Blood Donation Management System

Department of Computer Science and Engineering

Bangladesh University of Business and Technology (BUBT)

Mirpur-02

23 March, 2022

Blood Donation Management System

A project
Submitted to the Department of Computer Science and Engineering
Bangladesh University of Business and Technology (BUBT), Dhaka
In partial fulfillment of requirements
For the Advance Programming Lab
of

Bachelor of Science

In

Computer Science and Engineering

By

Tunazzinur Rahman Kabbo (19202103268)

Md. Zobayer Hasan Nayem (19202103274)

Nayema Khatun (19202103245)

Rubaitul Jannat (19202103249)

Intake 44, Section-07

Supervised By:

Mamun Hossain
Lecturer,
Department of Computer Science and Engineering (CSE)
Bangladesh University of Business and Technology (BUBT)
Mirpur-2, Dhaka-1216, Bangladesh

Abstract

We hereby declare that the project entitled "**Blood Donation Management System**" submitted in partial fulfillment by us for the degree B.Sc. Engineering in Computer Science and Engineering in the faculty of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) under the guidance of our supervision of Mamun Hossain, Lecturer, Department of Computer Science and Engineering is our own work and it contains no material which has been accepted for the award to the candidates of any other disciplines expect few references which is taken from various books and authors to enrich our knowledge about the topic of our project.

Tunazzinur Rahman Kabbo

ID: 19202103268

Md. Zobayer Hasan Nayem

ID: 19202103274

Nayema Khatun

ID: 19202103245

Rubaiatul Jannat

ID: 19202103249

Certificate

That is to certify that Tunazzinur Rahman Kabbo, Md. Zobayer Hasan Nayem and Nayema Khatun and also Rubaiatul Jannat students of B.Sc. in CSE has completed their project work titled **"Blood Donation Management System"** satisfactorily in partial fulfillment for the requirements of B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year December, 2021.

Tunazzinur Rahman Kabbo ID: 19202103268	Md. Zobayer Hasan Nayem ID: 19202103274

Nayema Khatun ID: 19202103245	Rubaiatul Jannat ID: 19202103249

Project Supervisor

Mamun Hossain

Lecturer,

Department of CSE

Bangladesh University of Business and Technology

DEDICATION

Dedicated to our parents for all their love and inspiration.

ACKNOWLEDGEMENT

"When a task is completed successful" makes everyone happy. But the happiness will be gold without glitter if we didn't state the persons who have supported us to make it a success. Success will be crowned to people who made it a reality but the people whose constant guidance and encouragement made it possible will be crowned first on the eve of success. This acknowledgment transcends the reality of formality when we would like to express deep gratitude and respect to all those people behind the screen who guided, inspired and helped me for the completion of our project work. We consider ourselves lucky enough to get such a good project. This project would add as an asset to our academic profile. We express our gratitude to the help of our supervisor **Mamun Hossain**, for his constant supervision, guidance and co-operation throughout the project and for giving constant motivation and valuable help through the project work.

We extend our sincere gratitude to our parents who have encouraged us with their blessings to do this project successfully. Finally, we would like to thank to all our friends, all the teaching and non-teaching staff members of the CSE Department, for all the timely help, ideas and encouragement which helped throughout in the completion of project.

Approval

This project **"Blood Donation Management System"** submitted by Tunazzinur Rahman Kabbo, Md. Zobayer Hasan Nayem, Nayema Khatun and Rubaiatul Jannat who belong ID No. sequentially 19202103268, 19202103274, 19202103245, 19202103249 students of B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year March, 2022 under the supervision of Shovon Roy, Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfillment for the requirements of B.Sc. in Computer Science and Engineering and approved as to its style and contents.

<u>Project Supervisor</u>

Mamun Hossain

Lecturer,

Department of CSE

Bangladesh University of Business and Technology

COPYRIGHT

Introduction

With many banks and financial institutions closing their physical doors and reducing staff levels to save costs, Blood Management System are becoming a vital part of the way Blood Donor transact. Even with the global shift to mobile and online banking, and predictions of an eventually cashless society, Blood Management System are still seen as an essential service. The convenience of a Blood Management System allows Donors to perform quick self-service transactions like depositing and withdrawing cash, bill payment and transfers between accounts.

However, with massive advances in software and hardware, a Blood Management System is not just for depositing and withdrawing. Today's Blood Management System are more complex and multi-dimensional. Often, they use software and hardware from various vendors and communicate with different services, and more than one network, providing a broader range of transactions.

1. Problem Statement

1.1 Problem Statement

We developed a software that why people are easily using his payment system. They can easily deposit his money, transfer his money, also he can buy cryptocurrency, he can easily exchange BDT to USD. he can check daily Cryptocurrency Rate.

2. Project Review

2.2 Objective of the Project

We were looking for a project to select that didn't match the other groups. The **"Blood Management System"** got the idea while searching for the project in internet. There we saw a lot of complete projects but they were in another high-level language. There were no such projects using C# language. And then we decided that we would complete this project using C# language. By the end of this project, the basics in C# language have become clearer. The mentality of developing software and working in a team has been created. By completing the project, we learned some of the functions of C# language that were unknown to us.

2.3 Features of Project

1. Splash Screen.
2. Main Menu.
3. Add Blood Donor.
4. Update Details of Blood Donor.

5. Details of Blood Donors.
6. Search Blood Donor Location.
7. Search Blood Donor by Blood Groups.
8. Stock Blood Group.
9. Delete Blood Donor.
10. Logout & Exit.

3.Technology

3.1 Software

3.1.1 NetBeans
NetBeans is an Integrated Development Environment (IDE) developed by Microsoft to develop GUI (Graphical User Interface), console, Web applications, web apps, mobile apps, cloud, and web services, etc. With the help of this IDE, you can create managed code as well as native code. It uses the various platforms of Microsoft software development software like Windows store, Microsoft Silverlight, and Windows API, etc. It is not a language-specific IDE as you can use this to write code in Java, Python, JavaScript, and many more languages. It provides support for 36 different programming languages. It is available for Windows as well as for macOS.

3.1.2 Xampp
XAMPP is a cross-platform web server that is free and open-source. XAMPP is a short form for Cross-Platform, Apache, MySQL, PHP, and Perl. XAMPP is a popular cross-platform web server that allows programmers to write and test their code on a local webserver. It was created by Apache Friends, and the public can revise or modify its native source code. It includes MariaDB, Apache HTTP Server, and interpreters for PHP and Perl, among other computer languages. Because of XAMPP's simplicity of deployment, a developer can quickly and easily install a WAMP or LAMP stack on an operating system, with the added benefit that common add-in apps like WordPress and Joomla can also be loaded.

3.1.3 mysql-connector-net-8.0.2.jar
MySQL Connector/NET 8.0.23 is the latest General Availability release of the MySQL Connector/NET 8.0 series. This version supports .NET 5.0 and the X Dev API, which enables application developers to write code that combines the strengths of the relational and document models using a modern, NoSQL-like syntax that does not assume previous experience writing traditional SQL.

3.2 Programming Language

3.2.1 Java Language

Java is a modern, object-oriented, and type-safe programming language. Java enables developers to build many types of secure and robust applications that run in .NET. Java has its roots in the C family of languages and will be immediately familiar to C, C++, Java, and JavaScript programmers. This tour provides an overview of the major components of the language in Java 8 and earlier. If you want to explore the language through interactive examples, try the introduction to Java tutorials. Java is an object-oriented, ***component-oriented*** programming language. Java provides language constructs to directly support these concepts, making Java a natural language in which to create and use software components. Since its origin, Java has added features to support new workloads and emerging software design practices. At its core, Java is an ***object-oriented*** language. You define types and their behavior.

3.3. Software Framework
3.3.1 The Java Swing Frame Work

Java Swing is a GUI Framework that contains a set of classes to provide more powerful and flexible GUI components than AWT. Swing provides the look and feel of modern Java GUI. Swing library is an official Java GUI tool kit released by Sun Microsystems. It is used to create graphical user interface with Java. JFC is an abbreviation for Java Foundation classes which encompass a group of features for building Graphical User Interfaces (GUI) and adding rich graphical functionalities and interactivity to Java applications. Java Swing is a part of Java Foundation Classes (JFC). Swing is a GUI widget toolkit for Java. It is part of Oracle's Java Foundation Classes (JFC) – an API for providing a graphical user interface (GUI) for Java programs. Swing was developed to provide a more sophisticated set of GUI components than the earlier Abstract Window Toolkit (AWT). Swing provides a look and feel that emulates the look and feel of several platforms, and also supports a pluggable look and feel that allows applications to have a look and feel unrelated to the underlying platform. It has more powerful and flexible components than AWT. In addition to familiar components such as buttons, check boxes and labels, Swing provides several advanced components such as tabbed panel, scroll panes, trees, tables, and lists. Unlike AWT components, Swing components are not implemented by platform-specific code. Instead, they are written entirely in Java and therefore are platform-independent. In December 2008, Sun Microsystems (Oracle's predecessor) released the CSS / FXML based framework that it intended to be the successor to Swing, called JavaFX.

4. System Analysis

4.1 System user analysis

4.1.1 Admin Panel

ADMIN In the admin panel, the admin can log in to the software using a special username & password. From the admin panel, an admin can view all data, insert any data, change/update any data, and also can delete any data from the database.

5. Access System

1. Splash Screen

Before starting the software, an animated splash screen will be shown. It will make sense about Blood Donation Management System.
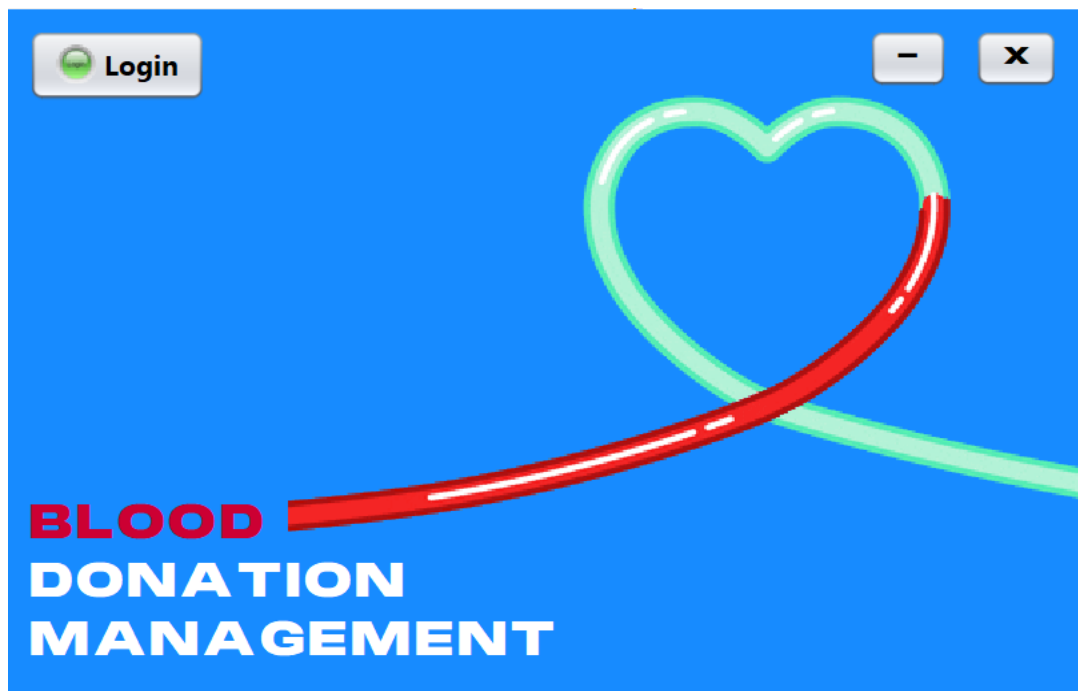

Figure: 01. Splash Screen

2. Login

Admin need to be login and use captcha to enter into the main screen

Figure: 02. Login

3. Main Menu

From the main menu, the user and the admin show Some Options that's are Add, Update, Delete, Search Blood Donors.
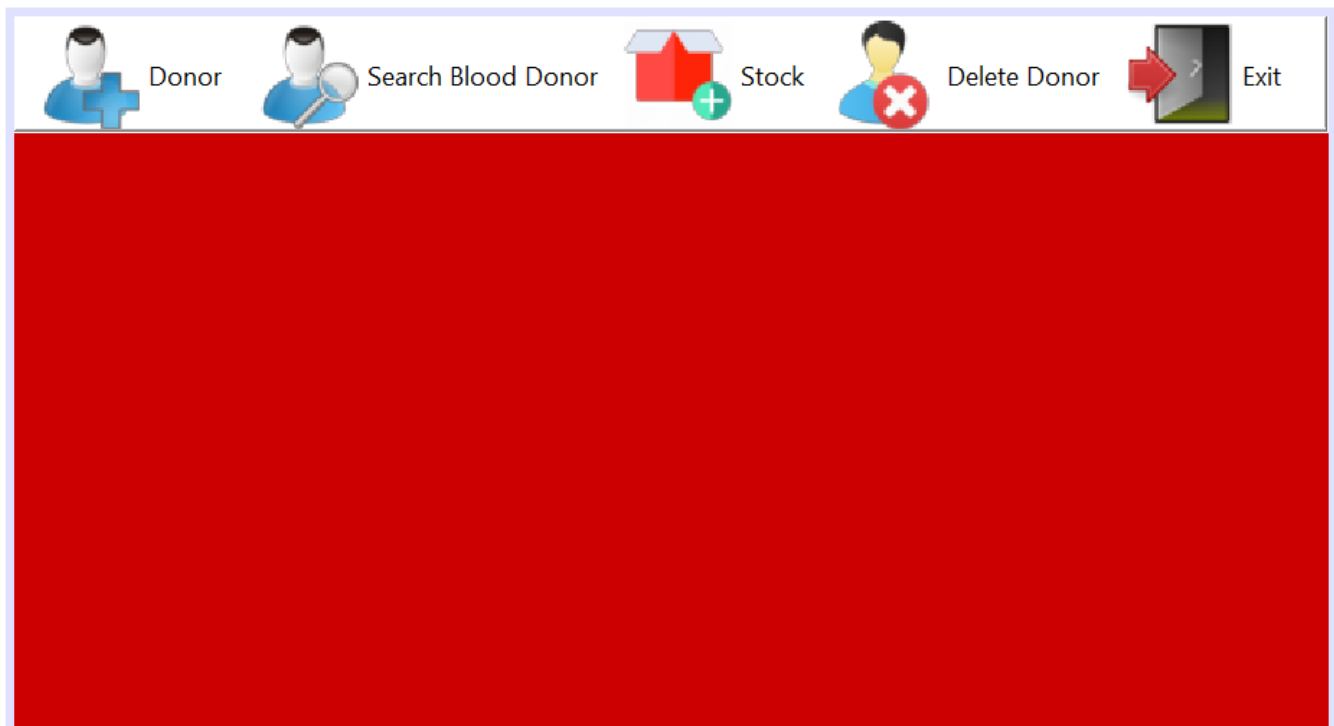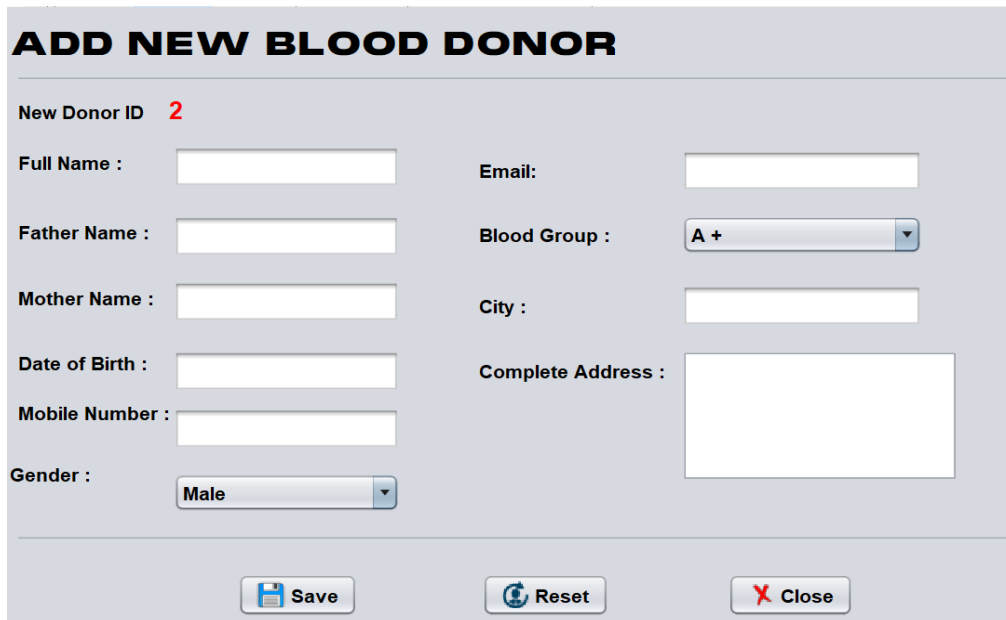
Figure: 03. Main Menu

4. Add New Blood Donors

The admin can add a blood donor by entering his name, address, phone number, email address, complete details.
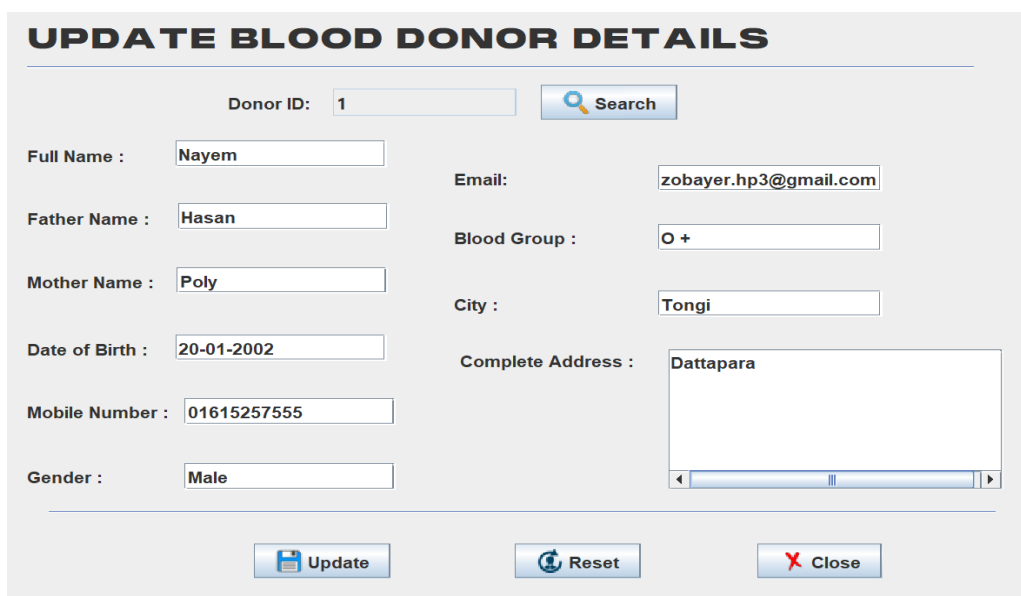
Figure: 04. Add New Blood Donor

5. Update Donor Details.

Admin will be able to update the identity of a blood donor. He will be able to update his name, identity, address, phone number, email.

Figure: 05. Update Donor Details

6. All Donor Details

Admin can update a blood donors' information. He will be able to update his name, identity, address, phone number, email.
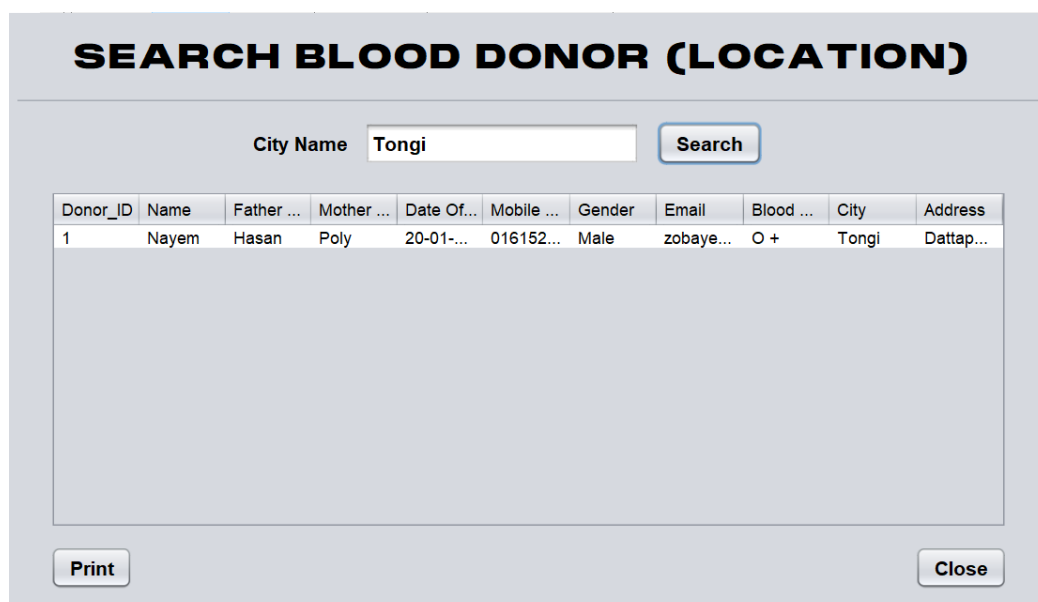

Figure: 06. All Donor Details

7. Search Donors by Location

Admin can search donors' information with location.

Figure: 07. Search Donors by Location

8. Search Donors by Blood Group

Admin can search donors' information with Blood Group.

Figure: 08. Search Donors by Blood Group

9. See & Update Stock Units Blood Group

Admin can see the stock of all blood groups and also able to delete and update the units of the blood groups.

Figure: 09. See & Update Stock Units Blood Group

10. Delete Blood Donor

Admin can delete the identity of any blood donor.

Figure: 10. Deleting Blood Donor

7. Future Work

1. We want to make this software more user friendly.
2. We will have an option for reporting bugs for fixing bugs (if any) or suggestions for better support.

8. Conclusion

We started this project when we had very few concepts about the Java language and its different usage. During the project preparation we were introduced with the new concepts and new elements of Java language along with the progression of the course. We were able to apply all those theoretical Java concepts taught to us in our application to make it more and more functional. Over time, we've worked to make our project more compact and more user-friendly. During this period, we learned various Java programming concepts and now in position to design in the error free program successfully. Overall, the team feels that the project is pretty successful although we did face a few problems here and there but we came to know the various Java programming techniques. We learned to make the variables and constants either global or local. Then we also learned the practical way of implementing the structures in the program and access the members of structures, compare them, initialize them and so on. The implementation of techniques like string comparison, function calling, recursion, array storage, using file for storage, and calling by value or reference has broaden my knowledge regarding Java language.

9. Reference

1. Stack Overflow
2. GitHub
3. W3School
4. YouTube