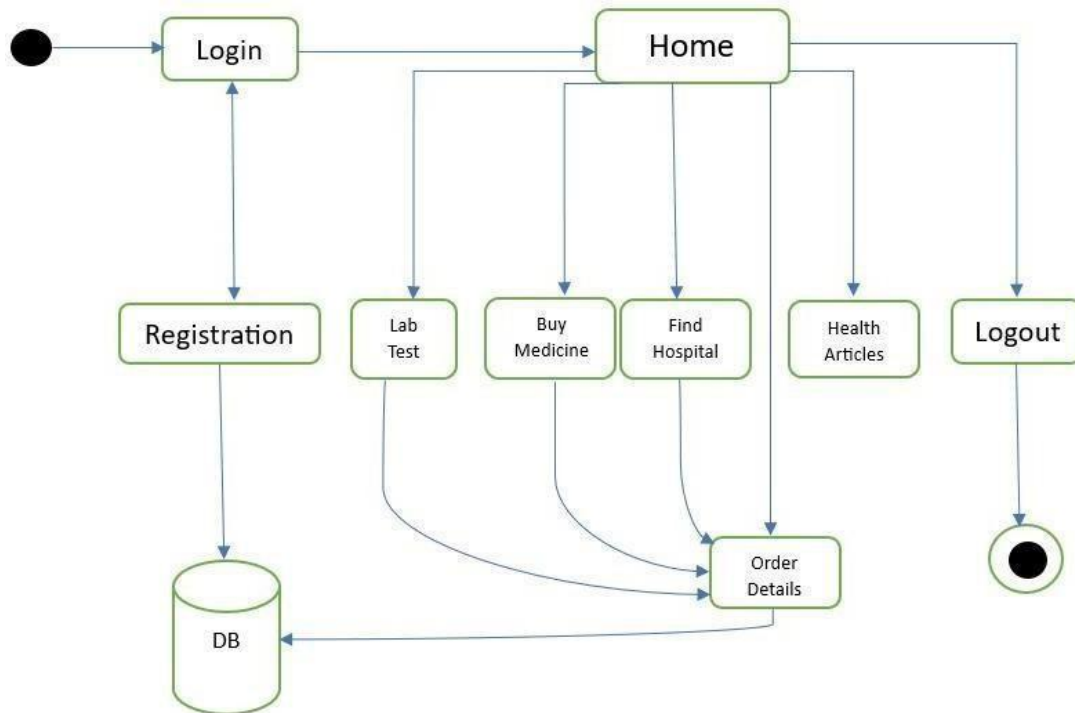
➤ **Data Privacy and Security**

Protecting sensitive user data is a cornerstone of the Hospital Finder Application. With healthcare information being particularly sensitive, the app employs robust security measures to ensure privacy and build user trust. Advanced encryption protocols safeguard data during storage and transmission, ensuring that personal and medical information remains confidential. Secure login systems, such as two-factor authentication, prevent unauthorized access to user accounts, adding an extra layer of protection. Additionally, the app complies with global data protection regulations like GDPR (General Data Protection Regulation) or HIPAA (Health Insurance Portability and Accountability Act), ensuring that all user data is handled responsibly and securely. To maintain continuous security, the app undergoes regular audits and updates to address emerging threats and vulnerabilities. Users are also given full control over their data, including the ability to manage, delete, or restrict access to their personal information. By prioritizing data privacy and security, the application fosters confidence among its users, ensuring that their trust is never compromised when interacting with the system.

---

## CHAPTER-6

### SYSTEM DESIGN & IMPLEMENTATION



**Fig 6.1: Architecture of Hospital Finder Application**

**The Proposed method consists of the following steps:**

This healthcare application is designed using a **three-tier architecture**, consisting of a **presentation layer** (user interface), **application layer** (business logic), and **data layer** (centralized database). The system comprises key modules, including **Login/Logout**, **Registration**, **Home**, **Lab Tests**, **Medicine Purchase**, **Hospital Search**, **Health Articles**, and **Order Details**.

In the **high-level design (HLD)**, the focus is on the architecture and core functionalities, ensuring smooth navigation between features, secure data handling, and scalability. The **low-level design (LLD)** dives into detailed implementation for each module, such as input validation, workflows, data storage, and error handling.

#### **Detailed Explanation of the Steps**

##### **1. Database Setup**

The database serves as the backbone of the Hospital Finder Application, facilitating efficient

management and storage of structured and dynamic data. A robust database schema is designed to organize critical information such as user details, hospital records, lab test availability, medicine inventory, and order history. SQL databases like MySQL or PostgreSQL are typically used for handling structured data due to their reliability and ability to execute complex queries, while NoSQL databases such as MongoDB may be integrated for managing more dynamic or flexible data structures. Establishing a seamless connection between the database and backend involves implementing data models and leveraging ORM (Object-Relational Mapping) frameworks like Hibernate or JPA in Java, enabling smooth interaction with database tables through object-oriented programming principles. Connection pooling is configured to improve database performance by managing connections efficiently and reducing latency. Additionally, ensuring proper indexing, normalization, and query optimization enhances the speed and scalability of database operations, ensuring that large volumes of healthcare-related data can be retrieved and processed quickly.

## **2. User Management**

User management plays a pivotal role in maintaining the security and privacy of user information within the Hospital Finder Application. It begins with a registration system that allows users to securely sign up by providing personal details like name, email, contact information, and passwords. Authentication protocols such as OAuth 2.0 and JSON Web Tokens (JWT) are implemented to validate user identity during login, ensuring secure access to the application. To protect sensitive data, passwords are hashed using algorithms like bcrypt or SHA-256 before being stored in the database. Advanced security mechanisms such as multi-factor authentication (MFA) add an additional layer of protection by requiring users to verify their identity through OTPs or secondary devices. Account recovery features like password reset through secure email links are also integrated to enhance user convenience. Furthermore, role-based access control (RBAC) is implemented to differentiate user permissions based on roles—regular users can access features like hospital search and order tracking, whereas administrators and healthcare providers can manage system data, orders, and appointments. This ensures users interact only with functionalities they are authorized to access.

## **3. Home Page with Features**

The home page of the Hospital Finder Application acts as the central hub where users can access the primary features of the app in a well-organized and user-friendly layout. Designed with an intuitive interface, the dashboard displays functionalities like hospital searches, lab test

bookings, medicine purchases, and access to health articles through clearly labeled cards or icons. Each option is visually distinct, making it easy for users to navigate the app and perform tasks efficiently. To further enhance usability, the home page incorporates personalization features that display recommendations tailored to the user's previous activities and preferences, such as suggesting nearby hospitals or highlighting recently searched healthcare facilities. The design ensures responsiveness and compatibility with various devices, providing a consistent experience for users across desktops, tablets, and smartphones. By combining simplicity with functionality, the home page ensures users can quickly access essential healthcare services while maintaining a smooth and engaging interface.

#### **4. Order Management**

The order management module in the Hospital Finder Application provides a seamless way for users to handle orders related to lab tests and medicine purchases. The backend efficiently records and manages order details, including the user's selected service, payment status, delivery timelines, and updates on the order's progress. Each order is assigned a unique identifier to facilitate tracking and management. Users can view comprehensive order histories, including past purchases, completed tests, and pending requests, along with options to cancel pending orders or reorder previously purchased medicines. Real-time updates on delivery timelines and payment confirmations ensure transparency and keep users informed at every stage of their transactions. A user-friendly interface displays order details in an organized manner, making it easier for users to track their current and past activities. By combining order tracking, cancellation, and reordering functionalities, this module simplifies the user experience and ensures smooth management of healthcare services and transactions.

#### **5. Integration of Functionalities**

Integrating various modules within the Hospital Finder Application ensures a cohesive and seamless experience for users by linking core features to the backend system. Individual modules such as hospital search, lab test booking, and medicine purchase are developed independently but are interconnected to enable smooth interactions with the database and external services. For instance, the lab test booking module manages test availability, user-selected slots, and confirmation details, allowing users to schedule appointments with ease. The medicine module tracks inventory, processes orders, and coordinates delivery updates, ensuring that medicines are available and delivered on time. The hospital search feature retrieves relevant hospital data based on user preferences such as specialization, facilities, and

city, making it easier to locate healthcare providers. Backend logic ensures these modules communicate in real-time, allowing users to book, purchase, or search without disruptions. By carefully integrating these functionalities, the application provides a streamlined and efficient solution for accessing a wide range of healthcare services.

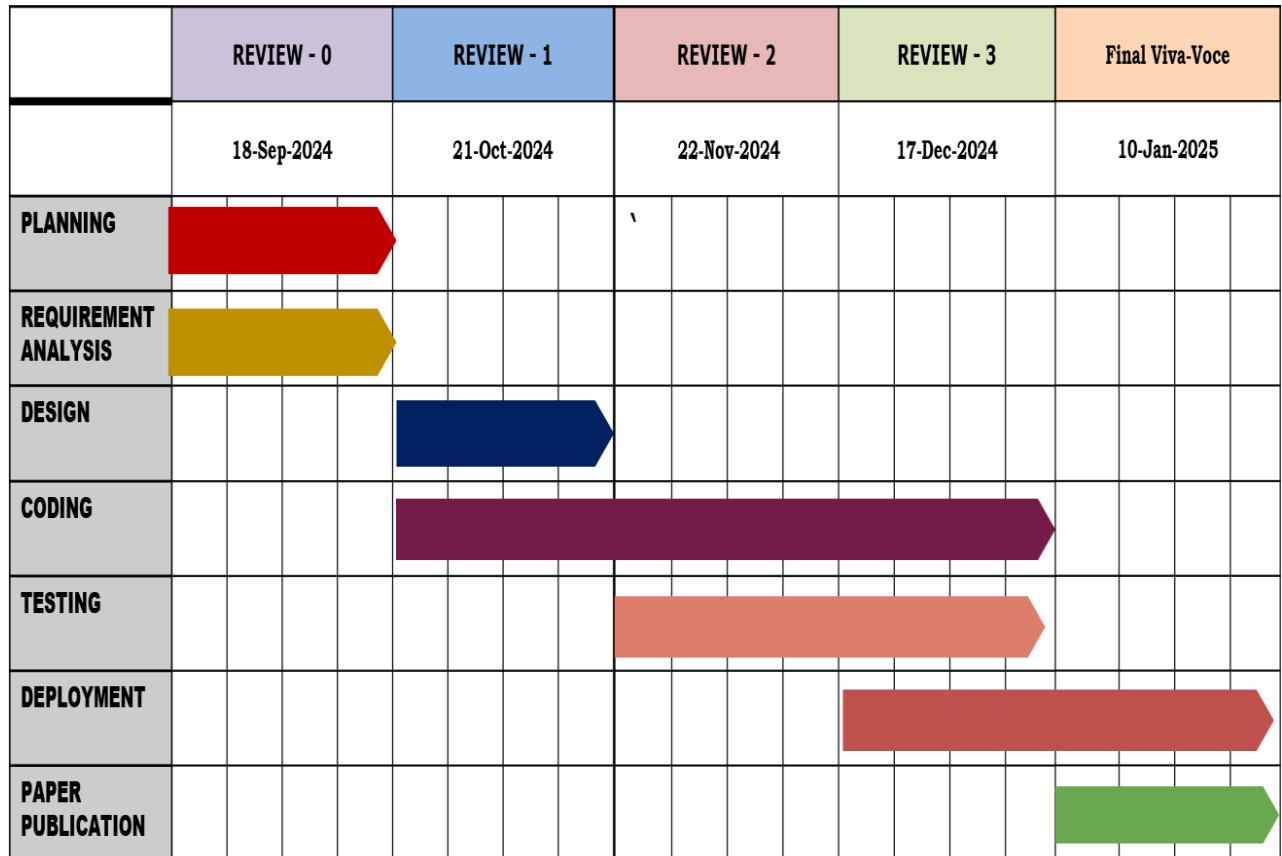
## **6. Logout and Security**

The logout and security mechanisms of the Hospital Finder Application are designed to ensure that user sessions can be terminated securely, preventing unauthorized access, especially on shared or public devices. Logout functionality effectively clears user authentication tokens, ending the session immediately and protecting sensitive data. The application incorporates strong security measures such as SSL/TLS encryption for secure communication between users and servers, safeguarding data from interception during transmission. Secure API endpoints are implemented to restrict unauthorized access, and regular security audits are conducted to identify and address vulnerabilities. Additionally, firewalls and intrusion detection systems (IDS) are deployed to protect against cyber threats like SQL injection, cross-site scripting (XSS), and brute-force attacks. These measures collectively ensure that user data remains protected and the integrity of the system is maintained, providing a safe and reliable platform for users to access healthcare services.

---

## CHAPTER-7

### TIMELINE FOR EXECUTION OF PROJECT



**FIG.7.1 Timeline of The Project**

---

## CHAPTER-8

### OUTCOMES

#### ➤ **Real-Time Data Access**

One of the primary outcomes of the Hospital Finder Application is the ability to provide users with real-time data access, ensuring that information on hospital services is always accurate and up-to-date. This feature includes data such as bed availability, the schedules of medical specialists, and the availability of critical resources like ventilators, ICU facilities, and emergency care. By delivering current information, the application eliminates the frustration and inefficiency of patients traveling to a hospital only to find the required services unavailable. Instead, users can make informed decisions, selecting hospitals that meet their specific needs, whether for routine check-ups or critical emergencies. This transparency in the healthcare system not only builds trust but also ensures that patients receive timely care, ultimately improving outcomes. Real-time updates foster a smoother healthcare experience by empowering users with knowledge and reducing unnecessary delays in receiving treatment.

#### ➤ **User-Friendly Experience**

The Hospital Finder Application emphasizes simplicity and usability in its design, ensuring that users from all backgrounds, including those with limited technological experience, can navigate the system effectively. The interface is clean, intuitive, and logically structured, enabling users to easily search for hospitals, book appointments, or explore health-related articles. Special attention is given to accessibility, ensuring that older adults or individuals with limited digital literacy can comfortably use the application. Features are clearly labeled, and the navigation is seamless, reducing the likelihood of user errors. By focusing on a user-friendly design, the application not only improves satisfaction but also encourages repeated usage. Moreover, the straightforward design reduces the learning curve for new users, making it a valuable tool in emergencies when time is critical. A well-designed interface plays a pivotal role in fostering trust and reliability, positioning the app as a dependable companion for healthcare needs.



➤ **Increased Hospital Utilization**

A significant outcome of the Hospital Finder Application is the optimization of hospital resource utilization. By providing users with tailored recommendations, the app ensures that patients are directed to facilities that can best meet their needs. This feature helps distribute patients more evenly across available hospitals, reducing overcrowding in certain facilities and preventing underutilization in others. For instance, if a specific hospital is overwhelmed with patients in its emergency department, the application can redirect non-critical cases to less busy hospitals with similar capabilities. This balance in patient distribution not only minimizes waiting times but also ensures that hospital staff and resources are utilized efficiently. The result is a more effective healthcare delivery system that benefits both patients and providers. Hospitals can manage their workload better, and patients experience reduced delays and improved access to quality care. In the long term, this enhanced utilization contributes to systemic improvements in healthcare delivery.

➤ **Integration with Emergency Services**

Future iterations of the Hospital Finder Application plan to integrate with local emergency services, such as ambulance providers and critical response units, further enhancing its utility in time-sensitive situations. This integration will allow users to directly connect with emergency responders through the app, facilitating faster assistance. For example, users can request ambulance services directly, and the app will provide responders with critical details such as the patient's condition, preferred hospital, and any relevant medical history. This feature significantly reduces communication delays, which can be life-saving in emergencies like cardiac arrests, accidents, or trauma cases. Furthermore, the app will guide users to the nearest and most equipped emergency facilities based on their current needs, ensuring that patients receive care at the right place and time. This seamless coordination between the app and emergency services not only saves lives but also enhances the overall efficiency of emergency response systems.

---

## **CHAPTER-9**

### **RESULTS AND DISCUSSIONS**

The Hospital Finder Application successfully delivers an integrated platform that enhances healthcare accessibility and management. It enables users to find hospitals, book lab tests, order medicines, and access health-related information efficiently. The real-time data updates and user-friendly interface improve user trust and satisfaction. Additionally, it contributes to better resource utilization by hospitals and ensures secure management of sensitive user data.

#### **Results**

##### **1. Improved Access to Healthcare Services**

The Hospital Finder Application breaks down physical barriers to healthcare by providing users with the ability to find hospitals, book lab tests, and purchase medicines online, regardless of their location. It enables users to access critical healthcare services 24/7 from the comfort of their homes, which is especially important for individuals in remote areas or those with mobility issues. This feature ensures timely access to healthcare without the need to travel long distances or navigate through busy healthcare systems, reducing delays in receiving medical attention.

##### **2. Enhanced Patient Experience**

One of the key features of the application is its intuitive and easy-to-use interface, which ensures that users can navigate through the app without difficulty. Whether they are searching for the nearest hospital, scheduling a lab test, or ordering medicine, the streamlined design allows for a smooth, user-friendly experience. This not only improves overall satisfaction but also encourages consistent use, as users are more likely to return to a platform that is simple, responsive, and tailored to their needs.

##### **3. Optimized Resource Utilization**

By providing real-time updates on hospital bed availability, medical staff capacity, and the status of other resources, the application helps to ensure a more balanced distribution of patients across available healthcare facilities. This reduces the chances of overcrowding in specific

hospitals, which can result in longer wait times and strain on medical resources. Additionally, it helps hospitals manage their capacity effectively, ensuring that patients are sent to the most appropriate facility based on their needs, thereby improving overall healthcare efficiency.

#### **4. Faster Emergency Response**

In future updates, integrating the application with local emergency services can significantly improve response times during medical emergencies. Users can quickly connect with ambulance services, fire departments, or other emergency responders directly from the app. This immediate connection reduces delays in emergency care and ensures that help arrives faster. Furthermore, the app can guide users to the nearest available emergency facilities, ensuring that they are directed to the most suitable and equipped hospital for immediate care, potentially saving lives.

#### **5. Data-Driven Decision Making**

The Hospital Finder Application can generate valuable insights from the data it collects, such as user behavior, hospital utilization patterns, and demand for specific services. These insights can be used by healthcare administrators to optimize hospital operations, improve service delivery, and forecast future needs. Hospitals can use this data to allocate resources more effectively, plan for peak demand times, and ensure that essential services are always available. Additionally, it helps healthcare providers make more informed decisions about patient care, improving the quality of healthcare services overall.

#### **6. Increased Trust and Transparency**

Providing real-time, accurate, and up-to-date information about hospital services, including bed availability, doctor schedules, and emergency room statuses, fosters transparency in the healthcare system. Users can make informed decisions about where to seek treatment based on this data, reducing uncertainty and frustration. The trust built through transparency is vital for encouraging users to rely on the app for all their healthcare needs, ultimately creating a more open and reliable healthcare environment. With accurate information at their fingertips, users feel more confident in their decisions, leading to higher satisfaction and better healthcare outcomes.

## **Discussion**

### **1. Impact on Healthcare Accessibility**

This discussion can explore how the app bridges the gap for people in remote or rural areas who have limited access to healthcare facilities. By offering online services like lab test bookings, medicine orders, and hospital searches, the app makes healthcare more accessible without requiring physical visits.

### **2. User Experience and Engagement**

Discussion can focus on the design and usability of the app, such as its intuitive interface, easy navigation, and features that cater to all age groups, including elderly users who might not be tech-savvy. The effectiveness of the interface and how it drives user engagement and satisfaction can be explored.

### **3. Real-Time Data and Resource Management**

The discussion can highlight how real-time data on hospital bed availability and resource status helps hospitals manage capacity efficiently. This would cover how reducing overcrowding, optimizing resource use, and improving patient distribution lead to better care and outcomes.

### **4. Integration with Emergency Services**

discussion can focus on how integrating emergency services into the app could improve response times in critical situations. The challenges of such integration, including coordination with local emergency teams, data privacy concerns, and technical difficulties, can also be addressed.

### **5. Data Privacy and Security**

privacy is a critical concern for any healthcare application. This discussion can explore the measures the app takes to protect personal health data, such as encryption, secure login, and compliance with data protection laws like HIPAA (in the U.S.) or GDPR (in Europe). The potential risks of data breaches and solutions to mitigate them can also be part of this discussion.

## **6. Scalability and Future Enhancements**

This could explore future updates, such as telemedicine integration, AI-driven health advice, or connecting with national healthcare systems. It could also touch on how the app could evolve to include more personalized features, like health tracking or integration with wearable health devices.

## **7. Cost-Effectiveness and Affordability**

A discussion can revolve around the financial aspect, such as whether the app helps users save money by reducing unnecessary hospital visits or improving the efficiency of healthcare providers, potentially reducing operational costs.

## **8. User Feedback and Continuous Improvement**

Discuss how user reviews, suggestions, and usage data can be used to enhance the app's functionality. Regular updates based on user feedback can ensure that the app continues to meet the evolving needs of patients and healthcare providers.

## **CHAPTER-10**

### **CONCLUSION**

The proposed Hospital Finder Application represents a significant advancement in improving healthcare access, particularly during medical emergencies. The application's primary feature is its ability to provide real-time information about hospital services, available beds, and medical specialists. This functionality ensures that users can make quick and informed decisions in critical situations, where every second can make a difference between life and death. By delivering immediate access to essential healthcare data, the app empowers users to identify and choose the most suitable medical facility or treatment option without unnecessary delays. This capability is especially valuable in emergency care scenarios, where rapid decision-making can save lives.

One of the most commendable aspects of the Hospital Finder Application is its focus on user experience, specifically through its user-friendly interface. In the context of medical emergencies, where stress and anxiety are often overwhelming, the app's design prioritizes simplicity and ease of navigation. Users, including patients or their family members, can quickly search for and locate necessary services without encountering complex steps or technical difficulties. The streamlined design reduces confusion and ensures that even individuals with limited technological proficiency can effectively use the application. This thoughtful approach to interface design enhances accessibility and allows users to focus on obtaining the care they need rather than grappling with technology during stressful times.

The Hospital Finder Application offers a transformative solution to some of the most pressing challenges in healthcare access and delivery. Its combination of real-time information, user-friendly design, and data analytics capabilities makes it an indispensable tool for improving emergency medical care and optimizing healthcare resources. By reducing delays in accessing critical services, simplifying the user experience, and enabling data-driven decision-making, the app has the potential to significantly enhance patient outcomes and the overall efficiency of the healthcare system. Through its innovative features and far-reaching impact, the application represents a pivotal step toward a more accessible, efficient, and responsive healthcare landscape.

## REFERENCES

- [1]. Arvind Mehta, *Evaluating the Impact of E-Health Systems on Emergency Medical Services in India*. Journal of Public Health Research, Volume 15, Issue 3, September 2021, Pages 15-22.  
<https://jphr.com>
- [2]. Anjali Bhatt, *The Role of Mobile Health Applications in Streamlining Emergency Medical Services in India*. Journal of Health Technology, Volume 9, Issue 6, June 2022, Pages 35-42.  
<https://jht.org>
- [3]. Shruti Desai, *Optimization of Hospital Selection Algorithms for Emergency Medical Care in Urban India*. Journal of Applied Algorithms and Computation, Volume 10, Issue 4, November 2020, Pages 47-54.  
<https://jaac.org>
- [4]. Amit Kumar, *Emergency Health Care Services in India: A Strategic Approach*. International Journal for Multidisciplinary Research, Volume 6, Issue 1, January-February 2024, Pages 5-10.  
<https://www.ijfmr.com>
- [5]. Kartik Mishra, *Mobile Health Apps and the Future of Emergency Medical Care in India*. Journal of Mobile Technology in Healthcare, Volume 3, Issue 7, July 2020, Pages 21-28.  
<https://www.jmthc.com>
- [6]. Naveen Sharma, *Emergency Response Systems in India: Leveraging Mobile Applications for Faster Access to Healthcare*. Journal of Emergency Medical Services, Volume 7, Issue 3, July 2021, Pages 33-40.  
<https://jems.com>

## **APPENDIX-A**

### **PSEUDOCODE**

Start

// Check if user is registered If user is not  
registered:

Go to registration Else:

Go to login page then home page

// Home page actions If lab test is  
selected:

Go to lab test section Add lab test to  
cart Go to cart

If booking details are correct: Mark booking as  
successful Go to order details

Else:

Ask user to provide correct information Else if buy medicines is  
selected

Go to buy medicines section Add medicines to cart

Go to cart

If booking details are correct: Mark booking as  
successful Go to order details

Else:



Ask user to provide correct information Else if find hospital is selected:

Go to find hospital section User selects hospital

Display list of top doctors in the selected hospital If user clicks on a doctor:

Book appointment with selected doctor Add appointment to order details

Mark booking as successful Go to order details

Else if articles is selected: If user selects yes:

Share details of articles

Else:

Go back to home page Else if order details is selected:

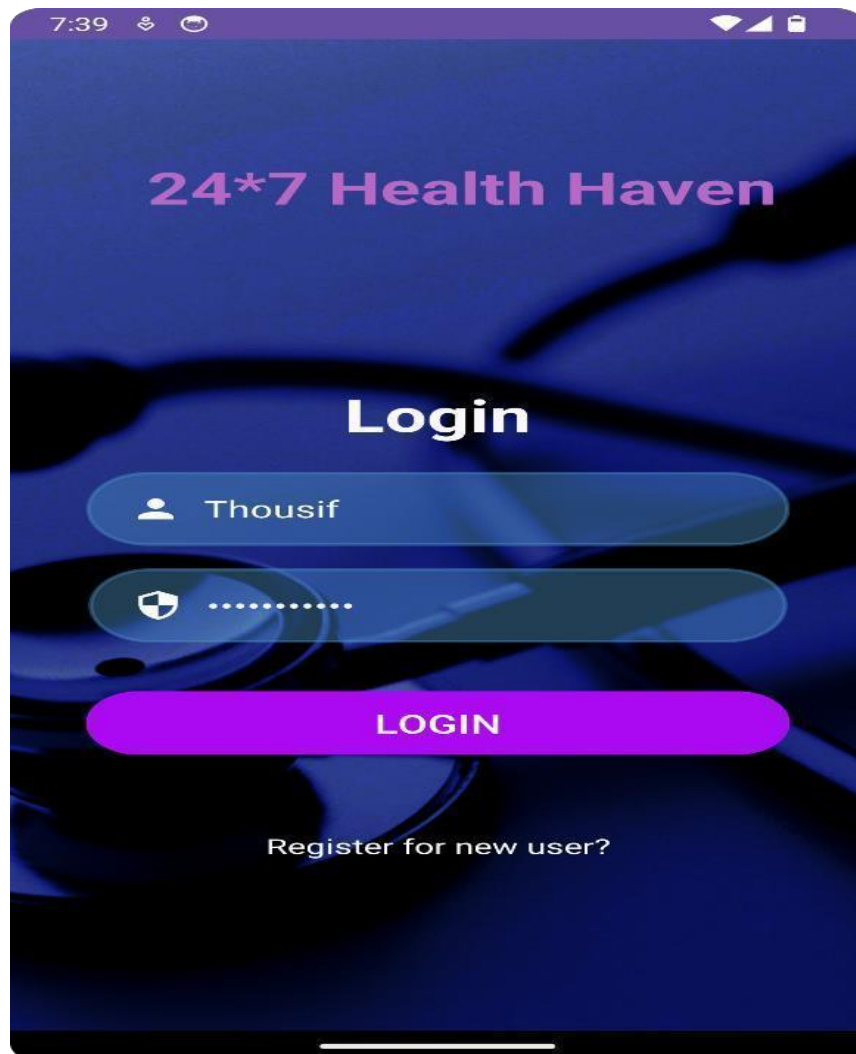
Display all orders that have been booked Else:

Logout

Go to login page End

## APPENDIX-B

### SCREENSHOTS



**Fig.1.login Page**

The login page is where users can authenticate themselves by entering their username and password. It often includes options for password recovery and account creation. The page is designed for ease of access, ensuring that users can quickly log into their accounts to proceed with further actions in the app. Additionally, there may be options for social media logins or multi-factor authentication for added security.



**Fig.2.Home Page**

The home page serves as the main dashboard of the application. It provides a navigation hub for users to access various features, including lab tests, medicines, health articles, and more. The layout typically includes a clean, user-friendly interface with icons or menus leading to specific sections of the platform. Users can also view promotional offers or updates about new services, helping to keep the interface engaging and informative.

7:38

24\*7 Health Haven

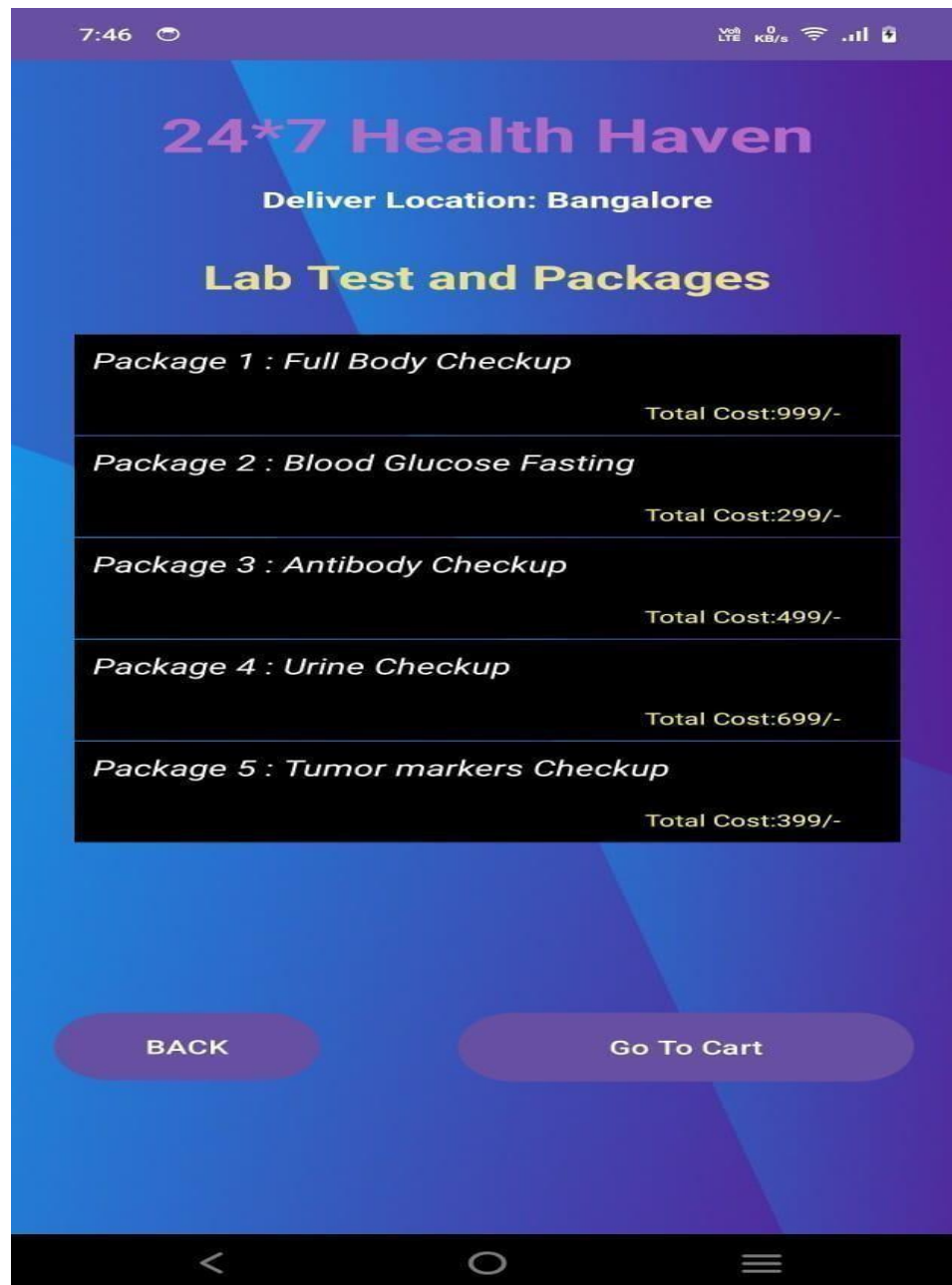
## Registration

**REGISTER**

Alredy have an account?

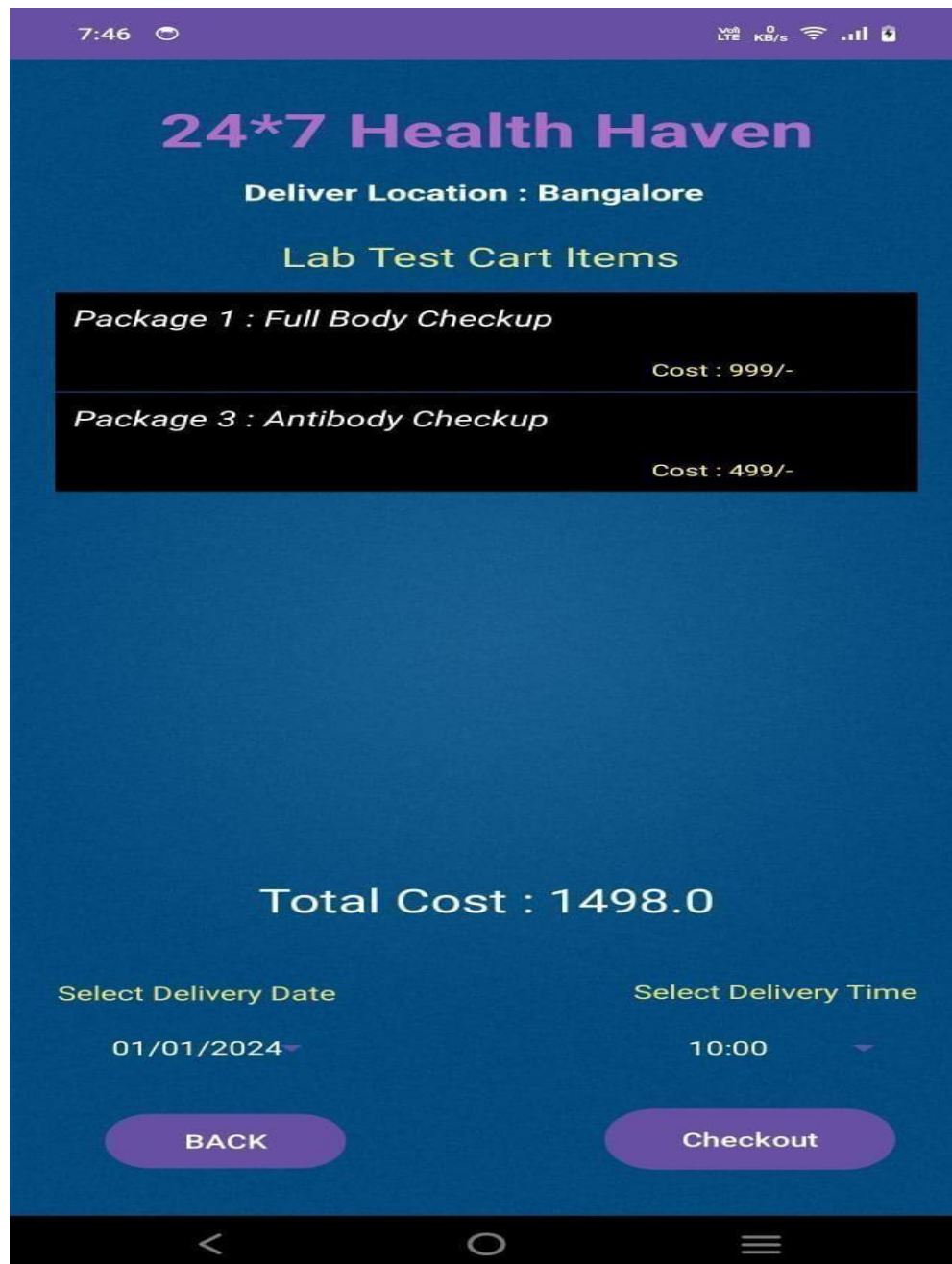
**Fig.3.Registration Page**

The registration page allows new users to create an account by entering their personal details such as name, email, phone number, and password. This page may also include terms and conditions or privacy policy links for users to review before completing their registration. Upon successful registration, users can log in to the app and begin using its features, often with a confirmation email or SMS for verification.



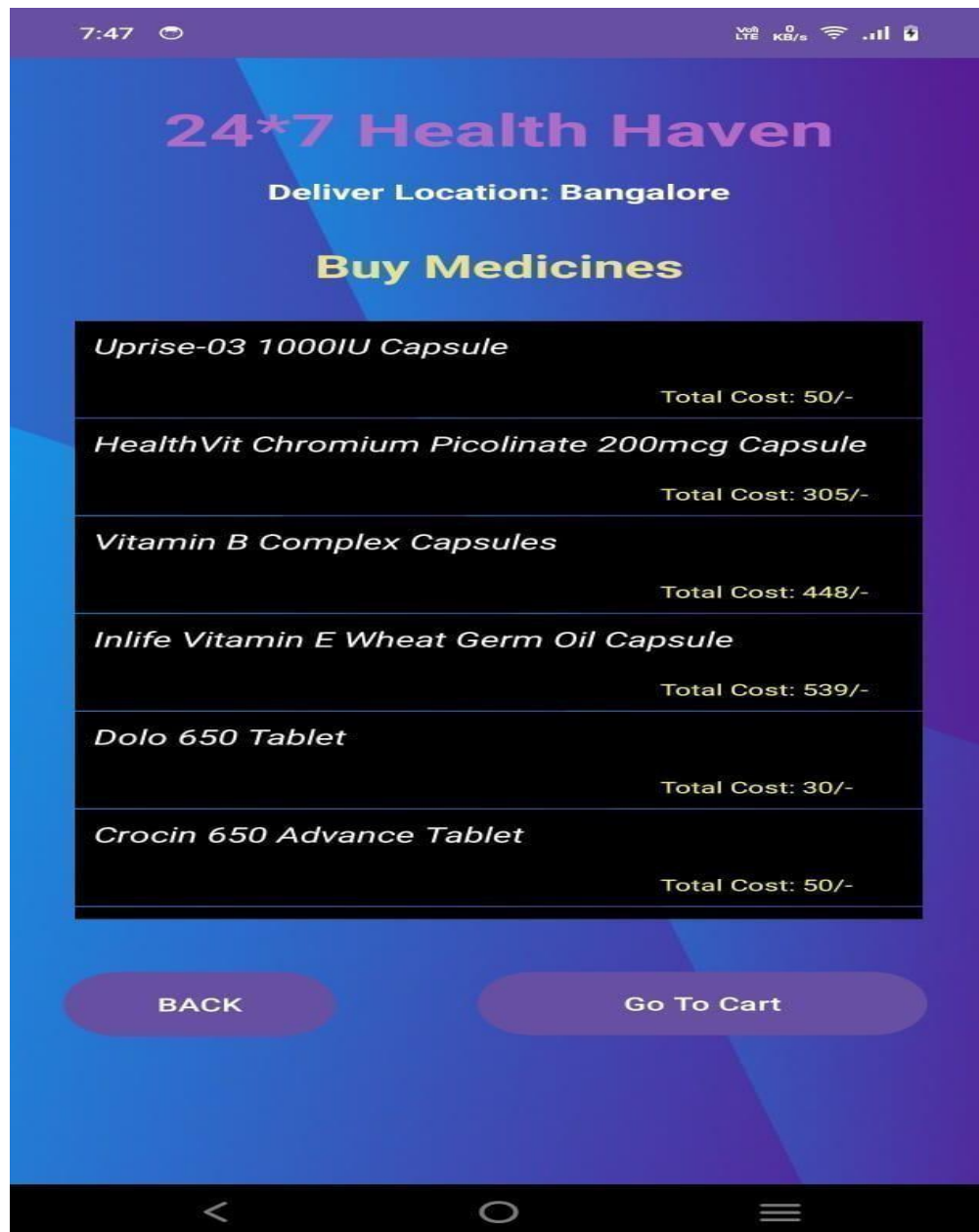
**Fig.4.Lab Test Page**

The lab test page allows users to browse available lab tests they can order through the app. This page typically includes detailed descriptions of various tests, including their purpose, cost, and how they are conducted. Users can select the test they need, read any relevant preparation instructions, and add it to their cart. The page may also include options for scheduling test appointments or choosing test packages.



**Fig.5.Lab Test Cart Items Page**

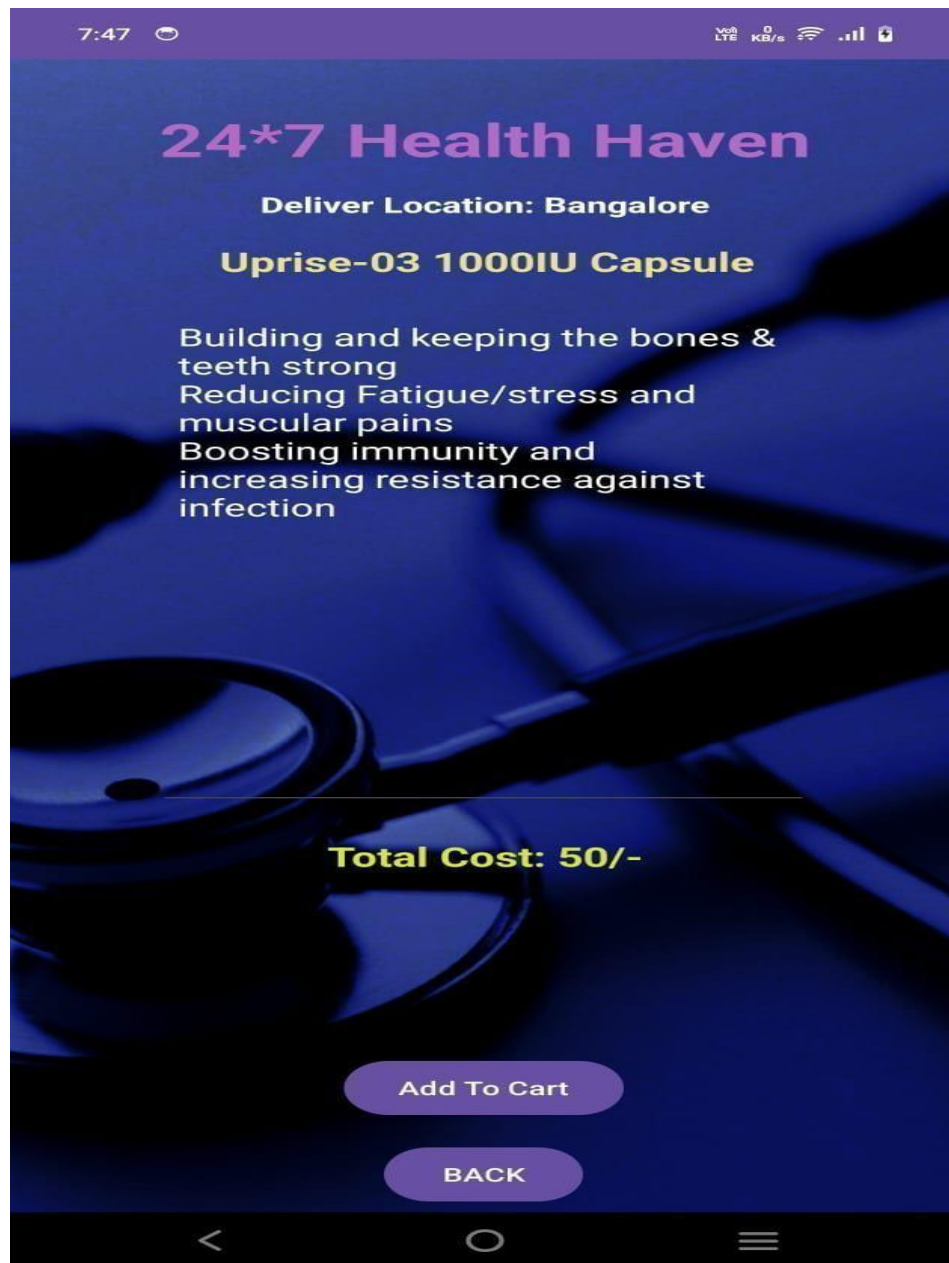
The lab test cart page provides users with a summary of the lab tests they have added to their cart. Here, they can review the tests, make adjustments to the quantity, or remove items. The page also typically displays the total cost for the selected tests. Users can proceed to checkout, where they'll finalize their orders and provide payment details. This page might include options for promo codes or discounts.



**Fig.6.Buy medicines Page**

The medicines page features a catalog of medications available for purchase through the app. Users can browse through various categories of medicines, such as over-the-counter drugs, prescribed medications, or wellness supplements. Each item typically includes a description, dosage information, and price. The page may also have filters or a search bar to help users find specific medications or products based on their needs.

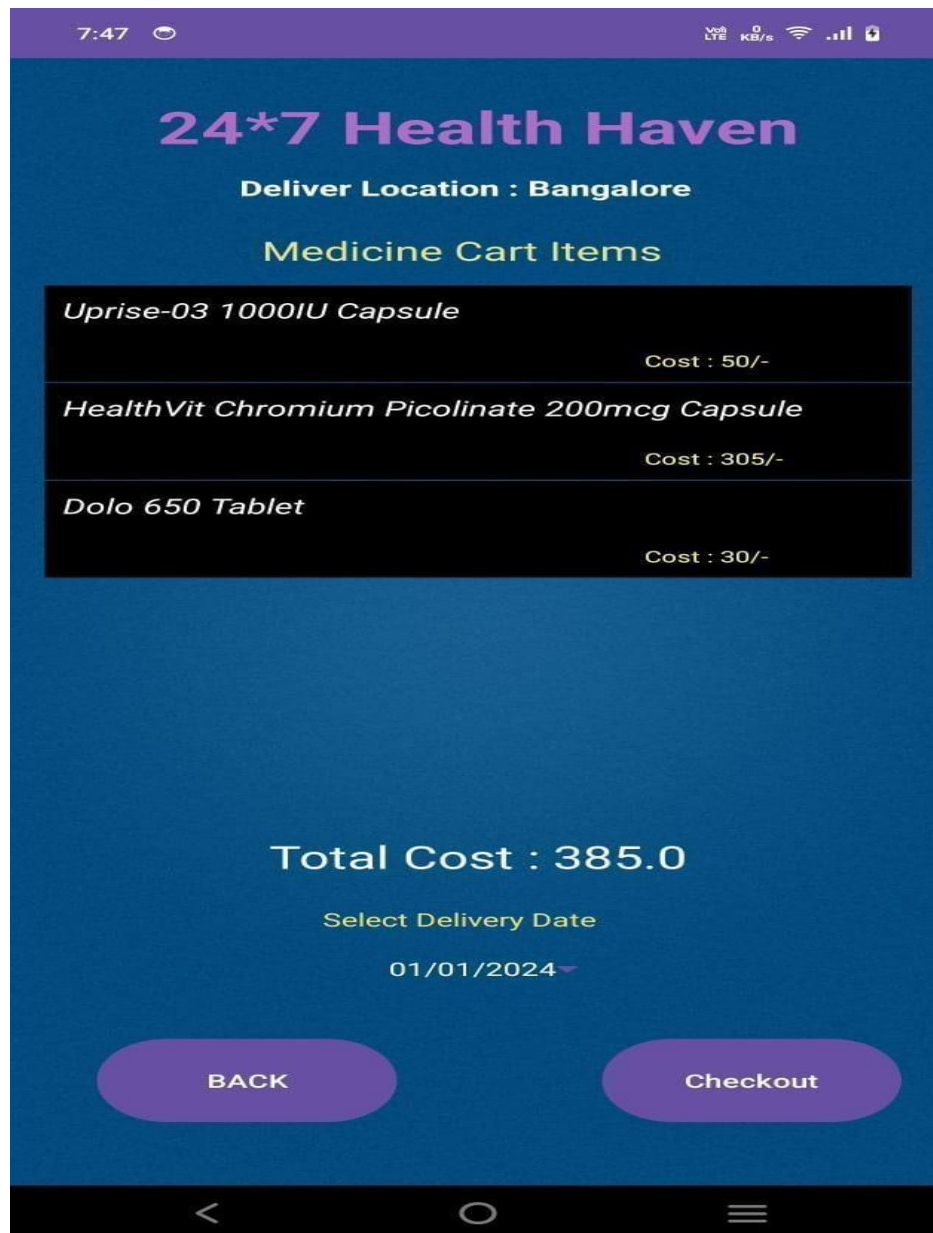




**Fig.7.Buy medicine Details Page**

The Medicines Details Page offers a streamlined catalog of medications and supplements for easy browsing and purchase. Users can explore categories such as over-the-counter drugs, prescription medications, and wellness supplements. Each product listing provides key details like benefits, dosage recommendations, and pricing.





**Fig.8.Medicines Cart Page**

The medicines cart page shows the items users have added to their shopping cart, including medicines and related products. Users can view each item, its quantity, price, and total cost. Options to edit the cart, such as adding more products or removing items, are available. This page typically includes a summary of the order, taxes, and delivery charges, followed by a checkout button to proceed with the purchase.

7:47

24\*7 Health Haven

Please Fill All Details for Booking

Mohammed Thousif B C

Bangalore

563124

9902992869

BOOK

**Fig.9.Booking Details Page**

The booking details page offers a clear overview of the user's booking, including the service type, scheduled date and time, and location if applicable. It also provides payment details, confirming the transaction and the total amount. Any special instructions or preparation guidelines for the service are displayed. Users have the option to modify or cancel the booking, depending on the platform's policy. Contact information for customer support is also provided for any queries. This page ensures that users have all the relevant information they need for their booking in a concise and accessible format



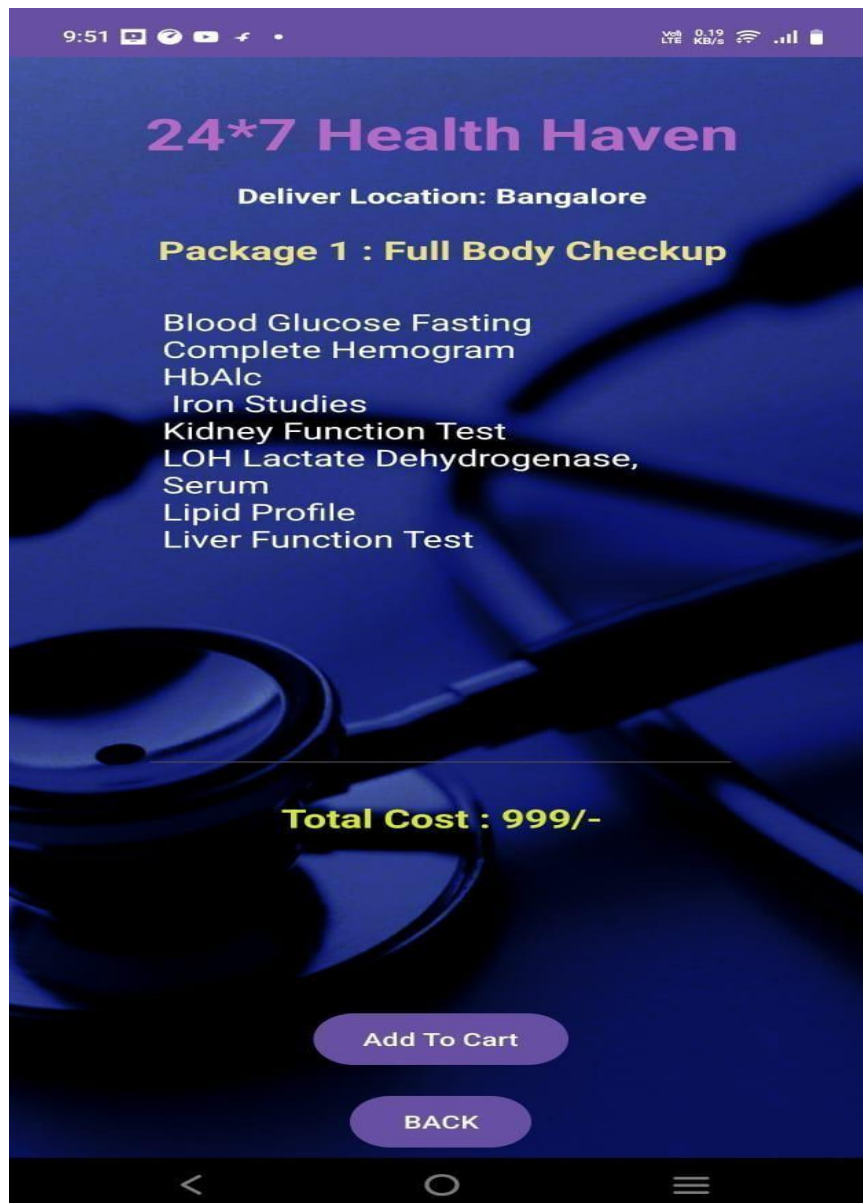
**Fig.10.Health Article Page**

The health article page displays educational and informative content related to various health topics. Articles may cover general health tips, wellness advice, medical conditions, treatment options, or lifestyle changes. Users can scroll through the content or search for specific topics. The page may also feature images, infographics, and links to related articles, helping users gain a deeper understanding of health-related issues.



Fig.11.Health Article Details Page

This is another page dedicated to health-related articles. It provides detailed written content, typically including expert opinions, tips, and guidelines for maintaining or improving health. The page may offer interactive elements, such as comment sections or sharing options, encouraging user engagement. Topics can vary from mental health and fitness to chronic illness management, providing a comprehensive resource for users seeking health information



**Fig.12.Lab Test Details Page**

The lab test details page indicates the over all activities for the particular lab test, then total cost of the particular lab test. If it's done add the particular lab activity to the cart else go back to the previous page.





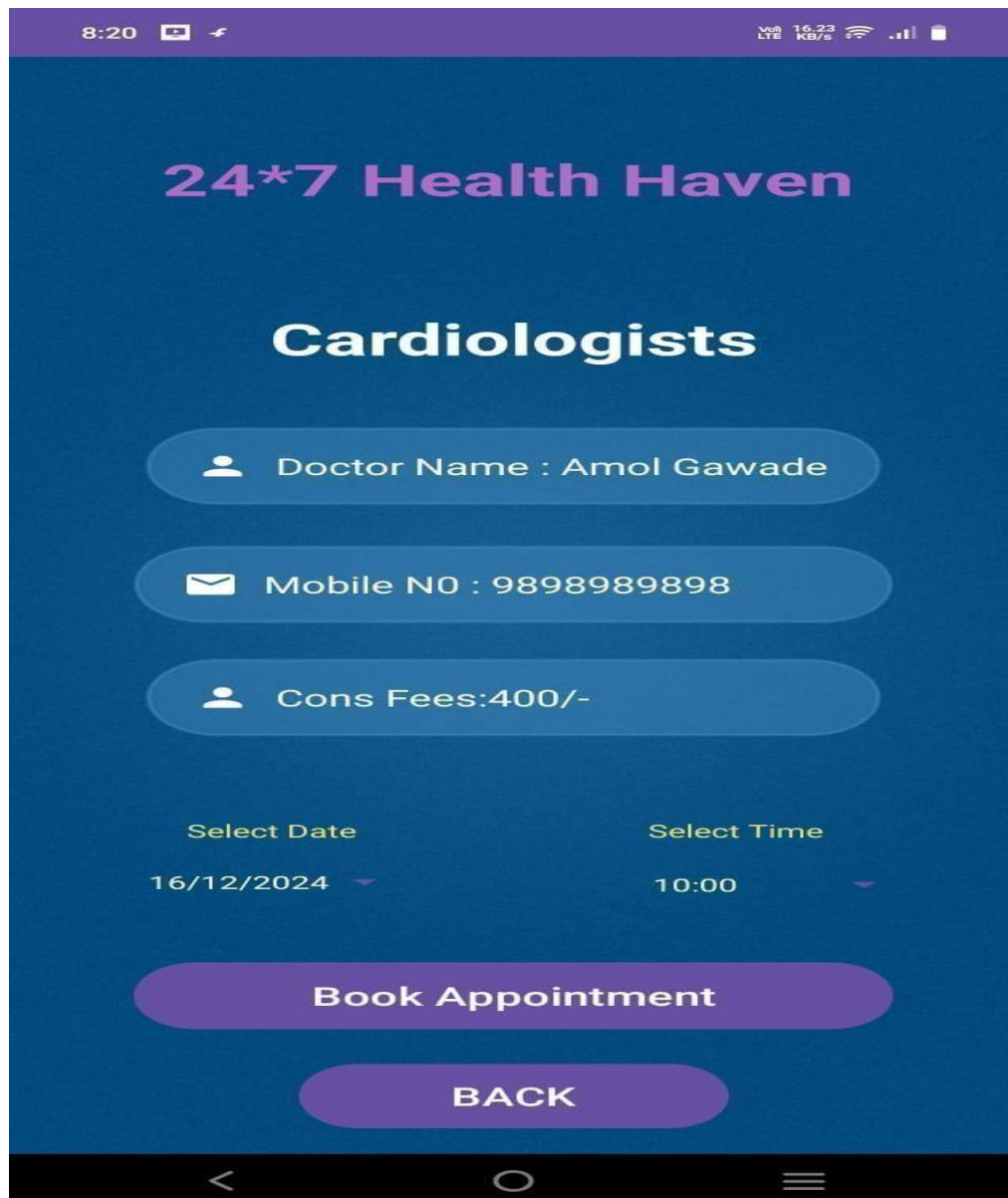
**Fig.13.Top Hospitals Page**

The "Top Hospitals" section of the 247 Health Haven\* app highlights a curated list of leading hospitals across major Indian cities. It features hospitals like Manipal Hospital, Apollo Hospital, Artemis Hospital, Max Hospital, and Lims Hospital with their respective locations clearly displayed. This section allows users to identify and choose hospitals based on their proximity or reputation. With a structured grid layout and seamless navigation, the app ensures accessibility to top-tier medical facilities, enhancing convenience for patients seeking reliable healthcare services.



**Fig.14.Top Doctors Page**

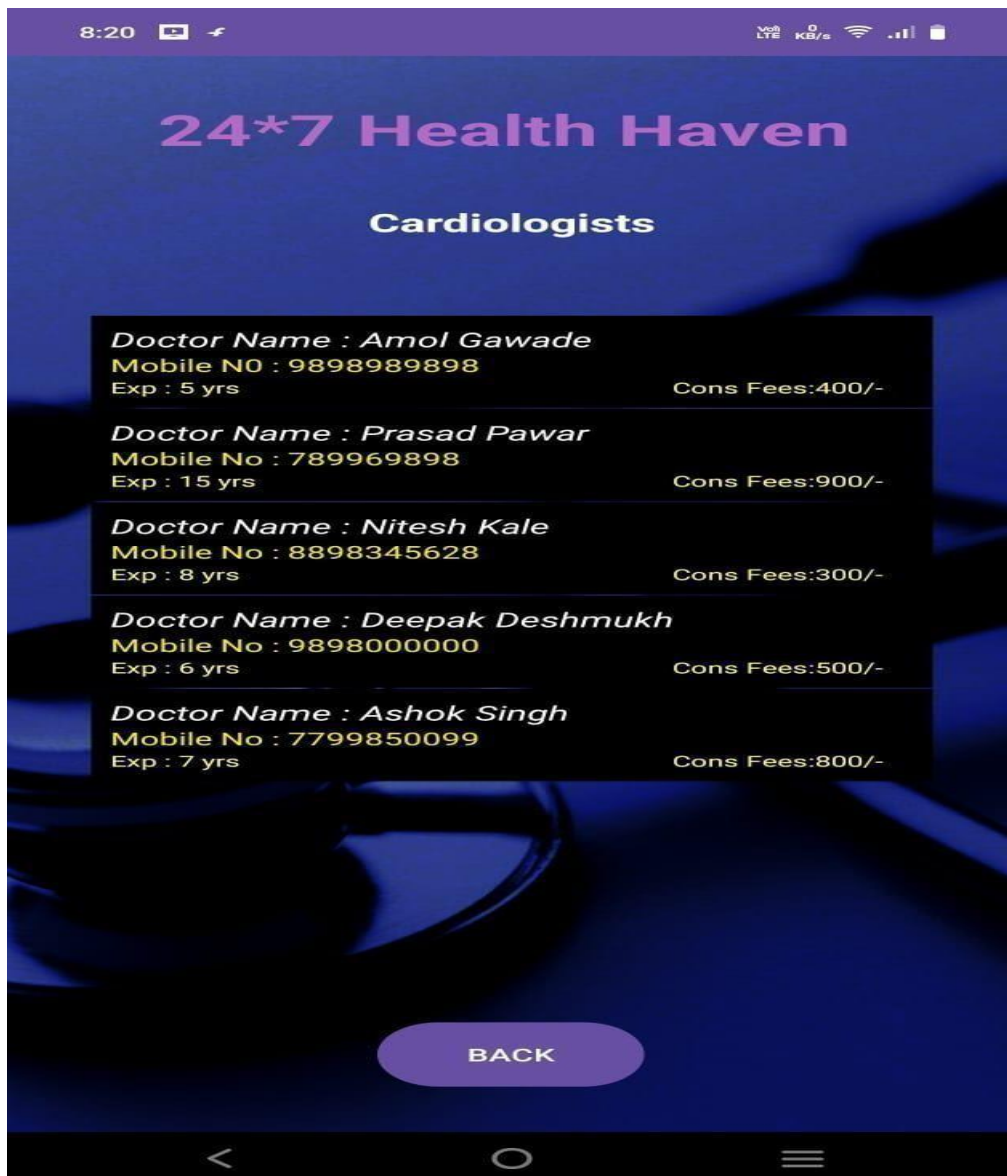
The "Top Doctors" section of the 247 Health Haven\* app is designed to help users find specialists for their medical needs quickly and efficiently. It provides categorized options for accessing doctors such as Family Physician, Dietician, Dentist, Surgeon, and Cardiologists, displayed in a visually appealing grid layout with corresponding images. This feature simplifies the process of connecting with healthcare professionals based on the user's specific requirements. The intuitive design, highlighted headings, and navigation buttons ensure a smooth user experience.



**Fig.15. Booking Doctor Appointment Page**

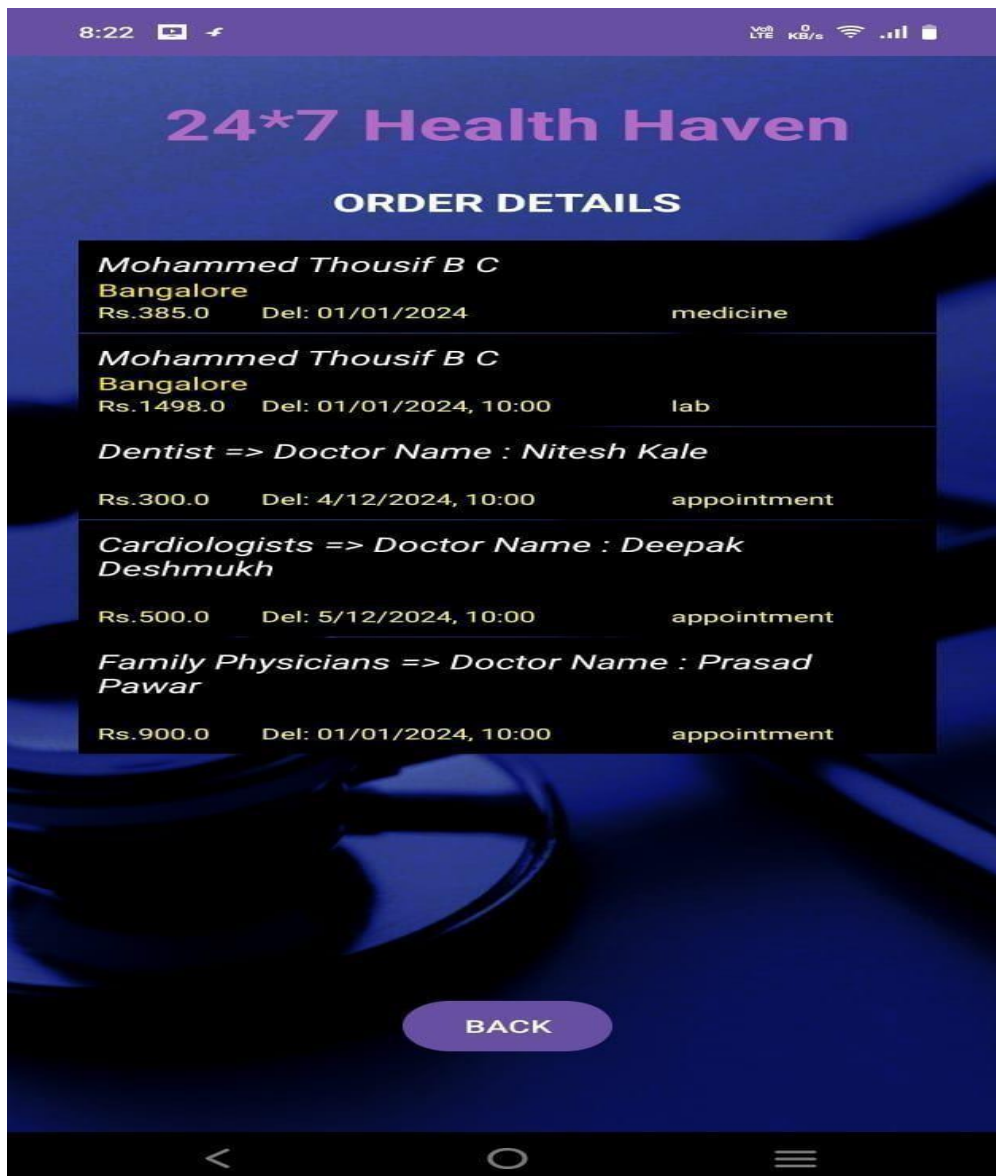
The image provides a focused view of an appointment booking screen for a cardiologist within the 24\*7 Health Haven\* application. It highlights specific details of *Dr. Amol Gawade*, such as the doctor's name, contact number, and consultation fee (₹400). Users can conveniently select a date and time for their appointment using the streamlined interface. The design includes clearly labeled buttons for booking the appointment or returning to the previous screen, ensuring a smooth and stress-free user experience.





**Fig.16.Doctors in Specific field Page**

The image showcases a list of cardiologists within the 247 Health Haven\* application. Each entry includes details such as the doctor's name, mobile number, years of experience, and consultation fees. For example, Dr. Prasad Pawar has 15 years of experience with a consultation fee of ₹900, while Dr. Nitesh Kale offers services at ₹300 with 8 years of experience. This comparative display enables users to make informed decisions based on their budget and the doctor's expertise. The structured layout, highlighted text, and organized presentation ensure ease of use for patients seeking specialized care.



**Fig.17.Order Details Page**

The *Order Details* section of the 247 Health Haven\* app provides users with a streamlined overview of their booked services, including medicines, lab tests, and doctor appointments. Each entry is neatly organized, showing relevant details like cost, delivery date, and doctor names, ensuring transparency and convenience. The clear structure allows users to keep track of their orders and appointments seamlessly. With its user- friendly interface, this feature enhances the healthcare experience by simplifying access to essential medical services.

## APPENDIX-C

### ENCLOSURES

1. Journal publication/Conference Paper Presented Certificates of all students.
2. Include certificate(s) of any Achievement/Award won in any project-related event.

8th International Conference on Innovative Computing and Communication (ICICC-2025) – A Flagship Conference

Dear Author(s),

Greetings from ICICC 2025!

We congratulate you that your paper with submission ID '1249' and Paper Title 'Hospital Finder' has been shortlisted to be considered for Elsevier SSRN Reputed Series. This means your paper is among the top 25% of the papers received/reviewed. The reviews have been found below. **Our registration process has started. Kindly submit your registration by 30th December 2024** (<https://icicc-conf.com/registrations>).

1/3/25, 10:18 AM
Conference Management Toolkit - Author Console

### Author Console

1 - 1 of 1

««
«
1
»
»»

**Show:**

25

50

100

All

Clear All Filters

Paper ID	Title	Track	Files
1249	Hospital Finder	ICICC2025	<b>Submission files:</b> <div style="display: flex; align-items: center; margin-top: 5px;"> <span style="color: #007bff; font-size: 1.2em; margin-right: 5px;">⬇</span> <span style="color: #007bff;">Hospital Finder App.pdf</span> </div>

1/3/25, 10:17 AM
Conference Management Toolkit - Conference List

### Conference List

My Conferences (1)

All Conferences

type to filter...

Name	Start Date	Location	External URL	Contact
8th INTERNATIONAL CONFERENCE ON INNOVATIVE COMPUTING AND COMMUNICATION 2025)	2/16/2025	DELHI, INDIA	<a href="http://icicc-conf.com" style="color: #007bff;">http://icicc-conf.com</a>	✉ Email Chairs

School of Computer Science and Engineering, Presidency University

49

### 3. Details of mapping the project with the Sustainable Development Goals (SDGs).



Fig.18.Hospital Finder Goals

# HOSPITAL FINDER - STUDENTS

*by* Mohammed Zia Ur Rahman

---

**Submission date:** 24-Dec-2024 12:30PM (UTC+0530)

**Submission ID:** 2557908952

**File name:** HOSPITAL\_FINDER\_-\_STUDENTS.pdf (739.39K)

**Word count:** 3264

**Character count:** 17713

# Hospital Finder

**Mohammed Thousif B C<sup>1</sup>, Suresh G<sup>2</sup>, Ullas H R<sup>3</sup>, Md Ziaur Rahman<sup>4</sup>**

<sup>1</sup>UG Student SOCSE, Presidency University, Bangalore-560 064, India

<sup>2</sup>UG Student SOCSE, Presidency University, Bangalore-560 064, India

<sup>3</sup>UG Student SOCSE, Presidency University, Bangalore-560 064, India

<sup>4</sup>Assistant Professor SOCSE, Presidency University, Bangalore-560 064, India

**Abstract:** The Health Finder application is a cross-platform solution that is easy to use and focused on helping users rapidly obtain medical services. It assists patients in locating medical resources such as doctors, hospitals, making appointments, getting lab tests, obtaining drugs as prescribed and reading health education articles. With the combination of crucial health services in a single system, Health Finder makes the management of health issues very easy for users as they are able to obtain the services they need with little hassle. Health Finder was built with today's busy world in mind where the demand for getting medical attention quickly is high making life easier, quicker and less complicated. In the world where the right timing for the right treatment is paramount, this app cuts the waiting time for patients, enabling them to get the correct treatment. It resolves the stress and misunderstanding that is predominantly associated with the use of the healthcare system hence patients can access the treatment they require easily and without worries.

## 1. Introduction

The increasing demand for accessible, relatable and responsive healthcare services has called for the emergence of new digital solutions that offer better experience to users. However, multiple frustrating cycles such as searching for a physician, scheduling an appointment, ordering for prescriptions or merely requesting for medical tests can prove to be extremely strenuous and lengthy. The Health Finder app seeks to alleviate these challenges by integrating core healthcare functionalities into a single platform for users.

With Health Finder, users are able to locate physicians quickly and easily by specialty and location, which reduces the amount of time spent searching for the right one. In addition, the app has the option of scheduling an appointment via the app rather than making calls or extending waiting time while in a queue. For those requiring diagnostic services, the app facilitates the easiest way of placing orders for lab tests so that users' health stays in check. Last but not least, Health Finder allows easy and competitive purchase of medicines from licensed pharmacies without the need to leave the app, thus meeting the users' needs for the medications.

In order to assist users in improving the management of their health, the app includes a repository of articles on health-related topics which includes disease prevention, wellness tips, healthy living, among others. This allows them to have a better understanding of their health.

Health Finder works especially well for those who do not have time to go to hospitals, or for those who have problems in accessing hospitals. The application provides these services and therefore removes many of the barriers to healthcare provision. In the end, Health Finder seeks to change the way people use a healthcare service by making it easy, quick and convenient to use.

## 2. Proposed System

The Health Finder app is a cutting-edge multi-faceted solution for people interested in the optimization of their health care issues. Integrating a range of health care services in a single app, the software allows for users to seek

medical assistance, schedule visits, and order drugs all in one location. This is an in-depth overview of the app's fulfilment functions:

**User Registration/Log In:** To begin simply users can create an account or log in using their email, phone number or social network accounts. After logging in, a user is free to use all the functions and services of the platform.

**Doctor Search and Appointment Booking:** Users are able to find doctors according to the filter settings, picked by specialty, hospital and a doctor's name and free time slots. Now that they've identified the right doctor, making an appointment is a matter of seconds rather than a long line of phone calls and periods of waiting.

**Lab Test Scheduling:** The application provides an option for users to select the appropriate lab test and schedule an appointment. There will be confirmation sent to guarantee everything is in order.

Consequently, the most simple and efficient means of acquiring pharmacy products on this platform is to simply register, select the required goods from the pharmacy catalogue, add them into the basket, and pay for the order. As a result, the buyer will be able to place an order and then receive a confirmation that the order will be delivered to them or that arrangements for pickup have been made.

**Health Articles:** Another function of the app is the collection of health-related articles. Users can navigate through articles on wellness, disease prevention, and healthy lifestyle. They can bookmark their favourite articles and get recommendations according to what the user is interested in.

**Order Tracking and Notifications:** Users can see the latest orders, appointments and tests results done in real time. Push notifications will let them know what is going on at every stage of interaction.

**Logout and Data Protection:** Users can log out of the application after achieving the intended purpose. The system guarantees that all personal and health information of the users is either securely preserved or deleted when needed in order to protect the users' privacy.



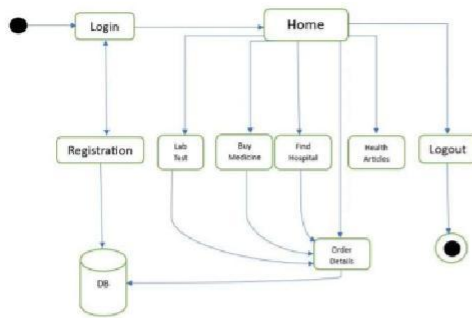


Fig. 1 - Architecture for Hospital Finder Application.

### 2.1. System Advantages

**Efficiency:** The application simplifies the several stages involved in seeking services from the health care providers. For example, booking for an appointment, scheduling for lab tests, and ordering medications will take an average period of time.

**Convenience:** That is, all these activities can be performed from one location and thus there is no need to access different websites or health institutions.

**Access to Information:** Users of the program are updated with new articles and materials posted on the website which relates to health and general well being.

**Security:** Due to the data protection techniques employed, users have trust that their health data is confidential and well protected.

To sum up, Health Finder enhances the user experience with the medical services by providing additional protection, comfort and ease of use.

## 3. Mathematical Model

The Health Finder app can be broken into key steps based on user interaction and service execution. Each step ensures that the app functions effectively, providing users with access to medical services, appointment booking, lab test scheduling, and medication purchase. The system relies on integrating various components such as user interface (UI), backend database, third-party services (e.g., pharmacies, diagnostic center's), and secure payment gateways.

The primary steps are:

#### User Registration and Authentication:

- **Mathematical Model:** User data (e.g., email, phone number, or social media credentials) is validated and stored in a secure database. Authentication is achieved through a secure login mechanism (e.g., token-based authentication, OAuth).
- **Equation:** User Login Validation =  $f(\text{User Credentials, Security Tokens}) \rightarrow \text{Access to Services}$

#### Doctor Search and Appointment Booking:

- **Mathematical Model:** The app uses filters like specialty, hospital, doctor availability, and user location (if relevant) to query the database. The system evaluates available time slots and confirms appointments.
- **Equation:** Appointment Availability =  $f(\text{Doctor Profile, Time Slot, User Preferences}) \rightarrow \text{Appointment Confirmation}$

#### Lab Test Scheduling:

- **Mathematical Model:** The Lab Test Scheduling Feature on HBF: The app sends queries to all the partnered diagnostic centres regarding the available lab tests which are then matched against the user's input for targeted tests, prices and schedules for all the relevant tests.
- **Equation:** Supply equations capturing appropriate use principles:  $T = f(\text{Test Type, User's Schedule, Center's Availability}) \rightarrow \text{EC}$ .

#### Medication Purchase:

- **Mathematical Model:** Feature Description: The application looks for the medicament which you need for the medication by cross referencing with the stock level of the nearby pharmacies. Constructs a price estimate if the medication is available with options for pick up along with storing in the home. Once everything is confirmed buying process is nicely covered with payments.
- **Equation:**  $M = f(\text{Medication, Nearest Pharmacy, Available Stock, Delivery Options, Payment, Collection Pick Up}) \rightarrow \text{Medicate}$ .

## 4. Result Analysis

### 1. User Interface and Navigation

**Login Process:** After downloading the application, the user goes through a login page, allowing sign in whenever necessary. This serves as an important requirement for securing user data like health history, orders made and past bookings in one place. **Analysis:**

Moreover, there is also the problem of user authentication after they download the application; this is often a frustrating experience. The app is simple for installation, but slow and complicated login procedures often hamper user engagement. Ameliorating this aspect will be crucial.

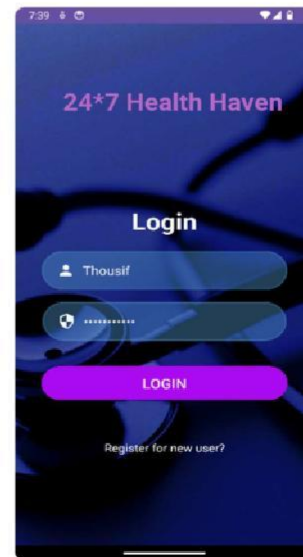


Fig. 2 - Login page

**Registration Page:** When registering, the individual may be required to provide their name, email and phone number as well as fill up a medical history or health preferences form if so designed by the app.

**Analysis:**

**Ease of Registration:** Such processes are a source of frustrations and should therefore be easy to follow and quick. Long and complicated forms for the registering potential users often would lead them to quit the registration stage hence adversely affecting the user base of the application. Streamlining this process for sourcing users in the first instance would highly assist.

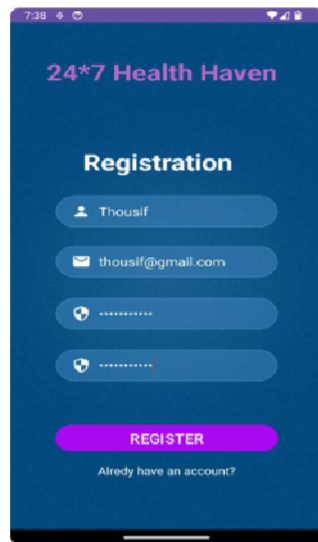


Fig. 3 - Registration page

**Home Page Navigation:** After the login, customers are presented on the home page with six modules, which is a module based central interface through which customers can navigate easily. It does contain all aimed at the consumers services in a straightforward manner.

**Analysis:**

The presence of clear module classification (Lab Tests, Medicine, Hospitals, Articles, etc) diminishes the users' cognitive load and thus, the user experience is improved. An appealing, easy-to-navigate homepage design can have a positive effect on the usage and engagement level of the app.

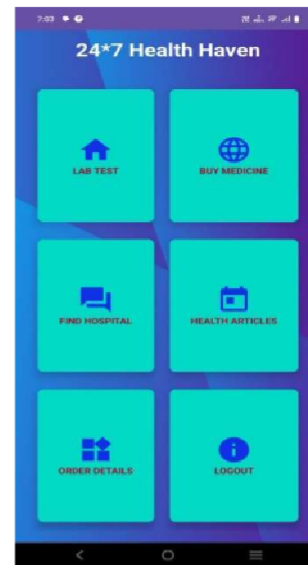


Fig. 4 - Home page

## 2. Module-wise Breakdown

**Lab Test Module:** Here users are able to see and book slots for different types of lab tests that they wish to undergo. This particular test is incorporated into the 5th module, "Order Details."

**Analysis:**

**User Experience:** Offering the possibility to request lab tests on the application can be a wonderful feature. In such cases, the convenience aspect, such as not needing to go to a lab to commence getting test schedules, is important.

**Efficiency:** By embedding lab tests with order details, users are able to view all their current healthcare related activities in one interface, in a consolidated manner.

**Buy Medicine Module:** This module presents a number of existing medications for users to purchase and places the order in the 'Order Details' section.

**Analysis:**

**Convenience:** Ordering through an application saves users from the hassle of visiting a brick and mortar pharmacy for a refill.

**User Trust:** This feature is important in ensuring credibility as it is offered by certified pharmacies.

**Market Competitiveness:** The performance of this module will be utmost covered by the supply of medicines and the courier time. If executed as it is, it stands a chance to rival other stand-alone e-pharmacy services in the industry.



**Find Hospital Module:** This module enables the user to locate a hospital and also lists the eminent doctors of the hospitals. As per the highlight, the users have the option of selecting a doctor and making an appointment which then goes into the sub-module of "Order Details."

**Analysis:**

**Healthcare Access:** In this feature, users are able to reach out to healthcare providers with no need to go navigating between various platforms or different websites. It can be quite useful in some critical situations or emergencies where every second is crucial.

**Doctor Discovery:** Offering doctor information, such as who can be a family doctor, the doctor's area of specialization, patient ratings makes it easy for users to choose. Booking an appointment directly through the app will ease the hassle of many users.

**User Engagement:** This is a service which users are likely to frequently visit since different members of the household will require different medical attention. Providing this feature as a single platform through which all the information about doctors and hospitals can be found, enhances the offering of the application.

**Health Article Module:** Health-related articles are included in the application with the view of helping users understand the issues of disease management, disease prevention, wellness and healthy living.

**Analysis:**

**Health Education:** Due to the knowledge articles, users are offered health care services which make them more aware and more knowledgeable on how to manage their health. This feature encourages users to be more health seeking and health conscious.

**User Retention:** Latest updated articles about the most sought after health issues may help users to remain active with the application, becoming the reason for them for why the app should be used for study only.

**Logout Module:** The app is equipped with an interface that logs the user out and navigates the user to a login page which enables the user to leave the app securely.

**Analysis:**

**Security and Privacy:** In health information, a secure logout procedure is essential and has to be implemented effectively while respecting the need for easy logouts to protect users' privacy and sensitive data.

**Effectiveness:** The log-off process ought to be relatively simple without being so apparent that it creates clutter in the interface of the system. Furthermore, it must support the complete erasure of any user data saved in the system after the user logs off.

### 3. Integration and Data Flow

**Order Details Consolidation:** The order details module serves as a center of all of a user's orders which can be lab tests, medicines and doctor appointments for a particular user. This feature helps the users to avoid many multi-screen or multi-module navigation games, when looking for their healthcare services tracking.

**Analysis:**

**Centralized Tracking:** In order to ease the management of the healthcare services provided, it is appropriate to merge all users' data into one platform: all appointments, orders and bookings in a single view, which is a great improvement in user convenience.

**User Retention:** This integration helps in fostering user retention over time since they are able to go back to their previous order or appointment

for instance when they want to check some 'Order Details' of their orders in the managed module in the task center.

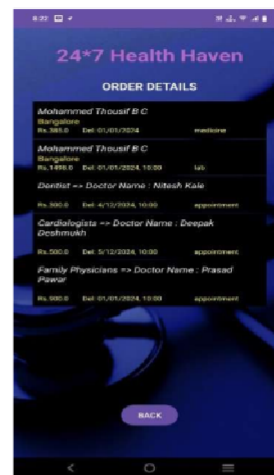


Figure 2. Order details page

### Advantages

**1.Accessibility:** The app noticeably makes it easier to navigate through the healthcare sector by bringing all the core services in a single interface. So even if you are not a digital native, it is easy for you to interact with doctors, schedule appointments or simply look through health articles with only some clicks more.

**2.Efficiency:** Essentially it changes the whole functioning of the healthcare industry by eliminating the entire hassle of searching for the required information, scheduling appointments and purchasing the medications. This in abstraction allows you to receive the required attention earlier and in a less complicated manner.

**3.Convenience:** Everything you may need in healthcare is within reach of just one app. Download the app and search for doctors, schedule tests , order drugs or even read health articles. It is all at the touch of your fingertips.

**4.Real-time updates:** via notifications help keep you updated with the status of your appointment, test results and even medication so that you are always ready and fully informed.

**5.Security:** You are sure your information is secure because you have safe storage of your health data encrypted, protected payment and consequently your health information obtained is kept confidential and is in line with modern standards of privacy.

### Challenges

**Dependence on Third Party Services:** The application makes use of pharmacy and diagnostic centers which are out sourced. Therefore, if any of its partners have challenges, it means the functionality of the app will be disrupted or services offered can be delayed.

**Internet Connectivity:** The application must work online which sometimes can be a problem for some users who do not have the internet which makes their use of the application's features more difficult.

**Ambiguity in their user inputs:** Besides the unfinished search queries, which consider the order of the noun and verb too often, even basic user input's vague symptoms or fuzzy doctor specialties can make things... let's say not easy.

**Complexity of Medical Data:** The challenge of interpreting health data and medical records that are complex in nature comes in as a challenge. Bad data management could lead a situation where the users' health could be harmful due to incorrect data advice or recommendations.

**Security and Privacy Concerns:** Working with the application requires serious security measures since the application shields very important health details of the users. Weaknesses in controls have the capacity to threaten the privacy of users and the security of their data.

**User Interface Issues:** Poor interfaces can also hinder users in booking appointments, lab tests, or purchasing medications via the app such users can be frustrated because they can't access what they need and thus the general user experience is diluted

## Conclusion

The proposed work stands out as a pivotal measure towards increasing access to better healthcare services during medical emergencies. The app provides users with information about the hospital and the available specialists, which enables them to make safe, but very important, decisions that affect the patient. Also, the focus on a user-friendly interface means the patients, even under stress, will be able to use the application easily. Additionally, the fact that there is an opportunity for integrating useful data analytics presents opportunities for improvement, which will inevitably make the healthcare system more efficient.

## Appendix A. Pseudocode

```
Start
// Check if user is registered
If user is not registered:
    Go to registration
Else:
    Go to login page then home page
// Home page actions
If lab test is selected:
    Go to lab test section
    Add lab test to cart
    Go to cart
    If booking details are correct:
        Mark booking as successful
        Go to order details
    Else:
        Ask user to provide correct information
Else if buy medicines is selected:
    Go to buy medicines section
    Add medicines to cart
    Go to cart
    If booking details are correct:
```

```
        Mark booking as successful
        Go to order details
Else:
    Ask user to provide correct information
Else if find hospital is selected:
    Go to find hospital section
    User selects hospital
    Display list of top doctors in the selected hospital
    If user clicks on a doctor:
        Book appointment with selected doctor
        Add appointment to order details
        Mark booking as successful
        Go to order details
Else if articles is selected:
    If user selects yes:
        Share details of articles
    Else:
        Go back to home page
Else if order details is selected:
    Display all orders that have been booked
Else:
    Logout
    Go to login page
End
```

## REFERENCES

- [1]. Arvind Mehta, *Evaluating the Impact of E-Health Systems on Emergency Medical Services in India*. Journal of Public Health Research, Volume 15, Issue 3, September 2021, Pages 15-22. <https://jphr.com>
- [2]. Anjali Bhatt, *The Role of Mobile Health Applications in Streamlining Emergency Medical Services in India*. Journal of Health Technology, Volume 9, Issue 6, June 2022, Pages 35-42. <https://jht.org>
- [3]. Shruti Desai, *Optimization of Hospital Selection Algorithms for Emergency Medical Care in Urban India*. Journal of Applied Algorithms and Computation, Volume 10, Issue 4, November 2020, Pages 47-54. <https://jaac.org>
- [4]. Amit Kumar, *Emergency Health Care Services in India: A Strategic Approach*. International Journal for Multidisciplinary Research, Volume 6, Issue 1, January-February 2024, Pages 5-10. <https://www.ijfmr.com>
- [5]. Kartik Mishra, *Mobile Health Apps and the Future of Emergency Medical Care in India*. Journal of Mobile Technology in Healthcare, Volume 3, Issue 7, July 2020, Pages 21-28. <https://www.jmthc.com>
- [6]. Naveen Sharma, *Emergency Response Systems in India: Leveraging Mobile Applications for Faster Access to Healthcare*. Journal of Emergency Medical Services, Volume 7, Issue 3, July 2021, Pages 33-40. <https://jems.com>

# HOSPITAL FINDER - STUDENTS

---

## ORIGINALITY REPORT

---

0%

SIMILARITY INDEX

0%

INTERNET SOURCES

0%

PUBLICATIONS

0%

STUDENT PAPERS

---

## PRIMARY SOURCES

---

Exclude quotes      Off

Exclude bibliography      On

Exclude matches      Off