

Folks Emergency Helper: Emergency Healthcare System

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Abstract- Now a days, it's easy to get details of doctor but however a person even patient doctor communication for pre and post treatment is not feasible due to various issues. In addition to seeing a doctor, the treatment of patient will sometimes require an assistant and online booking system for maintenance of patient reservations. Although this is a common requirement, it takes a lot of time to schedule manually. However, our system is designed to accommodate such requirements and is able to coordinate through our application. The proposed system is smart enough to provide patients or any user an easy way of requesting a doctor's appointment online and filling the online emergency form. This is an application that overcomes the issue of managing and booking appointments. The task sometimes becomes very tedious for the compounded or doctor himself in manually allotting appointments for the users as per their availability. Registered users can access the system through which they can view doctor's detail and also can request a particular doctor or hospital of their choice. User may also send feedback about the application, which is submitted to admin. System allows admin to perform operations like add doctor, view doctor, view user & view feedback. System allows doctor to view request which are requested by the users in which details of user as well as the disease is mentioned. Doctors can also update their password as well as the update & maintain their profile.

Keywords- Emergency Medical Service, Nearest Hospital, Health Record, Cloud Computing

I. INTRODUCTION

This application is used to find out the nearest hospital for the emergency patients which is much faster and delivers accurate results. So, our main intention is to develop an android application taking "Medical Emergency" into account.

A. User Groups

Our system is developed basically by health-conscious personnel. This application will be used by the

client to deal with the problem which they are facing in day-to-day life.

User classes are elaborated as below:

1) User of the Application:

Client itself can use this application in case of any emergency to inform the family members and search the nearest Hospital.

B. Technical Capability

1) Administrator:

Administrator is the only person who can handle the whole system. She/he only has the right to deal with the confidential details.

2) DBA (Database Administration)-Admin:

All Database related things such as "Integrity", "Reliability", and "Consistency" are handled by the DBA-Admin. Administer will only have the right to access the Database Management System. There has been a rapid increase in social pressure so most of the people are interfacing health problems, especially a lot of high-level personnel problems and modern social accidents occur frequently. It is more paramount to design a health security system for people. As mobile phones are playing an important role for people, it is the most convenient choice that the system will be situated on mobile phones. Mobile phones bear Internet access, so when the user is not feeling well, he can log in the system, and their condition will be sent to the server.

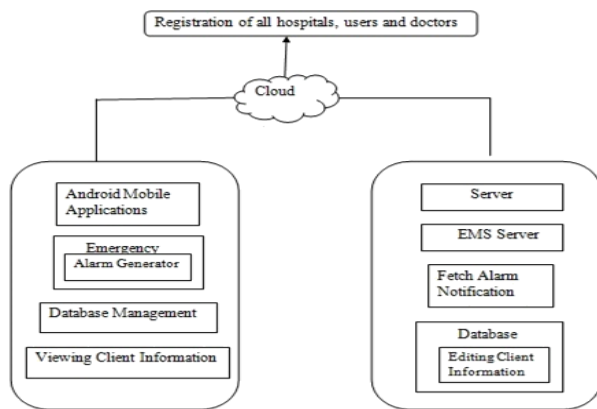


Fig. 1: System Architecture

C. Consumer Aspect:

- 1) In consumer aspect there are latest android phone through that the appliance run.
- 2) Graphics computer program of Electronic Health Record for filling personal and medical info on cloud.
- 3) Graphics computer program for editing the data and updating it on server.
- 4) Emergency are chosen on the bases of the situation like accident, heart failure, burn case and so on and it'll send a notification at sever aspect.
- 5) Additionally, contains some user helpful services like chase Blood Bank and Clinic Module.

D. Server Aspect:

- 1) Once the consumer sends request to sever, server gets activated and searches out nearest hospital.
- 2) It tracks out exact location of patient.
- 3) It fetches the coordinates and type of emergency from consumer.
- 4) Nearest Hospital will be searched relying upon variables received at server.
- 5) All the data of hospitals needs to be added into database that is present on cloud and update it frequently.
- 6) Generate EHR of patient by pressing the emergency button of phone just in case of emergency and send it to selected hospital for pre-medical treatments.

Doctor sends the prescription to the user's phone on bases of the user's condition so as to safeguard the user and obtain correct treatment. Once receiving the prescription sent to the user's mobile phone, it will remind the user to take medicine on the time.

There are numerous options that are provided to the user of the system and therefore the Hospital. Just in case of

emergency, the system finds the best route for the closest hospital provide them alert with the placement of the patient. The system can provide nearest route to succeed in the hospital and detail concerning facilities of a selected hospital so user has the previous information of the hospital like beds accessible, variety of specialized doctor accessible.

The system also will maintain Health record which is relay on cloud and prescription given to the user for hospital's perspective, the system can offer all health-related info of patients with prescription to the hospital as a carrier of emergency alarm and health care management system; there are a unit some blessings for telephone. The cell phone is convenient to hold. Individuals invariably carry a telephone with them, in an exceedingly case of emergency individuals will trigger an alarm and can get emergency service regardless of the situation familiar to them or not, anyplace and anytime. User can make a telephone to their friends and family, and with the help of GPS chip, their location is non-heritable. For this application, we elect mechanical man Phone as our platform. Android may be mobile software at first developed by Google. Mechanical man is Associate in nursing open supply system; therefore, we are able to modify it to satisfy the particular desires by dynamical or redaction the source code. The main objective of this application to produce quick emergency service to the patient during a case of emergency at freelance of his/her location on a click of a button moreover as it conjointly offers all health connected info together with medicinal prescription connected with the person to the hospital, for this

- The system can maintain the health record of the user.
- Make sure the situation of the user.
- Find the optimum path to the hospital.
- Maintain up so far standing of the hospital.

E. Non-Practical Needs:

1) Performance Requirements:

As Emergency Medical Service main perform is to produce it user the list of domain specific hospital in his emergency therefore it has to be fast and acceptable in it call. While deciding hospital EMS ought to think about determined variable such as distance, emergency, vacancy and accessibility of doctors in hospital whereas giving user list of nearest hospital.

2) Safety Requirements:

The data handled within the Emergency Medical system is incredibly vast.

The server must always be confirmed to run properly and the knowledge are saved to the info whenever user save or change his knowledge and may additionally take the update type hospital like vacancy in hospital, accessibility of doctor and new emergency treated by hospital.

3) *Security Requirements:*

No different person not even admin different then user ought to have the right edit his data.

Security to the user's medical and personal data as this data goes to be send to choose hospital for premedication and if any changes are created during this data then it will produce nice drawback for the patient and doctors additionally.

4) *Maintainability:*

The system is going to be developed exploitation the quality software package development conventions to assist in straightforward review and redesigning of the system. The systems are going to be protected by a full edge documentation of the merchandise which is able to be offered online additionally as liberated to transfer.

5) *Availability:*

The system is offered on demand. Solely factor user needs to do is to put in the appliance on his robot phone and register to the EMS server by giving all needed data.

6) *Supportability:*

The system is in a position to support robot a pair of.3.3 and forwards.

II. PROPOSED SYSTEM

Proposed system is exploitation A* formula for nearest route finding with its speciality. A* uses heuristic approach to search out nearest node at intervals totally different cluster. The alarm action can send emergency messages and calls to the users close Hospital; the emergency message can embody the placement information, so as for the rescue stuff to find the user and health record of the patient.

A. *User Handler Part:*

In this part of the projected system user area unit capable of saving the numbers that they require to send SMS and demand help in emergency things. This part is extremely necessary within the perspective of connecting to the individuals in their family, also with the hospitals and police stations.

Mistreatment "Setting" button gift on "Help" button of mobile screen user will save, edit, and delete any contacts numbers and create changes that they require.

B. *Location Chase Part:*

Location chase is that the most useful and promising innovate the projected system to create the system additional increased and useful. With the assistance of GPS, the system i.e., mobile device can mechanically track the situation of user from Google Map. The device can track the situation within the style of meridian and latitude together with the address of that space wherever the user is gift. Along with chase the situation of user the system is in a position to trace station and hospital that is found nearer to the user so that the system can send messages and calls to contact the station and hospitals. Many another system fails to seek out precise location of the user however projected system had worked to boost this part. However, this recently projected system is in a position to trace the exact location of the one that fall within the emergency scenario and unable to assist themselves.

C. *Message Causation Part:*

This projected system tracks the situation of the user within the variety of line of longitude and latitude and beside the address wherever the user is gift in any space.

As presently because the user presses the button gift on home screen of the mobile device or shake the mobile, the device can send emergency SMS to the pre-registered numbers. This message can contain line of longitude and latitude values, address wherever user is gift, and additionally link of the Google Map which is able to provide route to succeed in at emergency scenario.

This system send message repeatedly once some interval of your time. System can provide the situation of the user within the variety of line of longitude and latitude and additionally with address and therefore the link of the route to succeed in that person.

III. DESIGN METHODOLOGY

A. *Authentication:*

In this module, user authentication is completed according to the role primarily based access management. A brand-new user needs to register for access the content of our system. Registered user logs in with the registered username and positive identification. If the user is victimization the applying for the primary time then he will be prompted to fill a registration kind. After the registration, the user will use the applying directly while not having to register once more. Once the user is registered, he's redirected to Main interface wherever he will read his previous crammed details and even edit them. This interface contains tab to pick out emergency and activate EMS server. The registration kind accommodates user's personal and medical info in it. Fill personal info like name, address, age, gender so on and medical info like blood cluster, anamnesis etc. Personal info shows the information that user has given whereas registration. This Information is often helpful for doctors.

B. EHR (Electronic Health Record) on cloud:

There is some choice of implementing "cloud" technologies in care Management System. Electronic Health Record (EHR) as a service is perhaps the foremost appealing. The benefits of this model embrace the following:

- Users have unlimited access to the software system victimization any device connected to the web.
- The user isn't in chains to at least one stationary PC.
- Knowledge is often shared with different systems.
- All users access constant version of the software system.
- Maintenance and upgrades to newer versions are simple.
- Health care knowledge securities are improved.

Using the data over the server EHR of the patient are mechanically generated and forwarded to the selected hospital for pre-medical treatment. Huge info is maintained of all the hospitals, Clinic and bank over the server.

Thus, correct data processing will be useful to trace out the best hospital in emergency case. The User or Patient can initial register to the applying and his knowledge are saved over the cloud. User can fill his or her personal and medical details whereas registration which can be patient to get Electronic Health Record (EHR).

C. Nearest Hospital Trailing:

This module keeps track of Nearest Hospital for the patient's victimization the variables that are primarily based on:

- Sort of emergency (for example: coronary failure, Paralysis, Accident) □ Accessibility of Doctor and
- Distance from the patient.

D. Bank and Clinic:

We will maintain knowledge of clinic and bank over the server. This can be used as a refill to search out clinic in town for specific specialty (for example: specialist, Eye Specialist, medical practitioner) and additionally realize bank.

IV. RESULT

An application will be developed for android phones. Results are formed such as Android EMS and Patients details. Figure given below, gives the idea about Android EMS in this SQL query also executed as well as present the database using PHP MyAdmin.

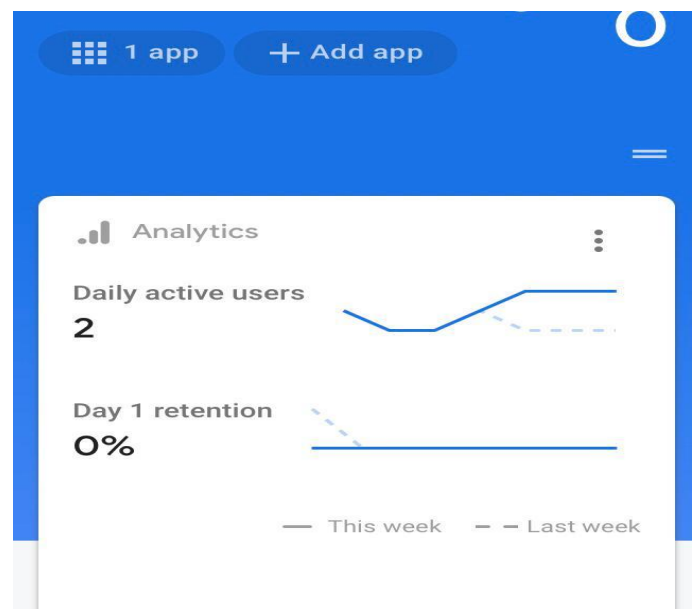


Fig. 2: Snapshot of Android EMS

After analysing it found that fields shown in Fig.2 are require in order to get required result and have complete information of patients. Figure given below is a basic look of how and what details are to be filled of patients.

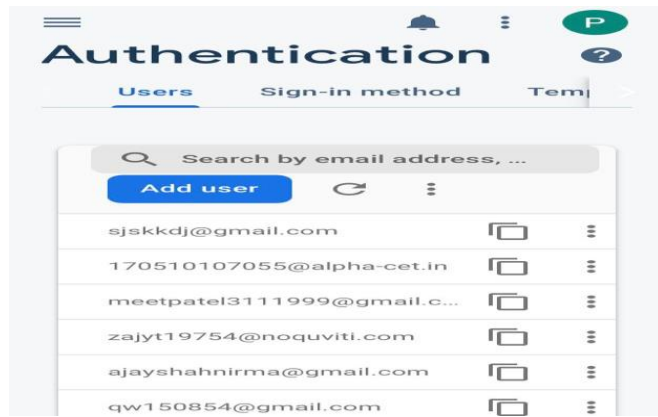


Fig. 3: Snapshot of Patients Details

Information shown in the fig.3 is basically known as medical history of patients. All the required information of patients will be filled by the authenticated person and he/she will only have the right to change and update the information. Patient will only have the right to view his details and the prescription given by the doctor, so that they can take medicines at time.

Result will be totally depending on clients and situations:

- Patient as client: Finds the Nearest Hospital.
- Doctor as client: Track the location of Patient.

V. ACKNOWLEDGE

Defeat is not when you fall down; it is when you refuse to get up". We faced many difficulties during our project to ensure, right from the requirement gathering to implementation. There were times when the goal looked beyond reach but all difficulties were accepted as challenge.

Greater the challenges were the effort to overcome it. It has been rightly said that we are built on shoulders of others. For everything we have achieved the credit goes to all those who really helped us in completing this project successfully.

We would like to thank my Project Leader **Prof. Ajaykumar T. Shah** for providing a vision about the system. We have been greatly benefited from their regular critical reviews and inspiration throughout my work.

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involved interest from his side. It was only due to their support, motivation and encouragement that could steer through the project on an honest course to splendour of success.

VI. CONCLUSION

We will develop "**FOLKS EMERGENCY HELPER**" System with great concern and will try our best to implement as many features to make it viable and usable. This system is a powerful and easy-to-use for the user in their day-to-day life. This System provide daily commodities price option. This is the easiest way for the users and farmers. It is the Application with the latest platform that fulfils the required needs of user and patient. Nowadays, technology is increasing day by day for making the works of human being easier. It is the platform for the Hospital to update Information. In these system admin can send push notification to the Hospital for the update the system.

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