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Date	17 September 2022
Team ID	PNT2022TMID07853
Project Name	Plasma Donor Application
Team Members	Udhayakumar M(leader) Mehesh P Sneha T Padma chandini T

INTRODUCTION

1.1 Project overview:

Plasma is used by pharmaceutical companies to make plasma-derived medicinal products (PDMPs). PDMPs are used to treat conditions such as immune deficiencies and bleeding disorders. Several PDMPS are included in the WHO Model Lists of Essential Medicines. According to the WHO, self-sufficiency driven by voluntary (non-remunerated) plasma donations is an important national goal to ensure an adequate supply is secured to meet the needs of the population. Australia, New Zealand, the UK, the Netherlands, and France only allow public or not-for-profit sectors to collect plasma for fractionation. Each of the 5 countries have toll or contract agreements with 1 private commercial plasma fractionator to manufacture PDMPs from the plasma collected within their respective countries. None of these countries pay plasma donors. Donors are only permitted to donate every 2 weeks (24 to 26 times per year) in these 5 countries. Austria, the Czech Republic, Germany, and the US allow both public and non-for-profit sectors, as well as commercial private plasma collection centres, to operate in the country. Private, not-for-profit, or public plasma collection centres in these 4 countries offer monetary compensation and other in-kind incentives to plasma donors. While the Czech Republic limits plasma donation to every 2 weeks, a much higher frequency of donation is allowed in other countries; up to 50 times per year in Austria, 60 times per year in Germany, and more than 100 times per year in the US. Austria, the Czech Republic, Germany, and the US (which allow commercial private plasma collectors to operate and pay donors) are 100% self-sufficient in immune globulins. These 4 countries collect the most plasma, which is from paid donors. In 2017, Austria, the Czech Republic, Germany, and the US collected 75 litres per 1,000 people, 45 litres per 1,000 people, 36 litres per 1,000 people, and 113 litres per 1,000 people of plasma for fractionation, respectively. Countries that do not pay donors including Australia, New Zealand, the UK, the Netherlands, and France are dependent to some extent on US and European Union donors who are paid for the supply of plasma or imported PDMPs.

1.2 Purpose:

To satisfy the Applicant by Donating the plasma who are under the critical situation .This may save many people lives who utilize this application in an efficient manner. The limited literature search conducted for the Environmental Scan did not identify publications on events of disease transmission through PDMPs manufactured from either paid or non-renumerated donors' plasma, the impact of plasma collection centres (including those that do or do not pay donors) on the collection of whole blood or other blood components, or the long-term costs associated with plasma self-sufficiency on the health care system. Registered hospitals can check the availability of required plasma and can send request to the nearby banks and also order for donors whose blood type match up with the required blood type. The location of nearest plasma donation centres, the banks and hospitals which request for the availability of plasma are traced by GPS tracking.

2.LITERATURE SURVEY

Introduction

Applying optimization methods to healthcare management and logistics is a developing research area with numerous studies.Specifically, facility location,staff rostering,patientallocation, and medical supplytransportation are the main themesanalysed.

Optimization approaches have been developed for several healthcare related problems, ranging from the resource management in hospitals to the delivery of care services in a territory. However, optimization approaches can also improve other services in the health system that have been only marginally addressed, yet. One of them is the Blood Donation (BD) system, aimingat providing an adequate supply of bloodto Transfusion Centres(TCs)and hospitals. Blood is necessary for several treatments and surgeries, and still a limited resource.

The need for blood is about ten million units per year in the USA, 2.1 in Italy and 2 in Turkey; moreover, people still die in some countries because of inadequate supply of blood products (World Health Organization 2014). Hence, BD plays a fundamental role in healthcare systems, aiming at guaranteeing an adequate blood availability to meet the demandand save lives. In Western countries, blood is usually collected from donors, i.e., unpaid individuals who give blood voluntarily. Blood is classified into groups (A and subgroups, B, 0 or AB) and based on the Rhesus factor (Rh+ or Rh-), and each donor should be correctly matched with the patient who receives his/her blood. Moreover, as it may transmit diseases, blood must be screened before utilization.

2.1 Existing problem

ABOUT THE SYSTEM

The system which was manual that is based on paper card to collect Plasma donor data, keep record of Plasma donors and disseminate results to Plasma donors, had weakness that needed IT based solutions. The system was characterized by delays and sometime failure to access historical records; errors were witnessed in entry and manual analysis of results, secrecy and confidentiality of records lacked because unauthorized persons could easily access the records.In regard to the existing plasma management system, we have taken into account a system called Raster’s web-based Plasma Management System. Plasma banks play an important role in the process of collecting blood and managing blood stocks, approving Plasma requests, updating donations and updating available Plasma. Raster’s web-based BBMS will address the issues and problems encountered in collecting information about donors, Plasma camps, inventories of blood bags, and Plasma transfusion services, etc., including donor screening, inventory management,

Plasma ordering, Plasma usage review and compatibility testing. Plasma Management system will greatly increase the safety and quality of the Plasma supply as well as provide logistics data for the optimal supply chain management.

2.2 References

S.NO	TITLE	Authors	Abstract	Drawbacks
1	Developing a plasma donor application using Function-as-a-service in AWS	Aishwarya R Gowri*Jain University, Department of MCA, computer science*	A plasma is a liquid portionof the blood, over 55% of humanblood is plasma. Plasma is used to treat various infectious diseasesand it is one of the oldest methods known as plasma therapy. Plasma therapy is aprocess where blood is donated by recovered patients in order to establish antibodies that fights the infection. In this project plasma donorapplication is being developed by using AWS services. The services used are AWS Lambda, API gateway, DynamoDB, AWSElastic Compute Cloud withthe help of these AWS services, it eliminates the need of configuring the serversand reduces the infrastructural costs associated with it and helps to achieve serverless computing. For instance, during COVID 19 crisis the requirement for plasma increased drastically as therewere no vaccination found inorder 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 necessary information aboutthe donors.	Internet: It would require an internet connection for the working of the website. handle multiple requests at the sametime

2	Optimizationof Blood Donor Information and ManagementSystem	K. Yamini, *M. E(CSC), SVCET, Thirupachur, India* R. Devi, *Asst. Professor, SVCET, Thirupachur, India*	Emergency situations, such as accidents, create an immediate, critical need for specific blood type. In addition to emergency requirements, advances in medicine have increased theneed for blood in many ongoing treatments and elective surgeries. Despite increasing requirements for blood, only about 5% of theIndian population donates blood. In this paper we propose a new and efficient way to overcome such scenarios with our project. We have to create a new idea, just touch the button. Donor will be prompted to enter an individual's details,like name, phone number, and blood type. After that your contact details will appear in alphabetical orderon the screen; the urgent time of a blood requirement,you can quickly check forcontacts matching a particular or related blood group and reach out to themvia Phone Call/SMS through the Blood donor App.	The accuracy of the location displayed on the map was beyond the scope of this Project. Only Android was used as a mobile operating system to test the application

3.	Blood Bank Management Information System in India	Vikas Kulshreshtha *Research Scholar*, Dr.Sharad Maheshwari, *Associate Professor*	A blood bank is a bank of blood or blood components, gathered as a result of blood donation, stored and preserved for later use in blood transfusion. To provide web based communication there are numbersof online web based blood bank management system exists for communicating between department of blood centers and hospitals, to satisfy blood necessity, to buy, sale and stock the blood, to give information about this blood.Manual systems as compared to Computer Based Information Systems are time consuming, laborious, and costly. This paper introduces the review of the main features, merits and demerits provided by theexisting Web-Based Information System for Blood Banks. This study shows the comparison of various existing system and provide some more idea for improve the existing system.First I will give some basic introduction about blood banks then I will try to provide comparative studyof some existing web based blood bank system. Afterthat I will introduce some new idea for improving the existing techniques used in web based blood bank system andat end I willconclude this paper	Do not provide the better inventory solution to the end use It requires an active internet connection.

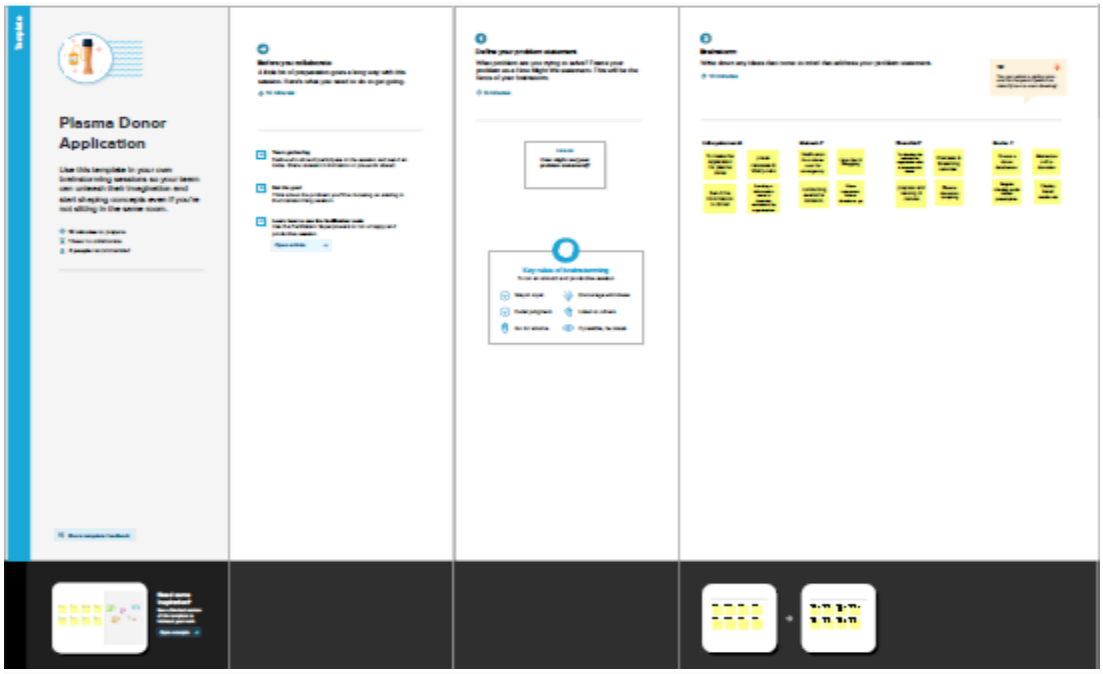
2.3 PROBLEM STATEMENT

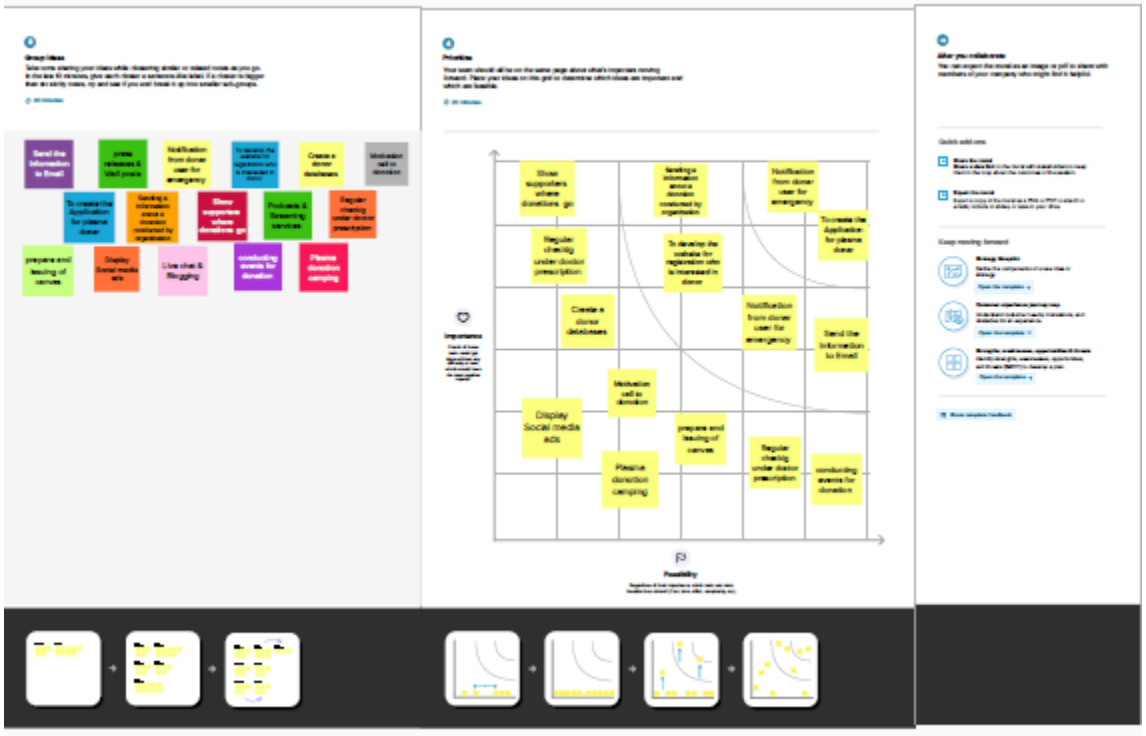
Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Donor	To Search for Donation Centre nearby my location	Not able to search	Lack of Technology	Worried
PS-2	Blood seeker	To search for plasma	Unavailable Resources	Registration is not done	Frustrated
PS-3	Health care professionals	To check for Volunteers For Plasma Donation	No clear information	Unpopularity Of Blood Centre	Tensed
PS-4	Third person (Society)	create awareness of Donation	Not Effective	Limited Support In Public	Dissatisfied

3. IDEATION AND PROPOSED SOLUTION

3.1 Empathy Map

3.2 IDEATION AND BRAINSTORMING





3.3 Proposed Solution :

Project team shall fill the following information in proposed solution template.

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To help the plasma donor and seeker by developing a cloud-based application.
2.	Idea / Solution description	In day-to-day life requirement for plasma became high, especially during the COVID-19 crisis. But the donor count was low. Saving the donor information and helping the needy by notifying the current donors would be a helping hand. It is very difficult to find the respective blood group donors when anyone is in need. Regarding the problem faced, an application is to be built which would take the donor details store them and inform them upon request. And also for plasma donation centre, it is easy to find donors.
3.	Novelty / Uniqueness	We help the donor to access the location of a blood centre which is nearby him/her. We Notify them by sending a confirmation emails after they get registered for the plasma donation and also we notify them once the appointment is fixed in the centre. Furthermore, the GPS map option is available to direct the donor to the centre.
4.	Social Impact / Customer Satisfaction	By using this application, the user will experience a user-friendly and responsive interface and they get satisfaction by saving thousands of people's life.

5.	Business Model (Revenue Model)	Donating Plasma with the help of an application makes our idea realistic. The user's information is encrypted. We maintain this app by automation for saving admin and user time. Users get profited as we take care of them even after the plasma donation by giving them hospitality details. Also, we use the Chabot to answer FAQs, as it helps the user to get immediate answers to their doubts.
6.	Scalability of the Solution	Whatever the requirements, the application provides a clear solution for the requirements. It can handle more users who use the application at the same time.

4. REQUIREMENTANALYSIS

4.1 Functional Requirements:

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 Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Login	Enter user name and password
FR-4	Adding User essential data	Link Bank account Enter Hard cash e penses Set budget limit
FR-5	Alerts	EmailAlert

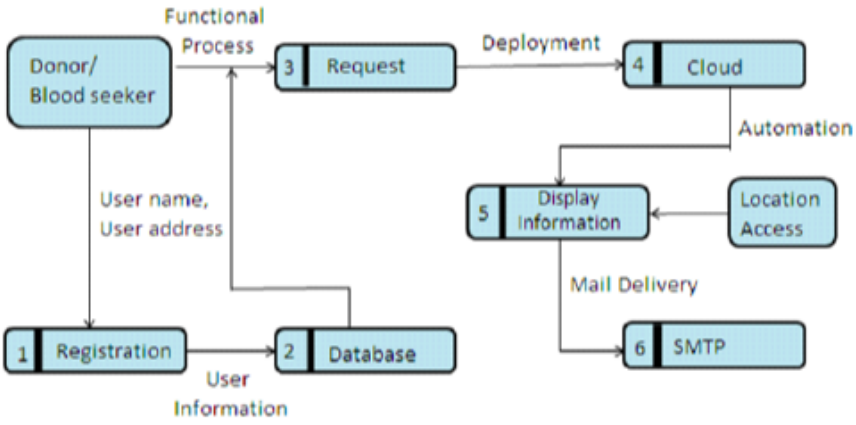
4.2 Non-functional Requirements:

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

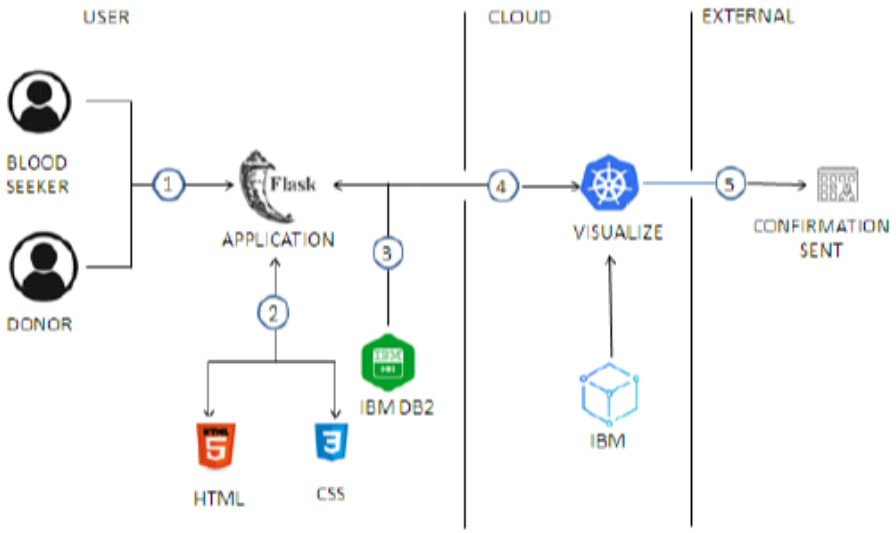
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Fast and Precise Budget Planning
NFR-2	Security	Resilient and data are immutable
NFR-3	Reliability	Failure-free operations and proper alerts are generated.
NFR-4	Performance	Instant e-mail alerts and generation of accurate expense-time graph.
NFR-5	Availability	User can access all the functionality of the application for 3 months after that they need to pay for premium account with all facility.
NFR-6	Scalability	This application can be further upscaled by having a separate section for Auditing/Accounting.

5. Project Design

5.1 Data flow Diagram



1.User registration start through web Application
2.User's Data stored in Database
3.There request processed and deployed in Kubernates
4.Cloud Extracts the data file and display the Information
5.Confirmation Message sent using SMTP to Users.



5.2 Technical Architecture:

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User creates account and view details.	HTML, CSS, JavaScript, Python Flask.
2.	Application maintenance	To keeps track of your container applications that are deployed into the cloud. Also restarts orphaned containers, shuts down containers when they're not being used, and automatically provisions resources like memory, storage, and CPU when necessary.	Kubernetes
3.	Chatbot	Chatbot to answer user's queries.	IBM Watson Assistant
4.	Confirmation Email	Sending a confirmation email to users once they have registered for donation.	SendGrid
5.	Data maintenance	For storing, maintaining, modifying and retrieving the user's details.	MySQL
6.	Cloud Database	For storing the booking details, and user's details.	IBM DB2

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python flask micro framework is used.	Python Flask
2.	Security Implementations	Mandatory Access Control (MAC) and kubernetes is used.	SHA-256, Encryptions, IAM Controls, OWASP, Kubernetes.
3.	Scalable Architecture	3 – Tier architecture is used.	Web Server – HTML, CSS, JavaScript. Application Server – Python Flask. Database Server – IBM DB2.
4.	Availability	Using Load Balancer to distribute network traffic across servers.	IBM Load Balancer
5.	Performance	Request and respond facility within a second. User-friendly API.	IBM Content Delivery Network.

5.3 Uses 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	Spint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I canreceive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through G mail	I can receive confirmation email and click confirm	Medi um	Sprint-1
	Login	USN-5	As a user, I can log into the application By entering email & password	I can enter into my account	High	Sprint-1
	Dashboard	USN-6	As a user, Display all details about plasma application	I can donate or get details about the plasma	High	Sprint-2

Customer (Web user)	Application	USN-7	As a user, I can register, login and see details about plasma	I can access the donor details and Availability of plasma	High	
Customer Care Executive	Update Plasma storage	USN-8	Can keep track of the availability of Plasma	I can provide applications for customer needs	High	
Administrator	Verify donor details	USN-9	To add the donor plasma details in application	Can control all details in this application	Medium	
Customer care Executive	Verify customer feedback	USN-10	To design the application that meets user desires	Can satisfy the customer expectations	Medium	Sprint-4
Customer Care Executive	Control all Plasma details	USN-11	Make sure to check the availability of plasma in the application	Can alert notification through email and SMS	High	Sprint-2

6. PROJECT PLANNING AND SCHEDULING

6.1 SPRINT PLANNING AND ESTIMATION

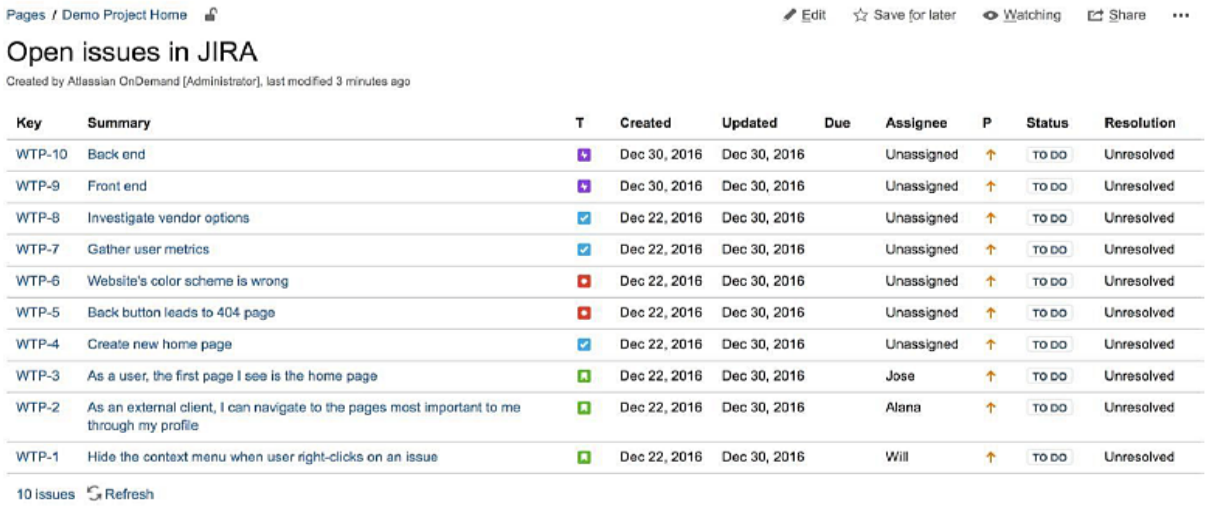
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)
Sprint-1	18	6 Days	24 Oct 2022	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022
Sprint-3	18	6 Days	07 Nov 2022	12 Nov 2022
Sprint-4	18	6 Days	14 Nov 2022	19 Nov 2022

6.2 REPORTS FROM JIRA:

When JIRA sends either standard notifications or user invitations to a mail server, they are listed as when the applicant in need of plasma.The mail server is receiving a constant stream of concurrent multiple email notifications from the same sender which, in turn, triggers security measures on the server which handle these messages, And this application is widely used in Health care industry.

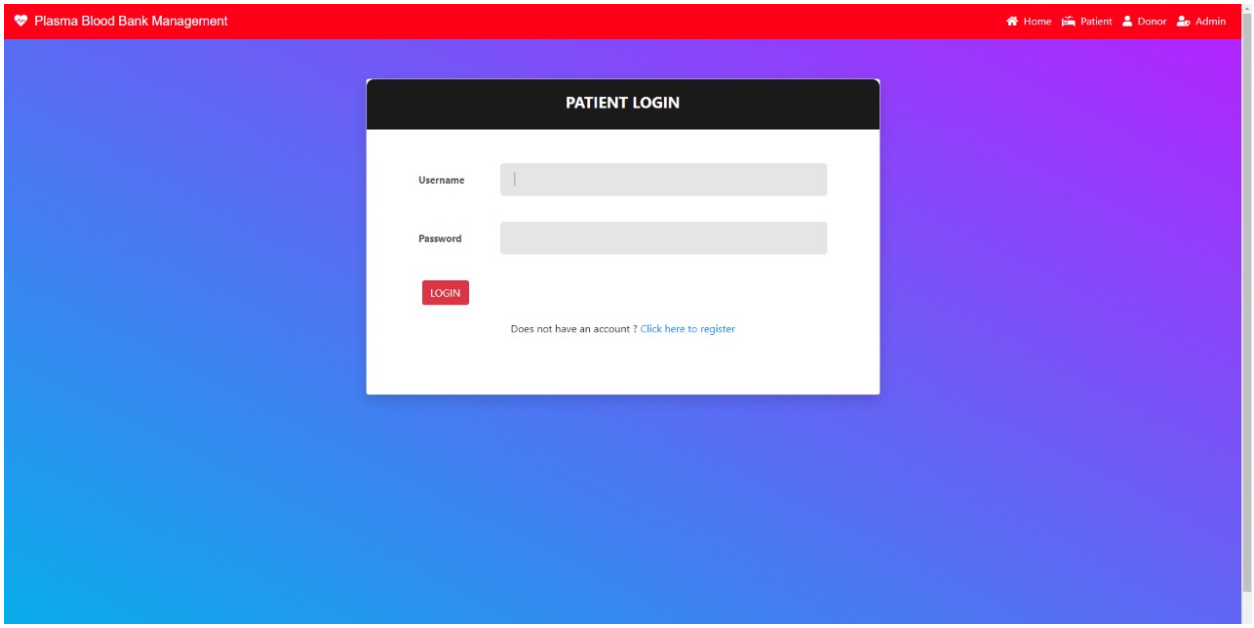
Resolution

a. Check the base url of JIRA to see if it is set as a direct ip address with port number.
b. Example: **http://10.10.10.10:8080**
c. Some email servers (such as Microsoft Outlook) will consider messages from non-DNS urls as phishing attempts. You can correct this behaviour by setting JIRA's base url to a url address such as **http://my-jira.com.**
d. Sometimes when certain mail servers receive multiple emails from the same sender security measures are triggered that will then list those emails as phishing messages. For this, it is best to check with the local mail server administrator for further assistance and confirmation.



7. CODING AND SOLUTIONING

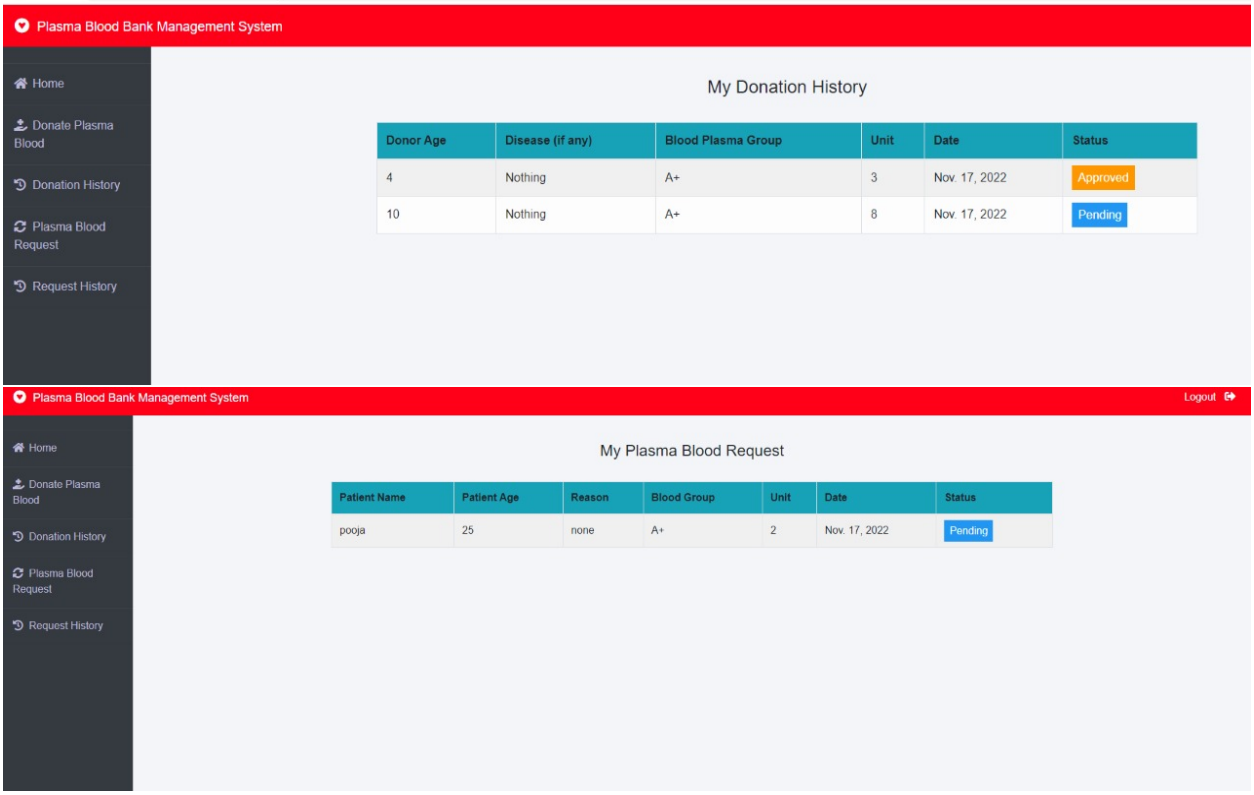
7.1 FEATURE 1



EXPLANATION:

The Chatbot is integrated with the home page so that the user can pass their queries in it and it will answered for the necessary request.

7.2 FEATURE 2



EXPLANATION:

When the user request for plasma for the needed blood group, the available donor details are sent to the user as a notification.

8.TESTING

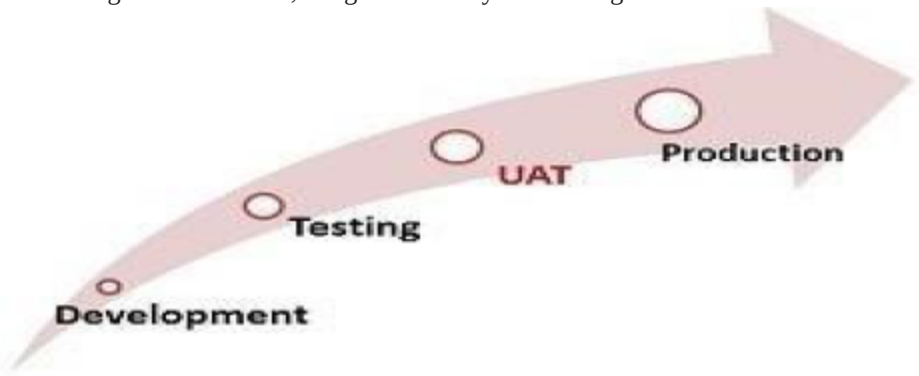
8.1 TEST CASE:

For the URL verifier module in the ISOT phishing detection system, phishing detection is done using 16 different heuristic rules. In the system, 11 main classes were defined, and 1 class was defined with 5 sub-classes. This covers all 16 heuristic rules. To test the system, 15 test cases were designed using assertion methods. Ten test cases were designed to test the 10 main classes and 5 test cases were designed to test the class with five sub-classes. The getter-setter method was used to test the class with five sub-classes. The getter method is used to obtain or retrieve a variable value from the class, and the setter method is used to store the variables.

The class with five sub-classes checks the 5 different heuristic rules, length of the URL, number of dots and slashes in the URL, presence of @ symbols in the URL, IP address mentioned in the URL, and the presence of special character such as ',', '_', ';' in the URL. Initially, only a single test case was created for the class with five sub-classes, but it was failing as this class has five methods as shown. After applying the getter setter method, all the test cases passed without any issues. The test results assert Not Null() is used to check if the input URL is not empty, and assert Array Equals() is used to compare the result from the detection method with the expected result.

8.2 USER ACCEPTANCE TESTING:

User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration and system testing is done.



The main **Purpose of UAT** is to validate end to end business flow. It does not focus on cosmetic errors, spelling mistakes or system testing. User Acceptance Testing is carried out in a separate testing environment with production-like data setup. It is kind of black box testing where two or more end-users will be involved.

UAT is performed by –

1. Client
2. End users

2. Defect Analysis

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

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	11	4	2	2	19
Duplicate	1	1	2	0	4
External	1	4	0	1	6
Fixed	10	2	2	20	34
Not Reproduced	0	0	2	0	2
Skipped	0	0	2	1	3
Won't Fix	0	5	2	1	8
Totals	23	16	12	25	76

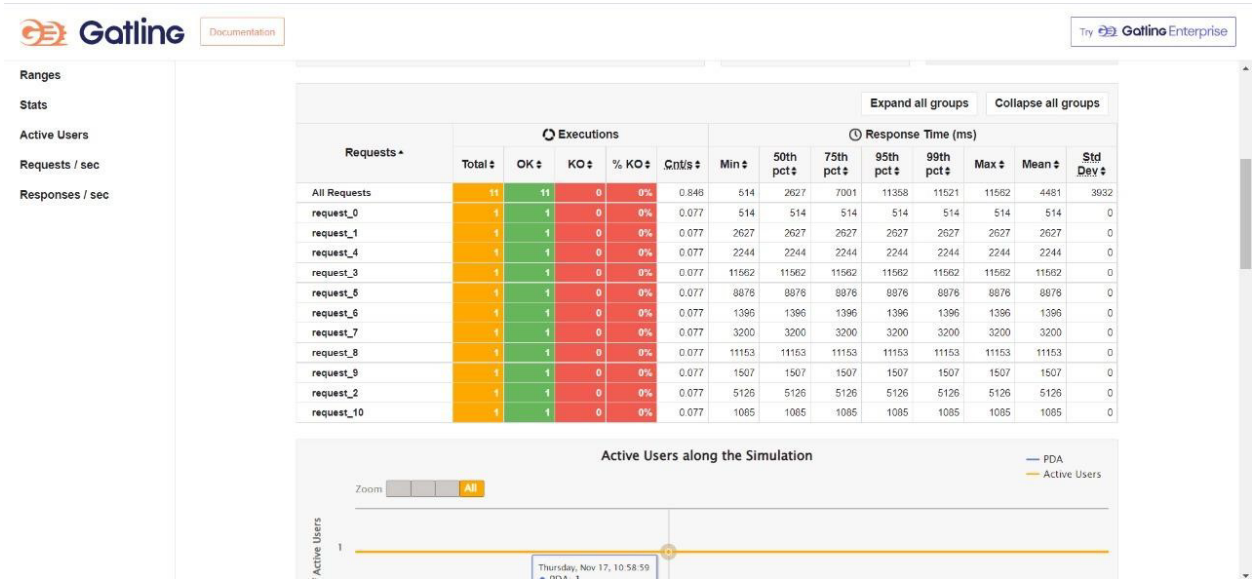
3. Test Case Analysis

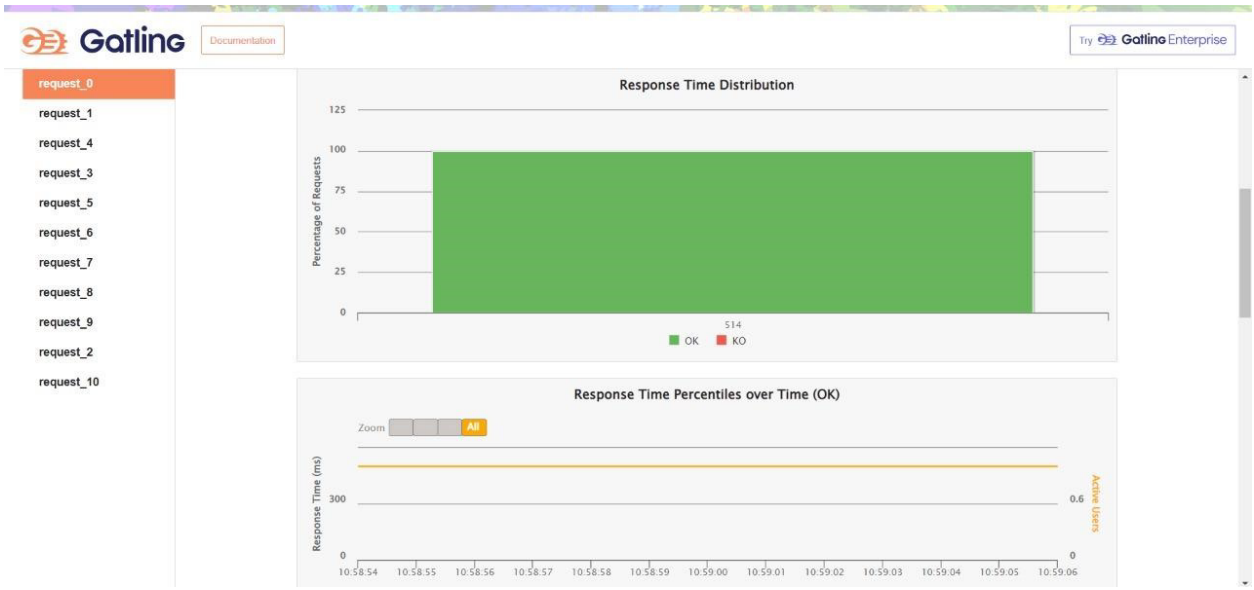
This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	5	0	1	4
Client Application	46	0	2	40
Security	3	0	0	3
Outsource Shipping	2	0	0	2
Exception Reporting	11	0	2	9
Final Report Output	5	0	0	5
Version Control	2	0	1	2

9. RESULTS

9.1 PERFORMANCE METRICS




Gatling
Documentation
Try Gatling Enterprise
request_0
request_1
request_4
request_3
request_5
request_6
request_7
request_8
request_9
request_2
request_10
Response Time Distribution
Percentage of Requests
125
100
75
50
25
0
514
OK
KO
Response Time Percentiles over Time (OK)
Zoom
All
Response Time (ms)
300
0
Active Users
0.6
0
10:58:54
10:58:55
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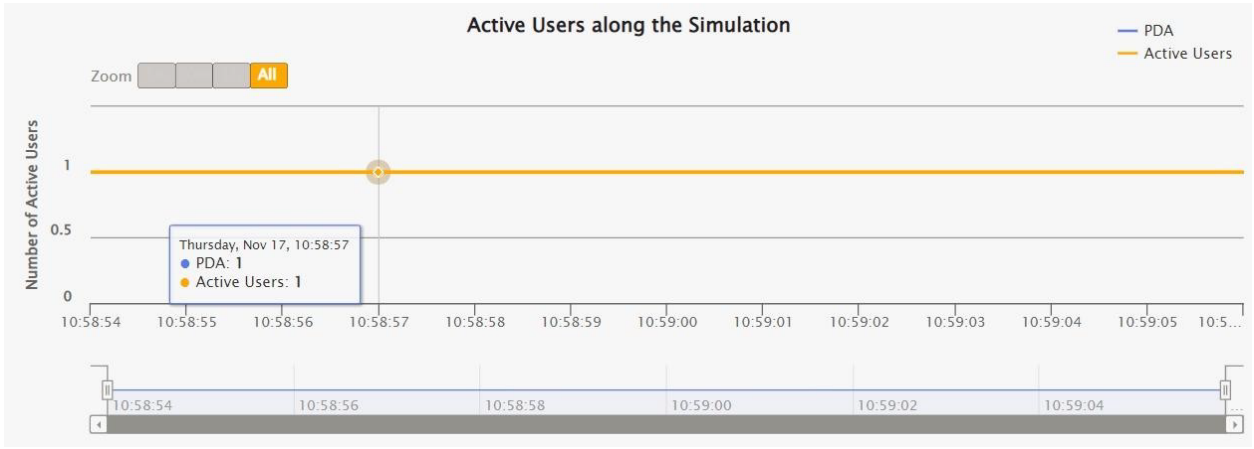
Active Users along the Simulation
PDA
Active Users
Zoom
All
Number of Active Users
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Thursday, Nov 17, 10:58:57
PDA: 1
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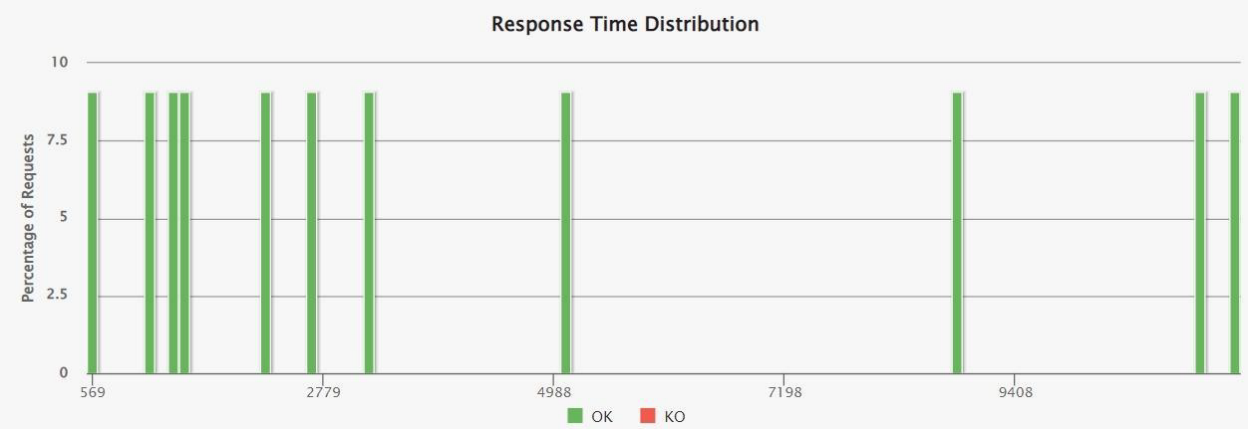
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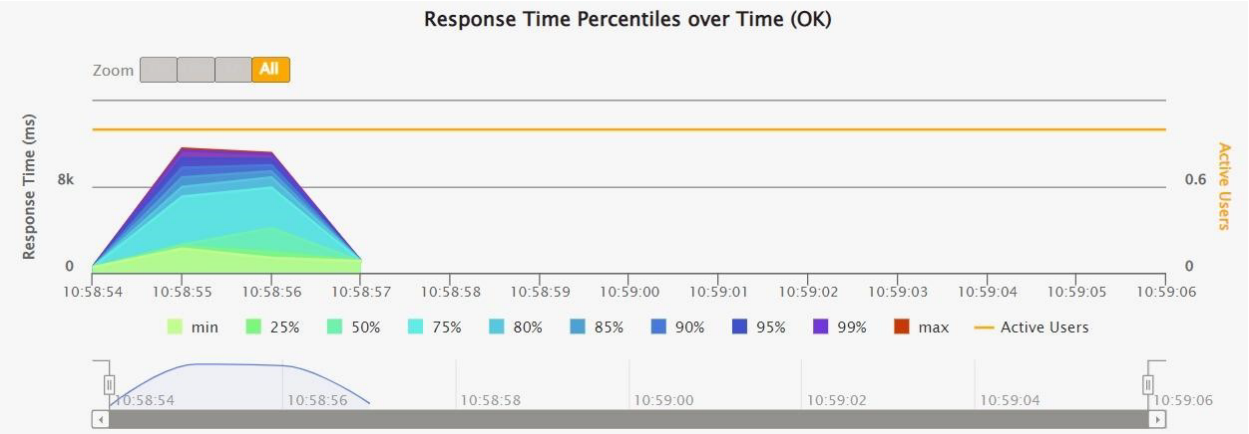
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Response Time (ms)
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min
25%
50%
75%
80%
85%
90%
95%
99%
max
Active Users


Gatling
Documentation
Try Gatling Enterprise
Ranges
Stats
Active Users
Requests / sec
Responses / sec
Number of requests per second
Zoom
All
Number of requests
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All
Active Users
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Gatling
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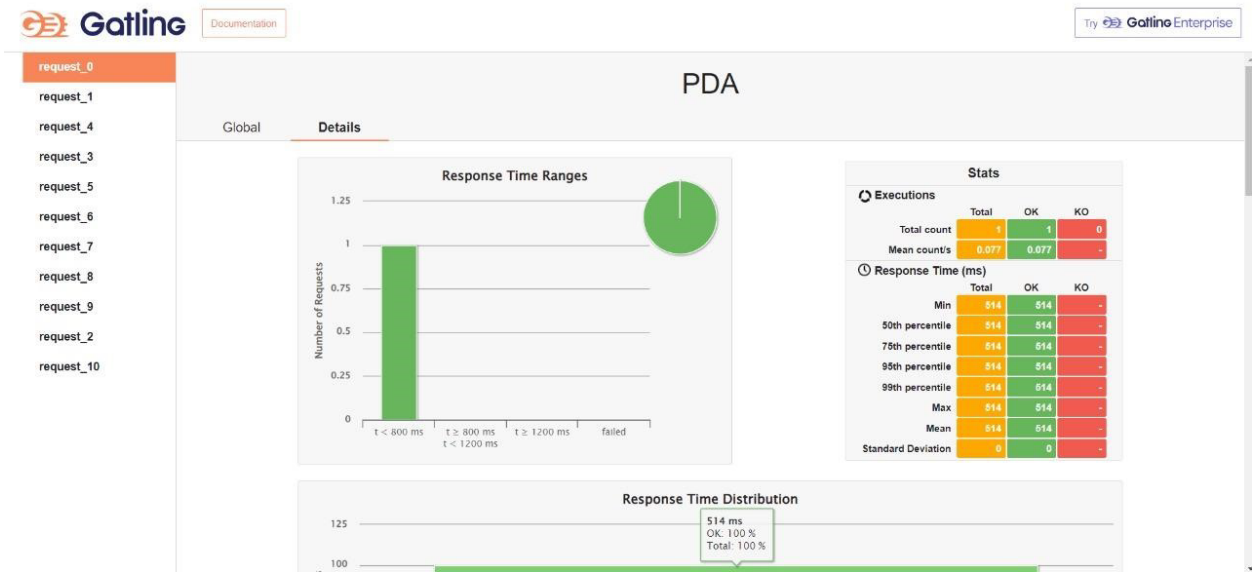
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Try Gatling Enterprise
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request_10
PDA
Global
Details
Response Time Ranges
Number of Requests
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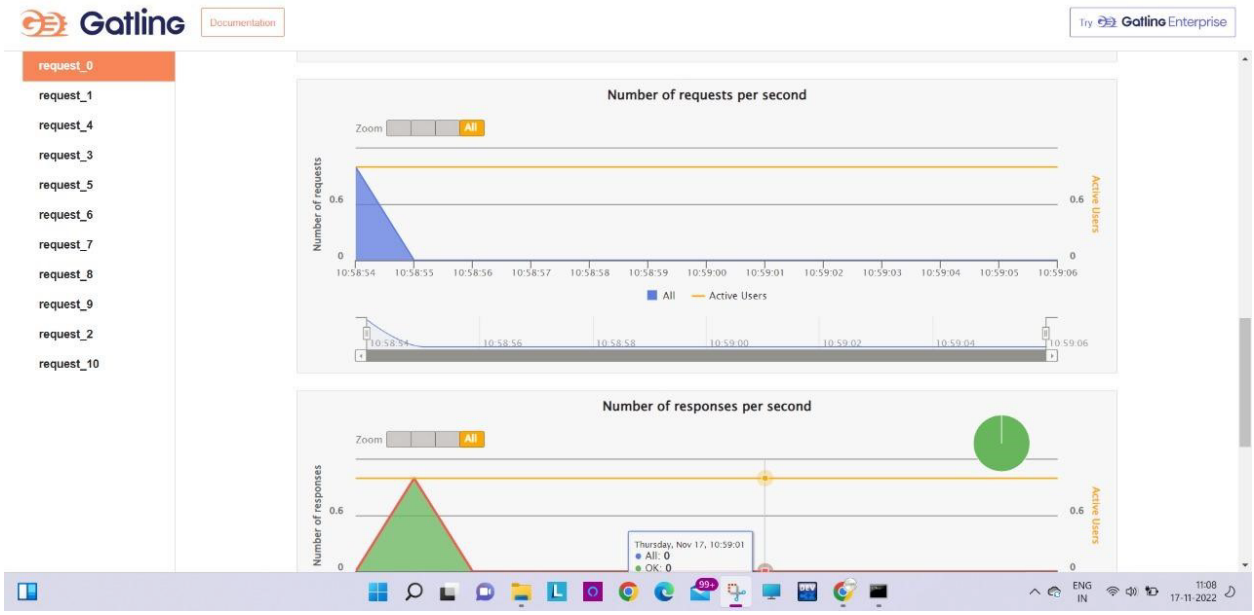
t ≥ 800 ms
t < 1200 ms
t ≥ 1200 ms
failed
Stats
Executions
Total
OK
KO
Total count
Mean count/s
Response Time (ms)
Min
50th percentile
75th percentile
95th percentile
99th percentile
Max
Mean
Standard Deviation
Response Time Distribution
514 ms
OK: 100 %
Total: 100 %


Gatling
Documentation
Try Gatling Enterprise
request_0
request_1
request_4
request_3
request_5
request_6
request_7
request_8
request_9
request_2
request_10
Number of requests per second
Zoom
All
Number of requests
Active Users
All
Active Users
Number of responses per second
Number of responses
Thursday, Nov 17, 10:59:01
All: 0
OK: 0
ENG
IN
11:08
17-11-2022

10. Advantages

1. The project is identified by the merits of the system offered to the user. The merits of this project are as follows:
2. It’s a web-enabled project.
3. This project offers user to enter the data through simple and interactive forms. This is very helpful for the client to enter the desired information through so much simplicity.
4. The user is mainly more concerned about the validity of the data, whatever he is entering. There are checks on every stages of any new creation, data entry or updation so that the user cannot enter the invalid data, which can create problems at later date.
5. Sometimes the user finds in the later stages of using project that he needs to update some of the information that he entered earlier. There are options for him by which he can update the records. Moreover, there is restriction for his that he cannot change the primary data field. This keeps the validity of the data to longer extent.
6. User is provided the option of monitoring the records he entered earlier. He can see the desired records with the variety of options provided by him. From every part of the project the user is provided with the links through framing so that he can go from one option of the project to other as per the requirement. This is bound to be simple and very friendly as per the user is concerned. That is, we can sat that the project is user friendly which is one of the primary concerns of any good project.
7. Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database:
8. The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.
9. Training for simple computer operations is necessary for the users working on the system. .
10. Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer takes much less time then manual system.
11. Allocating of sample results becomes much faster because at a time the user can see the records of last years.
12. Easier and faster data transfer through latest technology associated with the computer and communication.
13. Through these features it will increase the efficiency, accuracy and transparency,

DISADVANTAGES:

The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.

Training for simple computer operations is necessary for the users working on the system.

11. CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of not only programming in ASP.NET and VB.NET web based application and no some extent Windows Application and SQL Server, but also about all handling procedure related with **“Blood Bequeath Federal”.** It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently. Technology is introducing new innovations day by day, thus reducing the time required to do things. The proposed system can be used to reduce the time required to deliver required blood to the needy in cases of emergency. The Web application can be used by the people interested in donating their blood by locating their nearest blood bank. The web application provides a way of communication and synchronization between the hospitals and the blood banks. It also provides them with the facility of communicating with the nearby donors in emergency. The database is a vital aspect of the system. The database of the hospitals and the blood banks must be checked for consistency on regular basis for smooth working of the system.

12. FUTURE ENHANCEMENT

The proposed system uses Google Maps which provides the user with an efficient way of locating the nearby donors/blood banks. The Web application is developed using Xampp server which is an open-source software, while the web application for the hospitals and the blood banks is also developed using open-source tools, hence the system developed is quite feasible. A module is a software component or part of a program that contains one or more routines. One or more independently developed modules make up a program. An enterprise-level software application may contain several different modules, and each module serves unique and separate business operations. Modules make a programmer's job easy by allowing the programmer to focus on only one area of the functionality of the software application. Modules are typically incorporated into the program (software) through interfaces.

Software applications include many different tasks and processes that cohesively serve all paradigms within a complete business solution. Early software versions were gradually built from an original and basic level, and development teams did not yet have the ability to use prewritten code. For example, Systems, Applications and Products in Data Processing (SAP) - an enterprise resource planning (ERP) software - is comprised of several large modules (for example, finance, supply chain and payroll, etc.), which may be implemented with little or no customization. A classic example of a module-based application is Microsoft Word, which contains modules incorporated from Microsoft Paint that help users create drawings or figures.This module consists of the process of how the requests from recipients for the required blood are served. The Blood Bank first checks whether the request is a valid one. After validation it checks the hospital’s database to ensure that the required amount of blood is not available in that hospital and after the request is served. The blood bank module also consists of requesting the blood when urgently needed from other banks and from the registered donors who have kept their status as available for further contact.

- Supporting visual impaired persons

- Online testing human healthy such as blood pressure, temperature, etc.
- Supporting all nation and nationalities languages.
- To do using digital signature technologies to make the system more secure.
- The system has to include video demo

13. APPENDIX

13.1 GITHUB LINK:

https://github.com/IBM-EPBL/IBM-Project-30622-1660150952

13.2 PROJECT DEMO LINK:

https://drive.google.com/drive/folders/11mfW1LTvzUEu9ljR5Xtt2Z8yVyTvEsh9