

Developing Android Blood Bank Application for Saving Life's

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Abstract- In today's world a blood is a saver of all living beings. The task of the Blood bank application is to the receive blood from various the donors and monitors the blood groups and database to send the required for blood during the need to the hospital in case of emergencies. The problem lies when there is not insufficient of numbers of donors, but to find the willing donors at the right time and place. We try to build network of people who can help each other in case of emergencies. We have provided new users to register them self for authentication and according to their requirement and perspectives users have to login. The application mostly are updates the information for regarding to the donors where the administrator are accesses the whole information about the Blood Bank system. The donors required to enter the individual's details like name, Blood Group, phone number and donor location emergency in the time of a blood requirement. This application required active internet connection so that it helps to find the nearby hospital and donors instantly by tracing the user's location using GPS. The users get the route to reach the desired location and he won't have to ask manually, therefore time can be saved.

Keyword- Android Studio, Database, SQLite, java, xml, Jason, GPS

I. INTRODUCTION

Blood is an body fluid in the humans and other the animals of that a deliver the necessary of substances such as the nutrients and the oxygen to the cell, and the transports metabolic the waste of product away from the those an same cells. The task of our Blood bank application is to the maintain the details of an many donors and the monitor to blood groups database in an requirement of users. The problem arises when a required donor is not insufficient, but it is finding a willing donor at the right time. The blood bank is an the center for the where blood

to the gathered as a result of the blood donation it store, and the preserved for the later an use of the blood transfusion. In some situations that the patient is an unable to get the required need of blood at the right time, due to the lack of interrelationship among different blood bank. That is which leads to the lack of knowledge, and the update for record of all the blood donors. So, we have to build a network of people who they can help each other during an emergency. If someone needs blood, at first he has to search within his family members then the nearest hospital, and blood banks. After that if they cannot manage blood in these ways, it is really hard for them to collect blood within short period. That is the problem we are want to solve this through our application. The system uses an over server to store data which consists of database where the individual's information cannot be accessed by unauthorized person since the database will be encrypted. Our application groups. At First, the users have to log in into the aims to reduce the time to spend to search for blood donor in case of emergency. The system allows in need the users to view the donor's details such as name, phone number, locality and their blood system which will be hardly take the few seconds, and then the user gets access to all the available group of bloods using details of those who can donate blood in emergency. This Android application is developed are easily to search for blood in nearby the areas for emergency. In this Android app one think will get clear access to the blood in real time, and the right place

II. PROBLEM STATEMENT

The major problem in are old Blood banking systems was that, they don't follow the actual needs of the users. Traditional blood banking systems they were developed by 1 or 2 perspective. Tracking the database was the complicated when the details are maintained a manually. There was shortage and the sometimes unavailability of the rare blood groups due to the fewer modules, i.e. patient and the donors

III. PROPOSE METHODOLOGIES

1. ANDROID STUDIO

Android Studio is the official IDE for Google's Android operating system, built on JetBrains IntelliJ IDEA software and designed specifically for Android development. That is available for download on the Windows, for macOS and Linux based on operating systems or as a subscription-based service in 2020. It is a replacement for the Eclipse and Android Development Tools (ADT) as the primary IDE for the native Android application development. The Android Studio for offers flexible Gradle based build in a system, code templates to the help you build and common app features, rich layout editor with the support for drag and drop theme editing, built-in support for Google Cloud Platform, making it easy to the integrate Google Cloud Messaging and the App Engine and much more.

Android Studio features a new and improved interface the design perspective for where you can view the interface for you are working on and its related the components.

Android Studio provides a number of the user interface tools to the assist you with creating and layouts, implementing style themes, and the building graphic or text resources for your app.

The Android build system is the toolkit you can use to build, test, run and the package your apps. The build systems can the run as an integrated for tool from the Android Studio menu and independently are from the command line.

2. SQLite DATABASE

SQLite is an open source SQL database which that stores data to a text file on a device. Android comes in with built in the SQLite database implementation.

SQLite supports all the relational for data base features. In order to access this database, you don't need to establish the any kind of the connections for it like JDBC, ODBC etc.

SQLite is a relational database management system (RDBMS) contained in the C library. SQLite is a popular choice as the embedded database software for the local/client storage in the application software such as web browsers.

3. JSON

JSON (JavaScript Object Notation) could be a lightweight data-interchange format. It's easy an for humans to the read and write. It's easy for the machines an to parse and the generate. It is a based on the JavaScript Programming, Language, and the Standard 3rd Edition - December to 1999. JSON is a language-independent format. It had been the derived from the JavaScript, but many of modern the programming languages in include code to the come up with and the parse JSON-format for the data. It is an the open standard file to format in which the data interchange or and format, that uses the human-understanding for text to store the and transmit the data objects consisting of the attribute value pairs, and array an data type +its official Internet and media for JSON is application/ JSON. JSON filenames of use the extension for JSON. Douglas Crock ford originally or specified to the JSON format in the early for 2000s. JSON was the first at standardized in 2013, as the ECMA-404.

4. GPS

In our android blood bank application we are using GPS so that it is really helpful to trace the nearby hospitals and donor locality. The Global Positioning System (GPS), originally NAVSTAR GPS, is a satellite based system owned by the United States g government and it is operated by the United States Space Force. It is one of the global navigation satellite systems (GNSS) that provides relocation and time information to a GPS receiver ajmikny where on or near the Earth where there is an unhampered line of sight to more than four GPS satellites. Obstacles like buildings and mountains block the relatively weak signals. The GPS does not allow the user to transmit any data. It unconventional operates of any internet reception, though these technologies it enhance the convenience of the GPS positioning information. The GPS provides capabilities to civil, military and commercial users around the world. The US government created the system, maintains, a make sit freely accessible to an individual with a GPS receiver.

A. Users of the System

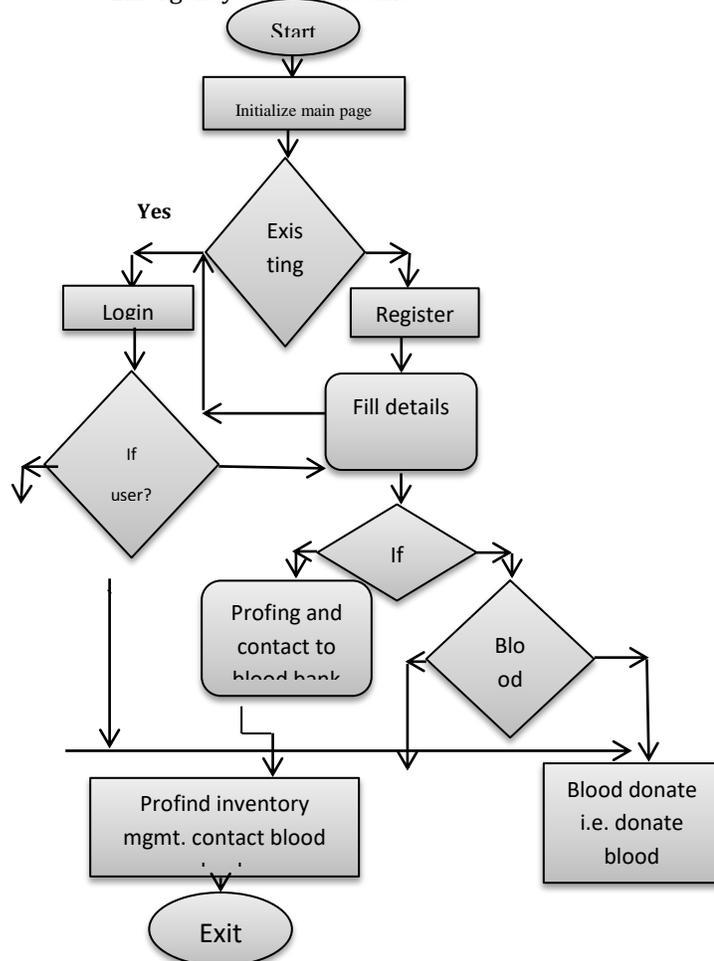
- i. Administrator (this should be a general body, could be from central blood bank agency)
- ii. Blood Donors
- iii. Blood Banks, Hospitals, Clinics, etc.

IV. PROPOSED SYSTEM

The user has to first download the application. He/she will be provided with two options: Login and the sign in. If the person has already registered, then he/she has to login. If not, he/she has to create an account providing a basic, for details like name, address, contact, date of birth, blood group, email id, etc. The user is allowed to update his/her information. Once the user registers, he/she can check various blood banks that are located

The user will get various options on screen:

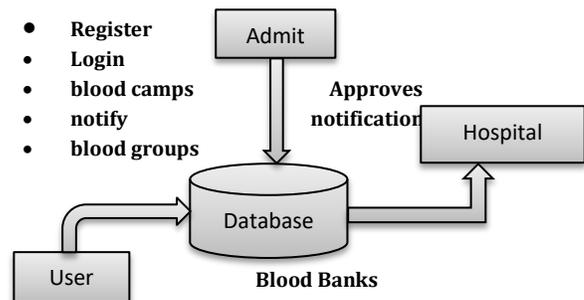
- Blood camps
- Search donors
- Search blood banks
- Request for blood
- Nearby hospital
- View notification
- Emergency contact details
- Emergency medical details



SYSTEM ARCHITECTURE

The user can select any of the option and according to the selected option he/she will get the information. The user can also get the exact path from his/her location to blood bank or hospital by using Global Positioning System (GPS). The details of the blood banks, hospitals etc will be saved in database and only the admin will have access to database. Private and confidential data of the users can only be viewed by administrator. This system promises very less paperwork and also provides help to blood recipient, blood banks and donors also. With help of our application the user will not have to go to the blood bank and ask for the required blood he/she can directly check from our application.

BLOCK DIAGRAM



The user can search for blood banks and blood camps. He can view other people who have already registered and he can search donors by location or type. He can organize blood camps by specifying the venue and date of the activity. This information is added in blood camps. By using GPS „Search nearby places“ searches nearby hospitals and also gives the direction to the hospital. The user can also request for required blood by giving any small description. This request is submitted to admin who accepts or rejects the request. Accepted request is published by admin. The registered user gets notification of this published request. This information about the request is added to Requirement for blood“ option. The user can also check various first aid details. He can update his own profile.

V. Types of Blood:

The type of blood although the all blood is made of the same basic are elements, not all the type blood is a alike. In fact, the there are eight different common of blood types, which are the determined by the presence or absence of the certain antigens since the some antigens can be trigger

a patient's in immune system to attack the transfused blood. The donor blood type must be determined before the transfusion of blood [1]

Type	You Can Give Blood to	You Can Receive from
A+	A+, AB	A+, A-, O+, O-
O+	O+,A+,B+,AB+	O+, O-
B+	B+, AB+	B+, B-, O+, O-
AB+	AB+	Everyone
A-	A+, A-, AB+, AB-	A-, O-
O-	Everyone	O-
B-	B+, B-, AB+, AB-	B-, O-
AB-	AB+, AB-	AB-, A-, B-, O-

- Group O can donate red blood cells to anybody. It is the universal donor.
- Group A can donate red blood cells to A's and AB's.
- Group B can donate red blood cells to B's and AB's.
- Group AB can donate to other AB's but can receive from all other.

VI. EXISTING SYSTEM

In the existing there is no proper care about the people who can the donate blood to the patients [1]. In case, if the donor can has or had any the medical problem and it comes toward to the donate blood to the patient and then it may the lead to the threat. Hence the medical history of the donor should be the updated. And the Medical an histories would be like:

- A person who have the anemia should not be donate blood
- The Donor who having the diseases that are transmissible to the through blood are not be request to the donate blood.

- People who are the unweighted for the height from the their height should not be donate blood.
- Pregnant women they or recent child to birth women should not be donate blood.

Thus the above of following reasons they are not updated in the existing system. These types of the information are not be provided in the existing system this may lead to dead in the person. The donor and patient's should body condition will not be match at all the time. Here it is contains two aspects (1) volunteer's and location (2) the distance between of the user location and the volunteers. In the most of the existing systems of the donated blood may not be used and the may expire after the certain amount of the time and causing the wastage of the blood [1].

VII. SCOPE OF PROJECT

The Scope of this project and is that in a very short of span it has provides user with many of the facilities. It has provides an the elegant management of the blood, list of the hospitals, and blood banks and the donors and online. The main of the purpose of this project is to the interconnect at all the time blood banks, hospitals, donors and into the a single the network, of the validation, has to store the various of the data and the information and of the blood and it has health of the each individual. This of the system is that the used to the store of data and the over the centralized and the server which of the consists of the database and where the individual and the information cannot be the accessed by the third party.

It also provides effective:

- Blood has donation of the management
- Blood are safety
- Blood and the blood component of the production.
- Blood and the blood are component storage and the distribution
- Online are platform for the health checkup
- Eradicate are Corruption In the Blood Distribution.

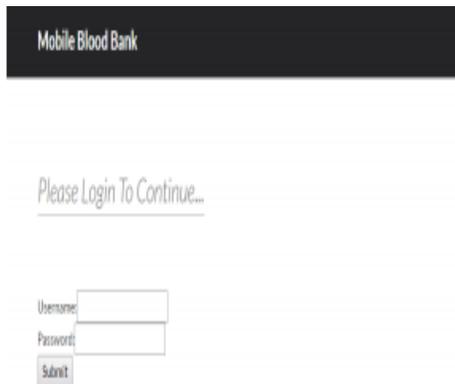
VIII. IMPLEMENTATION

Admin Panel:

After the successful authentication and the admin can add, update, and delete and view blood banks and blood camps. He can check profiles of registered users. He has the option to change his own of the password. He has to the right to an accept/reject users" request and the if accepted and he will publish of the requests. He has may log out an from the system and whenever the required.

Login Module:

The first page is an login page as shown in the Figure, whereas admin enters his the login details correctly to the proceed of further.



Add blood bank:

At After of the authentication of admin, he can the add blood bank and by the entering of the blood bank in details like name, or address, and contact no, email and the available blood of group. When this is information our submitted, validation is the performed and then the blood bank of the details will be an added and successfully in the database.



Update blood bank:

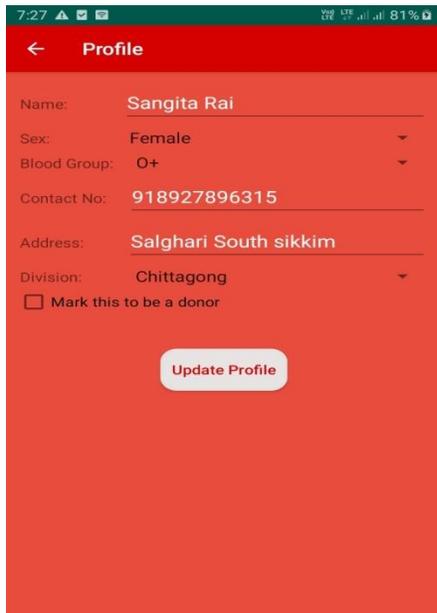
When any of the information is and of blood banks has to be the changed in their database, admin updates for the information. A page of appears which has already h all the details of the blood banks. Admin make the changes wherever are needed.



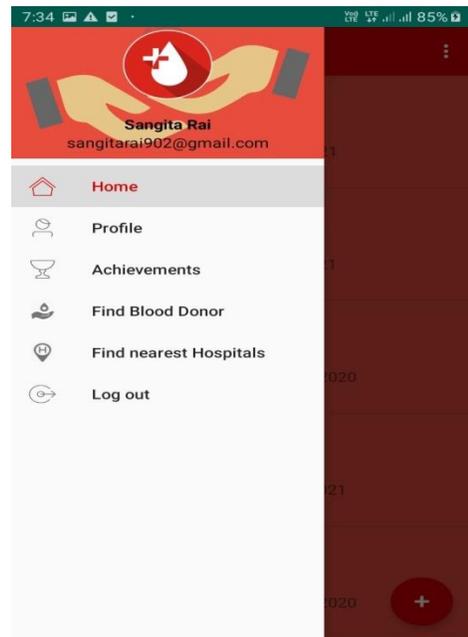
Admin can be publish the notifications.



User Profile:



Options for User

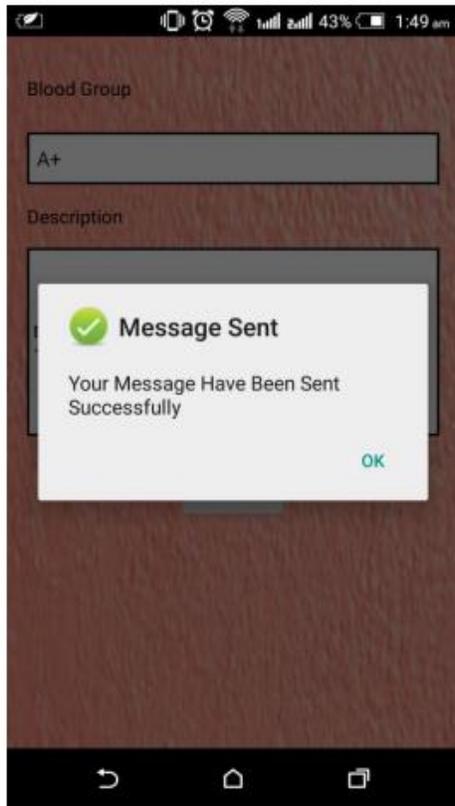


User Panel:

Form Validation: The form is the validated and if there is the any error, of prompt message is given. If all the details are the correct, a person is registered are successfully

When the all user requests for the blood by adding description and blood group are required, to the message is successfully and sent to admin.





User Panel:

Organize Blood Camp:

The users can be hospitals can be organize activities like a blood camps and by specifying of the venue and the data.

IX. RESULTS AND DISCUSSION

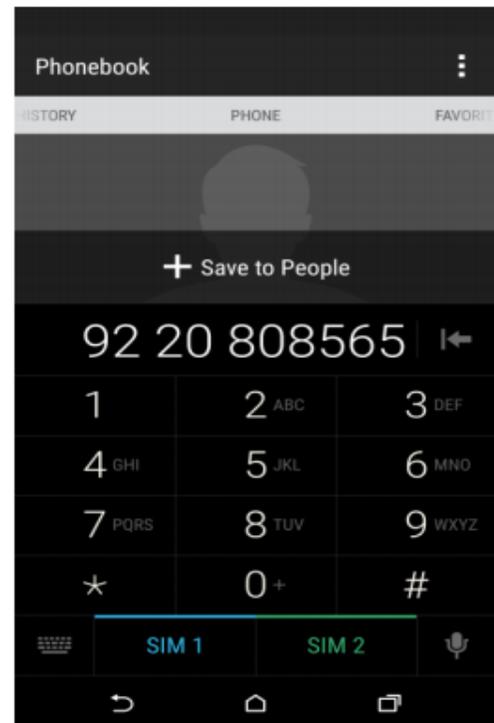
Admin Panel:

Blood Camp are details added are successfully.



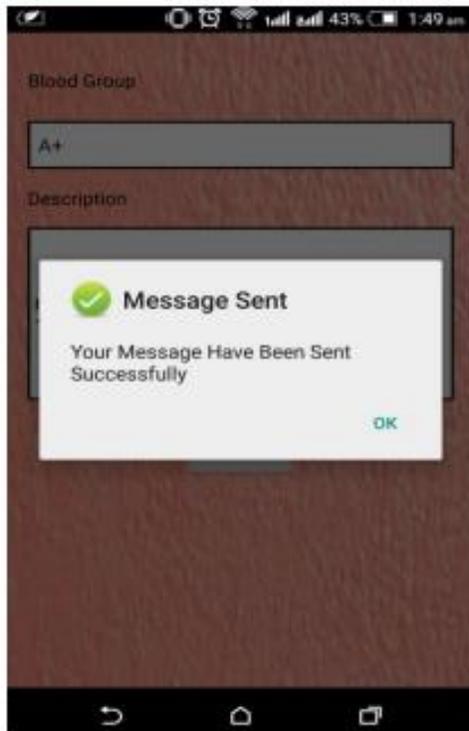
Blood Bank Panel:

Blood banks can be add to the details of the quantity of available blood in their our banks.



Request for Blood:

The registered user can be submit request to admin for the blood by the giving blood group and type and small description. Admin accepts/rejects or the request and the accepted request will be the published by the admin.



Guidelines



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X. CONCLUSION

We have to proposed the efficient and the reliable for android blood bank application. The service provided by the proposed an system is needed to them and valuable to the health sector where is the quality of the blood is considered for the safety and for the patient. The donor will get to the himself registered the through these are improved an system. In case of them emergency requirement to the blood and donor can be place at request. The wireless internet and the technique enables to the flow of the data at work more that rapidly and the conveniently. The future work of the system is for the develop this application for in the IOS platform.

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