

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 6, Issue 10, October 2017

Advanced and Structured System to Ease Medical Assistance

Naveen Vaswani¹, Vandana Patel², Ashish Saheta³, Smit Shah⁴, Sumit Shah⁵.

Assistant Professor, Department of Computer Engineering, WIEECT Engineering College, Ulhasnagar,
Maharashtra, India¹

Student, Department of Computer Engineering, WIEECT Engineering College, Ulhasnagar, Maharashtra, India²

Student, Department of Computer Engineering, WIEECT Engineering College, Ulhasnagar, Maharashtra, India³

Student, Department of Computer Engineering, WIEECT Engineering College, Ulhasnagar, Maharashtra, India⁴

Student, Department of Computer Engineering, WIEECT Engineering College, Ulhasnagar, Maharashtra, India⁵

ABSTRACT: Health Care Application is an idea to provide a use of mobile application to ease the medical assistance by providing efficient and effective responses to users. User of Health Care Application can be Doctor, Patient, and medicine, drugs, medical equipment dealer. Since the use of smart phones has considerably grown, the model 'Health Care Application' will give user the access to all the facilities anytime and from anywhere. In this modern and digital world, it is very important to solve the problem through digital and faster way, so the need during emergency must be fulfilled in user-friendly way. Health Care Application considerably accomplishes the goal by implementing all the services and providing to user through mobile application. The objective is to take care of patient safety, availability of all medicines and medical appliances, full time availability of doctor consultancy, health tips, help in connecting health insurance service through wallet to make cashless transaction, decrease the death rate by providing the medical services at the earliest. 'Health Care Application' has automated features of F.I.R. lodging, call ambulance at current location, hospital form filling with the help of UIDAI. Its search engine can search hospitals, available doctors and medicines via category, name, and location, blood donation camps. Doctors or the hospital authority can also search for available blood group needed in the hospital, nearby hospitals, nearby blood bank and can send request message to the registered users located nearby if not available. This application contains symptom analyzer, which processes the entered patient's symptoms and gives recommendation of medicines or doctors according to the symptoms. In the present life, it's hard to remember everything for which the medicine reminder keeps the user informed about the medicine dosage without missing any data integrity is highly considered because of multiple types of accounts, which helps in maintaining data security by only giving access to the data for which the user is authorized to. This application also has a chat room through which the patient can consult a doctor and can save time by avoiding the queue in the clinic and the patient can pay through wallet and also can have the benefit of health insurance service if opted. The doctor can monitor patient's health status live and can check previous medical history as well.

KEYWORDS: AadharSupport, UIDAI, Android Application, Aadhar Support authorized person, Medical assistance.

I. INTRODUCTION

In this modern era each and everyone is busy in their own responsibilities and task due to this, stressful and breath-taking life brings us many health issues. Everyone is so busy in their life that they least care about their health issues. Manual procedures are followed to fill the form at hospital, for identity verification, lodge F.I.R. during accident case, and have a separate system for health insurance service. To overcome this situation a Medical Mobile Application service is provided to users through digitalization, which binds all the services at one place and automates the manual procedures to ease the medical services. Health Care Application is an Android application which helps the user to ease

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 6, Issue 10, October 2017

the work in medical situations. In accident cases, it helps with AadharSupport for identification which is connected to Automated FIR system and Hospital bed reservation. AadharSupport can be used for E-Form filling. It also has an E-wallet, which is connected to medi-claim Services/Health insurance services, if opted. A user can search and buy a medicine or medical equipment with available information about it and its substitutes. Any available doctor can be consulted online including the specialists, various lab tests available nearby can be searched and compared.

II. RELATED WORK

Android is an open platform for everyone to implement their ideas where many people come up with their ideas and implement them to ease our daily routine. Iimg[1] offers services like online medicine ordering, find medicine substitutes get personal, useful health tips written by expert doctors, know about medicine's impact on people and their side effects, book all important health tests, consult doctors online. Lybrate[2] provides services like asking free health questions, book appointments with doctor, relative health tips, manage medical records, book lab tests. JioHealthHub[3] offers secure storage and sharing, anywhere accessibility, easy and automatic categorization i.e. any health data uploaded, clicked or received either from JioHealthHub's partner healthcare providers or other users is stored in categorized folders, View X-Rays, MRI, CT scans on phones. LIC Mobile[4] informs about LIC products and portal services like options for viewing products of LIC, Premium calculations, check policy details, apply for policy. Smart health consulting android system helps the patient to book an appointment in a hospital, contact a doctor, search doctor according to the symptoms of the patient [5]. Dr. on click Android Application helps patient to search a hospital in nearest area and book an appointment as per the availability of doctor. It also help to book an appointment by an appointment alert message in case the patient forget to book an appointment [6]. Using the healthcare monitoring application, ICU patients can be treated easily via a different geographical location as the doctor can see the blood pressure rate or the ECG waveform and treat the patient in a short span [7]. Electronic Commerce and E-Wallet helps to make payment anywhere in the world and saves time with online money transfer [8]. Study of Google Firebase API for Android analyses, stores, authenticates and retrieves data with the help of firebase [9]. Medication Reminder and Health Care Android Application helps the patient to remind about the medicines or dosage schedule using an alarm [10].

III. PROPOSED SYSTEM

While facing health problems in our day today life, and looking around the scenario of the manual services which can be automated and can ease the medical assistance which can solve problems in medical domain, we came across an idea of a mobile android application which has following features

- 1. Consult a Doctor:** Consult with doctor online for any kind of medical assistance. Avoid the queues and boring appointment; also get a personalised advice from verified doctors about health. One can also contact various specialists and can also contact to various hospitals for any Enquiry or for Emergency.
- 2. Symptoms Analyser:** Health Care Application's symptom analyser is designed to help one to understand what medical symptoms could mean and provide with different solutions to it. It helps to find out the list of possible causes of symptoms.
- 3. Select Language:** User can view or use the application in various languages like Hindi, English, Marathi, Tamil, Malayalam, etc.
- 4. Order Medicine and Equipments:** User can order medicine from anywhere, with wide range of medicine and other health products. Since Health Care Application also provides information about substitutes to most of the medicines. It also provide wider range equipment facilities for hospitals such as x-ray machine, surgery appliances ,diagnosis machine , water bed ,wheel chair , etc. and even for homes such as thermometer, blood pressure checking machine, diabetes checking machine. One can also order medicine with prescription, which helps user to get delivered the exact dosage prescribed by the doctor. Medicines which are restricted to sell without prescription, while checking out from the cart, upload prescription are asked and after validation of the prescription only the medicines are delivered.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 6, Issue 10, October 2017

5. **Medical Equipment Repair:** Various types of repairs and maintenance of medical equipment such as electric wheelchair, defibrillators, beds and imaging equipment are performed. Technicians use a variety of hand tools, electronic tools and computer to keep the equipment in top working condition.
6. **Medicine Reminder:** Staying Healthy and getting medicine exactly on time is necessary, the application help to set a reminder so that one can have their medicine or pill on time.
7. **Blood Finder:** Blood Finder has two sections, where first shows the search result of the blood donation camps to the user and the second finds the required blood group to the doctor when searched, it searches the current hospital, then the nearby hospitals, then the nearby blood banks from where the required blood can be get on time and if the availability of the blood is not found then the request message is sent to the Health Care Application User.
8. **Health Insurance:** Get instantly health insurance quotes online and compare the best medical insurance policy from various companies in India and can also apply online as well and it is connected to the Health Care Android Application's Wallet.
9. **AadharSupport:** It is a service which is connected to F.I.R. system and Hospitals, first the AadharSupport authorized person takes the finger print of the patient, in a case of accident the details are sent to F.I.R. system which lodges the F.I.R. and send a copy to hospital, this service also gets the identity verified and automatically fills the form of hospital and make possible of having more time to get the bed reserved for the patient.
10. **Contact F.I.R. System:** After verification from Aadhar system in accident cases F.I.R. is logged and by the time of patient is reaching hospital, the police leave for hospital to investigate and this automated system helps to prevent the delay of treatment to the patient.
11. **E-Form Filling at Hospital:** It is an automated information system supported by UIDAI which also verifies the identification; it reduces the manual work, saves time.
12. **E-Wallet:** E-Wallet is connected to health insurance policy is obtained which helps in cashless transaction. It helps in easy transaction between doctor and patient and dealer or anyway. It also provides money security, loaded in the wallet.
13. **SOS (Save Our Soul):** It is an Emergency Button in Health Care Android Application, should be pressed when an accident occurs to call the nearest ambulance at the accident location and further AadharSupport service is used.
14. **Check Patient Status:** The doctor can monitor patient status live and can also track previous health status. Doctor can know previous medical history which can help doctor in treating the patient in better way.
15. **Search and Compare lab Test:** User can search various categories of lab test such as full body check up, half body check up , diabetes , urine test , blood test , cholesterol , etc. Also user can view nearest labs and can compare it.
16. **First Aid Tips:** Health Care Application provides first aid articles because it is a life saving, critical help given to an injured or a sick person before medical aid arrives.
17. **Health Tips:** The application provides health tips in many categories such as beauty, diet, home remedies. It provides an easy interface for reading the tips easily.
18. **Check Health Record:** Patient can view their previous health records.
19. **Data Integrity:** Data integrity refers to accuracy and consistency of data stored in a database or data warehouse.
20. **Firestore's Server: Side Enforced Security:** Firestore servers and are enforced automatically at all times. Every read and write request will only be completed if developer's rules allow it. This is to protect database from abuse.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 6, Issue 10, October 2017

Fig.1. is the System flowchart of Health Care Android Application.

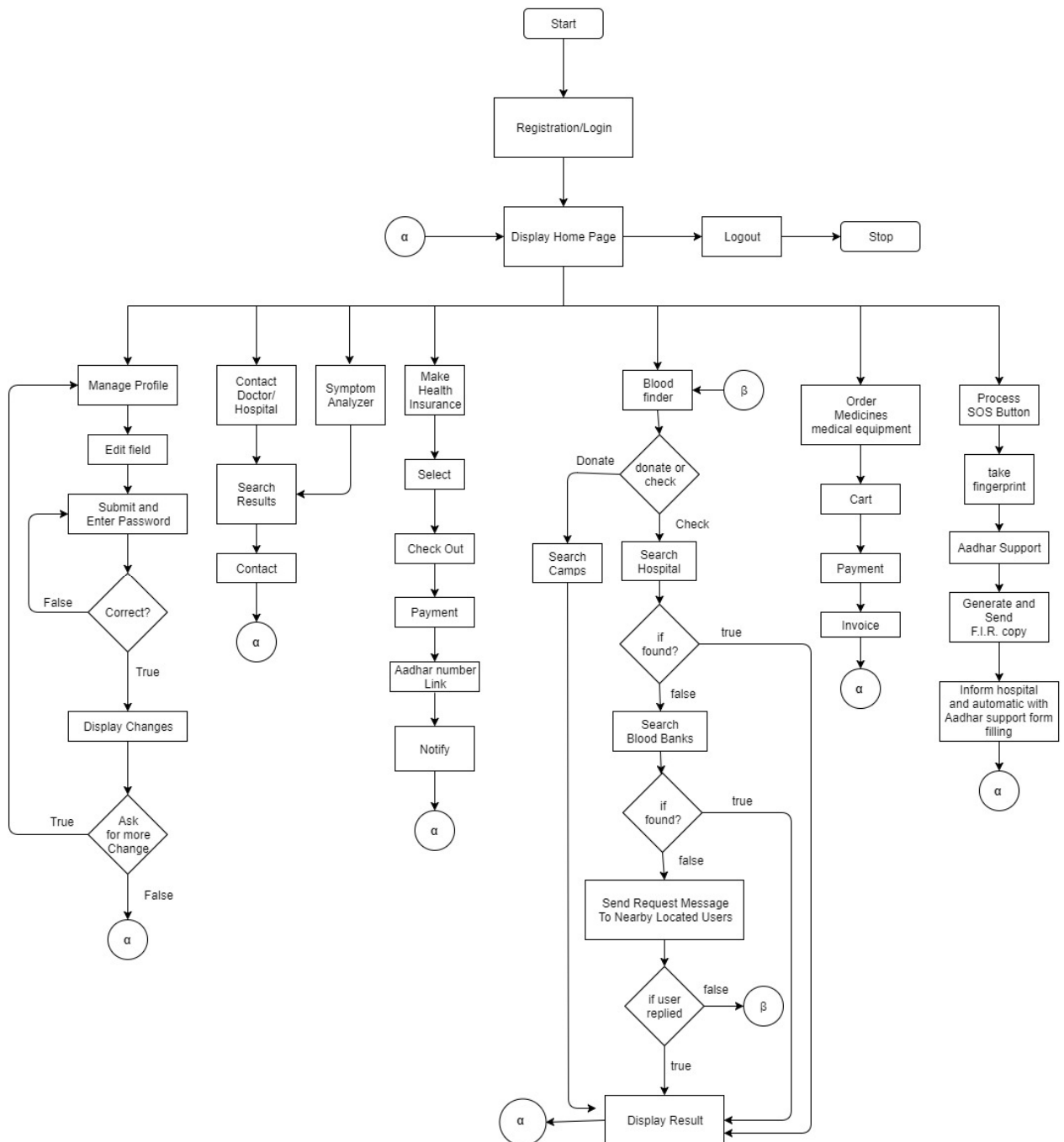


Fig. 1: System Flowchart of 'Health Care Android Application'

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 6, Issue 10, October 2017

IV. COMPARISON

Comparison between the situation with and without using Health Care Android Application.

	Without use of app	With use of app
Contact Doctor	Search for a doctor then get an appointment and then get there through transport and then get consultation.	This application allows the patient to connect to the doctor from any location.
Symptom Analysing	One may not easily find out the health problem with the symptom the one is going through	With the help of symptom analyser one can easily find out the health problem
Buy Medicines/ Medical Equipment	One has to go to medical shop to get the medicines or medical equipment.	One can get the medicine or medical equipment with prescription anytime at door step by ordering online.
Medicine Reminder	At times taking medicine exactly on time is not possible to remember for everyone	the application help to set a reminder so that one can have their medicine or pill on time.
Blood Donation	A person comes to know about a blood donation camp only when advertised or being passed through the camp.	User can easily find out blood donation camp with simply searching through application
Health Insurance	One has to contact health insurance agent to get health insurance done and service is provided in particular hospital.	With this app one can connect the health insurance policy with E-Wallet and also linked with aadhar number and can get the instant access of insurance service at the time of emergency.
Aadhar-Support	At the time of emergency one cannot fill the form and get the identity verified.	AadharSupport automates the manual procedure of filling the form at hospital and getting the identity verified.
Lodge F.I.R.	During accident cases it is not always possible to manage to lodge an F.I.R.	F.I.R. is linked with AadharSupport so that the F.I.R. is automatically lodged by Aadhar Support authorized person
Monitor Patient Status	The Doctor needs to visit the patient at regular intervals to be updated.	Doctor can monitor the patient's live health status through this application anytime.
Form Filling at Hospital	Long queues, which consumes time that might also been used for looking after patient.	This Application saves time by filling the form online.

V. CONCLUSION

Thus, we conclude based on our research and findings that our proposed system will ease the medical assistance by providing services digitally and user-friendly way. It will help to automate the manual procedures. It will Save time and avoid queues. Use of mobile phone as a device to get the medical assistance will make this application unique and the best remedy in emergencies. In rural areas it becomes very difficult for the people to find the doctor at the right time and even sometimes the doctors cannot reach to the patient during emergencies, so this application will help them to connect them with ease. The chat room service provided in this application is a feature which makes it more efficient as it is used to connect the patient and the doctor instantly and the video call service in chat room makes it convenient for the doctor to monitor the patient efficiently. Faster service is provided to get the details of the patient at the time of accident with the help of Aadhar Support and lodge an F.I.R. immediately so that the doctor need not wait for the treatment of the patient.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijrset.com

Vol. 6, Issue 10, October 2017

REFERENCES

- [1] <https://play.google.com/store/apps/details?id=com.aranoah.healthkart.plus&rdid=com.aranoah.healthkart.plus>
- [2] <https://play.google.com/store/apps/details?id=com.lybrate.phoenix>
- [3] <https://play.google.com/store/apps/details?id=com.hh.healthhub>
- [4] <https://play.google.com/store/apps/details?id=com.lic.MobileApp>
- [5] Ravi Aavula, M.Kruthini, N.Ravi teja, K.Shashank, "Smart Health Consulting Android System", International Journal of Innovative Research in Science, Engineering and Technology, Vol. 6, Issue 3, March 2017.
- [6] Thakor Swapnali S., Patil Nayana Y., Parikh Shubham A., Thorat Pooja K., "Design of 'Dr. on Click' Android Application", Journal of Innovative Research in Computer and Communication Engineering, Vol. 3, Issue 9, September 2015.
- [7] Roshni A. Santani, Mrs. Jyoti Varvadekar, 'HEALTH MONITORING SYSTEM USING WIRELESS TECHNOLOGY', International Journal of Electrical and Electronics Engineers, Vol. No.8 Issue 01, January-June 2016.
- [8] Abhay Upadhayaya, 'Electronic Commerce and E-Wallet', International Journal of Recent Research and Review, Vol. No.1, March 2012.
- [9] Navdeep Singh, 'Study Of Google Firebase API for Android', International Journal Of Innovative Research in Computer and Communication Engineering, Vol. 4, Issue 9, September 2016.
- [10] Deepti Ameta, Kalpana Mudaliar and Palak Patel, 'MEDICATION REMINDER AND HEALTH CARE – AN ANDROID APPLICATION', International Journal of Managing Public Sector Information and Communication Technologies (IJMPICIT), Vol. 6, No. 2, June 2015