A
Project Report
On

LIFEQUESTTT

The Project submitted to
Sant Gadge Baba Amravati University, Amravati
Towards partial fulfillment of the Degree of

Bachelor of Engineering
in
Computer Science & Engineering

Under the esteemed guidance of

Prof. K.P.Sable
Asst. Prof., CSE Dept.

Submitted by

Swapnil Murkute
Rahul Bhaonani
Vishal Zade
Kismat Shere
Rajat Sadiwala

Department of Computer Science & Engineering
Shri Sant Gajanan Maharaj College of Engineering, Shegaon,
Dist- Buldhana – 444 203 (M.S.)

2018-19

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING SHEGAON

2018-19

CERTIFICATE

This is to certify that ***Mr. Swapnil Murkute, Mr. Rahul Bhaonani, Mr. Vishal Zade, Mr. Kismat Shere, Mr. Rajat Sadiwala*** *students of final year B.E (Computer Science and Engineering) in the year 2018-2019 of Computer Science and Engineering Department of this institute has completed the project work entitled "****Lifequesttt****" based on syllabus and has submitted a satisfactory amount of their work in this report which is recommended for the partial fulfillment of the requirements for degree of* ***Bachelor of Engineering in Computer Science & Engineering of Sant Gadge Baba Amravati University, Amravati.***

Prof. K.P.Sable
(Project Guide)

Dr. D.R. Dhotre
Head
Computer Sci. & Engg. Department
S.S.G.M. College of Engineering,
Shegaon

Dr. S.B. Somani
Principal
S.S.G.M. College of Engineering,
Shegaon

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING SHEGAON

2018-19

CERTIFICATE

*This is to certify that the project work entitled "**Lifequesttt**" Submitted by* ***Mr. Swapnil Murkute, Mr. Rahul Bhaonani, Mr. Vishal Zade, Mr. Kismat Shere, Mr. Rajat Sadiwala*** *-students of final year B.E (Computer Science and Engineering) in the year 2018-2019 of Computer Science and Engineering Department of this institute has submitted a satisfactory amount of their work based on syllabus in this report which is approved for the award of degree of* ***Bachelor of Engineering in Computer Science & Engineering of Sant Gadge Baba Amravati University, Amravati.***

Internal Examiner
Date:

External Examiner
Date:

ACKNOWLEDGEMENT

The real spirit of achieving a goal is through the way of excellence and lustrous discipline. We would have never succeeded in completing our task without the Cooperation, encouragement and help provided to us by various personalities.

We would like to take this opportunity to express our heartfelt thanks to our project guide ***Prof. K.P.Sable*** *, for her esteemed guidance and encouragement, especially through difficult times. Her suggestions broaden our vision and guided us to succeed in this work. We are also very grateful for her guidance and comments while studying part of our project and we learnt many things under her leadership.*

We extend our thanks to ***Dr. D.R. Dhotre****, Head of Computer Science & Engineering Department, Shri Sant Gajanan Maharaj College of Engineering, Shegaon for his valuable support that made us consistent performer.*

We also extend our thanks to ***Dr. S. B. Somani****, Principal Shri Sant Gajanan Maharaj College of Engineering, Shegaon for his valuable support.*

Also we would like to thanks to all teaching and non-teaching staff of the department for their encouragement, cooperation and help. Our greatest thanks are to all who wished us success especially our parents, our friends whose support and care makes us stay on earth.

1. Mr. Swapnil Murkute
2. Mr. Rahul Bhaonani
3. Mr. Vishal Zade
4. Mr. Kismat Shere
5. Mr. Rajat Sadiwala

(Session 2018-19)

ABSTRACT

"**Lifequesttt**" is web application which provides a platform that connects the following stakeholders: Receiver, Donor and Blood bank. The aim is to simplify the process of searching the donors and make it more convenient. The information of various Blood banks and Donors is stored in the database. Whenever an emergency situation arises the receiver can search for blood banks in a particular city, having a particular blood group.

If the blood bank is not having the required blood group, then the blood bank Logs in and searches for donors having the required blood group in that city. Blood bank can fill the Blood camp details and Blood availability status. Camp Info is visible to all.

CONTENTS

CONTENTS

LIST OF FIGURES

LIST OF SNAPSHOTS

LIST OF SNAPSHOTS

CHAPTER 1

INTRODUCTION

1. INTRODUCTION

1.1 PREFACE

'**Lifequesttt**' is the first product resulted out of the community welfare initiative called 'People Project' from SSGMCE College. Universally, 'Blood' is recognized as the most precious element that sustains life. It saves innumerable lives across the world in a variety of conditions. Once in every 2- seconds, someone, somewhere is desperately in need of blood. More than 29 million units of blood components are transfused every year. The need for blood is great - on any given day, approximately 39,000 units of Red Blood Cells are needed. Each year, we could meet only up to 1% (approx.) of our nation’s demand for blood transfusion.

Despite the increase in the number of donors, blood remains in short supply during emergencies, mainly attributed to the lack of information and accessibility. We positively believe this tool can overcome most of these challenges by effectively connecting the blood donors with the blood recipients.

1.2 STATEMENT OF PROBLEM

Emergency situations, such as accidents, create an immediate and critical need for specific blood types. In such emergency cases, it is difficult for hospital staff to collect blood in case of shortage of blood without having appropriate resources.

Despite shortage of donated blood, efforts by the government and various organizations have led to a decrease in the demand and supply gap over the years. The number of voluntary blood donors increased from 54.4% in 2006-2007 to 83.1% in 2011-2012, with the number of blood units increasing from 4.4 million units in 2006-2007 to 9.3 million units in 2012-2013. In 2016, the Ministry of Health and Family Welfare reported a donation of 10.9 million units against a requirement of 12 million units.

1.3 OBJECTIVES OF PROJECT

- This project is aimed at developing an online platform that connects various hospitals, blood banks, receiver and donor.

- This web application aim to serve as a communication tool between patients (who need blood) and blood donors.

- The major goal of this project is to reduce the complexity of the system to find blood donors in an emergency situation.

1.4 SCOPE AND LIMITATIONS OF THE PROJECT

1.4.1 SCOPE

This project serves as platform which brings receivers, donors and blood banks together and provides information about the status of blood availability based on the inputs to the search (city and blood group). This project can help the needy people at the eleventh hour when they are unable to find blood from other sources. Not only this project takes the process of blood searching online but also it makes entire process more convenient.

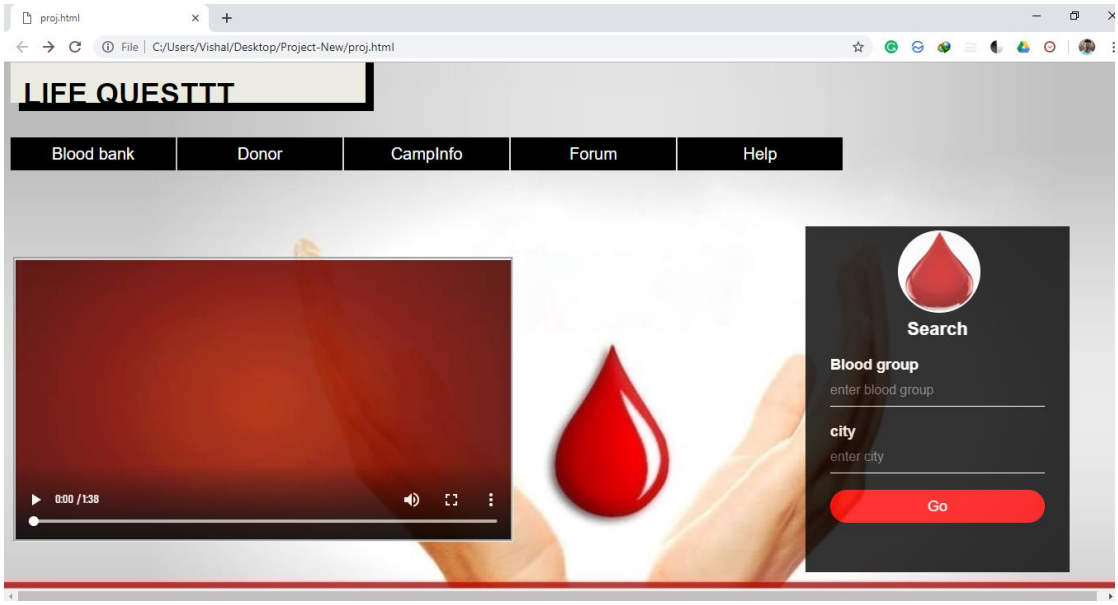
1.4.2 LIMITATIONS

- Not easy to implement for different blood banks in co-ordination.

- The availability status has to be updated frequently by the operator of the blood bank.

1.5 ORGANIZATION OF THE PROJECT

The Organization of our project is as follows



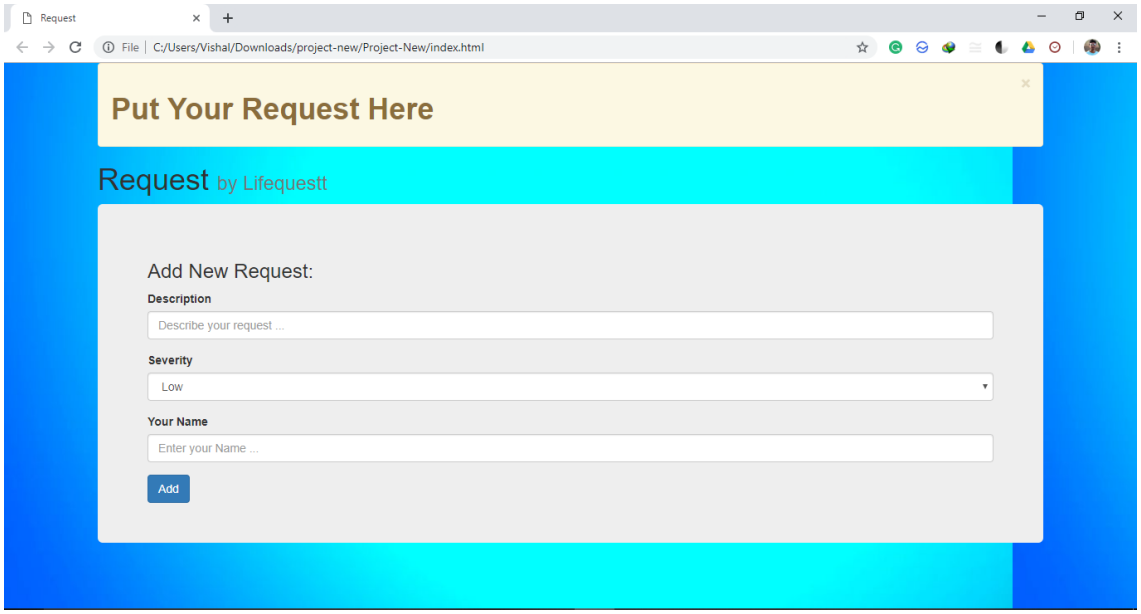
1.5.1 ORGANIZATION OF THE PROJECT

- **Blood bank**
  - Blood bank Signup: For registering the blood bank
  - Blood bank Login: For logging into the Blood bank profile

- **Donor**
  - Donor Signup: For registering the Donor
  - Donor Login: For logging into the Donor profile

- **Camp info**: For providing information about various blood camps

- **Forum**: For Donors to find receivers in urgent need of blood



1.5.2 REQUEST SECTION

- **Help**
  - Contact us: Contact us for any queries
- **Video**: For spreading awareness about importance of blood donation
- **Search**: For searching various blood banks in a city.

CHAPTER 2
LITERATURE SURVEY

2. LITERATURE SURVEY

Sr.No	Title	Journal Name and Publish Year	Author	Conclusion
1	Online Blood Bank Management System	International Journal of Scientific Research in Computer Science and Engineering, 2017	Sindhu J. Roopa M.	It Shows the Comparison of various existing system and introduces some new ideas for improving existing techniques.
2	A Survey on Blood Bank Management System	International Journal of Recent Trends in Engineering and Research, 2017	Animesh Tayal, Harshad Gahare, Akshay patel, Pratik Jain	A Survey on Blood Bank Management System
3	Online Blood Bank Management	International Journal of Innovative in	Ashita Jain, Amit	It helps to find the differences and evaluate the errors

	Using Android	**Science and Engineering Technology ,2016**	**Nirmal, Nitish Sapre**	**and have to improve it.**
4	**Blood Donor Communication**	**International Journal of Advance Research, 2015**	**Natesh Pandi., Samaya Karrupp -an, Ramaya P.**	**The Development of a Web based Blood Bank Management System is proposed to provide Management Functional to the Blood Bank**
5	**The Optimization of Blood Donor Information**	**International Conference on Engineering Technology and Science ,2014**	**P.Priya, V. Saranya, Shabana**	**Built and efficient and reliable blood donor information and management system based on web application.**

TABLE 2.1: LITERATURE SURVEY

CHAPTER 3
MATERIALS AND METHODS

3. MATERIALS AND METHODS

3.1 MATERIALS CAN BE USED

3.1.1 SYSTEM REQUIREMENTS

- Operating System : Windows xp & higher
- IDE : Brackets, Eclipse(Neon, Oxygen)
- Front End Language : HTML, CSS, JavaScript
- Backend Language : Java SE, JDBC Servlet
- Database : Oracle 10g,9i,11g ,12c 2018

3.1.2 HARDWARE REQUIREMENTS

- Intel p4 1.5GHz or above
- 512 MB ram.
- 80 GB HDD Minimum

3.2 METHODS CAN BE USED:

- Waterfall Method
- Iterative Method
- Agile

CHAPTER 4
ANALYSIS

4. ANALYSIS

4.1 DETAILED STATEMENT OF THE PROBLEM

Emergency situations, such as accidents, create an immediate and critical need for specific blood types. In such emergency cases, it is difficult for hospital staff to collect blood in case of shortage of blood without having appropriate resources.

Despite shortage of donated blood, efforts by the government and various organizations have led to a decrease in the demand and supply gap over the years. The number of voluntary blood donors increased from 54.4% in 2006-2007 to 83.1% in 2011-2012, with the number of blood units increasing from 4.4 million units in 2006-2007 to 9.3 million units in 2012-2013. In 2016, the Ministry of Health and Family Welfare reported a donation of 10.9 million units against a requirement of 12 million units.

We take the following points into consideration while building our project.

- Scarcity of rare blood group.
- Unavailability of blood during emergency.
- Less awareness among people about blood donation and blood transfusion.
- Deaths due to lack of blood during operation.
- The Blood Bank Management System project aims to make all the procedures automated and therefore with computer system it can be more fast and accurate

4.2 REQUIREMENT SPECIFICATIONS

4.2.1 SYSTEM REQUIREMENTS

- Operating System : Windows xp & higher
- IDE : Brackets, Eclipse(Neon, Oxygen)
- Front End Language : HTML, CSS, JavaScript, AngularJS
- Backend Language : Java SE, JDBC Servlet
- Database : Oracle 10g,9i,11g ,12c 2018

4.2.2 HARDWARE REQUIREMENTS

- Intel p4 1.5GHz or above
- 512 MB ram.
- 80 GB HDD Minimum

4.3 FUNCTIONAL REQUIREMENTS

- Blood Bank Login
- Blood Bank Signup
- Donor Login
- Donor Signup
- Change the Blood Bank Login Password
- Change the Donor Login Password
- Change Personal Contact details by the donor himself
- Change Personal Contact details by the Blood Bank itself
- Send Blood Donation details to the relevant donors
- Send Blood Bank testing details
- Withdraw registration details by donor

- Withdraw registration details by Blood Bank

4.4 NON-FUNCTIONAL REQUIREMENTS

- Capacity, Scalability and Availability
- Maintainability

4.4.1 OTHER

- Security

4.4.2 PERFORMANCE REQUIREMENTS

- Should run on 500GHz, 64MB Machine
- Should have a proper internet connection
- The response time for occurs a change will be no more than 4 seconds
- The response time for access the database will be no more than 5 seconds.

4.5 FEASIBILITY STUDY

4.5.1 Technical Feasibility

- Accuracy
- Reliability
- Security

4.5.2 Operation Feasibility

- Sufficient support for the Donors/users
- Work properly if it is being developed and implemented

- Easy to maintain

4.5.3 Economical Feasibility

- The System Economically Feasible
- Hardware, Software and Others

4.6 USE CASE DIAGRAM

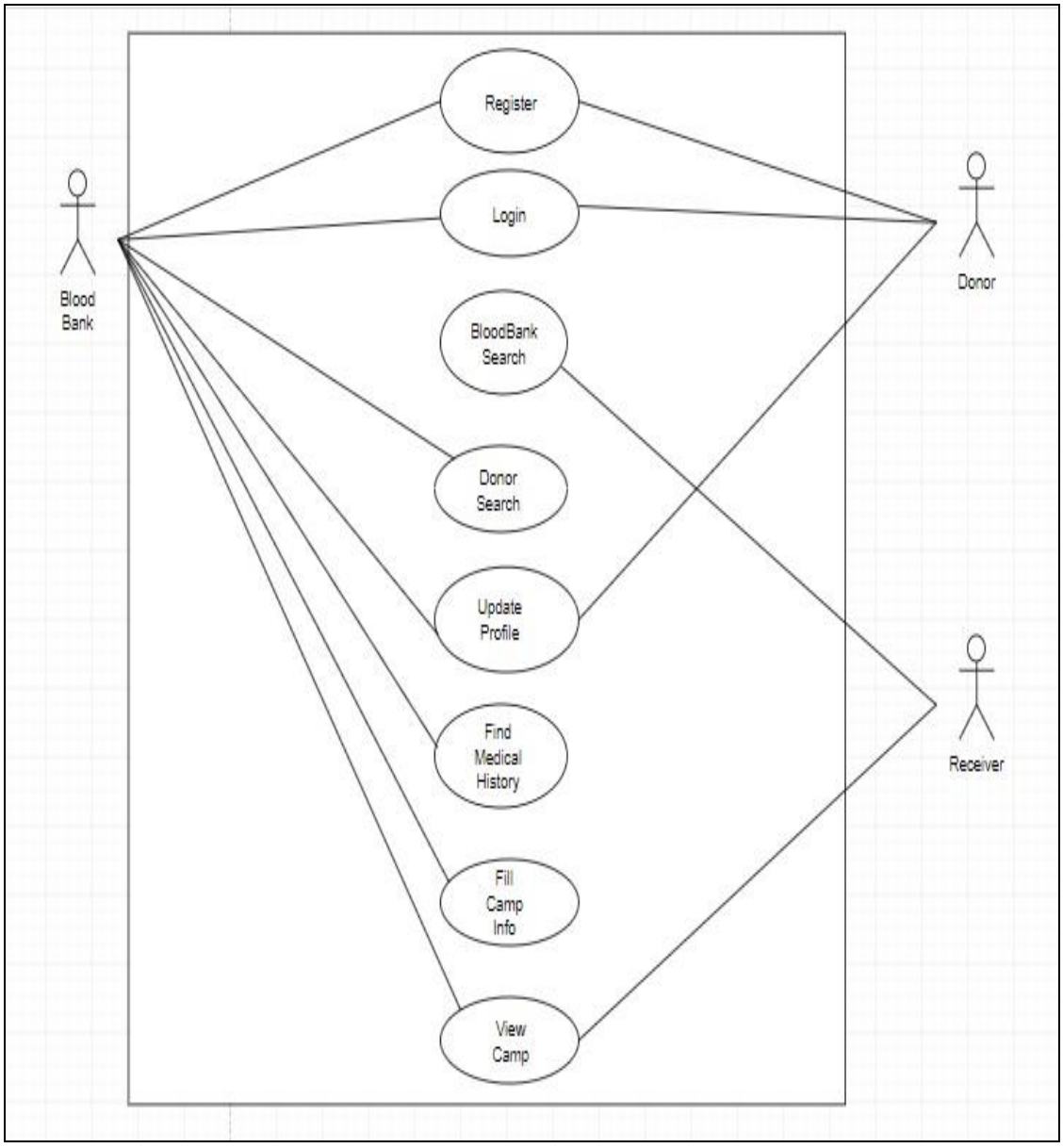


Fig 4.6 USE CASE DIAGRAM

4.7 USE CASE SPECIFICATION

Use Case Diagram – A use case diagram is a dynamic or behaviour diagram in UML. Use Case diagrams model the functionality of a System using use cases.

- **Primary Actors –** Primary Actors are actors using the system to achieve a goal. In this System the Primary User is Blood Bank.

- **Secondary Actor –** Secondary Actors are actors that the system needs assistance from to achieve the primary actor's goal. In this system Secondary Actors are donor and Receiver.

- **Use Cases –** Use cases are set of actions, services and functions that system needs to perform**.**

  In this system following use cases are present

  - Register
  - Login
  - Blood Bank Search
  - Donor Search
  - Update Profile
  - Find Medical History
  - Fill Camp Info
  - View Camp

CHAPTER 5

DESIGN

5. DESIGN

5.1 DESIGN GOALS

- The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation.
- The model should utilize established methods and techniques like database designs, normalizations and structured programming techniques.
- The model should consist of building blocks, which define tasks, results and interfaces.
- The model should separate the logical system from the physical system.
- Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible.

5.2 DESIGN STRATEGY

System design is the process of planning a new system or to replace the existing system. Simply, system design is like the blueprint for building, it specifies all the features that are to be in the finished product.

System design phase follows system analysis phase. Design is concerned with identifying functions, data streams among those functions, maintaining a record of the design decisions and providing a blueprint the implementation phase.

Design is the bridge between system analysis and system implementation. Some of the essential fundamental concepts involved in the design of application software are:

5.2.1 ABSTRACTION

Abstraction is used to construct solutions to problem without having to take account of the intricate details of the various component sub problems. Abstraction allows system designer to make step-wise refinement, which at each stage of the design may hide, unnecessary details associated with representation or implementation from the surrounding environment.

5.2.2 MODULARITY

Modularity is concerned with decomposing of main module into well-defined manageable units with well-defined interfaces among the units. This enhances design clarity, which in turn eases implementation, Debugging, Testing, Documenting and Maintenance of the software product. Modularity viewed in this sense is a vital tool in the construction of large software projects.

5.2.3 VERIFICATION

Verification is fundamental concept in software design. A design is verifiable if it can be demonstrated that the design will result in implementation that satisfies the customer's requirements. Verification is of two types namely.

- Verification that the software requirements analysis satisfies the customer's needs.
- Verification that the design satisfies the requirement analysis.

Some of the important factors of quality that are to be considered in the design of application software are:

Reliability:

The software should behave strictly according to the original specification and should function smoothly under normal conditions.

Extensibility:

The software should be capable of adapting easily to changes in the specification.

Reusability:

The software should be developed using a modular approach, which permits modules to be reused by other application, if possible.

The System Design briefly describes the concept of system design and it contains four sections. The first section briefly describes the features that the system is going to provide to the user and the outputs that the proposed system is going to offer.

The second section namely Logical Design describes the Data Flow Diagrams, which show clearly the data movements, the processes and the data sources, and sinks, E-R diagrams which represent the overall logical design of the database, and high-level process structure of the system.

The process of design involves “conceiving and planning out in the mind” and making a drawing pattern, or sketch of the system. In software design there are two types of major activities, Conceptual Design and Detailed Design.

Conceptual or logical or external design of software involves conceiving, planning out, and specifying the externally observable characteristics of a software product. These characteristics include user displays, external data sources, functional characteristics and high-level process structure for the product.

Details or internal design involves conceiving, planning out, and specifying the internal structure and processing details of the software product. The goal of internal design is to specify internal structure, processing details, blueprint of implementation, testing, and maintenance activities.

One of the important fundamental concepts of software design is modularity. A modularity system consists interfaces among the units. Modularity enhances design clarity, which in turn eases implementation, debugging, testing, documentation, and maintenance of the software product.

The other fundamental concepts of software design include abstraction, structure, information hiding, concurrency and verification. The use of structuring permits decomposition of a large system into smaller, more manageable units with well-defined relationships to the other units. The system design is verifiable if it can be demonstrated that the design will result in an implementation that satisfies the customer's requirements.

Preliminary Design:

Preliminary design is basically concerned with deriving an overall picture of the system. Deriving entire system into modules and sub-modules while keeping Cohesion and Coupling factors in mind. Tools, which assist in preliminary design process, are Data Flow Diagrams.

Code design:

The purpose of code is to facilitate the identification and retrieval for items of information. A code is an ordered collection of symbols designed to provide unique identification of an entity or attribute. To achieve unique identification there must be only one place where the identified entity or the attribute can be entered in the code; conversely there must be a place in the code for everything that is to be identified. This mutually exclusive feature must be built into any coding system.

The codes for this system are designed with two features in mind. Optimum human oriented use and machine efficiency. Length of the code range from length of one to length of five characteristics:

- The code structure is unique; ensuring that only one value of the code with a single meaning may be correctly applied to a given entity or attributes.

- The code structure is expansible allowing for growth of its set of entities and attributes.

- The code is concise and brief for recording, communication, and transmission and storage efficiencies.

- They have a uniform size and format.

- The codes are simple so that the user can easily understand it.

- The codes are also versatile i.e., it is easy to modify to reflect necessary changes in condition, chart eristic and relationships of the encode entities.

- The codes are also easily storable for producing reports in a predetermined order of format.

- The codes are also stable and do not require being frequently updated thereby promoting user efficiency.

- The codes are also meaningful.

- They are also operable i.e., they are adequate for present and anticipate data processing both for machine and human use.

5.3 CLASS DIAGRAM

The class diagram consists of the following:

Blood bank: It consists of blood bank name, username, email, city of type String, contact of integer, password of type password. Functions Search, view profile, update profile, edit profile, editcampinfo, viewcampinfo, medical history.

Donor: It consists of Donor name, username, email, gender, blood group, city of type string, contact, age of type integer, password of type password. Functions are search, view profile, update profile, view campinfo.

Blood: It consists of is available, blood group of type string.

Receiver: It consists of function search.

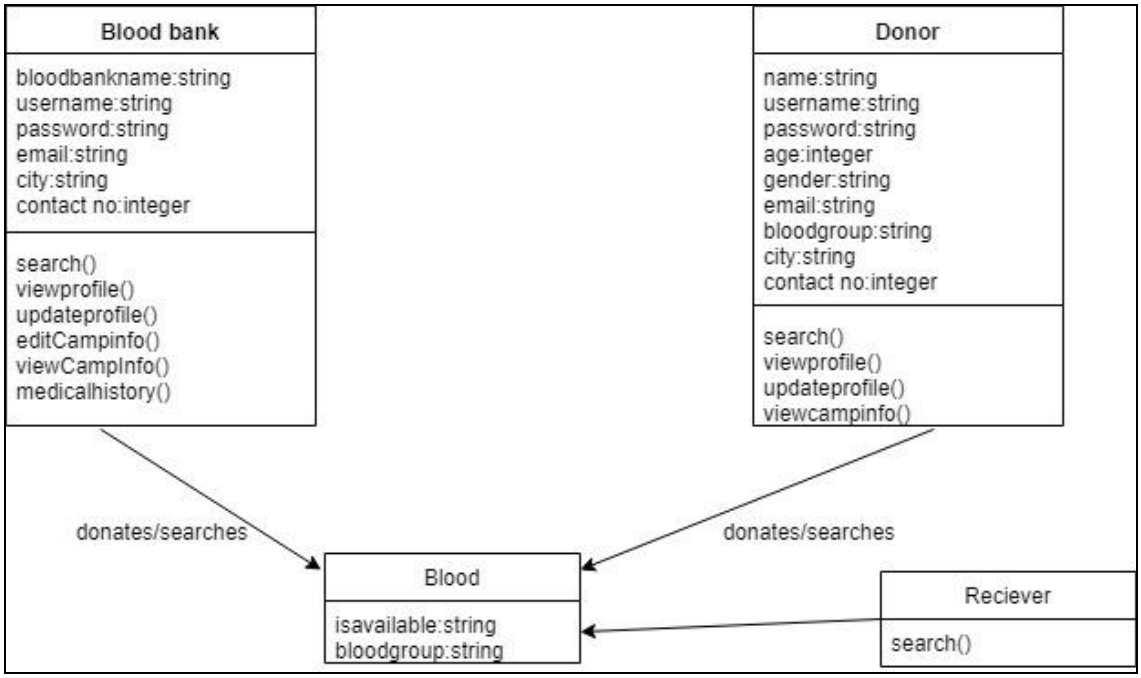


fig 5.3: CLASS DIAGRAM

5.4 SEQUENCE DIAGRAM

5.4.1 SEQUENCE DIAGRAM FOR DONOR

DONOR: In this diagram the donor who will first time visit the system has to register himself to the system as the donor, and his data will be stored in database. If he is already registered member then he will first login the system in the backside the data will be validated in database and if he is valid member then he will be able to view his profile and update his profile and the relevant changes will appear in database.

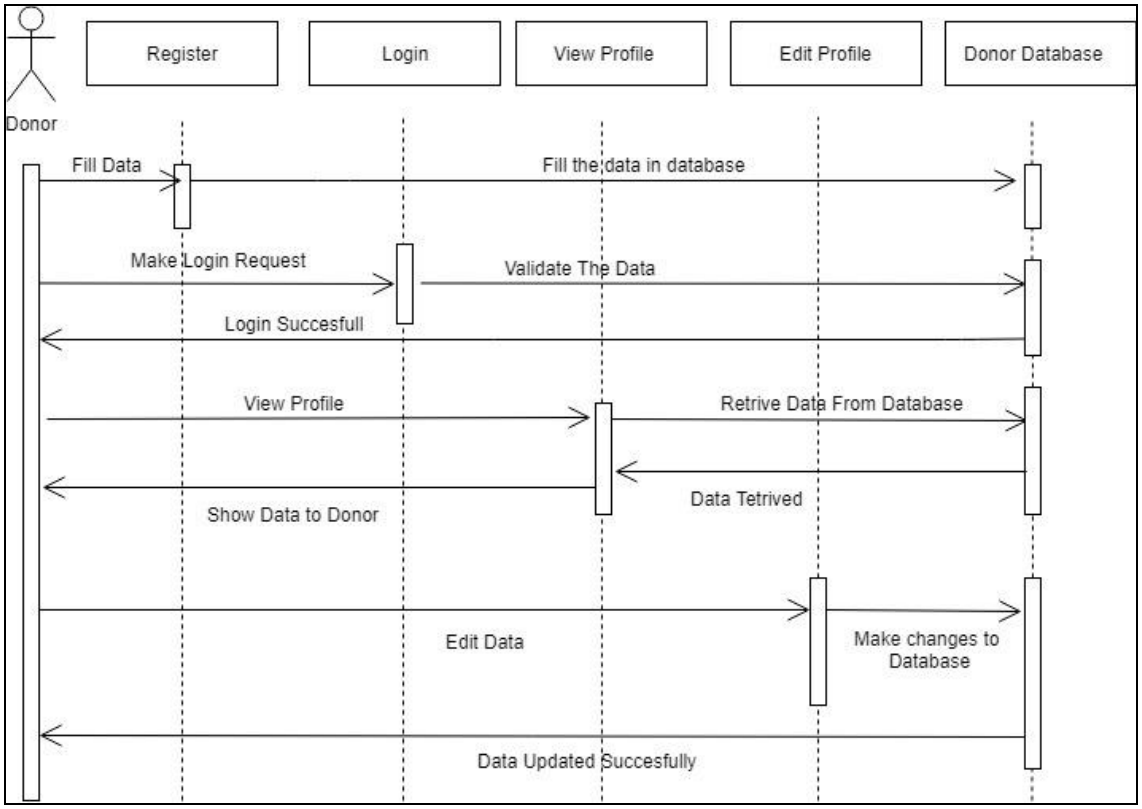


Fig 5.4.1: SEQUENCE DIAGRAM FOR DONOR

5.4.2 SEQUENCE DIAGRAM FOR RECEIVER

RECEIVER: In this the receiver will be anyone who needs the blood. In such scenario he will enter the required blood group and the city in which he presents. Such parameters are givven input to the blood bank database in that it will find the relevant list of blood banks who are satisfying the both conditions and according to that the list will be generated and it will be displayed to the receiver which contains the blood bank name, contact number, email. Receiver can also view the blood camp information which will be organised by different organisations. The camp information will be retrieved from the database and the information will be shown to user.

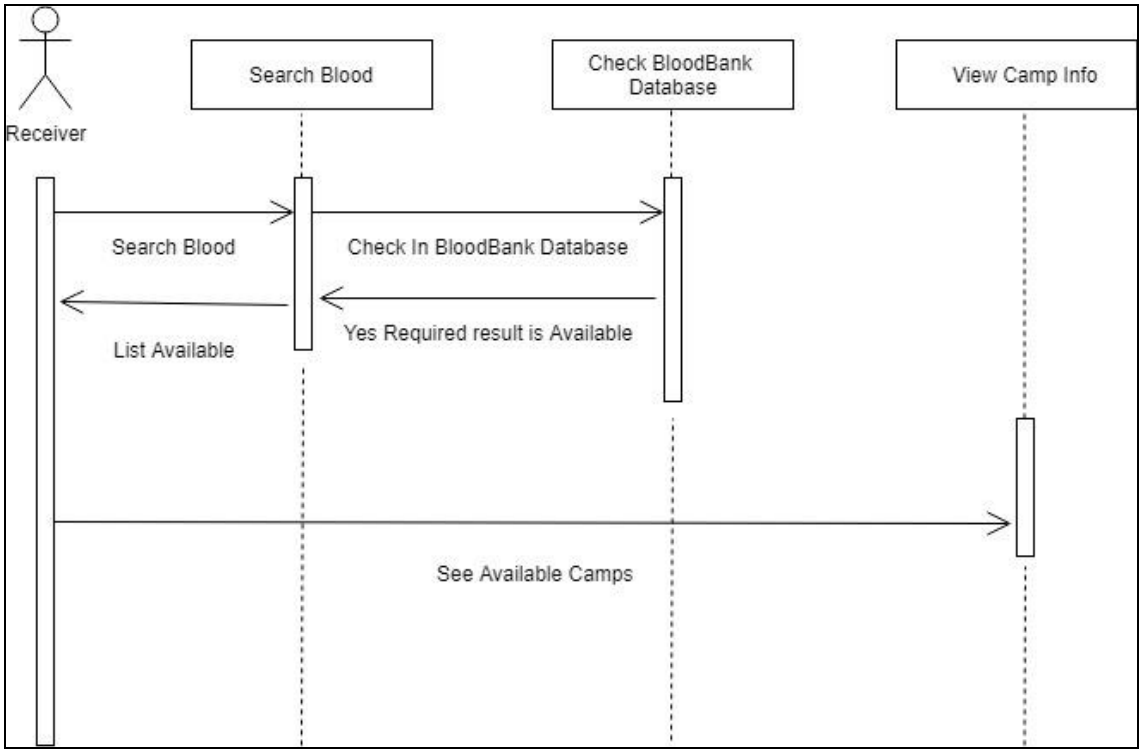


Fig 5.4.2**: SEQUENCE DIAGRAM FOR RECEIVER**

5.4.3 SEQUENCE DIAGRAM FOR BLOOD BANK

BLOOD BANK: Blood Bank first has to login to system his username and password will be checked in database if the credentials are valid then he will successfully login to system. After successful login he will be able perform different functions such as search donor, fill data, organise camp, search medical history of patient all this information will be retrieved and stored from database and according to that the relevant data will be shown to user.

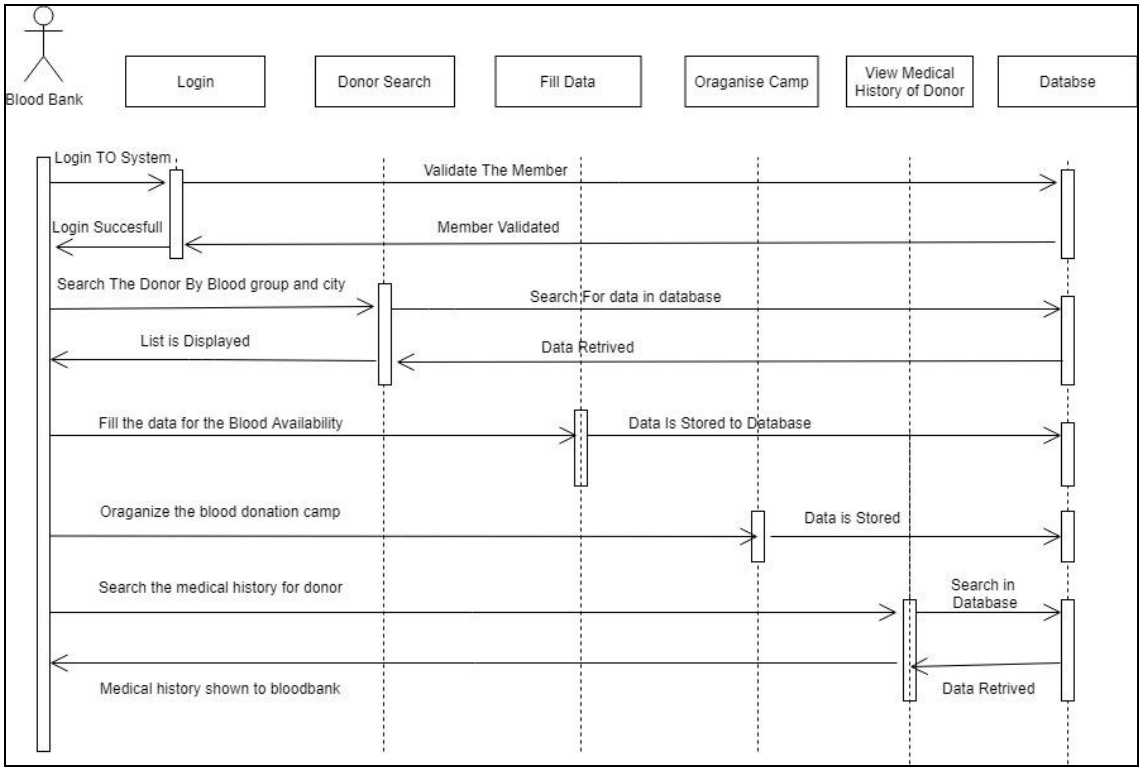


Fig 5.4.3: SEQUENCE DIAGRAM FOR BLOOD BANK

5.5 COLLOBORATION DIAGRAM

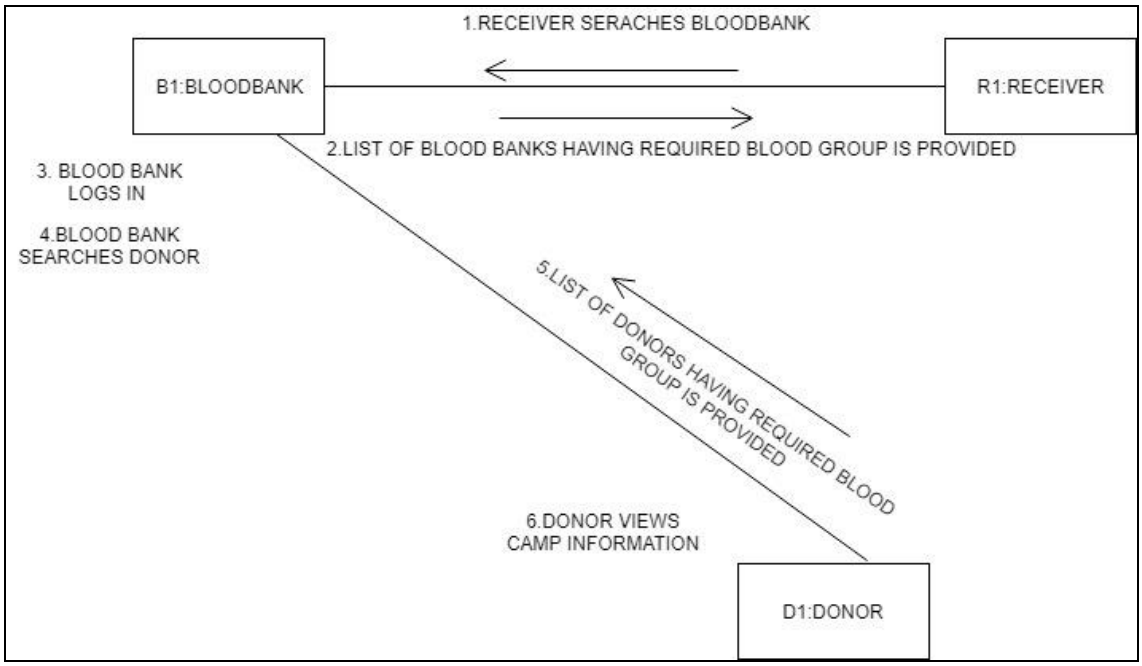


Fig 5.5: COLLOBORATION DIAGRAM

5.6 STATE CHART DIAGRAM

5.6.1 STATE DIAGRAM FOR DONOR

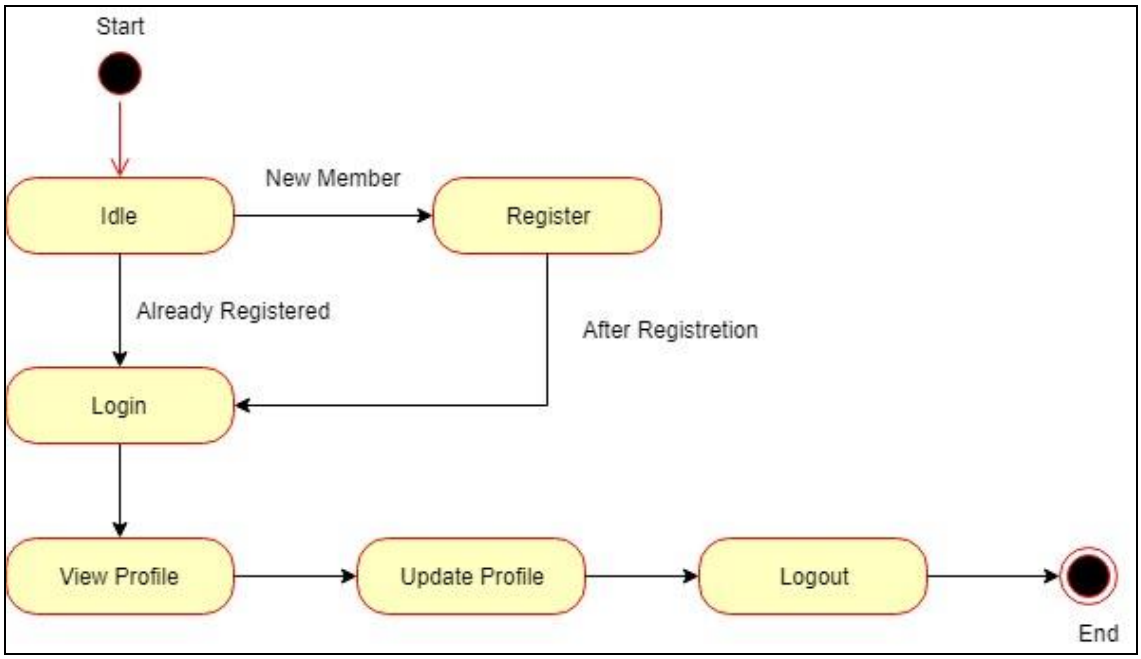


Fig 5.6.1: STATE DIAGRAM FOR DONOR

5.6.2 STATE DIAGRAM FOR RECEIVER

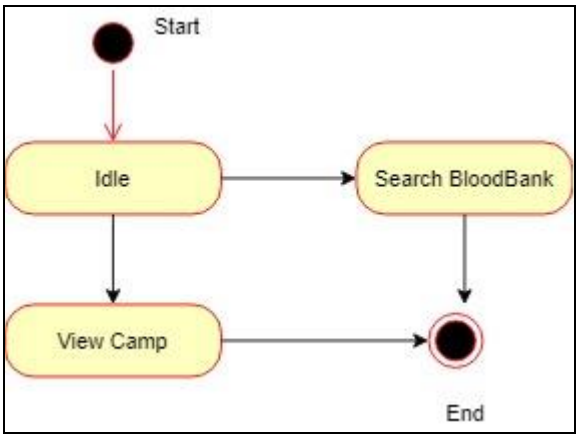


Fig 5.6.2: STATE DIAGRAM FOR RECEIVER

5.6.3 STATE DIAGRAM FOR BLOODBANK

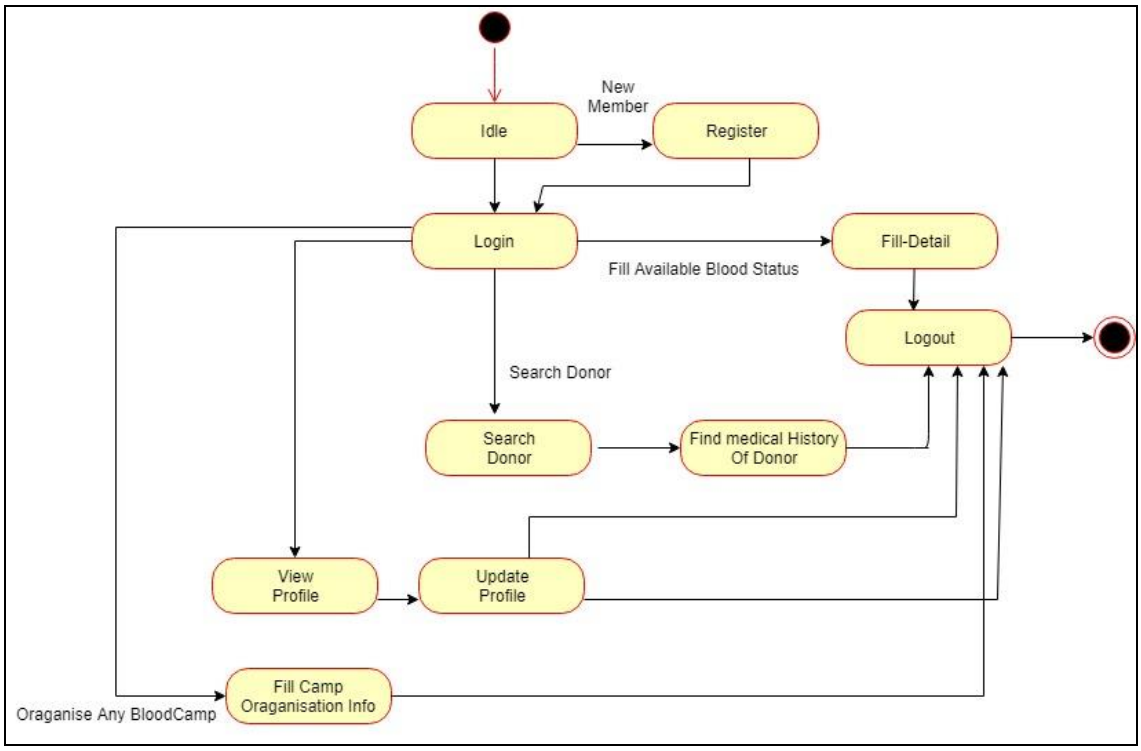


Fig 5.6.3: STATE DIAGRAM FOR BLOOD BANK

5.7 ACTIVITY DIAGRAM

After starting, if the actor is receiver then either he/she will either search blood bank or they will see the information of various blood donation camps being organized. If the actor is donor it will be checked whether he/she is existing donor if not, then they will sign up if yes then they will login. After that, the donor can either update profile or logout. If the actor is blood bank then the blood bank will sign up if it isn't registered else blood bank will login and will be able to search donor, fill camp info, view camp info, fill availability status and view medical history and logout.

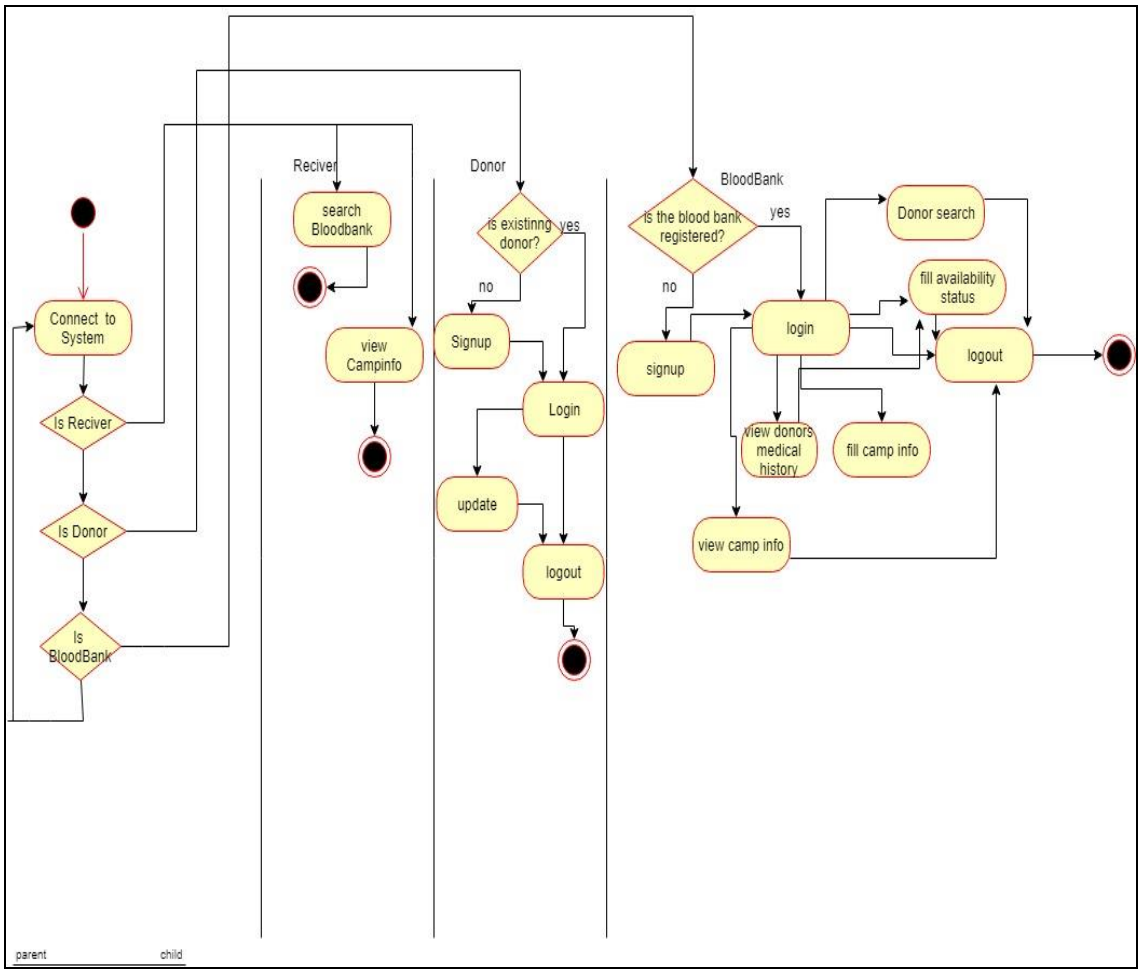


Fig 5.7: ACTIVITY DIAGRAM

CHAPTER 6

IMPLEMENTATION

6. IMPLEMENTATION

6.1 IMPLEMENTATION STRATEGY

During the software-testing phase each module of software is thoroughly tested for bugs and for accuracy of output. The system developed is very user-friendly and the detailed documentation is also given to the user as online help wherever necessary. The implementation phase normally ends with the formal test involving all the components.

The entire system was developed using the HTML, CSS, JavaScript, Personal Web Server, and Oracle 12c as back end. The HTML is used to design the web page. The Personal Web Server is used to understand the client's request and to send response to them. The VBScript are used for client-side validations so that the user can enter only appropriate input in the input fields. The Oracle 12c is the back end tool where the database resides.

Hence the design of the entire system is user-friendly and simple the implementation has been quite easy.

6.2 HARDWARE PLATFORM USED

- Intel core i3
- 2GB AMD Radeon
- 8 GB DDR4 Ram
- 1 TB HDD

6.3 SOFTWARE PLATFORM USED

- Operating System : Windows 10
- IDE : Brackets, Eclipse Oxygen
- Front End Language : HTML, CSS, JavaScript
- Backend Language : Java SE, JDBC Servlet
- Database : Oracle 12c 2018

6.4 DEPLOYMENT DIAGRAM

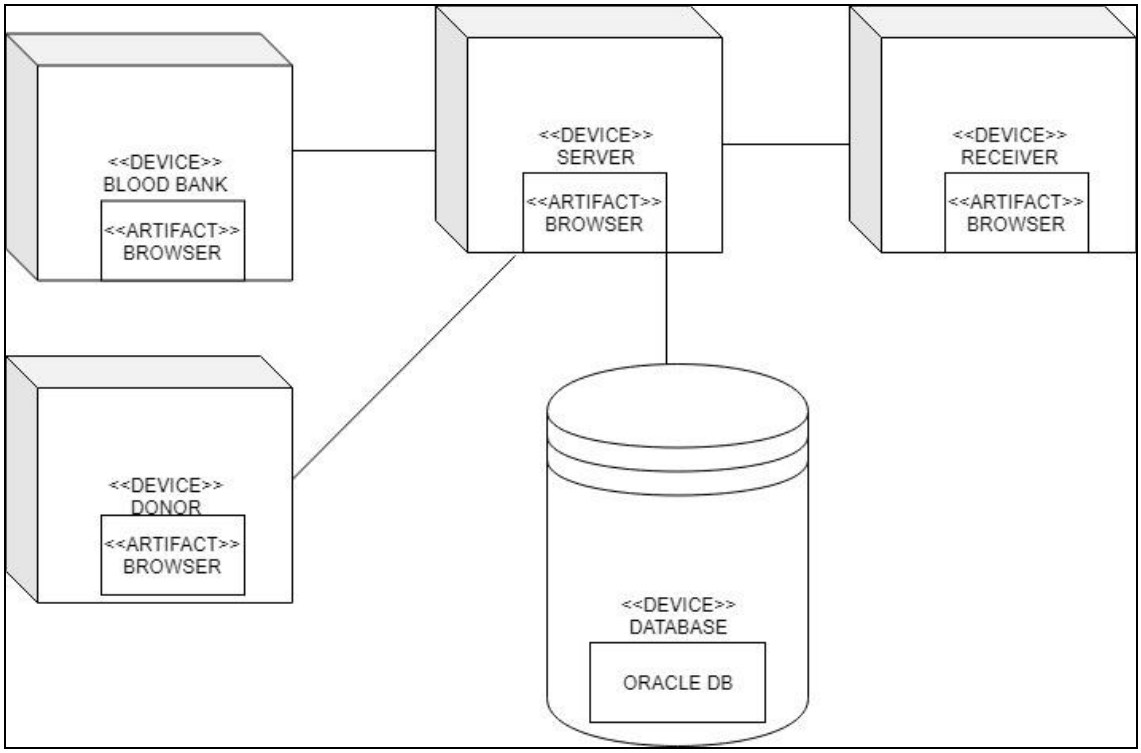


Fig 6.4: DEPLOYMENT DIAGRAM

6.5 IMPLEMENTATION LEVEL DETAILS

Oracle 12c:

Oracle is a comprehensive operating environment that packs the power of a mainframe Relational Database Management system into user microcomputer. It provides a set of functional programs that user can use as tools to build structures and perform tasks, became applications developed in oracle are completely portable to other versions of the programmer who can create a complex application in a single user environment and then move it to a multi user platform. User do not have to be an expert to appreciate oracle but the better user understands the program, the productively and creatively can use the tools it provides.

Features of Oracle:

1. Oracle is portable:

The oracle RDBMS is available on wide range of platforms ranging from pc's to super computers and as a multi-user network loadable module for Novell Netware. If you run the same application on one system you can run the same application on other systems without any modifications.

2. Oracle is Compatible:

The Oracle command can be used for COM indicating with IBM, DB/2, Mainframe RDBMS, which is different from Oracle, i.e., Oracle is compatible with DB/2. Oracle RDBMS is a high performances fault tolerant DBMS, which is specially designed for online transaction processing and for handling the large database applications.

3. Oracle RDBMS is available with two options:

Oracle RDBMS version 8 with transaction processing option and oracle RDBMS version 8 without transaction processing option. Oracle with transaction processing option offers three features, which contributes to a very high level of transaction processing throughout.

SQL:

The name SQL stands for Structural Query Language. SQL is a data access language, like any other language, it is used for communication. SQL communicates with database manager. The database manager could be Oracle, Informix, DB2 and SQL database. SQL is easy to learn. Despite the fact that SQL is a computer programming language, it is much simpler than traditional programming language like COBOL, BASIC, FORTRAN or API. This is due to the fact that SQL is a non-procedural language.

SQL is one of the Oracle facilities. It is important to understand in each case its differences, purpose and place in the Oracle family.

- SQL is the language used to access a relational database, including Oracle.
- SQL May be used with each of the Oracle tools, where access to the database is required.

Overview of SQL:

A database management system requires a query language to enable users to access data. Structured Query Language (SQL – pronounced ‘sequel’) is the language used by most relational database systems.

IBM developed the SQL language in a prototype relational database management system –System R – in the mid-1970s. In 1979, Oracle Corporation introduced the first commercially available implementation of SQL.

Features of SQL:

- SQL is an English-like language. It uses words such as select, insert, delete as part of its command set.

- SQL is a non-procedural language: you specify *what* information you require, not how to get it. In other words, SQL does not require you to specify the access method to the data. All SQL statements use the query optimizer – a part of the RDBMS – to determine the fastest means of retrieving the specified data. This feature makes it easier for you to concentrate on obtaining the desired result.

- SQL processes sets of records rather than a single record at a time. The most common form of a set of records is a table.

- A range of user including DBAs, application programmers, management personnel, and many other types of end users can use SQL.

- SQL provides commands for a variety of tasks including:

    - Querying data
    - Inserting, updating and deleting rows in a table
    - Creating, modifying and deleting database objects
    - Controlling access to the database and database objects
    - Guaranteeing database consistency.

SQL Processing Capabilities:

SQL is composed of a definition language a Data Manipulation Language and a Data Control Language. These three languages support the complete spectrum of Relational Data processing activity. In fact most SQL based product all access to the data through SQL.

1. Data Definition Language:

DDL allows creation, Deletion and Modification of data structure for bar system. These structures include tables, databases and indexes.

Ex: Create, Drop and Alter.

2. Data Manipulation Language:

These commands are used to manipulate the data in tables directly or through views. There are four standard DML statements. They are select, delete, insert and update.

3. Data control language:

These commands are used to control usage and access of data. The most commonly found one's will include grant, revoke.

Why to Use?

Oracle greatly supports RDBMS features. Also it supports high security to the data and faster accessing capability. It can be run on a variety of platforms and operating systems. One can develop an application easily by providing user-friendly environment.

The features of oracle are portability and compatibility.

HTML:

The extended reach of information and services to customers that the Internet has enabled, has created a new challenge for the developer. The developer should develop a user interface that is distributable, available on multiple platforms and supports a wide range of client environments from handheld wireless devices to high-end workstations. So to maintain a broad reach to client environments and to achieve greatest compatibility with all browsers, this system uses standard HTML.

Hyper Text Mark-up Language is the standard language for creating documents for the World Wide Web. An HTML document is a text file, which contains the elements, in the form of tags that a web browser uses to display text, multimedia objects, and hyperlinks using HTML; we can format a document for display and add hyperlinks to other documents.

The user interface has been designed in HTML hence can be browsed in any web browser.

Cascading Style Sheets:

These have been used to separate data form presentation. By using these style sheets throughout the project, a uniform look and feel can be maintained for all the HTML elements and tags that have been used in the project. If there is any revamp the way the content has been presented in the website, the changes can be made to the appropriate style sheet, which will be reflected across all the style sheets.

6.6 TESTING

System testing is the stage before system implementation where the system is made error free and all the needed modifications are made. The system was tested with test data and necessary corrections to the system were carried out. All the reports were

checked by the user and approved. The system was very user friendly with online help to assist the user wherever necessary.

Test Plan:

A test plan is a general document for the entire project, which defines the scope, approach to be taken, and schedule of testing, as well as identifying the test item for the entire testing process, and the personal responsible for the different activities of testing. This document describes the plan for testing, the knowledge management tool.

Major testing activities are:

- Test units
- Features to be tested
- Approach for testing
- Test deliverables
- Schedule
- Personal allocation

Test units:

Test Case specification is major activity in the testing process. In this project, we have performed two levels of testing.

- **Unit testing**
- **System testing**

The basic units in Unit testing are:

- Validating the user request
- Validating the input given by the user
- Exception handling

The basic units in System testing are:

- Integration of all programs is correct or not
- Checking whether the entire system after integrating is working as expected.
- The system is tested as whole after the unit testing.

Other Testing Strategies:

Alpha Testing:

This was done at the developer's site by a customer. The software is used in a natural setting with the developer "looking over the shoulder" of the user and recording errors and usage problems. Alpha tests are conducted in a controlled environment.

Beta Testing:

This was conducted at one or more customer sites by the end-user of the software. Unlike alpha testing, the developer is generally not present. Therefore, the beta test is a "live" application of the software in an environment that cannot be controlled by the developer. The customer records all problems that are encountered during beta testing and reports these to the developer at regular intervals. As a result of problems reported

during beta tests, software engineers make modifications and then prepare for release of the software product to the entire customer base.

Test deliverables:

The following documents are required besides the test plan

- Unit test report for each unit
- Test case specification for system testing
- The report for system testing
- Error report

CHAPTER 7

RESULT AND DISCUSSION

7. RESULT AND DISCUSSION

Benefits of blood bank management information system to donors

1. It provides the unique identification number at the time of blood donation camp which helps him for the future correspondence. Lifequesttt gives the unique user id and password for those donors who are applying online. They can edit their information time to time. This feature helps administrator to collect the information of all the donors area wise and blood group wise.

2. Donors can view the blood donation camp organizing at the different places.

3. As it is a web based application, its index page encourages the donor to donate the blood.

4. Donor can also check his blood group medical status whether it is healthy or unhealthy.

5. Donor can check the status of the particular blood group just on one click sitting at home.

Benefits of blood bank management information system to seekers

1. Seeker can get the information of the desired blood group from the central inventory

2. Seeker can get the list of donors' area wise, blood group wise if the desired blood group is not available in the central inventory.

3. Seeker can get the information of the particular blood group available in the blood bank.

4. Seeker can get the information of that blood group which is not fit for blood transfusion.

5. Seeker can get the blood units according to his requirement from the blood bank.

Benefits of blood bank management information system to blood bank

1. Blood bank in charge is getting rid from manual procedure. Now they to do the entries in the information system.

2. The probability of error should be minimal.

3. Information retrieval should be precise and effective.

4. Inventory control can be properly controlled and managed as researcher is using the FIFO (First in First Out) concept.

5. Report can be generated of donors, seekers, total consumption of the blood units and overall report monthly, bi-monthly, quarterly, half yearly, annually.

6. Blood bank in charge can get the information which blood is in demand but rarely available and which blood group is rarely in demand but plenty in stock.

7. Blood bank in charge can get the information which is maximum cause for which the blood units are required like accidental cases, heart surgery, delivery cases.

8. Blood bank in charge can get the information which doctor has recommended the blood units.

9. Blood bank in charge can view the list of discarded blood units, they can also view the reason for which the blood units are discarded.

10. Blood bank in charge can view the central inventory as it shows the total account of number of units of the particular blood group.

11. Blood bank in charge can manually discard those units which become unhealthy due to some technical fault.

12. Blood bank in charge can check by viewing the report whether the replacement donor has actually donated the blood or not.

13. Blood bank in charge can generate the unique identification number to the donor.

14. Blood bank in charge can generate the source id of the blood unit bags.

15. Blood bank can upload the information of the blood donation camp organizing in the city so that end user can view the details of the blood donation camp.

CONCLUSION

CONCLUSION

In the world of information technology where whole world is becomes global village, where end user can get the information just sitting at home on one click. In fact government has taken a step in order to transform the system. Management information system helps to make the system paper less. Now the end user has to enroll himself and his job is done. All the money transaction is made possible because of the management information system. Researcher believes that by developing the management information system for the blood bank make the revolutionary changes in the system. It is small contribution of the researcher in order to serve the mankind.

This project has given us an ample opportunity to design, code, and test and implements an application. This has helped in putting into practice of various Software Engineering principles and Database Management concepts like maintaining integrity and consistency of data. Further, this has helped us to learn more about ORACLE 12c, HTML, CSS, JavaScript, Adobe Photoshop 7.0 and Personal Web Server.

We thank our guide for her valuable contribution in guiding us throughout the project.

FUTURE WORK

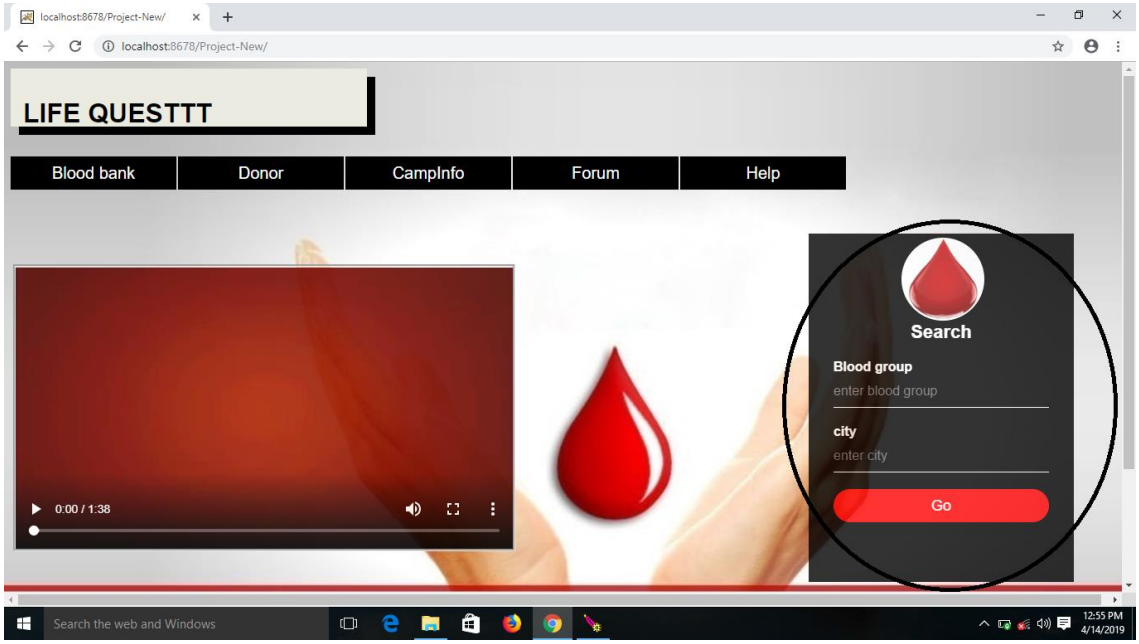
- Our future work would be to integrate this blood bank management system with other health care provider centre, hospitals and blood banks.
- We will add new features as and when required.
- Improve the effectiveness.

USER MANUAL

USER MANUAL

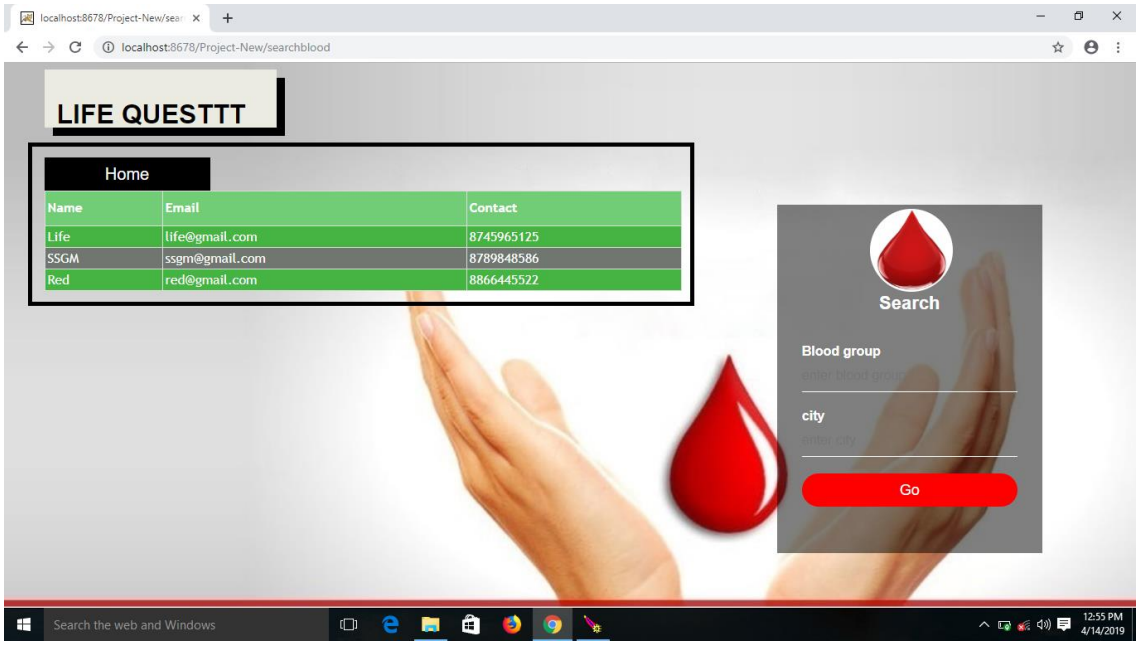
Client Side:

The User is redirected to Home page. User can search the required blood group directly.



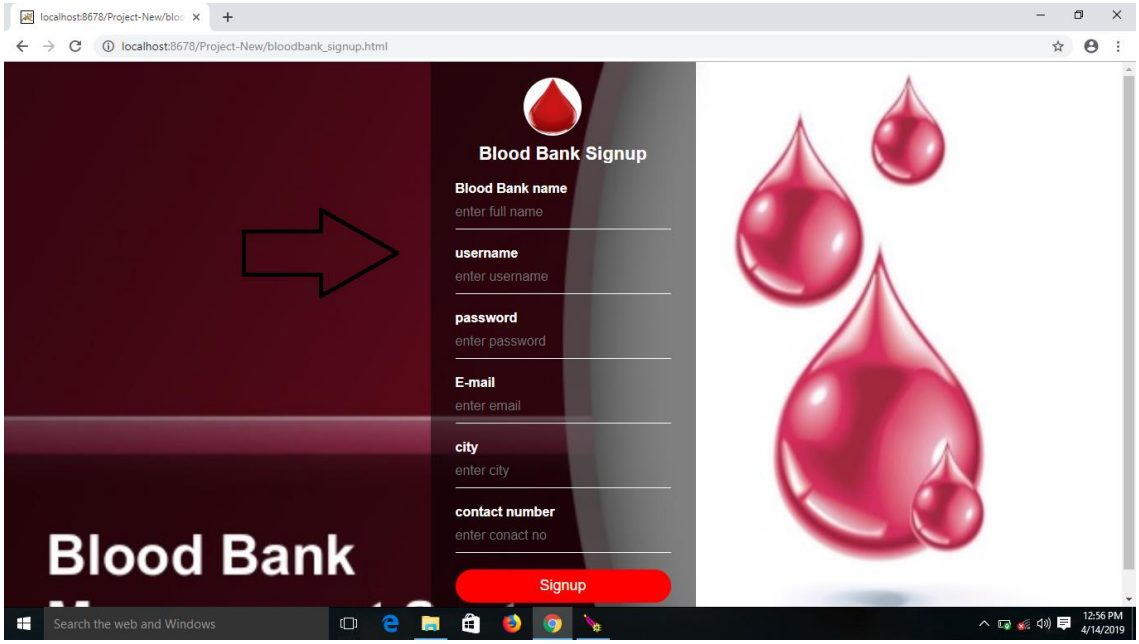
SNAPSHOT 1: HOME PAGE

The result of blood banks are displayed here.



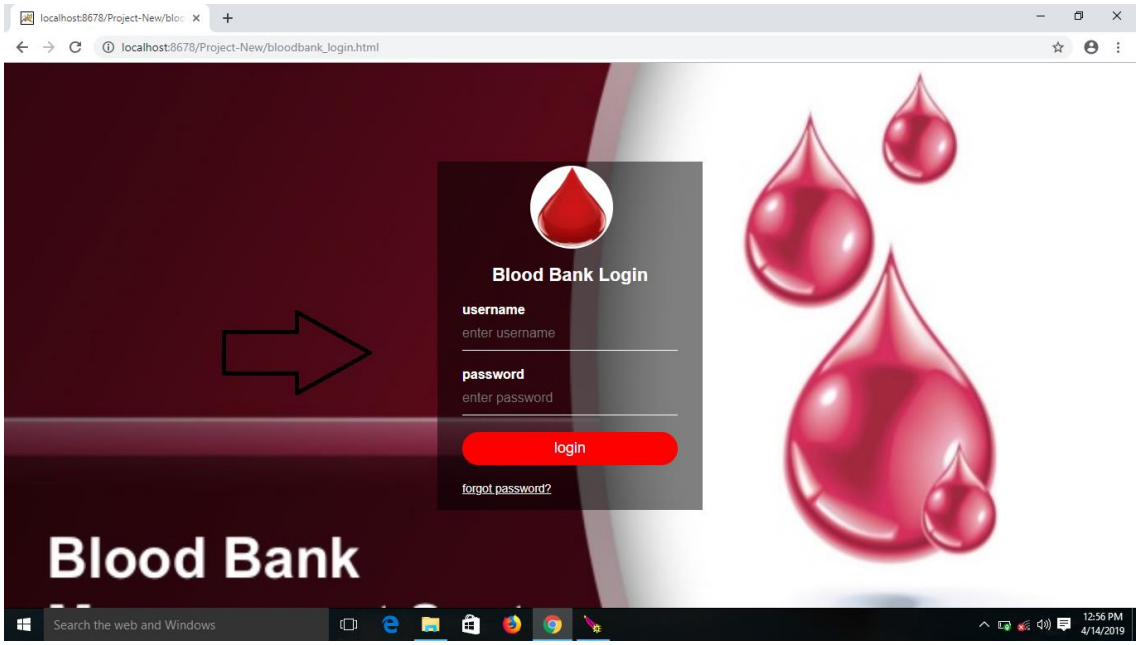
SNAPSHOT 2: RESULT OF BLOOD BANK SEARCH

Blood Bank Signup: New Blood Bank can register here.



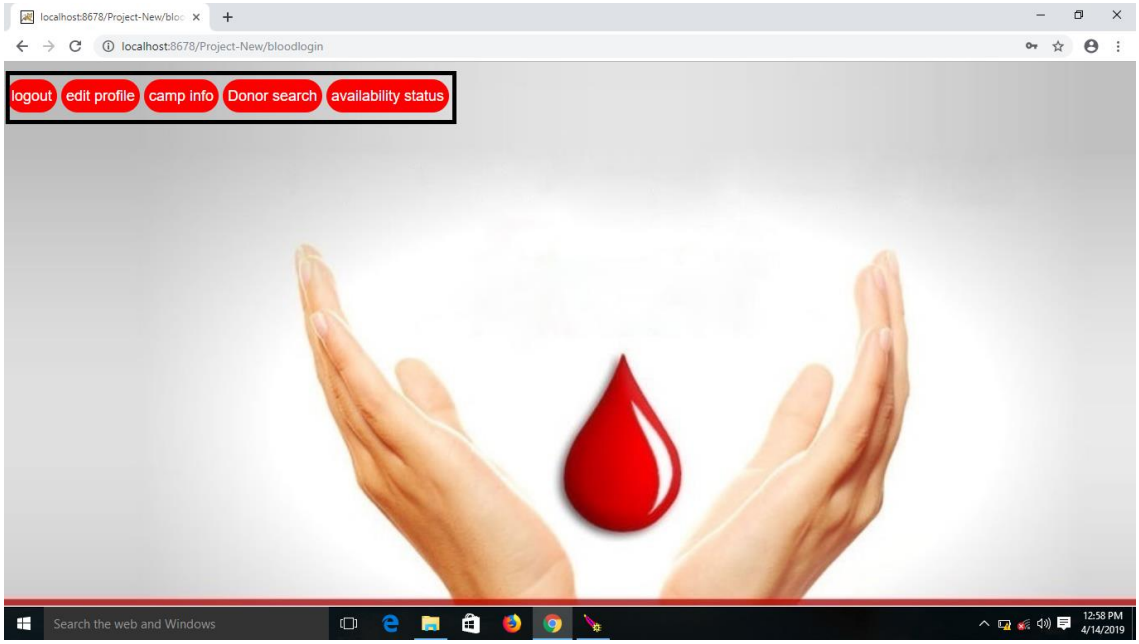
SNAPSHOT 3: NEW BLOOD BANK REGISTRATION

Blood Bank Login: Blood Bank can login here.



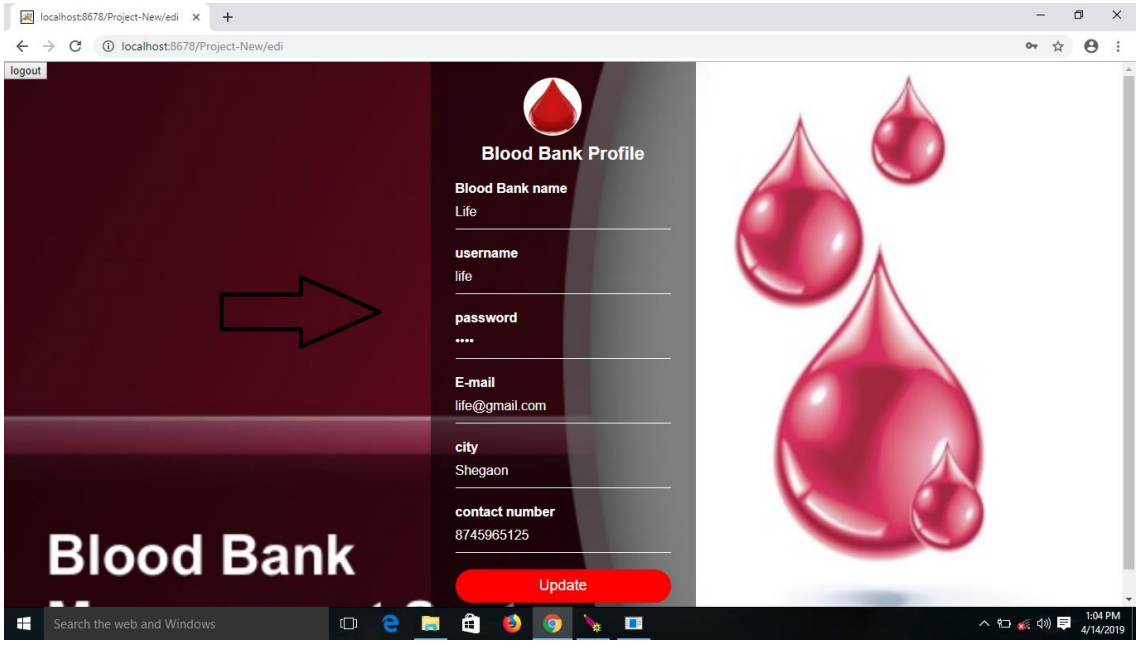
SNAPSHOT 4: BLOOD BANK LOGIN

Blood Bank Home page: After Blood Bank login this page appears.



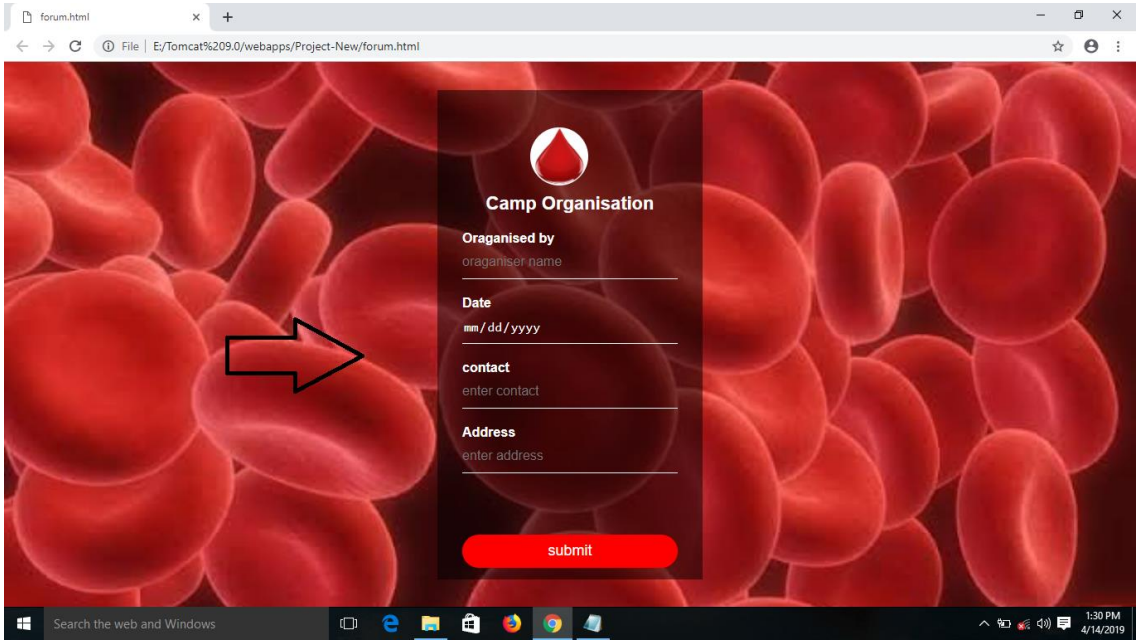
SNAPSOT 5: BLOOD BANK HOMEPAGE

Blood Bank Edit Profile: Blood Bank can edit profile here.



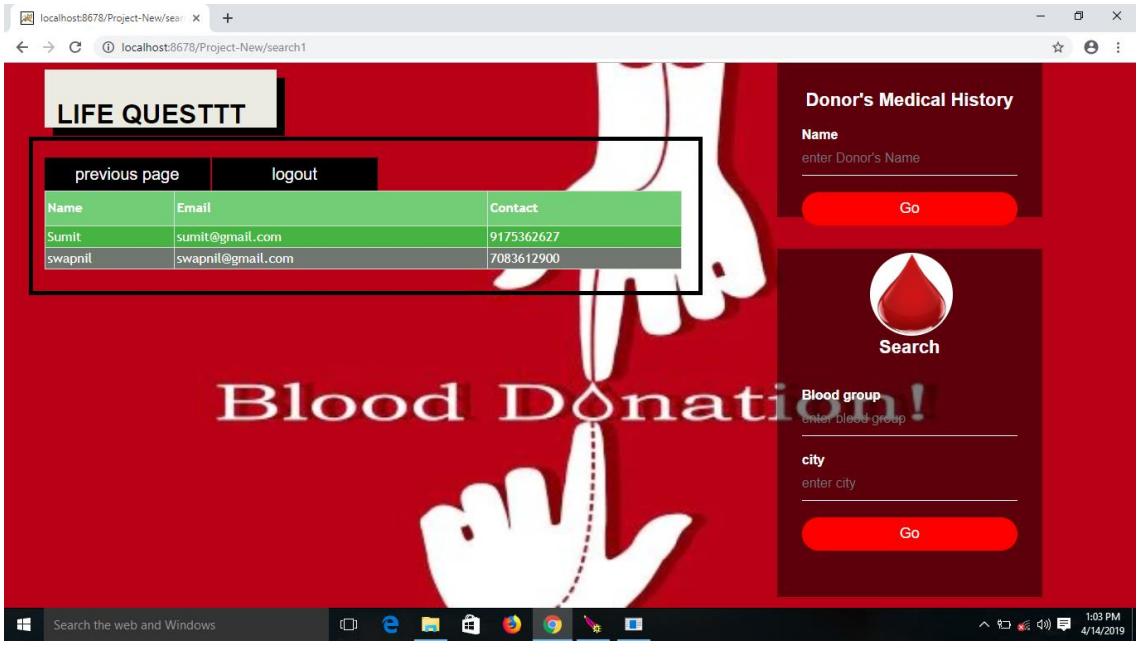
SNAPSHOT 6: BLOOD BANK EDIT PROFILE

Camp Organisation: Blood Bank can organised Blood camps.



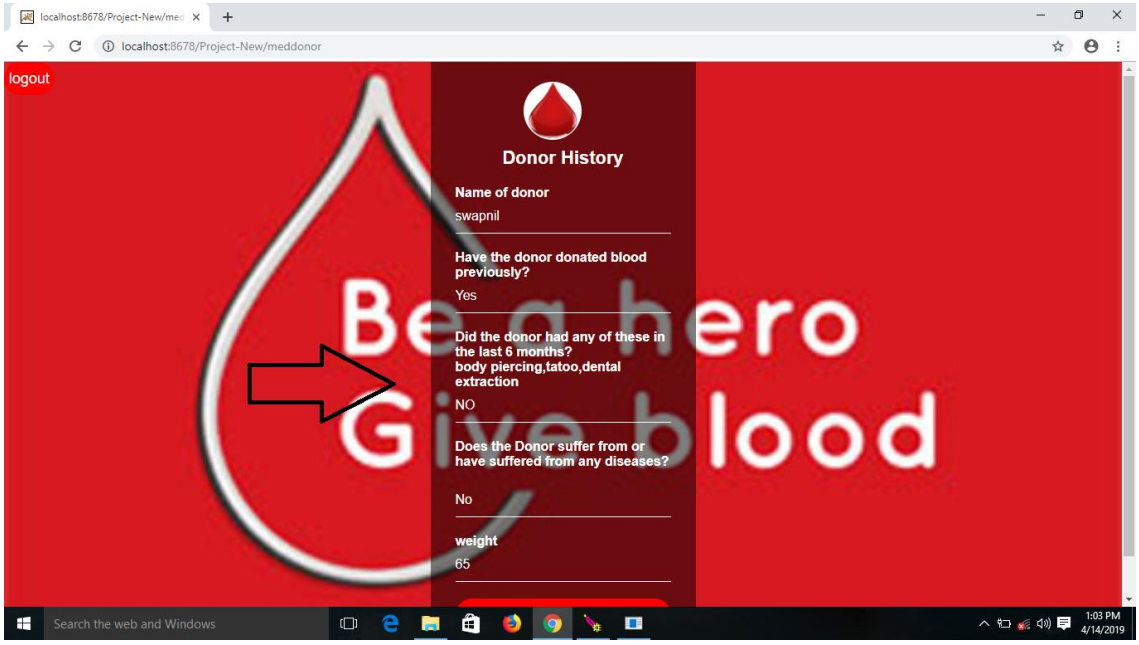
SNAPSHOT 7: CAMP ORGANISATION INFO FILLED BY BLOOD BANK

Donor Search Result: Donor Search result appears here.



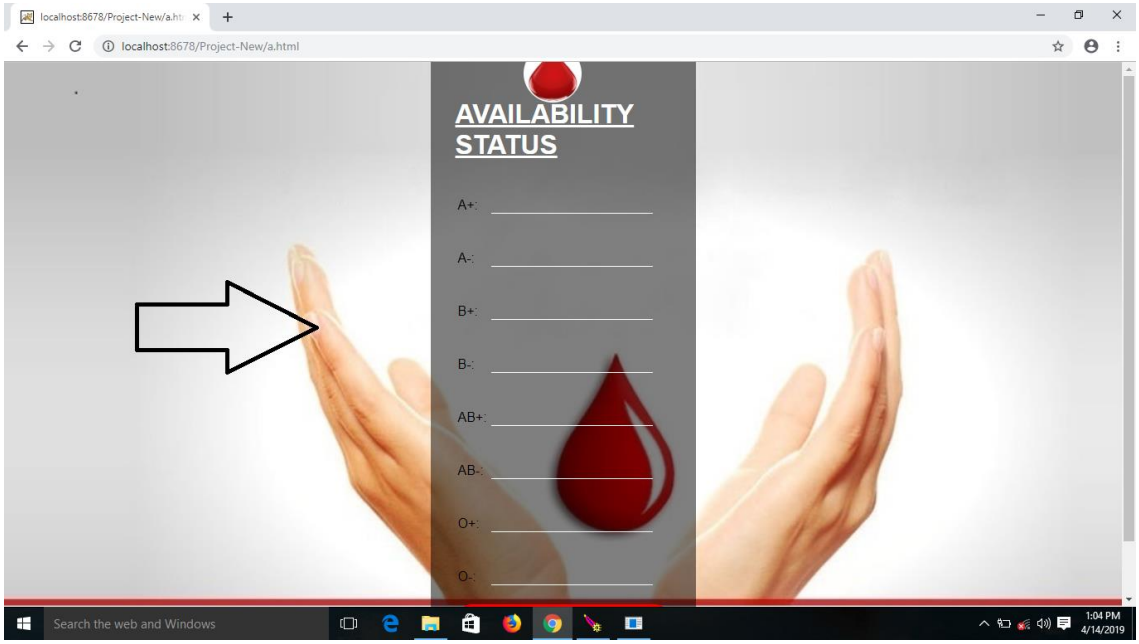
SNAPSHOT 8: REESULT OF DONOR SEARCH BY BLOOD BANK

Donor Medical History: Blood Bank can view Donor's Medical History.



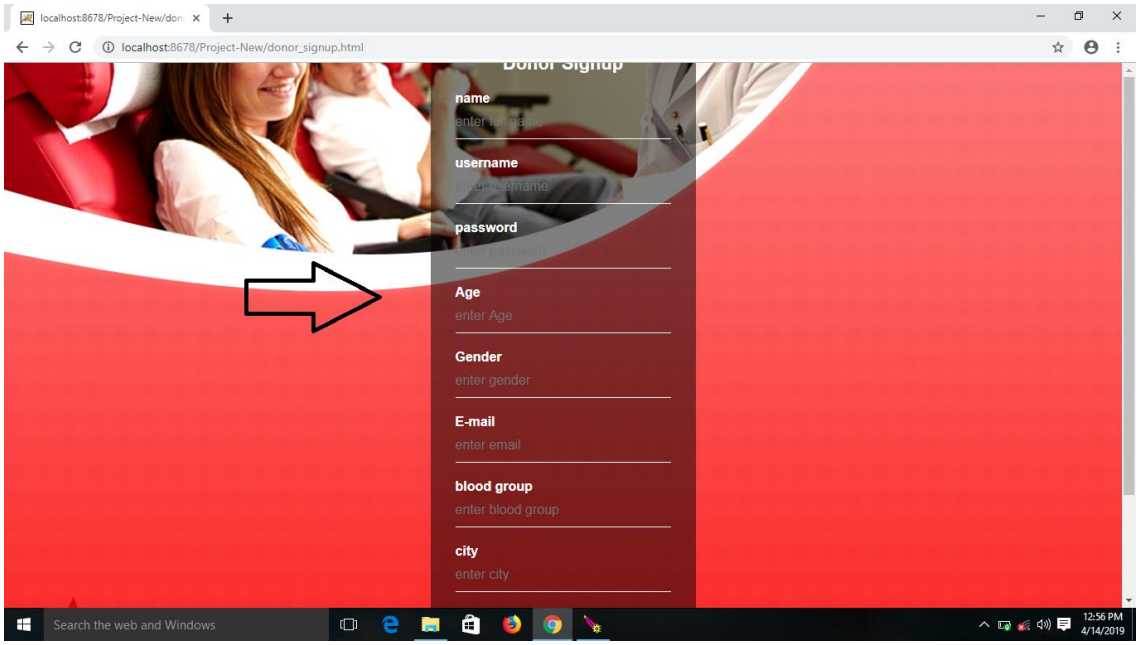
SNAPSHOT 9: DONOR HISTORY RESULT BY BLOOD BANK SEARCH

Blood Availability Status: Blood Banks filled the data of the availability status of different blood groups which are available in their blood bank.



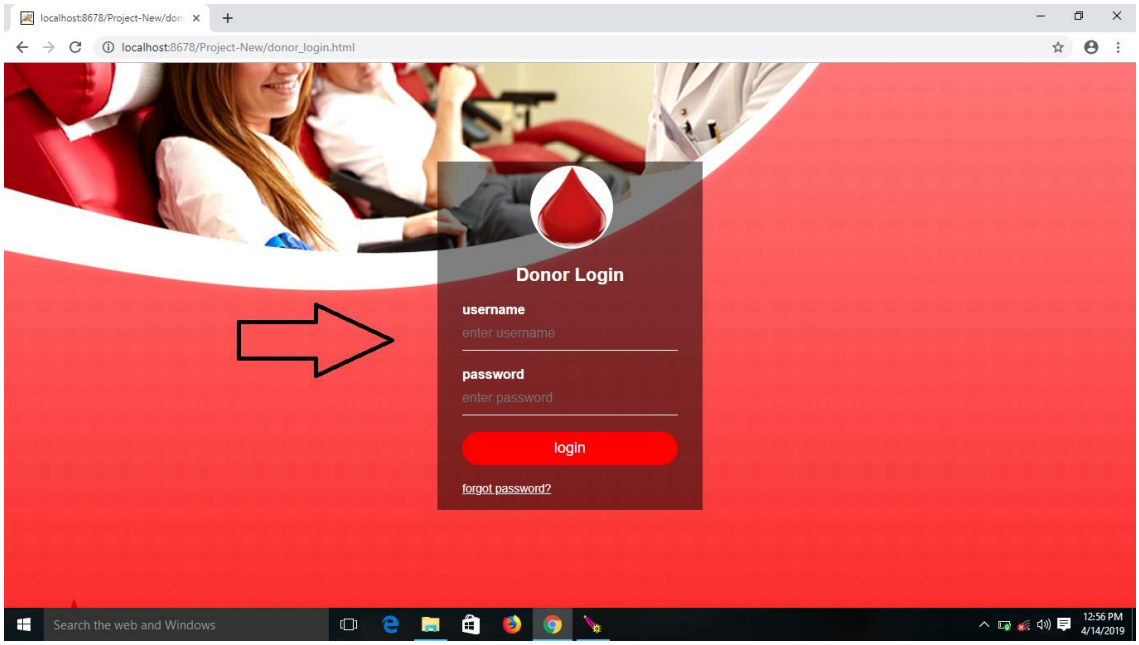
SNAPSHOT 10: BLOOD AVAILABILITY STATUS

Donor Signup: New Donors can sign up here.



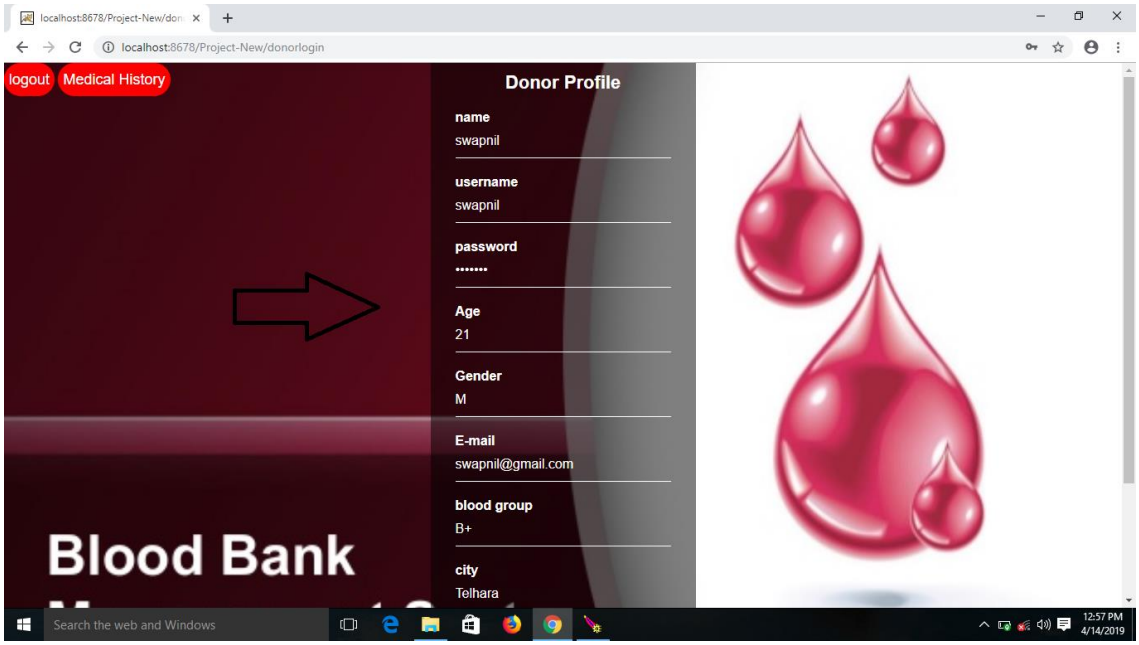
SNAPSHOT 11: DONOR SIGNUP

Donor Login: Donor can login here.



SNAPSHOT 12: DONOR LOGIN

Donor Profile: Donor can edit his/her profile here.

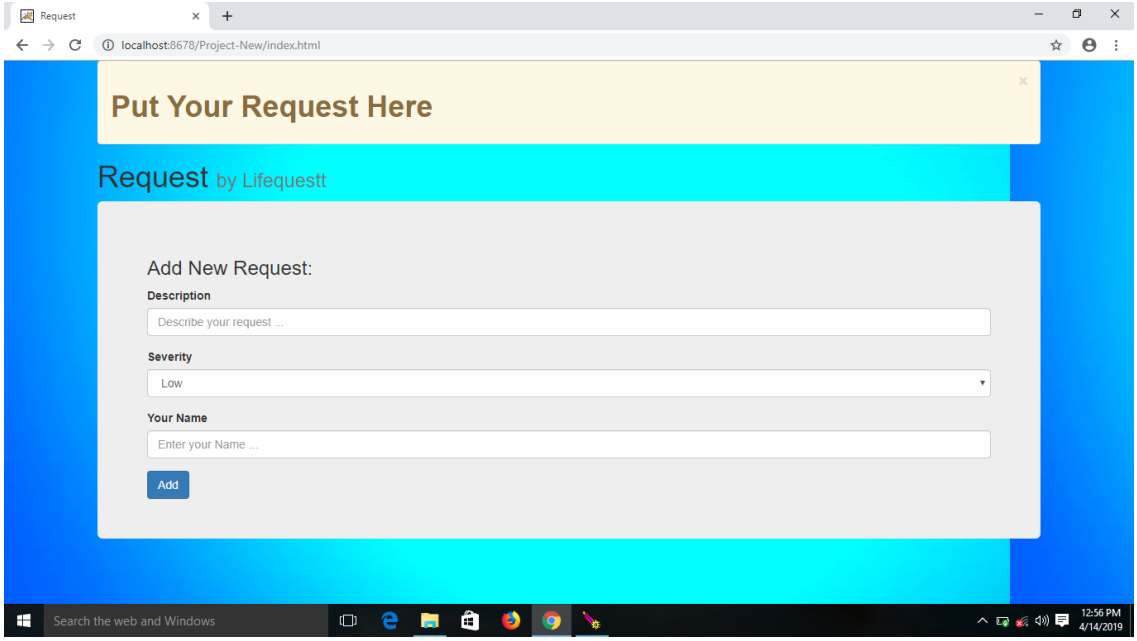


SNAPSHOT 13: DONOR PROFILE

Donor History: Donor can edit his/her medical history here.

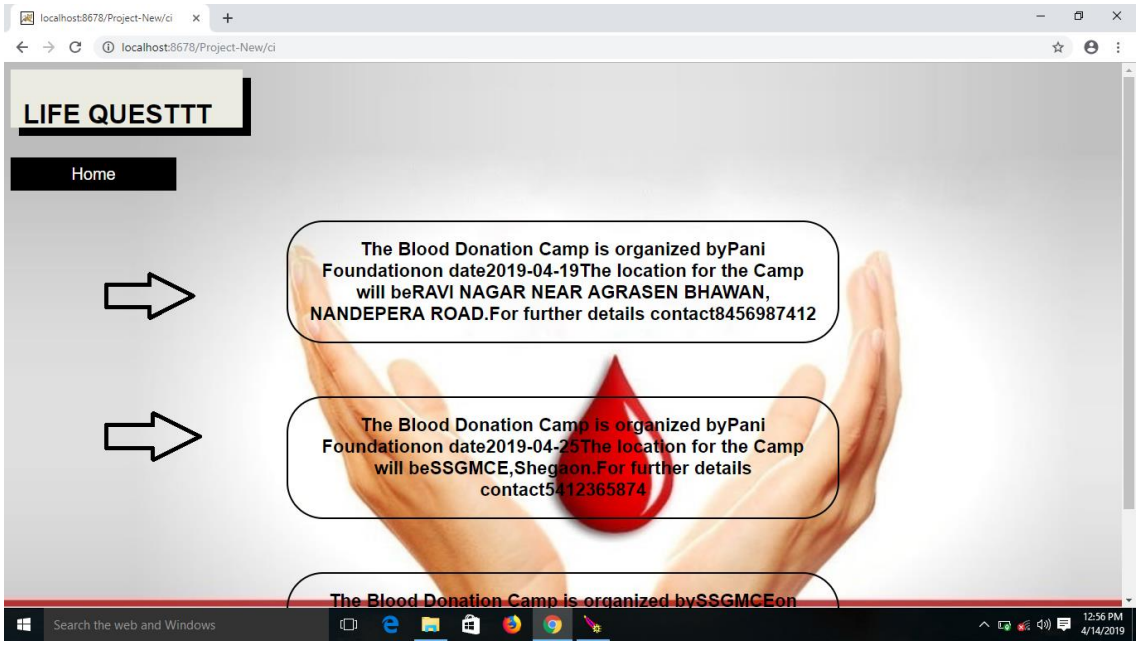
SNAPSHOT 14: DONOR'S MEDICAL HISTORY PROFILE

Receiver Request Page: Receiver can post his/her emergency requirement here with the severity by using following page.



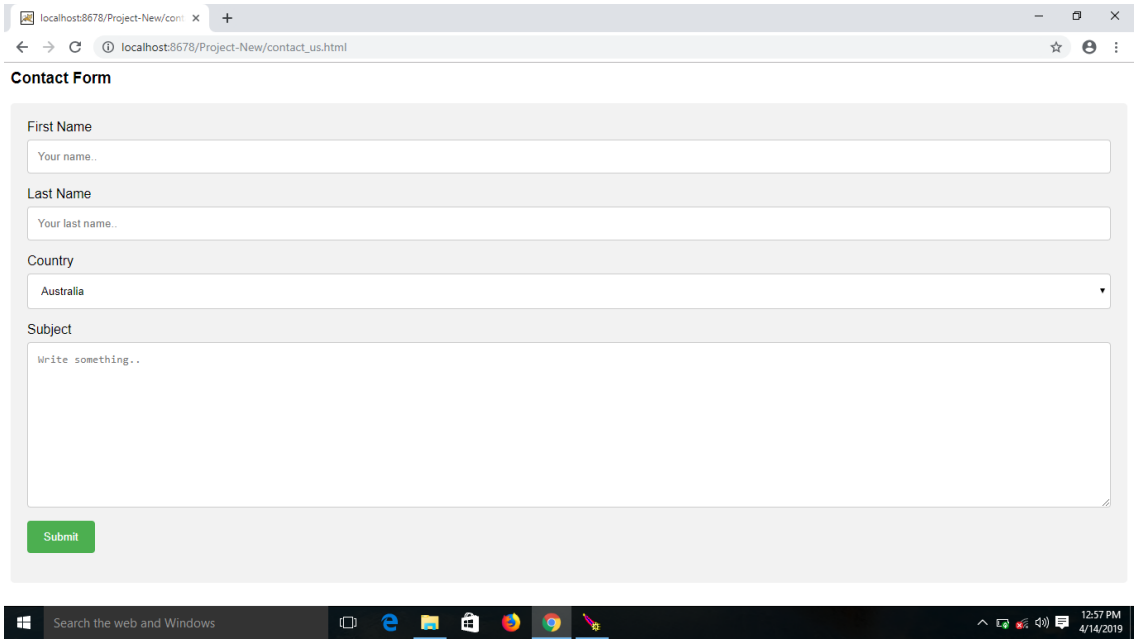
SNAPSHOT 15: RECEIVER REQUEST PAGE

Camp Organised info: Blood Camp Organised by different blood banks displays here.



SNAPSHOT 16: CAMP ORGANISED INFO

Contact Us: User can contact us for their any queries.



SNAPSHOT 17: CONTACT US

REFERENCES

REFERENCES

[1] Online Blood Bank Management System, Sindhu J., Roopa M., International Journal of Scientific Research in Computer Science and Engineering, Volume 2, Issue 2017

[2]A Survey on Blood Bank Management System, Prof. Animesh Tayal, Harshad Gahare, Akshay Patel, Sagar Jog, International Journal of Recent Trends in Engineering and Research, volume 3, Issue 1, January - 2017

[3] Online Blood Bank Management System using Android, Ashita Jain, Amit Nirmal, Nitish Sapre, International Journal of Innovative in Science and Engineering Technology, volume 2, Issue 2,2016

[4]Blood Donor Communication,Natesh Pandi,Samaya Karuppan,Ramya P, International Journal of Advance Research,volume 3, Issue 2 ,2015

[5]The Optimization of Blood Donor Information, P.Priya,V.Saranya,S.Shabana, International Conference on Engineering Technology and Science, volume 3, Issue 1, 2014

SOURCE CODE LISTING

We have use these following source code files in the development of project.

For Client Side Module:

- BloodBankSignup.HTML
- BloodBankLogin.HTML
- DonorSignup.HTML
- DonorLogin.HTML
- SearchBloodBank.HTML
- SearchDonor.HTML
- UpdateDonor.HTML
- UpdateBloodBank.HTML
- FillCampInfo.HTML
- ViewCamp.HTML
- FillMedicalHistory.HTML
- SeeDonor'sMedicalHistory.HTML
- Forum.HTML

- Forum.JS
- Project.HTML
- Contact.HTML

For Backend Side Module:

- BankSignup.java
- BankLogin.java
- DonorSignup.java
- DonorLogin.java
- BloodBankSearch.java
- DonorSearch.java
- FillCampInfo.java
- ViewCamp.java
- EditDonor.java
- EditBLoodBank.java
- MedicalHistory.java
- SearchDonorMedicalHistory.java
- EditMedicalHistory.java

- FillBloodDetails.java
- SmsService.java
- Contact.java
- Logout.java