

# PLASMA DONOR APPLICATION

## PROJECT REVIEW REPORT

**TEAM ID:** PNT2022TMID53106 / "# IBM-Project-9058-1658945281"

**MEMBERS:** Arandeep Singh, SA Madhulica(lead), Srivatsan S, Vaibhav Pandey

### 1. INTRODUCTION

#### a. Project Overview

- The main goal of our project is to design a user-friendly web application that is like a scientific vehicle from which we 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.

#### b. Purpose

- The Purpose of this Application is 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, this application is to be built which would take the donor details, store them and inform them upon a request.

## 2. LITERATURE SURVEY

### a. Existing Problem

- During COVID 19 crisis the requirement for plasma increased drastically. The average donation rate for plasma has decreased from an already low 20% to a dismal 11%. Considering the complex manufacturing process to fractionate plasma into the therapies patients rely on can take 7-12 months, any decline in donations is concerning.
- Compounding the effects of ongoing decline checking the donor history, i.e., whether he /she was infected previously and was recovered, and which donor is eligible to donate plasma was a challenging task. Also, saving the healthy donor information, notifying the interested patients and matching the donors with the requestees proved to be a strenuous job.

### b. References

- In “A study on plasma management system” by A. Clemen Teena, k. Sankar, S. Kannan[7]. They made a system through which they can manage information about donors and patients. So that whenever blood is needed they can use this information as blood bank authorized officers have access to this information.
- In “Android plasma” by professor Snigdha, Pratiksha Lokhande, Siddhi Kesar. and Pranita More[6] . came up with an android app in which updates information about donors time to time and also it shows all the blood banks near to user location. In this admin controls and have all information of the app.
- In “MBB: A life saving application” by Ramakant Gawande; Narendra Gupta; Nikhil Thengadi [4]. They came up with a system to link all donors and help in controlling blood transfusion process. Their system will also maintain database which hold data of donors and blood according to their city and further by their locality.
- In “Short message service (SMS) based plasma” by G. Muddu Krishna & S. Nagaraju(2016)[1]. They proposed a system in which services of blood bank will be accessed via SMS. If someone needed blood then they have to request for blood via SMS and then packet count module of their system will check for availability of blood and response will be given by data processing module.
- In “Automated online plasma database” by Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul(2012)[2] . They come up with direct call routing technique by using asterisk. In this every blood bank consist of a database and that will be managed by central server. When someone in need of blood call on their tollfree no. they will directly get connected to a donor and after receiving blood from that donor name of that donor will be kept on hold for 8 weeks.

### **c. Problem Statement Definition**

- The solution aims to solve the aforementioned drawbacks. The system works with the registration of a donor by providing the required details which gets stored in the database

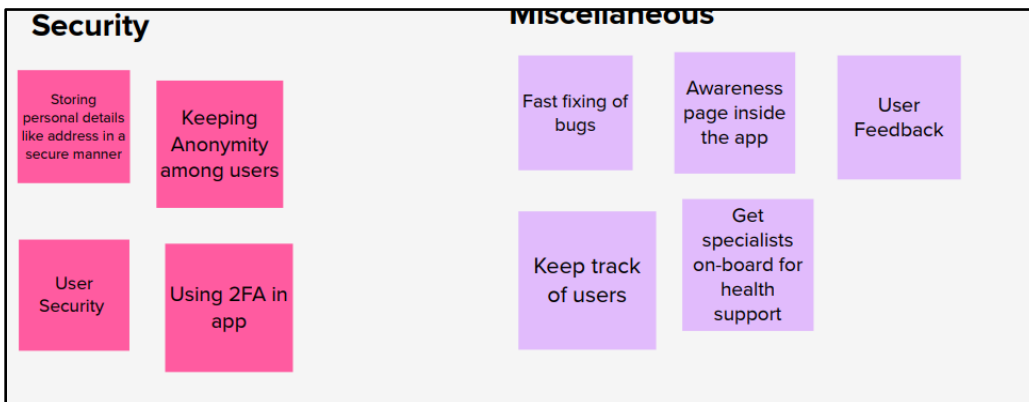
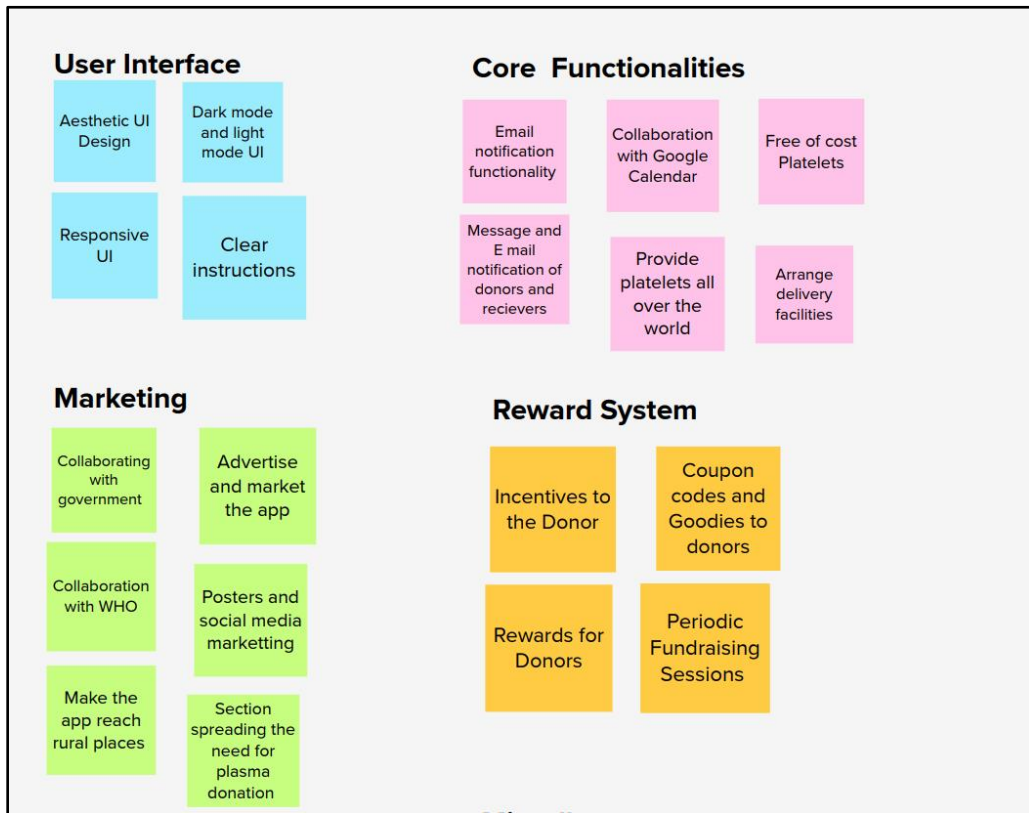
### 3. IDEATION & PROPOSED SOLUTION

#### a. Empathy Map Canvas



#### b. Ideation & Brainstorming

S A Madhulica	Srivatsan S	Vaibhav Pandey	Arandeep Singh
Aesthetic UI Design	User Friendly	Keeping Anonymity among users	Make the app reach rural places
Storing personal details like address in a secure manner	Responsive UI	Using 2FA in app	Posters and social media marketing
Email notification functionality	Collaboration with WHO	Collaboration with Google Calendar	Clear instructions
Dynamic database updation	Free of cost Platelets	Rewards for Donors	Provide platelets all over the world
Simple and direct buttons and instructions	Message and E mail notification of donors and receivers	Donation camps in Rural Areas	Coupon codes and Goodies to donors
Collaborating with government	User Security	Periodic Fundraising Sessions	User Feedback





### c. Proposed Solution

S NO.	PARAMETER	DESCRIPTION
1.	Problem Statement	The current procedure of plasma donation is a cumbersome task. There is no proper set way of assisting the donor and no incentive for the same. Also, there is no proper control over the data that the user provides during the process. As a patient, it is a daunting task to find a matching donor and the whole procedure is looked over manually making it a very time consuming job.
2.	Idea / Solution Description	The proposed method creates an application which aims to solve the aforementioned drawbacks. The system works with the registration of a donor by providing the required details which gets stored in the database.
3.	Novelty / Uniqueness	There exist certain applications that allow users to donate and receive. But these applications exist as a standalone rather than in going hand-in-hand. Our app not only solves this problem, but also makes the whole donation/reception procedure seamless for both parties.
4.	Social Impact / Customer Satisfaction	During COVID 19 crisis the requirement for plasma increased drastically. Considering the complex manufacturing process to fractionate plasma into the therapies patients rely on can take 7-12 months, any decline in donations is concerning. The proposed app creates a way of easing the way traditional plasma donation system works and thus increase donations and awareness among the masses.
5.	Business Model	By involving the <u>Key Partners</u> and using the <u>Key Resources</u> , we develop an application that will add Value to the already existing ecosystem. By looking at the incurred <u>Cost Structure</u> and the incoming <u>Revenue Streams</u> we make the model cost effective. The customers will be separated into various <u>Customer Segment</u> . The app will be advertised using various <u>Advertisement Channels</u> .
6.	Scalability of the Solution	The application will be scalable based on the requirements of the future. For instance, the application could partner with Government Agencies and standalone NGOs as an incentive to donate more. Similarly, the application could be made more advanced and modern by integrating a service bot that could aid users in customizing the app with ease.

## d. Problem Solution Fit

Define CS fit, intro CL	<b>CUSTOMER SEGMENT(S)</b> <span>CS</span> <p>Patients, Doctors and Donors come under the category of individual users.</p> <p>Donation centers and Hospitals come under the category of business users.</p>	<b>CUSTOMER LIMITATIONS</b> <span>CL</span> <p>Patients might not have proper means and procedures to procure plasma.</p> <p>Donors do not have any means and incentives to donate.</p> <p>Hospitals and donation centers do not have an efficient way of managing the files and history of donations.</p> <p>Application must be device friendly.</p>	<b>AVAILABLE SOLUTIONS</b> <span>AS</span> <p>Available solutions provide a platform to both donors and patients to keep a track of the availability and feasibility of the donation procedure.</p> <p>Existing solution also includes manual maintenance of the records which is a very cumbersome process.</p> <p>Some existing solutions also give suggestions regarding health and these donation procedures, but these suggestions may not be advisable by a certified medical practitioner.</p>
Focus on PR, tap into BE, understand RC	<b>PROBLEMS/PAINS</b> <span>PE</span> <p>The most prominent problem in plasma donation procedure is the hectic process of donation and unawareness among the masses.</p> <p>Also, there is no set and easy way of linking the donors and needy and patients without manual intervention.</p> <p>The lack of incentives for the donors also poses a hindrance in meeting the required number of healthy donors.</p>	<b>PROBLEM ROOT/CAUSE</b> <span>PR</span> <p>Users are reluctant to undergo the tedious and trivial process that makes donation of plasma a daunting task. Additionally, they tend to be less motivated even when they qualify as a healthy donor. More often, they never get to truly visualize their good deeds towards the society.</p> <p>The natural method of donation and reception is just not as effective as an application because of the aforementioned reasons.</p>	<b>BEHAVIOR</b> <span>BE</span> <p>Donors expect the process of donation is donor friendly, wherein if he/she registers in the app, a due date and time slot be assigned for donation in a nearby center.</p> <p>Also, his/her details remain confidential and there will be no bias among the available donors.</p> <p>Patients expect that as soon as request is made, the list of available donors is shown and a feasible donor is readily available.</p> <p>Also, the donor and patient history is recorded and stored safely in the app.</p>
Identify strong TR & EM	<b>TRIGGERS TO ACT</b> <span>TR</span> <p>Earn rewards for donation.</p> <p>Be more aware of your data.</p> <p>Understands the need vs want analogy.</p>	<b>YOUR SOLUTION</b> <span>SL</span> <p>A customizable Donation Web Based App that allows users to register either as a donor or a patient in need of plasma.</p> <p>The app will also provide a way to store donation and patient history along with suggestions and ways of healthy lifestyle by certified medical practitioners.</p>	<b>CHANNELS of BEHAVIOR</b> <span>CH</span> <p>Offline</p> <p>As hospitals, donation centers and various individuals use and share their experience with their peers, more people will be inclined to use the app themselves.</p> <p>Also, reviews from NGOs and Govt. centers and their valuable feedback will help in promoting the app.</p>
	<b>EMOTIONS</b> <span>EM</span> <p>Before: User is not motivated to donate plasma. And the lengthy process might result in adversely affecting the patient in need.</p> <p>After: User is more motivated to donate. Data is also more secure and the matching of donors and patients become easy.</p>		<p>Online</p> <p>The application will be marketed through the usage of various social media platforms. As users begin to use the application, ratings in Google, Play Store, and App Store would increase, resulting in a huge influx of customers.</p>



## 4. REQUIREMENT ANALYSIS

### a. Functional Requirements

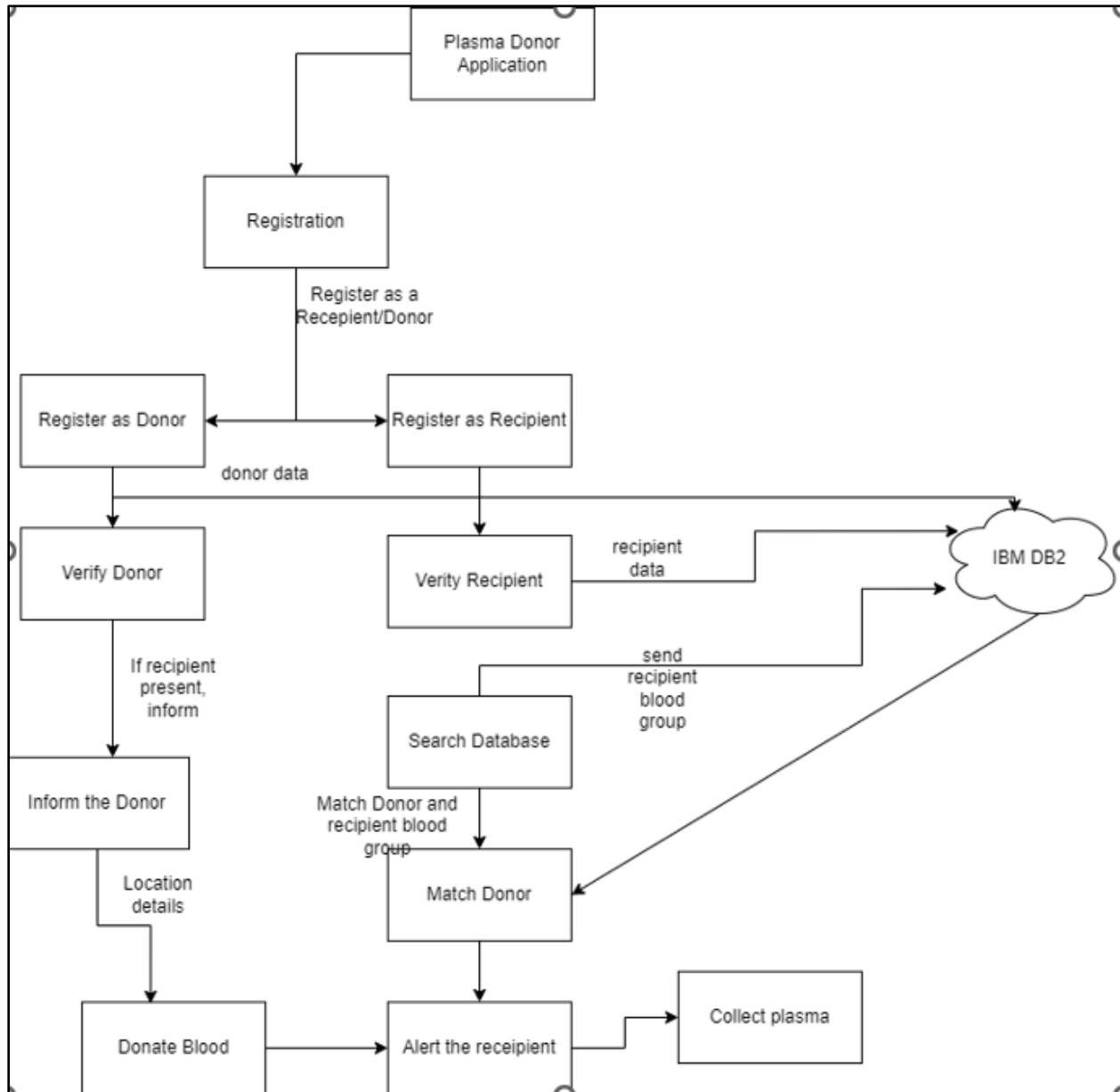
NO	FUNCTIONAL REQUIREMENT	SUB REQUIREMENT
1	Donor Registration	Google Form or Email
2	Recipient Registration	Google Form or Email
3	Donor Confirmation	Email or OTP
4	Recipient Confirmation	Email or OTP
5	Match Found	Email or SMS

### b. Non-Functional Requirements

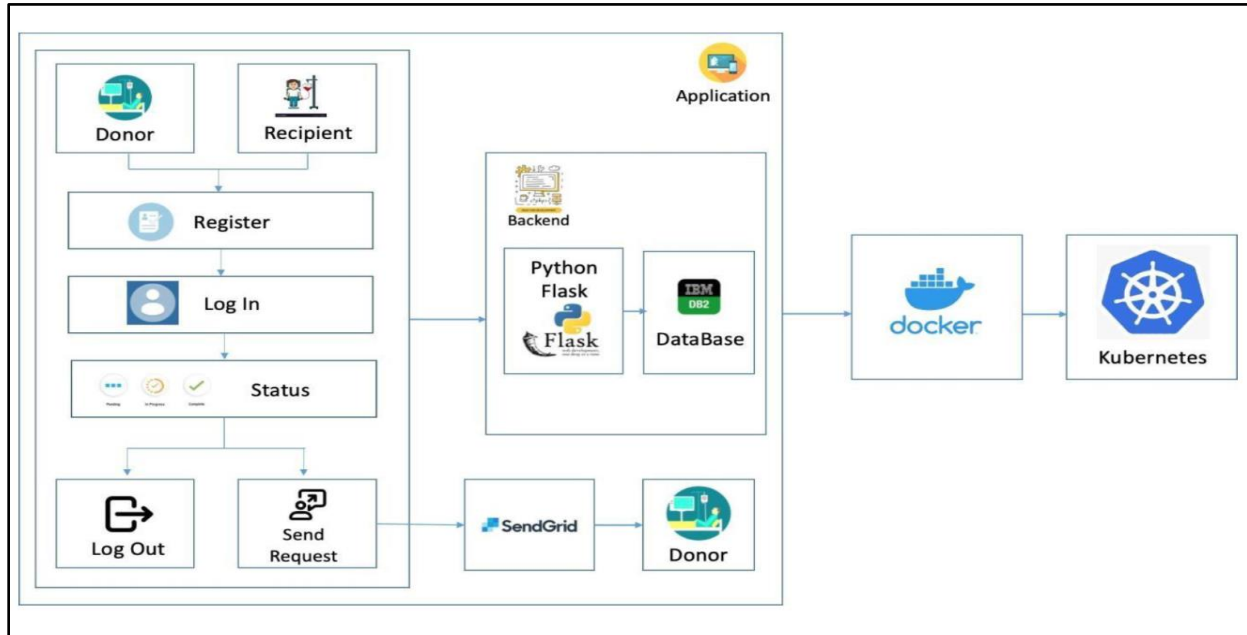
NO	NON-FUNCTIONAL REQUIREMENT	DESCRIPTION
1	Usability	User Friendly and Ease of Use
2	Security	Anonymity of Users
3	Reliability	No mismatch of Donation
4	Performance	Smooth UI/UX.
5	Availability	Depends on the availability of Donors
6	Scalability	Connect with NGOs, hospitals

## 5. PROJECT DESIGN

### a. Data-Flow Diagram



## b. Solution & Technical Architecture



S NO.	COMPONENT	DESCRIPTION	TECHNOLOGY
1.	User Interface	How user interacts with the application.	HTML, CSS, JavaScript, Flask etc.
2.	Donor Registration	How donor registers him/herself.	HTML, CSS, JavaScript
3.	Recipient Registration	How recipient registers him/herself.	HTML, CSS, JavaScript
4.	Finding a Match	Find if any donor and receiver have the same blood group.	Python
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud.	IBM DB2
7.	File Storage	File Storage Requirements.	IBM Block Storage
8.	Email API	Automating Sending Email	Send Grid etc.
9.	Infrastructure (Server/Cloud)	Application Deployment on Docker	Docker, Kubernetes etc.

### c. User Stories

STORY NO.	FUNCTIONAL REQUIREMENT	USER TYPE	USER STORY	ACCEPTANCE CRITERIA	PRIORITY	RELEASE
1.	Registration	Recipient	I can register to the app as a recipient.	I can access dashboard.	High	S1
2.	Verification		I will receive verification message once I register as a plasma patient.	I can confirm verification message.	Medium	S2
3.	Notification		I will be informed about a matching donor through the application.	I can receive notifications on the app.	Low	S1
4.			I will be able to collect plasma in a nearby hospital.	I can commute to a nearby hospital.	High	S1
5.			I will be able to watch various educational videos on the app.	I have a compatible device	Low	S3

6.	Registration	Donor	I can register to the app as a donor.	I can access dashboard.	High	S1
7.	Verification		I will receive verification message once I register as a plasma donor.	I can confirm verification message.	Medium	S1
8.	Notification		I will be informed about a matching patient through the application.	I can receive notifications on the app.	Low	S1
9.			I will receive various reward for regular plasma donation on the app.	I can avail offers.	Low	S4
10.			I will be informed about the plasma donation camps near me.	I attend these camps.	Medium	S3

## 6. PROJECT PLANNING & SCHEDULING

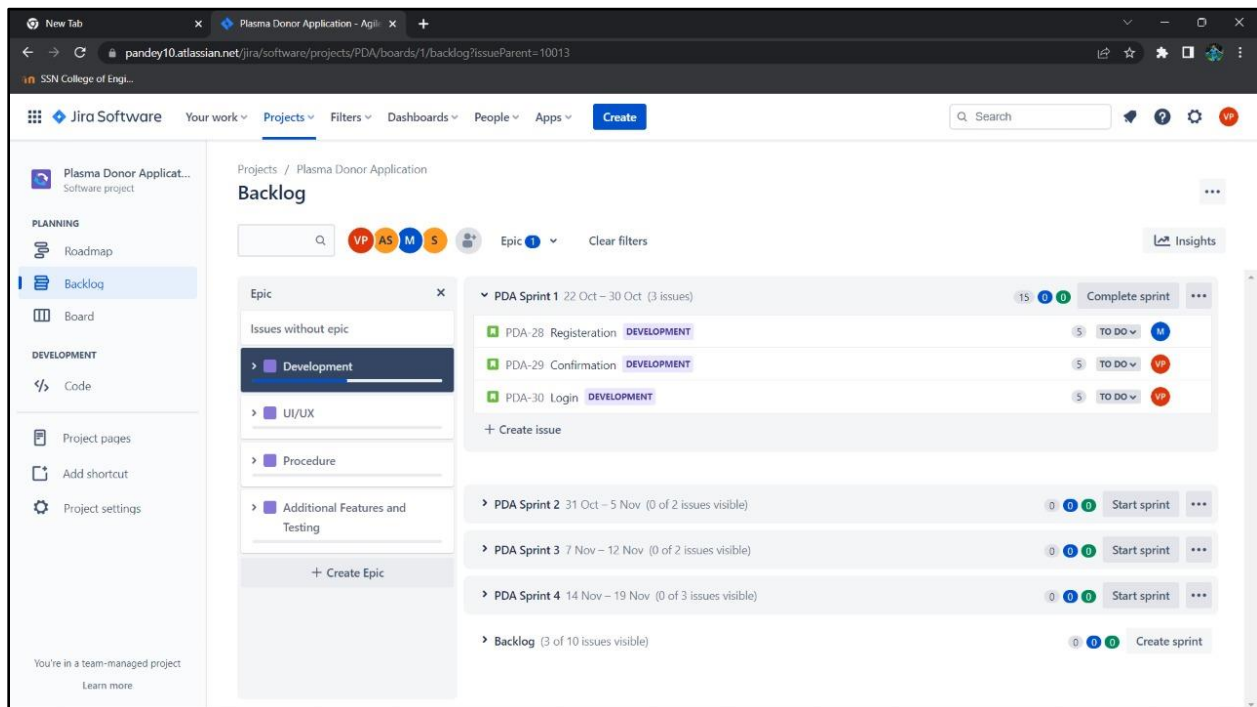
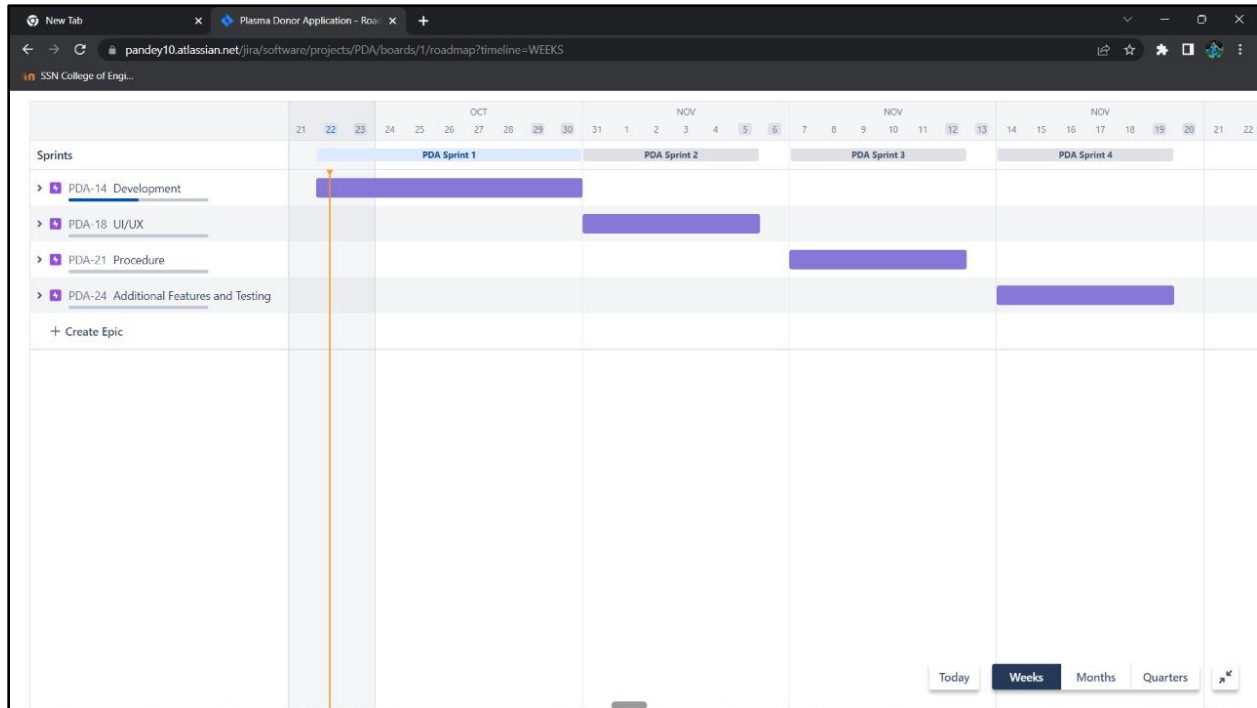
### a. Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Account Creation	USN-1	As a user, I can create an account on the application.	5	High	Madhulica, Arandeep
Sprint-1	Login	USN-2	I can successfully login to the application using provided login credentials.	5	High	Vaibhav, Srivatsan
Sprint-1	Storage	USN-3	As a user, my data will be stored on cloud in IBM Database.	5	High	Vaibhav, Srivatsan
Sprint-2	Registration as Donor	USN-4	As a user, I can fill as a donor and my blood report details will be stored in database for a suitable match as and when required	3	Low	Madhulica, Arandeep
Sprint-2	Donation History	USN-5	No. of registered donors and their donation history for each registered account is retrieved from the database.	10	High	Madhulica, Arandeep
Sprint-2	Plasma Matching	USN-6	For a receiver of plasma, real time blood group matching is done using database data.	5	Low	Vaibhav, Srivatsan
Sprint-3	Front End	USN-7	Create front end for all above listed services and connect them to back end and database.	10	Medium	Madhulica, Arandeep
Sprint-4	SendGrid Implementation	USN-8	Using SendGrid to automate the email-sending process without maintaining email servers.	5	Low	Vaibhav, Srivatsan
Sprint-4	Additional Features	USN-9	Implement all additional features of the application	5	Low	Madhulica, Arandeep
Sprint-4	Testing	Testing	Testing all the features of the application.	15	High	Vaibhav, Srivatsan

### b. Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)
Sprint-1	15	6 Days	23 Oct 2022	29 Oct 2022
Sprint-2	8	6 Days	31 Oct 2022	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022
Sprint-4	25	6 Days	14 Nov 2022	19 Nov 2022

## c. Reports from JIRA



New Tab x Plasma Donor Application - Agi... x +

← → ↻ pandey10.atlassian.net/jira/software/projects/PDA/boards/1/backlog?issueParent=10017

SSN College of Engi...

Jira Software Your work Projects Filters Dashboards People Apps Create

Search

Plasma Donor Applicat...  
Software project

PLANNING

- Roadmap
- Backlog
- Board

DEVELOPMENT

- Code
- Project pages
- Add shortcut
- Project settings

You're in a team-managed project  
Learn more

Projects / Plasma Donor Application

## Backlog

VP AS M S Epic Clear filters Insights

Epic x

Issues without epic

- Development
- UI/UX
- Procedure
- Additional Features and Testing

+ Create Epic

PDA Sprint 1 22 Oct – 30 Oct (0 of 3 issues visible) 0 0 0 Complete sprint

PDA Sprint 2 31 Oct – 5 Nov (2 issues) 0 0 0 Start sprint

- PDA-37 Dashboard - Time Period UI/UX 3 TO DO AS
- PDA-38 Dashboard - History UI/UX 5 TO DO S

+ Create issue

PDA Sprint 3 7 Nov – 12 Nov (0 of 2 issues visible) 0 0 0 Start sprint

PDA Sprint 4 14 Nov – 19 Nov (0 of 3 issues visible) 0 0 0 Start sprint

Backlog (2 of 10 issues visible) 0 1 0 Create sprint

New Tab x Plasma Donor Application - Agi... x +

← → ↻ pandey10.atlassian.net/jira/software/projects/PDA/boards/1/backlog?issueParent=10020

SSN College of Engi...

Jira Software Your work Projects Filters Dashboards People Apps Create

Search

Plasma Donor Applicat...  
Software project

PLANNING

- Roadmap
- Backlog
- Board

DEVELOPMENT

- Code
- Project pages
- Add shortcut
- Project settings

You're in a team-managed project  
Learn more

Projects / Plasma Donor Application

## Backlog

VP AS M S Epic Clear filters Insights

Epic x

Issues without epic

- Development
- UI/UX
- Procedure
- Additional Features and Testing

+ Create Epic

PDA Sprint 1 22 Oct – 30 Oct (0 of 3 issues visible) 0 0 0 Complete sprint

PDA Sprint 2 31 Oct – 5 Nov (0 of 2 issues visible) 0 0 0 Start sprint

PDA Sprint 3 7 Nov – 12 Nov (2 issues) 20 0 0 Start sprint

- PDA-39 Notification PROCEDURE 10 TO DO M
- PDA-40 Matching PROCEDURE 10 TO DO AS

+ Create issue

PDA Sprint 4 14 Nov – 19 Nov (0 of 3 issues visible) 0 0 0 Start sprint

Backlog (2 of 10 issues visible) 0 1 0 Create sprint



New Tab

Plasma Donor Application - Agi...

←

→

↻

pandey10.atlassian.net/jira/software/projects/PDA/boards/1/backlog?issueParent=10023

🔖

☆

⚙️

👤

⋮

SSN College of Engi...

🔍 Jira Software

Your work ▾

Projects ▾

Filters ▾

Dashboards ▾

People ▾

Apps ▾

Create

🔍 Search

🔔

?

⚙️

VP

Plasma Donor Applicat...

Software project

PLANNING

📅 Roadmap

**📋 Backlog**

📊 Board

DEVELOPMENT

📁 Code

📄 Project pages

🔖 Add shortcut

⚙️ Project settings

You're in a team-managed project

Learn more

Projects / Plasma Donor Application

Backlog

⋮

🔍

VPASMS

👤

Epic ▾

Clear filters

📊 Insights

Epic

✕

Issues without epic

> Development

> UI/UX

> Procedure

> Additional Features and Testing

+ Create Epic

> PDA Sprint 1

22 Oct – 30 Oct

(0 of 3 issues visible)

000

Complete sprint

⋮

> PDA Sprint 2

31 Oct – 5 Nov

(0 of 2 issues visible)

000

Start sprint

⋮

> PDA Sprint 3

7 Nov – 12 Nov

(0 of 2 issues visible)

000

Start sprint

⋮

> PDA Sprint 4

14 Nov – 19 Nov

(3 issues)

25000

Start sprint

⋮

📌 PDA-41

Nearby Camps

ADDITIONAL FEATURES AND TEST...

5

TO DO ▾

VP

📌 PDA-42

Reward System

ADDITIONAL FEATURES AND TEST...

5

TO DO ▾

AS

📌 PDA-43

Testing

ADDITIONAL FEATURES AND TEST...

15

TO DO ▾

S

+ Create issue

> Backlog

(3 of 10 issues visible)

010

Create sprint

## 7. CODING & SOLUTIONING

- a. USN – 1: Create front end for all the listed services and connect them to back end.

- Registration and Login Page:

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000/register'. The page has a solid yellow background. In the center, there is a white rectangular form. At the top of the form is a logo featuring a blood bag and test tubes, with the text 'DONATE PLASMA' to its right. Below the logo, the word 'REGISTER' is centered in bold. The form contains three input fields: 'Email' with the value 'Try1@gmail.com', 'Name' with the value 'Try1', and 'Password' with four dots. Below these fields is a yellow 'SIGN UP' button. At the bottom of the form, there is a link that says 'Already have an account? Login'.

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000/login'. The page has a solid yellow background. In the center, there is a white rectangular form. At the top of the form is the same logo as the registration page, with the text 'DONATE PLASMA' to its right. Below the logo, the word 'LOGIN' is centered in bold. The form contains two input fields: 'Email' with the value 'Try1@gmail.com' and 'Password' with four dots. Below the password field is a link that says 'Forgot password?'. At the bottom of the form is a yellow 'LOGIN' button. Below the button, there is a link that says 'Don't have an account yet?'.

Service Details - IBM Cloud x IBM Db2 on Cloud x +

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F4472137f7d5481ea544b192abad8222%3Adf6c569a-74d...

IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

NKN33411.USERS Back

Export to CSV

NAME	EMAIL	PASSWORD
Arandeep	Try1@gmail.com	Try1
madhu	madhu@gmail.com	MADHU

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F4472137f7d5481ea544b192abad8222%3Adf6c569a-74d...

IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

Find schemas or tables Refresh

Tables New table

Name	Schema	Properties
<input type="checkbox"/> DONORS	NKN33411	...
<input type="checkbox"/> USERS	NKN33411	...

Total: 2, selected: 0

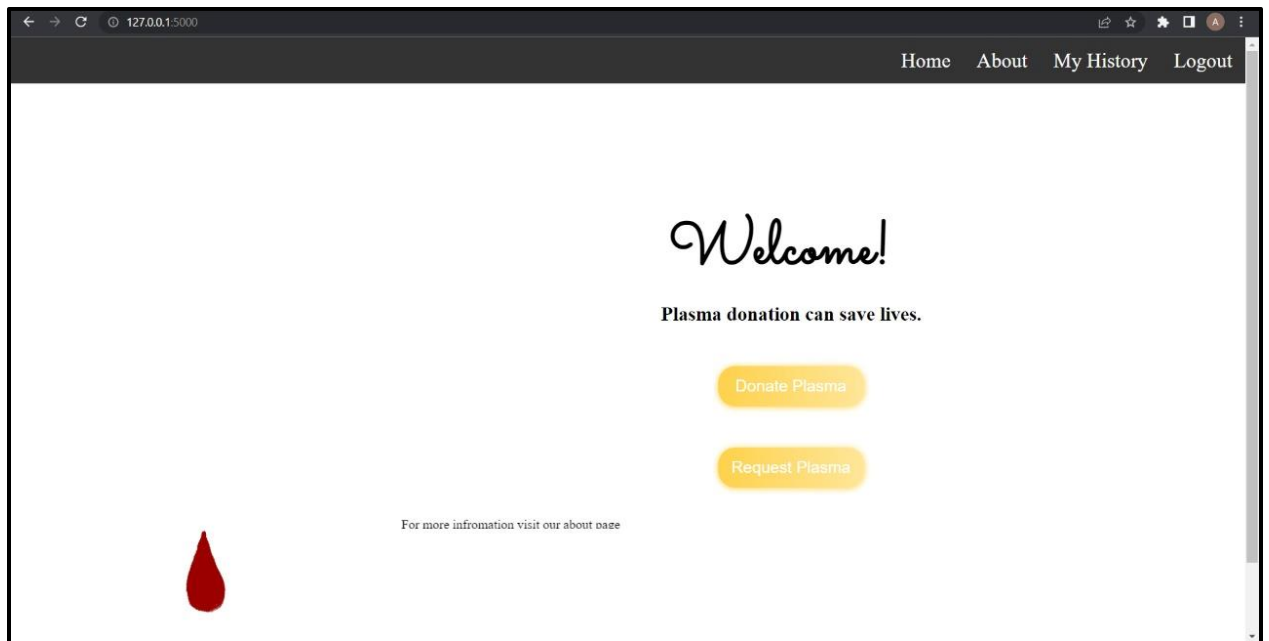
Table definition

DONORS Approximate 2 rows (32.0 KB)  
Updated on 2022-11-04 09:57:40

Name	Data type	Nullable	Length	Scale
NAME	VARCHAR	Y	32	0
EMAIL	VARCHAR	Y	32	0
NUMBER	INTEGER	Y		0
BLOODGROUP	VARCHAR	Y	32	0
ADDRESS	VARCHAR	Y	32	0

View data

- Home Page:



- Donation:

The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5000/donate". The navigation bar at the top includes links for "Home", "About", "My History", and "Logout". The main content area has a solid yellow background. In the center, there is a white form titled "DONOR DETAILS". The form contains five input fields with labels: "Email", "Name", "Phone", "Blood Group", and "Address". Below these fields is a yellow "SUBMIT" button.

IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

NKN33411.DONORS Back

Export to CSV

NAME	EMAIL	NUMBER	BLOODGROUP	ADDRESS
abcd	Try3@gmail.com	1234567	O	ss
try	try@gmail.com	1234567	B+	Sr
try1	Try1@gmail.com	1234567	B+	TN
try2	Try2@gmail.com	1234567	A	ss

- Request Plasma:

Home About My History Logout

**RECIPIENT DETAILS**

Email  
sri@gmail.com

Name  
vatsan abc

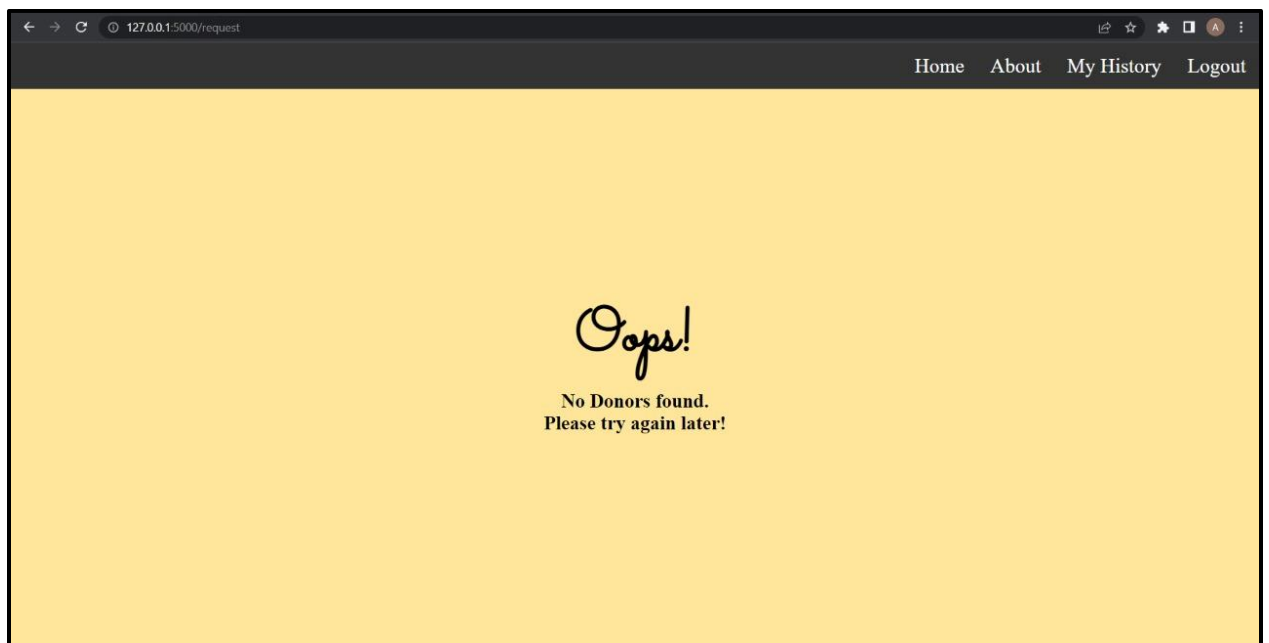
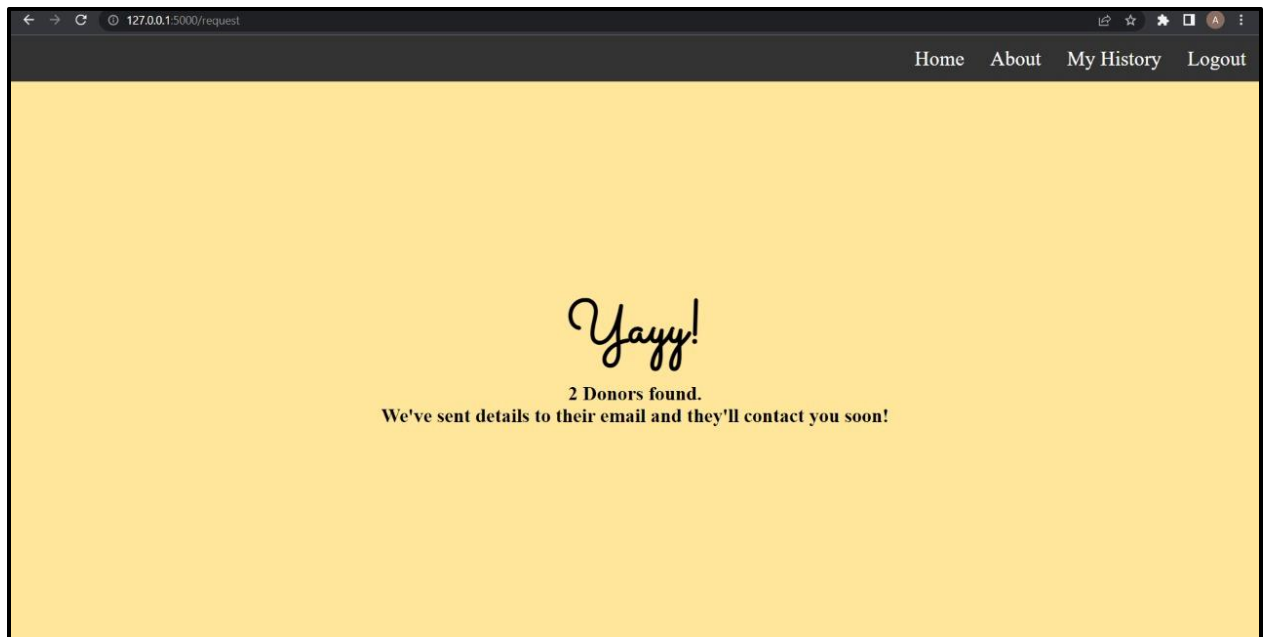
Phone  
123456

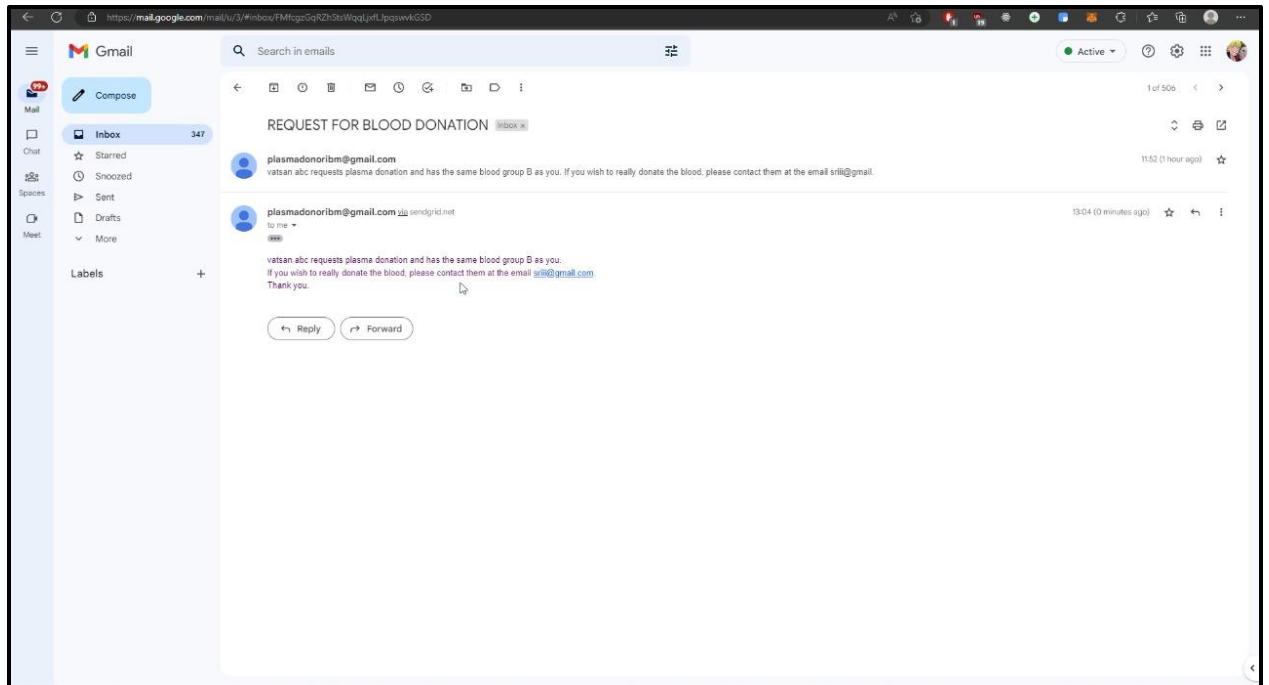
Blood Group  
B

Address  
India

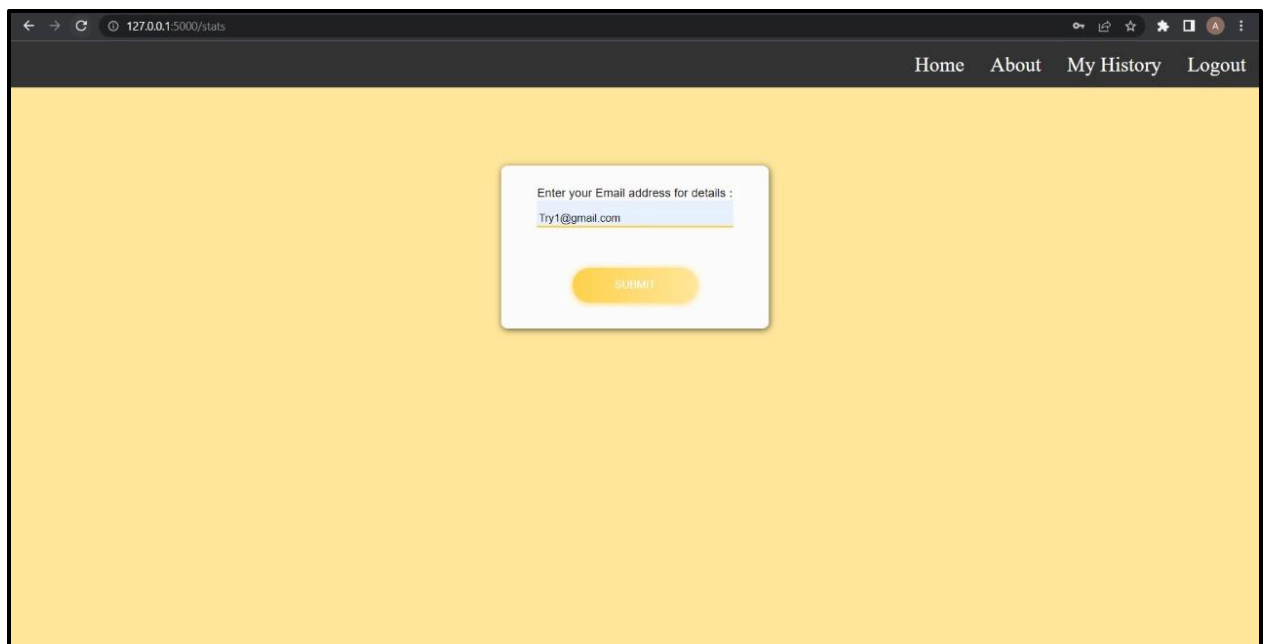
SUBMIT

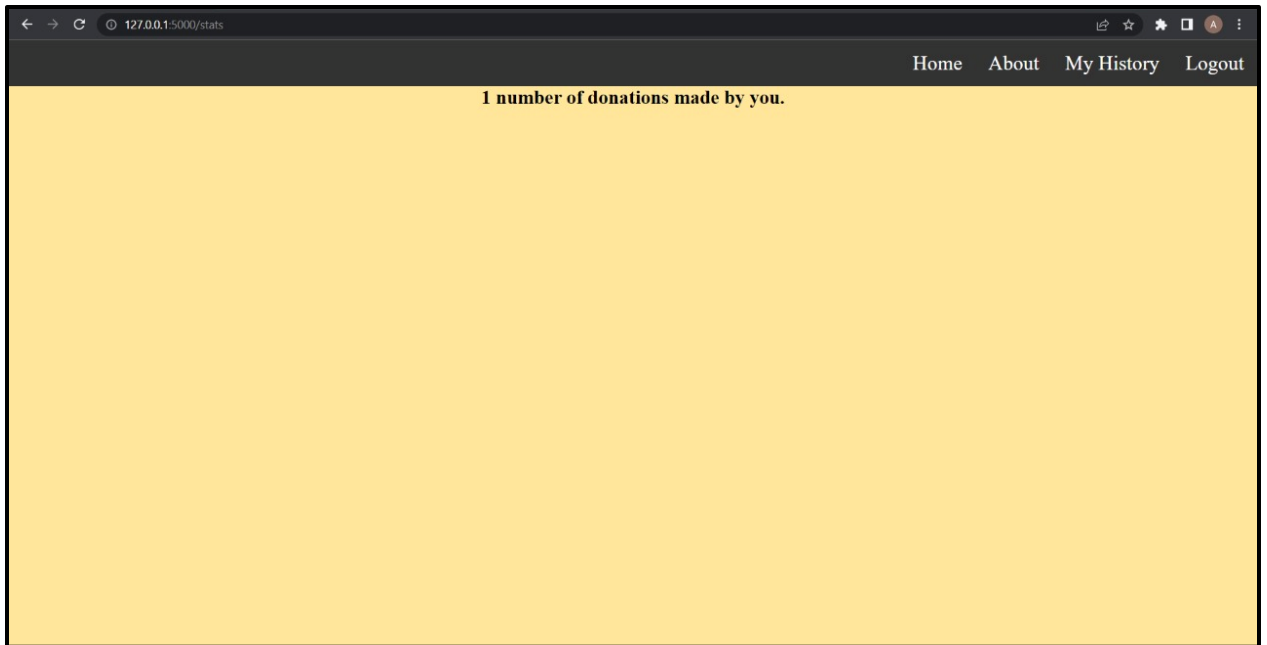
- Available Donors during Request:



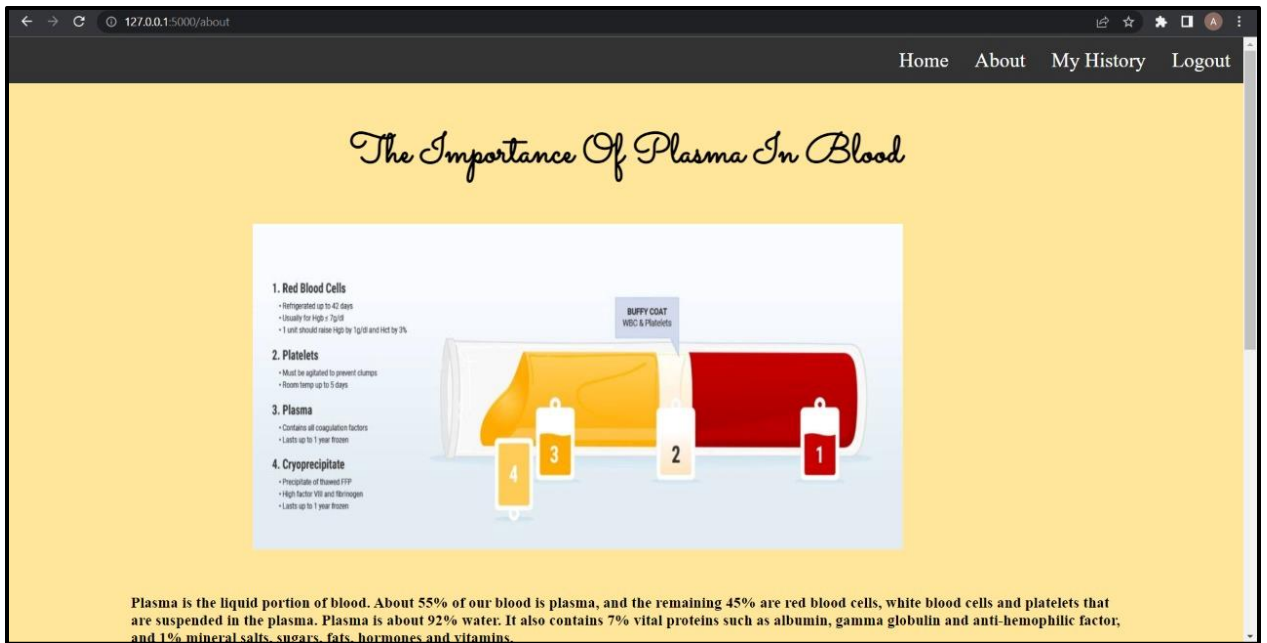


- Account Donation History:





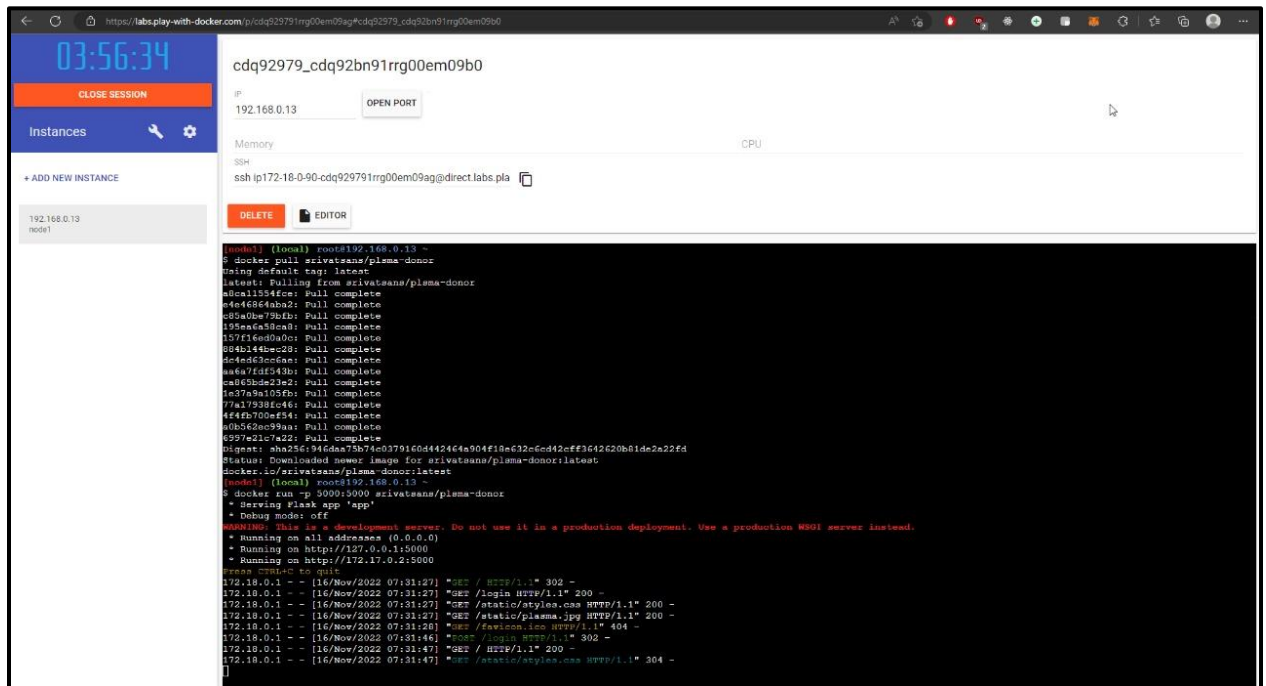
- About Page:





## b. USN – 2: Additional Features

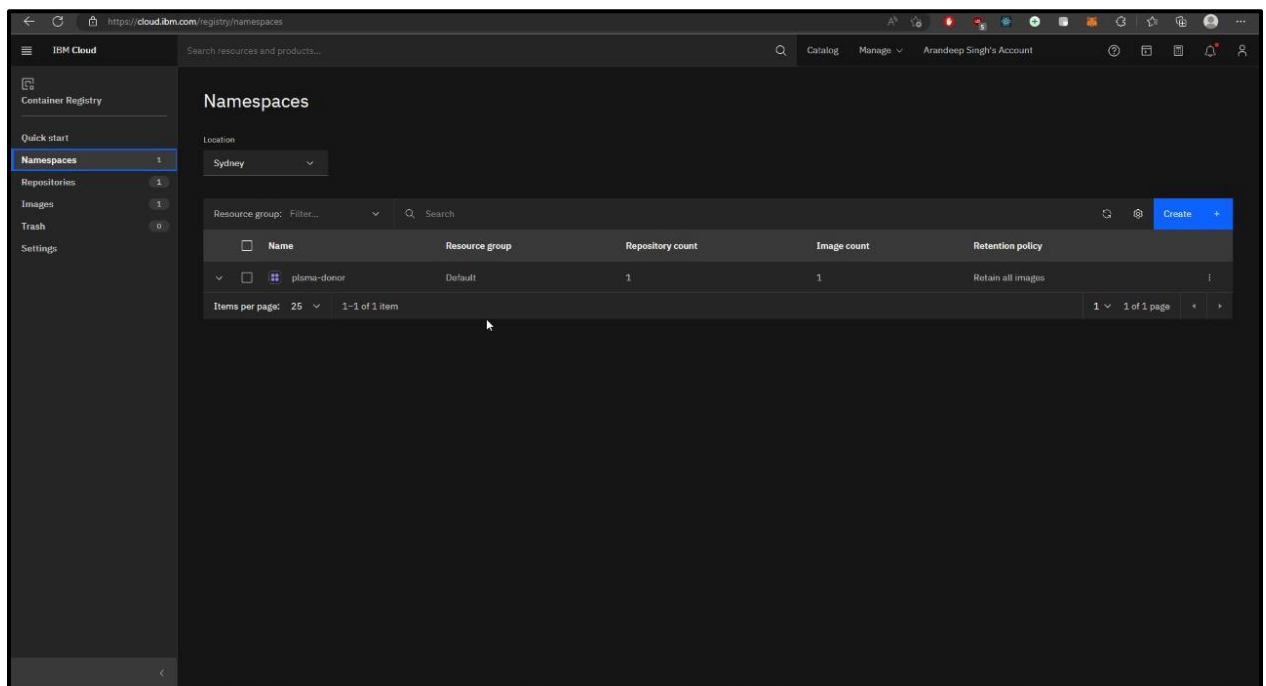
- Docker Container:



The screenshot shows the 'labs.play-with-docker.com' interface. The top bar displays the time '03:56:34' and a 'CLOSE SESSION' button. Below this, there's a section for 'Instances' with a '+ ADD NEW INSTANCE' button. The main area shows a Docker container session with the ID 'cdq92979\_cdq92bn91rrg00em09b0'. The terminal output shows the process of pulling a Docker image and running a Flask application.

```
cdq92979_cdq92bn91rrg00em09b0
192.168.0.13 OPEN PORT
Memory CPU
SSH
ssh ip172-18-0-90-cdq929791rrg00em09ag@direct.labs.pla
DELETE EDITOR
[root@192.168.0.13 ~]# docker pull srivatsans/plasma-donor
Using default tag: latest
latest: Pulling from srivatsans/plasma-donor
a8ca11594fca: Pull complete
4e46864aba2: Pull complete
65a0be79bdf: Pull complete
195ea6a5dca0: Pull complete
157f16ed0a0c: Pull complete
024b146ec2b: Pull complete
4e46d3c0c6ae: Pull complete
aa6a7fd4543b: Pull complete
ca863be23f2: Pull complete
1a27aba105bf: Pull complete
77a17938fc46: Pull complete
444fb700e5d4: Pull complete
6b562ec95aa: Pull complete
6397e21c7a22: Pull complete
Digest: sha256:946daa75b74c037916d4424c4a904f18a632c6c42ceff3612620b81de2a22fd
Status: Downloaded newer image for srivatsans/plasma-donor:latest
docker.io/srivatsans/plasma-donor:latest
[root@192.168.0.13 ~]# docker run -p 5000:5000 srivatsans/plasma-donor
 * Serving Flask app "app"
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://172.0.0.1:5000
 * Running on http://172.17.0.2:5000
Press CTRL+C to quit
172.18.0.1 - - [16/Nov/2022 07:31:27] "GET / HTTP/1.1" 302 -
172.18.0.1 - - [16/Nov/2022 07:31:27] "GET /login HTTP/1.1" 200 -
172.18.0.1 - - [16/Nov/2022 07:31:27] "GET /static/styles.css HTTP/1.1" 200 -
172.18.0.1 - - [16/Nov/2022 07:31:27] "GET /static/plasma.jpg HTTP/1.1" 200 -
172.18.0.1 - - [16/Nov/2022 07:31:28] "GET /favicon.ico HTTP/1.1" 404 -
172.18.0.1 - - [16/Nov/2022 07:31:46] "POST /login HTTP/1.1" 302 -
172.18.0.1 - - [16/Nov/2022 07:31:47] "GET / HTTP/1.1" 200 -
172.18.0.1 - - [16/Nov/2022 07:31:47] "GET /static/styles.css HTTP/1.1" 304 -
```

- IBM Cloud Namespaces:

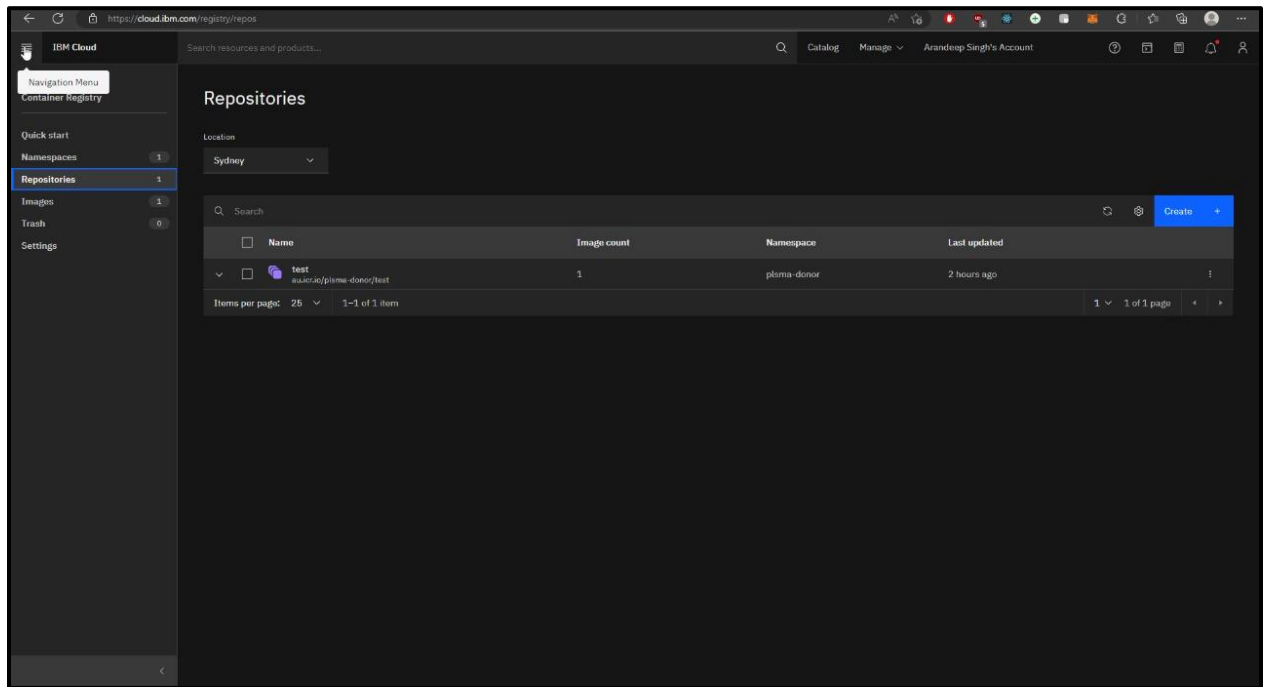


The screenshot shows the IBM Cloud Container Registry 'Namespaces' page. The page has a sidebar with 'Quick start' and 'Namespaces' (1) selected. The main area shows a table of namespaces.

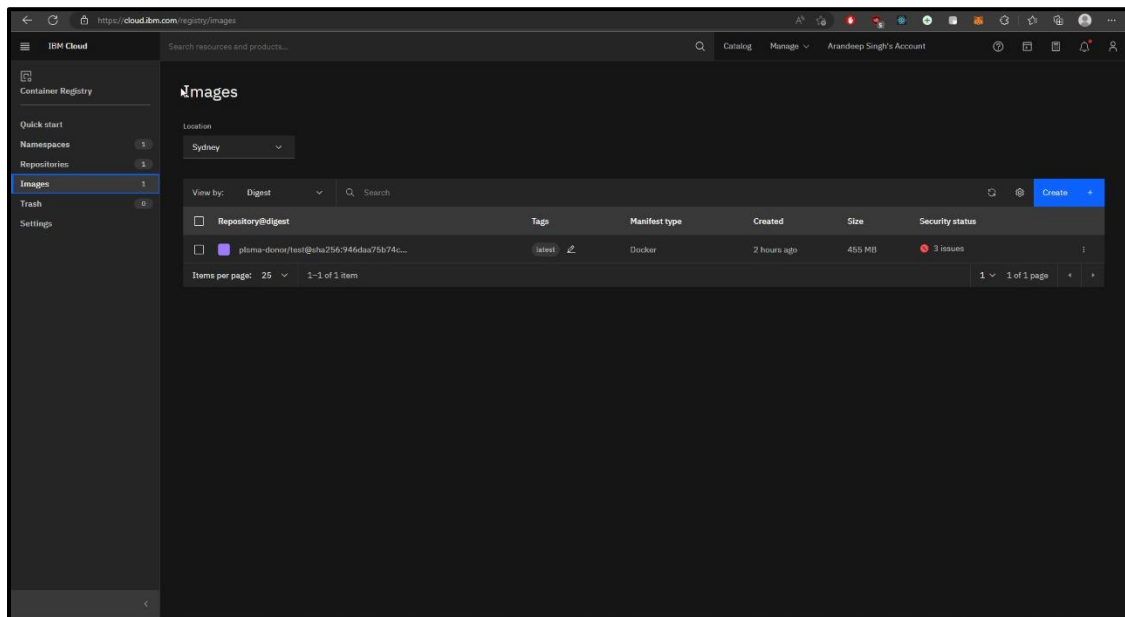
Name	Resource group	Repository count	Image count	Retention policy
plasma-donor	Default	1	1	Retain all images

Items per page: 25 1-1 of 1 item 1 1 of 1 page

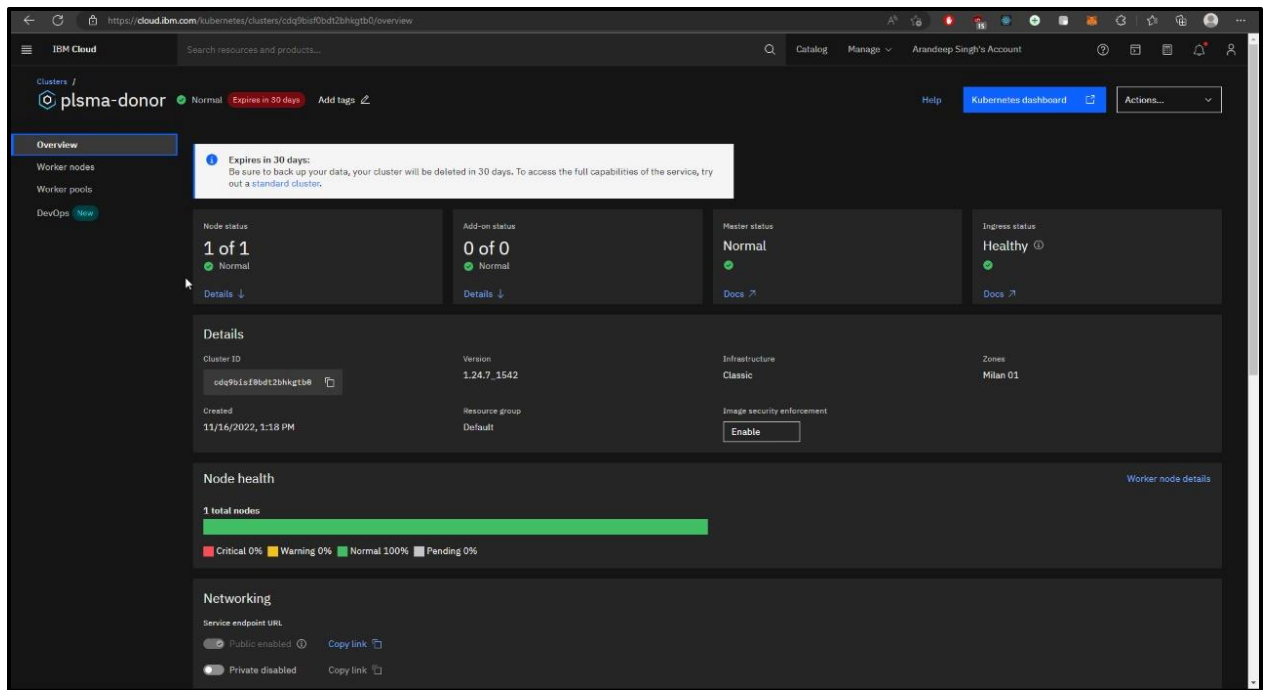
- IBM Cloud Repositories:



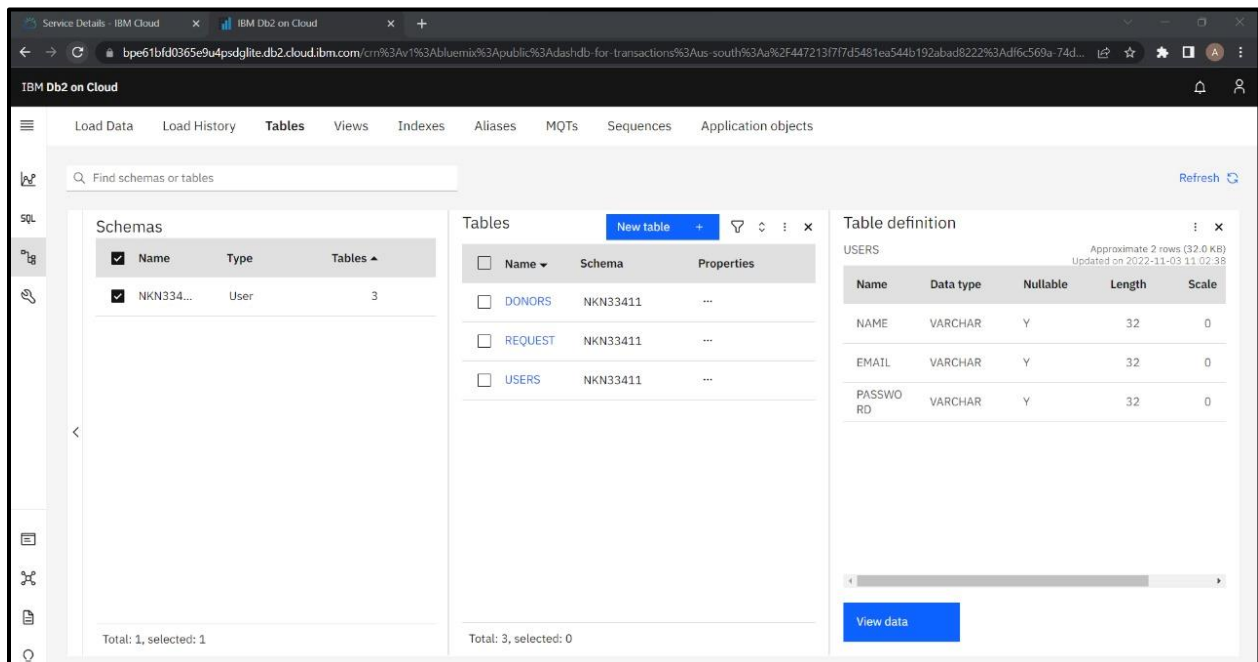
- IBM Cloud Images:



- **Kubernetes Cluster:**



**c. Database Schema (if Applicable)**



## 8. TESTING

### a. Test Cases

				Date	3-Nov-22								
				Team ID	PNT2022TMD53106								
				Project Name	Project - Plasma Donor Application								
				Maximum Marks	4 marks								
Test case ID	Feature Type	Component	Test Scenario	Pre-Requsite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
LoginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button		1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup displayed or not	<a href="https://hub.docker.com/containers/docker/nginx-plasma-donor">https://hub.docker.com/containers/docker/nginx-plasma-donor</a>	Login/Signup popup should display	Working as expected	Pass		Y		Madhulica
LoginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup popup		1.Enter URL and click go 2.Verify login/Signup popup with below UI elements: a. email text box b. password text box c. Login button d. New customer? Create account link	<a href="https://hub.docker.com/containers/docker/nginx-plasma-donor">https://hub.docker.com/containers/docker/nginx-plasma-donor</a>	Application should show below UI elements: a. email text box b. password text box c. Login button with orange colour d. New customer? Create account link	Working as expected	Pass		Y		Vaibhav
LoginPage_TC_003	Functional	Home page	Verify user is able to log into application with Valid credentials		1.Enter URL and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4. Enter valid password in password text box 5. Click on login button	Username: Try2@gmail.com password: Try2	User should navigate to user account homepage	User should navigate to user account homepage	Pass		Y		Arandeep
LoginPage_TC_004	Functional	Login page	Verify user is able to log into application with Invalid credentials		1.Enter URL and click go 2.Click on My Account dropdown button 3. Enter Invalid username/email in Email text box 4. Enter valid password in password text box 5. Click on login button	Username: Try2@gmail.com password: Testing123	Application should show 'Incorrect email or password' validation message.	Application should show 'Incorrect email or password' validation message.	Pass		Y		Madhulica
LoginPage_TC_004	Functional	Login page	Verify user is able to log into application with Invalid credentials		1.Enter URL and click go 2.Click on My Account dropdown button 3. Enter Valid username/email in Email text box 4. Enter Invalid password in password text box 5. Click on login button	Username: chalam@gmail.com password: Testing123678686786876876	Application should show 'Incorrect email or password' validation message.	Application should show 'Incorrect email or password' validation message.	Pass				Arandeep
LoginPage_TC_005	Functional	Login page	Verify user is able to log into application with Invalid credentials		1.Enter URL and click go 2.Click on My Account dropdown button 3. Enter Invalid username/email in Email text box 4. Enter Invalid password in password text box 5. Click on login button	Username: chalam@gmail.com password: Testing123678686786876876	Application should show 'Incorrect email or password' validation message.	Application should show 'Incorrect email or password' validation message.	pass				Madhulica
Signup_TC_006	Functional	Signup Page	Verify user is able to Sign into application with Valid credentials		1. Enter URL and click go 2. Click on My Account dropdown button 3. Enter Invalid username/email in Email text box 4. Enter Invalid password in password text box 5. Click on login button	Username: chalam@gmail.com password: Testing123678686786876876	Application should show 'Incorrect email or password' validation message.	Application should show 'Incorrect email or password' validation message.	Pass				Vaibhav

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
questPlasma_TC_007	Functional	Request Page	The receiver clicks on the receive plasma button		Receiver Details form opens	Click	Form opens	Form opens	pass		Y		Sivatsan
DonatePlasma_TC_008	Functional	Donor Page	The Donor clicks on the donate plasma button		Donor Details form opens	Click	Form opens	Form opens	pass		Y		Vaibhav
RequestPlasma_TC_009	Functional	Request Page	The receiver Enters his data and submits		If, donors found, alert	Enters details	Alert sent	Alert send	pass		Y		Sivatsan
DonationPlasma_TC_010	Functional	Donor Page	The Donor Enters his data and submits		Save in the DB2	Enters Details	Conformation message sent	Conformation message sent	pass		Y		Madhulica
AboutPage_TC_011	UI	About Page	The user clicks on about page		Display about page	<a href="https://hub.docker.com/containers/docker/nginx-plasma-donor">https://hub.docker.com/containers/docker/nginx-plasma-donor</a>	Displayed	Displayed	Pass		Y		Arandeep
DonorHistory_TC_012	Functional	Donor Page	The donor enters his email to see his statistics		Enter email, receive statistics	<a href="mailto:Try1@gmail.com">Try1@gmail.com</a>	1DONATION MADE	Displayed	pass		Y		Sivatsan
DonorHistory_TC_013	Functional	Receiver Page	The Donor enters his email to see his statistics		Enter email, receive statistics	Try1@gmail.com			Fail	No Donations made	Y		Sivatsan

## b. User Acceptance Testing

### Acceptance Testing UAT Execution & Report Submission

Date	03 November 2022
Team ID	PNT2022TMID53106
Project Name	Project – Plasma Donor Application
Maximum Marks	4 Marks

#### 1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [ProductName] project at the time of the release to User Acceptance Testing (UAT).

#### 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	5	2	1	1	9
Duplicate	1	0	1	0	1
External	1	0	0	0	1
Fixed	7	2	2	1	12
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	14	4	4	2	24

## 9. RESULTS

### a. Performance Metrics

#### Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID53106
Project Name	Project – Plasma Donor Application
Maximum Marks	10 Marks

#### Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S. No.	Parameter	Screenshot / Values
1.	Dashboard design	1
2.	Data Responsiveness	10
3.	Amount Data to Rendered (DB2 Metrics)	4
4.	Utilization of Data Filters	3
5.	Effective User Story	7
6.	Descriptive Reports	2

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

NFT - Risk Assessment									
S.No	Project Name	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Volume Changes	Risk Score	Justification
1	Plasma Donor	New	No Changes	No Changes	Moderate	Cannot Register New User	>5 to 10%	ORANGE	New Customers may be turned away from the app.
2	Plasma Donor	New	High	No Changes	High	Cannot Download details	>30%	RED	Details unavailable
3	Plasma Donor	New	No Changes	No Changes	No Changes	Generic Information Wrong	<5%	GREEN	Wrong info about Plasma Benefits
4	Plasma Donor	Existing	Moderate	No Changes	Moderate	Existing Username Incorrectly	>5%	GREEN	Username is correctly used but not displaying.
NFT - Detailed Test Plan									
S.No	Project Overview		NFT Test approach	Assumptions/Dependencies/R	Approvals/SignOff				
1	Plasma Donor		Incorrect Username Entry	Valid Account Exists	Login Unsuccessful				
2	Plasma Donor		False information Entry	Wrong UN also accepted	Login Successful				
3	Plasma Donor		No donations made	Not Registered for Donation	No Donation in History				
4	Plasma Donor		Reception For Donation	Registered in Database	Show Available Donors				
End Of Test Report									
S.No	Project Overview	NFT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	(Detected/Closed/Open)	Approvals/SignOff	
1	Plasma Donation	New Donor	Yes	Successfully Registered for Donation	GO	None	Closed	Success	
2	Donation History	Check History	No	History Not Visible	NO-GO	Test IBM DB Connection	Open	Fail	
3	About Page	Information	Yes	Plasma Benefits Wrong	GO	Validate Plasma Details	Closed	Success	
4	Available Donors Vis	Register as recipient	Yes	Available Donors are Visible	Go	None	Closed	Success	

## 10. ADVANTAGES & DISADVANTAGES

### ADVANTAGES:

- a. **Speed** – This website is fast and offers great accuracy as compared to manual registered keeping.
- b. **Maintenance** – This website runs with relatively low maintenance under IBM Cloud.
- c. **User Friendly** – The UI of the application is highly user friendly and the navigation in the website is smooth.
- d. **Fast Results** – The response time of the application is negligible and makes the whole plasma donation process hassle-free.

### DISADVANTAGES:

- a. **Internet** – The working of the application requires an established internet connection.
- b. **Auto Verification** – This application does not have the facility of auto verifying genuine users.
- c. **Fake Information** – This application cannot distinguish fake information.
- d. **Vulnerable** – This application is vulnerable to the downtime of IBM Cloud and Database.

## 11. CONCLUSION

An efficient and hassle-free way of plasma donation procedure is implemented using the plasma donation website hosted on the IBM Cloud Platform.

To ensure smooth functioning of the website operation, it has been hosted on IBM Db2 & Kubernetes Cluster and containerized using Docker.

The application has also been integrated with SendGrid to automate the mailing procedure of sending donation and reception notification.

## 12. FUTURE SCOPE

Upgrading to a smooth UI will help users in understanding the working of the app. It will surely help in adding more users to the plasma donation community.

Using an elastic load balancer will also be helpful in handling an excessive number of multiple users at the same time which will maintain the uptime of the website with negligible downtime.

## 13. APPENDIX

GIT LINK: <https://github.com/IBM-EPBL/IBM-Project-9058-1658945281>

DEMO LINK:

<https://drive.google.com/file/d/1SVhkfgRDL0S7kSj5zoR4HHS-bo5sbOJg/view?usp=sharing>