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REACH GREATER HEIGHTS

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OVER
40
YEARS
OF ACADEMIC
WISDOM

A Project Report

On

"HOSPITAL FINDER"

Batch Details

Sl. No.	Roll Number	Student Name
1	20211CSE0388	Mohammed Thousif B C
2	20211CSE0399	Suresh G
3	20211CSE0299	Ullas H R

School of Computer Science,

Presidency University, Bengaluru.

Under the guidance of,

Mr. Md Ziaur Rahman

Assistant Professor

School of Computer Science,

Presidency University, Bengaluru

CONTENTS

1. Introduction about Project

The Health Finder app addresses the critical need for timely medical assistance by simplifying the search process during emergencies. By providing essential details about nearby hospitals, including available services, medications, and specialist care, the app empowers users to make quick, informed decisions when every second counts. It offers live updates on factors like bed availability, emergency room capacity, and specialist availability, ensuring that users are directed to a hospital that can meet their immediate needs.

The app incorporates smart filtering to match users with facilities that align with specific medical requirements, such as blood type availability or specialized care units. This level of precision greatly enhances the chances of receiving the right treatment in time. Through an intuitive user interface, the app aims to be accessible to all, ensuring that even in stressful situations, navigating the app remains simple and efficient. Ultimately, Health Finder seeks to bridge the gap between individuals in need and accessible healthcare services, reducing delays and ensuring that help is always just a tap away.

2. Literature Review

Amit Kumar proposed 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.

Kartik Mishra utilized 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 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 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 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 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 requires a high degree of collaboration across medical teams, which can be difficult to achieve in practice.

Proposes a general knowledge management system (KMS) for hospital settings to enhance decision-making through shared medical knowledge.

Lin et al 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.

3. Objectives

○ develop a mobile application that provides real-time hospital information based on user location.

○ incorporate features that allow users to filter hospitals by required medical facilities and specialties.

○ enhance decision-making capabilities during medical emergencies.

○ ensure user-friendly interface and seamless experience.

4. Methodology

The Hospital Finder methodology begins with gathering critical user input, such as the type of medical emergency, required specialists, and blood group. Utilizing Java for backend processing and a MySQL database, the app fetches real-time data regarding nearby hospitals, including their available facilities and services. Hard constraints ensure that the application to essential requirements, such as proximity and service availability, while soft constraints optimize the user experience, considering factors like hospital ratings and distance. It enables users to review and select the best-suited hospital before making a decision. This comprehensive methodology enhances the likelihood of receiving appropriate medical care during critical moments.
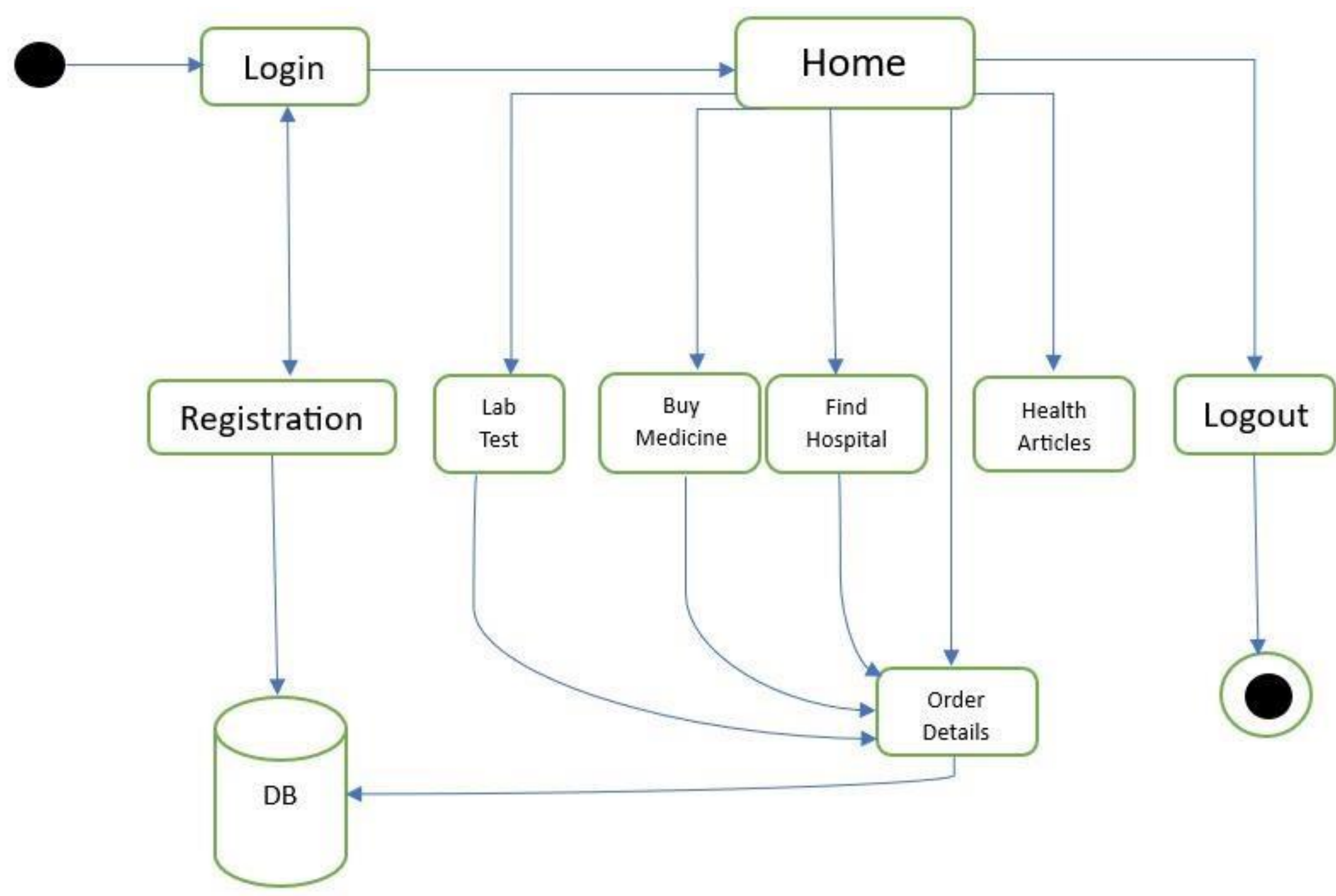

Fig 4.1. Proposed Architecture
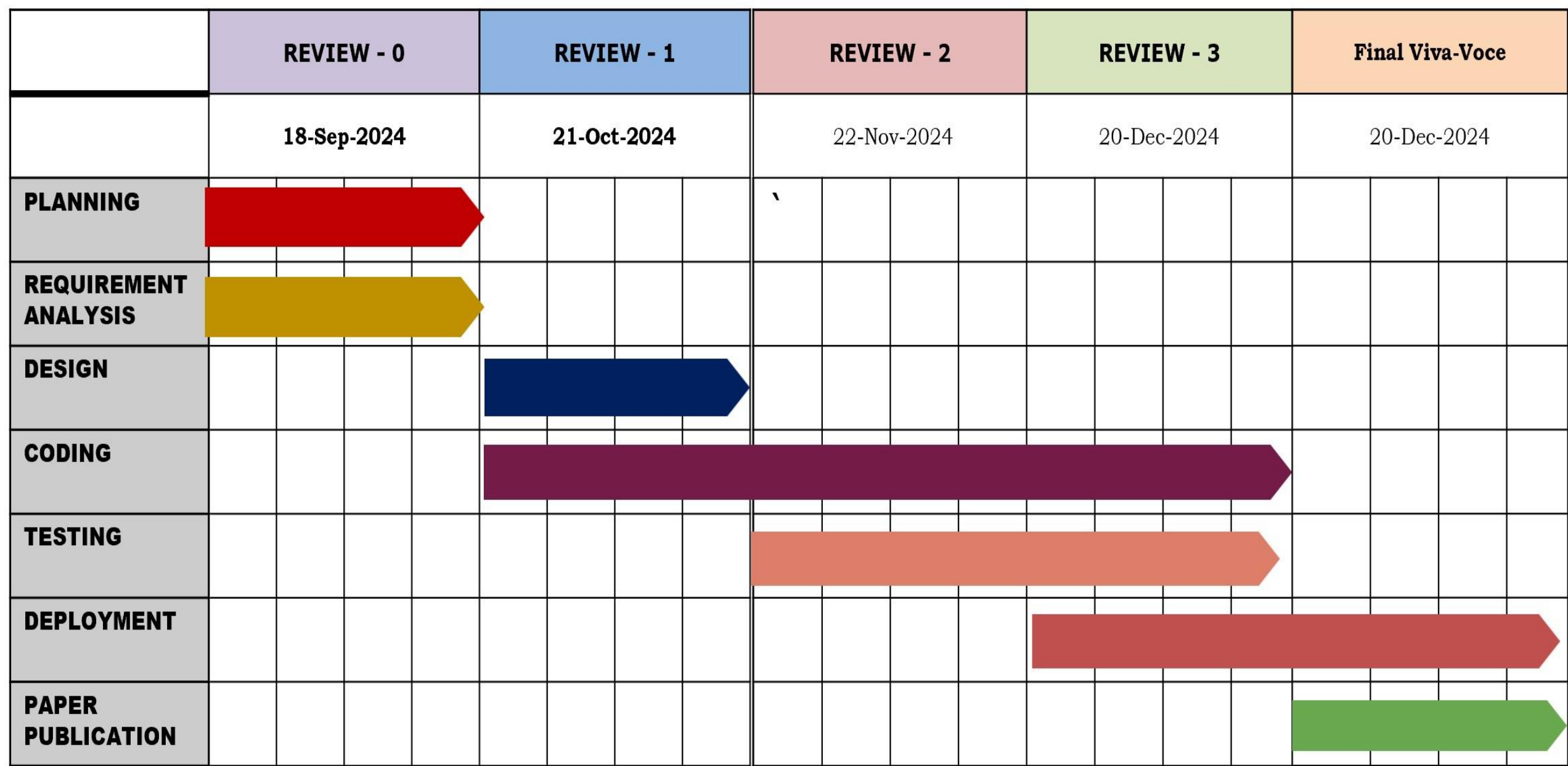
5. Timeline for Execution of Project

	REVIEW - 0	REVIEW - 1	REVIEW - 2	REVIEW - 3	Final Viva-Voce
	18-Sep-2024	21-Oct-2024	22-Nov-2024	20-Dec-2024	20-Dec-2024
PLANNING	████████				
REQUIREMENT ANALYSIS	████████				
DESIGN		████████			
CODING		████████████████			
TESTING			████████████		
DEPLOYMENT				████████████████	
PAPER PUBLICATION					████████

Fig 5.1. Gantt Chart

6. Expected Outcomes

O **Real-Time Data Access**:

Users will receive up-to-date information on hospital services and bed availability, enhancing trust in the data presented.

O **User-Friendly Experience**:

A simple and intuitive interface will ensure that users can navigate the app easily, improving overall satisfaction and usability.

O **Increased Hospital Utilization**:

The app will help optimize hospital resource usage by directing patients to the most appropriate facilities based on their needs.

O **Integration with Emergency Services**:

Future updates may incorporate features for seamless communication with local emergency services to improve response times.

7. Conclusion

The proposed work represents a crucial advancement in improving healthcare access during medical emergencies. By providing users with real-time information about hospital services and available specialists, the app empowers individuals to make informed decisions safely, which can be critical to patient outcomes. The emphasis on a user-friendly interface ensures that even in high-stress situations, users can navigate the app easily. Furthermore, the potential for integrating valuable data analytics offers insights that can drive future improvements, ultimately enhancing the overall efficiency of the healthcare system.

8. 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, JanuaryFebruary 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