International journal of advances in engineering and management (IJAEM)
Volume 3, issue 6 June 2021, pp: 2227-2237 www.ijaem.net ISSN: 2395-5252

A Preliminary Project Report On UPHealth

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Savitribai phule pune university, pune in the partial fulfillment for the award of the degree of bachelor ofengineering in computer engineering

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Submitted: 05-06-2021 Revised: 18-06-2021 Accepted: 20-06-2021

ACKNOWLEDGEMENT

We take this opportunity to thank our project guide **Prof. Dr. R. Parvati**We take this opportunity to thank
our project guide **Prof. Dr. R. Parvati** and Head of the Department **Dr. Nilesh Deotale** for their valuable guidance and for providing all the necessary facilities, which were indispensable in the completion of this
project report. We are also thankful to all the staff members of the Department of **Computer Engineering** of **G.H. Raisoni of Institute of Engineering & Technology**, **Pune** for their valuable time, support, comments, suggestions and persuasion. We would also like to thank the institute for providing the required facilities,
Internet access and important books

ABSTRACT: Health care management system: App-based patient portal provides benefits to the user. Our framework will give a route office to the client to discover the clinics close by productively so the client can book an arrangement effectively with the evaluations given to the Hospital/Clinics by the clients, by taking a gander at the forte of the Hospital/Clinics as referenced. Client can discover the subtleties of the Hospitals/Clinics for example beds Available, OPD timing, Doctors accessible, Charges for the treatment and so on It will likewise give offices to rescue vehicle help to the client which will be useful forboth..

CHAPTER 1 INTRODUCTION

1.1 Overview

Medical care Management arrangements are more than one factor that adds to the expanding request in the medical services area. In a consistently evolving world, medical care the board is fundamental to contend in the business in giving better consideration to patients. We have positively seen instances of both the triumphs and disappointments characteristic in the administration of the Covid emergency When history books are composed the features will incorporate the way that COVID was the interruption few satisfactorily got ready for the venture Entitled "UpHealth" is to mechanize the Front Office Management of Hospital to build up a product application which is easy to understand straightforward,quick,andpractical.Itmanagestheass ortment of Hospital's data, Ratings are given to the emergency clinic, OPD timings, Doctor's data, and Ambulance help. Generally, it was done physically. The primary capacity of the framework is to enlist and store Hospital subtleties and specialist subtleties and recover these subtleties as and when required, and furthermore to control these subtleties seriously System input contains persistent subtleties, while framework yield is to get these subtleties on to the screen. The information can be recovered without any problem. The information are all around ensured for individual use and make the information handlingquick.at the retail location can be followed back to the wellspring of every individual fixings.

1.2 Motivation

Now a days, Due to COVID 19 pandemic, we are facing a problem of shortage of beds in hospitals, ICU, proper medications.Because of these many peoples are not able to get medications and proper treatment.In Emergency sitution, people are moving from one hospital to another and still not able to find free bed in hospitals.Looking at this situation, we are trying to develop the application which can help the people and solve the problems like this.

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1.3 Background

To improve the supply chain's traceability and security, Blockchain technology has been producing interesting research zones due to its inventive attributes that give productive answers for the current loopholes identified. In simple terms, Blockchain can be defined as a conveyed information base, which is shared among and concurred upon by a distributed organization, also known as a peer-to-peer network. When a component is Recently smart mobile Phone is considering as one of the most widely used electronic devices. Android Application based automated system received huge popularity to make human life easier. There are several applications which have been built for different purposes health care is one of them. Health issues small or big are a general phenomenon now a days and visiting the doctors for checking up are important. Since most of the checkups require a prior appointment requirement with the doctor a patient has to physically visit the hospital and book the appointment or in some cases patient call the hospital for conforming the appointment

CHAPTER 2 LITERATURE REVIEW

2.1 ExistingMethodologies

Sr No.	Author Name/Research Paper Name &Year	Proposed System	Implementation
1.	Oliver MadimaLulembo , 2016	This research paper focuses onthe comparison of the performance of the paper- based patient record management	We can have the online data card for the User/Patient.
2.	Md. Nasfikur R. Khan,AKEHMashuk, WhomairaFDurdana, MehdiAlam, Robin Roy,MAbdurrazzak,2019	Thisresearch paper is proposed thatby using themobilecommunicationtechnology wecan connectthe user/patient to the doctors andhospitals.	Weare connecting Theusers/patient to the hospitals and doctors whoare specialists in their field.
3.	Open SOA Health Web Platform For Mobile Medical Apps, 2014	This Research Paper proposed that howthe DoctorscanServetheir patients using mobile application.	Weare connecting the users/patients to the hospitals andalso Tryingforbetter help by connecting tothe doctors for an emergency
4.	How to Find Your Appropri ate Doctor, 2014	This Research paper proposed that how we can find the best andefficient doctor/hospital.	Weare implementinghe application in such a waythat user/patient can also givethe review and bythe reviews and recommendation one canfindthebestand efficient nearbyhospital/clinic.

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2.2 Proposed System

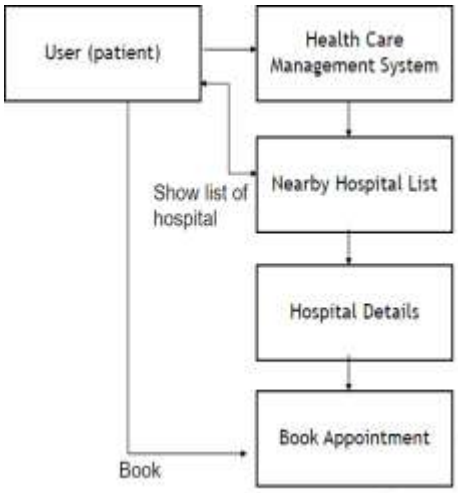

Fig 2.2 Proposed Architecture

- When the user will start the application, it will ask for the location and it will display all the nearby hospitals on the screen.
- When user click on any hospital, it will help us with the information related to that hospital i.e. OPD timing, charges, doctors available, bedsavailability.
- The user can also book an appointment if he wants.
- The user can contact to that hospital and can gather the information whatever he needs.
- The user can also find the ambulance service, which will show the nearest ambulance with the driver's number.
- We can likewise pass judgment on the medical clinic by its rating and surveys given by others.

CHAPTER 3 REQUIREMENT SPECIFICATION AND ANALYSIS

3.1 ProblemDefinition

- According to the world economic forum 1,50,000 people die each day in India. A recent study has shown that around 86,000 people die due to untimely healthcare.
- Emergency responses are slowed down due to lack of equipments and several lives are lost due to this untimely response
- Even if the patient does reach the hospital in time its not guaranteed that hospital is fully equipped with the facilities needed for the patient, because of the patient loses critical time which reduces his chances of survival

3.2 Concept

UpHealth include all the steps of any product's life-cycle, from manufacturing to consumption. The system can be exploited by introducing counterfeit products in the chain. In the pharmaceutical sector, it becomes really important to secure the overall chain. Thus, blockchain technology can be used to store the data securely and in-turn improve its overall efficiency.

3.3 Scope

Before planning the scope of our application UpHealth we consulted our project In future we will be l looking forward to implement this system in more depth by getting the real time data of our patients through sensors.Further, the project also aims to introduce IoT based devices in the system to automate the system's working inorder to improve its efficiency.

3.4 Objectives

1.The objective was to build an effective application for users with busy schedule to make an appointment with doctors of different specialty with different locations.
2. Scheduling the appointment of patient with doctors to make it convenient for both.
3. The main objective of the project on Doctors Appointment System is to manage the details of the doctor ,Appointment ,Patient ,bookings.
4. The purpose of the project is to build an application program to reduce the manual

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work for managing the doctor's appointment.
5. The information of the patients should be kept up to date and there record should be kept in the system for historical purposes.

3.5 ProjectRequirements

3.5.1 Functionalrequirements

1. Stable internet connection.
2. Enough storage space to store and display information.

3.5.2 Non-functionalrequirements

1. Usability
2. Legal or regulatory requirements
3. Reliability
4. Performance

3.5.3 Hardwarerequirements

Processor: Intel i3 AND motherboard.
RAM: 4GB or above.
Hard Disk: 40GB or above.
Input Devices: Keyboard, Mouse.
Output Devices: Monitor; -14" VGA.

3.5.3 Software requirements

1. Operating System:Windows 7 and above.
2. Internet Browser: Chrome(preferable), Mozilla Firefox, InternetExplorer.
3. Front-endSDK Flutter.
4. Language: Dart.
5. Backend: Firebase.

3.6 TechnologiesUsed

1. DART —it is a simple object oriented programming language. It is easy to use flutter is used as an SDK to DART

2. Flutter — Flutter is a SDK, UI tool kit by Google used for developing the applications for mobile, web, desktop. We are using the Flutter for front end development as it is a open source, reliable and easy touse.

3. Firebase — we are using the firebase as a Back end for the storage of the Information safe and secure. Firebase is a Backend- as-a-Service(Baas).

CHAPTER 4

SYSTEM ANALYSIS AND DESIGN

4.1 Data Flow Diagram

Fig. Level 0

In DFD Level 0 the user can search nearby hospitals with the ratings given it will find doctors availability, beds availability, timings of the hospital, etc.

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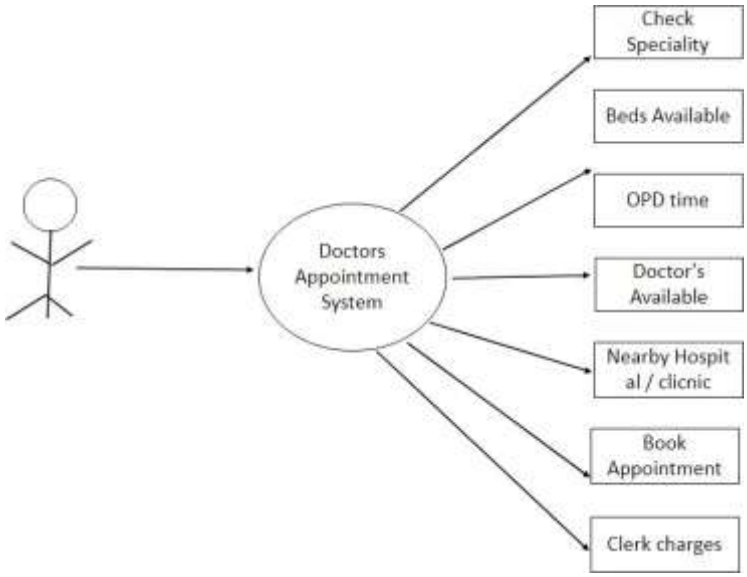

Fig. Level 1

First level DFD (First Level 1) of appointment system shows how the system is divided into sub-system each of which deals with one or more of the data flows to or from an external agent. The user will get the following reports of the bookings which will be easier for the user. These are the various concept's used by our system which is easier for user to find themaccordingly.

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4.2 ER Diagram

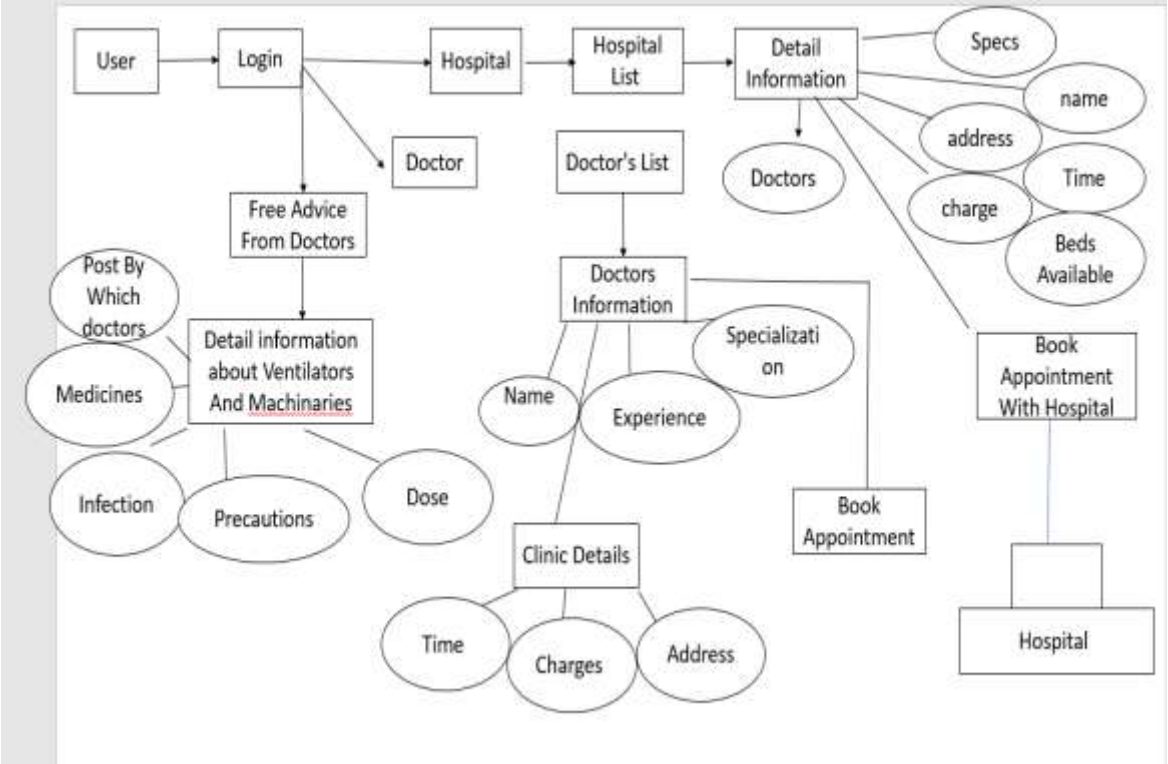

Fig. 4.2 :ER diagram

4.3 System diagram

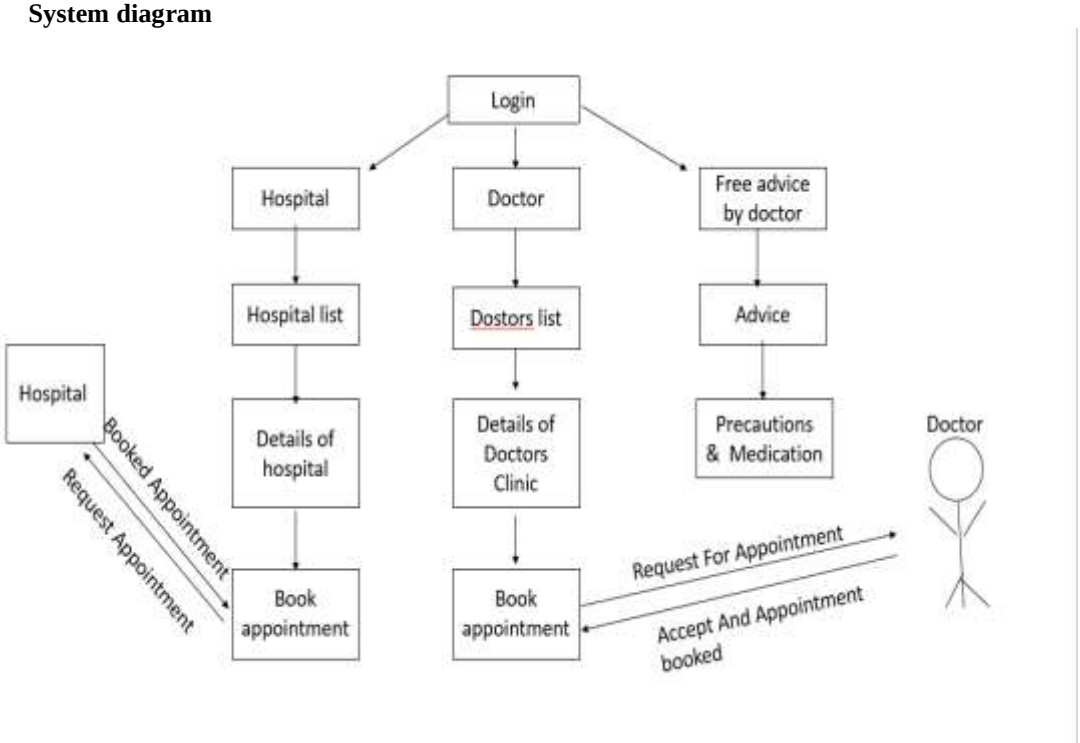

Fig. 4.3 : System diagram

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4.4 Use Case diagram

This diagram is an example which consists of Patient. Following functionalities are handled by application which is operated by user

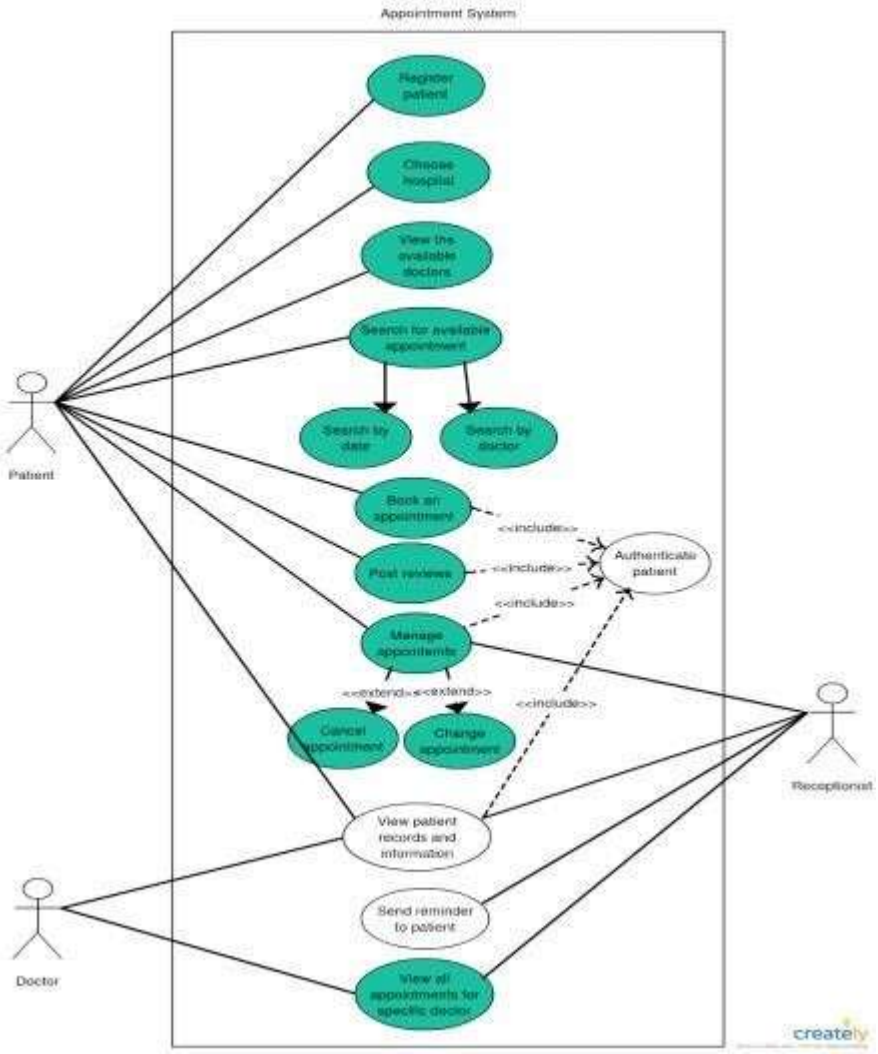

Fig. 4.4 :Use Case diagram

CHAPTER 5 IMPLEMENTATION

5.1 ProposedMethodology

User can locate the nearby Hospitals/Clinics and Doctors. To implement this we are using geo locator and geocoder to display the nearby hospitals/Clinics/Doctors.

User can contact to the hospital and doctor by the details provided by hospital/Doctor.

User can make a phone call to particular hospital/Doctor by the one click. To implement this we have used the URL launcher to redirect to phone Dialer.

User can book the appointment with the particular doctor/Hospital.

User can view the details of hospitals about beds, ICU, ventilator, doctors available.

User can view the posts, posted by the doctor for free. Some small diseases/infections like fever, headache will be posted by the doctor and the medications regarding that. If user wants to buy that medications user can navigate to the google maps using single button click and it will display all the nearby pharmacy to the user.

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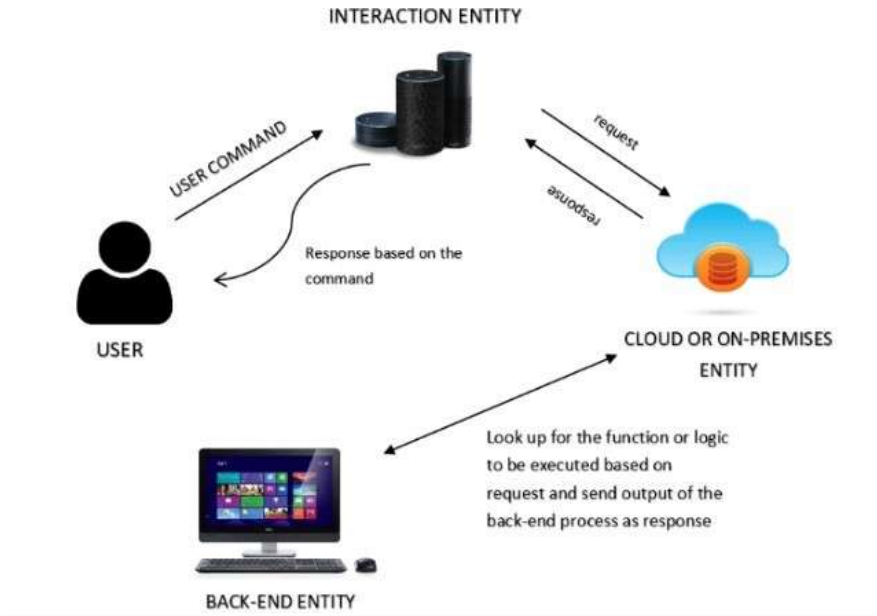

Fig. 5.1 :Proposed System

When the user will start the application, it will ask for the location and it will display all the nearby hospitals on the screen.
When user click on any hospital, it will help us with the information related to that hospital i.e. OPD timing, charges, doctors available, bedsavailability.
The user can also book an appointment if he wants.
The user can contact to that hospital and can gather the information whatever he needs.
The user can also find the ambulance service, which will show the nearest ambulance with the driver's number.
We can likewise pass judgment on the medical clinic by its rating and surveys given by others.

5.2 Screenshots

These are some of the screenshots of our system
The user will firstly downloads the application and install it in their mobile devices Figure 1 shows the login
Page.

Fig 5.2.1:LoginPage

Fig 5.2.2: WelcomePage

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This is the login page of our system where the user have to login to the system using login option. In the register option the user can register. The user can login with another option like Facebook

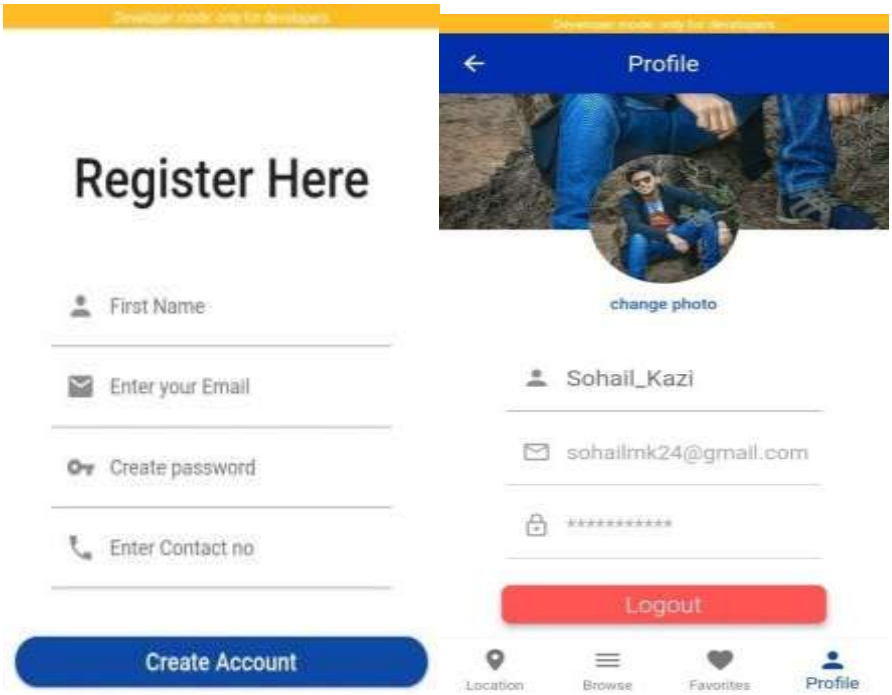

Figure 5.2.3 : Registration's DetailsFigure 5.2.4 : Profile Section

In Figure 3 The user can register with his name and email and setup a password for security reason. In figure 4 this is the profile section it shows the details which is filled by the user.

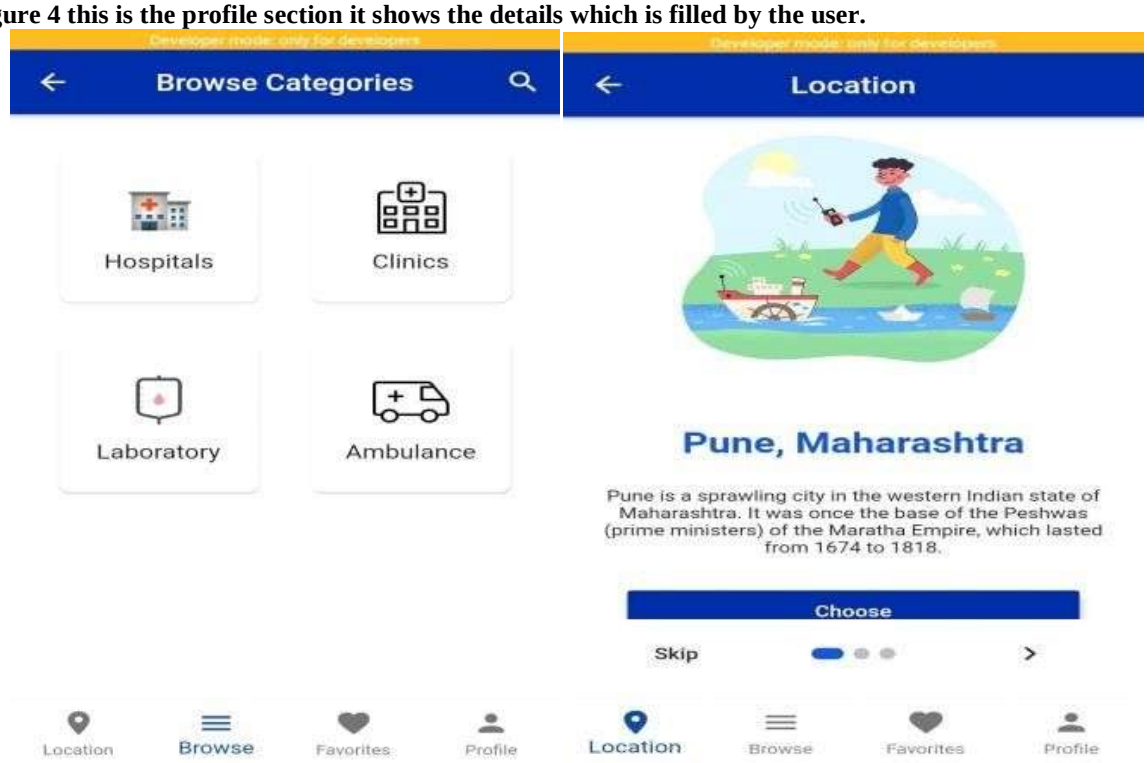

Fig 5.2.5 : The Menu ScreenFig 5.2.6 : Location

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If the patient selects the hospital options then he/she can view the list of hospitals. Then the Patient selects the perticular hospital and then he can view the hospital details as show

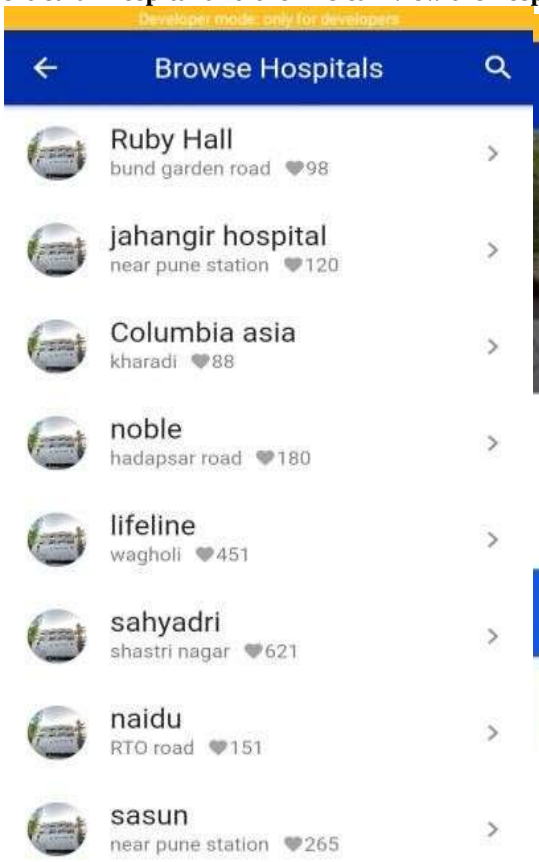

Fig 5.2.7 : List of HospitalsFig 5.2.8 : Details of Hospital

After selecting the option hospitals the patient can select accordingly with the ratings given by the people. Now as shown in fig 8 these are the details of the hospital with beds available and OPD Timings, availability of doctors and the user can also book an appointment.

5.3 Algorithm

We will be using Location Search Algorithm for this application.

The search algorithm takes in a latitude, longitude and additional tags like "GeneralPhsysician", "Dermatologist" etc. which are used as additional filters.

It maps the latitude and longitude to the spatial zone to which it belongs to, and returns a list of hospital in that zone.

It then looks for hospitals in adjacent spatial zones, and returns a list of hospitals in each of the nearby zone.

If step one and step two return hospital whose count is more than a defined critical count, the algorithm stops else it continues.

If step one and step two return no results, the algorithm looks for all the hospital in the same city.

If even step three returns an empty result, the algorithm returns all the hospitals in the database limited to a defined count and ordered by a defined property

Based on this search algorithm a Rails-Angular application called 'Chennai Foodie' was built, which enabled users to locate restaurants near their current location.

The application uses the phone's location via the geolocation API and fetches the restaurantsin and around the user.

The user can additionally specify Cuisines (tags) to filter his/her result further.

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CHAPTER 6 RESULTS AND EVALUATION

6.1 Results and evaluation

Using GPS it will detect the users location and search all the nearby hospitals.
The Application will provide the list of hospitals nearby to the patient
The hospitals will have all the necessary details like. OPD timing, doctors available ,beds available, charge sheet etc.
We can also book the appointment to the hospital.
We can contact hospitals for any details.

CHAPTER 7 CONCLUSION

7.0 Conclusion

Since we are planning the framework so that, It will help the clients/patients to locate the close by medical clinics/centers quickly with the necessary equipment's. Client/Patient will actually want to discover the insights about the Hospital/Clinics with the single click and discover the subtleties i.e. Beds accessibility, Hospital/Clinic Specialty, Doctors accessible, OPD Timing, and User/Patient can likewise associate with the Doctor in Emergency

7.1 Limitations

Internet Connection
To book an appointment online, you definitely need internet connection; be that on your phone or using a computer
High Demand
When you provide the option for online appointment scheduling, you open your doors to new customers

7.2 FutureScope

Nowadays, Due to COVID 19 pandemic, we are dealing with an issue of deficiency of beds in emergency clinics, ICU, legitimate drugs.
Due to these numerous people groups can't get drugs and legitimatetreatment.
In Emergency circumstances, individuals are moving starting with one clinic then onto the next and still not ready to discover free beds in clinics.
Information stored about patients is done by just writing the Patients name, age, and gender.
Taking a gander at the present circumstance, we are attempting to build up an application that can help individuals and tackle the issues this way.

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