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.

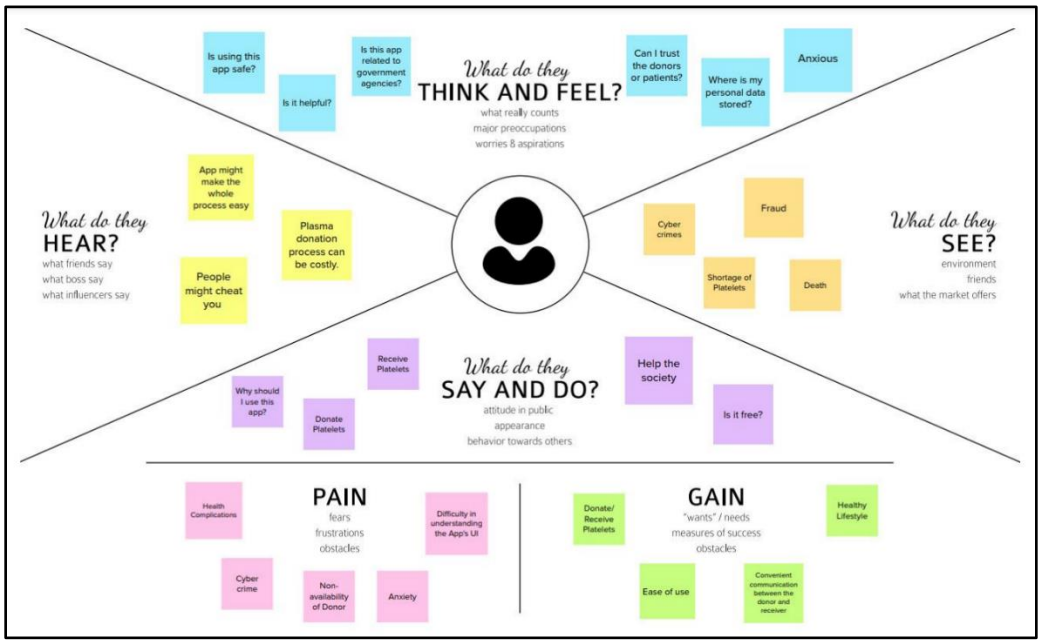
- In “Automated online plasma database” by Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul(2012)[2] . They come up with direct call routing technique by using asterisk. In this every blood bank consist of a database and that will be managed by central server. When someone in need of blood call on their 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

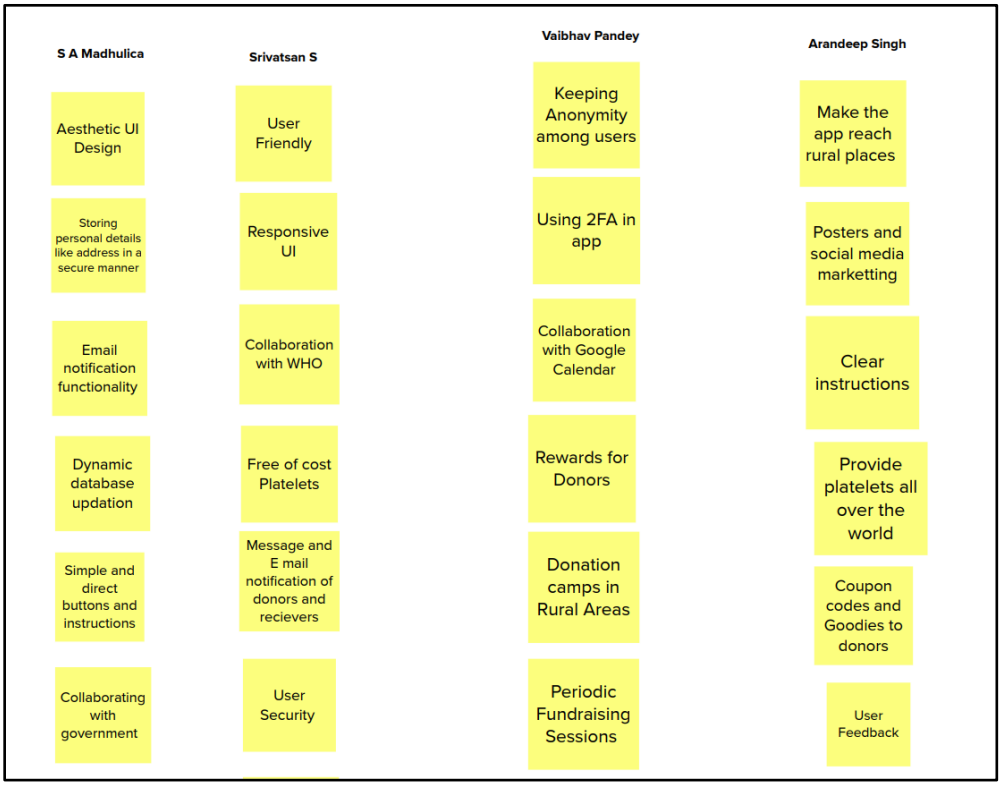
- The solution aims to solve the aforementioned drawbacks. The system works with the registration of a donor by providing the required details which gets stored in the database

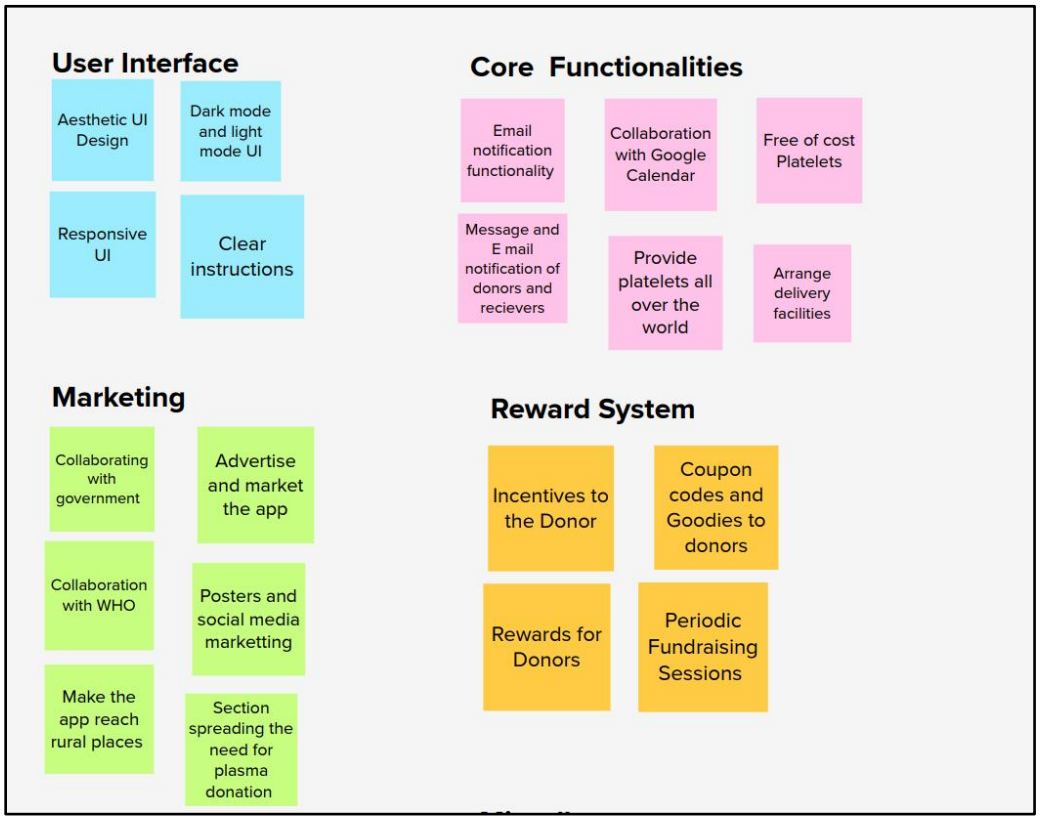
3. IDEATION & PROPOSED SOLUTION

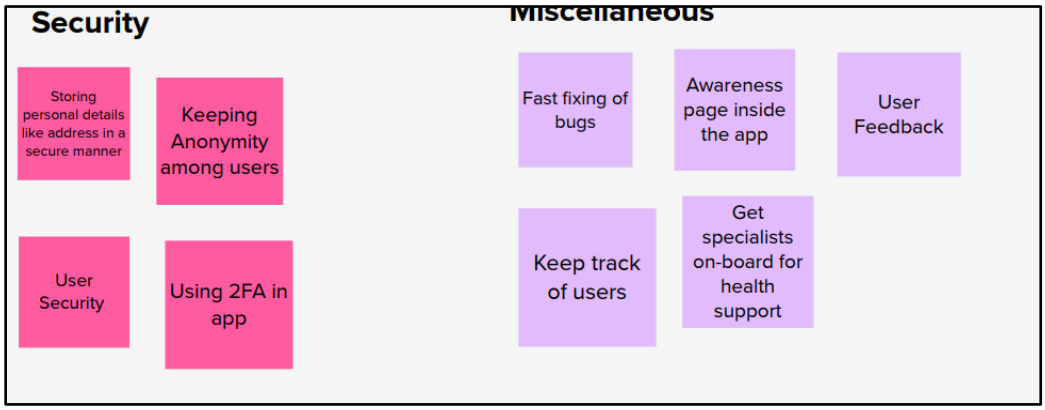
a. Empathy Map Canvas



b. Ideation & Brainstorming




User Interface
Aesthetic UI Design
Dark mode and light mode UI
Responsive UI
Clear instructions
Core Functionalities
Email notification functionality
Collaboration with Google Calendar
Free of cost Platelets
Message and E mail notification of donors and recievers
Provide platelets all over the world
Arrange delivery facilities
Marketing
Collaborating with government
Advertise and market the app
Collaboration with WHO
Posters and social media marketting
Make the app reach rural places
Section spreading the need for plasma donation
Reward System
Incentives to the Donor
Coupon codes and Goodies to donors
Rewards for Donors
Periodic Fundraising Sessions


Security
Storing personal details like address in a secure manner
Keeping Anonymity among users
User Security
Using 2FA in app
Miscellaneous
Fast fixing of bugs
Awareness page inside the app
User Feedback
Keep track of users
Get specialists on-board for health support


Responsive UI
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Periodic Fundraising Sessions
Advertise and market the app
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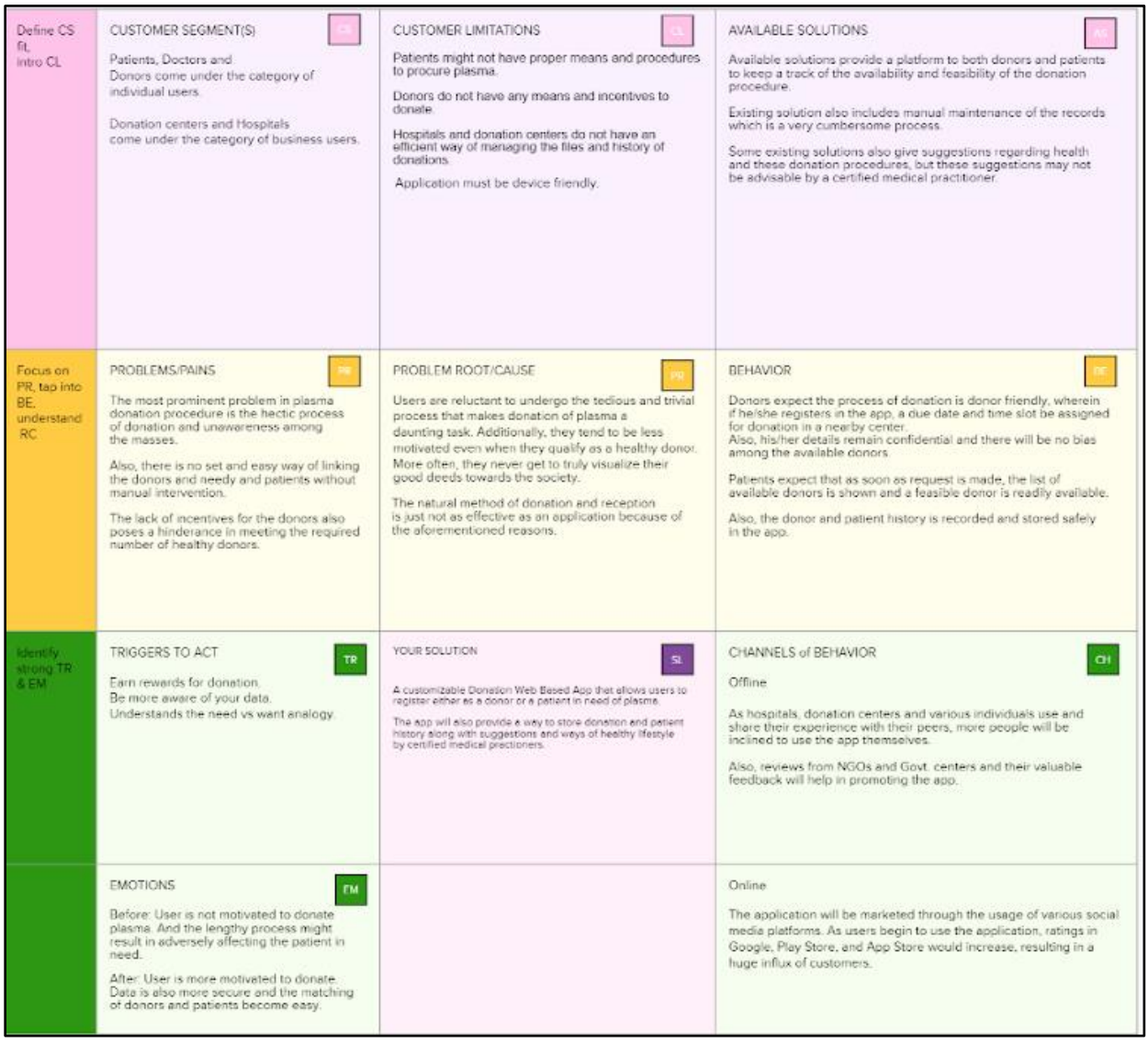
Arrange delivery facilities
User Feedback
Awareness page inside the app
Collaborating with government
Aesthetic UI Design
Incentives to the Donor
Collaboration with WHO
Dark mode and light mode UI
Collaboration with Google Calendar
Importance
If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?
Feasibility
Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

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 Key Partners and using the Key Resources, we develop and application that will add Value to the already existing ecosystem. By looking at the incurred Cost Structure and the incoming Revenue Streams we make the model cost effective. The customers will be separated into various Customer Segment. The app will advertised using various Advertisement Channels.
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 aid users in customizing the app with ease.

d. Problem Solution Fit



4. REQUIREMENT ANALYSIS

a. Functional Requirements

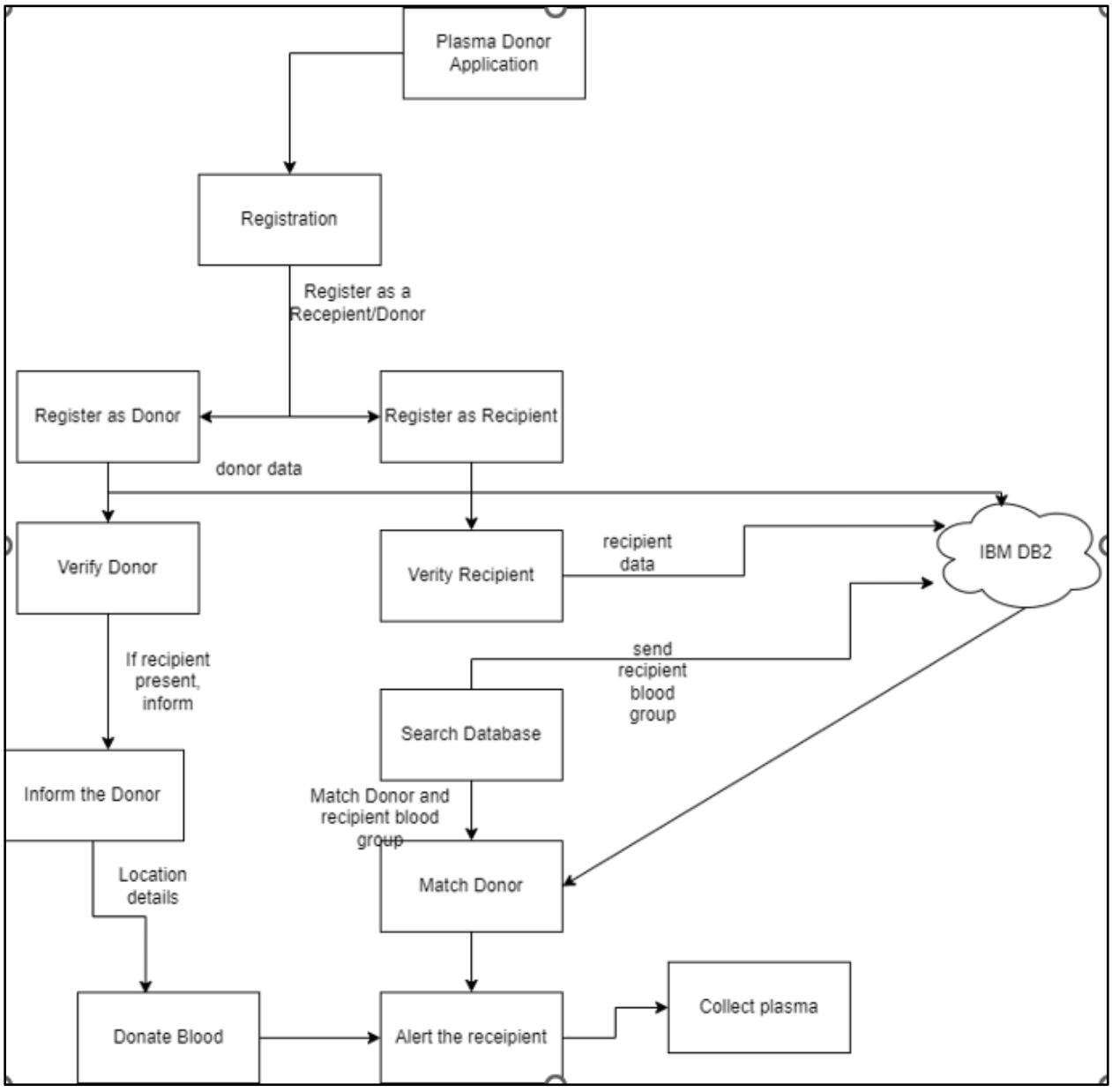
NO	FUNCTIONAL REQUIREMENT	SUB REQUIREMENT
1	Donor Registration	Google Form or Email
2	Recipient Registration	Google Form or Email
3	Donor Confirmation	Email or OTP
4	Recipient Confirmation	Email or OTP
5	Match Found	Email or SMS

b. Non-Functional Requirements

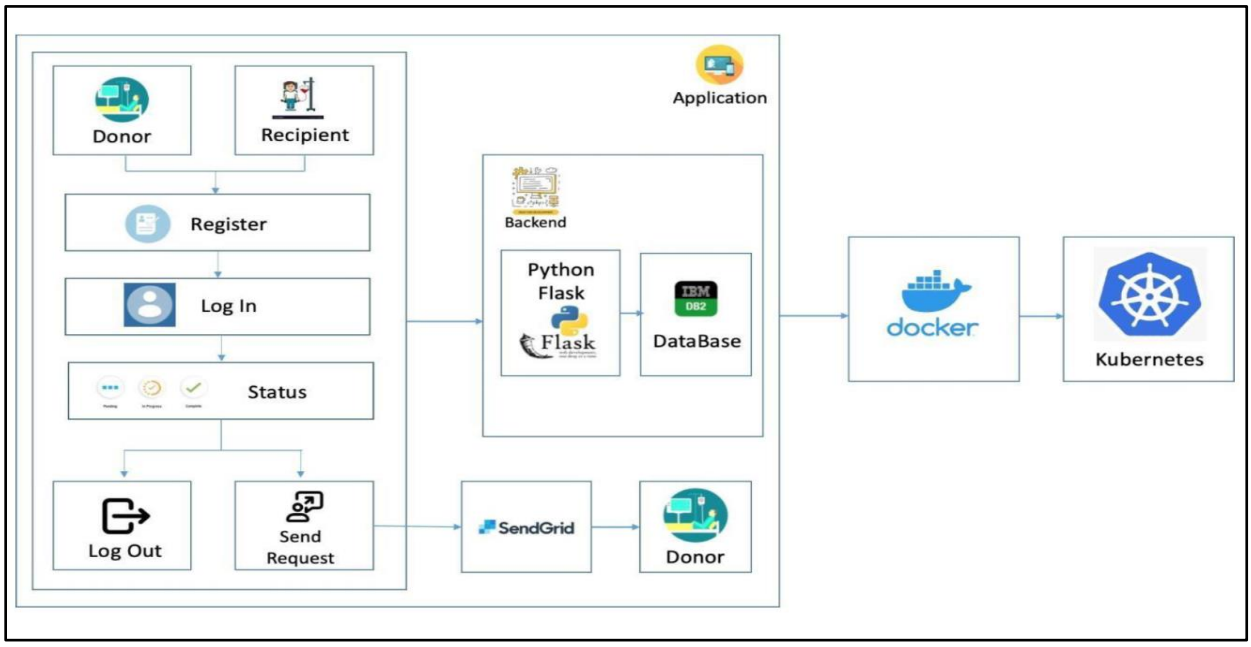
NO	NON-FUNCTIONAL REQUIREMENT	DESCRIPTION
1	Usability	User Friendly and Ease of Use
2	Security	Anonymity of Users
3	Reliability	No mismatch of Donation
4	Performance	Smooth UI/UX.
5	Availability	Depends on the availability of Donors
6	Scalability	Connect with NGOs, hospitals

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

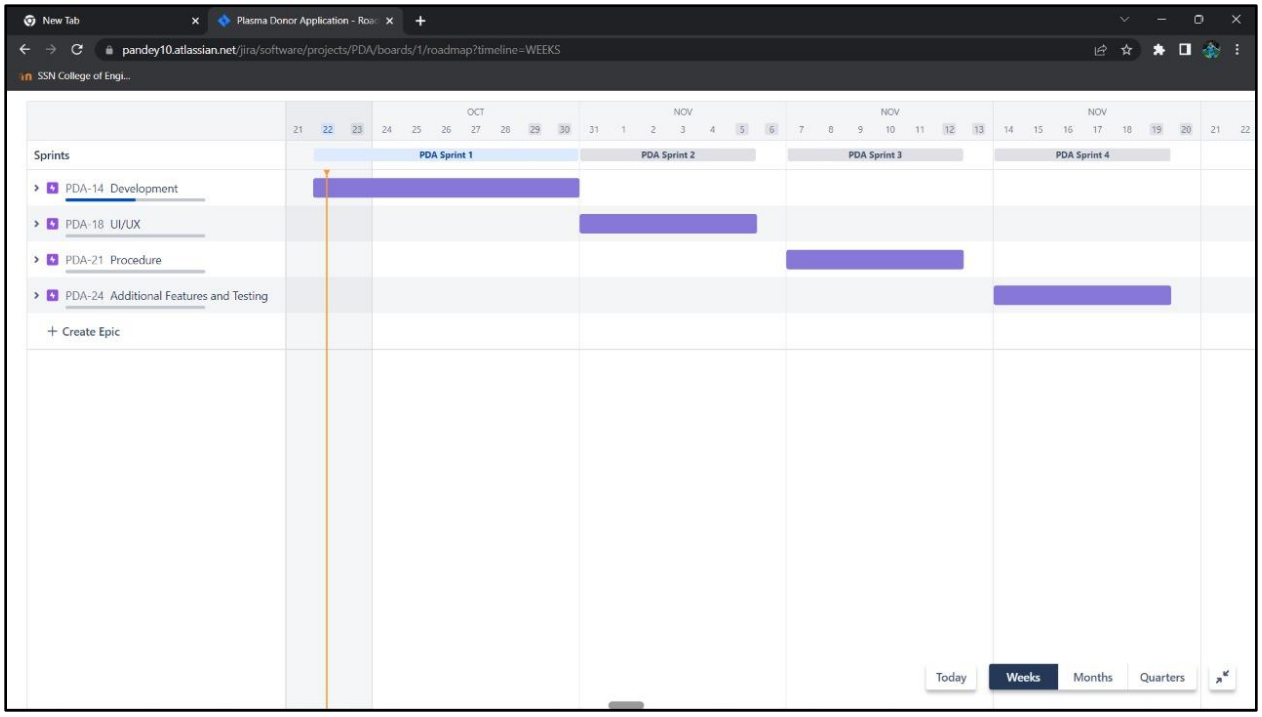
a. Sprint Planning & Estimation

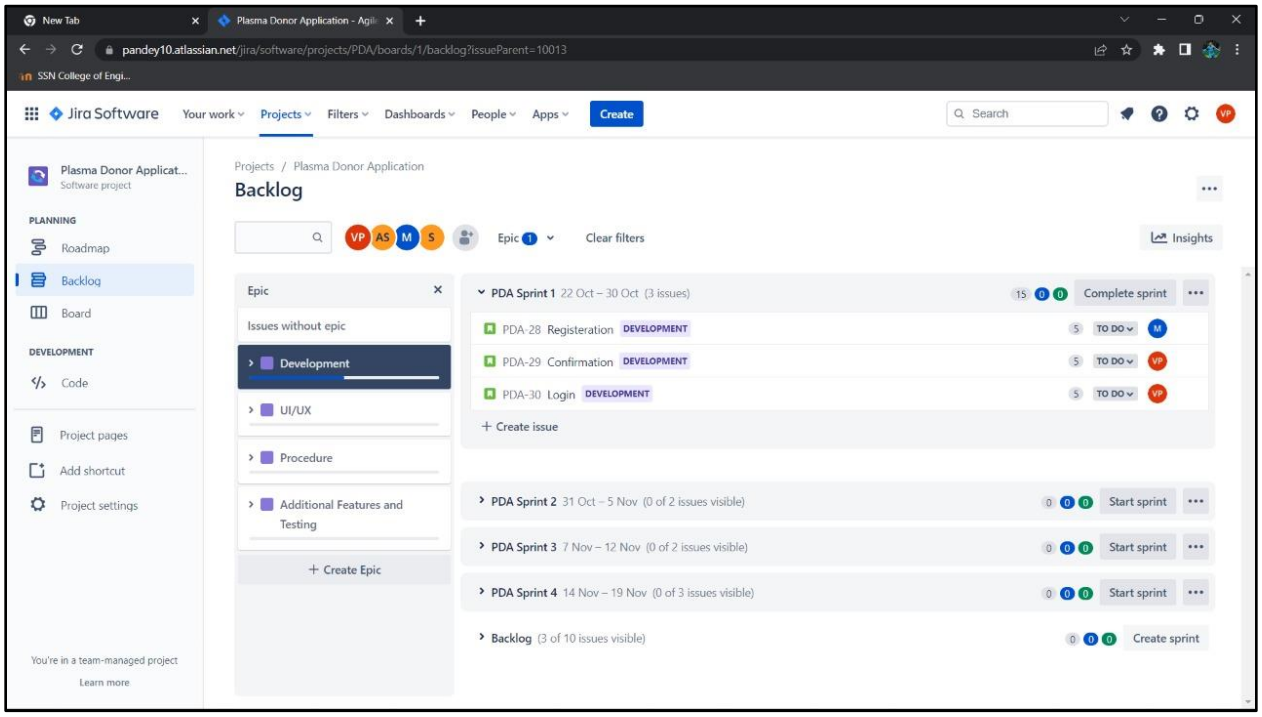
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Account Creation	USN-1	As a user, I can create an account on the application.	5	High	Madhulica, Arandeep
Sprint-1	Login	USN-2	I can successfully login to the application using provided 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

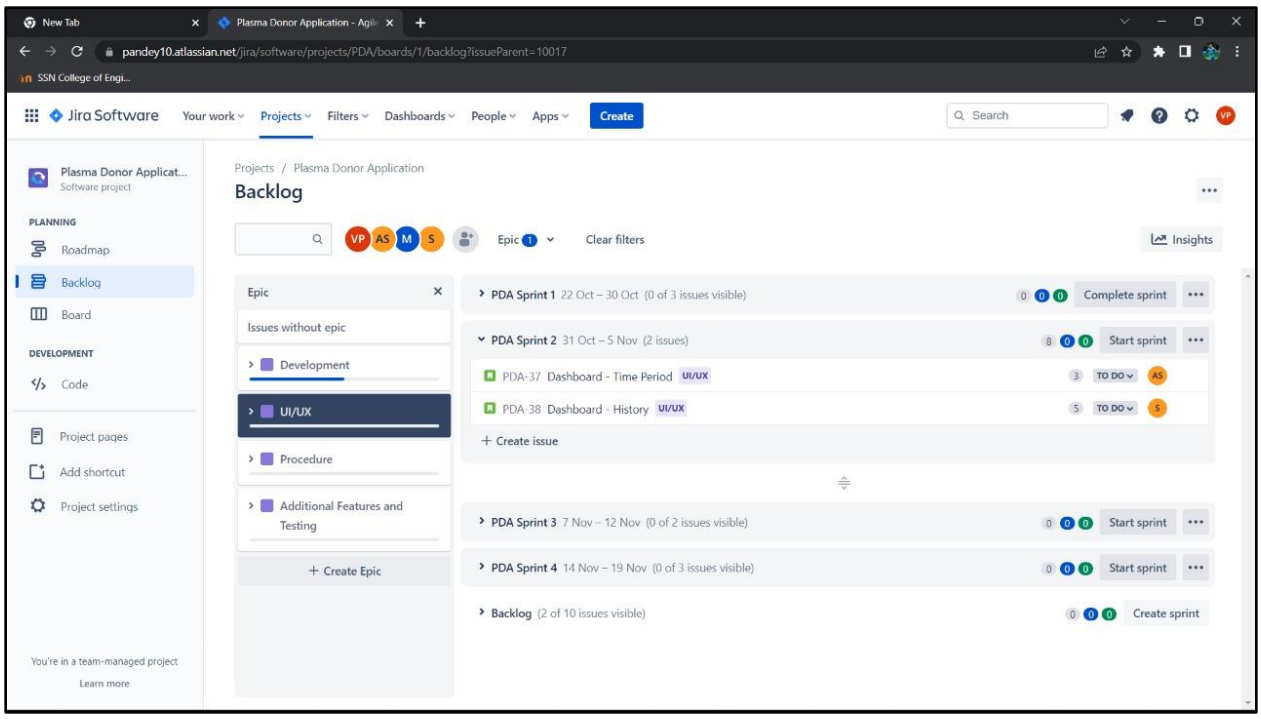
b. Sprint Delivery Schedule

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



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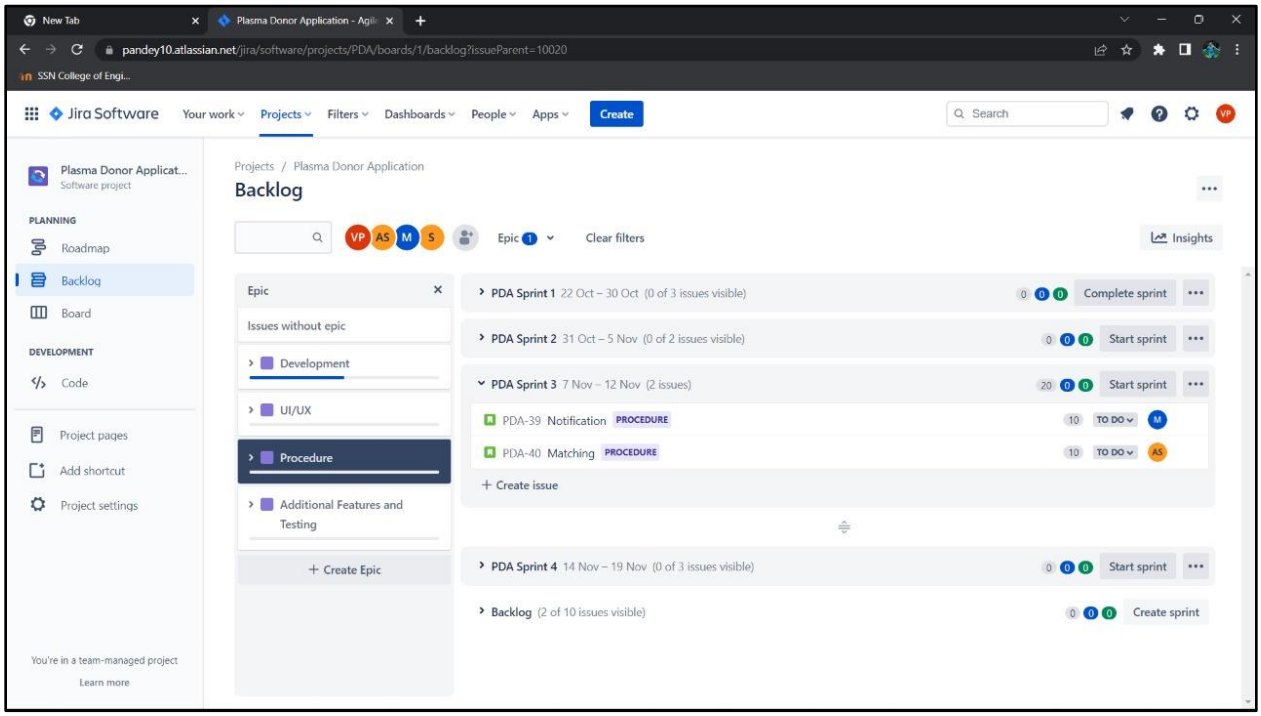
DEVELOPMENT
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Projects / Plasma Donor Application
Backlog
Epic 1
Clear filters
Insights
Epic
Issues without epic
Development
UI/UX
Procedure
Additional Features and Testing
+ Create Epic
PDA Sprint 1 22 Oct – 30 Oct (0 of 3 issues visible)
Complete sprint
PDA Sprint 2 31 Oct – 5 Nov (2 issues)
Start sprint
PDA-37 Dashboard - Time Period UI/UX
PDA-38 Dashboard - History UI/UX
TO DO
+ Create issue
PDA Sprint 3 7 Nov – 12 Nov (0 of 2 issues visible)
PDA Sprint 4 14 Nov – 19 Nov (0 of 3 issues visible)
Backlog (2 of 10 issues visible)
Create sprint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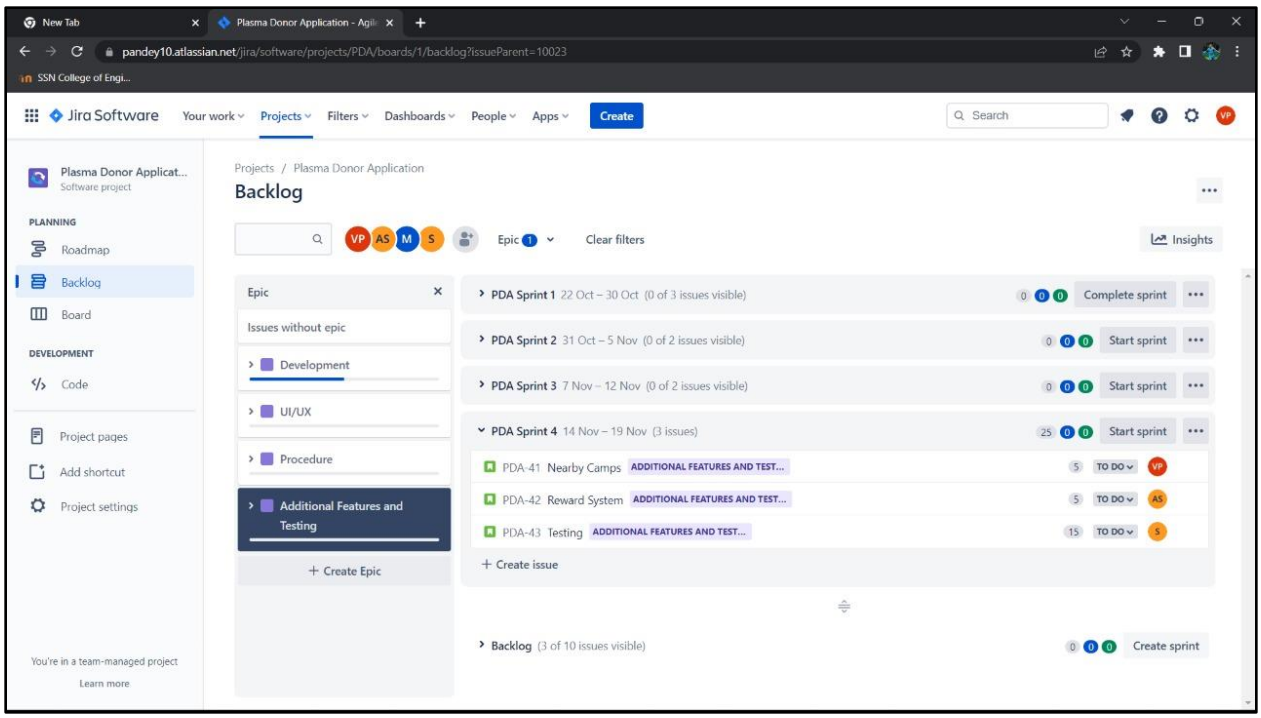
PDA Sprint 1 22 Oct – 30 Oct (0 of 3 issues visible)
Complete sprint
PDA Sprint 2 31 Oct – 5 Nov (0 of 2 issues visible)
Start sprint
PDA Sprint 3 7 Nov – 12 Nov (2 issues)
PDA-39 Notification PROCEDURE
PDA-40 Matching PROCEDURE
TO DO
+ Create issue
PDA Sprint 4 14 Nov – 19 Nov (0 of 3 issues visible)
Backlog (2 of 10 issues visible)
Create sprint


New Tab
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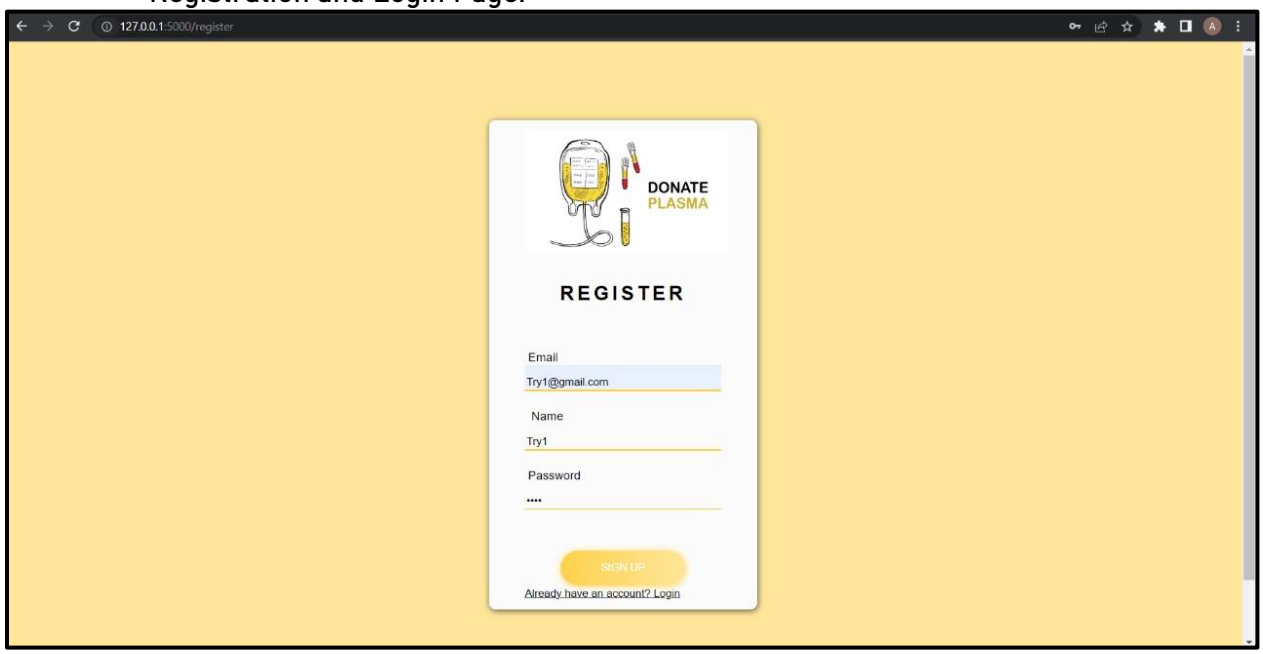
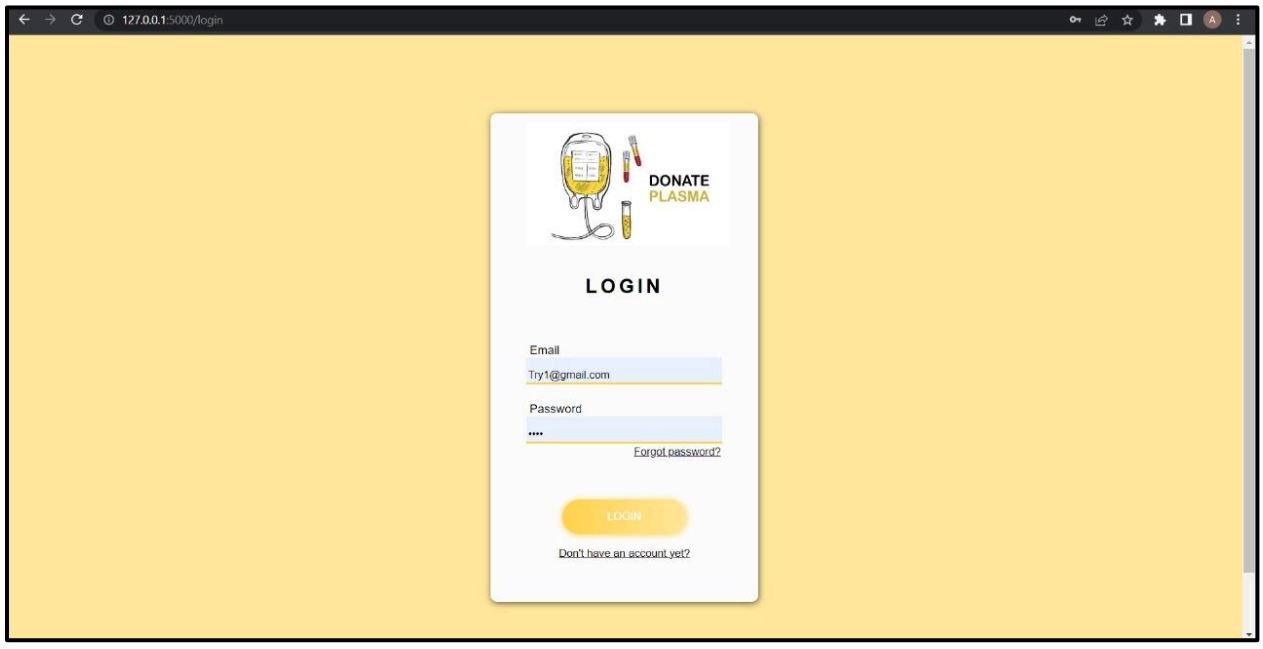
Start sprint
PDA Sprint 3 7 Nov – 12 Nov (0 of 2 issues visible)
Start sprint
PDA Sprint 4 14 Nov – 19 Nov (3 issues)
Start sprint
PDA-41 Nearby Camps ADDITIONAL FEATURES AND TEST... 5 TO DO
PDA-42 Reward System ADDITIONAL FEATURES AND TEST... 5 TO DO
PDA-43 Testing ADDITIONAL FEATURES AND TEST... 15 TO DO
+ Create issue
Backlog (3 of 10 issues visible)
Create sprint

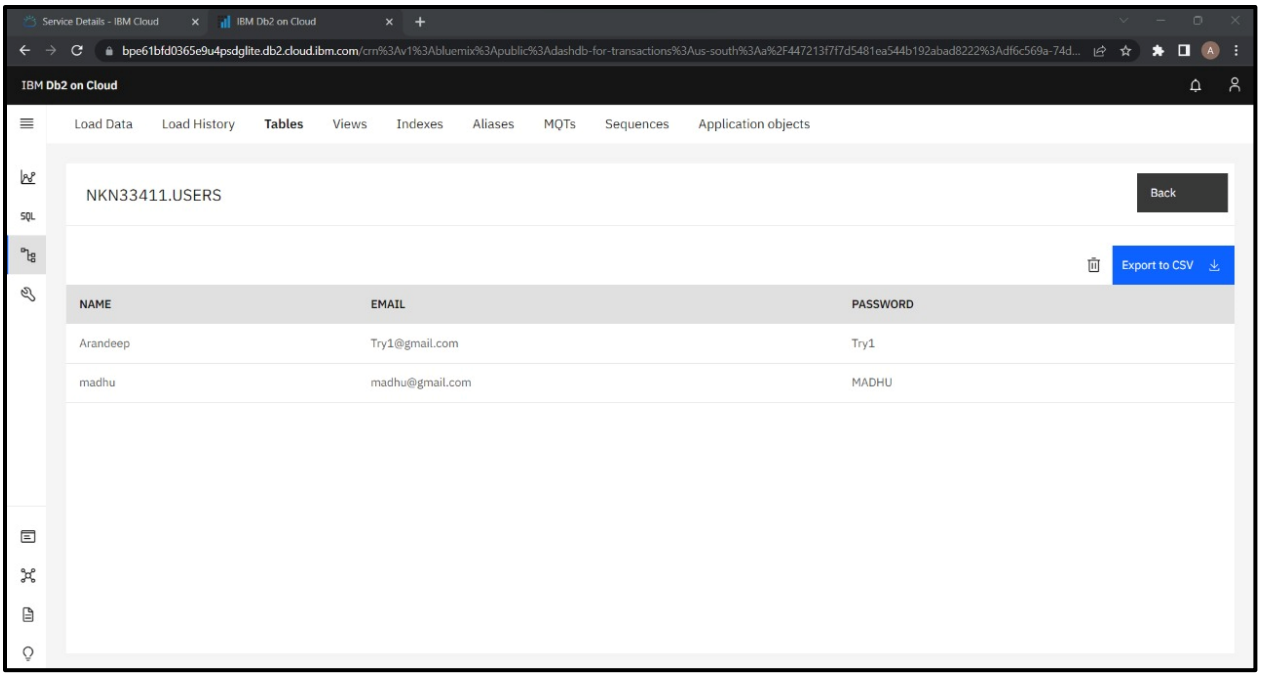
7. CODING & SOLUTIONING

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

- Registration and Login Page:






Service Details - IBM Cloud
IBM Db2 on Cloud
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Load History
Tables
Views
Indexes
Aliases
MQTs
Sequences
Application objects
NKN33411.USERS
Back
Export to CSV
NAME
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PASSWORD
Arandeep
Try1@gmail.com
Try1
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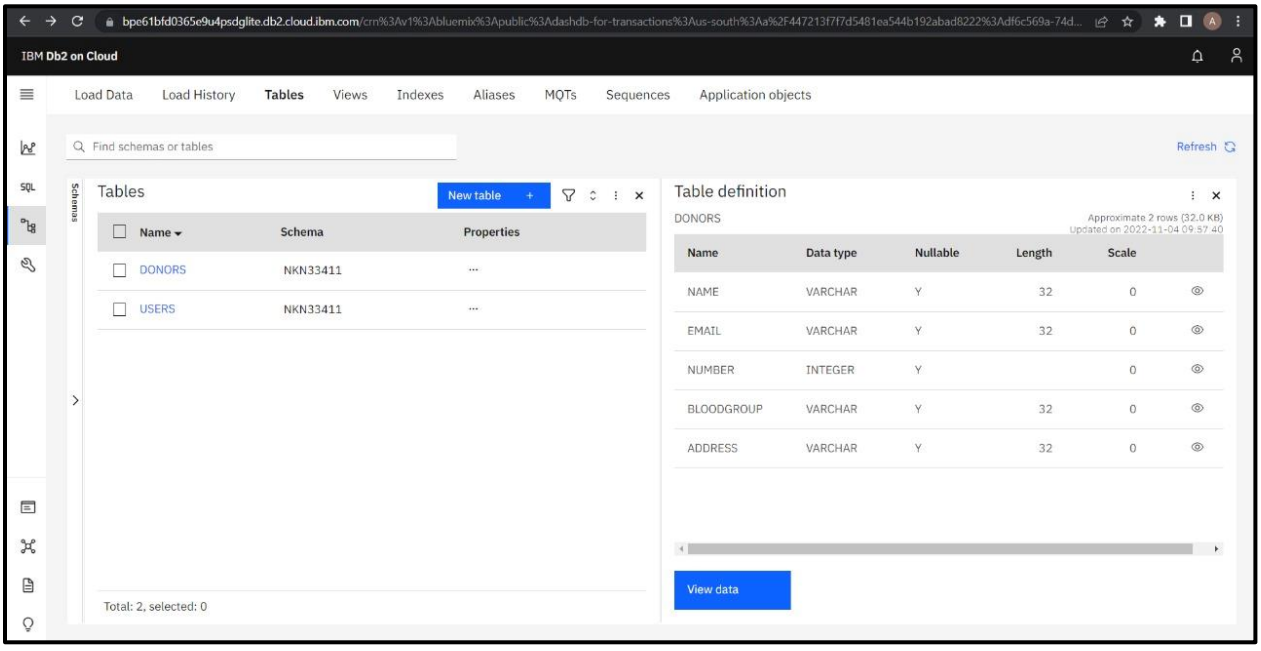
madhu@gmail.com
MADHU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IBM Db2 on Cloud
Load Data
Load History
Tables
Views
Indexes
Aliases
MQTs
Sequences
Application objects
Find schemas or tables
Refresh
Schemas
Tables
New table
Name
Schema
Properties
DONORS
NKN33411
USERS
NKN33411
Total: 2, selected: 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
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ADDRESS
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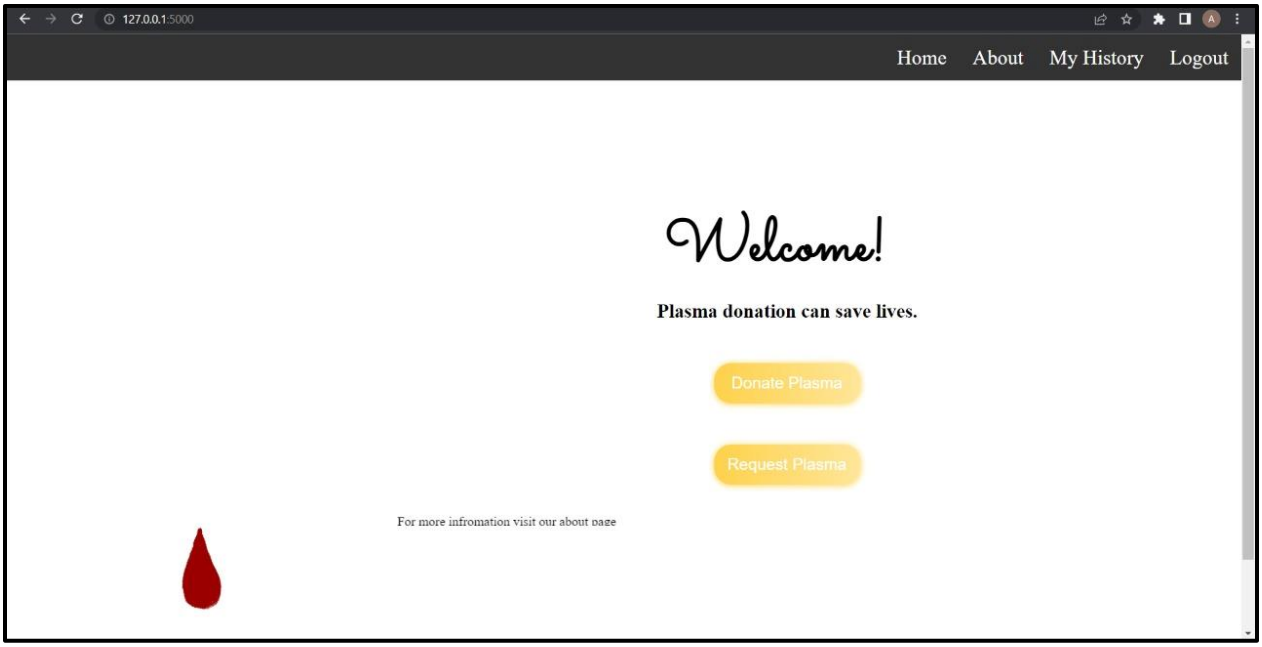
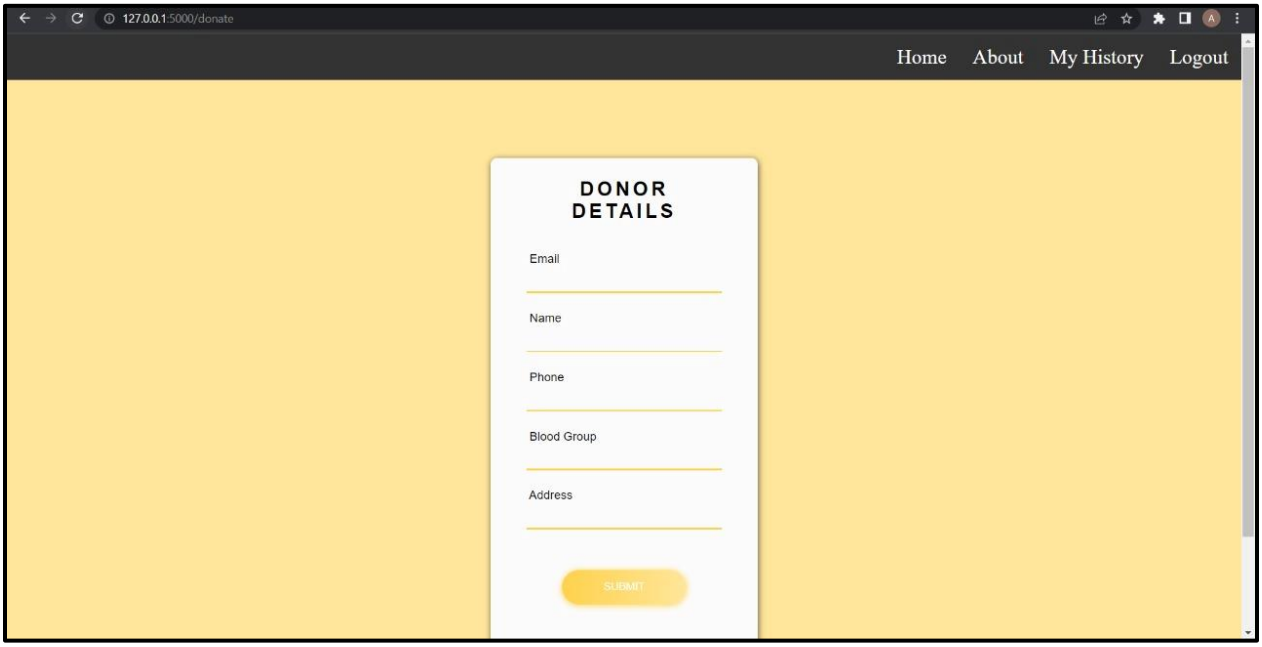
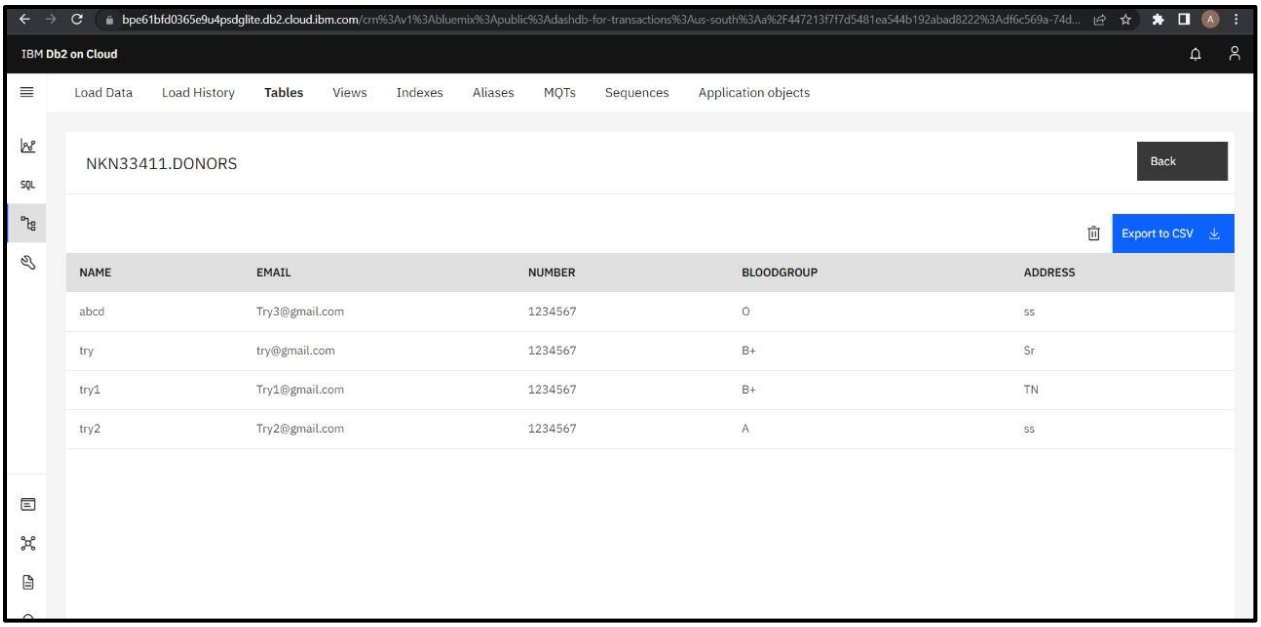
32
0
View data

- Home Page:

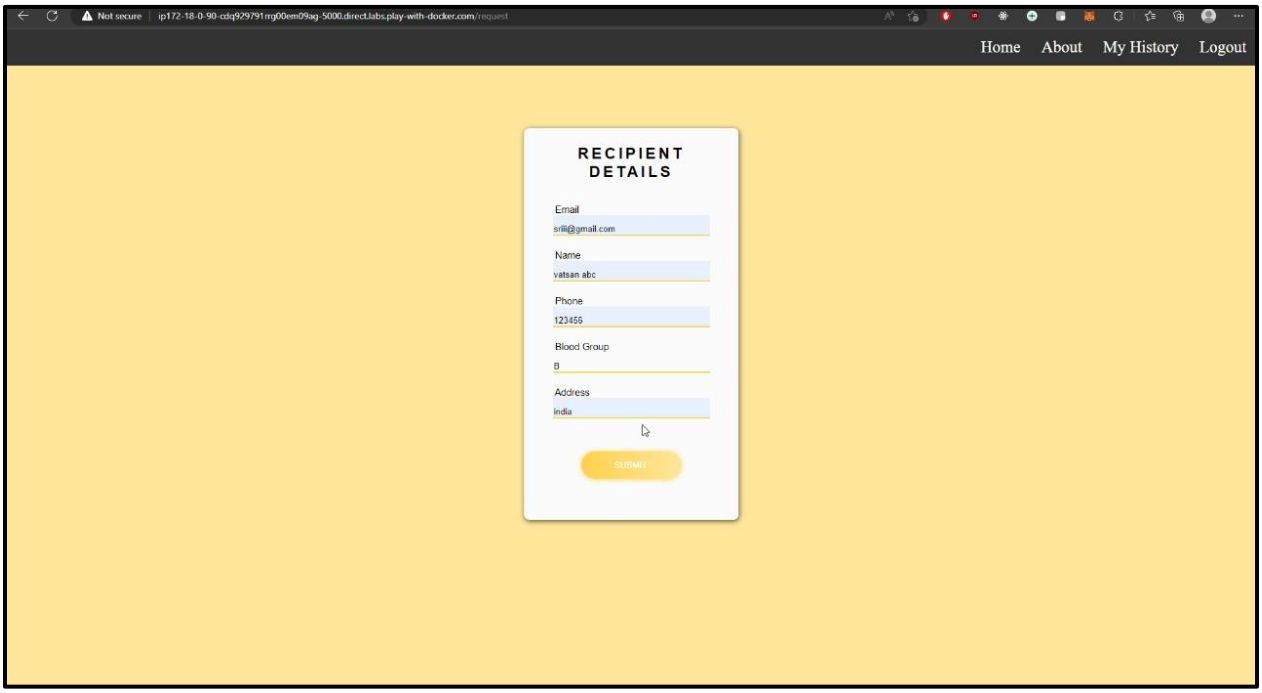


- Donation:

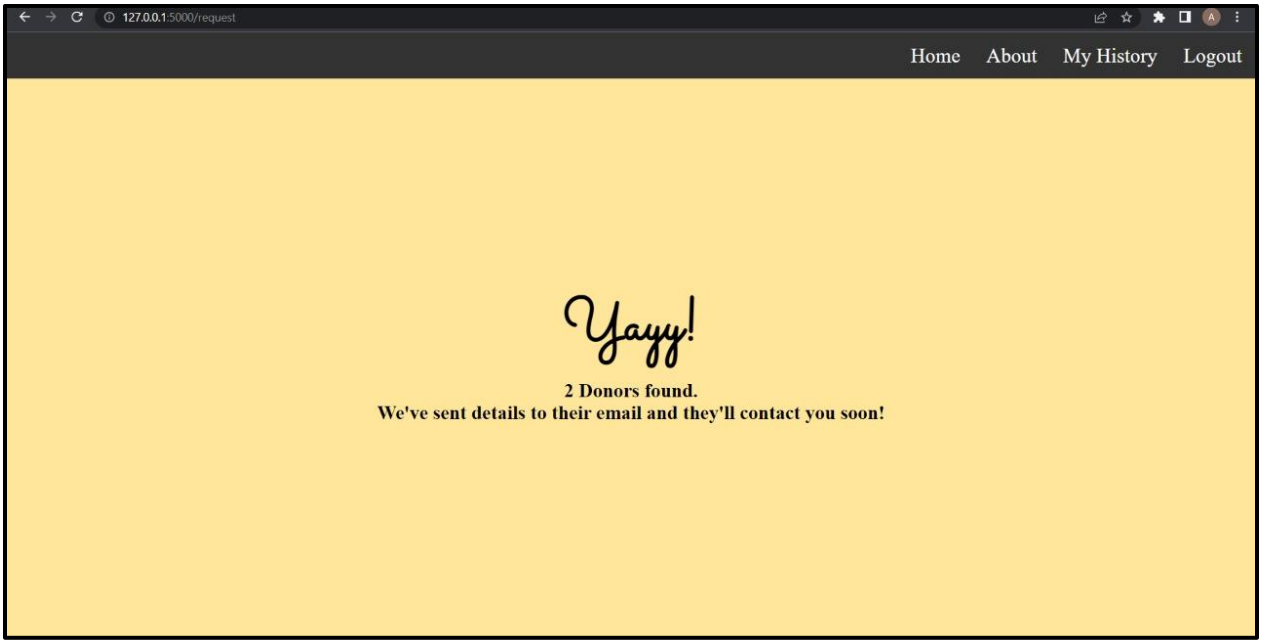


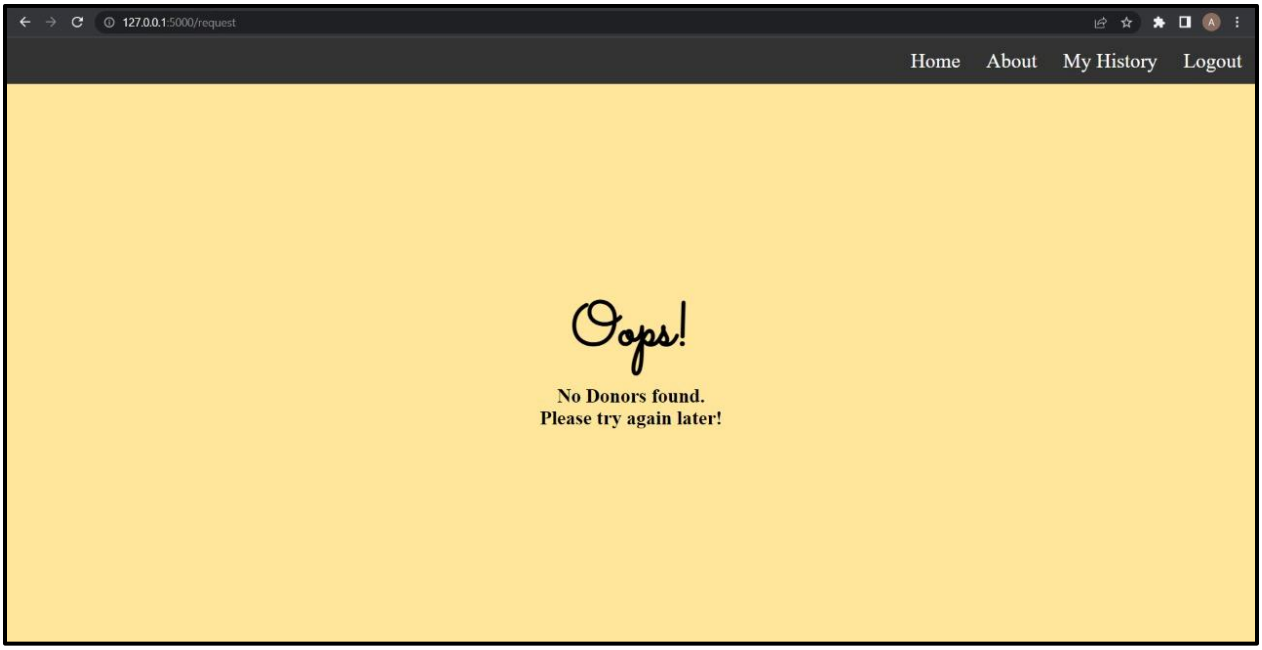


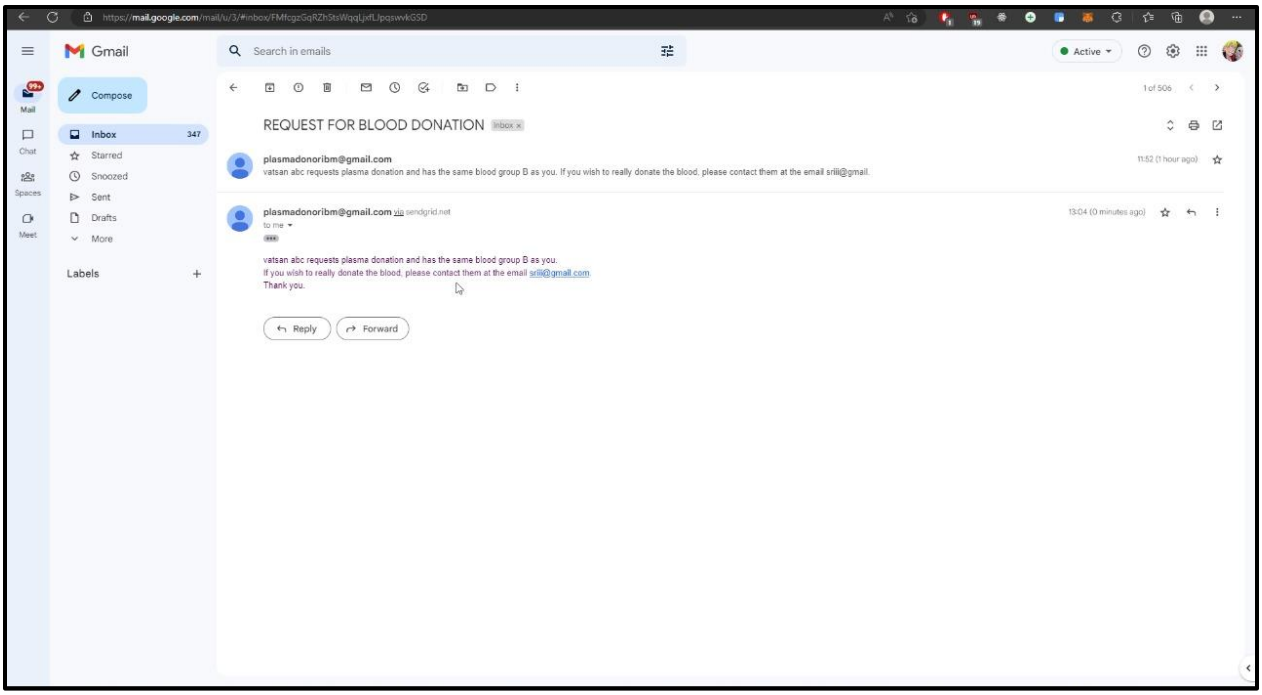
- Request Plasma:



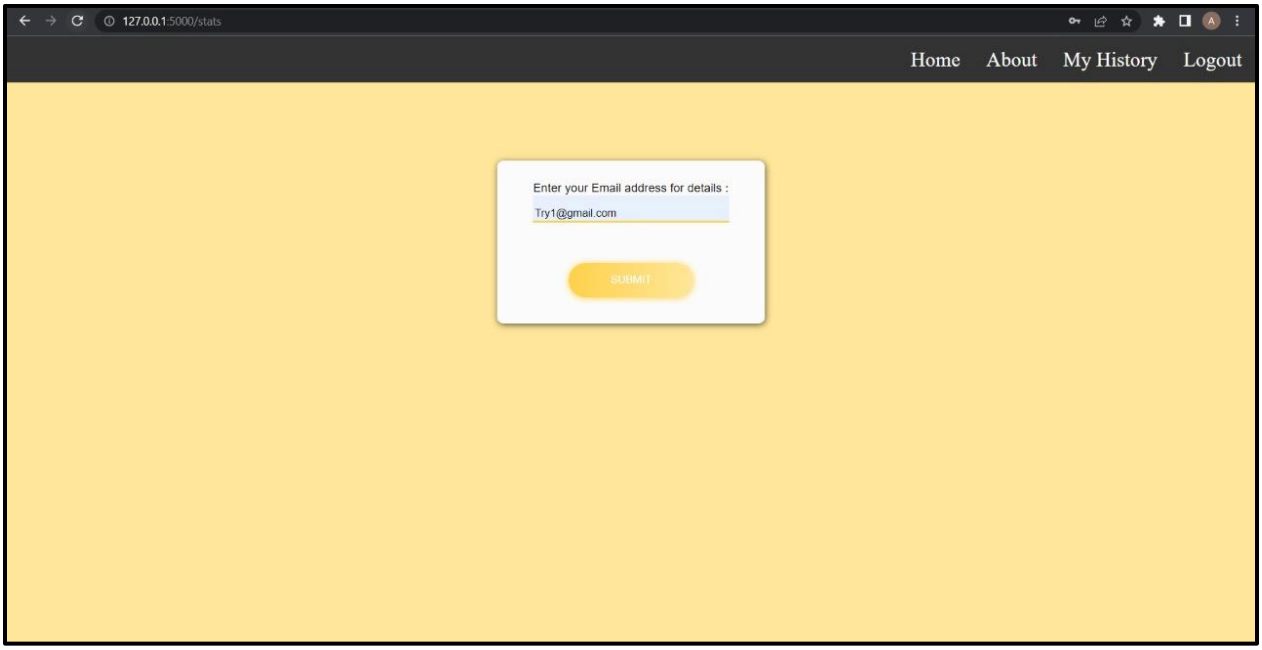
- Available Donors during Request:





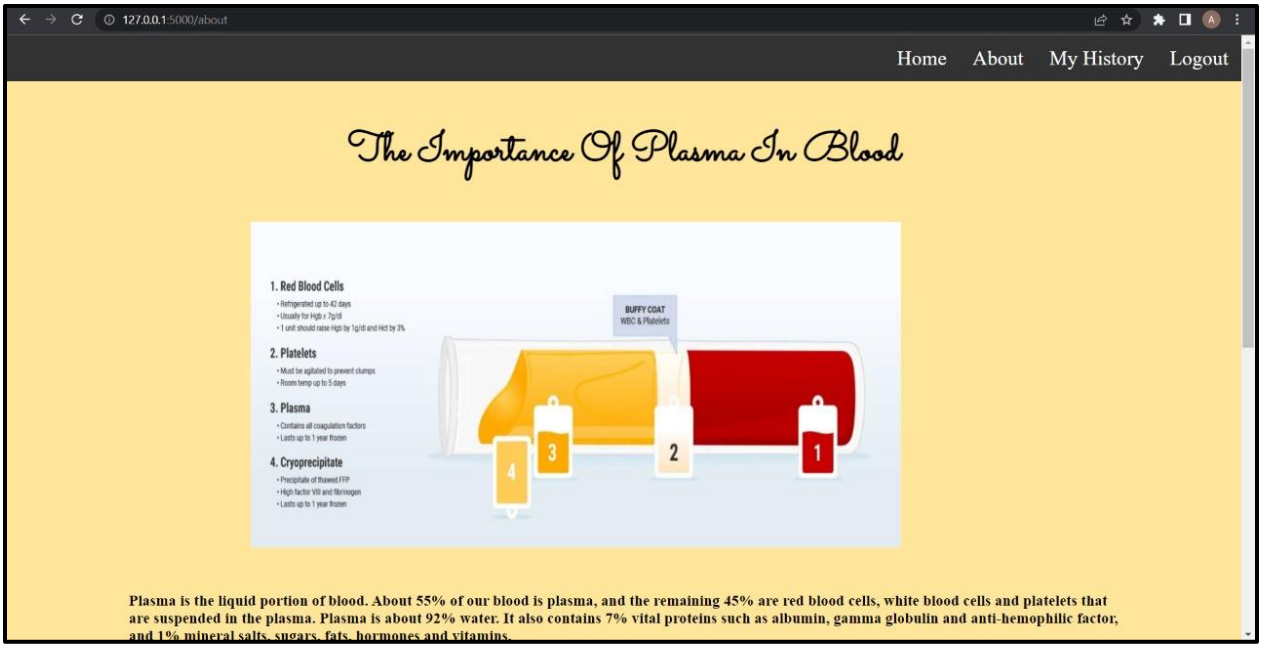


- Account Donation History:



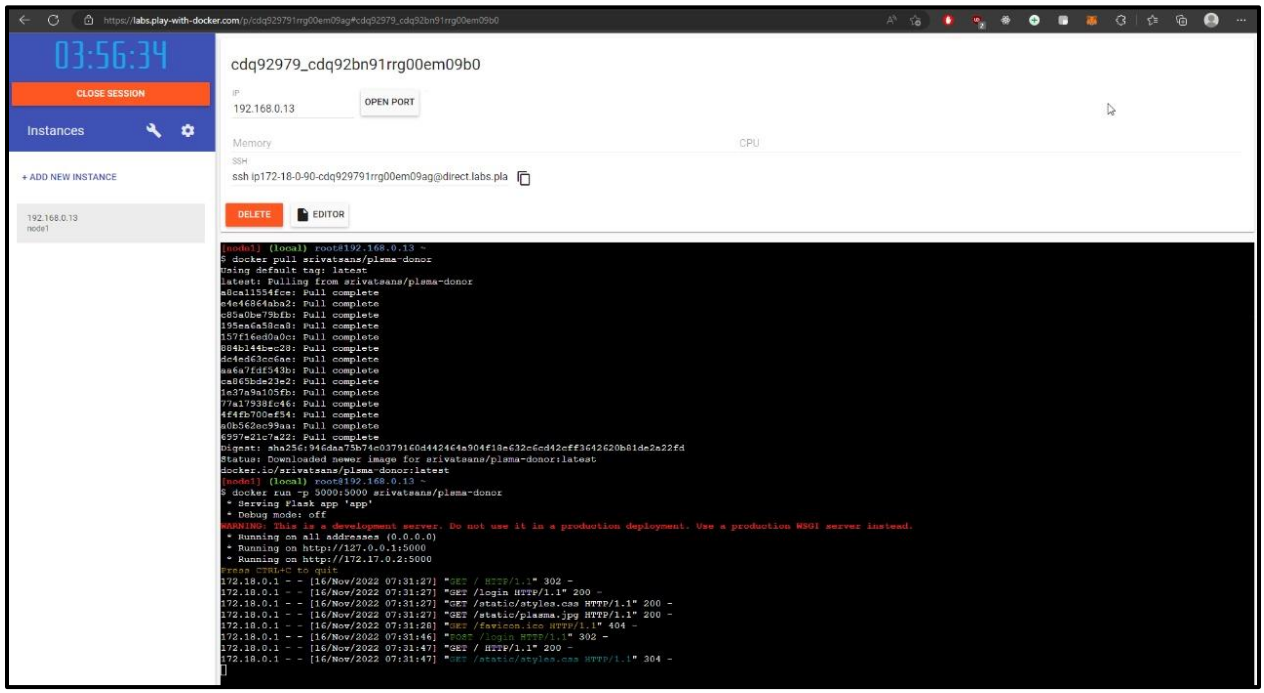

127.0.0.1:5000/stats
Home
About
My History
Logout
1 number of donations made by you.

- About Page:

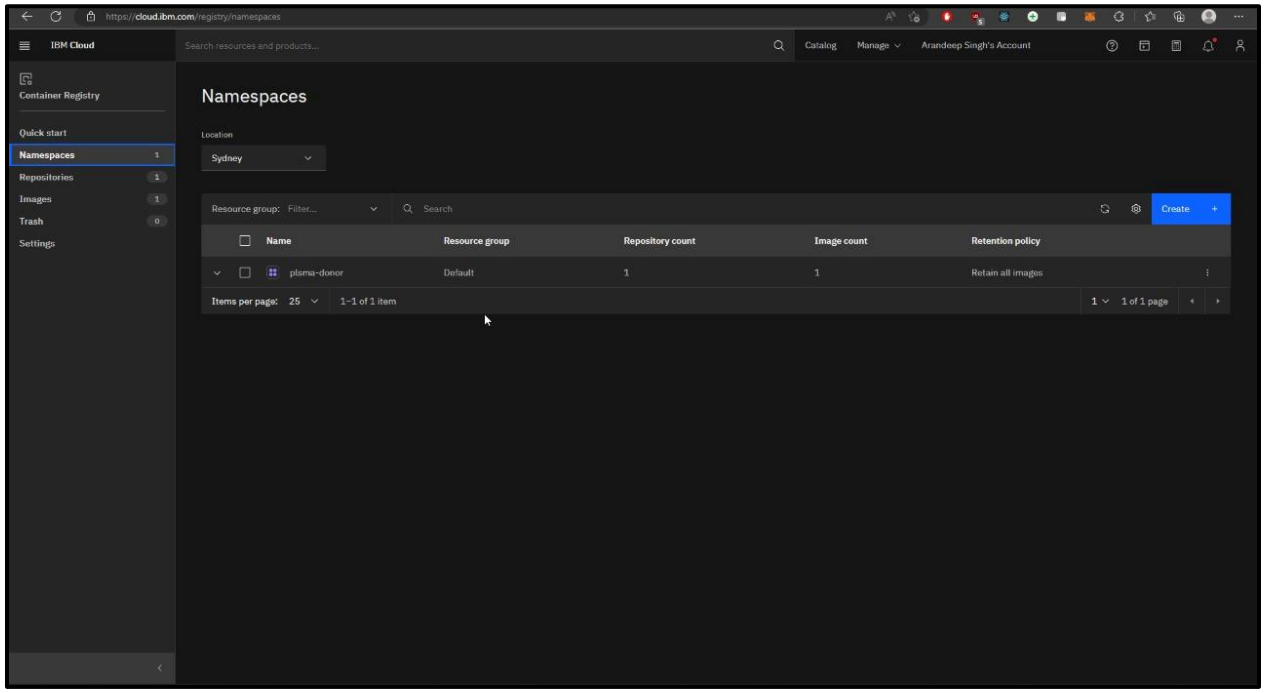

127.0.0.1:5000/about
Home
About
My History
Logout
The Importance Of Plasma In Blood
1. Red Blood Cells
2. Platelets
3. Plasma
4. Cryoprecipitate
BUFFY COAT
WBC & Platelets
Plasma is the liquid portion of blood. About 55% of our blood is plasma, and the remaining 45% are red blood cells, white blood cells and platelets that are suspended in the plasma. Plasma is about 92% water. It also contains 7% vital proteins such as albumin, gamma globulin and anti-hemophilic factor, and 1% mineral salts, sugars, fats, hormones and vitamins.

b. USN – 2: Additional Features

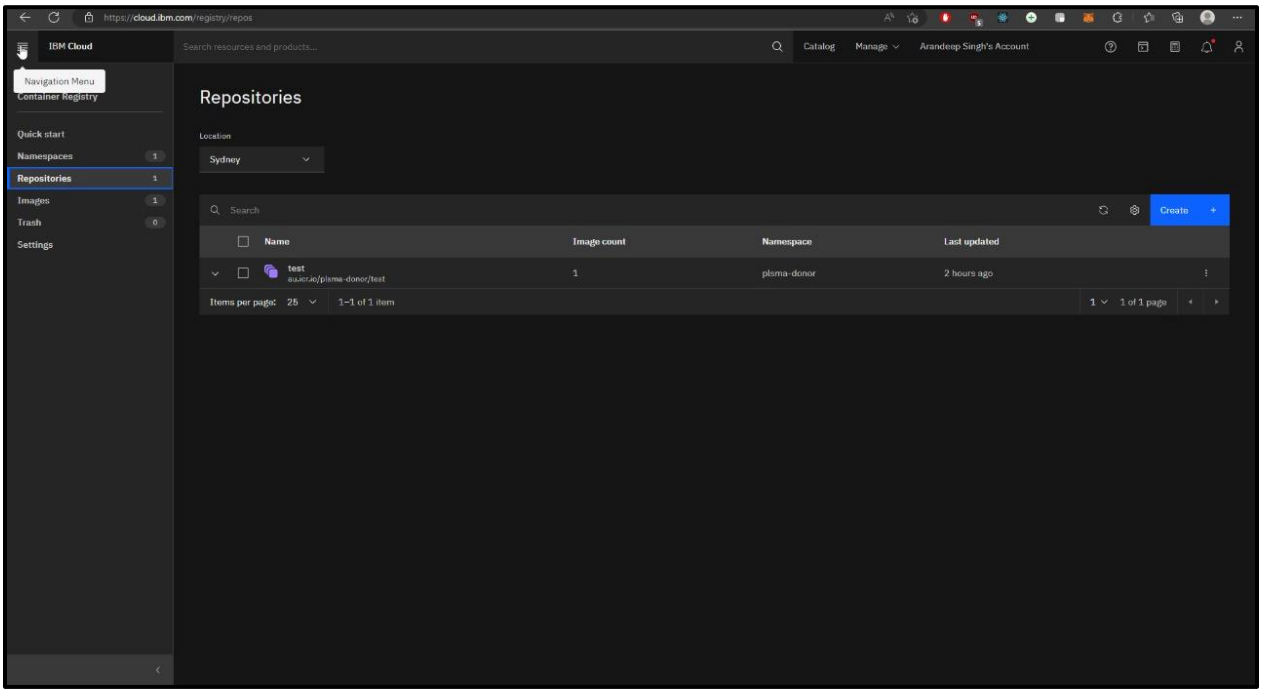
- Docker Container:



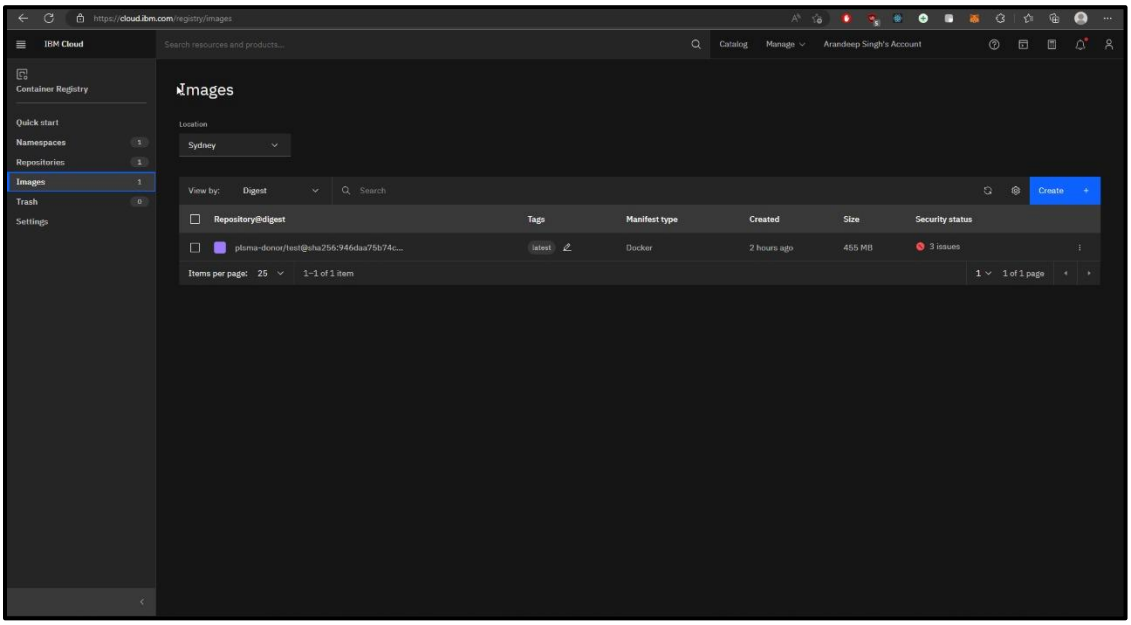
- IBM Cloud Namespaces:



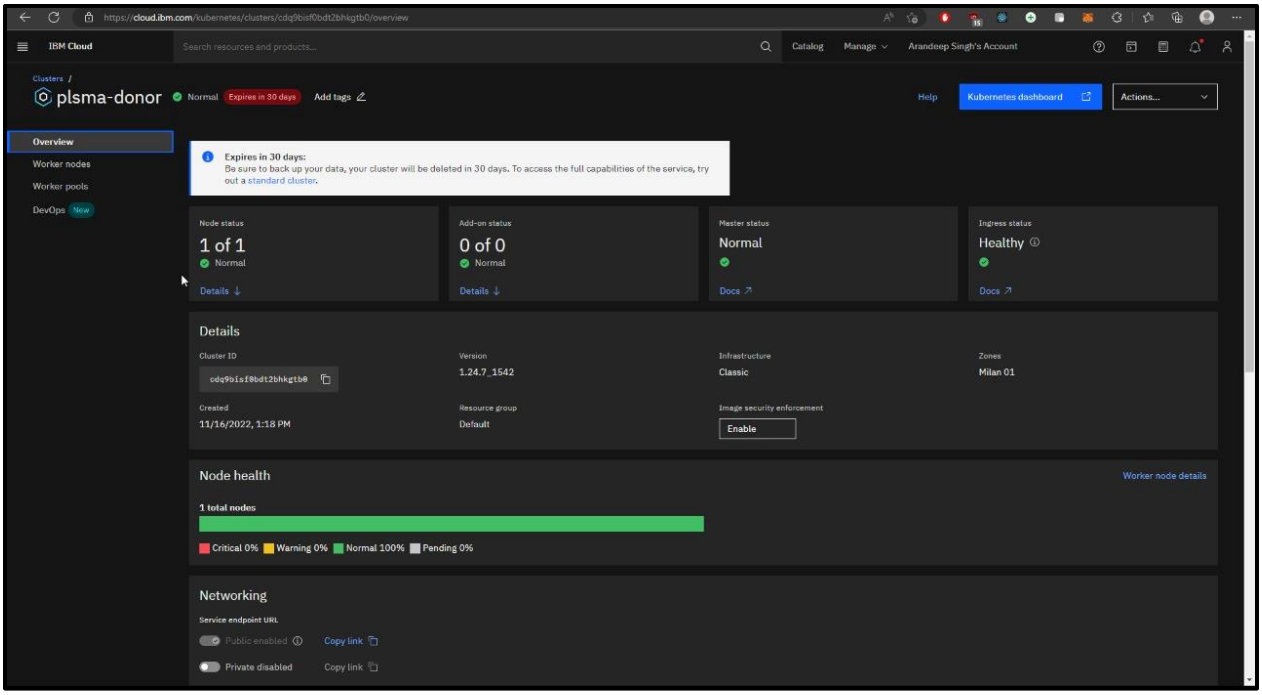
- IBM Cloud Repositories:



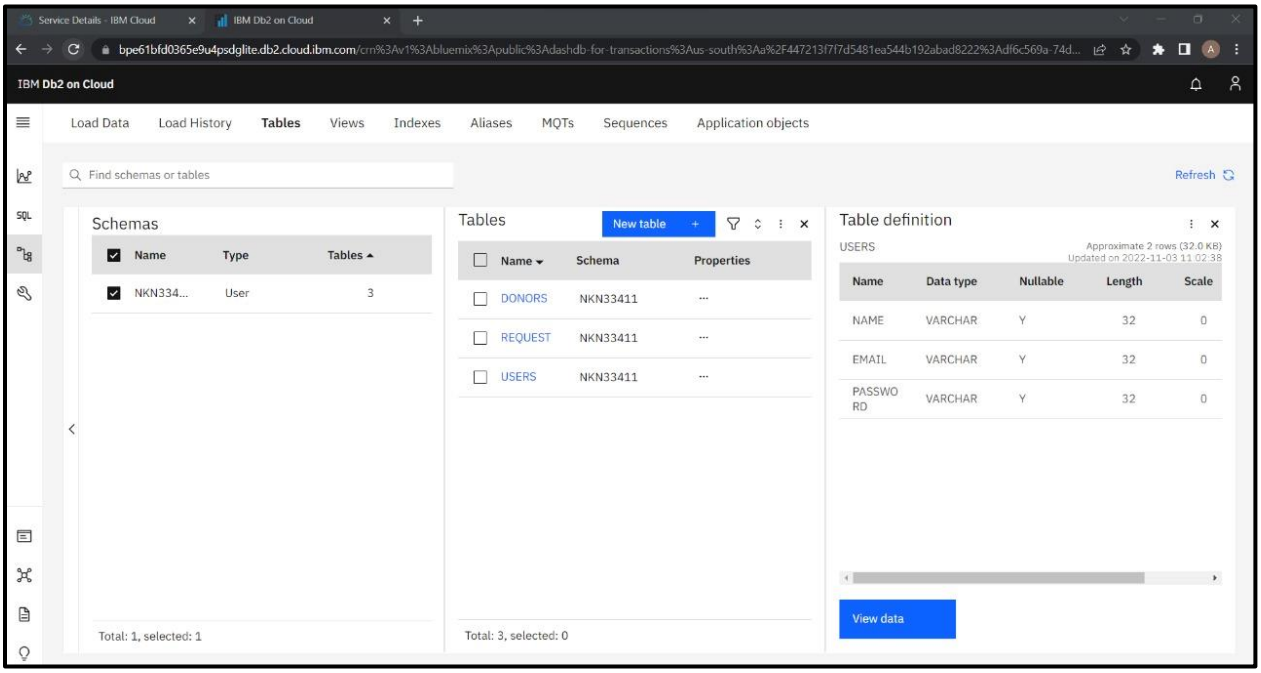
- IBM Cloud Images:



- Kubernetes Cluster:



c. Database Schema (if Applicable)



8. TESTING

a. Test Cases

Date	3-Nov-22
Team ID	PNT2022TMID53106
Project Name	Project - Plasma Donor Applicatio
Maximum Marks	4 marks

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Commnets	TC for Automation(Y/N)	BUG ID	Executed By
LoginPage_TC_OO1	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/Singup popup displayed or not	https://hub.docker.com/repository/docker/srivatsans/plsma-donor	Login/Signup popup should display	Working as expected	Pass		Y		Madhulica
LoginPage_TC_OO2	UI	Home Page	Verify the UI elements in Login/Signup popup		1.Enter URL and click go 2.Verify login/Singup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link	https://hub.docker.com/repository/docker/srivatsans/plsma-donor	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_OO3	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_OO4	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 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_OO4	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_OO5	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 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 credential		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 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	Commnets	TC for Automation(Y/N)	BUG ID	Executed By
questPlasma_TC_(	Functional	lequest Pag	The receiver clicks on the receive plasma button		Receiver Details from opens	Click	Form opens	Form opens	pass		Y		Srivatsan
natePlasma_TC_(	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		Srivatsan
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	https://hub.docker.com/repository/docker/srivatsans/plsma-donor	Displayed	Displayed	Pass		Y		Arandeep
DonorHistory_TC_012	Functional	Donor Page	The donor enters his email to see his statistics		Enter email, receive statistics	Try1@gmail.com	1.DONATION MADE	Displayed	pass		Y		Srivatsan
DonateHistory_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		Srivatsan

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

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	umptions/Dependencies/R	Approvals/SignOff
1	Plasma Donor	Incorrect Usename 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 Hostory
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 Donati	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 Benefts 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