



Blood Bank Management System Using Netbeans And Mysql

Tiyasi Maity, Suparna Das, Udita Chatterjee, Souvik Das, Sumit Mandal, Biplab Bhowmick

Department of Electronics and Communication Engineering, Asansol Engineering College, Vivekananda Sarani Kanyapur, Asansol, West Bengal-713305

ABSTRACT:

The objective of this application is to develop an online Blood Donation Information. The Blood Donation Agent is to create an e-formation about the donor, receiver and organization that are related to donating the blood. This System is used for maintain whole information about donors, camps.

Introduction:

The project is mainly towards persons who are willing to donate blood to the patients. Through this system it will be easier to find a donor for exact blood type and easy to build this connection between donor and the blood bank authorities. The main intend of building this software is formal the procedure of blood domain and motive donors in order to donation blood. We have tried to maintain all those information of donor which is easily understandable to the doctors which makes them easy to find the donor.

SOFTWARE TO BE USED

1.NetBeans:

NetBeans is a Java-based integrated development environment (IDE). The term also refers to the IDE's underlying application platform framework. The IDE is designed to limit coding errors and facilitate error correction with tools such as the NetBeans Find Bugs to locate and fix common Java coding problems and Debugger to manage complex code with field watches, breakpoints and execution monitoring. NetBeans IDE is designed specifically for Java developers, it also supports C/C++, PHP, Groovy, and HTML5 in addition to Java, JavaScript and JavaFX.

2.MySQL:

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license.

3.JFrame:

JFrame is a top-level container that provides a window on the screen. A frame is actually a base window on which other components rely, namely the menu bar, panels, labels, text fields, buttons, etc.

4.JDBC:

Java Database Connectivity (JDBC) is an application program interface (API) packaged with the Java SE edition that makes it possible to standardize and simplify the process of connecting Java applications to external, relational database management systems (RDBMS). Fundamentally, applications written in Java perform logic. The Java language provides facilities for performing iterative logic with loops, conditional logic with if statements and object-oriented analysis through the use of classes and interfaces.

DESCRIPTION OF THE PROJECT

We downloaded required software NetBeans, MySQL, mysql-connector-java-8.0.27, rs2xml, jcalendar-1.4.jar, installed in our system and adding them in the library of our project.

1.Login - We create our "Login page" using required elements of JFrame in netbeans to get into our application.

2.Home - We create "Home page" using JFrame in netbeans. Here we take menu bar where we create six menus – "Donor", "Search Blood Donor", "Stocks", "Receiver", "Delete", "Exit". Under these menus we have several menu items accordingly.

3.Add New Donor - We create “Add New Donor” page using JFrame to get the donor details as per requirements. To store the data, we create a database “bbms” in MySQL and inside this database we create a table called “addDonor”.We connect the source code of “Add New Donor” page with the database and “addDonor” table. Here we use jcalendar-1.4.jar to choose date automatically.

4.Update Donor Details - We create “UpdateDonor Details” page using JFrame to update the existing donor details.We connect “Update Donor Details” page with the database and the “addDonor” table to update existing the values of the table.

5.All Donor Details - We create “All Donor Details” page using JFrame to get all the donors details in a table format.We connect “All Donor Details” page with the database and the “addDonor” table to extract all the values in the table of “All Donor Details”page as output.

6.Search Donor Through Address - We create “Search Donor Through Address” page using JFrame to search the donors details in through the given address.We connect “Search Donor Through Address”with the database and the “addDonor” table to get the details of donors through the address search by us.

7.Search Donor Through Address - We create “Search Donor Through Blood Group” page using JFrame to search the donors details in through the given blood group. We connect “Search Donor Through Blood Group” with the database and the “addDonor” table to get the details of donors through the blood group search by us.

8.Stock Increased - We create “Stock Increased” page using JFrame to increase and maintain the units of blood according to the blood group whenever donors donate their blood. We connect “Stock Increased” page with the database and create “stock” table to store and modify the blood bags details.

We insert the elements according to the columns “bloodGr” and “units”in “stock”table to maintain the details accordingly.

9.Stock Decreased - We create “Stock Decreased” page using JFrame to decrease and maintain the units of blood according to the blood group whenever receivers collect the blood bags. We connect “Stock Decreased” page with the database and create “stock” table to modify the blood bags details.

10.Stock Details - We create “Stock Details” page using JFrame to get the no. of boold bags according to the blood groups in a table format.We connect “Stock Details”with the database and the “stock” table table to extract all the values in the table of “Stock Details”page as output.

11.Add New Receiver - We create “Add New Receiver” page using JFrame to get the receiver details as per requirements. To store the data, we create a database “bbms” in MySQL and inside this database we create a table called “addReceiver”. We connect the source code of “Add New Receiver” page with the database and “addReceiver” table. jcalendar-1.4.jar is being used to choose date automatically.

12.Update Receiver Details - We create “Update Receiver Details” page using JFrame to update the existing receiver details. We connect “Update Receiver Details” page with the database and the “addReceiver” table to update existing the values of the table.

13.All Receiver Details - We create “All Receiver Details” page using JFrame to get all the receiverss details in a table format. We connect “All Receiver Details” page with the database and the “addReceiver” table to extract all the values in the table of “All Receiver Details” page as output.

14.Delete Donor - We create “Delete Donor” page to delete the donor details from the database. We connect “Delete Donor”with the database and the “addDonor” table to delete the donor details from the database.

Field	Type	Null	Key	Default	Extra
id	varchar(10)	NO	PRI	NULL	
name	varchar(100)	YES		NULL	
dob	varchar(10)	YES		NULL	
dod	varchar(10)	YES		NULL	
mobileNo	varchar(10)	YES		NULL	
gender	varchar(10)	YES		NULL	
email	varchar(100)	YES		NULL	
bloodGroup	varchar(10)	YES		NULL	
city	varchar(100)	YES		NULL	
address	varchar(500)	YES		NULL	

Field	Type	Null	Key	Default	Extra
bloodGr	varchar(20)	YES		NULL	
units	varchar(10)	YES		NULL	

bloodGr	units
A+	1
A-	1
B+	1
B-	0
O+	0
O-	1
AB+	0
AB-	0

Field	Type	Null	Key	Default	Extra
id	varchar(10)	NO	PRI	NULL	
name	varchar(100)	YES		NULL	
bloodGroup	varchar(10)	YES		NULL	
mobNo	varchar(11)	YES		NULL	
email	varchar(100)	YES		NULL	
DOR	varchar(10)	YES		NULL	
address	varchar(500)	YES		NULL	

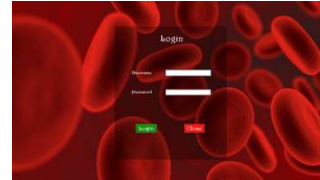
15.Delete Receiver - We create “DeleteReceiver” page to delete the receiver details from the database.We connect “Delete Receiver”with the database and the “addReceiver” table to delete the receiver details from the database.

16.Exit - Under the “Exit” menu in home page, we create twomenu items- “Logout” and “Exit application”. Using “Logout” we can return back to the “Login” page and using “Exit application”we can close the application.

TEST RESULTS

1.Login page

It is the “Login Page”. Here we have to enter username and password according to our source code. Then press the **Login** button to enter into the **Home Page**.



2.Home page

After pressing the **Login** button in “Login Page” It is the “Home Page”. It has some menus – Donor, Search Blood Donor, Stocks, Delete Donor, Exit in the menu bar. Under these menus we have several menu items which are used to perform operations like add, delete, update etc.



3.Add new donor page

Here we have to fill the required details of the donor to register themselves as a donor. After giving the details we have to press the **Save** button to save the details in database.



4.Update donor details page

After saving the details of any donor, if they made any mistake then they can change the wrong information by the “Update Donor Details”by searching the**Donor Id**.

After completing the changes we have to press **UPDATE** button to update the data in the database.



5.All donor details

Here we can see all the details of each and every donor.Pressing the **Print** button we can print the page .Pressing the **Close** button we can close the “All Donor Details Page”.



6.Search donor through address page

Here we can see the donors details through their Address by putting the address in the **Address** field .and we can print the page. Pressing the **Print** button we can print the page. Pressing the **Close**button we can close the “Search Through Address Page”.



7.Search donor through blood group

Here we can see the donors details through their Blood Group by putting the Blood Group in the **Blood Group** field and we can print the page.



8.Stock increase

In this page we can see the stock of each and every blood group and also we can change the details if the no. of blood bags increase by choosing the blood group and entering the no of boold bags which we have to add.



9. Stock decrease page

In this page we can see the stock of each and every blood group and also we can change the details if the no. of blood bags decrease by choosing the blood group and entering the no of blood bags which we have to subtract.



10. Stock details page

Here we can see the actual no. of available blood bags of each and every blood group. By Pressing the **Print** button we can print the page and by pressing the **Close** button we can close the “Stock Details Page”.



11. Add new receiver

Here we have to fill the required details of the receiver to register themselves as a receiver. After giving the details we have to press the **Save** button to save the details in database.



12. Update receiver details

After saving the details of any receiver, if they made any mistake then they can change the wrong information by the “Update Receiver Details” by searching the Receiver Id.

After completing the changes we have to press **UPDATE** button to update the data in the database.



13. All receiver details

Here we can see all the details of each and every receiver. Pressing the **Print** button we can print the page. Pressing the **Close** button we can close the “All Receiver Details Page”.



14. Delete donor page

If we want to delete any donor details, then at first we have to search the receiver using the **DonorId**. After giving the id we have to press **Delete** button to delete the data from the database.



15. Delete receiver

If we want to delete any receiver details, then at first we have to search the receiver using the **Receiver Id**.

After giving the id we have to press **Delete** button to delete the data from the database.



16. Exit

Under “Exit” menu we have a menu item called **Logout**. If we choose that option then it will show a popup message “Do you really want to Logout” with **Yes** and **No** buttons. If we press **Yes** then it will return back to the “Login Page”. Otherwise we have to press **No** for staying in the “Home Page”.

Under “Exit” menu we have a menu item called **Exit application**. If we choose that option then it will show a popup message “Do you really want to close the Application” with **Yes** and **No** buttons. If we press **Yes** then it will stop the running process and close the application. Otherwise we have to press **No** for staying in the “Home Page”.



FUTURE SCOPE

The system is used for maintaining all the process and activities of blood bank management system. The system can be extended to be used for maintaining records of hospital, organ donation and other similar sectors. While developing the system, there shall be space for further modification. There shall be a proper documentation so that further enhancement becomes easy

CONCLUSIONS

This project entitled "Blood Bank Management System" is developed using JAVA swing as front end and MYSQL database in back end to computerize the process of blood bank management. This project covers only the basic features required. This report presents the Blood Bank Management System related details. As we have the contact no. of the donor we can contact donor whenever necessary comes.

REFERENCES

- [1] <https://btechdays1.blogspot.com/2021/03/blood-bank-management-system-in-java.html>
- [2] https://www.researchgate.net/publication/329519303_Blood_Bank_System
- [3] <https://www.freecodecamp.org/news/learn-sql-queries-database-query-tutorial-for-beginners/>
- [4] <https://netbeans.apache.org/kb/docs/java/quickstart-gui.html>