Blood Bank Management System

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Abstract

Our Blood Bank Management System can easily automate the pre-existing manual system and can meet the user requirement by the use of our full-scale computer application. By the use of our computer application their valuable data / information can be easily accessed and handled in the long run. As well as the necessary software and hardware are readily available and easy to work with.

The Blood Bank Management System, as described above, can lead to an error-free, secure, reliable and fast management system. This will enable the user to focus on other activities rather than focusing on registration. This will help the company to make better use of resources. The system can maintain computerized records without unnecessary inputs. That is, when reaching for information, one does not have to be distracted by unrelated information.

With the help of computerized equipment and a full range of computer software, it aims to automate its current manual system and meet their needs so that they can save and store their valuable data / information in the long run. This project describes how to manage good performance and better services for the ones who rely on our web-based services.

Introduction

Every year the world's population grows, as do disease and health problems. With the increase in population, the need for blood increases. A large number of blood donors are created by the increasing world population. Nevertheless, over 90 percent of the world's population is not interested in donations of blood. With the increasing population and the advancement of the medical sciences, the need for blood has increased. The lack of contact between blood donors and the blood bank prevents most blood-needed patients from obtaining blood and from losing their lives at the right moment.

Synchronization of blood donors and hospitals with blood banks is desperately important. This insufficient blood control contributes to the disintegration of the blood products available. Mismatch and coordination between hospitals and blood banks contribute to the lack of blood available. The existing manual blood bank management system can be automated to resolve these issues. The goal is to create a very nice, secure, easily open, and scalable system to bridge the gap between donors and beneficiaries and to and efforts to search for donors.

To overcome problems in manual mode "Blood Bank Management System" has been developed. This program helps to eliminate and reduces the system's problems in certain situations. The system is designed to respond smoothly and efficiently to unique needs of the client.

To avoid error when entering data, the application is minimized as far as possible. The error message is also returned when incorrect data is entered. To use this environment, the user does not need formal knowledge. This makes it easy to use. A bug-free, secure, reliable and fast management system can be integrated with the Blood Bank Management System as described above.

There are increasing numbers of people who need blood every day. To support people in need of blood, the blood group and donor accounts that are in the same town can be used effectively by our online blood bank.

Via our on-line blood bank management system, people who want to donate blood can register with and provide all their information with our on-line blood donor management system.

All can conveniently access our online blood donation site. A individual who wants to donate blood is expected to provide detailed details via the registration form and create a unique user account to update the information directly through its account if any changes are needed.

LITERATURE SURVEY

We had established the resulting operating structure of blood banks based on the experience acquired from banks and the hospital. With the growing number of people, the need for blood is growing. Blood needs are increasing, but in laboratory blood cannot be produced. The blood bank and the hospital depend on the donor blood. Then, blood donors can arrange blood donation camps for retail donors, banks and clinics and donations can be contacted by the donor's telephone number in the application. The current procedure is the manual system in which the donor attends the patient and discusses the considerations below.

• Undertaking the form

• Blood donation

• Record for searching

Undertaking the form:-

The hospital provides a form to be completed by the donor, and the donor fills out the relevant form information. The staff of the hospital verifies the form, whether or not the submitted information is right and delivers the form.

Blood donation:-

The hospital checks blood tests for any illnesses since the shooting has been sent if the blood is not obtained by this patient or any infection is detected.

Record of search:-

If the patient needs blood, the hospital will check if blood is in the patient's files, if they do not seek a donor. This method takes time and takes more time.

However there are inconveniences to the existing system

1. Needs staff

2. Special clerical tasks

3. Mistake management is not effective

4. More paper-workload

5. Consumption of time

Methodology

1. Identifying and selecting the project

We intended to develop a Web banking system that can primarily focus on the management of the blood information of the donor. Anyone interested in donating blood can do a donation in hospitals or in blood donation centers.

2. Initiation and planning of programs

We collect this technique and prepare the scope and goals for the initiation of the project. The outcomes of this phase are scope and limitation, goals, costs and benefits, system and interface design features.

3. Unit requires review

We investigated and identified existing system problems and then developed data flow charts for the current system. For the framework proposed, we also establish data flow scheme and object relation scheme.

4. Design of the system proposed

Based on analysis, E-R diagram was converted into an electronic database model and during this process we created a data dictionary and a DFD interface.

5. Proposed Device Architecture

At this point, the proposed framework would be converted into computer software that involves computer programming using Visual Studio, SSMS and the design requirements will then be translated into the pc code.

6. Testing of the system proposed

This step is to check whether or not the programming code functions correctly with the machine conditions. We will correct bugs in this phase in order to provide a performance-based system.

7. Implementation of the system proposed

This technique would like to be launched on the web, so donors are willing to view their blood donation documents online and administrators can conveniently create, update, remove and query data.

Analysis

Process analyzes can be an attempt to gather and classify the data, identify issues and then propose changes to the program from the bank management system details. It is an operation for drag-resolution which involves intense communication between system users and system developers.

Any system development process involves an analysis or analysis of the system. The analyst plays the role of the questioner and is profoundly involved in the operation of this system. The system is considered in its entirety and the system input is identified. The performance of the organizations is based on the different processes. The study of the method means that the subject is informed, that the appropriate and decisional variables are established, that the various influences are analyzed and synthesized and an ideal, or necessary, solution or action plan is decided.

Diverse techniques such as interviews, questionnaires, etc. must be used to study the method in detail. In order to come to a conclusion, the evidence obtained from these sources must be analyzed. This system is known as the present system. It is now possible to complete the existing structure and recognize issues. The designer now works as a drag solver and attempts to map out the problems faced by the company.

Blood Bank Control System Development Framework

A logical structure that meets the specified requirements is designed in this point. In general, the following two steps are carried out in the design:

1. Step of prime design:

The device is intended at the block level in this step. The blocks are built based on the assumption that the subject recognition process is wiped out. Different blocks are built to limit the transfer of information between blocks, with emphasis on specific functions.

2. Stage of secondary conception:

The thorough design of each block is carried out during the secondary process.

The following are the general functions of the production process:

1. Project specific frameworks for device operations overall.
2. Project various configurations in the servers.
3. Model the input shape and device outputs.
4. Conduct design documents. Design documentation.
5. Checks on the program
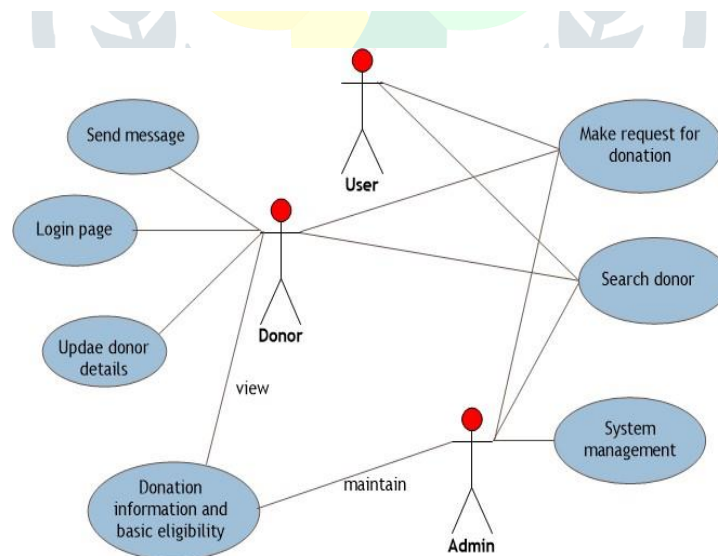
Use-Case Diagram

Class Diagram

ADMIN-PC.BloodBankM...tem - dbo.tbl_users
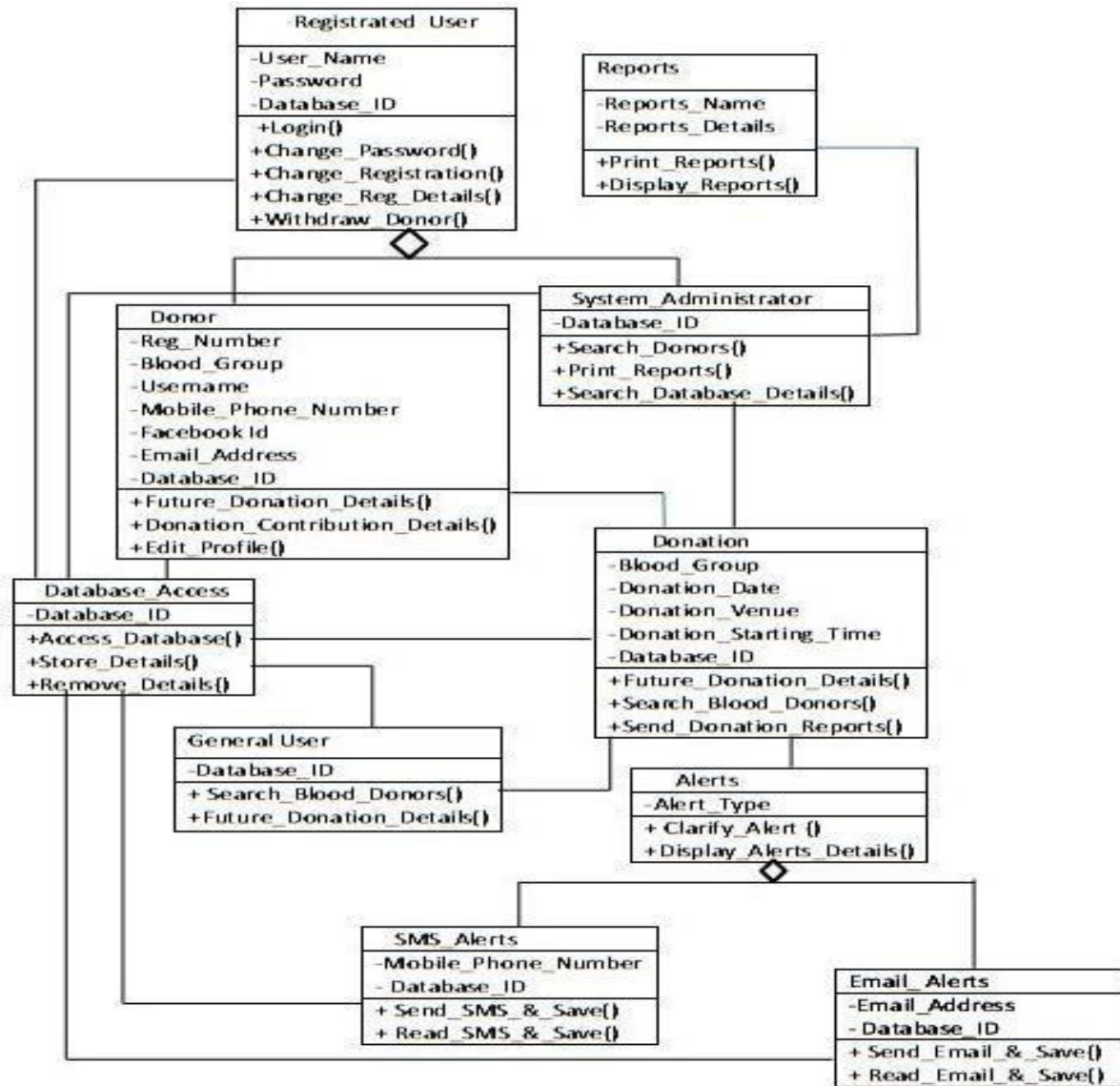
Column Name	Data Type	Allow Nulls
user_id	int	☐
username	nvarchar(50)	☑
email	nvarchar(150)	☑
password	nvarchar(150)	☑
full_name	nvarchar(150)	☑
contact	nvarchar(20)	☑
address	nvarchar(250)	☑
added_date	datetime	☑
image_name	nvarchar(50)	☑
		☐

Data Table 1: User

ADMIN-PC.BloodBank...em - dbo.tbl_donors

Column Name	Data Type	Allow Nulls
donor_id	int	☐
first_name	nvarchar(50)	☑
last_name	nvarchar(50)	☑
email	nvarchar(150)	☑
contact	nvarchar(20)	☑
gender	nvarchar(10)	☑
address	nvarchar(250)	☑
blood_group	nvarchar(10)	☑
added_date	datetime	☑
image_name	nvarchar(50)	☑
added_by	int	☑
		☐

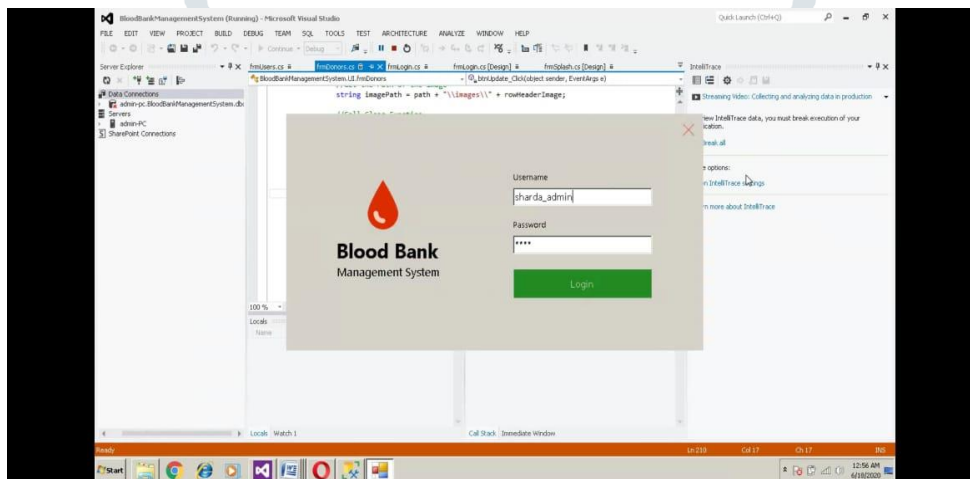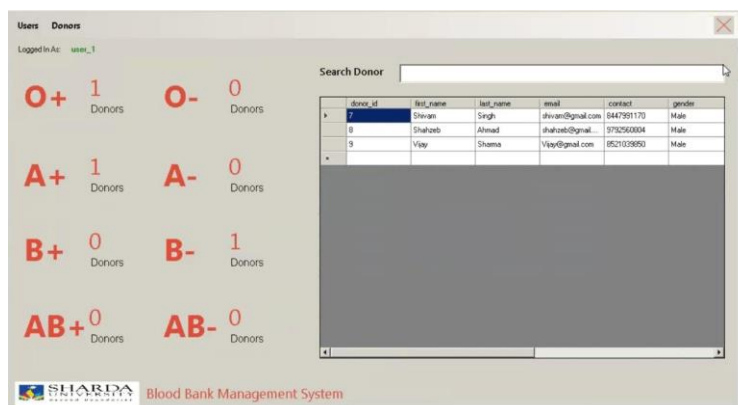Data Table 2: Donor

SCREENSHOTS

Image 1: Splash Screen
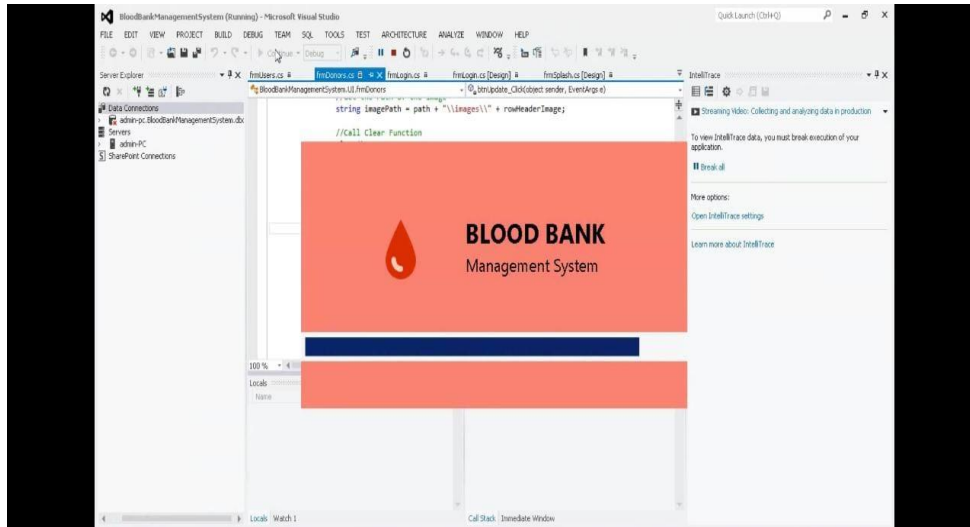
Image 2: Admin Login

Homepage

In the homepage, the search box is placed for every visitor or member searching blood quickly. They can request donors to donate blood.

Search Result

The search page searches for donors who in turn can search other donors and send SMS including blood group, location of donation and date of donation to available donor.
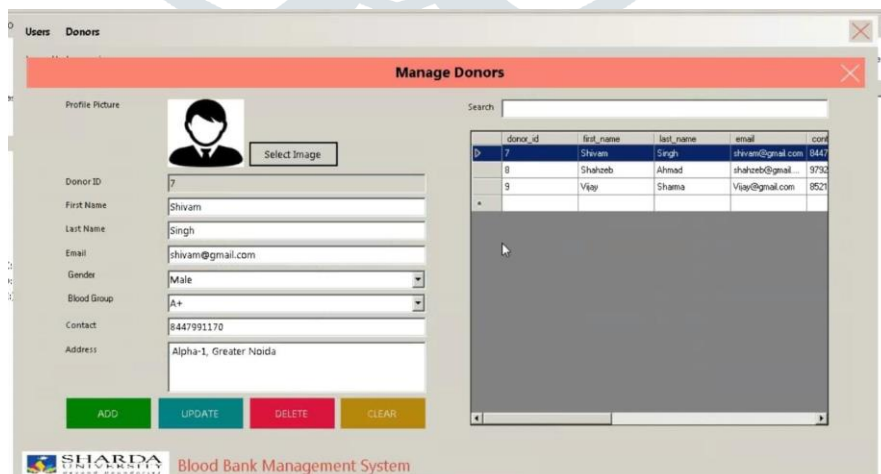
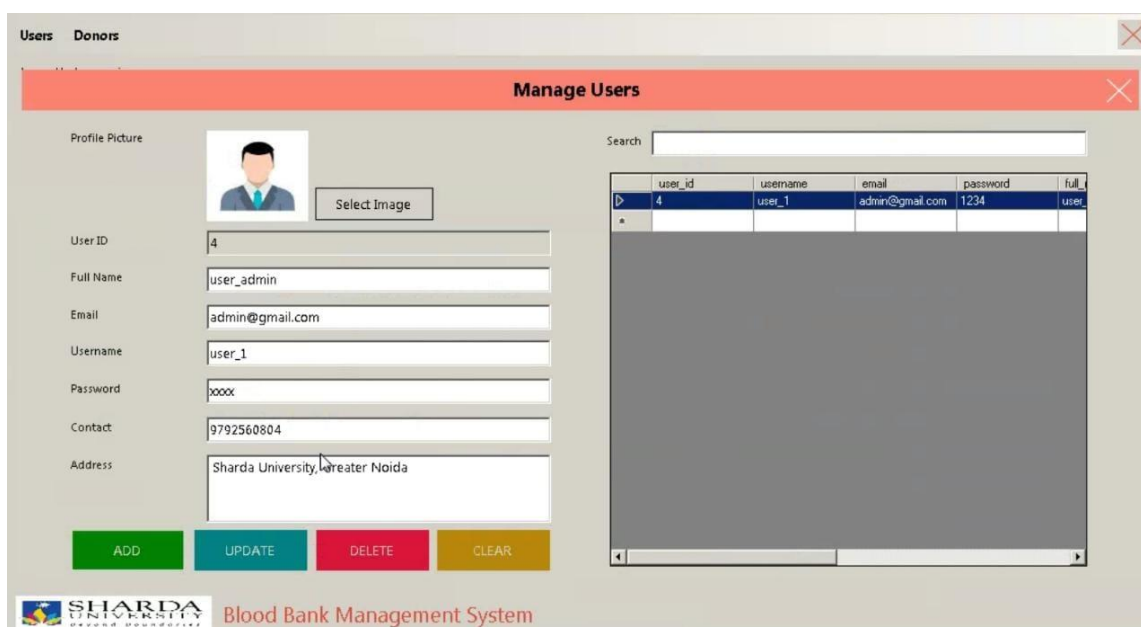- Searching for O+ Donor
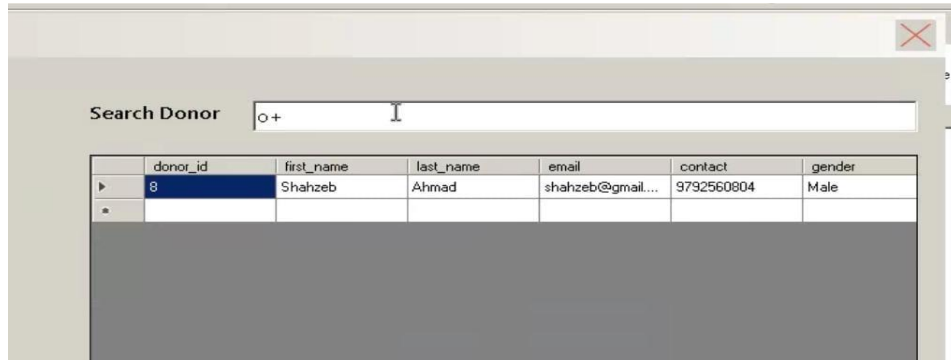
- Searching for A+ Donor

1. Donor Form

Donor can login to his own profile by entering valid email ID and password using User Login page. Using Profile page, a donor can request other donors to donate blood. He can update his profile, change password, retrieve password and delete own membership. Donor can also cancel appointment for donation blood.

2. User Form

     Admin can add, update or delete donor from this system using add, update and delete button in donor page. They can also add, or update another admin who can manage donors in their respective organization. They can also search for donors by entering their name or blood group in the search bar.

CONCLUSIONS

Our Blood Bank Management System is a software product that is well suited and designed to improve the quality of service and management of blood in blood bank. Our Blood Bank Management System enables the users to develop their organization and improve its effectiveness and the quality of work. Managing all the key processes is very critical. Our system provides of all the process management tool elements: modeling, analysis and simulation.

This venture has given us enough chance for: configuration, code, and test and to execute our application. This has assisted with trying different programming building standards and has data-based the board ideas.

Our venture is just an unassuming endeavor to meet the prerequisites of dealing with their task work. Numerous easy to use coding frameworks have been embraced. This bundle will end up being a ground-breaking bundle in addressing all the necessities of the school. The motivation behind the product venture is to give an edge work that empowers the director to perform sensible evaluations inside a set time period toward the start of the product venture and to be ceaselessly refreshed as the undertaking advances.

References

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- https://www.tutorialspoint.com/

- https://www.w3schools.com/

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Books:

- Pro ASP.NET MVC 5

(By: By Adam Freeman)