



INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact factor: 4.295

(Volume 3, Issue 6)

Available online at www.ijariit.com

Implementation of Blood Donation Application using Android Smartphone

Monika Mandale

Student

Bhivrabai Sawant Institute of
Technology & Research, Wagholi, Pune,
Maharashtra

monikamandale2396@gmail.com

Pradnya Jagtap

Student

Bhivrabai Sawant Institute of Technology
& Research, Wagholi, Pune,
Maharashtra

pradnya.jagtap25@gmail.com

Prachi Mhaske

Student

Bhivrabai Sawant Institute of
Technology & Research, Wagholi,
Pune, Maharashtra

mhaskeprachi000@gmail.com

Sonali Vidhate

Student

Bhivrabai Sawant Institute of
Technology & Research, Wagholi, Pune,
Maharashtra

sonalividhate162@gmail.com

S. S. Patil

Assitant Professor

Bhivrabai Sawant Institute of
Technology & Research, Wagholi, Pune,
Maharashtra

shri.patil11@gmail.com

Abstract: Blood is an important constituent of the human body. Timely availability of quality blood is a crucial requirement for sustaining the healthcare services. In the hospital, in most of the cases, when blood is required, could not be provided on time causing unpleasant things. Though donor is available in the hospital, the patient is unaware of it, and so is a donor. To resolve this, a communication between hospital, blood bank, donor, and the receptor is important. The system listed following forecasting on price variations and stock handling, increase in number of blood type, increase in human accident Infrastructure, blood on a various category to be managed. So we solve the problem using the android application. The system will make sure that in case of need, the blood will be made available to the patient. There will be web portal as well as an android app to make this communication faster. It aims to create an e-Information about the donor and organization that are related to donating the blood. The Methodology used to build this system uses GPS. The Proposed system will be used in Blood banks, Hospitals, for Donors and Requesters whoever registers to the system.

Keywords: GPS, Google Cloud Messaging, Clustering.

I. INTRODUCTION

Blood bank System is to create an e-Information about the donor and organization that are related to donating the blood. Through this application, any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover, if any general consumer wants to make request blood online he can also take the help of this system. Admin is the main authority who can do addition, deletion, and modification if required.

Blood bank System is an android based system that is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and helps them to manage in a better way. The aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle free and corruption free and make the system of blood bank management effective. document is a template.

II. LITERATURE SURVEY

In the year 2015, an IEEE paper on A Health-IoT Platform Based on the Integration of Intelligent Packaging, Unobtrusive Bio-Sensor, and Intelligent Medicine Box was authored by Geng Yang, Li Xie, Matti M'antysalo, Xiaolin Zhou, Zhibo Pang, Li Da Xu, Sharon Kao-Walter, Qiang Chen, Lirong Zheng. In this paper, an intelligent home-based healthcare platform is proposed and implemented. It involves iMedBox with connectivity, iMedPack with communication capability enabled by RFID, Bio-Patch, and SOC. It fuses with IoT. The body-worn Bio-Patch can detect and transmit the user's bio-signals to the iMedBox in real time. The only limitations are, comprehensive platform missing. And the Physical size, rigid nature, and short battery become a limitation for long term use.

In 2016, an IEEE paper was authored on Data Mining for Better Healthcare: A Path towards Automated Data Analysis? By Tania Cerquitelli, Elena Baralis, Lia Morra and Silivia Chiusano. This paper addresses the mining activity from the medical database perspective. The mining system should be able to devise which knowledge could be most interesting to the user & extract actionable knowledge from a large medical dataset with minimal user intervention. The system should be capable of yielding actionable knowledge & extracting manageable sets. Large parameter spaces need to be explored at abstraction level to envision a system capable of evaluating and comparing many data-mining technique configurations at a time.

In 2015, an IEEE paper on Mobile Based Healthcare Management using Artificial Intelligence was authored by Amiya Kumar Tripathy, Rebeck Carvalho, Keshav Pawaskar, Suraj Yadav, Vijay Yadav. In this paper, the health-care management system is proposed which will consist of mobile based heart rate measurement so that the data can be transferred and diagnosis based on heart rate can be provided quickly with a click of a button. The system will consist of video conferencing to connect remotely with the doctor. The system will also consist of Doc-Bot and an online Blood Bank. In this implemented project, heart rate calculation differs from actual one due to noise present in the input signal. So the performance is not efficient in practical. The methodology used Clustering, Text Mining, Pattern Matching, Support Vector Machine, Partitioning Algorithm and Donor HART tool used in collecting donor reaction information. Limitations are Difficulty in handling an emergency situation and No proper security for personal details misuse.

III. TECHNOLOGIES TO BE USED

Language: Java J2SE and JDK: J2SE (Java 2 Standard Edition) Java would be the required as a language for development of the project. JDK is the development kit used to compile java programs.

GCM: Service provides Google for sending notifications between android device and server.

Database/Data Library: Serialized Objects/Serialization - Database in Java In case the project needs database this is how it is handled in java.

GPS: This system provides location and time information in all weather conditions, anywhere on or near the earth.

IV. PRODUCT FUNCTION

Register user -Blood bank portal and Android application for Donor to register for donating

Blood Login - Donor, Blood bank admin, Hospital admin can login.

Donor functionality - If donor once donated blood he/ she not allowed to donate blood until three months of last donation date. The donor will get a notification whenever new blood donation camp takes place. Donors also request for the blood of nearest blood bank with priority and also get an appointment.

New Donor also can make a request for blood donation to the nearest blood bank and also get an appointment after request.

Admin functionality - Admin of all respective departments can generate reports of the blood bank, blood stock and check expiry date of blood.

V. OVERALL DESCRIPTION

A. REQUIREMENT SPECIFICATION

SOFTWARE REQUIREMENTS

- Operating system: Windows VERSION: 7
- Languages: Java
- Jdk 1.7, tomcat-7
- MySQL 6.0
- Neatbean, Android sdk, Android Studio

HARDWARE REQUIREMENTS

- Android Phone

B. USER CHARACTERISTICS

- Registration form for blood bank, donor, and Hospitals
- Login form for blood bank, donor, and Hospital
- Dash board form for Blood bank, Donor, and the hospital where blood bank and the hospital can see all data about their firm.

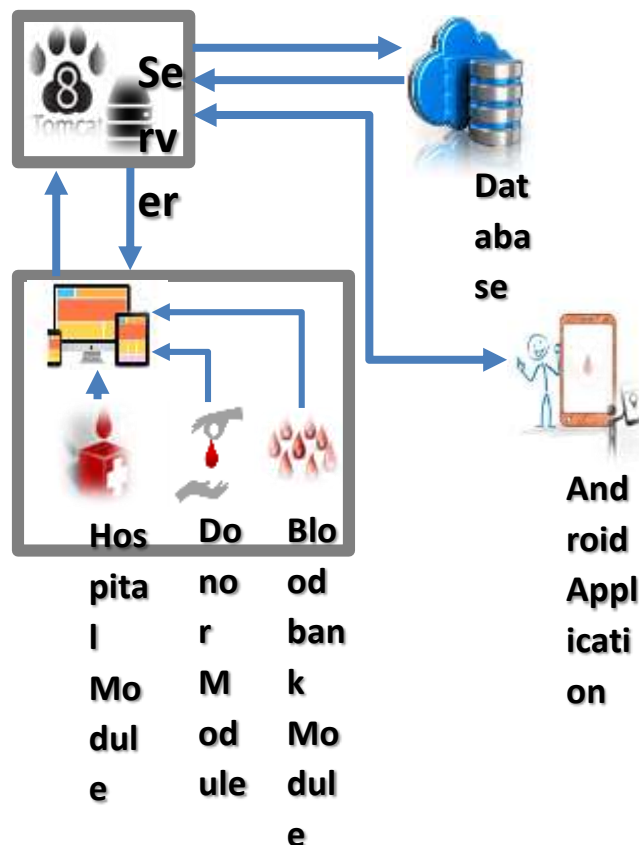


Fig.1 Architecture Diagram

We have created a system in java programming. Data is stored in MySQL database. We have created an android application on the local server. A web application that communicates with the local server and Trustee Server using REST API. User search nearest blood bank on the cloud, and after search successfully result shown in Google map.

VI. SYSTEM ANALYSIS

We have created a system for the android application. Data is stored in MySQL database. We have created a web application with local server for connecting to the android application. A web application that communicates with the local server and Trustee Server using REST API. We have uploaded blood bank details in the cloud. We have evaluated the Google map for showing the blood bank.

VII. CONCLUSION

A Proposed system provides Android based application which is very useful for Blood Bank users. The system provides a better way to communicate with blood banks. It is also able to maintain reports like stock, etc.

ACKNOWLEDGEMENT

I wish to express my profound thanks to all who helped us directly or indirectly in making this paper. Finally, I wish to thank all our friends and well-wishers who supported us in completing this paper successfully I am especially grateful to our guide from time to time, very much needed, valuable guidance. Without the full support and cheerful encouragement of my guide, the paper would not have been completed on time.

REFERENCES

- [1] Javed Akhtar Khan and M. R Alony "A New Concept of Blood Bank Management System using Cloud Computing for Rural Area (INDIA)", International Journal of Electrical, Electronics and Computer Engineering 4(1): 20-26(2015).
- [2] Sumazly Sulaiman, Abdul Aziz K. Abdul Hamid, Nurul Ain Najihah Yusri "Development of a Blood Bank Management System", Science Direct Procedia - Social and Behavioural Sciences 195 (2015).
- [3] Rohini Patil, Puja Pawar, Madhu Poi, Tejashri Patil, Prof. Namrata Ghuse "Blood Donor's safety using Data Mining", 978-1-4673-7910-6/15/31.00c 2015 IEEE(2015).
- [4] The Optimization of Blood Donor Information and Management System by Technopedia P. Priya¹, V. Saranya², S. Shabana³, Kavitha Subramani⁴ Department of Computer Science and Engineering, Panimalar Engineering College, Chennai, India^{1, 2, 3, 4}.
- [5] MBB: A Life Saving Application Narendra Gupta¹, Ramakant Gawande² and Nikhil thengadi³ 1, 2, 3 Final Year, CSE Dept., JDIET, Yavatmal, India.
- [6] AN ANDROID APPLICATION FOR VOLUNTEER BLOOD DONORS by Sultan Turhan. [4] Arif. M. Sreevas. S. Nafseer. K. and Rahul. R. (2012), 'Automated online Blood bank database', India Conference (INDICON), Annual IEEE, Print ISBN: 978-1-4673-2270-6, pp. 012 - 017.

- [7] M. Kay, J. Santos, M. Takane. "mHealth: New horizons for health through mobile technologies." World Health Organization, pp. 66-71, 2011.
- [8] K. Karagiannaki, S. Chonianakis, E. Patelarou, A. Panousopoulou and M. Papadopouli. "mMamee: A mHealth Platform for Monitoring and Assessing Maternal Environmental Exposure." In 28th IEEE International Symposium on Computer-Based Medical Systems (CBMS), pp. 163-168, 2015.
- [9] H. Chen and X. Jia. "New requirements and trends of mHealth." In IEEE 14th International Conference on e-Health Networking, Applications and Services (Healthcom), pp. 27-31, 2012.
- [10] Williamson, M. Lorna, and D. V. Devine. "Challenges in the management of the blood supply. The Lancet 381, vol. no. 9880, pp. 1866-1875, 2013.
- [11] Z. Kirtava, T. Gegenava, and M. Gegenava. "mHealth for cardiac patients tele monitoring and integrated care." In 15th IEEE International Conference on e-Health Networking, Applications and Services (Healthcom), pp. 21-251, 2013.