NALAIYA THIRAN - IBM PROJECT REPORT

(19CS406T Professional Readiness for Innovation, Employability and Entrepreneurship)

ON

CLOUD BASED PLASMA DONOR APPLICATION

Submitted by

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in partial fulfillment for the award of the degree of

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IN

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VELAMMAL ENGINEERING COLLEGE, CHENNAI-66.

(An Autonomous Institution, Affiliated to Anna University, Chennai)

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VELAMMAL ENGINEERING COLLEGE
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BONAFIDE CERTIFICATE

Certified that this NALAIYA THIRAN – IBM PROJECT REPORT **"CLOUD BASED PLASMA DONOR APPLICATION"** is the Bonafide work of "GOKUL D (113219031044), KIRAN BALAJI B (113219031073), KISHORE BALAJI D (113219031076), and NOOHU NUFAIS S (113219031104)" carried out in "PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP (NALAIYA THIRAN-IBM PROJECT)**"** during the Academic Year 2022-2023.

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CONTENTS

1. INTRODUCTION

1.1Project Overview:

Plasma is a liquid portion of the blood, over 55% of human blood is plasma. Plasma is used to treat various infectious diseases and is one of the oldest methods known as plasma therapy. Plasma therapy is a process where recovered patients donate blood to establish antibodies that fight the infection. In this project, the plasma donor application is being developed by using IBM DB2. The services used are Python, Flask, Docker, and IBM DB2 it eliminates the need of configuring the servers and reduces the infrastructural costs associated with it and helps to achieve serverless computing. For instance, during the COVID-19 crisis, the requirement for plasma increased drastically as there was no vaccination found to treat the infected patients, with plasma therapy the recovery rates were high but the donor count was meager and in such situations, it was very important to get the information about the plasma donors. Saving the donor information and notifying the current donors would be a helping hand as it can save time and help the users to track down the necessary information about the donors. In this project, the services used are IBM cloud which will allow the users to run the code without managing or provisioning the servers, IBM API gateway is a fully managed service that makes it easy for a developer to create, publish monitor, secure, and maintain APIs at any scale. It handles all the tasks which are involved in accepting and processing hundreds of Concurrent API calls along with traffic management, authentication, authorization, and API version management. IBM DB2 is a multi-master database used for storing data.

1.2 Project Purpose :

As we all know, the traditional methods of finding plasma, one has to find out for oneself by looking at hospital records and contacting donors have been recovered, sometimes may not be available at home and move to other places. In this type of scenario, the health of those who are sick becomes disastrous. Therefore, it is not considered a rapid process to find plasma. The main purpose of the proposed system, the donor who wants to donate plasma can simply upload their covid19 traced certificate and can donate the plasma to the blood bank, the blood bank can apply for the donor and once the donor has accepted the request, the blood bank can add the units they need and the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank.

2. LITERATURE SURVEY

2.1 Existing Problem Statement :

Many people are willing to donate plasma to those in need. But there is no accessible way to help them find plasma donation centers in real-time. So the problem is not the lack of sponsors, but finding the right sponsors at the right time. If someone needs plasma, he first seeks plasma from family members, then from the nearest hospitals and plasma banks. If they cannot process the plasma in this way, it will be difficult for them to contact others to collect plasma in a short time. This is a problem I want to solve through this app. Instead of just providing plasma to those in need with an outdated list of regular plasma donors who may or may not be available to help, this app will reach the right people as soon as the user finds out.

2.2 References

Several experiments have been carried out over the years by different groups of researchers. Here are some of the following groups:

[1] Denuis O'Neil (1999). "Blood component" Archived from the original on June 5, 2013. Normally, a certain amount of human body weight comes from blood. For adults, it is 4-6 liters of blood. This essential liquid plays an important role in transporting oxygen and nutrients to cells and removing carbon dioxide, ammonia and other waste products. Blood is a very common tissue composed of over 4000 different types of components. ways to keep your plasma healthy, Original Archived November 1, 2013, Accessed November 11, 2011. Plasma donation is one of the most accepted practices for saving lives,While earning a few dollars. The whole process can take some time, but it's well worth it once you experience it a few times. Accepting money in exchange for plasma is welcome. It's a move when you feel like you're not just a hero, but you're adding value to yourself. The term "healthy" does not mean only in the absence of disease. It also means that you are healthy enough.

[2] Ripathis S, Kumar V, Prabhakar A, Joshi S, Agarwal A (2015). "Microscale Passive Plasma Separation: A Review of Design Principles and Microdevices," J. Micromech Micro 25 (8): 083001; Plasma separation is of great importance in the fields of diagnosis and healthcare. Due to lagging transition to microscale, these recent trends are rapid shift towards shrinking complex macro processes.

[3] In this paper, the author has carried out analysis based on the opportunities presented by serverless computing. They emphasize that serverless services are a more affordable approach for many network services and it is more user friendly

as a serverless approach will relieve the customers from the intricacies of deployment. These services will help to improve new business opportunities.

[4] Author conducted a survey of existing serverless platforms in this paper from source projects, industry, academia, use cases, and key characteristics and has described the challenges and the open problems associated with it. The Author's work presented a hands on experience of serverless technologies using different services from different cloud provides such as Amazon, Google, IBM, Microsoft Azure.

[5] The serverless OS was designed. It comprises components such as

1. Desegregation model leverages desegregation for abstraction but it will enable resources to move fluidly between servers for the performance.

2. The second key component is cloud orchestration layer which helps to manage fine-grained resource placement and allocation throughout the application lifetime with the help of global and local decision making 3. And the third component is an isolation capability which enforces data and resource isolation.

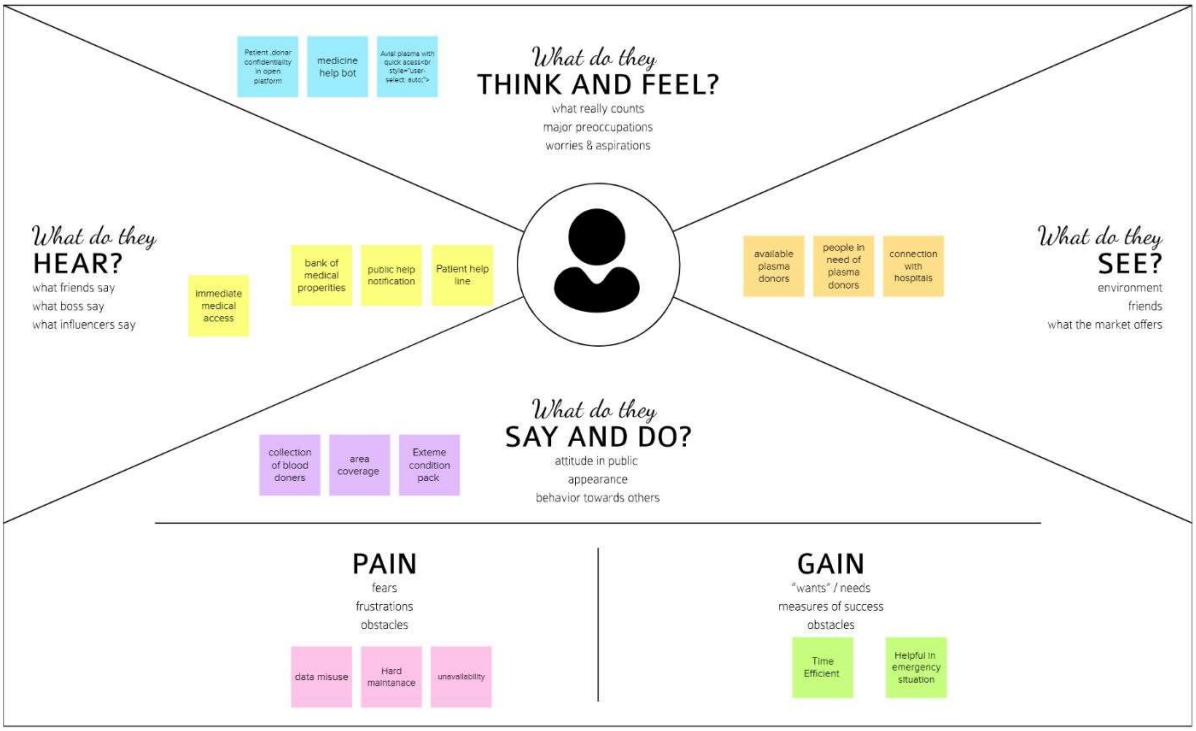
[6] An efficient resource management system for serverless computing framework was proposed which aims to enhance resource with a focus on memory allocation among the containers and the design which was added on top of an open-source serverless platform, openLambda and it is triggered

2.3 Problem Statement Definition :

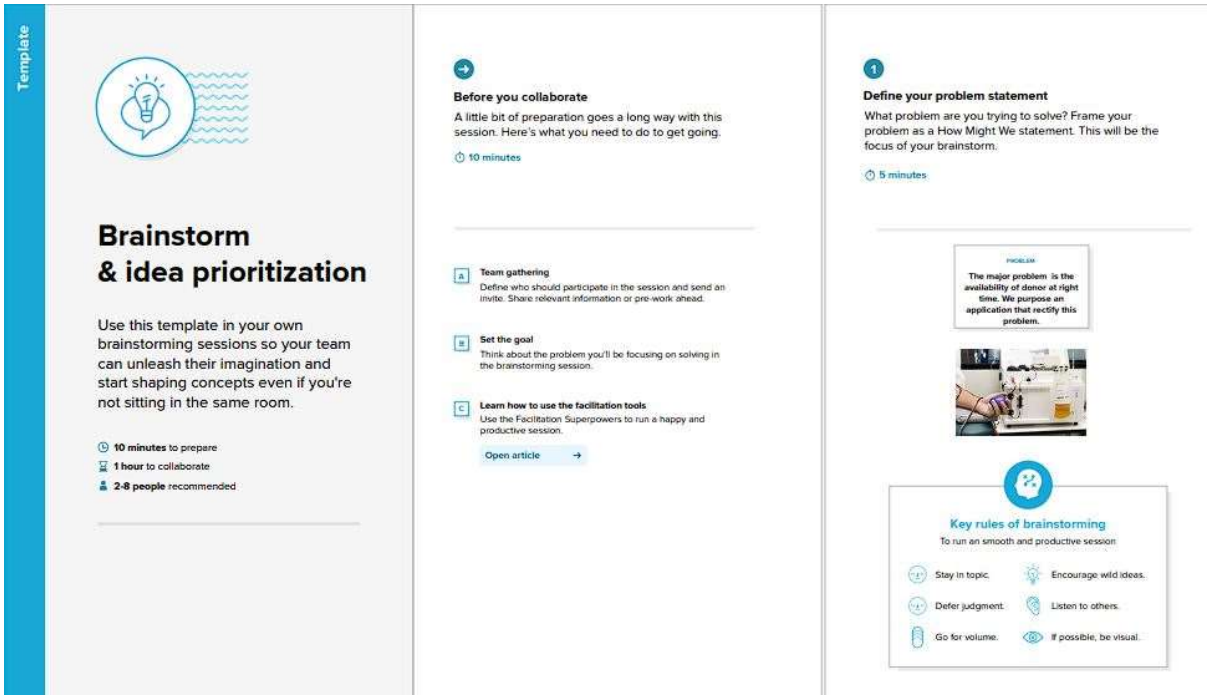
This system aims at connecting the donors & the patients by an online application. By using this application, the users can either raise a request for plasma donation or requirement. Similar to blood donors there also exist plasma donors where there exists problems like in case of emergency needs the most important life saver necessity is plasma, Plasma Banks are the main providers of plasma who receives blood from various donors, monitors the plasma groups database of emergencies and makes them available to the hospital whenever needed. The major problem faced by the main plasma providers and the need is the availability of donors at the right time. We hereby took a step forward to build a system to create a network of people who can help each other in need. We propose an application where the plasma banks can timely update the plasma Stock availability and donor and register themselves to the donor and the user can find plasma availability nearby him/her. The urgent time of a plasma requirement, users can quickly check for plasma banks, hospitals or donors as per requirement matching a particular or related and reach out to them through the App.

3. IDEATION AND PROPOSED SOLUTION

3.1 Empathy Map Canvas :



3.2 Ideation and Brainstorming :



2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Gokul

- Route to Timesaving
- Monitoring the plasma availability
- How to reduce the demand of plasma?
- affordable cost to the general public and free of cost to the poor
- Limits age for donating plasma to 18

Kishore Balaji

- Increases the number of needy
- Plasma demand and supply gap has grown even bigger
- Donating plasma is an act of saving lives.
- Convincing recovered patients for donation

Nufais

- Easy to contact the donors
- Getting the right donor
- provide safe and quality plasma from voluntary donors
- I don't want to lose anyone due to lack of blood

Kiran Balaji

- It is used for identifying the blood type of donor
- Get the plasma at time
- voluntary act that can help to save lives
- Find plasma availability nearby them

3 Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

FILL THE NEED

- need to find a donor before hand just to be secured
- Plasma can save the lives of patients and burns and bleeding disorders.
- update the availability of plasma resources

SAVE LIVES

- Platelets help those undergoing organ transplants and cancer treatment
- It helps to save the life at the right time
- One blood donation can save three lives

EASY AND LOW COST

- Easy to contact the donors
- Affordable cost to the general public and free of cost to the poor
- User-friendly to use

TIP

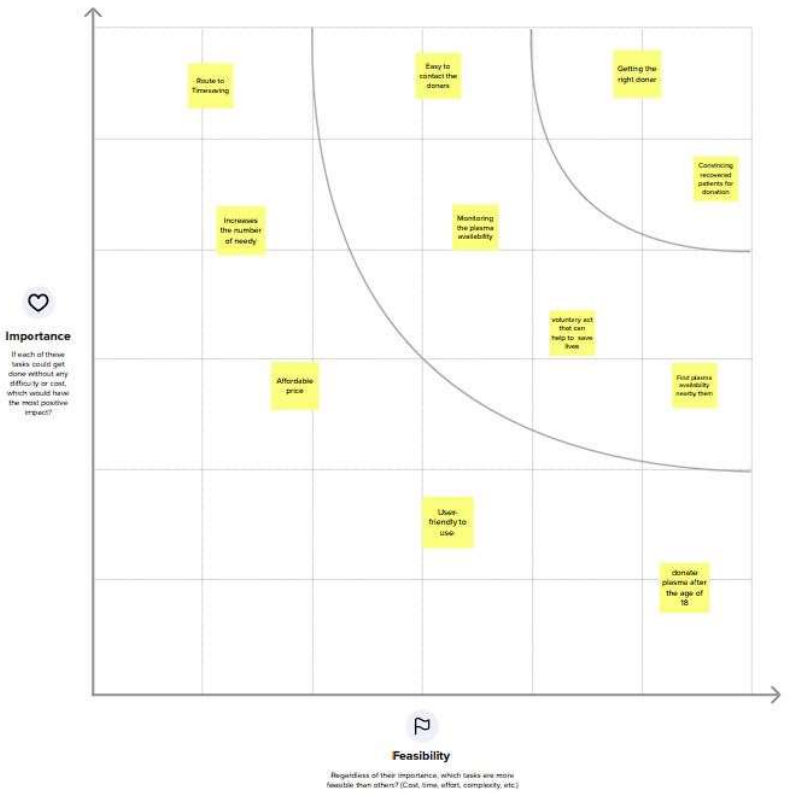
Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

"Your little effort can give others **second chance to live life."**

4 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes



After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

A **Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.

B **Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

Strategy blueprint
Define the components of a new idea or strategy.
Open the template →

Customer experience journey map
Understand customer needs, motivations, and obstacles for an experience.
Open the template →

Strengths, weaknesses, opportunities & threats
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
Open the template →

Share template feedback

3.3 Proposed Solution :

S.no	Parameter	Description
1	Problem Statement(Problem to be solved)	Plasma is used for the treatment of many 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 where 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.
2	Idea / Solution description	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 **Admin:** • Admin can login using their credentials. • Admin can edit the request. • Admin can delete the request. • Admin can add volunteers.

		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 e- certificate. • 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.
3	Novelty / 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.

4	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.
5	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.
6	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.

3.4 Problem-Solution Fit :

1. CUSTOMER SEGMENT : Anyone above the age of 21 can donate. We working on plasma therapy is process where blood is donated and received.	**2.PROBLEMS/PAINS:** The side effects of plasma donation include nausea and dizziness and fainting in some cases. You may develop a raised bump or experience continued bleeding and bruising at the needle site too. Some people might experience pain and physical weakness after donating plasma.	**3. TRIGGERS TO ACT :** Many people needs plasma for their treatment.Plasma donation really used for covid affected people for recovering faster.
4.EMOTIONS/AFTS : Donor get fear, anxiety prior to donation give way to largely positive emotional states like relaxation following donation.	**5. AVAILABLE SOLUTIONS CO :** It allows people to help others It is a relatively safe process. The process can be very uncomfortable and It depletes the calcium levels in the body. **6. LIMITATIONS :** You can donate plasma every 28 days, up to 13 times per year. While the FDA does not allow donors to give plasma more frequently. Limited no of users can use it at the same time.	**7. BEHAVIOR :** This app is used to make donation and receiving process easier so that anyone can easily access and use it. Intensity of this application is to connect donor and receiver in single platform. donor can fill the interest form to donate.

8. CHANNELS of BEHAVIOR : Online app allows user to make donation and receiver process easier send request from anywhere anytime users to visit nearby camp or hospital and donate as well as receive plasma.	**9. PROBLEM ROOT/CAUSE :** Localized allergic reaction Air embolism and Hemolysis Bruising and discomfort.	**10.YOUR SOLUTION**: Our app allows the user to request and donate plasma to requested person. Receiver can directly contact the donor and receive plasma. When you donate plasma, the blood that's drawn from your arm goes through a special machine to separate the different parts of your blood. Then we get plasma which can be used for transfusion.

4. REQUIREMENT ANALYSIS

4.1 Functional Requirement :

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**Access Website**	Software operator should be capable to access web- application through either an application browser or similar on the pc.
FR-2	**Software operator Registration**	The software operator should be able to register through the web-application. The donor software operator must provide user name, gender, blood/plasma group, location, contact.
FR-3	**Login/logout/update details**	The login information will be stored on the database for future use.
FR-4	**Search for donor**	Search results can be viewed in a list. Each element in the list represents a specific donor with the donor details.
FR-5	**User plasma request**	Users can request to donate plasma by filling out the request form on the page. Once the request is submitted, they will get an email.
FR-6	**View distribution details**	The plasma bank should be able to view the status of the distribution details.

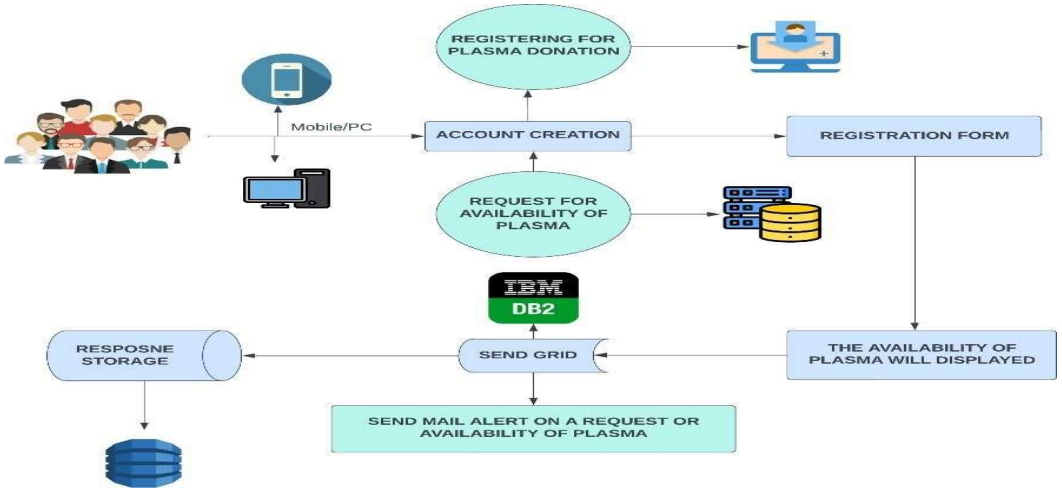
4.2 Non-Functional Requirement :

NFR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The plasma donor application must have a good looking user friendly interface.
NFR-2	**Security**	The plasma donor application must be secured with proper username and passwords.
NFR-3	**Reliability**	The plasma donor application should work properly, even when faults occur.

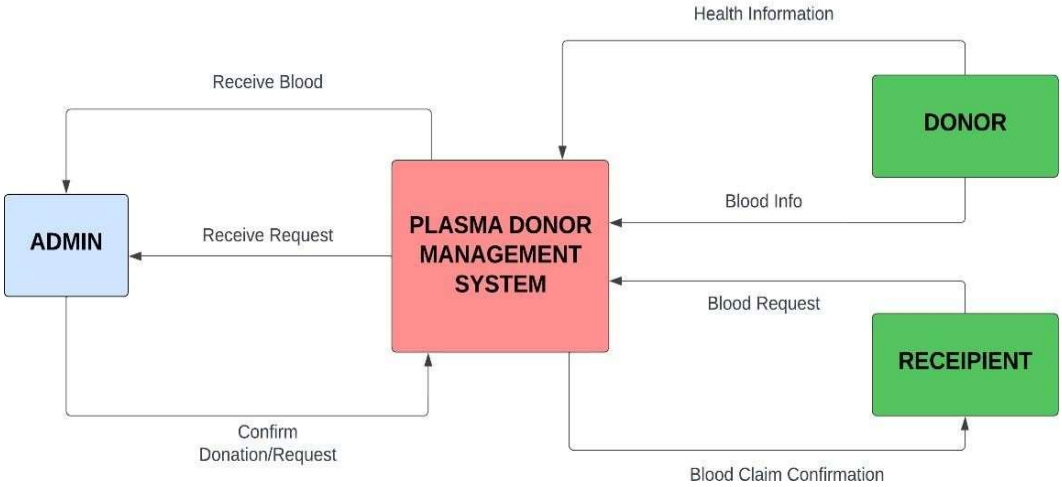
NFR-4	**Performance**	The plasma donor application must perform well in different scenarios.
NFR-5	**Availability**	The plasma donor application must be available 24 hours a day with no bandwidth issues.
NFR-6	**Scalability**	The plasma donor application should able to increase or decrease in performance and cost in response to changes in application and system processing demands.

5. PROJECT DESIGN

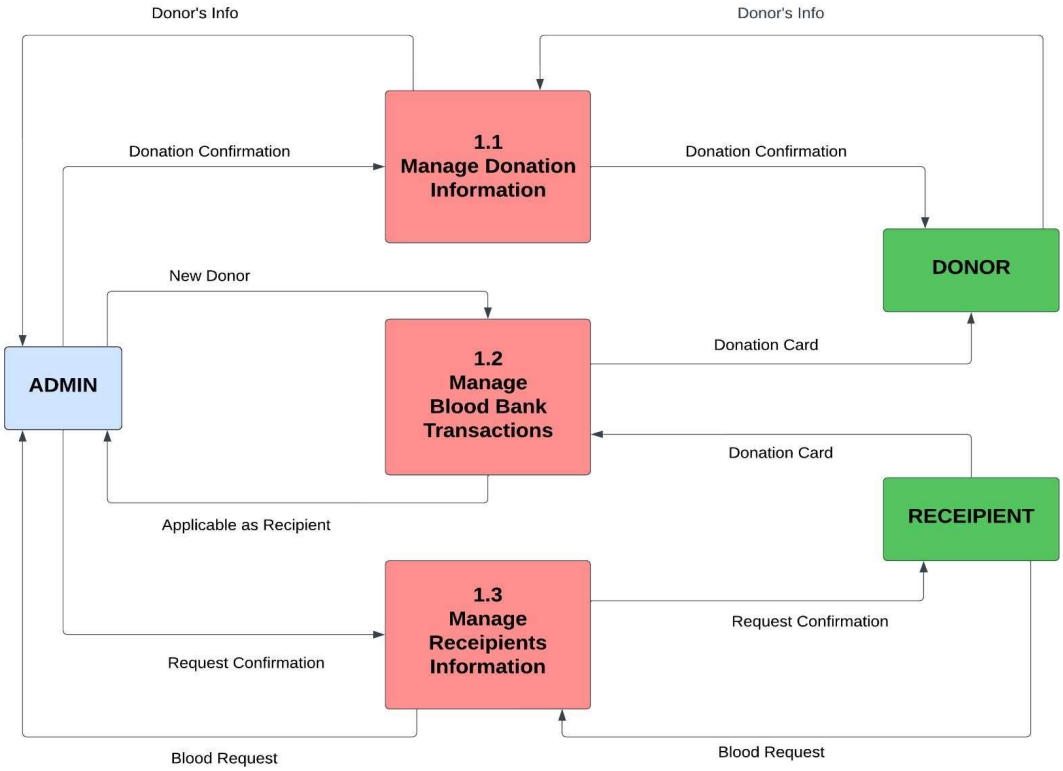
5.1 Data Flow Diagrams :

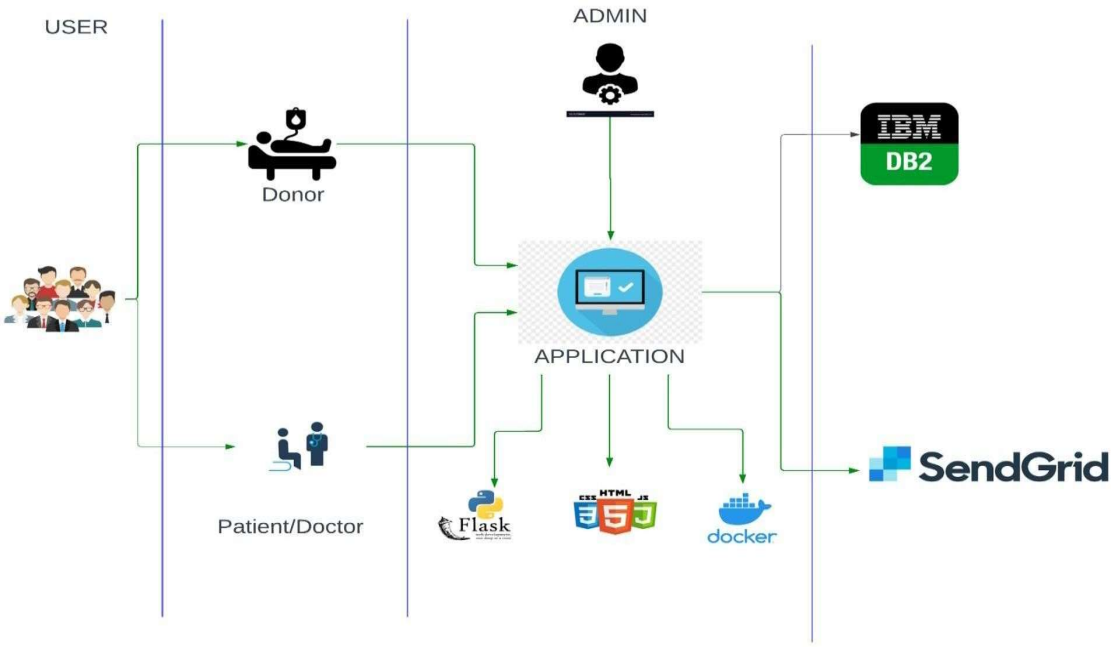


DATA FLOW DIAGRAM LEVEL 0



DATA FLOW DIAGRAM LEVEL 1





5.2 Solution and Technical Architecture :

Table 1 : Components and Technologies :

SNO	Component Description	Description	Technology
1	**User Interface**	The interaction between th use and application e.g., Web UI, Mobile App, Chatbot	HTML, CSS, JavaScript / Bootstrap etc.
2	**Application Logic-1**	Framework used for designing the application.	Python, Python - Flask
3	**Application Logic-2**	Accessing the cloud and storing details of the users both donors and patients.	IBM Cloud, IBM DB2
4	**Application Logic-3**	Docker is an open-source platform for building, deploying and managing containerized application	Docker
5	**Database**	Data Type, Configurations etc.	SQL.
6	**Cloud Database**	Database Service on Cloud	BM Cloud and IBM DB2
7	**File Storage**	File storage requirements	IBM Block Storage or NO Storage Service or Local File System

Table 2 : Application Characteristics :

S.no	Characteristics	Description	Technology
1	**Open-Source Framework**	Python – flask is an open-source framework used to develop the application.	Python – flask is an open source framework used to develop the application.
2	**Security Implementation**	Container registry and Kubernetes Cluster are used for encryption of data.	Container registry and Kubernetes Cluster
3	**Scalable Architecture**	Kubernetes Cluster allow containers to run across multiple machines and environments.	Kubernetes Cluster
4	**Availability**	Kubernetes Cluster provides all time availability.	Kubernetes Cluster
5	**Performance**	Docker improves the application performance.	Docker

5.3 User Stories :

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	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 facebook.	I can register & access the dashboard withfacebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can receive confirmation email click confirm	Mediu m	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can enter into my account	High	Sprint-1
	Dashboard	USN-6	As a user ,Display all details about plasma application	I can donate/get details about the plasma	High	Sprint-2
Customer (Web user)	Application	USN-7	As a user ,I can register, login and see details about plasma	I can access the donor details and availability of plasma	High	Sprint-3
Customer Care Executive	Update Plasma storage	USN-8	Keep track the availability of the Plasma	I can provide application customer needs	High	Sprint-4
Administra tor	Verify donor details	USN-9	To add the donor plasma details in application	I can Control the all details in this application	Medium	Sprint-3

Customer Care Executive	Verify Customer Feedback	USN-10	To design the application that meets user's desires	I can satisfy the customer expectations	Medium	Sprint-4
Customer Care Executive	Control all Plasma details	USN-11	Make sure to check the availability of plasma in application	I can alert notification through email and SMS	High	Sprint-2
Administrator	Performance of applicaton	USN-12	To make the process more efficient	I can save time, cost by improving the Plasma management application	High	Sprint-4

6. PROJECT PLANNING AND SCHEDULING

6.1 Sprint Planning and Estimation :

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	High	Kishore Balaji D Kiran Balaji B
Sprint-1	Login	USN-2	As a user, I can log into the application by entering email & password	High	Kishore Balaji D Kiran Balaji B
Sprint-2	Dashboard	USN-3	As a user ,Display all details about plasma application	High	Gokul D Noohu Nufais S
Sprint-3	Application	USN-4	As a user ,I can register, login and see details about plasma	High	Kishore Balaji D Kiran Balaji B
Sprint-3	Verify donor details	USN-5	To add the donor plasma details in application	Medium	Kishore Balaji D Kiran Balaji B
Sprint-2	Control all Plasma details	USN-6	Make sure to check the availability of plasma in application	High	Gokul D Noohu Nufais S
Sprint-4	Verify feedback	USN-7	To design the application that meets user’s desires	High	Gokul D Noohu Nufais Kishore Balaji D Kiran Balaji B

6.2 Sprint Delivery Schedule :

Sprint	Total story Points	Duration	Sprint Start Date	Sprint End Date	Sprint Release Date (Actual)
Sprint - 1	30	6 Days	25 Oct 2022	30 Oct 2022	30 Oct 2022
Sprint – 2	30	6 Days	1 Nov 2022	6 Nov 2022	6 Nov 2022
Sprint – 3	30	6 Days	8 Nov 2022	13 Nov 2022	13 Nov 2022
Sprint - 4	30	5 Days	14 Nov 2022	18 Nov 2022	18 Nov 2022

6.3 Reports From JIRA :

7. CODING AND SOLUTIONING

7.1 Feature 1 :

Python

- Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation.
- Python is dynamically-typed and garbage-collected.
- It supports multiple programming paradigms, including structured (particularly procedural), object-oriented and functional programming.
- It is often described as a "batteries included" language due to its comprehensive standard library.
- Guido van Rossum began working on Python in the late 1980s as a successor to the ABC programming language and first released it in 1991 as Python 0.9.0.
- Python 2.0 was released in 2000 and introduced new features such as list comprehensions, cycle-detecting garbage collection, reference counting, and Unicode support.
- Python 3.0, released in 2008, was a major revision that is not completely backward-compatible with earlier versions.
- Python consistently ranks as one of the most popular programming languages

7.2 Feature 2 :

Flask

- Flask is a micro web framework written in Python.
- It is classified as a microframework because it does not require particular tools or libraries.
- It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions.
- However, Flask supports extensions that can add application features as if they were implemented in Flask itself.
- Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools.
- Applications that use the Flask framework include Pinterest and LinkedIn.

- Flask has become popular among Python enthusiasts. As of October 2020, it has second most stars on GitHub among Python web-development frameworks, only slightly behind Django,[14] and was voted the most popular web framework in the Python Developers Survey 2018, 2019, 2020 and 2021.

7.3 Database scheme :

IBM DB2

- Db2 is a family of data management products, including database servers, developed by IBM.
- It initially supported the relational model, but was extended to support object–relational features and non-relational structures like JSON and XML.
- The brand name was originally styled as DB/2, then DB2 until 2017 and finally changed to its present form.
- Unlike other database vendors, IBM previously produced a platform-specific Db2 product for each of its major operating systems.
- However, in the 1990s IBM changed track and produced a Db2 common product, designed with a mostly common code base for L-U-W (Linux-Unix-Windows); DB2 for System z and DB2 for IBM i are different. As a result, they use different drivers.

Kubernetes

- Kubernetes is an open-source container orchestration system for automating software deployment, scaling, and management.
- Google originally designed Kubernetes, but the Cloud Native Computing Foundation now maintains the project.
- Kubernetes works with Docker, Containerd, and CRI-O.
- Originally, it interfaced exclusively with the Docker runtime through a "Dockershim"; however, from November 2020 up to April 2022, Kubernetes has deprecated the shim in favor of directly interfacing with the container through Containerd, or replacing Docker with a runtime that is compliant with the Container Runtime Interface (CRI).
- With the release of v1.24 in May 2022, "Dockershim" has been removed entirely.

8. TESTING

8.1 Test case :

- It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectation and not fail in an unacceptable manner.
- There are various types of test. Each test type addresses a specific testing requirement

Test case ID	Feature Type	Component	Test Scenario	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
LoginPage_TC_OO1	UI	Admin Login Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	1.Enter URL http://127.0.0.1:8000/ and click go 2.Click on My Account dropdown button 3.Verify login/Singup popup displayed or not	Username: rit password : rit123	Login/Signup popup should display and navigate to Admin dashboard	Working as expected	Pass		Y		Admin
LoginPage_TC_OO2	Functional	Patient Login page	Verify user is able to log into application with InValid credentials	1.Enter URL http://127.0.0.1:8000/ and click go 2.Click on 3.Verify login/Singup popup with below Patient elements: a.username text box b.password text box c.Login button	Username: shriram password : 2019011280	Application should show 'Incorrect Username or password ' validation message.	Working as expected	Fail	Steps are not clear to follow	N	BUG-1234	Patient

LoginPage_TC_OO3	Functional	Donor Login Page	Verify user is able to log into application with Valid credentials	1.Enter URL http://127.0.0.1:8000/and click go 2.Click on 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: sathish password: 201901120	User should navigate to user Donor Home Page	Working as expected	Pass		Y		Donor
LoginPage_TC_OO4	Functional	Patient Login page	Verify user is able to log into application with InValid credentials	1.Enter URL http://127.0.0.1:8000/and click go 2.Click on 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: shriram password: 201901128	User should navigate to user Donor Home Page	Working as expected	Pass		Y		Patient

8.2 User Acceptance Testing

1. Purpose of Document :

The purpose of this document is to briefly explain the test coverage and open issues of the Plasma Donation Application 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	Sub total
By Design	8	4	2	3	17
Duplicate	1	0	2	1	4
External	2	3	0	1	6
Fixed	10	2	5	18	35
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	3	2	1	6
Total	21	12	13	25	71

3. Test Case Analysis :

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

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	8	0	0	8
Client Application	50	0	0	50
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	10	0	0	10
Final Report Output	6	0	0	6
Version Control	3	0	0	3

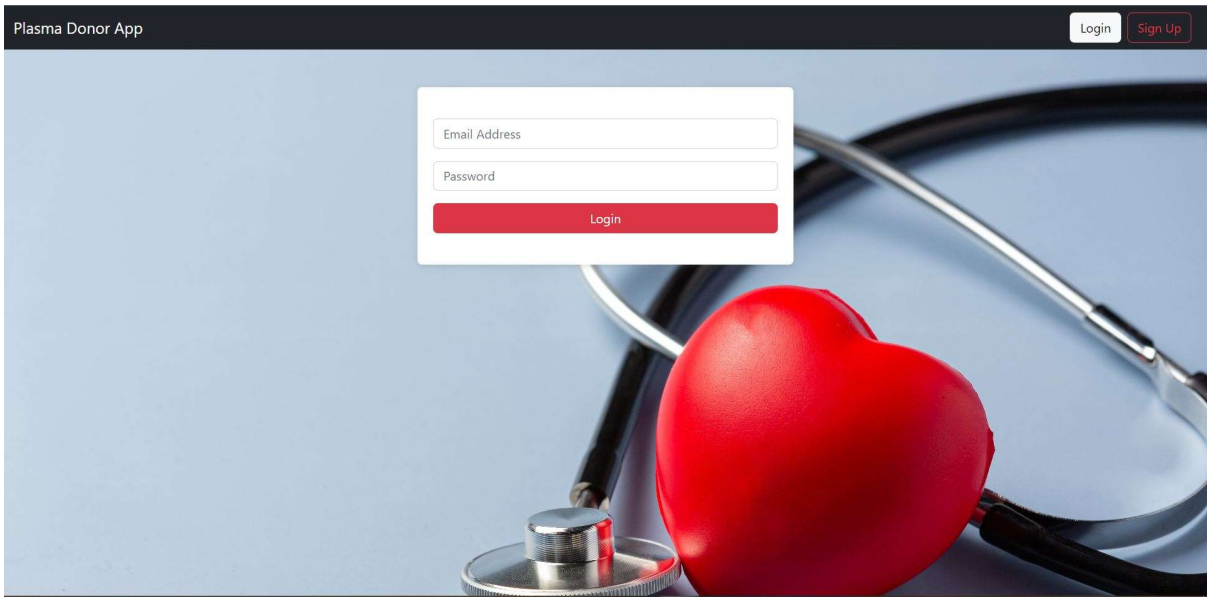
9. RESULTS

9.1 Performance Metrics :

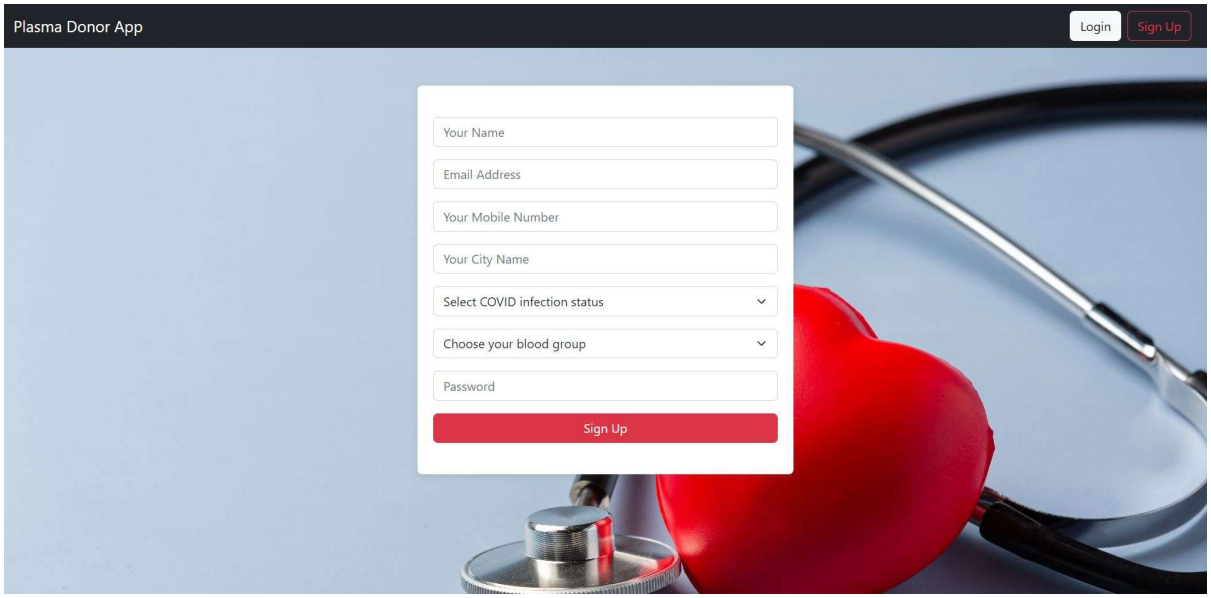
- Project metrics are used to track the progress and performance of a project.
- Monitoring parts of a project like productivity, scheduling, and scopemake it easier for team leaders to see what's on track.
- As a project evolves, managers need access to changing deadlines or budgets to meet their client's expectations

Output Snapshots :

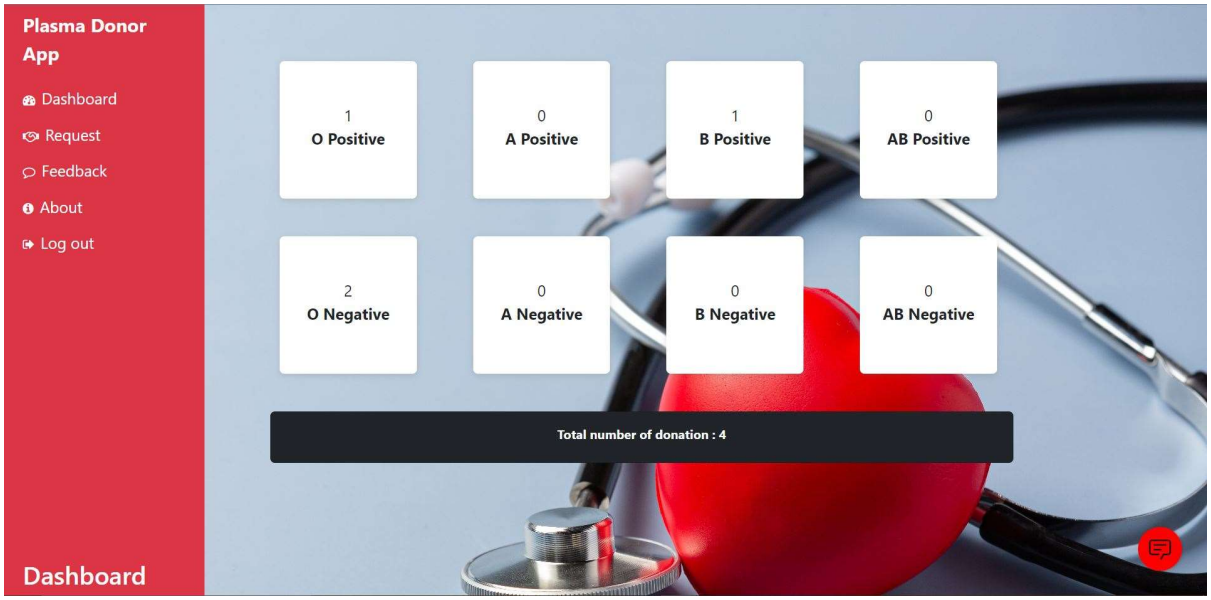
Login Page :



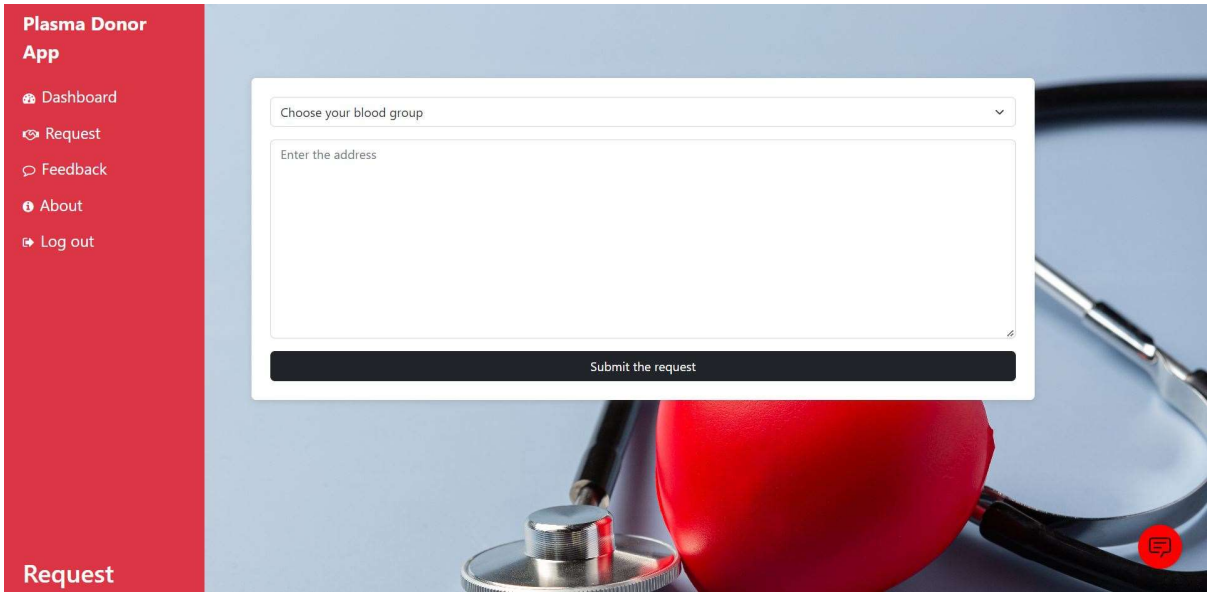
Registration Page :



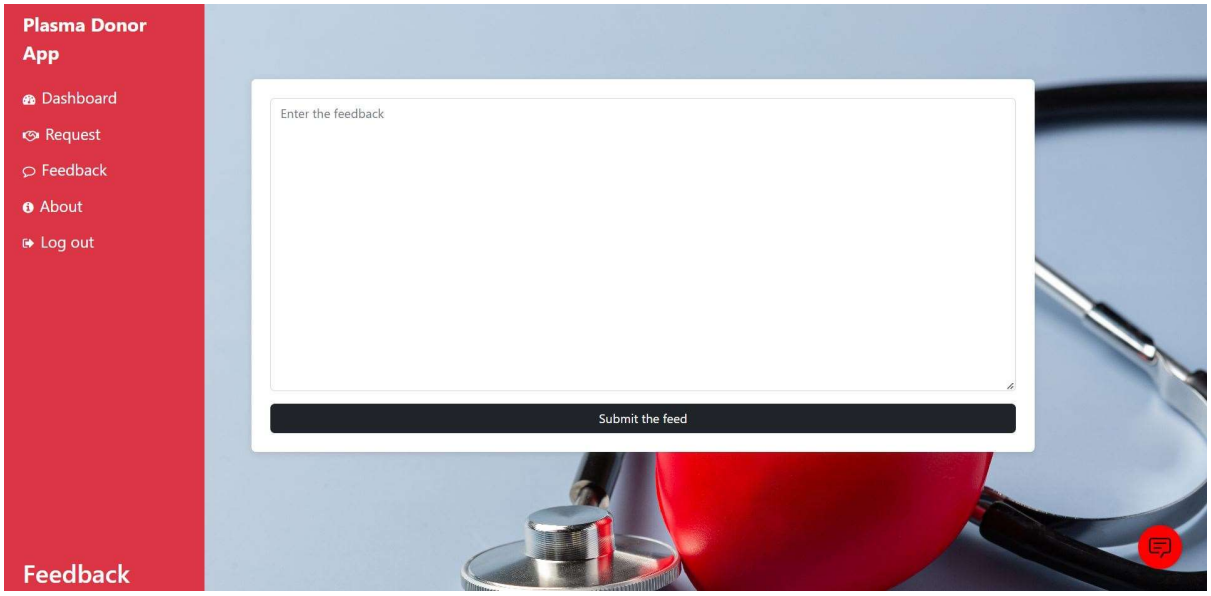
Dashboard :



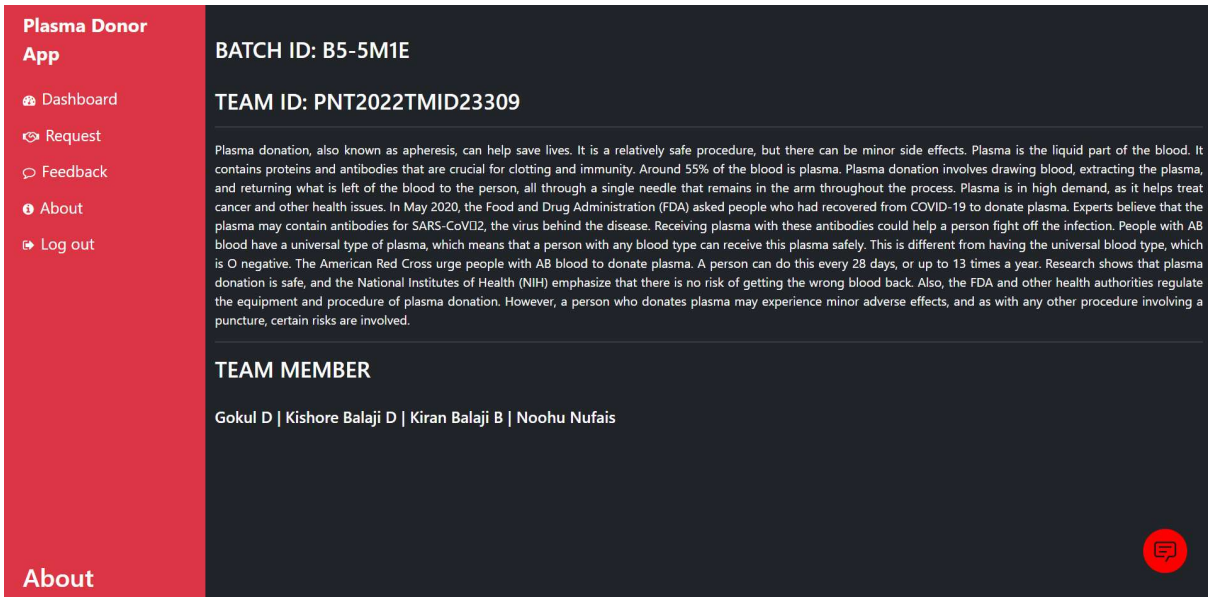
Request :



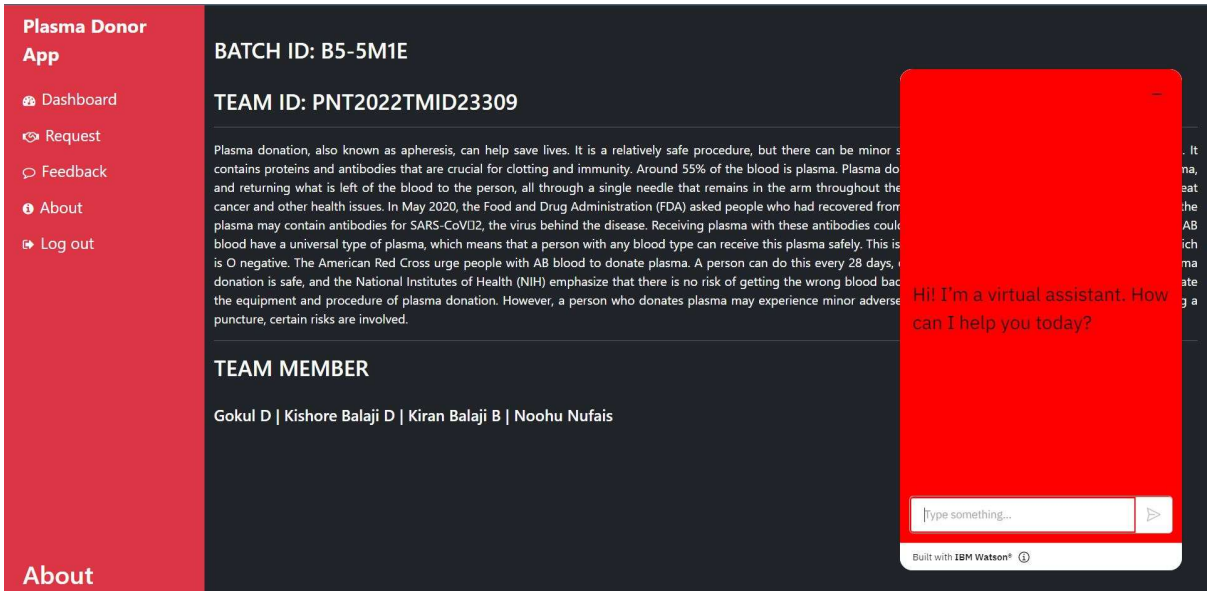
Feedback :



About :



Chatbot :


Plasma Donor App
Dashboard
Request
Feedback
About
Log out
BATCH ID: B5-5M1E
TEAM ID: PNT2022TMID23309
Plasma donation, also known as apheresis, can help save lives. It is a relatively safe procedure, but there can be minor
contains proteins and antibodies that are crucial for clotting and immunity. Around 55% of the blood is plasma. Plasma do
and returning what is left of the blood to the person, all through a single needle that remains in the arm throughout the
cancer and other health issues. In May 2020, the Food and Drug Administration (FDA) asked people who had recovered from
plasma may contain antibodies for SARS-CoV2, the virus behind the disease. Receiving plasma with these antibodies could
blood have a universal type of plasma, which means that a person with any blood type can receive this plasma safely. This is
is O negative. The American Red Cross urge people with AB blood to donate plasma. A person can do this every 28 days,
donation is safe, and the National Institutes of Health (NIH) emphasize that there is no risk of getting the wrong blood bac
the equipment and procedure of plasma donation. However, a person who donates plasma may experience minor adverse
puncture, certain risks are involved.
TEAM MEMBER
Gokul D | Kishore Balaji D | Kiran Balaji B | Noohu Nufais
Hi! I'm a virtual assistant. How can I help you today?
Type something...
Built with IBM Watson®
About

10. ADVANTAGES AND DISADVANTAGES

Advantages :

1. Easy connecting donors and recipients makes plasma donation way more proficient.

2. Prime motive of the app is to solve the perpetual shortfall of plasma donors.

3. It connects plasma donors and recipients through a single and scalable platform.

4. Effortless access: Users on this platform will be able to use the app with just One-click.

Disadvantages :

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

2. Auto- Verification: It cannot automatically verify the genuine users.

11. CONCLUSION

The efficient way of finding plasma donors for the infected people is implemented using the plasma donor website that is hosted on Cloud platform. To ensure the smooth functioning of the website operations. I have hosted the website on a cloud platform to make sure the operations are running successfully to deploy the application cloud service.

12. FUTURE ENHANCEMENTS

Upgrading the UI that is more user-friendly which will help many users to access the website and also ensures that many plasma donors can be added into the community. Using elastic load balancer, it helps to handle multiple requests at the same time which will maintain the uptime of the website with negligible downtime.

13. APPENDIX

Github Link :

https://github.com/IBM-EPBL/IBM-Project-25111-1659953787

Demo Link :

https://drive.google.com/drive/folders/17uPYdPLgfAsHTIwa2kU-EUqUK_CGQdWz?usp=sharing