Visvesvaraya Technological University

Jnana Sangama, Belagavi – 590018, Karnataka



A Mini Project Report on "BLOOD BANK MANAGEMENT SYSTEM"

Submitted in partial fulfillment of the requirement for the DBMS Laboratory with mini project (18CSL58) of V semester

Bachelor of Engineering
In
Computer Science and Engineering

Submitted By

PAVITHRA K TANTRY (1GA18CS189) NISHA BHAT BALANJA (1GA18CS192)

Under the Guidance of

Mrs. Reshma S Assistant Professor, Dept. of CSE



GLOBAL ACADEMY OF TECHNOLOGY

Department of Computer Science and Engineering (Accredited by NBA 2019-2022) Raja Rajeshwari Nagar, Bengaluru – 560 098 2020-2021





GLOBAL ACADEMY OF TECHNOLOGY

Department of Computer Science and Engineering (Accredited by NBA 2019-2022)



Raja Rajeshwari Nagar, Bengaluru – 560 098

Certificate

This is to certify that V Semester Mini project entitled "BLOOD BANK MANAGEMENT SYSTEM" is a bonafide work carried out by PAVITHRA K TANTRY (1GA18CS189), NISHA BHAT BALANJA (1GA18CS192) as a partial fulfillment for the award of Bachelor's Degree in Computer Science and Engineering for DBMS Laboratory with Mini Project [18CSL58] as prescribed by Visvesvaraya Technological University, Belagavi during the year 2020-2021.

Mrs.Reshma S Assistant Professor, Dept of CSE, GAT, Bengaluru.	Dr. Srikanta Murthy K Professor & Head, Dept of CSE, GAT, Bengaluru.
Exter	rnal Exam
Name of the Examiner	Signature with date
1	
2	

ABSTRACT

A blood bank is a center where blood gathered as a result of blood donation is stored and preserved for later use in blood transfusion. The term "blood bank" typically refers to a division of a hospital where the storage of blood products occurs and where proper testing is performed. The main aim of the blood bank management system is to help people who are in need of blood by giving them all details of blood group availability or regarding the donors with the same blood group. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and helping them manage in a better way.

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible and whose constant encouragement and guidance crowned our efforts with success.

We consider ourselves proud to be part of **Global Academy of Technology** family, the institution which stood by our way in endeavors.

We express our deep and sincere thanks to our Principal **Dr. N. Rana Pratap Reddy** for his support.

We are grateful to **Dr. Srikanta Murthy K**, Professor and Head, Dept. of Computer Science & Engineering who is a source of inspiration and of invaluable help in channelizing my efforts in the right direction.

We wish to thank our internal guide **Mrs. Reshma S**, Assistant Professor, Dept of CSE for guiding and correcting various documents with attention and care. She has taken a lot of pain to go through the document and make necessary corrections as and when needed.

We would like to thank the faculty members and supporting staff of the Department of CSE, GAT for providing all the support for completing the Project work.

Finally, we are grateful to our parents and friends for their unconditional support and help during our Project work.

PAVITHRA K TANTRY (1GA18CS189)

NISHA BHAT BALANJA (1GA18CS192)

TABLE OF CONTENTS

		ABSTRACT	i
		LIST OF TABLES	v
		LIST OF FIGURES	v
1.		INTRODUCTION	
	1.1	INTRODUCTION TO SQL	1
	1.2	INTRODUCTION TO FRONTEND SOFTWARE	2
	1.3	PROJECT REPORT OUTLINE	3
2.		REQUIREMENT SPECIFICATION	
	2.1	SOFTWARE REQUIREMENTS	4
	2.2	HARDWARE REQUIREMENTS	4
3.		OBJECTIVE OF THE PROJECT	5
4.		IMPLEMENTATION	
	4.1	ER DIAGRAM	6
	4.2	MAPPING OF ER DIAGRAM TO SCHEMA DIAGRAM	8
	4.3	MAPPING OF THE ER SCHEMA TO RELATIONS	10
	4.4	CREATION OF TABLES	11
	4.5	INSERTION OF TUPLES	13
	4.6	CREATION OF TRIGGERS	15
	4.7	CREATION OF STORED PROCEDURES	17
5.		FRONT END DESIGN	
	5.1	CONNECTIVITY TO DATABASE	18
	5.2	FRONT END CODE	18

6.		TESTING	
	6.1	Process	40
	6.2	Testing	40
	6.3	Test Cases	41
7.		RESULTS	
	7.1	SNAPSHOTS	42
8.		CONCLUSION	47
9.		REFERENCES	48

LIST OF FIGURES

Figure No.	Title	Page No.
4.1	ER diagram	7
4.2	Mapping of ER diagram to schema diagram	9
4.3	Mapping of ER diagram to Relation	10
7.1.1	Login Page	42
7.1.2	Welcome Page	42
7.1.3	Donor Page	43
7.1.4	Patient Page	43
7.1.5	Insert Donor Page	44
7.1.6	Search Donor Page	44
7.1.7	Delete Donor Page	45
7.1.8	Delete Patient Page	45
7.1.9	Donor Details	46
7.1.10	Patient Details	46

LIST OF TABLES

Table No.	Title	Page No.
6.1	Test cases for the project	41

1. INTRODUCTION

1.1 INTRODUCTION TO SQL

The name SQL is presently expanded as Structured Query Language. Originally, SQL was called SEQUEL (Structured English QUEry Language) and was designed and implemented at IBM Research as the interface for an experimental relational database system called SYSTEM R. SQL is now the standard language for commercial relational DBMSs and for interacting with RDBMS (Relational Database Management System). Some of the popular relational database examples are: MySQL, Oracle, MariaDB, PostgreSQL etc. SQL is a comprehensive database language. It has statements for data definitions, queries, and updates.

Types of Structured Query Language (SQL)

- DQL (Data Query Language)
 - DQL is used to fetch the information from the database which is already stored there.
- i) Select
- DDL (Data Definition Language)

DDL is used to define table schemas.

- i) Create
- ii) Alter
- iii) Drop
- iv) Truncate
- v) Rename
- DCL (Data Control Language)

DCL is used for user & permission management. It controls the access to the database.

- i) Grant
- ii) Revoke
- DML (Data Manipulation Language)

DML is used for inserting, updating and deleting data from the database.

- i) Insert
- ii) Update
- iii) Delete
- TCL (Transaction Control Language)

These commands are to keep a check on other commands and their effect on the database.

- i) Savepoint
- ii) Rollback
- iii) Commit

1.2 INTRODUCTION TO FRONTEND SOFTWARE

HTML:

Hypertext Markup Language (HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

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.

CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of World Wide Web, alongside HTML and JavaScript.

CSS describes how HTML elements are to be displayed on screen, paper, or in other media. **CSS** saves a lot of work. It can control the layout of multiple web pages all at once.

PHP:

PHP is a general-purpose scripting language especially suited to web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994.

On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control.

1.3 PROJECT REPORT OUTLINE

The report is arranged in the following way:

- Chapter 1: Gives the Introduction of SQL and Front End Software
- Chapter 2: Gives the Requirement Specification of the project
- Chapter 3: Gives the Objective of the project
- Chapter 4: Gives the Implementation of the project
- Chapter 5: Gives the Front-end Design of the project
- Chapter 6: Gives the Testing information of the project
- Chapter 7: Gives the Results of the project

2. REQUIREMENT SPECIFICATION

2.1 SOFTWARE REQUIREMENTS

Operating system: Windows

Front end: HTML, CSS

Back end: MySQL

2.2 HARDWARE REQUIREMENTS

Processor: Intel Core i3 @ 2.30GHz

RAM: 8.00 GB or more

Hard Disk: 512 GB

3. OBJECTIVE OF THE PROJECT

- To create a user-friendly interface.
- To automate the complete operations of blood bank.
- To allow the probable recipients to make search and match the volunteer donors, and make request for the blood.
- To build an application program to reduce the manual work for managing the blood bank, blood group, donor and acceptor.
- To provide immediate storage and retrieval of data and information.
- To assist in relieving emergency and shortage of blood.
- To utilize resources in an efficient manner by increasing their productivity through automation.

4. IMPLEMENTATION

4.1 ER DIAGRAM

Entity-Relationship Diagram is a graphical representation and relationship between entities. It describes the relationship between data. It is a visual representation of different entities within a system and how they relate to each other.

An entity-relationship model describes the structure of a database with the help of a diagram, which is known as entity-relationship diagram. An ER model is a design or blueprint of a database that can later be implemented as a database.

The three main components in the ER Diagram are:

ENTITY:

An entity can be place, person, object, event or a concept, which stores data in the database. The characteristics of entities are must have an attribute, and a unique key. Every entity is made up of some 'attributes' which represent that entity. It is represented by a rectangle symbol.

ATTRIBUTE:

It is a single-valued property of either an entity-type or a relationship-type.

For example, a lecture might have attributes: time, date, duration, place, etc.

An attribute in ER Diagram examples, is represented by an Ellipse

RELATIONSHIP:

A relationship in Entity-Relationship Model is used to describe the relation between two or more entities. It is represented by a diamond shape in the ER diagram.

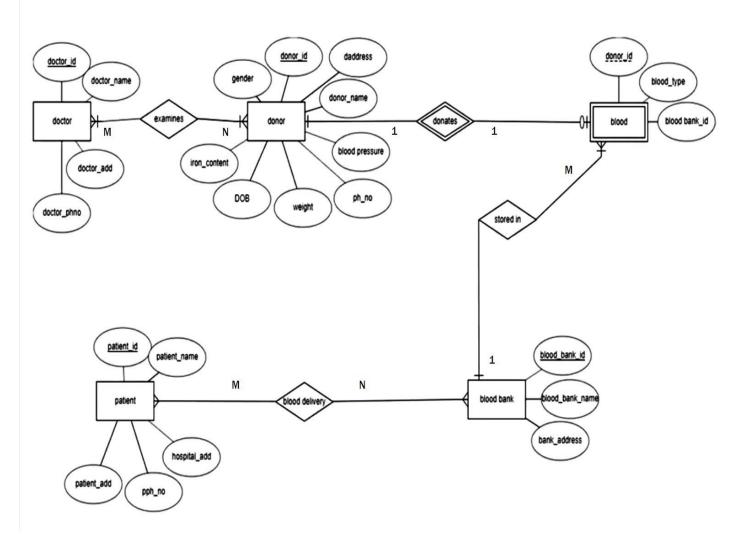


Fig 4.1 ER Diagram

4.2 MAPPING OF ER DIAGRAM TO SCHEMA DIAGRAM

Step 1 - Mapping of regular entity types

For each regular entity type E in the ER schema, create a relation R that includes all the simple attributes of E. Then choose one of the key attributes of E as the primary key for R. If the primary key of E is composite, the set of simple attributes that form it will together form the primary key of R.

Step 2 - Mapping of weak entity types

For each weak entity type W in the ER schema with owner entity type E, create a relation R and include all simple attributes of W as attributes of R. Also include as foreign key attributes of R the primary key attributes of relations that correspond to the owner entity. The primary key of R is the combination of the primary key of the owner and the partial key of the weak entity type W.

Step 3 - Mapping of binary 1:1 relationship type

There are three approaches:

- 1. Foreign key approach Choose one of the relations S and include a foreign key in S the primary key of T. It is better to choose an entity type with total participation in R in the role of S.
- 2. Merged relation approach An alternate mapping of a 1:1 relationship type is possible by merging the two entity types and the relationship into a single relation. This may be appropriate when both participations are total.
- 3. Cross-reference or relationship relation option The third alternative is to set up a third relation R for the purpose of cross referencing the primary keys of the two relations S and T representing the entity types.

Step 4 - Mapping of binary 1:N relationship types

For each binary 1:N relationship type R identifies the relation S that represents the participating entity type at the N-side of the relationship type. Include as foreign key in S the primary key of the relation T that represents the other entity type participating in R. Include any simple attributes of the 1:N relation type as attributes of S.

Step 5 - Mapping of binary M:N relationship types

For each regular binary M:N relationship type R, create a new relation S to represent R. Include as foreign key attributes in S the primary keys of the relations that represent the 3 participating entity types. Also include any simple attributes of the type as attributes of S.

Step 6 - Mapping of multivalued attributes

For each multivalued attribute A, create a new relation R. This will include an attribute corresponding to A, plus the primary key attribute K as foreign key in R that represents the entity type. The primary key of R is the combination of A and K. If the multivalued attribute is composite we include its simple components.

Step 7 - Mapping of N-ary relationship attributes

For each N-ary relationship type R, where n > 2, create a new relationship S to represent R. Include as foreign key attributes in S the primary keys of the relations that represent the participating entity types. Also include any simple attributes of the n-ary relationship type as attributes of S.

Doctor Doctor id Doctor_name Doctor_add Doctor_phno Donor Donor id Donor_name Do_phno Do dob gender Do add weight bp ic Doctor_id Blood bank Bloodb_id Bloodb_name Bloodb_add Blood Blood_type Donor_id Bloodb_id Patient Patient id Pa_name Pa_phno H_address Pa_address Blood delivery Bloodb_id Patient id

Fig 4.2 Mapping of ER Diagram to Schema Diagram

4.3 MAPPING OF ER DIAGRAM TO RELATIONS

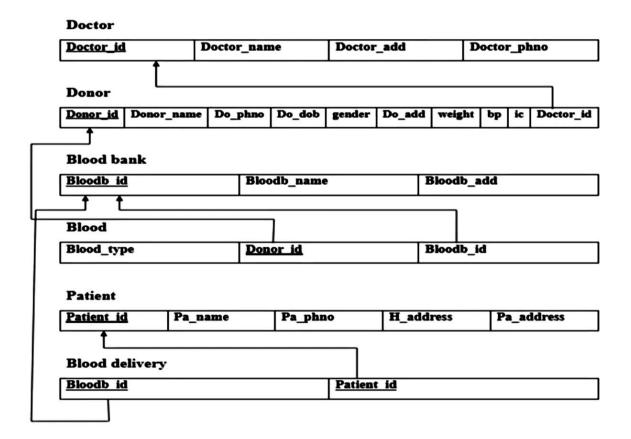


Fig 4.3 Mapping of ER Diagram to Relations

4.4 CREATION OF TABLES

CREATION OF TABLE DOCTOR

CREATE TABLE DOCTOR

(DOC_ID INTEGER PRIMARY KEY,

DOC_NAME VARCHAR(20),

DOC_ADDRESS VARCHAR(50),

DOC_PHNO BIGINT);

CREATION OF TABLE DONOR

CREATE TABLE DONOR

(DONOR_ID INTEGER PRIMARY KEY,

DONOR_NAME VARCHAR(20),

DONOR_ADDRESS VARCHAR(50),

DONOR_PHNO BIGINT,

DONOR_DOB DATE,

GENDER VARCHAR(1),

WEIGHT FLOAT,

BP VARCHAR(11),

IRON_COUNT FLOAT,

FOREIGN KEY(DOC_ID) REFERENCES DOCTOR(DOC_ID) ON DELETE CASCADE);

CREATION OF TABLE BLOOD_BANK

CREATE TABLE BLOOD_BANK

(BLOOD_BANK_ID INTEGER PRIMARY KEY,

NAME VARCHAR(30),

ADDRESS VARCHAR(50));

CREATION OF TABLE BLOOD

CREATE TABLE BLOOD

(BLOOD_TYPE VARCHAR(3),

DONOR_ID INTEGER,

BLOOD_BANK_ID INTEGER,

FOREIGN KEY(DONOR_ID) REFERENCES DONOR(DONOR_ID) ON DELETE CASCADE, FOREIGN KEY(BLOOD_BANK_ID) REFERENCES BLOOD_BANK(BLOOD_BANK_ID) ON DELETE CASCADE,

PRIMARY KEY(DONOR_ID));

CREATION OF TABLE PATIENT

CREATE TABLE PATIENT

(PATIENT_ID INTEGER PRIMARY KEY,
PATIENT_NAME VARCHAR(20),
PATIENT_PHNO BIGINT,
PATIENT_ADDRESS VARCHAR(50),
HOSPITAL_ADDRESS VARCHAR(50));

CREATION OF TABLE BLOOD_DELIVERY

CREATE TABLE BLOOD_DELIVERY

(PATIENT_ID INTEGER,

BLOOD_BANK_ID INTEGER,

FOREIGN KEY(PATIENT_ID) REFERENCES PATIENT(PATIENT_ID) ON DELETE CASCADE, FOREIGN KEY(BLOOD_BANK_ID) REFERENCES BLOOD_BANK(BLOOD_BANK_ID) ON DELETE CASCADE);

4.5 INSERTION OF TUPLES

INSERTION OF TABLE DOCTOR

INSERT INTO DOCTOR VALUES('1', 'Dr Amish', 'RR Nagar, Bangalore', '7845129636'); INSERT INTO DOCTOR VALUES('2', 'Dr Ram', 'Jayanagar, Bangalore', '79856321471'); INSERT INTO DOCTOR VALUES('3', 'Dr Varsha, 'Srinagar, Bangalore', '985895471'); INSERT INTO DOCTOR VALUES('4', 'Dr Alok', 'Vijayanagar, Bangalore', '9875641231'); INSERT INTO DOCTOR VALUES('5', 'Dr Smitha', 'Basvanagudi, Bangalore', '7845123698');

INSERTION OF TABLE DONOR

INSERT INTO DONOR VALUES('1', 'Rakesh Sharma', 'RR Nagar, Bangalore', '9874589635', '1998-01-06', 'M', '78', '120/80', '18', '1');
INSERT INTO DONOR VALUES('2', 'Mona', 'Vijayanagar, Bangalore', '9876543218', '1998-07-02', 'F', '58', '110/70', '15', '2');

INSERT INTO DONOR VALUES('3', 'Neelam', 'Srinagar, Bangalore', '7412541254',

'1999-06-02', 'F', '60', '110/80', '15', '2');

INSERT INTO DONOR VALUES('4', 'Mohan', 'KR Market, Bangalore', '7788456321',

'1999-01-01, 'M', '78', '120/90', '15', '1');

INSERT INTO DONOR VALUES('5', 'Maria', 'Chamrajpet, Bangalore', '8865472391',

'1993-05-01', 'F', '55', '135/70', '14', '3');

INSERTION OF TABLE BLOOD_BANK

INSERT INTO BLOOD_BANK VALUES('111', 'LIONS BLOOD BANK', 'Chord Road, Bangalore');

INSERT INTO BLOOD_BANK VALUES('222', 'JAYANAGAR BLOOD BANK', 'Jayanagar, Bangalore');

INSERT INTO BLOOD_BANK VALUES('333', 'Red Cross Blood Bank', 'Yelahanka, Bangalore'); INSERT INTO BLOOD_BANK VALUES('444', 'Rashtrotthana Blood Centre, 'Chamrajpet'); INSERT INTO BLOOD_BANK VALUES('555', 'KR Hospital Blood Bank, 'Srinagar, Bangalore');

INSERTION OF TABLE BLOOD

INSERT INTO BLOOD VALUES('AB+', '1', '111');

INSERT INTO BLOOD VALUES('A-', '2', '222'); INSERT INTO BLOOD VALUES('AB-', '3', '222'); INSERT INTO BLOOD VALUES('O+', '4', '333'); INSERT INTO BLOOD VALUES('B+', '5', '222');

INSERTION OF TABLE PATIENT

INSERT INTO PATIENT VALUES('1', 'Raj', '9845123478', 'Jayanagar, Bangalore', 'Apollo Hospital, Jayanagar);

INSERT INTO PATIENT VALUES('2', 'Neha', '7895412369', 'RR Nagar, Bangalore', 'SSNMC Hospital, RR Nagar);

INSERT INTO PATIENT VALUES('3', 'Ramu', '7896541473', 'JP Nagar, Bangalore', 'Apollo Hospital);

INSERT INTO PATIENT VALUES('4', 'Shama', '8563214792', 'JP Nagar', 'Apollo Hospital, Jayanagar);

INSERT INTO PATIENT VALUES('5', 'Harsha', '7856854528', 'Gandhi Bazar', 'Vasavi Hospital');

INSERTION OF TABLE BLOOD DELIVERY

INSERT INTO BLOOD_DELIVERY VALUES('111', '43'); INSERT INTO BLOOD_DELIVERY VALUES('222', '2'); INSERT INTO BLOOD_DELIVERY VALUES('333', '3'); INSERT INTO BLOOD_DELIVERY VALUES('555', '65'); INSERT INTO BLOOD_DELIVERY VALUES('666', '73');

4.5 CREATION OF TRIGGERS

CREATE insert_trigger

```
CREATE TRIGGER 'insert_trigger' AFTER INSERT ON 'donor'
FOR EACH ROW INSERT INTO log (
   donor_id,
   old_row_data,
   new_row_data,
   dml_type,
   dml_timestamp
 )
 VALUES(
   NEW.donor_id,
   null,
   JSON_OBJECT(
     "DONOR_NAME", NEW.DONOR_NAME,
     "DONOR_ADDRESS", NEW.DONOR_ADDRESS,
     "DONOR_PHNO", NEW.DONOR_PHNO,
     "DONOR_DOB", NEW.DONOR_DOB,
     "GENDER", NEW.GENDER,
     "WEIGHT", NEW.WEIGHT,
     "BP", NEW.BP,
     "IRON_COUNT", NEW.IRON_COUNT,
     "DOC_ID", NEW.DOC_ID
   ),
   'INSERT',
   CURRENT_TIMESTAMP
 )
CREATE update_trigger
CREATE TRIGGER `update_trigger` AFTER UPDATE ON `donor`
FOR EACH ROW INSERT INTO log (
   donor id,
   old_row_data,
   new_row_data,
   dml_type,
   dml_timestamp
 VALUES(
```

```
NEW.donor_id,
   JSON OBJECT(
     "DONOR_NAME", OLD.DONOR_NAME,
     "DONOR_ADDRESS", OLD.DONOR_ADDRESS,
     "DONOR_PHNO", OLD.DONOR_PHNO,
     "DONOR DOB", OLD.DONOR DOB,
     "GENDER", OLD.GENDER,
     "WEIGHT", OLD.WEIGHT,
     "BP", OLD.BP,
     "IRON_COUNT", OLD.IRON_COUNT,
     "DOC_ID", OLD.DOC_ID
   ),
   JSON_OBJECT(
     "DONOR_NAME", NEW.DONOR_NAME,
     "DONOR_ADDRESS", NEW.DONOR_ADDRESS,
     "DONOR_PHNO", NEW.DONOR_PHNO,
     "DONOR_DOB", NEW.DONOR_DOB,
     "GENDER", NEW.GENDER,
     "WEIGHT", NEW.WEIGHT,
     "BP", NEW.BP,
     "IRON_COUNT", NEW.IRON_COUNT
   ),
   'UPDATE',
   CURRENT_TIMESTAMP
CREATE delete_trigger
CREATE TRIGGER `delete_trigger` AFTER DELETE ON `donor`
FOR EACH ROW INSERT INTO log (
   donor id,
   old_row_data,
   new_row_data,
   dml_type,
   dml_timestamp
 VALUES(
   OLD.DONOR_ID,
   JSON_OBJECT(
     "DONOR_NAME", OLD.DONOR_NAME,
     "DONOR_ADDRESS", OLD.DONOR_ADDRESS,
     "DONOR_PHNO", OLD.DONOR_PHNO,
     "DONOR_DOB", OLD.DONOR_DOB,
```

```
"GENDER", OLD.GENDER,
"WEIGHT", OLD.WEIGHT,
"BP", OLD.BP,
"IRON_COUNT", OLD.IRON_COUNT,
"DOC_ID", OLD.DOC_ID
),
null,
'DELETE',
CURRENT_TIMESTAMP
)
```

4.6 CREATION OF STORED PROCEDURES

5. FRONT END DESIGN

5.1 CONNECTIVITY TO DATABASE

```
Connect.php
```

```
<?php
$servername = "localhost";
$username="root";
$password = "";
$database = "blood_bank_db";
$conn = mysqli_connect($servername,$username,$password,$database);
if(!$conn)
{
    die("Sorry we failed to connect" . mysqli_connect_error());
}
else
{
    echo "Connection was successful<br>";
}
?>
```

5.2 FRONT END CODE

login.php

```
<?php
$conn = mysqli_connect("localhost","root","","blood_bank_db");
$login = false;
$showError = false;
if($_SERVER["REQUEST_METHOD"] == "POST"){
    $username = $_POST["username"];
    $password = $_POST["password"];
    $sql = "Select * from users where username='$username' and password='$password'";
    $result = mysqli_query($conn, $sql);</pre>
```

```
$num = mysqli_num_rows($result);
  if (\text{snum} == 1){
    slogin = true;
    header("location: welcome.php");
  }
  else{
    $showError = "Invalid Credentials";
  }
}
?>
<!doctype html>
<html lang="en">
<head>
<title>Login</title>
</head>
<style>
 #button{
 padding:15px;
 background-color:blue;
 font-size:15px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/1.jpeg" style="background-repeat:no-repeat">
<?php
  if($login){
  echo ' <div class="alert alert-success alert-dismissible fade show" role="alert">
    <strong>Success!</strong> You are logged in
    <button type="button" class="close" data-dismiss="alert" aria-label="Close">
       <span aria-hidden="true">x</span>
    </button>
  </div>';
```

```
}
  if($showError){
  echo ' <div class="alert alert-danger alert-dismissible fade show" role="alert">
    <strong>Error!</strong> '. $showError.'
    <button type="button" class="close" data-dismiss="alert" aria-label="Close">
      <span aria-hidden="true">×</span>
    </button>
  </div>';
  }
  ?>
<center>
  <div class="container my-4">
   <h1 class="text-center">
   <font face = "Times New Roman" color="White" size = 32>BLOOD BANK MANAGEMENT
SYSTEM</h1></font>
   <br>>
   <br>>
   <fort face = "Cambria" color="White" size = 25>LOGIN</h1></fort>
  <br>><br>>
   <form action="login.php" method="post">
  <div class="form-group col-md-4">
  <h4><label for="username"><font color="White" size=06 >Username</label></font></h4>
 <input type="text" class="form-control" id="username" name="username" >
 </div>
 <div class="form-group col-md-4">
 <h4><label for="password"><font color="White" size=06 > Password</label></font></h4>
 <input type="password" class="form-control" id="password" name="password">
 </div><br><br><br>
 <button id=button type="submit" class="btn btn-primary">Login</button>
 </form
</div>
</center>
</body>
```

```
</html>
donor.php
<!doctype html>
<html lang="en">
<title>
New Donor
</title>
<style type:"text/css">
*{
 margin:0;
 padding:0;
.main{
 background-color:rgb(0,0,0,0.3);
 width:500px;
 margin:auto;
}
form{
 padding:10px;
}
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <center>
  <h2 class="text-center"><b><font color="White">ENTER THE FOLLOWING
DETAILS<b></h2><br>
 <div class="main";>
```

```
<form action="donor.php" method="post">
  <label for="DONOR_NAME"><b><font color="White">NAME<b></label><br/>br>
  <input type="text" id="DONOR_NAME" name="DONOR_NAME"><br><br>
  <label for="DONOR_PHNO"><b><font color="White">PHONE NO<b></label><br/>br>
  <input type="bigint" id="DONOR_PHNO" name="DONOR_PHNO"><br>><br>>
  <label for="DONOR_ADDRESS"><b><font color="White">ADDRESS<b></label><br/>br>
  <input type="text" id="DONOR_ADDRESS" name="DONOR_ADDRESS"><br><br>
  <label for="DONOR_DOB"><b><font color="White">DATE OF BIRTH<b></label><br/>br>
  <label for="GENDER"><b><font color="White">CHOOSE GENDER<b></label><br/>br>
  <select name="GENDER" id="GENDER">
  <option value="--">--</option>
  <option value="M">M - MALE</option>
  <option value="F">F - FEMALE</option>
  <option value="O">OTH - OTHERS</option>
  </select><br><br>
  <label for="WEIGHT"><b><font color="White">WEIGHT<b></label><br>
  <input type="int" id="WEIGHT" name="WEIGHT"><br><br>
  <label for="BP"><b><font color="White">BLOOD PRESSURE<b></label><br/>br>
  <input type="text" id="BP" name="BP"><br><br>
  <label for="IRON_COUNT"><b><font color="White">IRON COUNT<b></label><br/>br>
  <input type="int" id="IRON_COUNT" name="IRON_COUNT"><br><br>
  <label for="BLOOD_TYPE"><b><font color="White">CHOOSE BLOOD
GROUP<b></label><br
  <select name="BLOOD_TYPE" id="blood_type">
  <option value="--">--</option>
```

```
<option value="A+">A+</option>
  <option value="A-">A-</option>
  <option value="B+">B+</option>
  <option value="B-">B-</option>
  <option value="O+">O+</option>
  <option value="O-">O-</option>
  <option value="AB+">AB+</option>
  <option value="AB-">AB-</option>
  </select><br><br>
  <label for="DOC_ID"><b><font color="White">DOCTOR'S NAME<b></label><br/>br>
  <select name="DOC_ID" id="DOC_ID">
  <option value="--">--</option>
  <option value="1">Dr Amish</option>
  <option value="2">Dr Ram</option>
  <option value="3">Dr Varsha</option>
  <option value="4">Dr Alok</option>
  </select><br><br>
  <label for="BLOOD_BANK_ID"><b><font color="White">BLOOD BANK
NAME<b></label><br
  <select name="BLOOD_BANK_ID" id="BLOOD_BANK_ID">
  <option value="--">--</option>
  <option value="111">LIONS BLOOD BANK</option>
  <option value="222">JAYANAGAR BLOOD BANK</option>
  <option value="333">Red Cross Blood Bank
  <option value="444">Rashtrotthana Blood </option>
  </select><br><br>
  <input id="button" type="submit" value="Submit" onclick="alert('Submitted Successfully')">
  </div>
  </form>
  </center>
<?php
```

```
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
    $DONOR_NAME = $_POST['DONOR_NAME'];
    $DONOR_ADDRESS = $_POST['DONOR_ADDRESS'];
    $DONOR_PHNO = $_POST['DONOR_PHNO'];
    $DONOR_DOB = $_POST['DONOR_DOB'];
    $GENDER = $_POST['GENDER'];
    $WEIGHT = $_POST['WEIGHT'];
    BP = POST[BP'];
    $IRON_COUNT = $_POST['IRON_COUNT'];
    $BLOOD_TYPE = $_POST['BLOOD_TYPE'];
    $DOC_ID=$_POST['DOC_ID'];
    $last_id=$_POST['DONOR_ID'];
    $BLOOD_BANK_ID=$_POST['BLOOD_BANK_ID'];
   $conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
   // Die if connection was not successful
   if (!$conn){
     die("Sorry we failed to connect: ". mysqli_connect_error());
   }
   else{
    $sql = "INSERT INTO `donor` (`DONOR_ID`, `DONOR_NAME`, `DONOR_ADDRESS`,
`DONOR_PHNO`, `DONOR_DOB`, `GENDER`, `WEIGHT`, `BP`, `IRON_COUNT`, `DOC_ID`)
    VALUES ('NULL', '$DONOR_NAME', '$DONOR_ADDRESS', '$DONOR_PHNO',
'$DONOR_DOB', '$GENDER', '$WEIGHT', '$BP', '$IRON_COUNT', '$DOC_ID')";
    $result = mysqli_query($conn, $sql);
    if ($result === TRUE) {
     $last_id = $conn->insert_id;
     $sql1="INSERT INTO `blood` (`BLOOD_TYPE`,`DONOR_ID`, `BLOOD_BANK_ID`)
     VALUES ('$BLOOD_TYPE', '$last_id', '$BLOOD_BANK_ID')";
     $result1 = mysqli_query($conn, $sql1);
    $conn->close();
   }
```

```
}
  ?>
 </body>
</html>
updatedonor.php
<!doctype html>
<html lang="en">
<title>
Update Donor
</title>
<style type:"text/css">
*{
 margin:0;
 padding:0;
}
.main{
 background-color:rgb(0,0,0,0.3);
 width:500px;
 margin:auto;
}
form{
 padding:10px;
}
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <center>
```

```
<h2 class="text-center"><b><font color="White">ENTER THE FOLLOWING
DETAILS<b></h2><br>
 <div class="main":>
  <form action="updatedonor.php" method="post">
  <label for="DONOR_ID"><b><font color="White">ID<b></label><br/>br>
  <input type="int" id="DONOR_ID" name="DONOR_ID"><br><br>
  <label for="DONOR_NAME"><b><font color="White">NAME<b></label><br/>br>
  <input type="text" id="DONOR_NAME" name="DONOR_NAME"><br><br>
  <label for="DONOR_PHNO"><b><font color="White">PHONE NO<b></label><br/>br>
  <input type="bigint" id="DONOR_PHNO" name="DONOR_PHNO"><br>><br>>
  <label for="DONOR_ADDRESS"><b><font color="White">ADDRESS<b></label><br>
  <input type="text" id="DONOR_ADDRESS" name="DONOR_ADDRESS"><br><br>
  <input id="button" type="submit" value="Submit" onclick="alert('Submitted Successfully')">
  </div>
  </form>
  </center>
<?php
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
    $DONOR_ID= $_POST['DONOR_ID'];
    $DONOR_NAME = $_POST['DONOR_NAME'];
    $DONOR_ADDRESS = $_POST['DONOR_ADDRESS'];
    $DONOR_PHNO = $_POST['DONOR_PHNO'];
   $conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
   $sql = "UPDATE `donor` SET `DONOR_NAME`='$DONOR_NAME',
`DONOR_ADDRESS`='$DONOR_ADDRESS', `DONOR_PHNO`='$DONOR_PHNO'
    WHERE 'DONOR ID'='$DONOR ID'";
   $result = mysqli_query($conn, $sql);
```

```
$conn->close();
 }
?>
</body>
</html>
displaydonor.php
<!DOCTYPE html>
<html>
<head>
<title>Display all records from Database</title>
</head>
<body bgcolor = "pink">
<center>
<h2>DONOR DETAILS</h2>
DONOR ID DONOR NAME GENDER DOB PHONE
     NO ADDRESS WEIGHT BP IRON_COUNT
     DOCTOR NAME BLOOD TYPE BLOOD BANK NAME
<?php
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
$sql = "SELECT D.DONOR_ID,
D.DONOR_NAME,D.GENDER,D.DONOR_DOB,D.DONOR_PHNO,D.DONOR_ADDRESS,D.W
EIGHT, D.BP, D.IRON_COUNT, A.DOC_NAME, B.BLOOD_TYPE, C.NAME
   FROM DONOR D, BLOOD B, DOCTOR A, BLOOD_BANK C
   WHERE (D.DONOR_ID=B.DONOR_ID AND D.DOC_ID=A.DOC_ID AND
B.BLOOD_BANK_ID=C.BLOOD_BANK_ID)
   GROUP BY D.DONOR_ID";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows(\$result) > 0) {
while($data = mysqli_fetch_array($result))
```

```
{
?>
 <?php echo $data['DONOR_ID']; ?>
 <?php echo $data['DONOR_NAME']; ?>
 <?php echo $data['GENDER']; ?>
 <?php echo $data['DONOR_DOB']; ?>
 <?php echo $data['DONOR_PHNO']; ?>
 <?php echo $data['DONOR_ADDRESS']; ?>
 <?php echo $data['WEIGHT']; ?>
 <?php echo $data['BP']; ?>
 <?php echo $data['IRON_COUNT']; ?>
 <?php echo $data['DOC_NAME']; ?>
 <?php echo $data['BLOOD_TYPE']; ?>
 <?php echo $data['NAME']; ?>
<?php
?>
<?php mysqli_close($conn); // Close connection ?>
</center>
</body>
</html>
displaydonor.php
<!doctype html>
<html lang="en">
<title>
Delete Donor
</title>
```

```
<style type:"text/css">
*{
 margin:0;
padding:0;
.main{
 background-color:rgb(0,0,0,0.3);
 width:500px;
margin:auto;
}
form{
 padding:10px;
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <center>
 <h2 class="text-center"><b><font color="White">ENTER THE DETAILS OF THE DONOR TO
BE DELETED<b></h2><br>
 <div class="main";>
  <form action="deldonor.php" method="post">
  <label for="DONOR_ID"><b><font color="White">DONOR ID<b></label><br/>br>
  <input type="int" id="DONOR_ID" name="DONOR_ID"><br><br>
  <label for="DONOR_NAME"><b><font color="White">DONOR NAME<b></label><br/>br>
  <input type="text" id="DONOR_NAME" name="DONOR_NAME"><br><br>
```

```
<input id="button" type="submit" value="Submit" onclick="alert(' Record Deleted
Successfully')">
  </form>
  </center>
<?php
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
    $DONOR_NAME = $_POST['DONOR_NAME'];
    $DONOR_ID = $_POST['DONOR_ID'];
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
$sql = "DELETE FROM Donor WHERE DONOR_ID= '$DONOR_ID' AND DONOR_NAME=
'$DONOR_NAME'";
$result = mysqli_query($conn, $sql);
mysqli_close($conn);
}
?>
</body>
</html>
bloodcount1.php
<!DOCTYPE html>
<html>
<head>
 <title>Need Blood</title>
</head>
<style>
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
```

```
<center>
<?php
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
 B_TYPE = _POST['B_TYPE'];
 B_BANK_ID = POST[B_BANK_ID];
$sql ="SELECT B.BLOOD_TYPE,COUNT(BLOOD_TYPE)
      FROM BLOOD B
      WHERE BLOOD_TYPE = '$B_TYPE'
      AND EXISTS(SELECT D.BLOOD_BANK_ID
      FROM BLOOD_BANK D
      WHERE BLOOD_BANK_ID = '$B_BANK_ID' AND B.BLOOD_BANK_ID =
      D.BLOOD_BANK_ID)";
$result = mysqli_query($conn, $sql);
 while($row=mysqli_fetch_row($result))
 {
 if(\text{srow}[0]==\text{sB\_TYPE})
 {
  echo '<span style="color:#02075d;font-size:30px;text-align:center;">Blood Type available in
specified blood bank</span>';?>
  <form action="patient.php" method="get"><input id="button" type="submit"</pre>
value="Proceed"></form>
  <?php
 }
 else{
  echo '<span style="color:#02075d;font-size:30px;text-align:center;">Sorry! Blood Type is not
available in specified blood bank</span>';
 }
?>
```

```
</center>
</body>
</html>
patient.php
<!doctype html>
<html lang="en">
<title>
PATIENT
</title>
<style type:"text/css">
*{
 margin:0;
 padding:0;
}
.main{
 background-color:rgb(0,0,0,0.3);
 width:500px;
 margin:auto;
}
form{
 padding:10px;
}
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
 }
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <?php require 'web\nav3.php'?>
```

```
<center>
 <div class="main";>
 <h2 class="text-center"><b><font color="White">ENTER THE FOLLOWING PATIENT
DETAILS<b></h2>
  <form action="patient.php" method="post">
  <br><br><br><br>>
  <label for="PATIENT_NAME"><b><font color="White">NAME<b></label><br/>br>
  <input type="text" id="PATIENT_NAME" name="PATIENT_NAME"><br><br>
  <label for="PATIENT_PHNO"><b><font color="White">PHONE NO<b></label><br/>br>
  <input type="bigint" id="PATIENT_PHNO" name="PATIENT_PHNO"><br><br>
  <label for="PATIENT_ADDRESS"><b><font color="White">PATIENT
ADDRESS<b></label><br>
  <input type="text" id="PATIENT_ADDRESS" name="PATIENT_ADDRESS"><br><br>
  <label for="HOSPITAL ADDRESS"><b><font color="White">HOSPITAL
ADDRESS<b></label><br>
  <input type="text" id="HOSPITAL_ADDRESS" name="HOSPITAL_ADDRESS"><br><br>
  <label for="BLOOD_BANK_ID"><b><font</pre>
color="White">BLOOD_BANK_NAME<b></label><br
  <select name="BLOOD_BANK_ID" id="BLOOD_BANK_ID">
  <option value="--">--</option>
  <option value="111">LIONS BLOOD BANK</option>
  <option value="222">JAYANAGAR BLOOD BANK</option>
  <option value="333">Red Cross Blood Bank
  <option value="444">Rashtrotthana Blood </option>
  </select><br><br>
  <input id="button" type="submit" value="Submit" onclick="alert('Submitted Successfully')">
</form>
<center>
<?php
```

```
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
    $PATIENT_NAME = $_POST['PATIENT_NAME'];
    $PATIENT_ADDRESS = $_POST['PATIENT_ADDRESS'];
    $PATIENT_PHNO = $_POST['PATIENT_PHNO'];
    $HOSPITAL_ADDRESS = $_POST['HOSPITAL_ADDRESS'];
    $last_id=$_POST['DONOR_ID'];
    $BLOOD_BANK_ID=$_POST['BLOOD_BANK_ID'];
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
$sql = "INSERT INTO `patient` (`PATIENT_ID`,`PATIENT_NAME`, `PATIENT_PHNO`,
`PATIENT_ADDRESS`,`HOSPITAL_ADDRESS`)
    VALUES ('NULL', '$PATIENT_NAME', '$PATIENT_PHNO', '$PATIENT_ADDRESS',
'$HOSPITAL ADDRESS')";
 $result = mysqli_query($conn, $sql)
 if ($result === TRUE) {
 $last id = $conn->insert id;
 $sql1="INSERT INTO `blood_delivery` (`BLOOD_BANK_ID`,`PATIENT_ID`)
       VALUES ('$BLOOD_BANK_ID','$last_id')";
 $result1 = mysqli_query($conn, $sql1);
 }
 $conn->close();
}
?>
 </body>
</html>
search_donor.php
<!doctype html>
<html lang="en">
<title>Search Donor</title>
<style>
#button{
 padding:10px;
```

```
background-color:red;
font-size:11px;
border-radius:10px;
font-weight:bolder;
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <center>
<h2 class="text-center"><b><font color="White">ENTER THE REQUIRED BLOOD
GROUP<b></h2>
  <form action="search_donor.php" method="post">
  <br><br><br><br><br><
  <label for="BLOOD_TYPE"><b><font color="White">BLOOD TYPE<b></label><br/>br>
  <input type="text" id="BLOOD_TYPE" name="BLOOD_TYPE"><br><br>
  <input id="button" type="submit" value="Submit">
  /form>
<?php
if ($_SERVER['REQUEST_METHOD'] == 'POST'){
   $BLOOD_TYPE = $_POST['BLOOD_TYPE'];
   $DONOR_ID = $_POST['DONOR_ID'];
$sql = "SELECT D.DONOR_NAME, D.DONOR_PHNO, B.BLOOD_TYPE
FROM DONOR D,BLOOD B
WHERE D.DONOR_ID=B.DONOR_ID AND B.BLOOD_TYPE='$BLOOD_TYPE'";
$result = mysqli_query($conn, $sql);
{ ?>
 DONOR NAME DONOR PHNO BLOOD TYPE
<?php
 while($row=mysqli_fetch_array($result))
  { ?>
```

```
<?php echo $row['DONOR_NAME']; ?>
 <?php echo $row['DONOR_PHNO']; ?>
 <?php echo $row['BLOOD_TYPE']; ?>
 <?php }}?>
<?phpmysqli_close($conn);</pre>
}
?>
</center>
</body>
</html>
displaydonor.php
<!DOCTYPE html>
<html>
<head>
<title>Display all records from Database</title>
</head>
<body bgcolor = "pink">
<center>
<h2>PATIENT DETAILS</h2>
PATIENT ID PATIENT NAME PATIENT PHNO PATIENT
    ADDRESSHOSPITAL ADDRESSBLOOD BANK ID
    BLOOD BANK NAME
<?php
$conn = mysqli_connect("localhost", "root", "", "blood_bank_db");
$sql = "SELECT P.PATIENT_ID, P.PATIENT_NAME, P.PATIENT_PHNO,
P.PATIENT_ADDRESS, P.HOSPITAL_ADDRESS, B.BLOOD_BANK_ID, B1.NAME
```

FROM PATIENT P, BLOOD_DELIVERY B, BLOOD_BANK B1
WHERE P.PATIENT_ID=B.PATIENT_ID AND B.BLOOD_BANK_ID=B1.BLOOD_BANK_ID
ORDER BY P.PATIENT_ID";

```
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
while($data = mysqli_fetch_array($result))
{
?>
 <?php echo $data['PATIENT_ID']; ?>
  <?php echo $data['PATIENT_NAME']; ?>
  <?php echo $data['PATIENT_PHNO']; ?>
  <?php echo $data['PATIENT_ADDRESS']; ?>
  <?php echo $data['HOSPITAL_ADDRESS']; ?>
  <?php echo $data['BLOOD_BANK_ID']; ?>
  <?php echo $data['NAME']; ?>
 <?php
}
}
?>
<?php mysqli_close($conn); // Close connection ?>
</center>
</body>
</html>
deldonor.php
<!doctype html>
<html lang="en">
<title>
Delete Patient
</title>
<style type:"text/css">
```

```
*{
 margin:0;
padding:0;
}
.main{
 background-color:rgb(225,12,50,0.3);
 width:500px;
 margin:auto;
}
form{
 padding:10px;
#button{
 padding:10px;
 background-color:red;
 font-size:11px;
 border-radius:10px;
 font-weight:bolder;
}
</style>
<body background="images/6.jpg" style="background-repeat:no-repeat">
 <center><br><br><br>
 <div class="main";>
 <h2 class="text-center"><b><font color="White">ENTER THE DETAILS OF THE PATIENT TO
BE DELETED<b></h2>
 <form action="delpatient.php" method="post">
 <label for="PATIENT_ID"><b><font color="White">PATIENT ID<b></label><br/>br>
 <input type="int" id="PATIENT_ID" name="PATIENT_ID"><br><br>
  <label for="PATIENT_NAME"><b><font color="White">PATIENT NAME<b></label><br/>br>
  <input type="text" id="PATIENT_NAME" name="PATIENT_NAME"><br><br>
  <input id="button" type="submit" value="Submit" onclick="alert(' Deleted Successfully')">
  </form>
  <centre>
```

6. TESTING

6.1 PROCESS

Testing is an integral part of software development. Testing process certifies whether the product that is developed compiles with the standards that it was designed to. Testing process involves building of test cases against which the product has to be tested.

TESTING OBJECTIVES

This chapter gives the outline of all testing methods that are carried out to get a bug free system. Quality can be achieved by testing the product using different techniques at different phases of the project development. The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components sub-assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

6.2 TESTING

The main objectives of testing process are as follows.

- Testing is a process of executing a program with the intent of finding an error.
- A good test case is one that has high probability of finding undiscovered error.
- A successful test is one that uncovers the undiscovered error.

6.3 TEST CASES

The test cases provided here test the most important features of the project.

Test cases for the project

Table 6.1

Sl	Test Input	Expected Result	Observed	Remarks
No			Result	
1	Insert a record	New tuple should	Query Ok 1 row	PASS
		be inserted	affected or	
			inserted	
2	Insert a record	New tuple should	ERROR	FAIL
		be inserted		
3	Delete a record	Delete the tuple	Query Ok 1 row	PASS
			updated or	
			record deleted	
4	Update a record	Tuple should be	Query Ok 1 row	PASS
		updated	updated	
5	Update a record	Tuple should be	ERROR	FAIL
		updated		

7. RESULTS

7.1 SNAPSHOTS



Fig 7.1.1 Login Page

This is the login page where the admin logs in with their username and password.

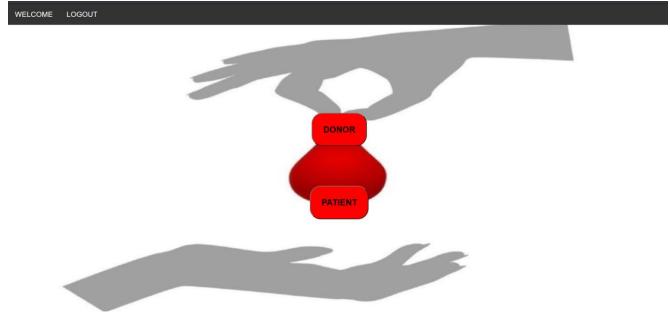


Fig 7.1.2 Welcome Page

Admin is directed to this page after logging in.

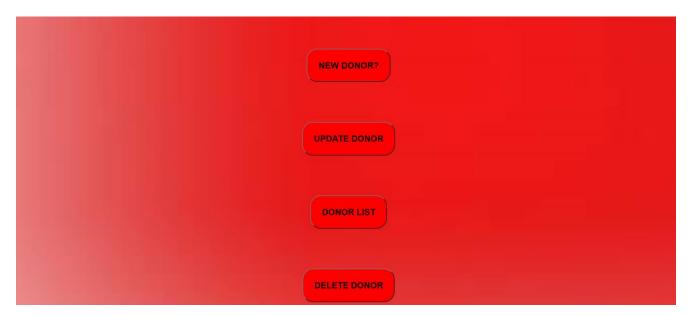


Fig 7.1.3 Donor Page



Fig 7.1.4 Patient Page

These are the operations that can be performed in the donor and patient page.



Fig 7.1.5 Insert Donor Page

We insert the donor details here.

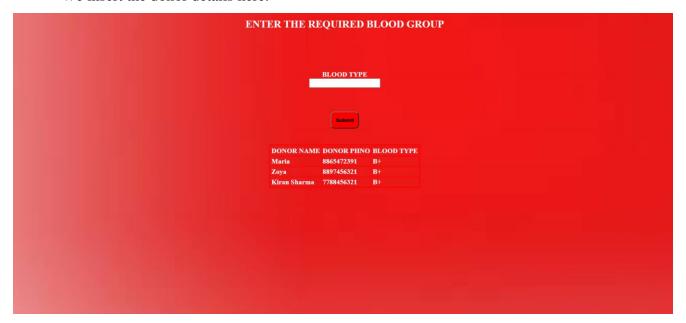


Fig 7.1.6 Search Donor Page

The names of all the donors with a particular blood type is displayed here.



Fig 7.1.7 Delete Donor Page

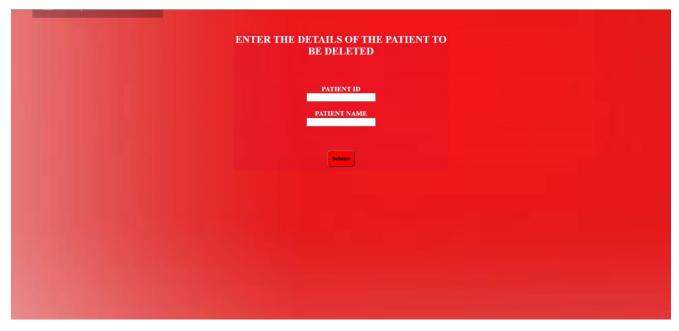


Fig 7.1.8 Delete Patient Page

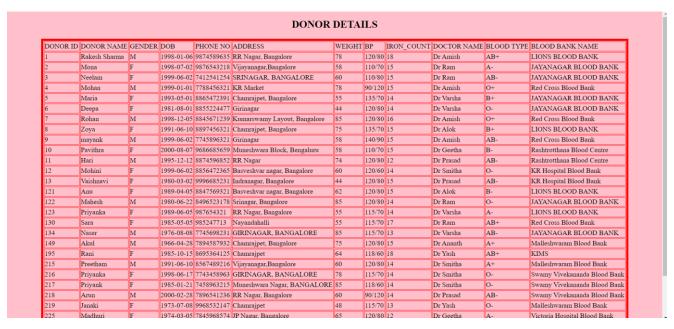


Fig 7.1.9 Donor Details

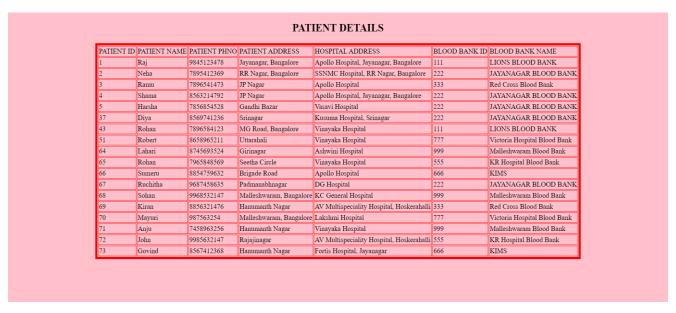


Fig 7.1.10 Patient Details

CONCLUSION

Blood Bank Management is a user-friendly and customization software for blood bank. Blood Bank Management System has been developed to manage and automate the over-all processing of any large blood bank. Blood Bank Management System project is capable of managing donor and patient details in association with various blood banks. This project is a very flexible software and it can be upgraded according to the individual blood bank needs.

REFERENCES

- [1] Fundamental of Database Systems (Ramez Elmasri, Shamkant B. Navathe) Seventh edition 2017, Pearson
- [2] Database Management Systems (3rd edition) by Ramakrishnan and Gehrke ,2014, McGraw Hill
- [3] https://stackoverflow.com/
- [4] https://www.w3schools.com/
- [5] https://www.php.net/