GLOBAL HEALTH CARE APPLICATION

A project Report

Submitted in partial fulfilment of the Requirements for the award of the Degree of

MASTER OF SICENCE (INFORMATION TECHNLOGY) By

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DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

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CERTIFICATE

This is to certificate that the Project report submitted by Rajiv Rajkishor Singh Seat no. 1298 Under the guidance of Ms. Megha Sawant respectively Submitted in partial fulfilment of requirement for theaward of degree of **M.Sc Information Technology** from RAMNARAIN RUIA COLLEGE AUTONOMOUS COLLEGE

Subject In- Charge	Head of Department
Date-	Date-

Examiner Seal

Date

ACKNOWLEDGEMENT

The success and final outcome of this project required a lot of guidance and assistance from many people and I am extremely privileged to have got this all along the completion of my project. All that I have done is only due to such supervision and assistance and I would not forget to thank them.

I have taken this opportunity to thank all of them. First of all, I would like to thank **RAMNARAIN RUIA AUTONOMOUS COLLEGE** for giving me this opportunity to develop the project and put into practice all the knowledge that I have acquired over the years.

I owe my deep gratitude to our project guide **Ms. Megha Sawant** who took keen interest on our project work and guided us all along, till the completion of our project work by providing all the necessary information for developing a good system.

I am thankful to and fortunate enough to get constant encouragement, support and guidance from all My friends and parents which helped us in successfully completing our project work. Also, I would like to extend our sincere esteems to all staff in laboratory for their timely support.

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1. PREFACE

The patients facing problem like losing their prescription, and many more problem. For solving their problem, we are presenting the global med care Application which is use to helping a patient for their problems. This project contains many things relate to health care, hospitals, medical, and more. In this project the users getting many things like digital prescription providing by a respective Doctor, blood donation, medicine details, nearest doctors' details, and also chat box for contacting to their doctors, etc. This application is easy to use and user friendly and supported in any android devices and it's also reduce lot of paperwork.

This is a client/ server-side application and the server contain a large database for storing a data. For accessing their details, they have to login. And for login there is a dual verification for more security because of protecting the medical or personal details. In the donation part user can request for the blood, medicines, and any other help form this app. And it can also analyses the most common disease in your area. The results reveal that the system provides an easy and user-friendly interface for end-users.

2. PROJECT OVERVIEW

GLOBAL MED CARE APPLICATION project is developing in java platform. The main aim of this project is to implement an online application for maintaining a patient's information, drugs/medicines information, doctor's information, prescriptions details, donations request and receiving details, online delivery's in a single application. This system is a user friendly and coast efficiency for user. Using this application data is maintained in a database and a data retrieving and updating a prescription is easy process for a doctors and patients and old data/ prescription can be easily retrieved by patients. Doctors and patients can view this data from anywhere which will save time. This application is also useful for pharmacist to inquire about the drugs and update information about drugs to database.

3. INTRODUCTION

The project global med care application system is built for upgrading the health care system. In the world there is a many place where people don't have any medical supports like village area, mountain area and many more placeless they have to travel long distance for treatment. There is many NGOs who try to help but some time they also have trouble. The health care problems are growing day by day and people/patients have to spend lot of money for their checkup, because they don't have easy and free checkup. How many times they go for checkup they have to pay the fees of the doctors. If they lose their prescription then for their prescription they have again go to the same doctor and the doctor charge their fee. Its take lot of money and time. There is many such type of problem facing by the people/ patients.



This project contains lot of features which is easy to use and user friendly. Here is a user registration and doctor registration page which take personal details. There is a login option with dual verification which send a onetime password (OTP) to the users registered mobile number. And there is a many feature like digital prescriptions. Benefit of digital prescriptions it is easy to carry and patient can access prescriptions any were from the world and patients don't go to doctor again and again for their same prescription. If patient want to change a doctor another doctor

also asks for their old prescriptions. But some time patient loses their prescriptions so the new doctor has to treat from basic stage. That's why we try to provide digital prescription which is stored in user personal database and they can use the digital prescription and also for buying a medicine they don't have to use a paper. User can directly give a prescription number which is provided doctor or a QR code of prescription which is safe or easy to use because prescription is very important. There is a donation feature which is use to request for medicine and blood. User can also donate the medicines to NGO or a hospitalized patient for helping them. The user can also search for medicine/ drug details for bater knowledge about medicines and there uses. This project also performs disease analyses according to in the area.

The global med care system is powerful, flexible and easy to use and is designed and develop to real benefits to patients.

4. LITERATURE REVIEW

4.1 Clinical and Paraclinical Findings in Children with Congenital Hepatic Fibrosis: A Single Center 10-Year Study

Seyed Mohsen Dehghani; Amir Saeidi; Farzaneh Nejati; Iraj Shahramian; Ali Bazi; Ali Jangjou; Ali Derakhshan; Morteza Salarzaei; Fatemeh Parooie

Congenital hepatic fibrosis (CHF) is an autosomal hereditary disorder affecting the porto-biliary system. It is a rare hereditary disorder often presenting in childhood or adolescence with hepatomegaly, splenomegaly, and gastrointestinal bleeding. A timely diagnosis of organomegalies by sonography can prevent esophageal varices. Liver transplantation is now the only cure for CHF. The current study aimed to determine clinical and paraclinical findings in patients diagnosed with CHF from 2008 to 2017. Methods: This was a descriptive cross-sectional study of all children Results: Overall, 32 CHF patients were included during the study period. Of these, 12 (37.5%) and 20 (62.5%) were female and male, respectively. The most frequent clinical presentations at diagnosis were hepatomegaly (81%), splenomegaly (68%), gastrointestinal bleeding (43%), abdominal protrusion (40%), ascites (21%), and epistaxis (6%). Severely enlarged livers were observed in 2 patients. Only 5 patients showed a normal-sized spleen, and kidney sonographic findings were normal in 30 patients. Liver enzymes were not severely deviated from the normal range. There was a significant association between spleen size and esophageal varices (P = 0.01). Overall, 8 patients were liver transplanted due to decompensated cirrhosis. One patient developed bone marrow suppression secondary to the Epstein bar virus and ultimately succumbed to post-transplant lymphoproliferative disorder. In the study period, 2 girls and 2 boys died of disease complications.

4.2 Providing generic medicines to the poor in India:

Manoj Pareek1*, Dr. M. Prakash2

Out of Pocket expenditure on medicines constitutes more than 50% of healthcare expenditure in India. The poor are most affected as branded medicines are expensive and treatments involving the use of such medicines pushes them further into poverty. To address this issue government central government started Jan Aushadhi (Medicine for the masses) programme in 2008 with the objective of providing quality medicines at affordable prices. The programme envisaged the sale of generic medicines through stores to be called "Pradhan Mantri Janaushadhi Kendras" in various districts of the country. This paper seeks to examine and assess the successes and failures of the government initiatives so far, impact on the beneficiaries, challenges in execution and the way ahead.

4.3 Big Health Application System based on Health Internet of Things and Big Data

YUJUN MA, (Member, IEEE), YULEI WANG, JUN YANG, YIMING MIAO, AND WEI LI2

The world is facing problems, such as uneven distribution of medical resources, the growing chronic diseases, and the increasing medical expenses. Blending the latest information technology into the healthcare system will greatly mitigate the problems. This paper presents the big health application system based on the health Internet of Things and big data. The system architecture, key technologies, and typical applications of big health system are introduced in detail.

4.4 Internet of Things for Smart Healthcare: Technologies, Challenges, and Opportunities

Stephanie Baker, Wei Xiang, Senior Member, IEEE, and Ian Atkinson

Internet of Things (IoT) technology has attracted much attention in recent years for its potential to alleviate the strain on healthcare systems caused by an aging population and a rise in chronic illness. Standardization is a key issue limiting progress in this area, and thus this paper proposes a standard model for application in future Internet of Things health care systems. This survey paper then presents the state-of-the-art research relating to each area of the model, evaluating their strengths, weaknesses, and overall suitability for a wearable IoT healthcare system. Challenges that healthcare IoT faces including security, privacy, wear ability and low-power operation are presented, and recommendations are made for future research directions

4.4 E –Hospital Management & Hospital Information Systems – Changing Trends(IEEE)

Premkumar Balaraman, Kalpana Kosalram School of Management, SRM University, Vadapalani, Chennai 600026, INDIA

The rapid growth in Information & Communication Technology (ICT), and the power of Internet has strongly impacted the business and service delivery models of today's global environment. E-Hospital Management Systems provide the benefits of streamlined operations, enhanced administration & control, superior patient care, strict cost control and improved profitability. Globally accepted health care systems need to comply with Healthcare Insurance Portability and Accountability Act (HIPAA) standards of the US and that has become the norm of the Healthcare industry when it comes to medical records management and patient information

privacy. The study is focused on understanding the performance indicators of Hospital information systems (HIS), summarizing the latest commonly agreed standards and protocols like Health Level Seven (HL7) standards for mutual message exchange, HIS components, etc... The study is qualitative and descriptive in nature and most of the data is based on secondary sources of survey data. To arrive at a conclusive idea of the larger picture on E-Hospital Management and Hospital information systems, existing survey data and specific successful case studies of HIS are considered in the study. With so many customized versions of E – hospital management solutions (E – HMS) and Hospital Information systems (HIS) available in the market, a generic module wise version of E – Hospital management system is charted out to give a clear understanding for researchers and industry experts. From the specific successful case studies analyzed in the study, the success factors and challenges faced in successful E-HMS implementation are highlighted. Some of the mandatory standards like HIPAA are discussed in detail for clarity on Healthcare system implementation requirements.

4.5 considerations regarding hospital information systems

The use of computers in medicine dates back to the 1950s with studies that attempted to expand the mental capacity of physicians (Stumpf and Freitas, 1997) or dealt with research on electrophysiology (Collen, 1986). With the evolution of this equipment, especially with the capacity to simultaneously execute various tasks beginning in the 1960s, computers began to be used in the processing of information in large hospitals, in both administrative and financial functions for the collection of statistics and the development of research projects (Stead, 2007; Stumpf and Freitas, 1997). The use of microcomputers, beginning in the 1970s, introduced the concept of

distributed processing, increasing the number of systems in use in large hospitals (Stumpf and Freitas, 1997).

Because this diffusion did not always occur in an organized or homogeneous manner, the initial diffusion of computers in hospitals led to the emergence of islands of computerization, with isolated systems that lacked any form of interconnection and were developed by different teams. The redundancy and the lack of data integrity deterred health professionals, who saw these systems as developed by systems professionals for systems professionals (Stumpf and Freitas, 1997). This situation was also investigated by McDonald (1997), who analyzed the lack of interconnection of the different systems used by the hospitals, laboratories, and service providers in the healthcare field.

Collen (1986) described the development of approaches in the 1970s that sought to approximate the habitual processes of decision-making with the use of artificial intelligence in differential diagnoses. In the same decade, studies were undertaken in search of a better organization of the healthcare system (Kaihara, 1978). With the help of computer-processed simulations, the author established an ideal relationship between medical centers and population demands.

The distributed processing was expanded during the 1980s with the development and greater availability of microcomputers, and the possibility of network communication of such equipment increased in the 1990s (Stumpf and Freitas, 1997). This allowed for the emergence of hospital information systems (HIS), covering medical, administrative, and hospitality areas, although hospitality may be considered as integrated into the administrative area (Cortes, 2008).

4.6 A Systematic Review of Healthcare Applications for Smartphones (BMC)

US National Library of Medicine National Institutes of Health

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Background Advanced mobile communications and portable computation are now combined in handheld devices called "smartphones", which are also capable of running third-party software. The number of smartphone users is growing rapidly, including among healthcare professionals. The purpose of this study was to classify smartphone-based healthcare technologies as discussed in academic literature according to their functionalities, and summarize articles in each category.

Methods In April 2011, MEDLINE was searched to identify articles that discussed the design, development, evaluation, or use of smartphone-based software for healthcare professionals, medical or nursing students, or patients. A total of 55 articles discussing 83 applications were selected for this study from 2,894 articles initially obtained from the MEDLINE searches.

Results A total of 83 applications were documented: 57 applications for healthcare professionals focusing on disease diagnosis (21), drug reference (6), medical calculators (8), literature search (6), clinical communication (3), Hospital Information System (HIS) client applications (4), medical training (2) and general healthcare applications (7); 11 applications for medical or nursing students focusing on medical education; and 15 applications for patients focusing on disease

management with chronic illness (6), ENT-related (4), fall-related (3), and two other conditions (2). The disease diagnosis, drug reference, and medical calculator applications were reported as most useful by healthcare professionals and medical or nursing students.

4.7 Evaluating and selecting mobile health apps: strategies for healthcare providers and healthcare organizations

Edwin D Boudreaux, PhD, Molly E Waring, PhD, Rashelle B Hayes, PhD, Rajani S Sadasivam, PhD, 4Sean Mullen, PhD, 5Sherry Pagoto, PhD

Mobile applications (apps) to improve health are proliferating, but before healthcare providers or organizations can recommend an app to the patients they serve, they need to be confident the app will be user-friendly and helpful for the target disease or behavior. This paper summarizes seven strategies for evaluating and selecting health-related apps: (1) Review the scientific literature, (2) Search app clearinghouse websites, (3) Search app stores, (4) Review app descriptions, user ratings, and reviews, (5) Conduct a social media query within professional and, if available, patient networks, (6) Pilot the apps, and (7) Elicit feedback from patients. The paper concludes with an illustrative case example. Because of the enormous range of quality among apps, strategies for evaluating them will be necessary for adoption to occur in a way that aligns with core values in healthcare, such as the Hippocratic principles of nonmaleficence and beneficence.

5. RESEARCH METHODOLOGY

5.1 OBJECTIVE:

In the current existing system if the paper prescription is not maintained properly it leads to prescription errors and increases the chance of risk to patient. Many a times the patient medication record is taken lightly and due to interactions between different drugs many hypersensitivity reactions are experienced by patients and to avoid such type of errors while prescribing a medicine a patient's medication record plays a vital role in current situation.



Generation of digital prescription instead of paper prescription. All the prescription data which belong to specific person will be stored in our global cloud. This data will be accessible by authorized personalities. If the patient's visited to different doctor or try to change a doctor for treatment by entering the unique identification number all the data regarding patient medication record will be accessible and doctor will be able to treat the patient more effectively. And for helping different people we included a donation parts for requesting and donating the health supported materials like medicine, Med kits and all things. This is only for NOGs.

5.1.1 MOTIVATION

As the use of Android mobile phone is drastically increasing and the people have an easy access to it so from that we found an idea to make an application on Android phone that will assist people in a better way to focus on their health-related issues and also to maintain their health on a regular basis just on an Android phone.

5.1.2 PROBLEMS IN THE EXISTING SYSTEM

In the existing system, hospital executives will use either desktop or paper generated Work for creating reports, most of doctor take down a patient's information on paper. It is difficult to monitor the hospital performance and patients get a paper prescription. The patient's medication records are difficult to maintain on papers or files for a long period of time and are also difficult to present whenever necessary.

5.2 SCOPE OF THE PROJECT: -

- The user needs to register for accessing the app or user can also use Aadhar card number as a patient id.
- After registration system generate application number automatically or a user id number and user can also user there Aadhar card number.
- Doctor request for application or Aadhar card number for record.
- Information about patients and doctor is done by their personal details. Whenever the patient goes to doctor, they don't have to so prescription.
- Doctor can provide a patient id and by using patient id doctor can provide a digital prescription to patient.

- All the documents, prescriptions are stored in cloud. User can access the prescriptions any time and any were easily.
- Buying a medicines patient don't want to so a prescription to pharmacist they directly so the QR code or application ID.
- User can search a medicines details for more information and uses.
- There is a Donation option for helping a people or a NGOs.
- This app also analyzes the information of nearest doctors and show to a user.
- User can also contact with doctors any doctor for their personal appointment.
 And user can post their problem to help chat box where only doctors can provide a solution for their problem and then they can contact to each other for batter communications.

All this work is done by manually by the doctor or a user for this no paper work required. All is done once only then they don't have to wary about losing prescription and all. Patients can also set a reminder for reminding them to eat medicines. There is a possibility doctors get more client.

5.3 LIMITATIONS

There is some limitation of this Study:

- To store the data of large population into database it will require large number of cloud space.
- To keep the patents digital medication records confidential security system will be required.
- Its work on android platform.
- It required several permissions from android system.
- This project is for basic and introducing new system in Health care systems.
- It required good network of internet.

- Digital prescription will be edited by the only doctor.
- Patents will access only digital prescription and their information.
- Pharmacist Access only a prescription by using person UID (Unique Identity Number) or QR code (Quick Response Code).

5.4 SIGNIFICANCE OF RESEARCH

5.4.1 NUMBER OF SMARTPHONE USERS WORLDWIDE:

	Number of smartphones	Number of mobile phones
2020	3.5	4.8
2019	3.2	4.7
2018	2.9	4.6
2017	2.7	4.4
2016	2.5	4.3

How Many People Have Smartphones In The World?



3.50Billionsmartphone users in the world today



44.81% of people have smartphones today

According to Statista, the current number of smartphone users in the world today is 3.5 billion, and this means 44.81% of the world's population owns a smartphone. This figure is up considerably from 2016 when there were only 2.5 billion users, 33.58% of that year's global population.

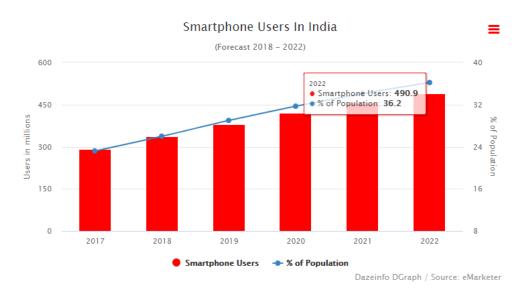


Figure: statistic of Smartphone uses in India

In our healthcare system the smart phone and different technology's playing an important role. There is a different Smart service provided by the Android application like fitness app, health app, medicals app, etc. application is available to make our life easy. In our M-healthcare industry there are over 1,65,000 health Apps in the ISO and Android app store.

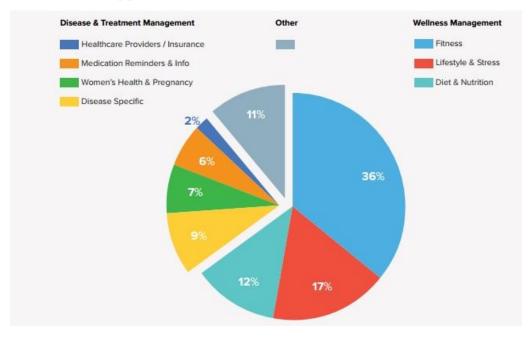


Figure: Report of finds more than 165,000 mobile health

54%

Of patients have shown a desire to take a more dramatic shift from regular office appointments toward mobile interactions 1/3

Of respondents have already used apps to communicate with their doctors and medical institutions in real time 62%

Of consumers do not trust healthcare providers with their personal information.

Figure no: healthcare apps statistics

5.4.2 RESEARCH ON PATIENT INFORMATION ON PRESCRIPTION:

In the study, all 100% prescription papers were found to be standard. Date of prescription was written for about 91.67% prescriptions. Two-thirds of prescriptions were found to have the targeted patient name to which the drug was prescribed. Even though, good prescribing practice was observed regarding sex 90.17%, age 88.6% and medical registration number 93.5%, significantly poor recording practices were observed in weight 2.50%, diagnosis 4.67% and address of patients 5.00% in this study (Figure 1).

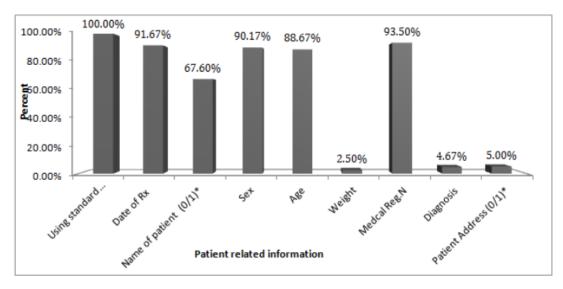


Figure No 1: Completeness of patient related information in prescriptions

Looking at all the drug related information and details, the name of the drug was written in all 100% prescriptions. More than 85% prescriptions had the dose of the drug 87.33%, route 85.67% and frequency 85.0% of administration. Almost three-fourth of prescription also contain the duration of treatment. Poor prescribing practice was observed in writing the dosage form of the drug 18.5% and the total quantity 35.34% to be taken during the course of treatment (Figure 2).

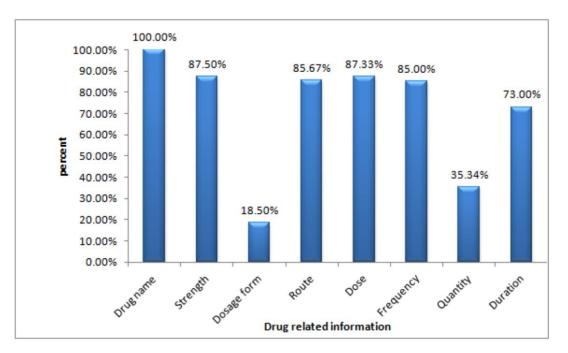
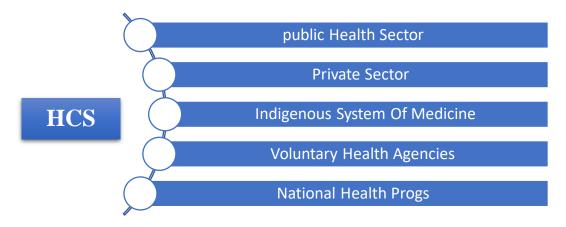


Figure 2: Drug information

5.4.3 HEALTH CARE PROBLEMS IN INDIA:

- Communicable disease problem:
- Nutrition problems.
- Environmental sanitation problem.
- Medical care problem.
- Population problems.
- Neglect of rural population
- Social Inequality.

5.4.4 HEALTH CARE SYSTEM IN INDIA:



From above research the conclusion the healthcare required a batter solution for improving the healthcare system to maintain a patient details and prescriptions and helping a village, mountain area peoples and poor peoples. According to Smartphone user most of the problem is solved. And make a life easy and healthy.

5.5 Description of Algorithms / procedures / data collection methods / logic

In this algorithm there is a three sections Doctor, patient/user and pharmacist (MEDIACL)

Algorithm for Doctor Section:

- Step 1: First Doctor have to create account for creating account they have to go Registration page.
- Step 2: If they already have account then they can dot to the logging page.
- Step 3: All the data will be stored in cloud or Database.
- Step 4: Doctor have to insert patient details and after diagnose.
- Step 5: For Creating a prescription doctor have to enter the date, patient name, age, and after Entering all data about patient then Doctors can able to create a Digital prescription.

Step 6: - Digital prescription have a doctor name, hospital address and patient basic information And Drugs name.

Step 7: - After inserting Doctor create a softcopy of prescription and share to patient using patient ID.

Step 8: - Finish.

Algorithm for Patients/Users:

Step 1: - First patient have to create a user account for creating patient have to fill all personal details then patient able to login.

Step 2: -If patient already have account then they can directly go to the login page.

Step 3: All the data entered by patient will be stored in cloud data base.

Step 4: - The Generated Digital prescription by Doctor will be visible in prescription page.

Step 5: - The Prescription will be use any were form the country.

Step 6: -Patient can also check for the generic drugs by clicking on drugs details.

Step 7: -In donation part there is two section Donate to NGOs or Donate Blood. IF user go to NGO then they can Donate anything related to medicines or Health kits.

Step 8: - If patient go to the Blood donation section then person/user can request for blood. If any blood donation camp is conducted then person get a camp details and the person can go and donate a blood.

Step 9: -User can logout.

Step 10: - Finish.

6. EXPERIMENTAL SETUP

6.1 TOOLS:

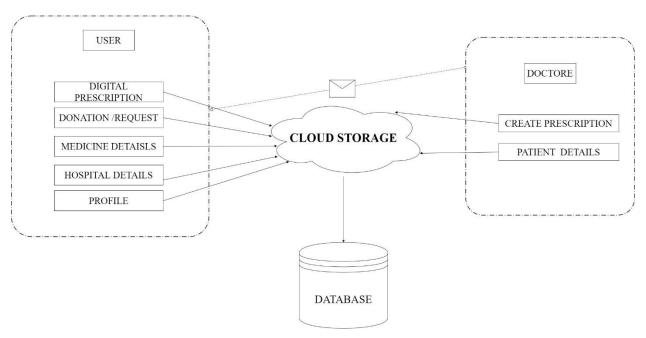
6.1.1 SOFTWARE REQUIREMENT:

- Windows 8,10 64bit
- Android studio
- JDK/SDK
- Noxplayer emulator

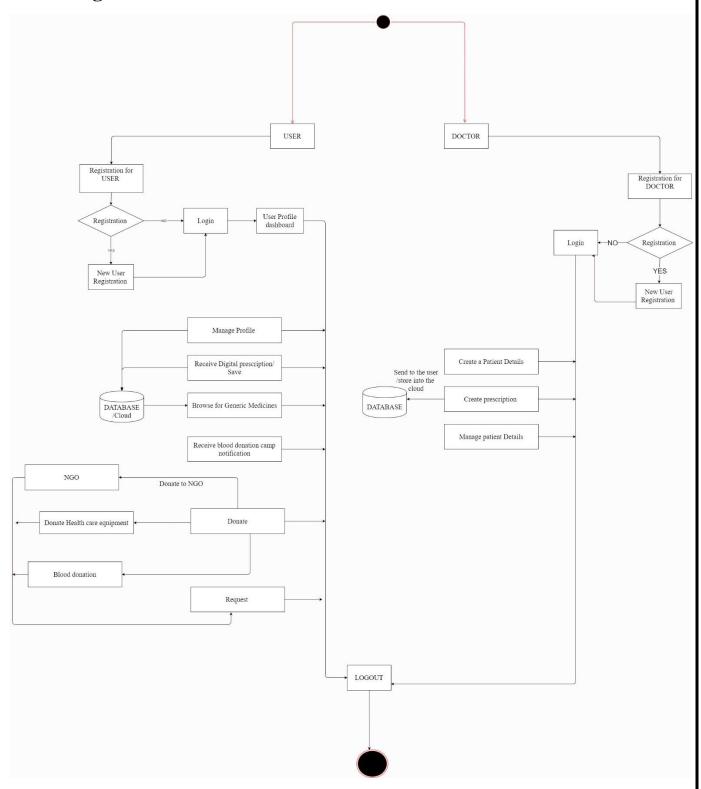
6.1.2 HARDWARE REQUIREMENT:

- Intel Core i58th gen
- 8 gigabyte ram DDR4
- 500 gigabyte Hard disk

6.2 ARCHITECTURES

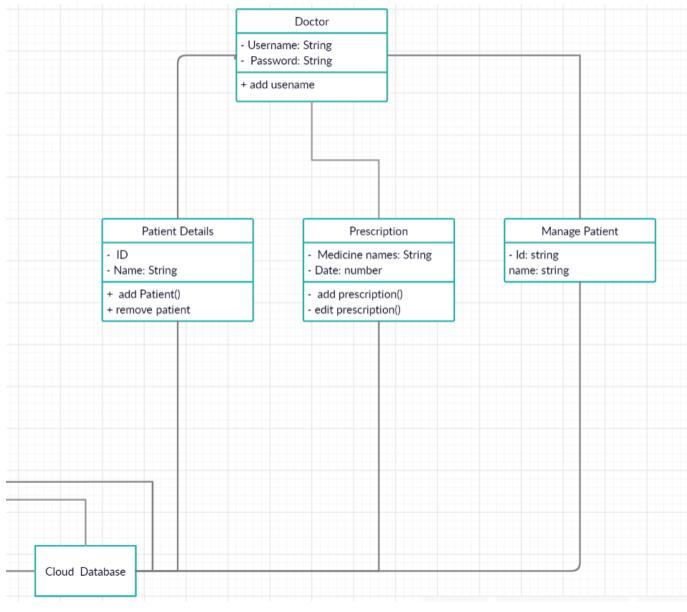


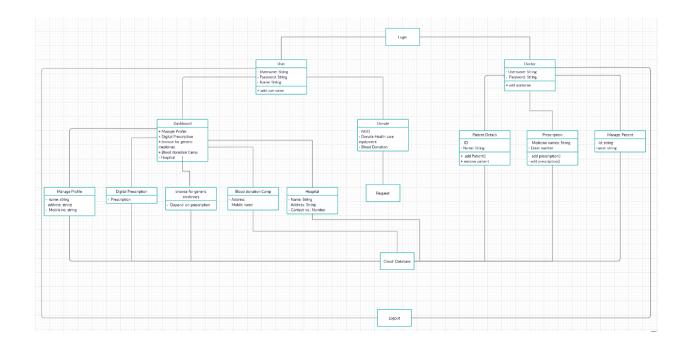
Flow Diagram:



Class Diagram for User: - Username: String Password: String Name: String + add username Dashboard + Manage Profile Donate + Digital Prescription - NGO + browse for generic - Donate Health care medicines equipment + Blood donation Camp - Blood Donation - Hospital Manage Profile Digital Prescription Blood donation Camp Hospital browse for generic Request medicines - Prescription Address name: string Name: String Depend on prescription - Mobile name address: string Address: String Mobile no: string Contact no.: Number Cloud Database

Class Diagram for Doctor:





Software Language:

Here we are using Java for developing the android application because Java is an official language of Android development and is supported by Android Studio. It has been an official language longer than Kotlin, and it is also popular outside of Kotlin development for many other purposes. Java and Android Studio have a steep learning curve, however.

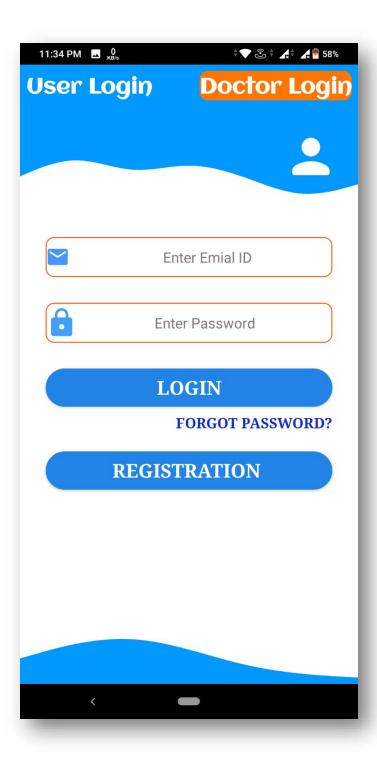
7. Results

Screen Layout:

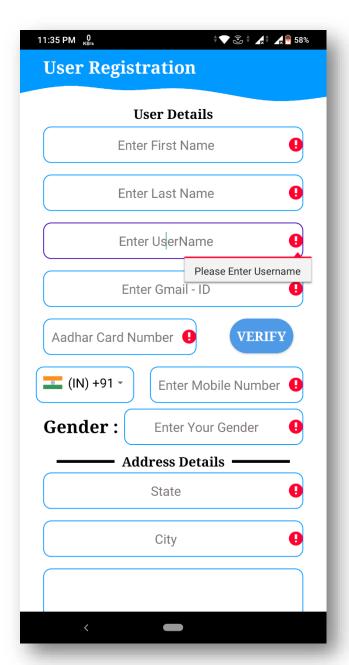
Welcome Screen

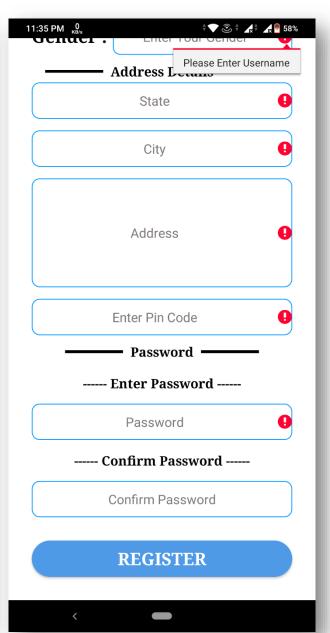


User Login

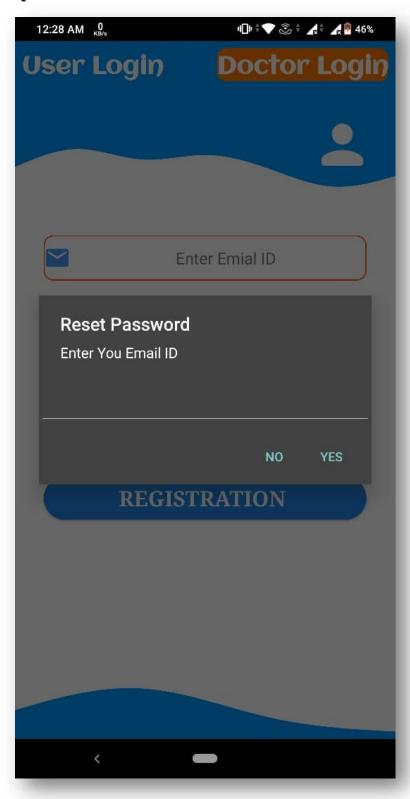


User Registration

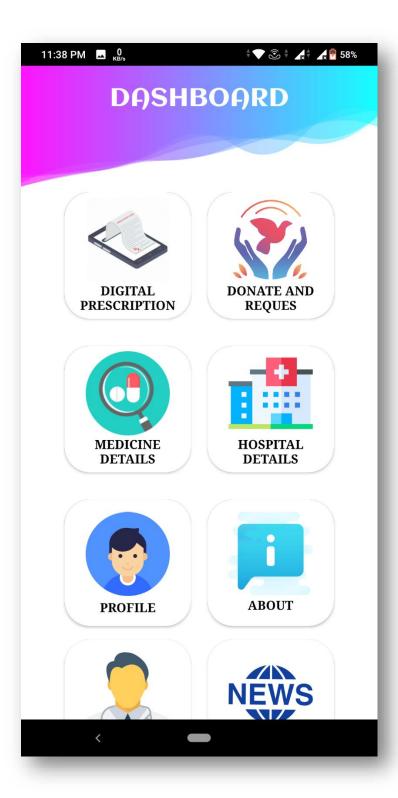




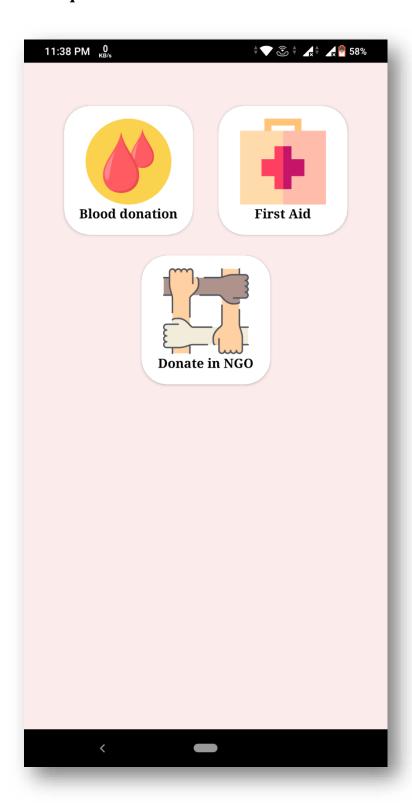
User Foregate password



User Dashboard



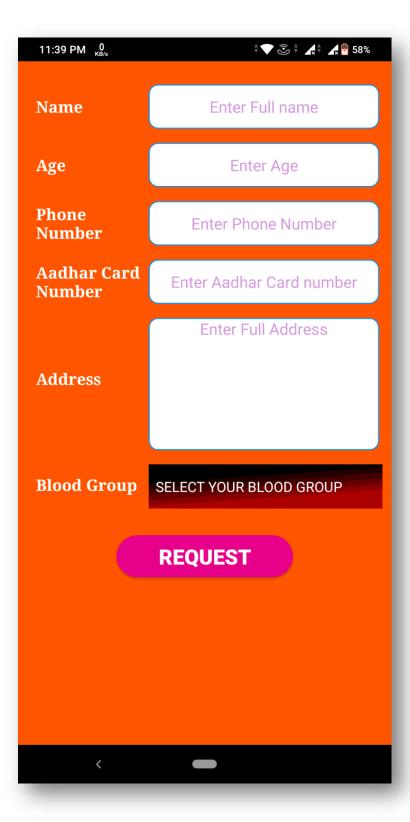
User Donate and Request:



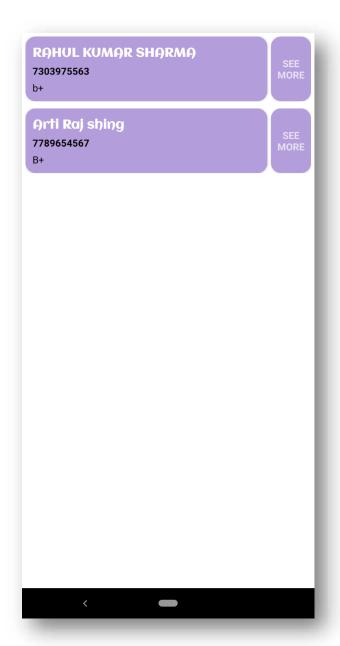
Blood Donate and Request:

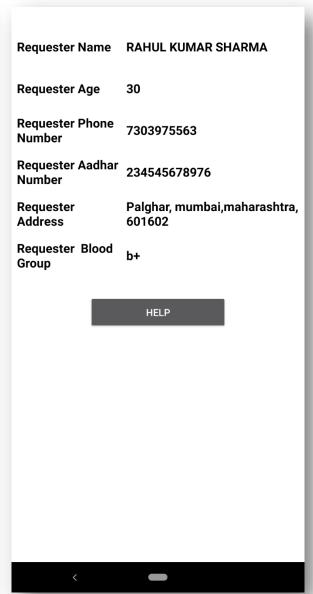


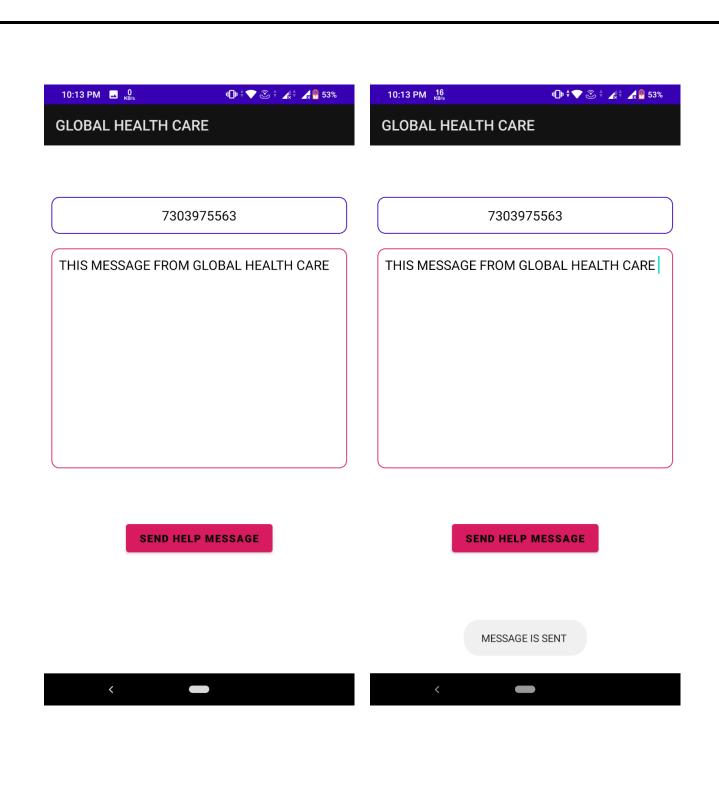
Blood Request

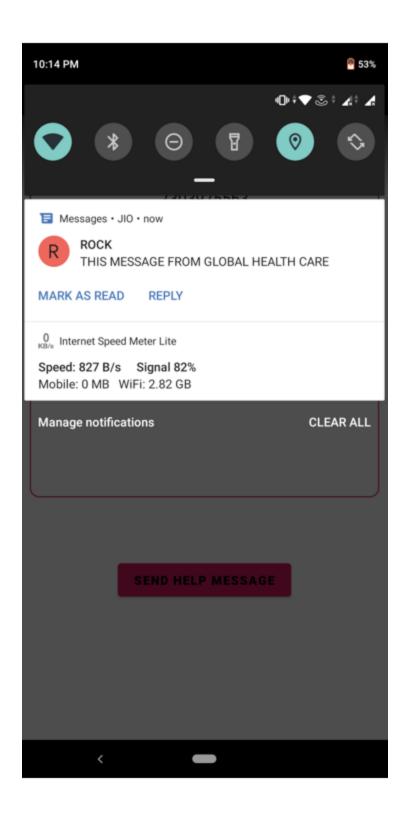


Blood Donate:

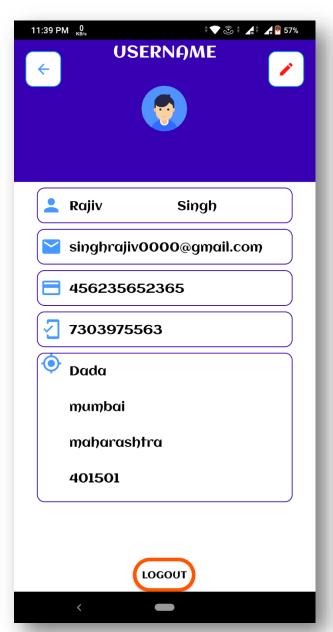


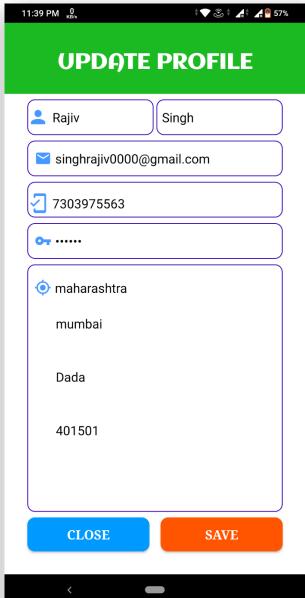






User Profile:

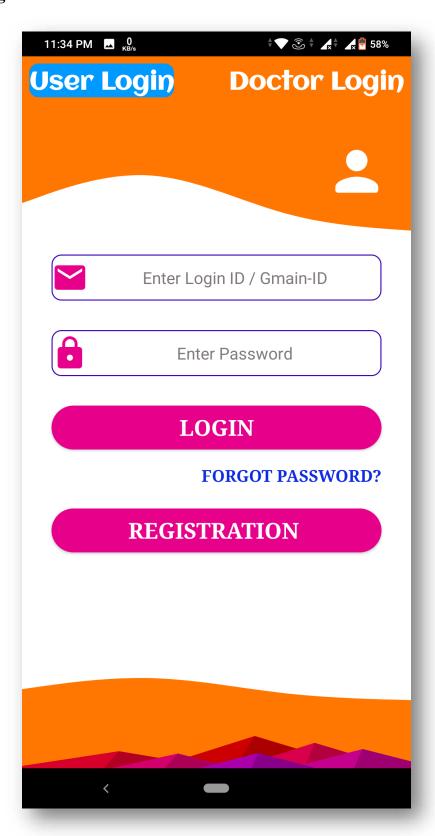




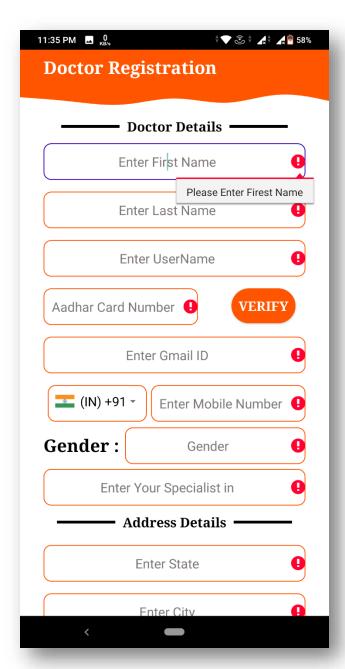
Doctor Contact:

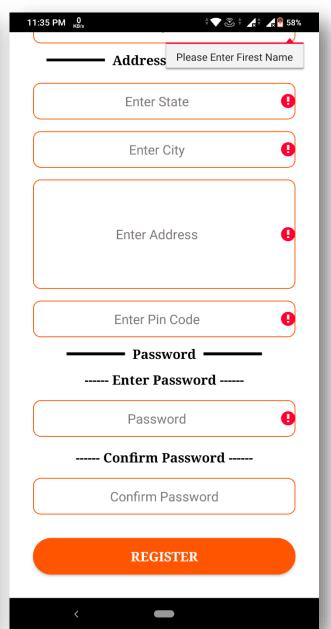


Doctor Login

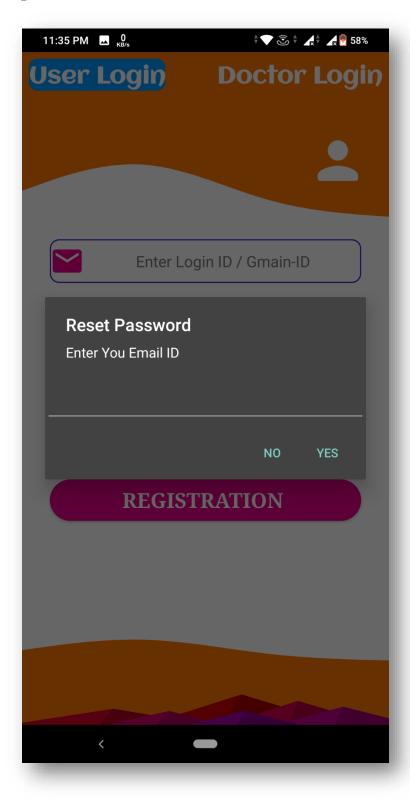


Doctor Registration:

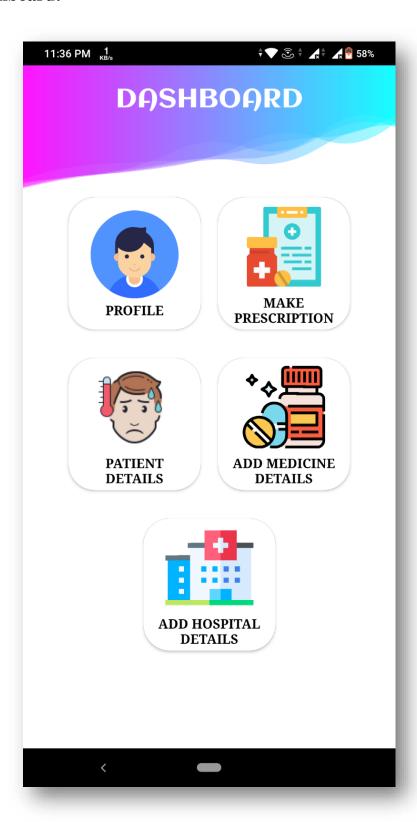




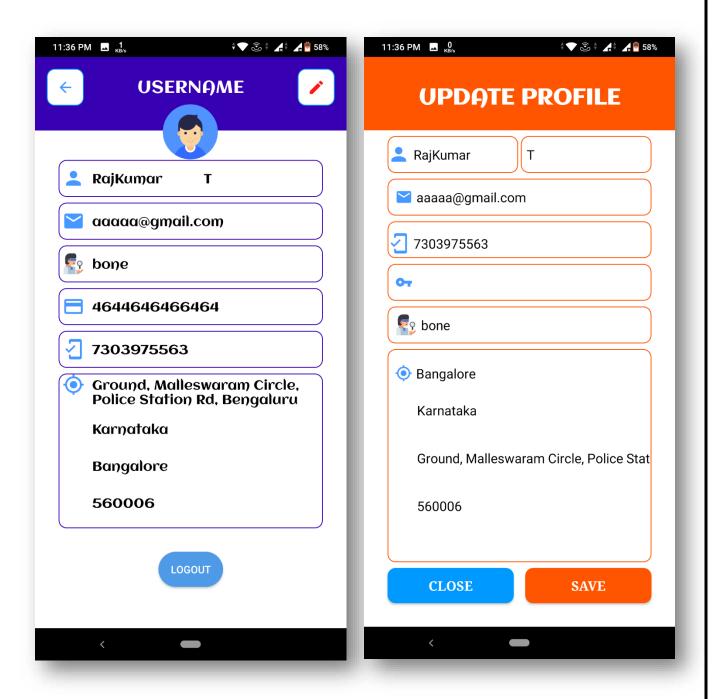
User Foregate password:



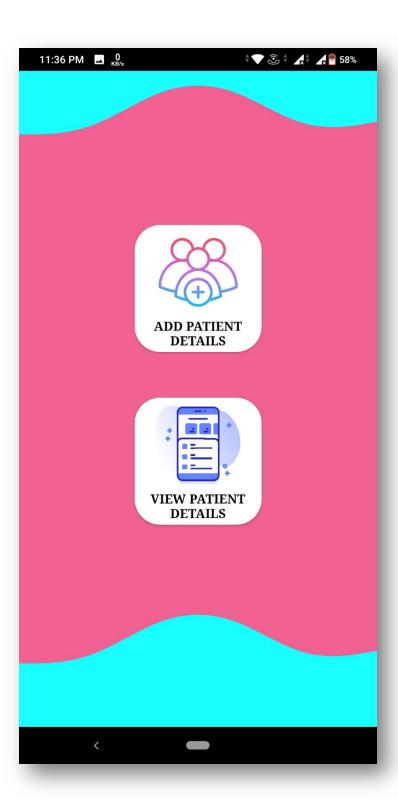
Doctor Dashboard:



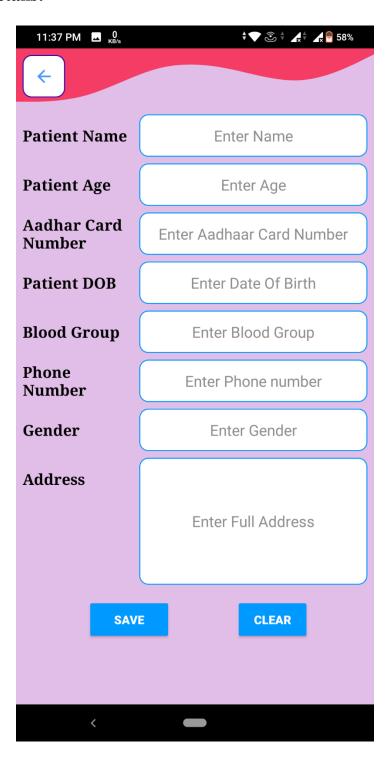
Doctor Profile and Update Profile:



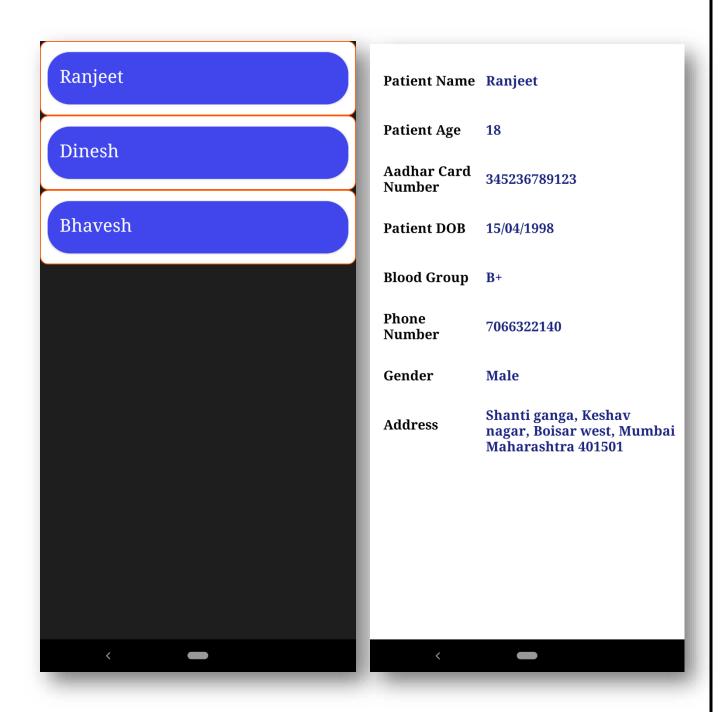
Patient Detail

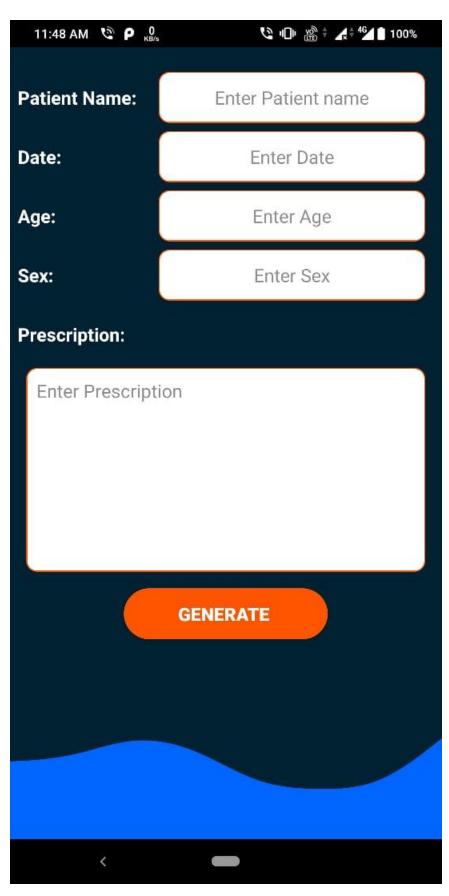


Add Patient Details:



View Patient Details:







DASHBOARD

MEDICINE DETAILS HUSPITAL DETAILS



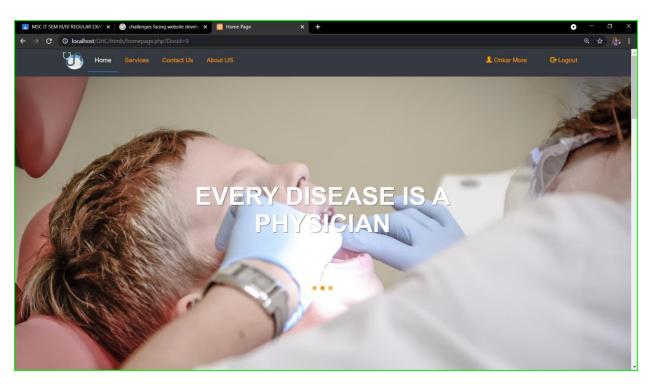


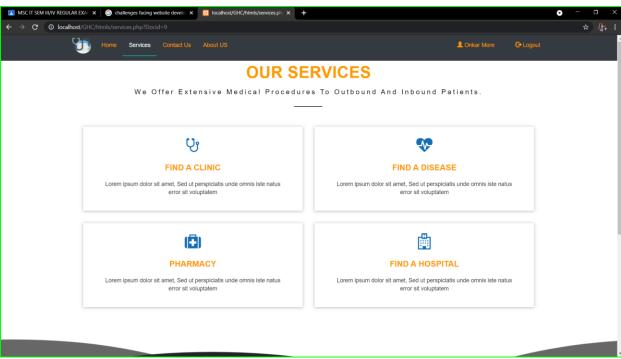


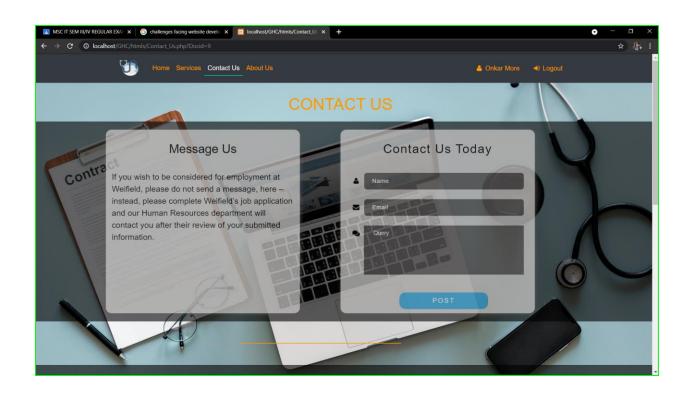


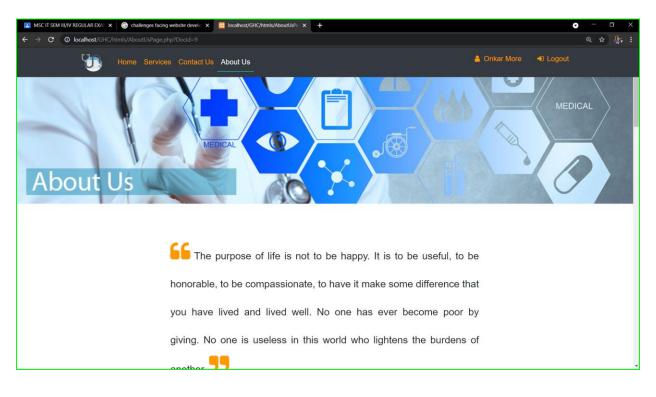


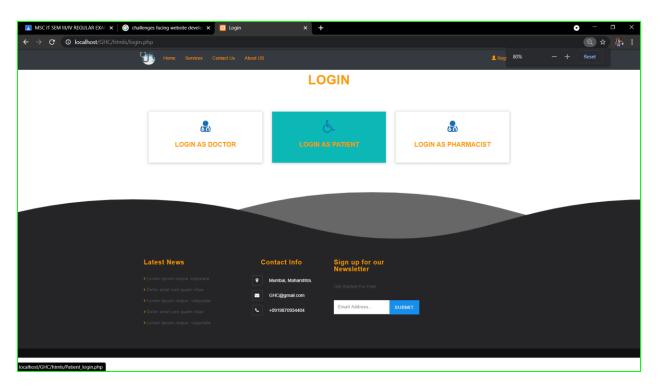


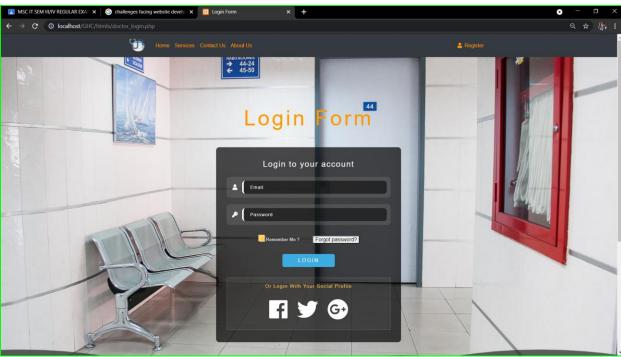


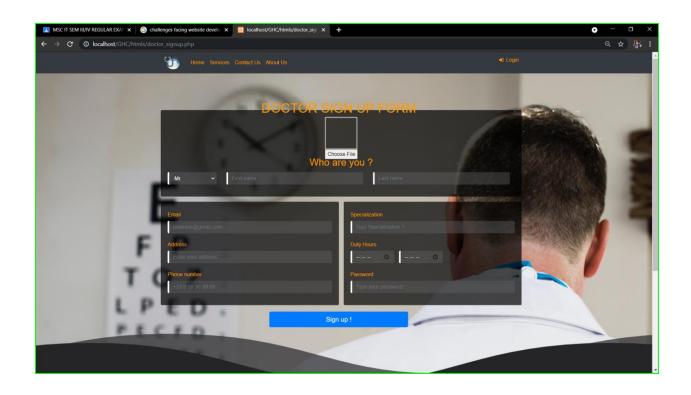












Testing report:

Objectives

The object of the test is to verify and validate the function of the system.

Test case Design

The aim of software/Hardware testing is to measure the quality of software/Hardware in terms of defects found in the software/Hardware, the no. of test runs and the system covered by the tests. These tests are carried out for both the functional and non-functional attributes of the software/Hardware. When bugs or defects are found with the help of testing, the bug is logged and the developer's team fixes the bug. Once the bug is fixed, testing is carried out again to ensure that the bug was indeed fixed and no new defects have been introduced in the software/Hardware. With the entire cycle, the quality of the software/Hardware increases.

Verification and validation testing are two important tests, which are carried out on software/Hardware, before it has been handed over to the customer. This makes sure that the software/Hardware testing life cycle starts early. The aim of both verification and validation is to ensure that the software/Hardware product is made according to the requirements of the client and thus indeed fulfil the intended purpose.

Therefore, validation testing is an important part of software/Hardware quality assurance procedures and standards.

Tools for Testing: -

- android studio
- NoxPlayer

Types of testing

1. Component Testing:

Component testing is also known as unit testing. The aim of the tests carried out in this testing type is to search for defects in the software/Hardware component. At the same time, it also verifies the functioning of the different software/Hardware components, like modules, objects, classes, etc., which can be tested separately.

2. Integration Testing:

This is an important part of the software/Hardware validation model, where the interaction between the different parts of the system, the interaction of the system with the computer operating system, file system, hardware and any other software/Hardware system it might interact with is also tested.

3. System Testing:

System testing, also known as functional and system testing is carried out when the entire software/Hardware system is ready. The concern of this testing is to check the behaviour of the whole system as defined by the scope of the project. The main concern of system testing is to verify the system against the specified requirements. While carrying out this testing, the tester is not concerned with the internals of the system but checks if the system behaves as per expectations

4. Acceptance Testing:

Acceptance testing is a level of software/Hardware testing where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.

What is a test case?

"A test case has a component that describes an input, action or event and an expected response, to determine if a feature of an application is working correctly."

Why we write test cases?

The basic objective of writing test cases is to validate the testing coverage of the application. Writing test cases brings some sort of standardization and minimizes the ad-hoc approach in testing.

With respect to testing conditions following test cases were developed:

Table 7.1 Test Cases/report for GLOBAL HEALTH CARE

Test case ID	Scenario Description	Actions to be performed	Executed Value	Actual Results	Result
TC1	Check User Registration	1) The Layout will be open 2) It allows to get information from User and Forward to User Dashboard	User Enter the All details and Go to the User Dashboard	As Expected	Success
TC2	Check User Registration	1) The Layout will be open 2) Detect all text fill will be fill by user if Not then its Show missing or wrong validations	If user forget to fill any Edit Text area or Enter wrong input is show error	As Expected	Success
TC3	Check User Login	1) The Login screen will be visible. 2)User able to Login 3)If success Go to User Dashboard	Login detail will match with Register detail and User Able to Login Successfully	As Expected	success

TC4	Check Digital Prescription Check Donate and Request	1)The Digital Prescription will be display. 2) User Click to Digital Prescription option to get Prescription which is generated by Doctor 1) User able to Get	User Able to all The Prescription Generated by Doctor	As Expected	success
		different donation and Request option Like Blood Donation, First Aid Help, Donate to NGO	User able to see option Layout	As Expected	success
TC6	Donate and Request	1)It display a Two option Blood Request or Blood Donate	User able to see option Layout	As Expected	success
TC7	Donate and Request (Blood Request)	1)User get a Blood Request form. 2)User Enter all the valid details. 3)If user Enter Wrong input its show error	User Enter all required details and click to Request button	As Expected	Success
TC8	Donate and Request (Blood Donation)	1)The list of Request will be Display on this Layout 2) User able to see all the Request and also able to see full details of Requester	User Get a all the Blood request information and able to help.	As Expected	Success
TC9	Donate and Request (Blood Donation)	1)User can see full details and apply for help by clicking on Help button. 2) User can send a Help message to Requester By using Contact number.	User get the Contact layout and able to send a help message to Requester successfully	As Expected	Success
TC10	Donate and Request (First Aid Request)	1)User get a Blood Request form. 2)User Enter all the valid details. 3)If user Enter Wrong input its show error	User Enter all required details and click to Request button	As Expected	Success

TC11	Donate and Request (First Aid Donation)	1)The list of Request will be Display on this Layout 2) User able to see all the Request and also able to see full details of Requester	User Get a all the First Aid request information and able to help.	As Expected	Success
TC12	Donate and Request (First Aid Donation)	1)User can see full details and apply for help by clicking on Help button. 2) User can send a Help message to Requester By using Contact number.	User get the Contact layout and able to send a help message to Requester successfully	As Expected	Success
TC13	Doctor Details	 In Doctor Details user can see all the list of Doctor and their details. User able to contact with doctor. 	User /Patent Able to see all the doctor's name and details. And able to contact with doctor.	As Expected	Success
TC14	Hospital Details	 In Hospital Details user can see all the list of Hospital and their detail's location. User able to contact with Hospital. Also able to find nearby Hospital 	User get an all-hospital details and able to contact with Hospitals	NA	NA
TC15	News	1)User able to see all latest news related to Health and deceases. 2)User also get a notification of any Blood Donation camp or and other Helping camps.	User can able to see and read the news	As Expected	Success
TC16	User Details/Update	1)In this layout User able to see own details	User can get all their information	As Expected	Success
		and also able to update a detail.	User able to update a detail.	NA	NA

TC17	User Profile	1)User and view all the details and also able to Logout through app.	User able to logout an Able to User login Screen.	As Expected	Success
TC18	Check Doctor Registration	1) The Layout will be open 2) It allows to get information from Doctor and Forward to Doctor Dashboard	Doctor Enter the All details and Go to the Doctor Dashboard	As Expected	Success
TC19	Check Doctor Registration	1) The Layout will be open 2) Detect all text fill will be fill by user if Not then its Show missing or wrong validations	If user forget to fill any Edit Text area or Enter wrong input is show error	As Expected	Success
TC20	Check Doctor Login	 The Login screen will be visible. Doctor able to Login If success Go to Doctor Dashboard 	Login detail will match with Register detail and Doctor Able to Login Successfully	As Expected	success
TC21	Doctor Details/Update	1)In this layout Doctor able to see own details and also able to update	Doctor can get all their information	As Expected	Success
		a detail.	Doctor able to update a detail.	NA	NA
TC22	Doctor Profile	1) Doctor and view all the details and also able to Logout through app.	Doctor able to logout an Able to Doctor login Screen.	As Expected	Success
TC23	Doctor / User Logout	Doctor / User can able to Logout.	Both logout successfully	As Expected	Success

TC24	Make Digital Prescription	1)Its Show a Prescription Layout and Doctor Enter a Medicine name. with all patient details.	Doctor create a Prescription successfully	As Expected	Success
TC25	Make Digital Prescription	Doctor Able to share Softcopy of Prescription to patient Gmail or WhatsApp	Doctor Share a Prescription to patients successfully	As Expected	Success
TC26	Patient Derails	Doctor able to store and manage Patient details	Doctor Able to Store patent details and manage them	As Expected	Success

8. SUMMARY AND CONCLUSION

FINDING OF PROJECT WORK:

India has a vast health care system, but there remain many differences in quality between rural and urban area as well as between public and private health care. And In some of condition like Earthquake, natural disasters, many more pandemic situations the help is not arrive. And the Village area is not fully developed and there is so many problems happen related to health, food, water and many more. Or some time in medical emergency there is no facility or information to contact with doctor. It is important to know a doctor /hospital / and Medicine information. In pandemic situation so many people not getting help or proper Treatment because of money, medicine, Blood problem. The prescriptions are also a very important. Some people lose their prescription and not able to get same treatment.

In this project we are handling a large number of live data. And providing to the user like Doctor details, Medicine details, Hospital details and so no, this project is able to provide help to people, many people can help by Donating Things. Doctor can also able to help people by proving Information and sharing digital prescriptions. People can also request for Blood, or any medical help like first aid. User can directly get the doctor details and able to contact with them, User get any live news related to Blood donation Camp, Update of new disease, and many more.

APPLICATION AREAS:

- 1. User/Patient
- 2. Doctor
- 3. Hospital / clinics
- 4. NGO's

9. FURTHER RESEARCH

In future Implementation user can able to Download prescription, Working on AI System to Analysis Person health. Improving Way of proving Information. Live disease detection. Also gone to disease nearest Hospital on Map. Modifying UI to look more attractive and User Friendly.

Also develop for another platform, like other OS devices. User can able to Communication on Video call or Voice Call To get Bater Conversation. Adding Pharmacists to get Digital prescription by using patient ID.

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