PLASMA DONAR APPLICATION

A PROJECT REPORT

Submitted by

JENIFER S

ASHABIYA M G

LETTIJA R

LITHIYA J

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ANNA UNIVERSITY::CHENNAI 600 025
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ANNA UNIVERSITY: CHENNAI 600 025

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Certified that this project report **"PLASMA DONAR APPLICATION"** is the bonafide work of " JENIFER S (960419104025), ASHABIYA M G(960419104008), LETTIJA R(960419104032), LITHIYA J(960419104034)" " **S. DIANA JULIET** "who carried out the project work under my supervision

SIGNATURE   SIGNATURE

MRS. S. DIANA JULIET   **MRS. S. DIANA JULIET**

HEAD OF THE DEPARTMENT

                                                                          MENTOR

Computer Science & Engineering

CSI INSTITUTE OF TECHNOLOGY,   **Computer Science and Engineering,**

Engineering Nagercoil-3

                                                            CSI INSTITUTE OF TECHNOLOGY
                                                            Engineering, Nagercoil-3

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ABSTRACT

A plasma is a liquid portion of the blood, over 55% of human blood is plasma. Plasma is used to treat various infectious diseases and it is one of the oldest methods known as plasma therapy. Plasma therapy is a process where blood is donated by recovered patients in order to establish antibodies that fight the infection. In this project plasma donor application is being developed by using AWS services. The services used are AWS Lambda, API gateway, DynamoDB, AWS Elastic Compute Cloud with the help of these AWS services, it eliminates the need of configuring the servers and reduces the infrastructural costs associated with it and helps to achieve server less computing. For instance, during COVID 19 crisis the requirement for plasma increased drastically as there were no vaccinations found in order to treat the infected 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 donor information and notifying about the current donors would be a helping hand as it can save time and help the users to track down the information of donors.

CHAPTER 1
INTRODUCTION

1.1 PROJECT OVERVIEW

Cloud computing helps in on-demand deliver of IT resources over the internet with pay-as-you-go pricing model where users have to pay only for the resource that they use. This helps to reduce the additional infrastructural cost and users can access technology services such as power, storage, compute, database, networking, analytics and also intelligence over the internet in order to offer flexible, innovation, and economies of scale. Users can run their infrastructure more efficiently and scale their business according to their requirement. Cloud deployment modules such as public cloud, private cloud, hybrid cloud and community cloud helps the users to choose the type of deployment options that are beneficial for their company. Cloud service models consists of software as a service (saas), platform as a service (paas) and infrastructure as a service (iaas). In Software as a service a third party service providers will host the applications and make them available over the internet. Some a requires purchasing of licenced version with involves huge cost and with the help of software as a service those applications can also be used without having to buy the licence of the software which is more cost effective. with the help of platform-as-a-service customers can run, develop and manage the applications without any complexity of building and maintaining the infrastructure which is associated with developing and launching the applications. Infrastructure as a service allows the enterprise to rent or lease the servers for compute and storage in cloud. Microsoft Azure. Amazon Web

Services (AWS), Microsoft azure, Google Cloud, IBM Cloud, Oracle, Salesforce, SAP are some of the cloud service providers.

Amazon web services (AWS) is one of the leading cloud service providers. They offer mixture of infrastructure as a service (IaaS), software as a service (SaaS) and platform as a service (PaaS). Aws was launched in 2006 and it is one of the first company to introduce pay-as-you-go cloud computing model. Plasma is that the clear, straw-coloured liquid part of blood this is still once crimson blood cells, white blood cells, platelets and alternative cellular elements rectangular measure removed. it's the only largest elementof human blood, comprising concerning fifty-five p.c, and carries water, salts, enzymes, antibodies and alternative proteins. A plasma donor has to pass health screening prior to each donation. Plasma is collected through a process known as plasmapheresis. During this process an automated device is used to separate the plasma from the blood. Once the plasma is collected red blood cells and other components will be returned to the donor. After plasma is collected it is tested for suitability for future manufacture, frozen and then held for 60 days prior to pooling.

A donor has to register to the website providing his details such as name, contact information (phone number and email id) along with donor's blood group and donor's plasma count. In this project the services used are AWS Lambda which will allow the users to run the code without managing or provisioning the servers, AWS API gateway is a fully managed service which makes it easy for a developer to create, publish monitor, secure, maintain APIs at any scale. It handles all the tasks which is involved in accepting and processing hundreds of Concurrent API calls along with traffic management, authentication, authorization and API version management.DynamoDB is a multi-master database used for storing

the data, Amazon SNS is a messaging service form system –to-system and app-to-person communication.

1.2 PURPOSE

This plasma therapy is an experimental approach to treat patients and help them recover. This plasma therapy is considered to be safe & promising. A person can donate his/her plasma to a person who is in need of plasma 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 recommended here for Plasma Donation. Both parties can Accept or Reject the request. User has to Upload details report to be able to Donate Plasma.

CHAPTER 2
LITERATURE SURVEY

2.1 REFERANCE

1. TITLE: **Developing a plasma donor application using Functions-as-as service in AWS**

AUTHORS: Aishwarya R Gowri, Jain University Department of MCA, computer science

 A plasma is a liquid portion of the blood, over 55% of human blood is Plasma isused to treat various infectious diseases an diction of the oldest methods known as plasma therapy. Plasma therapy is a process where blood is donated by recovered patients in order to establish antibodies that fight the infection.

In this project plasma donor application is being developed by using AWS services. The services use dare AWS Lambda, API gateway, DynamoDB, AWS Elastic Compute Cloud with the help of these

AWS services t eliminates hence do f configuring the servers and reduces the infrastructural costs associated with it and helps to achieve server less computing. Situations like f the donor count is very low, t is very important to get t information about the Plasma donors. Saving the donor information and notifying about the current donors would be a helping hand as it save time and help the users to track down the necessary information about the donors.

DRAWBACKS:

- Internet: It would require an active internet connection
- Auto-Verification: It cannot auto verify the genuine users.

2. TITLE: Enhanced Mobile Application development for Plasma, Mother's Milk and Blood Banks

AUTHORS: Dr.S.Brindha,Ms.D.Priya,Mr.S.AjithKannan,Mr.D.joy alVictor,Mr. R.Gunachandra

Covid-19 is currently spreading as a deadly disease and till today no medicine has been found for this disease.Alternatively, nowaday's plasma transplant surgery is also being performed rapidly.At this present time plasma banks are in short supply. Not only that ,but the number of plasma donors is low too.And some people do not know what plasma donation is and where to donate plasma. We have set up a system to all eviate this situation and help needy people to identify plasma donors and plasma banks. As the world grows in this modern age,only a few babies are born prematurely without the nutrients they need to grow. Mother's Milk provides the best nutrition for those babies after birth.But babies do not even get Mother's Milk properly.So those children get many more defects and become infected.We found a new son the social media site that a woman donated her Mother's Milk to help and rectify the situation. We have

setup a system to encourage that action and help them. Today mobile and mobile primarily based applications became a neighborhood of our day today life.

DRAWBACKS:

•Tedious work.

 •Expensive.

•Requires more manpower.

•TimeConsuming

3. TITLE: Instant Plasma Donor Recipient connector Webapplication

AUTHOR: Kalpana Devi Guntoju, Tejaswini Jalli, Sreeja Uppala, Sanjay Mallisetti.

 The world is suffering from the COVID19 crisis and no vaccine has been found yet. .But there is another scientific way in which we can help reduce mortality or help people affected by COVID19 by donating plasma from recovered patients. In the absence of an approved antiviral treatment plan for a fatal COVID19 infection, plasma therapy is an experimental approach to treat COVID19 - positive patient sand help them faster recovery. Therapy is considered competent. In their commendation system, the do nor who wants to donate plasma can donate by uploading their COVID19 certificate and the blood bank can see the donors who have uploaded the certificate and they can make a Request to the donor and the hospital can register/login and search for the necessary things. plasma from a

blood bank and they can request a blood bank and obtain plasma from the blood bank.

DRAWBACKS:
- It requires an active internet connection
- It cannot automatically verify the genuine users.

5. TITLE: Nearest Blood & Plasma Donor Finding: A Machine Learning Approach

AUTHORS : Nayan Das, MD. Asif Iqbal

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 how that   a t remendous 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 trans-fusions 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 has4/ 1,000,and   Bangladesh has 5/ 1000. Recently a life threatening virus, COVID- 19, spreaeding throughout the globe, which is more vulnerable for older people and those with pre- exiting 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 donor so the same group   in a particular area can be explored with hin less time and more efficiently

DRAWBACK:

- Internet connection is mandatory.

- Reports are not verified.

5. TITLE: Implementation of Blood Donation Application using Android Smart phone.

AUTHORS: Ms.Pradnya Jagtap ,Ms.Monika Mandale ,Ms. Pr achi Mhaske, Ms.
Sonali Vidhate,Mr . S. S. Patil.

Blood is an important constituent of human body. Timely availability of quality blood is a crucial requirement f or sustaining the healthcare services. In the hospital, in most of the cases, when blood is required, could not be provided on time causing unpleasant things. Though donor is available in the hospital, patient is unaware of it , and so is donor . To resolve this, a communication between hospital, blood bank, donor , and receptor is important. The system listed with following for ecasting on price variations and stock handling, increase in number of blood type, increase in human accident Infrastructure, blood on various category to be managed. So we solve the problem using the android application. The system will make sure that in case of need, the blood will be made available to the patient. There will be android app to make this communication faster. It aims to create an information about the donor and organization that are related to donating the blood. The methodology used to build this system uses GPS. The Proposed system will be used in Blood banks, Hospitals, f or Donor s and Requester whoever registers to the system.

DRAWBACKS:

- No search filter available.
- Cannot login through chrome.
- UI improvement in login page.

2.2 PROBLEM STATEMENT

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.
A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you

better understand how they perceive your product or service.

Reference: https://miro.com/templates/customer-problem-statement/ **Example:**

FIG1: PROBLEM STATEMENT

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	a Blood Donor	Donate blood	page takes more time to respond.	The network traffic was high.	Exasperated
PS-2	a User	search blood donor	page takes more time to display.	It has large amount of datasets.	Frustrated

CHAPTER 3
IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS:

Empathy maps are an efficient tool used by designers to not only understand user behaviour,but also visually communicate those findings to colleagues,uniting the team under one shared understanding of the user.Essentially,an empathy map is a square divided into four quadrants with the user or client in the middle.Each of the four quadrant comprises a category that helps us deive into the mind of the user.the four empathy map quadrants look at what the user says,thinks,feels and does.

With the user at the centre and the categories in each of the four surrounding quadrant ,an empathy map arranges all of your research about the user into an easy to read visual.
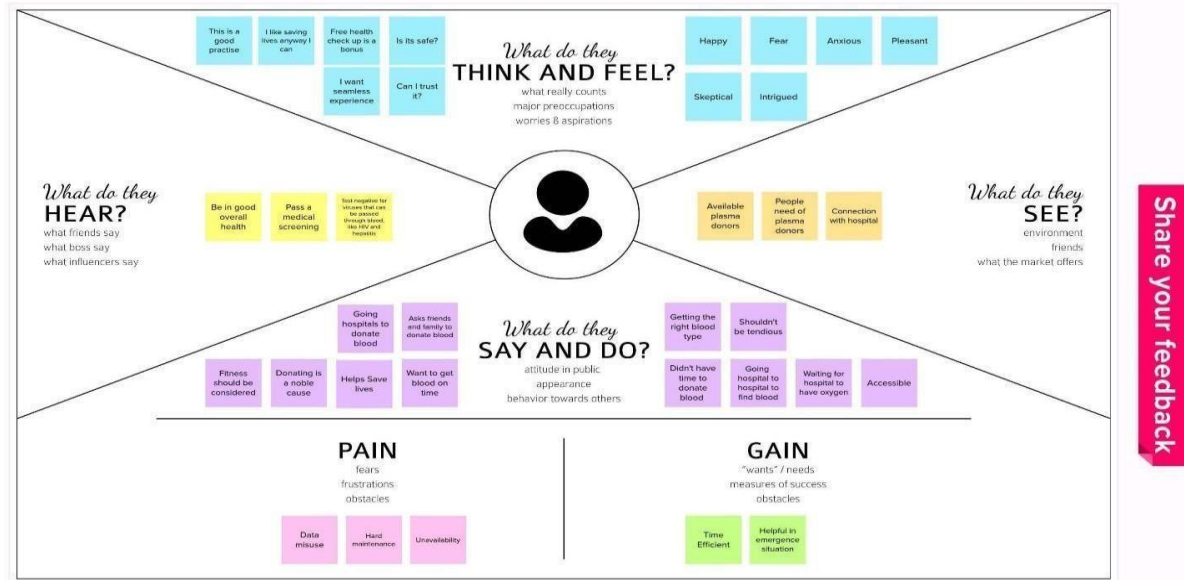
FIG2.EMPATHY MAP

3.2. IDEATION & BRAINSTORMING

Brainstorming is a method design teams use to generate ideas to solve clearly defined design problems. Brainstorming is a method of generating ideas and sharing knowledge to solve a particular commercial or technical problem, in which participants are encouraged to think without interruption. Brainstorming is a group activity where each participant shares their ideas as soon as they come to mind. At the conclusion of the session, ideas are categorised and ranked for follow-on action.

When planning a brainstorming session it is important to define clearly the topic to be addressed. A topic which is too specific can constrict thinking, while an ill-defined topic will not generate enough directly applicable ideas. The composition of the

brainstorming group is important too. It should include people linked directly with the subject as well as those who can contribute novel and unexpected ideas. It can comprise staff from inside or outside the organisation.

Step-1: Team Gathering,Collaboration and select the problem statement

Step-2: Brainstorm ,Idea Listing and Grouping

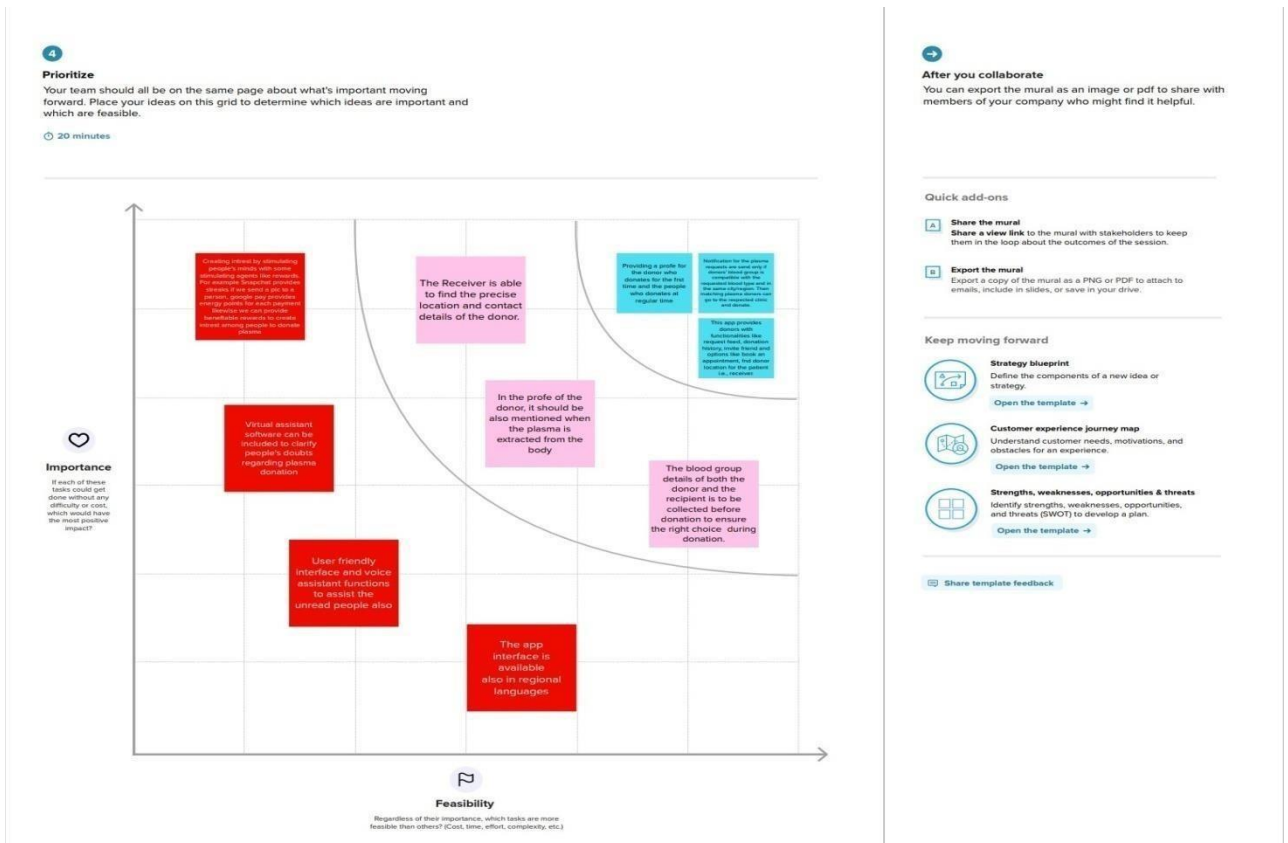Step-3: Idea Prioritization

FIG3: BRAINSTORM & IDEA PRIORITIZATION

3.2 PROPOSED SOLUTION:

Proposed Solution means the technical solution to be provided by the implementation agency in response to the requirements and the objectives of the project.

S.No.	Parameter	Description

1.	Problem Statement (Problem to be solved)	Many major medical conditions are treated by plasma. For this reason, blood drives are held to solicit donations of plasma and blood. One of the most well-known techniques known as plasma treatment, plasma is used to cure various incurable diseases. As there were no vaccines available to treat the infected patients during the Covid-19 emergency, the need for plasma increased dramatically. Plasma therapy had a high probability of recovery but a very low donor count, therefore it was crucial to learn more about the donors in these circumstances. It would be helpful to save the contributor information and let clients know about the recurring donors because it can help them find the crucial information more quickly.
2.	Idea / Solution description	This system's goal is to use an online application to link donors and patients. Users of this application may post requests for plasma donations or requests for services. The fundamental solution is to establish a centralised system to keep track of current and previous Plasma Donation Events. The recommendation solution is as follows: Application contains two roles: i)Admin ii)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.

		• If the user is donor then he/she will fill the donation interest form which includes their Name, blood group details, location, last time donated date , phone number, email id. After filling the donation form he/she will redirected to page in which he/she can download the ecertificate. • If the user is receiver then he/she can see the list of donors available and they can raise their request and contact donor directly
3.	Novelty / Uniqueness	Users can easily grasp a user interface. The application is available anytime, anywhere. The user can use this application to raise a request and directly contact the donor to ask them to donate the plasma if they urgently need it for their treatment but the plasma is not available in the nearby hospitals. Hospitals may also put out a call for donors. Someone who wishes to donate blood and plasma but is unsure how to do so uses this programme, which is easy to use and will help save many lives. Nowadays, a lot of them have smartphones on which they can download this programme and use it to save lives.
4.	Social Impact / Customer Satisfaction	Everything is accessible online because we live in a modern age. Despite the fact that there are numerous applications, there is no official form for donating plasma. Although many of them would like to donate blood and plasma, they are not aware of the process or how to contribute. The ability to give plasma is made available through this application. Plasma donations are being made everywhere, and although many people step forward to do so, the plasma is not always ready for use. There may occasionally be a shortage of a particular type of plasma. Prior to plasma transfusion, we require additional facilities that provide quick access to patient information. Software applications are used in conjunction with cloud computing and Internet of Things tools to address this problem and offer capabilities like information retrieval and ongoing data tracking with analytics. This programme prevents the spread of false information. a centralised location to save accurate information and boost participants' faith in the activity. It boosts the quantity of donors.

5.	Business Model (Revenue Model)	Everyone has access to this programme. This programme allows users to add people who want to donate plasma and store their data in a data set. It is free because it is difficult to identify donors who match a particular blood group. The need for plasma is rising today. Anyone with a basic understanding can use this software. This can be applied at any time, anywhere. Working with the government, we can develop a programme to assist people in need of plasma.
6.	Scalability of the Solution	Instead of scouring the entire world for plasma donors, this programme enables users to find donors while sitting at home. When there is an emergency, plasma requests that everyone sends a message. When a donor is prepared to donate, the recipient is informed. Receiver may get in touch with the donor. This software helps donors find potential donors quickly and easily by letting them know if they are eligible to donate

PROBLEM SOLUTION FIT:

Problem Solution Fit- this occurs when you have evidence that donor details are given ,At this stage you've proved the existence of a problem and have designed a value proposition that addresses donor information .
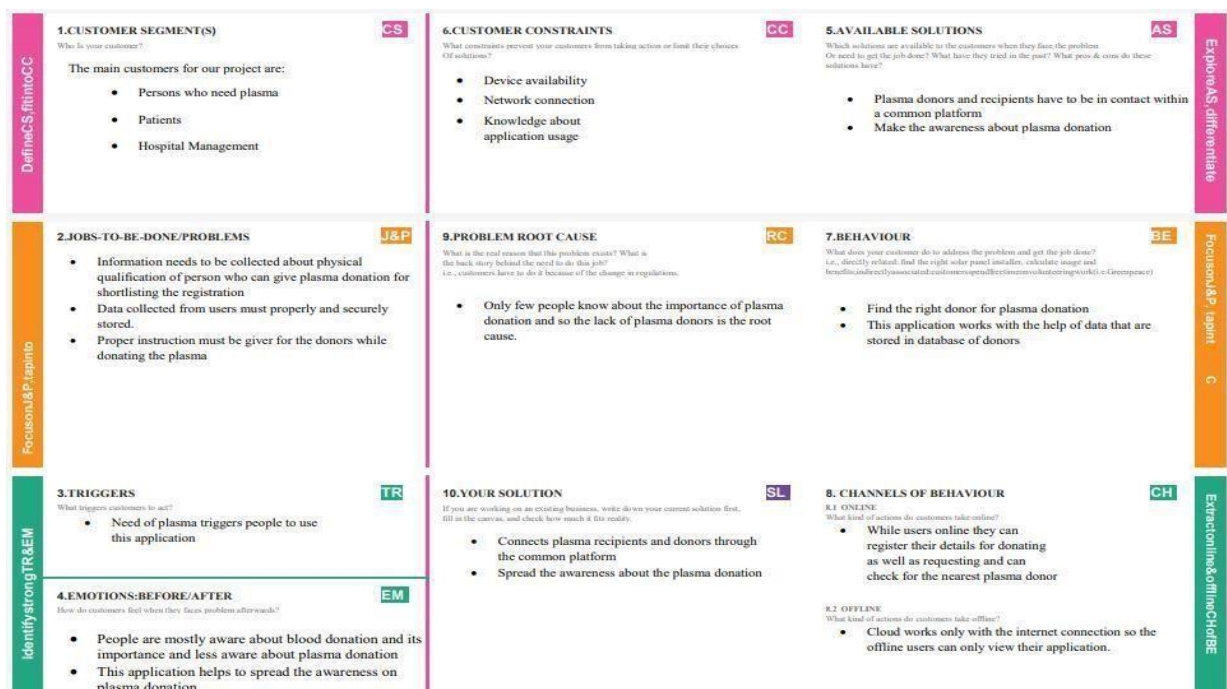

FIG4: PROBLEM SOLUTION FIT

CHAPTER 4

REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form (WebApp)
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Certification	After the donor donates plasma, we will give them a certificate of appreciation and authentication.
FR-4	Statistical data	The availability of plasma is given in the page as stats, which will be helpful for the users.
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	Searching/reporting requirements	Users can use the search bar to look up information about camps and other topics.

FR-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.

4.2 NON-FUNCTIONAL REQUIREMENTS:

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

| FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Must have a good looking User friendly interface.
NFR-2	**Security**	It must be secured with the proper username and password.
NFR-3	**Reliability**	The system should be made in such a way that it is reliable in its operations and for securing the sensitive details.
NFR-4	**Performance**	Users should have a proper Internet Connection.
NFR-5	**Availabilty**	By developing & deploying resilient hardware and beautiful software we empower cities,businesses,and countries to manage wasre smarter.
NFR-6	**Scalability**	Using Smart waste bins reduce the number of bins inside town,cities coz we able to monitor the garbage 24\7 more cost effect and scalability when we moves to smarter.

CHAPTER 5

PROJECT DESIGN

5.1 DATA FLOW DIAGRAM:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system .A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the

information, and where data is stored. In the Plasma donation activity diagram, we see two main methods of obtaining blood from a donor. The most frequent is simply taking the blood from a vein as whole blood. This blood is typically separated into parts, usually red blood cells and plasma since most recipients need only a specific component for transfusions. The activity diagram below shows that after login user can manage all the operations on Blood Cells, Stock, Blood, Donor, and Patient. These various objects interact throughout the Activity, and the user will not be able to access the page without first identifying their identity. As represented in the blood donation activity diagram below, an activity diagram is a behavioral diagram that depicts the behavior of any system. It should be noted here that an activity diagram describes business processes and uses cases to document the implementation of system processes.
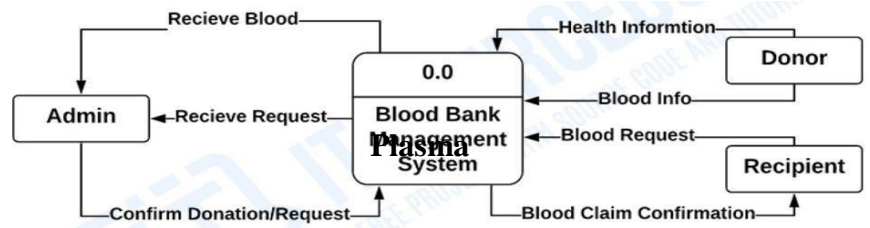
DATA FLOW DIAGRAM LEVEL 0
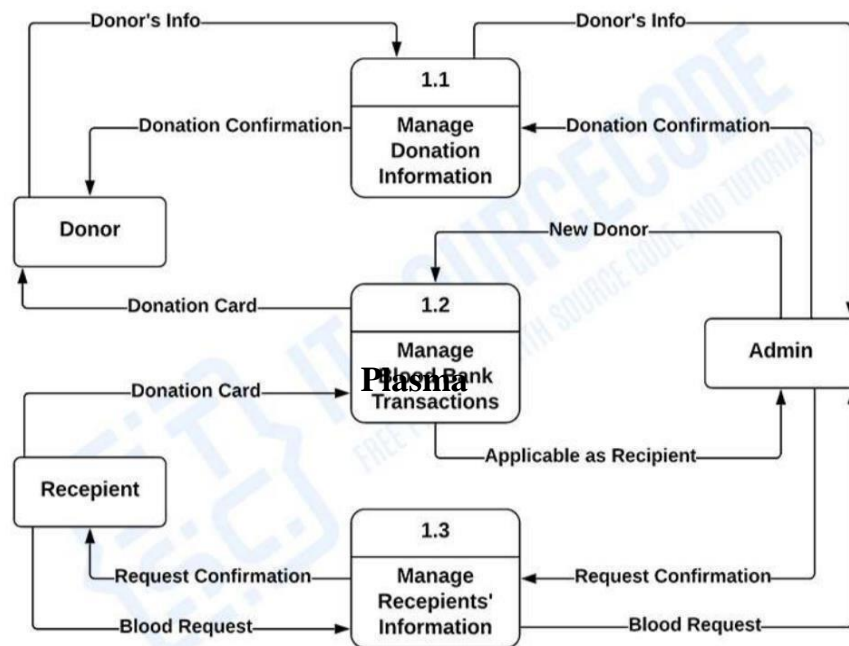
DATA FLOW DIAGRAM LEVEL 1
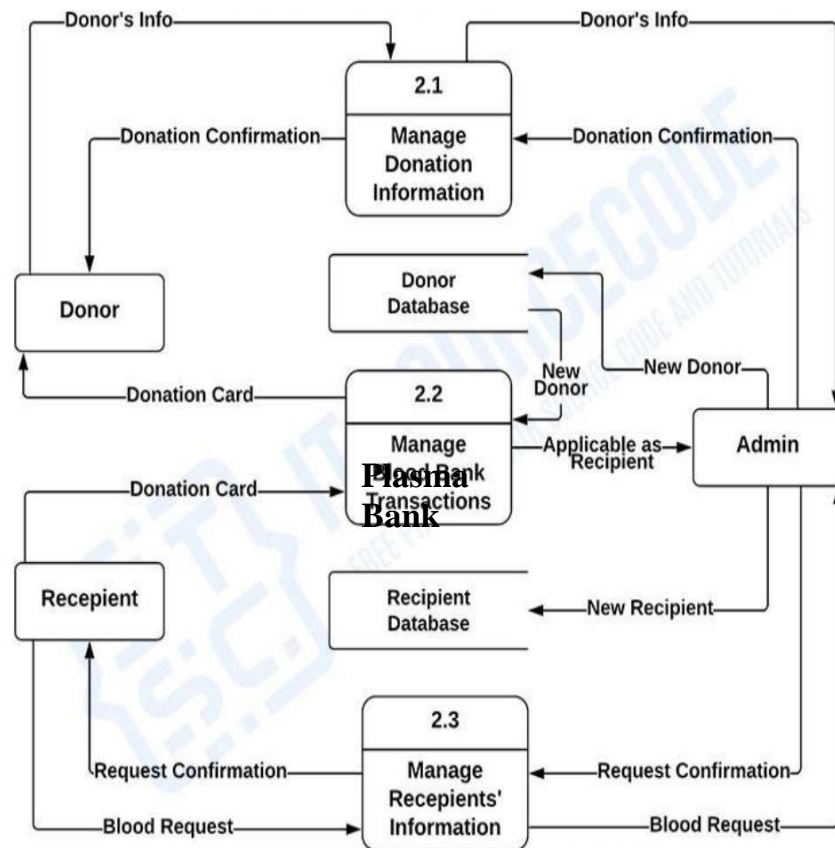
FIG5: DATA FLOW DIAGRAM

5.2 SOLUTION & TECHNOLOGY ARCHITECTURE

5.2.1 SOLUTION ARCHITECTURE

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions.
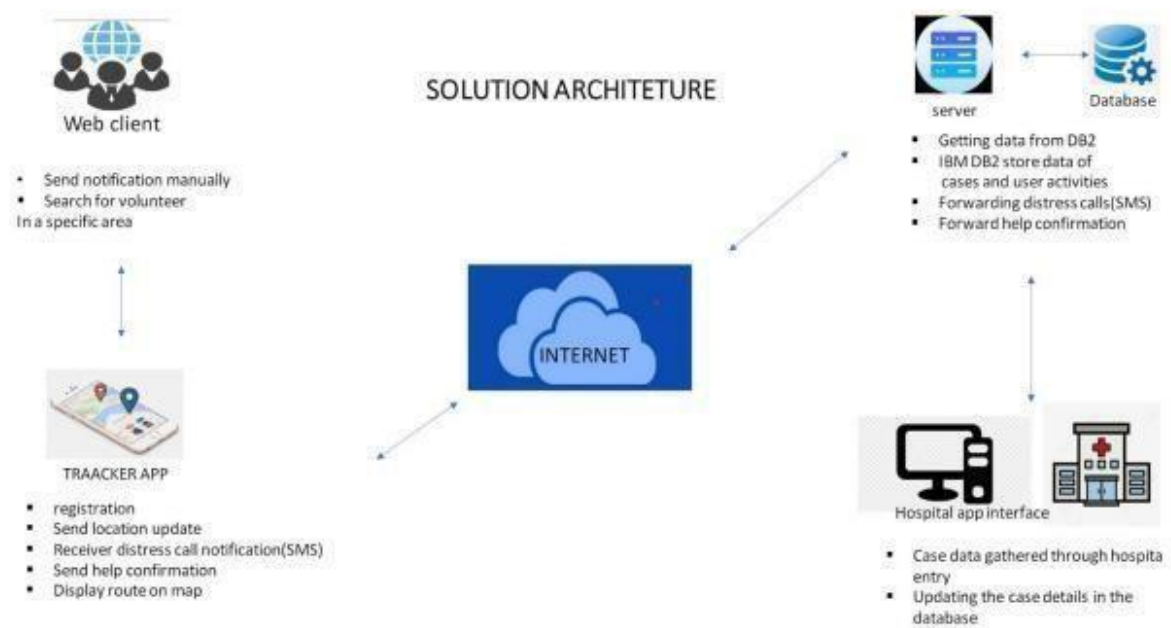
SOLUTION ARCHITETURE

Web client
- Send notification manually
- Search for volunteer
In a specific area

TRAACKER APP
- registration
- Send location update
- Receiver distress call notification(SMS)
- Send help confirmation
- Display route on map

INTERNET

server **Database**
- Getting data from DB2
- IBM DB2 store data of cases and user activities
- Forwarding distress calls(SMS)
- Forward help confirmation

Hospital app interface
- Case data gathered through hospita entry
- Updating the case details in the database

FIG 6:Architecture And Data Flow Of The Voice Patient Dairy
Sample Application

5.2.2 TECHNOLOGY ARCHITECTURE

Technical Architecture (TA) is a form of IT architecture that is used to design computer systems. It involves the development of a technical blueprint with regard to the arrangement, interaction, and interdependence of all elements so that system-relevant requirements are met.

- The user interacts with the application.

- Registers by giving the details as a donor.

- The database will have all the details and if a user posts a request   then the concerned blood group donors will get notified about it
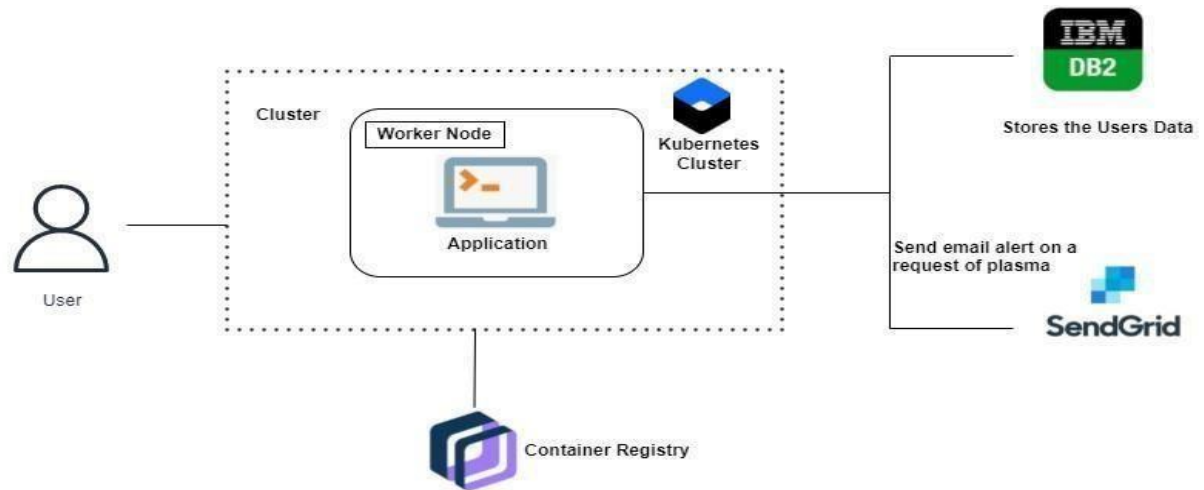
FIG 7: Technology Architecture Diagram

5.3 USER STORIES:

A User story is an informal, general explanation of a software feature written from the perspective of the end user. Its purpose is to articulate how a software feature will provide value to the customer .It's tempting to think that user stories are simply put software system requirements.

CHAPTER 6

PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint1	Registration	USN-1	As a donor, I can register for the application by entering my email /Phone number, password, and confirming my password.	4	High	Dharshana A S (Leader)
Sprint1	Login	USN-2	Registered donor can log into the application by entering donor email & password	3	High	Josemi M (Member 3)
Sprint-2	Verification	USN-3	As a donor, I can enter my details to check the donor eligibility criteria,	10	Medium	Mancy Ruba S (Member 2)
Sprint-3	Dashboard	USN-4	User can provide their personal details and location	7	Low	Dharshini S J (Member 1)

Sprint-4	Acceptance	USN-5	User can accept their willingness to donate plasma	10	Medium	Dharshana A.S(leader)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint1	Registration	USN-1	As a receiver, I can register for the application by entering my email /Phone number, password, and confirming my password	4	High	Josemi M (Member 3)
Sprint1	Login	USN-2	Registered receiver can log into the application by entering receiver email & password	3	High	MancyRuba S (Member 2)
Sprint2	Verification	USN-3	As a receiver, I can enter my details to check the receiver eligibility criteria	10	Medium	Dharshini S J (Member 1)
Sprint3	Dashboard	USN-4	User can search the list of available donor	7	Low	Dharshana A S (Leader)
Sprint4	Access	USN-5	User can access the available donors list ,then they can choose the donor who is nearby to receiver	10	Medium	Josemi M (Member 3)
Sprint1	Registration	USN-1	Third Party user can register for the application by entering my email /Phone number, password, and confirming my password.	3	High	Mancy Ruba S (Member 2)

Sprint-1	Login	USN-2	Registered user can log into the application by entering user email & password	3	High	Dharshini S J (Member 1)
Sprint-3	Query System	USN-3	User can ask their queries via Chabot which is available 24/7 to sort user issues	6	Medium	Dharshana A S (Leader)

6.2 SPRINT DELIVERY SCHEDUL.E:

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	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

CHAPTER 7

CODING & SOLUTION

Feature 1: Register_1.html
Feature 2: Register_2.html
Feature 3: login page.html
Feature 4: Dashboard page.html
Feature 5: Requset page.html

Code:
APP.py

```python
from __future__ import print_function
from flask import Flask,render_template,request,redirect,url_for,session
import ibm_db
import re

import time
import sib_api_v3_sdk
from sib_api_v3_sdk.rest import ApiException
from pprint import pprint

app=Flask(__name__)

app.secret_key='a'

print("plasma")

conn=
ibm_db.connect("DATABASE=;HOSTNAME=;PORT=;SECURITY=;SSLSeverCertificate=;UID=;PWD=",'
','')

configuration = sib_api_v3_sdk.Configuration()
configuration.api_key['api-key'] = ''
api_instance =
sib_api_v3_sdk.TransactionalEmailsApi(sib_api_v3_sdk.ApiClient(configuration))


sql ="select * from Count_Values"
stmt=ibm_db.exec_immediate(conn,sql)
ibm_db.fetch_row(stmt)

donor_count =ibm_db.result(stmt,0)
request_count = ibm_db.result(stmt,1)
```

```python
userid =''

@app.route('/')
def home():
    return render_template('Register_1.html')

@app.route('/request_page',methods=['GET','POST'])
def request_page():
    msg=''
    if request.method == 'POST':
        blood_type=request.form['blood_type']
        userid= session['USERNAME']
        insert_sql="select * from DONORS"
        mail_sql="select * from DONORS where USERNAME='%s'"%(userid)
        record=ibm_db.exec_immediate(conn,insert_sql)
        record2=ibm_db.exec_immediate(conn,mail_sql)
        ibm_db.fetch_row(record2)
        name_list =ibm_db.fetch_assoc(record)
        html_content = "<html><body><h1>Plasma Donation</h1><p><h2>%s blood was
request.<h2><br><h3>Contect info: <h3><br><h4>Email id:<h4>%s,<br><h4>Mobile
NO:<h4>%s,<br><h4>Address:<h4>%s.</p></body></html>"%(blood_type
,ibm_db.result(record2,1),ibm_db.result(record2,3),ibm_db.result(record2,5))
        while name_list != False:
            email=name_list["EMAIL"]
            name=name_list["USERNAME"]
            subject = "Hello "+name

            sender = {"name":"Plasma Donor Apllication","email":"Hello@gmail.com"}
            to = [{"email":email,"name":name}]
            cc = [{"email":email,"name":name}]
            bcc = [{"name":name,"email":email}]
            reply_to = {"email":email,"name":name}
            headers = {"Some-Custom-Name":"unique-id-1234"}
            params = {"parameter":"plasma donor application","subject":"plasma
donation"}
            send_smtp_email = sib_api_v3_sdk.SendSmtpEmail(to=to, bcc=bcc, cc=cc,
reply_to=reply_to, headers=headers, html_content=html_content, sender=sender,
subject=subject)

            print(name)
            try:
                api_response = api_instance.send_transac_email(send_smtp_email)
                pprint(api_response)
                msg="Request success"
            except ApiException as e:
                print("Exception when calling SMTPApi->send_transac_email: %s\n" % e)
            name_list =ibm_db.fetch_assoc(record)
        return render_template('login.html',msg=msg)
```

```python
@app.route('/dashboard',methods=['GET','POST'])
def dashboard():
    msg=''
    if request.method == 'POST':
        age=request.form['age']
        R_value = request.form['R_button']
        userid= session['USERNAME']
        insert_sql="update DONORS set AGE=?,STATUS=? where USERNAME=?"
        prep_stmt=ibm_db.prepare(conn,insert_sql)
        ibm_db.bind_param(prep_stmt,1,age)
        ibm_db.bind_param(prep_stmt,2,R_value)
        ibm_db.bind_param(prep_stmt,3,userid)

        if R_value == "donor":
            if age >= '17' and age <= '60':
                ibm_db.execute(prep_stmt)
                return render_template('Request.html')

            else:
                msg='Your not eligible for plasma donoation!'
                return
render_template('dashboard.html',msg=msg,donor_count=donor_count,request_count=request_count)
        ibm_db.execute(prep_stmt)
        return render_template('Request.html')

@app.route('/login',methods=['GET','POST'])
def login():
    global userid
    msg=''

    if request.method == 'POST':
        email=request.form['email']
        password=request.form['password']
        sql="SELECT * FROM DONORS WHERE EMAIL=? AND PASSWORD=?"
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,email)
        ibm_db.bind_param(stmt,2,password)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            session['loggedin'] = True
            session['id']=account['USERNAME']
            userid= account['USERNAME']
            session['USERNAME'] =account['USERNAME']
            msg = 'Logged in successfully!'
```

```python
            return
render_template('dashboard.html',msg=msg,donor_count=donor_count,request_count=reques
t_count)
        else:
            msg='Incorrect username/password!'
    return render_template('login.html',msg=msg)

@app.route('/R_page',methods=['GET','POST'])
def R_page():
    return render_template('Register_1.html')

@app.route('/L_page',methods=['GET','POST'])
def L_page():
    return render_template('login.html')

@app.route('/Logout_page',methods=['GET','POST'])
def Logout_page():
    session['loggedin'] = False
    session['id']= ""
    userid= ""
    session['USERNAME'] = ""
    return render_template('login.html')

@app.route('/register',methods=['GET','POST'])
def register():
    global userid
    msg=''
    if request.method == 'POST':
        username= request.form['username']
        email=request.form['email']
        password= request.form['password']
        sql="SELECT * FROM DONORS WHERE USERNAME=?"
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,username)
        ibm_db.execute(stmt)
        account=ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            msg= 'Account already exists!'
        elif not re.match(r'[^@]+@[^@]+\.[^@]+',email):
            msg='Invalid email'
        elif not re.match(r'[A-Za-z0-9]+',username):
            msg='name must contain only alpha characters or numbers!'
        else:
            insert_sql="INSERT INTO DONORS(USERNAME,EMAIL,PASSWORD)VALUES(?,?,?)"
            prep_stmt=ibm_db.prepare(conn,insert_sql)
            ibm_db.bind_param(prep_stmt,1,username)
            ibm_db.bind_param(prep_stmt,2,email)
            ibm_db.bind_param(prep_stmt, 3,password)
```

```python
            ibm_db.execute(prep_stmt)

            session['USERNAME'] =username
            msg='you have successfully registered!'
    elif request.method == 'POST':
        msg= "Please fill out the form"
    print(msg)
    return render_template( 'Register_2.html', msg=msg,userid=username)

@app.route('/secondregister',methods=['GET','POST'])
def secondregister():
    global userid
    msg=''
    if request.method == 'POST':
        address= request.form['address']
        phone=request.form['phone']
        blood_type= request.form['blood_type']
        userid= session['USERNAME']

        insert_sql="update DONORS set ADDRESS=?,MOBILE_NO=?,BLOOD_TYPE=? where
USERNAME=?"
        prep_stmt=ibm_db.prepare(conn,insert_sql)
        ibm_db.bind_param(prep_stmt,1,address)
        ibm_db.bind_param(prep_stmt,2,phone)
        ibm_db.bind_param(prep_stmt,3,blood_type)
        ibm_db.bind_param(prep_stmt,4,userid)
        ibm_db.execute(prep_stmt)
        msg='you have successfully registered!'
    else:
        msg= "Please fill out the form"
    print(msg)
    return render_template( 'login.html',
msg=msg,donor_count=donor_count,request_count=request_count)

if __name__ == "__main__":
    app.run(host ='0.0.0.0',port = 5001, debug = True)
```

CHAPTER 8
TESTING

- ➢ Regester page
- ➢ Login page
- ➢ Dashboard
- ➢ Requset

CHAPTER 9

Result

Register_1.html

Register_2.html
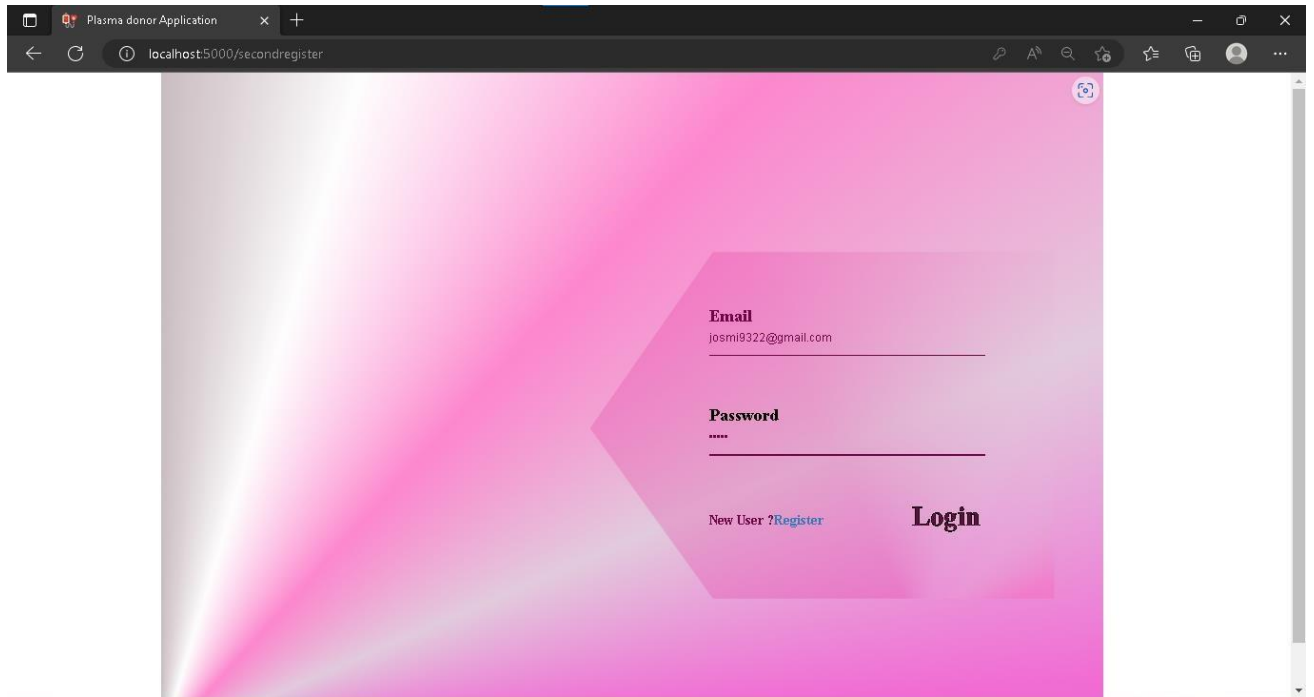
Login.html
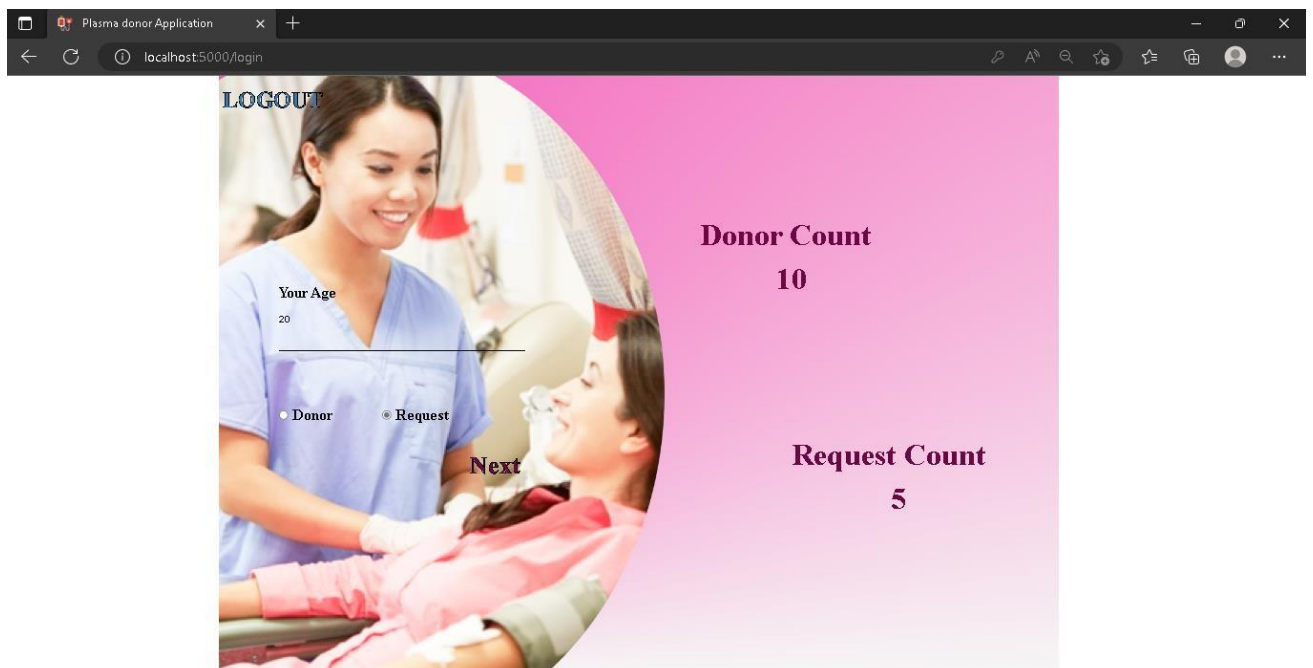
Dashboard.html

Request.html

Database screen

CHAPTER 10

ADVANTAGES & DISADVANTAGES

ADVANTAGES:-

Whenever an individual has a cut or injury, these clotting factors ensure that they do not lose too much blood. Plasma donations ensure that these individuals can receive a plasma transfusion to supplement their body's clotting ability and stop excessive bleeding from occurring. Some of the advantages of the application include

• It is a user-friendly application.

• It will help people to find plasma easily.

• App already filters the Active Members.

• Here a User can be a giver as well as a borrower.

DISADVANTAGES:-

• Wrong inputs will affect the project outputs.

• It cannot auto verify user genuineness.

• Internet Connection is mandatory..

CHAPTER 11

CONCLUSION

Plasma donor satisfaction varies among demographic and donation history subgroups and is positively correlated with the intent to return for future donation. Although the primary motivation among all donors was altruism, incentives to future donation may need to be tailored according to demographic subgroups.

Blood centers are challenged to maintain an adequate Plasma inventory in the face of increasing plasma utilization. A survey of 1735 blood centers (131) and hospitals (1604) in the United States showed that blood collection per thousand US population of donor age (18– 65 years) was 85.6 in 2004 compared to 88.0 in 2001. This was a decrease of 2.7 percent from the 2001 rate. The number of whole blood (WB) and red blood cells (RBCs) transfused in 2004 totaled 14,182,000 units, a small but not significant increase over 2001 totals. During this time, blood centers were responsible for the collection of 14,305,000 WB and/or RBC units or 93.6 percent of the supply; hospitals collected 983,000 WB and/or RBC units or 6.4 percent of the total.1

More complex and advanced therapeutic treatments in the fields of surgery and hematology and oncology have led to increasing blood and plasma utilization. For example, according to the OPTN/UNOS Registry, the number of lung and liver transplants has been increasing from 1990 to 2005.2,3 In addition, 20,000 hematopoietic stem cell transplants are performed annually in the United States.4 This increased demand in the surgical and medical subspecialty arenas spurred the development of better blood collection technology (e.g., automated technology to collect multiple platelet [PLT] units, double RBCs, and plasmaRBCs) in recent years.

CHAPTER 12

FUTURE SCOPE

Over the past two decades, more complex infectious disease testing and donor deferral and enhanced regulatory scrutiny has distracted blood centers from customer service to detailed documentation of the entire process. In addition to this redirected energy, enhanced market competition and cost cutting may have diverted resources from donor recruitment and retention.[5] The development of robust recruitment and retention efforts is now more important than ever before. In the past several years blood centers have revisited and refocused their efforts in enhancing recruitment strategies in order to increase the number of new donors while retaining the current donors.

Satisfaction with the blood donation process has been evaluated by others[6,7] as an important factor in recruitment and retention programs. We are unaware, however, of studies examining blood and plasma donor satisfaction and motivation concurrently at the time of donation. To better understand how donors perceive satisfaction with a donation experience and increase understanding of motivational factors, we studied first-time and repeat blood and plasma donors with a brief anonymous survey administered during the donation process.

CHAPTER 13

APPENDIX

GitHub :

GitHub Link: https://github.com/IBM-EPBL/IBM-Project-46623-1660751948