

# **PROJECT REPORT FORMAT**

## **1. INTRODUCTION**

- 1.1 Project Overview
- 1.2 Purpose

## **2. LITERATURE SURVEY**

- 2.1 Existing problem
- 2.2 References
- 2.3 Problem Statement Definition

## **3. IDEATION & PROPOSED SOLUTION**

- 3.1 Empathy Map Canvas
- 3.2 Ideation & Brainstorming
- 3.3 Proposed Solution
- 3.4 Problem Solution fit

## **4. REQUIREMENT ANALYSIS**

- 4.1 Functional requirement
- 4.2 Non-Functional requirements

## **5. PROJECT DESIGN**

- 5.1 Data Flow Diagrams
- 5.2 Solution & Technical Architecture
- 5.3 User Stories

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

- 6.1 Sprint Planning
- 6.2 Sprint Estimation and Delivery Schedule

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

- 7.1 SendGrid
- 7.2 Database Schema

## **8. RESULTS**

## **9. ADVANTAGES & DISADVANTAGES**

## **10. CONCLUSION**

## **11. FUTURE SCOPE**

## **12. APPENDIX**

GitHub & Project Demo Link

# 1.INTRODUCTION

## ***1.1 Project Overview: -***

Patients with severe liver disease or numerous clotting factor deficits, as well as those who have undergone trauma, burns, or shock, frequently get plasma. The patient's blood volume is increased as a result, which can aid in blood coagulation and help to prevent shock. The number of people with Covid-19 infection has increased, as has the demand for the plasma of patients who have recovered. The antibodies that are already in our systems can aid someone in overcoming the infection.

Plasma donation saves lives, and donors' and blood/plasma facilities' communication is key to this. Smart apps are increasingly viewed as a crucial communication tool, and if they are created with the users' requirements and preferences in mind, plasma donation could make the best use of them.

## ***1.2 Purpose: -***

In our opinion we intend to create an application that is user-friendly for people who require plasma or who wish to donate plasma to anyone who is in need.

However, during design and development, areas of concern including privacy and secrecy should be taken into account. Age was found to be a contributing factor that might reduce donors' propensity to use apps. This system is used if anyone needs a Plasma Donor.

This system comprises of Admin and User where both can request for a Plasma.

- Both parties can Accept or Reject the request.
- The person who wants to donate his/her plasma needs to register in our application providing required information which are name, age, blood group, phone number, and location, etc.
- Patients who need plasma can also fill the form to request the plasma. Patients can directly call the donor by taking his/her contact number from the application.
- User can also search based on location they are living
- Just a single search allows anyone to reach maximum number of plasma donors in minimum possible time .

## 2. LITERATURE SURVEY

### 2.1 Existing Problem:

In most of the existing plasma donor application then system is closed for general plasma donation and mainly focused on COVID-19 patients for plasma donation, the android mobile user will not be able to insert or view details if the server goes down and a disadvantage of single point of failure. Most of the user details remains unverified and its difficult to track the fake users. The user interface of the application is not being user friendly and the user must have a device with android operating system with an active internet connection to interact with this application.

### 2.2 References: -

YEA R	TITLE	AUTHOR(s)	TECHNIQ UE(s)	PROS	CONS
2022	Instant Plasma Donor Recipient connector web applicatio n	Kalpana Devi Guntoju, Tejaswini Jalli, Sreeja Uppala, Sanjay Malliseti	Web Technol ogies, API, Databas e	The Donor needs to upload their recovered COVID-19 Certificate and it required to verified by the blood bank. It is a userfriendly application. It will help people to find plasma easily.	This is system is closed for general plasma donation and mainly focused on COVID-19 patients for plasma donation

2021	BDoor App-Blood Donation Application using Android Studio	S Periyana yagi, A Manikandan, M Muthukrishnan, and M Ramakrishnan	Android, Flutter UI, Dart, Firebase, Decision tree algorithm	The Donor details are verified before they allow to donate and have to be authorised by institution. The Verification and validation are done in Email base.	The android mobile user will not be able to insert or view details if the server goes down. Thus, there is a disadvantage of single point failure.
2020	Lifesaver E-Blood Donation App Using Cloud	Rishab Chakrabarti, Asha Darade, Neha Jadhav, Prof. S. M. Chitalkar	E-health, GPS, Blood bank database, Cloud Computing	Reduction in the errors of blood bank using most eligible donor method. Direct Communication Between donor and the person in need of blood During the Emergency situation.	The user given details are maintained unverified.
2020	Developing a plasma donor application using Function-as-a-service in AWS	Aishwarya R Gowri	Serverless, aws, plasma theory, covid19, dynamoDB, cloud	The efficient way of finding plasma donor for the infected people. Aws lambda function is used and to deploy the application AWS EC2 service is used.	The user interface can be better than now.

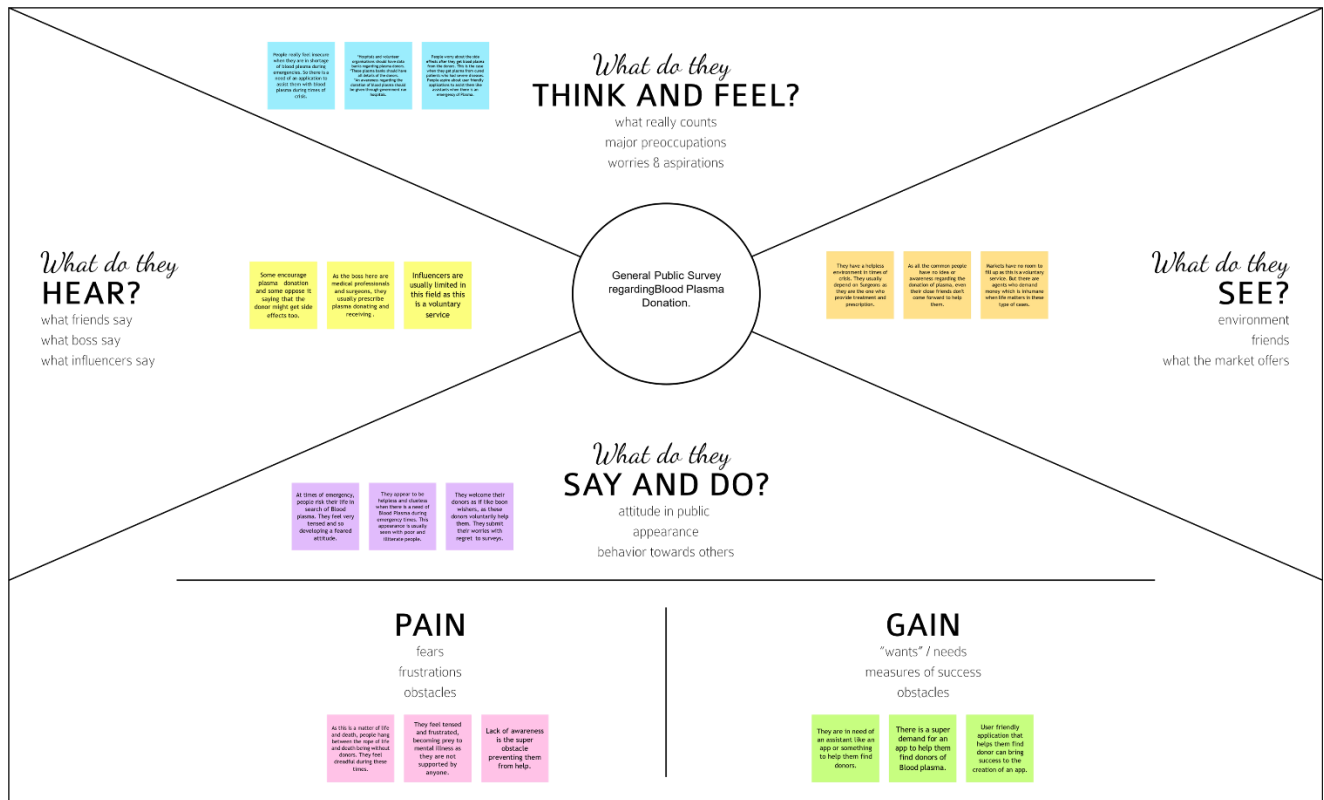
2019	D'WORLD: Blood Donation App Using Android	A. Meiyappan , K. Loga Vignesh, R. Prasanna, T. Sakthivel	Android, Global Positioning System (GPS), Mobile Computing	When the giver gives the blood, it will naturally evacuate the contributor detail for next three months. It additionally confirms with the Department of Health and Welfare to guarantee the benefactor medical case history.	The user must have an device with android operating system with an active internet connection to interact with this application.
2018	Automated blood bank system using Raspberry PI	Ashlesha C. Adsul, V. K. Bhosale, R. M. Autee	Raspberry Pi, Embedded Blood Bank, GSM, Android	When there is urgent need for blood then If this model is adopted the caller is immediately connected to the donor	Tackling the fake users.

### **2.3 Problem Statement Definition: -**

Plasma donation saves lives, and the communication between blood/plasma centres and donors plays a vital role in this. Smart apps are now considered an important communication tool, and could be best utilized in plasma donation if they are designed to fit the users' needs and preferences. We plan to make a User-friendly application for users who are in need for plasma or who wish to donate plasma to anyone who are in need. However, areas of concern, including privacy and confidentiality, should be considered during design and development. Age was identified as a contributing factor that might decrease the likelihood of app usage among donors. The donation centre staff focused on the educational features of the app and emphasized the importance of the app providing statistics and sending notifications and reminders to donors.

### 3. IDEATION & PROPOSED SOLUTION

#### 3.1. Empathy Map Canvas:-



#### 3.2 Ideation & Brainstorming:-

Plasma is used for the treatment of serious health problems. This is why there are blood drives asking people to donate blood, plasma. Plasma is utilized to treat different irresistible sicknesses and it is one of the most established strategies known as plasma treatment. During Coronavirus emergency the necessity for plasma expanded radically as there were no immunization found to treat the contaminated patients, with plasma therapy the recovery rates were high but the donor count was very low and in such situations it was very important to get the information about the plasma donors. Saving the contributor data and telling about the ongoing givers would be some assistance as it can save time and assist the clients with finding the vital data about the contributors.

#### 3.3 Proposed Solution:-

This proposed system 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 requirements.

The basic solution is to create a centralized system to keep a track on the upcoming as well as past Plasma Donation Events. The recommendation solution is as follows:

Application contains two roles:

□ Admin

□ User User:

- If the user wants to donate or receive they have to register with their personal details.
- After successful registration of user.
- A successful registration email is send to the user.
- After successful registration user will be directed to home page.
- They will be asked to press whether they will be donor or receiver.
- If the user is donor then he/she will fill the donation interest form which includes their Name, blood group details, location, last time donated date , phone number, email id.
- After filling the donation form he/she will redirected to page in which he/she can download the ecertificate.
- If the user is receiver then he/she can see the list of donors available and they can raise their request and contact donor directly.

Admin:

- Admin can login using their credentials.
- Admin can edit the request.
- Admin can delete the request.
- Admin can add volunteers.

### **3.4 Problem Solution Fit:-**

#### ***Uniqueness:-***

A User Interface is simple for users to understand. We can use the application anywhere anytime. The user immediately need the plasma for their treatment but the plasma is not available in nearby hospitals, then user can use this application to raise request and directly contact the donor , request them to donate the plasma. Hospitals can also raise request donors for donation. Somebody wants to donate blood and plasma but they don't know the way to donate then they use this application which will simple to use and it will save lives of many people. Today many of them have mobile phones they can install this application and use it to save the lives of people.

### ***Social Impact / Customer Satisfaction:-***

We are living in a modern world and everything can be accessed online. Even though there are many application there is no proper application for plasma donation . Many of them wish to donate blood and plasma but they are unaware about donation and how they can donate. This application provides opportunity to those who want to donate plasma. Donation of plasma are happening in many places many of them come forward to donate but it is not available at right time for use. Sometimes there is a shortage of plasma of particular type. Additional facilities that we need is to access the patients information quickly before plasma transfusion. To solve this issue software applications are employed with Cloud computing and Internet of Things tool which enable features such as information retrieval and continuous data tracking with analytics. This application avoids circulating of wrong information. A single platform for maintaining genuine information and increase the trust of participants involved int his activity. It increases the number of donors.

### ***Business Model (Revenue Model):-***

This application is accessible by everyone . It is free. Because of the trouble in finding givers who match a specific blood bunch, this application empowers clients to enlist individuals who wish to give plasma and keep their data in a data set. Nowadays the need for plasma increases. Anyone with basic knowledge can access this app. This can be used anywhere anytime. working with the government we can utilize an application to help those needing plasma.

### ***Scalability of the Solution :-***

This application helps users to find plasma donors by sitting in home itself instead of searching donors everywhere. When there is a emergency then plasma request to send to everyone. Once the donor is ready to donate receiver is notified about donation. Receiver can contact the donor. With this app donor can know the eligibility to donate and making it easier to locate suitable donor at right time.

## **4. REQUIREMENT ANALYSIS**

### ***4.1. Functional Requirements:-***

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Email and Social media accounts



FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Login	Login through registered email id
FR-4	User Examination	Medical Examination before donating
FR-5	Recipient Request	The recipient makes request for blood type for plasma
FR-6	Donor Request Alert	The Donor gets alerted through email
FR-7	Closed Request Verification	Donor gets an e-certificate and rewards once donation is completed
FR-8	Videos and Donation camps	Users can look up the benefits of plasma donation and information related
FR-9	Chat Assistant	Helps to solve queries related to donation within the app

## 4.2. Non- Functional Requirements:-

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

FR No.	Non-Functional Requirement	Description
<b>NFR-1</b>	<b>Usability</b>	This app is easy to use, easy to learn and navigate. Tasks such as booking a donation appointment could be completed in few steps and no instructions and training are required and this app is usable by people of all age group.
<b>NFR-2</b>	<b>Security</b>	This is a secure web application plus a secure database system that provides a safe environment for patients, doctors and transplant centres to create online profile for patients seeking living donors of plasma. Fake login and bots are carefully removed.

---

<b>NFR-3</b>	<b>Reliability</b>	All information that the user enters into the app is voluntary and the user can cease the usage at any time and delete their profile. If the user has shared any information through social network portals, it can also be removed. This app creates a friendly bond with the donors.
<b>NFR-4</b>	<b>Performance</b>	There is no lag during usage and the user can experience a glitch free usage. The user also gets route and tips on how to travel conveniently to the donation point.
<b>NFR-5</b>	<b>Availability</b>	This App will be available on Google Play store and App Store and also in web.
<b>NFR-6</b>	<b>Scalability</b>	This App has ability to handle multiple donors at a time and provides users with good user experience and reacts fast according to growing number of requests.

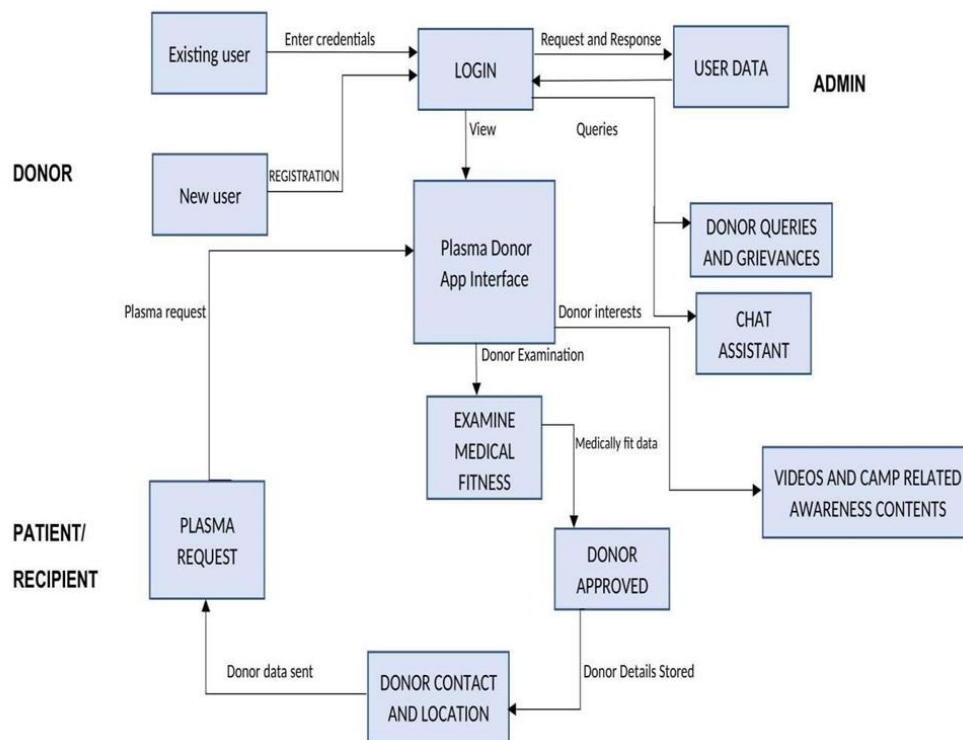
---

## 5. PROJECT DESIGN

### 5.1 Data Flow Diagrams: -

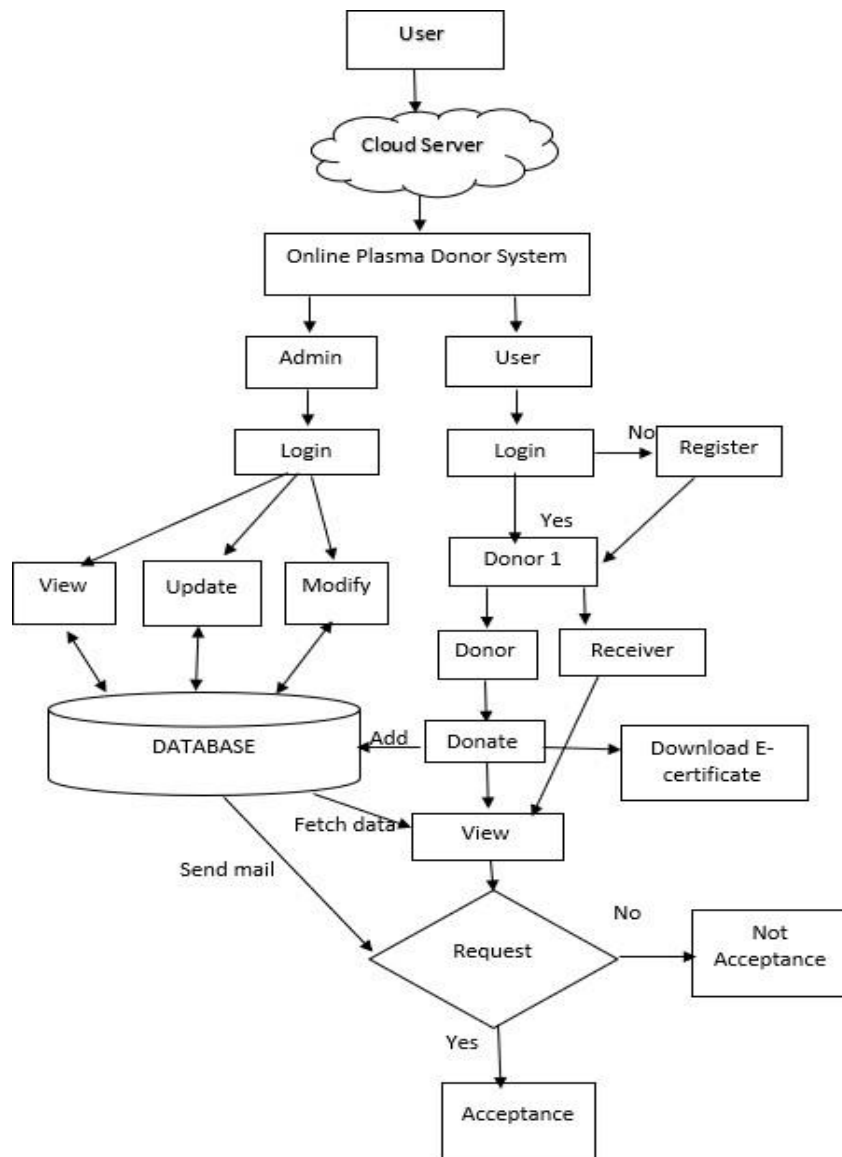
#### Data Flow Diagrams:

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.

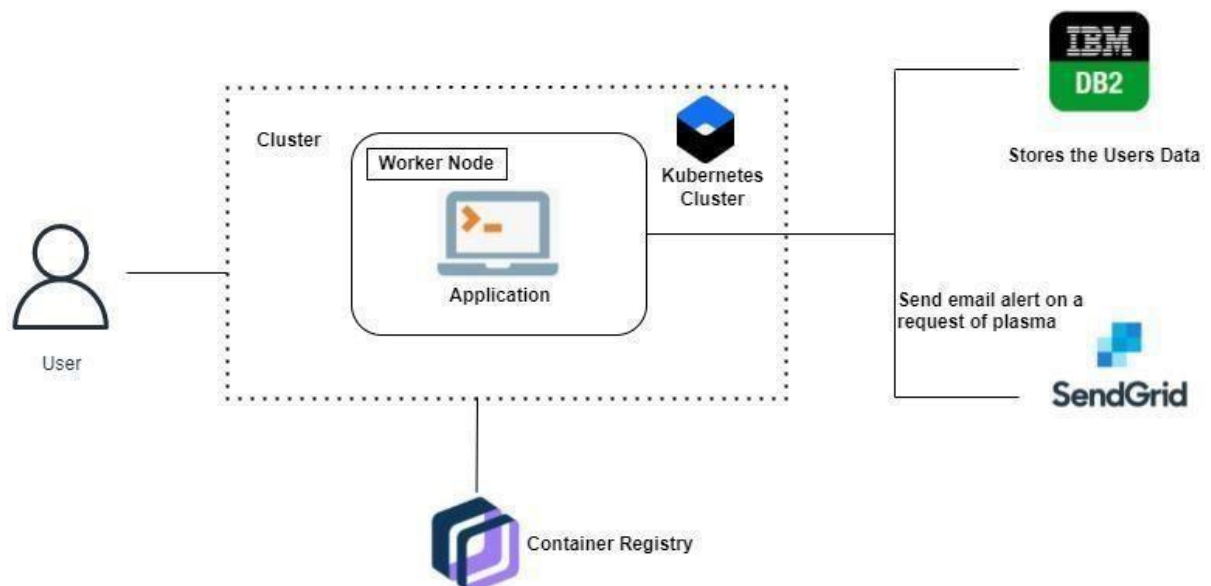


### 5.2 Solution & Technical Architecture: -

#### Solution Architecture: -



## Technical Architecture:-



## 5.3 User stories:

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user) Donor	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
		USN-2	As a user, 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 user, I can register for the application through Social media accounts	I can register & access the app with Social media account	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail other Email services	I can register the app with email account	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can register and access user profile with Gmail account	High	Sprint-1
Patient	Recipient	USN-6	As a requester, I can request the blood group for which I need plasma	I can get plasma from donors when available	High	Sprint-2
Customer (Web user) Donor	Profile	USN-7	As a user, I can see registration page, login page and chat bot for which the user can access to donate and to request for the required blood group plasma.	I can login through email and social media account for registration.	Medium	Sprint-2
Customer Care Executive	Help desk /User support for App	USN-8	As a helpdesk supporter, I can solve the queries and grievances of the user	I can reply to queries and give solutions to problems	High	Sprint-3
Administrator	Registration support	USN-9	As an admin, I can view the database of the registered user	I can check and verify the registered user's login credentials	Medium	Sprint-4

	Dashboard	USN-9	As an admin, I can manage plasma requests and other technical glitches in the app	I can check request numbers and troubleshoot problems in the app	Medium	Sprint-4
Chat Assistant	Dashboard	USN-10	In addition to customer care executive, I can help with user's queries within the app	I can reply to user's queries in the app	Medium	Sprint-4

## 6. PROJECT PLANNING AND SCHEDULING

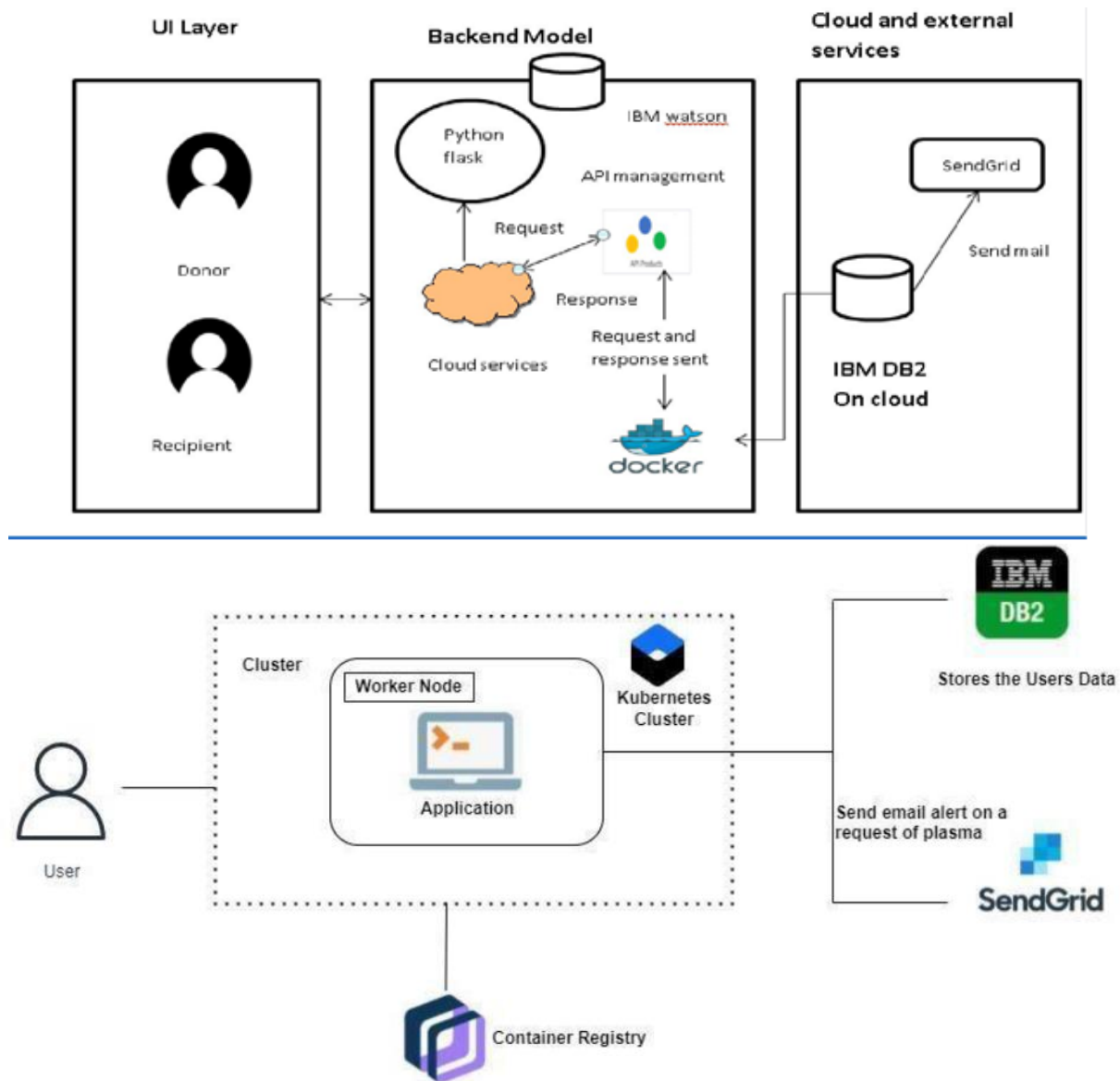
### 6.1 Sprint Planning

Sprints are the backbone of any good Agile development team. And the better prepared you are before a sprint, the more likely you are to hit your goals. Spring planning helps to refocus attention, minimize surprises, and (hopefully) guarantee better code gets shipped. The main event during agile methodology is the sprint, the stage where ideas turn into innovation and valuable products come to life. On one hand, agile sprints can be highly effective and collaborative. At the same time, they can be chaotic and inefficient if they lack proper planning and guidance. And for this reason, making a sprint schedule is one of the most important things you can do to ensure that your efforts are successful.

We categorized the sprint as 4 phases for creating the application

- Sprint 1 is about creating the login page and the register page.
- Sprint 2 is about sending the confirmation mail to the users during registration.
- Sprint 3 is about as a user, can log into application by entering email and password.
- Sprint 4 is about as user, can register and make request for plasma donation via portal.

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



#### Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript, Python, Flask
2.	Register to website	The user can able to register in website and fill their details. The user details are Stored in IBM DB2 securely.	Flask app using Kubernetes cluster, IBM DB2.
3.	Login to website	The user interact with the website to login into account. The user details are verified by comparing it with details stored in IBM DB2	Flask app using Kubernetes cluster, IBM DB2.
4.	Request for Donor/Register for donating	The user interact with the website to request for plasma Donor/register for willing to donate plasma.	Flask app using Kubernetes cluster, IBM DB2.
5.	Upload proof in website	The user can able to upload the vaccination certificate and other proofs.	Container registry,
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1 (Email Alert)	To send email alerts to donor when a person requesting Plasma Donor.	SendGrid.
9.	Machine Learning Model	Machine Learning Model can be used for Chatbot.	IBM Watson.
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes.

**Table-2: Application Characteristics:**



S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is an open source framework in python. Similarly Docker is also used.	Flask , Docker
2.	Security Implementations	Only registered users who have specific privileges has access to the website.	IBM DB2
3.	Scalable Architecture	3 – tier architecture, presentation tier, application tier, data tier	Python, IBM cloud services
4.	Availability	The application can be available for user at any time.	Kubernetes, Docker
5.	Performance	The application can handle multiple requests per second.	Kubernetes cluster, IBM

## 6.2 Sprint Estimation and Delivery Schedule:

A sprint estimation shows how much effort a series of tasks require. It's based on assumptions, requirements, and dependencies of a project.

### The Benefits of Agile Estimation



Improve  
decision-making  
and sprint planning



Achieve better  
coordination  
among teams



Support risk  
management for  
on-time, quality  
delivery

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Simulation creation	USN-1	Connect with python code	2	High	Vishalatchi B Vinothini V Balarhythamica R Abinaya V
Sprint-2	Software	USN-2	Creating an IBM Watsonin Cloud platform	2	High	Vishalatchi B Vinothini V Balarhythamica R Abinaya V
Sprint-3	MIT App Inventor	USN-3	Develop an Plasma donor application	2	High	Vishalatchi B Vinothini V Balarhythamica R Abinaya V
Sprint-4	Dashboard	USN-4	Design the Modules andtest the app	2	High	Vishalatchi B Vinothini V Balarhythamica R Abinaya V

### 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)

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

## 7. CODING & SOLUTIONING

### 7.1 *SendGrid*

SendGrid is a cloud-based SMTP provider that allows you to send email without having to maintain email servers. SendGrid manages all of the technical details, from scaling the infrastructure to ISP outreach and reputation monitoring to whitelist services and real time analytics.

SendGrid provides two ways to send email: through our SMTP relay or through our Web API. SendGrid provides client libraries in many languages. This is the preferred way to integrate with SendGrid. If you choose to use SendGrid without a client library, the Web API is recommended in most cases as it is faster, provides some benefit with encoding, and tends to be easier to use. SMTP provides many features by default, but is harder to setup.

#### **Web API**

- The Web API has some advantages over SMTP:
- If your ISP blocks all outbound mail ports and your only option is HTTP.
- If there is high latency between your site and ours, the Web API might be quicker since it does not require as many messages between the client and server.
- If you do not control the application environment and cannot install and configure an SMTP library.
- If you build a library to send email, developing against a web API provides quicker development. **SMTP Relay**
- If you are integrating SendGrid with an existing application, setting up the application to use our SMTP relay is easiest, as it only requires modifying SMTP configuration.
- Change your SMTP username and password to your SendGrid credentials.
- Set the server host name to smtp.sendgrid.net
- Use ports 25 or 587 for plain/TLS connections and port 465 for SSL connections.

```

Code: import os from dotenv import
load_dotenv load_dotenv() from
sendgrid import SendGridAPIClient from
sendgrid.helpers.mail import Mail def
sendmail(usermail,subject,content):

    message =
Mail(from_email='maryada@student.tce.edu',to_emails=usermail,subject=subject,html_content='<strong> {} </strong>'.format(content))    try:

        sg = SendGridAPIClient(os.getenv('SENDGRID_API_KEY'))

    response = sg.send(message)        print(response.status_code)

    print(response.body)        print(response.headers)    except
Exception as e:        print(e.message)

```

## 7.2 Database Schema

Name	Type	Tables
<input checked="" type="checkbox"/> YGG09863	User	4

Name	Schema	Properties
<input type="checkbox"/> DONORS	YGG09863	...
<input type="checkbox"/> JOBS	YGG09863	...
<input type="checkbox"/> REQUESTED	YGG09863	...
<input type="checkbox"/> USERS	YGG09863	...

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTsSequencesApplication objects

Find schemas or tablesRefresh

Schemas

Tables

New table +

NameSchemaProperties

☐DONORSYGG09863...

☐JOBSYGG09863...

☐REQUESTEDYGG09863...

☐USERSYGG09863...

Total: 4, selected: 0

Table definition

DONORS

Approximate 2 rows (32.0 KB)  
Updated on 2022-10-29 08:08:08

Name	Data type	Nullable	Length	Scale
USERNAME	VARCHAR	Y	32	0
EMAIL	VARCHAR	Y	32	0
PASSWORD	VARCHAR	Y	32	0
CITY	VARCHAR	Y	32	0
INFECT	VARCHAR	Y	32	0

View data

Load DataLoad HistoryTablesViewsIndexesAliasesMQTsSequencesApplication objects

YGG09863.DONORSBack

Export to CSV

USERNAME	EMAIL	PASSWORD	CITY	INFECT	BLOOD	phone
Maryada	maryada@student.tce.edu	maryada@123	Madurai	uninfected	B Positive	+919080532800
Nitin	maryada@student.tce.edu	nitin@123	Madurai	uninfected	O Positive	+919080532800

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTsSequencesApplication objects

Find schemas or tablesRefresh

Schemas

Tables

New table +

NameSchemaProperties

☐DONORSYGG09863...

☐JOBSYGG09863...

☒REQUESTEDYGG09863...

☒USERSYGG09863...

Total: 4, selected: 2

Table definition

REQUESTED

Approximate 4 rows (32.0 KB)  
Updated on 2022-10-29 06:03:05

Name	Data type	Nullable	Length	Scale
BLOODGRP	VARCHAR	Y	32	0
ADDRESS	LONG VARCHAR	Y	32700	0
NAME	VARCHAR	Y	32	0
EMAIL	VARCHAR	Y	32	0
PHONE	VARCHAR	Y	32	0

View data

	Load Data	Load History	Tables	Views	Indexes	Aliases	MQTs	Sequences	Application objects
	YGG09863.REQUESTED								Back
									Export to CSV
BLOODGRP	ADDRESS	NAME	EMAIL	PHONE					
AB Positive	44/24 MAHAL 4TH STREET, 1ST FLOOR , Madurai	Maryada Kumar Lodha D	Maryada Kumar Lodha D	+919080532800					
AB Positive	44/24 MAHAL 4TH STREET, 1ST FLOOR , Madurai	Maryada Kumar Lodha D	danny@student.tce.edu	+919080532800					
B Positive	44/24 MAHAL 4TH STREET, 1ST FLOOR , Madurai	Maryada Kumar Lodha D	maryada@student.tce.edu	+919080532800					
B Positive	44/24 MAHAL 4TH STREET, 1ST FLOOR , Madurai	Maryada Kumar Lodha D	maryada@student.tce.edu	+919080532800					
select	44/24 MAHAL 4TH STREET, 1ST FLOOR , Madurai	Maryada Kumar Lodha D	danny@student.tce.edu	+919080532800					

## 8. RESULT

### 8.1 Authentication Module

- Sign Up

New user or donor can create an account to use in the blood/plasma donor application and create a password for account verification and create an identity.

- Sign In

Donor Sign In to the account for viewing or editing location details and any other personal information.

- Account Verification

If donor changes their password or if they forget the password then we have to verify their account using mail verification.

### 8.2 Service Provider Module •

Add New Donor

User can be able to register to add donor details.

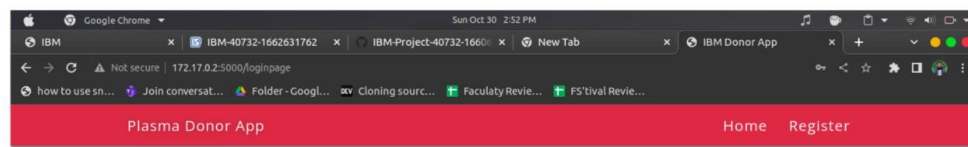
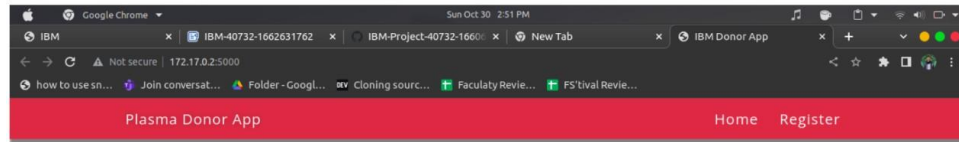
- List All Donor

User can be able to view all Donor who all use our Plasma Donor Application.

- Edit Customer Plan Details

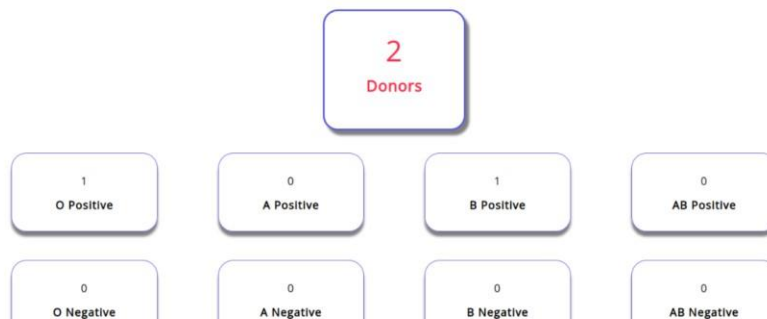
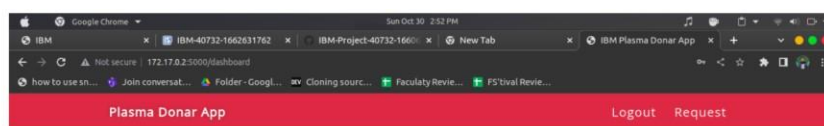
User can be able to edit the existing Donor details as the Donor wish.

### 8.3 Screen Layouts



Incorrect username / password !

### Login page



### Home page

Plasma Donor App      Home   Register   Request

Enter Name

Enter Email

Enter 10-digit mobile number

Choose your blood group

Enter the address

Submit the request

Plasma Donor App      Home

Enter Your Name

Enter Email

Enter 10-digit mobile number

Enter Your City Name

Select COVID infection status

Choose your blood group

Enter Password

Register

## Registration page

The Donors can register their account using their email ID. Once registered, The Donor can sign-up by using his\her respective password. The login page for Plasma Donors is shown in the figure, which contains the E-mail and Password field. The profile of the Donor, where he/she needs to enter the required details. After registration Donor can maintain according to his availability. The registration page with Full Name, Email Address, Last donated date, Password, Contact Details, Blood Group, Location and all other details, which is illustrated. The details of the available donors can be displayed and viewed by other users.



## 9. ADVANTAGES & DISADVANTAGES

### *Advantages*

- *Speed*

This website is fast and offers great accuracy as compared to manual registered keeping.

- *Maintenance*

Less maintenance is required

- *User Friendly*

It is very easy to use and understand. It is easily workable and accessible for everyone.

- *Fast Results*

It would help you to provide plasma donors easily depending upon the availability of it.

### *Disadvantages*

- *Internet*

It would require an internet connection for the working of the website.

- *Auto- Verification*

It cannot automatically verify the genuine users.

## 10. CONCLUSION

Although the government is carrying out Covid vaccination campaigns on a large scale, the number of vaccines produced is not enough for all the population to get vaccinated at present. And with the corona positive cases rising every day, saving lives has become the prime matter of concern. As per the data provided by WHO more than 3 million people have died due to the coronavirus. However, apart from vaccination, there is another scientific method by which a covid infected person can be treated and the death risk can be reduced. This plasma therapy is an experimental approach to treat coronapositive patients and help them recover. This plasma therapy is considered to be safe & promising. A person who has recovered from Covid can donate his/her plasma to a person who is infected with the coronavirus.

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. Both parties can Accept or Reject the request. User has to Upload a Covid Negative report to be able to Donate Plasma. This system is used if anyone needs a Plasma Donor Blood and Plasma donation is a kind of citizen's social responsibility in which an individual can willingly donate blood/plasma via our app. This Application has been created with the concept and has sought to make sure that the donor gives blood/plasma to community. This model is made user friendly so anybody can view and maintain his/her account. This application will break the chain of business through blood/plasma and help the poor to find donor at free of cost. This project will help new blood/plasma banks improve their services and progress from traditional to user-friendly frameworks.

## **11. FUTURE SCOPE**

Plasma 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. Data scraping can be done from different social networks and can be shown in the Blood/Plasma Request Feeds. Appointments can be synchronized with Google and Outlook calendars for the ease of users.

Donor and Beneficiary Stories feature aims to create a sense of belonging to the community. Donors will be able to view and share personal experiences about their donation; Beneficiaries can share their experiences of receiving blood transfusion which contributed to their improved health and lives.

Live Check-in Process feature aims to provide a better experience with regards to the waiting time when the user is in the process of donation. We hypothesise that a more efficient experience will help the user look forward to his blood/plasma donation appointments.

---

## 12. APPENDIX

- *GitHub and Source code Link : <https://github.com/IBM-EPBL/IBM-Project-50946-1660932926>*