INSTITUTE FOR ADVANCED COMPUTING AND SOFTWARE DEVELOPMENT AKURDI, PUNE

Documentation On

"Blood Bank Management System"

E-DAC MAY 2021

Submitted By:

Group No: 09

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Table of Contents

1. Introduction

The main aim of developing this system to provide blood to the people who are increasing in large number day by day. This blood bank management system is an online website, so it is easily available to everyone. When person want to donate blood, he/she must register to the system. Donor registration is very easy. Admin will manage the blood stock and organization details for blood donation campaigns. When person want to buy the blood bag, he/she can register to the system to check availability of blood stock to buy a blood bag.

1.1 Document Purpose

The focus of this system is to provide an online easy access to blood stock and manage blood stock data available, so that using this blood bank management system people can search blood group available they need. It will replace the paperwork. It keeps records of donor, buyer, and blood stock.

This system helps the customer to enquire the availability of blood they need. Second module helps him to make a payment and reserve a ticket.

- First module helps donors and buyers to access the system by simple registration
- Second module will be accessed by Admin to manage the stock details and organization details.

1.2 Problem Statement

The proposed blood bank management system helps the people who need blood by giving them all the details of blood group availability. This saves the time as he can search the blood required without going anywhere. This website works 24*7 so user can get the information of blood required any time.

1.3 Product Scope

- Secure registration and blood stock availability for users.
- User can buy blood online.
- Browsing through the System to see the availability of blood group required. Donor can register online to donate the blood.
- This web application will help the people in need of blood to save the life of their relative or friend.

1.4 Aims and Objectives

Specific goals are: -

- To produce a web-based system that allows the admin to manage the blood stock.
- To ease donor/buyer the process of buying or donating the blood.

2.1 Functional and Non-Functional requirements of Blood Bank Management System

Functional Requirements:

1)Admin:

-Manage the Registration of users, donors, and organization.
-View User/Donor and organization information.

2)User:

-Check the blood availability.
-Register
-login
-Post the blood request

3)Donor:

-Register
-login
-Book an appointment to donate blood.

4) organization:

-registration
-login
-Schedule the blood donation campaign.

Non-Functional Requirements:

1)Availability-

-Users & Donors can access this management system from anywhere from this web application.

2)Security:

-Users and Donors information should be kept confidential under security system.
-The system automatically logs out after the period of inactivity.

3)Reliability:

-System will be reliable enough to provide intact information about to user and donor.
-Once the blood is donated or request for blood is post user or donor will receive the notification on the same.

4) Performance:

-Basic system configuration is enough to access the web application.
-Users and Donors can access the web application from mobile phones with minimal performance of the same.
-Performance of the system remains same regardless of platform either it is laptop or mobile phone.

2.2 Operating Environment:

- Server Side:

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 4GB

OS: Windows 7 or above

Database: MySQL8.0

- Client Side (minimum requirement):

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 4GB

OS: Windows 7 or above

2.3 Design and Implementation Constraints:

- The application will use React and Bootstrap as main web technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and MySQL Injections can also be prevented.
- Since Blood Bank Management System is a web-based application, internet connection must be established.
- The Blood Bank Management System will be used on PCs and will function via internet or intranet in any web browser.

3. Requirement Specification

3.1 External Interface Requirements:

- User Interfaces:
    - All the users will see the same page when they enter in this website. This page asks the users a email and a password.
    - After being authenticated by correct email and password, user will be redirected to check the availability of the blood group they need and donors will be directed to fill the registration form.
    - The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

- Hardware Interfaces:
    - No extra hardware interfaces are needed.
    - The system will use the standard hardware and data communication resources.

4. System Design

4.1 Activity Diagram

This is Activity UML diagram of Blood Bank Management System which shows the flows between the activity of stocks, user, donor and organize.

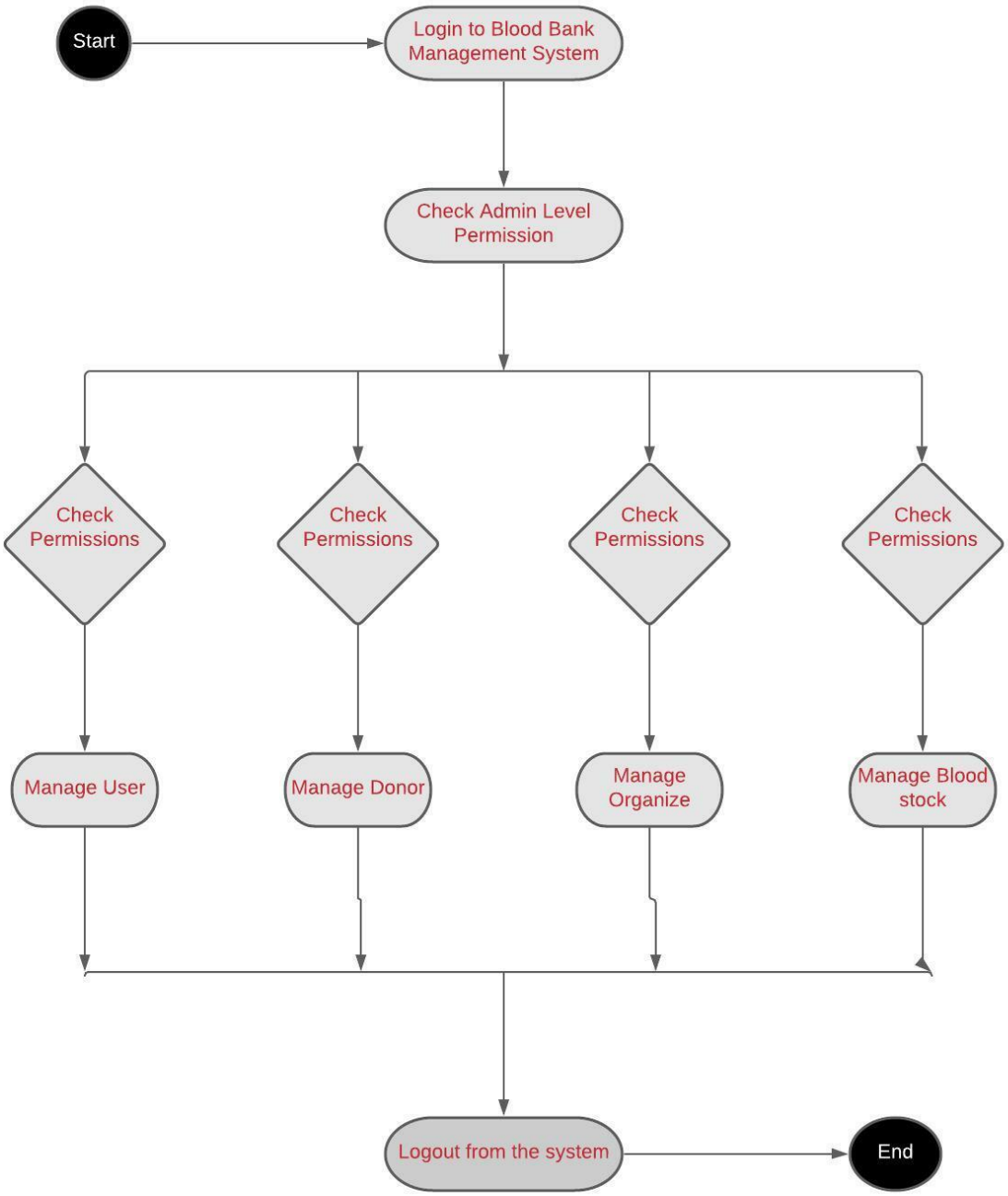


Figure 1: Activity Diagram

4.2 Data Flow Diagram

1.Zero Level Data Flow Diagram [0 Level DFD] of Blood Bank Management System:
This is the Zero Level DFD of Blood Bank Management System, where we have elaborated the high-level process of Blood Bank. It's a basic overview of the whole Blood Bank Management System or process being analyzed or modelled. It's designed to be an at-a-glance view of Admin, User, Donor, and organization showing the system as a single high-level process, with its relationship to eternal entities of blood group.it should be easily understood by a wide audience.

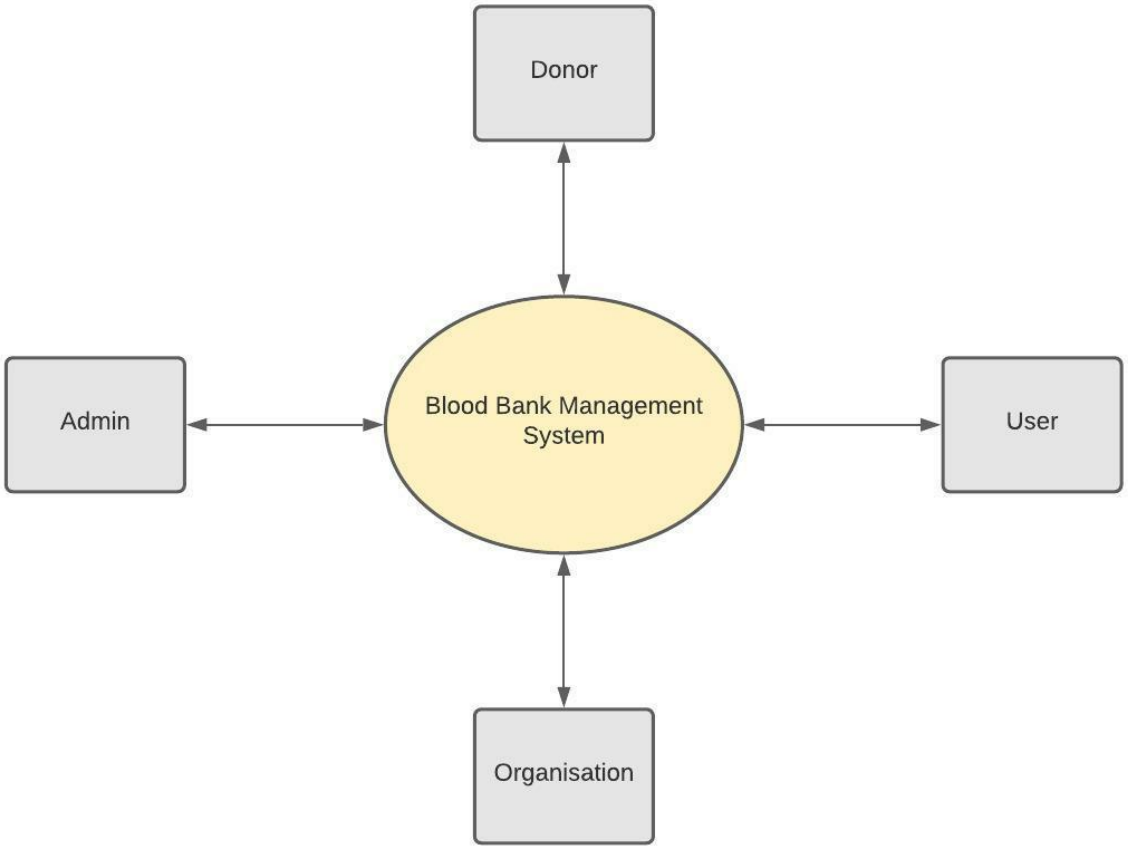


Figure 4: Level 0 Data Flow Diagram

2.First Level Data Flow Diagram [1st Level DFD] of Blood Bank Management System:
First Level DFD [1st Level DFD] of Blood Bank Management System shows how the system is divided into sub-systems(processes), each of which deals with one or more of the data flows to or from an eternal agent, and which together provide all of the functionality of the Blood Bank Management System as a whole.it also identifies internal data store of User, Donor, Blood Stocks and Organizations.

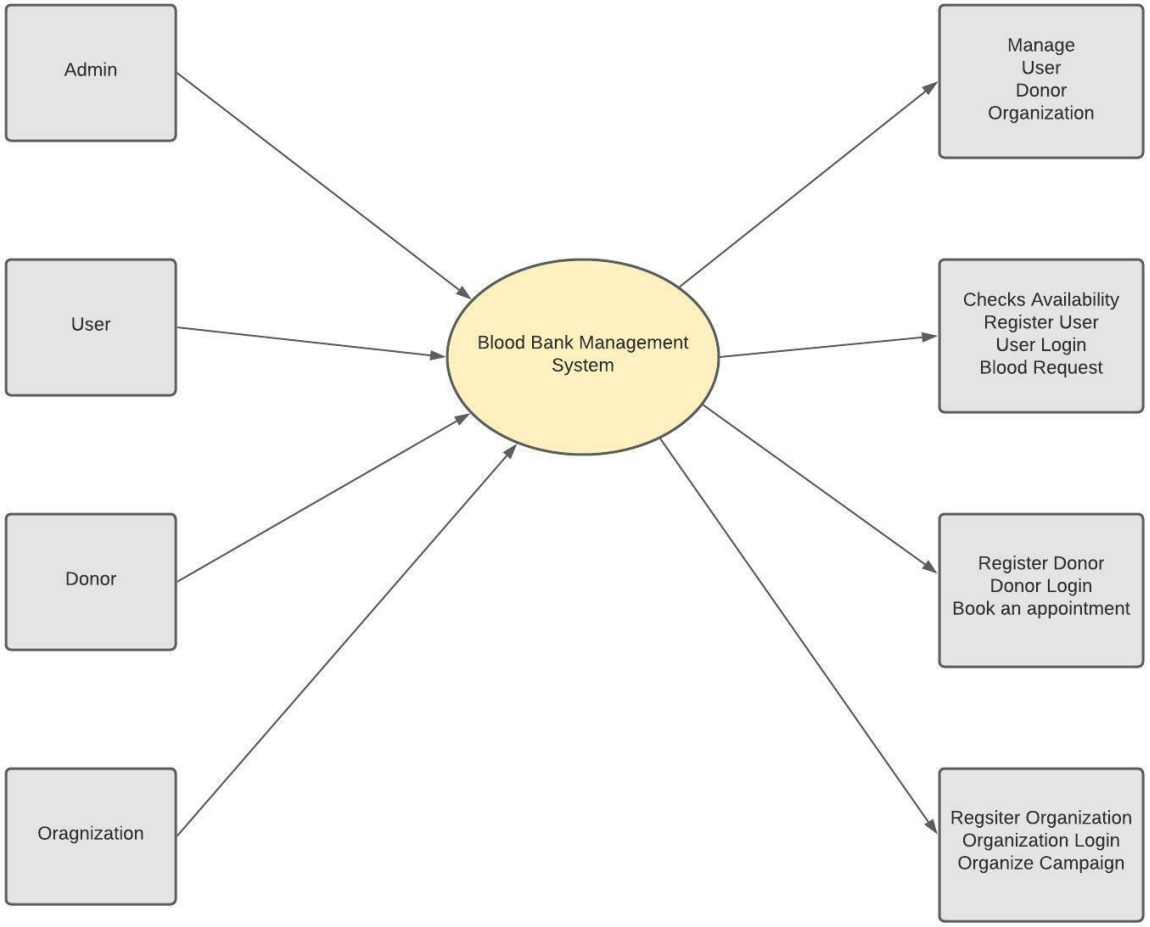


Figure 5: Level 1 Data Flow Diagram

3.Second Level Data Flow Diagram [2nd Level DFD] of Blood Bank Management System:

DFD Level 2 then goes one step deeper into parts of Level 1 of Blood Bank. It may require more functionalities of Blood Bank Management to reach the necessary level of details about the Blood Bank functioning. First level DFD of BBMS shows how the system is divided into sub-systems. The 2nd Level DFD contains more details of User, Donor and Organization.

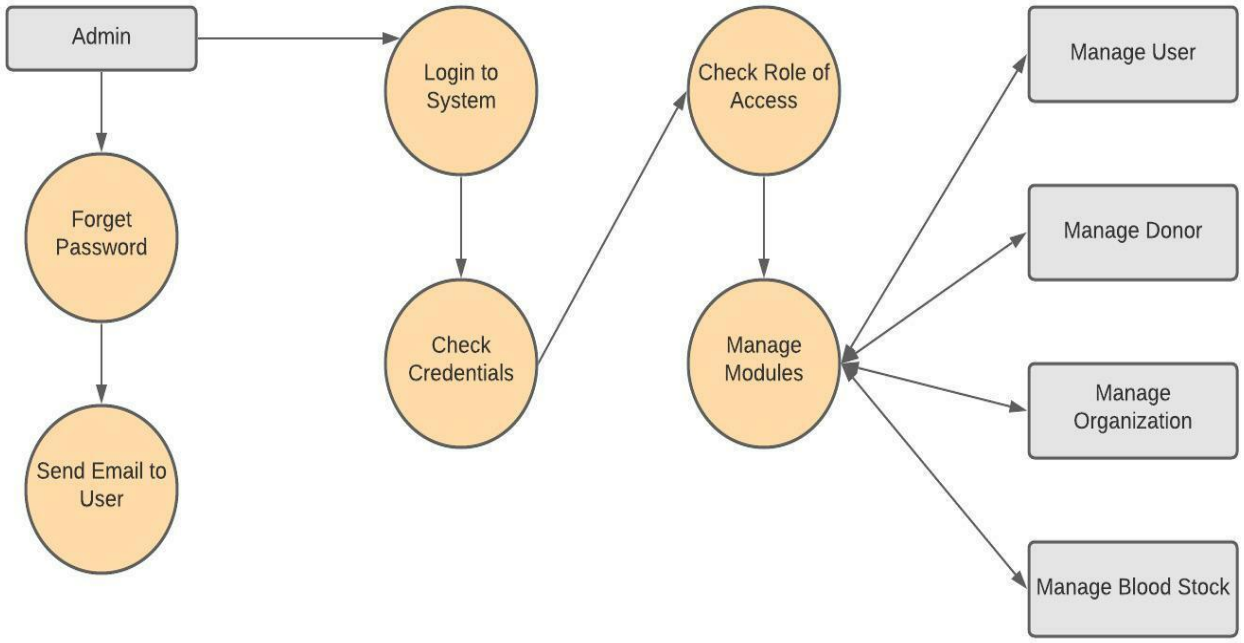


Figure 6: Level 2 Data Flow Diagram

4.3 Use Case Diagram

This use case Diagram is a graphical depiction of the interactions among the elements of Blood Bank Management System. It represents the methodology used in the system analysis to identify, clarify and organize system requirements of Blood Bank Management System. The main actors of Blood Bank Management System in this Use Case Diagram are: Admin, User, Donor and organizations who perform the different types of use cases shown on the picture below.

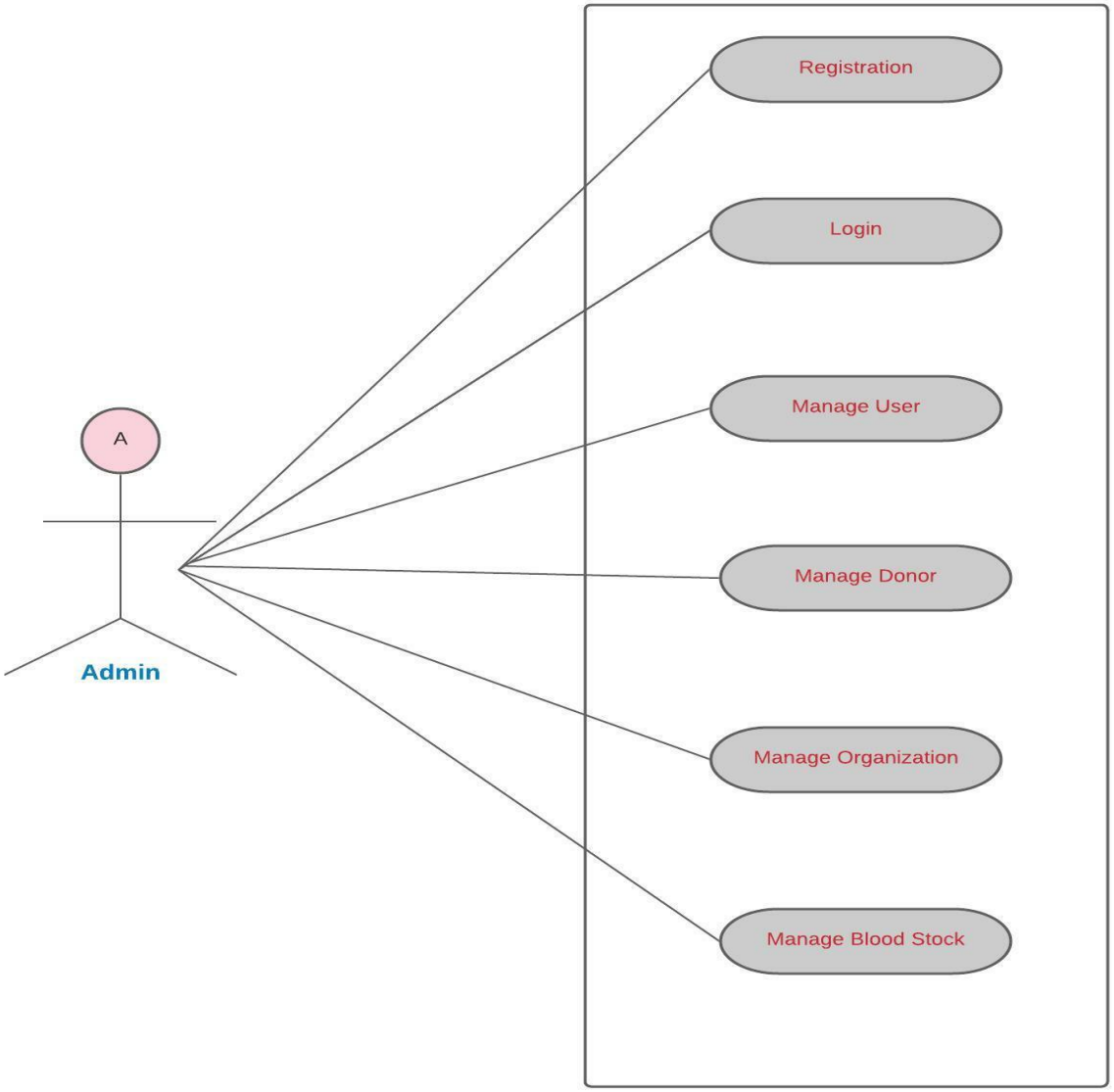


Figure 7: Use Case Diagram1

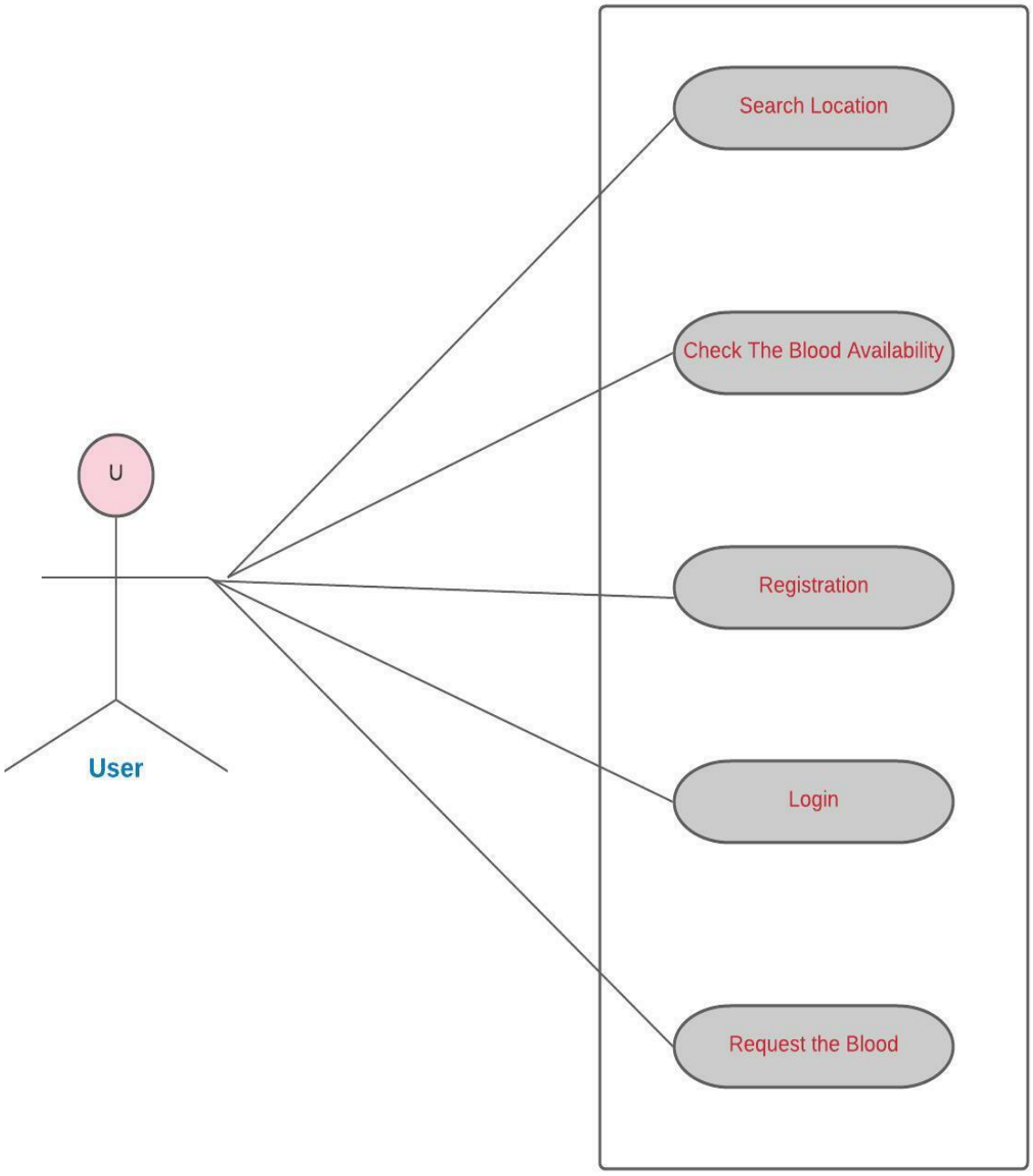


Figure 8: User Use Case Diagram2

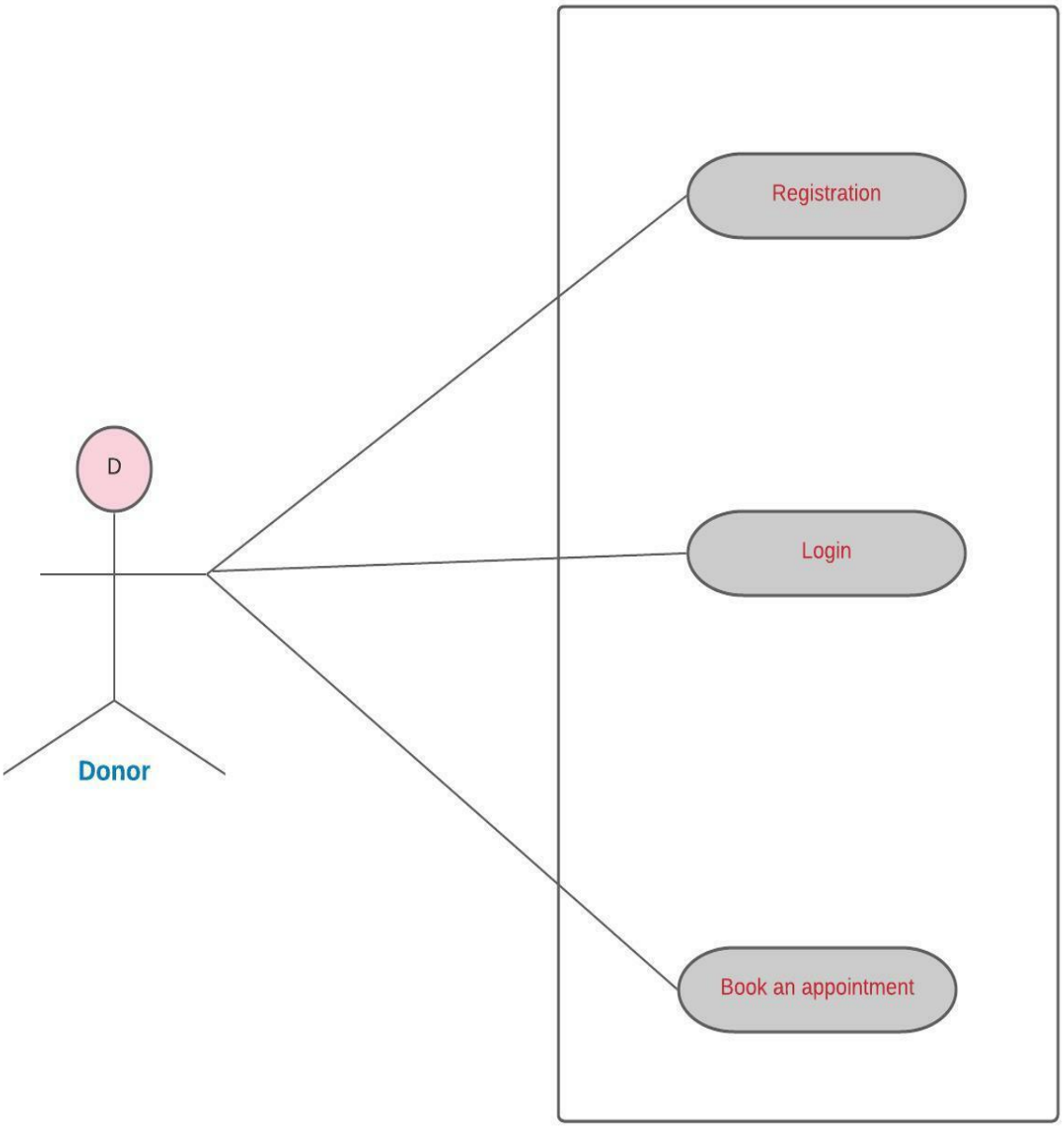


Figure 9: Donor Use Case Diagram3

4.4 ER Diagram

This ER (Entity Relationship) Diagram represents the model of Blood Bank Management System Entity. The entity-relationship diagram of Blood Bank Management System sows all the visual instrument of database tables and the relations between Admin, User, Donor, Organization and Blood stocks etc. It used structure data and to define the relationship between structured data groups of Blood Bank Management System functionalities.

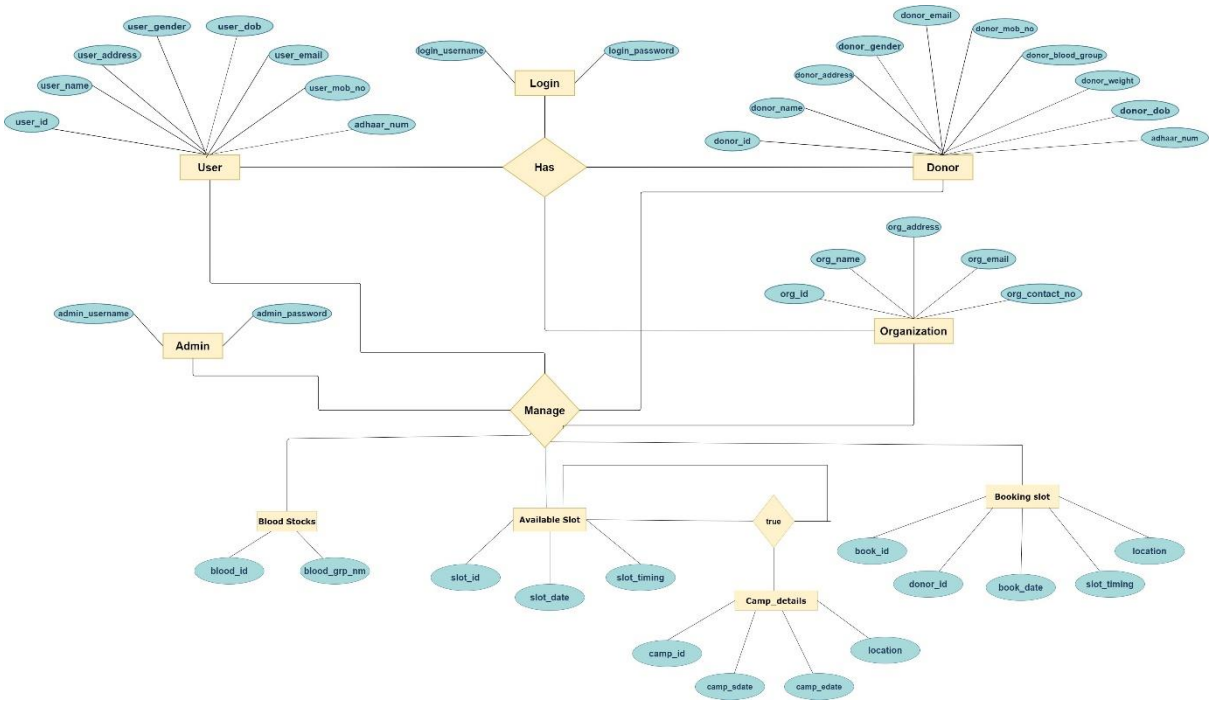


Figure 10: ER Diagram

5. Table Structure

5.1 Users:

Field	Type	Null	Key	Default	Extra
u_id	int(11)	NO	PRI	NULL	auto_increment
u_name	varchar(100)	YES		NULL	
u_email	varchar(100)	YES	UNI	NULL	
u_address	varchar(100)	YES		NULL	
u_gender	varchar(20)	YES		NULL	
u_dob	date	YES		NULL	
u_id_proof	varchar(100)	YES		NULL	
u_mobileno	bigint(20)	YES		NULL	
u_password	varchar(50)	YES		NULL	
reg_date	timestamp	NO		CURRENT_TIMESTAMP	

5.2 Donors:

Field	Type	Null	Key	Default	Extra
blood_grp	varchar(5)	NO	PRI	NULL	
count	int(11)	YES		NULL	

5.3 Organization:

Field	Type	Null	Key	Default	Extra
org_id	int(11)	NO	PRI	NULL	auto_increment
org_name	varchar(100)	YES		NULL	
org_address	varchar(100)	YES		NULL	
org_city	varchar(50)	YES		NULL	
org_state	varchar(50)	YES		NULL	
org_contact_no	bigint(20)	YES		NULL	
org_start_date	date	YES		NULL	
org_end_date	date	YES		NULL	

5.4 Donors Info:

Field	Type	Null	Key	Default	Extra
u_id	int(11)	YES	MUL	NULL	
blood_grp	varchar(5)	YES	MUL	NULL	
d_donate_date	timestamp	NO		CURRENT_TIMESTAMP	

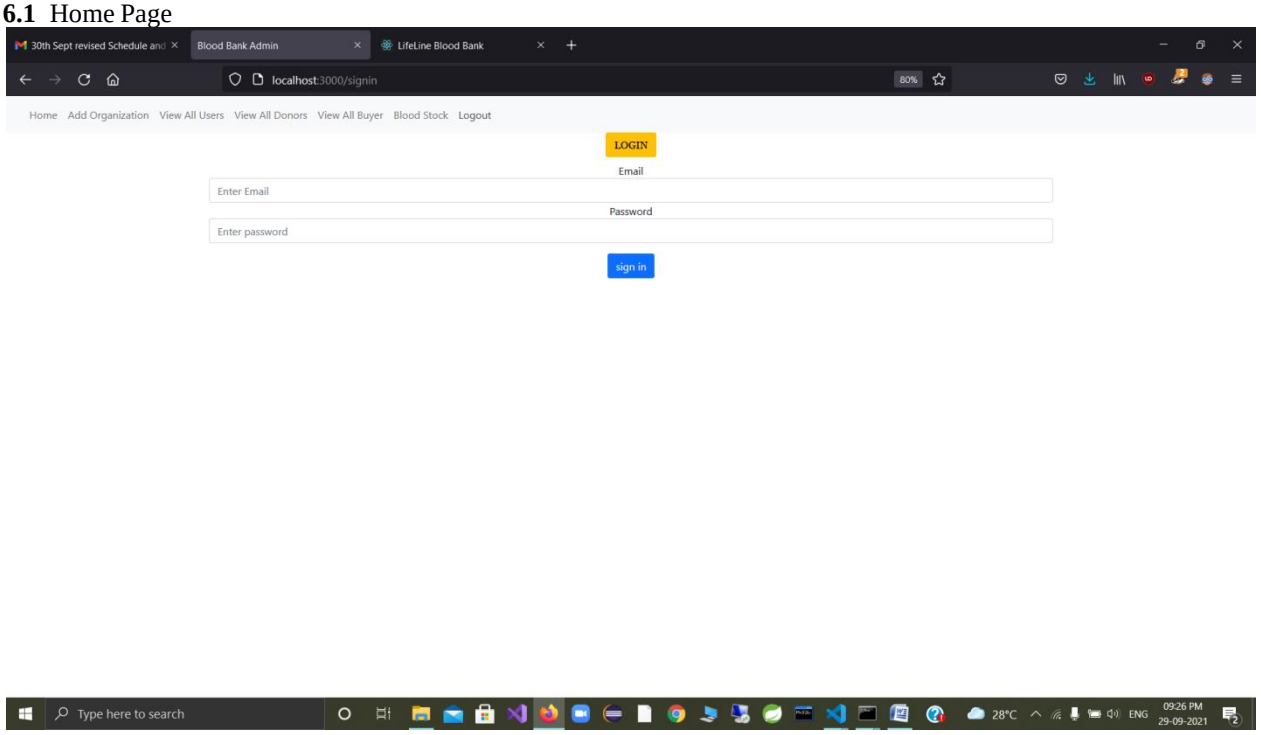
5.5 Buyer Info:

6

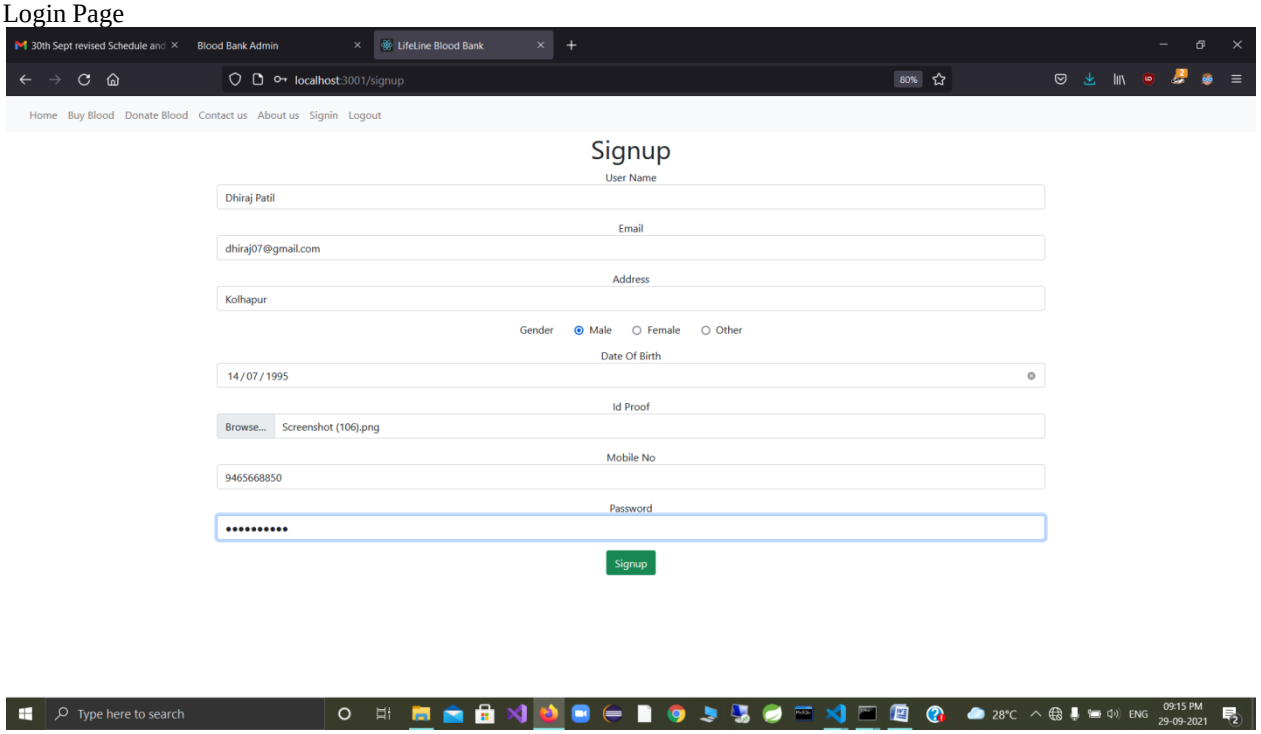
Field	Type	Null	Key	Default	Extra
u_id	int(11)	YES	MUL	NULL	
blood_grp	varchar(5)	YES	MUL	NULL	
buy_date	timestamp	NO		CURRENT_TIMESTAMP	

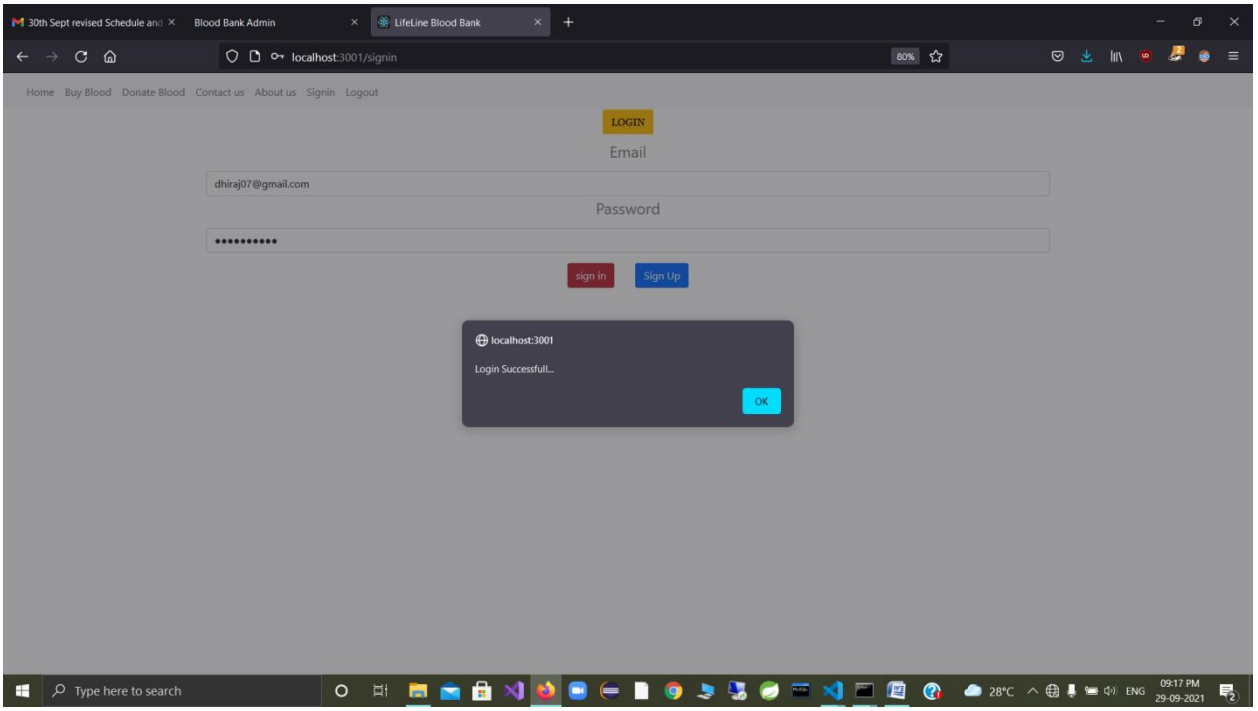
6. SnapShots

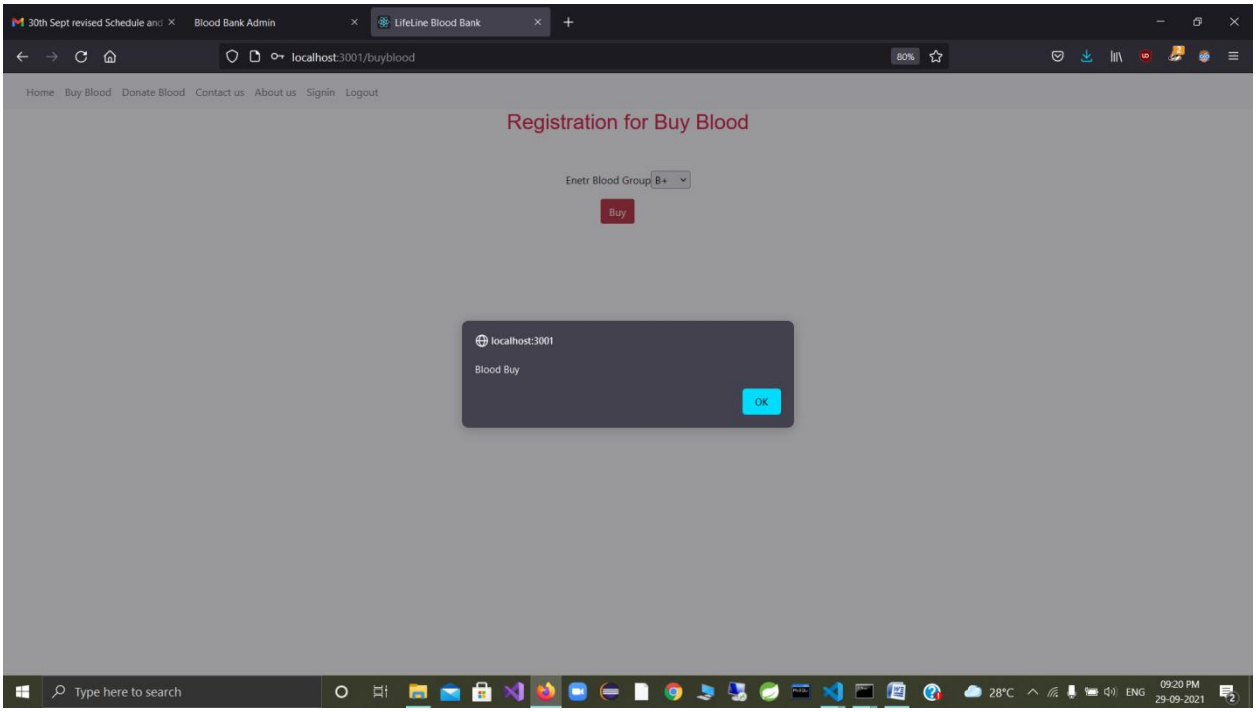
6.1 Home Page

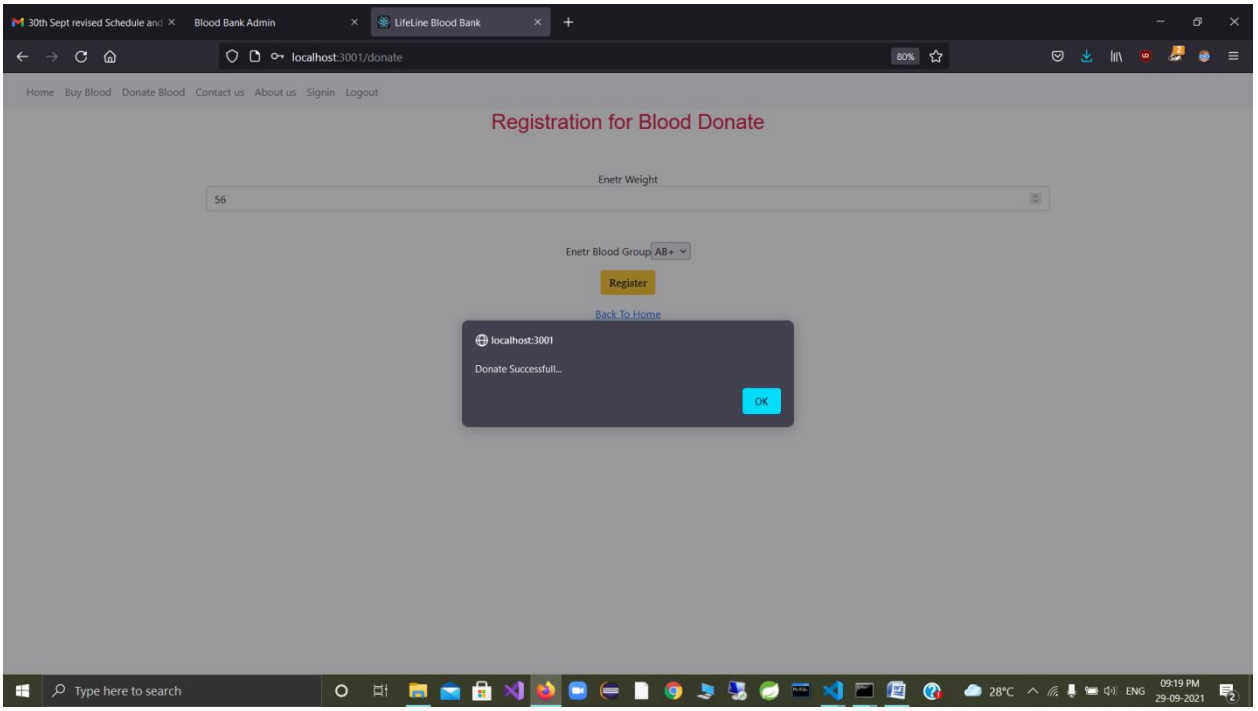


6.2 Login Page

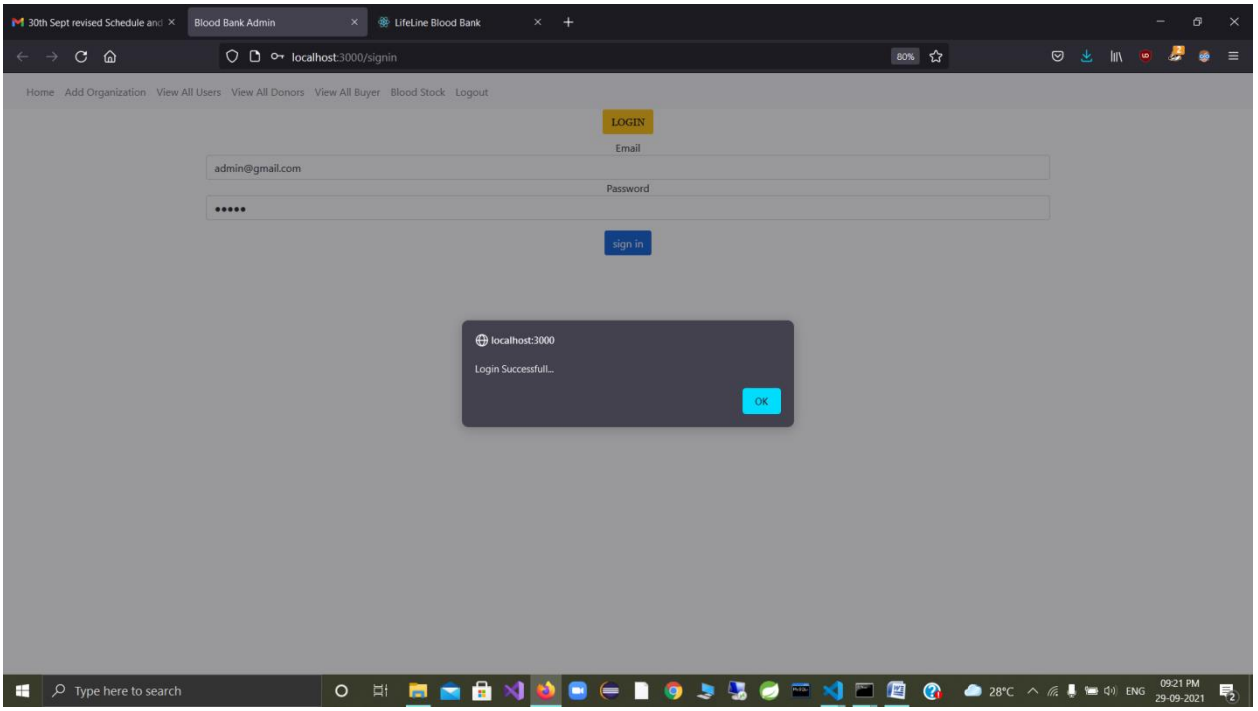



30th Sept revised Schedule and
Blood Bank Admin
LifeLine Blood Bank
localhost:3001/signin
Home Buy Blood Donate Blood Contact us About us Signin Logout
LOGIN
Email
dhiraj07@gmail.com
Password
sign in
Sign Up
localhost:3001
Login Successfull...
OK
Type here to search
28°C
ENG
09:17 PM
29-09-2021

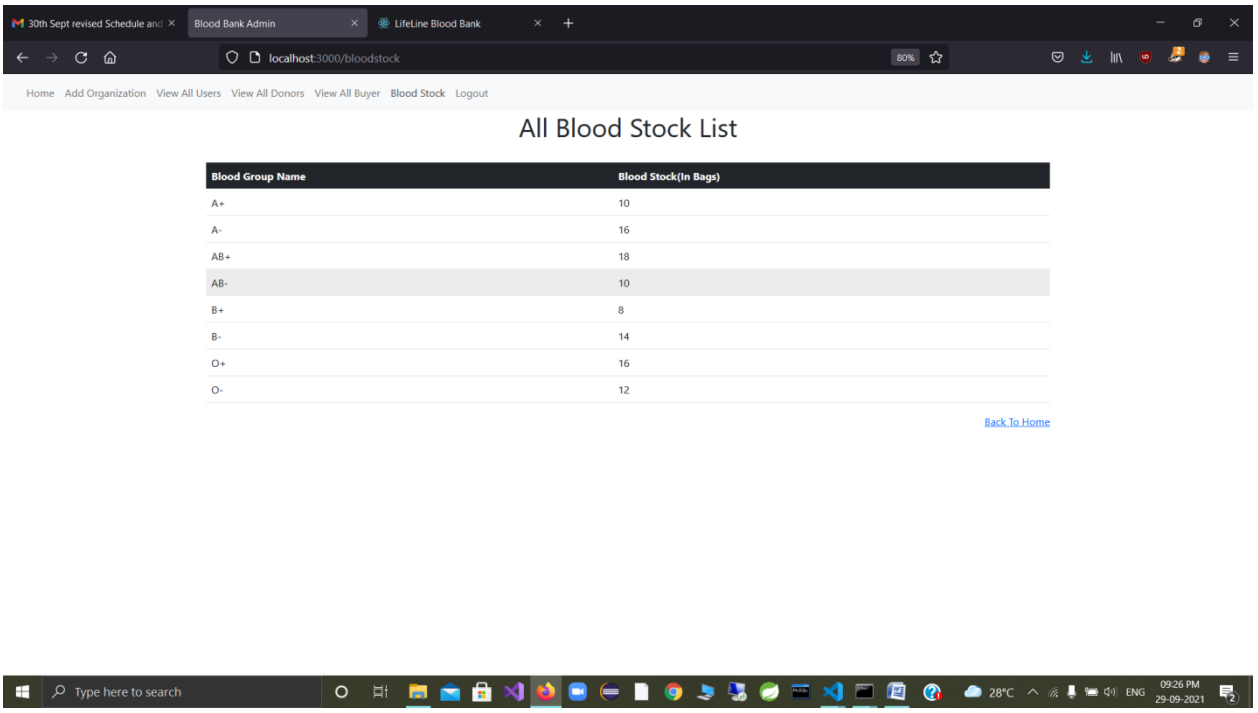

30th Sept revised Schedule and
Blood Bank Admin
LifeLine Blood Bank
localhost:3001/buyblood
Home Buy Blood Donate Blood Contact us About us Signin Logout
Registration for Buy Blood
Enetr Blood Group
B+
Buy
localhost:3001
Blood Buy
OK
Type here to search
28°C
ENG
09:20 PM
29-09-2021

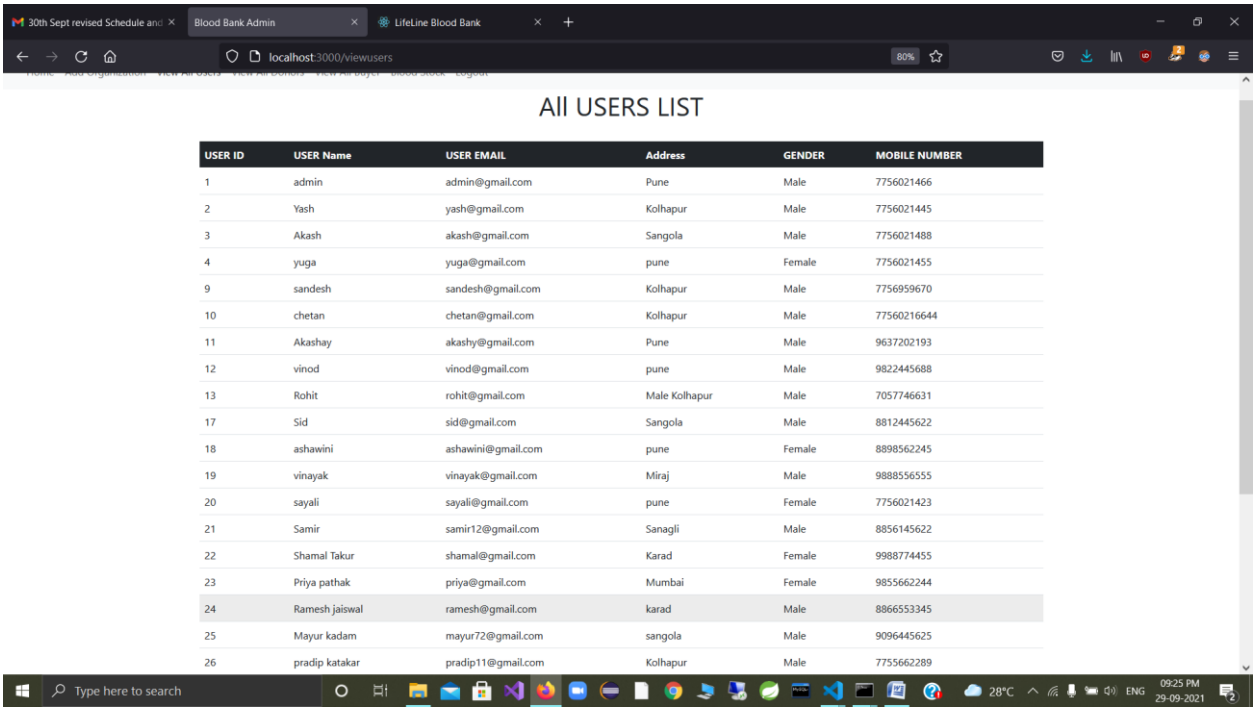

30th Sept revised Schedule and
Blood Bank Admin
LifeLine Blood Bank
localhost:3001/donate
Home Buy Blood Donate Blood Contact us About us Signin Logout
Registration for Blood Donate
Enetr Weight
56
Enetr Blood Group AB+
Register
Back To Home
localhost:3001
Donate Successfull...
OK
Type here to search
28°C
ENG
09:19 PM
29-09-2021

6.3 Admin Page



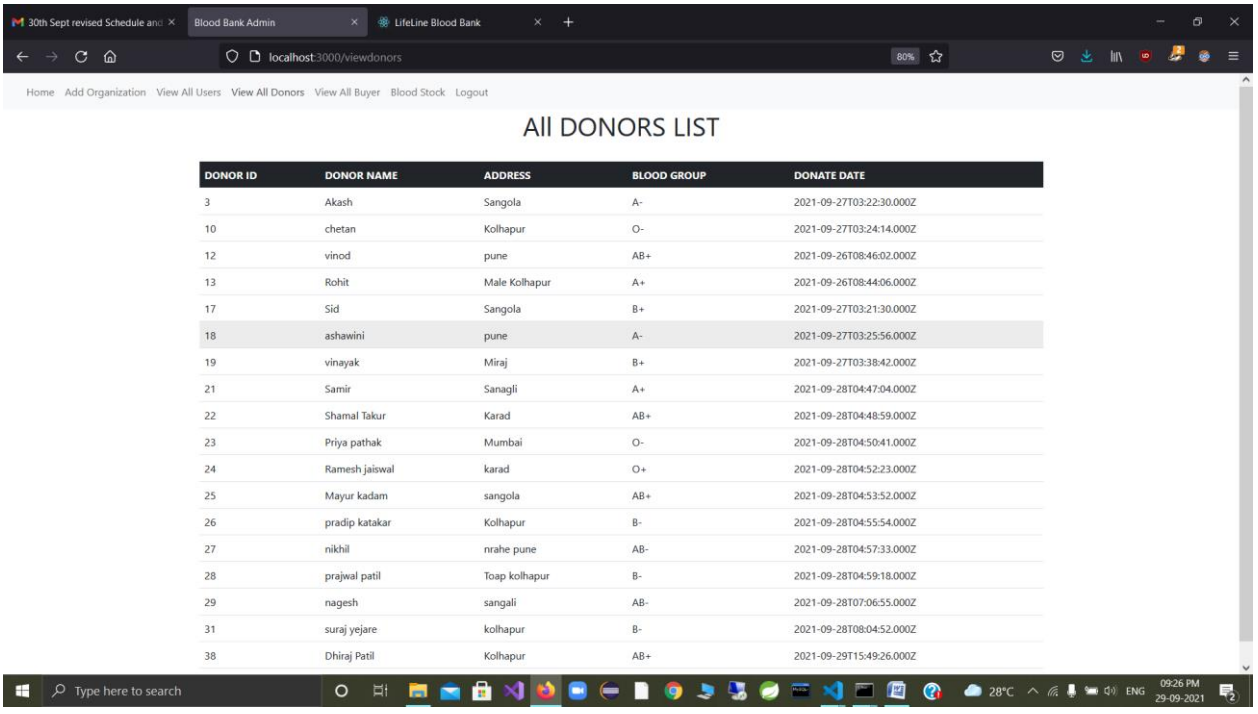
6.4 Blood Stock Page





All USERS LIST

USER ID	USER Name	USER EMAIL	Address	GENDER	MOBILE NUMBER
1	admin	admin@gmail.com	Pune	Male	7756021466
2	Yash	yash@gmail.com	Kolhapur	Male	7756021445
3	Akash	akash@gmail.com	Sangola	Male	7756021488
4	yuga	yuga@gmail.com	pune	Female	7756021455
9	sandesh	sandesh@gmail.com	Kolhapur	Male	7756959670
10	chetan	chetan@gmail.com	Kolhapur	Male	77560216644
11	Akashay	akashy@gmail.com	Pune	Male	9637202193
12	vinod	vinod@gmail.com	pune	Male	9822445688
13	Rohit	rohit@gmail.com	Male Kolhapur	Male	7057746631
17	Sid	sid@gmail.com	Sangola	Male	8812445622
18	ashawini	ashawini@gmail.com	pune	Female	8898562245
19	vinayak	vinayak@gmail.com	Miraj	Male	9888556555
20	sayali	sayali@gmail.com	pune	Female	7756021423
21	Samir	samir12@gmail.com	Sanagli	Male	8856145622
22	Shamal Takur	shamal@gmail.com	Karad	Female	9988774455
23	Priya pathak	priya@gmail.com	Mumbai	Female	9855662244
24	Ramesh jaiswal	ramesh@gmail.com	karad	Male	8866553345
25	Mayur kadam	mayur72@gmail.com	sangola	Male	9096445625
26	pradip katakar	pradip11@gmail.com	Kolhapur	Male	7755662289



All DONORS LIST

DONOR ID	DONOR NAME	ADDRESS	BLOOD GROUP	DONATE DATE
3	Akash	Sangola	A-	2021-09-27T03:22:30.000Z
10	chetan	Kolhapur	O-	2021-09-27T03:24:14.000Z
12	vinod	pune	AB+	2021-09-26T08:46:02.000Z
13	Rohit	Male Kolhapur	A+	2021-09-26T08:44:06.000Z
17	Sid	Sangola	B+	2021-09-27T03:21:30.000Z
18	ashawini	pune	A-	2021-09-27T03:25:56.000Z
19	vinayak	Miraj	B+	2021-09-27T03:38:42.000Z
21	Samir	Sanagli	A+	2021-09-28T04:47:04.000Z
22	Shamal Takur	Karad	AB+	2021-09-28T04:48:59.000Z
23	Priya pathak	Mumbai	O-	2021-09-28T04:50:41.000Z
24	Ramesh jaiswal	karad	O+	2021-09-28T04:52:23.000Z
25	Mayur kadam	sangola	AB+	2021-09-28T04:53:52.000Z
26	pradip katakar	Kolhapur	B-	2021-09-28T04:55:54.000Z
27	nikhil	nrahe pune	AB-	2021-09-28T04:57:33.000Z
28	prajwal patil	Toap kolhapur	B-	2021-09-28T04:59:18.000Z
29	nagesh	sangali	AB-	2021-09-28T07:06:55.000Z
31	suraj yejare	kolhapur	B-	2021-09-28T08:04:52.000Z
38	Dhiraj Patil	Kolhapur	AB+	2021-09-29T15:49:26.000Z

7. Conclusion

Using this project “Blood Bank Management System” people can search blood group available which they need. They check the details using blood bank management website. The main benefit of this system is the information of available blood group. This will save the time and eventually help to save the life of a person who is in extreme need of the blood in an emergency. This website works 24*7 so user can get information of blood required at any time.

8. References

[1] https://www.oxley.com/domain/text.com/

[2] https://app.diagrams.net/