A

PROJECT REPORT

ON

"Shree Siddhivinayak Hospital App"

Shree Siddhivinayak Hospital, Nashik.

SUBMITTED BY

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Seat No: 196

UNDER THE GUIDANCE OF

Dr. R.L.PAGAR SIR

SUBMITTED TO

Savitribai Phule Pune University

MASTER OF BUSINESS ADMINISTRATION

IN

Information Technology

M.V.P. SAMAJ'S

Institute of Management Research and Technology, Nashik

2023-2024

DECLARATION

I hereby declare that the Shree Siddhivinayak Hospital App presented in this project is the culmination of my efforts and original ideas. Throughout the development process, I have endeavoured to adhere to the principles of academic integrity and honesty.

This project represents my own work and has not been submitted in whole or in part for any other degree or qualification. Any external sources of information, including publications, websites, and discussions with peers, have been appropriately acknowledged and cited in accordance with academic conventions.

I take full responsibility for the accuracy and authenticity of the content presented in this project, including the design, implementation, and evaluation of the Shree Siddhivinayak Hospital App. Furthermore, I attest that all data, figures, and results included in this project are genuine and have not been manipulated or fabricated.

I understand the importance of academic integrity and pledge to uphold these principles in all my future endeavours.

Date: / / 2024 **Shital Bajirao Hiray**
Place: I.M.R.T. Nashik. **M.B.A.(I.T.) – II**

Acknowledgement

I am using opportunity to express my gratitude to everyone who supported me throughout the course of this **MBA(IT)** project, I am thankful for their aspiring guidance, invaluably constructive criticism and friendly advice during the project work, I am sincerely grateful to them for sharing their truthful and illuminating views on the number of issues related to the project.

Today I am very pleased as I am presenting the project report on the Android based application of "**Shree Siddhivinayak Hospital App**".

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Date: / / 2024 **Shital Bajirao Hiray**

Place: I.M.R.T. Nashik. **M.B.A.(I.T.) – II**

Abstract

The Hospital Management System (HMS) is designed for Any Hospital to replace their existing manual, paper based system. The new system is to control the following information; patient information, availability of doctors, number of appointments, placed order of medicines, Lab Reports. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.

A significant part of the operation of any hospital involves the acquisition, management and timely retrieval of great volumes of information. This information typically involves; patient personal information and medical history, various facilities waiting lists. All of this information must be managed in an efficient and cost wise fashion so that an institution's resources may be effectively utilized HMS will automate the management of the hospital making it more efficient and error free. It aims at standardizing data, consolidating data ensuring data integrity and reducing inconsistencies.

This application based on online doctor appointment booking system, finding doctors, order of medicines. This application is user friendly simple, fast and cost-effective and save time. This application has many features where the main features is booking online doctor appointment. Other feature is hospital information, address and contact information etc. It will provide the

power of direct interaction between doctors and users. This application is user or patient.

oriented based, in which only the user or patient can get an online appointment. To use this android application patient or user must register for getting appointment. User who chooses.

premium packages select date and time. This android application based on doctors of Shree Siddhivinayak Hospital. The doctors are being added by the admin. The admin can add or delete doctors in application. This application can save time and money to get a doctor appointment. Overall, this project of mine is being developed to help the users or patients as well as the hospital to maintain appointment schedule in better way and reduce the human efforts.

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CHAPTER 1: INTRODUCTION

1.1 Objects of the Project

1. User Interface Components: Buttons, Text views, Lists and screens for user interaction.
2. Data Entities: Doctors, patients, Reports, medicine, order details.
3. Modules and Components: 1. Login 2. Registration 3. Lab Test : Shows Multiple Package details, add to cart, make order
4. Medicine : Shows Medicine List, add to cart, make order.
5. Find Doctor : Search Specialist Doctor, book appointment 6. Health Articles : Article Information 7.Order Details : Order information 8.Logout.
6. System Components: Database, server, authentication, data processing, reporting.
7. User Roles: patients, Doctors, with their respective permissions.

1.2 Introduction

Welcome to the forefront of healthcare innovation with the Shree Siddhivinayak Hospital Android application. Crafted meticulously to revolutionize patient care and hospital management, this project epitomizes the synergy between Java programming, MySQL databases, and Android development. Whether you're an intermediate Java developer seeking to elevate your skills or a healthcare enthusiast passionate about leveraging technology for better outcomes. In an era where technology is revolutionizing every aspect of our lives, healthcare stands as a forefront beneficiary. With the aim to bridge the gap between conventional healthcare systems and modern technological advancements, we present "Shree Siddhivinayak Hospital," a comprehensive Android application designed to streamline and enhance the healthcare experience for both patients and medical professionals. this project promises an enriching journey.

Problem Statement:

The healthcare sector, despite its critical importance, often grapples with inefficiencies, accessibility challenges, and fragmented service delivery. Traditional hospital management systems are plagued by manual processes, long wait times, and disjointed communication channels, leading to suboptimal patient experiences and operational inefficiencies. Moreover, in the wake of technological advancements, there exists a pressing need to leverage innovative solutions to bridge the gap between conventional healthcare practices and modern digital ecosystems. the Shree Siddhivinayak Hospital Android application aims to address these challenges by offering a comprehensive Hospital Management System (HMS) platform.

The project endeavors to streamline healthcare operations, enhance patient care, and empower stakeholders with intuitive digital tools. By leveraging Java programming, MySQL databases, and Android development, the project seeks to develop a user-friendly, scalable solution that caters to the dynamic needs of patients, doctors, and administrative staff.

Traditional hospital management systems often suffer from inefficiencies, fragmented communication, and cumbersome processes, leading to suboptimal patient experiences and operational challenges. In response to these issues, the Shree Siddhivinayak Hospital Android application seeks to provide a comprehensive solution that addresses key pain points and improves overall healthcare delivery.

Project Overview:

The Shree Siddhivinayak Hospital Android application transcends conventional healthcare paradigms, offering a holistic platform that caters to the diverse needs of patients, doctors, and administrators alike. By amalgamating cutting-edge technologies with intuitive user interfaces, this project redefines the hospital experience, fostering seamless interactions and fostering a culture of proactive healthcare management.

Key Modules and Functionalities:

1.Login and Registration: Seamlessly authenticate users and enable hassle-free registration to access personalized healthcare services.

2.Lab Test Management: Browse through a plethora of lab test packages, add them to the cart, and effortlessly place orders for diagnostic tests, ensuring prompt and accurate healthcare diagnostics.

3.Medicine Management: Explore an extensive catalog of medicines, add them to the cart, and conveniently order medications for doorstep delivery, ensuring continuous access to essential pharmaceuticals.

4.Find Doctor: Discover specialized doctors catering to diverse medical needs, schedule appointments seamlessly, and embark on a journey towards personalized healthcare consultations.

5.Health Articles: Delve into a repository of informative health articles, empowering users with valuable insights and actionable knowledge for proactive healthcare management.

6.Order Details: Track the status of orders, appointments, and diagnostic reports in real-time, ensuring transparency and accountability in healthcare transactions.

7.Logout: Safely conclude sessions and prioritize data security, upholding the confidentiality and integrity of user information.

Project Objectives:

1.Enhanced Accessibility: Bridge geographical barriers and empower users with anytime, anywhere access to essential healthcare services.

2.Optimized Healthcare Delivery: Streamline hospital operations, minimize wait times, and enhance patient satisfaction through seamless digital interactions.

3.Empowered Decision-Making: Equip hospital administrators with comprehensive insights and analytics, facilitating data-driven decisions for resource optimization and quality enhancement.

Objective:

The project aims to develop a user-friendly Enhanced Accessibility: Bridge geographical barriers and empower users with anytime, anywhere access to essential healthcare services.

Optimized Healthcare Delivery: Streamline hospital operations, minimize wait times, and enhance patient satisfaction through seamless digital interactions.

Empowered Decision-Making: Equip hospital administrators with comprehensive insights and analytics, facilitating data-driven decisions for resource optimization and quality enhancement.

Approach:

The project encompasses the development of a feature-rich Android application that includes modules for user authentication, patient management, doctor management, lab test management, medicine management, appointment scheduling, health articles, order tracking, and administrative dashboard functionalities.

Expected Results:

Upon successful completion, the Shree Siddhivinayak Hospital Android application is expected to transform the hospital experience, improve patient outcomes, and set new standards for healthcare delivery. By leveraging the power of technology and innovation, the project aims to empower stakeholders, enhance efficiency, and ultimately, contribute to the advancement of healthcare worldwide.

1.3 Objectives of the study

The objectives collectively aim to transform the healthcare experience for patients, improve efficiency and effectiveness of hospital operations, and empower healthcare professionals to deliver high-quality care in a patient-centric manner.

1. Enhanced Patient Experience:
    - Improve accessibility and convenience of healthcare services for patients.
    - Minimize waiting times and streamline appointment scheduling processes.
    - Provide personalized care and support tailored to individual patient needs.
2. Optimized Hospital Operations:
    - Automate administrative tasks to improve efficiency and reduce manual errors.
    - Ensure effective resource allocation through real-time monitoring and analytics.
    - Enhance communication and collaboration among healthcare professionals.
3. Empowerment of Healthcare Professionals:
    - Provide tools and resources to streamline workflows and improve productivity.
    - Enable quick access to patient data and medical records for informed decision-making.
    - Support continuous professional development and learning within the application.
4. Data-driven Decision Making:
    - Implement analytics and reporting features to gain insights into hospital performance.
    - Support evidence-based decision-making for resource allocation and process optimization.
    - Ensure compliance with regulatory requirements and quality standards.
5. Improvement of Healthcare Accessibility and Affordability:
    - Increase access to healthcare services through remote consultation and telemedicine.
    - Provide transparency in pricing and facilitate access to affordable treatment options.
    - Promote preventive care and health education to improve overall wellness.
6. Enhancement of Patient Engagement and Empowerment:
    - Foster active participation of patients in their own healthcare management.
    - Enable easy communication between patients and healthcare providers.
    - Empower patients to make informed decisions about their health and wellness.

1.4 Scope of the study:

The scope of this study encompasses the development and implementation of the Shree Siddhivinayak Hospital Android application, aimed at transforming the healthcare delivery system through the integration of advanced technology and innovative features. The study will focus on the following key aspects:

1. **Comprehensive Application Development:** The primary focus of the study is to develop a comprehensive Android application that caters to the diverse needs of patients, doctors, and administrative staff within Shree Siddhivinayak Hospital. The application will include modules for user authentication, patient management, doctor management, lab test management, medicine management, appointment scheduling, health articles, order tracking, and administrative dashboard functionalities.
2. **Integration of Modern Technologies:** The study will involve the integration of modern technologies such as Java programming, MySQL databases, and Android development frameworks to ensure the development of a robust and scalable application. Advanced features such as real-time data synchronization, secure data storage, and seamless user experience will be incorporated to enhance the overall functionality and performance of the application.
3. **User-Centric Design Approach:** A user-centric design approach will be adopted throughout the development process to ensure that the application meets the needs and preferences of its end-users. User feedback and usability testing will be conducted to iteratively refine the application interface and improve user satisfaction.
4. **Operational Efficiency and Resource Optimization:** The study will focus on improving operational efficiency and resource optimization within the hospital by automating administrative tasks, streamlining communication channels, and providing real-time insights into patient flow and resource utilization. The application will enable hospital administrators to make data-driven decisions for better resource allocation and process optimization.
5. **Enhanced Patient Engagement and Empowerment:** The study will aim to enhance patient engagement and empowerment by providing patients with easy access to healthcare services, personalized health information, and communication channels with healthcare providers. Features such as appointment reminders, medication tracking, and health articles will be included to empower patients to take control of their healthcare journey.

6. **Scalability and Future Expansion:** The study will ensure that the developed application is scalable and capable of accommodating future expansions and enhancements. The application architecture will be designed to support additional features, modules, and integration with third-party systems to meet the evolving needs of the hospital and its stakeholders.

1.5 Proposed System

The proposed system for the Shree Siddhivinayak Hospital Android application represents a visionary leap towards modernizing healthcare delivery and optimizing hospital management practices. Rooted in the principles of innovation, efficiency, and user-centric design, this system aims to redefine the patient experience while empowering healthcare professionals with advanced tools and insights.

The proposed system is a comprehensive Hospital Management System (HMS) designed to seamlessly integrate with the daily operations of Shree Siddhivinayak Hospital. By harnessing the power of Java programming, MySQL databases, and Android development frame works, this system offers a robust and scalable platform capable of addressing the multifaceted challenges faced by modern healthcare facilities.

The system's architecture is meticulously crafted to encompass a wide range of functionalities, spanning patient management, doctor management, lab test management, medicine management, appointment scheduling, health articles, order tracking, and administrative dashboard capabilities. Each module is intricately interconnected to provide a cohesive and synergistic healthcare ecosystem, fostering seamless communication, collaboration, and data flow across departments.

The proposed system lies in its user-centric design philosophy, which places utmost importance on the needs, preferences, and usability of its end-users. Through intuitive interfaces, personalized experiences, and streamlined workflows, the system aims to enhance user satisfaction and engagement at every touchpoint, from patients scheduling appointments to doctors accessing critical patient data.

The proposed system leverages cutting-edge technologies to deliver unparalleled performance, reliability, and security. Real-time data synchronization, secure data storage, and seamless connectivity ensure that users can access information anytime, anywhere, without compromising on data integrity or confidentiality.

In addition to enhancing operational efficiency and resource optimization, the proposed system prioritizes patient empowerment and engagement. Features such as appointment reminders, medication tracking, and access to health articles empower patients to take an active role in their healthcare journey, leading to improved health outcomes and overall satisfaction.

1.6 Limitations of the study

- Platform Dependency: The Android application developed for Shree Siddhivinayak Hospital is limited to Android devices, which may exclude users of other operating systems such as iOS or Windows.
- Internet Connectivity Dependency: The application's functionality relies on a stable internet connection, potentially limiting access in areas with poor network coverage.
- Data Security Risks: Despite efforts to ensure data security, there may be risks of data breaches or unauthorized access to sensitive patient information stored within the application.
- User Adoption Challenges: Encouraging user adoption and providing adequate training for stakeholders may be challenging, particularly for users who are less familiar with technology.

Chapter 2: Project Methodology/ System Analysis

2.1 Method of study

2.1.1 Survey

Conduct a survey to understand the current healthcare management practices and challenges at Shree Siddhivinayak Hospital. Gather feedback from hospital administrators, healthcare professionals, and patients regarding their experiences, pain points, and expectations from a digital hospital management system.Identify key requirements, preferences, and priorities for the development of the Android application.

2.1.2 Project Design:

Based on the survey findings, design the architecture, features, and user interface of the Shree Siddhivinayak Hospital Android application. Define the scope, objectives, and deliverables of the project, including the modules for patient management, doctor management, lab test management, medicine management, appointment scheduling, health articles, order tracking, and administrative dashboard functionalities.

2.1.3 Requirements Determination:

Gather detailed requirements for each module of the Android application, including functional and non-functional requirements.

Define user stories, use cases, and system requirements to capture the desired behavior and interactions of the application.

Specify hardware and software requirements, including device compatibility, operating system support, development tools, and server infrastructure needed for application development and deployment.

2.1.4 Hardware and Software Requirements:

Hardware Requirements:

1) **Processor:** Dual Core or latest
2) **RAM:** Minimum 8 GB
3) **Hard Disk:** Minimum 512 GB

Software Requirements:

1) **Operating system:** Windows 7 or latest
2) **Front End:** XML
3) **Back End:** Java
4) **Database:** MySQL
5) **Editor**: Android Studio

Server Requirements:

1) Server: MySQL database

Client-Side Operations:

1.User Authentication:

- Allow users to log in to the application using credentials such as username and password.
- Implement authentication mechanisms to verify user identity and ensure secure access to patient records, appointment schedules, and other sensitive information.

2.Patient Registration:

- Enable new patients to register accounts within the application by providing personal details, contact information, and medical history.
- Validate user input and ensure data accuracy during the registration process.

3.Appointment Booking:

- Allow patients to view available appointment slots for doctors, select preferred dates and times, and book appointments accordingly.
- Provide confirmation notifications to patients upon successful appointment booking.

4.Medicine Ordering:

- Enable patients to browse a catalog of available medicines, view details such as dosage and price, and place orders for required medications.
- Implement a shopping cart functionality to facilitate order management and checkout.

5.Lab Test Booking:

- Allow patients to search for specific lab tests, select desired packages or individual tests, and schedule appointments for sample collection.
- Provide options for patients to specify preferences such as test timing and location.

6.Find Doctor:

- Implement a search functionality for patients to find doctors based on specialization, location, availability, and other criteria. Display detailed profiles of doctors, including qualifications, experience, patient reviews, and appointment availability.

Server-Side Operations:

1.Data Storage and Management:

- Store patient records, doctor profiles, appointment schedules, medicine inventory, and other application data securely in a MySQL database.
- Implement CRUD (Create, Read, Update, Delete) operations to manage data integrity and ensure consistency.

2.User Authentication and Authorization:

- Validate user credentials during login and authenticate users against stored account information.
- Implement access control mechanisms to restrict unauthorized access to sensitive data and functionalities.

3.Appointment Management:

- Handle appointment scheduling, including availability management for doctors, slot booking, and appointment confirmation.
- Send notifications to patients and doctors regarding appointment updates, cancellations, or reminders.

4.Order Processing:

- Manage medicine orders and lab test bookings, including order placement, inventory management, and order status tracking.
- Process payment transactions securely and generate invoices for completed orders.

5.Integration with External Systems:

- Integrate with external systems such as payment gateways, lab test providers, and pharmacy databases to facilitate seamless operations and data exchange.
- Implement APIs and data interfaces for interoperability with third-party services.

Front-End Development:

1. User Interface Design: Design visually appealing and intuitive user interfaces using XML layouts in Android Studio.
- Utilize Material Design principles and UI components to ensure consistency and familiarity for users.
- Implement responsive design to accommodate various screen sizes and orientations.

2. Navigation and User Experience:

- Define navigation flows and user journeys to ensure seamless navigation within the application.

- Implement navigation components such as bottom navigation bars, navigation drawers, or tabs for easy access to different sections of the app.
- Focus on creating a smooth and intuitive user experience by minimizing the number of clicks and providing clear feedback for user actions.

3. Data Presentation and Interaction:

- Display data fetched from the backend in a clear and organized manner usings, ListViews.
- Implement interactive components such as buttons, text fields, and dropdowns to enable user input and interaction.
- Handle user interactions and input validation to ensure data integrity and accuracy.

4. Integration with Backend Services:

- Communicate with backend APIs using Retrofit or Volley libraries to fetch and send data to the server.
- Implement asynchronous network calls to prevent blocking the main UI thread and ensure a smooth user experience.
- Handle network errors, timeouts, and retries gracefully to provide reliable connectivity.

5. Authentication and Security:

- Implement user authentication and session management mechanisms to secure access to sensitive data and functionalities.
- Utilize token-based authentication or OAuth protocols to authenticate users securely.

Encrypt sensitive data stored locally on the device to protect user privacy.

Back-End Development:

1.Database Management:

- Design and create a MySQL database schema to store application data such as user accounts, medical records, appointment schedules, and product inventory.
- Define relationships between database tables and establish constraints to maintain data integrity.
- Optimize database queries and indexing to improve performance and scalability.

2.API Development:

- Design RESTful APIs to expose backend functionalities and data to the Android application.

- Define API endpoints, request parameters, and response formats according to REST principles.
- Implement CRUD operations (Create, Read, Update, Delete) for interacting with database resources.

3.Integration with External Services:

- Integrate with external services such as payment gateways, SMS gateways, or third-party APIs for additional functionalities.
- Implement secure communication protocols such as HTTPS and OAuth to ensure data privacy and integrity.
- Handle API versioning and backward compatibility to support future updates and changes.

4.Testing and Deployment:

- Conduct thorough testing of backend functionalities using unit tests, integration tests, and end-to-end tests.
- Deploy backend services to a reliable hosting environment such as a cloud platform or dedicated server.
- Monitor server performance, logs, and error reports to identify and address issues promptly.

2.1.5 Feasibility Study:

1.Introduction:

- Provide an overview of the feasibility study and its importance in assessing the viability of the project.
- Briefly introduce the Shree Siddhivinayak Hospital Android application project and its objectives.

2.Technical Feasibility:

- Evaluate the technical feasibility of the project by assessing the availability of resources, technology stack, and infrastructure required for development.
- Discuss the compatibility of the chosen development tools, programming languages, and frameworks with project requirements.
- Consider factors such as hardware and software requirements, development timeframes, and scalability options.

3.Operational Feasibility:

- Analyze the operational feasibility of implementing the Android application within the hospital environment.
- Assess the readiness of stakeholders, including hospital administrators, healthcare professionals, and patients, to adopt and use the application.
- Consider factors such as user training needs, change management strategies, and potential resistance to technology adoption.

4.Economic Feasibility:

- Conduct a cost-benefit analysis to evaluate the economic feasibility of the project.Estimate the initial investment required for development, including hardware, software, and personnel costs.
- Calculate the potential return on investment (ROI) based on projected revenue streams, cost savings, and other financial benefits.
- Compare the expected costs and benefits over the project's lifecycle to determine the project's financial viability.

5.Legal and Regulatory Feasibility:

- Assess the legal and regulatory implications of developing and deploying the Android application.
- Identify relevant laws, regulations, and industry standards related to healthcare data privacy, security, and compliance.
- Ensure compliance with data protection regulations such as HIPAA (Health Insurance Portability and Accountability Act) or GDPR (General Data Protection Regulation).

6.Schedule Feasibility:

- Evaluate the project timeline and schedule feasibility to determine if the project can be completed within the specified timeframe.
- Identify potential risks, dependencies, and constraints that may impact project milestones and delivery deadlines.
- Develop a realistic project plan with achievable milestones and contingency measures to mitigate schedule risks.

2.2 System Requirement Specification

2.2.1Introduction:

- Provide an overview of the Shree Siddhivinayak Hospital Android application project and its objectives.
- Describe the purpose of the SRS document and its importance in defining the system requirements.

2.2.2 Scope:

- Define the scope of the project, including the features, functionalities, and modules to be included in the Android application.
- Specify the target users, stakeholders, and intended audience for the application.

2.2.3.Functional Requirements:

1. Login:

- Users should be able to log in to the application using their credentials (username/email and password).
- Admin users should have additional privileges for managing user accounts and system settings.

2. Registration:

- New users should be able to register accounts by providing necessary personal information such as name, email, and contact details.

3. Lab Test:

- Users should be able to browse and view multiple lab test packages with details such as name, description, and price.
- Users should be able to add lab test packages to their cart, proceed to checkout, and place orders.

4. Medicine:

- Users should be able to view a list of available medicines with details such as name, dosage, and price.
- Users should be able to add medicines to their cart, proceed to checkout, and place orders.

5. Find Doctor:

- Users should be able to search for doctors based on specialization, location, and availability.

- Users should be able to view detailed profiles of doctors, including qualifications, experience, and appointment availability.
- Users should be able to book appointments with doctors directly from the application.

6. Health Articles:

- Users should be able to browse and read health articles on various topics.
- Articles should be categorized and searchable for easy access.
- Users should be able to share articles on social media platforms or via email.

7. Order Details:

- Users should be able to view information about their orders, including order ID, status, and items ordered.
- Users should be able to track order status and view order history.

8. Logout:

- Users should be able to log out of their accounts securely.

2.2.4. Non-Functional Requirements:

1. Performance: The application should load quickly and respond promptly to user actions, even under peak load conditions.
2. Security: User data should be encrypted during transmission and storage to ensure confidentiality and integrity.
3. Usability: The application should have an intuitive user interface and navigation flow to enhance user experience.
4. Compatibility: The application should be compatible with a wide range of Android devices and screen sizes.
5. Scalability: The application architecture should support scalability to accommodate future growth and increasing user demands.
6. Constraints:

- Hardware Constraints: The application should be designed to run on Android devices with varying hardware specifications.
- Software Constraints: The application should be compatible with Android OS versions 5.0 (Lollipop) and above.
- Regulatory Constraints: The application should comply with relevant data protection regulations such as HIPAA or GDPR.

7. Assumptions and Dependencies:

- Assumptions: It is assumed that users have access to a stable internet connection for using the application.
- Dependencies: The application depends on external services such as payment gateways and third-party APIs for certain functionalities

2.3 Data Collection

2.3.1 Database Design including File Layout:

The database design for the Shree Siddhivinayak Hospital Management System Android application is meticulously crafted using SQLite, featuring multiple tables to efficiently organize and retrieve data across various aspects of the system's functionality. Each table is structured to capture specific details related to patient management, medical inventory, employee information, feedback, and more. The file layout of each table outlines the fields and their corresponding data types, ensuring a well-defined structure for seamless data management.

Table Name: User

Field	Data Type	Description
User_ID	INTEGER	Unique identifier for each user
Username	TEXT	Username for user authentication
Password	TEXT	Password for user authentication

2.3.2 Data Type/Data Dictionary/Data Description:

- Data Types: The database employs various data types such as INTEGER, TEXT, and DATE to represent different types of information effectively.
- Data Dictionary: A comprehensive data dictionary is maintained within the database system, documenting the structure of each table, including field names, data types, and any constraints or relationships with other tables.
- Data Description: Each table in the database stores specific types of data pertinent to hospital management, ranging from patient details and medical inventory to employee information and feedback submissions. The structured data ensures efficient storage and retrieval of information for seamless operations.

2.3.3 Collection - Instruments, Tools & Techniques used:

- Database Software: Utilizes SQLite as the embedded database software for efficient data storage and management within the Android application.
- Programming Languages: Incorporates Java for backend logic and SQLite database interactions within the Android application.
- Data Analysis: Utilizes SQLite queries and Android's SQLiteOpenHelper class for data retrieval, manipulation, and analysis.

2.3.4 Measurement Scales:

- Modules: The project comprises approximately 10 modules, each serving distinct functions within the hospital management system Android application.
- Data Dictionaries: Includes 10 data dictionaries defining the structure and attributes of the data used in the SQLite database.
- Records: The quantity of records varies across tables within the SQLite database, with each table containing specific data related to users, patient mortality, purchases, employee details, feedback, feed consumption, medicine inventory, production, and sales transaction**.**

2.4 Presentation of Data, Tools of Analysis & Interpretation

2.4.1 Editing & Coding - Data Preparation:

- Data Cleansing: Ensured the dataset's integrity by identifying and rectifying any inconsistencies or errors.
- Handling Missing Data: Implemented strategies to address missing data, ensuring completeness and accuracy.
- Standardization: Ensured uniformity in data formats and units for seamless analysis.
- Variable Transformation: Adapted variables as needed to enhance compatibility and analysis efficiency.

2.4.2 Presentation of Data

- Patient Engagement Metrics: Analyzed user interactions such as appointment bookings, lab test requests, and medicine orders.
- Departmental Utilization Analysis: Explored usage patterns across different hospital departments, including doctor consultations and lab tests.
- Feedback and Satisfaction Trends: Examined feedback and satisfaction ratings to gauge user experience and identify areas for improvement.
- Visual aids like charts and graphs were employed to convey insights effectively, aiding stakeholders in understanding usage trends and user sentiments.

2.4.3 Describing the Data (Descriptive Statistics):

- Summary Metrics: Calculated key statistics such as mean, median, and range to summarize data characteristics.
- Data Distribution Analysis: Assessed the distribution of variables to discern patterns and trends.

2.4.4 Analysis of Data

- Patient Segmentation Analysis: Conducted segmentation to categorize patients based on demographics, medical history, and treatment preferences.
- Service Utilization Patterns: Investigated correlations between service utilization and patient demographics or medical conditions.

2.4.5 Testing Hypotheses and Models

- Outcome Prediction Models: Developed models to forecast patient admissions, treatment outcomes, or resource utilization based on historical data.
- Quality Improvement Hypotheses: Formulated hypotheses to test the effectiveness of interventions aimed at enhancing patient satisfaction and healthcare delivery.

Chapter 3: Profile of the Organisation

Organization Name: Shree Siddhivinayak Hospital, Nashik

Organization Address: Opp.K.T.H.M.College Gangapur Road,
Nashik –422002, Mob No: 7262888000.

3.1 History & General Information

Shree Siddhivinayak Hospital stands as a beacon of excellence in healthcare, dedicated to providing top-notch medical services and setting new standards in Nashik's healthcare landscape. Established in 2018, our hospital has swiftly emerged as the epitome of hospitality and multi-specialty care, offering a comprehensive range of medical treatments and services.

At Shree Siddhivinayak Hospital, patient care is our utmost priority. With a team of highly experienced specialists and state-of-the-art facilities, we ensure prompt and effective treatment for all types of medical emergencies. Our commitment to excellence has been recognized with prestigious accolades, including the Iconic Super speciality Hospital Award organized by Mid Day International Health and Wellness Icons.

Our esteemed directors, including Dr. Nitin Pawar, Dr. Sandesh Patil, Dr. Rahul Shinde, and Dr. Jitendra Wadgule, lead our dedicated team of medical professionals across various departments. From medicine and orthopaedics to cardiology, paediatrics, gynaecology, ophthalmology, general surgery, dentistry, and gastroenterology, all specialties are meticulously managed to provide comprehensive healthcare solutions.
Moreover, Shree Siddhivinayak Hospital is accredited by NABH and empanelled with CGHS and all major Mediclaim companies, reflecting our commitment to meeting the highest standards of quality and patient care. For appointments and inquiries, please call +91 7262888000. We are proud to serve the community with advanced medical care and unwavering dedication to health and wellness.

3.2 Organisation

1. Nature and Scope:
Shree Siddhivinayak Hospital, established in 2018, is a leading healthcare institution offering a comprehensive range of medical services, including surgeries and emergency care.
Renowned for its commitment to excellence, the hospital is accredited by prestigious organizations such as the National Accreditation Board for Hospitals & Healthcare Providers (NABH) and is empaneled with Central Government Health Scheme (CGHS) and all major mediclaim companies. With a dedicated focus on patient care and safety, Shree Siddhivinayak Hospital ensures the highest standards of quality and professionalism in all its medical procedures and services.

2. Structure:

Shree Siddhivinayak Hospital operates with a well-defined hierarchical structure, reflecting its commitment to efficient management and organizational excellence.

The hospital is structured into various departments, including administration, medical services, nursing, finance, human resources, and facilities management, each led by experienced professionals dedicated to upholding the hospital's reputation for excellence.

3. Departments:

Medical Services: Shree Siddhivinayak Hospital offers a wide array of medical services, including surgeries and emergency care, delivered by a team of skilled and experienced healthcare professionals.

Nursing: The hospital's nursing department provides compassionate and attentive care to patients, ensuring their comfort and well-being throughout their stay.

Administration: With a focus on operational efficiency and regulatory compliance, the administration department oversees the day-to-day functioning of the hospital, ensuring smooth operations and quality service delivery.

Finance: Responsible for managing the hospital's financial affairs, including billing, insurance claims processing, and budgeting, the finance department ensures

3.4Activities

1. Hospital Management System Development:

- Customized Online/Offline Software: Tailored hospital management system developed incrementally with a user-friendly approach, focusing on functionalities such as patient management, appointment scheduling, inventory management, and report generation.

2. Android Application Development:

- Android App Development: Professional mobile app development services for Android platform, providing a user-friendly interface for patients to access hospital services, schedule appointments, view medical records, and order medications.

3. Web Design:

- Engaging and Responsive Website Design: Creation of a responsive website for Shree Siddhivinayak Hospital, ensuring seamless access to hospital information and services across various devices and screen sizes.

4. Digital Marketing/Research:

- Promotion and Branding: Conducting digital marketing activities to promote Shree Siddhivinayak Hospital app, including advertising, brand/image research, and social media marketing to enhance visibility and engagement.

3.4 Corporate & Functional Practices

3.4.1 Corporate Practices:

1.HRM (Human Resource Management):

Shree Siddhivinayak Hospital app implements effective talent acquisition strategies, fosters employee engagement, and provides ongoing training and development opportunities for its staff members.

2.Finance:

The finance department of the Shree Siddhivinayak Hospital app ensures financial accountability, oversees budgeting and financial planning, and maintains compliance with regulatory requirements to support the hospital's operations.

3.Marketing:

Shree Siddhivinayak Hospital app conducts market research, develops targeted marketing strategies, and utilizes digital channels to reach its target audience effectively, promoting its healthcare services and enhancing brand visibility.

3.4.2.Functional Practices:

1.Production:

The production team of the Shree Siddhivinayak Hospital app follows agile methodologies, conducts thorough testing, and collaborates closely with hospital staff to deliver innovative and high-quality healthcare solutions through the Android application.

2.Inventory:

Shree Siddhivinayak Hospital app optimizes resource allocation, manages inventory levels efficiently, and ensures timely procurement of medical supplies and equipment to support its healthcare services and operations.

3.CSR (Corporate Social Responsibility):

Shree Siddhivinayak Hospital app actively engages in CSR initiatives, supporting causes that align with its values and making a positive impact on society and the community it serves through various healthcare outreach programs and initiatives.

Frontend Development:

In the Shree Siddhivinayak Hospital app, frontend development focuses on crafting intuitive user interfaces and engaging experiences for the Android application. This involves designing XML layouts for screens such as login, registration, appointment booking, and medication browsing. Java and Kotlin programming languages are utilized to implement frontend logic, handle user interactions, and ensure a seamless user experience across various functionalities.

Backend Development:

The backend development team of the Shree Siddhivinayak Hospital app manages server-side logic, database management, and integration to support the functionality and performance of the Android application. PHP scripting language is employed for server-side logic, facilitating user authentication, data processing, and communication with the MySQL database. Backend developers ensure secure data storage, efficient retrieval, and seamless interaction between the frontend and backend components of the application.

Desktop Development:

Shree Siddhivinayak Hospital app includes software applications tailored for desktop computers or laptops, catering to the operational needs of hospital staff and administrators. These desktop applications adhere to various operating system requirements, providing functionalities such as administrative management, decision-making processes.

Web Development:

The Shree Siddhivinayak Hospital app specializes in web development, offering a user-friendly website and web application to facilitate online interactions and access to hospital services. The web development team ensures seamless frontend and backend functionalities, allowing users to schedule appointments, access patient records, and obtain healthcare information conveniently through web browsers on desktop and mobile devices.

Mobile Application:

The mobile application development team of the Shree Siddhivinayak Hospital app creates customized Android applications optimized for smartphones and tablets. These mobile applications provide a user-friendly interface for patients to book appointments, view medical records, order medications, and access healthcare resources on-the-go.

Chapter 4: System Design

4.1 Why we use Frontend as…. & Backend as …. etc.

We use specific technologies for frontend and backend development in software projects for various reasons:

1. Frontend:

- The frontend of your Android application encompasses the user interface and user experience elements visible to the users on their devices.
- The frontend is developed using XML layouts, which define the structure and appearance of the app's screens, along with Java or Kotlin programming languages for implementing the application logic.
- Purpose: The frontend provides the graphical interface through which users interact with the application. It displays information, receives user input, and delivers a seamless user experience.

2. Backend:

- The backend of your application refers to the server-side component responsible for handling business logic, processing data, and managing communication with external services.
- The backend is typically implemented using technologies such as PHP for server-side scripting, MySQL for database management, and possibly other frameworks or languages for additional functionalities.
- Purpose: The backend manages user authentication, stores and retrieves data from the database, performs business logic operations, and communicates with external services. It acts as the backbone of the application, handling core functionalities behind the scenes.

Each technology serves a specific purpose in the development stack:

- **Frontend technologies** focus on creating the user interface and enhancing user experience.
- **Backend technologies** handle data processing, business logic, and server-side operations.

4.2Basic Theories of the Topic

User Authentication and Authorization: This theory involves implementing secure login mechanisms to authenticate users and control access to different functionalities based on their roles and permissions.

• Data Management and Security: Encompasses strategies for efficient storage, retrieval, and protection of sensitive patient data, ensuring compliance with privacy regulations like HIPAA.

• Appointment Scheduling and Management: Focuses on facilitating seamless booking and organization of patient appointments with doctors and specialists, optimizing healthcare service delivery.

• Medicine Inventory Control: Involves tracking medication stock levels, expiration dates, and usage to ensure timely replenishment and availability for patient treatment.

• Patient Information Management: Addresses the systematic organization and retrieval of patient records, including medical history, diagnoses, treatment plans, and lab results.

• Feedback and Satisfaction Monitoring: Incorporates mechanisms for collecting patient feedback and assessing satisfaction levels to identify areas for improvement in hospital services.

4.3 Basic ideas of the Project on the selected topic

4.3.1 Project Design

With a focus on enhancing user experience and operational efficiency, the Shree Siddhivinayak Hospital Android application is designed with the following modules:

1. Login: Allows authorized users, such as administrators, doctors, and staff, to securely access the application using their credentials.
2. Registration: Enables new users, including patients and caregivers, to create accounts within the application by providing necessary personal information.
3. Lab Test: Provides comprehensive information on various laboratory test packages available at the hospital. Allows users to view package details, add desired packages to the cart, and proceed to place orders for tests.
4. Medicine: Displays a list of available medicines along with details such as name, dosage, and price. Users can add medicines to their cart, review the selected items, and place orders for required medications.

5. Find Doctor: Empowers users to search for specialist doctors based on their medical needs and preferences. Allows users to book appointments with preferred doctors, specifying the desired date and time for consultations.
6. Health Articles: Offers valuable information and insights through articles related to healthcare, wellness, and medical advancements. Users can access articles to stay informed and educated about various health-related topics.
7. Order Details: Provides users with comprehensive information about their previous orders, including test packages, medicines, and appointments. Users can review order history, track current orders, and manage appointments conveniently.
8. Logout: Allows users to securely log out of their accounts, ensuring data priva8.cy and security.

4.3.1 Entity Relationship Diagram ERD

An Entity-Relationship Diagram (ERD) for the Shree Siddhivinayak Hospital Android application helps visualize the relationships between various entities and their attributes. Here's a simplified ERD outline for the project:

Entities:

• Users:

Represents individuals interacting with the application.

Attributes: User_ID, Username, Password, UserType.

• Lab Test Packages:

Represents different laboratory test packages available at the hospital.

Attributes: Package_ID, PackageName, Description, Price.

• Medicines:

Represents medications and supplements available at the hospital.

Attributes: Medicine_ID, MedicineName, QuantityAvailable, Price.

• Doctors:

Represents medical professionals practicing at the hospital.

Attributes: Doctor_ID, DoctorName, Specialization, ContactNumber, Email.

• Appointments:

Represents scheduled appointments between patients and doctors.

Attributes: Appointment_ID, Patient_ID, Doctor_ID, AppointmentDate, AppointmentTime.

• Health Articles:

Represents informative articles available for users to read.

Attributes: Article_ID, Title, Content, PublishedDate.

• Orders:

Represents orders placed by users for lab tests and medicines.

Attributes: Order_ID, User_ID, OrderDate, TotalPrice.

Relationships:

• Lab Test Order:

Connects Users and Lab Test Packages entities.

One User can order multiple Lab Test Packages.

One Lab Test Package can be ordered by multiple Users.

• Medicine Order:

Connects Users and Medicines entities.

One User can order multiple Medicines.

One Medicine can be ordered by multiple Users.

• Doctor Appointment:

Connects Users and Doctors entities.

One User can schedule appointments with multiple Doctors.

One Doctor can have appointments scheduled by multiple Users

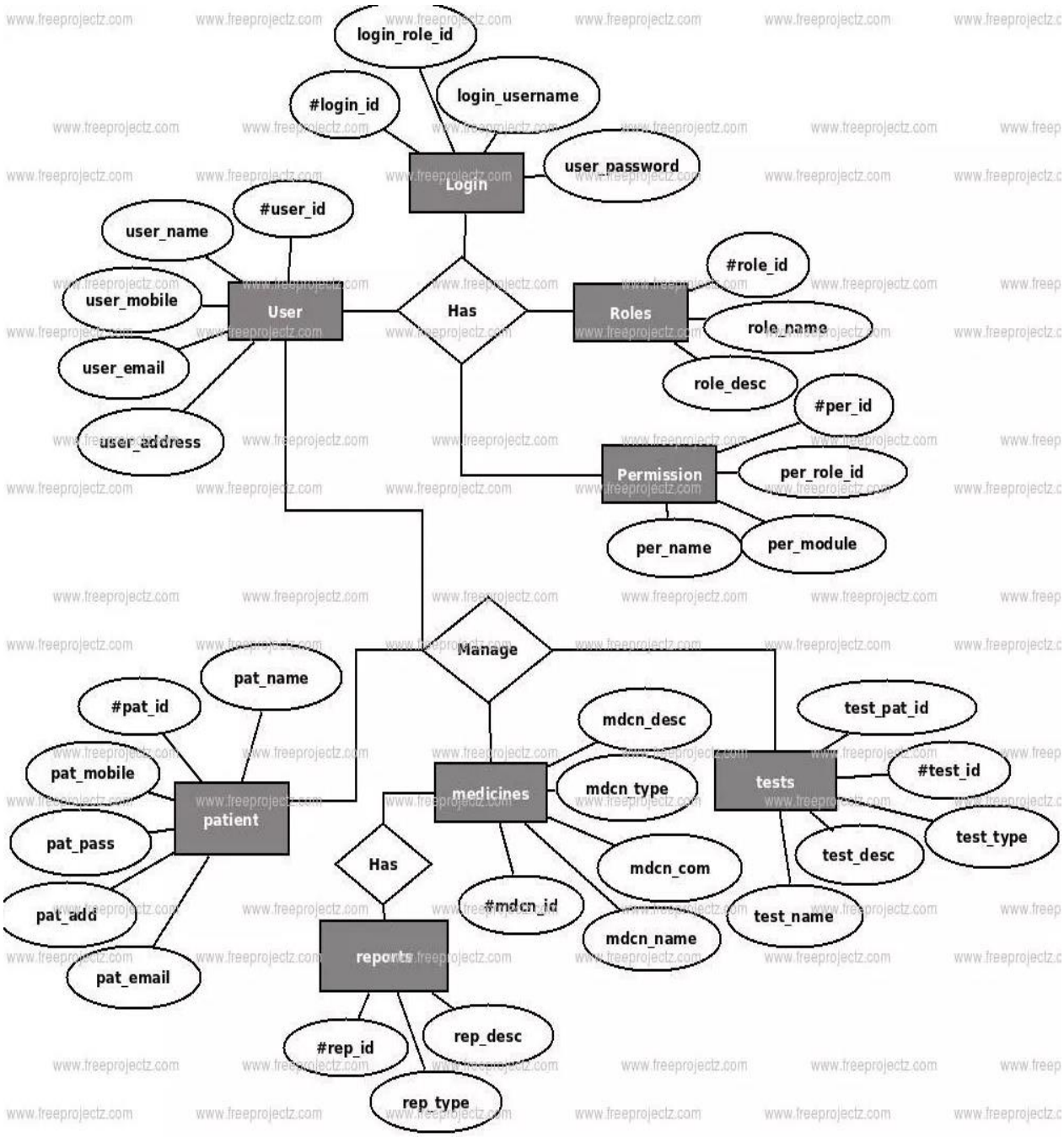


Fig : ERD Diagram

4.3.2 Use-case Diagram

The use case diagram for the Shree Siddhivinayak Hospital Android application depicts the various interactions between the actors (users) and the system. Here's an explanation of the use case diagram:

Actors:

Admin: Represents the administrative staff or personnel responsible for managing the hospital's backend operations and system settings.

Patient: Represents individuals seeking medical assistance or services from the hospital.

Doctor: Represents medical professionals providing healthcare services to patients within the hospital.

Lab Technician: Represents personnel responsible for conducting laboratory tests and managing lab reports.

Use Cases:

Admin Login: Allows the admin to log in to the system with appropriate credentials to access administrative functionalities.

Patient Registration: Enables new patients to register their details in the hospital's database for future appointments and medical records.

Doctor Registration: Facilitates the registration of new doctors into the system, allowing them to provide medical services.

Lab Test Management: Allows lab technicians to manage laboratory tests, including viewing available test packages, adding them to the cart, and placing orders.

Medicine Management: Enables users to view the list of available medicines, add them to the cart, and place orders for medication.

Find Doctor: Allows patients to search for specialist doctors based on their medical requirements and book appointments.

Health Articles: Provides access to informative health articles for users to educate themselves on various health-related topics.

Order Details: Enables users to view details of their orders, including medication, lab tests, and appointments.

Logout: Allows users to securely log out of the system, terminating their current session.

Associations:

Admin-Manages-All Use Cases: The admin has access to all functionalities within the system, including patient registration, doctor registration, and managing lab tests and medications.

Patient-Performs-Use Cases: Patients interact with various functionalities such as registration, finding doctors, and viewing health articles.

Doctor-Performs-Use Cases: Doctors may use functionalities related to appointments and patient management.

Lab Technician-Performs-Use Cases: Lab technicians interact with functionalities related to managing lab tests and reports.

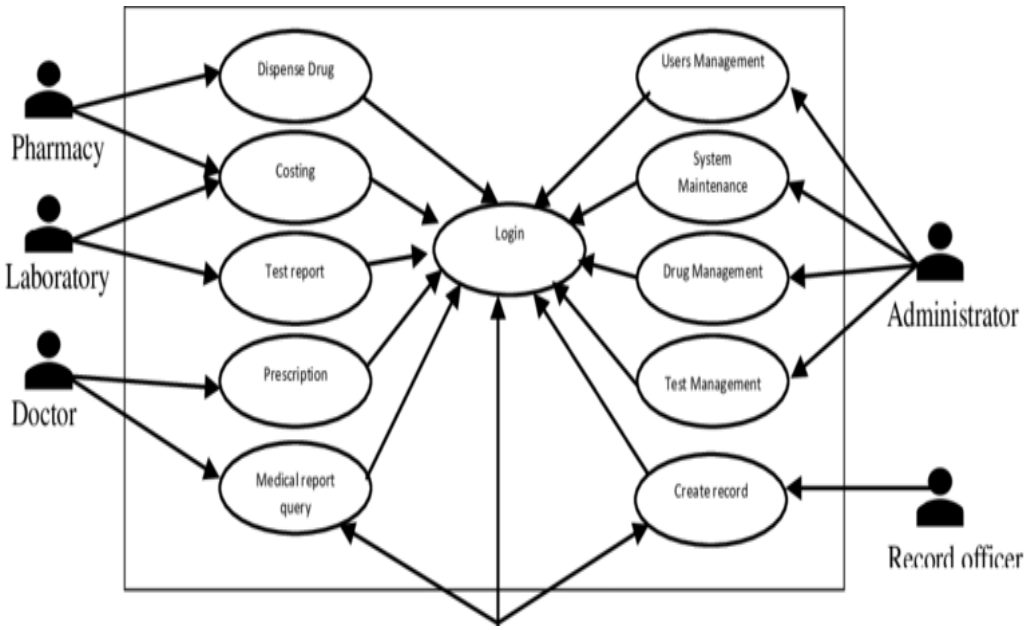


Fig : Use-case Diagram

4.3.3 Activity Diagram

The activity diagram for the Shree Siddhivinayak Hospital Android application illustrates the flow of activities and actions performed by users within the system. Here's an explanation of the activity diagram:

Admin Activities:

Admin Login: The admin initiates the login process by entering valid credentials.

System Authentication: The system verifies the admin's credentials and grants access if they are valid.

Admin Dashboard: Upon successful authentication, the admin is directed to the dashboard, where various administrative functionalities are available.

Manage Users: The admin can choose to manage users, including patient and doctor registration.Patient Activities:

Patient Registration: A new patient initiates the registration process by providing personal details.

Registration Submission: The system collects and stores the patient's registration information.

Find Doctor: The patient navigates to the find doctor section to search for specialist doctors.

Book Appointment: After selecting a doctor, the patient books an appointment for consultation.

View Health Articles: The patient accesses informative health articles provided by the hospital.

Doctor Activities:

Doctor Registration: New doctors can register with the hospital by providing necessary credentials and professional details.

Appointment Management: Doctors manage their appointments by viewing scheduled appointments and updating their availability.

Patient Consultation: During the appointment, doctors conduct consultations and update patient records as necessary.

Lab Technician Activities:

Lab Test Management: Lab technicians manage laboratory tests by adding test packages, processing orders, and generating reports.

Report Generation: After conducting tests, lab technicians generate lab reports and make them available to patients and doctors.

General Activities:

Logout: Users can log out of the system to end their session securely.Error Handling: The system handles any errors or exceptions that may occur during the execution of activities, providing appropriate feedback to users.

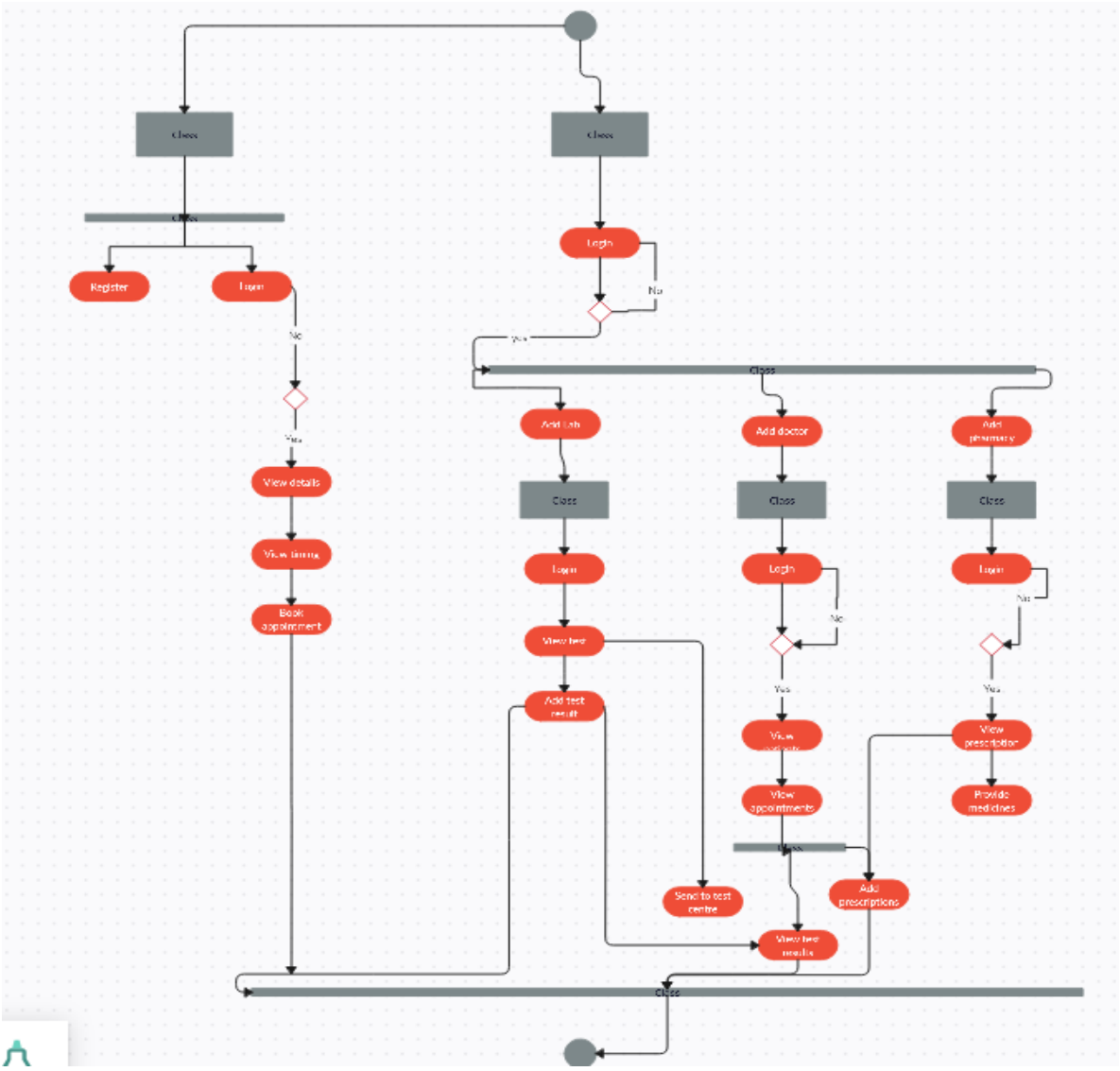


Fig : Activity Diagram

4.3.4 Sequence Diagram

The sequence diagram for the Shree Siddhivinayak Hospital Android application depicts the interactions between different components of the system in a chronological sequence. Here's an explanation of the sequence diagram:

User Authentication:

The sequence starts when a user (admin, patient, doctor, or lab technician) initiates the login process.

The user interface sends a request to the authentication module to verify the user's credentials.

The authentication module checks the database for the user's credentials and sends a response indicating whether the login is successful or not.

If the credentials are valid, the user is granted access to the system; otherwise, an error message is displayed.

User Registration:

In case of a new user registration (patient, doctor), the sequence begins when the user fills out the registration form.

The user interface sends the registration data to the registration module for processing.

The registration module validates the data and stores it in the database.

Upon successful registration, a confirmation message is sent back to the user interface.

Appointment Booking:

When a patient wants to book an appointment with a doctor, the sequence starts.

The patient selects the desired doctor and appointment slot through the user interface.

The appointment booking module processes the request, checks for availability, and reserves the slot if available.

A confirmation message is sent back to the patient, confirming the appointment booking.

Lab Test Ordering:

When a doctor orders lab tests for a patient, the sequence begins.

The doctor selects the required tests and submits the order through the user interface.

The lab test module receives the order request, processes it, and generates a unique order ID.

The order ID is sent back to the doctor for reference, and the lab technician is notified of the new test order.

Report Generation:

After conducting lab tests, the lab technician generates the test reports.

The lab technician selects the completed tests, generates the reports, and attaches them to the respective orders.

The reports are then made available to the doctor and patient through the user interface.

Logout:

At any point, the user can choose to log out of the system.

The logout module receives the logout request and terminates the user's session, clearing any active session data.

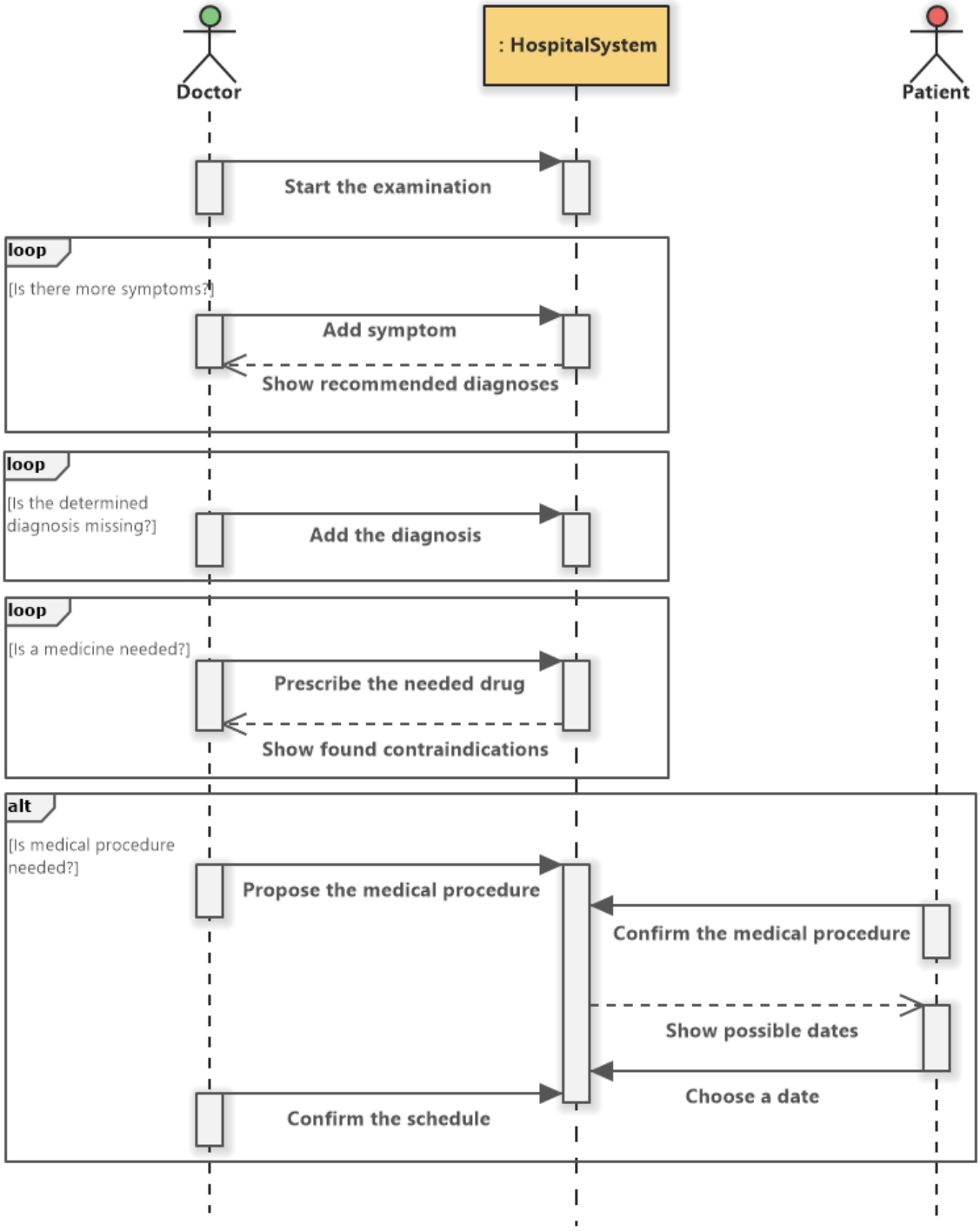


Fig : Sequence Diagram

4.3.5 Component Diagram

The component diagram for the Shree Siddhivinayak Hospital Android application illustrates the high-level structure of the system, breaking it down into individual components and their interactions. Here's an explanation of the components:

User Interface Components:

This includes various screens and interfaces visible to the users, such as login screen, registration form, appointment booking interface, lab test ordering interface, etc. Each component represents a specific user interaction point and is responsible for presenting information and receiving user input.

Authentication Component:

Responsible for handling user authentication and authorization processes. Validates user credentials during login and grants access to authorized users. Ensures the security of the application by controlling user access based on their roles (admin, patient, doctor, lab technician).

Registration Component:

Manages user registration processes for new patients and doctors.Collects user information through registration forms and stores it securely in the database. Validates registration data to ensure accuracy and completeness.

Appointment Booking Component:

Allows patients to book appointments with doctors.Provides a user-friendly interface for selecting doctors, choosing appointment slots, and confirming bookings. Coordinates with the scheduling system to check availability and reserve slots.

Lab Test Ordering Component:

Enables doctors to order lab tests for patients directly from the application. Displays a list of available tests and allows doctors to select the required tests for each patient.Generates test orders with unique identifiers and sends them to the lab for processing.

Lab Report Generation Component:

Handles the generation and delivery of lab test reports.
Receives completed test results from the lab technicians and attaches them to the corresponding test orders.Makes the reports accessible to both doctors and patients through the application interface.

Database Component:

Represents the database management system (DBMS) used to store and retrieve application data.Stores user information, appointment details, lab test orders, test results, and other relevant data.Ensures data integrity, consistency, and security through proper storage and retrieval mechanisms.

Notification Component:

Provides notification services to inform users about important events and updates.

Sends notifications for appointment reminders, test order status updates, and other relevant information.Enhances user engagement and facilitates timely communication between users and the application.

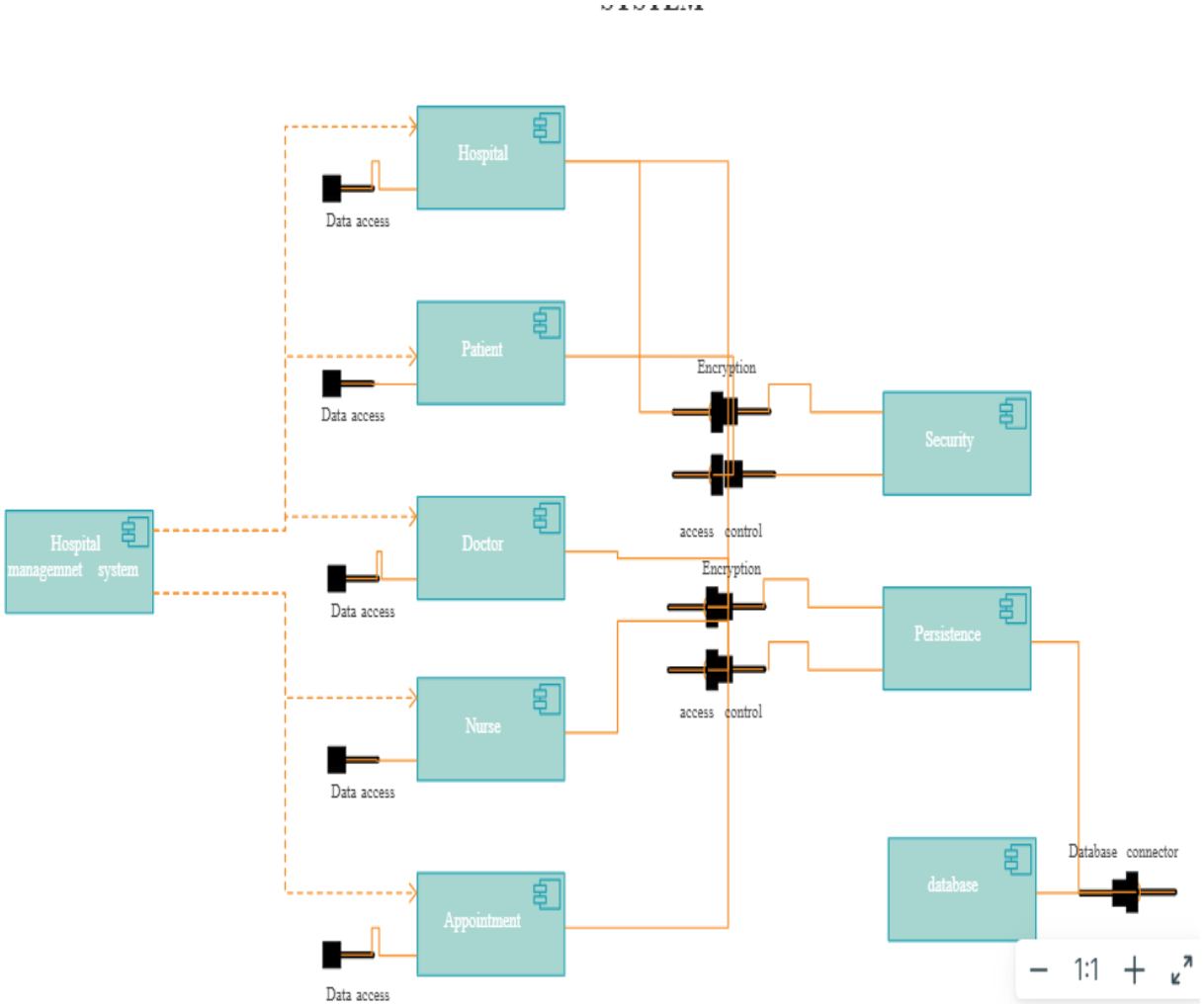


Fig : Component Diagram

4.3.6 Deployment Diagram

The deployment diagram illustrates how the software components are distributed across different hardware nodes and how they interact with each other. Here's an explanation of the components in the deployment diagram:

Client Devices: Represents the various client devices where the hospital management system application is accessed and used. This includes smartphones, tablets, laptops, and desktop computers used by hospital staff, patients, and administrators.

Hospital Server:This node represents the central server infrastructure deployed within the hospital premises.It hosts the backend services and databases required for the hospital management system. Components such as the application server, database server, and other backend services are deployed here.It manages the core functionality of the hospital management system, including user authentication, data storage, and business logic processing.

Database Server:

This node represents the dedicated server hosting the hospital management system's database.It stores all the data related to patients, doctors, appointments, medical records, inventory, and other relevant information.The database server ensures data integrity, security, and scalability, providing efficient storage and retrieval of data for the hospital management system.

External Systems:

Represents any external systems or services integrated with the hospital management system.This may include external databases, third-party APIs for payment processing or insurance verification, or other healthcare systems for interoperability.

Internet Connection:

Represents the network connectivity between client devices, the hospital server, and external systems. It ensures seamless communication and data exchange between different components of the hospital management system.A reliable and secure internet connection is essential for real-time access to patient information, appointment scheduling, and other critical functionalities.

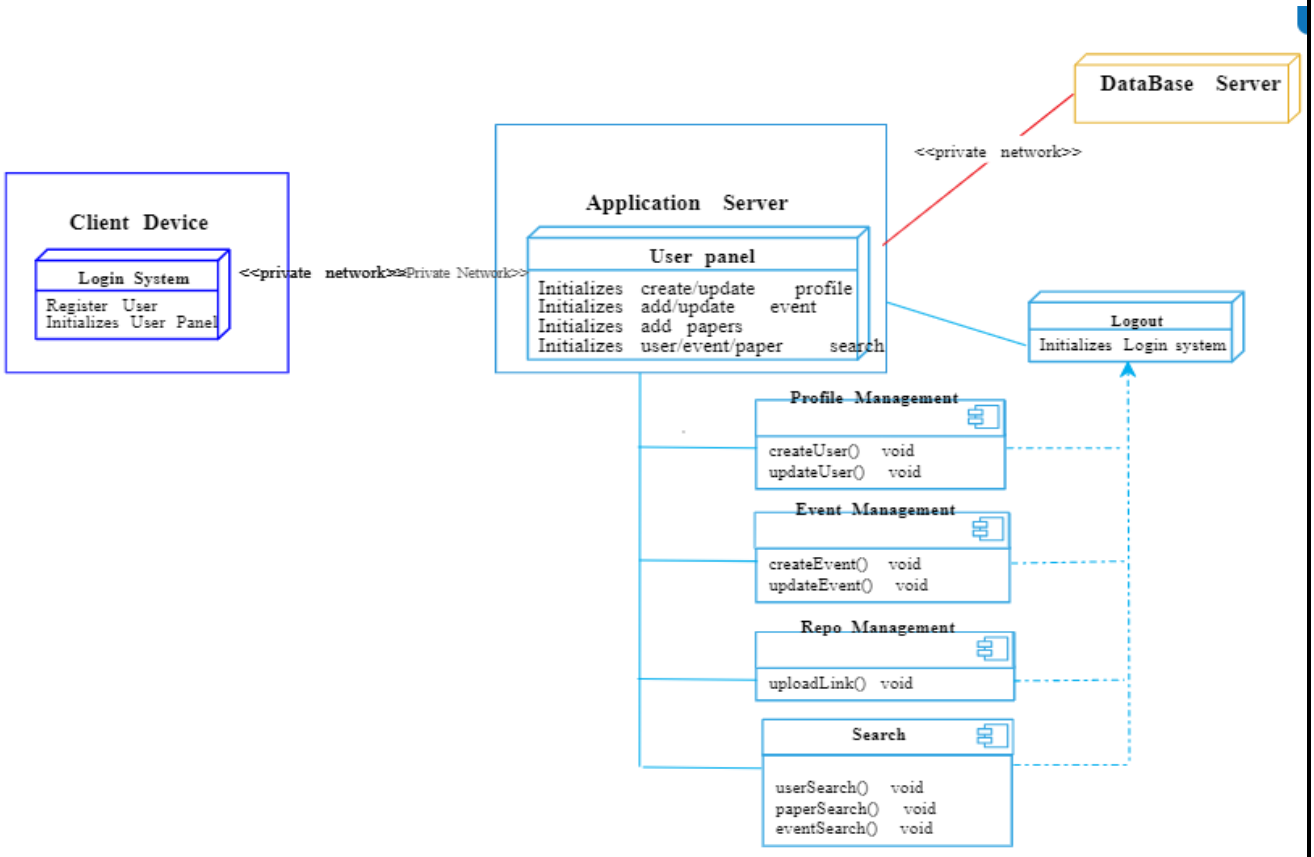


Fig : Deployment Diagram

Chapter 5: System Implementation

5.1 Coding

5.1.1 Database Designing

```
package com.example.hospitalproject;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;
import java.util.ArrayList;
public class Database extends SQLiteOpenHelper {
   public Database(@Nullable Context context, @Nullable String name, @Nullable SQLiteDatabase.CursorFactory factory, int version){
super(context, name, factory, version); }
   @Override
   public void onCreate(SQLiteDatabase sqLiteDatabase){
      String qry1="create table users(username text,email text,password text)";
      sqLiteDatabase.execSQL(qry1);
      String qry2="create table cart(username text,product text,price float,otype text)";
      sqLiteDatabase.execSQL(qry2);
      String qry3="create table orderplace(username text,fullname text,address text,contactno text,pincode int,date text,time text,amount float,otype text)";
      sqLiteDatabase.execSQL(qry3); }
   @Override
   public void onUpgrade(SQLiteDatabase sqLiteDatabase,int i, int i1){}
   public void register(String username,String email, String password){
      ContentValues cv=new ContentValues();
      cv.put("username",username);
      cv.put("email",email);
      cv.put("password",password);
      SQLiteDatabase db=getWritableDatabase();
      db.insert("users",null,cv);
      db.close();
```

```
}
public int login(String username, String password) {
    int result=0;
    String str[]=new String[2];
    str[0]=username;
    str[1]=password;
    SQLiteDatabase db=getReadableDatabase();
    Cursor c= db.rawQuery("select * from users where username=? and password=?",str);
    if(c.moveToFirst()){
        result=1;
    }
    return result;
}
public void addCart(String username,String product,float price,String otype){
    ContentValues cv=new ContentValues();
    cv.put("username",username);
    cv.put("product",product);
    cv.put("price",price);
    cv.put("otype",otype);
    SQLiteDatabase db=getWritableDatabase();
    db.insert("cart",null,cv);
    db.close();
}
public int checkCart(String username,String product){
    int result=0;
    String str[]=new String[2];
    str[0]=username;
    str[1]=product;
    SQLiteDatabase db=getReadableDatabase();
    Cursor c=db.rawQuery("select * from cart where username = ? and product = ?",str);
    if(c.moveToFirst()){
        result=1;
    }
    db.close();
```

```
        return result;
    }
    public void removeCart(String username,String otype){
        String str[]=new String[2];
        str[0]=username;
        str[1]=otype;
        SQLiteDatabase db=getWritableDatabase();
      db.delete("cart","username=? and otype=?",str);
        db.close();
    }
public ArrayList getCartDate(String username,String otype){
    ArrayList<String> arr=new ArrayList<>();
    SQLiteDatabase db=getReadableDatabase();
    String str[]=new String[2];
    str[0]=username;
    str[1]=otype;
    Cursor c= db.rawQuery("select * from cart where username=? and otype=?",str);
    if(c.moveToFirst()){
        do{
            String product=c.getString(1);
            String price=c.getString(2);
            arr.add(product+"$"+price);
        }while(c.moveToNext());
    }
    db.close();
    return arr;
}
public void addOrder(String username, String fullname, String contact, String string, int
pincode, String date, String time, float price, String otype){
   ContentValues cv=new ContentValues();
   cv.put("username",username);
    cv.put("fullname",fullname);
    cv.put("contact",contact);
    cv.put("pincode",pincode);
```

```
    cv.put("date",date);
    cv.put("time",time);
    cv.put("amount",price);
    cv.put("otype",otype);
    SQLiteDatabase db=getWritableDatabase();
    db.insert("orderplace",null,cv);
    db.close();
}
    public ArrayList getOrderData(String username){
        ArrayList<String> arr=new ArrayList<>();
        SQLiteDatabase db=getReadableDatabase();
        String str[]=new String[1];
        str[0]=username;
        Cursor c= db.rawQuery("select * from orderplace where username=?",str);
        if(c.moveToFirst()){
            do{
arr.add(c.getString(1)+"$"+c.getString(2)+"$"+c.getString(3)+"$"+c.getString(4)+"$"+c.getS
tring(5)+"$"+c.getString(6)+"$"+c.getString(7)+"$"+c.getString(8));
            }while(c.moveToNext());
        }
        db.close();
        return arr;
    }
    public int checkAppointmentExists(String username,String fullname,String address,String
contact,String date,String time){
        int result=0;
        String str[]=new String[6];
        str[0]=username;
        str[1]=fullname;
        str[2]=address;
        str[3]=contact;
        str[4]=date;
        str[5]=time;
        SQLiteDatabase db=getReadableDatabase();
```

```
        Cursor c=db.rawQuery("select * from orderplace where username=? and fullname=? and address=? and contactno =? and date=? and time=? ",str);
        if(c.moveToFirst()){
            result=1;
        }
        db.close();
        return result;
    }
}
```

Java Coding:

Home Activity.java

```
package com.example.hospitalproject;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class HomeActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);

        SharedPreferences sharedpreferences = getSharedPreferences("shared_prefs", Context.MODE_PRIVATE);
```

```
        String username = sharedpreferences.getString("username", "").toString();
Toast.makeText(getApplicationContext(),"Welcome"+username,Toast.LENGTH_SHORT).s
how();
        CardView exit = findViewById(R.id.cardExit);
        exit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                SharedPreferences.Editor editor = sharedpreferences.edit();
                editor.clear();
                editor.apply();
                startActivity(new Intent(HomeActivity.this, LoginActivity.class));
            }
        });
        CardView findDoctor = findViewById(R.id.cardFindDoctor);
        findDoctor.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(HomeActivity.this, FindDoctorActivity.class));
            }
        });
        CardView labTest = findViewById(R.id.cardLabTest);
        labTest.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(HomeActivity.this, LabTestActivity.class));
            }
        });
        CardView orderDetails = findViewById(R.id.cardOrderDetails);
        orderDetails.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(HomeActivity.this, OrderDetailsActivity.class));
            }
        });
        CardView buyMedicine = findViewById(R.id.cardBuyMedicine);
```

```
        buyMedicine.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(HomeActivity.this, BuyMedicineActivity.class));
            }
        });
        CardView health = findViewById(R.id.cardHealthDoctor);
        health.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(HomeActivity.this, HealthArticlesActivity.class));
            }
        });
    }
}
```

Login Activity.java :

```
package com.example.hospitalproject;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class LoginActivity extends AppCompatActivity {
    EditText edUsername, edPassword;
```

```
    Button btn;
    TextView tv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        edUsername = findViewById(R.id.editTextLoginUsername);
        edPassword = findViewById(R.id.editTextLoginPassword);
        btn = findViewById(R.id.buttonLogin);
        tv = findViewById(R.id.textViewNewUser);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(LoginActivity.this, HomeActivity.class));
                String username =edUsername.getText().toString();
                String password = edPassword.getText().toString();
                Database db = new Database(getApplicationContext(), "Healthcare", null, 1);
                if(username.length()==0 || password.length()==0)
                {
                    Toast.makeText(getApplicationContext(),"Please Fill All
Details",Toast.LENGTH_SHORT).show();
                }else {
                    if(db.login(username,password)==1){
Toast.makeText(getApplicationContext(), "Login Success",
Toast.LENGTH_SHORT).show();
                        SharedPreferences sharedpreferences = getSharedPreferences("shared_prefs",
Context.MODE_PRIVATE);
                        SharedPreferences.Editor editor=sharedpreferences.edit();
                        editor.putString("username",username);
                        editor.apply();
                        startActivity(new Intent(LoginActivity.this, RegisterActivity.class));
                    }else{
                        Toast.makeText(getApplicationContext(), "Invalid Username and Password",
Toast.LENGTH_SHORT).show();
                    }
```

```
            }
        }
    });
    tv.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            startActivity(new Intent(LoginActivity.this, HomeActivity.class));
        }
    });
  }
}
```

Registration Activity.java :

```
package com.example.hospitalproject;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class RegisterActivity extends AppCompatActivity {
  EditText edUsername, edEmail, edPassword, edConfirm;
  Button btn;
  TextView tv;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_register);
    edUsername = findViewById(R.id.editTextRegUsername);
    edPassword = findViewById(R.id.editTextRegPassword);
    edEmail = findViewById(R.id.editTextAddress);
    edConfirm = findViewById(R.id.editTextRegConfirmPassword);
```

```
        btn = findViewById(R.id.buttonRegister);
        tv = findViewById(R.id.textExistingUser);
        tv.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(RegisterActivity.this, LoginActivity.class));
            }
        });
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String Username = edUsername.getText().toString();
                String Email = edEmail.getText().toString();
                String Password = edPassword.getText().toString();
                String confirm = edConfirm.getText().toString();
                Database db = new Database(getApplicationContext(), "Healthcare", null, 1);
                if (Username.length() == 0 || Email.length() == 0 || Password.length() == 0 ||
confirm.length() == 0) {
                    Toast.makeText(getApplicationContext(), "Please Fill All Details",
Toast.LENGTH_SHORT).show();
                } else {
                    if (Password.compareTo(confirm) == 0) {
                        if (isValid(Password)) {
                            db.register(Username,Email,Password);
                            Toast.makeText(getApplicationContext(), "Record Inserted",
Toast.LENGTH_SHORT).show();
                            startActivity(new Intent(RegisterActivity.this, LoginActivity.class));
                        } else {
                            Toast.makeText(getApplicationContext(), "Password must contain at least 1
digit and 1 special character", Toast.LENGTH_SHORT).show();
                        }
                    } else {
                        Toast.makeText(getApplicationContext(), "Password and confirm password
didn't match", Toast.LENGTH_SHORT).show();
                    }
```

```
            }
        }
    });
}
public static boolean isValid(String password) {
    if (password.length() < 8) {
        return false; // Password length less than 8 characters is invalid
    }
    boolean hasDigit = false;
    boolean hasSpecialChar = false;
    for (int i = 0; i < password.length(); i++) {
        char c = password.charAt(i);
        if (Character.isDigit(c)) {
            hasDigit = true; // At least one digit found
        } else if ((c >= 33 && c <= 46) || c == 64) {
            hasSpecialChar = true; // At least one special character found
        }
    }
    // Return true only if all conditions are met
    return hasDigit && hasSpecialChar;
}
}
```

Find Doctor Activity.java:

```
package com.example.hospitalproject;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
```

```
public class FindDoctorActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_find_doctor);
        CardView exit=findViewById(R.id.CardFDBACK);
        exit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(FindDoctorActivity.this, HomeActivity.class));
            }
        });
        CardView familyphysician = findViewById(R.id.cardFDFamilyPhysician);
        familyphysician.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent it=new Intent(FindDoctorActivity.this,DoctorDetailsActivity.class);
                it.putExtra("title","family physicians");
                startActivity(it);
            }
        });
        CardView cardiologist = findViewById(R.id.cardFDCardiologist);
        cardiologist.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent it=new Intent(FindDoctorActivity.this,DoctorDetailsActivity.class);
                it.putExtra("title","Cardiologists");
                startActivity(it);
            }
        });
        CardView dietecian = findViewById(R.id.cardFDDietecian);
        dietecian.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

```
            Intent it=new Intent(FindDoctorActivity.this,DoctorDetailsActivity.class);
            it.putExtra("title","Dietecian");
            startActivity(it);
        }
    });
    CardView orthopedic = findViewById(R.id.cardFDOrthopedic);
    orthopedic.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent it=new Intent(FindDoctorActivity.this,DoctorDetailsActivity.class);
            it.putExtra("title","orthopedics");
            startActivity(it);
        }
    });
    CardView gensurgeon = findViewById(R.id.cardFDSurgeon);
    gensurgeon.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent it=new Intent(FindDoctorActivity.this,DoctorDetailsActivity.class);
            it.putExtra("title","General Surgeon");
            startActivity(it);
        }
    });
  }
}
```

Book Appointment Activity.Java:

```
package com.example.hospitalproject;
import android.app.AlertDialog;
import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.TimePicker;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
import java.util.Calendar;
public class BookAppointmentActivity extends AppCompatActivity {
    EditText ed1,ed2,ed3,ed4;
    TextView tv;
    private DatePickerDialog datePickerDialog;
    private TimePickerDialog timePickerDialog;
    private Button dateButton,timeButton,btnBook,btnBack;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_book_appointment);
            tv=findViewById(R.id.textViewAppTitle);
            ed1=findViewById(R.id.editTextAppFullname);
            ed2=findViewById(R.id.editTextAppAddress);
            ed3=findViewById(R.id.editTextAppContact);
            ed4=findViewById(R.id.editTextAppFees);
            dateButton=findViewById(R.id.buttonAppDate);
            timeButton=findViewById(R.id.buttonAppTime);
            btnBook=findViewById(R.id.buttonBookAppointment);
            btnBack=findViewById(R.id.buttonAppBack);
            ed1.setKeyListener(null);
```

```
        ed2.setKeyListener(null);
        ed3.setKeyListener(null);
        ed4.setKeyListener(null);
    Intent it=getIntent();
    String title=it.getStringExtra("text1");
    String fullname=it.getStringExtra("text2");
    String address=it.getStringExtra("text3");
    String contact=it.getStringExtra("text4");
    String fees=it.getStringExtra("text5");
    tv.setText(title);
    ed1.setText(fullname);
    ed2.setText(address);
    ed3.setText(contact);
    ed4.setText("Cons Fees:"+fees+"/-");
    initDatePicker();
    dateButton.setOnClickListener(new View.OnClickListener(){
        @Override
        public void onClick(View view){
            datePickerDialog.show();
        }
    });
    initTimePicker();
    timeButton.setOnClickListener(new View.OnClickListener(){
        @Override
        public void onClick(View view) {
            timePickerDialog.show();
        }
    });
    btnBack.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            startActivity(new Intent(BookAppointmentActivity.this,
FindDoctorActivity.class));
        }
```

```
        });
        btnBook.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Database db=new Database(getApplicationContext(),"healthcare",null,1);
                SharedPreferences sharedPreferences=getSharedPreferences("shared_prefers",
Context.MODE_PRIVATE);
                String username=sharedPreferences.getString("username","").toString();
                if(db.checkAppointmentExists(username,title+"=>"+
fullname,address,contact,dateButton.getText().toString(),timeButton.toString())==1){
                Toast.makeText(getApplicationContext()," Appointment Already
Booked",Toast.LENGTH_SHORT).show();
            }else{
                    db.addOrder(username,title+"=>"+
fullname,address,contact,0,dateButton.getText().toString(),timeButton.getText().toString(),Fl
oat.parseFloat(fees),"Appointment");
                    Toast.makeText(getApplicationContext(),"Your Booking is Done
Successfully",Toast.LENGTH_SHORT).show();
                    startActivity(new Intent(BookAppointmentActivity.this, HomeActivity.class));
                }
            }
        });
    }
    private void initDatePicker(){
        DatePickerDialog.OnDateSetListener dateSetListener = new
DatePickerDialog.OnDateSetListener() {
            @Override
            public void onDateSet(DatePicker datePicker, int i, int i1, int i2) {
                i1=i1+1;
                dateButton.setText(i2+"/"+i1+"/"+i);
            }
        };
        Calendar cal=Calendar.getInstance();
        int year=cal.get(Calendar.YEAR);
        int month=cal.get(Calendar.MONTH);
```

```
        int day=cal.get(Calendar.DAY_OF_MONTH);
        int style= AlertDialog.THEME_HOLO_DARK;
        datePickerDialog=new DatePickerDialog(this,style,dateSetListener,year,month,day);
        datePickerDialog.getDatePicker().setMinDate(cal.getTimeInMillis()+86400000);
    }
    private void initTimePicker(){
        TimePickerDialog.OnTimeSetListener timeSetListener = new
TimePickerDialog.OnTimeSetListener() {
            @Override
            public void onTimeSet(TimePicker timePicker, int i, int i1) {
                timeButton.setText(i+":"+i1);
            }
        };
        Calendar cal=Calendar.getInstance();
        int hrs=cal.get(Calendar.HOUR);
        int mins=cal.get(Calendar.MINUTE);
        int style=AlertDialog.THEME_HOLO_DARK;
        timePickerDialog=new TimePickerDialog(this,style,timeSetListener,hrs,mins,true);
    }
}
```

Lab Test Activity.java:

```
package com.example.hospitalproject;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.SimpleAdapter;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
```

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
import java.util.ArrayList;
import java.util.HashMap;
public class LabTestActivity extends AppCompatActivity {
    private String[][] packages={
        {"package1:Full Body Checkup","","","","999"},
        {"package2:Blood Gluecose Fasting","","","","299"},
        {"package3:COVID-19 Antibody-IgG","","","","899"},
        {"package4:Thyroid Check","","","","499"},
        {"package5:Immunity Check","","","","699"},
};
private String[] package_Details={
        "Blood Glucose Fasting\n"+
                "Complete Hemogram\n"+
                "HbA1c\n"+
                "Iron Studies\n"+
                "Kidney Function Test\n"+
                "LDM Lactate Dehydrogenase ,Serum\n"+
                "Lipid Profile\n"+
                "Liver Function Test\n",
                "Blood Gluecose Fasting",
                "COVID-19 Antibody-IgG\n",
        "Thydroid Profile-Total(T3,T4 & TSH Ultra-sensitive)",
                "Complete Hemogram\n"+
                "CRP(C Reactive Protein)Quantitive,Serum\n"+
                "Iron Studies\n"+
                "Kidney Function Test\n"+
                    "Vitamin D total-25 Hydroxy\n"+
                "Liver Function Test\n"+
                "Lipid Profile\n"
    };
```

```
HashMap<String,String> item;
    ArrayList list;
    SimpleAdapter sa;
    Button btnGoToCart,btnBack;
    ListView listView;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_lab_test);
        btnGoToCart=findViewById(R.id.buttonLTGoToCart);
        btnBack=findViewById(R.id.buttonLTBack);
        listView=findViewById(R.id.listViewLT);
btnBack.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        startActivity(new Intent(LabTestActivity.this, HomeActivity.class));
    }
});
        btnGoToCart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(LabTestActivity.this, LabTestDetailsActivity.class));
            }
        });
list=new ArrayList();
        for (int i = 0; i <packages.length; i++) { // Corrected the loop bounds
            item = new HashMap<String, String>();
            item.put("line1", packages[i][0]);
            item.put("line2", packages[i][1]);
            item.put("line3", packages[i][2]);
            item.put("line4", packages[i][3]);
            item.put("line5", "cons_Fees" + packages[i][4] + "/-");
            list.add(item);
        }
```

```
        sa = new SimpleAdapter(this, list,
                R.layout.multi_lines, new String[]{"line1", "line2", "line3", "line4", "line5"},
                new int[]{R.id.line_a, R.id.line_b, R.id.line_c, R.id.line_d, R.id.line_e});
        listView.setAdapter(sa);
        listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
                Intent it= new Intent(LabTestActivity.this,LabTestDetailsActivity.class);
                it.putExtra("text1",packages[i][0]);
                it.putExtra("text2",package_Details[i]);
                it.putExtra("text3",packages[i][4]);
                startActivity(it);
            }
        });
        btnGoToCart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(LabTestActivity.this,CartLabActivity.class));
            }
        });
    }
}
```

Lab Test Book Activity.java:

```
package com.example.hospitalproject;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
```

```
public class LabTestBookActivity extends AppCompatActivity {
    EditText edname,edaddress,edcontact,edpincode;
    Button btnBooking;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_lab_test_book_acitivity);
        edname=findViewById(R.id.editTextLTBFullname);
        edaddress=findViewById(R.id.editTextLTBAddress);
        edcontact=findViewById(R.id.editTextLTBContact);
        edpincode=findViewById(R.id.editTextLTBPincode);
        btnBooking=findViewById(R.id.buttonLTBBooking);
        Intent intent=getIntent();
Stringprice[]=intent.getStringExtra("price").toString().split(java.util.regex.Pattern.quote(":"));
        String date=intent.getStringExtra("date");
        String time= intent.getStringExtra("time");
        btnBooking.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                SharedPreferences sharedPreferences=getSharedPreferences("shared_prefers",
Context.MODE_PRIVATE);
                String username=sharedPreferences.getString("username","").toString();
                Database db=new Database(getApplicationContext(),"healthcare",null,1);
db.addOrder(username,edname.getText().toString(),edaddress.getText().toString(),edcontact.
getText().toString(),Integer.parseInt(edpincode.getText().toString()),date.toString(),time.toStr
ing(),Float.parseFloat(price[1].toString()),"lab");
                db.removeCart(username,"lab");
                Toast.makeText(getApplicationContext(),"Your Booking is Done
Successfully",Toast.LENGTH_SHORT).show();
                startActivity(new Intent(LabTestBookActivity.this, HomeActivity.class));
            }
        });
    }
}
```

Buy Medicine Activity.java:

```
package com.example.hospitalproject;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.ListView;
import android.widget.SimpleAdapter;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
import java.util.ArrayList;
import java.util.HashMap;
public class BuyMedicineActivity extends AppCompatActivity {
  private String[][] packages=
        {
              {"Uprise-03 1000IU Capsule"," "," "," ","50"},
              {"HealthVit Chromium Picolinate 200mcg capsule"," ","","","305"},
              {"Vitamin B Complex Capsules","","","","448"},
              {"Inlife Vitamin E Wheat Germ Oil Capsule","","","","539"},
              {"Dolo 650 Tablet","","","","30"},
              {"Crocin 650 Advance Tablet","","","","50"},
              {"Strepsils Modicated Lozenges for Sore Throat","","","","40"},
              {"Tata 1mg Calcium + Vitamin D3","","","","30"},
              {"Feronia -XT Tablet","","","","130"},
        };
   private String[] package_details={
         "Building and keeping the bones & teeth strong\n"+
               "Reducing Fatigue/stress and muscular pains\n"+
               "Boosting immunity and increasing resistance against infection",
         "Chromium is an essential trace mineral that plays an important role in helping insulin
regulat",
```

```
        "Provides relief from vitamin B deficiencies\n"+
            "Helps in formation of red blood cells\n" +
            "Maintains healthy nervous system",
        "It promotes health as well as skin benefit.\n"+
            "It act as safeguard the skin from the harsh UVA and UVB sun rays.",
        "Dolo 650 Tablet helps relieve pain and fever by blocking the release of certain
chemical message responsible for fever and pain.",
        "Helps relieve fever and bring down a high temperature\n"+
            "Suitable for people with a heart condition or high blood pressure",
        "Provides a warm and conforming feeling during sore throat infection and soothes the
recovery process\n"+
        "Reduce the risk of calcium deficiency, Rickets, and Osteoporosis\n"+
            "Promotes mobility and flexibility of joints",
        "Helps to reduce the iron deficiency due to chronic  blood loss or low intake of iron"
    };
    HashMap<String,String> item;
    ArrayList list;
    SimpleAdapter sa;
    ListView lst;
    Button btnBack,btnGoToCart;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_buy_medicine);
        lst=findViewById(R.id.listViewBM);
        btnBack=findViewById(R.id.buttonBMBack);
        btnGoToCart=findViewById(R.id.buttonBMGoToCart);
        btnGoToCart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(BuyMedicineActivity.this,
CartBuyMedicineActivity.class));
            }
        });
```

```
        btnBack.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(BuyMedicineActivity.this, HomeActivity.class));
            }
        });
        list=new ArrayList();
        for(int i=0;i< packages.length;i++){
            item=new HashMap<String,String>();
            item.put("line1",packages[i][0]);
            item.put("line2",packages[i][1]);
            item.put("line3",packages[i][2]);
            item.put("line4",packages[i][3]);
            item.put("line5","Total Cost:"+ packages[i][4]+"/-");
            list.add(item);
        }
        sa=new SimpleAdapter(this,list,
                R.layout.multi_lines,new String[]{"line1", "line2", "line3", "line4", "line5"},
                new int[]{R.id.line_a, R.id.line_b, R.id.line_c, R.id.line_d, R.id.line_e});
        lst.setAdapter(sa);
        lst.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
                Intent it=new Intent(BuyMedicineActivity.this,BuyMedicineDetailsActivity.class);
                it.putExtra("text1",packages[i][0]);
                it.putExtra("text2",package_details[i]);
                it.putExtra("text3",packages[i][4]);
                startActivity(it);
            }
        });
    }
}
```

Buy Medicine Book Activity.java:

```
package com.example.hospitalproject;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
public class BuyMedicineBookActivity extends AppCompatActivity {
    EditText edBname,edBaddress,edBcontact,edBpincode;
    Button btnBMBooking;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_buy_medicine_book);
        edBname=findViewById(R.id.editTextBMBFullname);
        edBaddress=findViewById(R.id.editTextBMBPAddress);
        edBcontact=findViewById(R.id.editTextBMBContact);
        edBpincode=findViewById(R.id.editTextBMBPincode);
        btnBMBooking=findViewById(R.id.buttonBMBBooking);
        Intent intent=getIntent();
String
price[]=intent.getStringExtra("price").toString().split(java.util.regex.Pattern.quote(":"));
        String date=intent.getStringExtra("date");
        //String time= intent.getStringExtra("time");

        btnBMBooking.setOnClickListener(new View.OnClickListener() {
            @Override
```

```
        public void onClick(View view) {
            SharedPreferences sharedPreferences=getSharedPreferences("shared_prefers",
Context.MODE_PRIVATE);
            String username=sharedPreferences.getString("username","").toString();
            Database db = new Database(getApplicationContext(),"healthcare",null,1);
db.addOrder(username,edBname.getText().toString(),edBaddress.getText().toString(),edBcon
tact.getText().toString(),Integer.parseInt(edBpincode.getText().toString()),date.toString(),"",F
loat.parseFloat(price[1].toString()),"medicine");
            db.removeCart(username,"medicine");
            Toast.makeText(getApplicationContext(),"Your Booking is Done
Successfully",Toast.LENGTH_SHORT).show();
            startActivity(new Intent(BuyMedicineBookActivity.this, HomeActivity.class));
        }
    });
  }
}
```

Buy Medicine Details activity.Java

```
package com.example.hospitalproject;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
public class BuyMedicineDetailsActivity extends AppCompatActivity {
TextView tvPackageName,tvTotalCost;
EditText edDetails;
Button btnBack,btnAddToCart;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_buy_medicine_details);
    tvPackageName=findViewById(R.id.textViewBMDPackageName);
    edDetails=findViewById(R.id.editTextTextBMDMultiline);
```

```
        edDetails.setKeyListener(null);
        tvTotalCost=findViewById(R.id.textViewBMDTotalCost);
        btnBack=findViewById(R.id.buttonBMDBack);
        btnAddToCart=findViewById(R.id.buttonBMDAddToCart);
        Intent intent = getIntent();
        tvPackageName.setText(intent.getStringExtra("text1"));
        edDetails.setText(intent.getStringExtra("text2"));
        tvTotalCost.setText("Total Cost" + intent.getStringExtra("text3") + "/-");
        btnBack.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(BuyMedicineDetailsActivity.this,
BuyMedicineActivity.class));
            }
        });

        btnAddToCart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                SharedPreferences sharedPreferences=getSharedPreferences("shared_prefers",
Context.MODE_PRIVATE);
                String username=sharedPreferences.getString("username","").toString();
                String product=tvPackageName.getText().toString();
                float price=Float.parseFloat(intent.getStringExtra("text3").toString());

                Database db=new Database(getApplicationContext(),"healthcare",null,1);

                if(db.checkCart(username,product)==1){
                    Toast.makeText(getApplicationContext(),"Product Alredy
Added",Toast.LENGTH_SHORT).show();
                }else{
                    db.addCart(username,product,price,"medicine");
                    Toast.makeText(getApplicationContext(),"Record Inserted to
Cart",Toast.LENGTH_SHORT).show();
                    startActivity(new Intent(BuyMedicineDetailsActivity.this,
BuyMedicineActivity.class));
                }
            }
        });
    }
}
```

5.1.2 Sample Coding:

Home Page:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/back2"
    tools:context=".HomeActivity">
<TextView
    android:id="@+id/titleHome"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="24X7 HealthCare"
    android:textColor="#fff"
    android:textSize="30sp"
    android:textStyle="bold"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="12dp"
    android:layout_margin="12dp"/>
<GridLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_below="@+id/titleHome"
    android:layout_margin="20dp"
    android:columnCount="2"
    android:rowCount="3" >
    <androidx.cardview.widget.CardView
        android:id="@+id/cardLabTest"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="0"
        android:layout_column="0"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/teal_200"
        app:cardCornerRadius="8dp"
        app:cardElevation="8dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical|center_horizontal"
            android:gravity="center"
            android:orientation="vertical">
            <ImageView
                android:layout_width="100dp"
                android:layout_height="70dp"
                android:src="@drawable/home"/>
```

```
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="LAB TEST"
                android:textAlignment="center"
                android:textColor="@color/design_default_color_error"
                android:textStyle="bold"/>
        </LinearLayout>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:id="@+id/cardBuyMedicine"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="0"
        android:layout_column="1"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/teal_200"
        app:cardCornerRadius="8dp"
        app:cardElevation="8dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical|center_horizontal"
            android:gravity="center"
            android:orientation="vertical">
            <ImageView
                android:layout_width="100dp"
                android:layout_height="70dp"
                android:src="@drawable/language"/>
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="BUY MEDICINE"
                android:textAlignment="center"
                android:textColor="@color/design_default_color_error"
                android:textStyle="bold"/>
        </LinearLayout>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:id="@+id/cardFindDoctor"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="1"
        android:layout_column="0"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
```

```
    app:cardBackgroundColor="@color/teal_200"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
  <LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center_vertical|center_horizontal"
    android:gravity="center"
    android:orientation="vertical">
    <ImageView
      android:layout_width="100dp"
      android:layout_height="70dp"
      android:src="@drawable/chat" />
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="FIND DOCTOR"
    android:textAlignment="center"
    android:textColor="@color/design_default_color_error"
    android:textStyle="bold"/>
  </LinearLayout>
  </androidx.cardview.widget.CardView>
  <androidx.cardview.widget.CardView
    android:id="@+id/cardHealthDoctor"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="1"
    android:layout_column="1"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/teal_200"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_gravity="center_vertical|center_horizontal"
      android:gravity="center"
      android:orientation="vertical">
      <ImageView
        android:layout_width="100dp"
        android:layout_height="70dp"
        android:src="@drawable/calendar" />
      <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="HEALTH ARTICLES"
```

```
            android:textAlignment="center"
            android:textColor="@color/design_default_color_error"
            android:textStyle="bold"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>

<androidx.cardview.widget.CardView
    android:id="@+id/cardOrderDetails"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="2"
    android:layout_column="0"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/teal_200"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical|center_horizontal"
        android:gravity="center"
        android:orientation="vertical">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
            android:src="@drawable/widget"/>
        <TextView
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:text="ORDERDETAILS"
            android:textAlignment="center"
            android:textColor="@color/design_default_color_error"
            android:textStyle="bold" />
    </LinearLayout>
</androidx.cardview.widget.CardView>

<androidx.cardview.widget.CardView
    android:id="@+id/cardExit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="2"
    android:layout_column="1"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/teal_200"
    app:cardCornerRadius="8dp"
```

```
        app:cardElevation="8dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical|center_horizontal"
            android:gravity="center"
            android:orientation="vertical">
            <ImageView
                android:layout_width="100dp"
                android:layout_height="70dp"
                android:src="@drawable/info"/>
            <TextView
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:text="LOGOUT"
                android:textAlignment="center"
                android:textColor="@color/design_default_color_error"
                android:textStyle="bold"/>
        </LinearLayout>
    </androidx.cardview.widget.CardView>
</GridLayout>
</RelativeLayout>
```

Login Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".LoginActivity"
    android:background="@color/white">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="24X7 HealthCare"
        android:textAlignment="center"
        android:textColor="@color/purple_200"
        android:textSize="24sp"
```

```
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.457"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.02" />

<EditText
    android:id="@+id/editTextLoginUsername"
    android:layout_width="330dp"
    android:layout_height="43dp"
    android:layout_marginTop="32dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Enter UserName"
    android:inputType="text"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:textColorHint="#A1390808"
    android:textDirection="firstStrong"
    android:textIsSelectable="true"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView2" />
<TextView
   android:id="@+id/textView2"
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
   android:hint="Enter UserName"
   android:text="Login"
   android:textColor="#E91E63"
   android:textSize="34sp"
   android:textStyle="bold"
   app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.745"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView"
    app:layout_constraintVertical_bias="0.215" />
  <EditText
    android:id="@+id/editTextLoginPassword"
    android:layout_width="330dp"
    android:layout_height="43dp"
    android:layout_marginTop="36dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Enter Password"
    android:inputType="textPassword"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:text="Password"
    android:textAlignment="gravity"
    android:textColor="#9C200E0E"
    android:textColorHint="#94131312"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextLoginUsername" />
  <Button
    android:id="@+id/buttonLogin"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="32dp"
    android:background="@drawable/btn_bg"
    android:text="LOGIN"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.393"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextLoginPassword" />

  <TextView
    android:id="@+id/textViewNewUser"
    android:layout_width="291dp"
```

```
        android:layout_height="47dp"
        android:layout_marginTop="52dp"
        android:text="Register For New User"
        android:textColor="#2196F3"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.366"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/buttonLogin" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="142dp"
        android:layout_height="126dp"
        android:layout_marginBottom="56dp"
        app:layout_constraintBottom_toBottomOf="@id/textView2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.461"
        app:layout_constraintStart_toStartOf="parent"
        app:srcCompat="@drawable/hospitallogo" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Registration Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/back2"
    android:visibility="visible"
    tools:context=".RegisterActivity"
    tools:visibility="visible">
    <EditText
        android:id="@+id/editTextRegConfirmPassword"
        android:layout_width="330dp"
        android:layout_height="43dp"
        android:layout_marginTop="100dp"
        android:drawablePadding="10dp"
        android:ems="10"
```

```
    android:inputType="textPassword"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:text="Confirm Password"
    android:textAlignment="gravity"
    android:textColor="#9C200E0E"
    android:textColorHint="#94131312"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.506"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextAddress" />
<EditText
    android:id="@+id/editTextAddress"
    android:layout_width="330dp"
    android:layout_height="43dp"
    android:layout_marginTop="40dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Email"
    android:inputType="textEmailAddress"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:textColorHint="#A1390808"
    android:textDirection="firstStrong"
    android:textIsSelectable="true"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextRegUsername" />
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="24*7 Emergency services"
    android:textAlignment="center"
    android:textColor="@color/purple_200"
    android:textSize="34sp"
    android:textStyle="bold"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.023" />
  <EditText
    android:id="@+id/editTextRegUsername"
    android:layout_width="330dp"
    android:layout_height="43dp"
    android:layout_marginTop="112dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Enter UserName"
    android:inputType="text"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:textColorHint="#A1390808"
    android:textDirection="firstStrong"
    android:textIsSelectable="true"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.506"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView2" />
  <TextView
    android:id="@+id/textView2"
    android:layout_width="209dp"
    android:layout_height="46dp"
    android:text="Registration"
    android:textColor="#E91E63"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.801"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView"
    app:layout_constraintVertical_bias="0.048" />

  <EditText
    android:id="@+id/editTextRegPassword"
    android:layout_width="330dp"
```

```
    android:layout_height="43dp"
    android:layout_marginTop="104dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:inputType="textPassword"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:text="Password"
    android:textAlignment="viewStart"
    android:textColor="#9C200E0E"
    android:textColorHint="#94131312"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextRegUsername" />
<Button
    android:id="@+id/buttonRegister"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="35dp"
    android:background="@drawable/btn_bg"
    android:text="Register"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.428"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextRegConfirmPassword" />
<TextView
    android:id="@+id/textExistingUser"
    android:layout_width="291dp"
    android:layout_height="47dp"
    android:layout_marginTop="28dp"
    android:text="Already Have an Account?"
    android:textColor="#2196F3"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.408"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/buttonRegister" />
```

```
    <ImageView
        android:id="@+id/imageView"
        android:layout_width="91dp"
        android:layout_height="101dp"
        android:layout_marginTop="28dp"
        android:layout_marginBottom="4dp"
        app:layout_constraintBottom_toBottomOf="@id/textView2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.149"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        app:srcCompat="@drawable/hospitallogo" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Lab Test Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/back2"
    tools:context=".LabTestActivity">
    <TextView
        android:id="@+id/textViewLTName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="24*7 HealthCare"
        android:textColor="@color/purple_200"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.045" />
    <TextView
        android:id="@+id/textViewLTTitle1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Deliver Location:Nashik"
```

```
    android:textColor="@color/white"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.465"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textViewLTName"
    app:layout_constraintVertical_bias="0.0" />
<TextView
    android:id="@+id/textViewLTTitle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Lab Test and Packages"
    android:textColor="@color/yellowLight"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textViewLTName"
    app:layout_constraintVertical_bias="0.062" />
<ListView
    android:id="@+id/listViewLT"
    android:layout_width="350dp"
    android:layout_height="500dp"
    android:layout_margin="10dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="16dp"
    android:layout_marginEnd="16dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textViewLTTitle"
    app:layout_constraintVertical_bias="0.0">
</ListView>
<Button
    android:id="@+id/buttonLTBack"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="92dp"
    android:text="BACK"
```

```
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.816"
        app:layout_constraintStart_toStartOf="parent" />
    <Button
        android:id="@+id/buttonLTGoToCart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="92dp"
        android:text="GO TO CART"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.357"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Find Doctor Page:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/background"
    tools:context=".FindDoctorActivity">
    <TextView
        android:id="@+id/titleFindDoctor"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_margin="12dp"
        android:layout_marginTop="12dp"
        android:text="24/7 HealthCare"
        android:textColor="#fff"
        android:textSize="30sp"
        android:textStyle="bold" />
    <TextView
        android:id="@+id/titleFindDoctorTop"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Top Doctors"
        android:textColor="#fff777"
```

```
    android:textSize="20sp"
    android:textStyle="bold"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="12dp"
    android:layout_marginTop="56dp"
    android:layout_marginEnd="12dp"
    android:layout_marginBottom="12dp" />
<GridLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_below="@+id/titleFindDoctorTop"
    android:layout_margin="20dp"
    android:columnCount="2"
    android:rowCount="3" >
    <androidx.cardview.widget.CardView
        android:id="@+id/cardFDFamilyPhysician"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="0"
        android:layout_column="0"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/purpleDark"
        app:cardCornerRadius="8dp"
        app:cardElevation="8dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical|center_horizontal"
            android:gravity="center"
            android:orientation="vertical">
            <ImageView
                android:layout_width="100dp"
                android:layout_height="70dp"
                android:src="@drawable/family_physicians"/>
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="FAMILY PHYSICIANS"
                android:textAlignment="center"
                android:textColor="@color/yellowLight"
                android:textStyle="bold"/>
```

```
    </LinearLayout>
</androidx.cardview.widget.CardView>
<androidx.cardview.widget.CardView
    android:id="@+id/cardFDCardiologist"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="0"
    android:layout_column="1"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/purpleDark"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical|center_horizontal"
        android:gravity="center"
        android:orientation="vertical">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
            android:src="@drawable/cardiologists"/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="CARDIOLOGIST"
            android:textAlignment="center"
            android:textColor="@color/yellowLight"
            android:textStyle="bold"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<androidx.cardview.widget.CardView
    android:id="@+id/cardFDDietecian"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="1"
    android:layout_column="0"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/purpleDark"
```

```
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical|center_horizontal"
        android:gravity="center"
        android:orientation="vertical">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
            android:src="@drawable/dietician"/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="DIETECIAN"
            android:textAlignment="center"
            android:textColor="@color/yellowLight"
            android:textStyle="bold"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<androidx.cardview.widget.CardView
    android:id="@+id/cardFDOrthopedic"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="1"
    android:layout_column="1"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/purpleDark"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical|center_horizontal"
        android:gravity="center"
        android:orientation="vertical">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
```

```
            android:src="@drawable/orthopedic"/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="ORTHOPEDIC"
            android:textAlignment="center"
            android:textColor="@color/yellowLight"
            android:textStyle="bold"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<androidx.cardview.widget.CardView
    android:id="@+id/cardFDSurgeon"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="2"
    android:layout_column="0"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/purpleDark"
    app:cardCornerRadius="8dp"
    app:cardElevation="8dp"
    app:cardUseCompatPadding="true">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical|center_horizontal"
        android:gravity="center"
        android:orientation="vertical">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
            android:src="@drawable/surgeon"/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="GENERAL SURGEON"
            android:textAlignment="center"
            android:textColor="@color/yellowLight"
            android:textStyle="bold"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<androidx.cardview.widget.CardView
    android:id="@+id/CardFDBACK"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="2"
        android:layout_column="1"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/purpleDark"
        app:cardCornerRadius="8dp"
        app:cardElevation="8dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
          android:layout_width="wrap_content"
          android:layout_height="wrap_content"
          android:layout_gravity="center_vertical|center_horizontal"
          android:gravity="center"
          android:orientation="vertical">
          <ImageView
            android:layout_width="100dp"
            android:layout_height="70dp"
            android:src="@drawable/info"/>
          <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="BACK"
            android:textAlignment="center"
            android:textColor="@color/yellowLight"
            android:textStyle="bold"/>
        </LinearLayout>
      </androidx.cardview.widget.CardView>
  </GridLayout>
</RelativeLayout>
```

Order Details Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:id="@+id/main"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:background="@drawable/back1"
```

```
tools:context=".OrderDetailsActivity">
<TextView
    android:id="@+id/textView_logo3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="24*7 Healthcare"
    android:textColor="@color/purple_200"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.045"/>
<TextView
    android:id="@+id/textViewODTitle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="ORDER DETAILS"
    android:textColor="@color/white"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView_logo3"
    app:layout_constraintVertical_bias="0.01999998" />
<ListView
    android:id="@+id/listViewOD"
    android:layout_width="344dp"
    android:layout_height="523dp"
    android:layout_marginStart="-40dp"
    android:layout_marginTop="12dp"
    android:layout_marginEnd="-40dp"
    app:layout_constraintEnd_toEndOf="@+id/textViewODTitle"
    app:layout_constraintHorizontal_bias="0.51"
    app:layout_constraintStart_toStartOf="@+id/textViewODTitle"
    app:layout_constraintTop_toBottomOf="@+id/textViewODTitle" />
<Button
    android:id="@+id/buttonODBack"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="92dp"
    android:text="BACK"
```

```
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintVertical_bias="0.69"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Buy Medicine Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/back2"
    tools:context=".BuyMedicineActivity">
    <TextView
        android:id="@+id/textView_logo3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="24*7 Healthcare"
        android:textColor="@color/purple_200"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.01999998"/>
    <TextView
        android:id="@+id/textViewBMTitle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Deliver Location:PUNE"
        android:textColor="@color/white"
        android:textSize="16sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/textView_logo3"
        app:layout_constraintVertical_bias="0.01999998" />
```

```
<ListView
    android:id="@+id/listViewBM"
    android:layout_width="wrap_content"
    android:layout_height="47dp"
    android:layout_marginStart="-40dp"
    android:layout_marginTop="12dp"
    android:layout_marginEnd="-40dp"
    app:layout_constraintEnd_toEndOf="@+id/textViewBMTitle"
    app:layout_constraintHorizontal_bias="0.507"
    app:layout_constraintStart_toStartOf="@+id/textViewBMTitle"
    app:layout_constraintTop_toBottomOf="@+id/textViewBMTitle" />
<Button
    android:id="@+id/buttonBMBack"
    android:layout_width="wrap_content"
    android:layout_height="47dp"
    android:layout_marginBottom="16dp"
    android:text="BACK"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="@id/listViewBM"
    app:layout_constraintHorizontal_bias="0.947"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/listViewBM"
    app:layout_constraintVertical_bias="1.0"/>
<Button
    android:id="@+id/buttonBMGoToCart"
    android:layout_width="223dp"
    android:layout_height="47dp"
    android:layout_marginBottom="16dp"
    android:text="GO TO CART"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/buttonBMBack"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="@id/listViewBM"
    app:layout_constraintTop_toBottomOf="@id/listViewBM"
    app:layout_constraintVertical_bias="1.0"/>
<TextView
    android:id="@+id/textViewBM"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="BUY MEDICINE"
    android:textColor="@color/yellowLight"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="@id/listViewBM"
```

```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/textViewBMTitle"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Health Articles Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/back1"
    tools:context=".HealthArticlesActivity">
    <ListView
        android:id="@+id/listViewHA"
        android:layout_width="344dp"
        android:layout_height="523dp"
        android:layout_marginStart="-40dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="-40dp"
        app:layout_constraintEnd_toEndOf="@+id/textViewHATitle"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="@+id/textViewHATitle"
        app:layout_constraintTop_toBottomOf="@+id/textViewHATitle" />
    <TextView
        android:id="@+id/textViewHAName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="24*7 HealthCare"
        android:textColor="@color/purple_200"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.42"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.02" />
    <TextView
```

```
        android:id="@+id/textViewHATitle"
        android:layout_width="235dp"
        android:layout_height="32dp"
        android:layout_marginTop="12dp"
        android:text="Health Articles"
        android:textColor="@color/white"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.683"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textViewHAName"
        app:layout_constraintVertical_bias="0.0" />
    <Button
        android:id="@+id/buttonHABack"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="88dp"
        android:text="BACK"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.537"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Book Appointmnet Page:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/background"
    tools:context=".BookAppointmentActivity">
    <EditText
        android:id="@+id/editTextAppFees"
        android:layout_width="311dp"
        android:layout_height="76dp"
        android:layout_marginTop="28dp"
        android:drawablePadding="10dp"
        android:ems="10"
        android:inputType="text|number"
```

```
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:text="Fees"
    android:textAlignment="gravity"
    android:textColor="#9C200E0E"
    android:textColorHint="#94131312"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.384"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextAppContact" />
<EditText
    android:id="@+id/editTextAppAddress"
    android:layout_width="312dp"
    android:layout_height="62dp"
    android:layout_marginTop="20dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Address"
    android:inputType="textPostalAddress"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:textColorHint="#A1390808"
    android:textDirection="firstStrong"
    android:textIsSelectable="true"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.357"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/editTextAppFullname" />
<TextView
    android:id="@+id/textViewTitle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="24*7 HealthCare"
    android:textAlignment="center"
    android:textColor="@color/purple_200"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.313"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.0" />
  <EditText
    android:id="@+id/editTextAppFullname"
    android:layout_width="312dp"
    android:layout_height="65dp"
    android:layout_marginTop="32dp"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Enter Full Name"
    android:inputType="textPersonName"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="10dp"
    android:paddingBottom="10dp"
    android:textColorHint="#A1390808"
    android:textDirection="firstStrong"
    android:textIsSelectable="true"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.339"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textViewAppTitle" />
  <TextView
    android:id="@+id/textViewAppTitle"
    android:layout_width="209dp"
    android:layout_height="46dp"
    android:text="Book Appointment"
    android:textColor="#E91E63"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.323"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textViewTitle"
    app:layout_constraintVertical_bias="0.011" />
  <EditText
    android:id="@+id/editTextAppContact"
    android:layout_width="315dp"
    android:layout_height="73dp"
```

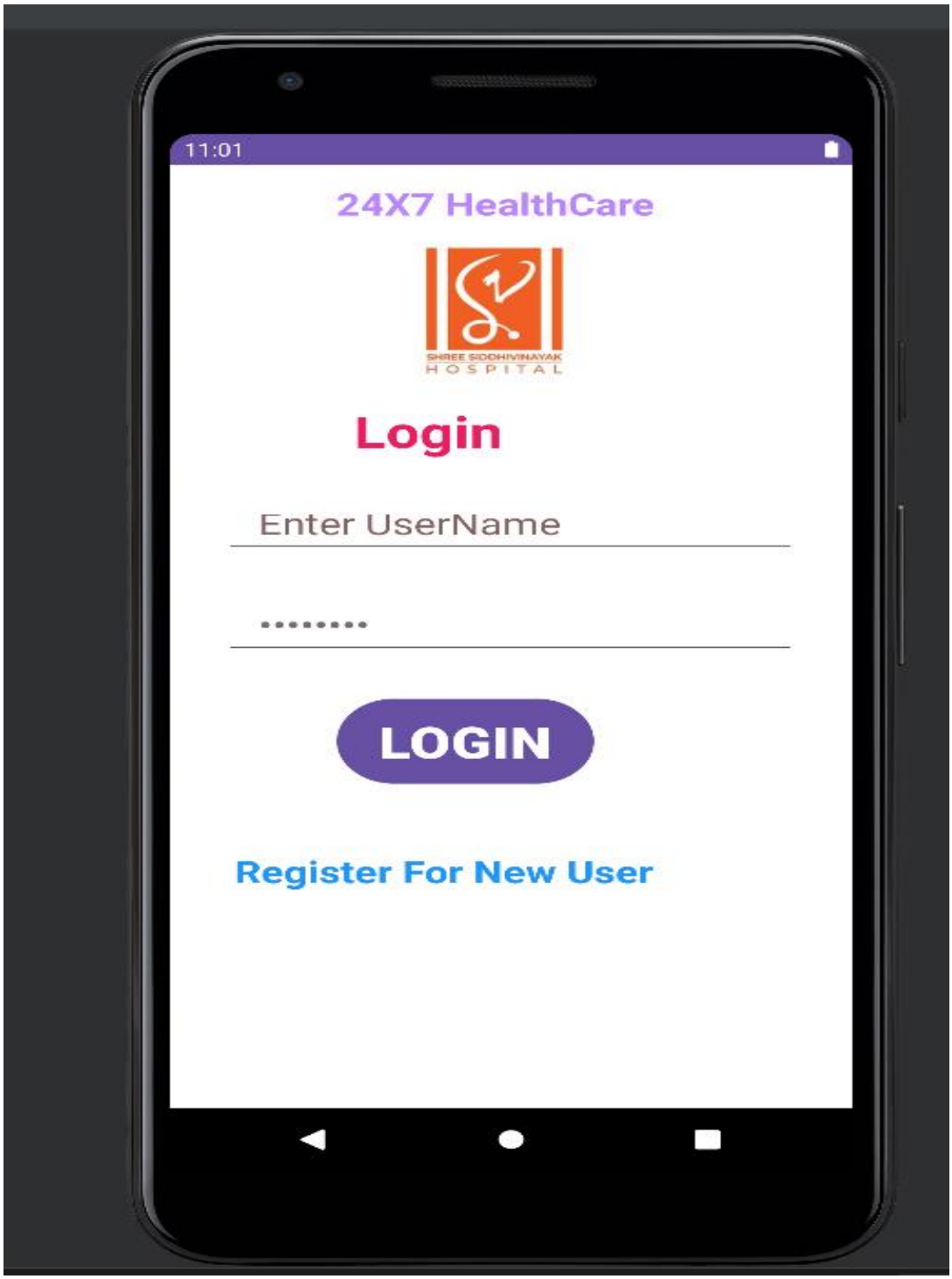
```
        android:layout_marginTop="24dp"
        android:drawablePadding="10dp"
        android:ems="10"
        android:inputType="text|number"
        android:paddingLeft="20dp"
        android:paddingTop="10dp"
        android:paddingRight="10dp"
        android:paddingBottom="10dp"
        android:text="Contact Number"
        android:textAlignment="viewStart"
        android:textColor="#9C200E0E"
        android:textColorHint="#94131312"
        android:textSize="24sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.359"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/editTextAppAddress" />
    <Button
        android:id="@+id/buttonBookAppointment"
        android:layout_width="425dp"
        android:layout_height="72dp"
        android:layout_marginTop="180dp"
        android:background="@drawable/btn_bg"
        android:text="Book Appointment"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.369"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/editTextAppFees" />
    <Button
        android:id="@+id/buttonAppBack"
        android:layout_width="394dp"
        android:layout_height="64dp"
        android:layout_marginTop="104dp"
        android:background="@drawable/btn_bg"
        android:text="BACK"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.411"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/buttonAppTime" />
<TextView
```

```
        android:id="@+id/textView3"
        android:layout_width="207dp"
        android:layout_height="64dp"
        android:layout_marginTop="36dp"
        android:text="Select Date"
        android:textColor="@color/yellowLight"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.146"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextAppFees" />
    <Button
        android:id="@+id/buttonAppTime"
        style="?android:spinnerStyle"
        android:layout_width="176dp"
        android:layout_height="64dp"
        android:layout_marginTop="4dp"
        android:text="10:00"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.786"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView4" />
    <TextView
        android:id="@+id/textView4"
        android:layout_width="222dp"
        android:layout_height="60dp"
        android:layout_marginTop="36dp"
        android:text="Select Time"
        android:textColor="@color/yellowLight"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.807"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextAppFees" />
    <Button
        android:id="@+id/buttonAppDate"
        style="?android:spinnerStyle"
        android:layout_width="165dp"
        android:layout_height="52dp"
        android:layout_marginTop="20dp"
        android:text="21/04/2024"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.194"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView3" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

5.1.3 Sample Interfaces:

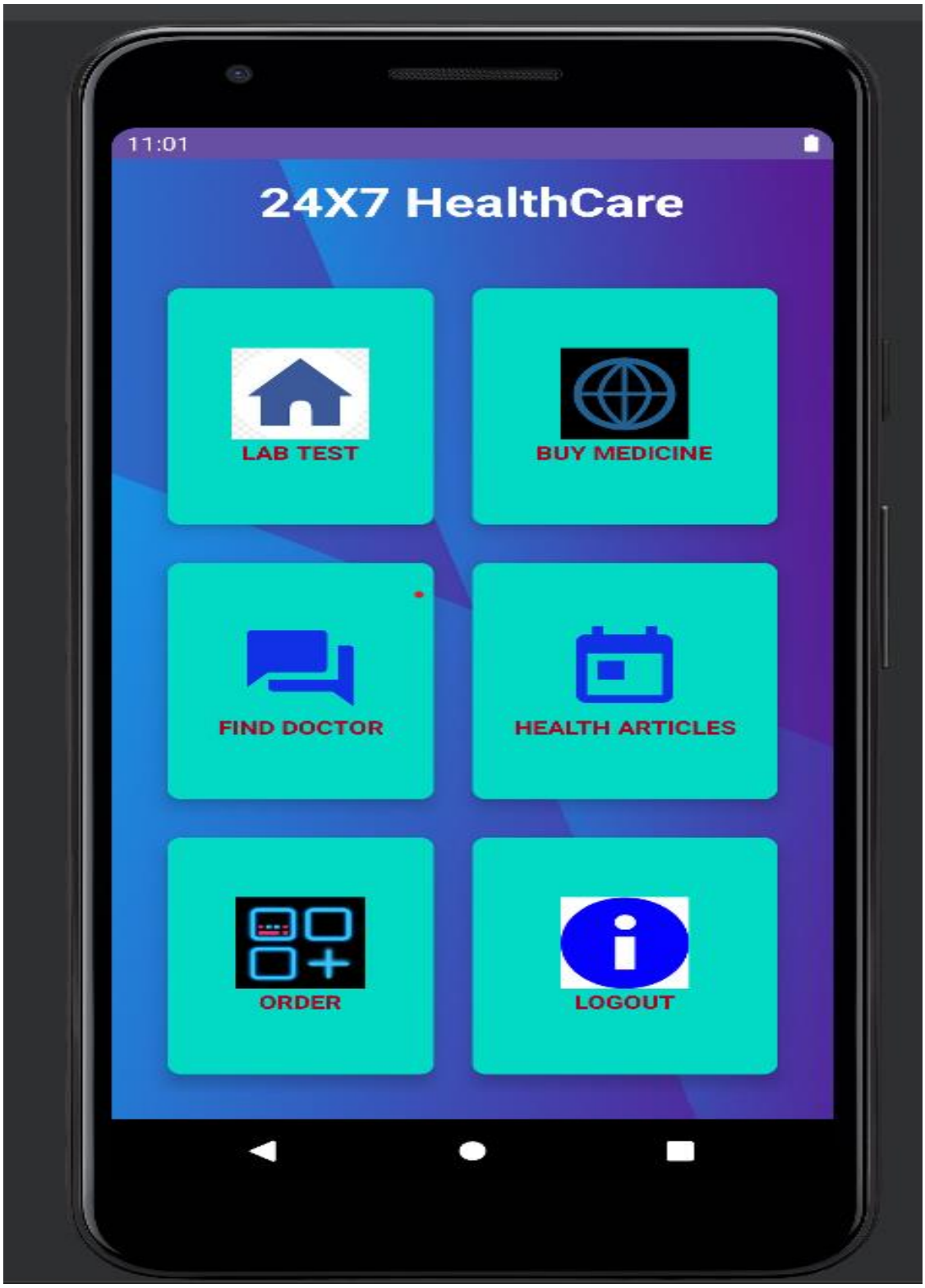
Front Page:

Login page (index page):

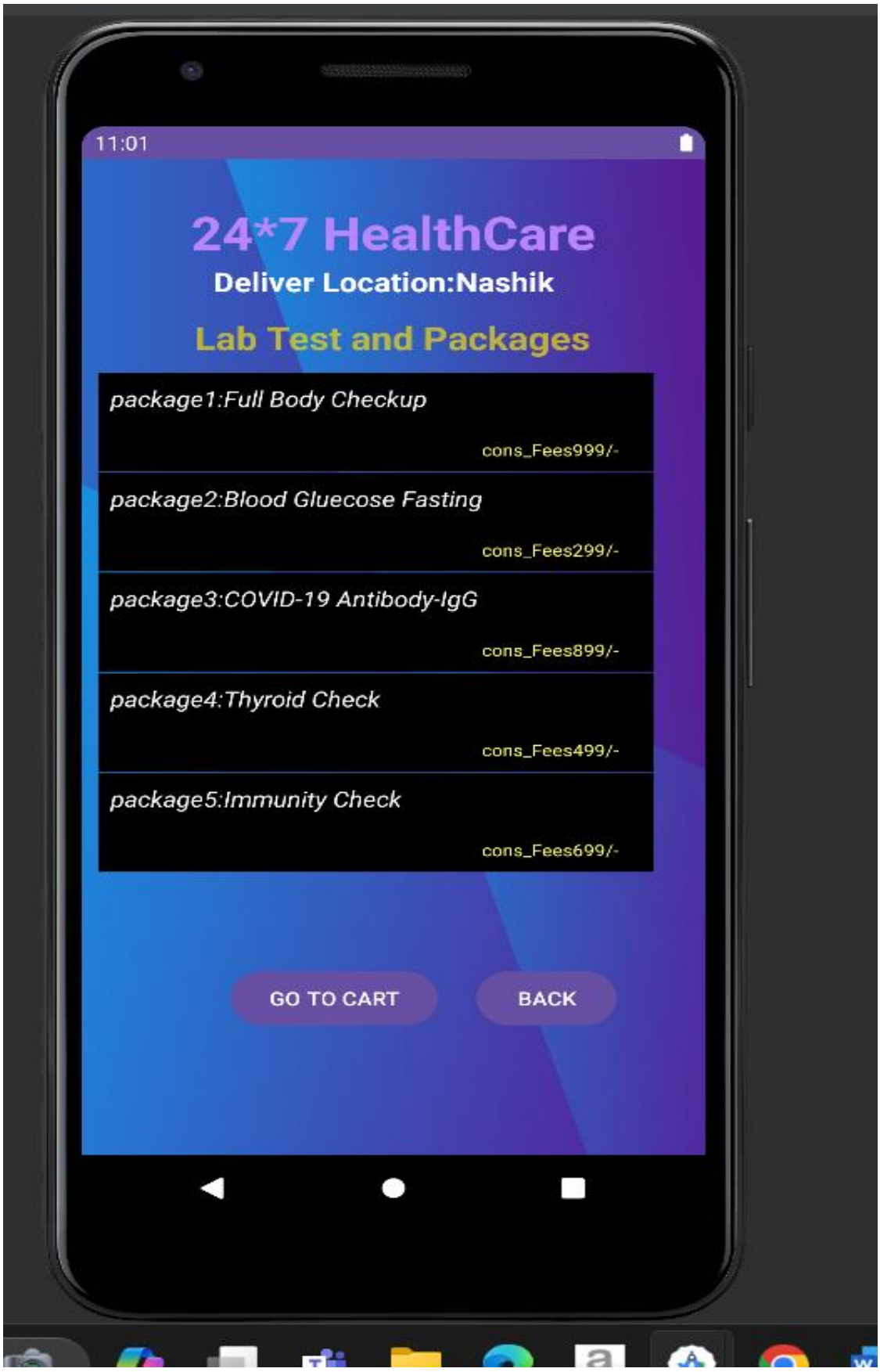


Registration Page

Home Page:

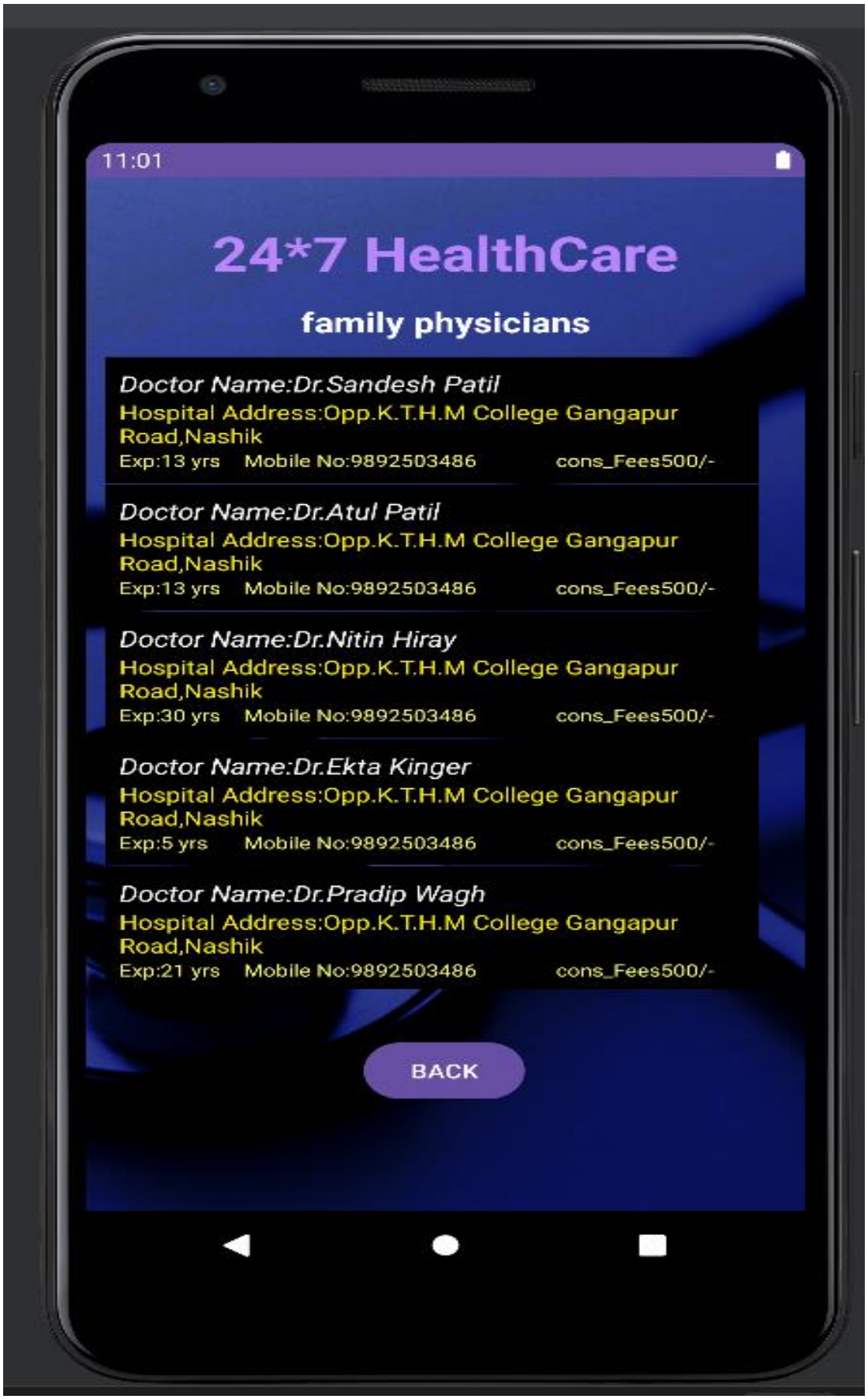

11:01
24X7 HealthCare
LAB TEST
BUY MEDICINE
FIND DOCTOR
HEALTH ARTICLES
ORDER
LOGOUT

Lab Test Page:

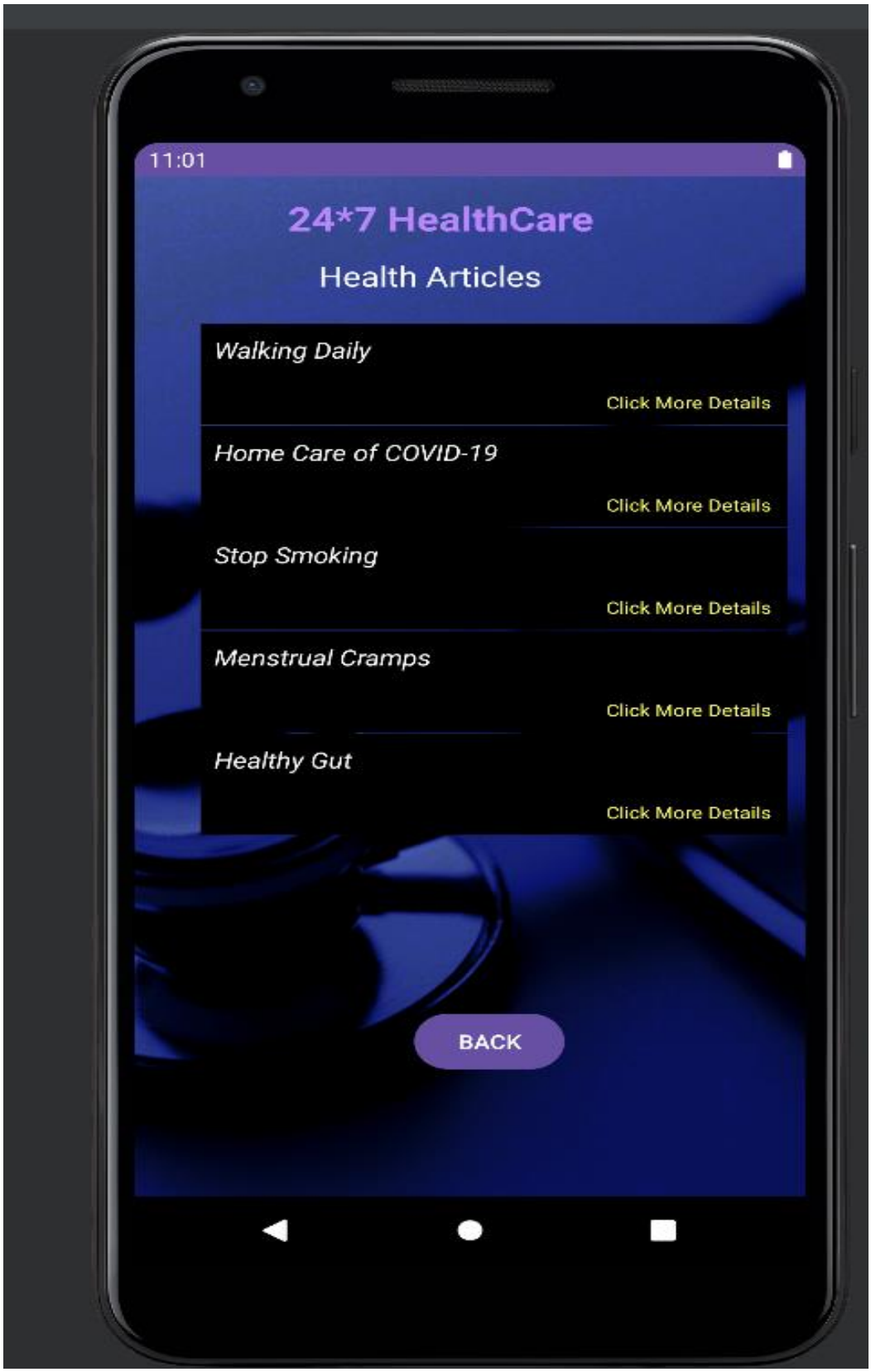


Find Doctor Page:

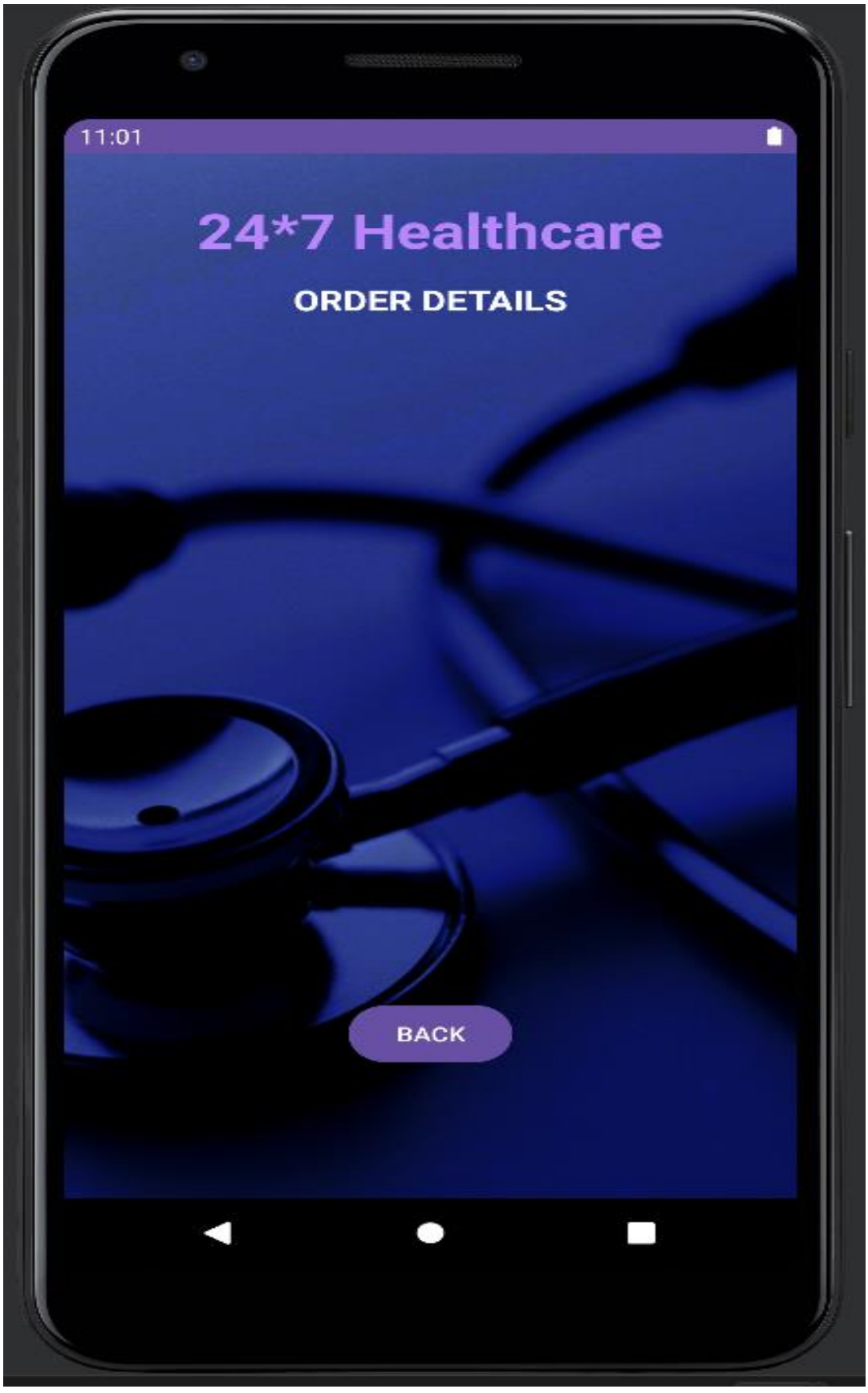
Family Physician page:



Health Articles Page:

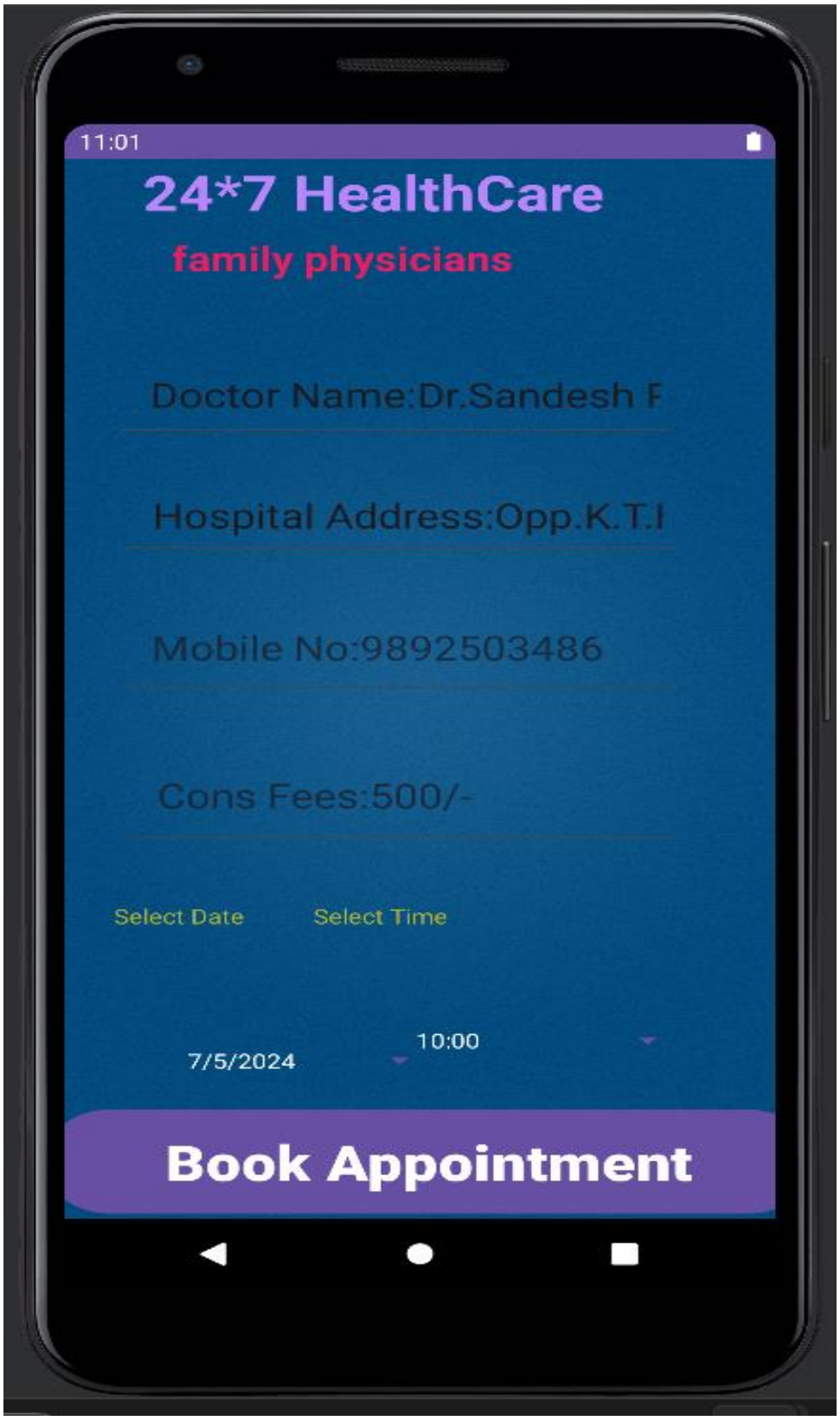


Order Details Page:

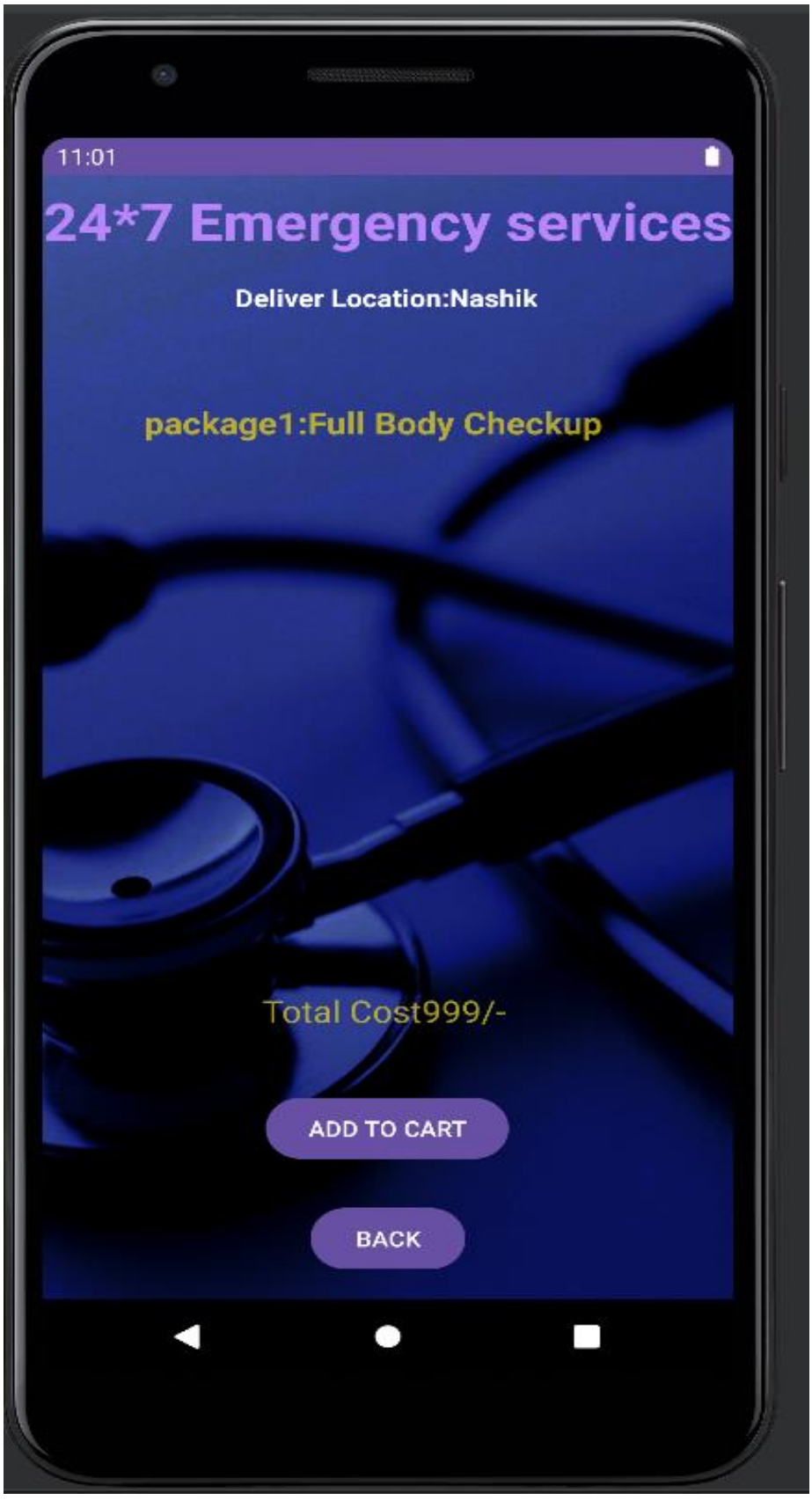


Chapter 6: Reports

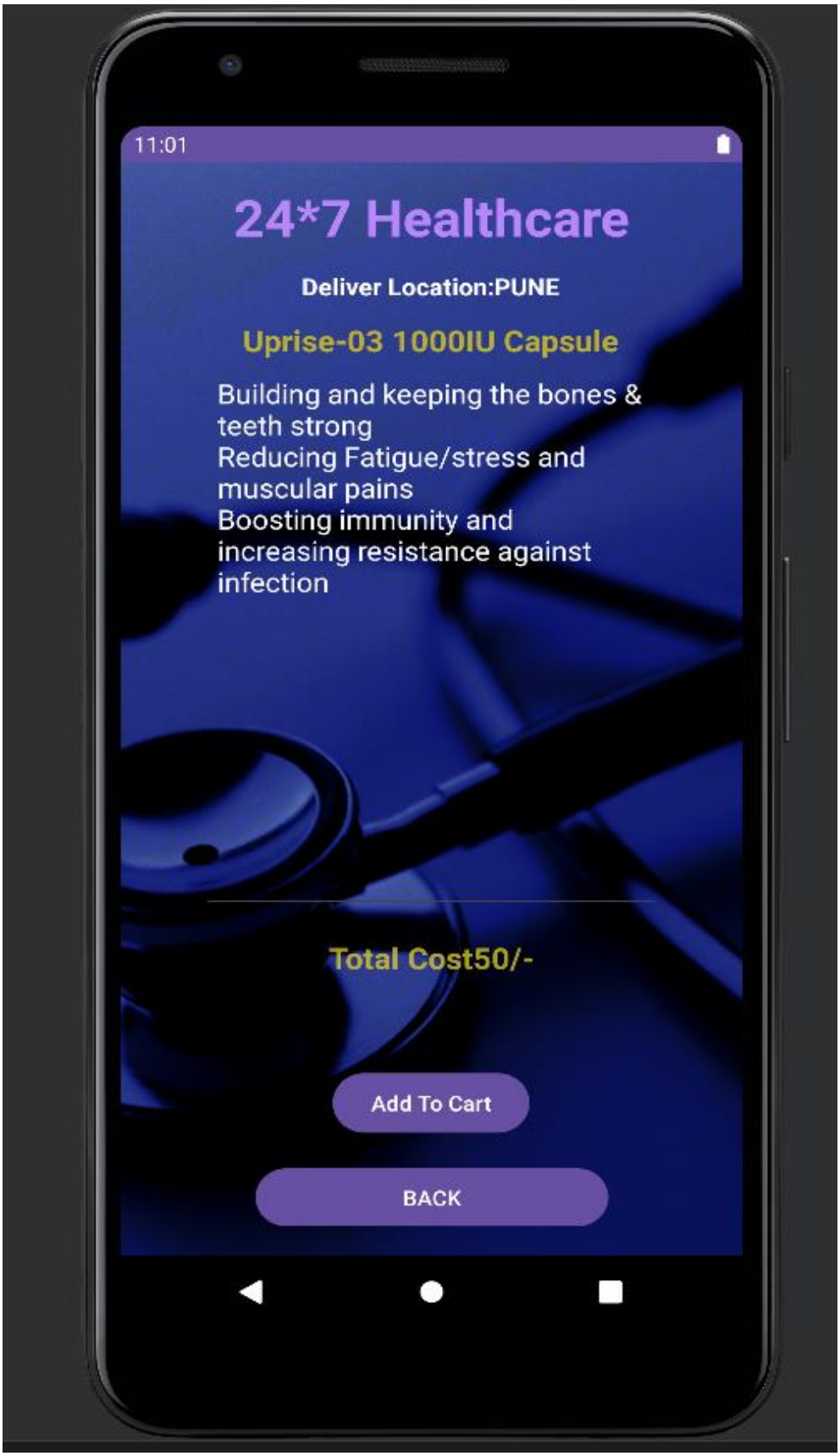
1. **Appointment Book Page:**



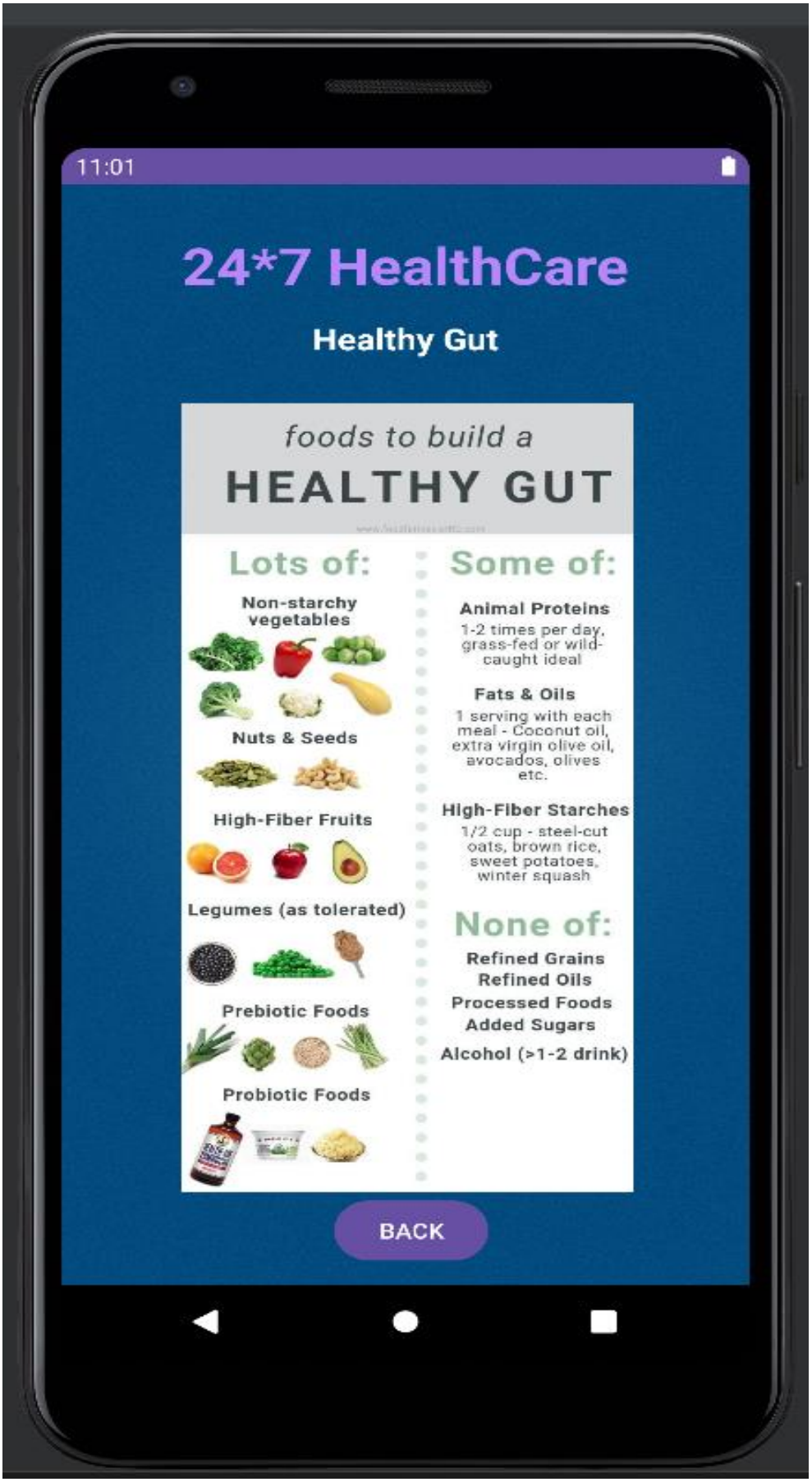
2. **Lab Test Cart Page:**



3.Buy Medicine Details Page:



Health Articles Details page:


11:01
24*7 HealthCare
Healthy Gut
foods to build a
HEALTHY GUT
Lots of:
Non-starchy vegetables
Nuts & Seeds
High-Fiber Fruits
Legumes (as tolerated)
Prebiotic Foods
Probiotic Foods
Some of:
Animal Proteins
1-2 times per day, grass-fed or wild-caught ideal
Fats & Oils
1 serving with each meal - Coconut oil, extra virgin olive oil, avocados, olives etc.
High-Fiber Starches
1/2 cup - steel-cut oats, brown rice, sweet potatoes, winter squash
None of:
Refined Grains
Refined Oils
Processed Foods
Added Sugars
Alcohol (>1-2 drink)
BACK

Order Details Page:

Chapter 7: Conclusion & Suggestions

7.1Conclusion

1.Positive Aspects:

Enhanced Efficiency: The Shree Siddhivinayak Hospital Android application significantly improves operational efficiency by automating various processes such as appointment scheduling, order management, and information dissemination.

Informed Decision-Making: Through comprehensive data analytics and reporting features, the application empowers hospital administrators and staff to make data-driven decisions, leading to improved resource allocation and service delivery.

Enhanced Patient Experience: With functionalities like online appointment booking and access to health articles, the application enhances the overall patient experience by providing convenience and valuable information.

Robust Support System: The inclusion of features such as help desk services and user guides ensures that users can easily navigate the application and receive prompt assistance when needed, contributing to high user satisfaction.

Scalability: The modular architecture of the application allows for seamless scalability, enabling the hospital to adapt and grow in response to changing requirements and increasing patient demand.

2.Negative Aspects:

Initial Implementation Challenges: The initial deployment and configuration of the application may pose challenges, particularly for hospitals with limited technical expertise or resources, requiring careful planning and investment.

Training Requirements: Hospital staff may require comprehensive training to fully utilize the features and functionalities of the application, which could entail additional costs and time commitments during the implementation phase.

7.2 Suggestions

1. **User Experience Enhancement:**

   Continuously gather user feedback for interface improvements.Optimize for mobile devices and ensure responsiveness.

2. **Integration and Innovation:**
   - Explore integrating with wearable health devices.
   - Incorporate telemedicine features for virtual consultations**.**

3. **Data Analytics and Security:**
   - Implement advanced analytics for insights.

Chapter 8: Future Enhancement

Future Enhancement

1. **Scalability:**
    - Design the system architecture to accommodate a larger user base without performance degradation.
2. **Mobile Optimization:**
    - Develop a mobile application or optimize the existing system for seamless usage on smartphones and tablets.
3. **Enhanced Security:**
    - Implement advanced security features to ensure secure data sharing and communication among users.
4. **Data Analytics:**
    - Integrate analytics tools to analyze patient data, trends, and performance metrics for informed decision-making.
5. **Collaboration Features:**
    - Incorporate collaboration tools to facilitate teamwork among hospital staff for efficient patient care.
6. **Customization Options:**
    - Allow users to customize the system interface, settings, and workflows according to their specific needs and preferences.
7. **Accessibility Improvements:**
    - Ensure accessibility features are integrated to accommodate users with disabilities, adhering to accessibility standards.

Chapter 9. Abbreviations

Abbreviations:

a) HMS: Hospital Management System

(b) SSH: Shree Siddhivinayak Hospital

(c) SSHA: Shree Siddhivinayak Hospital Application

Chapter 10. Concepts

Concepts

The concept of the Shree Siddhivinayak Hospital Application (SSHA) revolves around providing efficient management of hospital operations through a mobile application. This includes facilitating various functionalities to enhance patient care, streamline administrative tasks, and improve overall hospital efficiency.

1. Login Module a) Authentication and access control for users.
2. Registration Module a) User registration process for new users.
3. Lab Test Module a) Displaying multiple lab test packages. b) Adding tests to cart and placing orders.
4. Medicine Module a) Showing a list of available medicines. b) Adding medicines to cart and placing orders.
5. Find Doctor Module a) Searching for specialist doctors. b) Booking appointments with doctors.
6. Health Articles Module a) Providing informative articles on various health topics.
7. Order Details Module a) Displaying information about past orders.
8. Logout Module a) Ending the user session and logging out of the application.

Chapter 11. References

Books:

1. "Hospital Management Handbook" by Dr. Rahul Shinde.
2. "Financial Management in Healthcare" by Dr. Rajesh Deshmukh.

Workshops:

1. Workshop on Healthcare Management conducted by Dr. Sandesh Patil, Shree Siddhivinayak Hospital.
2. Seminar on Patient Care Strategies led by Dr. Sandesh Patil, Shree Siddhivinayak Hospital.

Websites:

1. **https://www.healthcaremanagement.com/blog/hospital-management-systems**
2. **https://www.who.int/health-topics/hospital-management**
3. **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5291593/**
4. **https://www.hindawi.com/journals/ahci/2020/8827923/**