

# Android Based Health Application in Cloud Computing For Blood Bank

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## ABSTRACT

In many emergency situations, such as accidents, there is an immediate need for specific blood type. Despite increasing requirements for blood, only about 5% of the Indian population donates blood. [3] User will just touch the button on mobile phone. Then he will automatically connect to the cloud and his location will be tracked by GPS. All information about the donors and blood bank is stored on the cloud. As per blood requirement, user can quickly get notification from blood bank within the radius of 5-10 km. If requested blood group is available in the blood bank then it will send positive reply message to the users. If requested stock is not available in the blood bank then blood bank send notification to all donors. If anyone is able to donate then he will reply to blood bank. Only a registered person, with willingness to donate blood, will be able to access the service. Cloud- based services can prove important in emergency blood delivery since they can enable central and immediate access to donors data and location from anywhere.

**Keywords:** Cloud Computing, Global Positioning System, Web Application, Android Application.

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## I. INTRODUCTION

E-health provides a new method for using health resources. The Internet also provides a new medium for information dissemination, and for interaction and collaboration among institutions, health professionals, health providers and the public. E-health is an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the internet and related technologies.[5]

In many emergency situations, such as accidents, there is an immediate, critical need for specific blood type. In addition to emergency requirements, advances in medicine have increased the need for blood in many on-going treatments and medical surgeries. Despite increasing requirements for blood, only about 5% of the Indian population donates blood. The need for the blood is important for treating in medical field. [3] For every second someone needs blood to save their life. The task of blood bank is to receive blood from various donors, to monitor the blood groups database and to send the required blood during the need to the hospital in case of emergencies. In developing countries, especially like

India, the blood resource lacks in quantity which is a barrier to others life.

Cloud communicating is an emerging technology that can be integrated with traditional health management used to provide better health services. Traditional healthcare systems mainly include personal and public healthcare services, teaching and research activities. Personal healthcare services are offered at hospitals, homes and different organizations. Public healthcare services involve guidelines for drugs, food and safety policies to maintain a healthy environment. Teaching and research activities are essential for prevention, detection, tracking and treatment of diseases. Healthcare information systems are designed today for the convenience of the user who obtains its benefits efficiently. Accessibility and availability are the criteria on which an application is designed for its success in the IT market. The data has to be accessible from anywhere in the world at any time and the easy transaction of data to the mobile devices. Transparency in the data storage, transaction and maintenance can be achieved through the cloud computing concept. In the earlier days, physical storage of data and its maintenance was a major problem to build such medical applications. Healthcare systems are the need of the hour today for

enabling in producing accurate results of medical information and in proper communication of the results to the patient or the doctors for further analysis. This requires the patient records to be accurate and accessible. In this system we will make sure that also in the worst case the blood will be made available to the patient. There will be three levels as user, Blood Banks and Donors. The donor or blood bank will supply blood as per requirement. [2].

## II. LITERATURE SURVEY

During a literature survey we collect some of information about the blood bank management system located in city and rural area we find some of the hospital have its own blood bank unit with each and all technical facilities in city but this conduction is poor in rural area. [4] There are a number of research work have been done to integrate cloud computing, health sector and social media. Existing work can be classified as integration of cloud computing with health care system and integration of social media with health sector. The integration of health care system with cloud computing is further classified based on public cloud integration and private cloud integration.[2] Blood bank staff has authorized access permission to maintain the all module. Blood module can manage the types, quantity and expiry dates for each category of blood that stored in blood transfusion unit.

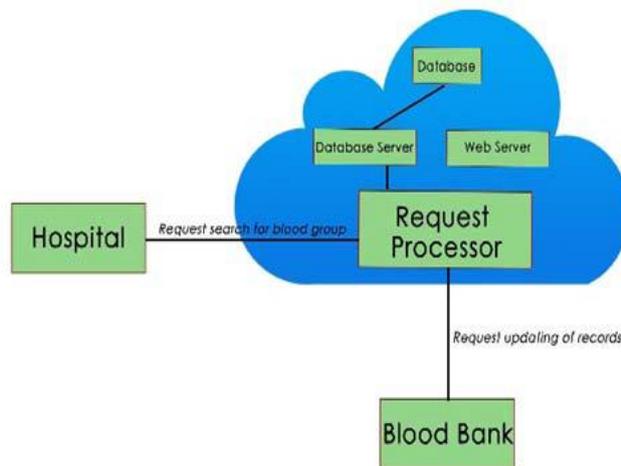


Fig.1. Architectural Design of the existing system

Existing systems the given blood group and quantity is searched for in the cloud database, where the blood bank data has been stored. When the results are found, they are displayed on the website for the hospital to see. The results contain the basic information of the blood banks that have that specific blood group, ordered by the geographical proximity.

## III. PROPOSED EXPLANATION

In Emergency situations requirement of blood cannot be fulfilled immediately so we are defining a solution that

receiver with an android application requests blood on the cloud and this request will be sent to nearby blood bank and donors who are registered on cloud. Nearby donors and blood bank will be traced with the help of global positioning system. Hence Requested receiver will get blood.

## IV. ALGORITHM

Algorithm Blood bank (D, Q, I, P)

Problem Description: This Algorithm computes blood bank application.

Input: I, P are the of character type.

Output: Outcome is Notification and Response from blood bank for blood.

Step 1: If User is registered then provide User Id (I) and password (P) else Create new account;

Step 2: While blood stock gets low Send notification to donors for blood donation camp;

Step 3: If there is request from user for blood, track location of user with GPS;

Step 4: Check for blood availability at blood bank;

Step 5: If blood is not available send notification from blood bank to nearby registered Donors;

Step 6: Check conditions for blood donation like HB, Weight, other factors and previous history;

Step 7: If conditions are satisfied accept it;

Step 8: If Conditions are not satisfied then send notification to other donors who are eligible;

Description:

The central blood bank will have a database of the count of blood packs for the respective blood groups. If any of the count goes low, the system will notify the authorities and a blood camp will be organized for the filling of the blood shortage.

The smaller blood bank will also work in the similar fashion, just when there will be any shortage the central bank will be informed and the blood will be made available.

Finally when there will be an emergency at the hospital, the nearest blood bank will be contacted and the blood will be made available but if the requested blood is unavailable then either of the following procedure can be implemented.

Using the GPS and a messenger, the people around the blood bank will be notified of the need of blood and thus blood will be made available through the donor.

## V. CONCLUSION

We introduce blood bank application which will help to society in emergency situations and will provide users requirement with the help of android application and blood will be easily made available to needy persons with the help of panic button. It works as a solution for social issues like accident cases, medical surgeries and various diseases.

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