

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“JNANA SANGAMA”, BELAGAVI-590018**



**Database Management Laboratory with Mini Project Report**

**On**

**“BLOOD BANK & DONOR MANAGEMENT SYSTEM”**

**SUBMITTED IN PARTIAL FULFILLMENT FOR 5<sup>TH</sup> SEMESTER**

**BACHELOR OF ENGINEERING**

**in**

**COMPUTER SCIENCE & ENGINEERING**

For the academic year 2023-24

SUBMITTED BY:

**SHRUTI BHAGELLI[1DB21CS144]**

**SOWMYA J S [1DB21CS146]**

**Under the Guidance of:**

**Ms.Sinchana K.P**

Assistant Professor,  
Dept. of CSE, DBIT,  
Bangalore-74



# DON BOSCO INSTITUTE OF TECHNOLOGY

Kumbalagodu, Bengaluru-560074

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



## CERTIFICATE

This is to certify that the Mini Project Report entitled “**BLOOD BANK & DONOR MANAGEMENT SYSTEM**” is a bonafide Mini Project work carried out by **SHRUTI BHAGELLI (1DB21CS144)** and **SOWMYA J S (1DB21CS146)**, in partial fulfillment of ‘5th’ semester for the Degree of **Bachelor of Engineering in Computer Science and Engineering** of Visvesvaraya Technological University, Belagavi, during the academic year 2023-24. It is certified that all corrections/suggestions indicated for Internal Assessments have been incorporated with the degree mentioned.

### Project Guide

**Ms.Sinchana K.P**  
Assistant. Prof.  
Dept. of CSE,  
DBIT, Bangalore.

### Head of Department

**Prof. K.B Shiva Kumar**  
Head of Department  
Dept. of CSE,  
DBIT, Bangalore.

### External Viva

#### Name of the Examiners

1. \_\_\_\_\_

2. \_\_\_\_\_

#### Signature with Date

\_\_\_\_\_

\_\_\_\_\_

**DON BOSCO INSTITUTE OF TECHNOLOGY**  
**Kumbalagodu, Bengaluru -560074**



**DECLARATION**

**SHRUTI BHAGELLI and SOWMYA J S**, student of fifth semester B.E,  
Department of Computer Science and Engineering, Don Bosco Institute of  
Technology, Kumbalagodu, Bengaluru, declare, that the Mini Project Work entitled  
**“BLOOD BANK & DONOR MANAGEMENT SYSTEM”** has been carried out  
and submitted in partial fulfillment of the requirement of V semester Aug 2023-Jan  
2024. The matter embodied in this report has been submitted to any university  
or institute for the award of any other degree or diploma.

**Place: BANGALORE**

**Date:**

**SHRUTI BHAGELLI [1DB21CS144]**

**SOWMYA J S [1DB21CS146]**

## ACKNOWLEDGEMENT

At the various stages in making the mini project, a number of people have given me invaluable comment on the manuscript. I take this opportunity to express my deepest gratitude and appreciation to all those who helped me directly or indirectly towards the successful completion of this project.

I would like to thank **Principal Dr. NAGABUSHANA B S**, Don Bosco institute of Technology for his support throughout this project.

I express my whole hearted gratitude to **Prof. Dr. K B SHIVA KUMAR** who is our respectable **Head of Dept. of Computer Science & Engineering**. I wish to acknowledge for his valuable help and encouragement.

In this regard I owe a heartfelt gratitude to my guide **Ms.Sinchana K.P** Assistant Professor **Department of Computer Science and Engineering**, for their timely advice on the mini project and regular assistance throughout the project work.

## **ABSTRACT**

This project is aimed to developing an Online Blood Bank & Donation Management Information. The main aim of this project will therefore be to find more effective ways of managing the database of blood donors and establish a forum for people connected to potential blood donors in the region. The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The purpose of this project was to develop a blood management information system to assist in the management of blood donor records and the people who are in need can contact the donors directly. The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

# **TABLE OF CONTENTS**

ABSTRACT

TABLE OF CONTENTS LISTS OF

ii-

FIGURES

iii

iv

---

Chapter 1: INTRODUCTION

1 - 5

1.1 Data, Database and DBMS

1.2 About Blood Bank and Donor Management System

Chapter 3: SYSTEM REQUIREMENTS

3.1 Hardware requirements

3.2 Software requirements

Chapter 4: SYSTEM DESIGN

4.1 Schema diagram

4.2 ER diagram

4.3 Database structure

4.4 Table creation

4.4.1 Admin table

4.4.2 Blood Group table

4.4.3 Blood Donor table

4.4.4 Contact Us Info table

4.4.5 Contact Us Query table

4.4.6 Manage Pages table

4 4.5 Stored Procedure

4 4.6 Triggers

Chapter 5: SYSTEM IMPLEMENTATION

16 – 22

Software tools use

17

Front end

Back end

Chapter 6: SNAPSHOTS	23-32
○ Admin – Log-In Page view	23
○ Dashboard view	23
○ Admin Profile view	24
○ Add Blood Group view	24
○ Manage Blood Group view	25
○ Add Donor view	25
○ Donor List view	26
○ Manage Contact Us Queries view	26
○ Update Contact Info view	27
○ Blood Request view	27
○ Homepage view	29
○ About Us view	30
○ Contact Us view	31
○ Menu bar view	31
○ Admin Left-Side Bar	32
-----	
CONCLUSION	33
REFERENCES	34

\*\*\*\*\*

## **LISTS OF FIGURES USED IN THE REPORT**

Figure Nos	Figure Name	Page No
1.1	Components of a DBMS system	2
4.1	Schema diagram for Bloodbank & Donor management system	8
4.2	ER diagram for Bloodbank & Donor management System	9
4.3	Structure of the database	10
4.4.1	Admin table	11
4.4.2	Blood Group table	11
4.4.3	Blood Donors table	12
4.4.4	Contact Us Info table	13
4.4.5	Contact Us Query table	13
4.4.6	Manage Pages table	14
4.5	Stored Procedure	14
4.6	Trigger	15
6.1	Admin – Log-In Page view	23
6.2	Dashboard view	23
6.3	Admin Profile view	24
6.4	Add Blood Group view	24
6.5	Manage Blood Group view	25
6.6	Add Donor view	25
6.7	Donor List view	26
6.8	Manage Contact Us Queries view	26
6.9	Update Contact Info view	27
6.10	Blood Request view	27
6.11	Homepage	29
6.12	About Us view	30
6.13	Contact Us view	31
6.14	Menu bar view	31
6.15	Admin left bar view	32



## **1.1 Data, Database and DBMS**

Data is a known fact that can be recorded. It can also be defined as information that has been translated into a form that is efficient for processing. Eg: name, USN, address etc. Meaningful data combines to form information. Hence, information is Interpreted data i.e. data provided with semantics.

Database is a collection of related data without an implicit meaning. It can also be defined as a structured set of data held in a computer, especially one that is accessible in various ways. Eg. Student database, Employee database, etc.

Database management system (DBMS) is a collection of programs that enable users to create and maintain the database. It is a general-purpose software which contains defining, constructing, manipulating, sharing, protecting the database. Basically, a DBMS is a software tool to organize (create, retrieve, update and manage) data in a database. The main aim of a DBMS is to supply a way to store and retrieve database information that is both convenient and efficient. By data, we mean known facts that can be recorded and that have embedded meaning. Normally people use software such as MySQL, Microsoft ACCESS, or EXCEL to store data in the form of database.

Database systems are meant to handle large collection of information. Management of data involves both defining structures for storage of information and providing mechanisms that can do the manipulation of those stored information. Moreover, the database system must ensure the safety of the information stored, despite system crashes or attempts at unauthorized access.

## **Components of a DBMS**

The main components of a DBMS system are:

1. Users: Users may be of any kind, such as database administrators, system developers.
2. Database application: Database application may be Departmental, Personal.
3. DBMS: Software that allows users to create and manipulate database access.
4. Database: Collection of logical data as a single unit.

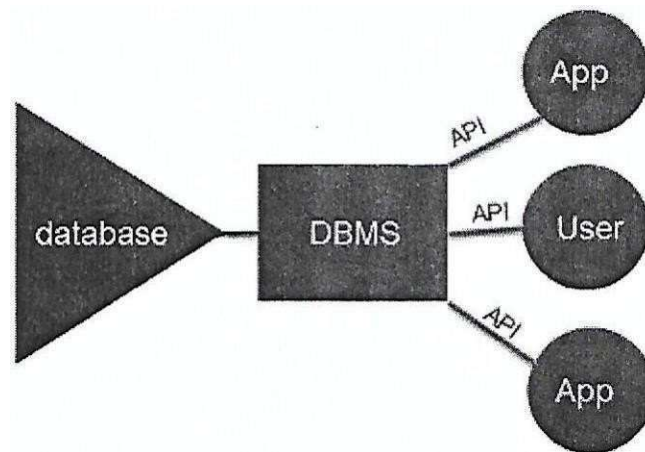


Fig. 1.1 Components of a DBMS system

## Relational Data Model

The relational model (RM) for database management system is an approach to managing data using a structure and language consistent with first-order predicate logic, first described in 1969 by English computer scientist Edgar F. Code, where all data is represented in terms of tuples, grouped into relations. A database organized in terms of the relational model is a relational database.

The purpose of the relational model is to provide a declarative method for specifying data and queries: users directly state what information the database contains and what information they want from it, and let the database management system software take care of describing data structures for storing the data and retrieval procedures for answering queries.

Most relational databases use the SQL data definition and query language; these systems implement what can be regarded as an engineering approximation to the relational model. A table in an SQL database schema corresponds to a predicate variable; the contents of a table to a relation; key constraints, other constraints, and SQL queries correspond to predicates. However, SQL databases deviate from the relational model in many details, and Code fiercely argued against deviations that compromise the original principles.

## **About Blood Bank and Donor Management System:**

Blood is a necessary element in the human body. Without blood, the human body is incomplete. Blood is about 7% to 8% of human weight, according to scientists. Blood is donated in the conventional way by blood donation services or blood bank. Blood bank is defined as an area where blood is obtained as a result of donor blood donation operation that is processed and preserved for subsequent transfusion (maximum twenty-eight days). Because of this enormous amount of donor data there must be an efficient and successful way of managing data that could make the online blood donation site a pavestone. It is a clear sign that blood donors rise with population growth. In addition to the blood handling issue, there is a possibility that data is obsolete and the process of data retrieval is also hindered by conventional manual operator's data entry techniques. Information such as name, mobile.no, gender, age, blood group and other donor-related information can be seen in this site who is in need of it. The main aim of this project will therefore be to find more effective ways of managing the database of blood donors and establish a forum for people connected to potential blood donors in the region.

The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer wants to make request blood online he can also take the help of this site.

## **CHAPTER 2**

### **LITERATURE SURVEY**

Blood bank, an organization that collects, stores, processes, and transfuses blood. During World War-1. It was demonstrated that stored blood could safely be used, allowing for the development of the first blood bank in 1932. Before the first blood banks came into operation, a physician determined the blood types of the patient's relatives and friends until the proper type was found, performed the cross match, bled the donor, and gave the transfusion to the patient. In the 1940s the discovery of many blood types and of several cross matching techniques led to the rapid development of blood banking as a specialized field and to a gradual shift of responsibility for the technical aspects of transfusion from practicing physicians to technicians and clinical pathologists.

Whole blood can be stored only for a limited time, but various components (e.g., red blood cells and plasma) can be frozen and stored for a year or longer. Therefore, most blood donations are separated and stored as components by the blood bank. These components include platelets to control bleeding; concentrated red blood cells to correct anemia; and plasma fractions, such as fibrinogen to aid clotting, immune globulins to prevent and treat a number of infectious diseases, and serum albumin to augment the blood volume in cases of shock. Thus, it is possible to serve the varying needs of five or more patients with a single blood donation. Despite such replacement programs, many blood banks face continual problems in obtaining sufficient donations. The chronic shortage of donors has been alleviated somewhat by the development of apheresis, a technique by which only a desired blood component is taken from the donor's blood, with the remaining fluid and blood cells immediately transfused back into the donor. This technique allows the collection of large amounts of a particular component, such as plasma or platelets, from a single donor.

The proposed system (Blood Bank & Donor Management System) is designed to help the Blood Bank administrator to meet the demand of Blood by sending and/or serving the request for Blood as and when required. The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Bank. This Application will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Bank) and will ensure the fulfillment of demand for Blood requested by Recipient and/or Blood Bank.

## **CHAPTER 3**

### **SYSTEM REQUIREMENTS**

#### **Hardware Requirements:**

- GPU – Intel(R) HD Graphics
- Processor : Pentium IV or above
- RAM — 2 GB or more
- Hard Disk — 2GB or more
- Peripherals – USB Keyboard, Optical Mouse

#### **Software Requirements:**

Technologies used:

- Front End: HTML, JAVASCRIPT, CSS, PHP, BOOTSTRAP, AJAX
- Connection/Controller: PHP
- Back End/ Database: MySQL Software
- Server: Apache (on XAMPP 7)
- Operating System: Windows 10
- Database Support: MySQL 7.1

## **CHAPTER 4**

## **SYSTEM DESIGN**

### **Schema Diagram:**

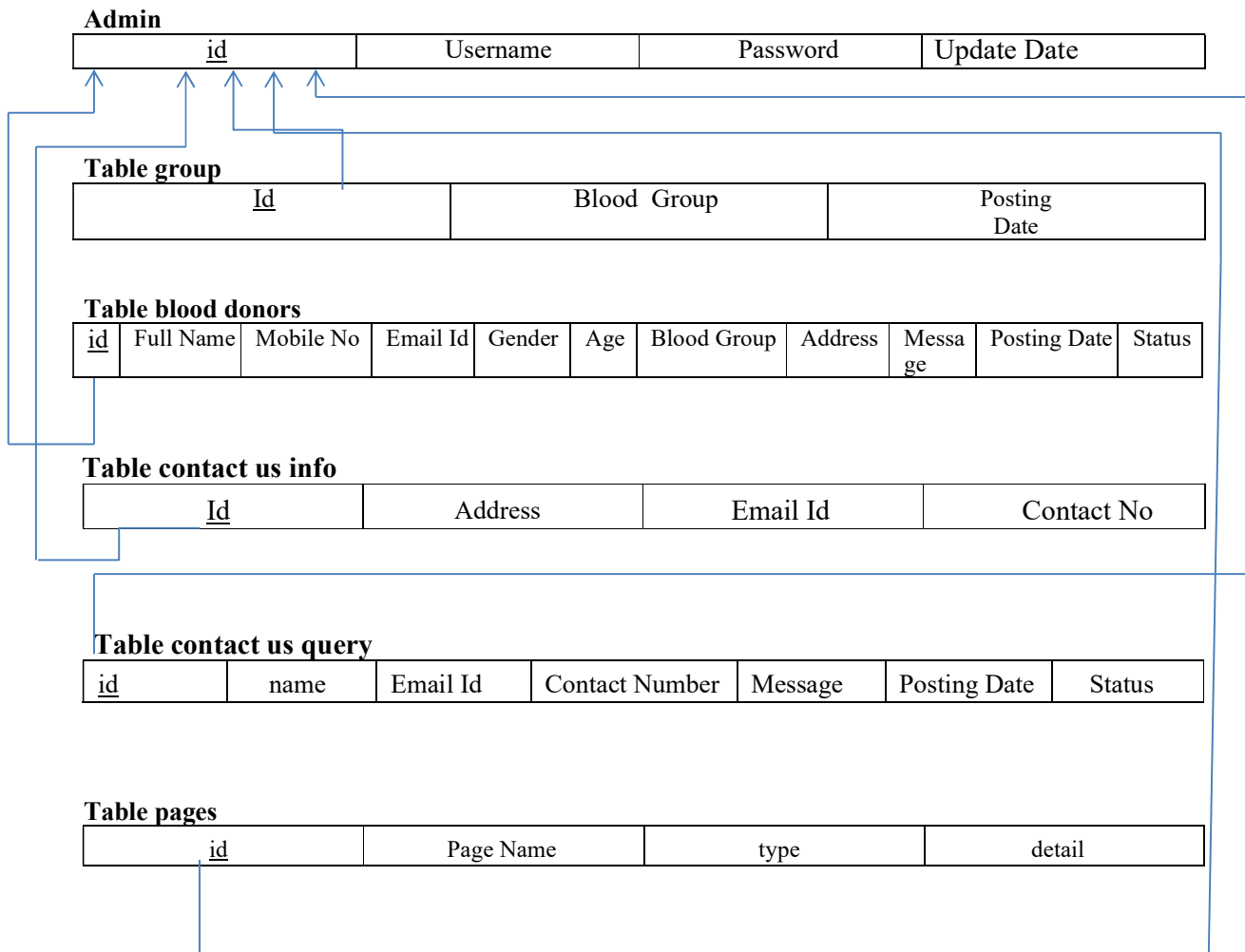


Fig. 4.1 Schema diagram for Blood Bank & Donor Management System

## Entity-Relationship Diagram

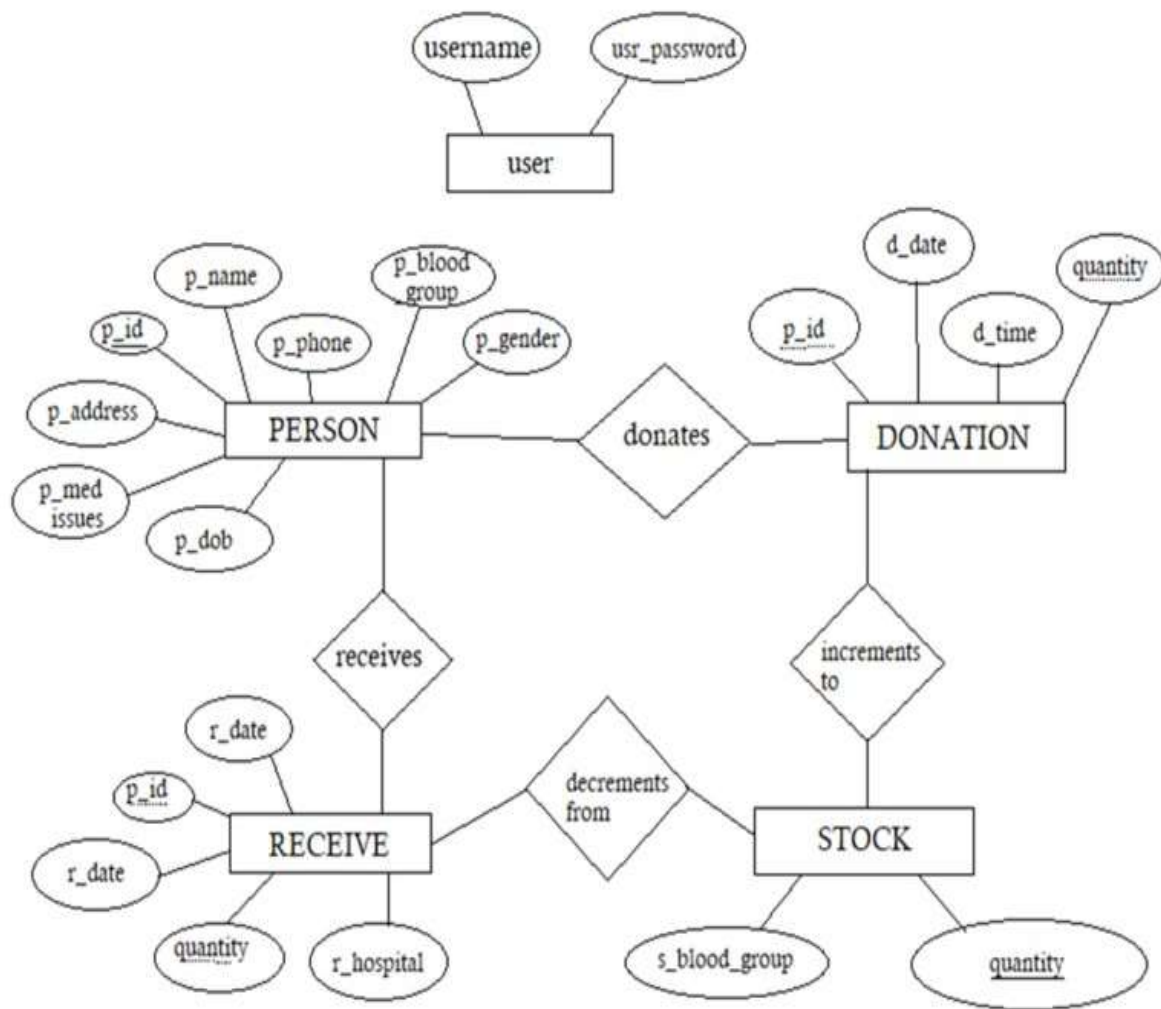
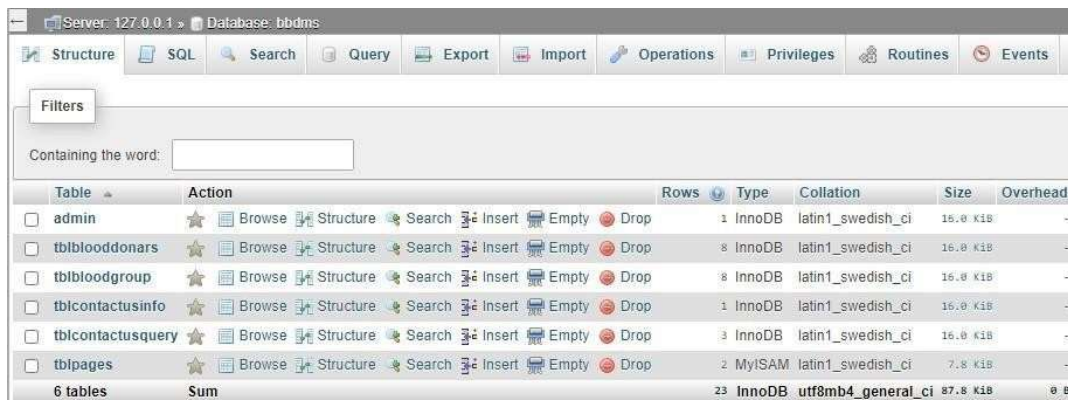


Fig4.2 ER Diagram for Blood Bank & Donor Management System

## Database Structure

Now that we have run and tested PHP My Admin, the next step is running MySQL and creating a database and table which will hold information to be used by our database. In order to start MySQL, navigate to the XAMPP directory and run the mysql\_start.bat batch file. The XAMPP package contains an application called PHP My Admin which allows developers to administer and maintain MySQL databases. We will be using PHP My Admin to create a database and table, and enter test data. Before testing PHP My Admin, make sure that both Apache and MySQL are running by opening their respective batch files: apache\_start.bat and mysql\_start.bat. Along with Apache and MySQL running in the background, we type `http://localhost/phpmyadmin/index.php` into our web browser.



The screenshot shows the 'Structure' tab of the PHP My Admin interface. The top navigation bar includes tabs for Structure, SQL, Search, Query, Export, Import, Operations, Privileges, Routines, and Events. Below the navigation bar is a 'Filters' section with a search input field. The main content area displays a table of database structures. The table has columns for Table, Action, Rows, Type, Collation, Size, and Overhead. The table lists six tables: admin, tblblooddonars, tblbloodgroup, tblcontactusinfo, tblcontactusquery, and tblpages. Each table has a set of actions (Browse, Structure, Search, Insert, Empty, Drop) and a star icon. The 'tblblood' database is selected, and the 'tblblooddonars' table is highlighted. The 'tblblooddonars' table has 8 rows, is of type InnoDB, and has a size of 16.0 KiB. The 'tblbloodgroup' table has 8 rows, is of type InnoDB, and has a size of 16.0 KiB. The 'tblcontactusinfo' table has 1 row, is of type InnoDB, and has a size of 16.0 KiB. The 'tblcontactusquery' table has 3 rows, is of type InnoDB, and has a size of 16.0 KiB. The 'tblpages' table has 2 rows, is of type MyISAM, and has a size of 7.8 KiB. The 'tblblood' database has 6 tables and a total size of 87.8 KiB.

Table	Action	Rows	Type	Collation	Size	Overhead
admin	Browse Structure Search Insert Empty Drop	1	InnoDB	latin1_swedish_ci	16.0 KiB	-
tblblooddonars	Browse Structure Search Insert Empty Drop	8	InnoDB	latin1_swedish_ci	16.0 KiB	-
tblbloodgroup	Browse Structure Search Insert Empty Drop	8	InnoDB	latin1_swedish_ci	16.0 KiB	-
tblcontactusinfo	Browse Structure Search Insert Empty Drop	1	InnoDB	latin1_swedish_ci	16.0 KiB	-
tblcontactusquery	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	16.0 KiB	-
tblpages	Browse Structure Search Insert Empty Drop	2	MyISAM	latin1_swedish_ci	7.8 KiB	-
6 tables	Sum	23	InnoDB	utf8mb4_general_ci	87.8 KiB	0.8

Fig 4.3 Structure of the database


The above picture shows how exactly the XAMPP PHP My Admin page looks like. All the SQL commands can be executed.



## Table Creation

**TABLE 1:** Table structure for table `admin`

```
CREATE TABLE `admin` (
  `id` int(11) NOT NULL,
  `UserName` varchar(100) NOT NULL,
  `Password` varchar(100) NOT NULL,
  `updateDate` timestamp NOT NULL DEFAULT '0000-00-00 00:00:00' ON UPDATE
current_timestamp()
);
```



The screenshot shows the MySQL Table Structure window for the 'admin' table. The table has four columns: 'id' (int(11), NOT NULL, AUTO\_INCREMENT), 'UserName' (varchar(100), NOT NULL), 'Password' (varchar(100), NOT NULL), and 'updateDate' (timestamp, NOT NULL, DEFAULT '0000-00-00 00:00:00', ON UPDATE CURRENT\_TIMESTAMP()).

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	UserName	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
3	Password	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
4	updateDate	timestamp			No	0000-00-00 00:00:00		ON UPDATE CURRENT_TIMESTAMP()	Change Drop More

Fig 4.4.1 Admin table

**TABLE 2:** Table structure for table `tblbloodgroup`

```
CREATE TABLE `tblbloodgroup` (
  `id` int(11) NOT NULL,
  `BloodGroup` varchar(20) DEFAULT NULL,
  `PostingDate` timestamp NOT NULL DEFAULT current_timestamp()
);
```



The screenshot shows the MySQL Table Structure window for the 'tblbloodgroup' table. The table has three columns: 'id' (int(11), NOT NULL, AUTO\_INCREMENT), 'BloodGroup' (varchar(20), DEFAULT NULL), and 'PostingDate' (timestamp, NOT NULL, DEFAULT current\_timestamp()).

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	BloodGroup	varchar(20)	latin1_swedish_ci		Yes	NULL			Change Drop More
3	PostingDate	timestamp			No	current_timestamp()			Change Drop More

Fig 4.4.2 Blood Group table

**Table 3:** Table structure for `tblblooddonars`

```
CREATE TABLE `tblblooddonars` (  
  `id` int(11) NOT NULL,  
  `FullName` varchar(100) DEFAULT NULL,  
  `MobileNumber` char(11) DEFAULT NULL,  
  `EmailId` varchar(100) DEFAULT NULL,  
  `Gender` varchar(20) DEFAULT NULL,  
  `Age` int(11) DEFAULT NULL,  
  `BloodGroup` varchar(20) DEFAULT NULL,  
  `Address` varchar(255) DEFAULT NULL,  
  `Message` mediumtext DEFAULT NULL,  
  `PostingDate` timestamp NOT NULL DEFAULT current_timestamp(),  
  `status` int(1) DEFAULT NULL  
);
```



The screenshot shows a database management interface with a table structure view for 'tblblooddonars'. The table has 11 columns: id, FullName, MobileNumber, EmailId, Gender, Age, BloodGroup, Address, Message, PostingDate, and status. The 'id' column is the primary key and is auto-incrementing. The 'PostingDate' column is a timestamp with a default value of 'current\_timestamp()'. The 'status' column is an integer with a default value of 'NULL'.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	FullName	varchar(100)	latin1_swedish_ci		Yes	NULL			Change Drop More
3	MobileNumber	char(11)	latin1_swedish_ci		Yes	NULL			Change Drop More
4	EmailId	varchar(100)	latin1_swedish_ci		Yes	NULL			Change Drop More
5	Gender	varchar(20)	latin1_swedish_ci		Yes	NULL			Change Drop More
6	Age	int(11)			Yes	NULL			Change Drop More
7	BloodGroup	varchar(20)	latin1_swedish_ci		Yes	NULL			Change Drop More
8	Address	varchar(255)	latin1_swedish_ci		Yes	NULL			Change Drop More
9	Message	mediumtext	latin1_swedish_ci		Yes	NULL			Change Drop More
10	PostingDate	timestamp			No	current_timestamp()			Change Drop More
11	status	int(1)			Yes	NULL			Change Drop More

Fig 4.4.3 Blood Donors table

**TABLE 4:** Table structure for table `tblcontactusinfo`

```
CREATE TABLE `tblcontactusinfo` (  
  `id` int(11) NOT NULL,  
  `Address` tinytext DEFAULT NULL,  
  `EmailId` varchar(255) DEFAULT NULL,  
  `ContactNo` char(11) DEFAULT NULL  
);
```

Server: 127.0.0.1 » Database: bbdms » Table: tblcontactusinfo

Table structure

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	Address	tinytext	latin1_swedish_ci		Yes	NULL			Change Drop More
3	EmailId	varchar(255)	latin1_swedish_ci		Yes	NULL			Change Drop More
4	ContactNo	char(11)	latin1_swedish_ci		Yes	NULL			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns

Fig 4.4.4 Contact Us Info table

**TABLE 5:** Table structure for table `tblcontactusquery`

```
CREATE TABLE `tblcontactusquery` (
  `id` int(11) NOT NULL,
  `name` varchar(100) DEFAULT NULL,
  `EmailId` varchar(120) DEFAULT NULL,
  `ContactNumber` char(11) DEFAULT NULL,
  `Message` longtext DEFAULT NULL,
  `PostingDate` timestamp NOT NULL DEFAULT current_timestamp(),
  `status` int(11) DEFAULT NULL
);
```

Server: 127.0.0.1 » Database: bbdms » Table: tblcontactusquery

Table structure

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(100)	latin1_swedish_ci		Yes	NULL			Change Drop More
3	EmailId	varchar(120)	latin1_swedish_ci		Yes	NULL			Change Drop More
4	ContactNumber	char(11)	latin1_swedish_ci		Yes	NULL			Change Drop More
5	Message	longtext	latin1_swedish_ci		Yes	NULL			Change Drop More
6	PostingDate	timestamp			No	current_timestamp()			Change Drop More
7	status	int(11)			Yes	NULL			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns

Fig 4.4.5 Contact Us Query table

**TABLE 6:** Table structure for table `tblpages`

```
CREATE TABLE `tblpages` (  
  `id` int(11) NOT NULL,  
  `PageName` varchar(255) DEFAULT NULL,  
  `type` varchar(255) NOT NULL DEFAULT "",  
  `detail` longtext NOT NULL  
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	PageName	varchar(255)	latin1_swedish_ci		Yes	NULL			Change Drop More
3	type	varchar(255)	latin1_swedish_ci		No				Change Drop More
4	detail	longtext	latin1_swedish_ci		No	None			Change Drop More

Fig 4.4.6 Manage Pages table

## Stored Procedure :

A stored procedure is a subroutine available to applications that access a relational database management system (RDBMS). Such procedures are stored in the database data dictionary.

```
CREATE DEFINER='root'@'localhost'  
PROCEDURE `get_blood_donars_details`() NOT DETERMINISTIC NO SQL  
SQL SECURITY DEFINER select * from tblblooddonars
```

**Add routine**

**Details**

Routine name:

Type:

Parameters:

Definition: 

```
1 select * from tblblooddonars;
```

Is deterministic: ☐

Definer:

Security type:

SQL data access:

Comment:

## Trigger :

A trigger is a special kind of stored procedure that automatically executes when an event occurs in the database server.

This following trigger is implemented on the INSERT operation. Whenever a blood donor full name is entered by admin or donor , his/her name would be saved in the database in block(capital) letters even if the user had entered it in small letters.

```
CREATE DEFINER='root'@'localhost'  
CREATE TRIGGER `capital`  
BEFORE INSERT ON `tblblooddonars`  
FOR EACH ROW  
SET NEW.FullName=UPPER(NEW.FullName);
```

The screenshot shows a window titled 'Edit' with a 'Details' tab. The configuration is as follows:

Field	Value
Trigger name	capital
Table	tblblooddonars
Time	BEFORE
Event	INSERT
Definition	1 SET NEW.FullName=UPPER(NEW.FullName);
Definer	root@localhost

4.6 Trigger table

## **CHAPTER 5**

### **SYSTEM IMPLEMENTATION**

#### **Software Tools Used:**

**Front End**-The front end is designed using of HTML, PHP, CSS, BOOTSTRAP.

**HTML** - HTML or Hyper Text Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like), within the web page content. HTML tags most commonly come in pairs like <h1> </h1>, although some tags represent empty elements and so are unpaired, for example **Error! Filename not specified.** The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create Interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behaviour of HTML web pages.

**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. While most often used to style web pages and Interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colours, and fonts. This separation can improve content accessibility, provide more flexibility. CSS can also allow the same mark-up page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being view.

**PHP** - PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Rasmus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: Hypertext Pre-processor. PHP code is interpreted by a web server with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line Interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

**BOOTSTRAP** – Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation and other Interface components. Bootstrap is a web framework that focuses on simplifying the development of informative web pages (as opposed to web apps). The primary purpose of adding it to a web project is to apply Bootstrap's choices of colour, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark- coloured tables, page headings, more prominent pull quotes, and text with a highlight.

**AJAX** - AJAX (is an acronym for asynchronous JavaScript and XML) is a group of interrelated web development techniques used on the client-side to create asynchronous web applications. With Ajax, web applications can send data to, and retrieve data from, a server asynchronously (in the background) without interfering with the display and behavior of the existing page. Data can be retrieved using the XMLHttpRequest object. Despite the name, the use of XML is not required (JSON is often used instead), and the requests do not need to be asynchronous.

**JAVASCRIPT** - JavaScript often abbreviated as JS, is a high-level, dynamic, weakly typed, prototype-based, multi-paradigm, and interpreted programming language. Alongside HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content production. It is used to make webpages interactive and provide online programs, including video games.

The majority of websites employ it, and all modern web browsers support it without the need for plug-ins by means of a built-in JavaScript engine. Each of the many JavaScript engines represent a different implementation of JavaScript, all based on the ECMA Script specification, with some engines not supporting the spec files, and with many engines supporting additional features beyond ECMA.

## **BackEnd**

**MYSQL** - MySQL is the world's second most widely used open-source relational database management system (RDBMS). The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation .MySQL is a popular choice of database for use in web applications, and is central components of the widely used LAMP open source web application software stack (and other 'AMP' stacks). Free-software-open source projects that require a full-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality.

**XAMPP** - XAMPP is a small and light Apache/Mysql distribution containing the most common web development technologies in a single package. Its contents, small size, and portability make it the ideal tool for students developing and testing applications in PHP and MySQL. XAMPP is available as a free download in two specific packages: full and lite. While the full package download provides a wide array of development tools, XAMPP Lite contains the necessary technologies that meet the Ontario Skills Competition standards. The light version is a small package containing Apache HTTP Server, PHP, MySQL, phpMyAdmin, and SQLite.



```

<?php
error_reporting(0);
include('includes/config.php');
if(isset($_POST['submit']))
{
$fullname=$_POST['fullname'];
$mobile=$_POST['mobilenos'];
$email=$_POST['emailid'];
$age=$_POST['age'];
$gender=$_POST['gender'];
$bloodgroup=$_POST['bloodgroup'];
$address=$_POST['address'];
$message=$_POST['message'];
$status=1;
$sql="INSERT INTO
tblblooddonors(FullName,MobileNumber,EmailId,Age,Gender,BloodGroup,Address,Message,status)
VALUES(:fullname,:mobile,:email,:age,:gender,:bloodgroup,:address,:message,:status)";
$query = $dbh->prepare($sql);
$query->bindParam(':fullname',$fullname,PDO::PARAM_STR);
$query->bindParam(':mobile',$mobile,PDO::PARAM_STR);
$query->bindParam(':email',$email,PDO::PARAM_STR);
$query->bindParam(':age',$age,PDO::PARAM_STR);
$query->bindParam(':gender',$gender,PDO::PARAM_STR);
$query->bindParam(':bloodgroup',$bloodgroup,PDO::PARAM_STR);
$query->bindParam(':address',$address,PDO::PARAM_STR);
$query->bindParam(':message',$message,PDO::PARAM_STR);
$query->bindParam(':status',$status,PDO::PARAM_STR);
$query->execute();
$lastInsertId = $dbh->lastInsertId();
if($lastInsertId)
{
$msg="Your info submitted successfully";
}
else
{
$error="Something went wrong. Please try again";
}

}
?>

<!DOCTYPE html>
<html lang="en">
<head>

<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
<meta name="description" content="">
<meta name="author" content="">

```

```

<title>BloodBank & Donor Management System | Become A Donar</title>
<link href="vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
<link href="vendor/font-awesome/css/font-awesome.min.css" rel="stylesheet" type="text/css">
<link href="css/modern-business.css" rel="stylesheet">
<style>
.navbar-toggler {
  z-index: 1;
}

@media (max-width: 576px) {
  nav > .container {
    width: 100%;
  }
}
</style>
<style>
.errorWrap {
padding: 10px;
margin: 0 0 20px 0;
background: #fff;
border-left: 4px solid #dd3d36;
-webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
.succWrap{
padding: 10px;
margin: 0 0 20px 0;
background: #fff;
border-left: 4px solid #5cb85c;
-webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
</style>

</head>

<body>

<?php include('includes/header.php');?>

<!-- Page Content -->
<div class="container">

  <!-- Page Heading/Breadcrumbs -->
  <h1 class="mt-4 mb-3">Become a <small>Donor</small></h1>

  <ol class="breadcrumb">
    <li class="breadcrumb-item">
      <a href="index.php">Home</a>

```

```

        <li class="breadcrumb-item active">Become a Donor</li>
    </ol>

    <?php    if($error){?><div    class="errorWrap"><strong>ERROR</strong>:<?php    echo
htmlentities($error); ?> </div><?php }
    else    if($msg){?><div    class="succWrap"><strong>SUCCESS</strong>:<?php    echo
htmlentities($msg); ?> </div><?php }?>
    <!-- Content Row -->
    <form name="donar" method="post">
<div class="row">

<div class="font-italic">Full Name<span style="color:red">*</span></div>
<div><input type="text" name="fullname" class="form-control" required></div>
</div>
<div class="col-lg-4 mb-4">
<div class="font-italic">Mobile Number<span style="color:red">*</span></div>
<div><input type="text" name="mobilen0" class="form-control" required></div>
</div>
<div class="col-lg-4 mb-4">
<div class="font-italic">Email Id</div>
<div><input type="email" name="emailid" class="form-control"></div>
</div>
</div>

<div class="row">
<div class="col-lg-4 mb-4">
<div class="font-italic">Age<span style="color:red">*</span></div>
<div><input type="text" name="age" class="form-control" required></div>
</div>

<div class="col-lg-4 mb-4">
<div class="font-italic">Gender<span style="color:red">*</span></div>
<div><select name="gender" class="form-control" required>
<option value="">Select</option>
<option value="Male">Male</option>
<option value="Female">Female</option>
</select>
</div>
</div>

<div class="col-lg-4 mb-4">
<div class="font-italic">Blood Group<span style="color:red">*</span> </div>
<div><select name="bloodgroup" class="form-control" required>
<?php $sql = "SELECT * from tblbloodgroup ";
$query = $dbh -> prepare($sql);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{

```

```

<option value="<?php echo htmlentities($result->BloodGroup);?>"><?php echo htmlentities($result-
>BloodGroup);?></option>
<?php } } ?>
</select>
</div>
</div>
</div>

```

```

<div class="row">
<div class="col-lg-4 mb-4">
<div class="font-italic">Address</div>
<div><textarea class="form-control" name="address"></textarea></div>
</div>

```

```

<div class="col-lg-8 mb-4">
<div class="font-italic">Message<span style="color:red">*</span></div>
<div><textarea class="form-control" name="message" required> </textarea></div>
</div>
</div>

```

```

<div class="row">
<div class="col-lg-4 mb-4">
<div><input type="submit" name="submit" class="btn btn-primary" value="Submit"
style="cursor:pointer"></div>
</div>

```

```

</div>

```

```

<!-- /.row -->
</form>
<!-- /.row -->
</div>
<?php include('includes/footer.php');?>
<!-- Bootstrap core JavaScript -->
<script src="vendor/jquery/jquery.min.js"></script>
<script src="vendor/tether/tether.min.js"></script>
<script src="vendor/bootstrap/js/bootstrap.min.js"></script>

```

```

</body>

```

```

</html>

```

## CHAPTER 6

### SNAPSHOTS

#### **Admin – Log-In Page:**

This is JavaScript based login page. In the code we perform Ajax request to match admin email and password for login.



Fig. 6.1 Admin – Log-In Page view

#### **Admin –Dashboard:**

In this section admin can see the listed blood groups, registered blood group, and total queries

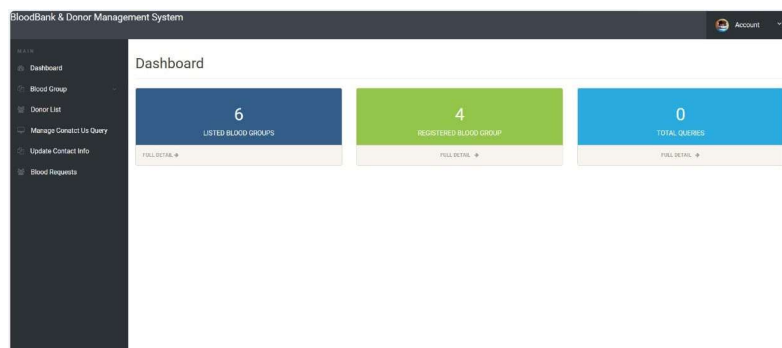


Fig. 6.2 Dashboard view

## Admin Profile:

The screenshot shows a web browser window with the URL `localhost/bbdoms/admin/profile.php`. The page title is "BloodBank & Donor Management System". On the left is a dark sidebar with a "MAIN" header and a list of menu items: Dashboard, Blood Group, Donor List, Manage Contact Us Query, Update Contact Info, and Blood Requests. The main content area is titled "Admin Profile" and contains a "FORM FIELDS" section. This section has five input fields: "Admin Name" (containing "Admin"), "User Name" (containing "admin"), "Contact Number" (containing "897955558"), "Email" (containing "admin@gmail.com"), and "Admin Registration Date" (containing "2024-01-01 10:06:52"). Below these fields is a blue "Save changes" button. The browser's address bar shows several tabs: "localhost/bbdoms/ - Search", "BBOMS | Admin Change Passwor...", and "BBOMS | Donor List". The Windows taskbar at the bottom shows the date and time as "23:08 04-03-2024".

Fig. 6.3 Admin Profile view

## Admin - Add Blood Group:

Here, this is add blood group page. In here, Admin can add blood group.

### Add Blood Group

The screenshot shows a web form titled "Add Blood Group". It features a "FORM FIELDS" section with a single input field labeled "Blood Group". Below the input field is a blue "Submit" button.

Fig. 6.4 Add Blood Group view

## Manage Blood Groups:

In this section, here the page means manage blood group. Here admin can manage the groups of blood. Admin can also delete the blood group.

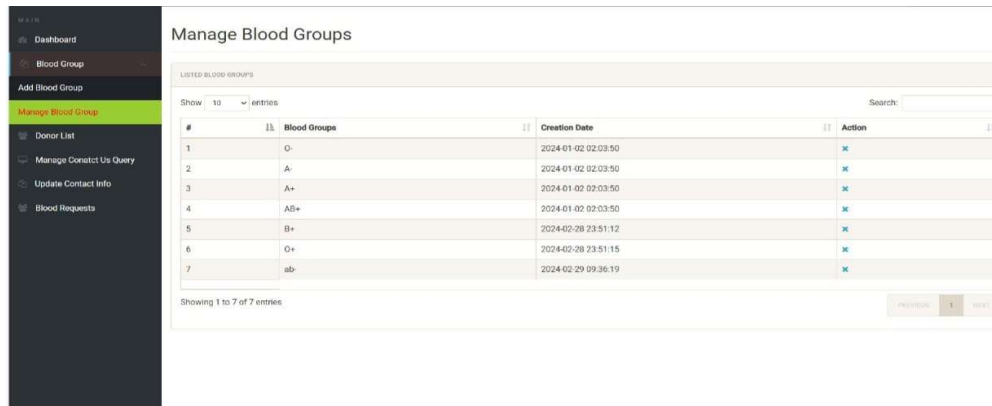


Fig. 6.5 Manage Blood Group view

### Add Donor:

In this section, the admin can add the donor details.

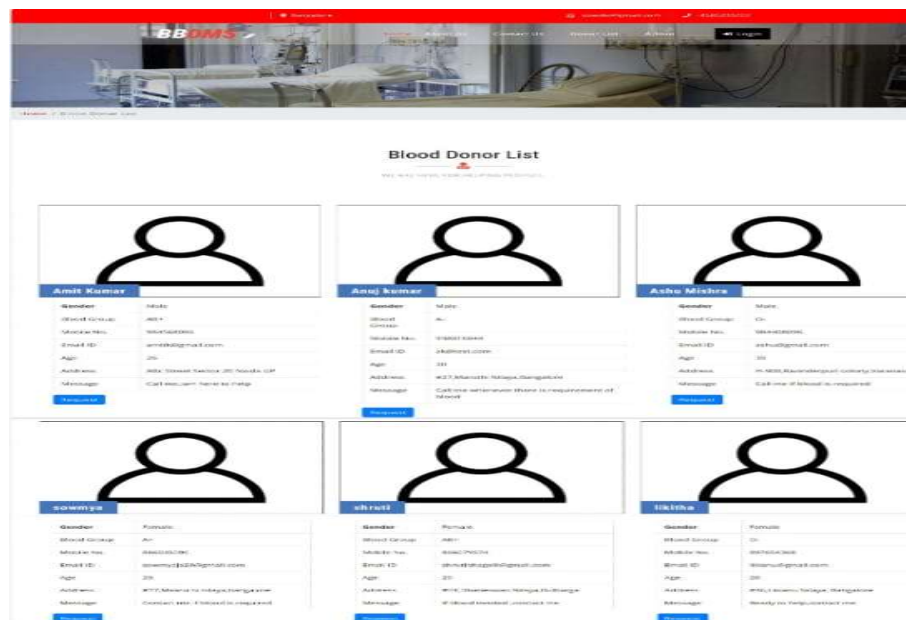


Fig. 6.6 Add Donor view

## Donor List:

In this layout admin can see the donor list. Admin can also delete the donor bio from the list. Admin can also download the donor list.

#	Name	Mobile No	Email	Age	Gender	Blood Group	address	Message	action
1	Ashu Misra	7797967981	ashu@gmail.com	Male	35	O-	H-901, Ravinderpuri colony, Varanasi	Call me if blood require	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
2	John Doe	1236547890	john@gmail.com	Male	25	O-	A 5623 XYZ Street New Delhi	NA	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
3	Amit Kumar	1231231230	amit@gmail.com	Male	26	AB+	ABC Street Sector 20 Noida UP	NA	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
4	Anuj kumar	1425362514	ak@test.com	Male	30	A-	NA	NA	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
5	sneha jagade	1234567890	sneha@gmail.com	Female	20	A-	BNG	to help	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
6	sinchana	1234567890	sinchana@gmail.com	Female	24	A+	glb	abcdef	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
7	Sowmya J S	9380169449	sowmyajs29@gmail.com	Female	20	B+	#27 Maruthi Nilaya, Suprabatha Nagar	helping	<a href="#">Make it Hidden</a> <a href="#">Delete</a>
8	likitha	9876543568	likitha@gmail.com	Female	20	A+	brg	to help people	<a href="#">Make it Hidden</a> <a href="#">Delete</a>

Showing 1 to 8 of 8 entries

PREVIOUS 1 NEXT

Fig. 6.7 Donor List view

## Manage Contact Us Queries:

In this section, the admin can manage Contact Us query which is there in the homepage.

#	Name	Email	Contact No	Message	Posting date	Action
1	likitha	likitha@gmail.com	98765449087	need blood	2024-03-03 11:40:03	<a href="#">Read</a>   <a href="#">Delete</a>

Showing 1 to 1 of 1 entries

PREVIOUS 1 NEXT

Fig. 6.8 Manage Contact Us Queries view



## Update Contact Info:

In this section, Admin can update the contact information. Admin can change the address, email id, and contact number.

Update Contact Info

FORM FIELDS

Address: Bangalore

Email Id: sowshr292@gmail.com

Contact Number: 8585233222

Update

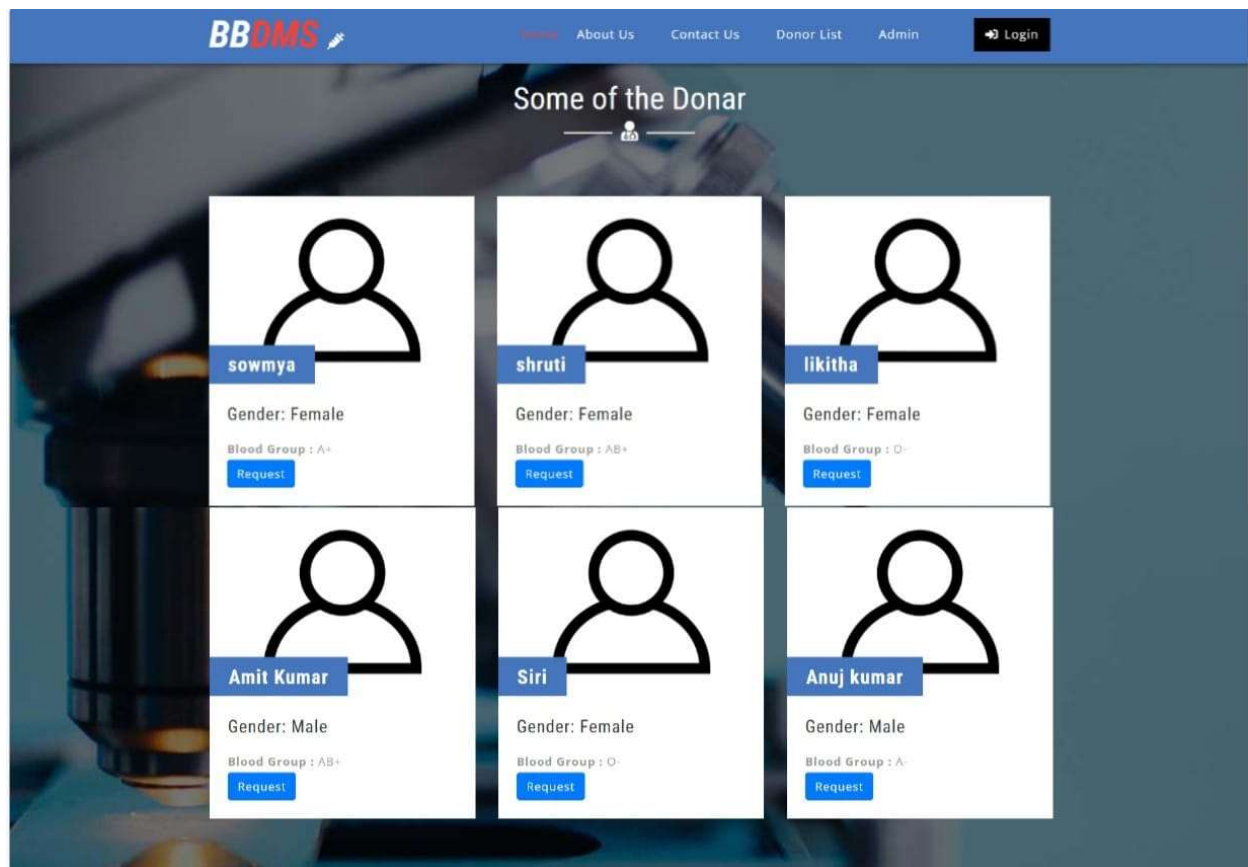
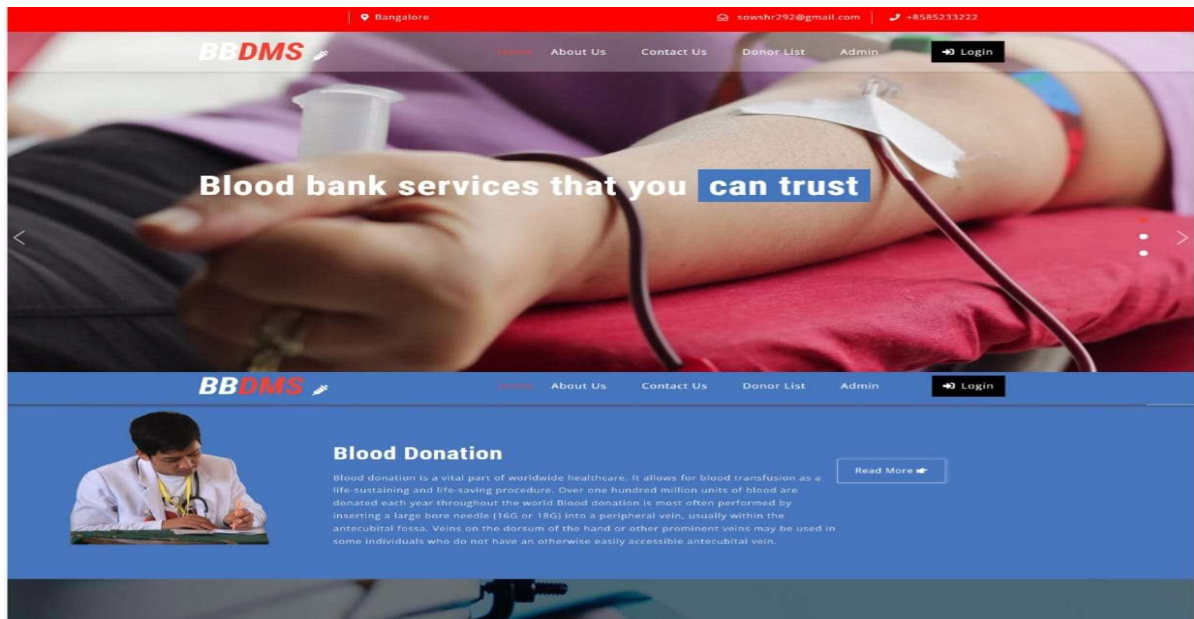
Fig. 6.9 Update Contact Info view

## Blood Request Info:

S.No	Name of Donor	Contact Number of Donor	Blood Group	Name of Requirer	Mobile Number of Requirer	Email of Requirer	Blood Require For	Message of Requirer	Apply Date
1	Ashu Misra	7797987981	O-	CC	7894561236	rak@gmail.com	Father	Please help	2024-01-06 17:27:24
2	Ashu Misra	7797987981	O-	Hitesh	1236547896	hls@gmail.com	Brother	do the needful	2024-01-07 17:32:12
3	John Doe	1236547890	O-	Rahul Singh	2536251425	rahk@gmail.com	Mother	Please help me	2024-01-08 07:21:52
4	Amit Kumar	1231231230	AB+	Anuj Kumar	8525232102	ak@gmail.com	Others	Need blood on urgent basis	2024-01-08 06:54:18
5	Amit Kumar	1231231230	AB+	sneha jagade	1234567890	sneha@gmail.com	Others	blood	2024-03-04 18:57:30
6	sneha jagade	1234567890	A-	chethan	9876543287	chethan@gmail.com	Brother	please its urgent!!	2024-02-28 23:58:05
7	sneha jagade	1234567890	A-	sowmya	9869654324	sowmya/s29@gmail.com	Others	please help!!	2024-02-29 09:41:30
8	Sowmya J S	9380169449	B+	lkd	897654368	likianu@gmail.com	Others	please its urgent	2024-03-03 11:43:06
9	Sowmya J S	9380169449	B+	shruti	1234567890	shrutibhagetti@gmail.com	Others	need blood	2024-03-04 18:39:01

Fig. 6.10 Blood Request view

## Home page :



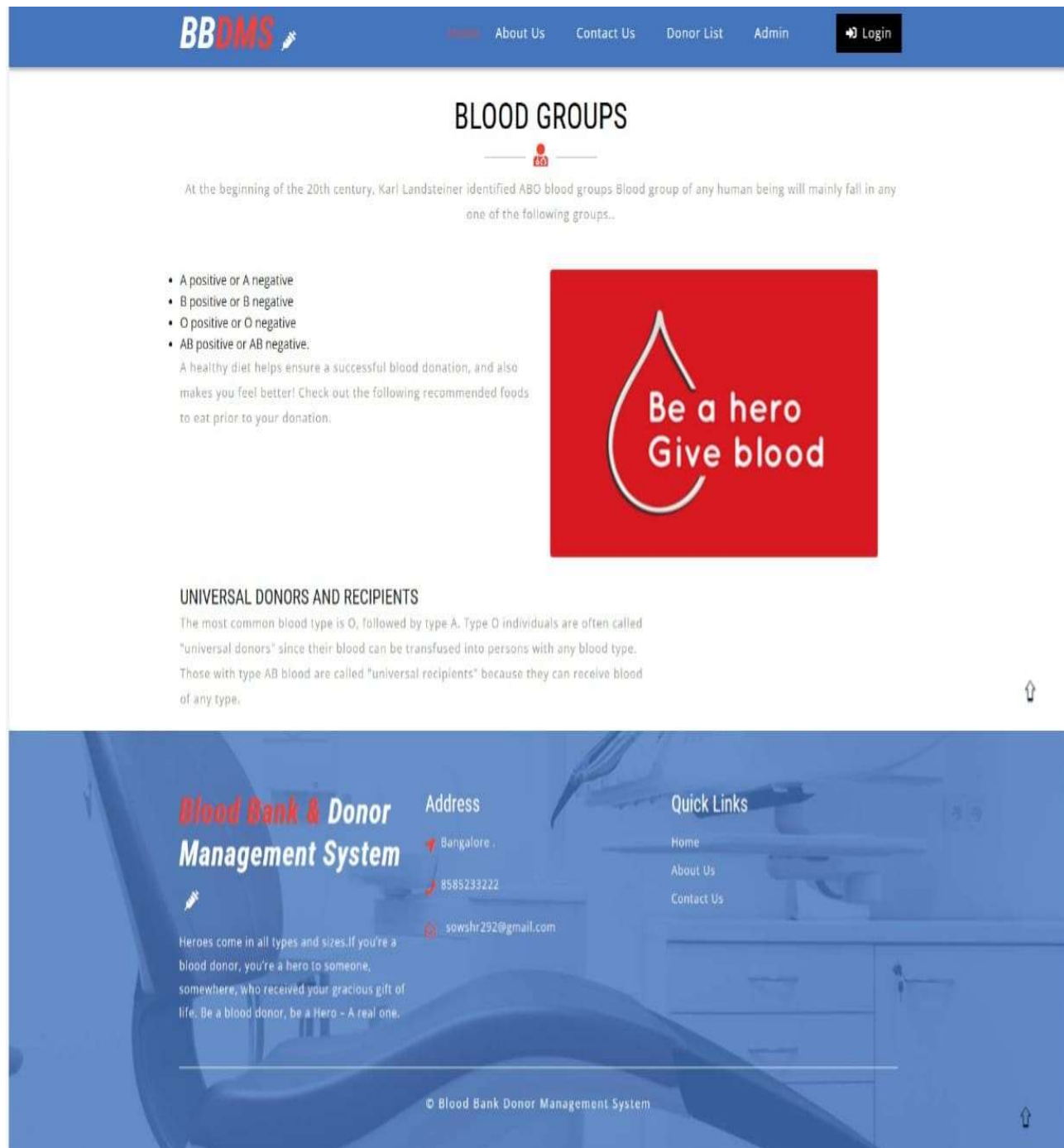


Fig. 6.11 Homepage view

**About Us:** Provide information about the web Page

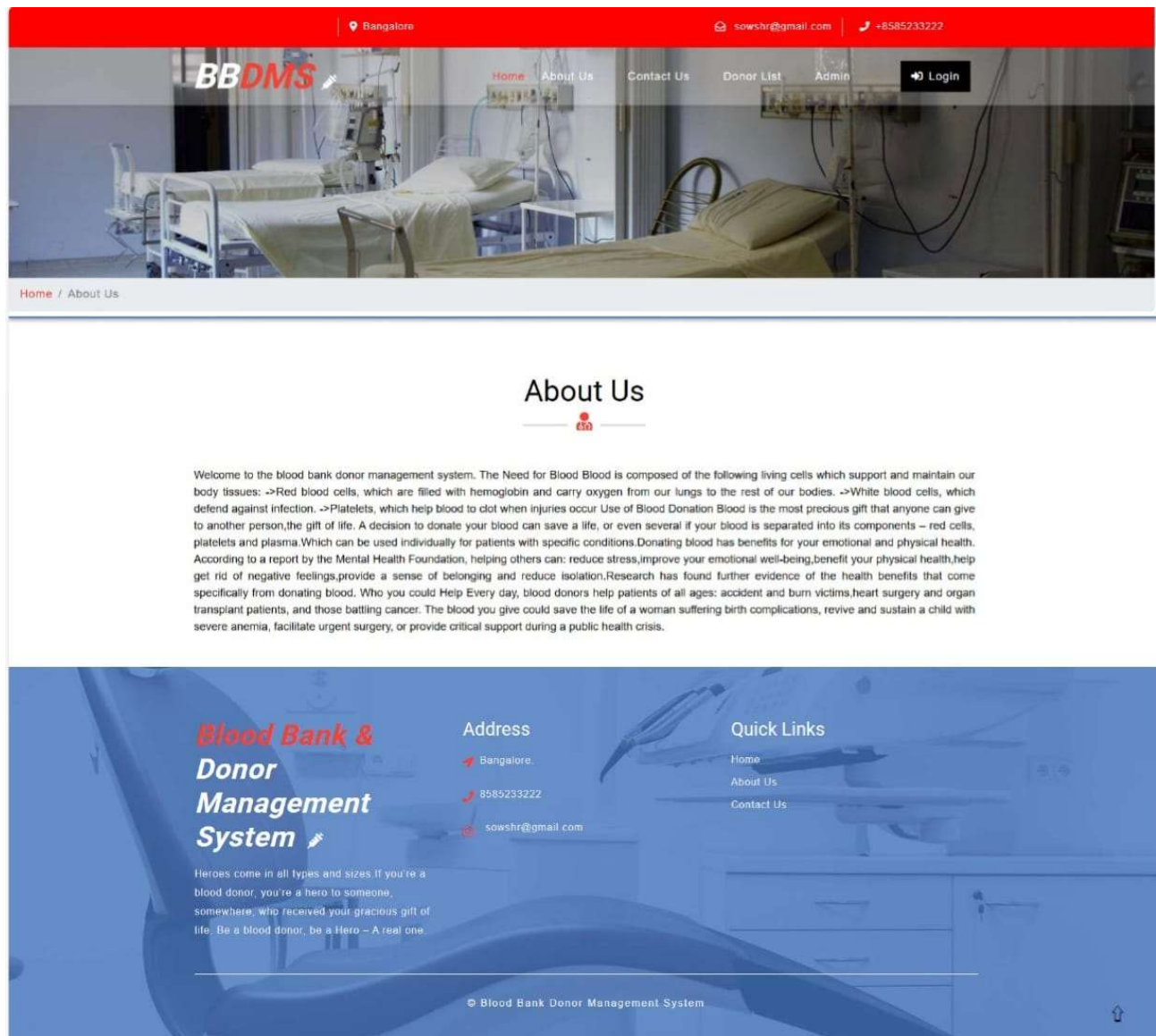
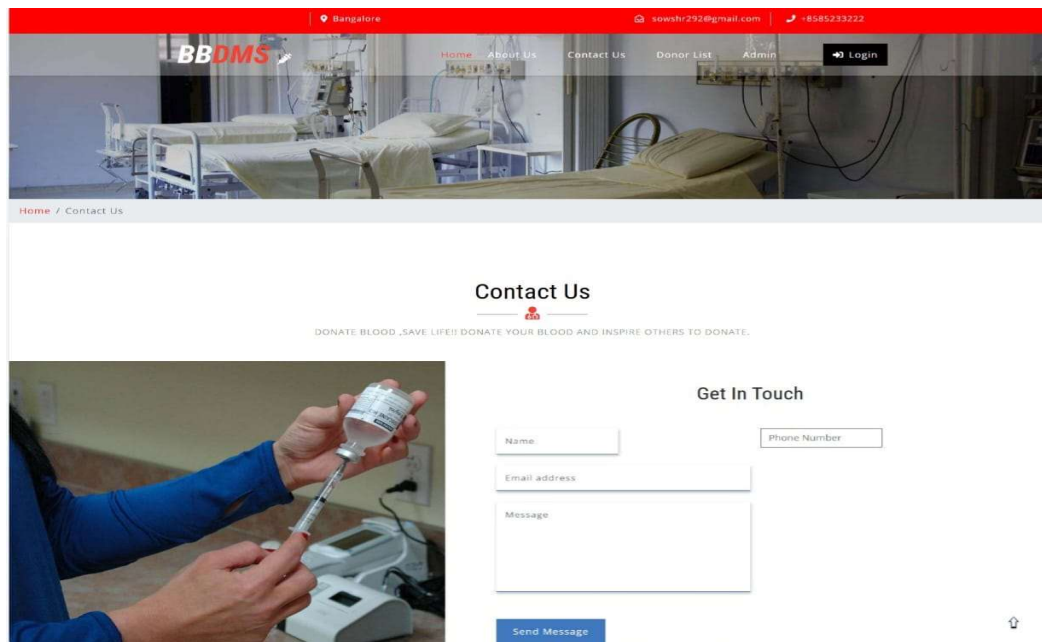


Fig. 6.12 About Us view

## Contact Us:



The screenshot shows the 'Contact Us' page of the BBDMs website. The header is red with the BBDMs logo and navigation links: Home, About Us, Contact Us, Donor List, Admin, and a Login button. The main content area has a white background with the title 'Contact Us' and a sub-header 'DONATE BLOOD, SAVE LIFE! DONATE YOUR BLOOD AND INSPIRE OTHERS TO DONATE.' Below this is a large image of a person's arm being bled into a syringe. To the right of the image is a 'Get In Touch' form with fields for Name, Phone Number, Email address, and Message, and a 'Send Message' button.

Fig. 6.13 Contact Us view

## Menu bar:

This is the main menu bar.



Fig. 6.14 Menu bar view

**Admin Left-Side bar:** This is Left-side bar. Here has dashboard, blood group (add blood group, manage blood group), add donor, donor list, manage contact us query, manage page, and update contact info.



Fig. 6.15 Admin left side bar view

## **CONCLUSION**

With the theoretical inclination of our syllabus, it becomes very essential to take the utmost advantage of any opportunity of gaining practical experience that comes along. The construction of this mini project "BLOOD BANK & DONOR MANAGEMENT SYSTEM" was one of these opportunities. It gave us the requisite practical knowledge to supplement the already taught theoretical concepts, thus making us more competent.

This project has made us aware of the immense capabilities and the various uses of PHP, CSS, My SQL and Apache server individually. This project gives me more than enough opportunity for a web-based project to design, code, measure and execute. This has also helped me find out more about HTML, CSS, JAVASCRIPT, BOOTSTRAP & PHP. It is of vital importance that the software must have the right type of modularity and the openness so that it is manageable, maintainable and upgradeable.

## **REFERENCES**

1. Ramez Elmasri, Shamikant B. Navathe; Fundamentals of Database Management System; 5th Edition; Pearson; 2017.
2. Dr. Rajiv Chopra; Database Management Systems; 5th Edition; S Chand; 2017.
3. W3Schools (PHP reference) — <https://www.w3schools.com/php/default.asp>
4. W3Schools (HTML reference) — <https://www.w3schools.com/html/default.asp>
5. W3Schools (HTML reference) — <https://www.w3schools.com/css/default.asp>
6. PHP Official Documentation — <http://php.net/docs.php>
7. The MySQL Documentation — <https://dev.mysql.com/doc/refman/8.0/en/>
8. Stack Overflow — <https://stackoverflow.com/>
9. Stack Exchange — <https://stackexchange.c>



