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A Survey on LIFE CARE: GPS Based Emergency Medical Services

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ABSTRACT—Emergency Medical Services become essential for the proper treatment in emergency situation. That technology of location-based services make use of digital devices like computer and mobile for giving users live location and emergency service center location. Their application has static data as well as dynamic data so, at any time it is very useful to users. Patient's life become much more suitable and comfortable. Application made by them LIFE CARE would assist user for recognizing the hospitals, clinics, specialized doctors and ambulance services. That application helps the patient for finding the hospital and doctors. LIFE CARE have ability of checking medicines are present in medicals or not. All the information would be computerized so it can become easy to handle. There is no chance of loss of information. Maintenance of health and protecting of data is the feature of that application. There are three parts that are Admin, Doctor and patient. All that three are manage that application.In future, there is chance of adding many features like video calling, giving ranking to doctors and hospitals. Hence, now-a-days that application become very popular.

Keywords— (Hospitals; Doctors; Ambulances; Emergency Services; Computerized data; GPS; Prescription; Patients; Location Based Service;)

I. INTRODUCTION

EMS is the Emergency Medical Services which is the branch of emergency services that provides medical services out-of-hospitals. In critical condition it provides ambulance services for the patient's care. Patient who needs a proper treatment or who wants medical services then by that system all the services get provide by an online system using Geo-Location system.

If patient wants to see hospitals, clinics, doctors nearby location and wants to take appointment of doctor or if someone needs emergency services then according to the reference research paper their app will help you all resources with just click some buttons. Emergency Medical Services(EMS) system works on any smartphone/android mobile or any operating system. During emergency that application recognizes the location of hospitals and doctors. If someone wants getting treatment at home then user can put appeal in an appointment. Due to the GPS system it become easy to contact with doctors and hospitals fastly. In that application static as well as dynamic data are provided and hence in case of unavailability of internet connection in any platform patients will be able to see all the information because of offline data are also present there. Offline maps are provided with Google Markers for better placement of that location. When patient upraise in emergency, that notification will gives to the doctor and then doctor notify to ambulance services and ambulance will arrive to patient's location. That application works as firstly, for handling that application user have to sign-up on that application and enter all medical information about itself in that. So in emergency doctor can see this information quickly. After registration and sign-up process there is login option from that patient can logged in often at anywhere and anywhere. User can see hospitals, clinics, specialized doctors, ambulances, medical stores and blood banks. For getting proper treatment patient have to take appointment for that. In emergency notification of patient's request will get to the doctor and he send ambulance to patient's location. During intermediate time doctor would check the medical history of patient, inform to nurses and get ready for the treatment of patient.

Doctors can share all the medical reports by uploading reports and medical prescription in that application after checking of patients. Patient can see all the uploaded information and he/she get notification in their application. If patient have any query about the prescription then theycan inform to doctor and get satisfied with them. Emergency Medical services gives relief and better enhance to

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the patient. If patients wants medicines then they have to get medicine list to the pharmacy section. That medicine prescription notified by pharmacist and it will gives information about availability of medicines. Life about healthcare become more sufficient and joyful.

II. LITERATURE SURVEY

In reference research paper, they have proposed Geolocation based Emergency Medical Services (EMS) resulting from a qualitative study. Aim if that application is to review existing literature in order to get verification for managing patients in emergency service care.

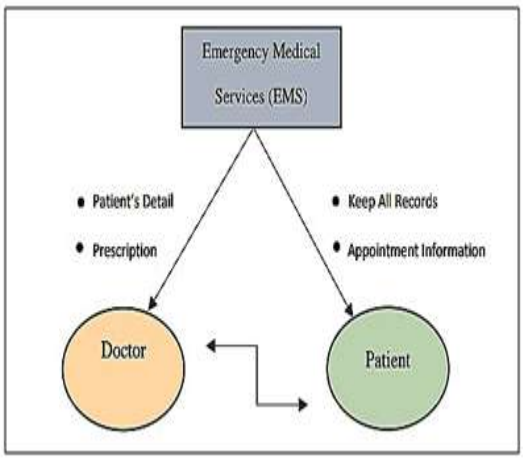

Figure 1. Basic Flowchart

Health Maintenance and Care: Over the past few years, the importance of healthcare system is very large in a society and have demand of it. That healthcare maintenance part has been expanding and initiating bring a more progressively, computerized, well-organized structure. There would be a large progress in a web-based application for the people which store medical details. In maintenance medical details are put in data collection. That is the skillful method for keeping the data computerized and it contains better security.

Specialized Structure: Specialized Structure is used in
medical service and in that, survey can takes place which is depends on the accuracy for the therapy and regulation of the system. According to reference paper they show that this system uses Fuzzy Least Load and Round Robin Algorithm. In that system there are separate plan of action for executing a specialized expert system. That system also contains Data Mining techniques.

Protecting Medical Information: In case of emergency, information of patient is not available then there is chance of death takes place. For keeping that information, merging of technology like Blockchain Technology and Secure File Transfer implementation used. In that Blockchain Technology combines peer-to-peer network and dispense storage. The verified certificate is needed to the doctor and hospital or clinics for keeping the data on system. For encoding the text and data different techniques are used. Algorithm called Paillier Cryptosystem is used for images and Advanced Encryption Standard is used for text data.

Doctor Location: It draws extraordinary facility and functionality searching specialized doctors. That help for searching the doctor's information. That system further analyzed that the it does same on Android and operating system. There is some change that it doesn't gives idealistic information about specialized.

III. SYSTEM DESIGN

Admin: Admin can control all the information of doctor. He can add doctor, delete and update profile. All history of doctor will be under the admin.

Doctor: Doctor have to login in that application, update profile. At home page they can see today's emergencies and see appointment status. All notification about patient's appointment will arrives at doctors application and can see appointment of patient.

Patient: On the first page of application there is a map with current location and detect the location of medical services in that. Patient can see doctor's information also. Patient have to register, login, update own's profile and can see prescription added by doctor.

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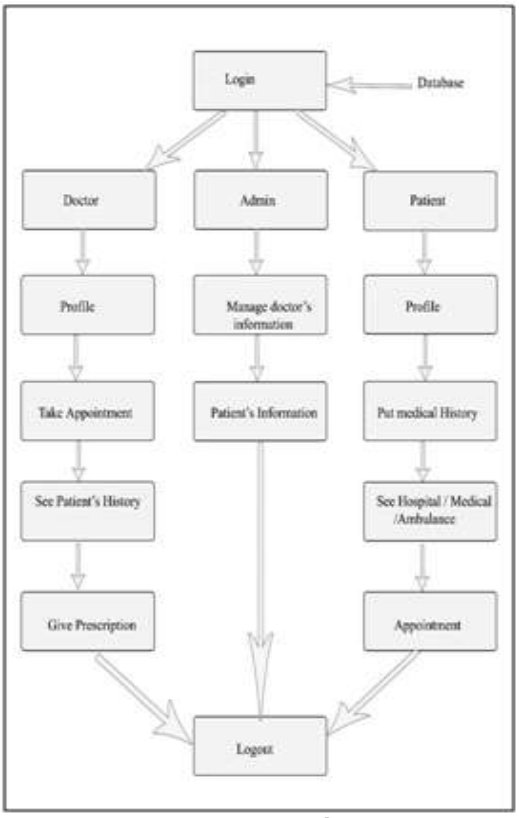

Figure 2. System Architecture

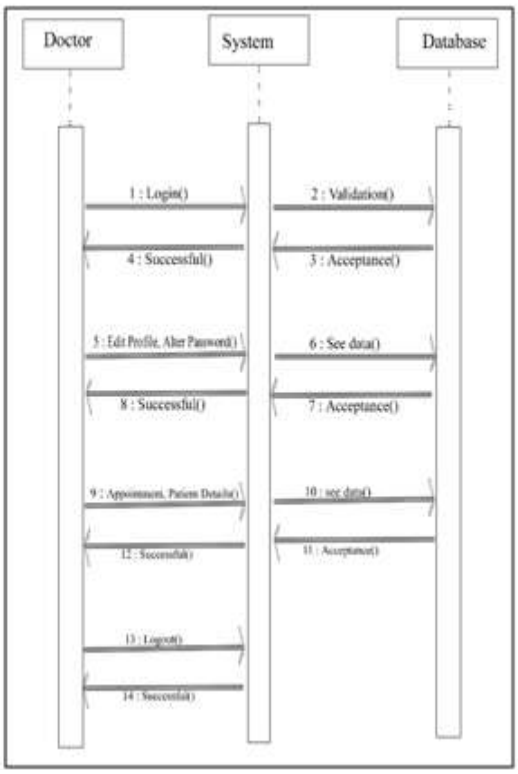

Figure 4. Doctor Series Diagram

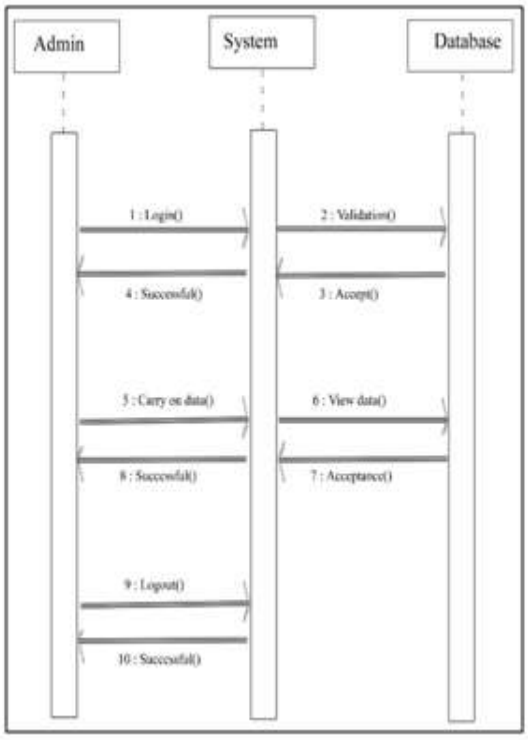

Figure 3. Admin Series Diagram

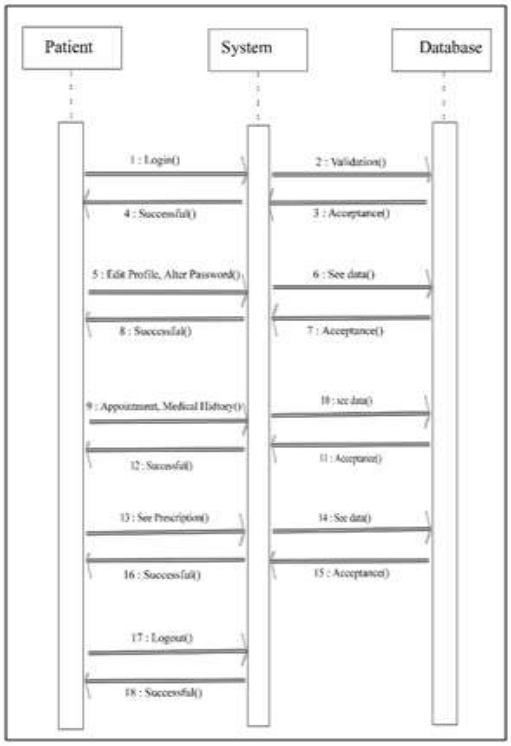

Figure 5. Patient Series Diagram

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IV. IMPLEMENTAION

GPS based Emergency Medical Services have successful performance. All the functions in their application have qualitative work and all that functions work properly. In that application admin's work is that manage data of doctor, likely doctor's function is that see the notification of patient, give appointment and proper treatment to the patient. Patient also performs their best work which they needed in their emergency cases.In their application other than admin, doctor and patient there are medical stores, blood banks, ambulance services are also present and by the GPS system user can see all that services in their application and takes use of that services successful. Some screenshots of their application are shown below:

Figure 6. Doctor's Registration

Figure 7. Emergencies in Doctor's Application

Figure 8. Doctor's Details

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Figure 9. Patient's Detail.

Figure 10. Specialized Doctor Display

V. FUTURE SCOPE

In future, in that application many other characteristics will be include for the better purpose and due to adding many more attributes in that application users of that application get satisfaction.

A special function will be must add in that application andthat is online video calling.

Ranking and Remark for the doctor.

Online payment method will be wants add in that application.

In present database, adding all other information, for making the application underof roof for the online record.

VI. CONCLUSION

The Emergency Medical Services is more sufficientapplication which brings much more updates and well-organized application. Similar to other services theemergency services become more computerized. Some users used that application for keep records of their medicalhistory safe. Doctor gives prescription in that application and hence there is no chance of loss of prescription given by doctor. Instead of lack of internet connection that application has provided facility of online as well as offline data also. Protection of all the data in that application and having much more security. Due to the GPS system the users can find doctor very easily in short time. LIFE CARE supplies the services of hospitals, doctors and ambulance to the user. That application will available on all smartphone and operating system platforms. Hence by including all that facilities in that application, their application becomes popular among the users.

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