CLOUD APPLICATION DEVELOPMENT – PLASMA DONOR APPLICATION

PROJECT REPORT

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Project Report

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1.INTRODUCTION

1.1 Project Overview:

During the covid-19 crisis ,the requirement of plasma became high and the donor count is being low. It is very difficult to find the respective blood group donors when anyone is in need. The necessity of blood has become a significant concern in the present state. An efficient flow of blood is required in blood donation camps to meet the regular demands of recipients. A bag of blood can save a precious life. Statistics show that a tremendous amount of blood is needed yearly and many voluntary blood donors are quite promising in many countries to donate their blood.

1.2 Purpose:

In regard to the problem faced, our purpose is to built a web application which would provide the quickest solution to find the plasma donors. Our system would save the donor information and helping the need by notifying the nearest donors would be a helping hand at the right time.

2.LITERATURE SURVEY

B82A4E- PLASMA DONOR APPLICATION

LITERATURE SURVEY

1.BLOOD DONAR American red cross APP

The American Red Cross Blood Donor App puts the power to save lives in the palm of your hand. Donating blood, platelets and AB Plasma is now easier than ever.

- · Find local blood drives and donation centers quickly and easily
- · Convenient, easy appointment scheduling and rescheduling

Advantage:

- · Easy to use.
- · It works smooth and visually appealing

Disadvantage:

- The app had no specific location details for where the donations were being taken within the hospital.
- · The scheduling part of this app is poorly designed.

2.DELHIFIGHTSCORONO

The Delhi government has launched the country's first plasma bank. If you are a recovered Corona patient, come forward and donate your plasma.

Your contribution may help save a life!

ADVANTAGE:

· It is specifically created for covid-19 patients

DISADVANTAGE:

· It is not specific for proper plasma donor application

2.2 Problem Statement Definition:

B82A4E- PLASMA DONOR APPLICATION

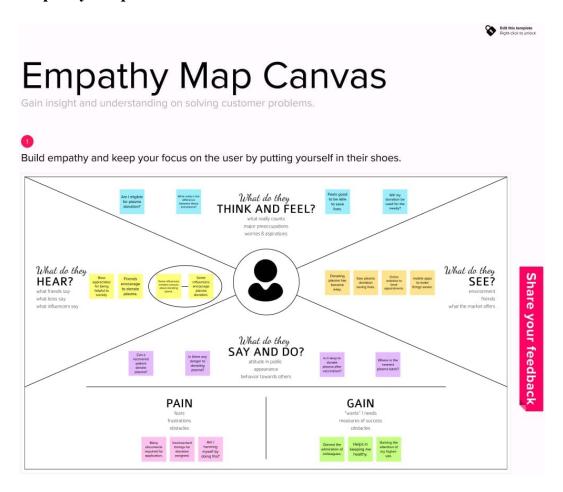
PROBLEM STATEMENT

During the COVID 19 crisis, the requirement of plasma became high and the donor count being low. Saving the donor information and helping the need by notifying the current donors would be a helping hand. It is very difficult find the respective blood group donors when anyone is in need. In regard to the problem faced, an application is to be built which would take the donor details store it and inform them upon a request.

Who does the problem affect?	 Patients 		
	 Hospital Management 		
	 Donor 		
What are the boundaries of the	 Blood bank 		
problem?	 Volunteers camps 		
What is the issue?	 Unavailability of plasma donors. 		
	 Donors are not being notified at the right time 		
	when plasma needed.		
	 Hospital management has difficulty at 		
	communicating with donors.		
	 Time for donation and work time clash. 		
When does the issue occur?	 When the patients are in need of plasma, but 		
	donor couldn't reach them at right time.		
	 While finding rare blood groups. 		
Where is the issue occurring?	 Delayed notification tend to happen 		
	 While entering details, blood group may be 		
	wrongly registered.		
Why is it important that we fix the	To increase the plasma donors & to create		
problem?	awareness among people.		
	 Easy accessible and reliable to donors. 		
	 It is important to save lives of people. 		
	 To make organizations realize it is important to 		
	encourage their employees to donate plasma.		

3.IDEATION&PROPOSEDSOLUTION

3.1 Empathy Map:



3.2 Ideation & Brainstorming:



3.3 Proposed Solution:

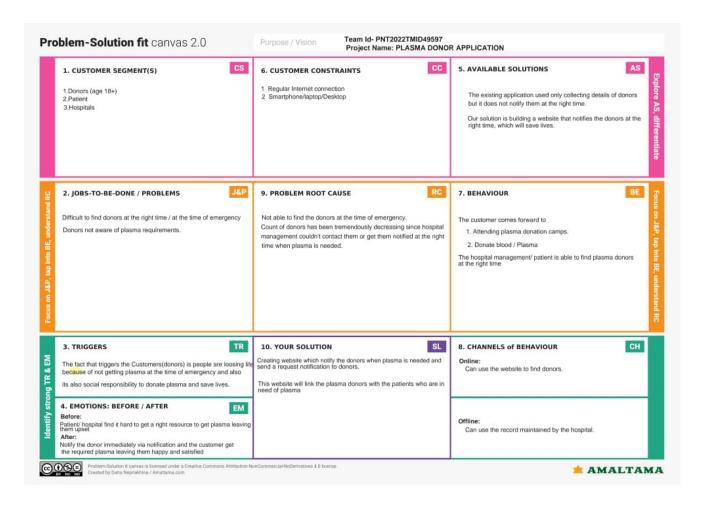
Project Design Phase-I Proposed Solution

Date	23 September 2022	
Team ID	PNT2022TMID49597	
Project Name	Project – Plasma Donor Application	
Maximum Marks	2 Marks	

S.No.	Parameter	Description		
1.	Problem Statement (Problem to be solved)	During the COVID 19 crisis, the requirement of plasma became high and the donor coun being low. Saving the donor information and helping the need by notifying the current donors would be a helping hand. It is very difficult to find the respective blood group donors when anyone is in need. The donors also face a lot of inconvenience when using the system to donate plasma. In regard to the problem faced, an application is to be built which would take the donor details store it and inform them upon a request all the while making it more convenient to use.		
2.	Idea / Solution description	The donors can register their details in the application. Their registered details will be saved in the database. When there is a need for plasma, the relevant donors will be alerted via their mail. The location to the where the plasma is needed will be given in mail Donors can also schedule appointments to their convenience, to donate plasma to the plasma bank.		
3.	Novelty / Uniqueness	Our application is unique in the fact that it is very convenient for the donor. It has a unique, simple and elegant User Interface that makes it much easier to understand and navigate.		
4.	Social Impact / Customer Satisfaction	It promotes awareness for plasma donation. It attracts many willing donors because of its convenience. It assures people that plasma is available at anytime, anywhere by contacting all relevant donors by mail, largely reducing the worry of patients.		
5.	Business Model (Revenue Model)	This application can collaborate with the Government and Non-Profitable Organizations where they can utilize the application for helping people and pays us a		

		certain amount every year for its maintenance.
6.	Scalability of the Solution	Adequate number of donors can register themselves. A large amount of requests for plasma donation can be processed at the same time.

3.4 Problem Solution Fit:



4.REQUIREMENT ANALYSIS

4.1 Functional & Non-Functional requirements:

Project Design Phase-II Solution Requirements (Functional & Non-functional)

Date	14 October 2022	
Team ID	PNT2022PMID49597	
Project Name	Project – Plasma Donor Application	
Maximum Marks	4 Marks	

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No. Functional Requirement (Epic) FR-1 User Registration		Sub Requirement (Story / Sub-Task)	
		Registration through Form Registration through Gmail	
FR-2 User Confirmation		Confirmation via Email Confirmation via OTP	
FR-3 Recipient Registration		Registration through Form Registration through Gmail	
R-4 Recipient Confirmation		Confirmation via Email	
FR-5 Recipient Notify Donors		Notify Donors via Email	
FR-6 Donor Reply to Recipient		Notify Recipient via Email	

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution. \\

FR No. Non-Functional Requirement NFR-1 Usability		Description It becomes easier for the donors to use this application for donating plasma, which in turn increases the number of users.		
NFR-3	Reliability	This application will intimate the donors to provide the correct information if any wrong data is entered thus providing reliable information for recipient and vice versa.		
NFR-4 Performance		The application performs in a better way for the donors as well as for the recipients thus making their work much easier.		
NFR-5 Availability		This application is available for both donors and recipients at any time, any place.		
NFR-6 Scalability		Adequate number of donors and recipient can get Registered and it can handle an adequate number of requests.		

5. PROJECT DESIGN

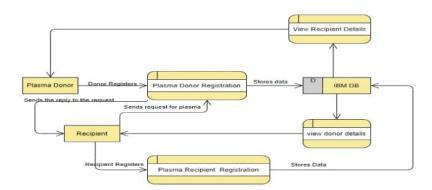
5.1 Data Flow Diagram:

Project Design Phase-II Data Flow Diagram & User Stories

Date	15 October 2022	
Team ID	PNT2022PMID49597	
Project Name	Project – Plasma Donor Application	
Maximum Marks	4 Marks	

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



5.2 User Stories:

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Donor)	Registration	USN-1	As a DONOR, I can register for the application by entering my name, email, password, Blood Group, Address, mobile number and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a DONOR, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a DONOR, I can register in the application through Gmail	I can register & access the dashboard with Gmail Login	Low	Sprint-2
	Login	USN-4	As a DONOR, I can log into the application by entering email & password	I can register & access the dashboard with Login	Medium	Sprint-1
	Respond to Request	USN-5	As a DONOR, I can send my response to the Recipients request for plasma.	I can send my response.	High	Sprint-1
e0.00 000	Dashboard	USN-6	As a DONOR, I can see the information about my application	I can see the dashboard with Register or login	Medium	Sprint-2
Customer (Recipient)	Registration	USN-7	As a RECIPIENT, I can register in the application by entering my name, email, Password, Organization name, Address, mobile number and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Login	USN-8	As a RECIPIENT, I can log into the application by entering email & password	I can register & access the dashboard with Login	Medium	Sprint-1
	Request Notification	USN-9	As a RECIPIENT, I can send Request to the Donors by notifying them at the right time, i.e., when plasma needed	I can register & send the Request	High	Sprint-2
	Response from Donor	USN-10	As a RECIPIENT, I can Receive response from Donors	I can Send Request & Get response from Donors	High	Sprint-2

5.3 Solution & Technical Architecture:

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	14 October 2022	
Team ID	PNT2022TMID49597	
Project Name	Project – Plasma Donor Application	
Maximum Marks	4 Marks	

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2

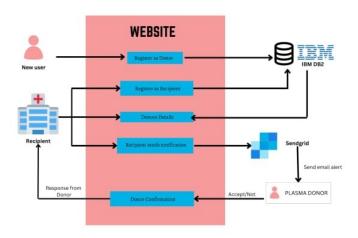


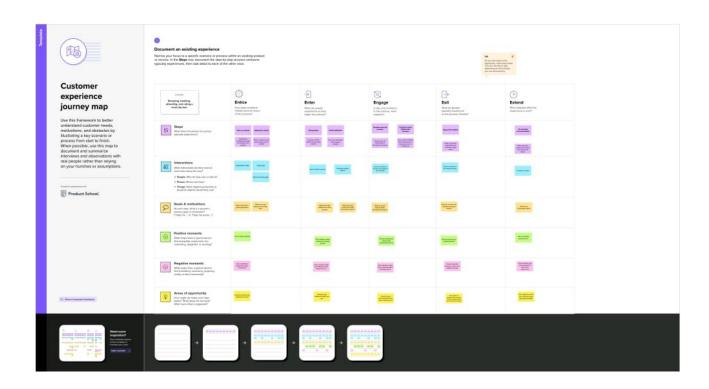
Table-1 : Components & Technologies:

Component	Description	Technology
User Interface	User interact with application using form, login, Request notification	Python FLASK, HTML, CSS
Registration (Donor)	Donors register in the application to Donate the plasma	Python FLASK, HTML, CSS, IBM DB2
Registration (Recipient)	Recipients register in the application to get a Donors	Python FLASK, HTML, CSS, IBM DB2
Notification Request	This sends the notification to the Donors	Python FLASK, HTML, CSS, IBM DB2
SendGrid	Sends email alert on a request of plasma Donor	sendgrid
Cloud Database	Database Service on Cloud	IBM DB2
Kubernets cluster	Run Containerized application	IBM Kubernets
	User Interface Registration (Donor) Registration (Recipient) Notification Request SendGrid Cloud Database	User Interface User interact with application using form, login, Request notification Registration (Donor) Donors register in the application to Donate the plasma Registration (Recipient) Recipients register in the application to get a Donors Notification Request This sends the notification to the Donors SendGrid Sends email alert on a request of plasma Donor Cloud Database Database Service on Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Docker is used for Open Source Framework	DOCKER
2.	Scalable Architecture	It connected with Scalable Architecture	IBM DB2
3.	Availability	This application is anytime accessible	Python FLASK
4.	Performance	Record resource requests and save Registered information. Availability of application	IBM DB2

5.4Customer Journey Map:



6.PROJECT PLANNING& SCHEDULING

6.1 Sprint Planning & Estimation:

Project Planning Phase Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	22 October 2022
Team ID	PNT2022TMID49597
Project Name	Project-Plasma Donor Application
Maximum Marks	8 Marks

Product Backlog, SprintSchedule, and Estimation (4Marks)

Requirement (Epic) Number As a don Sprint-1 Donor Registration USN-1 entering		User Story / Task	Story Points	Priority	Team Members	
		USN-1	As a donor, I can register for the application by entering my email, password, and confirming my password and plasma details.	1	High	Suswin, Saravanar
Sprint-1	Donor login	USN-3	As a Donor, I can log into the application by entering email and password		High	Saravanan
Sprint-2	Recipient Registration	USN-4	As a Recipient, I can register for the application by entering required details		High	Suswin, Saravanan
Sprint-2	Recipient Login	USN-5	As a Recipient, I can log into the application by entering email & password		High	Suswin
Sprint-3	Request Notification	USN-6	As a Recipient, I can send Request to the Donors by notifying them at the right time	3	High	Jebin Rose, Raja Chera Kesari
Sprint-3	Donor confirmation	USN-2	As a Donor, I will receive confirmation email once I have registered for the application	3	High	Jebin Rose, Raja Chera Kesari
Sprint-4	Response from Donor	USN-7	As a Recipient, I can Receive response from Donors	3	High	Jebin Rose, Raja Chera Kesari
Sprint-4	Dashboard	USN-8	As a Donor, I can see the information about application	2	Medium	Jebin Rose, Raja Chera Kesari

6.2 Sprint Delivery Schedule:

Project Tracker, Velocity & Burndown Chart: (4 Marks)

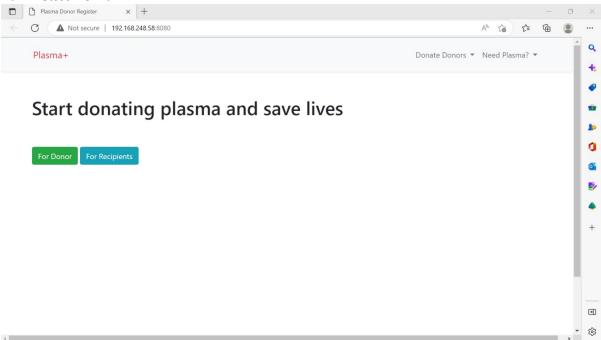
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	12	6 Days	24 Oct 2022	29 Oct 2022	12	29 Oct 2022
Sprint-2	12	6 Days	31 Oct 2022	05 Nov 2022	12	05 Nov 2022
Sprint-3	12	6 Days	07 Nov 2022	12 Nov 2022	12	12 Nov 2022
Sprint-4	12	6 Days	14 Nov 2022	19 Nov 2022	12	19 Nov 2022

Velocity:
Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

AV= sprint duration / velocity = 12/6 = 2

7. CODING & SOLUTIONING (Explain the features added in the project along with code):

7.1 Feature 1:



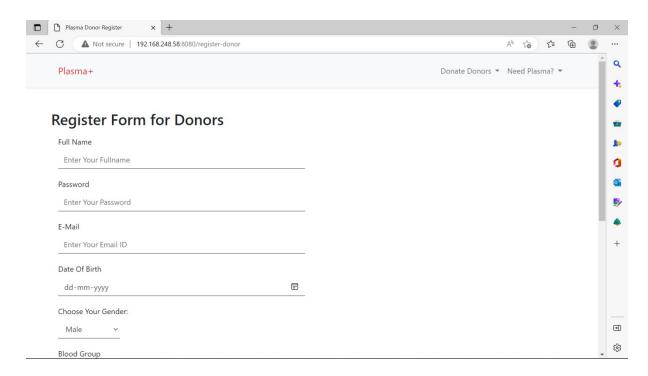
Source code for feature1:

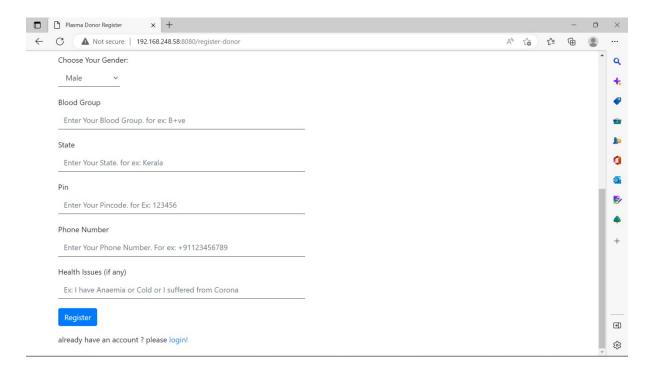
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"</pre>
```

```
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
klink
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
                  aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                             Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                             Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
```

```
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<!-- Home page -->
<div class="hero">
<div class="container">
 Start donating plasma and save lives
<div class="px-1 py-5">
<button onclick="window.location.href='register-donor'" class="btnbtn-</pre>
success">For Donor</button>
<button onclick="window.location.href='register-recipient'" class="btnbtn-</pre>
info">For Recipients</putton>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
               integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</div>
</div>
</body>
</html>
```

7.2 Feature 2:





Source code for feature 2:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-
bs-target="#navbarNav"
                    aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                               data-bs-toggle="dropdown" aria-
expanded="false">
```

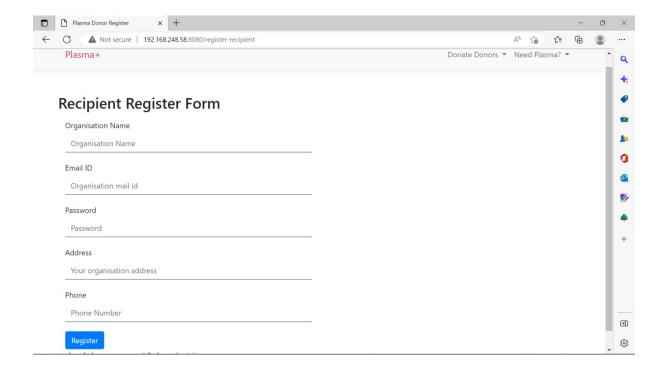
Donate Donors

```
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                             Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-</a>
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<!-- Login form -->
<div class="container mt-5">
<h2 class="h2"> Register Form for Donors</h2>
<form action="/register-donor" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<label class="form-label">Full Name</label>
<input type="text" class="form-control input_text" name="Fullname"</pre>
placeholder="Enter Your Fullname" id="Fullname"
                  reauired>
<label class="form-label" >Password</label>
<input type="password" class="form-control input_text" name="password"</pre>
placeholder="Enter Your Password"
                  id="password" required>
<label class="form-label" >E-Mail</label>
<input type="email" class="form-control input_text" name="email"</pre>
placeholder="Enter Your Email ID" id="email"
                  required>
<label class="form-label" >Date Of Birth</label>
<input type="date" class="form-control input_text" name="DOB"</pre>
placeholder="Enter your Date of birth: DD-MM-YYYY"
```

```
id="DOB" required>
```

```
<label class="form-label" for="Gender" >Choose Your Gender:</label>
<select id="Gender" name="Gender" data-name="Gender" required="" class="col-3</pre>
form-control input text">
<option value="Select one" disabled>Select Your Gender</option>
<option value="Male">Male</option>
<option value="Female">Female</option>
</select>
<label class="form-label" >Blood Group</label>
<input type="text" class="form-control input_text" name="BloodGroup"</pre>
                    placeholder="Enter Your Blood Group. for ex: B+ve"
id="Blood-Group" required>
<label class="form-label" >State</label>
<input type="text" class="form-control input_text" name="State"</pre>
placeholder="Enter Your State. for ex: Kerala"
                    id="State" required>
<label class="form-label" >Pin</label>
<input type="number" class="form-control input_text" name="Pin"</pre>
placeholder="Enter Your Pincode. for Ex: 123456"
                    id="Pin" required>
<label class="form-label" >Phone Number</label>
<input type="tel" class="form-control input text" name="phone"</pre>
                    placeholder="Enter Your Phone Number. For ex:
+91123456789" id="phone" required>
<label class="form-label" >Health Issues (if any)</label>
<input type="text" class="form-control input text" name="Issues"</pre>
                    placeholder="Ex: I have Anaemia or Cold or I suffered from
Corona" id="Issues">
<button type="submit" id="button" class="btnbtn-primary"> Register </button>
<div class="note mt-3">
<!--Register form -->
 already have an account ? please <a href="login">login! </a>
</div>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```

7.3 Feature 3



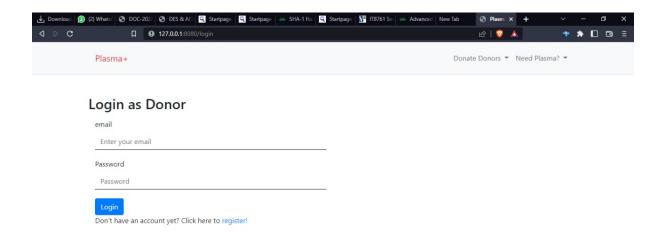
Source for feature 3

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
k
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
```

```
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
                 aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="/" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Donate Donors
</a>
<a class="dropdown-item text-secondary" href="login">Login</a>
<a class="dropdown-item text-secondary" href="register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="/" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="login2">Login</a>
<a class="dropdown-item text-secondary" href="register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<!-- Home page -->
<!--navbar ends -->
<!-- Login form -->
<div class="container mt-5">
<h2 class="form-text-h2"> Recipient Register Form </h2>
```

```
<form action="/register-recipient" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<label class="form-label">Organisation Name</label>
<input type="text" class="form-control input_text" name="Name" data-</pre>
name="Name"
                    placeholder="Organisation Name" id="Name" required>
<label class="form-label">Email ID</label>
<input type="email" class="form-control input_text" name="email" data-</pre>
name="email"
                    placeholder="Organisation mail id" id="email" required>
<label class="form-label">Password</label>
<input type="password" class="form-control input_text" name="password" data-</pre>
name="password"
                    placeholder="Password" id="password" required>
<label class="form-label">Address</label>
<input type="textarea" class="form-control input_text" name="Address" data-</pre>
name="Address"
                    placeholder="Your organisation address" id="Address"
required>
<label class="form-label">Phone</label>
<input type="tel" class="form-control input_text" name="phone" data-</pre>
name="phone"
                    placeholder="Phone Number" id="phone" required="">
<button type="submit" id="button" class="btnbtn-primary"> Register </button>
 already have an account ? please <a href="login2">login! </a>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.is"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```

7.4 Feature 4





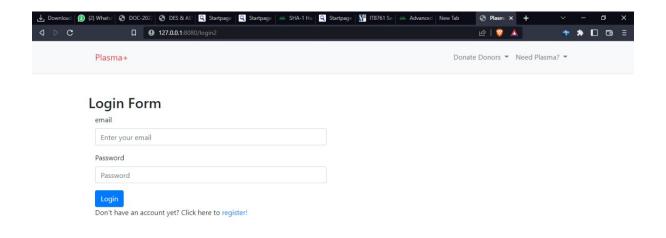
Source for feature 4

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Login</title>
<!-- favicon -->
<!--<li>k rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
icon">-->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon">-->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-</pre>
32x32.png">
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
```

```
</head>
<body>
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
                 aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-</pre>
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<div class="container mt-5">
<h2 class="form-text-h2"> Login as Donor </h2>
```

```
<form action="/login" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<div class="form-group mb-3">
<label class="form-label" for="Fullname">email</label>
<input type="email" class="form-control input_text" placeholder="Enter your</pre>
email" name="email" required>
</div>
<div class="form-group mb-3">
<label class="label" for="password">Password</label>
<input type="password" class="form-control input_text" placeholder="Password"</pre>
name="password" required>
</div>
<button type="submit" id="button" class="btnbtn-primary"> Login </button>
 Don't have an account yet? Click here to <a href="/register-</p>
donor">register! </a>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```

7.5 Feature 5





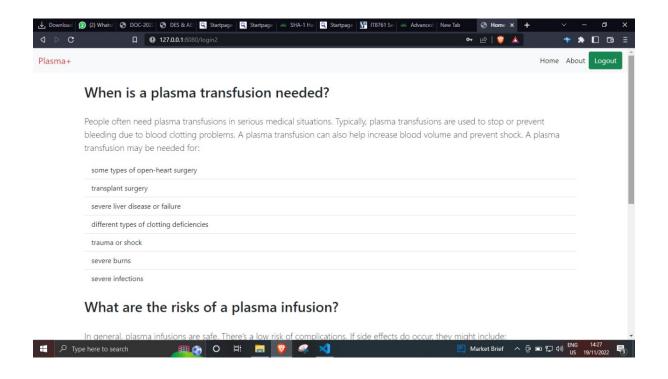
Source for feature 5

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Login</title>
<!-- favicon -->
<!--<li>k rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
icon">-->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon">-->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-</pre>
32x32.png">
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
```

```
</head>
<body>
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
                 aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-</pre>
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<div class="container mt-5">
<h2 class="form-text-h2"> Login Form </h2>
```

```
<form action="/login2" method="post">
<div class="msg">{{ msg }}</div>
<div class="col-6">
<div class="form-group mb-3">
<label class="form-label" for="Fullname">email</label>
<input type="email" class="form-control input-text" placeholder="Enter your</pre>
email" name="email" required>
</div>
<div class="form-group mb-3">
<label class="form-label" for="password">Password</label>
<input type="password" class="form-control input-text" placeholder="Password"</pre>
name="password" required>
</div>
<button type="submit" id="button" class="btnbtn-primary"> Login </button>
 Don't have an account yet? Click here to <a href="/register-</p>
recipient">register! </a>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```

7.6 Feature 6



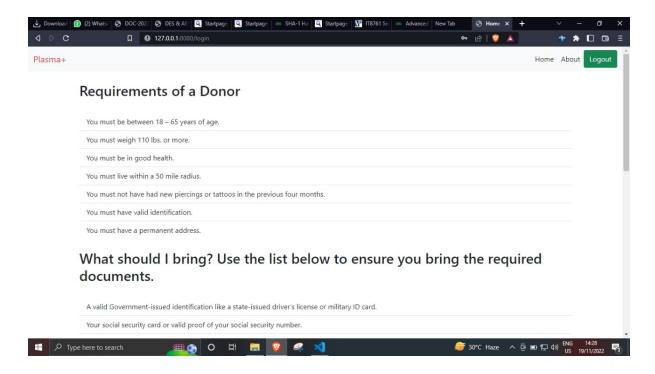
Source for feature 6

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
        integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<title>Home Recipients</title>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="#">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNavDropdown"
                aria-controls="navbarNavDropdown" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end"</pre>
id="navbarNavDropdown">
```

```
<a class="nav-link active" aria-current="page" href="#">Home</a>
<a class="nav-link active" aria-current="page" href="#">About</a>
<button onclick="window.location.href='login2'" class="btnbtn-</pre>
success">Logout</button>
<!--<li>class="nav-item">
<a class="nav-link" href="#">Features</a>
<a class="nav-link" href="#">Pricing</a>
<a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"</pre>
role="button" data-bs-toggle="dropdown" aria-expanded="false">
            Dropdown link
</a>
<a class="dropdown-item" href="#">Action</a>
<a class="dropdown-item" href="#">Another action</a>
<a class="dropdown-item" href="#">Something else here</a>
</div>
</div>
</nav>
<div class="container">
<h2 class="py-4">When is a plasma transfusion needed?</h2>
People often need plasma transfusions in serious medical
situations.
        Typically, plasma transfusions are used to stop or prevent
bleeding due to blood clotting problems. A plasma
        transfusion can also help increase blood volume and prevent shock.
        A plasma transfusion may be needed for:
some types of open-heart surgery
transplant surgery
severe liver disease or failure
different types of clotting deficiencies
trauma or shock
severe burns
severe infections
<h2 class="py-4">What are the risks of a plasma infusion?</h2>
```

```
In general, plasma infusions are safe. There's a low risk of
complications.
          If side effects do occur, they might include:
soreness, bruising, or pain at the needle
insertion site
infections
allergic reactions
reactions to the plasma
class="list-group-item">transfusion-associated circulatory overload
transfusion-related acute lung injury
<h2 class="py-4">Frequently asked questions</h2>
<div class="col-6">
<div class="accordion" id="accordionExample">
<div class="accordion-item">
<h2 class="accordion-header " id="headingOne">
<button class="accordion-button" type="button" data-bs-toggle="collapse"</pre>
                     data-bs-target="#collapseOne" aria-expanded="true"
aria-controls="collapseOne">
                     Are blood types important for plasma transfusion?
</button>
<div id="collapseOne" class="accordion-collapse collapse show" aria-</pre>
labelledby="headingOne"
                  data-bs-parent="#accordionExample">
<div class="accordion-body">
                     Yes, blood type matters for plasma transfusions. Type
AB blood is best because that plasma
                     contains no antibodies. This means it can be given it
to a person with any blood type. </div>
</div>
</div>
<div class="accordion-item">
<h2 class="accordion-header" id="headingTwo">
<button class="accordion-button collapsed" type="button" data-bs-</pre>
toggle="collapse"
                     data-bs-target="#collapseTwo" aria-expanded="false"
aria-controls="collapseTwo">
                     Can disease be transmitted in plasma transfusion?
</button>
</h2>
<div id="collapseTwo" class="accordion-collapse collapse" aria-</pre>
labelledby="headingTwo"
                  data-bs-parent="#accordionExample">
<div class="accordion-body">
Yes. However, the Food and Drug Administration requires that all plasma be
tested after it's collected, just like whole blood. The plasma is mainly
checked for syphilis, HIV, and hepatitis A, B, and C.
</div>
```

7.7 Feature 7



Source for feature 7

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

<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"</pre>
```

```
integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<title>Home Donor</title>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="#">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNavDropdown"
             aria-controls="navbarNavDropdown" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end"</pre>
id="navbarNavDropdown">
<a class="nav-link active" aria-current="page" href="#">Home</a>
<a class="nav-link active" aria-current="page" href="#">About</a>
<button onclick="window.location.href='login'" class="btnbtn-</pre>
success">Logout</button>
<!--<li>class="nav-item">
<a class="nav-link" href="#">Features</a>
<a class="nav-link" href="#">Pricing</a>
<a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"</pre>
role="button" data-bs-toggle="dropdown" aria-expanded="false">
              Dropdown link
</a>
<a class="dropdown-item" href="#">Action</a>
<a class="dropdown-item" href="#">Another action</a>
<a class="dropdown-item" href="#">Something else here</a>
</div>
</div>
</nav>
<div class="container">
<h2 class="py-4">Requirements of a Donor</h2>
You must be between 18 - 65 years of age.
You must weigh 110 lbs. or more.
                                                          You must be in good health.
```

```
class="list-group-item">You must live within a 50 mile radius.
class="list-group-item">You must not have had new piercings or tattoos in
the previous four months.
You must have valid identification.
You must have a permanent address.
<h2 class="py-4">What should I bring? Use the list below to ensure you bring
the required documents.</h2>
A valid Government-issued identification like a
state-issued driver's license or military ID card. 
class="list-group-item">Your social security card or valid proof of your
social security number.
class="list-group-item">Proof of a local residence. You can use a piece of
mail such as a utility bill postmarked in the last 30 days, or a valid lease,
etc. 
<h2 class="py-4">How do I prepare for my visit?</h2>
class="list-group-item">Drink plenty of water, juice, or other non-
caffeinated beverages 2-3 hours before you arrive. We recommend 4-6 glasses.
Avoid caffeine in the same time period.
class="list-group-item">Don't drink any alcohol for 24 hours before your
plasma donation. 
Do eat a meal before you arrive. 
Get plenty of sleep the night before your plasma
donation. 
<h2 class="py-4">Who Do Plasma Donations Help?</h2>
Individuals who experience a severe trauma, burn or shock often
lose a significant amount of
          blood volume, and are
          depleted of many necessary electrolytes. Electrolytes are minerals
that help to balance the
          amount of water, nutrients
          and pH level inside the body. In this situation, a plasma
transfusion can provide the lifesaving
          blood volume needed to
          restore their blood pressure and volume status, as well as restore
electrolyte levels.
          In addition, people with liver disease or clotting factor
deficiencies may not have the proper
          substances in their blood
          to allow their blood to clot normally. Whenever an individual has
a cut or injury, these
          clotting factors ensure that
          they do not lose too much blood. Plasma donations ensure that
these individuals can receive a
          plasma transfusion to
          supplement their body's clotting ability and stop excessive
bleeding from occurring. Finally,
          children and adults with
```

```
cancer sometimes experience complications in which their body has
used up all of their natural
           clotting factors. In
           cases of this disorder, called disseminated intravascular
coagulation (DIC), transfusions of
           fresh frozen plasma may be
           critical.
<h2>What Is The Plasma Donation Process?</h2>
During a plasma donation, blood is removed from the donor's arm
and run through an automated
           process that removes the plasma portion from the blood. The
remaining red blood cells and
           platelets are then returned to the donor's arm with a small amount
of saline to maintain the
           overall volume. This all occurs while the donor is in the donation
chair and allows a donor to
           give more plasma than they would during a regular blood donation -
enough plasma for up to three
           patients from a single plasma donation. The process itself is
safe, and ultimately is very
similar to a general blood donation visit.
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js"
           integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
</body>
</html>
```

8.TESTING

8.1 Test Cases:

Test case ID Feature Type Component Test Scenario Pre-Requisite Steps To IndexPage_TC_OO1 Functional Home Page Both the donor and receipient are verified with their choosing process. Test Case ID Feature Type Component Test Scenario Pre-Requisite Steps To Steps To 1.Enter URL and click go 2.Click on Donor/recipier 3.Verify Login/Register is process.	Execute Te	Test Data Expect	Actual					
Test case ID Feature Type Component Test Scenario Pre-Requisite Steps To IndexPage_TC_001 Functional Home Page Receipient are verified with their choosing process. Maximum Marks 4 marks Pre-Requisite Steps To 1.Enter URL and click go with their choosing process.	Execute Te	Test Data Expect	Actual		1			
Test case ID Feature Type Component Test Scenario Pre-Requisite Steps To IndexPage_TC_001 Functional Home Page Both the donor and receipient are verified with their choosing process. IndexPage_TC_001 Functional Home Page Page Page Page Page Page Page Pag	nt to login or register.	Test Data Expect	Actual					
IndexPage_TC_O01 Functional Home Page Both the donor and receipient are verified with their choosing process. Both the donor and receipient are verified with their choosing process.	nt to login or register.	Test Data Expect	Actual					
IndexPage_TC_001 Functional Home Page receipient are verified with their choosing process. 4. Click on Donor/recipier 3. Verify Login/Register is process.			Result	Status	Commnet s	TC for Automati on(Y/N)	BUG ID	Executed By
IndexPage_IC_OUT Functional Home Page with their choosing with their choosing process. 3.Verify Login/Register is			ter page of Workin	,				
with their choosing 3. Verify Login/Register is process.	displayed or not	0.51.207.216:31233/ both Donor	and	Pass				1
		Recipient s	nould display expecte	d				1
2. Verify login with below a .email text box b. password text box c. Login Page_TC_OO2 UI Login Page of Verify the UI elements c. Login button	/ UI elements:	below UI el a.email tex b.password c.Login but	t box text box ton with	g Pass				
Donor in Login page d.Don't have already an	account? Or Signup	orange colo d.Don't hav account? O	e already an r Signup					
1.Enter URL and click go	email:	User should	-					1
Login Page_TC_OO3 Functional Login page of Login page of Login Page_TC_OO3 Functional Login page of Login Page TC_OO3 Functional Login Page TC_OO3 Functional Login Page TC_OO3 Functional Login Page TC_OO3 Functional Login Page Functional Functional Login Page Functional Func	· ·	aniswamy@gmail.c verification	upon Workin ogin of donor. as	Pass				1
Donor can be registered 4.Click on login button	password text box password:20		expecte					1
			Capetite		<u> </u>			
Verify user is able to 1.Enter URL and click go	email:		should show Workin	Į.				
LoginPage_TC_004 UI Login page_Of log into application 2.Enter Valid email in Em	· ·	aniswamy@gmail.c 'Incorrect e password '	mail or	Pass				1
with Valid credentials	password:20	ľ	expecte	d				1
1.Enter URL and click go	· ·	swin00@gmail.com User should	-					
Login Page_TC_OO5 Functional Login page of recipient is verified, If 3.Enter valid password in		1002 verification successful I		Pass				1
Recipient Recipi	i password text box	recipient.	expecte					1
1.Enter URL and click go	URL:		should show					
2. Verify register with bel a. fullname text box	ow UI elements: http://169.5 login2	0.51.207.216:31233/ below UI el	ements: . and click go					1
b.Blood Group text box	logii.	a.fullname	- 1					
c.email text box		b.Blood Gro	oup text box					
d.password text box		c.email tex						
e.phone number text box f.gender text box	g.age text	d.password e.phone nu						
l l l l l l l l l l l l l l l l l l l	h.address text box	box						
Register page of register into Ldistrict text box	j.State	f.gender te		'				
RegisterPage_IC_006 UI Donor application with Valid have any illness text box	k.do you	g.age text b h.address t		Pass				
credentials credentials		i.district te		"				
		j.State text						
		·	ve any illness					
			Register Now white color					i
		button witi	Willte Color					1
								1
								1
1.Enter URL and click go	URL:http://1	//169.51.207.216:31 Application	should show	+				
2.Verify register with bel	ow UI elements: 233/register	<u>er-donor</u> below UI el	ements:					i l
a.Admin Organisation Na b.Admin Email text box	ame text box		and click go					1
b.Admin Email text box c.Patient's name text box	x	a.Admin Or Name text						1
d.Patient's Blood group		b.Admin En	nail text box					1
e.Patient's Age text box			name text box					1
f.Type of request text bo		d.Patient's text box	Blood group					1
Verify user is able to haddress text how	i.Submit		Age text box Workin	3				1
RegisterPage_TC_007 UI Register page of Register into Button Recipient application with Valid		f.Type of re	quest text as	Pass				1
credentials		box	expecte	d				1
		g.phonenui h.address t	mber text box ext box					1
		i.Submit bu						1
								1
								1
								1
								1

9.RESULTS

9.1 Performance Metrics

We show screenshots for the BLOOD DONOR web application for different types of users including recipient, donor, and administrator. Various features of the application are described and their needs of use are analyzed. If a patient needs a plasma, blood donors in vicinity can be contacted through sending email which is provided in the web application. Registered donors will get notification for the blood requests only if their blood group is compatible with the requested blood type and in the same city/region. Then matching blood donors can go to the requesting clinic and donate.

10.ADVANTAGES AND DISADVANTAGES

Advantages:

- The recipient get the plasma at the right time by registering in our web application.
- The donor gets increased.
- By sending request to the available donors, it is easy to contact the nearest donor.
- Our web application shows the donors list when the recipient search for the specific blood group

Disadvantages:

- It requires an active internet connection.
- It cannot auto verify user genuineness

11. CONCLUSION BLOOD DONOR

web application provides a reliable platform to connect local blood donors with patients. This web application will attract more users as it is user friendly and greatly reduces scalability issues in the case blood donation. Only the person who have a social responsibility will have a courage to donate their blood. Thus, we have successfully designed and developed the web application to ease the process of becoming a donor and recipient. BLOOD DONOR get to notified whenever a patient needs blood donation. It is a useful to everyone who are in need of plasma.

12.FUTURE SCOPE BLOODDONOR

Web Application can be developed to further improve user accessibility via integrating this application with various social networks application program interfaces (APIs). Consequently, users can login and sign up using various social networks. This would increase number of donors and enhances the process of blood donation. User interface (UI) can be improved in future to accommodate global audience by supporting different languages across countries. We can collaborate with government and it can further developed into moblie application to use app to help the people who are in need of plasma.

13.APPENDIX

Source code:

about.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
       integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<title>Home Recipients</title>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="#">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNavDropdown"
              aria-controls="navbarNavDropdown" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse" id="navbarNavDropdown">
<a class="nav-link active" aria-current="page" href="#">Home</a>
<a class="nav-link active" aria-current="page" href="#">About</a>
<!--<li>class="nav-item">
<a class="nav-link" href="#">Features</a>
<a class="nav-link" href="#">Pricing</a>
<a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"</pre>
role="button" data-bs-toggle="dropdown" aria-expanded="false">
               Dropdown link
</a>
<a class="dropdown-item" href="#">Action</a>
<a class="dropdown-item" href="#">Another action</a>
```

```
<a class="dropdown-item" href="#">Something else here</a>
</div>
</div>
</nav>
<div class="container">
<h2 class="py-4">About the company</h2>
<strong>Plasma+</strong>was incorporated in October of 2020 with a singular
focus of collecting medical-grade source blood plasma for our biotherapeutic
pharmaceutical client base. Source plasma is used in the production of plasma
protein-based injectable patient treatment therapies.
<h2 class="py-4">Our Mission</h2>
<strong>Our mission is</strong> to provide a customer-focused donor experience
while collecting source blood plasma to be utilized in the manufacturing of
lifesaving therapies, improving the world we live in one donation at a time.
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js"
       integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
</body>
display.html
<div>
<div>Name</div>
           {% for val in data %}
<div>{{val}}</div>
           {% endfor %}
                                                   {% if state == "SENT" %}
                                         <div>Email Sent Successfully </div>
                                                                {% else %}
                                   <form action="/send_email" method="post">
                                                                            <input hid
                                         <button type="submit">Send</button>
                                                                   </form>
                                                               {% endif %}
</div>
```

home donor.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
k
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
       integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<title>Home Donor</title>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="#">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNavDropdown"
              aria-controls="navbarNavDropdown" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end"</pre>
id="navbarNavDropdown">
<a class="nav-link active" aria-current="page" href="#">Home</a>
<a class="nav-link active" aria-current="page" href="#">About</a>
<button onclick="window.location.href='login'" class="btnbtn-</pre>
success">Logout</button>
<!--<li>class="nav-item">
<a class="nav-link" href="#">Features</a>
<a class="nav-link" href="#">Pricing</a>
<a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"</pre>
role="button" data-bs-toggle="dropdown" aria-expanded="false">
                Dropdown link
</a>
<a class="dropdown-item" href="#">Action</a>
<a class="dropdown-item" href="#">Another action</a>
<a class="dropdown-item" href="#">Something else here</a>
```

```
</div>
</div>
</nav>
<div class="container">
<h2 class="py-4">Requirements of a Donor</h2>
You must be between 18 - 65 years of age.
You must weigh 110 lbs. or more.
You must be in good health.
You must live within a 50 mile radius.
class="list-group-item">You must not have had new piercings or tattoos in
the previous four months.
You must have valid identification.
You must have a permanent address.
<h2 class="py-4">What should I bring? Use the list below to ensure you bring
the required documents.</h2>
A valid Government-issued identification like a
state-issued driver's license or military ID card. 
class="list-group-item">Your social security card or valid proof of your
social security number.
Proof of a local residence. You can use a piece of
mail such as a utility bill postmarked in the last 30 days, or a valid lease,
etc. 
<h2 class="py-4">How do I prepare for my visit?</h2>
Drink plenty of water, juice, or other non-
caffeinated beverages 2-3 hours before you arrive. We recommend 4-6 glasses.
Avoid caffeine in the same time period.
class="list-group-item">Don't drink any alcohol for 24 hours before your
plasma donation. 
class="list-group-item">Do eat a meal before you arrive. 
Get plenty of sleep the night before your plasma
donation. 
<h2 class="py-4">Who Do Plasma Donations Help?</h2>
Individuals who experience a severe trauma, burn or shock often
lose a significant amount of
         blood volume, and are
         depleted of many necessary electrolytes. Electrolytes are minerals
that help to balance the
         amount of water, nutrients
         and pH level inside the body. In this situation, a plasma
transfusion can provide the lifesaving
         blood volume needed to
         restore their blood pressure and volume status, as well as restore
electrolyte levels.
```

```
In addition, people with liver disease or clotting factor
deficiencies may not have the proper
            substances in their blood
            to allow their blood to clot normally. Whenever an individual has
a cut or injury, these
           clotting factors ensure that
            they do not lose too much blood. Plasma donations ensure that
these individuals can receive a
            plasma transfusion to
            supplement their body's clotting ability and stop excessive
bleeding from occurring. Finally,
            children and adults with
            cancer sometimes experience complications in which their body has
used up all of their natural
            clotting factors. In
            cases of this disorder, called disseminated intravascular
coagulation (DIC), transfusions of
           fresh frozen plasma may be
           critical.
<h2>What Is The Plasma Donation Process?</h2>
During a plasma donation, blood is removed from the donor's arm
and run through an automated
            process that removes the plasma portion from the blood. The
remaining red blood cells and
            platelets are then returned to the donor's arm with a small amount
of saline to maintain the
            overall volume. This all occurs while the donor is in the donation
chair and allows a donor to
            give more plasma than they would during a regular blood donation -
enough plasma for up to three
            patients from a single plasma donation. The process itself is
safe, and ultimately is very
similar to a general blood donation visit.
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js"
            integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
</body>
</html>
home receipient.html
```

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

```
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"
       integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
<title>Home Recipients</title>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="#">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNavDropdown"
              aria-controls="navbarNavDropdown" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end"</pre>
id="navbarNavDropdown">
<a class="nav-link active" aria-current="page" href="#">Home</a>
<a class="nav-link active" aria-current="page" href="#">About</a>
<button onclick="window.location.href='login2'" class="btnbtn-</pre>
success">Logout</button>
<!--<li>class="nav-item">
<a class="nav-link" href="#">Features</a>
<a class="nav-link" href="#">Pricing</a>
<a class="nav-link dropdown-toggle" href="#" id="navbarDropdownMenuLink"</pre>
role="button" data-bs-toggle="dropdown" aria-expanded="false">
               Dropdown link
</a>
<a class="dropdown-item" href="#">Action</a>
<a class="dropdown-item" href="#">Another action</a>
<a class="dropdown-item" href="#">Something else here</a>
</div>
</div>
</nav>
<div class="container">
```

```
<h2 class="py-4">When is a plasma transfusion needed?</h2>
People often need plasma transfusions in serious medical
situations.
         Typically, plasma transfusions are used to stop or prevent
bleeding due to blood clotting problems. A plasma
         transfusion can also help increase blood volume and prevent shock.
         A plasma transfusion may be needed for:
some types of open-heart surgery
transplant surgery
severe liver disease or failure
class="list-group-item">different types of clotting deficiencies
trauma or shock
severe burns
severe infections
<h2 class="py-4">What are the risks of a plasma infusion?</h2>
In general, plasma infusions are safe. There's a low risk of
complications.
         If side effects do occur, they might include:
class="list-group-item">soreness, bruising, or pain at the needle
insertion site
infections
allergic reactions
reactions to the plasma
class="list-group-item">transfusion-associated circulatory overload
class="list-group-item">transfusion-related acute lung injury
<h2 class="py-4">Frequently asked questions</h2>
<div class="col-6">
<div class="accordion" id="accordionExample">
<div class="accordion-item">
<h2 class="accordion-header " id="headingOne">
<button class="accordion-button" type="button" data-bs-toggle="collapse"</pre>
                  data-bs-target="#collapseOne" aria-expanded="true"
aria-controls="collapseOne">
                  Are blood types important for plasma transfusion?
</button>
</h2>
```

```
<div id="collapseOne" class="accordion-collapse collapse show" aria-</pre>
labelledby="headingOne"
                    data-bs-parent="#accordionExample">
<div class="accordion-body">
                        Yes, blood type matters for plasma transfusions. Type
AB blood is best because that plasma
                        contains no antibodies. This means it can be given it
to a person with any blood type. </div>
</div>
</div>
<div class="accordion-item">
<h2 class="accordion-header" id="headingTwo">
<button class="accordion-button collapsed" type="button" data-bs-</pre>
toggle="collapse"
                        data-bs-target="#collapseTwo" aria-expanded="false"
aria-controls="collapseTwo">
                        Can disease be transmitted in plasma transfusion?
</button>
</h2>
<div id="collapseTwo" class="accordion-collapse collapse" aria-</pre>
labelledby="headingTwo"
                    data-bs-parent="#accordionExample">
<div class="accordion-body">
Yes. However, the Food and Drug Administration requires that all plasma be
tested after it's collected, just like whole blood. The plasma is mainly
checked for syphilis, HIV, and hepatitis A, B, and C.
</div>
</div>
</div>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
                integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
</body>
</html>
home.html
<!DOCTYPE html>
<html lang="en">
```

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

<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>

<!-- bootstrap csscdn-->
```

```
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
<!--navbar ends -->
<!-- Home page -->
 Welcome to our Home Page!
<form method="POST">
<button onclick="window.location.href='send_email'" class="btnbtn-</pre>
success">Mail</button>
</form>
</body>
</html>
login1.html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Login</title>
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
<!--<li>k rel="icon" href="/assets/img/favicon.ico" type="image/x-icon">-->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-</pre>
32x32.png">
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
```

```
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
klink
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-
bs-target="#navbarNav"
                  aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                             Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                             Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
```

```
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<div class="container mt-5">
<h2 class="form-text-h2"> Login as Donor </h2>
<form action="/login" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<div class="form-group mb-3">
<label class="form-label" for="Fullname">email</label>
<input type="email" class="form-control input text" placeholder="Enter your</pre>
email" name="email" required>
</div>
<div class="form-group mb-3">
<label class="label" for="password">Password</label>
<input type="password" class="form-control input text" placeholder="Password"</pre>
name="password" required>
</div>
<button type="submit" id="button" class="btnbtn-primary"> Login </button>
 Don't have an account yet? Click here to <a href="/register-</p>
donor">register! </a>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
login2.html
<!DOCTYPE html>
```

<html lang="en">

```
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Login</title>
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon">-->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-</pre>
32x32.png">
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
       integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
k
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-
bs-target="#navbarNav"
                   aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                               data-bs-toggle="dropdown" aria-
expanded="false">
                               Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
```

```
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                             data-bs-toggle="dropdown" aria-
expanded="false">
                              Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<div class="container mt-5">
<h2 class="form-text-h2"> Login Form </h2>
<form action="/login2" method="post">
<div class="msg">{{ msg }}</div>
<div class="col-6">
<div class="form-group mb-3">
<label class="form-label" for="Fullname">email</label>
<input type="email" class="form-control input-text" placeholder="Enter your</pre>
email" name="email" required>
</div>
<div class="form-group mb-3">
<label class="form-label" for="password">Password</label>
<input type="password" class="form-control input-text" placeholder="Password"</pre>
name="password" required>
</div>
<button type="submit" id="button" class="btnbtn-primary"> Login </button>
 Don't have an account yet? Click here to <a href="/register-</p>
recipient">register! </a>
</div>
</form>
</div>
```

```
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
```

reg1.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<!-- bootstrap navbar-->
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
```

```
aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<!-- Login form -->
<div class="container mt-5">
<h2 class="h2"> Register Form for Donors</h2>
<form action="/register-donor" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<label class="form-label">Full Name</label>
<input type="text" class="form-control input_text" name="Fullname"</pre>
placeholder="Enter Your Fullname" id="Fullname"
```

```
required>
<label class="form-label" >Password</label>
<input type="password" class="form-control input text" name="password"</pre>
placeholder="Enter Your Password"
                    id="password" required>
<label class="form-label" >E-Mail</label>
<input type="email" class="form-control input_text" name="email"</pre>
placeholder="Enter Your Email ID" id="email"
                    required>
<label class="form-label" >Date Of Birth</label>
<input type="date" class="form-control input_text" name="DOB"</pre>
placeholder="Enter your Date of birth: DD-MM-YYYY"
                    id="DOB" required>
<label class="form-label" for="Gender" >Choose Your Gender:</label>
<select id="Gender" name="Gender" data-name="Gender" required="" class="col-3"</pre>
form-control input_text">
<option value="Select one" disabled>Select Your Gender
<option value="Male">Male</option>
<option value="Female">Female</option>
</select>
<label class="form-label" >Blood Group</label>
<input type="text" class="form-control input text" name="BloodGroup"</pre>
                    placeholder="Enter Your Blood Group. for ex: B+ve"
id="Blood-Group" required>
<label class="form-label" >State</label>
<input type="text" class="form-control input_text" name="State"</pre>
placeholder="Enter Your State. for ex: Kerala"
                    id="State" required>
<label class="form-label" >Pin</label>
<input type="number" class="form-control input_text" name="Pin"</pre>
placeholder="Enter Your Pincode. for Ex: 123456"
                    id="Pin" required>
<label class="form-label" >Phone Number</label>
<input type="tel" class="form-control input text" name="phone"</pre>
                    placeholder="Enter Your Phone Number. For ex:
+91123456789" id="phone" required>
<label class="form-label" >Health Issues (if any)</label>
<input type="text" class="form-control input_text" name="Issues"</pre>
                   placeholder="Ex: I have Anaemia or Cold or I suffered from
Corona" id="Issues">
<button type="submit" id="button" class="btnbtn-primary"> Register </button>
<div class="note mt-3">
<!--Register form -->
 already have an account ? please <a href="login">login! </a>
</div>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
```

```
crossorigin="anonymous"></script>
</body>
</html>
reg2.html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
k
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-
bs-target="#navbarNav"
                   aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
```

```
<a class="nav-link dropdown-toggle text-secondary" href="/" role="button"</pre>
                              data-bs-toggle="dropdown" aria-
expanded="false">
                              Donate Donors
</a>
<a class="dropdown-item text-secondary" href="login">Login</a>
<a class="dropdown-item text-secondary" href="register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="/" role="button"</pre>
                              data-bs-toggle="dropdown" aria-
expanded="false">
                              Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="login2">Login</a>
<a class="dropdown-item text-secondary" href="register-</a>
recipient">Register</a>
</div>
</div>
</div>
</nav>
<!--navbar ends -->
<!-- Home page -->
<!--navbar ends -->
<!-- Login form -->
<div class="container mt-5">
<h2 class="form-text-h2"> Recipient Register Form </h2>
<form action="/register-recipient" method="post">
<div class="col-6 py-2">
<div class="msg">{{ msg }}</div>
<label class="form-label">Organisation Name</label>
<input type="text" class="form-control input_text" name="Name" data-</pre>
name="Name"
                  placeholder="Organisation Name" id="Name" required>
<label class="form-label">Email ID</label>
<input type="email" class="form-control input_text" name="email" data-</pre>
name="email"
                  placeholder="Organisation mail id" id="email" required>
<label class="form-label">Password</label>
<input type="password" class="form-control input_text" name="password" data-</pre>
name="password"
                  placeholder="Password" id="password" required>
```

```
<label class="form-label">Address</label>
<input type="textarea" class="form-control input_text" name="Address" data-</pre>
name="Address"
                    placeholder="Your organisation address" id="Address"
reauired>
<label class="form-label">Phone</label>
<input type="tel" class="form-control input_text" name="phone" data-</pre>
name="phone"
                    placeholder="Phone Number" id="phone" required="">
<button type="submit" id="button" class="btnbtn-primary"> Register </button>
 already have an account ? please <a href="login2">login! </a>
</div>
</form>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
    integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>
wel.html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Plasma Donor Register</title>
<!-- bootstrap csscdn-->
<link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="/static/css/style.css">
<!-- font styles cdn-->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"</pre>
rel="stylesheet">
```

```
k
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar-->
<nav class="navbar navbar-expand-lgbg-light shadow-sm p-3 mb-5 bg-body</pre>
rounded">
<div class="container">
<div class="container-fluid">
<a class="navbar-brand text-danger" href="/">Plasma+</a>
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-</pre>
bs-target="#navbarNav"
                 aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse justify-content-end" id="navbarNav">
<a class="nav-link dropdown-toggle text-secondary" href="" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Donate Donors
</a>
<a class="dropdown-item text-secondary" href="/login">Login</a>
<a class="dropdown-item text-secondary" href="/register-
donor">Register</a>
<a class="nav-link dropdown-toggle text-secondary" href="#" role="button"</pre>
                            data-bs-toggle="dropdown" aria-
expanded="false">
                            Need Plasma?
</a>
<a class="dropdown-item text-secondary" href="/login2">Login</a>
<a class="dropdown-item text-secondary" href="/register-
recipient">Register</a>
</div>
</div>
</div>
```

```
</nav>
<!--navbar ends -->
<!-- Home page -->
<div class="hero">
<div class="container">
 Start donating plasma and save lives
<div class="px-1 py-5">
<button onclick="window.location.href='register-donor'" class="btnbtn-</pre>
success">For Donor</button>
<button onclick="window.location.href='register-recipient'" class="btnbtn-</pre>
info">For Recipients/button>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min
.js"
                integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</div>
</div>
</body>
</html>
app.py
from flask import Flask, render template, request, redirect, url for, session
import ibm db
# fromflask_mail import Mail, Message
import re
app = Flask(__name___)
# mail = Mail(app)
# app.config['MAIL SERVER']='smtp.gmail.com'
# app.config['MAIL PORT'] = 465
# app.config['MAIL_USERNAME'] = 'psuswin00@gmail.com'
# app.config['MAIL_PASSWORD'] = 'Su$i0410'
# app.config['MAIL_USE_TLS'] = False
# app.config['MAIL USE SSL'] = True
# mail = Mail(app)
app.secret key='a'
conn =ibm db.connect("DATABASE=bludb;HOSTNAME=b0aebb68-94fa-46ec-a1fc-
1c999edb6187.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;PORT=31249;USERNAM
E=zxd72229;PASSWORD=XEdSEnZ2jpYUndqg;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiCer
tGlobalRootCA.crt;","","")
@app.route("/",methods=['GET', 'POST'])
def home():
    return render template("wel.html")
```

```
@app.route("/",methods=['GET', 'POST'])
def home1():
    return render template("home.html")
@app.route("/register-donor", methods=['GET', 'POST'])
def register_donor():
msg=''
    if request.method=='POST':
Fullname =request.form['Fullname']
        password =request.form['password']
        email =request.form['email']
        DOB = request.form['DOB']
        Gender = request.form['Gender']
BloodGroup = request.form['BloodGroup']
        State = request.form['State']
        Pin = request.form['Pin']
        phone = request.form['phone']
        Issues = request.form['Issues']
sql="SELECT * FROM samp WHERE fullname =?"
stmt= ibm db.prepare(conn,sql)
ibm db.bind param(stmt,1, Fullname)
ibm_db.execute(stmt)
        account =ibm db.fetch assoc(stmt)
        print(account)
        if account:
msg='Account already exists !'
elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):
msg='Invalid email address !'
elif not re.match(r'[A-Za-z0-9]+', Fullname):
msg='name must contain only characters and numbers !'
        else:
insert_sql="INSERT INTO samp VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?)"
prep_stmt=ibm_db.prepare(conn,insert_sql)
ibm_db.bind_param(prep_stmt,1,Fullname)
ibm db.bind param(prep stmt,2,password)
ibm db.bind param(prep stmt,3,email)
ibm_db.bind_param(prep_stmt,4,DOB )
ibm_db.bind_param(prep_stmt,5,Gender)
ibm db.bind param(prep stmt,6,BloodGroup)
ibm_db.bind_param(prep_stmt,7,State)
ibm_db.bind_param(prep_stmt,8,Pin)
ibm_db.bind_param(prep_stmt,9,phone)
ibm_db.bind_param(prep_stmt,10,Issues)
ibm db.execute(prep stmt)
msg='You have successfully registered !'
elifrequest.method=='POST':
msg='Please fill out the form !'
    return render_template('reg1.html',msg=msg)
@app.route("/register-recipient", methods=['GET', 'POST'])
def register_recipient():
msg=''
    if request.method=='POST':
        Name =request.form['Name']
        email =request.form['email']
        password =request.form['password']
```

```
Address = request.form['Address']
        phone = request.form['phone']
sql="SELECT * FROM recip WHERE name =?"
stmt= ibm db.prepare(conn,sql)
ibm _db.bind_param(stmt,1, Name)
ibm db.execute(stmt)
        account =ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
msg='Account already exists !'
elif not re.match(r'[^{0}]+@[^{0}]+\.[^{0}]+, email):
msg='Invalid email address !'
elif not re.match(r'[A-Za-z0-9]+', Name):
msg='name must contain only characters and numbers !'
insert_sql="INSERT INTO recip VALUES (?, ?, ?, ?)"
prep_stmt=ibm_db.prepare(conn,insert_sql)
ibm db.bind param(prep stmt,1,Name)
ibm_db.bind_param(prep_stmt,2,email)
ibm_db.bind_param(prep_stmt,3,password)
ibm db.bind param(prep stmt,4,Address)
ibm_db.bind_param(prep_stmt,5,phone)
ibm db.execute(prep stmt)
msg='You have successfully registered !'
elifrequest.method=='POST':
msg='Please fill out the form !'
    return render_template('reg2.html',msg=msg)
@app.route("/login",methods=['GET', 'POST'])
def login_donor():
    global userid
msg=''
    if request.method=='POST':
        email =request.form['email']
        password =request.form['password']
sql="SELECT * FROM samp WHERE email =? AND password=?"
stmt=ibm db.prepare(conn,sql)
ibm db.bind param(stmt,1, email)
ibm_db.bind_param(stmt,2, password)
ibm db.execute(stmt)
        account =ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            session['loggedin'] =True
            session['id'] = account['EMAIL']
userid= account['EMAIL']
            session['email'] = account['EMAIL']
msg='Logged in successfully !'
msg='Logged in successfully !'
            return render template('home donor.html',msg=msg)
        else:
msg='Incorrect username / password !'
    return render template('login1.html',msg=msg)
@app.route('/logout')
```

```
def logout():
session.pop('loggedin', None)
session.pop('id', None)
session.pop('username', None)
   return redirect(url_for('login_donor'))
@app.route("/login2", methods=['GET', 'POST'])
def login recipient():
    global userid
msg='
    if request.method=='POST':
        email =request.form['email']
        password =request.form['password']
sql="SELECT * FROM recip WHERE email =? AND password=?"
stmt=ibm db.prepare(conn,sql)
ibm_db.bind_param(stmt,1, email)
ibm_db.bind_param(stmt,2, password)
ibm_db.execute(stmt)
        account =ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            session['loggedin'] =True
            session['id'] = account['EMAIL']
userid= account['EMAIL']
            session['email'] = account['EMAIL']
msg='Logged in successfully !'
msg='Logged in successfully !'
            return render_template('home_recipient.html',msg=msg)
        else:
msg='Incorrect username / password !'
    return render_template('login2.html',msg=msg)
@app.route('/logout2')
def logout2():
session.pop('loggedin', None)
session.pop('id', None)
session.pop('username', None)
   return render_template('login2.html')
# @app.route('/send email', methods = ['POST'])
# def send():
      if 'blood' in request.form:
#
#
          type = request.form['blood']
#
          stmt = ibm_db.prepare(conn, 'SELECT email FROM samp WHERE blood =
?')
#
          ibm_db.bind_param(stmt,1,type)
#
          ibm_db.execute(stmt)
          tb = ibm db.fetch tuple(stmt)
#
          mails = []
#
#
          while tb != False:
#
              mails.append(tb[0])
#
              tb = ibm_db.fetch_tuple(stmt)
```

```
#
          msg = Message('Blood Request', recipients=mails)
          msg.body = "Here the " + request.form['blood'] + " Blood Requested"
#
#
          mail.send(msg)
          return render_template('display.html', state="SENT")
#
      return 'Please Provide Blood in Form'
#
# @app.route('/display', methods =['GET', 'POST'])
# def display():
      if 'id' in session:
#
#
          if 'blood' in request.form:
              type = request.form['blood']
#
              stmt = ibm_db.prepare(conn, 'SELECT Fullname FROM samp WHERE
#
blood = ?')
              ibm_db.bind_param(stmt,1,type)
#
              ibm_db.execute(stmt)
#
              tb = ibm db.fetch tuple(stmt)
              data = []
#
              while tb != False:
#
#
                  data.append(tb[0])
#
                  tb = ibm_db.fetch_tuple(stmt)
              return render_template('display.html', data=data,
blood=request.form['blood'], state="NOTSENT")
          return redirect('login2')
#
      return 'Not Authed'
if __name__ =='__main__':
app.debug=True
app.run(host='0.0.0.0',port=8080)
```

main.py

```
from flask import Flask
from flask_mail import Message,Mail

app = Flask(__name__)
mail = Mail(app)

app.config['MAIL_SERVER']='smtp.gmail.com'
app.config['MAIL_PORT'] = 465
app.config['MAIL_USE_TLS'] = False
app.config['MAIL_USE_SSL'] = True
```

Demo Video Link:

https://github.com/IBM-EPBL/IBM-Project-49621-1660830057/tree/main/Final Deliverables/Demo%20Video

GitHub Repository Link:

https://github.com/IBM-EPBL/IBM-Project-49621-1660830057