PLASMA DONOR APPLICATION

TEAM ID : PNT2022TMID10840

TEAM LEADER : ASHWIN RUPAK S A B

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1. INTRODUCTION

- **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.

- **PURPOSE :**

  During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. 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

EXISTING PROBLEM REFERENCES

1.NEAREST BLOOD & PLASMA DONOR FINDING: A MACHINE LEARNING APPROACH

Authors : (Nayan Das Department of Computer Science and Engineering (CSE), Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh MD. Asif Iqbal Department of Computer Science and Engineering (CSE), Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh) .

The necessity of blood has become a significant concern in the present context all over the world. Due to a shortage of blood, people couldn't save themselves or their friends and family members. A bag of blood can save a precious life. Statistics show that a tremendous amount of blood is needed yearly because of major operations, road accidents, blood disorders, including Anemia, Hemophilia, and acute viral infections like Dengue, etc. Approximately 85 million people require single or multiple blood transfusions for treatment. Voluntary blood donors per 1,000 population of some countries are quite promising, such as Switzerland (113/1,000), Japan (70/1,000), while others have an unsatisfying result like India has 4/1,000, and Bangladesh has 5/1000.

Recently a life-threatening virus, COVID-19, spreading throughout the globe, which is more vulnerable for older people and those with pre-existing medical conditions. For them, plasma is needed to recover their illness. Our Purpose is to build a platform with clustering algorithms which will jointly help to provide the quickest solution to find blood or plasma donor. Closest blood or plasma donors of the same group in a particular area can be explored within less time and more efficiently.

2. PASSIVE BLOOD PLASMA SEPARATION AT THE MICROSCALE; A REVIEW OF DESIGN PRINCIPLES AND MICRODEVICES

Author : (Siddhartha Tripathi , Y V Bala Varun Kumar , Amit Prabhakar , Suhas S Joshi and Amit Agrawal) .

Blood plasma separation is vital in the field of diagnostics and health care. Due to the inherent advantages obtained in the transition to microscale, the recent trend in these fields is a rapid shift towards the miniaturization of complex macro processes. Plasma separation in microdevices is one such process which has received extensive attention from researchers globally.

Blood plasma separation techniques based on microfluidic platforms can be broadly classified into two categories. While active techniques utilize external force fields for separation, the passive techniques are dependent on biophysical effects, cell behavior, hydrodynamic forces and channel geometry for blood plasma separation. In general, passive separation methods are favored in comparison to active methods because they tend to avoid design complexities and are relatively easy to integrate with biosensors; additionally they are cost effective. Here we review passive separation techniques demonstrating separation and blood behavior at microscale.

We present an extensive review of relevant biophysical laws, along with experimental details of various passive separation techniques and devices exploiting these physical effects. The relative performances, and the advantages and disadvantages of microdevices discussed in the literature, are compared and future challenges are brought about.

3. BLOOD DONATION APPLICATION WITH IMPLEMENTATION OF MACHINE LEARNING

Author : (Diba, Sadia Nadira) .

Blood is one of the most important elements of human body. Blood can be defined as the fluid we have in our bodies that carries oxygen from the lungs to the rest of the body. It also carries waste to be eliminated from the body. We have between 4 and 6 liters of blood in our adult bodies depending on size. Millions of people need blood every year.

There are tens of thousands of pints of blood that are needed every day to help people. Due to deficiency of blood a person can suffer from serious health issue and may even die. Medical science cannot produce blood but with the blessing of medical science blood can be transferred from one person to another. A lot of people's live can be saved if blood donors are easily available. The blood donation Application we are making puts the power to save lives in the palm of your hand. Donating blood and blood components are easier than ever.

A person just needs to have an account in our Blood Donation Application, then he can both donate and request for blood anytime. "BLOOD DONOR" is a free blood Donation app available for Android Smartphone. Blood Donor searches, notifies and connect thousands of blood donors in some simple steps. Blood Donor donation app ensures hassle free blood donation and privacy of a blood donor. Connecting blood donors and needy reduces time which increases the possibility of saving lives and also eliminates the shortage of blood. Blood donation exclusive app "BLOOD DONOR" is a free location based blood donation app.

It is one of its first and only unique applications available with feature of real-time map and machine learning algorithm for finding the best suitable donor. It uses the phone's internet connection to let us search blood donors and recipient. This Android based mobile application finds the blood donor by GPS location service. The App is also able to find the best matches among the donors available with the help of machine learning algorithms. The algorithms are capable of analyzing the profile of each donor and find the best fit ones with respect to health condition and lifestyle. Moreover, the app is also capable of showing the exact position of the donors in the map who are willing to donate blood. The Blood Donation App will make the easiest and fastest way to get a best match blood donor.

4. WAYS TO KEEP YOUR PLASMA HEALTHY

Convalescent Plasma (CP) therapy is an efficient method in the treatment of COVID-19 patients who either have a weak immune system or who are early in their illness. The notable setback for the implementation of the CP therapy lies in understanding the availability and spatial distribution of plasma donors. A multi-agent-based expert system is proposed in this paper to identify a suitable plasma donor in a short span and also in an efficient manner. Moreover, the issues with blood banks are twofold in connection with uneven intra-state and interstate distribution and lacuna of necessary facilities like the Component Blood Separation Units (CBSU) and Apheresis. The proposed expert system would remove the barriers of non-uniform distribution of blood banks and facilities across the country, and will provide a suitable solution to overcome the pandemic using multi-agent systems if implemented systematically.

5. BLOOD DONATION AND LIFE SAVER-BLOOD DONATION APP

Authors : (M.R. Anish Hamlin Department of Computer Science and Engineering, Sathyabama University, Chennai, Tamil Nadu, IN J. Albert Mayan Department of Computer Science and Engineering, Sathyabama University, Chennai, Tamil Nadu, IN) .

"Blood" one of the most important necessity of our life. The numbers of blood donor is very less when compared with other countries. In our project we propose a new and efficient way to overcome such outline. Such as just touch the button donor will be ask to enter an individual's details like name, phone number, age, weight, date of birth, blood group, address etc.

At the emergency time of blood needed we can check for blood donor nearby by using GPS. Once the app user enter the blood group which he/she needed it will automatically show the donor nearby and send an alert message to the donor. In case if the first donor is not available it will automatically search the next donor which is present in queue.

If the donor accept the request then an one time password (OTP) will be send to the donor to verify. Blood donation app provider list of donor in your city/area. Once the donor donate the blood it will automatically remove the donor detail for next three months.

6. INSTANT PLASMA DONOR RECIPIENT CONNECTOR ANDROID APP

Although the government is carrying out Covid vaccination campaigns on a large scale, the number of vaccines produced is not enough for all the population to get vaccinated at present. And with the corona positive cases rising every day, saving lives has become the prime matter of concern.

As per the data provided by WHO more than 3 million people have died due to the coronavirus (https://covid19.who.int/). However, apart from vaccination, there is another scientific method by which a covid infected person can be treated and the death risk can be reduced. This plasma therapy is an experimental approach to treat corona-positive patients and help them recover. This plasma therapy is considered to be safe & promising. A person who has recovered from Covid can donate his/her plasma to a person who is infected with the coronavirus. This system proposed here aims at connecting the donors & the patients by an online application. By using this application, the users can either raise a request for plasma donation or requirement.

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

7. SYNTHETIC PAPER SEPARATES PLASMA FROM WHOLE BLOOD WITH LOW PROTEIN LOSS

Authors : (Weijin Guo , Jonas Hansson & Wouter van der Wijngaart) .

The separation of plasma from whole blood is the first step in many diagnostic tests. Point-of-care tests often rely on integrated plasma filters, but protein retention in such filters limits their performance. Here, we investigate plasma separation on interlocked micropillar scaffolds (“synthetic paper”) by the local agglutination of blood cells coupled with the capillary separation of the plasma.

We separated clinically relevant volumes of plasma with high efficiency in a separation time on par with that of state of the art techniques. We investigated different covalent and noncovalent surface treatments (PEGMA, HEMA, BSA, O2 plasma) on our blood filter and their effect on protein recovery and identified O2 plasma treatment and 7.9 μg/cm2 agglutination antibody as most suitable treatments.

Using these treatments, we recovered at least 82% of the blood plasma proteins, more than with state-of-the-art filters. The simplicity of our device and the performance of our approach could enable better point-of-care tests.

8. B-DONOR: A GEO-LOCALISED BLOOD DONOR MANAGEMENT SYSTEM USING MOBILE CROWDSOURCING

Authors : (Hridoy Deb Das Department of Computer Science and Engineering, East West University, Dhaka, Bangladesh Rakib Ahmed Department of Computer Science and Engineering, East West University, Dhaka, Bangladesh Nurunnahar Smrity Department of Computer Science and Engineering, East West University, Dhaka, Bangladesh Linta Islam Department of Computer Science and Engineering, Jagannath University, Dhaka, Bangladesh) .

Blood donation is a noble act but during emergency times people rarely find blood donors. In this paper, we present an architecture for and prototype of a blood donation system using crowdsourcing for smartphones whereby anyone at the nearest location can search for their desired blood group. We discuss our system features and functionalities.

We developed our system with the idea of mobile crowdsourcing. This system will help the blood requester to find the donors of requested blood groups in the nearby location. Location information will send to the system by using GPS in our proposed system.

Requesters can search donors from their current or destination location. As we proposed to find more than one donor parallelly and request for more than one blood group, our system will save time and protect from any disappointed. This system search donor within 5km, as a result, finding donors and arriving at the destination will be easier and in the most short time period. In the future, we will implement the user information in the block chain.

9. The role of identity in how whole-blood donors reflect on and construct their future as a plasma donor

Authors : (Rachel Thorpe,Barbara M. Masser,Kyle Jensen,Nina Van Dyke,Tanya E. Davison).

In the context of decreased demand for whole blood and increased demand for plasma-derived products, donors in Australia are increasingly being asked to convert from whole-blood to plasmapheresis donations. Plasmapheresis is a different type of donation to whole blood as the process takes longer and can be engaged in more frequently. What is unknown is whether whole-blood donors view donating plasma as consistent with their donor identity and how they respond to the possibility of donating more frequently.

To explore this, we undertook semistructured telephone interviews with 26 whole-blood donors who had recently made their first plasma donation. Findings indicated that whereas donating plasma was viewed as a bigger ask than donating whole blood, the former was viewed as consistent with their identity as a donor because both behaviours were seen to benefit others and self and were located within the same institutional context.

Donating plasma was an opportunity for donors to enhance their self-concept as an altruistic giver. When contemplating their future donation behaviour, donors considered how their donor identity would fit alongside other salient roles. These findings have implications for how institutions can position their request of existing donors to give a different gift.

10. Help Is in Your Blood—Incentive to "Double Altruism" Resolves the Plasma Donation Paradox

Authors : (Petra Gyuris , Baksa Gergely Gáspár , Béla Birká , Krisztina Csókás and Ferenc Kocsor) .

Blood donation is considered as one of the purest forms of altruism. Plasma donation, in contrast, despite being a similar process, is mostly a paid activity in which donors are compensated for their contribution to the production of therapeutic preparations. This creates a so-called "plasma paradox:" If remuneration is promised for a socially useful effort, volunteers with altruistic motives might be deterred. At the same time, regular plasma donors who pursue the monetary benefits of donation might drop out if remuneration stops.

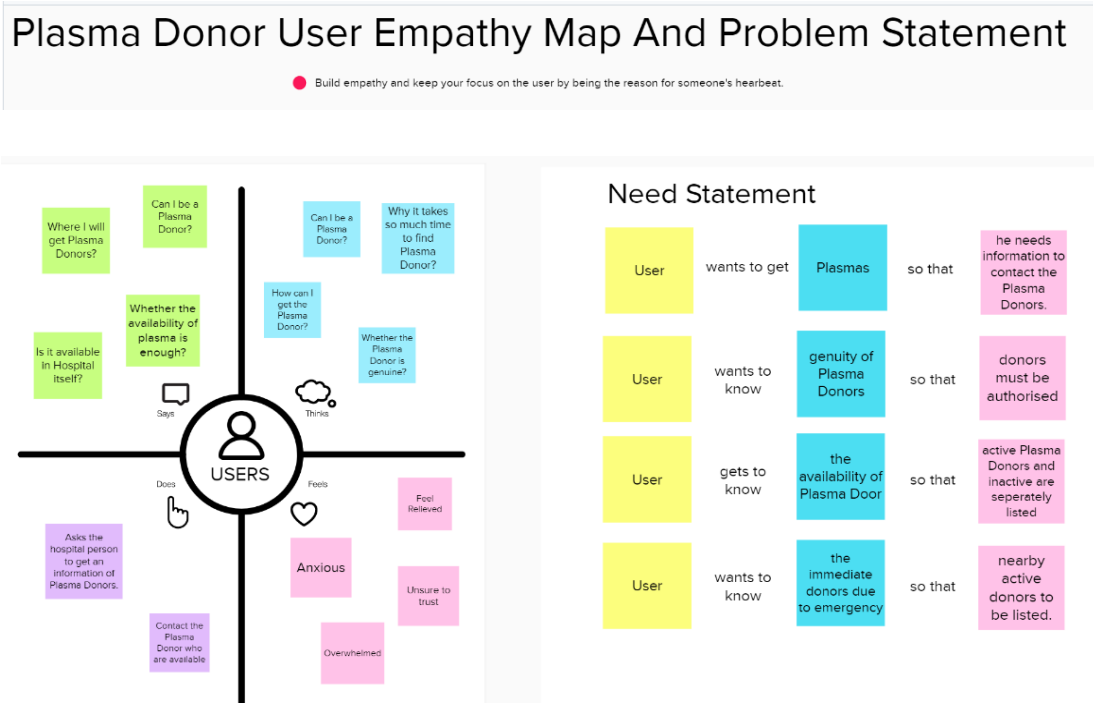
The same controversy can be caught in the messages of most plasma donation companies as well: They promise a monetary reward (MR), and at the same time, highlight the altruistic component of donation. In this study, we tested the assumption that emphasizing the social significance enhances the willingness to donate blood plasma more effectively than either MR or the combination of these two incentives.

This had to be rejected since there was no significant difference between the three scenarios. Furthermore, we also hypothesized that individuals might be more motivated to donate plasma if there is a possibility of offering an MR toward other socially beneficial aims. We found an increased willingness to donate in scenarios enabling "double altruism", that is, when donating plasma for therapeutic use and transferring their remuneration to nongovernmental organizations, is an option.

We propose relying on double altruism to resolve the plasma paradox, and suggest that it could serve as a starting point for the development of more optimized means for donor recruitment.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas:



3.2 Brainstorm & Idea Prioritization Template:

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

Step-2: Brainstorm, Idea Listing and Grouping

Step-3:Idea Prioritization

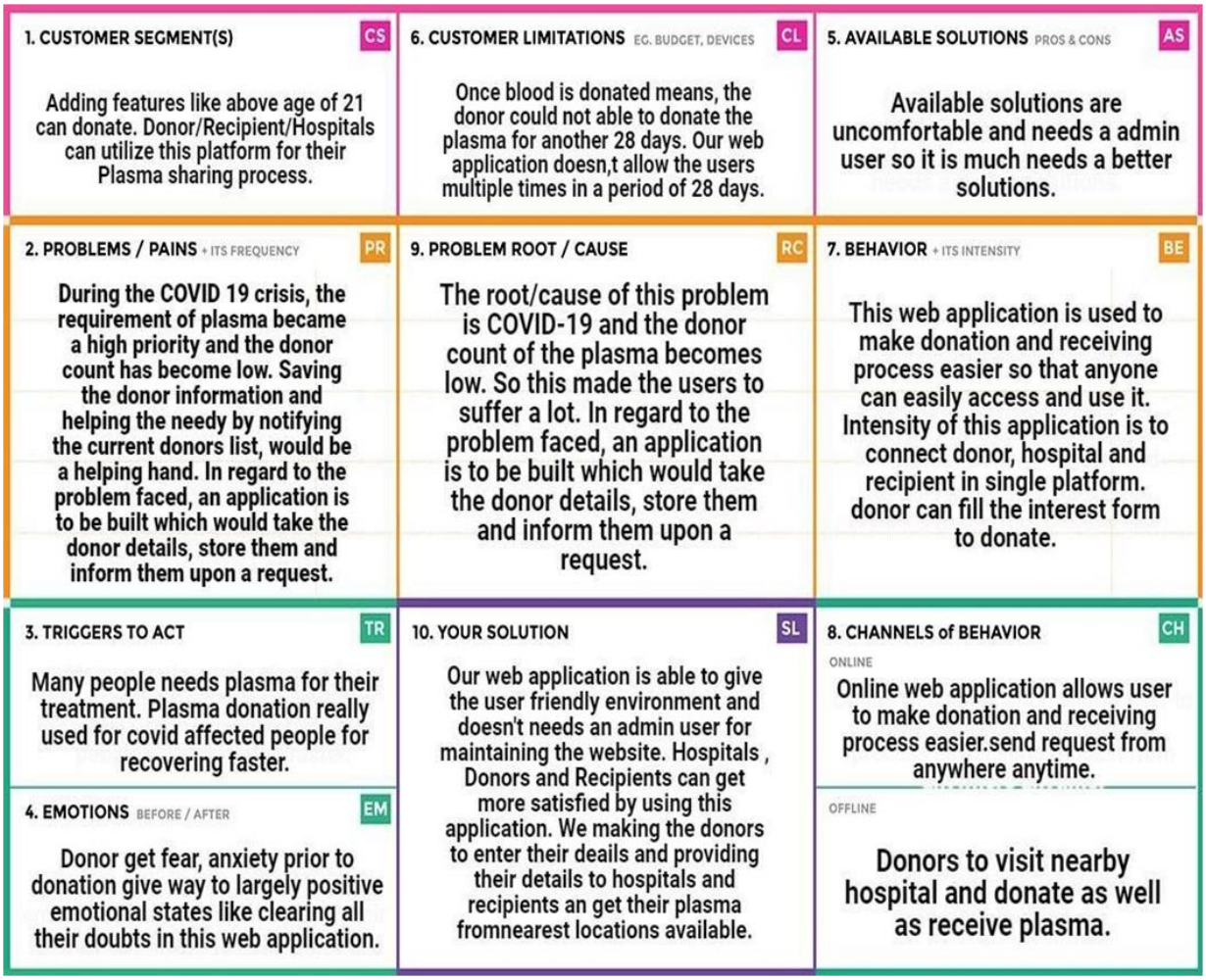
Proposed Solution Template

Project team shall fill the following information in proposed solution template

S.No	Parameter	Description
1	**Problem Statement (Problem to be solved)**	**To help the plasma donor and seeker by developing a cloud-based application.**
2	**Idea/Solution description**	**In day-to-day life requirement for plasma became high, especially during the COVID-19 crisis. But the donor count was low. Saving the donor information and helping the needy by notifying the current donors would be a helping hand. It is very difficult to find the respective blood group donors when anyone is in need. Regarding the problem faced, an application is to be built which would take the donor details store them and inform them upon request. And also for plasma donation centre, it is Easy to find donors.**
3	**Novelty/ Uniqueness**	**We help the donor to access the location of a blood centre which is nearby him/her. We Notify them by sending a confirmation emails after they get registered for the plasma donation and alsowe notify them once the appointment is fixed in the centre. Further , more the GPS map option is available to direct. The donor to the centre.**

4	**Social Impact / Customer Satisfaction**	**By using this application, the user will experience a user-friendly and responsive interface and they get satisfaction by Saving thousand so people's life.**
5	**Business Model(Revenue Model)**	**Donating Plasma with the help of an application makes our idea realistic. The user's information is encrypted.** **We maintain this app by automation for saving admin and user time. Users get profited as we take care of them even after the plasma donation by giving them hospitality details. Also, we use the Chabott answer FAQs,asset helps the user to get immediate Answer to their doubts.**
6.	**Scalability of the Solution**	**Whatever the requirements, the application provides a clear solution for the requirements. It can handle more users who use the application at the same time.**

PROBLEM SOLUTION FIT:



4. REQUIREMENT ANALYSIS:

FUNCTIONAL REQUIREMENTS:

Following are the functional requirements of the proposed solution.

S.No	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
1	User Registration	Registration through Form (WebApp)
2	User Confirmation	Confirmation via EmailConfirmation via OTP
3	Certification	After the donor donates plasma, we will give them a certificate of appreciation and authentication.
4	Statistical data	The availability of plasma is given in the page as stats, which will be helpful for the users.
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
6	Searching/reporting requirements	Users can use the search bar to look up information about camps and other topics.
7	Virtual Assistants	A virtual assistant is a software agent that can carry out tasks or provide services on behalf of a person in response to commands or inquiries. When users enter their inquiries, the system will respond with pertinent information about plasma and details of plasma donation.

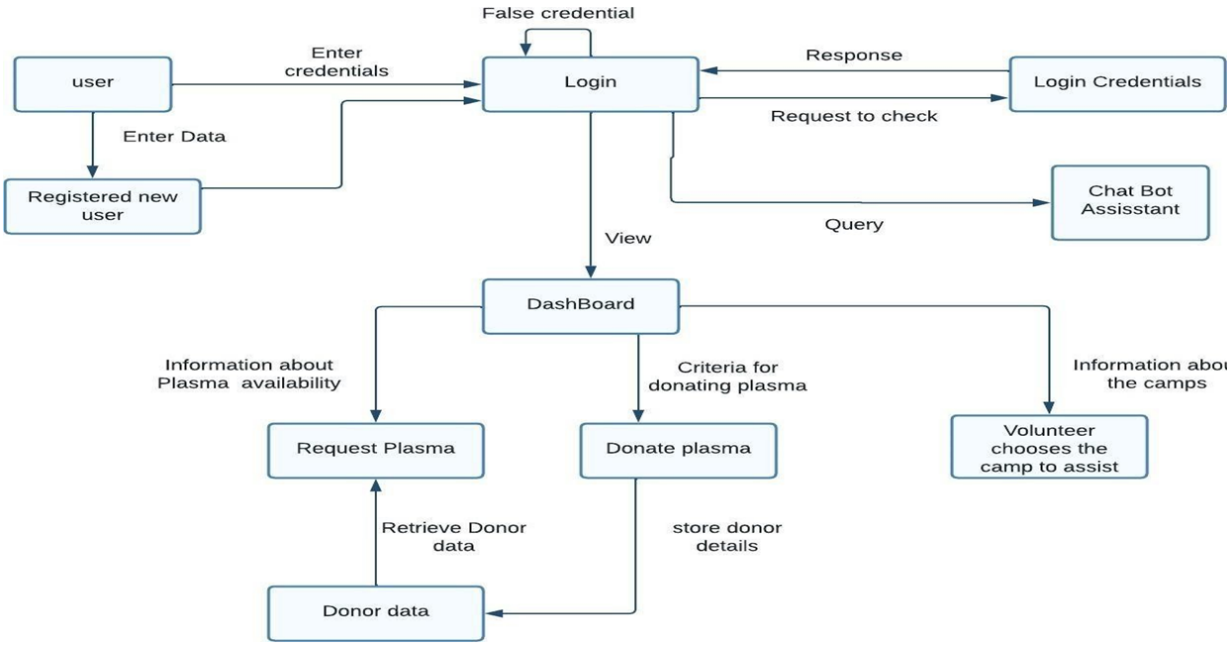
NON-FUNCTIONALREQUIREMENTS:

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

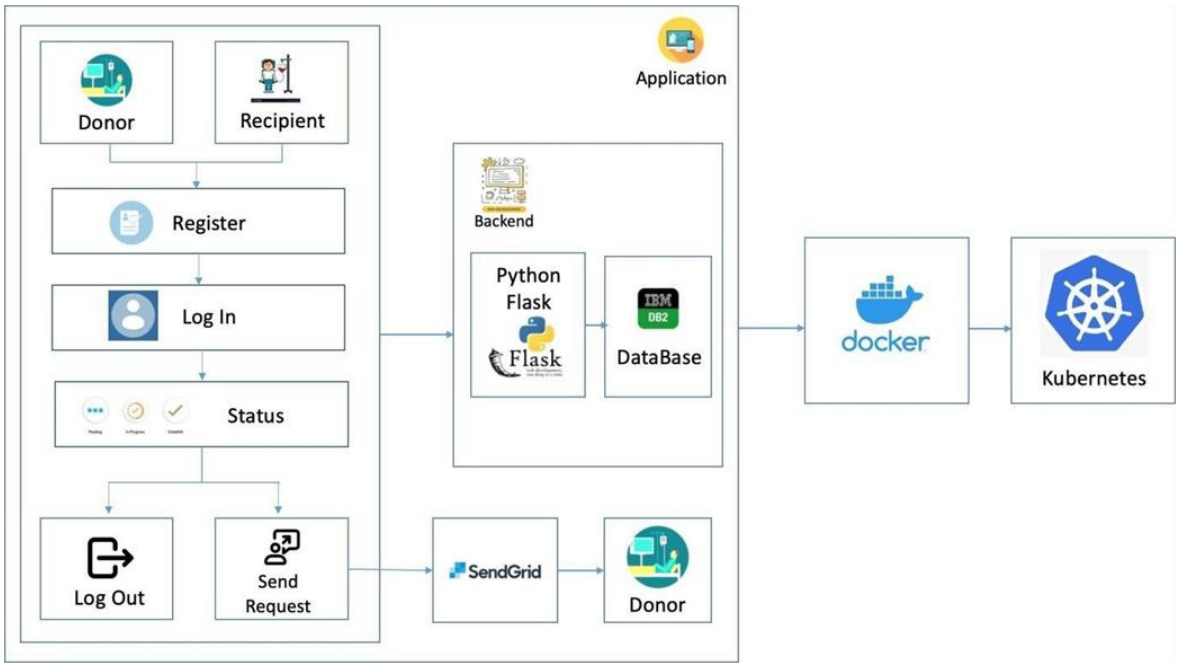
S.No	Non-Functional Requirement	Description
1	Usability	Must have a good-looking User-friendly interface.
2	Security	It must be secured with the proper username and password.
3	Reliability	The system should be made in such a way that it is reliable in its operations and for securing the sensitive details.

5 . PROJECT DESIGN

Data Flow Diagram:



Solution & Technical Architecture:



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 Gmail	I can receive confirmation notifications through Gmail	Medium	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering email & password	I can access into my User profile and view details in dashboard	High	Sprint-1
	Dashboard	USN-5	As a user, I can send the proper requests to donate and obtain plasma.	I can receive appropriate notifications through email	High	Sprint-1
Customer (Web user)	Login	USN-6	As a user, I can register and log into the application by entering email & password to view the profile	I can access into my User profile and view details in dashboard	High	Sprint-1
	Dashboard	USN-7	As a user, I can send the proper requests to donate and obtain plasma.	I can receive appropriate notifications through email	High	Sprint-1
Customer Care Executive	Application	USN-8	As a customer care executive, I can try to address user's concerns and questions	I can view and address their → concerns	Medium	Sprint-2
Administrator	Application	USN-9	As an	I → can → change	Medium	Sprint-

6. PROJECT PLANNING & SCHEDULING

Sprint Planning & Estimation

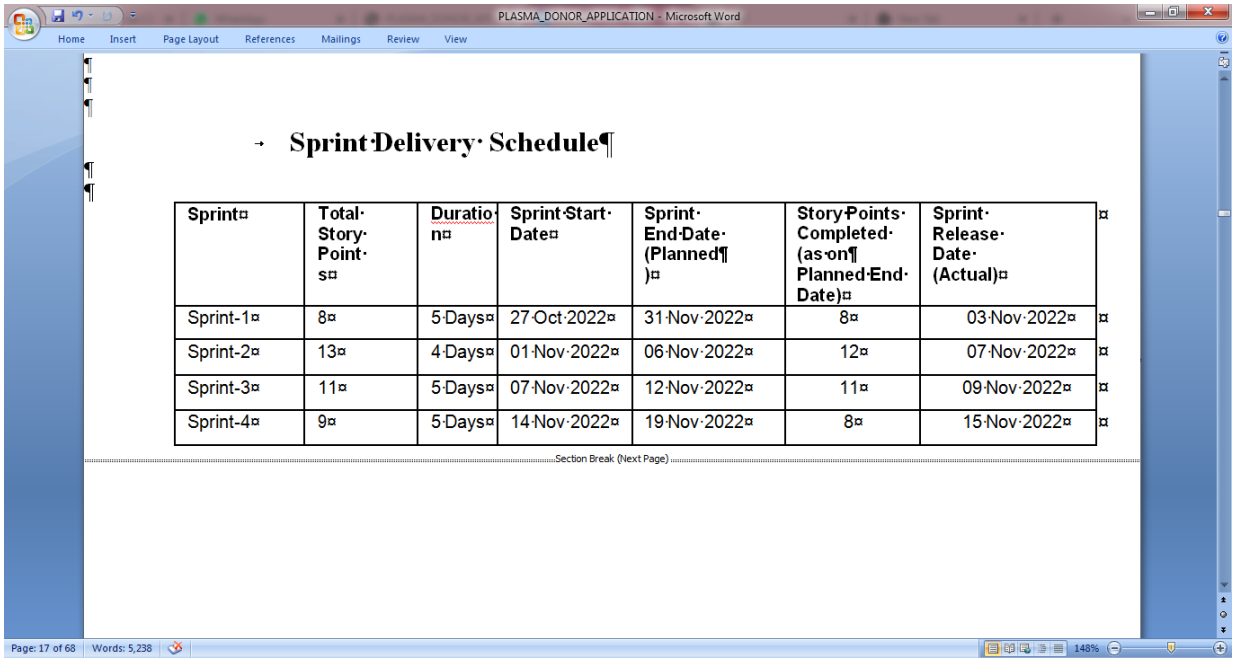
Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Donor Registration	USN-1	As a Donor, I can register for the application by entering my email, password, and confirming my password with validation.	1	Medium	Kishore Kumar
Sprint-1		USN-2	As a Donor, I will receive confirmation email once I have registered for the application	1	Medium	Kishore Kumar
Sprint-2	Donor Login	USN-3	As a Donor, I can login into application using his credentials with usertype as donor	1	Medium	Harissh
Sprint-1	User Registration	USN-4	As a User, I can register for the application by entering my email, password, and confirming my password with validation.	1	Medium	Kishore Kumar
Sprint-1		USN-5	As a User, I will receive confirmation email once I have registered for the application	1	Medium	Kishore Kumar
Sprint-2	User Login	USN-6	As a Donor, I can login into application using his credentials with usertype as user	1	Medium	Harissh
Sprint-2	Dashboard	USN-7	As a User, I submit the application form in need of plasma to notify the donors.	2	High	Ashwin Rupak
Sprint-2		USN-8	As a User, he/she can view the available donor list to contact the donor.	2	High	Ashwin Rupak
Sprint-2		USN-9	As a User, he/she can send a request to the particular donor.	2	Low	Ashwin Rupak
Sprint-3		USN-10	As a Donor, able to view the request from the users.	2	Medium	Janarthanan

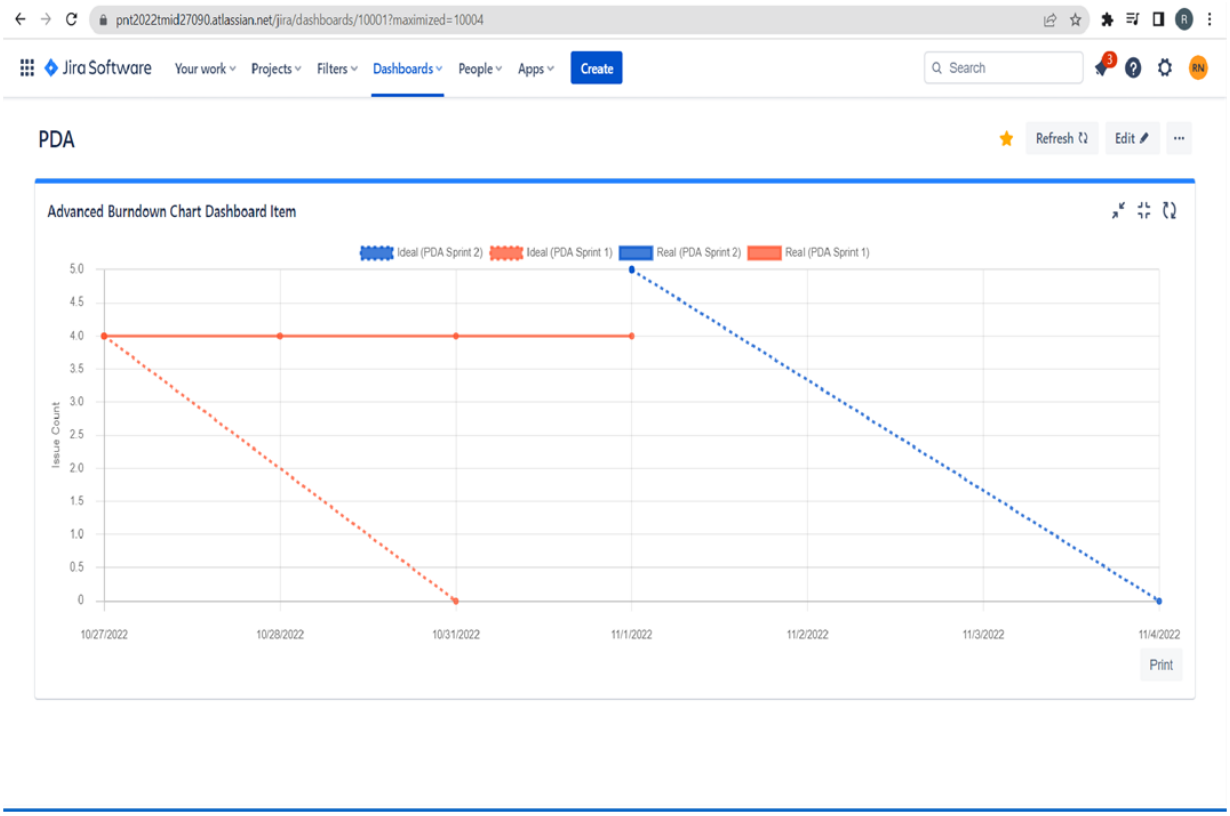
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3		USN-11	As a Donor, can accept or decline in the dashboard	3	Medium	Janarthanan
Sprint-3		USN-12	As a User, irrespective of contact details, can notified through email regarding accept or decline.	3	High	Janarthanan
Sprint-3		USN-13	As a Donor, for successful donation and given feedback, badges will be provided depending on donor level, initially start from level 0.	3	Medium	Harissh
Sprint-4		USN-14	As a Donor, change the availability status to notify the donor	3	Medium	Janarthanan
Sprint-4	Plasma Technology	USN-15	Recent Plasma Technology Update News	1	Low	Ashwin Rupak, Janarthanan
Sprint-4		USN-16	Current Plasma Technology Trends	1	Low	Kishore Kumar, Harissh

Sprint Delivery Schedule



Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	8	5 Days	27 Oct 2022	31 Nov 2022	8	03 Nov 2022
Sprint-2	13	4 Days	01 Nov 2022	06 Nov 2022	12	07 Nov 2022
Sprint-3	11	5 Days	07 Nov 2022	12 Nov 2022	11	09 Nov 2022
Sprint-4	9	5 Days	14 Nov 2022	19 Nov 2022	8	15 Nov 2022

Reports from JIRA



7. CODING & SOLUTIONING

FEATURE 1:

Python

It is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation.[33]

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.[34][35]

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.[36]

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 2 was

discontinued with version 2.7.18 in 2020.[37]

Python consistently ranks as one of the most popular programming languages.

FEATURE 2:

Flask

Flask is a micro web framework written in Python. It is

classified as a micro framework 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.

Database Schema IBM

Db2 -

A hybrid ANSI-compliant data virtualization tool for accessing, querying and summarizing data across the enterprise which:

- Provides a massively parallel processing (MPP) architecture Exploits Hive, HBase and Apache Spark concurrently for best-in-class analytic capabilities.
- Requires only a single database connection or query to connect disparate sources such as HDFS, RDMS, NoSQL databases, object stores and Web HDFS.
- Provides low latency support for ad-hoc and complex queries, high performance, and federation capabilities.
- Understands dialects from other vendors and various products from Oracle, IBM® Db2® and IBM Netezza®.
- Enables advanced row and column security.

8. TESTING

TESTING CASE:

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product.

It provides a way to check the functional it your components, sub- assemblies, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectation and does not fail in an unacceptable manner.

There are various types of test. Each test type addresses a specific testing requirement

ACCEPTANCE TESTING

Acceptance Testing

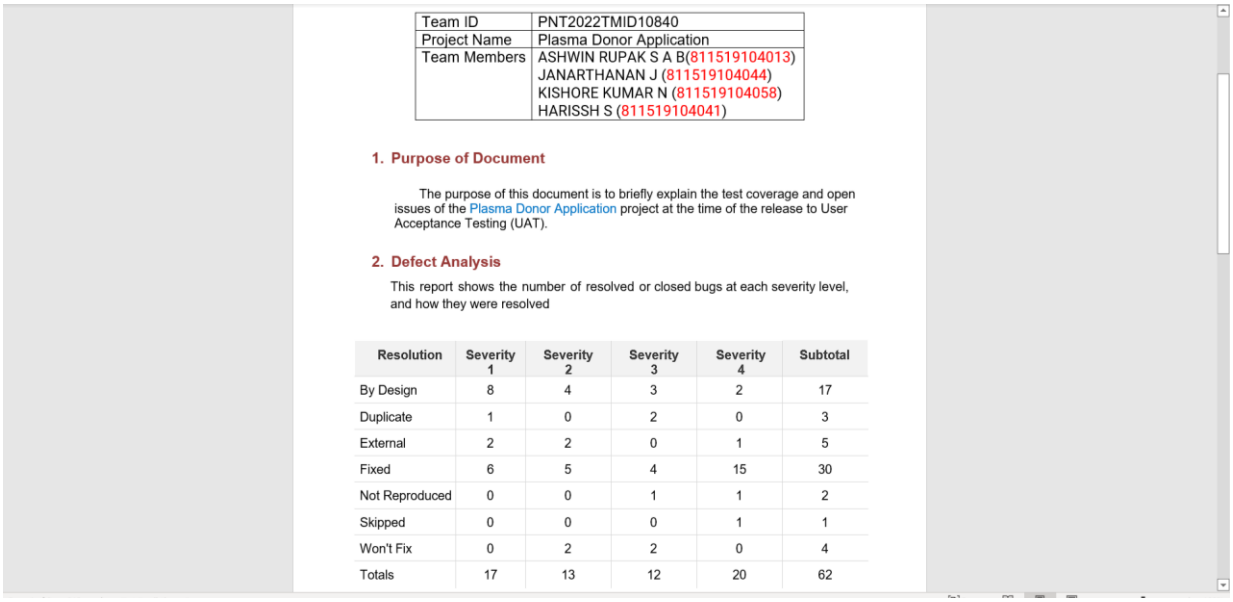
UAT Execution & Report Submission

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Plasma Donor 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 eachseverity level, and how they were resolved.



Team ID	PNT2022TMID10840
Project Name	Plasma Donor Application
Team Members	ASHWIN RUPAK S A B(811519104013) JANARTHANAN J (811519104044) KISHORE KUMAR N (811519104058) HARISSH S (811519104041)

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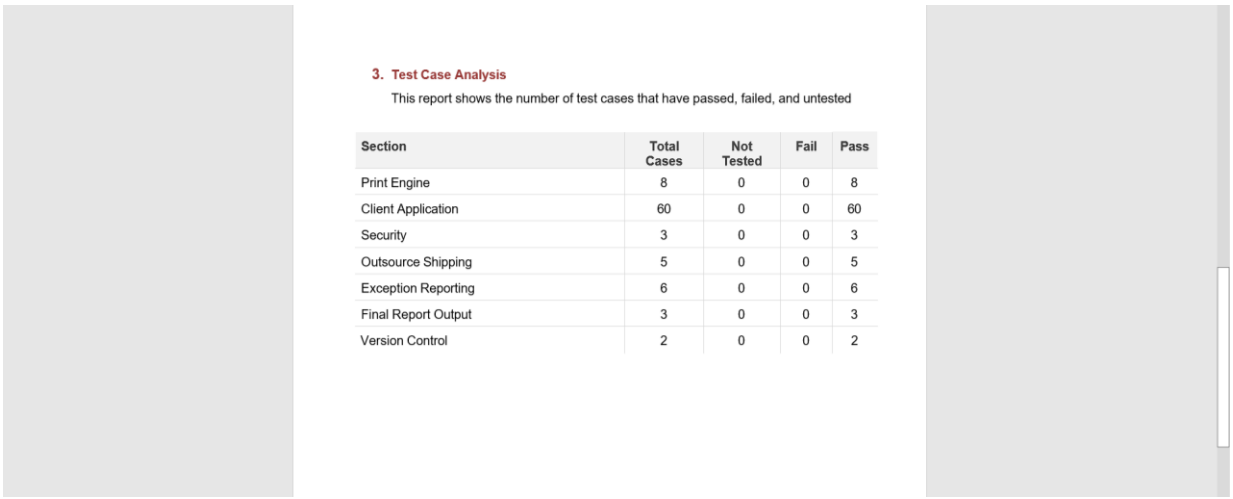
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	8	4	3	2	17
Duplicate	1	0	2	0	3
External	2	2	0	1	5
Fixed	6	5	4	15	30
Not Reproduced	0	0	1	1	2
Skipped	0	0	0	1	1
Won't Fix	0	2	2	0	4
Totals	17	13	12	20	62

3. Test Case Analysis

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



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	60	0	0	60
Security	3	0	0	3
Outsource Shipping	5	0	0	5
Exception Reporting	6	0	0	6
Final Report Output	3	0	0	3
Version Control	2	0	0	2

9. RESULTS

PERFORMANCE METRICS:

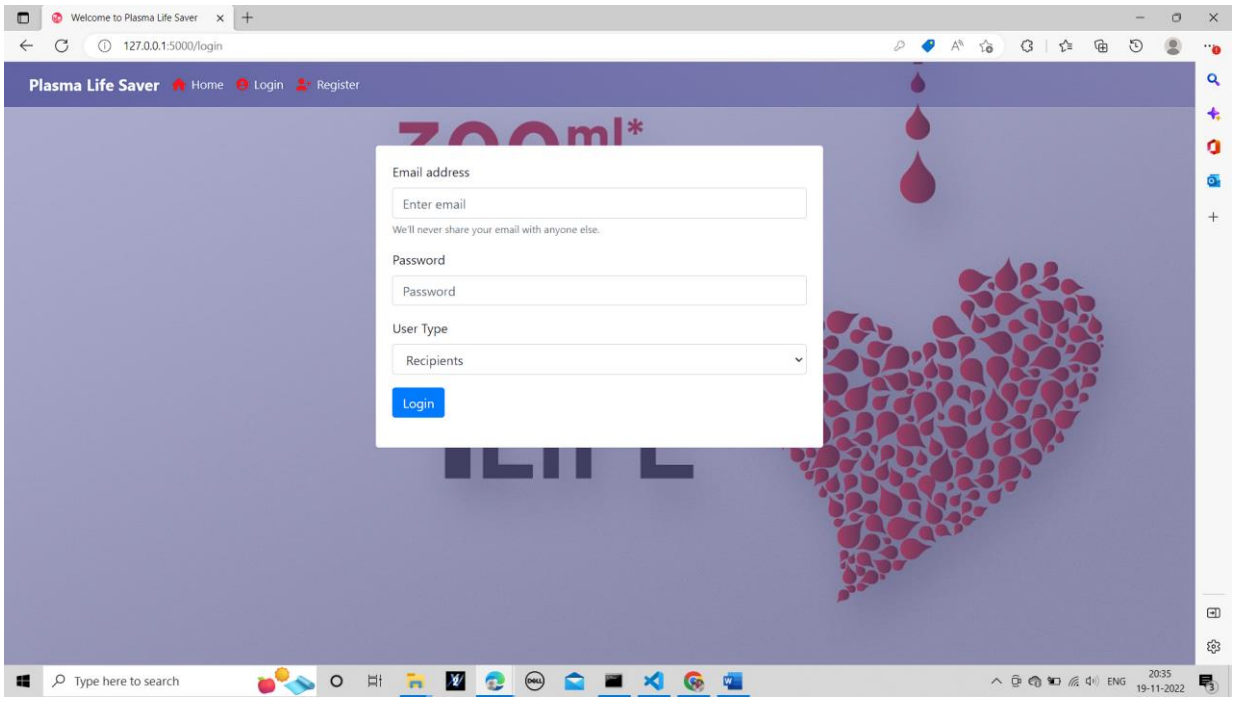
§ Project metrics are used to track the progress and performance of a project.

§ Monitoring parts of a project like productivity, scheduling, and scope make it easier for team leaders to see what's on track.

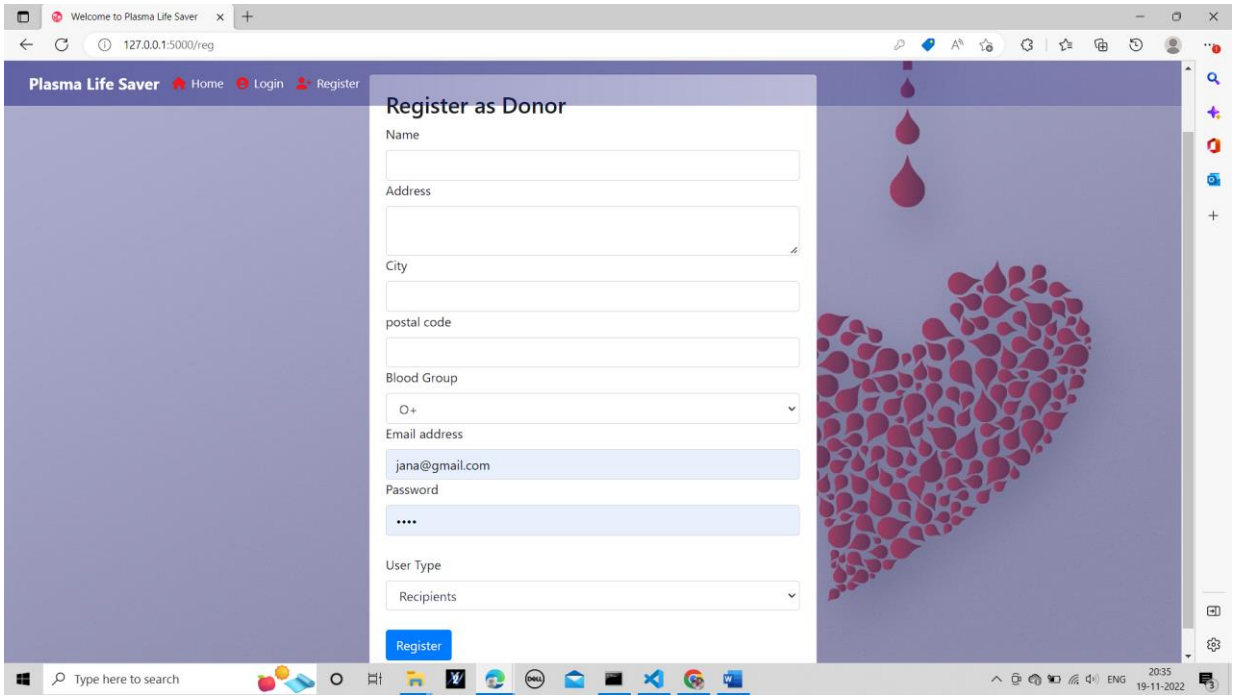
§ As a project evolves, managers need access to changing deadlines or budgets to meet their client's expectations.

OUTPUT SCREENS:

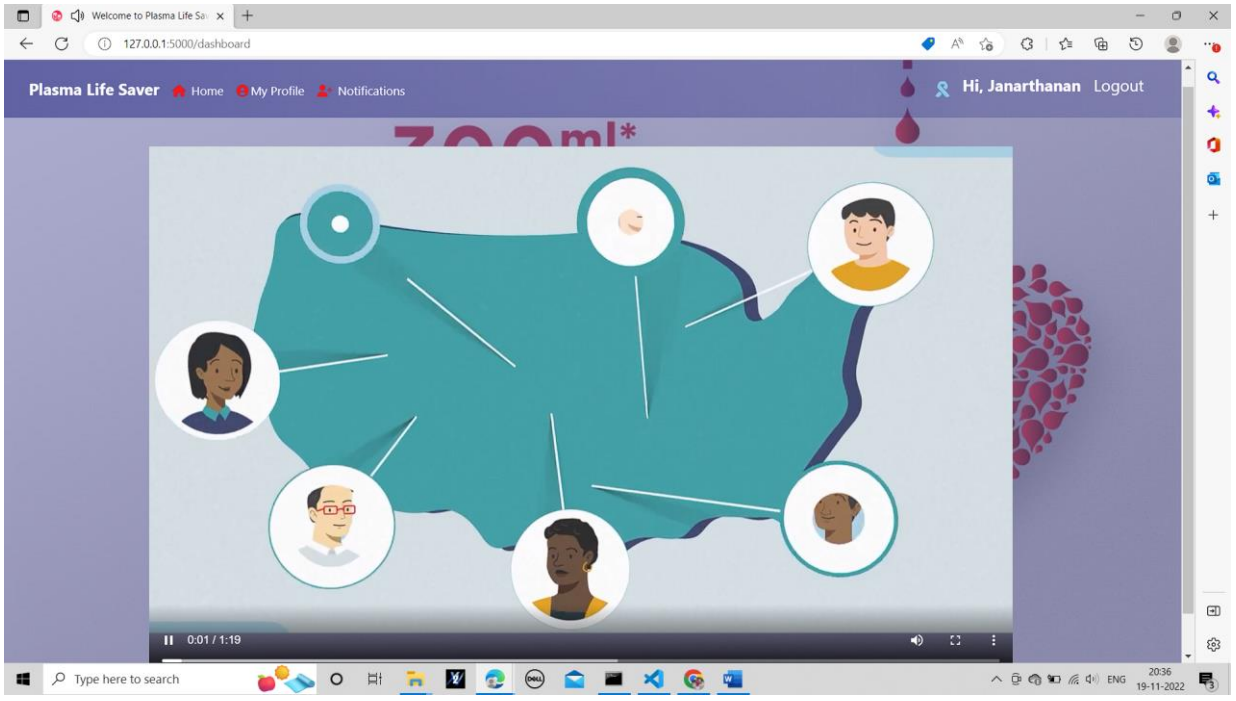
Login Page



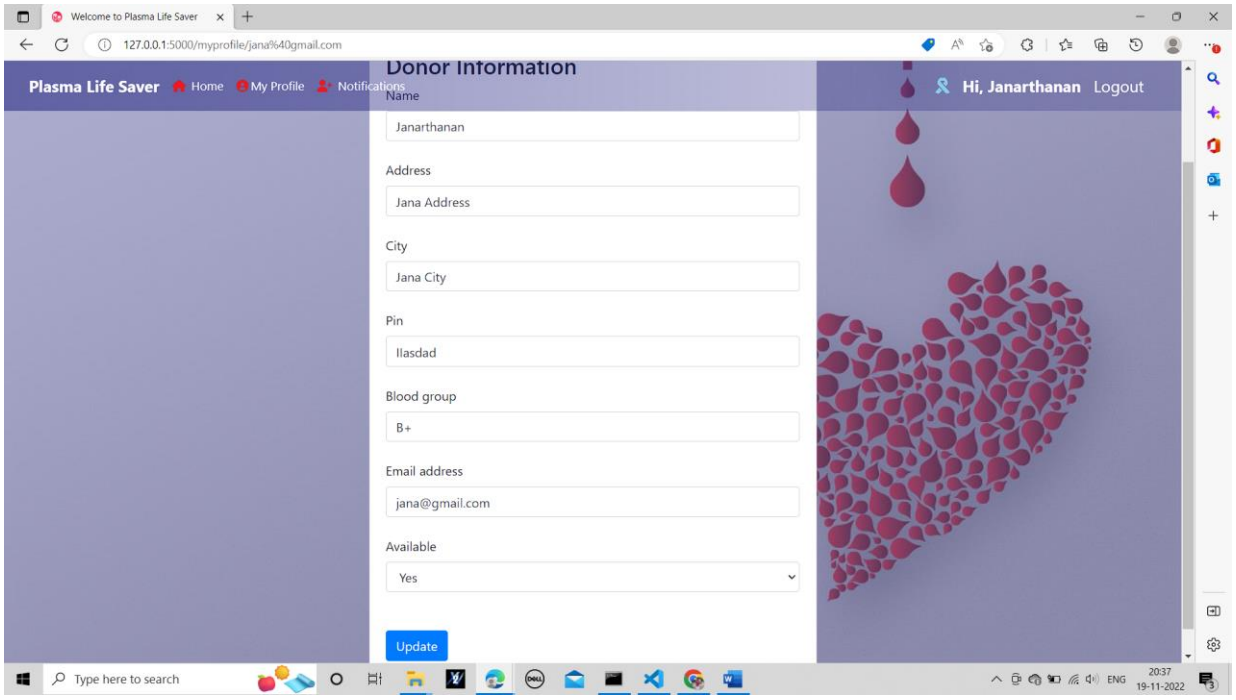
Register Page



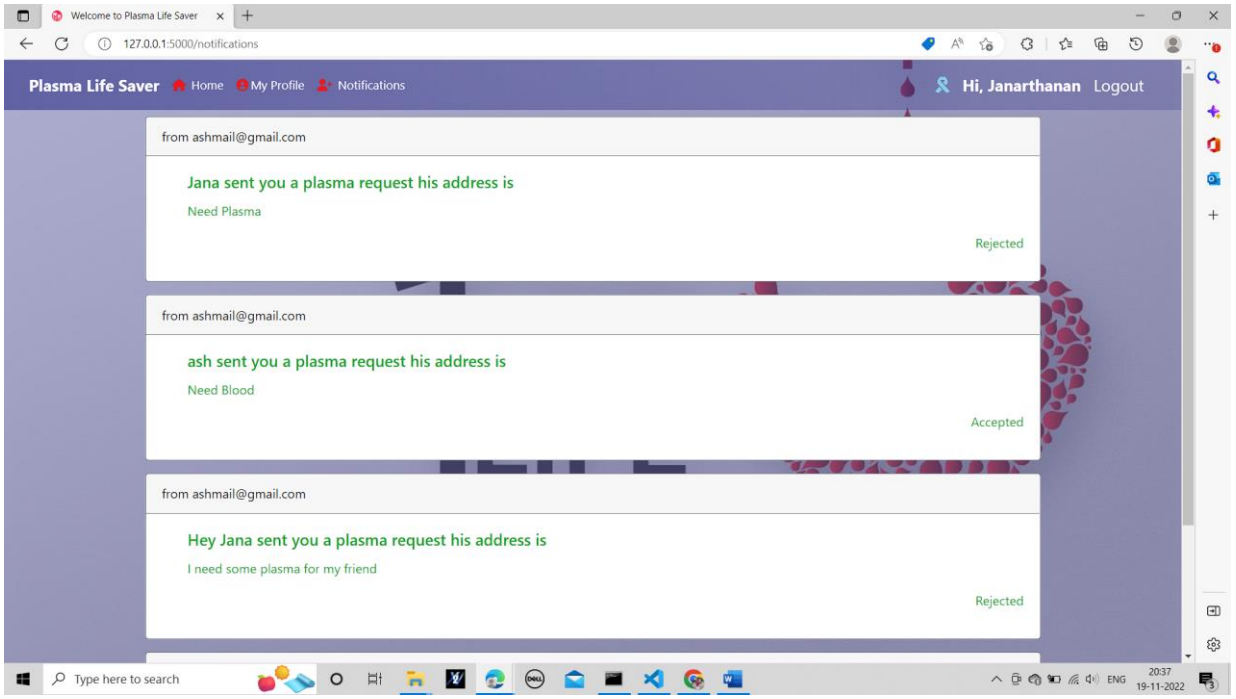
Donor Dashboard



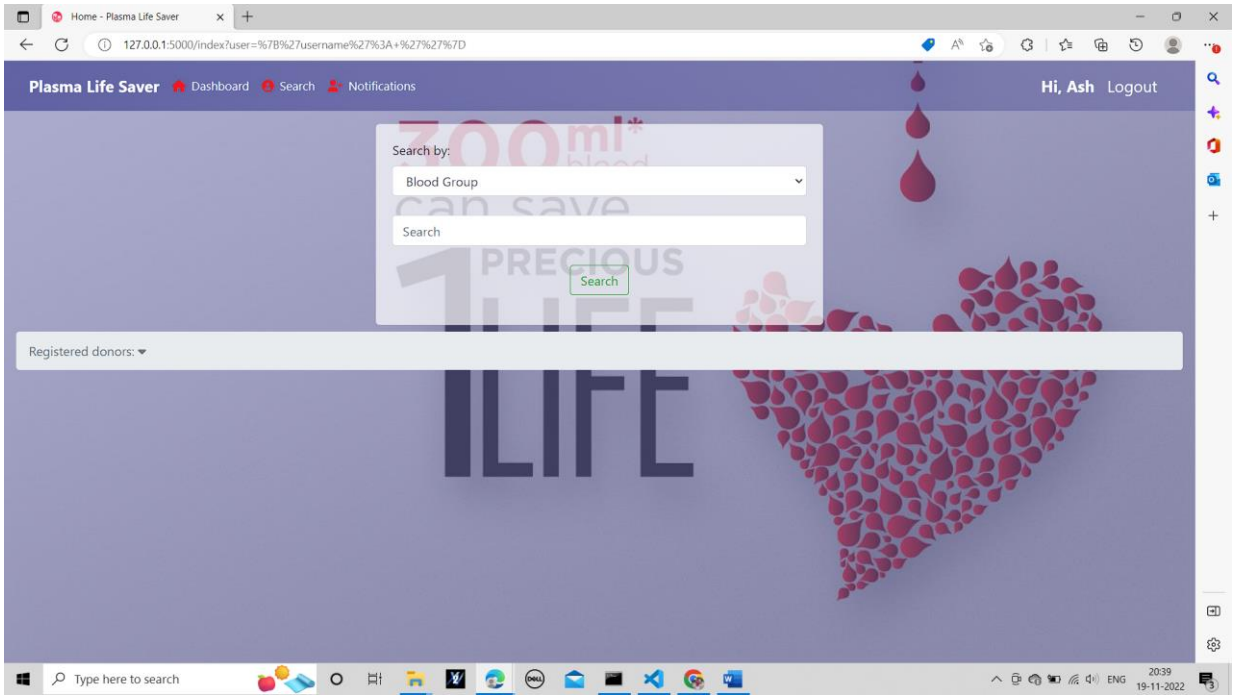
Donor Dashboard



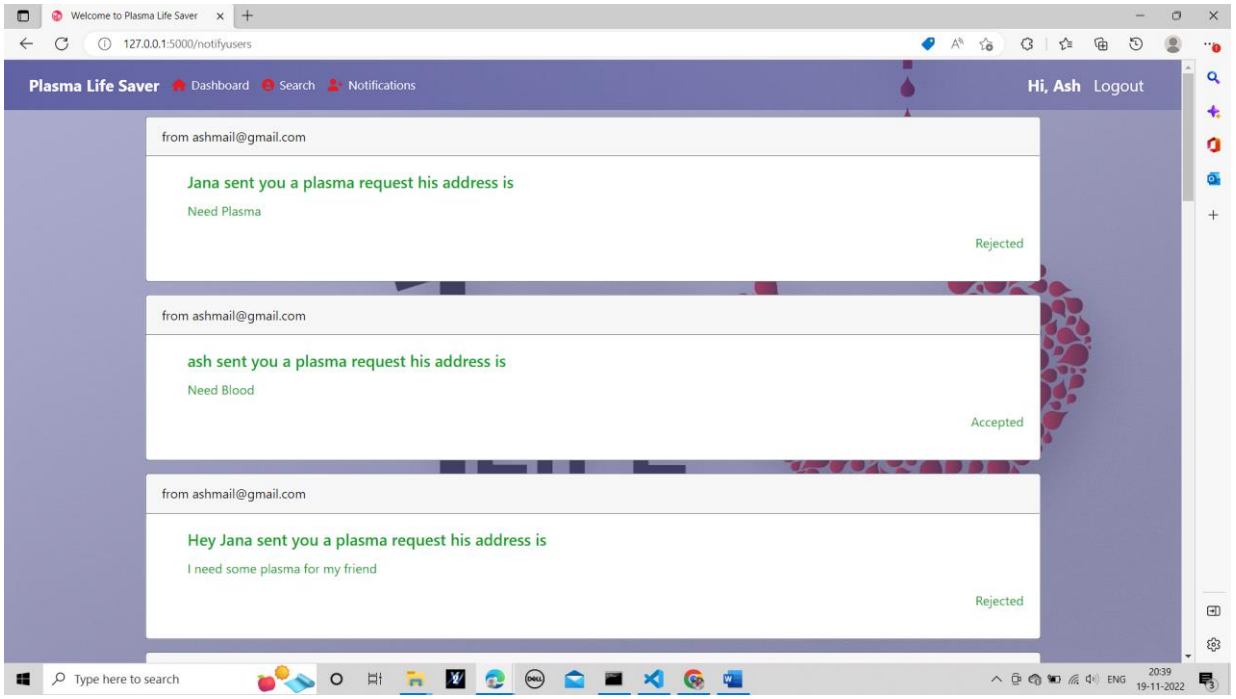
Notifications



Search Page



Recipient Notification



10. ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- **Speed:** This website is fast and offers great accuracy as compared to manual registered keeping.
- **Maintenance :** Less maintenance is required.
- **User Friendly**: It is very easy to use and understand. It is easily workable and accessible for everyone.
- **Fast Results:** It would help you to provide plasma donors easily depending upon the availability of it.

DISADVANTAGES:

- **Internet:** It would require an internet connection for the working of the website.
- **Auto- Verification:** It cannot automatically verify the genuine users.

11. CONCLUSIONS

The efficient way of finding plasma door for the infected people is implemented using the plasma donor website that is hosted on IBM Cloud platform.

To ensure the smooth functioning of the web site operation. I have hosted the website in IBM Db2 & Kubernates Cluster to make sure the operations are running successfully Cloud lambda function is used and to deploy the application IBM Db2 service is used.

12. FUTURE ENHANCEMENTS

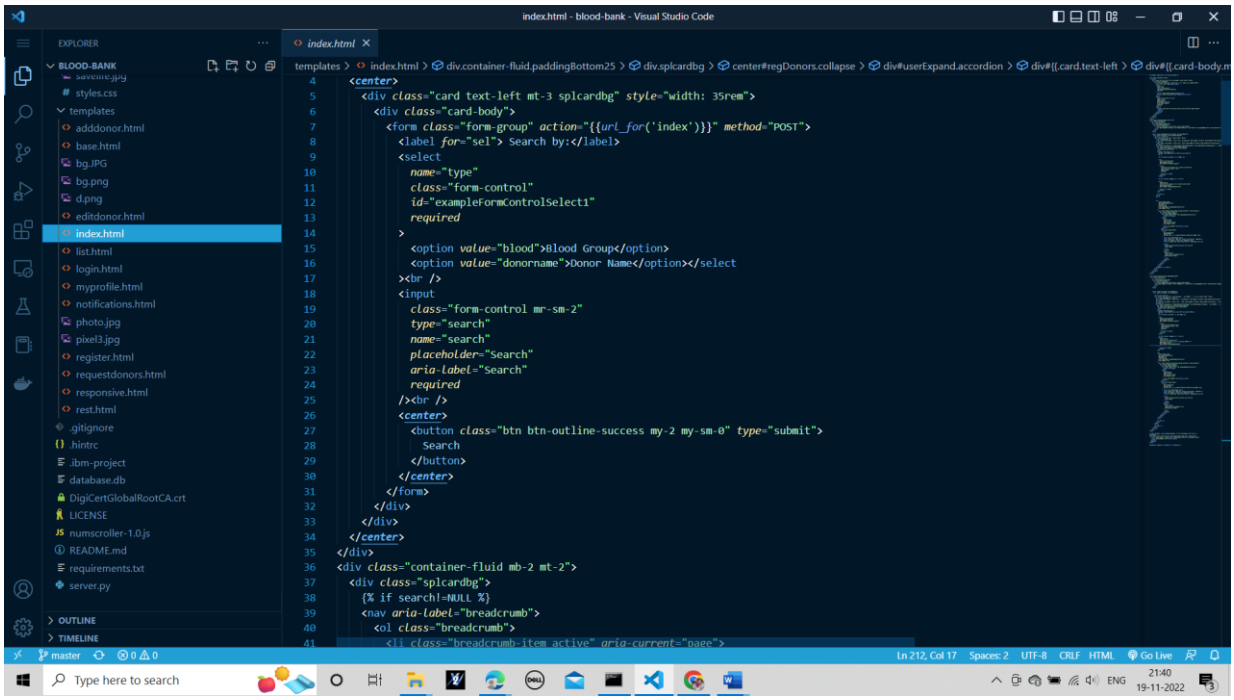
Upgrading the UI that is more user-friendly which will help many users to access the website and also ensures that many plasma donors can be added into the community.

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.

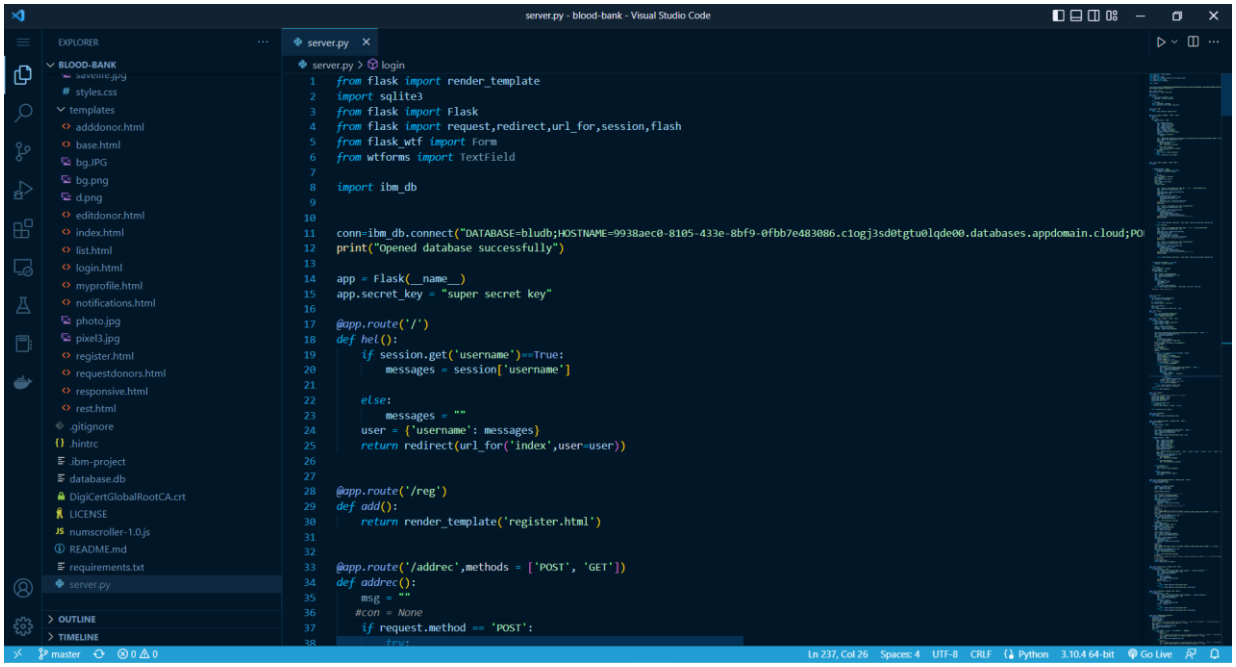
APPENDIXES

SOURCE CODE :

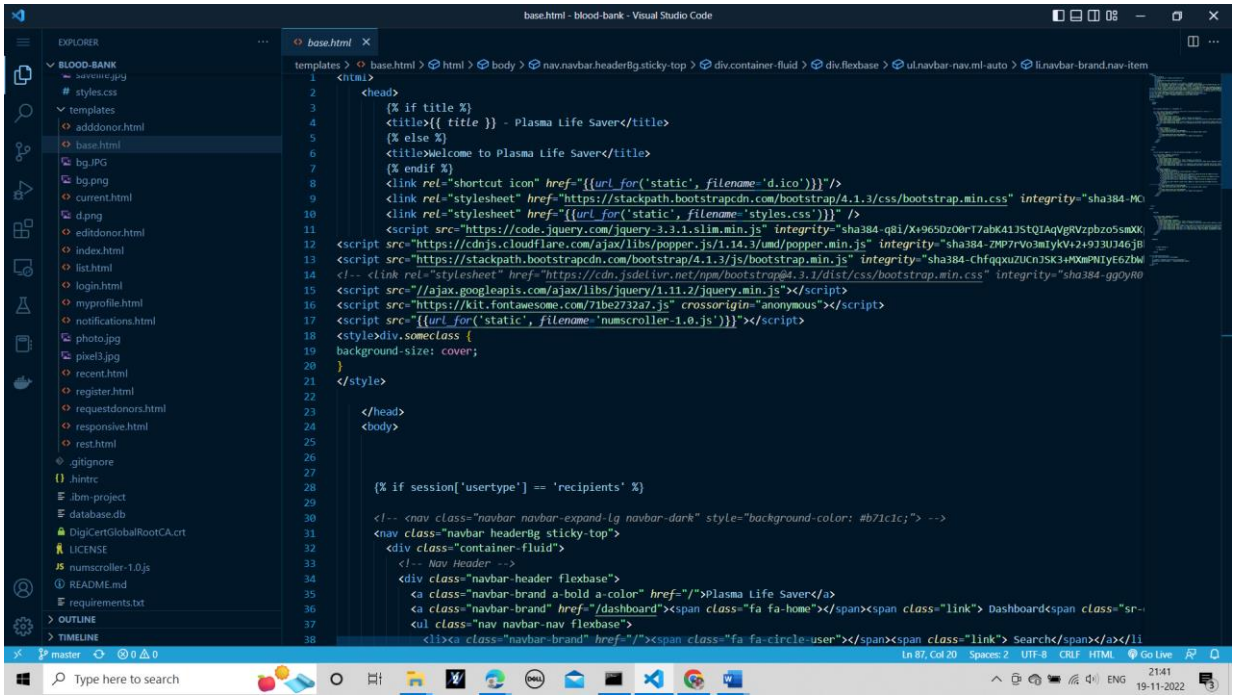
INDEX.HTML



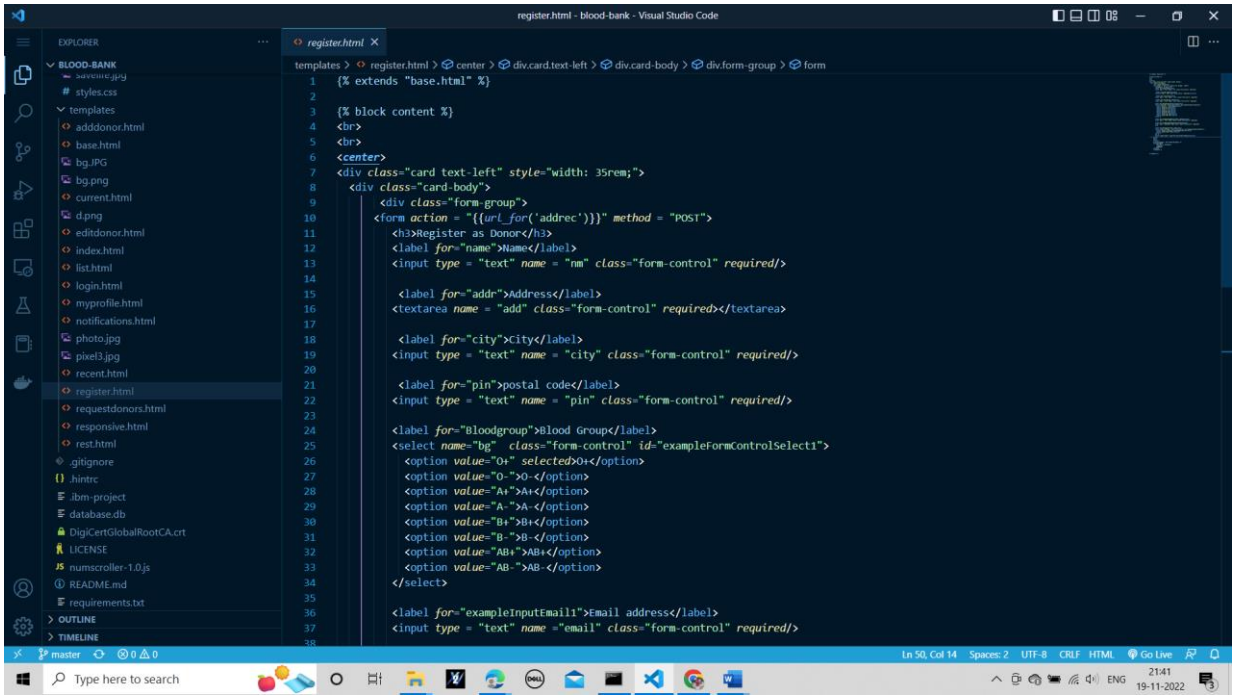
app.py


server.py - blood-bank - Visual Studio Code
EXPLORER
BLOOD-BANK
styles.css
templates
adddonor.html
base.html
bg.JPG
bg.png
d.png
editdonor.html
index.html
list.html
login.html
myprofile.html
notifications.html
photo.jpg
pixel3.jpg
register.html
requestdonors.html
responsive.html
rest.html
.gitignore
.hintrc
.ibm-project
database.db
DigiCertGlobalRootCA.crt
LICENSE
numscroller-1.0.js
README.md
requirements.txt
server.py
OUTLINE
TIMELINE
server.py
server.py > login
from flask import render_template
import sqlite3
from flask import Flask
from flask import request,redirect,url_for,session,flash
from flask_wtf import Form
from wtforms import TextField
import ibm_db
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=9938aec0-8105-433e-8bf9-0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PO
print("Opened database successfully")
app = Flask(__name__)
app.secret_key = "super secret key"
@app.route('/')
def hel():
if session.get('username')==True:
messages = session['username']
else:
messages = ""
user = {'username': messages}
return redirect(url_for('index',user=user))
@app.route('/reg')
def add():
return render_template('register.html')
@app.route('/addrec',methods = ['POST', 'GET'])
def addrec():
msg = ""
#con = None
if request.method == 'POST':
master
Ln 237, Col 26
Spaces: 4
UTF-8
CRLF
Python
3.10.4 64-bit
Go Live

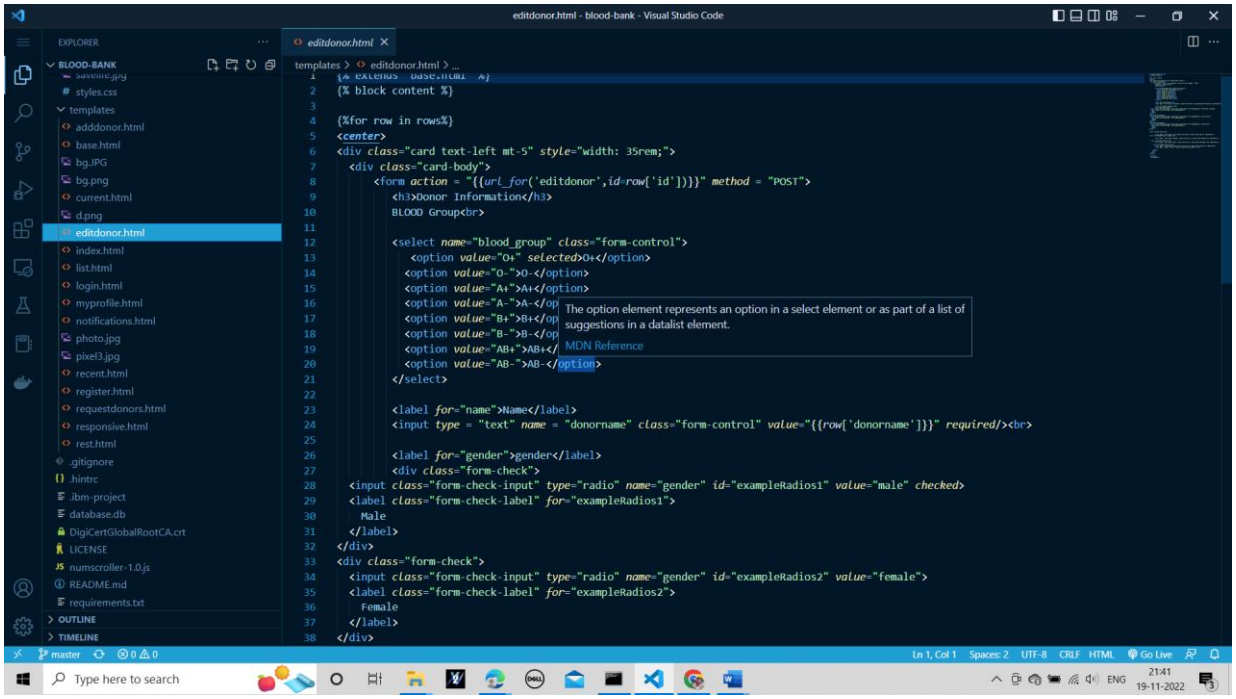
BASE.HTML


base.html - blood-bank - Visual Studio Code
EXPLORER
BLOOD-BANK
templates
base.html
OUTLINE
TIMELINE
master
Type here to search
ENG
21:41
19-11-2022

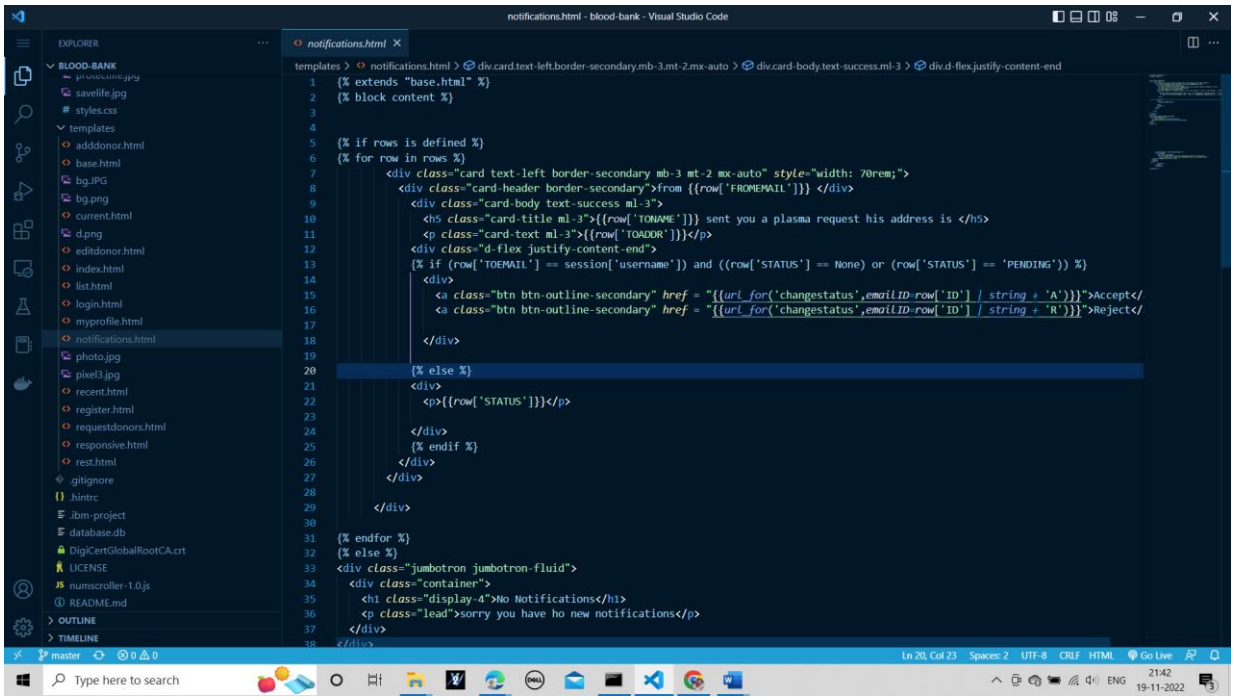
REGISTER.HTML



EDIT DONOR.HTML



NOTIFICATIONS.HTML



GITHUB

IBM-EPBL/IBM-Project-8452-1658919890: Plasma Donor Application (github.com)

PROJECT DEMO LINK

https://youtu.be/lfk06rdDlt8