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Blood Bank Management System

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Abstract: ***The Main aim of the Blood Bank Management system is to ease the process of blood donation and allowance at the blood bank. We aim to demonstrate the use of creating, reading, updating, and deleting MySQL operations through this project. This project starts by adding details of the doctor. Once, registration is done doctor can add blood donor details with blood group, quantity, age, etc. Now, when the patient needs blood, doctors can easily check the blood group available and provide it to the blood receiver.***
Keywords: Java, MySQL, Blood Bank, Javafx

I. INTRODUCTION

In today's world, there is a need for a proper and robust platform where donors and doctors can get connected for blood donation, so that every patient can get the required blood within time.

The blood bank management system aims to fulfill the gap between blood donors and doctors. When a blood donor gets an easy and suitable platform to register and donate blood, it becomes easier for many people who wish to donate blood but cannot find a proper platform for it due to their busy schedules.

Donor Registration: The application allows the users to store the donor details in the application itself. As soon as a donor is registered, a unique identification number is assigned to him/her automatically which remains the same throughout the lifetime of the donor. Any subsequent donations made by the same donor automatically got linked up with the same identification number.

Donor physical and medical details: The system allows the user to store the physical and medical details of the donor at the time of the registration which could, later on, be edited during the time of subsequent donations. The application also allows the users to check the eligibility criteria of the donors for making donations, depending on which track of the deferred donors can be kept for future referrals.

II. PROBLEM STATEMENT

The percentage of people donating blood is increasing day by day due to awareness to donate blood for those needed. The blood received must be managed thoroughly so that there will be no negative effect on the blood receiver once they received blood.

III. LITERATURE REVIEW

Three systems have been selected as benchmarks for the development of BBMS. They are the Blood Bank India (BBI) at http://www.bloodbankindia.net, Lions Blood Bank & Research Foundation (LBBRF) from http://www.lionsbloodbank.net/ and a previous BBMS standalone version.

The website for Blood Bank India is a website that provides the facility for the donor to register him or herself as a blood donor. Only citizens in India can register to the system. It also provides a feature where a person or hospital can request the blood bag or bloodstock from the Blood Bank India.

LBBRF is a private organization that functions as a place to donate blood. They give a charge to the person or patient that needs blood. However, the money that they collected is not for their profit for them but to recover the expenses incurred in recruiting and educating donors. This is also to ensure that the blood transfusion is as safe as possible. Lions Bank & Research Foundation, they will make sure the availability of bloodstock in their blood bank.

They also published the status of bloodstock on their website homepage. This is for them to keep the website visitor, especially donors informed about the need for blood. They also inform the donor and the public where and when is their next event. However, this blood bank does not provide any facility for the donor and the patient. Therefore, they cannot know how many times they have donated their blood. As for the donor, they cannot know their blood screening result each time they donate their blood. Without having this function in the system, the donor cannot monitor his or her health condition. This will make the donor unaware of their health condition.

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IV. PROPOSED SYSTEM

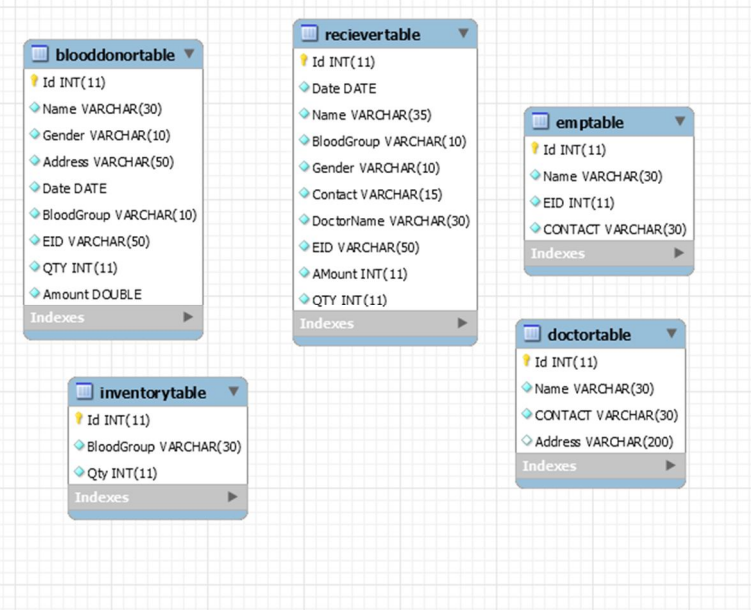
The proposed system allows users to add details of their own from anywhere in India and respective doctors can get the details of the donor for further process. This system helps doctors and blood inventory management staff in organizing and supplying the blood needed.

A. Modules

Blood Bank Management Mini DBMS Project contains 4 modules:

1) *Donor:* Details of donor donating blood.
2) *Blood Receiver:* Details of patients in need of blood.
3) *Doctor Details:* Details of doctor managing blood bank.
4) *Employee:* Employee details managing blood bank patients.
5) *Available Blood:* Details of blood groups available in the blood bank

B. EER Diagram



C. System Requirements

1) Hardware Requirements

- System : Pentium Dual Core.
- Hard Disk : 120 GB.
- Ram : 1 GB

2) Software Requirements

- *Operating system : Windows XP/7/10.*
- *Language : Java (Install JDK 1.8)*
- *IDE : Netbeans 8.2/Eclipse*
- *Database : MYSQL (Install XAMPP)*

3) Technologies Used

- *JavaFX*
- *Mysql*

D. Need for JavaFX

To develop Client-Side Applications with rich features, the programmers used to depend on various libraries to add features such as Media, UI controls, Web, 2D, and 3D, etc. JavaFX includes all these features in a single library. In addition to these, the developers can also access the existing features of a Java library such as Swing.

JavaFX provides a rich set of graphics and media APIs, and it leverages the modern Graphical Processing Unit through hardware accelerated graphics. JavaFX also provides interfaces using which developers can combine graphics animation and UI control.

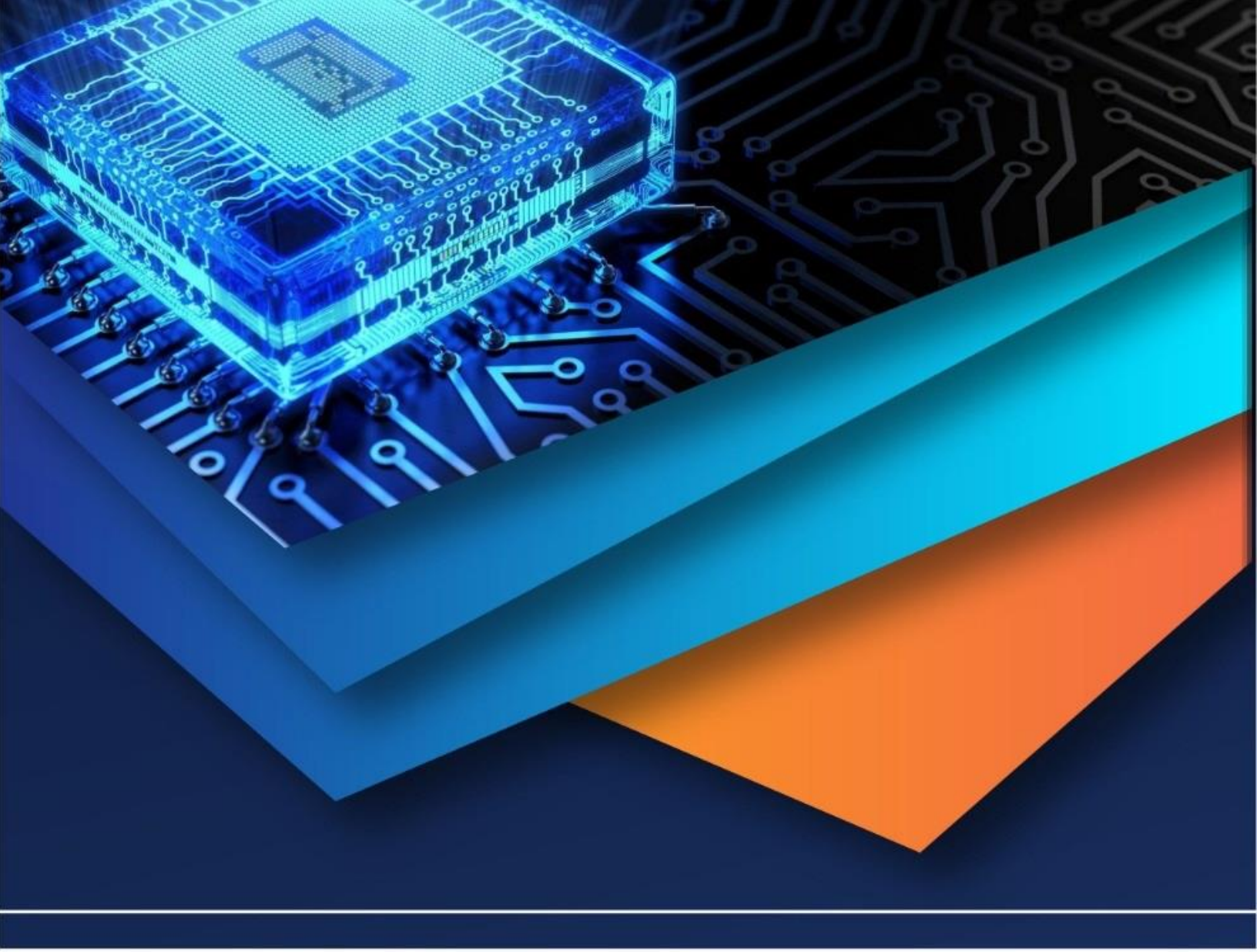
One can use JavaFX with JVM-based technologies such as Java, Groovy, and JRuby. If developers opt for JavaFX, there is no need to learn additional technologies, as prior knowledge of any of the above-mentioned technologies will be good enough to develop RIA's using JavaFX.

V. CONCLUSION

Successfully addressed the real-time issues regarding blood donation and management. Through BBMS blood donors can easily donate blood also doctors can manage blood donation efficiently. We are in process of building a global platform for BBMS in the future.

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