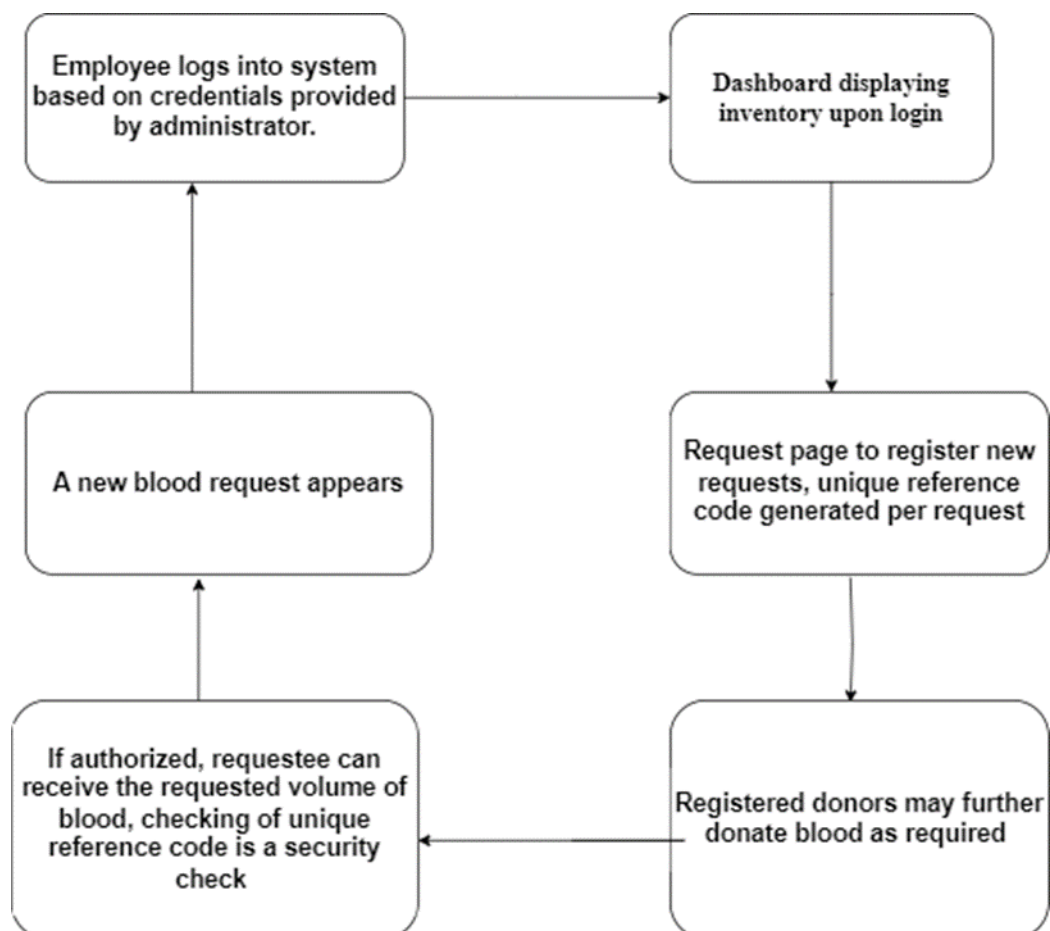


BLOOD DONOR MANAGEMENT SYSTEM

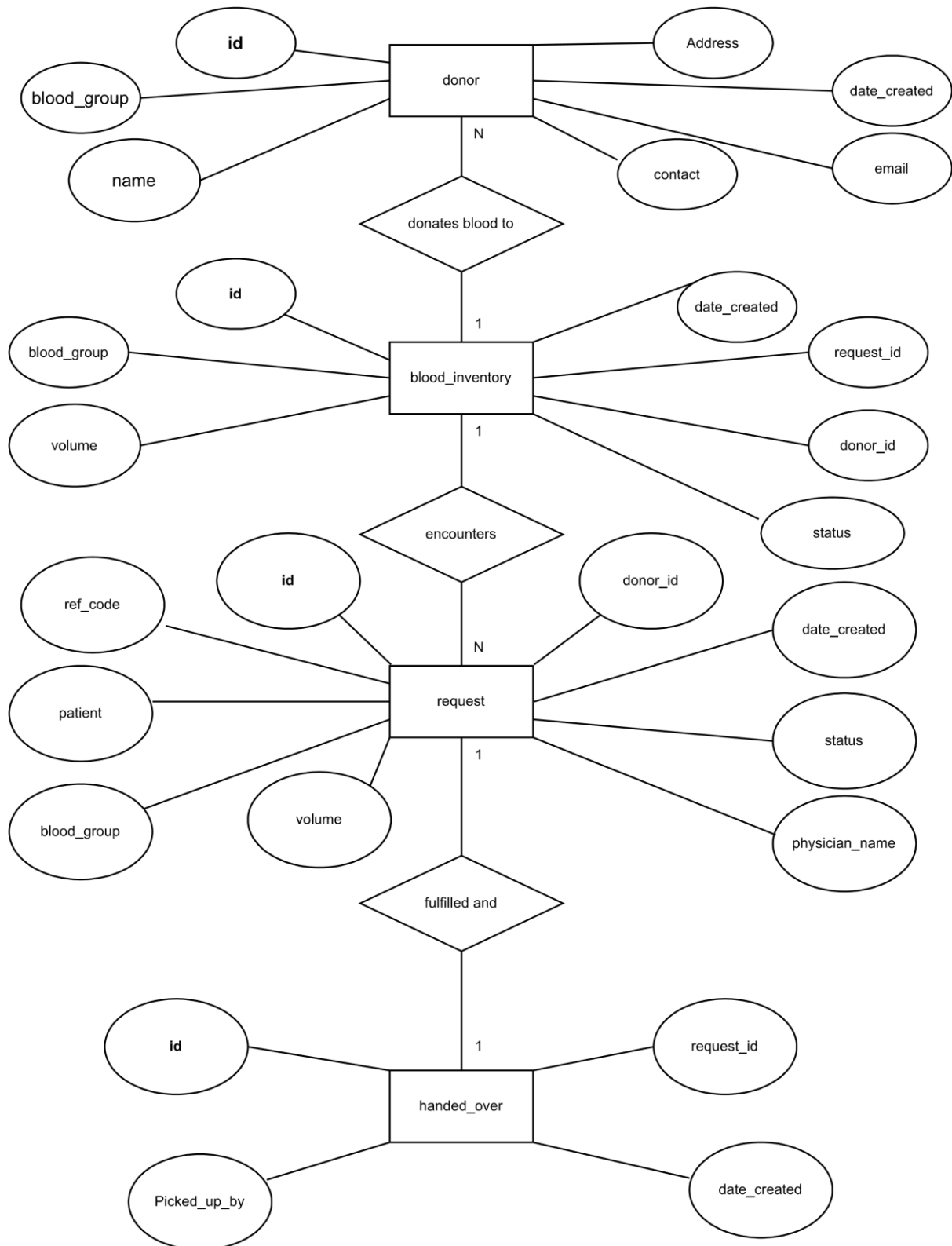
1. Candidate System

A Blood Donor Management System is utilised in individual hospitals for the purpose of managing inventory of Blood in their establishment.

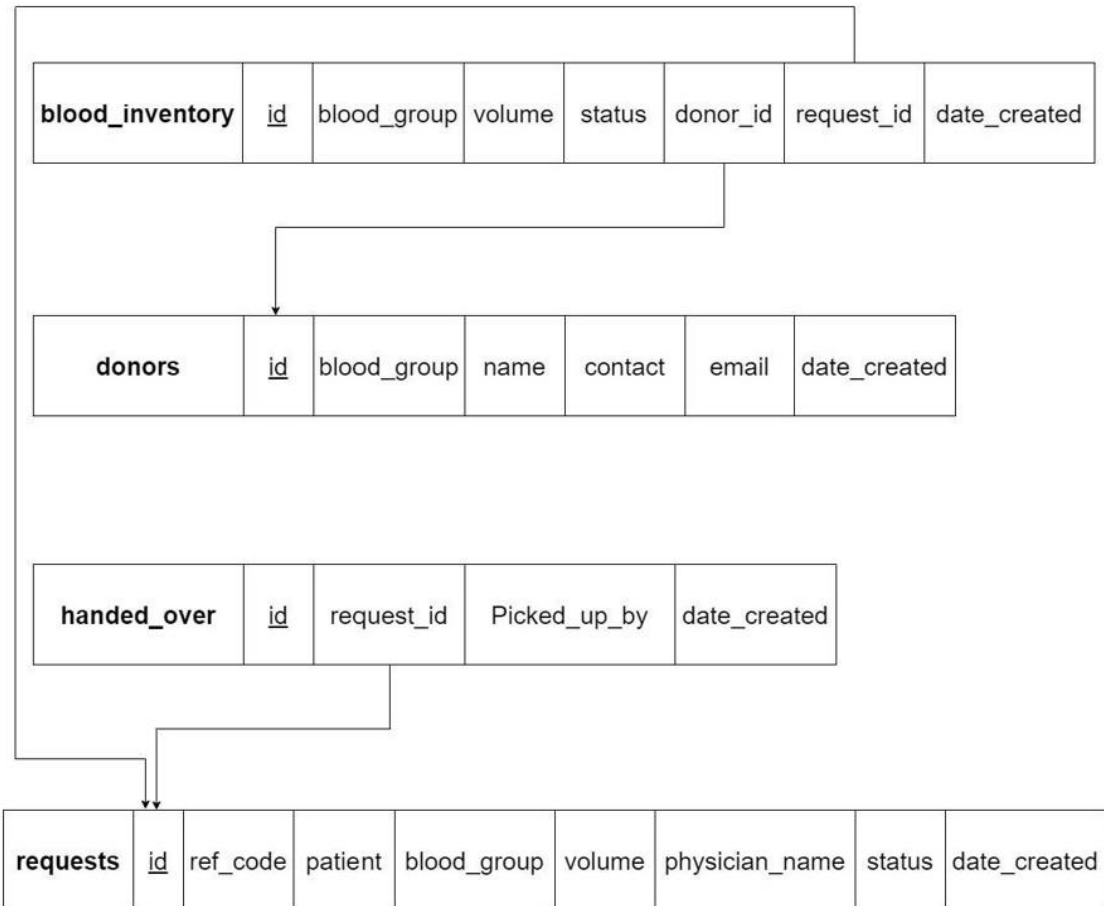
A purely employee operated system wherein various operations involving registrations of donors, recording donations, managing requests, supervising the receiving of authorized blood donations, means of adding users to the system by administrator based on privileges associated to employee job title.



2. ER Diagram:



3. Schema



4. Normalized Tables:

There are 5 tables present, namely:

1. Blood inventory (contains the information related to the available blood in the inventory)
2. Donors (contains the information related to the registered donors in the system)
3. Requests (contains the information related to registered requests put forth by patients)
4. Handed -over requests (Contains the information related to requests which have been approved)
5. Users (Contains the information related to the list of users that can access the system and their login credentials)

NOTE: The above tables are normalized up to BCNF form.

5. Explanation of each form:

1. Login:

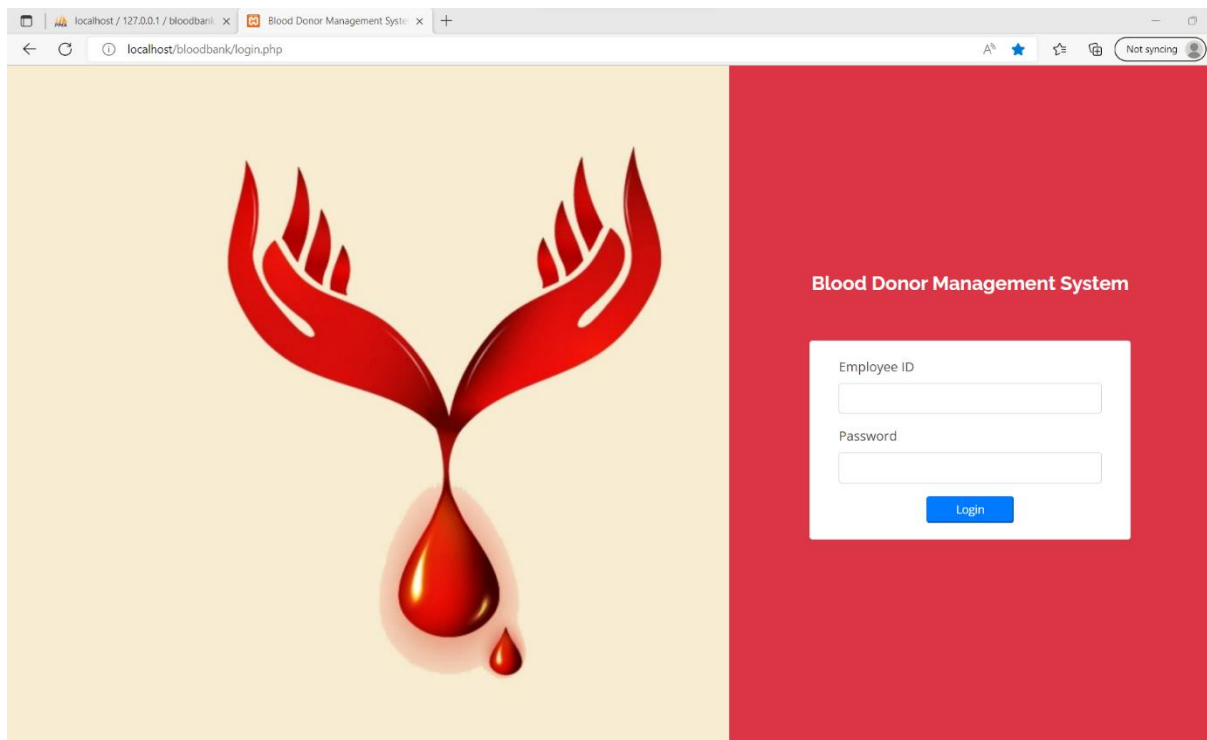


Figure 1

The login form(Figure 1) contains two main credentials:

1. Employee ID
2. Password

Employee should click login to enter the system.

Purpose: To ensure that an authorized user can access the system.

2. New Donor Registration Form:

The screenshot displays a web application titled "Blood Donor Management System". A modal form titled "New Donor" is open in the center. The form contains the following fields:

- Full Name: A text input field.
- Address: A text input field.
- Email: A text input field.
- Phone No.: A text input field.
- Blood Group: A dropdown menu with "A+" selected.

At the bottom of the form are "Save" and "Cancel" buttons. The background shows a sidebar with navigation links: Inventory, Statistics, Donors, Blood Donations, Requests, Handed Over, and Users. The main content area displays a table of donors with columns for Sr. No., Name, Blood Group, Address, Email, Phone No., Previous Donation, and Action. The table contains five rows of data, including entries for Percy Jackson and Serena Shetty.

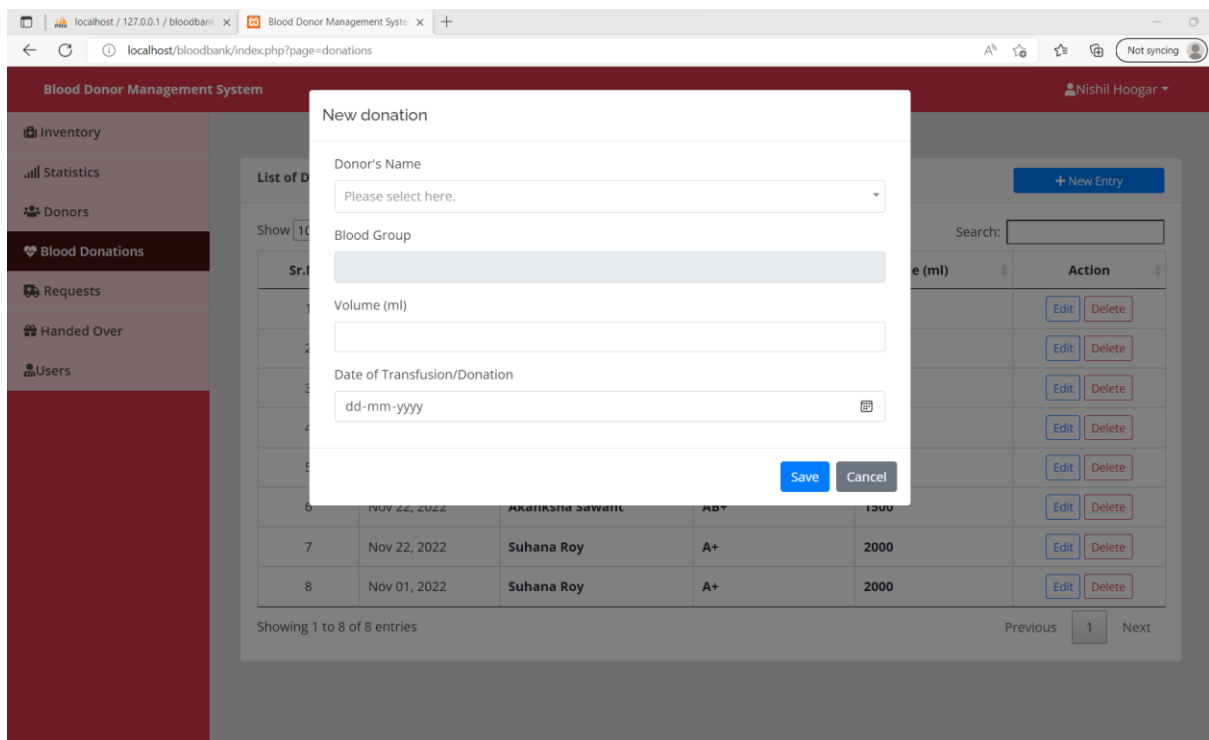
Figure 2

The New Donor Registration form(Figure 2) contains the following fields:

1. Full Name-Field to take Name as an input.
2. Address-Field to take Address as an input.
3. Email-Field to take Email Address as an input.
4. Phone No.-Field to take Phone No. as an input
5. Blood Group- A drop down selection with all blood groups as options.

Purpose: Collect information of a New Donor who wishes to register.

3.New Donation Form:



The screenshot displays the 'Blood Donor Management System' interface. A modal window titled 'New donation' is open, allowing for the entry of a new blood donation. The form includes the following fields:

- Donor's Name:** A dropdown menu with the placeholder text 'Please select here.'
- Blood Group:** A static text input field.
- Volume (ml):** A static text input field.
- Date of Transfusion/Donation:** A date picker set to 'dd-mm-yyyy'.

At the bottom of the modal are 'Save' and 'Cancel' buttons. In the background, a table lists existing donations with columns for 'Sr.', 'Date', 'Donor Name', 'Blood Group', 'Volume (ml)', and 'Action'. The table shows three entries, with the last two being by 'Suhana Roy'.

Sr.	Date	Donor Name	Blood Group	Volume (ml)	Action
6	Nov 22, 2022	Akanksha Sawant	AB+	1500	[Edit] [Delete]
7	Nov 22, 2022	Suhana Roy	A+	2000	[Edit] [Delete]
8	Nov 01, 2022	Suhana Roy	A+	2000	[Edit] [Delete]

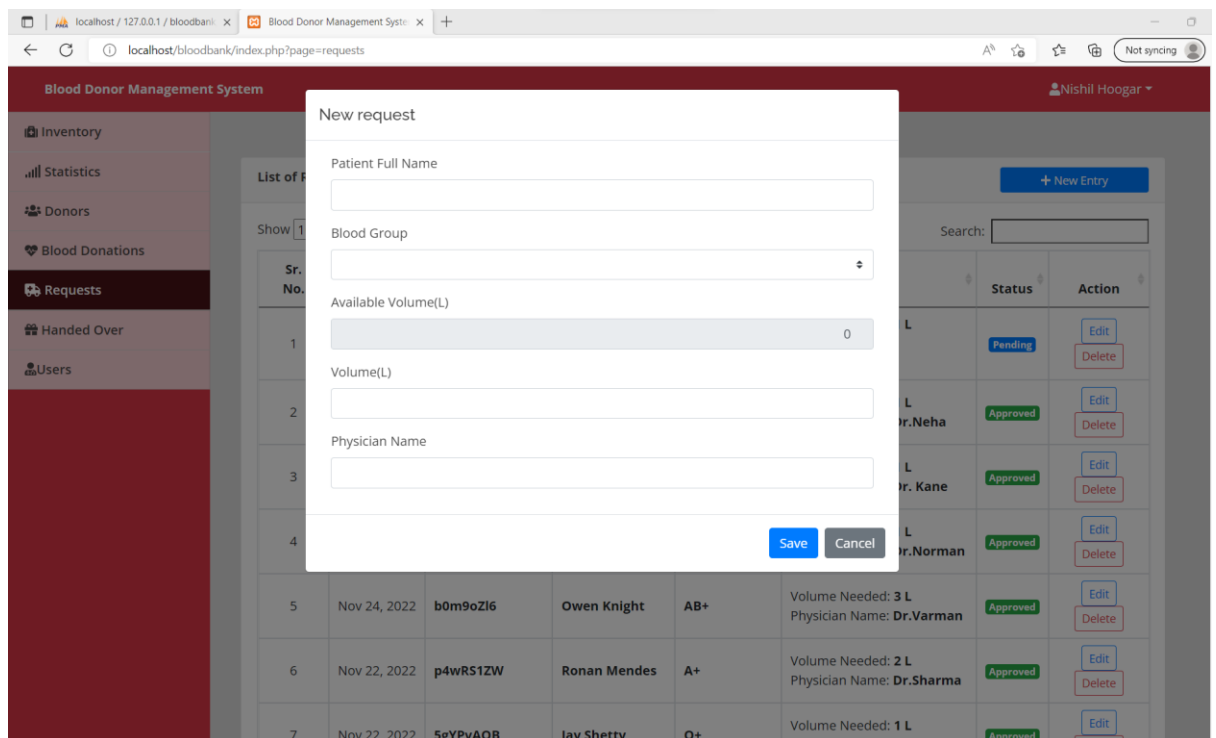
Figure 3

The New Donation Form (Figure 3) contains the following fields:

1. Donor's Name- A drop down selection with all registered blood donor's names as options.
2. Blood Group- A static field reflecting the blood group of the particular donor.
3. Volume- Records the volume of blood being donated.

4. Date of Transfusion/Donation-Records the current date on which the donation is occurring.
Purpose: Collect information of a New Donation.

4.New Request Form:



The screenshot displays the 'Blood Donor Management System' interface. A 'New request' modal form is open, allowing users to add a new blood request. The form includes fields for Patient Full Name, Blood Group (a dropdown menu), Available Volume(L) (a static field showing 0), Volume(L), and Physician Name. Below the form, a table lists existing requests with columns for Sr. No., Date, ID, Name, Blood Group, Volume Needed, Physician Name, Status, and Action. The table contains seven entries, each with a corresponding 'Edit' and 'Delete' button.

Sr. No.	Date	ID	Name	Blood Group	Volume Needed	Physician Name	Status	Action
1							Pending	Edit Delete
2							Approved	Edit Delete
3							Approved	Edit Delete
4							Approved	Edit Delete
5	Nov 24, 2022	b0m9oZl6	Owen Knight	AB+	Volume Needed: 3 L	Physician Name: Dr.Varman	Approved	Edit Delete
6	Nov 22, 2022	p4wRS1ZW	Ronan Mendes	A+	Volume Needed: 2 L	Physician Name: Dr.Sharma	Approved	Edit Delete
7	Nov 22, 2022	5gYPvAQB	Jay Shetty	O+	Volume Needed: 1 L		Approved	Edit Delete

Figure 4

The New Request Form(Figure 4) contains the following fields:

1. Patient Full Name- Field to take Name as an input.
2. Blood Group- A drop down selection with all blood groups as options.
3. Available Volume- A static field which displays the volume of blood of the particular type that is available.

4. Volume- Records the volume of blood that is requested.
5. Physician Name- Field to take Name of the Physician as an input.

Purpose: Collect information of a new request.

5. New Handover Form:

The screenshot displays the 'Blood Donor Management System' interface. A modal window titled 'New handover' is open, containing the following fields and buttons:

- Request Reference Code: Q4qWeRsg
- Check button
- Patient: 13
- Blood Group: B-
- Volume Needed: 1 L
- Physician: Dr. Kane
- Received by: (empty text field)
- Save button
- Cancel button

The background interface includes a sidebar with navigation links: Inventory, Statistics, Donors, Blood Donations, Requests, Handed Over, and Users. The main content area shows a table with columns for 'Sr.No', 'Status', 'Action', and 'Received by'. The table contains four rows of data, each with a 'Given: 1 L' status and a 'By:' field (Me, Patient Brother, Patient Friend, Patient Father). Each row has 'Edit' and 'Delete' buttons. A 'Search:' field and a '+ New Entry' button are also visible.

Figure 5

The New Handover Form (Figure 5) contains the following fields:

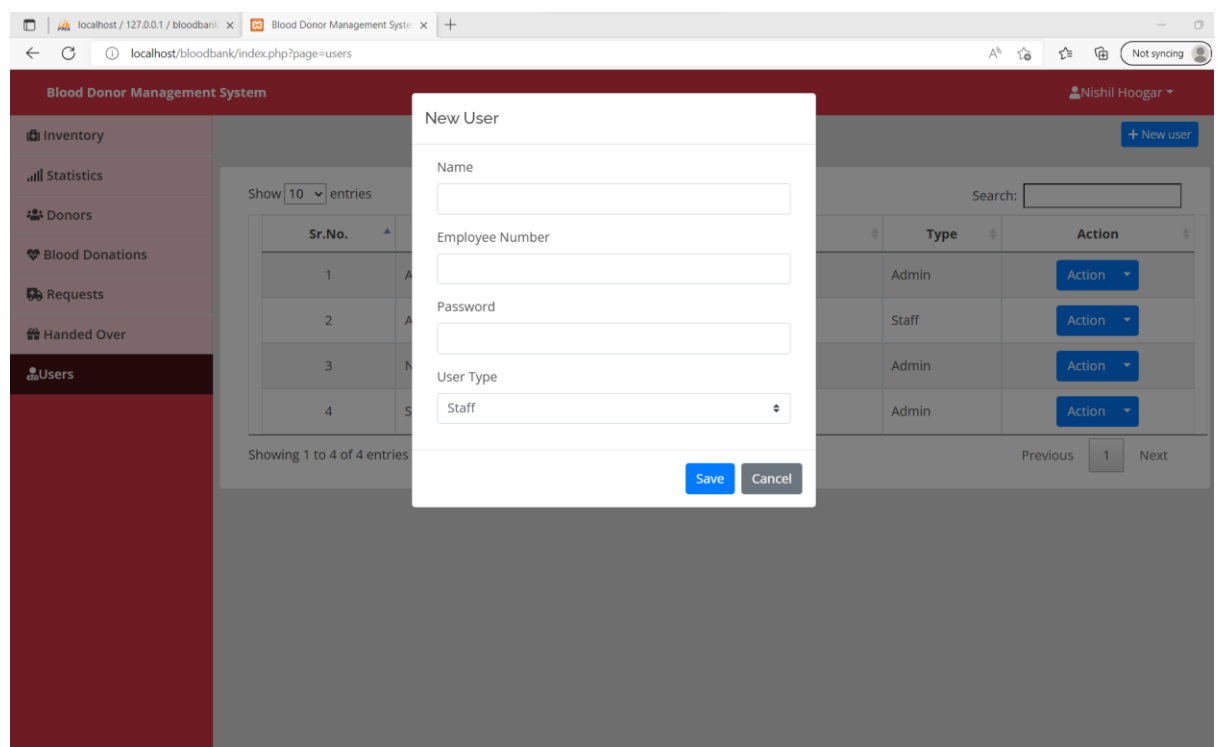
1. Request Refence Code- A unique reference code that has been generated upon submission of request has to be provided as a input in this field.
2. A check button- To check the status of the particular request (Pending/Approved) identified by the unique

reference code. Further displays information about the patient.

3. Received By: A field to enter the name of the Physician that has authorized the request.

Purpose: Collect information of the handover of a particular request.

6. New User Form:



The screenshot shows a web application titled "Blood Donor Management System". A modal form titled "New User" is open in the center. The form contains the following fields:

- Name:
- Employee Number:
- Password:
- User Type:

At the bottom of the form are "Save" and "Cancel" buttons. In the background, a table of users is visible with columns "Sr.No.", "Type", and "Action".

Sr.No.	Type	Action
1	Admin	Action
2	Staff	Action
3	Admin	Action
4	Admin	Action

Figure 6

The New User Form (Figure 6) contains the following fields:

1. Name- Takes the full name of the user that is being added to the system.
2. Employee Number- Takes the Employee Number of the user that is being added to the system.

3. Password- Takes the password that shall be assigned to the particular employee that is being added to the system.
4. User Type- A drop down selection which contains the two types of user profiles for the proposed system , namely : Admin and Staff.

NOTE: A user with a Staff Profile does is not provided with the facility to add new users to the system.

Purpose: Collect information of a new user that is being added to the system.

7.Manage Account Form:

The screenshot displays the 'Blood Donor Management System' interface. A modal window titled 'Manage Account' is open, allowing for user management. The modal contains the following fields:

- Name: Nishil Hoogar
- Employee Number: 1
- Password: (masked with dots)
- Enter New Password: (empty field)

At the bottom of the modal are 'Save' and 'Cancel' buttons. The background interface shows a sidebar with navigation options: Inventory, Statistics, Donors, Blood Donations, Requests, Handed Over, and Users (selected). The main content area displays a table of users with columns for 'Sr.No.', 'Type', and 'Action'. The table contains four entries, all of type 'Admin'. A search bar and a '+ New user' button are also visible in the top right of the main area.

Sr.No.	Type	Action
1	Admin	Action
2	Staff	Action
3	Admin	Action
4	Admin	Action

Figure 7

The Manage Account Form (Figure 7) contains the following fields:

1. Name- Name of the user that is currently logged in and wishes to change his password.
2. Employee Number – The employee number of the particular user.
3. Password- The new password that the user wishes to update.

Purpose- Update the password of a particular user who wishes to update his/her password.

DDL STATEMENTS:

CREATING TABLES WITH PRIMARY KEYS

1.

```
create table blood_inventory
(
    id int(30) not null,
    blood_group varchar(10) not null,
    volume float not null,
    status tinyint(1) not null,
    donor_id int(30) not null,
    request_id int(30) not null,
    date_created datetime not null,
    primary key(id)
);
```

2.

```
create table donors
(
    id int(30) not null,
    blood_group varchar(10) not null,
    name text not null,
```

```
address text not null,  
contact varchar(20) not null,  
email varchar(50) not null,  
date_created datetime not null,  
primary key (id)  
);
```

3.

```
create table handed_over  
(  
id int(30) not null,  
request_id int(30) not null,  
picked_up_by text not null,  
date_created datetime not null,  
primary key(id)  
);
```

4.

```
create table requests  
(  
id int(30) not null,  
ref_code varchar(20) not null,  
patient text not null,  
blood_group varchar(10) not null,  
volume float not null,  
physician_name text not null,  
status tinyint(1) not null,  
date_created datetime not null,  
primary key(id)  
);
```

5.

```
create table users  
(  
id int(30) not null,  
name text not null,  
username varchar(200) not null,  
password text not null,  
type tinyint(1) not null,  
primary key (id)
```

);

TRIGGERS

1.

```
{
create table donors_archives
(
    id int(30) PRIMARY KEY not null,
    blood_group varchar(10) not null,
    name text not null,
    address text not null,
    contact varchar(20) not null,
    email varchar(50) not null
);

DELIMITER $$

CREATE TRIGGER before_donors_delete
BEFORE DELETE
ON donors FOR EACH ROW
BEGIN
    INSERT INTO donors_archives(id,blood_group,name,address,
contact,email)
    VALUES(OLD.id,OLD.blood_group,OLD.name,OLD.address,OLD.contact,
OLD.email);
END $$

DELIMITER ;
}
```

2.

```
{
    create table handed_over_archives
    (
        id int(30) PRIMARY KEY not null,
        request_id int(30) not null,
        picked_up_by text not null
    )
}
```

```

);
DELIMITER $$

CREATE TRIGGER before_handed_over_delete
BEFORE DELETE
ON handed_over FOR EACH ROW
BEGIN
    INSERT INTO
handed_over_archives(id,request_id,picked_up_by)
VALUES(OLD.id,OLD.request_id,OLD.picked_up_by);
END $$

DELIMITER ;

```

```

}

```

3.

```

{

```

```

create table requests_archives
(
    id int(30) PRIMARY KEY not null,
    ref_code varchar(20) not null,
    patient text not null,
    blood_group varchar(10) not null,
    volume float not null,
    physician_name text not null,
    status tinyint(1) not null
);

DELIMITER $$

CREATE TRIGGER before_request_delete
BEFORE DELETE
ON requests FOR EACH ROW
BEGIN
    INSERT INTO
requests_archives(id,ref_code,patient,blood_group,volume,physicia
n_name,status)
VALUES(OLD.id,OLD.ref_code,OLD.patient,OLD.blood_group,OLD.
volume,OLD.physician_name,OLD.status);
END $$

```

DELIMITER ;

}

4.

{

create table system_settings_archives

(

id int(30) PRIMARY KEY not null,
name text NOT null,
email varchar(200) not null,
contact varchar(20) not null,
cover_img text not null,
about_contact text not null

);

DELIMITER \$\$

CREATE TRIGGER before_system_settings_delete

BEFORE DELETE

ON system_settings FOR EACH ROW

BEGIN

INSERT INTO

system_settings_archives(id,name,email,contact,cover_img,about_contact)

VALUES(OLD.id,OLD.name,OLD.email,OLD.contact,OLD.cover_img,OLD.about_contact);

END \$\$

DELIMITER ;

}

5.

{

create table users_archives

(

id int(30) PRIMARY KEY not null,
name text not null,


```

        username varchar(200) not null,
        password text not null,
        type tinyint(1) not null
    );

DELIMITER $$

CREATE TRIGGER before_users_delete
BEFORE DELETE
ON users FOR EACH ROW
BEGIN
    INSERT INTO users_archives(id,name,username,password,type)
    VALUES(OLD.id,OLD.name,OLD.username,OLD.password,OLD.type);
END $$

DELIMITER ;
}

```

Views

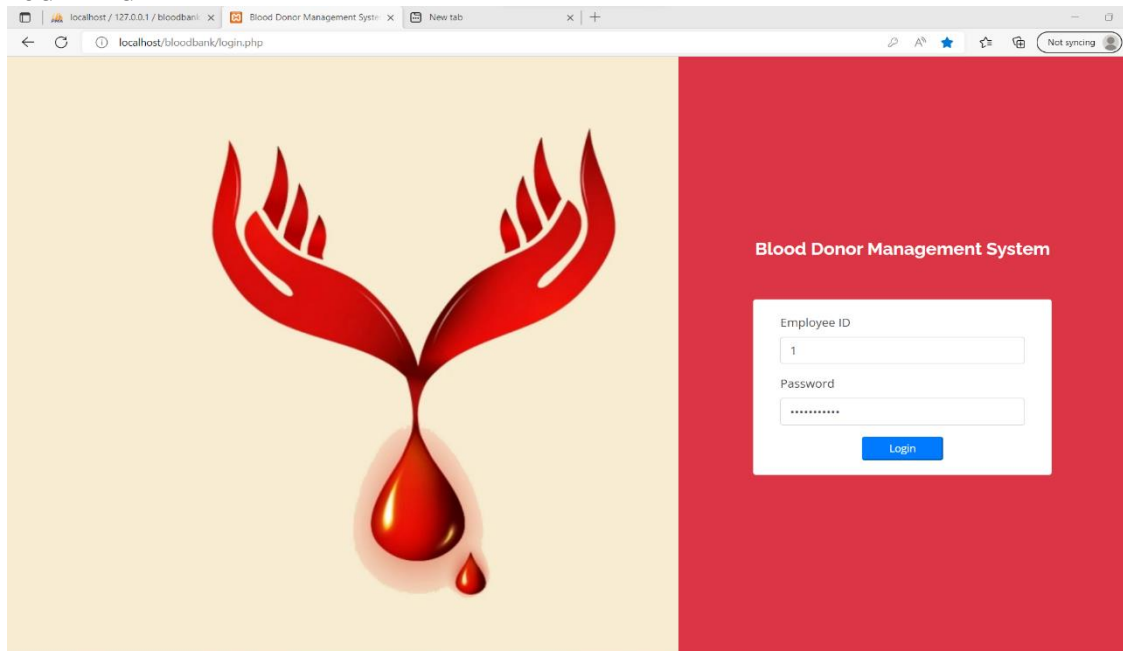
```

CREATE VIEW max_request_per_bloodgroup AS
SELECT p.blood_group, MAX(p.volume) as volume
FROM requests p INNER JOIN
    (SELECT blood_group, MAX(volume) AS max_volumr
    FROM requests
    GROUP BY blood_group
    ) p2
ON p.blood_group = p2.blood_group AND p.volume = p2.max_volume GROUP BY p.blood_group;

```

SYSTEM:

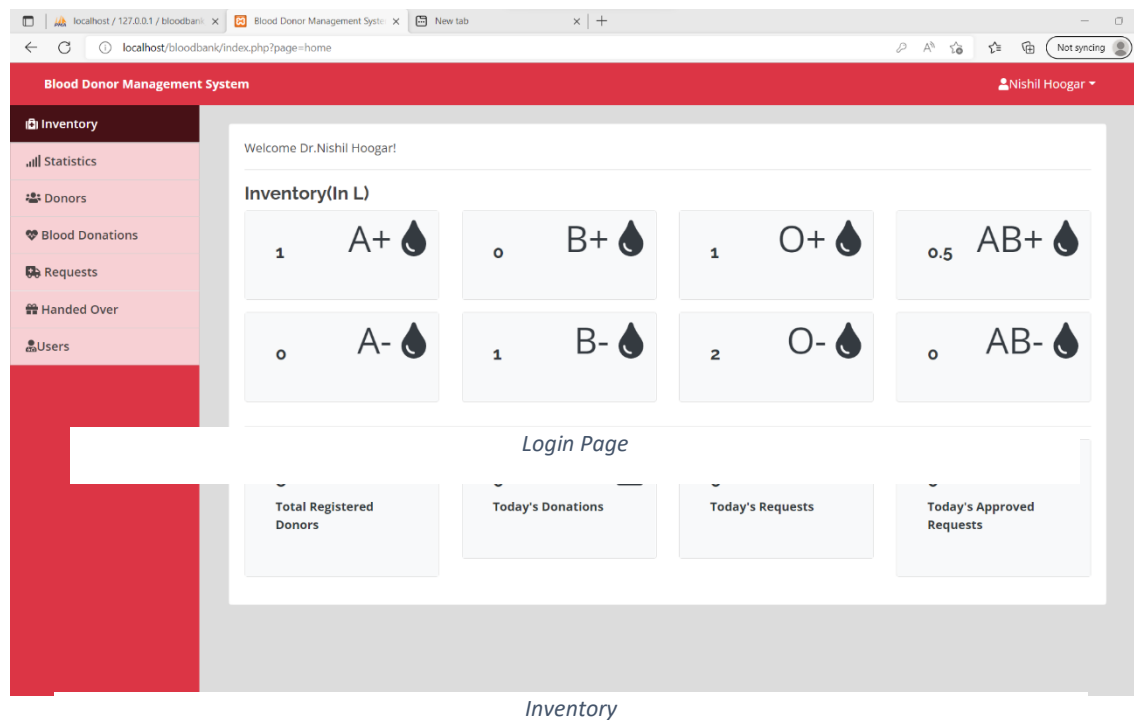
1. LOGIN PAGE:



User can log in with the appropriate credentials.

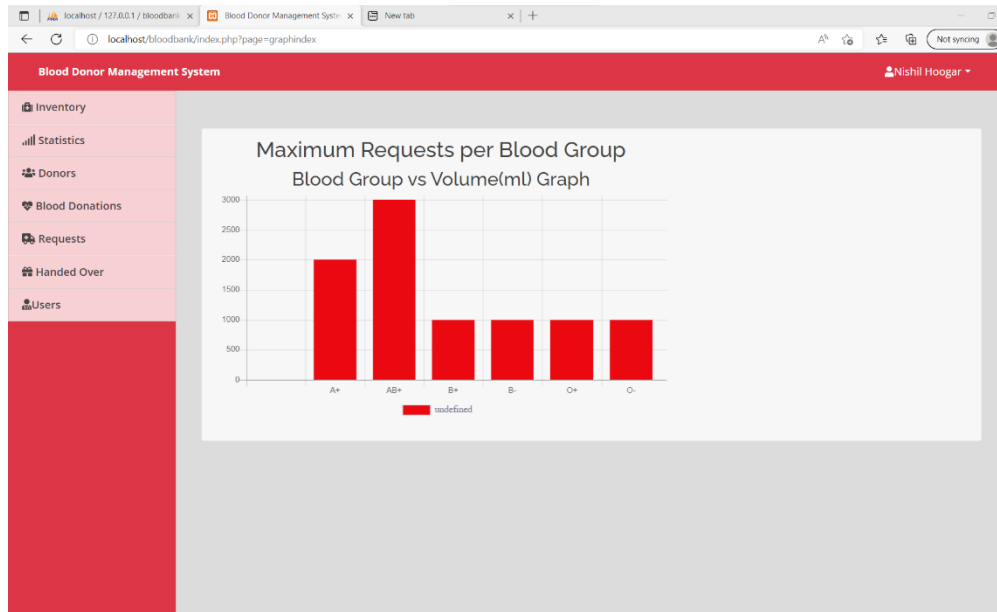
INVENTORY PAGE:

Inventory displays the availability of all blood groups.



2. Statistics Page

Displays statistics in the form of bar graph.



Analytics

3. List of Donors

Displays list of registered donors.

The screenshot shows the 'Blood Donor Management System' interface with the 'List of Donors' page. The page includes a sidebar with navigation links: Inventory, Statistics, Donors, Blood Donations, Requests, Handed Over, and Users. The main content area displays a table of registered donors. The table has columns for Sr. No., Donor, Blood Group, Information, Previous Donation, and Action. There are 5 donors listed. Each donor entry includes their name, blood group, contact information (email, phone, address), and a previous donation date. The 'Action' column contains 'Edit' and 'Delete' buttons for each donor.

Sr. No.	Donor	Blood Group	Information	Previous Donation	Action
1	Akanksha Sawant	AB+	Email: aks@gmail.com Phone No.: 852963410 Address: H. No. 19 Salcette, Fatorda Goa-403602	Nov 22, 2022	Edit Delete
2	Annabeth Chase	B-	Email: Phone No.: Address:	Dec 10, 2022	Edit Delete
3	Nishil Hoogar	O+	Email: nishilhoogar@gmail.com Phone No.: 1023456789 Address: Flat No. B1 Ace Residency Aquem Margao Goa-403601	Nov 22, 2022	Edit Delete
4	Percy Jackson	A+	Email: percyjackson@gmail.com Phone No.: 319-420-852 Address: 495 Grove St. Apartment #20 New York, NY 10014 USA	New	Edit Delete
5	Serena Shetty	O+	Email: example2@gmail.com Phone No.: 1098765432 Address: House No. 14 Sapna Housing Colony Navelim, Margao Goa-403601	Nov 22, 2022	Edit Delete

List of Donors

4. List of Donations:
Displays a list of donations which have been implemented

Blood Donor Management System

Nishil Hoogar

Inventory

Statistics

Donors

Blood Donations

Requests

Handed Over

Users

List of Donations

+ New Entry

Show 10 entries

Search:

Sr.No.	Date	Donor Name	Blood Group	Volume (ml)	Action
1	Dec 11, 2022	Walter White	O-	2000	Edit Delete
2	Dec 10, 2022	Shrinidhi Ganesh	B+	1000	Edit Delete
3	Dec 10, 2022	Annabeth Chase	B-	2000	Edit Delete
4	Nov 22, 2022	Nishil Hoogar	O+	1000	Edit Delete
5	Nov 22, 2022	Serena Shetty	O+	1000	Edit Delete
6	Nov 22, 2022	Akanksha Sawant	AB+	1500	Edit Delete
7	Nov 22, 2022	Suhana Roy	A+	2000	Edit Delete
8	Nov 01, 2022	Suhana Roy	A+	2000	Edit Delete

Showing 1 to 8 of 8 entries

Previous 1 Next

List of Donations

5. List of Requests
Displays list of requests in the system

Blood Donor Management System

Nishil Hoogar

Inventory

Statistics

Donors

Blood Donations

Requests

Handed Over

Users

List of Requests

+ New Entry

Show 10 entries

Search:

Sr. No.	Date	Reference Code	Patient Name	Blood Group	Information	Status	Action
1	Dec 11, 2022	GwqDn0bO	Sally Jackson	O-	Volume Needed: 1 L Physician Name: Dr.Hisenberg	Pending	Edit Delete
2	Dec 10, 2022	2yRKJGDA	Kushi Agarwal	B+	Volume Needed: 1 L Physician Name: Dr.Neha	Approved	Edit Delete
3	Dec 10, 2022	Q4qWeRsg	Sally Kane	B-	Volume Needed: 1 L Physician Name: Dr. Kane	Approved	Edit Delete
4	Nov 28, 2022	sPOTfll1	Nadia Fernandes	A+	Volume Needed: 1 L Physician Name: Dr.Norman	Approved	Edit Delete
5	Nov 24, 2022	b0m9oZl6	Owen Knight	AB+	Volume Needed: 3 L Physician Name: Dr.Varman	Approved	Edit Delete
6	Nov 22, 2022	p4wRS1ZW	Ronan Mendes	A+	Volume Needed: 2 L Physician Name: Dr.Sharma	Approved	Edit Delete
7	Nov 22, 2022	5gYPvAQ8	Jay Shetty	O+	Volume Needed: 1 L Physician Name: Dr. Gupta	Approved	Edit Delete

List of Requests

6. List of users

Displays list of users that can access the system

The screenshot shows a web application titled "Blood Donor Management System". The left sidebar contains a menu with the following items: Inventory, Statistics, Donors, Blood Donations, Requests, Handed Over, and Users (which is highlighted). The main content area displays a table of users. Above the table, there is a "Show 10 entries" dropdown and a search bar. The table has five columns: Sr.No., Name, Employee Number, Type, and Action. There are four rows of user data. Below the table, it says "Showing 1 to 4 of 4 entries" and includes pagination controls for "Previous", "1", and "Next". A "+ New User" button is located in the top right corner of the main content area.

Sr.No.	Name	Employee Number	Type	Action
1	Administrator	4	Admin	Action
2	Arya Jain	3	Staff	Action
3	Nishil Hoogar	1	Admin	Action
4	Serena Shetty	2	Admin	Action

List of users