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IMPLEMENTATION OF BLOOD DONATION APPLICATION USING ANDROID SMARTPHONE

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ABSTRACT: Blood is an important constituent of 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, patient is unaware of it, and so is donor. To resolve this, a communication between hospital, blood bank, donor, and receptor is important. The system listed with following forecasting on price variations and stock handling, increase in number of blood type, increase in human accident Infrastructure, blood on 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 android app to make this communication faster. It aims to create an 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 Requester whoever registers to the system.

KEYWORDS: Cloud Computing, GPS, Google Cloud Messaging, Clustering.

I INTRODUCTION

Cloud computing is nothing but internet based computing which made revolution in today's world. It is the biggest innovation which uses advanced computational power and improves data sharing and data storing capabilities. Cloud is a large group of interconnected computers, which is a major change in how we store information and run application. Cloud computing is a shared pool of configurable computing resources, on demand network access and provisioned by the service provider. The advantage of cloud is cost savings. The prime disadvantage is security. The cloud computing security contains to a set of policies, technology controls deployed to protect data, application the associated infrastructure of cloud computing.

Blood Donation System is an android based system that is designed to store, process, retrieve and analyse 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. 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 year 2015, a 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 Mantysalo, 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 users 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 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 Silvia 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 large medical dataset with minimal user intervention. 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, a 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 button. The system will consist of video conferencing to connect remotely with 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 input signal. So the performance is not efficient in practical. Methodology used Clustering, Text Mining, Pattern Matching, Support Vector Machine, Partitioning Algorithm and DonorHART tool used in collecting donor reaction information. Limitations are Difficulty in handling emergency situation and No proper security for personal details misuse.

III PROPOSED WORK

Blood Donation 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. 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.

The sole purpose of this project is to develop a computer system that will link all donors, control a blood transfusion service and create a database to hold data on

stocks of blood in each area. Furthermore, people will be able to see which patients need blood supplies via the android application.

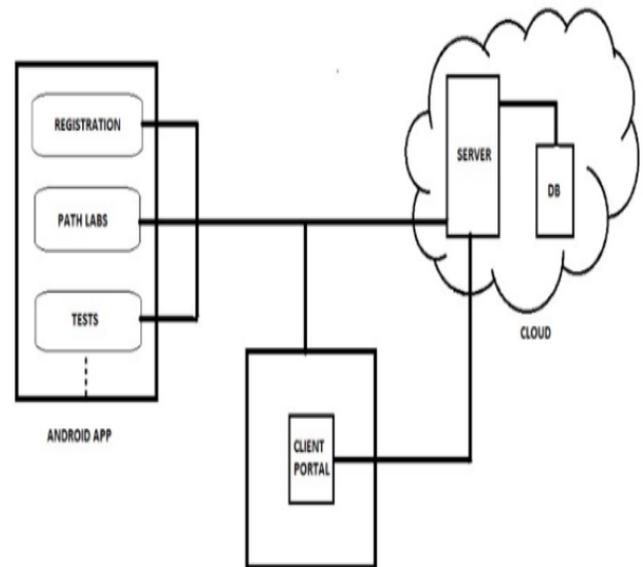


Fig 1: Proposed System Architecture

IV PROPOSED SYSTEM MODULES

1. **Android Application:** This component is used to maintain feasibility of the user. By using this component user can able to easily access the data related to the path labs, hospitals, tests, oers, etc. It provides user interface and increases the portability of the user.
2. **Cloud:** This is the second component of three tier architecture. It includes server and Database and handles them in cloud. Server plays the main role in the overall system as the whole authentication is done by server only and it also include the whole database.
3. **Client Portal:** It is the third component of three tier architecture. As the system is able to provide the path labs then the client portal helps to register themselves with the system.

V ADVANTAGES

1. Easy connecting donors and recipients makes blood donation way more proficient.
2. Prime motive of the app is to solve the perpetual shortfall of blood donors.
3. It connects blood donors and recipients through a single and scalable platform.
4. Effortless access: Users on this platform will be able to use the app with just One-click.
5. Easy registrations through the mobile app will help getting quick access from both ends.

VI RESULTS

1. LOGIN PAGE

BloodUser

Login Here

Enter Username

Enter Password

Login Sign Up

Forgot Password?

192.168.0.109:8081

2. REGISTRATION

BloodUser

Register Here

Enter Full Name

Select Gender: Male Female

Enter Mobile

GENERATE OTP

Enter OTP here

Enter Email Address

Select Blood Group

Select Age Group

Enter Address

Enter Password

Re-Enter Password

Sign Up

3. OPTIONS FOR USER:

monika
monikamandale@gmail.com

- Blood Request
- Blood Donate
- Request History
- Donate History
- Find Blood Bank
- Profile
- GuideLines
- Logout

4. BLOOD REQUEST AND DONATE:

Add Blood Request

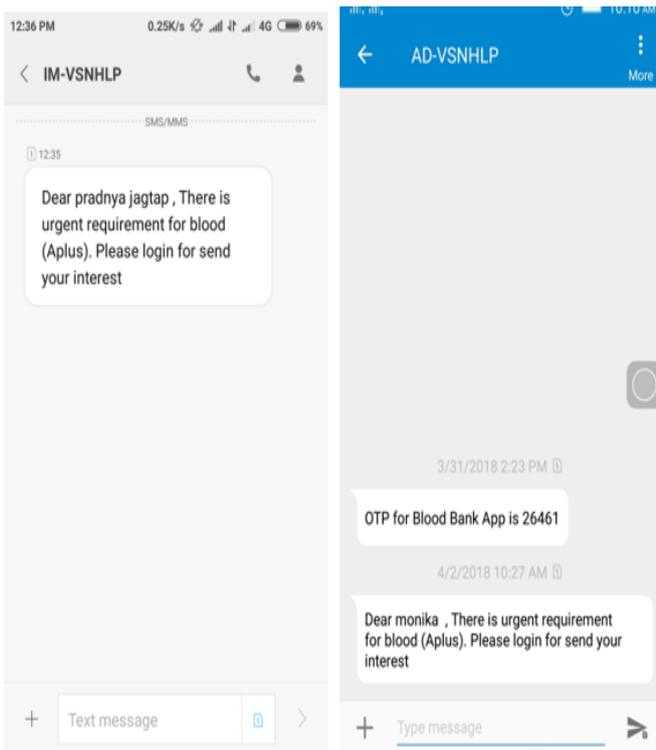
Donate Blood

Blood Requests

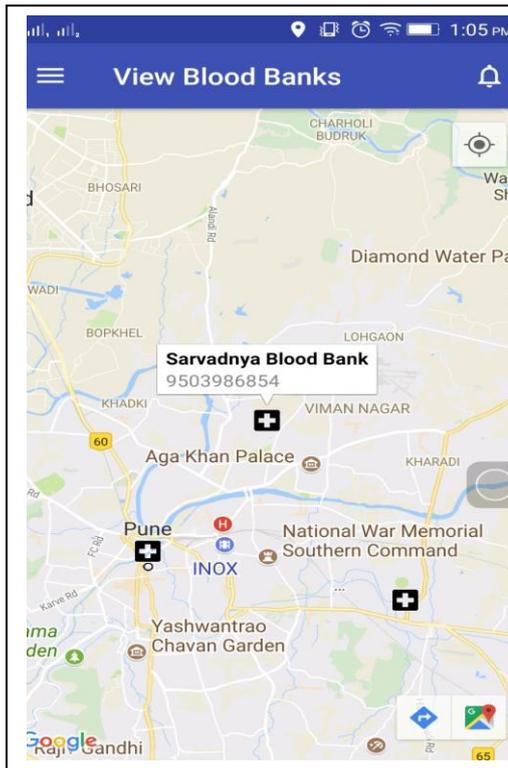
Requestor name	Request Date:
sonalividhate@gmail.com	02/04/2018 10:08:21
Required On	Quantity
3/4/2018	350

Show Interest

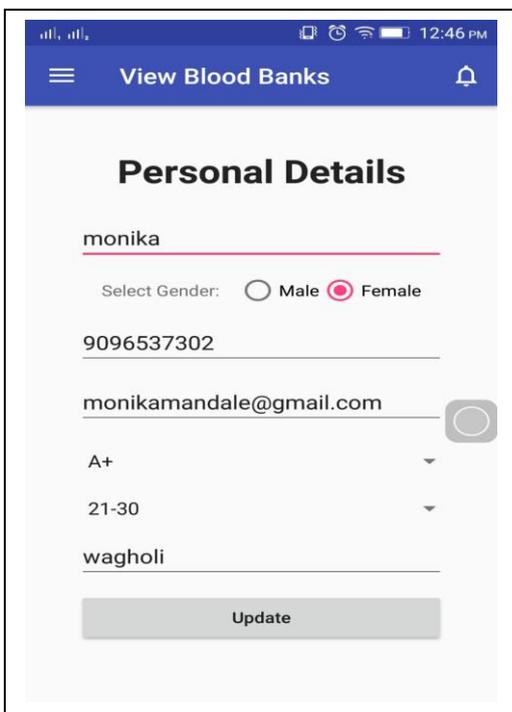
5. REQUEST SMS TO USER:



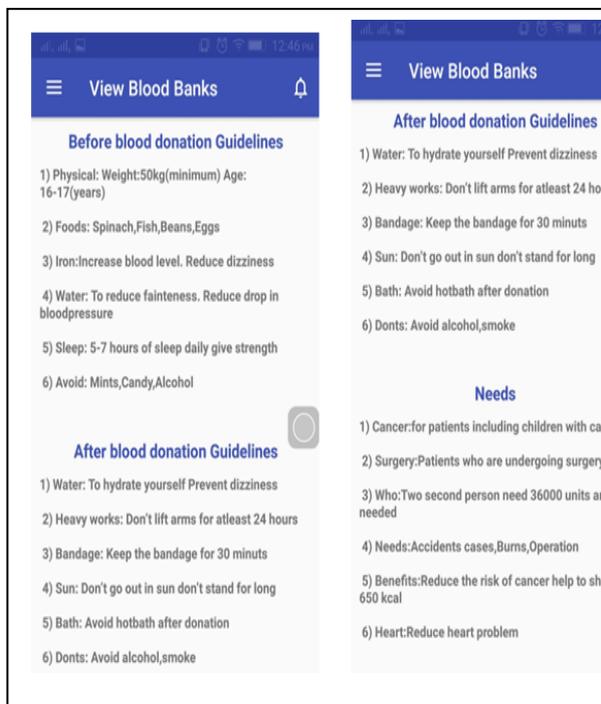
6. FIND BLOOD BANK:



7. USER PROFILE:



8. GUIDELINES:



VII CONCLUSION AND FUTURE WORK

The sole purpose of this project is to develop a computer system that will link all donors, control a blood transfusion service and create a database to hold data on stocks of blood in each area. Furthermore, people will be able to see which patients need blood supplies via the android application.

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