
UML AND TESTING TOOLS LAB
BLOOD BANK MANAGEMENT SYSTEM
BATCH-14

*A Project report submitted in partial fulfillment
of the requirements for the award of the degree of*

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

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DEPARTMENT OF INFORMATION TECHNOLOGY

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DEPARTMENT OF INFORMATION TECHNOLOGY

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES
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CERTIFICATE

This is to certify that the project reported entitled “**BLOOD BANK MANAGEMENT SYSTEM**” submitted by **K.Abhiraam,K.Likhitha,B.Mahesh,V.Manju,V.Surya Kriranin** partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Information Technology** of Anil Neerukonda Institute of technology and sciences, Visakhapatnam is a record of bonafide work carried out under my guidance and supervision.

Lecturer Incharge

A.Surekha

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ANITS

Head of the Department

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1.PROBLEM STATEMENT:

The project blood bank management system is known to be a pilot project that is designed for the blood bank to gather blood from various sources and distribute it to the needy people who have high requirements for it.

The system should be standalone in nature.

2.DESRIPTION:

- This project is a high quality software to manage all the data of donors,recievers
- The software is designed to handle the daily transactions of the blood bank and search the details when required.
- It also helps to register the details of donors, blood collection details as well as blood issued reports.
- The software application is designed in such a manner that it can suit the needs of all the blood bank requirements in the course of future.
- This project will overcome the problems that occur in the existing system.

REQUIREMENTS:**Donor's**

Donor's Name,
Donor's blood group,
Donor's Age,
Donor's health condition,
Donor's phone number,
Donor's address,
Blood donation date

Patient's

Patient Name,

Patient blood group
Patient Age,
Patient admitted hospital,
Cause for Patient to require blood
Patient phone number,
Patient Address,
Blood received date

AVAILABILITY:

Currently available blood groups

Records:

Blood transactions
Donor records(stores donors id, and the donors data)
Patient records(stores the Patients data)

3.SOFTWARE REQUIREMENT SPECIFICATION(SRS)**INTRODUCTION:**

Data from different blood banks maintained in this project. Blood stock reports, and donor profiles from different blood banks are management in this project. It will help us to find the blood group with its most efficient time to take care of the blood and it is more easy to hand over the blood to the hospitals to help people to get blood on time. This all thing is been stored and been seen in this Blood Bank Management System.

(i)Purpose of this document:

Blood Bank Management Software is designed & suitable for different users who required immediate blood. It gives data about availability of required blood group and the list of donors with required blood group .

(ii)Scope of this document:

- Immediate updation of data about available blood
- It will display data of required blood from receivers form to admin.
- Display of several donors of specific blood groups

It has the capabilities:

- Login
- View Available blood groups
- Search blood
- Online blood donation form.
- Online blood receiver form
- Login and Logout Security

The Admin have the following access to this website:-

- Login
- view donor
- Update donor
- Remove and deactivate donor
- View receivers
- Profile Edit
- Logout

Technologies used:-

1.Front-End Development:

- Html
- Css

2.Back-End Development

- Php
- MySQL

(iii)overview:

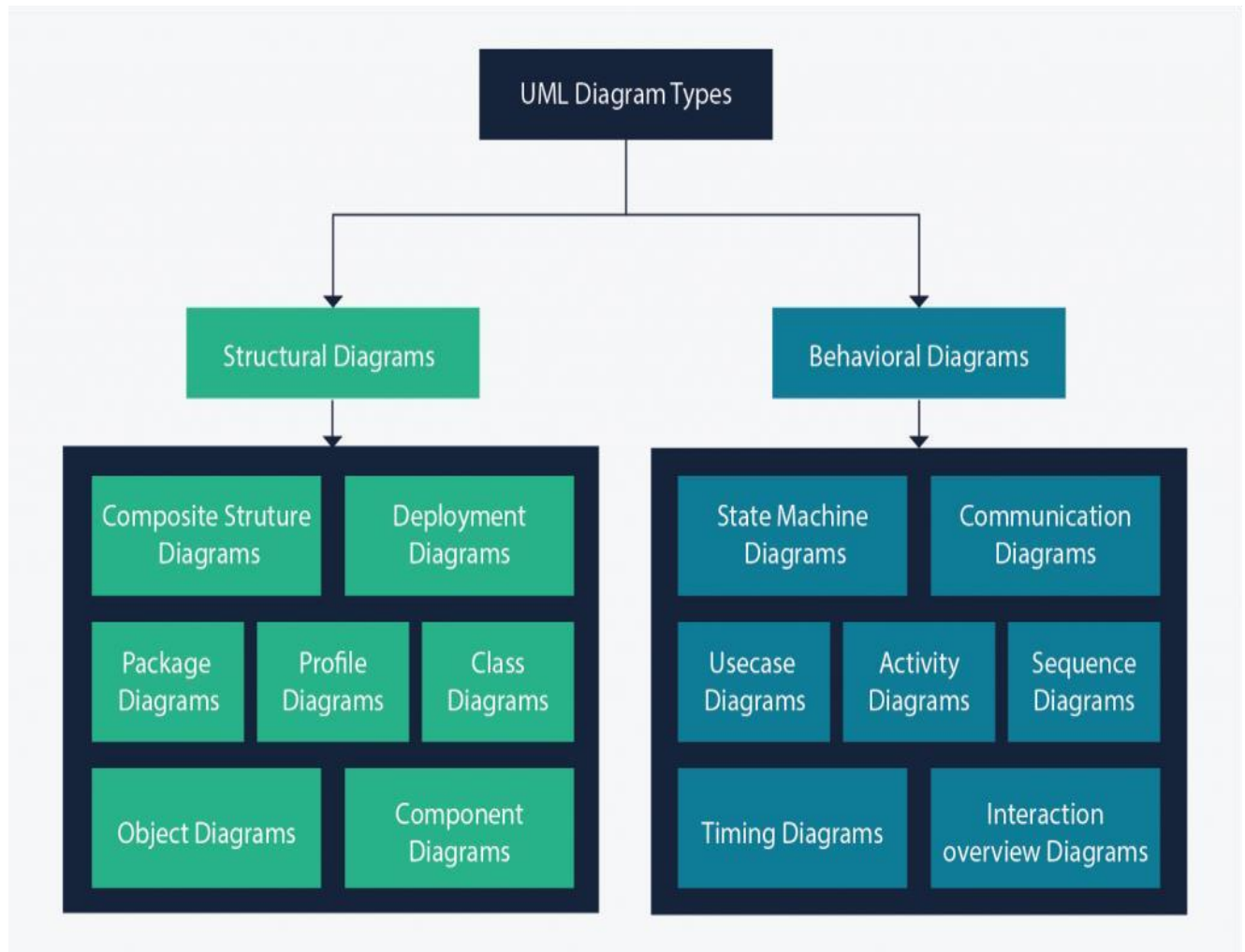
- In this User should enter the valid username and password to get access to its profile.
- The user can see the available blood groups in nearest blood banks and can see the distance between the blood bank from their location
- And they can see the list of donors which are available for the specific blood group required for the users and they can see the name and the phone number to contact them

Product features:

- Login Interface :
User should enter the valid username and password to get access to its profile.
- user Profile :
user will able to see his first name, last name, blood group, age, phone number of the users
- Availability :
We will show the available donors for the specific blood groups required for the users and we will give their name and their phone number to contact them.
- Report :
It will be available on the Admin's Profile and will show the Availability of the Blood Groups with its no. of available bottle as per admin's choice to view the report as Month, Day, or Year.

4. UML DIAGRAMS

UML stands for Unified Modelling Language. It's a rich language to model software solutions, application structures, system behaviour and business processes. There are 14 UML diagram types to help you model these behaviours.

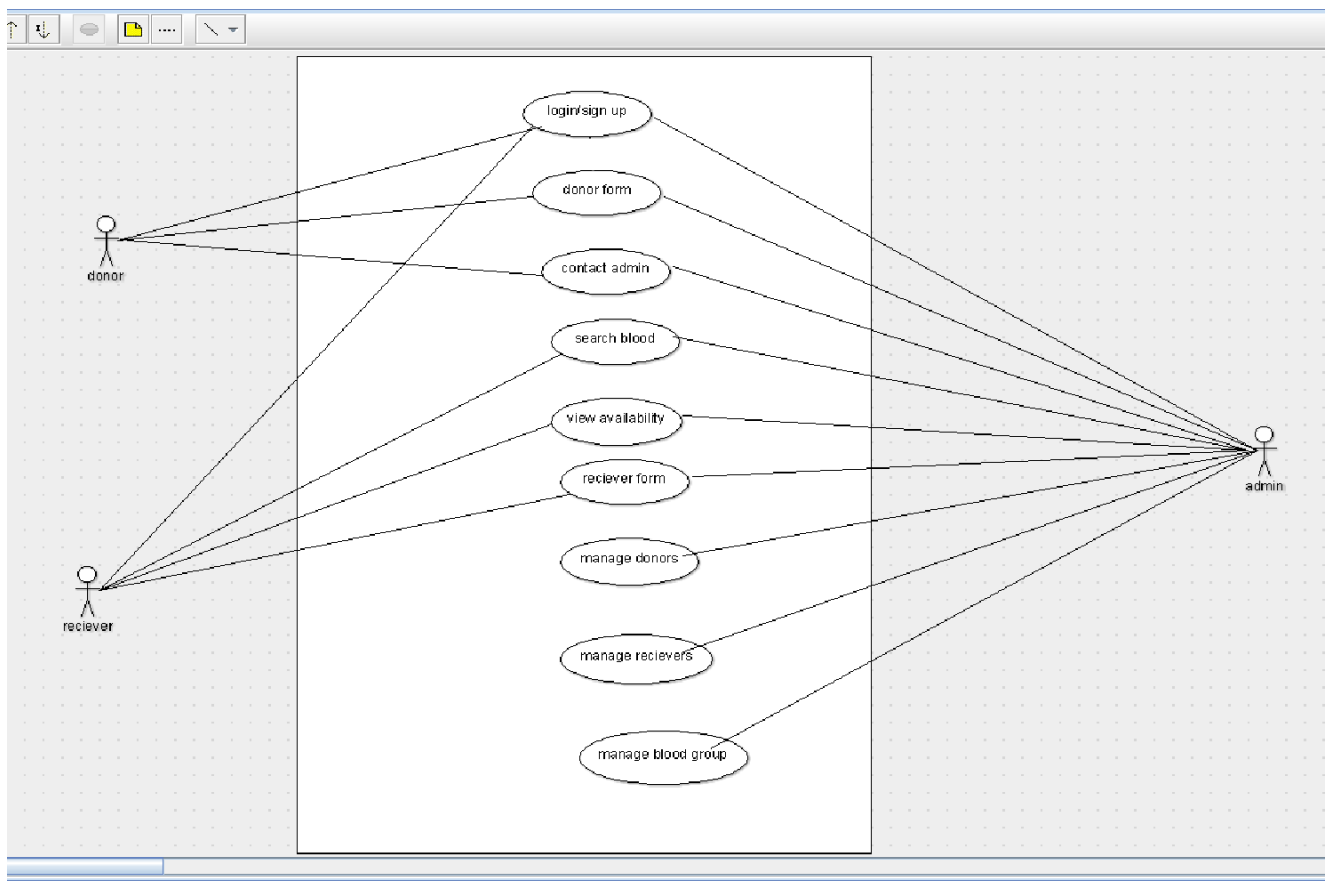


Structure diagrams show the things in the modelled system. In a more technical term, they show different objects in a system. Behavioural

diagrams show what should happen in a system. They describe how the objects interact with each other to create a functioning system.

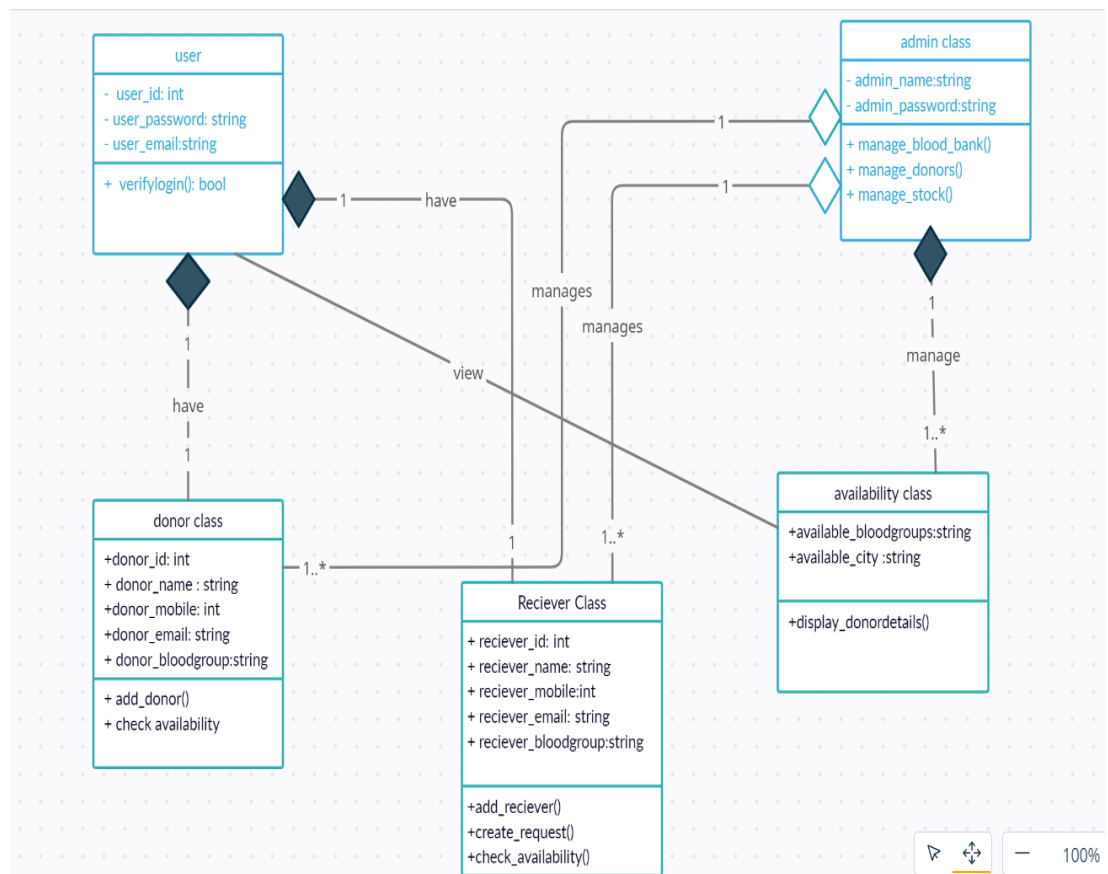
1.USE CASE DIAGRAM:

A use case diagram is used to represent the dynamic behaviour of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles



2. CLASS DIAGRAM

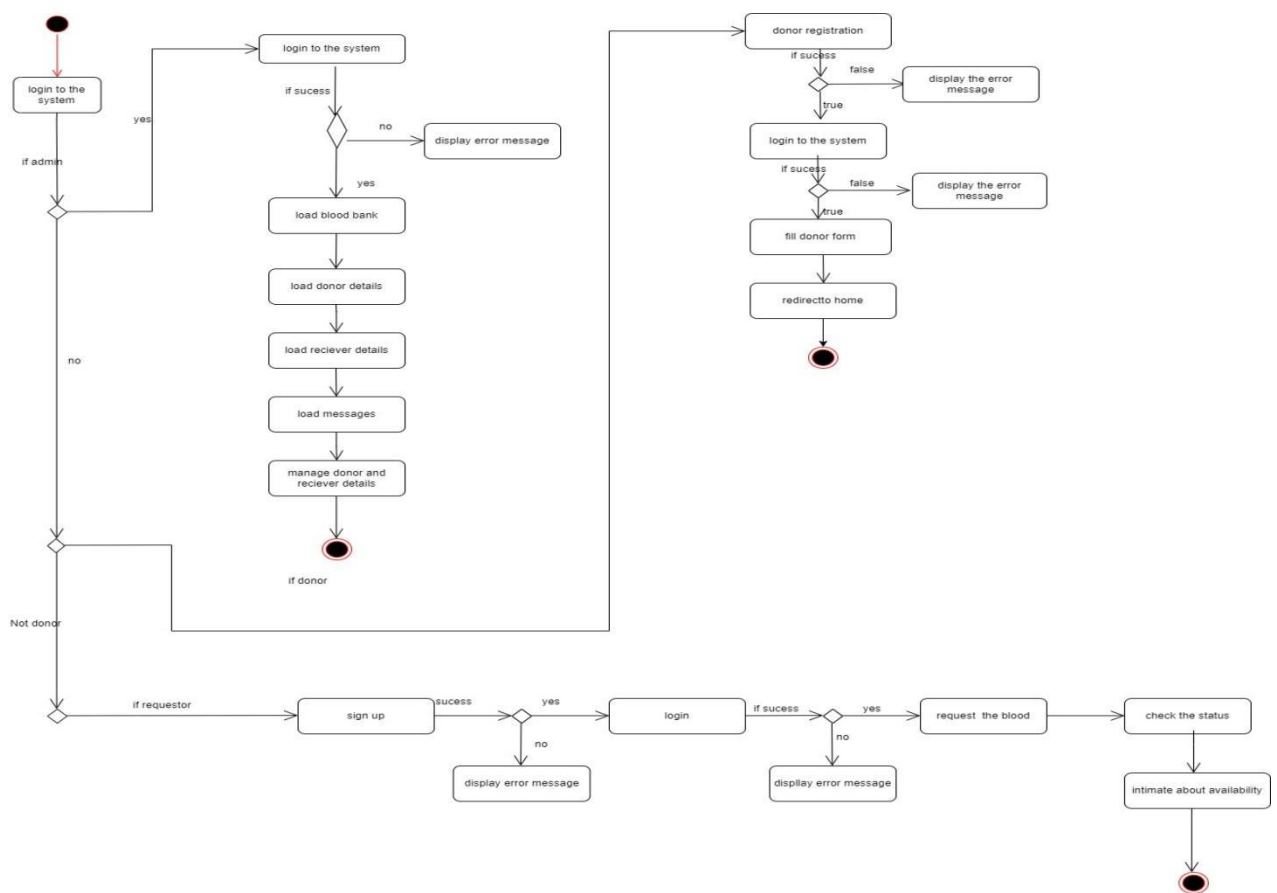
- Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.
- In this class diagram we have 4 Classes-user,blood bank,donor,admin
- The user class contains user method, blood bank class contains verifying blood bank, donor class contains donor details and admin class contains modification of the details in blood bank.



3. STATECHART DIAGRAM:

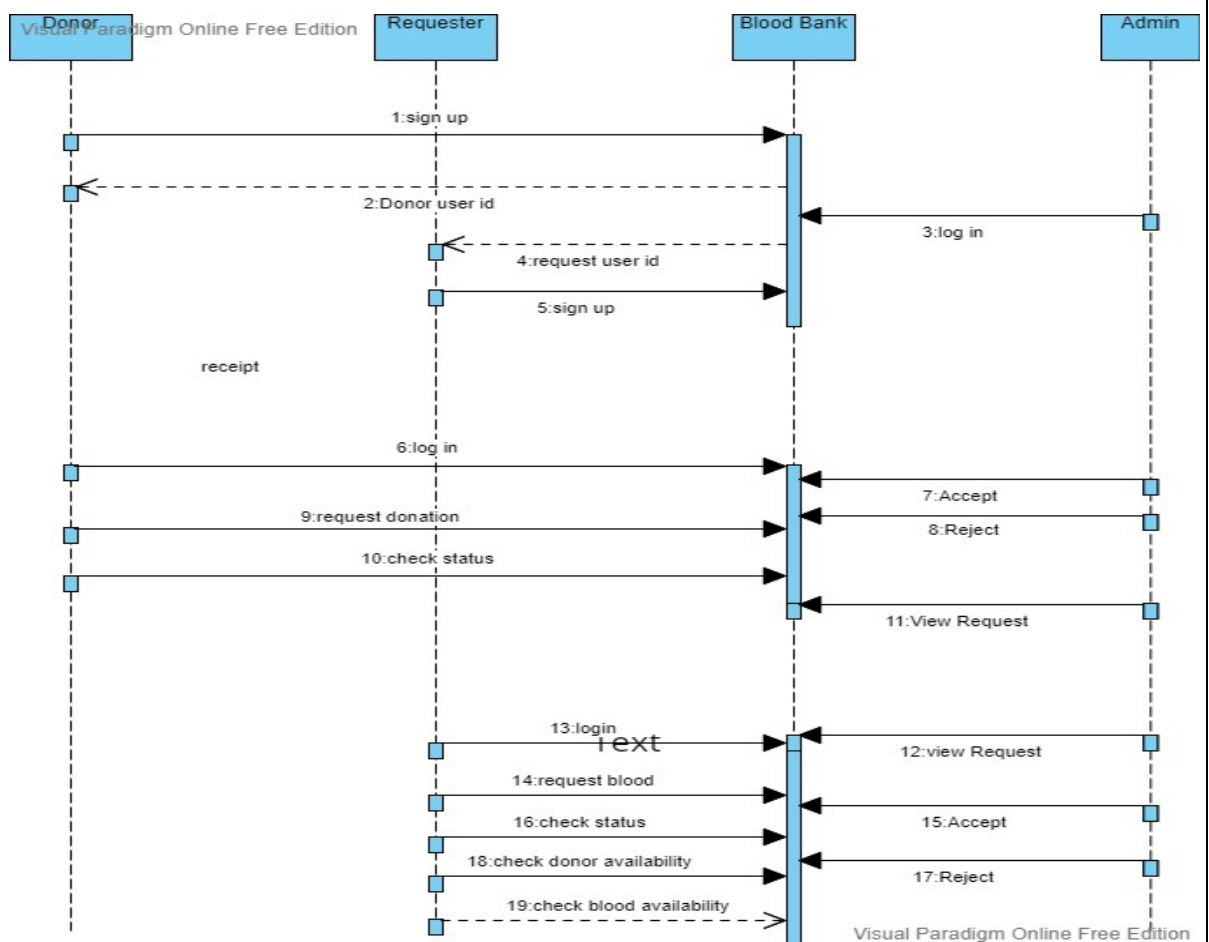
A state chart diagram is a type of diagram used in computer science and related fields to describe the behavior of systems. State diagrams require that the system described is composed of a finite number of states.

States including in following systems are Admin login details, to check login details is valid or not, and to login to the system successfully and to access the internal data successfully.



4. SEQUENCE DIAGRAM:

- The sequence diagram represents the flow of messages in the system and is also termed as an event diagram. It helps in envisioning several dynamic scenarios. It portrays the communication between any two lifelines as a time-ordered sequence of events, such that these lifelines took part at the run time.
- In UML, the lifeline is represented by a vertical bar, whereas the message flow is represented by a vertical dotted line that extends across the bottom of the page. It incorporates the iterations as well as branching.



5. DEPLOYMENT DIAGRAM:

Deployment diagrams are used for describing the hardware components, where software components are deployed.

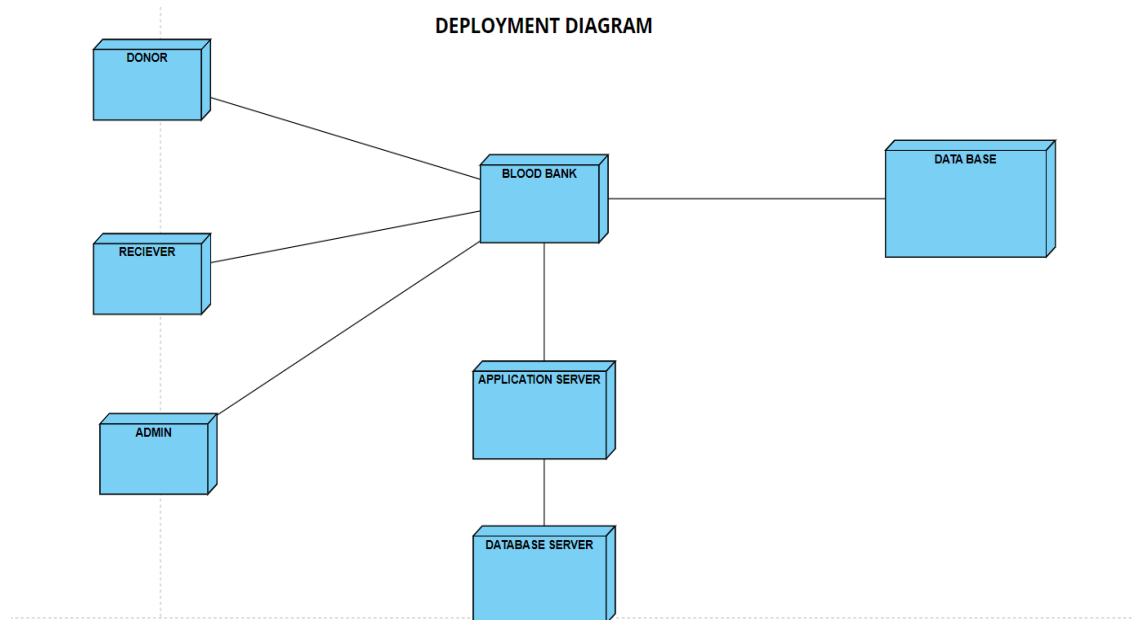
Component diagrams and deployment diagrams are closely related.

Component diagrams are used to describe the components and deployment diagrams show how they are deployed in hardware.

In the below diagram, the donors require only the blood bank system. For this blood bank system, there is a use for application server and database server.

Application server has the application part and the database server consists of all the databases related to the project.

To store the data, we require a hardware part like data base, which has to be connected.



5.SAMPLE CODE:

Code for receiving donor details:

FRONTEND:

```
<html>
  <head>

  </style>
  <title>Donor Registration form </title>
  <link rel="stylesheet" href="donor reg.css">

  </head>

  <body>
    <h3>Donor Registration form</h3>
    <form action="donor.php" method="post">

    <table align="center" cellpadding = "10">

    <!-- First Name ----->
    <tr>
    <td>FIRST NAME</td>
    <td><input type="text" name="First_Name" maxlength="30" placeholder="(max 30
characters a-z and A-Z)"/>

    </td>
    </tr>

    <!-- Last Name ----->
    <tr>
    <td>LAST NAME</td>
    <td><input type="text" name="Last_Name" maxlength="30" placeholder="(max 30
characters a-z and A-Z)"/>

    </td>
    </tr>

    <!-- AGE ----->
```

```

    <tr>
    <td>AGE</td>
    <td><input type="number" name="AGE" id="">
    </td>
    <tr>
    <td>DATE OF BIRTH</td>
    <td><input type="date" name="d_o_b" id="date"></td>
    <!-- Email Id ----->
    <tr>
    <td>EMAIL ID</td>
    <td><input type="email" name="Email_Id" maxlength="100" placeholder="your
    email address here"/></td>
    </tr>

    <!-- Mobile Number ----->
    <tr>
    <td>MOBILE NUMBER</td>
    <td>
    <input type="number" name="Mobile_Number" maxlength="10" placeholder="10
    digit number"/>

    </td>
    </tr>

    <!-- Gender ----->
    <tr>
    <td>GENDER</td>

    <td>
    <select name="GENDER" id="GENDER">
    <option value="-1"></option>
    <option value="MALE">MALE</option>
    <option value="FEMALE">FEMALE</option>
    <option value="TRANSGENDER">TRANSGENDER</option>
    <option value="OTHER">OTHER</option>
    </tr>
    </td>

```



```
<!-- BLOOD GROUP ----->
```

```
<tr>
```

```
<td>BLOOD GROUP</td>
```

```
<td>
```

```
<select name="BLOOD_GROUP" id="BLOOD_GROUP">
```

```
<option value="-1"></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>
```

```
</tr>
```

```
</td>
```

```
<tr>
```

```
<tr>
```

```
<td>BODY WEIGHT</td>
```

```
<td><input type="number" name="BODY_WEIGHT"></td>
```

```
</tr>
```

```
<td>LAST DONATED</td>
```

```
<td><input type="date" name="ldate" id="ldate"></td>
```

```
<!-- PINCODE ----->
```

```
<tr>
```

```
<td>PINCODE</td>
```

```
<td><input type="number" name="pin" id="pin"></td>
```

```
<!-- Address ----->
```

```
<tr>
```

```
<td>ADDRESS <br /><br /><br /></td>
```

```
<td><textarea name="Adress" rows="4" cols="30"></textarea></td>
```

```
</tr>
```

```
<!--City ----->
```

```
<tr>
```

```
<td>CITY</td>
```

```
<td>
```

```
<select name="City" maxlength="30">
```

```
<option value="">Adilabad</option>
```

```
<option
```

```
value="477">Agra</option>
```

```
<option
```

```
value="70">Ahmedabad</option>
```

```
<option
```

```
value="290">Ahmednagar</option>
```

```
<option
```

```
value="326">Aizawal</option>
```

```
<option
```

```
value="407">Ajmer</option>
```

```
<option
```

```
value="274">Akola</option>
```

```
<option
```

```
value="219">Alapuzzha</option>
```

```
<option
```

```
value="465">Aligarh</option>
```

```
<option
```

```
value="464">Allahabad</option>
```

```
<option
```

```
value="584">Almora</option>
```

```
<option
```

```
value="64">Alog</option>
```

```
<option
```

```
value="408">Alwar</option>
```

```
<option
```

```
value="132">Ambala</option>
```

```
<option
```

```
value="521">Ambedkarnagar</option>
```

```
<option
```

```
value="Amravati">Amravati</option>
```

	<option
value="68">Amrela</option>	
	<option
value="379">Amritsar</option>	
	<option
value="201">Anantnag</option>	
	<option
value="Anantpur">Anantpur</option>	
	<option
value="580">Andaman</option>	
	<option
value="350">Angul</option>	
	<option
value="266">Anooppur</option>	
	<option
value="121">Araria</option>	
	<option
value="268">Ashoknagar</option>	
	<option
value="270">Aurangabad</option>	
	<option
value="102">Aurangabad</option>	
	<option
value="512">Azamgarh</option>	
	<option
value="638">Badakhshan</option>	
	<option
value="192">Badgan</option>	
	<option
value="639">Badghis</option>	
	<option
value="261">Badwani</option>	
	<option
value="587">Bageshwar</option>	
	<option
value="640">Baghlan</option>	
	<option
value="530">Bagpat</option>	

value="509">Bahraich</option> <option
value="424">East</option> <option
value="105">East Champaran</option> <option
value="319">East Garo Hill</option> <option
value="east Godavari">east Godavari</option> <option
value="52">East Kameng Seppa</option> <option
value="318">East Khasi Hill</option> <option
value="54">East Siang</option> <option
value="676">Elbasan</option> <option
value="209">Ernakulam</option> <option
value="434">Erode</option> <option
value="484">Etah</option> <option
value="482">Etawah</option> <option
value="473">Faizabad</option> <option
value="643">Farah</option> <option
value="134">Faridabad</option> <option
value="385">Faridkot</option> <option
value="496">Farrukhabad</option> <option
value="644">Faryab</option>

```

                                <option
value="148">Fatehabad</option>
                                <option
value="633">Rajnandgaon</option>

</select>

</td>
</tr>

<!-- Submit and Reset ----->
<tr>
<td colspan="2" align="center">
<button name="save" class="button">Register</button>
<button name="reset" class="button"><a href="donor_reg
form.html">Reset</button></a>
</td>
</tr>
</table>

</form>

</body>
</html>

```

CSS:

```

h3{

font-family: Calibri;
font-size: 25pt;
font-style: normal;
font-weight: bold;
color:rgb(221, 69, 42);
text-align: center;
text-decoration: underline
}

```

```
body {
  background-image: url('https://media.istockphoto.com/photos/the-concept-of-
charity-love-donate-and-helping-hand-picture-
id1280945508?b=1&k=20&m=1280945508&s=170667a&w=0&h=X1lyt6a5JHE4N
IGqgyqZQz1JNhsL_yi8lcbYdKCw-OQ=');
  background-size:cover ;
  background-repeat:no-repeat;

}

table{
  font-family: Calibri;
  color:black;
  font-size: 11pt;
  font-style: normal;
  font-weight: bold;
  text-align:;
  border-radius: 25px;
  border: 2px solid rgb(128, 51, 0)
}
table.inner{
  border: 0px
}

.button {
  background-color: #db2b34;
  border: none;
  border-radius: 15px;
  color: white;
  padding: 15px 32px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
  font-size: 16px;
  margin: 4px 2px;
  cursor: pointer;

}
```

BACKEND:

```

<?php
$server_name="localhost";
$username="root";
$password="";
$database_name="blood-bank";

$conn = mysqli_connect($server_name,$username,$password,$database_name);
if(!$conn)
{
    die("connection failed" . mysqli_connect_error());
}
if(isset($_POST['save']))
{

    $First_Name = $_POST['First_Name'];
    $Last_Name = $_POST['Last_Name'];
    $Mobile_Number = $_POST['Mobile_Number'];
    $AGE = $_POST['AGE'];
    $d_o_b = $_POST['d_o_b'];
    $Email_Id = $_POST['Email_Id'];
    $GENDER = $_POST['GENDER'];
    $BLOOD_GROUP = $_POST['BLOOD_GROUP'];
    $BODY_WEIGHT=$_POST['BODY_WEIGHT'];
    $ldate = $_POST['ldate'];
    $pin = $_POST['pin'];
    $Adress = $_POST['Adress'];
    $City = $_POST['City'];

    // get the post recordsswds

    $sql_query = "INSERT INTO
donordetails(fname,lname,mobnum,age,dob,email,gender,blood_group,body_weight
,l_donated,pin,adress,city)

```

```
VALUES ( '$First_Name', '$Last_Name',  
'$Mobile_Number','$AGE','$d_o_b','$Email_Id','$GENDER','$BLOOD_GROUP','$  
BODY_WEIGHT','$ldate','$pin','$Adress','$City')";
```

```
// insert in database
```

```
$rs = mysqli_query($conn, $sql_query);
```

```
if($rs)
```

```
{
```

```
    echo '<script>alert("register details sucessful")</script>';
```

```
    include 'index.html';
```

```
}
```

```
else
```

```
{
```

```
    echo '<script>alert("register details not sucessful")</script>'; // "error" .
```

```
$sql . "" . mysqli_error($conn);
```

```
    include 'donor_reg form.html';
```

```
}
```

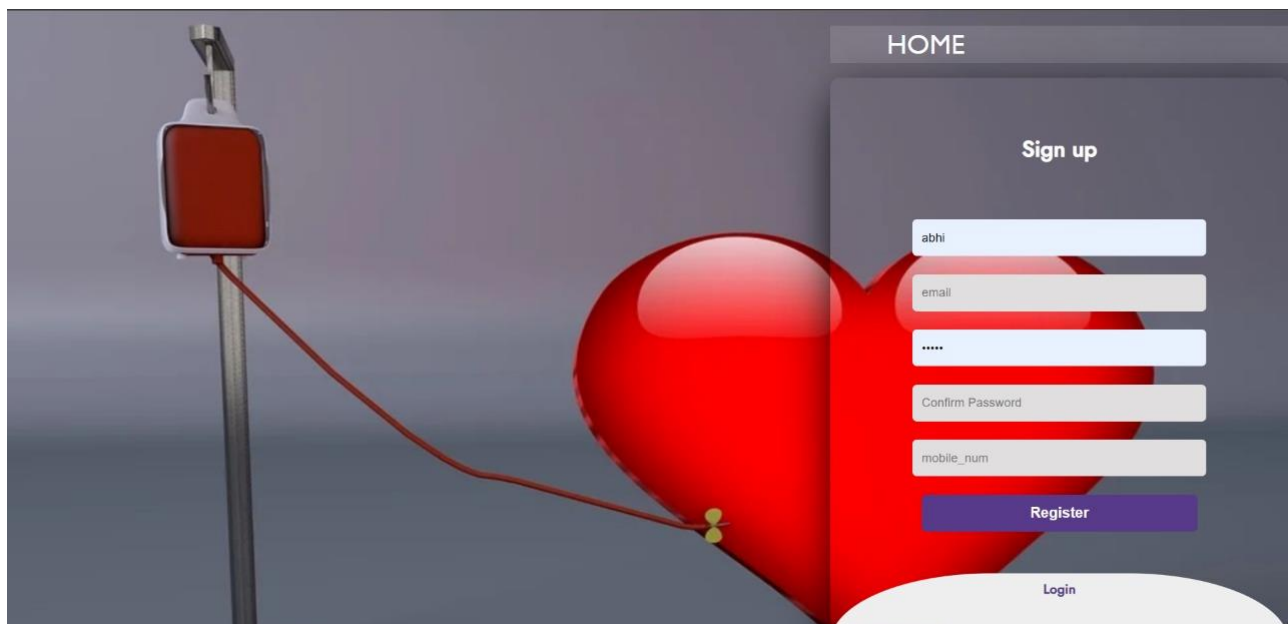
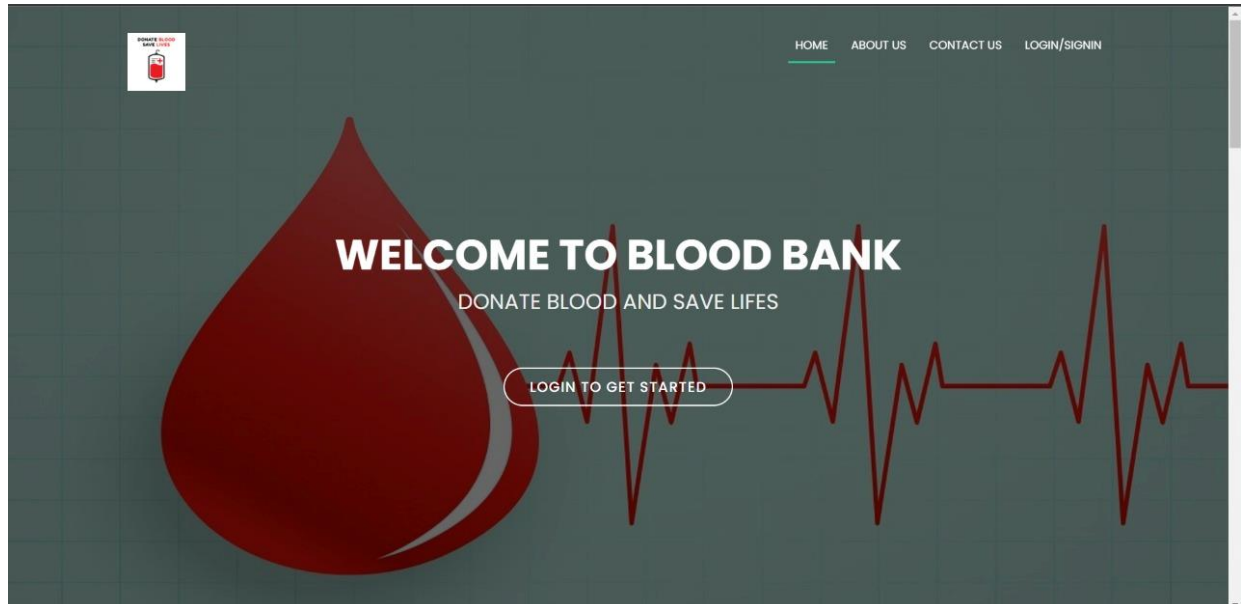
```
mysqli_close($conn);
```

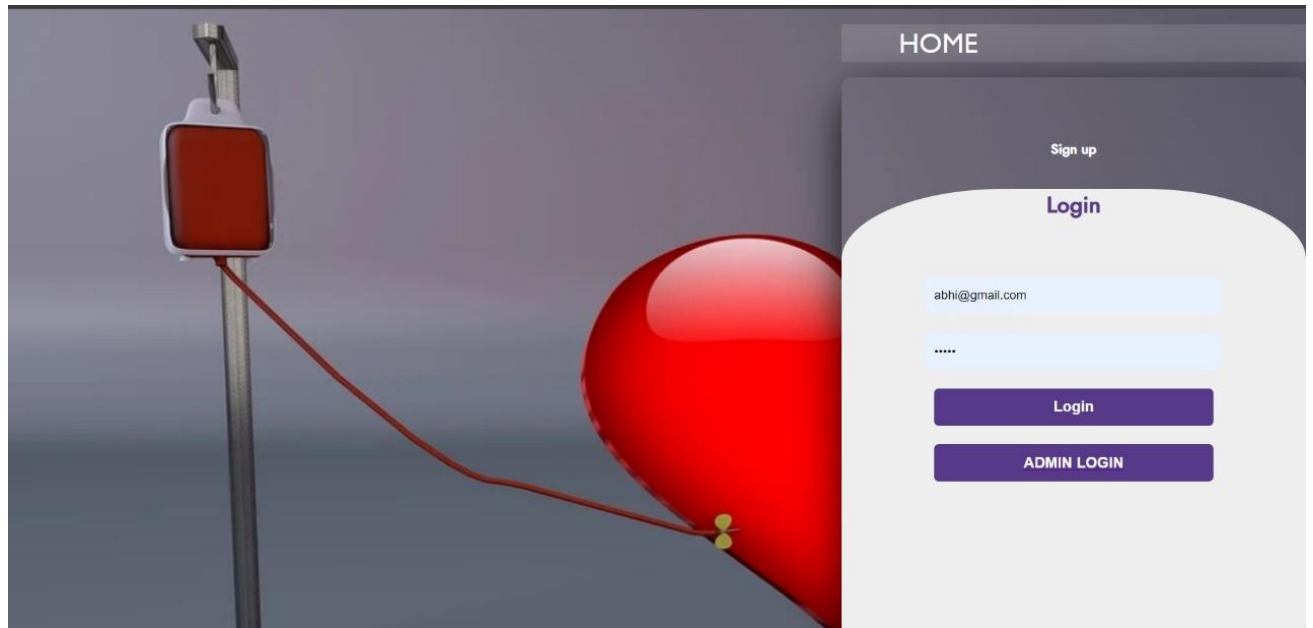
```
}
```

```
?>
```


6.RESULTS:

SCREENSHOTS OF WEB PAGES:





[Home](#)
[About](#)
[Services](#)
[Gallery](#)
[Contact](#)

WELCOME TO BLOOD BANK

DONATE BLOOD SAVE LIFE

Blood Donation Facts:

- every two seconds someone needs blood
- The donated blood will be replaced in 56 days (less than 2 months)
- Donor will not become "weak" after blood donation
- Donor will not become "weak" after blood donation
- One can donate blood every 90 days (3 months)
- It takes only 15 to 20 minutes to donate blood
- One pint of blood can save up to three lives.
- 94 percent of blood donors are registered voters.
- 10 pints: amount of blood in the body of an average adult.
- Blood centers often run short of types O , B red blood cells.
- There is no substitute for human blood.

Learn About Donation:

Compatible Blood Type Donors		
Blood Type	Donate Blood To	Receive Blood From
A+	A+ AB+	A+ A- O+ O-
O+	O+ A+ B+ AB+	O+ O-
B+	B+ AB+	B+ B- O+ O-
AB+	AB+	Everyone
A-	A+ A- AB+ AB-	A- O-
O-	Everyone	O-
B-	B+ B- AB+ AB-	B- O-
AB-	AB+ AB-	AB- A- B- O-

Benefits of Blood Donation:

- Stimulates Blood Cell Production
- Blood Donation helps to reduce risk of heart attack and cancer
- Donation of blood, burns calories & helps in weight loss
- Blood donation helps to maintain healthy liver
- Prevents Hemochromatosis and helps to maintain iron level
- By donating blood you can save someone's life
- It helps you to complete your social responsibilities

A Blood Bank Management System

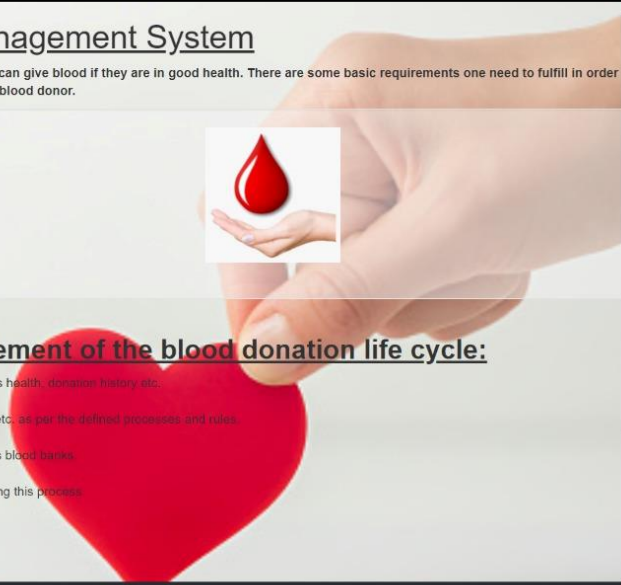
Blood bank project was started on 10th november 2021 for the Health and Family Welfare. Most people can give blood if they are in good health. There are some basic requirements one need to fulfill in order to become a blood donor.

• Objectives

- Safe and Adequate Blood Supplies
- Reduced Turnaround Time
- Preventing Wastage of Blood
- Restrict Professional Donors
- Networking of Blood Banks
- Donor Repository

• Salient Features

- Web Based Application
- Aadhar Linkage
- Decision Support
- Enforces Guidelines
- Dashboard
- Statutory Reports



The six major components for management of the blood donation life cycle:

- The bio metric Donor Management System for identifying, tracking and blocking donors based on donor's health, donation history etc.
- It provides features such as blood grouping, TTI screening, antibody screening, component preparation etc. as per the defined processes and rules.
- A centralized Blood Inventory Management System for keeping track of the blood stock across numerous blood banks.
- Bio-Medical Waste Management System for disposal of discarded blood and other waste generated during this process.
- Generation of rare blood group donor registries and the generation of regular repeat donors.
- Alert and Notification System.

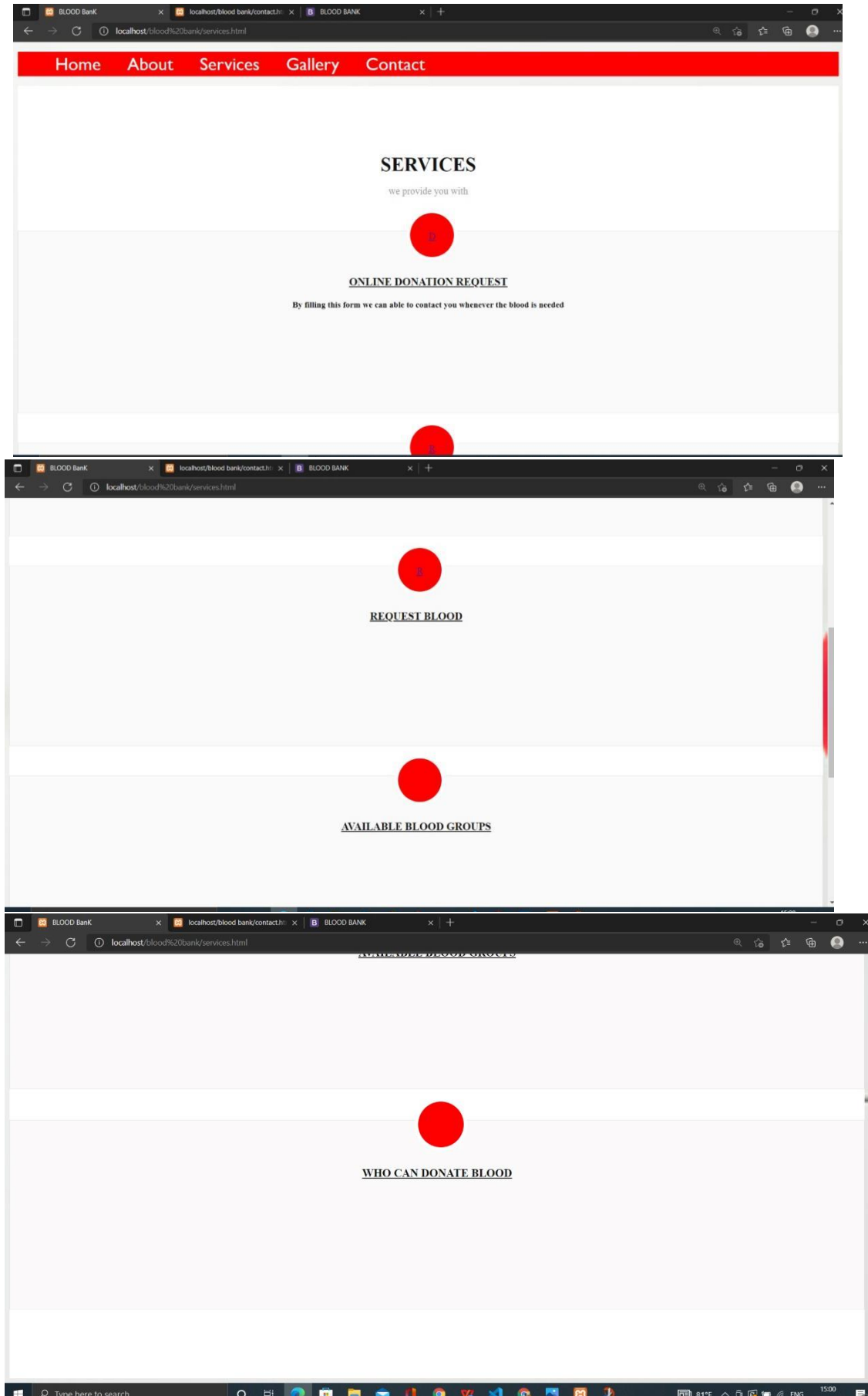
Contact Form

User Name



Email

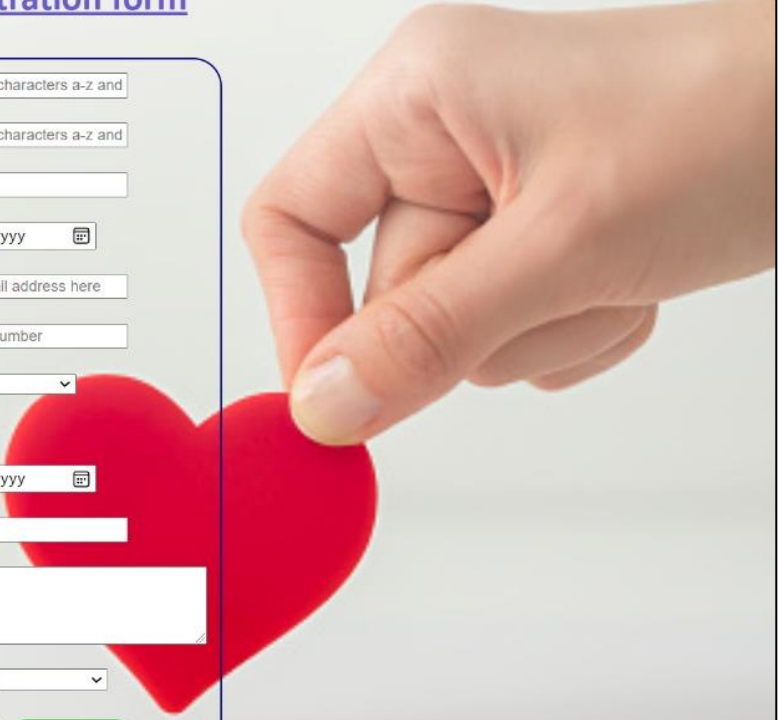
Subject

message





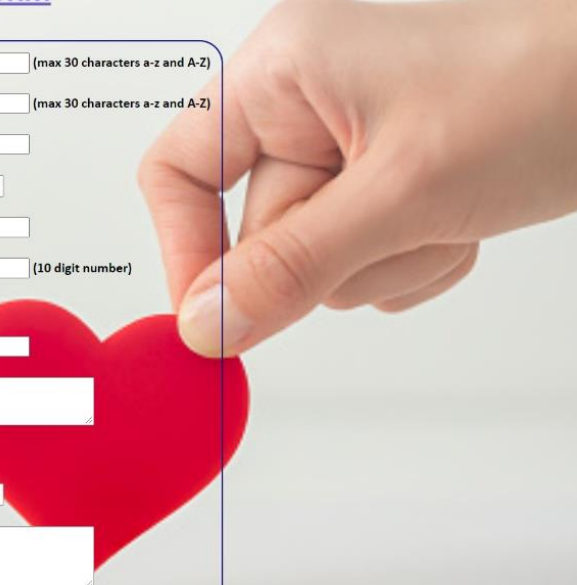
Donor Registration form

FIRST NAME	<input type="text" value="(max 30 characters a-z and"/>
LAST NAME	<input type="text" value="(max 30 characters a-z and"/>
AGE	<input type="text"/>
DATE OF BIRTH	<input type="text" value="dd - mm - yyyy"/> 
EMAIL ID	<input type="text" value="your email address here"/>
MOBILE NUMBER	<input type="text" value="10 digit number"/>
GENDER	<input type="text" value=""/>
BLOOD GROUP	<input type="text" value=""/>
LAST DONATED	<input type="text" value="dd - mm - yyyy"/> 
PINCODE	<input type="text"/>
ADDRESS	<input type="text"/>
CITY	<input type="text" value="Adilabad"/>



RECEPIENT FORM

FIRST NAME	<input type="text" value=""/>	(max 30 characters a-z and A-Z)
LAST NAME	<input type="text" value=""/>	(max 30 characters a-z and A-Z)
AGE	<input type="text"/>	
DATE OF BIRTH	<input type="text" value="dd - mm - yyyy"/> 	
EMAIL ID	<input type="text"/>	
MOBILE NUMBER	<input type="text"/>	(10 digit number)
GENDER	<input type="text" value=""/>	
NUMBER OF PACKETS REQUIRED	<input type="text"/>	
REFERENCE HOSPITAL	<input type="text"/>	
BLOOD GROUP	<input type="text" value=""/>	
LAST RECIEVED	<input type="text" value="dd - mm - yyyy"/> 	
ADDRESS	<input type="text"/>	



[Home](#) [Log Out](#)

City:

Krishna

Blood Group:

O+

Search

[Home](#) [Log Out](#)

City:

Krishna

Blood Group:

O+

Search

Email	Name	Mobile	City	Blood_Group
sandeep@gmail.com	sandeep	2147483647	Krishna	B+



Blood Bank Home Admin

Admin Login

User Name

admin

Password

Login Here

Blood Bank

DashboardLogout

Dashboard

Inbox

Manage Donors

Need Blood

Inbox

sandeep: need of donar

ViewDelete

ABHIRAM: help me

ViewDelete

Blood Bank

DashboardLogout

Dashboard

Inbox

Manage Donors

Need Blood

Active Donor Details

S.No.	NAME	GENDER	BLOOD-GROUP	AGE	MOBILE	ADDRESS	View	Delete
1	sandeep	MALE	B+	21	2147483647	machilipatnam,531366,near collector office	View	Delete

Blood Bank

DashboardLogout

Dashboard

Inbox

Manage Donors

Need Blood

Need Blood

S.No.	Name	Gender	Blood	Unit	Hospital	R-Date	Update
1	abhiram	MALE	B-	2	ANITS	2021-12-31	View
2	abhi	MALE	A-	2		2021-12-23	View
3	abhi	FEMALE	A+	2	aegsrj5uj	2021-12-24	View
4	abhiram	MALE	O+	2	ANIL NEERUKONDA HOSPITALS	2021-11-11	View

7.CONCLUSION:

In this project we tried to implement the centralized Blood Bank Management System. The application provides appropriate information to users. The project is designed keeping in view the day to day problems faced by management. Deployment of our application will certainly help the people to reduce unnecessary wastage of time in personally going to each department or co-ordinator for some information. Computerized entry with student details are stored which could be referred any time. The main purpose is to reduce man power and time.