

ANNAI TERESA COLLEGE OF ENGINEERING

THIRUNAVALUR-607 204



PROJECT REPORT

DOMAIN: CLOUD APPLICATION DEVELOPMENT

PLASMA DONOR APPLICATION

SUBMITTED BY

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1. INTRODUCTION

1.1 Project Overview

Traditionally, in order to find a plasma patient, one should look at hospital records and contacting donors who have been recovered. Unfortunately, sometimes those people may not be available at home or would have relocated. In this situation, it is difficult to find the required person in case of emergency requirement. If we consider the recent Covid19 calamity, it is required to find donors as early as possible. In this project, such a solution is presented. As the backup system is weak, this method is not considered as a rapid process to find plasma. The solution presented in this project will help the persons who want to donate plasma to upload their Covid19 traced certificate and can donate the plasma to the blood bank. On the other hand, the blood bank can invite for the donor and once the donor has accepted the request, the blood bank can add the units they required. At the same time, 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.

In this project, on receipt of the plasma from the donor, the blood bank verifies the donor's certificate and can make a request to the donor. If the donor accepts the request, they can add the required number of units. The hospital can send a request to the blood bank that needs the patient's emergency plasma and to get the plasma from the blood bank.

Following is the sequence of events that will happen during the function of this application.

1. On giving the URL to run the application, the system will ask for login details.
2. A new user needs to register for this and an old user can use the same credentials.
3. The blood bank Admin can view the existing and valid donor details and can make request to specific donors.
4. Donors also can view these requests from their login, and on the acceptance of any request, the blood bank checks the status of this request.
5. The status will change as "pending" or "approved" based on the acceptance and rejection of the request by the donor.
6. The blood bank acts as an interface between the hospital and the donor, and there is no direct communication between the donor and the hospital.

1.2 Purpose

The main objective of this application is to design an user-friendly web application. This application tries to 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. It should be noted that plasma therapy is an experimental approach to treat these Covid19-positive patients and help them recover faster. This therapy is considered reliable and safe. If a particular person has fully recovered from Covid19, they are eligible to donate their plasma.

2. LITERATURE SURVEY

2.1 Existing System

During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. Traditionally, in order to find a plasma patient, one should look at hospital records and contacting donors who have been recovered. Unfortunately, sometimes those people may not be available at home or would have relocated. As the backup system is weak, this method is not considered as a rapid process to find plasma. In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request.

Cloud computing is nothing but internet-based computing which made revolution in today's world. It is the biggest innovation which uses advanced computational power and improves data sharing and data storing capabilities. Cloud is a large group of interconnected computers, which is a major change in how we store information and run application. Cloud computing is a shared pool of configurable computing resources, on demand network access and provisioned by the service provider. The advantage of cloud is cost savings. The prime disadvantage is security. The cloud computing security contains to a set of policies, technology controls deployed to protect data, application the associated infrastructure of cloud computing.

Blood Donation System is an android based system that is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and helps them to manage in a better way. Aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle free and corruption free and make the system of blood bank management effective.

The following technology have been used:

- Frontend: HTML, CSS, React.JS
- Backend: NodeJS, Express.Js
- Database: IBM DB2

The following are this project's objectives:

- To provide a common platform for Plasma, Mother's milk and Blood Donors, Recipients and Health care system.
- To track the location of Donors using Maps and Send quick messages via short message service.
- To advertise and effectively manage Blood/Plasma/Mother's milk camps, To provide scalability and ensure security
- To provide health tips and guidelines about PMB donation.

The planned system consists of the subsequent modules: Admin Module, PMB Bank Module, Donor Module, Recipient Module.

This project is based on Android OS version 6.0+ developed in Android Studio, which enables developers to create high quality applications for Android devices. It is an Android application that uses the Firebase & 000webhost.blogs (web cloud) real-time database to quickly and efficiently search, collect and sort data for each Plasma, mother's milk and blood donor and users.

2.2 References

1) In year 2021, "A Systematic Review & Design of Web-Based Blood Management System".

AUTHORS: Gokul Dudani, Tanushree, Kajal Singh, Anushka Singh Chauhan.

Blood is a fluid that carries oxygen and is a connective tissue that carries other substances because of its volume. Now that we understand the importance of blood, we see that it not only carries oxygen to the tissues but also clears the air between them through the heart and blood vessels. The average volume of blood donation is 470ml per person, which is only 8% of the adult volume. When blood is needed in a hospital, it is usually not available in time, leading to inconsistencies. Both patients and sponsors are unaware that the donor is being hospitalized due to a lack of communication and other services.

A system like this is needed to close the communication gap between hospitals, blood banks, donors, and receptors. The main purpose of a web-based blood donation program is to ensure compliance with blood stock. In today's system, first and foremost the hand system, and when a person needs a blood type and that type is not available in that blood bank, it takes time to process blood from another blood bank, which may adversely affect the patient's health because time is critical in emergencies. Therefore, a web-based blood donation system is a good place to monitor whether a particular type of blood is available in a stock or not, as well as to provide a place where blood can be accessed.

2) In year 2021, "Web Based Online Blood Donation System".

AUTHORS: R. Kumar, R. Kumar and M. Tyagi.

This paper depicts a high level program to close the hole between blood givers and individuals needing blood. The online blood donation administration framework application is an approach to synchronize blood donation centers with emergency clinics with the assistance of the web. It is a web application where enlisted clinics can check the accessibility of the necessary blood and can send a blood solicitation to the closest blood donation center or comparable contributor as per the blood and can be controlled online through where fundamental. Blood donation center can likewise send a solicitation to another blood donation centers that isn't accessible. Anybody willing to give blood can be found at the closest blood donation center utilizing the android bank the executive framework. Blood donation center can be followed utilizing maps. The android application is simply accessible to benefactors to look for blood gifts and ask blood donation centers and clinics to search out blood donation center and close by givers.

3) In year 2020, "Towards an Efficient and Secure Blood Bank Management System".

AUTHORS: P.A.J. Sandaruwan, U.D.L. Dolapihilla, D.W.N.R. Karunathilaka; W.A.D.T.L. Wijayaweera, W.H. Rankoth.

A blood bank plays an important role in a hospital as well as in a country, ensuring safe and timely blood transfusions. However, there are several challenges faced by blood banks around the world, specifically when securing the blood supply chain. Reducing the supply-demand imbalance, protecting the data privacy of donors as well as receivers, are some of them. Therefore, there is a timely requirement for an effective and secure management system for the blood bank.

We have proposed a management platform for the blood bank operations with the following modules: (1) forecast blood demand, (2) suggest blood donation campaign locations and (3) secure blood supply chain. The proposed platform has been implemented using techniques such as Long Short-Term Memory (LSTM), k-means clustering, Geographic Information Systems (GIS), and block chain. Our results show that using our proposed modules, we can minimize the imbalance between supply and demand of blood, find the most suitable donor in an emergency, and enhance the privacy of data.

4) In year 2018, “Automated blood bank system using Raspberry PI”.

AUTHORS: Ashlesha C. Adsul, V. K. Bhosale, R. M. Autee .

“Raspberry pi based blood bank system” proposed to bring blood donors to the one place. The aim of this system is fulfil every blood request by using android application and raspberry pi. In the proposed system, data about the donors will be collected by using android application and raspberry pi by installing systems at places such as hospitals, blood banks etc. These data will be stored in the database. User/Patients needs to access application and needs to enter his requirements about the blood in the application the requirements are matched with the database and message will be to that particular blood donor through GSM modem.

5) In year 2016, “Short message service (SMS) based blood bank”.

AUTHORS: G. Muddu Krishna & S. Nagaraju.

They proposed a system in which services of blood bank will be accessed via SMS. If someone needed blood then they have to request for blood via SMS and then packet count module of their system will check for availability of blood and response will be given by data processing module.

6) In year 2015, A Health-IOT Platform Based on the Integration of Intelligent Packaging, Unobtrusive Bio-Sensor and Intelligent Medicine Box.

AUTHORS: Geng Yang, Li Xie, Matti Mantysalo, Xiaolin Zhou, Zhibo Pang, Li Da Xu, Sharon Kao-Walter, Qiang Chen, Lirong Zheng.

In this paper, an intelligent home-based healthcare platform is proposed and implemented. It involves iMedBox with connectivity, iMedPack with communication capability enabled by RFID, Bio-Patch and SOC. It fuses with IOT. The body-worn Bio-Patch can detect and transmit the user bio-signals to the iMedBox in real time. The only limitations are, comprehensive platform missing. And the Physical size, rigid nature and short battery become limitation for long term use.

7) In 2015, Mobile Based Healthcare Management using Artificial Intelligence.

AUTHORS: Amiya Kumar Tripathy, Rebeck Carvalho, Keshav Pawaskar, Suraj Yadav, Vijay Yadav.

In this paper, the health-care management system is proposed which will consist of mobile based heart rate measurement so that the data can be transferred and diagnosis based on heart rate can be provided quickly with a click of button. The system will consist of video conferencing to connect remotely with doctor. The system will also consist of Doc-Bot and an online Blood Bank. In this implemented project, heart rate calculation differs from actual one due to noise present in input signal. So the performance is not efficient in practical. Methodology used Clustering, Text Mining, Pattern Matching, Support Vector Machine, Partitioning Algorithm and DonorHART tool used in collecting donor reaction information. Limitations are Difficulty in handling emergency situation and No proper security for personal details misuse.

8) In 2012, “Automated online blood bank database”.

AUTHORS: Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul.

They come up with direct call routing technique by using asterisk. In this every blood bank consist of a database and that will be managed by central server. When someone in need of blood call on their toll free number. They will directly get connected to a donor and after receiving blood from that donor name of that donor will be kept on hold for 8 weeks.

9) The “Benefits of management information system in blood bank”.

AUTHORS: Dr. Sharad Maheshwari and Vikas Kulshreshtha.

They discusses about the beneficiaries of the blood bank management information system. They show advantages and benefits of these systems.

10 The “MBB: A life saving application”.

AUTHORS: Ramakant Gawande, Narendra Gupta, Nikhil Thengadi.

They come up with a system to link all donors and help in controlling blood transfusion process. Their system will also maintain database which hold data of donors and blood according to their city and further by their locality. they have proposed a machine so that it will hyperlink all donors. The machine will help to control the blood transfusion service and create a database to maintain records on shares of blood in every place as records on donors in every city. Moreover, human beings will be capable of see which sufferers want blood components thru the application. They will be able to check in as donors and as a result acquire a request from their nearby customers who desires blood to donate blood in instances of want.

11) In year 2016 “Blood donation and life saver: blood donation app”.

AUTHORS: Anish Hamlin M R, Albert Mayan J.

They introduced a system where when someone wants blood, they login into their app and by GIS they can get details of nearby blood donors. They also can donate blood by registering themselves. Blood” one of the most important necessities of our life. The numbers of blood donor are 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 enters 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 accepts the request, then a onetime password (OTP) will be send to the donor to verify. Blood donation app provider list of donors in your city/area. Once the donor donates the blood it will automatically remove the donor detail for next three months.

12) The “Android blood bank”.

AUTHORS: Snigdha, Pratiksha Lokhande, Siddhi Kesar and Pranita.

The android app in which updates information about donor’s time to time and also it shows all the blood banks near to user location. In this admin controls and have all information of the app. The android software which well time updates the records concerning donors where the admin accesses the entire records approximately blood financial institution control system. The app presents a listing of blood banks relying upon the user’s location.

13) The “A study on blood bank management system”.

AUTHORS: A. Clemen Teena, k. Sankar, S. Kannan.

They made a system through which they can manage information about donors and patients. So that whenever blood is needed they can use this information as blood bank authorized officers have access to this information.

2.3 Problem Statement Definition

Customer Problem Statement Template:

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.

I am	Describe customer with 3-4 key characteristics - who are they?	Describe the customer and their attributes here
I'm trying to	List their outcome or "job" the care about - what are they trying to achieve?	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way - what bothers them most?	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists - what needs to be solved?	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view - how does it impact them emotionally?	Describe the emotions the result from experiencing the problems or barriers

Reference: **Example:**

I am	I'm trying to	But	Because	Which makes me feel
a donor	donate my blood	i not able to sure about this	this is for first time i donate a blood	so i feel very desire and fear.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Donors	When The blood donation event schedule is normally advertised to the public.	I am did not known this event.	So that they are not aware of the blood donation campaign period.	The public did not have knowledge about blood donation.

PS-2	Public	The public are not getting any details information about blood donation unless they go to the blood donation house.	There are brochures distributed to the Donors, the schedule of the month is using whiteboard and it is written by using whiteboard marker.	These details can be viewed by the public so that they know and they can allocate some time to go and donate their blood	By giving awareness to the public, this will Increases volunteers to donate their blood.
PS-3	Women	Without Fear/Uncomfortable about donating blood.	But I am not control me that time.	The color of the bloods makes me an unconscious.	So, I am trying to not present in this type of places.
PS-4	Donors	Good quality care of donation center.	Most of the donating center was not working properly.	The maintenance of the blood center is not sure.	So, i fear as any side effects or any type of infection is come to me.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

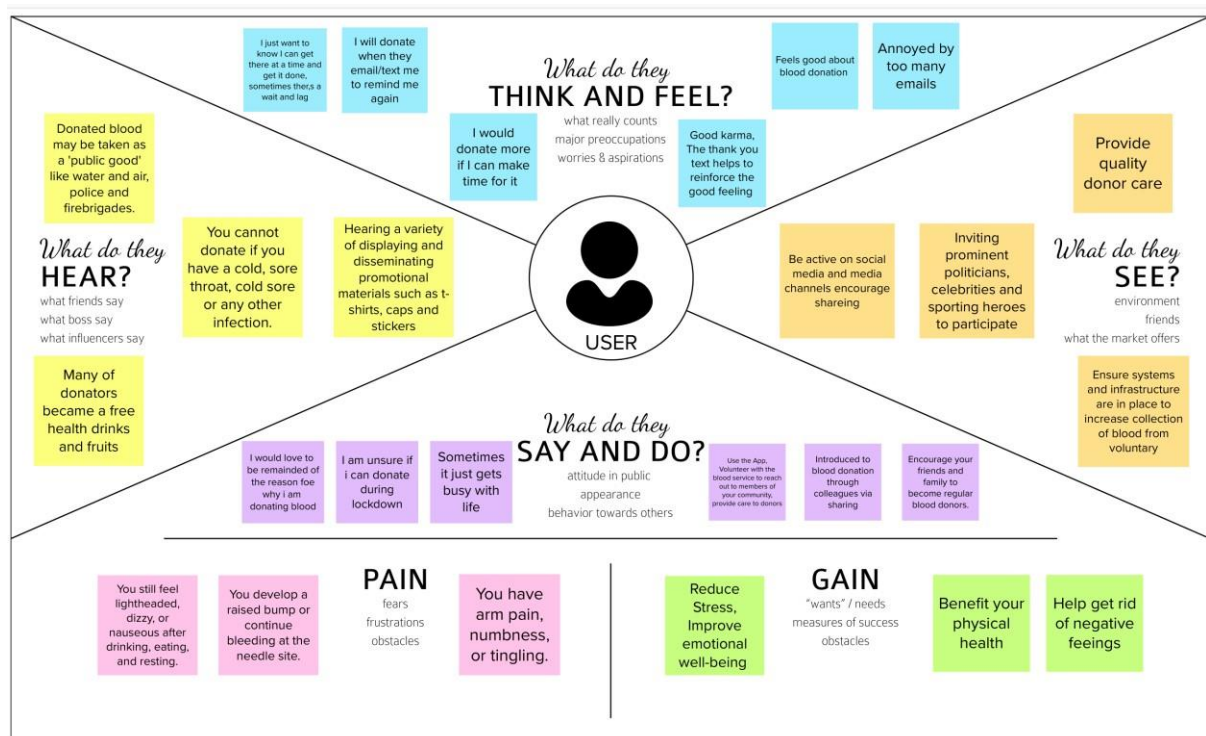
Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes.

It is a useful tool to help teams better understand their users.

Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Plasma Donor Application



3.2 Ideation & Brainstorming


Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

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

Template



Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

⌚ 10 minutes to prepare
🕒 1 hour to collaborate
👥 2-8 people recommended

[Share template feedback](#)

Before you collaborate
A little bit of preparation goes a long way with this session. Here's what you need to do to get going.
⌚ 10 minutes

A Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.


C Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.
[Open article](#) →

1 Define your problem statement
What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.
⌚ 5 minutes

Produce
How to increase a usage of blood bank system in between Peoples?

Key rules of brainstorming
To run an smooth and productive session

- 🗣️ Stay in topic.
- 💡 Encourage wild ideas.
- 👂 Defer judgment.
- 👂 Listen to others.
- 🗣️ Go for volume.
- 👁️ If possible, be visual.



Need some inspiration?
See a limited version of this template to kickstart your work.
[Open example](#) →

Step-2: Brainstorm, Idea Listing and Grouping

2

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

10 minutes

Tip

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

Jayakumar

List the availability of blood bags at any given time.

Search based on Component ID, Donor Registration ID, Donor Blood Bag Number and Donor Name.

Auto-check if the person donated blood in the last 3 months.

Ensures hospitals have good supply or inventories of blood bags.

Blood Camp Management and Reporting

Ability to manage the information of its blood donor.

Blood Issue and Billing.

Alerts for blood requirement from registered donors.

Ram prakash

Availability of location-based blood bank details and extraction of location-based donor's detail

A little token or reward to blood donors

Educate the donors on the whole process of blood donation

Patient Management System.

Advice on the foods and drinks to take to boost strength and blood

Light refreshments for donors after donating blood

Creating awareness through campaigns in church, social media, etc.

Set up systems for the oversight on the whole chain of blood transfusion

Balaji

24 x 7 system provides services to the hospitals and other users.

A Quick video on the whole process.

Blogs/ Messages From other donors and health practitioners.

Reminders and notifications on day and location on campaigns.

A daily reminder of the blood donor and drinks to take to boost strength for a week after donation.

The share link option

Request for blood at Subsidized discount

Appreciation screens and postes on the social media page

Arsakumaran

Product oriented data input.

Inventory control reports.

Product utilization reports

Rapid retrieval of individual patient reports

Licensing Policy and Legal framework.

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 can break it up into smaller sub-groups.

20 minutes

Tip

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

List the availability of blood bags at any given time.

Search based on Component ID, Donor Registration ID, Donor Blood Bag Number and Donor Name.

Ensures hospitals have good supply or inventories of blood bags.

Blood Camp Management and Reporting

Ability to manage the information of its blood donor.

Blood Issue and Billing.

Alerts for blood requirement from registered donors.

Educate the donors on the whole process of blood donation

Patient Management System.

Light refreshments for donors after donating blood

Creating awareness through campaigns in church, social media, etc.

24 x 7 system provides services to the hospitals and other users.

Blogs/ Messages From other donors and health practitioners.

Reminders and notifications on day and location on campaigns.

A daily reminder of the blood donor and drinks to take to boost strength for a week after donation.

The share link option

Request for blood at Subsidized discount

Appreciation screens and postes on the social media page

Product oriented data input.

Inventory control reports.

Product utilization reports

Rapid retrieval of individual patient reports

Licensing Policy and Legal framework.

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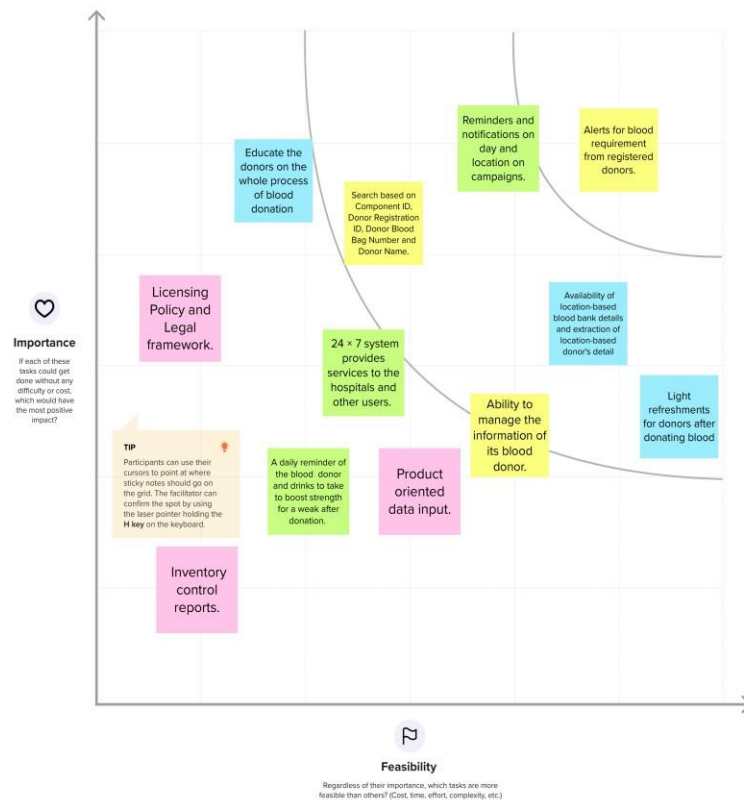
Step-3: Idea Prioritization

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

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 create an application for Plasma is a critical part of the treatment for many serious health problems. This is why there are blood drives asking people to donate blood plasma. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. People who want to donate their plasma for the people who need it mostly in times of emergency.
2.	Idea / Solution description	In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request. In This way, the one who in need in plasma can able to make a request, then the application can able to read the information of donors that are stored in database and informing up the donors regarding that request.
3.	Novelty / Uniqueness	This application can able to perform certain functionality and possess certain feature which are unique. Those are listed below: <ul style="list-style-type: none">● 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 via registered email.● A chat-bot to answer frequently asked question about plasma donation.
4.	Social Impact / Customer Satisfaction	By using the application one can easily able to find the donor at emergency situations and the one who willing to donate their plasma can easily be connected with the needy. Since this process takes place continuously, we can build a healthy society of tomorrow. The application is user friendly and anyone with basic knowledge can access it.

5.	Business Model (Revenue Model)	We can provide some additional medical services in order to generate some revenue. Medical services like blood test, medical record management, medical transportation service and some other health care service.
6.	Scalability of the Solution	Since the whole application is developed based on micro-services architecture, the scalability of the application is made easy. The application can able scale as the users grow and handle the traffic at any situations. This app is going to store its data in cloud, it will continue to be efficient when large number of people uses it. Also when the number of requests for plasma increases, the mail notification system will work fine without any disruption.

3.4 Problem Solution fit

Problem-Solution fit canvas 2.0

Plasma Donor Application

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS <small>Who is your customer? i.e. working parents of 0-5 y.o. kids</small> <p>Donors who wants to donate their plasma. Hospitals and Seekers or needy who are in the need of plasma.</p>	6. CUSTOMER CONSTRAINTS CC <small>What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.</small> <p>Easy finding of donors. Availability of plasma types information at any time. Donor health condition. Donors within their nearest location. Regular Internet connection.</p>	5. AVAILABLE SOLUTIONS AS <small>Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking</small> <p>The existing application used only collecting details of donors but it does not notify them at the right time. Our solution is building a website that notifies the donors at the right time.</p>	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small> <p>Helps the needy or plasma seeker to find the donors available to their nearest location. Provide a platform to volunteer donors to help the needy. Lack of information about the donors. The details of donors to be maintained properly.</p>	9. PROBLEM ROOT CAUSE RC <small>What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.</small> <p>Plasma is a critical part of the treatment for many serious health problems. This is why there are blood drives asking people to donate blood plasma. Saving the donor information and helping the needy by notifying the current donors list. People who want to donate their plasma for the people who need it mostly in times of emergency.</p>	7. BEHAVIOUR BE <small>What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)</small> <p>The customer comes forward and Attend plasma donation camps. Donate plasma. The hospital management or patient is able to find plasma donors at the right time. Finding the available donors within their nearest location.</p>	
Identify strong TR & EM	3. TRIGGERS TR <small>What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</small> <p>Seeing the donors count become low. Emergency situation of plasma need.</p>	10. YOUR SOLUTION SL <small>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.</small> <p>A web based application which will provide information about available donors and plasma. If not available, the customer will be notified when plasma is available.</p>	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE <small>What kind of actions do customers take online? Extract online channels from #7</small> <p>Register their information with the application. Making plasma request via the application</p>	Extract online & offline CH of BE
	4. EMOTIONS: BEFORE / AFTER EM <small>How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure > confident, in control - use it in your communication strategy & design.</small> <p>Patient to find it hard to get a right resource to get plasma leaving them upset. The donors and customers have a feeling of satisfaction.</p>		8.2 OFFLINE <small>What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small> <p>Arranging the required medical infrastructure for the donation process. Donating the plasma.</p>	



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Created by Daria Nepriakhina / Amaltama.com



4. REQUIREMENT ANALYSIS

4.1 Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through Website Registration through Application
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Customer care	Regularize the Send grid service
FR-4	Administrator	Monitor the overall functionalities of the application and ensure quality of service

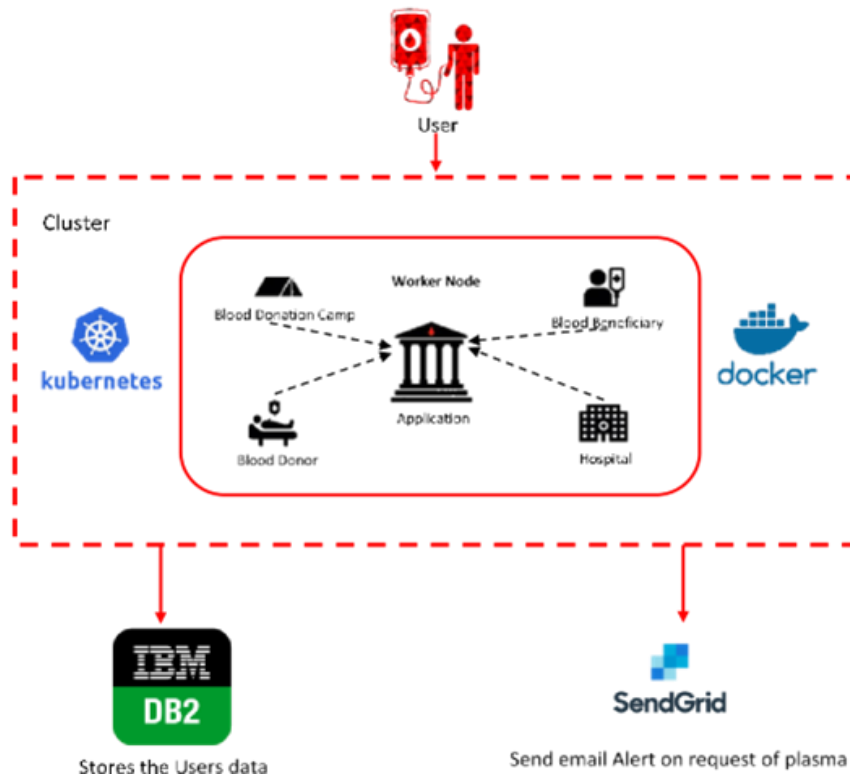
4.2 Non-functional requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Plasma donar Application is very useful to the emergency situation patient, because that application gives the information of the nearby plasma donors and request to donate their plasma to patient via email , SMS etc.
NFR-2	Security	Very secured website and application that provides various security features like 2 step verification , Email Verification , OTP password etc..
NFR-3	Reliability	It gave the reliable information to the user , because the register donors are well reliable person .So reliability is high.
NFR-4	Performance	Carrying out an evaluation to quantify empirically the recommendation abilities of two state-of-the-art methods, considering different configurations, within the proposed framework.
NFR-5	Availability	Made publicly available a new dataset formed by a set of plasma donors profiles and a set of patient collected from different search engine sites
NFR-6	Scalability	Scalability problem mainly arise in huge and dynamic data sets which is produced by interactions between user and item such as preferences, ratings and reviews. It is possible that when some recommendation algorithms are applied on relatively small data sets, they provide the best results, but may reflect inefficient or worst behaviour on very large datasets.

5. PROJECT DESIGN

5.1 Data Flow Diagrams

Plasma Donor Application:

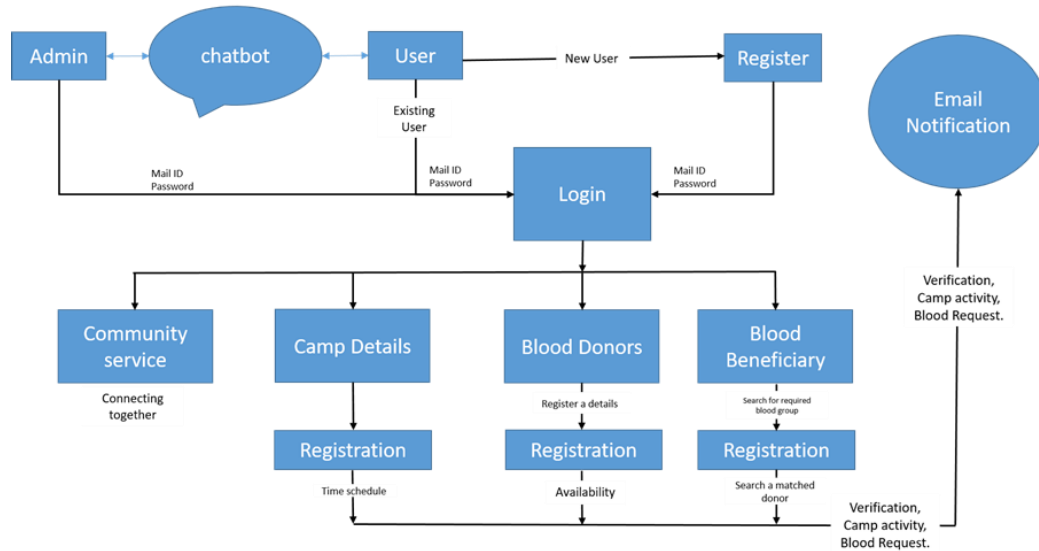


5.2 Solution & Technical Architecture

S.No	Component	Description	Technology
1.	User Interface	User creates account and view details. User feel like free to flow with usage of sites application.	HTML, CSS, JavaScript , Py
2.	Chatbot	Chatbot to answer user's queries.	IBM Watson Assistant
3.	Database	Data Type, Configurations, For storing, maintaining, modifying and retrieving the user's details.	IBM DB2, IBM SQL.
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
5.	File Storage	Using to store object and files.	IBM Cloud Object Storage.
6.	Confirmation Email	Sending a confirmation email to users once they have registered for donation.	SendGrid.
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Configuration.	Local, Docker, Kubernetes.

Technical Architecture Diagram:

DFD Level 1



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 donors, 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 blood recipient, I can register for the application through Gmail	I can access my account / dashboard	Medium	Sprint-1
	Login	USN-4	As a blood beneficiary, I can log into the application by entering email & password.	I can receive confirmation email & click confirm	High	Sprint-1
		USN-5	As a donor, I can log into the application by entering email & password.	I can receive confirmation email & click confirm	Medium	Sprint-2
	Dashboard	USN-6	As a blood beneficiary, I can search the blood group for which I need plasma.	I can access my account / dashboard	High	Sprint-1
		USN-7	As a blood donor, I can get a blood donation camp details.	I can access my account / dashboard	Medium	Sprint-2
Customer Care Executive	Dashboard	USN-9	As a user, I can connect easily to a customer care about any Queries.	I can access to chat with customer care.	Low	Sprint-2
Administrator	Login	USN-10	As an Administrator, I can view the database of the registered users and maintain the blood camp.	I can see who are the persons registered here and check their valid or fake.	High	Sprint-1
	Dashboard	USN-11	As an Administrator, I can view how many members need what kind of blood group for plasma. Filter the accounts.	I can count the number of requirements and view the list.	Medium	Sprint-2
Chatbot	Dashboard	UNS-12	As a customer care executive, I can solve the queries of the users.	I can reply to all the questions that are related to our app.	Medium	Sprint-2

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	A User can register and create the user account.	6	High	J.Jayakumar, B.Balaji
Sprint-1	Login	USN-2	A User can sign-in to the application by entering the registered email id and password.	6	High	P.Ramprakash, P.Arasakumaran
Sprint-1	Admin Register	USN-3	An admin can register through the admin registry.	4	Medium	P.Ramprakash, P.Arasakumaran
Sprint-1	Register Admin Via Script	USN-4	Creating an Admin Account using a python script. As for security reasons we should implement a separate python script.	4	High	J.Jayakumar, B.Balaji
Sprint-2	Implementing Authentication System	USN-5	creating an authentication system for both admin and users using flask application	6	High	J.Jayakumar, B.Balaji, P.Ramprakash,
Sprint-2	Creating Tables	USN-6	Creating Db2 account and creating the tables in DB2 in IBM cloud db2	4	Medium	P.Ramprakash, P.Arasakumaran

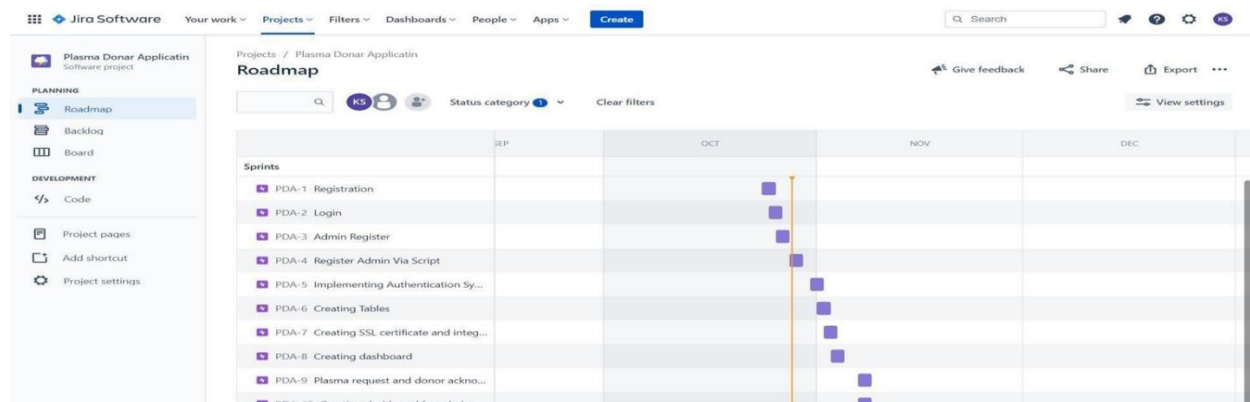
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Creating SSL certificate and integrating with python code	USN-7	Creating the SSL certificate to connect db2 via python code.	6	High	J.Jayakumar, B.Balaji
Sprint-2	Creating dashboard	USN-8	Admin and Donor can interact with our application.	4	Medium	B.Balaji
Sprint-3	Plasma request and donor acknowledge feature	USN-9	Admin can create plasma requests which will be shown in the user portal.	6	High	J.Jayakumar
Sprint-3	Creating dashboard for admin	USN-10	Admin dashboard, admin can view the total request has been requested for plasma by the recipient/user.	6	High	J.Jayakumar, B.Balaji
Sprint-3	Integrating the Watson chat bot	USN-11	Users can use the chat bot for basic clarification using the chat bot.	4	Medium	P.Ramprakash, P.Arasakumaran
Sprint-3	Integration with SendGrid.	USN-12	The source/verification mail for both user(donar and recipient) .	4	Medium	P.Ramprakash, P.Arasakumaran
Sprint-4	Docker installation	USN-13	Installing Docker CLI	4	Low	P.Arasakumaran

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Creating docker image	USN-14	Setting up the Docker environment and creating the Docker image file	6	High	J.Jayakumar, B.Balaji
Sprint-4	Kubernetes	USN-15	creating pods in Kubernetes and uploading it in IBM cloud	6	Medium	J.Jayakumar, B.Balaji, P.Ramprakash
Sprint-4	End-to-End Testing	USN-16	Implementing End-to-End testing	6	High	J.Jayakumar, B.Balaji

6.2 Sprint Delivery Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Initial creation process	USN-1	Create template, Static and python flask app.	20	High	J.Jayakumar, B.Balaji P.Ramprakash P.Arasakumaran
Sprint-2	Cloud and database	USN-2	Connecting the python flask app with database, object storage created in Cloud and implementation of Chat bot	20	High	J.Jayakumar, B.Balaji P.Ramprakash P.Arasakumaran
Sprint-3	Deployment in DevOps, Mailing	USN-3	Develop the project, create it as image with docker, containerize in container registry and deploy in Kubernetes, Add the mailing service	20	High	J.Jayakumar, B.Balaji P.Ramprakash P.Arasakumaran
Sprint-4	Testing, Deployment and user experience	USN-4	To do all the testing and to make sure the use of the software handy to user.	20	High	J.Jayakumar, B.Balaji P.Ramprakash P.Arasakumaran

6.3 Reports From JIRA:



7. CODING AND SOUTION

1.LOGIN PAGE

Sign In

Email

Password

Submit

New User? [SignUp](#)

2.SIGNUP PAGE

Sign Up

Name

Email

Password

Retype Password

I am a:

☒ Beneficiary

☐ Donor

Submit

Already a User? [Login](#)

Hi,I'm Laura!Can I help you ?

Close



3.PROFILE – ACCOUNT SETTINGS PAGE

Login successful..

Account Settings

The image displays two versions of an 'Account Settings' form. The top version is a cropped view showing the top half of the form, while the bottom version shows the full form with a 'Submit' button at the bottom.

Account Settings

First Name: Janu

Last Name:

Email: janu@gmail.com

Phone number: 8765423623

Address: None

City: Tiruchy

Bio: None

Submit

Hi, I'm Laura! Can I help you?

Close

Account

Details

Janu

Account Settings

First Name

Last Name

Email

Phone number

Address

City

Bio


Submit

Hi, I'm Laura! Can I help you?

Close

4.PROFILE-DETAILS PAGE

Account Settings



Janu

[Account](#)
[Details](#)
[Password](#)
[Notification](#)

Details

I am a : Beneficiary


Height	Weight
<input type="text" value="None"/>	<input type="text" value="None"/>
Blood Group: O+	Age
<input type="text" value="Select"/>	<input type="text" value="34"/>

Update

Choose File

No file chosen

Submit



5.PASSWORD CHANGE PAGE

Account Settings

Janu

Account

Details

Password

Notification

Password Settings

Old password

New password

Confirm new password

Submit

6.DASHBOARD-FOR BENEFICIARIES

HOME DASHBOARD PROFILE ABOUT CONTACT

Welcome Janu bene

Beneficiary Dashboard

My Details

Name	Janu
Blood Group	O+
Email	janu@gmail.com
Location	Tiruchy
Phone	8765423623

Request Donors

7. DASHBOARD FOR DONORS

Profile x +

Not secure | 169.51.206.11:31457/dashboard

Plasma Donor App Logout

HOME DASHBOARD PROFILE ABOUT CONTACT

Welcome Test!

All Requests

Saved Requests

My-Dashboard

Requests

First Name	Last Name	EMAIL	PHONE	ADDRESS	CITY	AGE	BLOODGROUP	Covid-Certificate-uploaded
Harshitha	Reddy	harshitha@gmail.com	9557435524	No-57,5th Lane,Richard's colony	Chennai	24	B-	Save
Pavi Nisha	S	pavinisha@gmail.com	9965434577	-	Chennai	30	B-	Save

169.51.206.11:31457/dashboard#

8. HOME PAGE

Plasma Donor App Logout


HOME DASHBOARD PROFILE ABOUT CONTACT

Welcome User!

[Go to Profile](#)



Government of Assam



National Health Mission, Assam

Do's and Don'ts for Convalescent Plasma Therapy (CPT):

Plasma therapy is to be recommended only in the early stage of COVID-19 disease (3-7 days from the onset of symptoms but not later than 10 days).

- Always carry a hard copy of the COVID-19 negative report (RT-PCR or Rapid Antigen Test) required. A person cannot donate if he/she gets rejected for the lack of adequate antibodies in



169.51.206.11:31457/home

9. CONTACT PAGE

Plasma Donor App

Logout

HOME DASHBOARD PROFILE ABOUT CONTACT

Share your feedback!

Name

Test

City

Chennai

Subject

Write something...

Submit

10. CHATBOT

HOME DASHBOARD PROFILE ABOUT CONTACT

Account Settings

Test

Account

Details

Password

Account Settings

First Name

Test

Last Name

User

Email

testusers@gmail.com

Phone number

8888777777

Address

None

City

Chennai

Watson Assistant

Hi

Hello,Welcome! I will tell you how this app works..For that,are you a donor or a beneficiary?

Donor Beneficiary

Beneficiary

You can sign up as a Beneficiary and fill your details in the profile page.Donors in same city with eligible blood group will be notified of your request and will reach out to you. Do you want to know what details you will have to fill??

yes no

Type something...

Built with IBM Watson®

8.TESTING

8.1 Test Cases

Test case ID	Feature Type	Component	Test Scenario	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Executed By
LoginPage_TC_OO1	Functional	Login page	Verify user is able to see the Login page	1.Enter URL and click go. 2.Verify login page is displayed or not.	http://127.0.0.1:5000/	Login page should display	Working as expected	Pass	Abbireddy Sai Jahnvi
LoginPage_TC_OO2	UI	Login page	Verify the UI elements in Login page	1.Enter URL and click go. 2.Verify login page with below UI elements: a.email text box b.password text box c.Submit button d.New user? Signup link	http://127.0.0.1:5000/	Application should show below UI elements: a.email text box b.password text box c.Submit button d.New user? Signup	Working as expected	Pass	Anandhitha TR
LoginPage_TC_OO3	Functional	Login page	Verify user is able to log into application with Valid credentials	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button	Username: testuser@gmail.com password: testuser-1	User should navigate to user account homepage	Working as expected	Pass	Chrissy Panfila V

LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with Invalid credentials	1.Enter URL and click go 2.Enter Invalid username/email in Email text box 3.Enter valid password in password text box 4.Click on login button	Username: abc@gmail.com password: testuser-1	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Sravya Sravani
LoginPage_TC_OO5	Functional	Login page	Verify user is able to log into application with Invalid credentials	1.Enter URL and click go 2.Enter Valid username/email in Email text box 3.Enter Invalid password in password text box 4.Click on login button	Username: testuser@gmail.com password: test1234	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Abbireddy Sai Jahnvi
LoginPage_TC_OO6	Functional	Login page	Verify user is able to log into application with Invalid credentials	1.Enter URL and click go 2.Enter Invalid username/email in Email text box 3.Enter Invalid password in password text box 4.Click on login button	Username: abc@gmail.com password: test1234	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Chrissy Panfila V
LoginPage_TC_OO7	Functional	Login Page	Check if signup link takes the	1.Enter URL and click go 2. Click on the signup		The signup page should be displayed	Working as expected	Pass	Anandhitha TR

			user to the signup page	link					
LoginPage_TC_OO8	UI	Signup page	Verify the UI elements in Signup page	1.Enter URL and click go 2. Click on the signup link 3. Check if the following UI elements are present: a. Name textbox b. email textbox c. password textbox d. retype password textbox e. Beneficiary/Donor radio button f. Submit button g. Already a user? Login link		Application should show below UI elements: a. Name textbox b. email textbox c. password textbox d. retype password textbox e. Beneficiary/Donor radio button f. Submit button g. Already a user? Login link	Working as expected	Pass	Chrissy Panfila V
LoginPage_TC_OO9	Functional	Signup page	Verify if the user is able to signup with invalid email	1.Enter URL and click go 2. Click on the signup link 3. Enter an invalid email address 4. Fill other details 5. Click submit	name: Test User email: abc@gmail.com password: test1234 retype-password: test1234	An error message stating the email is invalid should be displayed	Working as expected	Pass	Sravva Sravani
LoginPage_TC_O10	Functional	Signup page	Verify if the user is able to	1.Enter URL and click go 2. Click on the signup	name: Test User email:	An error message stating the passwords do not	Working as expected	Pass	Anandhith a TR

			signup with passwords that do not match	link 3. Type a password 4. Type a different password in retype-password field	abc@gmail.com password: test1234 retype-password: test123456	match should be displayed			
LoginPage_TC_O11	Functional	Signup page	Check if the users details are uploaded correctly in the database	1.Enter URL and click go 2. Click on the signup link 3. Enter all required details 4. Click on submit	name: Test User email: abc@gmail.com password: test1234 retype-password: test1234	The users signup details should be entered in the database	Working as expected	Pass	Sravva Sravani
LoginPage_TC_O12	Functional	Signup page	After signup the user should be redirected to login page	1.Enter URL and click go 2. Click on the signup link 3. Enter all required details 4. Click on submit		The user should be redirected to login page after signup	Working as expected	Pass	Abbireddy Sai Jahnavi
LoginPage_TC_O13	Functional	Home page	After login the user should be directed to home page	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button.		The user should be directed to home page after login	Working as expected	Pass	Chrissy Panfila V
LoginPage_	UI	Home page	Verify the	1.Enter URL and click		Application should	Working	Pass	Abbireddy

TC_O14		ge	UI elements in Home page	go 2. Login into the website 3. Check if the following UI elements are present: a.App name b. logout button c.Navigation bar		show below UI elements: a.App name b. logout button c.Navigation bar	as expected		Sai Jahnvi
LoginPage_ TC_O15	Functional	Home page	Check if the logout button logs the user out	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on logout button in homepage.		The user should be logged out of the application and redirected to login page	Working as expected	Pass	Shravya Shrivani
LoginPage_ TC_O16	Functional	Dashboard	Check if navigation link to dashboard is working	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on dashboard in navbar		The dashboard should be displayed	Working as expected	Pass	Chrissy Panfila V
LoginPage_ TC_O17	Functional	Profile page	Check if navigation	1.Enter URL and click go.		The profile should be displayed	Working as	Pass	Anandhitha TR

			link to profile page is working	2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on profile in navbar			expected		
LoginPage_ TC_O18	Functional	Contact page	Check if navigation link to contact page is working	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on contact in navbar		The contact page should be displayed	Working as expected	Pass	Shravya Shrivani
LoginPage_ TC_O19	Functional	About page	Check if navigation link to about us page is working	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on about in navbar		The about page should be displayed	Working as expected	Pass	Chrissy Panfila V
LoginPage_ TC_O20	Functional	Profile page	Check if the password	1.Go to profile page 2. Go to password tab	Old password: test1234	The password should not change and display error	Working as expected	Pass	Anandhitha TR

			change is working with wrong password	3.Enter wrong password in password field 4.Fill other details 5.Click on Submit button	New password: test-abcd Confirm password: test-abcd	message			
LoginPage_TC_O21	Functional	Profile page	Check if the password change is working with correct credentials	1.Go to profile page 2. Go to password tab 3.Enter old password in password field 4.Type new password and confirm 5.Click on Submit button	Old password: testuser-1 New password: test-abcd Confirm password: test-abcd	The password should be changed and updated in database	Working as expected	Pass	Abbireddy Sai Jahnavi
LoginPage_TC_O22	Functional	Contact page	Check if the message entered in contact page is delivered correctly	1.Enter URL and click go. 2.Enter Valid email in Email text box 3.Enter valid password in password text box 4.Click on login button. 5. Click on contact in navbar	Hello I have a problem with contacting the donor	The message should be stored in database	Working as expected	Pass	Chrissy Panfila V
ProfilePage_TC_OO1	Functional	Profile page	Verify user is able to see the Profile page	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab	http://127.0.0.1:5000/	Profile page should display	Working as expected	Pass	Abbireddy Sai Jahnavi
ProfilePage_TC_OO2	Functional	Profile page	Check if the user is	1.Enter URL and click go.	Firstname: Test	All the details should be updated	Working as	Pass	Anandhith a TR

			able to update the details in account settings	2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in account settings. 5. Click on submit.	Lastname: User Phone:999 9999999 Address: 20, First Lane, Chromepet City: Chennai	in the accounts page	expected		
ProfilePage_TC_OO3	Functional	Profile page	Check if the details are stored in the database	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in account settings. 5. Click on submit.	Firstname: Test Lastname: User Phone:999 9999999 Address: 20, First Lane, Chromepet City: Chennai	All details should be available in the database	Working as expected	Pass	Chrissy Panfila V
ProfilePage_TC_OO4	Functional	Profile page	Check if the user is able to update the details in details tab of account settings	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in details tab of account settings. 5. Click on update.	Height: 160 Weight: 55 Blood Group: O+ Age: 22 Illness: None	All the details should be updated in the details tab of accounts page	Working as expected	Pass	Sravya Sravani
ProfilePage_TC_OO5	Functional	Profile page	Check if the data in	1.Enter URL and click go.	Height: 160 Weight: 55	All details of details tab should be	Working as	Pass	Abbireddy Sai

			details tab of account settings is updated in the database.	2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in details tab of account settings. 5. Click on update.	Blood Group: O+ Age: 22 Illness: None	available in the database	expected		Jahnvi
ProfilePage_TC_OO6	Functional	Profile page	Check if the user is able to update the details in account settings with invalid data	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in account settings. 5. Enter invalid phone number. 5. Click on submit.	Firstname: Test Lastname: User Phone:999 9999 Address: 20, First Lane, Chromepet City: Chennai	Application should show 'Incorrect phone number ' validation message.	Working as expected	Pass	Chrissy Panfila V
ProfilePage_TC_OO7	Functional	Profile page	Check if the user is able to update the details in details tab of account settings with invalid data.	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in details tab of account settings. 5. Enter invalid height. 5. Click on update.	Height: 1600 Weight: 55 Blood Group: O+ Age: 22 Illness: None	Application should show 'Invalid height ' validation message.	Working as expected	Pass	Anandhitha TR
ProfilePage_TC_OO8	Functional	Profile page	Check if the user is	1.Enter URL and click go.	Height: 160 Weight:	Application should show 'Invalid	Working as	Pass	Chrissy Panfila V

			able to update the details in details tab of account settings with invalid data.	2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in details tab of account settings. 5. Enter invalid weight. 5. Click on update.	5500 Blood Group: O+ Age: 22 Illness: None	weight ' validation message.	expected		
ProfilePage_TC_OO9	Functional	Profile page	Check if the user is able to update the details in details tab of account settings with invalid data.	1.Enter URL and click go. 2.Login with valid credentials. 3. Click on profile tab. 4. Enter the details in details tab of account settings. 5. Enter invalid age. 5. Click on update.	Height: 160 Weight: 55 Blood Group: O+ Age: 2201 Illness: None	Application should show 'Invalid age ' validation message.	Working as expected	Pass	Shravya Shrivani
Dashboard_TC_OO1	Functional	Dashboar d	Verify if the donor dashboard is displayed for donors correctly.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab		donor dashboard is displayed for donors	Working as expected	Pass	Anandhitha TR
Dashboard_TC_OO2	Functional	Dashboar d	Verify if the beneficiary dashboard is displayed for beneficiari	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab		beneficiary dashboard is displayed for beneficiaries	Working as expected	Pass	Shravya Shrivani

			es correctly.						
Dashboard_TC_OO3	UI	Dashboa rd	Verify if the donor details given are displayed correctly and verify if the request button is visible	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4.Check the details 5. Check for Request button.		Donor details are displayed correctly and request button is visible.	Working as expected	Pass	Abbireddy Sai Jahnavi
Dashboard_TC_OO4	UI	Dashboa rd	Verify if the beneficiary details given are displayed correctly and verify if the accept button is visible	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab 4.Check the details 5. Check for Accept button.		Beneficiary details are displayed correctly and accept button is visible.	Working as expected	Pass	Chrissy Panfila V
Dashboard_TC_OO5	Functional	Dashboa rd	Verify if the request is stored in the database after the request button is clicked.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab 4. Click on Request button.		Request should be stored in database	Working as expected	Pass	Abbireddy Sai Jahnavi

Dashboard_TC_OO6	UI	Dashboa rd	Verify if the stop requesting button is present after the request is made.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab 4. Click on Request button. 5.Check for stop requesting button.		Stop requesting button should be visible	Working as expected	Pass	Chrissy Panfila V
Dashboard_TC_OO7	UI	Dashboa rd	Verify if all requests button is present in the donor dashboard.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab 4. Check if all requests button is present in the dashboard.		The all requests button should be present.	Working as expected	Pass	Chrissy Panfila V
Dashboard_TC_OO8	UI	Dashboa rd	Verify if saved requests button is present in the donor dashboard.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on dashboard tab 4. Check if saved requests button is present in the dashboard.		The saved requests button should be present.	Working as expected	Pass	Anandhitha TR
Dashboard_	Functional	Dashboa	Verify if	1.Enter URL and click	-	All requests for	Working	Pass	Abbireddy

TC_O09		rd	the all requests button displays all the donor requests.	go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4. Click on all requests button present in the dashboard.		donor should be displayed.	as expected		Sai Jahnavi
Dashboard_TC_O10	Functional	Dashboar d	Verify if the saved requests button displays all the donor requests.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4. Click on saved requests button present in the dashboard.		All requests saved by the donor should be displayed.	Working as expected	Pass	Anandhith a TR
Dashboard_TC_O11	Functional	Dashboar d	Check if the requests from beneficiary is displayed to the correct donor based on given criteria.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4. Click on all requests button present in the dashboard.		The displayed beneficiaries should match the given criteria.	Working as expected	Pass	Chrissy Panfila V
Dashboard_TC_OO12	Functional	Dashboar d	Verify if the request is cancelled	1.Enter URL and click go. 2.Login as donor with		The cancelled request should not be displayed.	Working as expected	Pass	Sravva Sravani

			when stop requesting button is clicked.	valid credentials. 3. Click on dashboard tab 4. Click on all requests button present in the dashboard.					
Dashboard_TC_O13	Functional	Dashboar d	Check if save button saves the request in the database.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4. Click on save button near a request.		Check if the request is saved in the database.	Working as expected	Pass	Abbreddy Sai Jahnavi
Dashboard_TC_O14	Functional	Dashboar d	Check if saved requests are displayed when save button is clicked.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab 4. Click on save button near a request. 5. Click on saved beneficiaries button.		All the saved requests should be displayed.	Working as expected	Pass	Chrissy Panfila V
IBMAssistan t_TC_OO1	UI	Signup Page	Check if the IBM Assistant can be viewed in signup page.	1. Go to signup page.		IBM Assistant is displayed in the signup page.	Working as expected	Pass	Anandhith a TR

IBMAssistant_TC_002	UI	Login Page	Check if the IBM Assistant can be viewed in login page.	1. Go to login page.		IBM Assistant is displayed in the login page.	Working as expected	Pass	Chrissy Panfila V
IBMAssistant_TC_003	UI	Home Page	Check if the IBM Assistant can be viewed in home page.	1.Enter URL and click go. 2.Login as donor with valid credentials.		IBM Assistant is displayed in the home page.	Working as expected	Pass	Sravva Sravani
IBMAssistant_TC_004	UI	Dashboard	Check if the IBM Assistant can be viewed in dashboard page.	1.Enter URL and click go. 2.Login as donor with valid credentials. 3. Click on dashboard tab		IBM Assistant is displayed in the dashboard page.	Working as expected	Pass	Anandhitha TR
IBMAssistant_TC_005	UI	Profile	Check if the IBM Assistant can be viewed in profile page.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on profile tab		IBM Assistant is displayed in the profile page.	Working as expected	Pass	Sravva Sravani
IBMAssistant_TC_006	UI	Contact	Check if the IBM Assistant can be viewed in contact us page.	1.Enter URL and click go. 2.Login as beneficiary with valid credentials. 3. Click on contact tab		IBM Assistant is displayed in the contact page.	Working as expected	Pass	Abbireddy Sai Jahnvi

8.2 User Acceptance Testing

Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved.

SPRINT – 1

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	8	4	1	3	16
Duplicate	1	1	3	0	5
External	2	3	2	1	8
Fixed	12	2	3	19	36
Not Reproduced	0	0	1	0	1
Skipped	0	1	1	1	3
Won't Fix	0	5	2	0	7
Totals	23	16	13	24	76

SPRINT – 2

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	7	5	0	3	15
Duplicate	2	0	3	1	6
External	2	2	1	1	6
Fixed	15	3	1	12	31
Not Reproduced	0	1	0	0	1
Skipped	0	1	3	1	5
Won't Fix	0	4	0	3	7
Totals	26	16	8	21	71

SPRINT – 3

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	3	1	1	10
Duplicate	2	1	4	0	7
External	0	2	0	3	5
Fixed	14	4	0	18	36
Not Reproduced	0	0	1	0	1
Skipped	0	1	2	0	3
Won't Fix	1	1	0	1	3
Totals	22	12	8	23	65

SPRINT – 4

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	6	3	1	15
Duplicate	0	1	2	0	3
External	2	1	1	1	5
Fixed	10	3	2	15	30
Not Reproduced	0	0	1	0	1
Skipped	0	1	1	0	2
Won't Fix	1	3	1	2	7
Totals	18	15	11	19	63

SPRINT –

Test Case Analysis

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

SPRINT – 1

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	5	0	0	5
Client Application	60	0	0	60
Security	4	0	0	4
Outsource Shipping	3	0	0	3
Exception Reporting	7	0	0	7
Final Report Output	4	0	0	4
Version Control	2	0	0	2

SPRINT 2

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	6	0	0	6
Client Application	55	0	0	55
Security	3	0	0	3
Outsource Shipping	2	0	0	2
Exception Reporting	6	0	0	6
Final Report Output	3	0	0	3
Version Control	2	0	0	2

**SPRINT –
SPRINT – 3**

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	3	0	0	3
Client Application	30	0	0	30
Security	2	0	0	2
Outsource Shipping	2	0	0	2
Exception Reporting	4	0	0	4
Final Report Output	3	0	0	3
Version Control	2	0	0	2

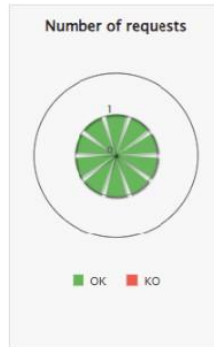
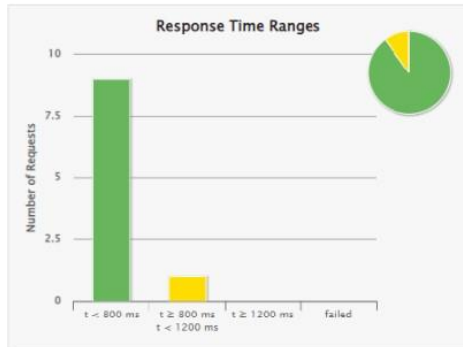
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	5	0	0	5ss
Client Application	27	0	0	27
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	7	0	0	7
Final Report Output	3	0	0	3
Version Control	2	0	0	2

9.RESULTS

9.RESULTS

Performance Metrics

Login Page



Gatling Version	
Version:	3.8.4
Released:	2022-09-13
Run Information	
Date:	2022-11-12 13:40:09 GMT
Duration:	47s
Description:	—

														Expand all groups		Collapse all groups	
Requests	Executions					Response Time (ms)											
	Total	OK	KO	% KO	Cnt/s	Min	50th pct	75th pct	95th pct	99th pct	Max	Mean	Std Dev				
All Requests	10	10	0	0%	0.208	115	385	553	757	829	847	415	221				
request_0	1	1	0	0%	0.021	115	115	115	115	115	115	115	0				
request_6	1	1	0	0%	0.021	646	646	646	646	646	646	646	0				
request_1	1	1	0	0%	0.021	124	124	124	124	124	124	124	0				
request_2	1	1	0	0%	0.021	315	315	315	315	315	315	315	0				
request_3	1	1	0	0%	0.021	519	519	519	519	519	519	519	0				
request_5	1	1	0	0%	0.021	248	248	248	248	248	248	248	0				
request_4	1	1	0	0%	0.021	847	847	847	847	847	847	847	0				
request_7	1	1	0	0%	0.021	357	357	357	357	357	357	357	0				
request_13	1	1	0	0%	0.021	413	413	413	413	413	413	413	0				
request_13 Redirect 1	1	1	0	0%	0.021	564	564	564	564	564	564	564	0				

Dashboard



Requests*	Executions				Cont/s	Response Time (ms)							
	Total	OK	KO	% KO		Min	50th pct	75th pct	95th pct	99th pct	Max	Mean	Std.Dev
All Requests	13	13	0	0%	0.461	104	440	809	1371	1727	1818	914	438
request_0	1	1	0	0%	0.037	104	104	104	104	104	104	104	0
request_6	1	1	0	0%	0.037	883	883	883	883	883	883	883	0
request_2	1	1	0	0%	0.037	369	369	369	369	369	369	369	0
request_3	1	1	0	0%	0.037	271	271	271	271	271	271	271	0
request_5	1	1	0	0%	0.037	343	343	343	343	343	343	343	0
request_4	1	1	0	0%	0.037	268	268	268	268	268	268	268	0
request_1	1	1	0	0%	0.037	809	809	809	809	809	809	809	0
request_7	1	1	0	0%	0.037	449	449	449	449	449	449	449	0
request_12	1	1	0	0%	0.037	440	440	440	440	440	440	440	0
request_12 Redirect 1	1	1	0	0%	0.037	1818	1818	1818	1818	1818	1818	1818	0
request_16	1	1	0	0%	0.037	1078	1078	1078	1078	1078	1078	1078	0
request_20	1	1	0	0%	0.037	759	759	759	759	759	759	759	0
request_20	1	1	0	0%	0.037	311	311	311	311	311	311	311	0

10. ADVANTAGES AND DISADVANTAGES

The main advantage of this application is the centralized platform for the interaction of donors, blood bank and hospital. Further it provides an authentication phase in addition to the decision options by the donor and the hospital. Also the blood bank can provide this service to other hospitals also.

In spite of many advantages, this application comes with some disadvantages also. This application is not able to verify the genuineness of the user automatically. That is, it requires various entities and phases by the users to verify their integrity. Furthermore, it requires an active internet connection throughout its operation, which is considered as a constraint for this application.

11. CONCLUSION

Plasma donor application provides a reliable platform to connect local plasma donors with patients. This application creates a communication channel through authenticated hospitals whenever a patient needs plasma donation. It is a useful tool to find compatible blood donors who can receive plasma request posts in their local area. Hospitals can use this web application to maintain the blood donation activity.

12. FUTURE SCOPE

Plasma donor application can be further improved by providing a provision for user accessibility via integrating this application with various social network application program interface. Consequently, users can login and signup using various social networks. This would increase number of donors and enhances the process of plasma donation. User interface can be improved in future to accommodate global audience by supporting different languages across countries. Data scrapping can be done from different social networks and can be shown in the plasma request feeds.

13. APPENDIX Source code

```
window.watsonAssistantChatOptions = {  
    integrationID: "0b26d6c6-f0b0-4523-b321-521b3a1b752d", // The ID of this  
integration.  
    region: "eu-gb", // The region your integration is hosted in.  
    serviceInstanceID: "bef30b86-322f-496b-8084-24f492d6c1ba", // The ID of  
your service instance.  
    onLoad: function(instance) { instance.render(); }  
};  
setTimeout(function(){    const  
t=document.createElement('script');  
    t.src="https://web-  
chat.global.assistant.watson.appdomain.cloud/versions/" +  
(window.watsonAssistantChatOptions.clientVersion || 'latest') +  
"/WatsonAssistantChatEntry.js";  
document.head.appendChild(t);  
});
```

14. GitHub Link and Project Demo Link

GitHub Link: <https://github.com/IBM-EPBL/IBM-Project-41803-1660645136>