ONLINE BLOOD BANK

BY

SUDDAM HOSSAIN

ID: 122-15-1979

AND

MD KAMRUZZAMAN

ID: 122-15-1971

AND

MD RAJIB MUNSI

ID: 122-15-1965

This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

Mr. Narayan Ranjan Chakraborty

Senior Lecturer

Department of CSE

Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY

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APPROVAL

This Project title **"ONLINE BLOOD BANK"**, submitted by SUDDAM HOSSAIN and MD KAMRUZZAMAN and MD RAJIB MUNSI to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering (BSc) and approved as to its style and contents. The presentation has been held on 11/08/2015

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Department of CSE

Faculty of Science & Information Technology
Daffodil International University

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Department
Computer Science and Engineering
Jahangirnagar University

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mr. Narayan Ranjan Chakraborty, Senior Lecturer,** Department of Computer Science and Engineering Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:

Mr. Narayan Ranjan Chakraborty
Senior Lecturer
Department of CSE
Daffodil International University

Submitted by:

SUDDAM HOSSAIN
ID: 122-15-1979
Department of CSE
Daffodil International University

MD KAMRUZZAMAN
ID: -122-15-1971
Department of CSE
Daffodil International University

MD. RAJIB MUNSI
ID: -122-15-1965
Department of CSE

ABSTRACT

Web-based Blood Donation Management System is a management system website that enables individuals who want to donate blood to help the needy. It also enables hospitals to record and store the data for people who want to communicate with them, and it also provides a centralized blood bank database. The system is developed by using HTML, CSS, Java Script, PHP, and MySQL as a database system to manage and store the data. The Waterfall Methodology, which is the traditional version and the classic approach of a system development life cycle, is used to develop and build the web-based blood bank. The system targets three types of user: the public who wants to donate blood, the recipients who need the donated blood, and the hospitals who that work as an intermediary to manage the communication between the donors and recipients.

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CHAPTER 1
INTRODUCTION

Blood Bank Management System (BBMS) is a browser based blood donor information system.

Online Blood Bank is specially meant for hospital who need blood for their patient regularly or for blood bank who collect blood to be given for different hospital. Here we maintain the information about the donor. It helps the doctors, people to find the donor at right time.

1.2 Objective of the project

The main objective of this project is to facilitate hospital, general people who needed 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. Using these schema donor to are attracted to donate the blood. Our system encourages the blood communication between the donor and doctor.

1.3 Scope of Online Blood Bank registration systems

Online Blood Bank system is to control and co-ordinate all of its sectors in an effective manner. At the initial stage two main modules are thought as part of the Online Blood Bank registration system. They are:

- Computerizes hospital
- And a register to operate the computer

1.4 Summary

This system presents an alert system to the donor about requirement of their blood to a person in need and also provides online status of blood group wise availability of blood units in all the licensed blood banks, Hospitals Bangladesh.

CHAPTER 2

SYSTEM ANALYSIS

2.1 Introduction

System analysis is a detailed study of the various operation performed by a study and their relationships within an outside of the system. A key question is what must be done. One aspect on analysis is defining the boundaries of the system and determining whether or not a candidate system should consider other related system. During analysis, data are collected on available files, decision, points and transactions handled by the present system.[3]

2.2 Initial Investigation

The first phase of the software engineering development life cycle is initial investigation. In this stage, the analyst (system engineer) meets with user and the end user. The user may be a representative of an outside.

- Defining the problem and deciding whether to be proceed.
- Analyzing the current system of the problem.
- Selecting the best solution.

So, initial investigation identify that what will do top to bottom of the system.[3]

2.3 Feasibility Study

The feasibility study is performed to determine whether the proposed system is viable considering the Technical, Operational and Economical factors. After going through feasibility study we can have a clear-cut view of the system's benefits and drawbacks.[4]

2.4 Technical feasibility

The proposed system is developed using PHP with Codeigniter framework, Java Script, Jquery, Ajax and HTML-CSS as front-end tool and MySQL Server as the back end. The proposed system needs a Personal Web Server to serve the requests submitted by the users. The Web browser is used to view the web page that is available within the Windows operating system itself . The proposed system will run under Win9x, NT, and all other environment. As Windows is very user friendly and GUI OS it is very easy to use. All the required hardware and software are readily available in the market. Hence the system is technically feasible.

2.5 Operational Feasibility

The proposed system is operationally feasible because of the following reasons.

- The customer is benefited more as most of his time is saved. The customer is serviced at his place of work.
- The cost of the proposed system is almost negligible when compared to the benefits gained.

2.6 Economical Feasibility

As the necessary hardware and software are available in the market at a low cost, the initial investment is the only cost incurred and does not need any further enhancements. Hence it is economically feasible.

2.7 Summary

After successful completion of the system analysis, I have found the easy way to established online blood bank, So i am going to making a system within specified time and easy user friendly.

CHAPTER 3

SYSTEM REQUIREMENTS

3.1 Introduction

Online blood bank is a Software Environment project. It is a technical specification of requirement of software product. This specifies the environment for development, operation and maintenance of the product.

Technology used:

- HTTP
- HTML
- CSS
- PHP with Codeigniter framework
- Java Script
- JQuery
- MySQL

3.2 HTTP

The Hypertext Transfer Protocol is stateless, TCP/IP based protocol used for communicating on the World Wide Web. HTTP defines the precise manner in which Web clients communicate with Web servers. HTTP/1.0 is the most common version in use today.

3.3 HTML

Hypertext Markup Language, commonly referred to as HTML, is the standard markup language used to create web pages. Our Online blood bank website structure create By this language.[1]

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3.4 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. Our Online blood bank website full style create By this language.[1]

3.5 PHP with Codeigniter framework

Codeigniter is an Application Development Framework - a toolkit - for people who build web sites using PHP. Its goal is to enable our develop projects much faster than we could if we were writing code from scratch, by providing a rich set of libraries for commonly needed tasks, as well as a simple interface and logical structure to access these libraries. Codeigniter lets you creatively focus on your project by minimizing the amount of code needed for a given task.[9]

3.6 Java Script and Jquery

JavaScript is the programming language of HTML and the Web. Programming makes computers do what you want them to do.

jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML . jQuery is the most popular JavaScript library in use today.

3.7 MySQL

MySQL is a database system used on the web. MySQL is a database system that runs on a server. The data in a MySQL database are stored in tables. A table is a collection of related data, and it consists of columns and rows .

We store user Information, Blood group Information, user message information, Captcha information, menu information, admine notice information in MySQL Server.

3.8 Summary

This technology is most important for our project .Without this technology we did not create this project .This technology is dependent one another.

We easily create our project full Dynamic, easily store user data, show user data by this technology.

CHAPTER 4

DATABASE

4.1 Introduction

One or more large structured sets of persistent data usually associated with software to update and query the data. A simple database night be a single file containing records, each of which contains the same set of fields where each field is contain fixed width. Each record in a database is composed of the important elements of information for a particular item. Each record is composed of a set of fields.[5]

4.2 System Structuring

Database system is design to store large bodies of information. A major purpose of a database system is to provide users with an abstract view of the data. That is, the system hides certain details of how the data are stored and maintained.

Several data structure is required as part of the physical system implementation: Data files, which store the database itself .[5]

43 Instances and Schema

4.3.1 Instance

The collection of information stored in the database. So in the particular moment the result of database is called database schema. It is in the view level. In a programming language, the value of the variable in any time is the instance. It may be changed time to time.

4.3.2 Schema

The overall database is called the schema that is the whole program is the schema. It is in the logical level. There are three types of database schema.

- **Physical Schema:** In the physical level which data structure we maintain is called the physical schema.
- **Logical Schema:** In the logical level which data structure we maintain is called the logical schema.
- **Sub Schema:** In the view level which data structure we maintain is called the sub schema .[5]

4.4 Table Design

To the design database table, first we have to appropriate fields then according to the fields had to define data type, collation attributes and null. For the user table has shown in the figure:

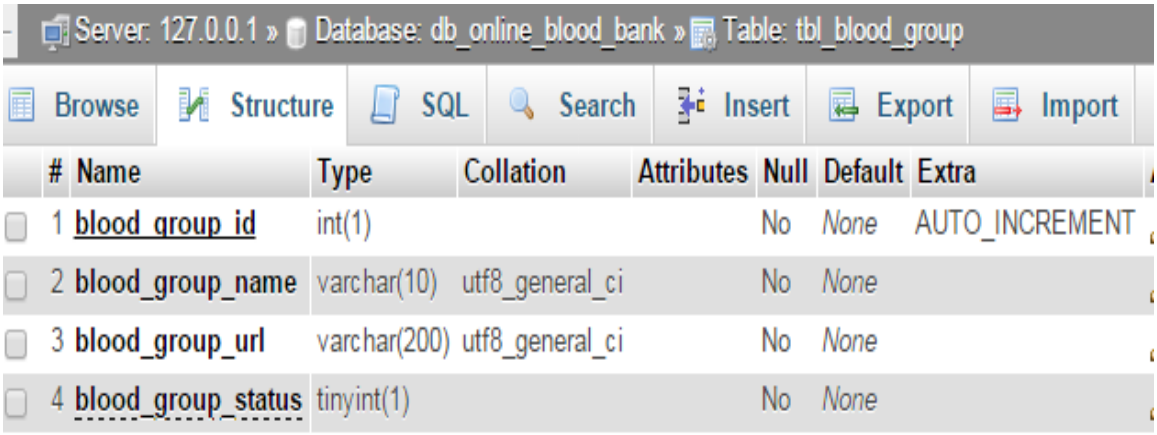
- **tbl_user_ information:** This is tbl _ user_ information table structure .There is nine fields. Here only user id field is auto increment and adjust primary key, because this field is unique.[6] All user information stores in this figure 4.1.

Browse | Structure | SQL | Search | Insert | Export | Import

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	user_id	int(6)			No	None	AUTO_INCREMENT
2	user_name	varchar(50)	utf8_general_ci		No	None	
3	user_email_address	varchar(50)	utf8_general_ci		No	None	
4	user_password	varchar(32)	utf8_general_ci		No	None	
5	user_blood_group	varchar(5)	utf8_general_ci		No	None	
6	user_image	varchar(50)	utf8_general_ci		No	None	
7	user_district	varchar(50)	utf8_general_ci		No	None	
8	user_mobile	int(11)			No	None	
9	user_sex	varchar(6)	utf8_general_ci		No	None	

Figure 4.1: tbl_user_information table structure

- **tbl_blood_group:** This is tbl_blood_group table structure .There is four fields. Here only blood group id field is auto increment and adjust primary key, because this field is unique.[6]All blood group information stores shown in 4.2 figure.



#	Name	Type	Collation	Attributes	Null	Default	Extra
1	blood_group_id	int(1)			No	None	AUTO_INCREMENT
2	blood_group_name	varchar(10)	utf8_general_ci		No	None	
3	blood_group_url	varchar(200)	utf8_general_ci		No	None	
4	blood_group_status	tinyint(1)			No	None	

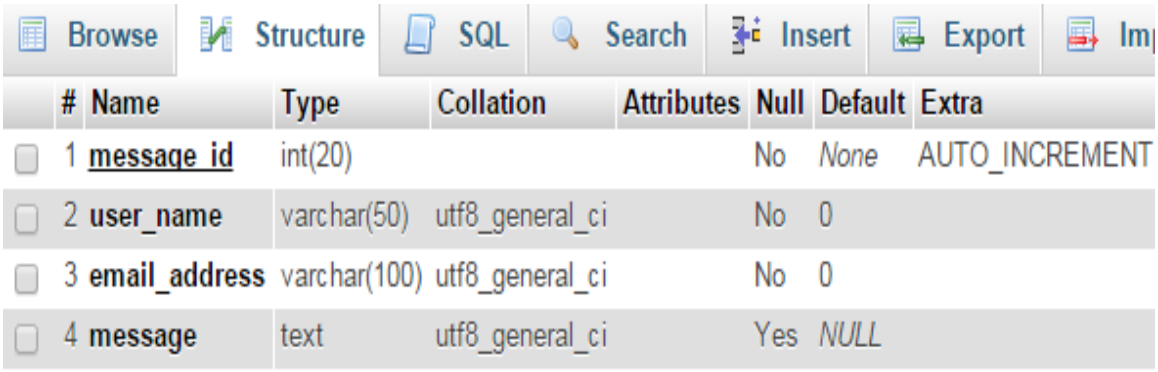
Figure 4.2: tbl_blood_group table structure

- **tbl_menu:** This is tbl_menu table structure .There is four fields. Here only menu id field is auto increment and adjust primary key, because this field is unique.[6]All menu information stores 4.3.

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	menu_id	int(2)			No	None	AUTO_INCREMENT
2	menu_name	varchar(50)	utf8_general_ci		No	None	
3	menu_url	varchar(200)	utf8_general_ci		No	None	
4	menu_status	tinyint(1)			No	None	

Figure 4.3: tbl_menu table structure

- **tbl_user_contact_message:** This is tbl_user_contact_message table structure .There is four fields. Here only message id field is auto increment and adjust primary key, because this field is unique.[6] All user feedback message information stores figure4.4 .

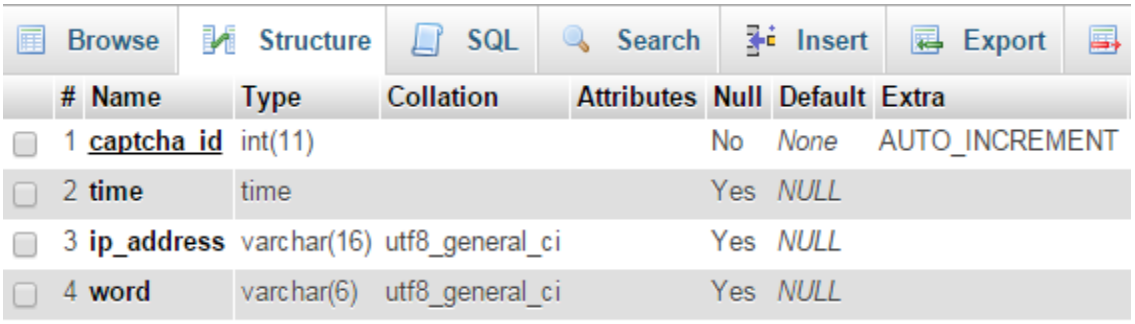


Browse | Structure | SQL | Search | Insert | Export | Im

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	message_id	int(20)			No	None	AUTO_INCREMENT
2	user_name	varchar(50)	utf8_general_ci		No	0	
3	email_address	varchar(100)	utf8_general_ci		No	0	
4	message	text	utf8_general_ci		Yes	NULL	

Figure 4.4: tbl_user_contact_meassage table structure

- **tbl_captcha:** This is tbl_captcha table structure .There is four fields. Here only captcha id field is auto increment and adjust primary key, because this field is unique. This table store temporally capuche data only for determine whether or not the user is human.[6]For the table has shown in the figure 4.5.



Browse | Structure | SQL | Search | Insert | Export

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	captcha_id	int(11)			No	None	AUTO_INCREMENT
2	time	time			Yes	NULL	
3	ip_address	varchar(16)	utf8_general_ci		Yes	NULL	
4	word	varchar(6)	utf8_general_ci		Yes	NULL	

Figure 4.5: tbl_captcha table structure

4.5 Summary

The project has been an opportunity to know communication among blood donor and customer. To work in this project – we have to go through many websites, learn new things – talk and take review of many different people and to bring all this together and to work for a project so dynamic – it was a very learning experience for both of us. I specially thank my supervisor for his kind patience and for his ability to explain complex issues so easily for mediocre students like us to grab and work as he planned.

CHAPTER 5

FUNCTIONAL SPECIFICATIONS

5.1 Introduction

In this Chapter, we are going to describe step by step our online blood bank Project working process.

Front end Feature:

- Registration Panel
- User login Panel
- User Profile
- Blood Search by Blood group.
- Blood Search by City
- View User Feeds.
- Contact Panel

Admin Panel:

- Admin Login Panel
- Admin Dashboard
- Add Menu
- Manage Menu
- Add Blood Group
- Manage Blood Group
- Add User
- Manage User

5.2 Registration Panel

easily Any users registration in our online blood bank. As a result his/her information save our database information and at the same time update his/her information in our website home page.[7] This is online blood bank registration form figure 5.1:

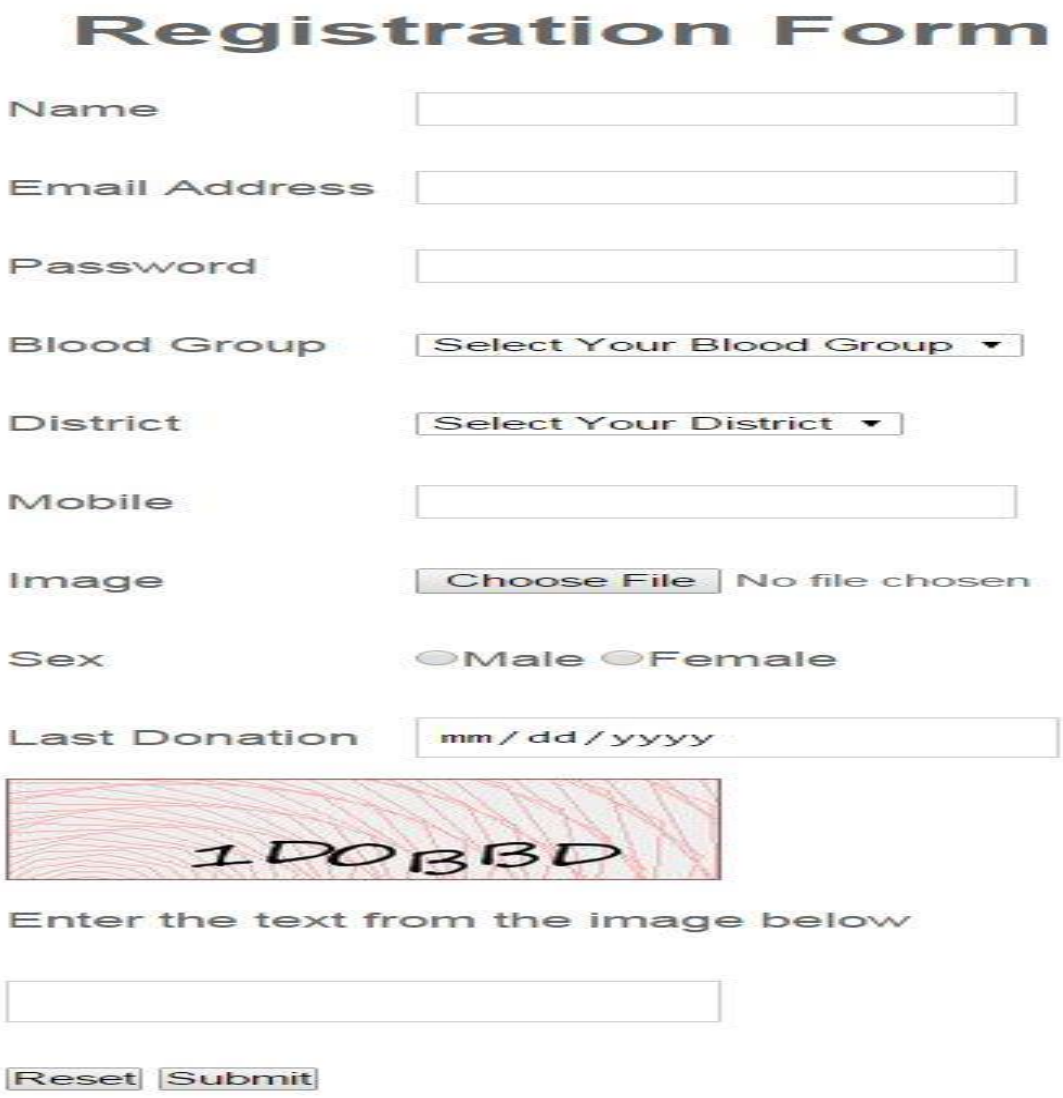


Figure 5.1: Online blood Bank Registration form

5.3 User login Panel

When any user registration in online blood bank, then he/she create auto user id. He /She login user panel by given email address and password.[8]The flowing figure are shown below 5.2.

Figure 5.2: Online blood Bank User login form .

5.4 User Profile

This is user Profile dashboard. Here users see her/his profile, change his / her profile.

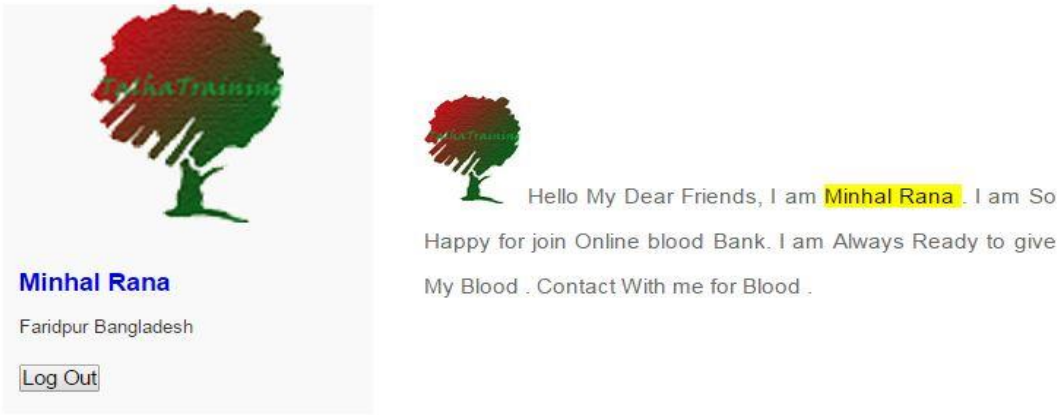


Figure5.3: Online blood Bank User Profile.

5.5 Blood Search by blood group

This is blood group search panel by individual blood group .When I select any blood group ,show selected blood group total information in this figure 5.4.

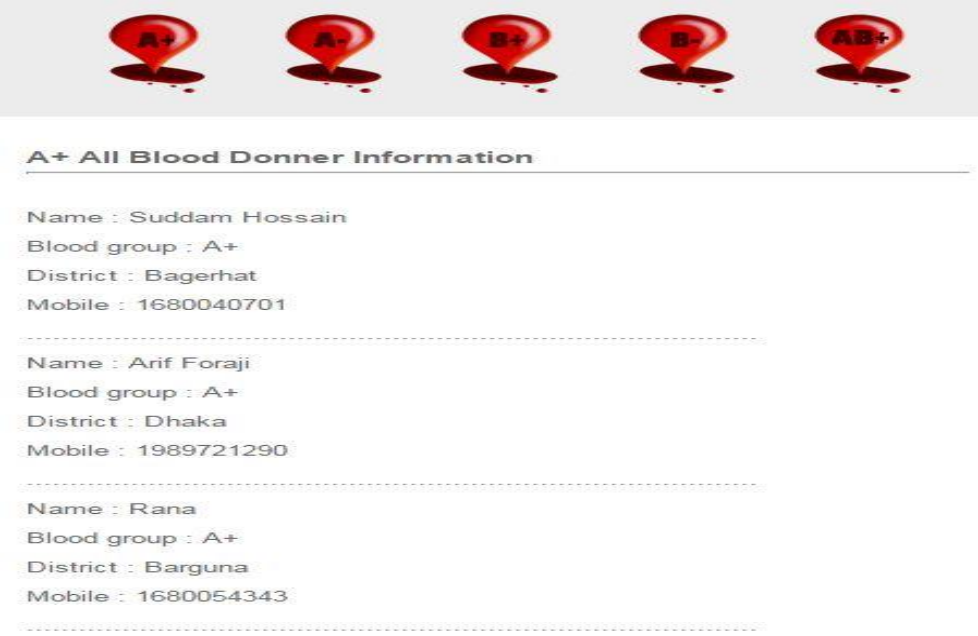


Figure 5.4: Online blood Bank Blood Search by blood group.

5.6 Blood Search by City

This is blood group search panel by district .When I select any blood group and district, show selected blood group total information.

Figure 5.5: Online blood Bank Blood Search by District.

5.7 View User Feeds

Online Blood Bank all update information always show home page that is called Feeds and this Feeds shown in the figure 5.6.

Figure 5.6: Online blood Bank Feeds.

5.8 Contact Panel

This is user problem report panel .User easily there query, send message to administrator, which represent the figure 5.7.

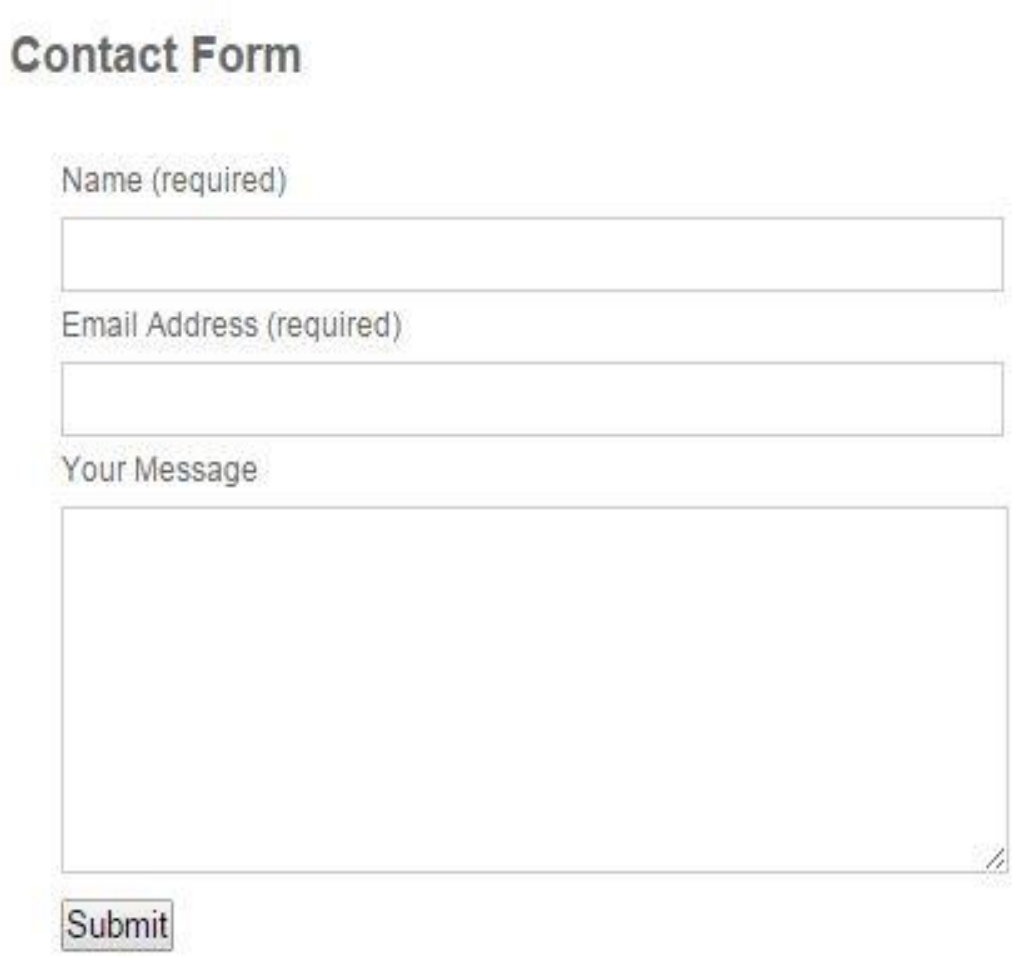


Figure5.7: Online blood Bank Contact form.

5.9 Admin Login Panel

This is admin login panel .Who manage this website, only he/she login this panel .It shown by the figure 5.8.

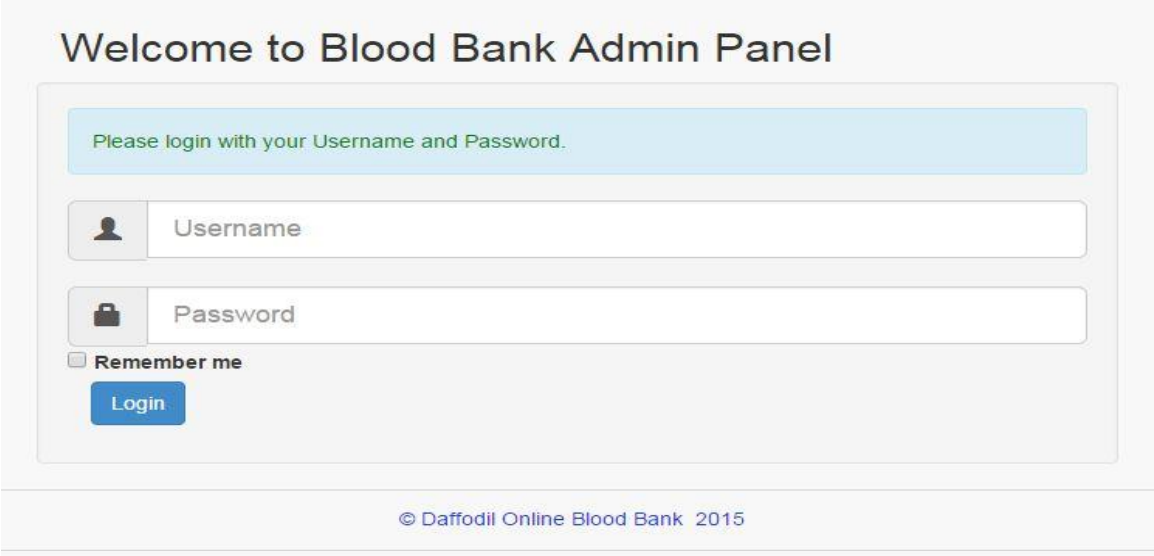


Figure 5.8: Online blood Bank Admin login panel.

5.10 Admin Dashboard

This is admin user dashboard. Here admin user fully control this project front end site .

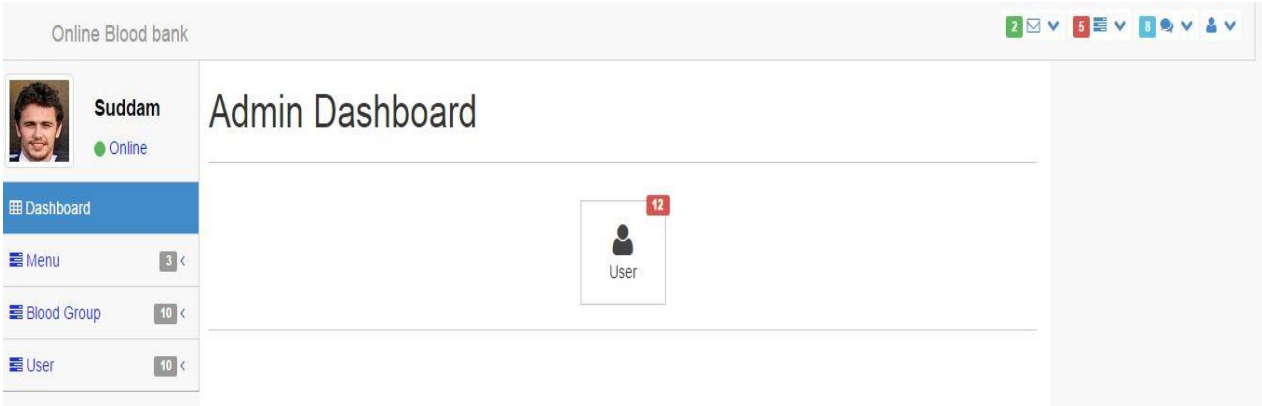


Figure 5.9: Online blood Bank Admin Dashboard.

5.11 Add Menu

Here admin user dynamically add main menu. It shown in the figure no 5.10..

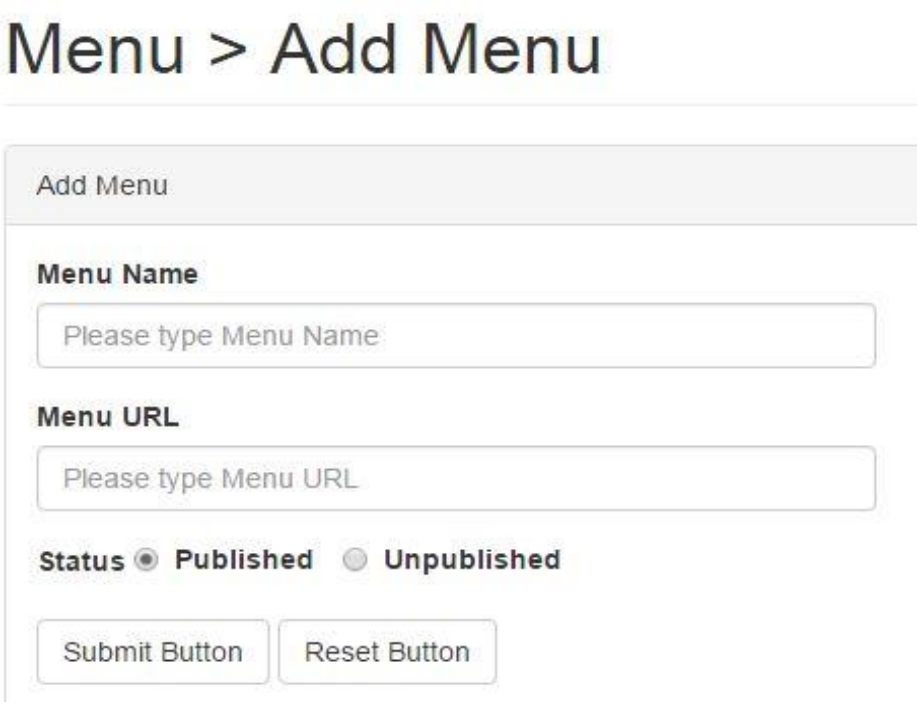


Figure 5.10: Add menu

5.12 Manage Menu

Here admin user menu active, inactive, delete action control. It shown in the figure no 5.11.

Figure 5.11: Manage menu

5.13 Add blood group

Here admin user dynamically add blood group. It shown in the figure no 5.12.

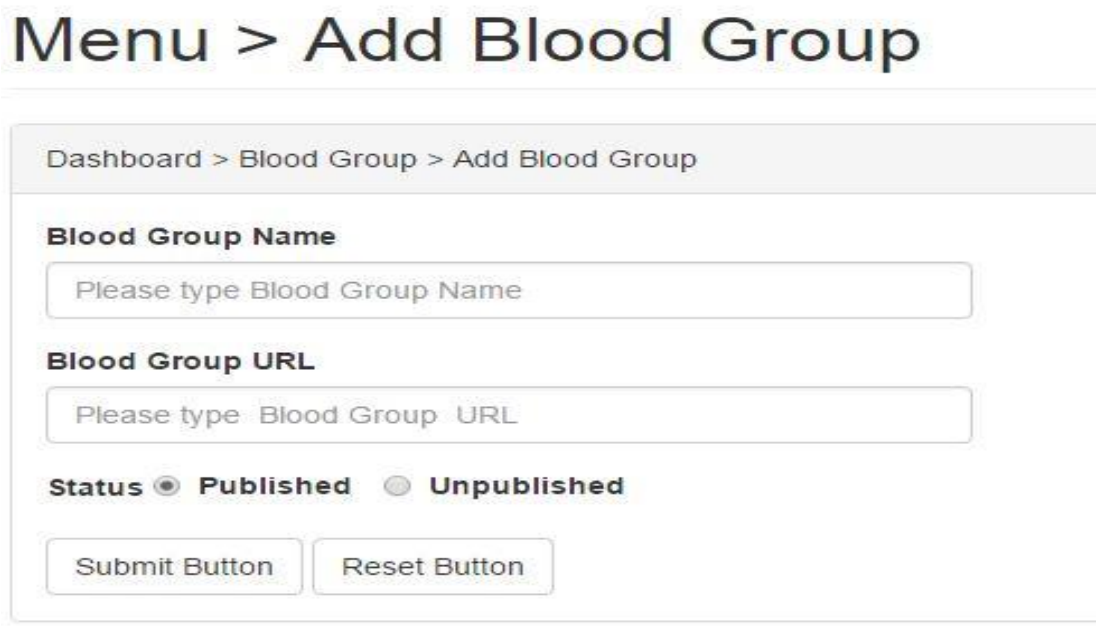


Figure 5.12: Add Blood Group

5.14 Manage Blood Group

Here admin user blood group active, inactive, delete action control. It shown in the figure no 5.13.

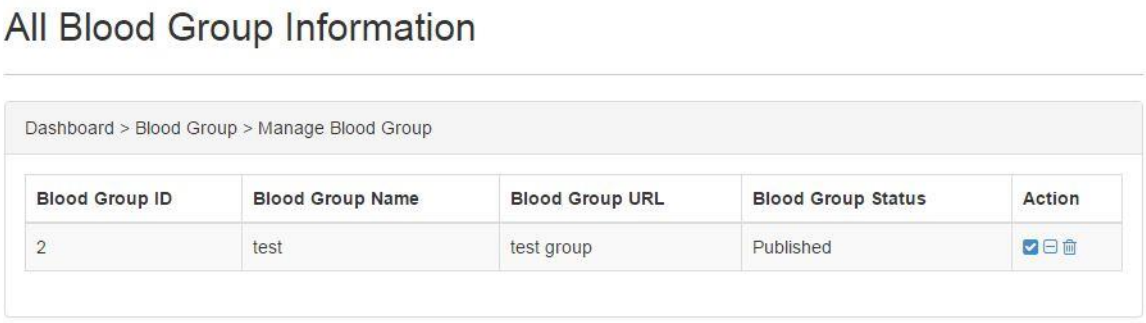


Figure 5.13: Manage Blood Group

5.15 Add User

Here admin user dynamically add user. It shown in the figure no 5.14.

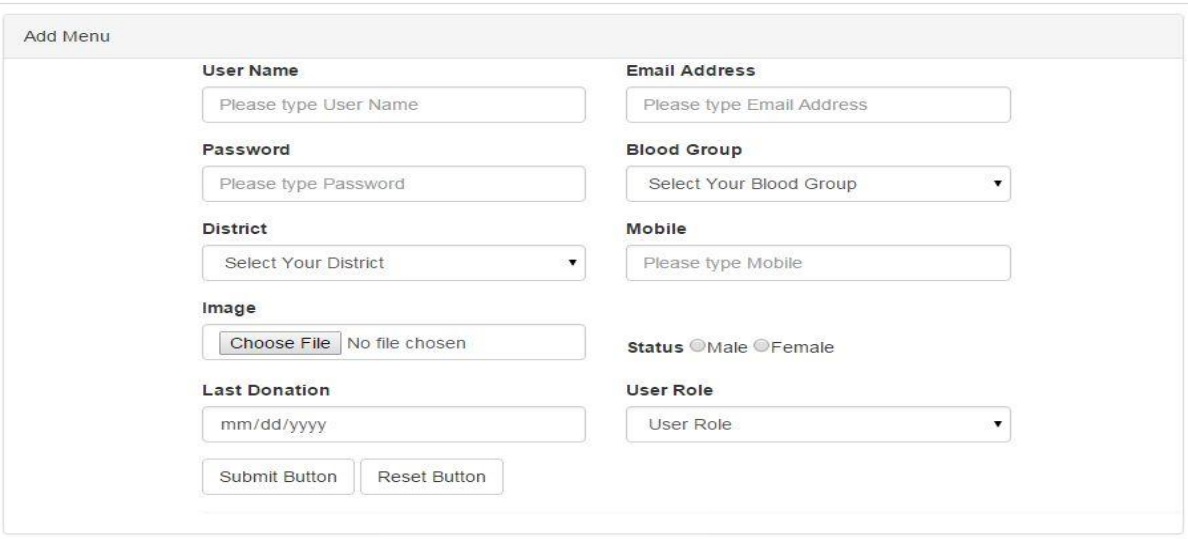


Figure 5.14: Add User

5.16 Manage User

Here admin user, any users active, inactive, delete action control.It shown in the figure no 5.15.

User Name	Email Address	Blood Group	District	Mobile	Last Donation	User Role	Action
Polash	polash@gmail.com	O+	Noakhali	1680040701	0000-00-00	User	
Arif Foraji	arif@gmail.com	A+	Dhaka	1989721290	2015-04-01	User	
Abdul Halim	halim@gmail.com	B+	Bagerhat	1916752032	2015-02-15	User	
Md Rajib	rajib@gmail.com	A-	Barisal	1680054343	0000-00-00	User	
Rana	rana@gmail.com	O+	Dhaka	1680054343	0000-00-00	Admin	
Rana	rana@gmail.com	A+	Barguna	1680054343	0000-00-00	User	
Regan	regan.bd2012@gmail.com	O+	Feni	1680054343	0000-00-00	User	
Minhal Rana	student1@gmail.com	AB+	Faridpur	1680040701	0000-00-00	User	
Test korce	test1@gmail.com	B-	Feni	232323	2015-07-05	User	
testy korce	test2@gmail.com	B-	Gaibandha	2312321	2015-07-15	User	
Test korce	student1@gmail.com	AB-	Feni	232323	2015-08-01	User	
Test korce	student1@gmail.com	AB-	Feni	232323	2015-04-15	User	

Figure 5.15: Manage User

5.17 Summary

This stage tests most of the functions of the proposed system by valid and invalid input of data. All the tested function is primarily working correctly. So I can come to the decision that the system is now ready for Database. And the testing helped to prove that the "Development of a Online Blood Bank" met its specification and carried out showed that the system is working correctly and performing the required functions.

CHAPTER 6

CONCLUSION

6.1 Discussion

The main goal of this project was to design a PHP based system which can be used in hospital or organization to carry goods saves time and easily collect blood in emergency.

There are so many web based solutions provided in the market for the comfort of the people. But without blood human being is non living, just by providing the web solution of blood bank management information system is just one more step in order to serve the mankind.

After defining and identifying the project background, problem statements, objectives, scopes, project significance and lastly the expected output, the features and functions provided by the OBB, which are allows for online publication of blood donation events, online reservation and records management system, are adequate to solve the problems faced by the hospital blood bank such as inefficiency in publication by using solely traditional advertising media or the publication of just the donation drives for that particular hospital or medical center and inefficiency in records management. Detailed descriptions of these design methodologies and there operational were present throughout the previous chapter of this project.

6.2 Limitation

- Since All user have internet connection so it is not easy to access for all.
- Each user have basic computer knowledge.

6.3Future work

By developing this application, the hospital will benefit from having a more efficient and effective, not only the hospital but also general people those are need to blood for emergency or self service OBB to manage the database in our application. Here we try to provide simple system. We try to develop our project further instructions. In future this project will be popular.

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