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# **PLASMA DONOR APPLICATION**

**DOMAIN:** CLOUD APPLICATION DEVELOPMENT

**TEAM MEMBERS:**

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2. S. ANEES FATHIMA
3. P. HANNAH PRINCY
4. J.V. SNEHAA SREE

## **1. INTRODUCTION**

### **1.1 OVERVIEW:**

Our objective is to provide and reach out a safe, pure, potent and adequate plasma supply for patients in the diverse communities who are in need. The main role of plasma is to take nutrients, hormones, and proteins to the parts of the body that need it. Cells also put their waste products into the plasma. The plasma then helps remove this waste from the body. Blood plasma also carries all parts of the blood through your circulatory system. Plasma is a critical part of the treatment for many serious health problems. This is why there are blood drives asking people to donate blood plasma. When you donate blood, healthcare providers can separate these vital parts from your plasma. These parts can then be concentrated into various products. These products are then used as treatments that can help save the lives of people suffering from burns, shock, trauma, and other medical emergencies. The proteins and antibodies in plasma are also used in therapies for rare chronic conditions. People with these conditions can live long and productive lives because of the treatments. In fact, some health organizations call plasma "the gift of life." If you want to donate plasma to help others in need, you will go through a screening process. This is to make sure your blood is healthy and safe. Type AB plasma can be given to people of all blood types. Because type AB blood is rare and this plasma is usually in short supply. We encourage all forms of donation from those who are eligible, so that they may contribute life-saving blood and source plasma to those in need. Plasma donation requires a commitment both in the amount of time for each donation and frequency of donation. So the objective of the application is to reach out the plasma donors to the recipients who are all in urgent need of the plasma. As plasma can save many lives we need to create awareness about the plasma donation and its impact on many

suffering lives which can create a second chance for many people. The programs may fit into a donor's life differently at various times in the donor's life, and are equally important in helping to fulfill a vital medical need.

**Who can donate plasma to donate plasma, you will need to:**

- be able to spare just over an hour to donate
- be generally fit and well
- be between the ages of 17 and 65
- weigh at least 50kg

## **1.2 PROBLEM STATEMENT**

During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request. As we develop plasma donor application for finding the plasma donor who is willing to donate their blood. Here the problem faced by the donor and the recipient can be bridged by using our Plasma donor application which collects the necessary data from the donor and make them available to the recipients.

<b>Problem Statement (PS)</b>	<b>I am (Customer)</b>	<b>I'm trying to</b>	<b>But</b>	<b>Because</b>	<b>Which makes me feel</b>
PS-1	Recipient	To get plasma	It takes much time and hard to find	Finding Plasma donor is not easy	Frustrated

PS-2	Donor	To donate the plasma	It takes much time and hard to find	Finding the required blood group recipient is difficult	Irritated
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## **2. LITERATURE SURVEY**

### **2.1. EXISTING PROBLEM**

#### **INSTANT PLASMA DONOR RECIPIENT CONNECTOR WEB APPLICATION**

The world is suffering from the COVID 19 crisis and no vaccine has been found yet..

But there is another scientific way in which we can help reduce mortality or help people affected by COVID19 by donating plasma from recovered patients. In the absence of an approved antiviral treatment plan for a fatal COVID19 infection, plasma therapy is an experimental approach to treat COVID19-positive patients and help them faster recovery. Therapy is considered competent. In the recommendation system, the donor who wants to donate plasma can donate by uploading their COVID19 certificate and the blood bank can see the donors who have uploaded the certificate and they can make a request to the donor and the hospital can register/login and search for the necessary things. plasma from a blood bank and they can request a blood bank and obtain plasma from the blood bank.

The main goal of the project is to design a user-friendly web application that is like a scientific vehicle from which can help reduce mortality or help those affected by COVID19 by donating plasma from patients who have recovered without approved antiretroviral therapy planning for a deadly COVID19 infection, plasma therapy is an experimental approach to treat those COVID-positive patients and help them recover faster. Therapy, which is considered reliable and safe. If a particular person has fully recovered from COVID19, they are eligible to donate their plasma. As we all know, the traditional methods of finding plasma, one has to find out for oneself by looking at hospital records and contacting donors have been recovered, sometimes may not be available at home and move to other places. In this type of scenario, the health of those who are sick becomes disastrous. Therefore, it is not considered a rapid process to find plasma. The main purpose of the proposed system, the donor who wants to donate plasma can simply upload their covid-19 traced certificate and can donate the plasma to the blood bank, the blood bank can apply for the donor and once the donor has accepted the request, the blood bank can add the units they need and the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank.

## **BLOODR: BLOOD DONOR AND REQUESTER MOBILE APPLICATION**

Conventionally, when a patient needs blood, he/she has to contact a blood bank or a compatible blood group of a donor in their circle, family, and friends. However, it is difficult to find suitable donor within a limited group of people in a given time. In addition, there is no guarantee that blood banks will have compatible blood group in stock. There is also steady increase in blood donation requests posts in social networking sites (like Facebook, twitter, Instagram, etc.) requesting for donation.

Ease of access, requirements of blood, and the blood donation statistics are taken into consideration while researching the topic. There is a steady need for blood and blood components (red blood cells, blood plasma, platelets). Every minute of every day someone is in need for blood, however as e.g., in Canada, only 1 in 60 Canadians gave blood last year, when almost 1 of every 2 Canadians is eligible to donate. 52% of Canadians say they or a family member have needed blood or blood products. The blood donation rate in high-income countries is 33.1 donations per 1,000 people; 11.7 donations in middle-income countries and 4.6 donations in low-income countries .As a result, finding blood donor is becoming very difficult in almost every country.

BLOODR application can resolve these issues by connecting patients promptly with a large pool of donors in the same region via an authorized clinic. When a patient needs a blood donation, the clinic (where the patient is admitted) can use the application to contact the blood donors in the vicinity or nearby city based on their location. The registered donors will get notification about the blood donation needed at a specific clinic where they can go and donate.

BLOODR application provides donors with functionalities including “blood request feed”, “donation history”, “invite friend”, and “book an appointment” (with the clinic to donate blood), at the same time the requester (aka clinic) can send requests and use this application to maintain the different blood donation activities.

## **NEVON INSTANT PLASMA DONOR RECIPIENT CONNECTOR**

This system is used if anyone needs a Plasma Donor. This system comprises of Admin and User where both can request for a Plasma. In this system there is something called an active user, which means the user is an Active member of the App and has recovered from Covid 19, only such people are recommended here for Plasma Donation. Both parties can Accept or Reject the request. User has to Upload a Covid Negative report to be able to Donate Plasma.

The system comprises of 2 major modules with their sub-modules

Admin can login into his account using id and password. Admin can view all active users. Admin can raise request for plasma donation to an Active User. Admin can accept or reject donor requests on basis of user report.

User can register using personal details. User can login into his account using email id and password. Request for Plasma when User can raise request for plasma donation. User need to upload their report of been successfully recovered from COVID19. For Emergency Request user can raise request for plasma in emergencies.

This application already filters the Active Members. Here a User can be a giver as well as a borrower. This system proposed here aims at connecting the donors & the patients by an online application. By using this application, the users can either raise a request for plasma donation or requirement.

The Limitations of this application include the following criteria. Inputs will affect the project outputs. Internet Connection is mandatory. Reports are not Verified.





## **BLOOD DONATION APPLICATION USING ANDROID SMARTPHONE**

Blood is an important constituent of human body. Timely availability of quality blood is a crucial requirement for sustaining the healthcare services. In the hospital, in most of the cases, when blood is required, could not be provided on time causing unpleasant things. Though donor is available in the hospital, patient is unaware of it, and so is donor. To resolve this, a communication between hospital, blood bank, donor, and receptor is important.

The system listed with following forecasting on price variations and stock handling, increase in number of blood type, increase in human accident Infrastructure, blood on various category to be managed. So we solve the problem using the android application. The system will make sure that in case of need, the blood will be made available to the patient. There will be android app to make this communication faster. It aims to create an information about the donor and organization that are related to donating the blood. The methodology used to build this system uses GPS. The Proposed system will be used in Blood banks, Hospitals, for Donors and Requester whoever registers to the system.

Blood Donation System is an android based system that is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and helps them to manage in a better way. Aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle free and corruption free and make the system of blood bank management effective document is a template.

## **2.2 REFERENCES**

1. INSTANT PLASMA DONOR RECIPIENTCONNECTOR WEBAPPLICATION

Author: Kalpana Devi Guntoju, Tejaswini Jalli, Sreeja Uppala, Sanjay Mallisetti

Published on: Volume:04/Issue:06/June-2022

[https://www.irjmets.com/uploadedfiles/paper//issue\\_6\\_june\\_2022/26076/final/fin\\_irjmts1655361213.pdf](https://www.irjmets.com/uploadedfiles/paper//issue_6_june_2022/26076/final/fin_irjmts1655361213.pdf)

2. BLOODR: BLOOD DONOR AND REQUESTER MOBILE APPLICATION

Author: Vamsi Krishna Tatikonda

<https://pubmed.ncbi.nlm.nih.gov/29184892/>

3. NEVON INSTANT PLASMA DONOR RECIPIENT CONNECTOR

<https://nevonprojects.com/instant-plasma-donor-recipient-connector-android-app/>

4. BLOOD DONATION APPLICATION USING ANDROID SMARTPHONE

Author: Muhammad Fahim; Halil Ibrahim Cebe; Jawad Rasheed; Farzad Kiani

Published on: 18 August 2016

<https://ieeexplore.ieee.org/document/7543997>

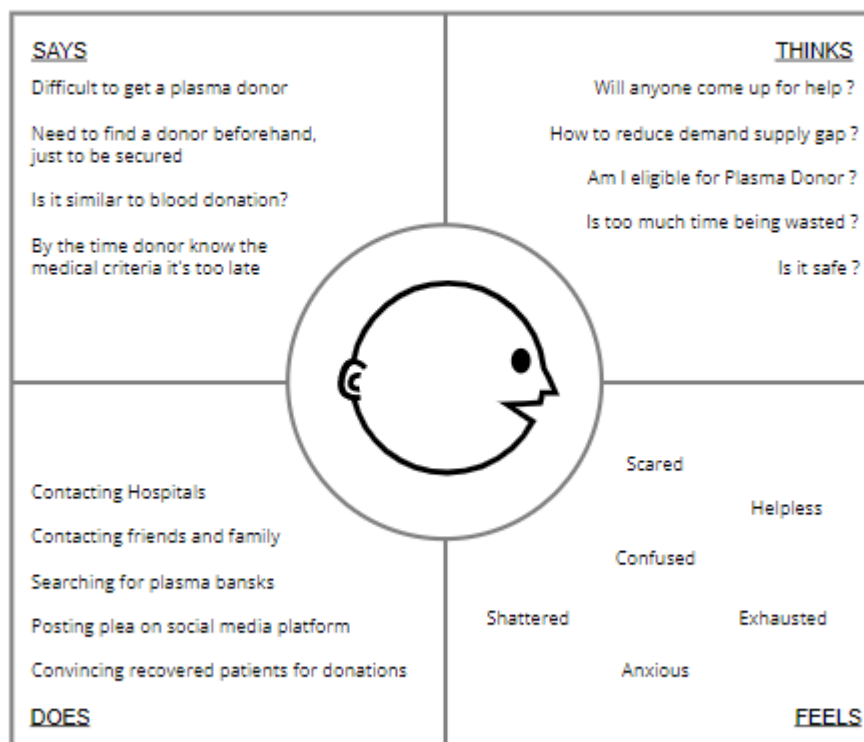
## **2.3 PROBLEM STATEMENT DEFINITION**

During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request.

### 3. IDEATION & PROPOSED SOLUTION

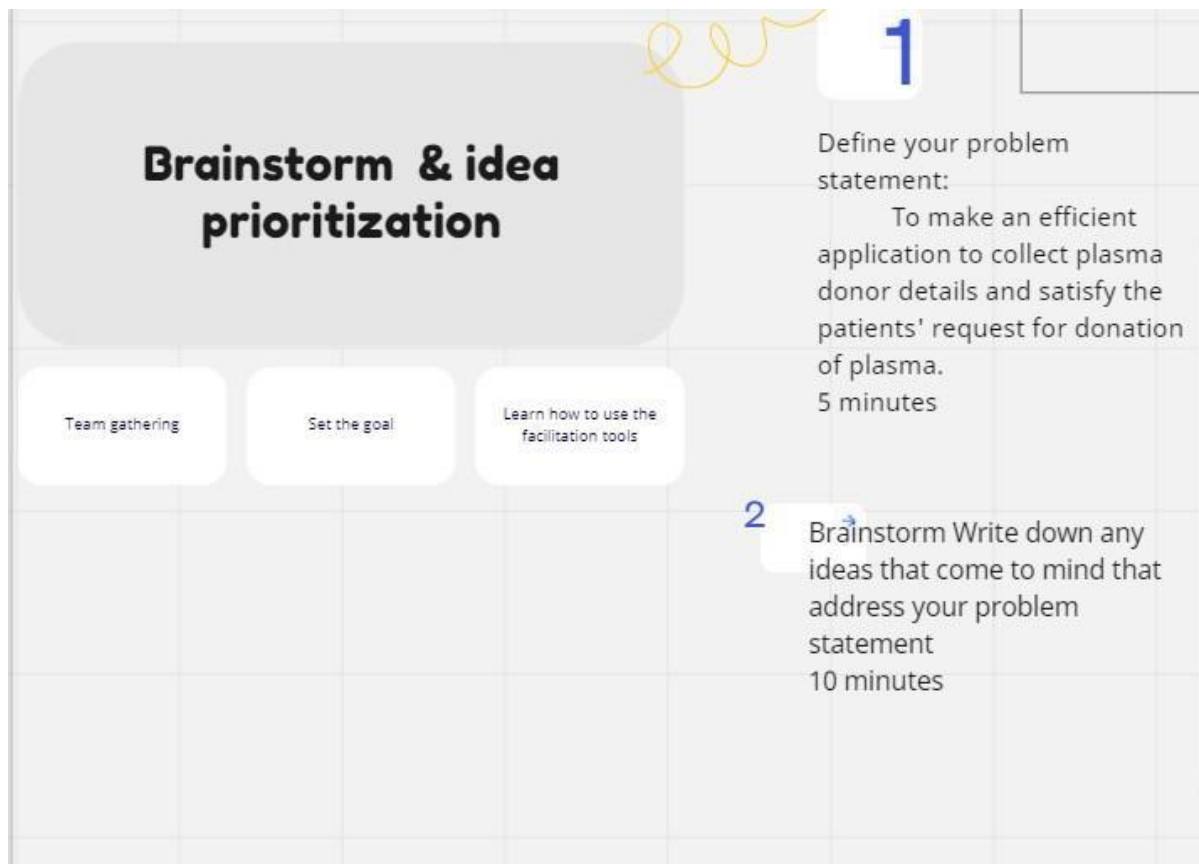
#### 3.1 EMPATHY MAP CANVAS

EMPATHY MAP FOR PLASMA DONOR APPLICATION



### 3.2 IDEATION & BRAINSTORMING

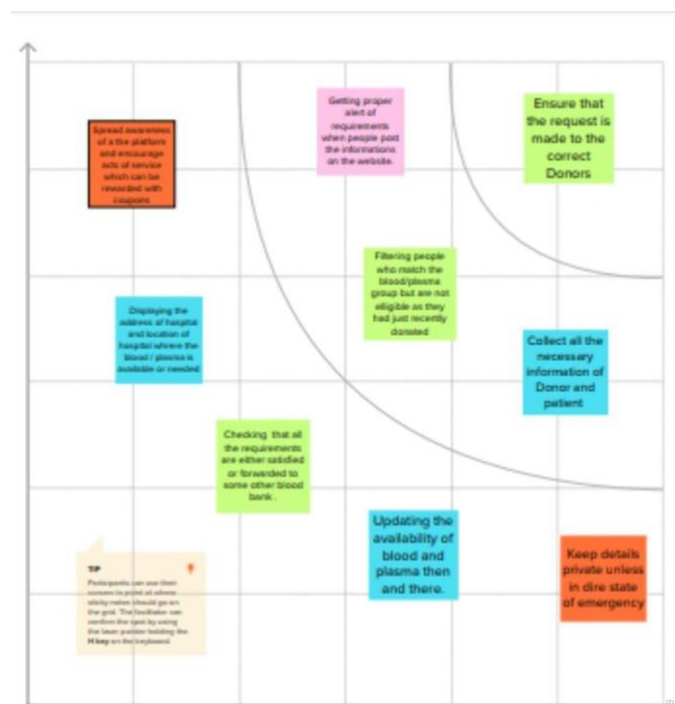
#### Step-1: Team Gathering, Collaboration and Select the Problem Statement



## Step-2: Brainstorm, Idea Listing and Grouping



## Step-3: Idea Prioritization



### **3.3 PROPOSED SOLUTION**

<b>S.No.</b>	<b>Parameter</b>	<b>Description</b>
1.	Problem Statement (Problem to be solved)	During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request.
2.	Idea / Solution description	To make an efficient application to collect plasma donor details and satisfy the patients request for donation of plasma.
3.	Novelty / Uniqueness	Display the information about blood plasma and eligibility of a donor to donate blood plasma. The donor and recipient can communicate by sending emails.
4.	Social Impact / Customer Satisfaction	It is a user-friendly application and it will help people to find plasma easily.
5.	Business Model (Revenue Model)	With the help of social media, we can spread about our application.

6.	Scalability of the Solution	Since this is a cloud-based application, scalability is much easier. Several people can use our application without any failure.
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### 3.4 PROPOSED SOLUTION FIT

<b>1. CUSTOMER SEGMENT(S)</b>	<b>6. CUSTOMER CONSTRAINTS</b>  Easy to access, quick help for emergency cases.	<b>5. AVAILABLE SOLUTIONS</b>  The blood donation websites are common but not blood plasma donation.
<b>2. JOBS-TO-BE-DONE / PROBLEMS</b>  During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the	<b>9. PROBLEM ROOT</b>  The root cause is the uncertainty of blood plasma donations and	<b>7. BEHAVIOUR</b>  The customer can donate and request about blood plasma donation.

<b>3. TRIGGERS</b> The need for blood plasma.	<b>10. YOUR SOLUTION</b> To create an interactive and user-friendly web application for users to register for blood plasma donation and request for blood plasma.	<b>8. CHANNELS of BEHAVIOUR</b> The web application can notify the donors if any user requests for blood plasma and it makes blood plasma donation an easy process.
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<p><b>4. EMOTIONS: BEFORE / AFTER</b></p> <p>How do <del>customers</del> feel when they face a <del>problem</del> of a job and <del>satisfaction</del>?</p> <p><del>Is</del> Infer of loss to satisfaction</p>		
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## 4. REQUIREMENT ANALYSIS

### 4.1 FUNCTIONAL REQUIREMENT

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	<ul style="list-style-type: none"> <li>Registration through mobile/ laptop/ PC</li> </ul>
FR-2	User Confirmation	<ul style="list-style-type: none"> <li>Confirmation via Email</li> <li>Confirmation via OTP</li> </ul>
FR-3	Donor Notification	<ul style="list-style-type: none"> <li>Get notification through register Email</li> </ul>



FR-4	Plasma needer details(person)	<ul style="list-style-type: none"> <li>• Availability details in web- application</li> </ul>
FR-5	Plasma availability(blood)	<ul style="list-style-type: none"> <li>• Availability details in web- application</li> </ul>

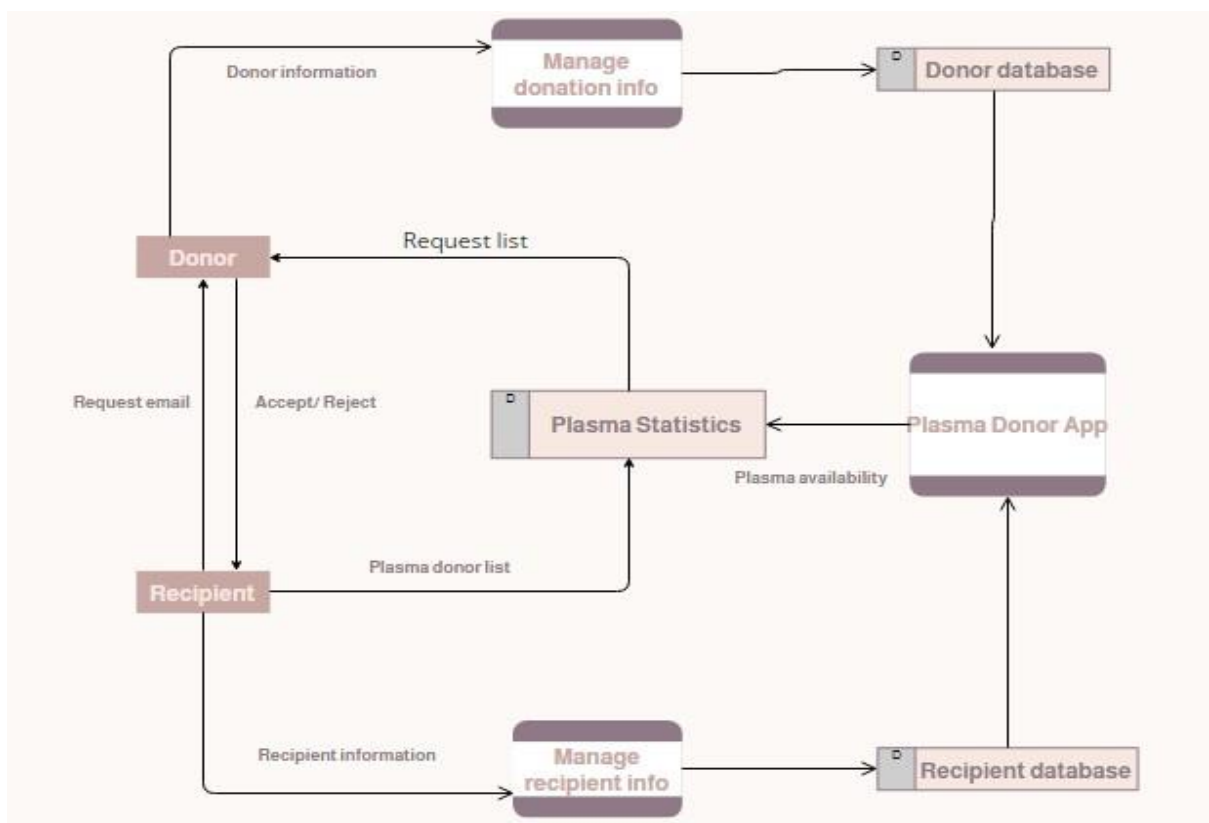
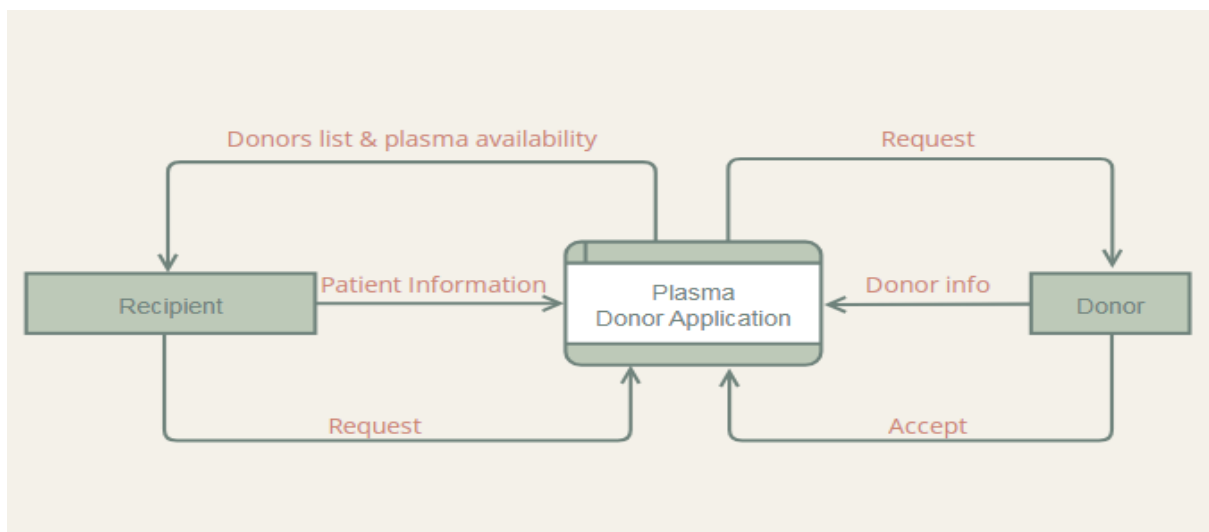
## 4.2 NON-FUNCTIONAL REQUIREMENT

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none"> <li>• Can new user quickly adapt to the softwarewithout helpless</li> <li>• the most common operations streamlinedto be performed quickly</li> </ul>

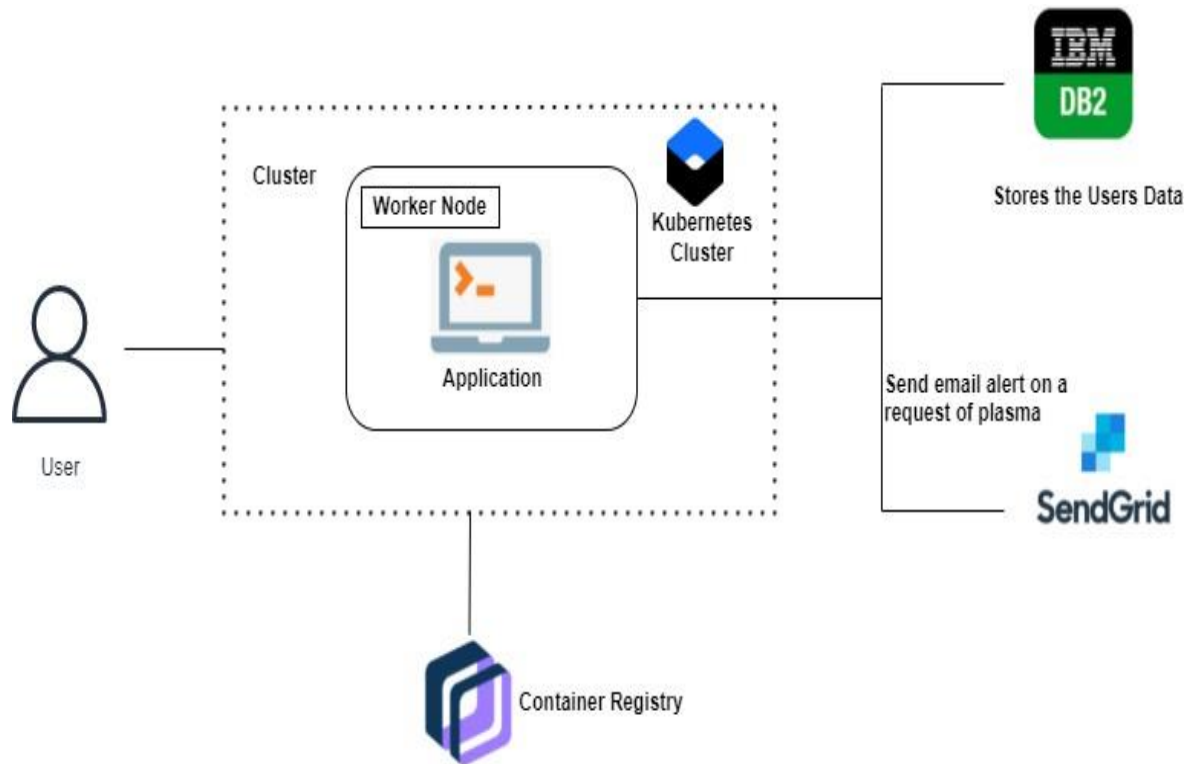
NFR-2	Security	<ul style="list-style-type: none"> <li>• The system had user or role-based security</li> <li>• any operations done by user will keep private</li> </ul>
NFR-3	Reliability	<ul style="list-style-type: none"> <li>• Whenever the user changes his scheduled</li> <li>• use mobile and desktop anywhere</li> </ul>
NFR-4	Performance	<ul style="list-style-type: none"> <li>• The performance of the app is in high level because it can hold only few data so it performance will fast</li> </ul>
NFR-5	Availability	<ul style="list-style-type: none"> <li>• User can use mobile and desktop anywhere in network</li> <li>• User can use application 24/7</li> </ul>
NFR-6	Scalability	<ul style="list-style-type: none"> <li>• The capacity of an app is handled by cloud so it has high scalability and elasticity</li> </ul>

## **5.PROJECT DESIGN**

### **5.1 DATA FLOW DIAGRAMS**



## 5.2 SOLUTION & TECHNICAL ARCHITECTURE



### 5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Donor	App Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Login	USN-2	As a user, I can log into the application by entering email & password	I can receive confirmation email & click confirm	High	Sprint-2
	Accept to Donate	USN-3	As a user, I can log into the application and see the request and also receive request through mail. Accept or reject the request.	I can see the requests and accept or reject it.	High	Sprint-3
Recipient	App Registration	USN-4	As a user, I can register for the application by entering my email, password, and confirming my	I can access my account / dashboard	High	Sprint-1

			password.			
	Login	USN-5	As a user, I can log into the application by entering email & password	I can receive confirmation email & click confirm	High	Sprint-2
	Find the donor	USN-6	As a patient, I can directly access the application and find the plasma donor.	I can access my account / dashboard	High	Sprint-1,2
	Request for plasma	USN-7	As a user, I can enter into the application and find the donor and request.	I can register & access the dashboard with Login and request plasma.	Medium	Sprint-3
Admin	Maintain the applications	USN-8	Maintaining details for users	I can access database	High	Sprint-3
	Maintain Database	USN-9	As Administrator I can hold the exact availability of plasma.	I can access my account / dashboard	Medium	Sprint-4

## **6. PROJECT PLANNING & SCHEDULING**

### **6.1 SPRINT PLANNING & ESTIMATION**

#### **SPRINT PLANNING:**

<b>Sprint</b>	<b>Functional</b>	<b>User Story</b>	<b>User Story / Task</b>	<b>Story</b>	<b>Priority</b>	<b>Team</b>
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	<b>Requirement (Epic)</b>	<b>Number</b>		<b>Points</b>		<b>Members</b>
Sprint-1	Registration	USN-1	As a requester, I can register for the application by entering my email, password, and confirming my password.	5	High	Anees Fathima
Sprint-1	Login	USN-2	Registered requester can log into the application by entering requester email & password	5	High	Krishandhini
Sprint-2	Dashboard	USN-3	User can search the list of available donors	10	Medium	Snehaa Sree
Sprint-4	Access	USN-4	User can access the available donors list, then they can choose the donor who is nearby to Receiver	20	Medium	Hannah Princy
Sprint-1	Registration	USN-1	As a donor, I can register for the application by entering my email, password, and confirming my password.	5	High	Anees Fathima
Sprint-1	Login	USN-2	Registered donor can	5	High	Krishandhini

			log into the application by entering donor email & password			
Sprint-2	Dashboard	USN-3	The donor can view the request for blood plasma from requesters	10	Medium	Snehaa Sree
Sprint-3	Query System	USN-4	Any user can ask their queries via Chabot which is available 24/7 to sort user issues.	20	High	Hannah Princy

**SPRINT ESTIMATION:**

<b>Sprint</b>	<b>Total Story Points</b>	<b>Duration</b>	<b>Sprint Start Date</b>	<b>Sprint End Date (Planned)</b>	<b>Story Points Completed (as on Planned End Date)</b>	<b>Sprint Release Date(Actual)</b>
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	5 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022



Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022
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### Velocity:

Imagine we have 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)

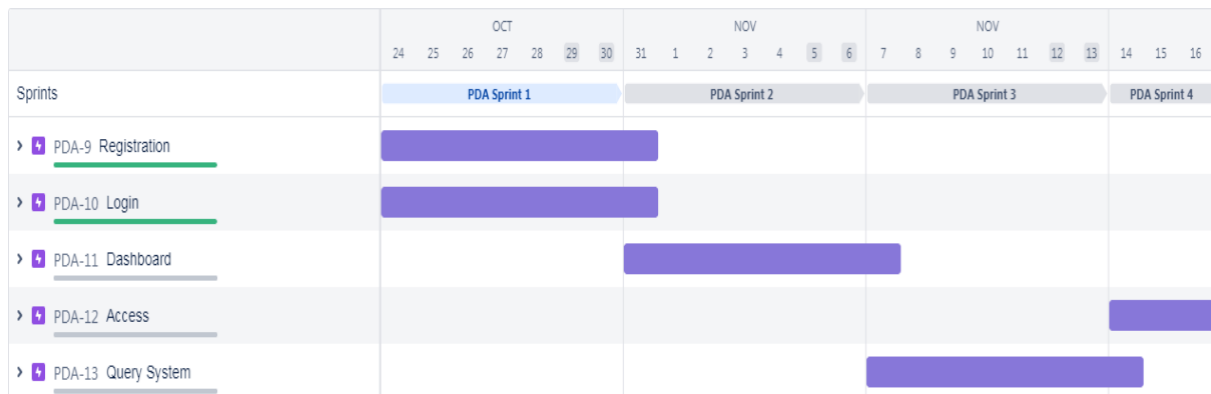
$$AV = \frac{\text{sprint duration}}{\text{velocity}} = \frac{20}{10} = 2$$

## 6.2 SPRINT DELIVERY SCHEDULE

TITLE	DESCRIPTION	DATE
Literature Survey & Information Gathering	Literature survey on the selected project & gathering information by referring the, technical papers, research publications etc.	26 SEPTEMBER 2022

<b>Prepare Empathy Map</b>	Prepare Empathy Map in mural to capture the user Pains & Gains, Prepare list of problem statements	22 SEPTEMBER 2022
<b>Ideation</b>	Organizing the brainstorming session and prioritize the top 4 ideas based on the feasibility & importance.	30 SEPTEMBER 2022
<b>Proposed Solution</b>	Prepare the proposed solution document, which includes the problem statement, idea, novelty, business model, social impact, scalability of solution	16 OCTOBER 2022
<b>Problem Solution Fit</b>	Prepare problem - solutionfit document.	16 OCTOBER 2022
<b>Solution Architecture</b>	Prepare solution architecture document.	17 OCTOBER 2022
<b>Customer Journey</b>	Prepare the customer journey maps to understand the user interactions & experiences with the application	20 OCTOBER 2022
<b>Functional Requirement</b>	Prepare the functional requirement document.	19 OCTOBER 2022
<b>Data Flow Diagrams</b>	Draw the data flow diagrams and submit for review.	19 OCTOBER 2022
<b>Technology Architecture</b>	Prepare the technology Architecture diagram.	20 OCTOBER 2022
<b>Prepare Milestone &amp; Activity List</b>	Prepare the milestones & activity list of the project.	26 OCTOBER 2022
<b>Project Development - Delivery of Sprint-1, 2, 3,4</b>	Develop & submit the developed code by testing it.	19 NOVEMBER 2022

## 6.3 REPORTS FROM JIRA



## **7 CODING AND SOLUTIONING**

### **7.1 FEATURE 1**

#### **LOGIN:**

First page of the blood plasma donor application is login page. The login page is common for admin, donor and requester. A person can login with username and password with he/she registered. If the password of the person is correct, they will be taken to the dashboard. If the password or username is incorrect, it pops up a notification saying incorrect.

#### **login.html**

```
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
<meta charset="UTF-8">
<title>IBM Donor App</title>
<link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet'
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'
rel='stylesheet' type='text/css'>
```

```

<link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
<style>
.login{
top: 20%;
}
</style>
</head>
<body>
<div class="header">
<div>Plasma Donor App</div>
<ul>
<li><a href="/registration">Register</a></li>
<li><a class="active" href="/login">Home</a></li>
</ul>
</div>
<div class="login" >
<div>
</div>
<!-- Main Input For Receiving Query to our ML -->
<form action="{{ url_for('loginpage') }}" method="post">
<input type="text" name="username" placeholder="Enter UserName" required="required"
style="color:black" />
<input type="password" name="password" placeholder="Enter Password"
required="required" style="color:black" />
<button type="submit" class="btn btn-primary btn-block btn-large">Login</button>
</form>
<br><br>
<div style="color:black">
{{ msg }}</div>
</div>
</body>
</html>

```

## REGISTRATION:

A new donor/requester can register themselves by providing their name, username, password, age, address, blood group and covid 19 infection status or any other medical history. By registering as a new user, they can login anytime using the username and password.

### **register.html**

```
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
  <meta charset="UTF-8">
  <title>IBM Plasma Donor App</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet'
type='text/css'>
  <link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet'
type='text/css'>
  <link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet'
type='text/css'>
  <link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'
rel='stylesheet' type='text/css'>
  <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
<style>
.login{
top: 20%;
}
</style>
</head>
<body>
<div class="header">
<div>Plasma Donor App</div>
  <ul>
    <li><a class="active" href="/login">Home</a></li>
  </ul>
</div>
<div class="login">
```

```

<!-- Main Input For Receiving Query to our ML -->
<form action="{{ url_for('register') }}" method="post">
    <input type="text" name="username" placeholder="Enter Your Name"
required="required" style="color:black"/>
    <input type="email" name="email" placeholder="Enter Email" required="required"
style="color:black"/>
    <input type="text" name="phone" placeholder="Enter 10-digit mobile
number" required="required" style="color:black"/>
    <input type="city" name="city" placeholder="Enter Your City Name"
required="required" style="color:black"/>
    <select name="infect">
        <option value="select" selected>Select COVID
infection status</option>
        <option value="infected">Infected</option>
        <option value="uninfected">Uninfected</option>
    </select>
    <select name="blood">
        <option value="select" selected>Choose your blood
group</option>
        <option value="O Positive">O Positive</option>
        <option value="A Positive">A Positive</option>
        <option value="B Positive">B Positive</option>
        <option value="AB Positive">AB Positive</option>
        <option value="O Negative">O Negative</option>
        <option value="A Negative">A Negative</option>
        <option value="B Negative">B Negative</option>
        <option value="AB Negative">AB Negative</option>
    </select>
    <input type="password" name="password" placeholder="Enter Password"
required="required" style="color:black"/>
    <button type="submit" class="btn btn-primary btn-block btn-large">Register</button>
</form>
<br><br>

```

```
<div style="color:black">
  {{ msg }}</div>
</div>
</body>
</html>
```

## DASHBOARD

A dashboard is a visual display of all of your data. While it can be used in all kinds of different ways, its primary intention is to provide information at-a-glance, such as KPIs. Here dashboard is used to dodge between pages for the ease of use for the users.

### dashboard.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>IBM Plasma Donar App</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
  <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
</head>
<style>
    .big{
      top:70;
      background-color:white;
```



```
margin-top:80px;
margin-left:550px;
margin-right:550px;
height:200px;
border-radius: 25px;
border: 3px solid #4a77d4;
box-shadow: 6px 8px 4px grey;
text-align:center;
}
.row{
height:150px;

}
.col{
margin:10px;
margin-left:50px;
margin-right:50px;
border-radius: 25px;
border: 1px solid #4a77d4;
box-shadow: 0px 8px 4px grey;
text-align:center;
}
.ext{
margin-top:25px;
line-height:40px;
}
.ext1{
margin-top:40px;
line-height:50px;
font-size:25px;
color:#f95450;
}
```

</style>

<body>

```
<div class="container-fluid">
<div class="header">
<div><b>Plasma Donar App</b></div>
<ul>
    <li><a href="/requester">Request</a></li>
    <li><a class="active" href="/logout">Logout</a></li>

</ul>
</div>
<br>
<div class="big">
    <div class="box">
        <div class="ext1"><font
size="20px">{ {b['1']}} </font><br><b>Donors</b></div>
        </div>
</div>
<br>
<div class="row">
    <div class="col" >
        <div class="ext">{ {b['2']}} <br><b>O Positive</b></div>
        </div>
    <div class="col" >
        <div class="ext">{ {b['3']}} <br><b>A Positive</b></div>
        </div>
    <div class="col" >
        <div class="ext">{ {b['4']}} <br><b>B Positive</b></div>
        </div>
    <div class="col" >
        <div class="ext">{ {b['5']}} <br><b>AB Positive</b></div>
        </div>
</div>
<br>
<div class="row">
    <div class="col" >
```

```

        <div class="ext">{{b['6']}}<br><b>O Negative</b></div>
    </div>
    <div class="col" >
        <div class="ext">{{b['7']}}<br><b>A Negative</b></div>
    </div>
    <div class="col" >
        <div class="ext">{{b['8']}}<br><b>B Negative</b></div>
    </div>
    <div class="col" >
        <div class="ext">{{b['9']}}<br><b>AB Negative</b></div>
    </div>
</div>
<div style="height:200px"></div>
</div>
</body>
</html>

```

## **7.2 FEATURE 2**

### **REQUEST FORM**

Request form for blood plasma is a form to fill out in need for blood plasma. Both the donor and requester/recipient can fill the request form when in need. It asks for patient's name, blood group, quantity of blood plasma needed, health issue. This request can be viewed by the administrator and donor.

#### **request.html**

```

<h1>Edit page</h1>
<form class="form-horizontal" action="{{url_for('update')}}" method="POST">
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Name:</label>
    <div class="col-sm-6">
        <input type="text" class="form-control" id="name" name="name"
value="{{data[0][1]}}" placeholder="Enter Name">
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Email:</label>

```

```

<div class="col-sm-6">
    <input type="email" class="form-control" id="email" name="email"
value="{{ data[0][2] }}" placehloder="Enter Email">
</div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Phno:</label>
    <div class="col-sm-6">
        <input type="text" class="form-control" id="phno" name="phno"
value="{{ data[0][3] }}" placehloder="Enter Phno">
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Blood Group:</label>
    <div class="col-sm-6">
        <select class="form-control" id="blood_group" name="blood_group">
            <option value="A+" {% if data[0][4]=="A+"% } selected {% endif
% }>A+</option>
            <option value="A-" {% if data[0][4]=="A-"% } selected {% endif % }>A-
</option>
            <option value="B+" {% if data[0][4]=="B+"% } selected {% endif
% }>B+</option>
            <option value="B-" {% if data[0][4]=="B+"% } selected {% endif % }>B-
</option>
            <option value="AB+" {% if data[0][4]=="AB+"% } selected {% endif
% }>AB+ </option>
            <option value="AB-" {% if data[0][4]=="AB-"% } selected {% endif % }>AB-
</option>
            <option value="O+" {% if data[0][4]=="O+"% } selected {% endif
% }>O+</option>
            <option value="O-" {% if data[0][4]=="O-"% } selected {% endif % }>O-
</option>
            <option value="Don't know" {% if data[0][4]=="A+"% } selected {% endif
% }>Don't Know</option>

```

```

        </select>
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Weight:</label>
    <div class="col-sm-6">
        <input type="text" class="form-control" id="weight" name="weight"
value="{{ data[0][5] }}" placehloder="Enter weight">
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">Gender:</label>
    <div class="col-sm-6">
        <label class="radio-inline"><input type="radio" name="gender"
value="Male" {% if data[0][6]=="Male"% } checked {% endif % }>Male</label>
        <label class="radio-inline"><input type="radio" name="gender"
value="Female" {% if data[0][6]=="Female"% } checked {% endif % }>Female</label>
        <label class="radio-inline"><input type="radio" name="gender"
value="Others" {% if data[0][6]=="Others"% } checkeded {% endif % }>Others</label>
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="pwd">dob:</label>
    <div class="col-sm-6">
        <input type="date" class="form-control" id="dob" name="dob"
value="{{ data[0][7] }}" placehloder="Enter dob">
    </div>
</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="Address">Address:</label>
    <div class="col-sm-6">
        <input type="text" class="form-control" id="address" name="address"
value="{{ data[0][8] }}" placehloder="Enter Address">
    </div>

```

```

</div>
<div class="form-group">
    <label class="control-label col-sm-2" for="adharno">Adharno:</label>
    <div class="col-sm-6">
        <input type="text" class="form-control" id="adharno" name="adharno"
value="{{ data[0][10] }}" placehloder="Enter Adharno">
    </div>
</div>
<div class="form-group">
    <div class="col-sm-offset-2 col-sm-10 ">
        <button type="submit" class="btn btn-default" value={{ { data[0][0] } }
name='id'}>Submit</button>
    </div>
</div>
</form>

```

## VIEW REQUEST

The donor is capable to view the request came and admin can approve or reject it according to the stock available.

### view.html

```

<script type="text/javascript">
    var m={{ { messages|safe } }};
    for(var i=0;i<m.length;i++)
    {
        alert(m[i]);
    }
</script>
<table id="example" class="display" style="width:100%">
    <thead>
        <tr>
            <th>Sno</th>
            <th>Name</th>
            <th>Email</th>
            <th>Phno</th>

```

```

        <th>Blood_group</th>
        <th>Weight</th>
        <th>Gender</th>
        <th>Dob</th>
        <th>Address</th>
        <th>Adharno</th>
        <th>Action</th>
        <th></th>
        <th></th>
    </tr>
</thead>
<tbody>
    <tr>
        <td>{{ loop.index }}
        <td>{{ d[1] }}</td>
        <td>{{ d[2] }}</td>
        <td>{{ d[3] }}</td>
        <td>{{ d[4] }}</td>
        <td>{{ d[5] }}</td>
        <td>{{ d[6] }}</td>
        <td>{{ d[7] }}</td>
        <td>{{ d[8] }}</td>
        <td>{{ d[10] }}</td>
        <td>
            <form action="{{ url_for('edit') }}" method="POST">
                <button value="{{ d[0] }}" name="edit">Edit</button>
            </form>
        </td>
        <td>
            <form action="{{ url_for('hold') }}" method="POST">
                <button value="{{ d[0] }}" name="hold">Hold</button>
            </form>
        </td>
    </tr>

```

```

        <form action="{ {url_for('delete')}} " method="POST">
        <button value="{ {d[0]} } " name="delete">Delete</button>
    </form>
</td>
</tr>
    { % endfor % }
</tbody>
</table>
<script type="text/javascript">
$(document).ready(function() {
    $('#example').DataTable( {
        dom: 'Bfrtip',
        buttons: [
            'copy', 'csv', 'excel', 'pdf', 'print'
        ]
    } );
});
</script>
<div class="container-fluid"> <!-- Header content -->
    <nav class="navbar navbar-inverse">
    <div class="container-fluid">
        <div class="navbar-header">
            <button type="button" class="navbar-toggle" data-toggle="collapse" data-
target="#myNavbar">
                <span class="icon-bar"></span>
                <span class="icon-bar"></span>
                <span class="icon-bar"></span>
            </button>
            <div>
                <ul class="nav navbar-nav navbar-right">
                    <li><a href="{ {url_for('inactive')}} "><span class="glyphicon glyphicon-log-
out"></span> Inactive</a></li>
                </ul>
            </div>
        </div>
    </div>

```



```
<div>
<ul class="nav navbar-nav navbar-right">
  <li><a href="{ {url_for('logout')}} "><span class="glyphicon glyphicon-log-
out"></span> Logout</a></li>
</ul>
</div>
</div>
</div>
</div>
</nav>
</div>
```

## 8. TESTING

### 8.1 TEST CASES

#### SPRINT 1

Test case ID	Test Scenario	Expected Result	Status
--------------	---------------	-----------------	--------

Home_TC_OO1	Verify user is able to see the Login , register and support button	Login , register and support button is displayed	Pass
Home_TC_OO2	Verify whether register button works	Redirected to registration page	Pass
Home_TC_OO3	Verify whether login button works	Redirected to login page	Pass
Home_TC_OO4	Verify whether support button works	Redirected to support page	Pass
Registration_TC_OO1	Verify the registration credentials valid or not	Application should show below UI : a.First name and last name text box b.email text box - mandatory field c.Phone number textbox - mandatory field with maximum 10 digits allowance d.Password textbox - mandatory field with minimum 5 characters with atleast 1 alphabet and 1 number no special characters allowed e.Confirm password text box - mandatory field f.Register button	Pass
Registration_TC_OO2	Verify whether register button works	Redirects to Personal details page	Pass
Registration_TC_OO3	Verify whether the page will redirect to login page if account already registered	Redirects to Login page	Pass
Login_TC_OO1	Verify whether user is able to see email and password text box	User should navigate to user account homepage	Pass
Login_TC_OO2	Verify user is able to log into application with Valid credentials	Application redirects to dashboard	Pass
Login_TC_OO3	Verify user able to log into application with Invalid Credentials	Application should show 'Incorrect email or password ' validation message.	Pass

## **SPRINT 2**

Test case ID	Test Scenario	Expected Result	Status
Dasboard_TC_OO1	Verify user is able to see the dashboard after login in with correct credentials	Respective Dashboard is displayed	Pass

Dashboard_TC_OO2	Verify the user login as donor, it should donor dashboard	Redirected to donor dashboard	Pass
Dashboard_TC_OO3	Verify the user login as requester, it should donor dashboard	Redirected to requester dashboard	Pass
Dashboard_TC_OO4	Verify the user logins as admin, it should admin dashboard	Redirected to admin dashboard	Pass

### **SPRINT 3**

Test case ID	Test Scenario	Expected Result	Status
Request_TC_OO1	Verify if the requester can view request form for blood plasma	Request form is displayed	Pass
Request_TC_OO2	Verify if the admin can view request form for blood plasma	Request form is displayed	Pass
Request_TC_OO3	Verify if the donor can view request form for blood plasma	Request form is displayed	Pass
Request_TC_OO4	Verify if the requester can make request for blood plasma	Make plasma request	Pass
Request_TC_OO5	Verify if the donor can make request for blood plasma	Make plasma request	Pass
Request_TC_OO6	Verify if the donor can view the plasma requested	View plasma request	Pass
Request_TC_OO7	Verify if the admin can view the plasma requested	View plasma request	Pass
Request_TC_OO8	Verify if the admin can make request for blood plasma	Make plasma request	Pass
Request_TC_OO9	Verify if the admin can update or reduce the plasma stock	Can update and view stock	Pass

### **SPRINT 4**

Test case ID	Test Scenario	Expected Result	Status
View_TC_OO1	Verify if the requester can view if their request has been approved or in waiting state	Request status is displayed	Pass

View_TC_OO2	Verify if the admin can view the approved plasma request	Request status is displayed	Pass
View_TC_OO3	Verify if the donor can view their donation history	Donation history is displayed	Pass
view_TC_OO4	Verify if the donor can accept a plasma request	Accept plasma request	Pass
Request_TC_OO5	Verify if the mail has been sent to donor	Send mail	Pass
Request_TC_OO6	Verify if the admin can view donor and requester details	View donor and requester details	Pass

## **8.2 USER CASE ACCEPTANCE TESTING**

### **SPRINT 1**

#### **DEFECT ANALYSIS**

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	1	2	2	3	8
Duplicate	1	0	1	0	2
External	2	0	0	1	3
Fixed	4	2	4	1	11
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	16	6	7	14	24

#### **TEST CASE ANALYSIS**

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Login	5	0	0	5

Register	19	0	0	19
----------	----	---	---	----

## **SPRINT 2**

### **DEFECT ANALYSIS**

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	1	2	2	3	8
Duplicate	1	0	1	0	2
External	2	0	0	1	3
Fixed	4	2	4	6	16
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	16	6	7	14	29

### **TEST CASE ANALYSIS**

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Login	5	0	0	5
Register	19	0	0	19
Dashboard	5	0	0	5

## **SPRINT 3**

### **DEFECT ANALYSIS**

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	1	4	2	3	10
Duplicate	1	0	1	0	2
External	2	0	0	1	3
Fixed	8	2	4	6	20
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	16	6	7	14	35

## TEST CASE ANALYSIS

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Login	5	0	0	5
Register	19	0	0	19
Dashboard	5	0	0	5
Request blood plasma	6	0	0	6

## SPRINT 4

### DEFECT ANALYSIS

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	1	4	2	3	10
Duplicate	1	0	1	0	2
External	2	0	0	1	3
Fixed	12	2	4	10	28
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	16	6	7	14	43

## TEST CASE ANALYSIS

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Login	5	0	0	5
Register	19	0	0	19
Dashboard	5	0	0	5
Request blood plasma	6	0	0	6
View request	8	0	0	8

## 9. RESULTS

### 9.1 PERFORMANCE METRICS



## **10. ADVANTAGES & DISADVANTAGES**

### **ADVANTAGES:**

- Plasma donor application is a user friendly and easy to use application.
- It motivates many people to donate plasma which is in high demand as blood.
- The need of blood plasma increased during covid 19 crisis, so this application meets the need of many patients.
- The patients who are in need can register and can get blood plasma.
- If a donor is in need of other blood group's plasma, he/she can login in the donor page to request for any other blood group's plasma.

### **DISADVANTAGES:**

- It cannot auto verify user genuineness whether he/she is providing the correct information about their health history.
- It requires an active internet connection.
- Due to some wrong location the application will get confused