Sanjeevani: A Centralized Data Repository to Search Real-Time Emergency Medical Supplies

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Abstract— These days, with a bustling way of life individuals of all age aggregate battle with well-being related issues. Also searching for suitable blood groups and medicines in an emergency situation is strenuous task for family members which requires most extreme time and human exertion and now and then turns out to be exceptionally important that may cost the life of the patient. In this manner, HealthCare has turned into a required need of each family. To solve health related problem, we propose a Web based platform to ease the process of finding suitable blood groups from nearby Blood Banks in the area. Likewise, the application discovers conventional and its substitute drug from Medicine Shops accessible in the region utilizing Real time Location of the particular client/s through GPS. Subsequently, it reduces paperwork on daily basis of hospital blood banks by maintaining a database that will work in real-time for blood record maintenance.

Keywords: GPS, Generic Medicine, Healthcare System, Emergency Medical Supplies, Web based application.

I. INTRODUCTION

Each subject of the nation visits the specialist or doctor's facility in his lifetime for various well-being related reason. So as to treat the patient specialists, endorse drugs which perhaps conventional or extraordinary which is obtained from a therapeutic shop. Likewise, once in a while patient may require blood for various related reasons. Looking for indicated prescription and blood bunches amid crisis circumstances or on everyday schedule have turned into an exceptionally disturbed errand. It is regularly observed that tolerant needs to visit a few therapeutic shops to get the endorsed medications as he is ignorant of various choices for a medication salt accessible to him. This may require connecting all brand names for a medication/salts in the database which might be accessible to the clients. At the same time this database might be connected with accessibility of such medications at various therapeutic shops which can be distinguished by a map. This venture additionally manages Inter Hospital Blood Transaction in which when doctor's facility faces shortage of blood in their doctor's facility amid crisis they could proficiently utilize our web application and contact other doctor's facility for bloods without making any inconvenience the relatives of the patient to experience the ill effects of finding the blood and coordinating blood bunches wandering around from one clinic to another[1].This will to a great extent help in Health Care Department of any doctor's facilities to keep up their records of blood donation center progressively premise and furthermore make a straight forwardness in the arrangement of doctor's facility and their won't be any defilement in name

of blood gift or such things by any stretch of the imagination.

In this paper, an online application is proposed which bargains in giving a convenient and hustle free human services framework. The reason for choosing online stage is that in India, each and every native approach web and web application furnishes better client involvement with responsive structure. It's much simpler and less expensive to make an electronic framework easy to understand framework over numerous stages and different screen goals.

The application will give:
• Mechanism for finding the recommended medications or it's substitute accessibility in the medicinal shops of the region.
• Provides stage to healing facilities/clients for finding blood units in the close-by blood donation centers and clinics.
• Searching for a substitute prescription.
• Real time blood records the executives by doctor's facilities or blood donation centers to our brought together database.

We examined about some significant papers in Section II. In Section III we depicted various leveled chart clarifying the framework usefulness with framework design. We demonstrated a Use Case graph centering the client's collaboration with the framework. Lastly, in Section IV we finish up our paper and in Section V contains Future Scope for advancement of our framework.

II. LITERATURE REVIEWS

We have found many such health care systems available in market whose documents we have selected and effectively evaluated. The author of [1] proposed a mobile application for online cabin booking system as well as it gives information about the hospitals based on the cost and quality. It is also used for booking appointment with doctors, intelligent suggestion on choosing suitable hospitals, Alarm System for medication and also provides a BMI (Body Mass Index) calculator.

The author in [2] aim is to assist the patient by eradicating outdated paper-based system. Its motive is tomake aware of the cheaper generic substitute to the medicine their doctor prescribes. It also makes affordable for people for their cure of diseases or illness irrespective of any shortcoming in their lifestyle.

A web application proposed in [3] that are connected to a database to gather and organize the data from all blood banks and blood donation campaign. It assembles and controls the critical process of blood donation; it's testing, storage and delivery.

The author in [4] aims to facilitate faster and efficient communication between doctors and patients giving transparency to location and distance where they are based while using android based application. It is based on Android platform which is connected to server to manage hospitals data and also uses GPS and GSM network for communication.

The author in [5] aim is to bridge the gap between the blood donors and the receiver who is in need for blood. The application is provided to synchronize donors and users with of help of internet so that user can view the availability of matching blood required and can order online when in need.

Our main motive is to provide user satisfaction which is the prime priority by means of rapid and continuous delivery of useful workable web application. By making such a platform we are able to save human efforts and time which was wasted in searching for medical emergency supplies [1,6]. For example, viewing nearest hospitals, blood banks for blood transactions and also maintaining real time blood records in the database, viewing nearest medical shops for finding the prescribe drugs, searching for substitute medicines. These features would help the users to save good amount of time and make their task easier. These features were not combinedly done in any previous works.

III. IMPLEMENTATION OF OUR SYSTEM

Here is a short diagram of our framework where we can without much of a stretch see that how our framework has a tremendous effect when such a crisis circumstance emerges and how it helps the relatives and companions of patients not to problem all over for blood rather clinic can give a plan to this sort of circumstance.
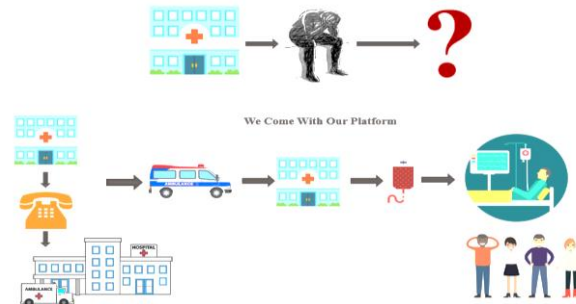

Figure. 1. Overview of our System

In this module we are going to discuss some topics which are System Architecture and also to give you the overview of our web-based system which is given as follows;

System Architecture

The system is composed of three modules: User, Hospital and Administrator. The Administrator section is for generating and updating information about medicines and their different substitutes that are newly available in market. And the server will provide several distinguished features for the other three modules that will authorize them to get quick and essential healthcare. The web application requires internet connection for updating data and for getting modules current location to provide them with nearest medical stores and blood banks. The web application uses a Three Tier architecture system which consists of a server, three types of members and a centralized database. The system architecture is showing Figure 2.
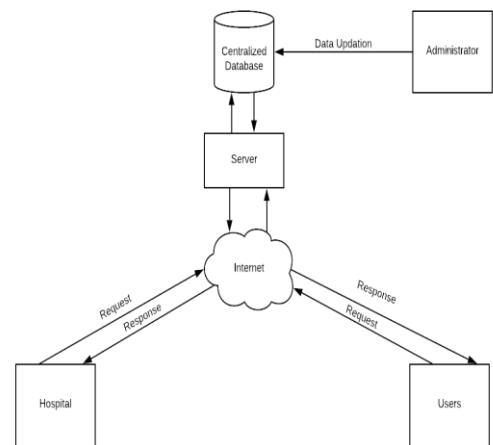

Figure. 2. System Architecture.

C. *Web Application*

The technical development of the Website may be inclusive to the latest Technology from PHP 7.2 to HTML 5 to CSS 3.0, thus bringing in a wide scalable dimension of

smoothrunning website on any devices. Also, usage of various security features like SSL Certificate, HTTPS Protocol, Anti-Hacking MD5, etc. may ensure safety of website. All the details of Enquiry, Contact Info, Web Access Information etc. will be scripted in MySQL Database. Features like MVC & CMS will constitute the Back-End Architecture of the website. From the Client or Display Point-Of-View the Artistic Designs and Sleek Appearance will be brought about using BootStrap, FancyBox, etc. User Coordination and engagement can be achieved via JavaScript, JQuery, etc.

Brief Overview about the system:

1. Home Screen and Registration

Home Screen comprises of depiction of highlights that are incorporated in our stage. It furnishes individuals with Registration and Login catch. While enrolling in our stage we will get some information about different subtleties, for example, Name, Password, Contact Details, Email Address and Member Type. Out of which Member Type is basic to be chosen which contains a drop-down list having alternatives like User and Hospital. Along these lines, in light of the Member Type every part will get the separate element. Enlistment might be substantial for special individuals, if any copy passages are made it won't be refreshed in the database.

2. Login Screen

During Login procedure we will ask the member to enter his/her username, password and it will be verified with the entry present in the database and based on the member type present we will display them their respective landing page of the application. The hierarchical system is shown in Figure 3.
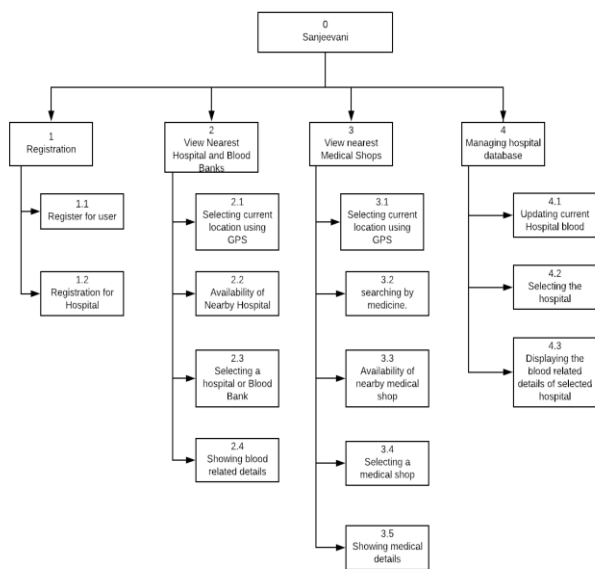
3. Member Type → User

There can be three unique sorts of User which will utilize our framework. They are Care-Taker, Patients and General Public. In the event that the part type is User, the framework will give two unique highlights which are, first survey closest blood donation centers/Hospitals and Second review closest medicinal shops. Presently, on the off chance that the client needs to see closest blood donation centers, the framework will get his/her present area through GPS and dependent on the information recovered from concentrated database, the framework will give the rundown of adjacent blood donation centers with the assistance of Google Maps out of which the client will choose one of the blood donation center and subtleties of that individual blood donation center will be given to client.

Likewise, in the event that he/she needs to discover data about separate prescription substitute accessible, the client will look by medication name and our framework will recover detail data about drug substitute from our concentrated database. Furthermore, presently if the client needs to see closest drug shops which gives that medication then our framework will get his/her present area through GPS and dependent on the information recovered from incorporated database, the framework will give the rundown of close-by restorative shops on Google Maps out of which the client will choose one of the medicinal shops and subtleties of that individual blood donation center will be given to client. Fig 4 speaks to the Use-Case Diagram of our framework.
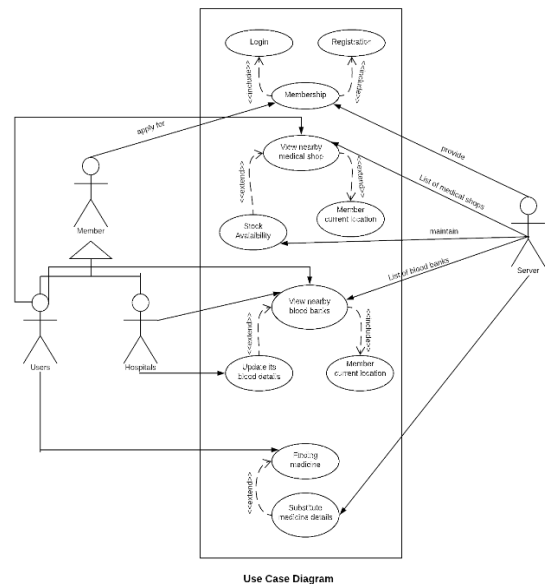

Fig. 4. Use Case Diagram.

4. Member type → Hospital

On the off chance that the part type is Hospital, the

Figure. 3. Hierarchical Diagram.

framework will create two distinct highlights. After enlistment the main thing clinic needs to do is to refresh their blood record subtleties to our concentrated database. By utilizing these blood records different healing centers which utilize our stage will have the capacity to see the accessible blood bunches that are available in this clinic. Presently, if the doctor's facility needs to see adjacent blood donation centers and different healing centers which contain the required blood a mass in crisis then our framework will get the doctor's facility's present geographic area through GPS and furthermore takes the required blood gather from the administrator.

Based on this information, the system will retrieve the list of nearby blood banks and hospitals with precise location present on Google Maps. Out of the retrieved list, operator will select any one blood bank or hospital which satisfies the requirement and then the system will provide the detail information about that respective option selected
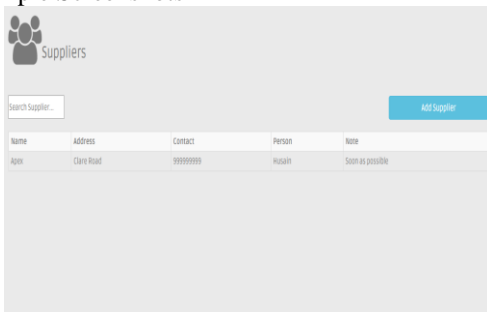.

5. Sample Screenshots
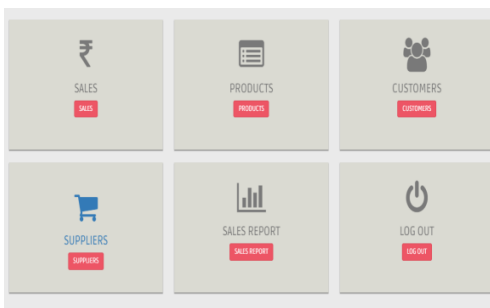

Figure. 5. Medicine Suppliers Record

Fig. 6. Pharmacy Dashboard
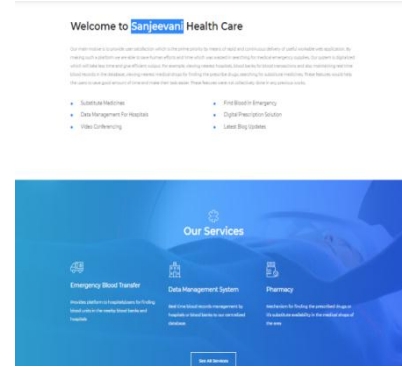

Fig.7. Admin Screen

Fig.8. Home Screen

IV. CONCLUSION

Our system Sanjeevani helps the user's and hospitals save their time and human efforts through a controlled system which takes care of all-important details which are required during emergency situation which could help to save someone life. These processes are stored in the centralized database. We aim to ensure that we overcome the problem of lack of blood supply in hospital and also the serious issue of expired blood by providing a web application in hospitals which would follow a concept of Inter-Hospital Blood Transaction, also blood which is near to its expiry date can be send to the hospitals which have more usage of that blood group so that no blood is wasted [7,8].

Besides, not very many individuals know about drug substitutes that are accessible in market at a less expensive rate then the non-exclusive medication which are all the more exorbitant. So, with the assistance of our framework individuals would effortlessly discover medication substitute data and furthermore area of restorative shops from where they can without much of a stretch purchase the drugs [8]. This paper exhibits a web application-based Health Care Tool that can be a buddy for countless. Utilizing the application, they can discover numerous advantages that can change the manner in which individuals respond in a crisis circumstance. Client may locate the basic method to achieve the arrangement with the assistance of this application. Thus, it is normal that electronic medicinal services framework will be helpful and advantageous piece.

V. FUTURE WORK

There is part more work to be done before utilizing this application into medicinal condition. To improve the framework usefulness, we can add more highlights to the web application wherein we can include one more part type that is Doctor. The specialists can turn into a part to our stage where they can give their patients computerized remedy and furthermore, they can prescribe their patients with various substitute prescription data via seeking in our database and forward it to separate approved patients or

guardian who may have an application to get to the alternative and accessibility of the medications in his/her adjacent territory.

Additionally, specialists and patients can associate with one another by means of talk room and video conferencing highlights which will be helpful for patients to comprehend their inquiries and to offer straightforwardness to area where they are based while utilizing the application [9, 10].

Also, we would like to add the interface to schedule patient's appointment [11] as given in the mentioned reference paper for making appointment process very convenient for the patients. Also, everyday analysis graph will be showed to both the user's (Doctor's and Pharmacy) about the sales and number of patients visited in the clinic to get analysis of their business [12].

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