# A PROJECT ON
# DESIGN AND DEVELOPMENT OF A WEB APPLICATION FOR BLOOD DONATION MANAGEMENT SYSTEM



**ISLAMIC UNIVERSITY**

This project paper is submitted to the Department of Information and Communication Technology , Islamic University, Kushtia, Bangladesh for the partial fulfilment and requirements of degree of B.Sc. (Hon's) in Information and Communication Technology.

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*Dedicated*
*To*
*My Family and Teachers*

# CERTIFICATE

I am pleased to certify that Md. Al-amin Hossain, examination roll no.1518034, has performed a project work entitled **" Design and Development  of a Web Application For Blood Donation Management  System"** under my supervision in academic year 2015-2016 for all the fulfillment of partial requirement of B.Sc. Degree. So far as I concern this is an original project work that she carried out in the Department of Information and Communication Technology, Islamic University, Kushtia, Bangladesh.

……………………………….

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Md. Al-amin Hossain
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## ABSTRACT

Blood can be defined as the fluid we have in our bodies that carries oxygen from the lungs to the rest of the body 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). Due to deficiency of blood a person can suffer from serious health issue and may even die. Medical science cannot produce blood but with the blessing of medical science blood can be transferred from one person to another. A lot of people's live can be saved if blood donors are easily available.

The system that is going to be developed is Blood Donation Management System (BDMS).The main aim of this system is to offers such a cross platform web interface which will let anybody to access the detail contact of potential blood donors around the required location. An algorithm has been developed to identify the potential blood donors Several automated blood management system are available like the Facebook blood donation, but none of them offer any efficient algorithm considering the variables like frequency of blood donation, last date of donation, gender and age factor. To find the eligible donors we have considered all factors simultaneously, which makes the study unique. Practically this search engine will be helpful for the automated blood donation organizations and other blood bank for identifying the potential blood donors from their large database.

In this blood donation system; it is mainly used for maintaining the stock record of the blood. In today's system first it is manual system and also it when person requires the particular type of blood and if that type is not available in that blood bank then it is time consuming to arrange the blood from other blood bank it may affect the patient health because time is very important in accidental cases. So in web based blood donation system is best for checking whether particular type of blood is available in stack or not and also it gives the location weather that available.

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## List of figures

# Chapter -1 : Introduction

## 1.1 Introduction

Blood donation is a voluntary procedure that can help save the lives of others. A blood donation occurs when a person voluntarily has blood drawn and used for transfusions and/or made into biopharmaceutical medications by a process called fractionation (separation of whole-blood components). Donation may be of whole blood, or of specific components directly (the latter called apheresis).(1) Blood donation is required during an organ transplant, accidents, cancer treatment etc. In conventional way blood is donated via blood donation organizations or blood bank. Blood bank is observed as an area wherever blood is gathered as a results of the activity of blood donation by donors that is stored and preserved (maximum twenty eight days) for later transfusion. Most of the blood banks in Bangladesh don't support online blood donors database. In countries like Bangladesh blood a huge amount of units of blood is donated on average every year. According to statistical automated and efficient way of data management is to be introduced for which online platform of blood donation can become a pavestone.

Blood Donation Management System (BDMS) is a Web-study in the year 2011 about five-lakh unit of blood was recorded as donated in Bangladesh the value of which increased to seven lakh in following five years (Molla, 2017). It is a clear sign that blood donors are on the rise along with the increase of population.

Web based application that is designed to store, process, retrieve and analyze information concerned with the admin. The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this Online Blood Donation management System application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer/patient wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

## 1.2 Motivation

Blood donation is one of the most significant contributions that a person can make towards the society. It is not harmful for an adult person to donate blood. The body of the donor can regenerate the blood within few days. It poses no threat to the metabolism of the body. An ailing body needs blood for various reasons. He may be attacked with anemia, undergone an operation or may meet with an accident. But such a patient may die for want of blood as it is not always available. Even a pregnant mother may need blood in case of emergency situation. Blood donation in Bangladesh is an activity conducted by several different organizations. As of 2011, about 25% of the nation's blood supply came from voluntary donation, 20–25% from paid donors, and 50–55% from one-time donation for a specific patient.(2)

Blood transfusion service became available in Bangladesh at the Dhaka Medical College Hospital in 1950. Professional blood donors were the mainstay of blood donation in Bangladesh, with 47% of donated blood coming from professional donors as late as the year 2000. The potential for contamination in the supply, and the need for volunteer donors was well recognized.

The first volunteer blood donation program in Bangladesh was begun in 1977 at Dhaka Medical College, and was organized by Shandhani.(3) Shandhani has now 24 units in different medical and dental colleges. Shandhani is a voluntary institution run by the medical and dental students of Bangladesh. Shandhani is also working for the helpless patient in the community by serving them with drug from the drug bank, donating blood to the thalassaemia patient, giving relief to the flooded and disaster affected people etc.

The International Red Cross and Red Crescent Movement began a blood program in Bangladesh in 1981. Today they operate several centers, using both whole blood and fractionated blood co A 1997 survey of students at the University of Dhaka had found a generally favorable attitude towards voluntary blood donation, and an overwhelmingly unfavorable attitude to paid blood donation, and recommended that a campaign should be started immediately to increase awareness and participation in voluntary blood donation among the student population.

Badhan is a non-political voluntary blood donors' organization in Bangladesh that was established in 1997. Badhan's first activity was a free blood-group testing program that took place on 24 October 1997 at Shahidullah Hall of the University of Dhaka. Shahidullah Hall is very close to Dhaka Medical College and Hospital, and before that time people needing blood for patients would gather regularly in or near the hall gate, seeking help. Mohammad Shahidul Islam Ripon was the principal originator of the program, along with other students.

The blood provided is fresh rather than stored, using a database of people whose blood type has been previously established. The graduate- and postgraduate-level students of Bangladeshi universities and postgraduate colleges are the main participants of the organization.(4) The organization is active in 14 universities and 29 university colleges. Other activities include raising awareness about donating fresh blood, donating blood voluntarily for patients and helping poor people in time of natural disasters.

We became motivated because of all these voluntary blood donation organization who are trying hard to accumulate donors who are willing to help people. The aim of this Blood Donation Web Aplication is to improve the communication with the people who are in need of blood and the persons who are willing to donate blood in few touches of the Smartphone/PC.

According to the research in the year 2000, 47% of the total blood requirement in our country was met by unsafe professional blood donors. In 2011, it came down to 20-25%. Around 362,000 units of blood were collected in Bangladesh in 2009, of which only 29% were from voluntary donors. So, we built this site in such a way that no one will ever need to buy blood from professional, which is a unsafe process. The best way to get blood is via donation. We believe that if we can bring this huge number of people of Bangladesh under the shade of blood donation process and then it will be a blessing for our society.


## 1.3 Goals and Objectives

Our objective is to build a web application which will create a huge blood donation community, who will be able to receive and donate blood in the fastest way possible. We want that no Bangladeshi will suffer from lacking of blood. No matter how rare the blood group is an ailing person will always get a match of his or her blood group. The donor and receiver can find each other via the website . Any patient can easily conduct to the preferable donor for their matched blood group.

The goals of the Blood Donation Management System are as follows:
- ✓ To conduct a study on Blood donor management.
- ✓ To design a electronic Blood donor management system.
- ✓ To validate the design using a prototype suppprt.
- ✓ To maintain the blood donor information system.
- ✓ To allow the probable recipients to make search and match the volunteer donors, and make request for the blood.
- ✓ To provide an efficient donor

### 1.4  Expected Outcome

After developing the web application ,the following parts may include:

**Registration**:

Any doner and requester must need to be register before login.

Login: The system provides security features through username and password matching where only authorized user can access the system with different authorization level.

**Donor profile completion**:

Here any register donor put his or her necessity information as a blood donor.

**Seekers:**

person who wants the blood from the exact donor .

**Donor management:**

 The records of all donors and their history kept in one central database.The record of the donation is maintain by the system.

**Contact:**

seekers can contact to the donor for blood via phone call,SMS or email.

# Chapter -2 : Literature Review

## 2.1 Similar Work

The main purpose of our project to make a Blood Donation Web Application that is user friendly and has the feature to find the best matches of blood donors by analyzing the nearby donor's profile.We believe that our Blood Donation Management System webapp will bring the donors and receives so close that blood donation will no longer be a matter of risk and worries. At the beginning of the project we have researched on some secondary resources based on this. From these sources, we have been able to know the existing functions and determined our work outline.

There are some researches on automation of blood donor database. Because for efficient blood donor recruitment different factors are to be considered and different researchers used different factors in the recruitment process. AlRashdi et al. (2018) assessed some factors that influence the levels of recruitment for blood donations in Saudi Arabia. (5)Fincket al. (2016) did a study on the factors of motivation and deterrents of blood donation among high school blood donors. Ferguson (2015) used MOA approach in the case of recruitment of blood donor. Alfouzan (2014) did a research to measure the level of knowledge on blood donation, to identify positive and negative attitudes, find the obstacles, and suggest some motivational factors. Bani et al. (2014) accessed the reasons of gender gap sampling donors who stopped donation at least two years before the study and also analyzed frequency of donation. Arif et al. (2012) used last date of blood donation, BMI and last date of contact between donor and receivers in an asterisk technology based automated blood donation system as recruitment factors in their work.(6)

Again, from the source(3) a paper called" Blood donation system for online users",we have known that most of people desire to know about online blood donation to the patients at once. Patients want to get blood to live at emergency time. At present people are needed to know how to contact blood donors online. This system provides how to get blood at their serious time. Matcher system is implemented with Decision Tree and Decision Table by rules. This matcher applies the rules based on Blood Donation in Blood Bank in Myanmar. Information about donors and patients has been reserved in the system so that it is ready to donate blood instantly.

Though a good number of studies have been done in last couple of years but some limitations in the studies are observed. In recruitment of blood donors gender factor which is males can donate blood with a delay of 3 months but females can donate with 4 months delay, is not

considered. Besides some frequency preferences of donors in each year has never been taken into concern in any of the past studies.

## 2.2 Comparing Our Proposed System with Existing Technologies

In our web application user Authentication has been done dbSQlite database after registration.It is a bulid in database in django framework.Doners will input their details (Full name, blood group, age, gender, profession, last donation date, email, home district, present address, phone number,profile photo) and these values will be stored in the database under the name of their doner profile.

Seekers will be able to search the blood group of people and see in the doners present address.Then seekers choose the  best matched who nearby the patient and demanding blood group.Seekers can contact the matched doner by contact number and email address.

Our app will filter only those people who are eligible to donate blood according to age and last donated date. Moreover it can share the blood request via various social networks like face book, instagram, twitter etc.

# Chapter -3 : Project Feature

## 3.1 Basic Features of the Project

Online Blood Donation Management System is to provide services for the people who are in need of blood by getting help from the donors who are interested in donating blood for the people.

There are seven main modules/phases in this system.

- ❖ Admin
- ❖ Donor/seekers registration
- ❖ Donors profile creation
- ❖ Modifying donor information
- ❖ Seekers
- ❖ Donor search
- ❖ Contacts

**Admin:**

Admin is the all of one in this system who can manage all the users(donors & acceptors).He/she can remove any user from the system.Each member in a donor & acceptor is given a user name and password, which identifies him uniquely. From admin module can change donor details , delete donor or change the password.

- Change password
- Modify donor details
- Delete users
- Logout

**Doners profile creation:**

In this module users can be a donor a. For this purpose donor create their profile as a blood donor by giving the total details such as full name, gender, age,blood group, profession, home district, present address ,last blood donated date, phone /contact number, email and profile picture. In this option some are optional and some are mandatory for  a donor.doners can :

- Create profile as a donor
- Update profile
- Also search blood as a seekers
- Refer his/her friend to become a donor
- Change password

- Logout

**User (donors/seekers) registration :**

From this module user can create their account via registration/signup option, when user create his/her account the user get a user name and password. For registration user must fill up the registration form by giving user name, first name,email and password. The user can visit or enter into this site using this user name and password via login option. After login user can be a donor or search blood as a seekers.

**Modifying donor information:**

The registered donor only is able to modify only his/her own profile details.For modifying his/her profile , they must login before using user name and password.

**Seekers/Acceptors:**

This module helps user to find blood. When user click on donors option he/she can show  all the registered donor profile or details. He/she find their necessity blood group from the all donor profile. Then contact the best donor for blood.
Available option for a acceptor is:
- Find a donor
- Refer a friend
- Change password
- Become a donor
- Contact
- Logout

**Donor search:**

The people who are need of blood can search in our site for getting the details of donors having the same blood group and with in the same city or nearest address. They can directly click on the option search a donor can select a blood group as well as  present address  which he/she needs. When searching the donor must notify the donor last blood donated date. After finding best matched donor ,he/she can contact with him.

**Contacts:**

This module is the last process for blood. After finding the donor(s) , a seekers can contact him via phone call, text message and email by giving the details about patient.

# Chapter -4 : Proposed System Model

## 4.1 System Architecture:

The system architecture describe the system's hardware, software, and network environment. The Blood Donation Management System(BDMS) is to designed to have a three tier client-server architecture. The client server architecture is the most common architecture used today, whice attempt to balance the processing between client devices and one or more server devices. In a three tier the software on the client computer is responsible for presentation logic , an application server(s) is responsible for the application logic, and a separate database server(s) is responsible for the data access logic and data storage.

Following figure shows the client/server system architecture design for the blood donation management system.
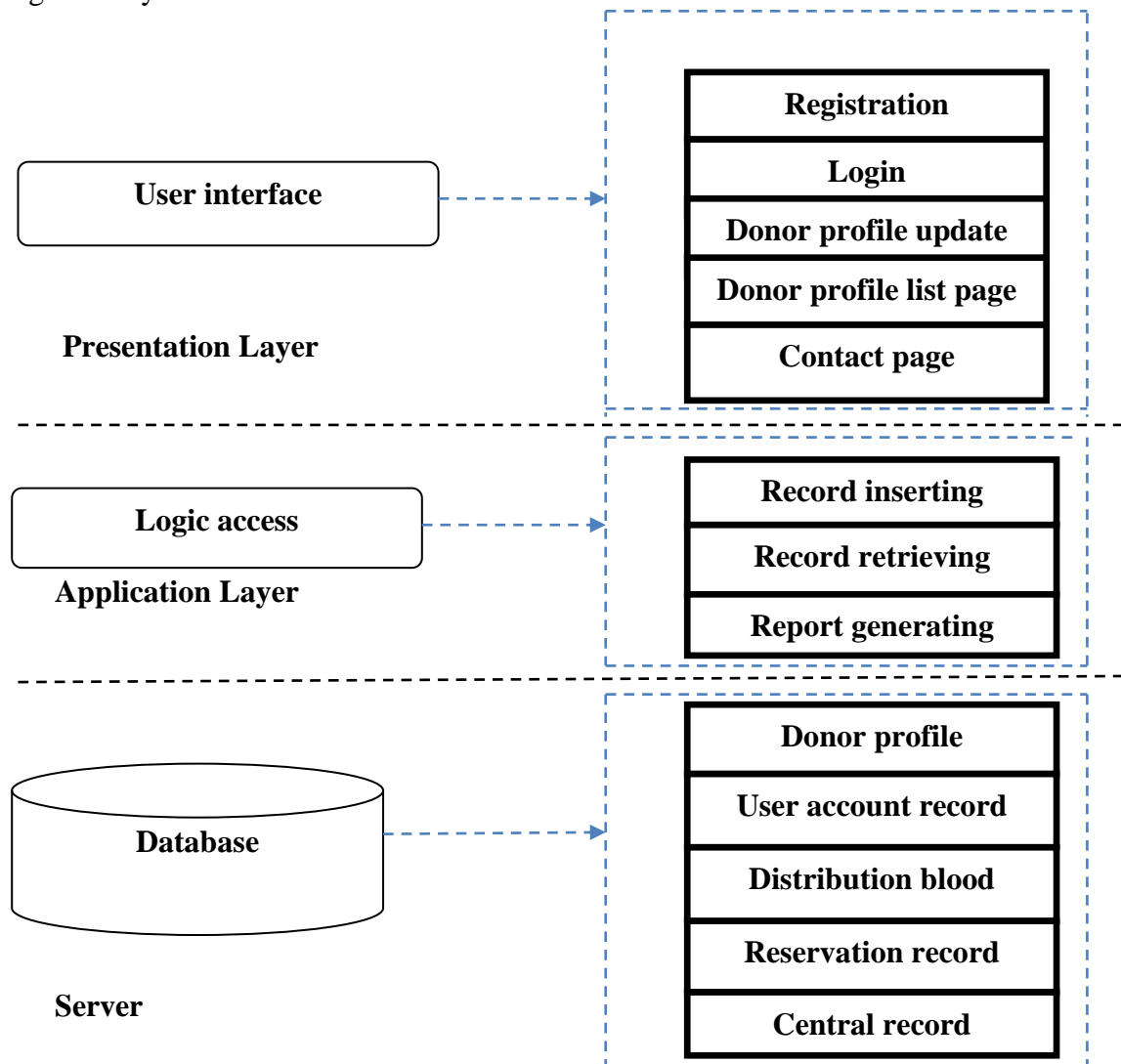


**Fig -4.1:** System architecture

## 4.2 Complete Flowchart:

This flowchart describe the overall procedure model of the system.
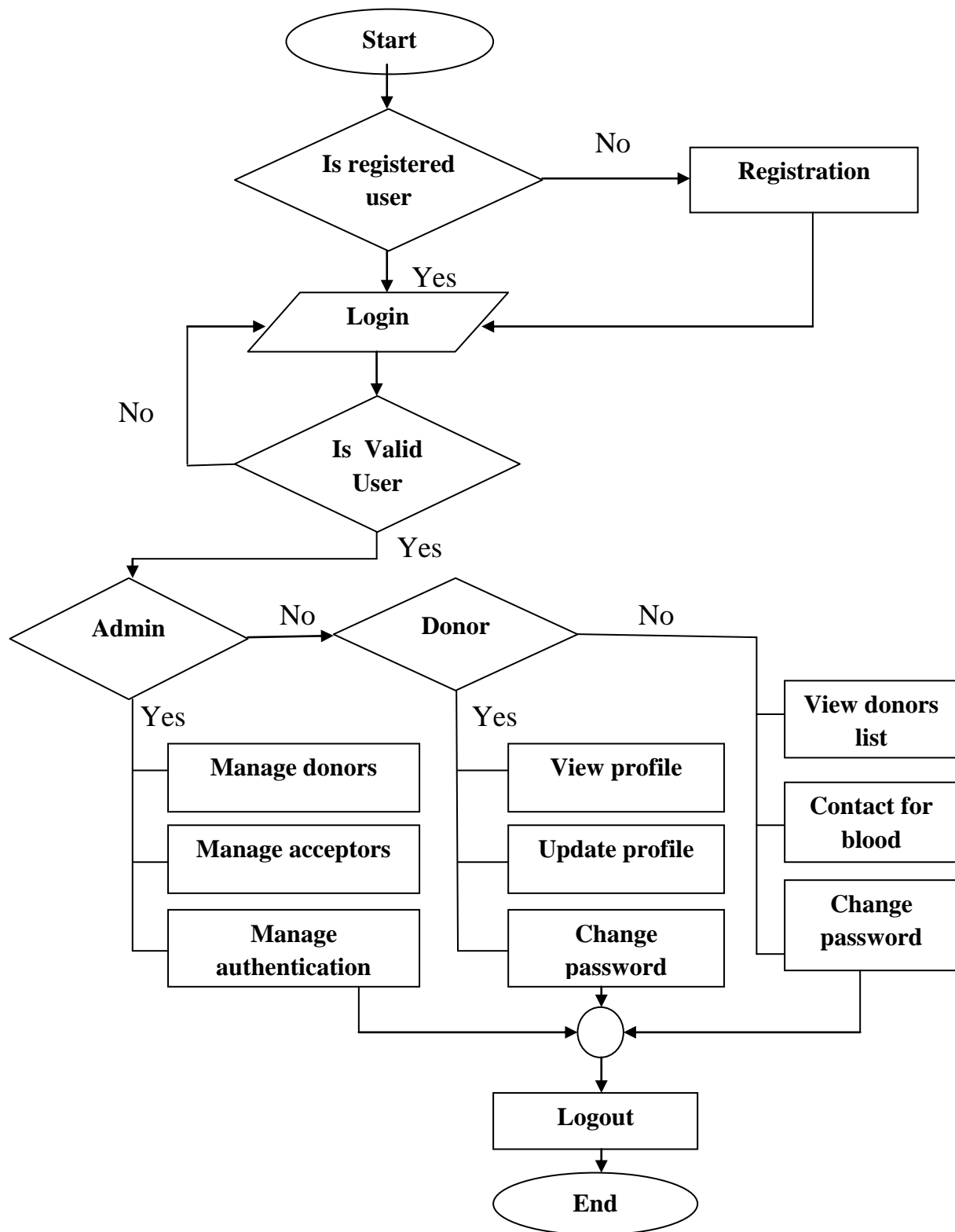


**Fig -4.2:** Complete flowchart of the system

At first it needs to be seen whether a person is registered or not. If a person is registered then he can login in my user name  and password. But if the person is not logged in then  he/she can't be logged in until he fills up the registration form.When the person logs in then he can see the blood donation management main  page and available option for donor and acceptor.

**4.3 Use case diagram:**

The use case diagram shows the boundary of the system and it is a representation of a users interaction with the system and depicting the specification of a use case. This diagram shows the roll  of  each actors.  Use  case  represent  functionality  provided  by  a  system  unit  and expressed by sequence of message exchange by the system unit and one or more actors of the system.
The following use cases have been identified for the proposed system specification.
The use case diagram are listed below:

- ✓ Admin

- ✓ Donor

- ✓ Patient/Seeker

**Use case diagram for admin:**

Admin is the manager and author of this system.he can manage both donors and acceptors. He/she can remove any user from the system.Each member in a donor & acceptor is given a user name and password, which identifies him uniquely. From admin module can change donor details , delete donor or change the password.

- • Change password
- • Modify donor details
- • Remove users
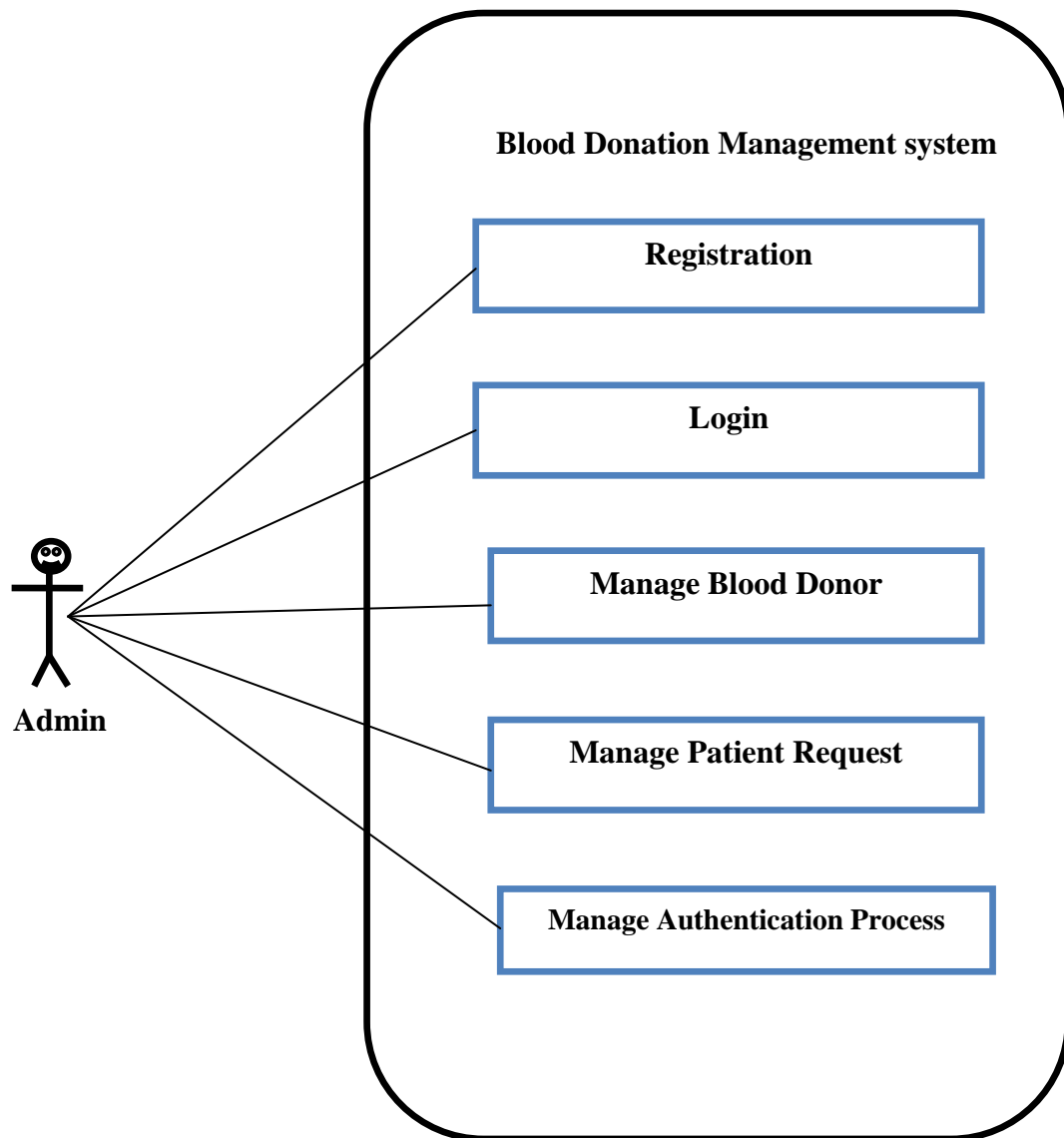
**Fig -4.3:** Admin use case diagram

**Use case diagram for donor:**

In this module users can be a donor a donor.For this purpose donor create their profile as a blood donor by giving the total details such as full name, gender, age,blood group, profession, home district, present address ,last blood donated date, phone /contact number, email and profile picture. The donor after donating the blood will update the last donation date in his profile so that no one calls the donor for the next 4 months as he is not eligible for donation for next four months.
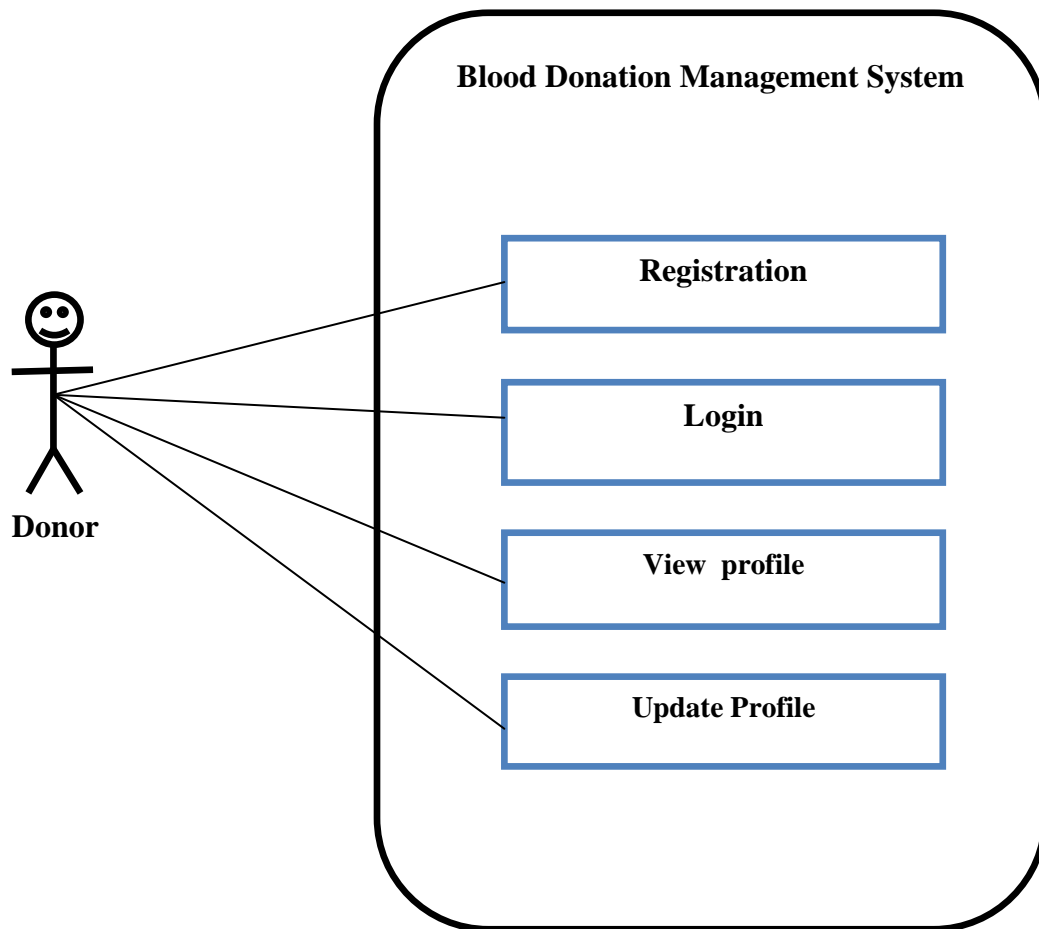
**Fig -4.4:** Donor use case diagram

**Use case diagram for acceptor:**

The Acceptor have to go through Registration login and logout. The acceptor while accepting blood can select blood group, select address and search blood. After that he/she can also call the donor from the list and also share the request for blood in social media. Acceptors can contact with the donor by phone call, email or text message.
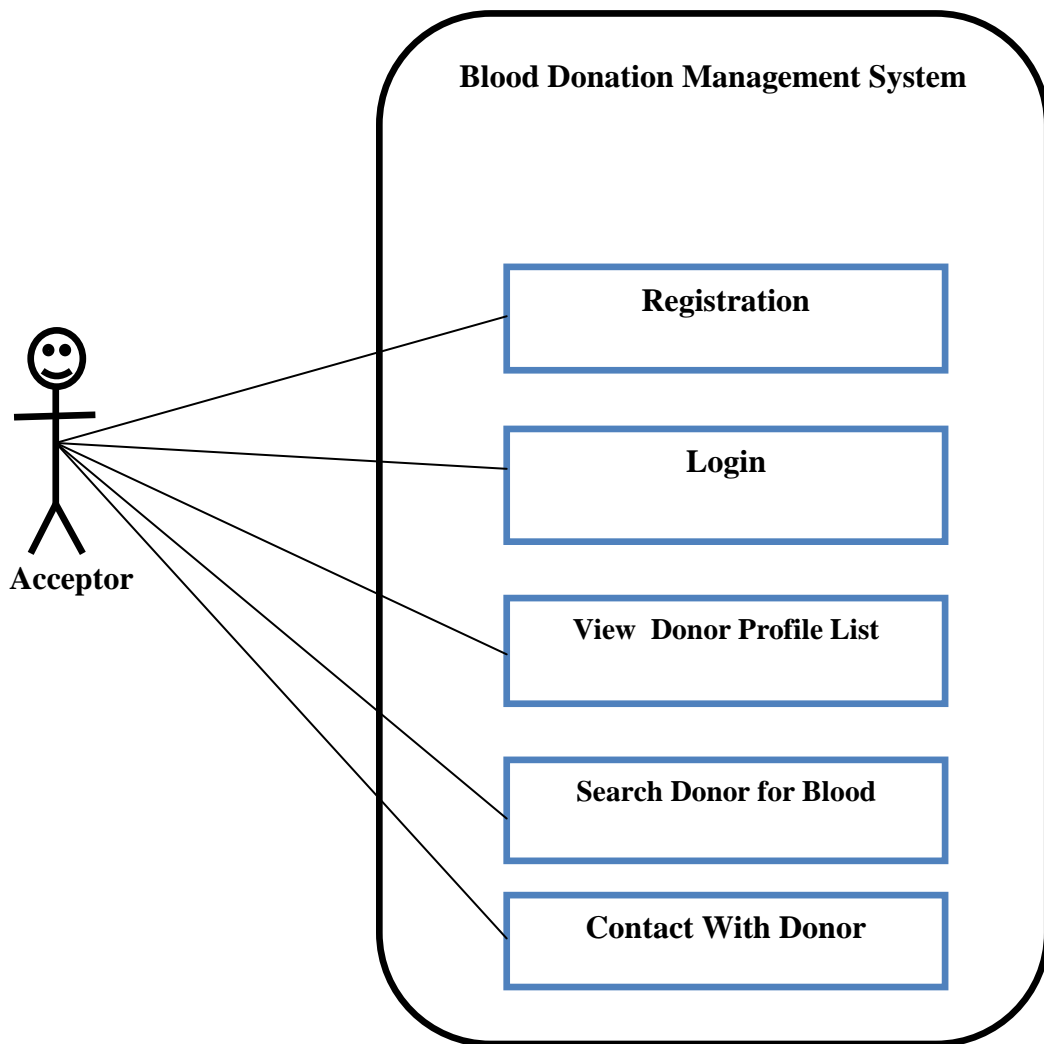
**Fig -4.5:** Acceptor use case diagram

## 4.4 Sequence of activities

Sequence of activities describe the active sequence diagram. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the logical view of the system under development. A sequence diagram shows, as parallel vertical lines (lifelines), different processes or objects that live simultaneously, and, as horizontal arrows, the messages exchanged between them, in the order in which they occur. This allows the specification of simple runtime scenarios in a graphical manner.

The following five diagram are expressed consecutively for user registration, admin , donor, acceptor and search donor.

**Sequence diagram for user registration:-**

**Registration:**
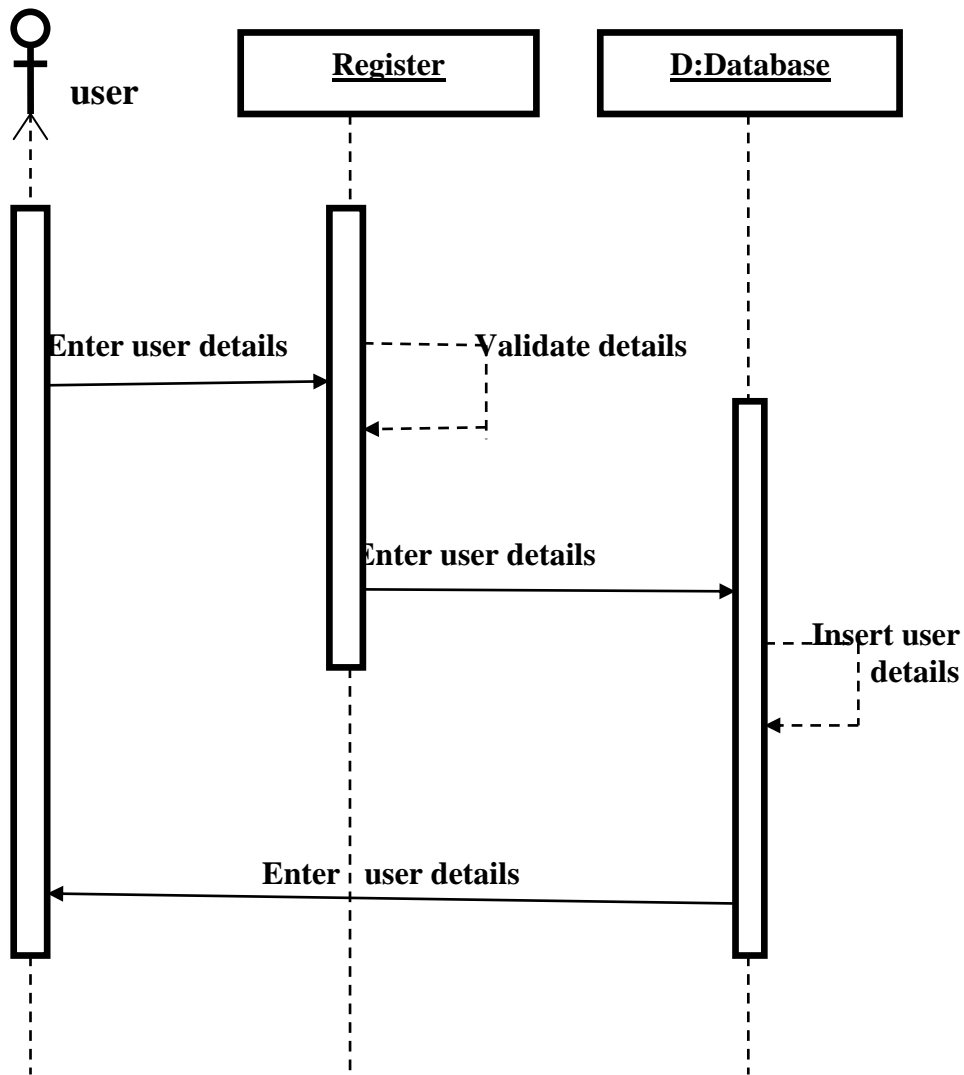


**Fig -4.6:** User registration sequence diagram

**Sequence diagram for admin:-**
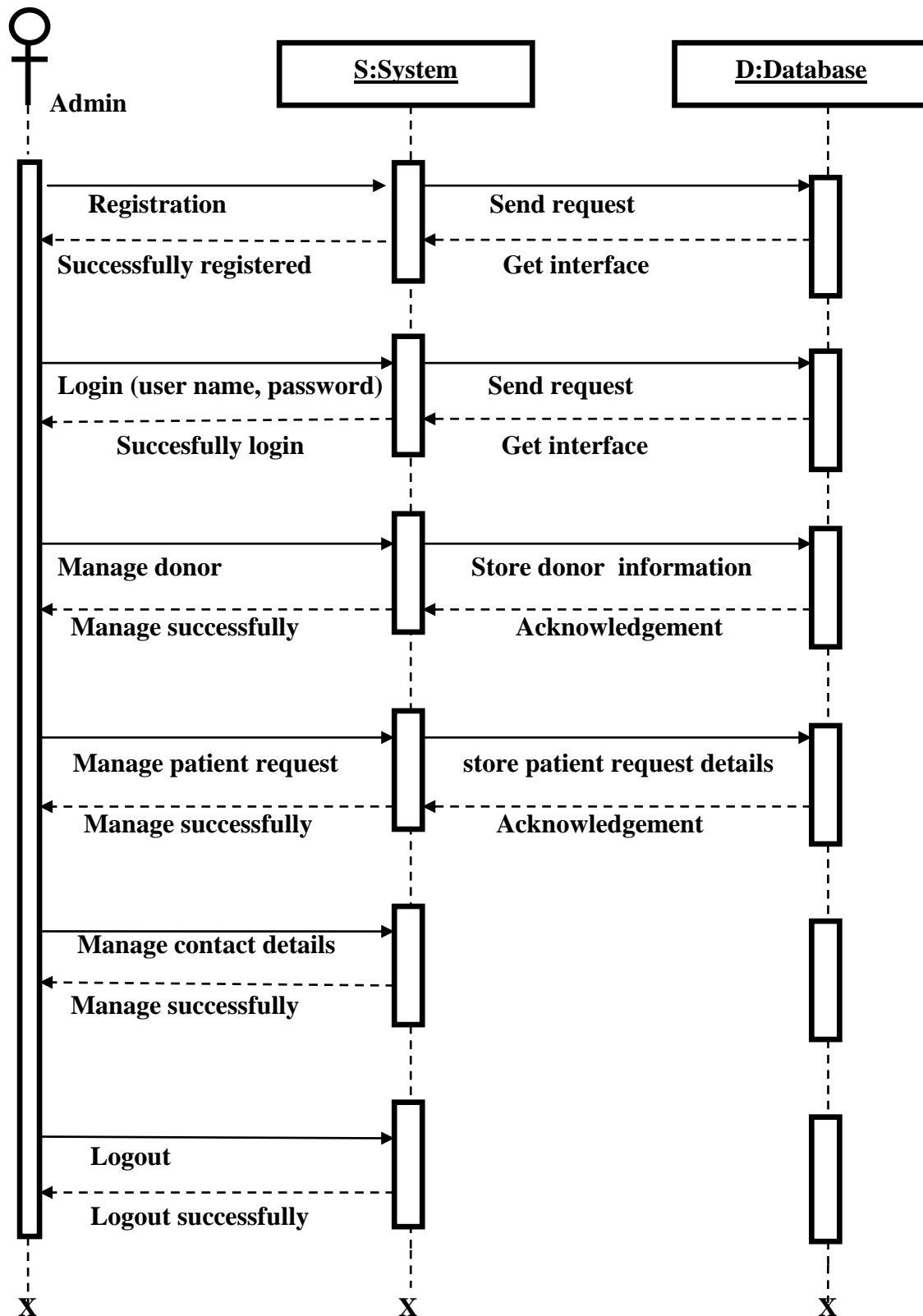
**Admin:**



**Fig -4.7:** Admin sequence diagram

**Sequence diagram for donor:-**

**Donor:**
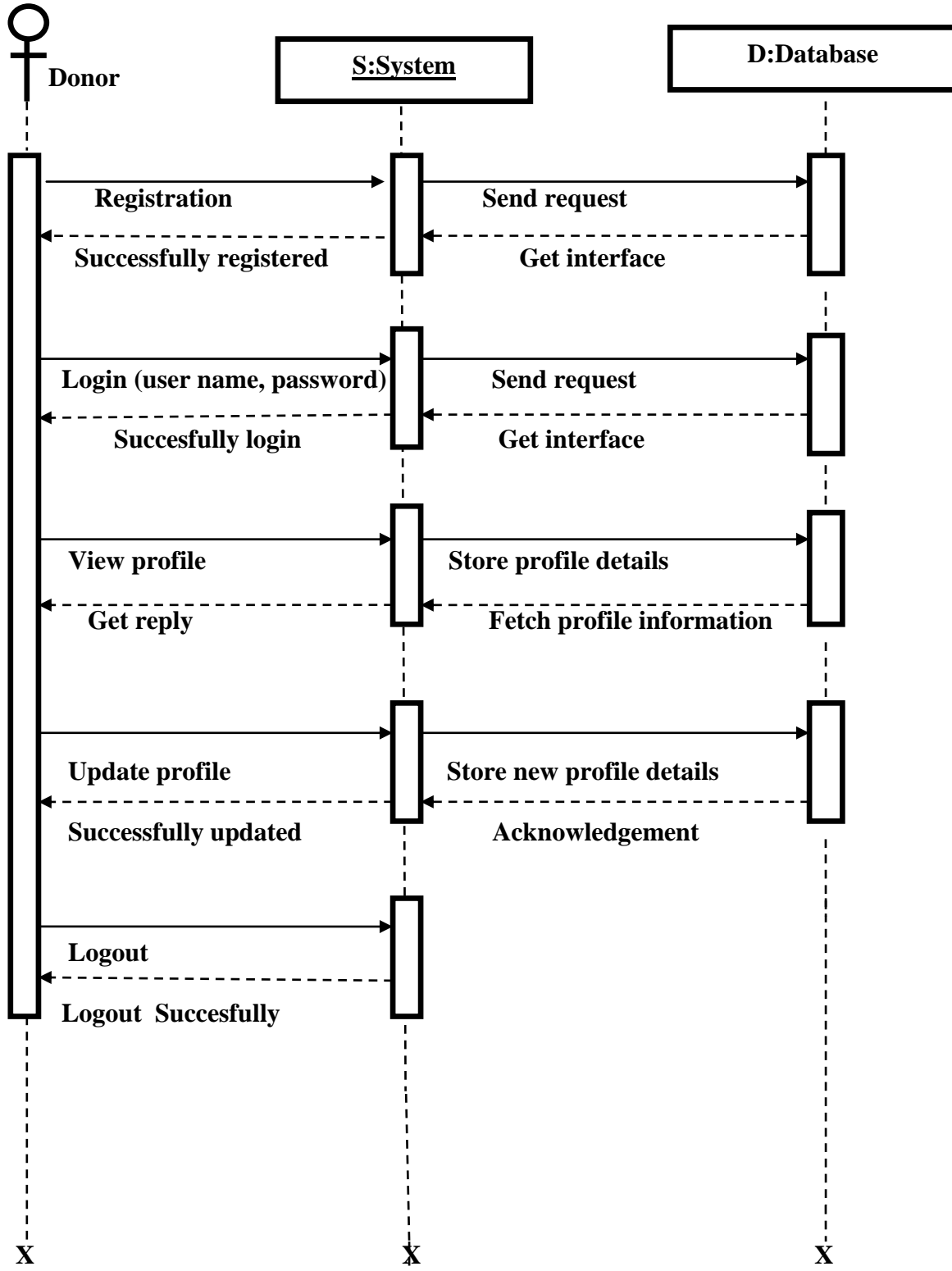


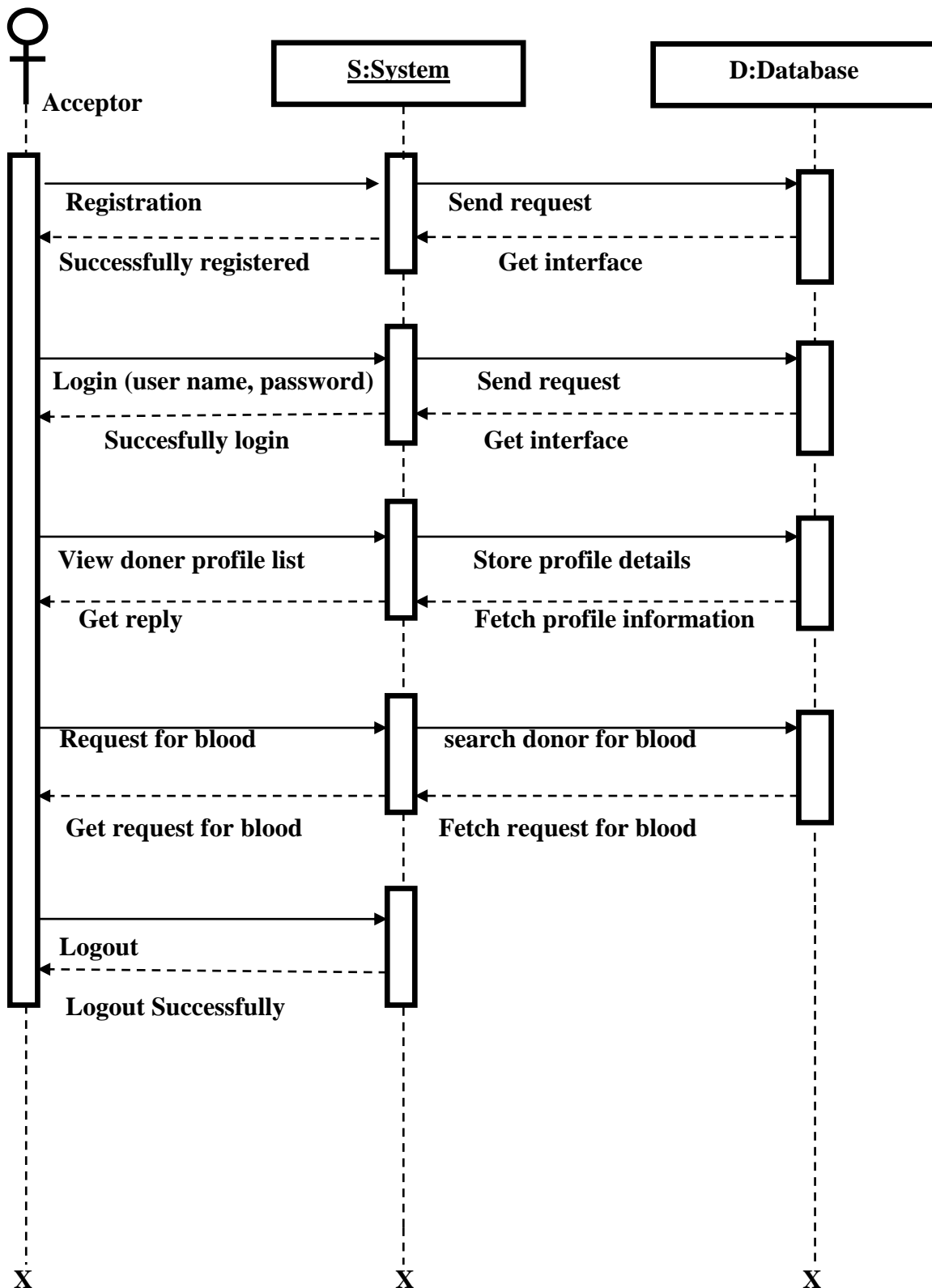**Fig -4.8:** Donor sequence diagram

**Sequence diagram for acceptor:-**

**Acceptor:**



**Fig -4.9:** Acceptor sequence diagram

**Sequence diagram for search donors:-**

**Search donors:**
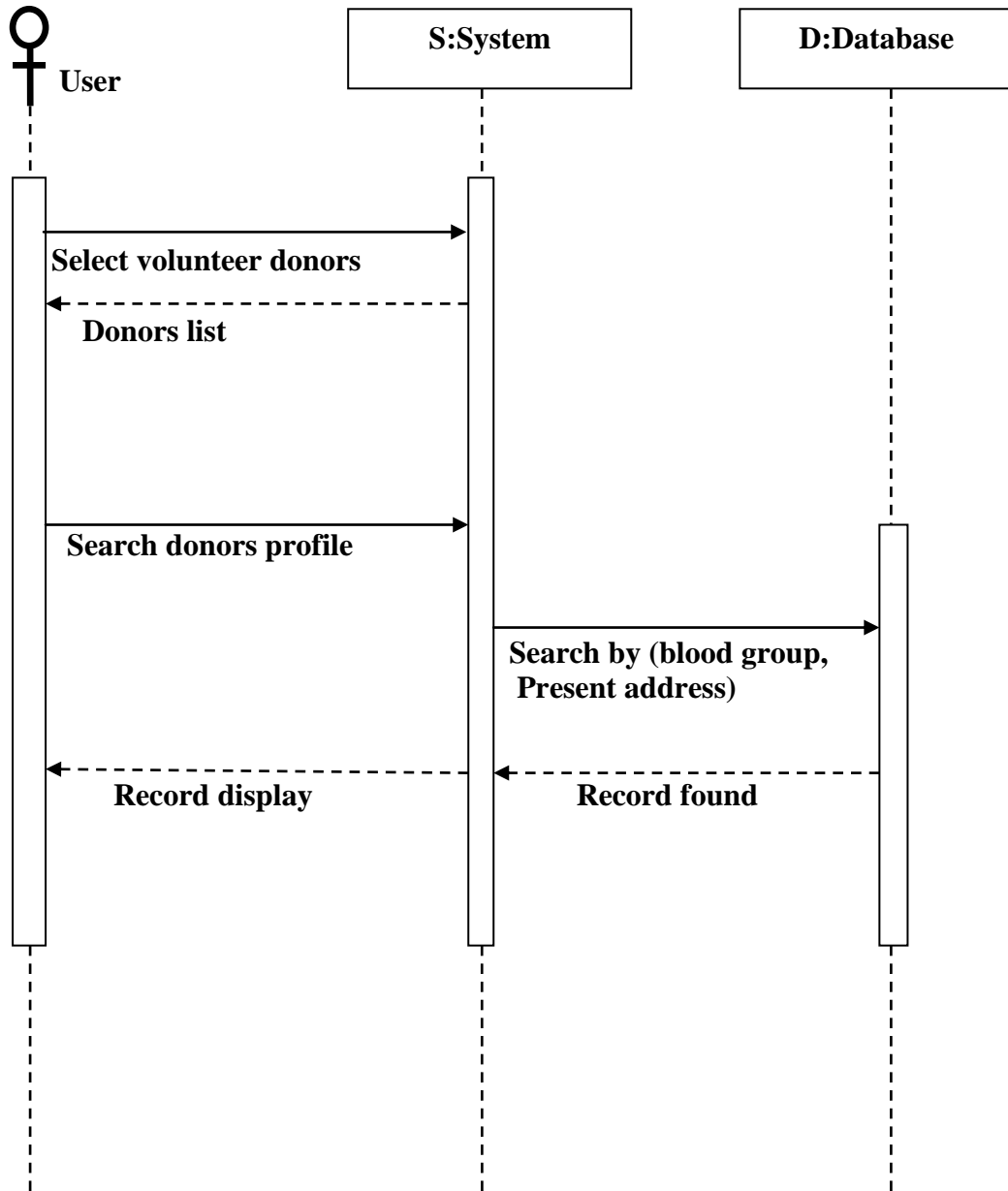


**Fig -4.10:** Search donor sequence diagram

# Chapter -5 :  Design and  Implementation

## 5.1 Introduction

Web application:

A web application (or web app) is an application software that runs on a web server, unlike computer-based software programs that are stored locally on the Operating System (OS) of the device. Web applications are accessed by the user through a web browser with an active internet connection. These applications are programmed using a client–server modeled structure—the user ("client") is provided services through an off-site server that is hosted by a third-party. Examples of commonly-used, web applications, include: web-mail, online retail sales, online banking, and online auctions.
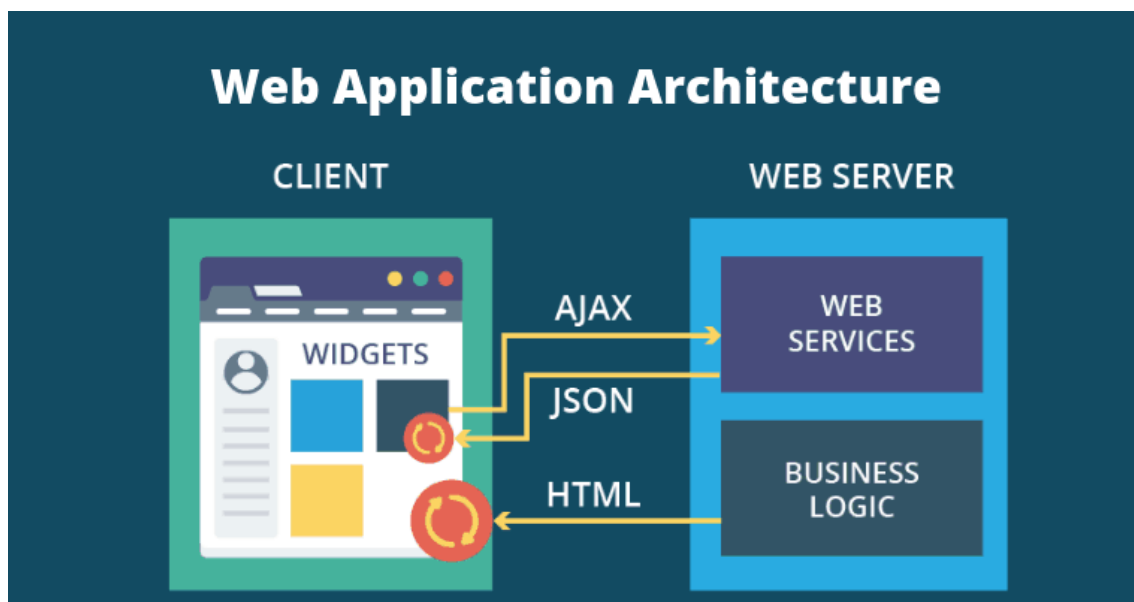


**Fig -5.1:** Architecture of web application

API

An application programming interface (API) is a set of subroutine definitions, protocols, and tools for building software and applications.To put it in simple terms, API is some kind of interface which has a set of functions that allow programmers to access specific features or data of an application, operating system or other services.

A Web  API is  an application  programming  interface for  either  a web  server or  a web browser. It is a web development concept, usually limited to a web application's client-side (including any web frameworks being used), and thus usually does not include web server or

browser implementation details such as SAPIs or APIs unless publicly accessible by a remote web application. An API over the web which can be accessed using HTTP protocol. It is a concept and not a technology. We can build Web API using different technologies such as Java, .NET etc.
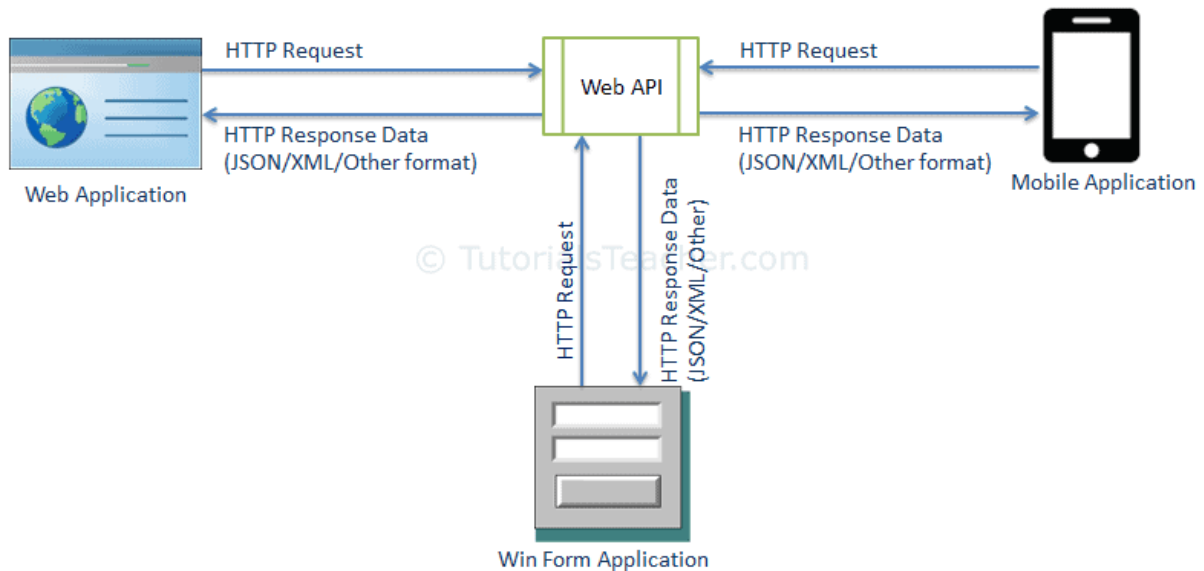


**Fig -5.2 :** Structure of web API

Django framework

Django is a Python-based free and open-source web framework that follows the model-template-view (MVC) architectural pattern. Django's primary goal is to ease the creation of complex, database-driven websites.

The framework emphasizes reusability and "pluggability" of components, less code, low coupling, rapid development, and the principle of don't repeat yourself. Python is used throughout, even for settings files and data models. Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.
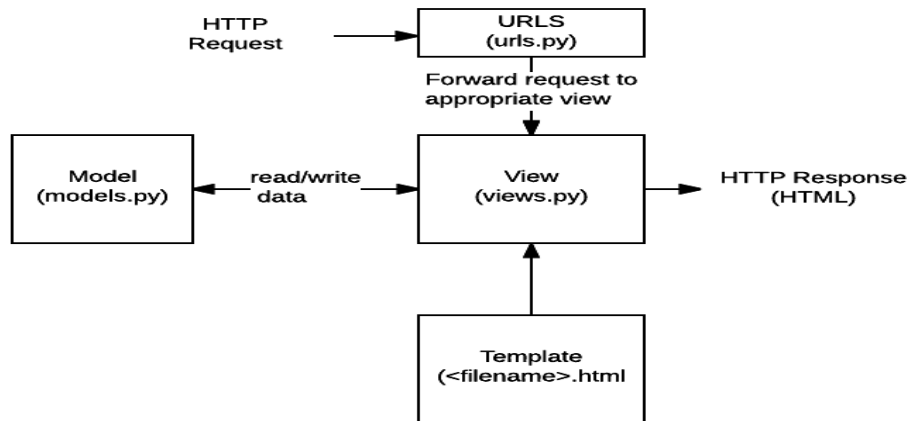
**Fig -5.3 :** Structure of Django framework

**5.2 Design Concepts of Designing An Web Application**

**System Requirements:**

❖ Software Configuration

| | | |
|---|---|---|
| Operating Platform | : | WINDOWS 7 or higher |
| RDBMS | : | DB Browser for SQLite |
| Web Framework | : | Django framework |
| Back-End Language | : | Python |
| IDE, Code Editor | : | Visual Studio |
| Front-End Tool | : | HTML,CSS,JavaSript(JS) |

❖ Hardware Configuration

| | | |
|---|---|---|
| RAM | : | Minimum 1GB |
| Hard Disk | : | 160 GB |
| Processor | : | Core i3 or higher |

**Software Setup :**

Visual Studio Code Editor

Visual Studio is an **Integrated Development Environment(IDE)** developed by Microsoft to develop GUI(Graphical User Interface), console, Web applications, web apps, mobile apps, cloud, and web services, etc. With the help of this IDE, you can create managed code as well as native code. It uses the various platforms of Microsoft software development software like Windows store, Microsoft Silverlight, and Windows API, etc. It is not a language-specific IDE as you can use this to write code in C#, C++, VB(Visual Basic), Python, JavaScript, and many more languages. It provides support for 36 different programming languages. It is available for Windows as well as for macOS.

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I downloaded the latest version of Visual Studio for windows.

**Installation**

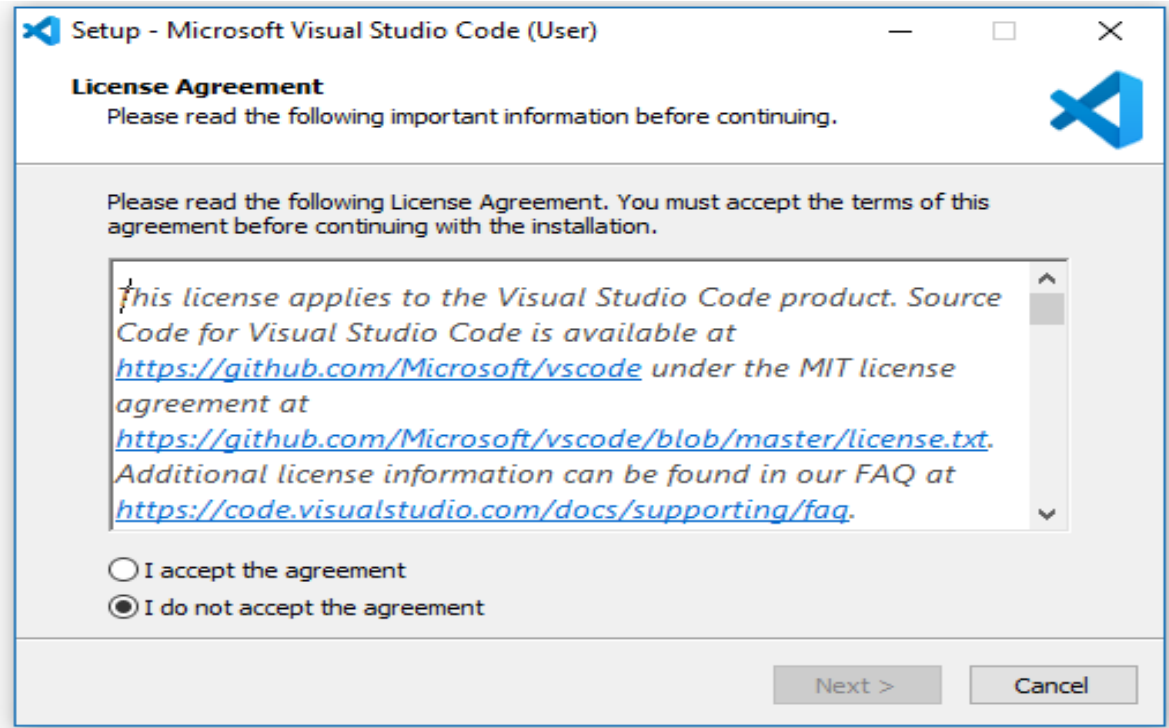After downloading I install visual studio in following way:
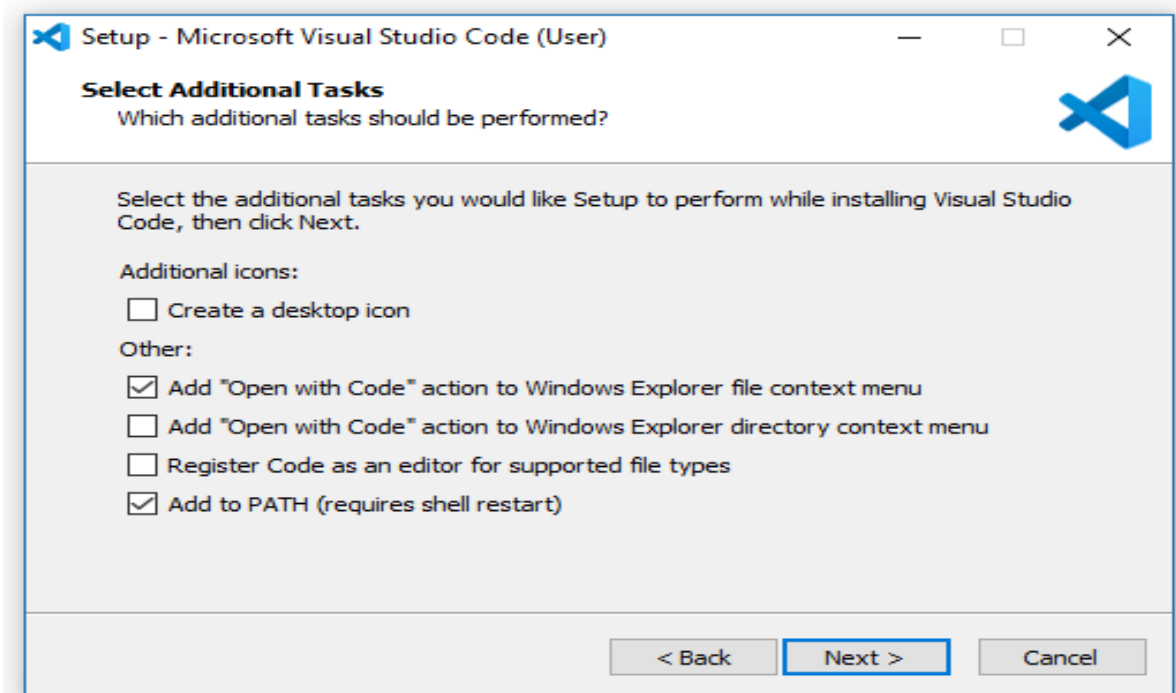


**Fig-5.4 :** Set up visual studio first window
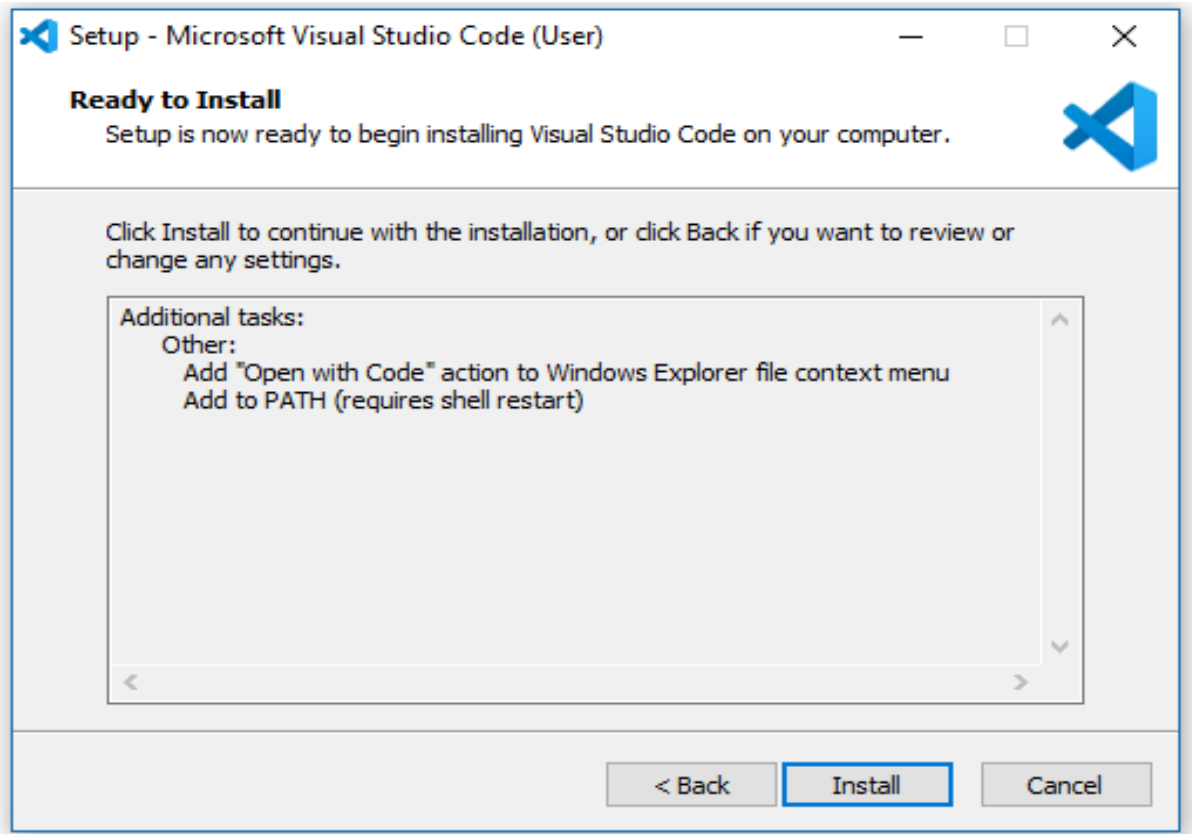


**Fig-5.5 :** Set up visual studio (path and icon selection)

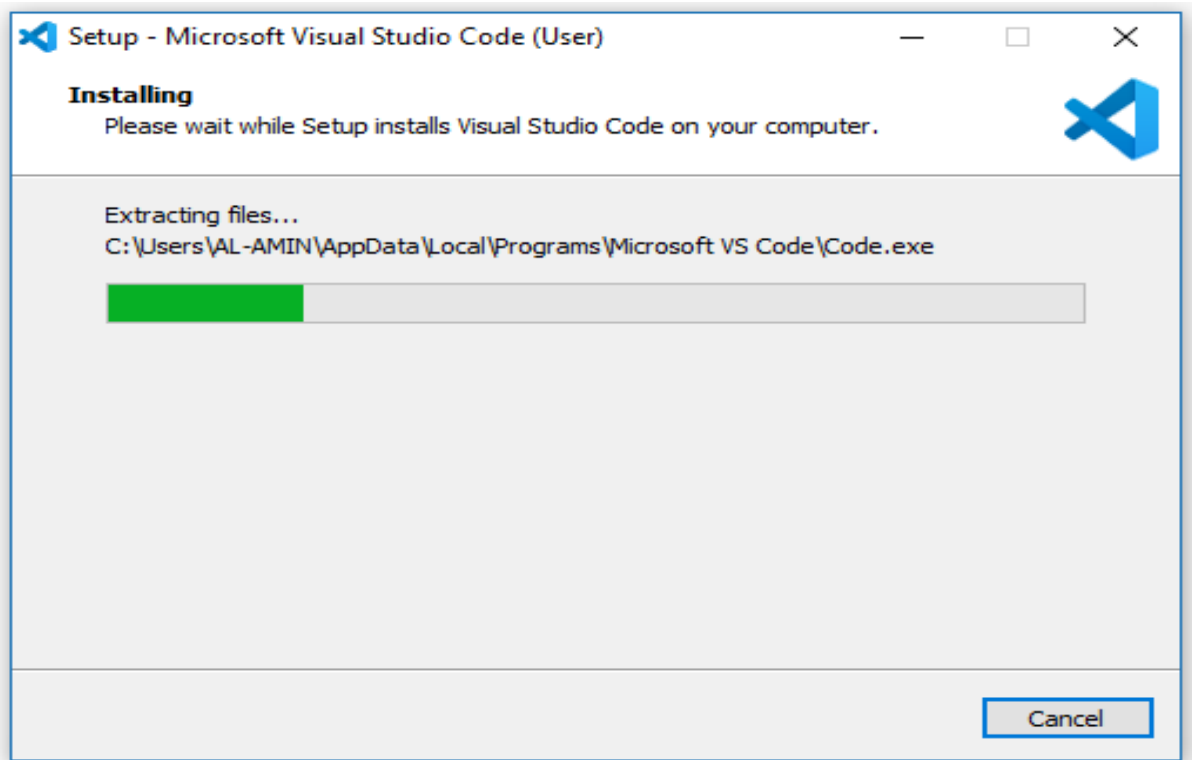**Fig-5.6 :** Set up visual studio (ready to install)



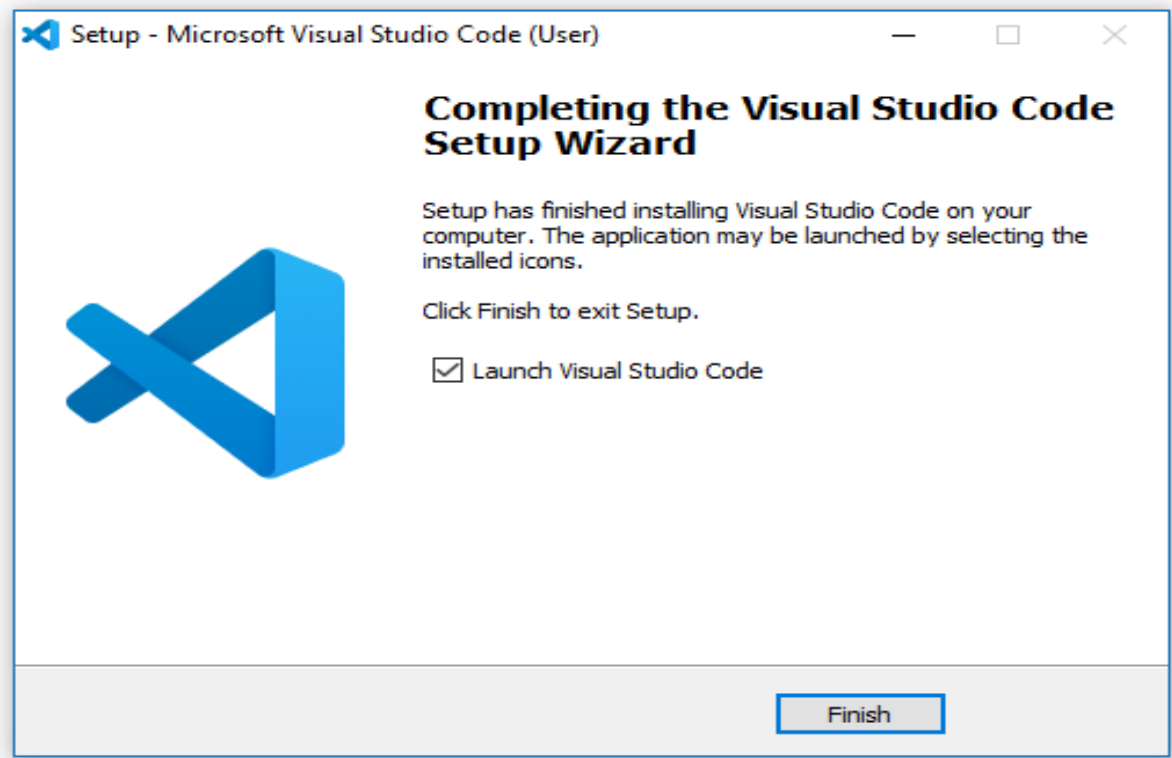**Fig-5.7:** This panel shows the progress of the installation

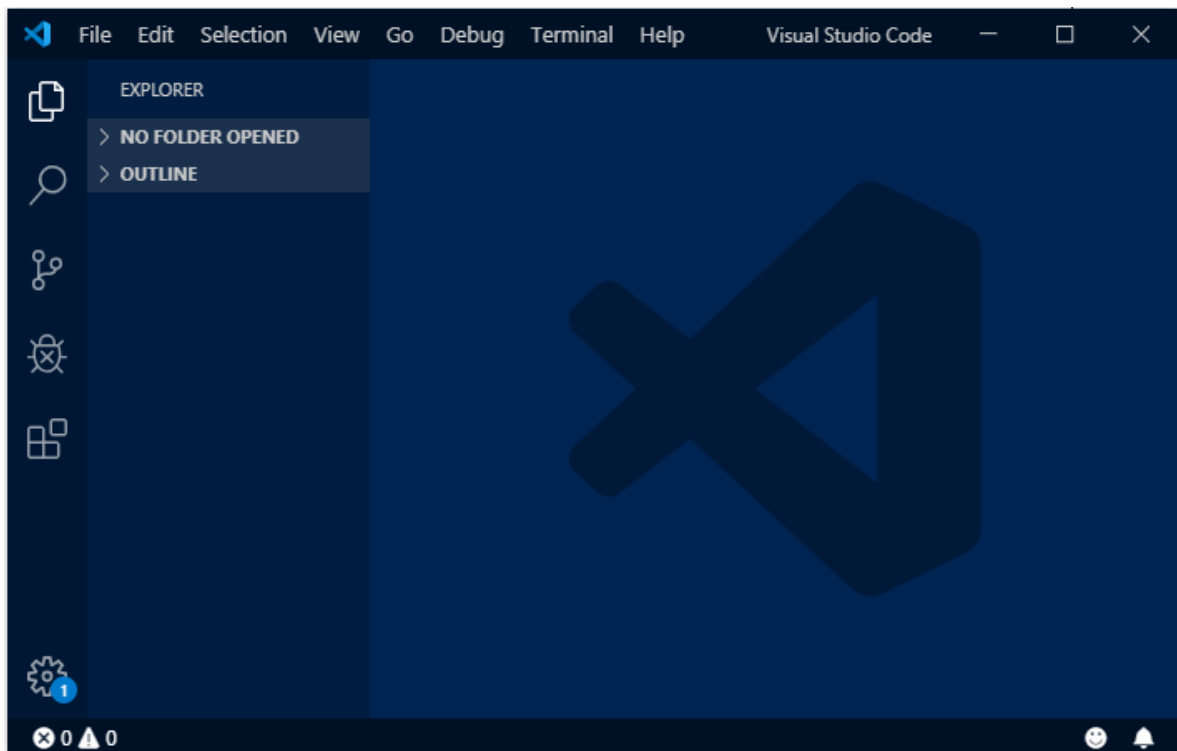**Fig-5.8:** Leave the Start Visual Studio checkbox checked to run/launch this software



**Fig-5.9 :** Visual Studio main window

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**5.3 Project Implementation**

The system is used for maintaining all the process and activities of blood donation management system.The system can be extended to be used for maintaining records of hospital, organ donation and other similar sectors. Whole the system is focused to work with blood donation system and on additional modification it can be also used as management systems of similar organization.

❖ **Stakeholders**

    1.System Owner: The Admin

    2.System users:

- Donors: can view other donors and donate blood
- Public: can view all of the donors and can make request for blood donation.

❖ **Data**

1. **Data about donor**

    User Name

    Full Name

    Gender

    Age

    Blood Group

    Last donation Date

    Profession

    Home District

    Present Address

    Phone Number

    Email Address

    Profile Photo

2. **Data about seekers**

    User Name

    First Name

    Last Name
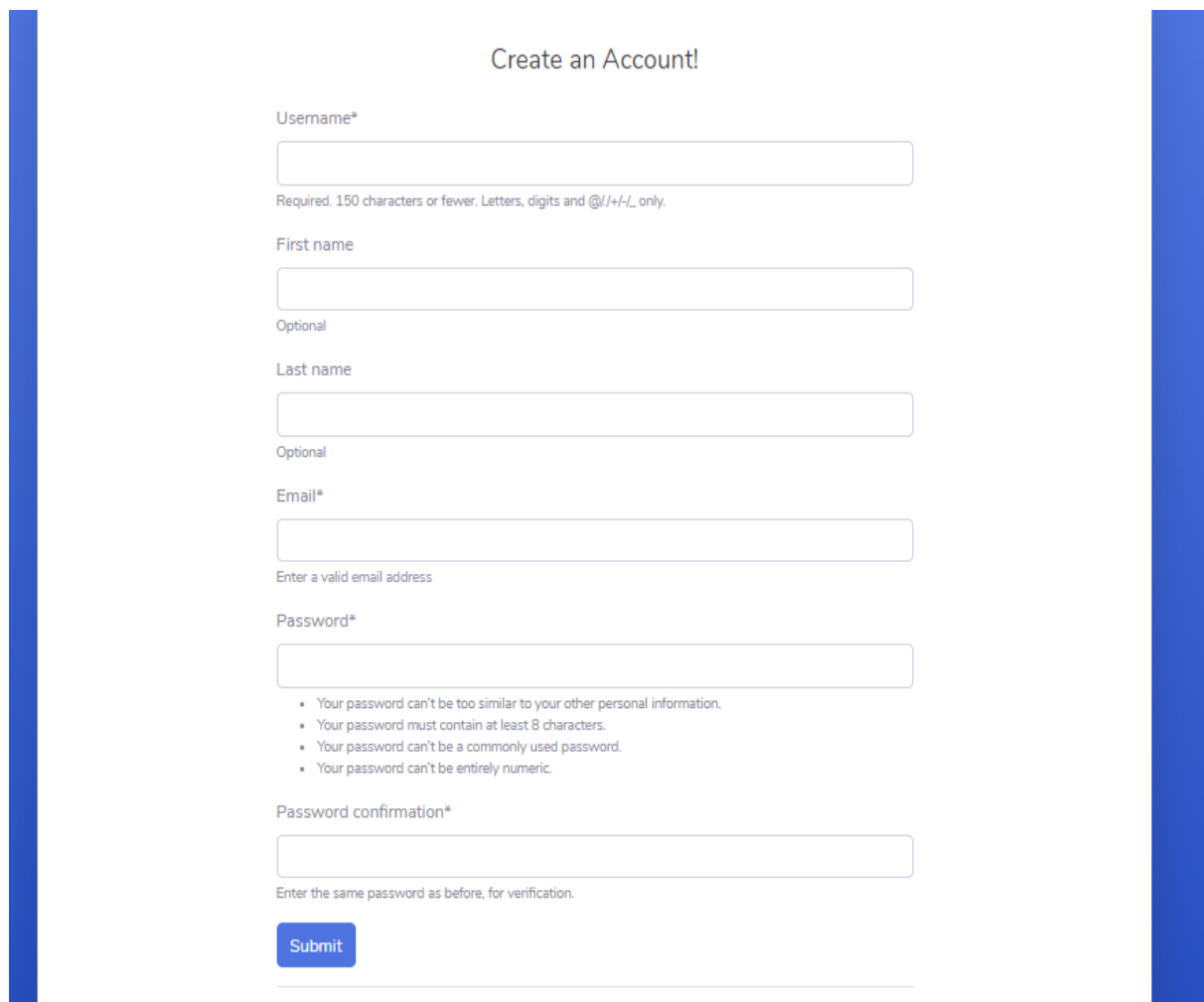
    Email Address

    password

## 5.4 Working principle

The working principle of the web application is has some steps. The registration phase, login phase, profile creation phase, searching phase, saving in the database and retrieving the data from the server and showing the best match in the list. Here we will show all the step by step.

**Registration**

The registration of the app both the donor and the acceptor is done by DBSQLite. All the information are saved in the database. And the username and password is saved for authentication.



**Fig-5.10 :** Registration for create an account as a user

In Django authorization and  authentication section the usernames, first name, last name, email and passwords are saved.

**Fig-5.11:** Django Authentication and saving user

## Login

Here, both doner and reciver has to login through the app. The username and the password related to the same account is the main way to login. The database has the authenticated password and username which is here the email id. The informations are fetched from the database and matched. If not matched then the authentication will be failed and the person cant login.
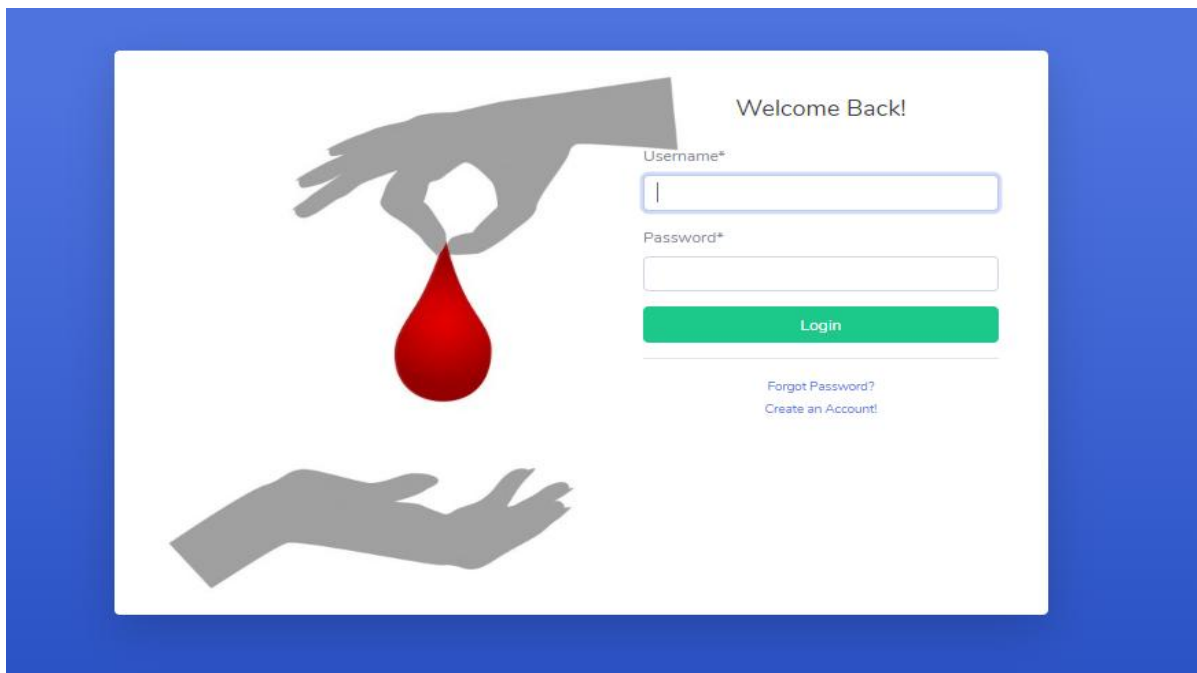


**Fig-5.12:** Login page

In fig -5.12 the authenticated users are shown, how can login and when click on the "Login" button the main activity page will be open.

**Donor Profile Creation/Updation**

This allows healthy users to create their profile as a volunteer blood donor. In this section users can add their full name, gender, age, blood group, profession, home district, present address, last donation date, phone number and profile photo with first registered information as well as update when needed.

**Search donor for blood**

In this step the users can search the donor for blood by clicking the donor profile list option. They can search donor by blood group or present address. Django framework database store all of the profile data as a donor profile.

**Management Donors/Acceptors**

The records of all donors/acceptors and their history are kept in one centralized database reducing duplicate data in the database. The record of donation is maintained by the system.
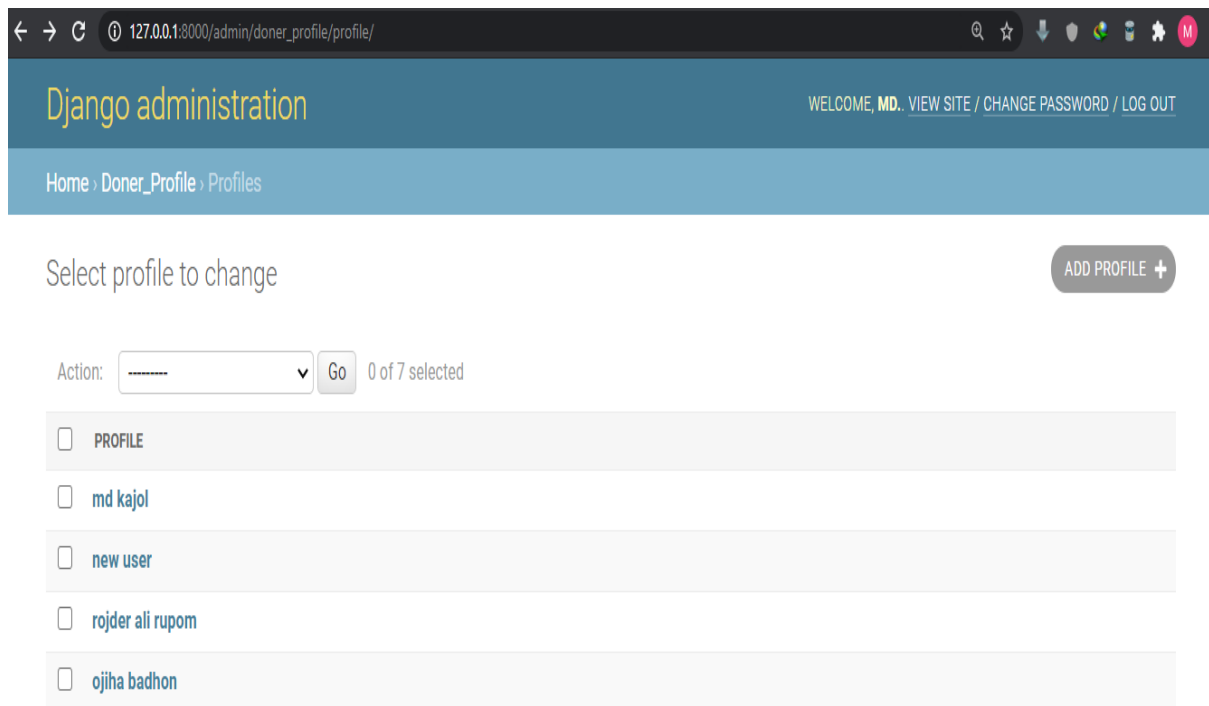


**Fig-5.13:** Donor profile saving

**Contact with donor**

In this step seekers contact with the matched donor who donated blood last four month ago. Seekers can contact by phone number or text message or email. If seekers want to contact by email he/she puted donor name , donr email address that is get from donor profile and patient details such as name, age , gender, about disease, admitted hospital or present address, appointment time  etc.

**Reporting**

The system is able to generate pre-defined reports such as list of donors profile, acceptors, admi as staff and charts.

Project Approach

- Problem identification
- System Design
- System Building
- Testing and Implementation

**5.5 User Interface**

After implementation we show the following list of figures in our window.
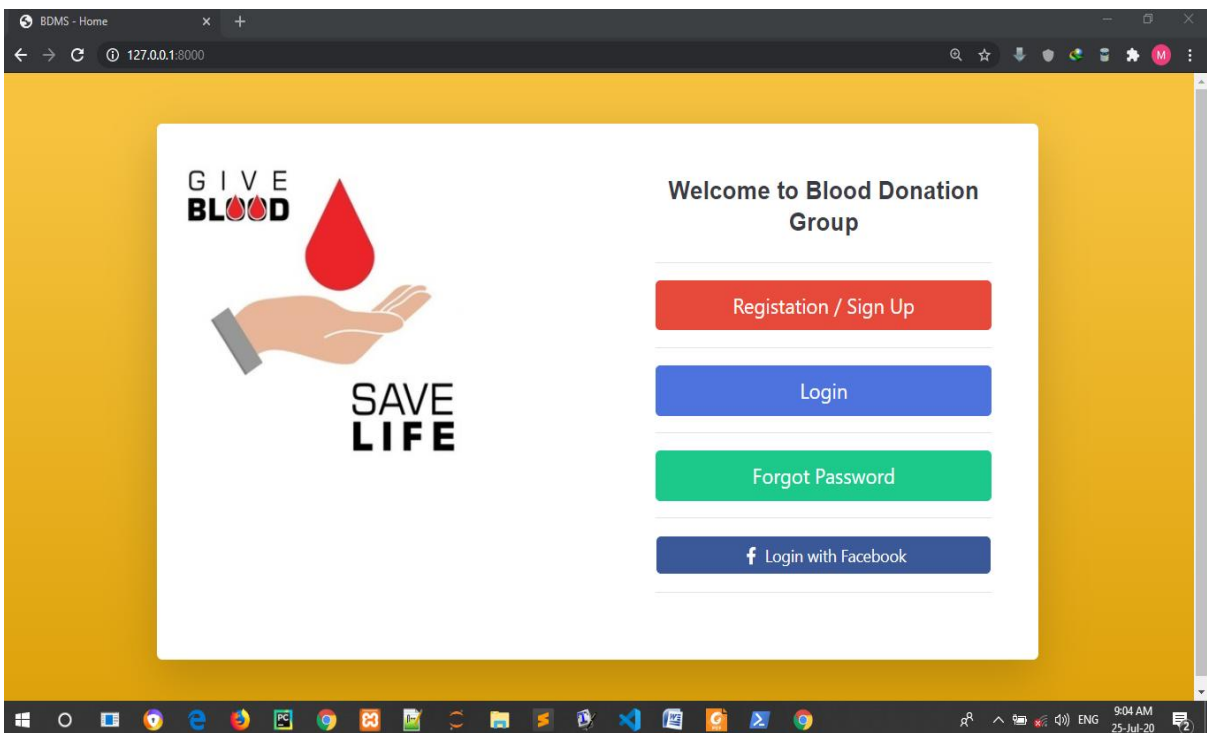
**Home page before registration or login**



**Fig-5.14 :** Home page

**Main home page after login**



**Fig-5.15:** Main web app home page
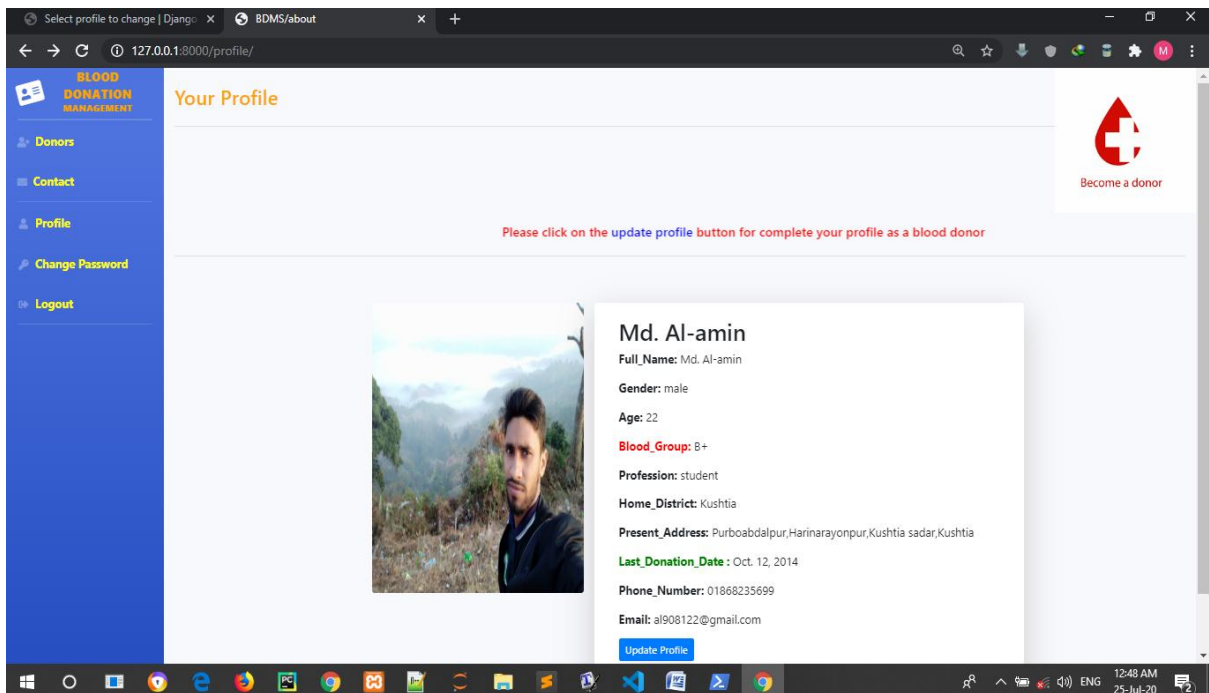
**Donor  profile  page**



**Fig-4.16 :** user profile

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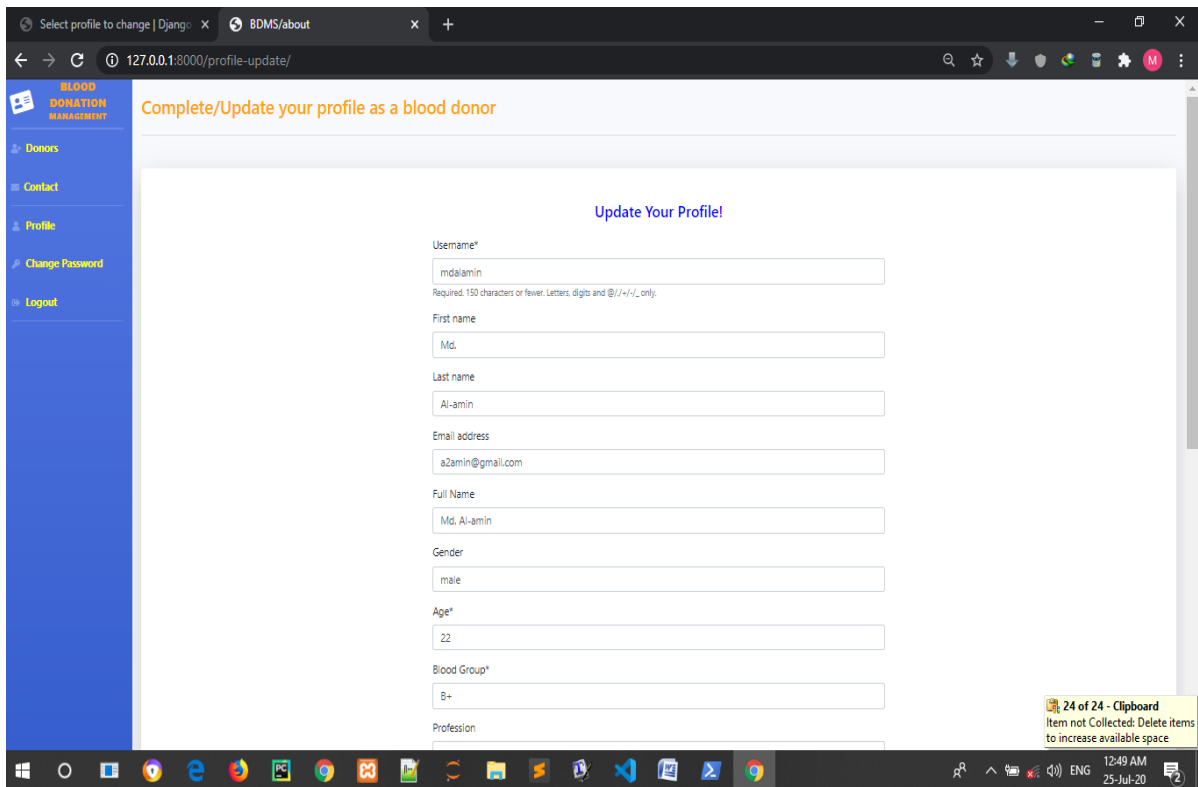**Donor profile compilation / updation window**



**Fig-5.17 :** Donor profile creation
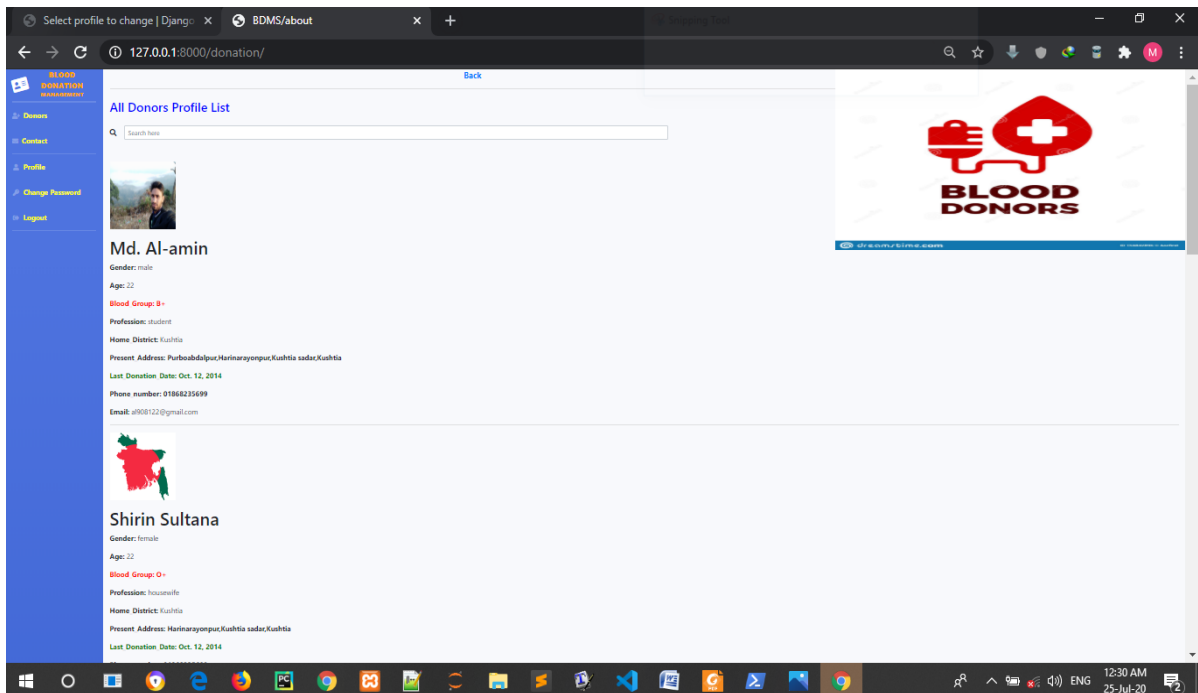
**Donors profile list and search page**



**Fig-5.18** : Donor profile list page
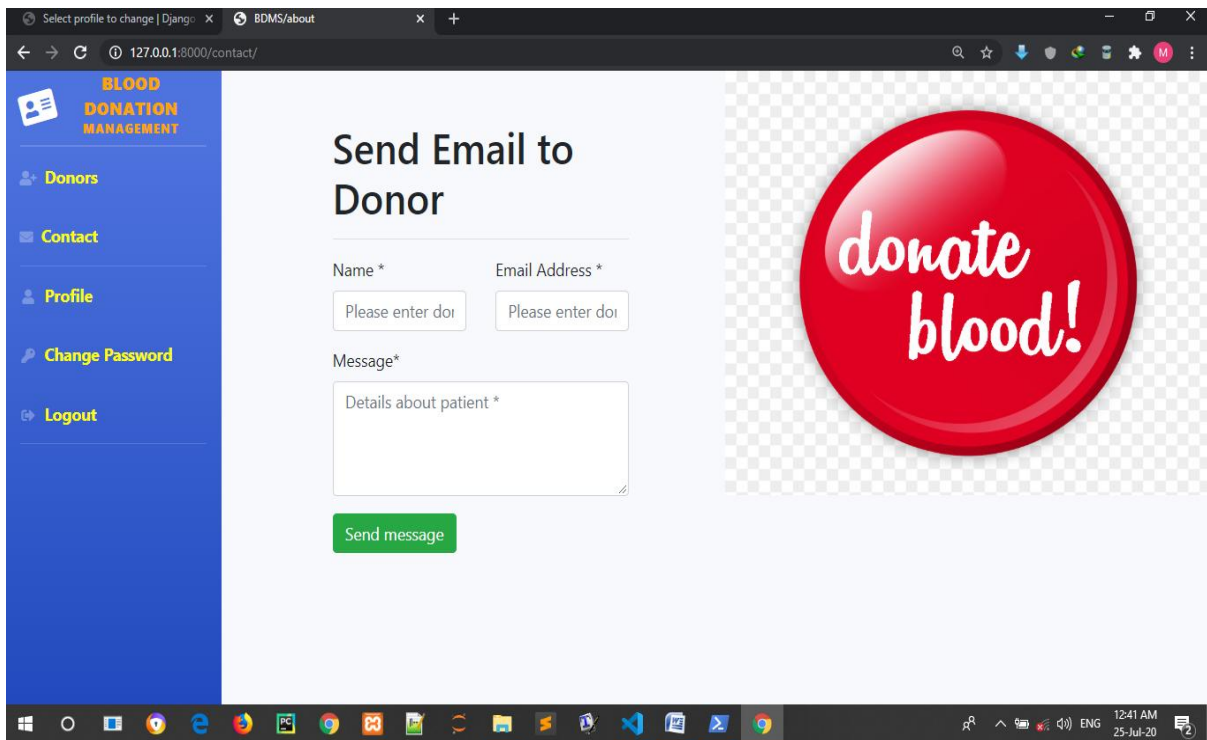
32

**Contact by email page**



**Fig-5.19** : Contact page
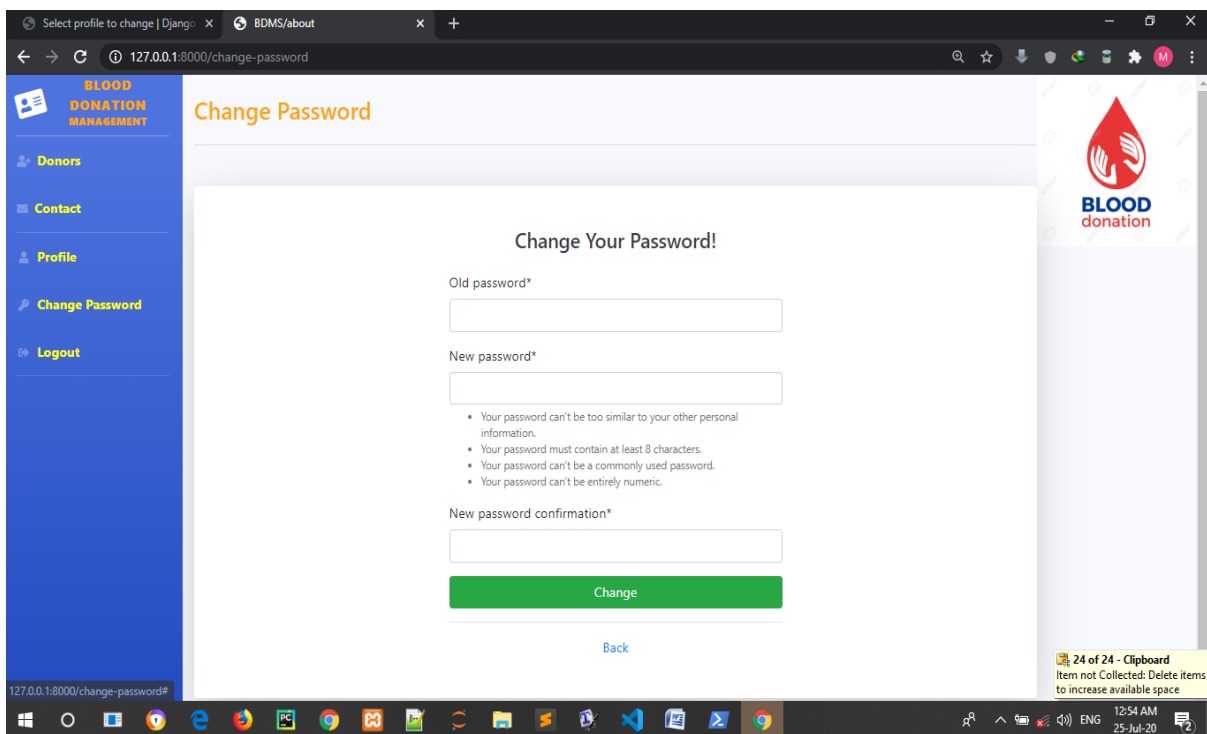
**Change password page**



**Fig-5.20 :** Change password

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# Chapter -6 : Experimental Result and Discussion

## 6.1 Goal  archived

1. User Authentication with django administration. Here authenticated login in enabled.

2. Users will input their details (Blood group, age, name, profession etc) and their record  will be automatically taken and updated in database.

3. Users will be able to search the blood group of people and find his/her present address.

4. They can contact with the person nearest to them by finding the present location.

## 6.2 Discussion of  results

Collection of  blood donor within a webpage is rare. This project has tried to design this collection of donors. The designed system has a capability to reverse a time slot for donating a blood and records all information regarding donors, donated blood contact. In addition the system generates different standard reports for the stackholders.

On the otherhand , the system is also helpful in serving as apromotional page in relation to the donors and seekers. Here under it is presented in the following subtitle.

- ➢ Every donor can easily access the web application for donating blood with a view to saving life.
- ➢ Every user would  registered in the website under the administrative procedure.
- ➢ The authority has a control to active the request of the donor
- ➢ Without verification user can not register or donate blood successfully.
- ➢ Seeker will get the information about donor details from the web app.
- ➢ User would get about the contact or place information of authority.
- ➢ This web application is user friendly for all.

# Chapter -7 : Conclusion

## 7.1 Concluding Remarks

The aim of this blood donation web application is to improve the communication with the people who are in need of blood and the persons who are willing to donate blood. This dlood donation web application will reduce the barrier between blood donors and the people in sever need of blood. The donors' location can be detected by the app and the best matched donor will be contacted in no time. So our research paper's objective is to build a community of blood donor and to make sure that we can come forward to donate blood as it can make sure the return of a dying man again into the light of life.

The blood donation web application we are making puts the power to save lives in the palm of your hand. Donating blood and blood components are easier than ever. A person just needs to have an account in our blood donation web application, then he can both donate and request for blood anytime. "BLOOD DONATION MANAGEMENT SYSTEM" is a free blood donation website available for OS. Blood donor searches, notifies and connect thousands of blood donors in some simple steps. Blood Donor donation web app ensures hassle free blood donation and privacy of a blood donor. Connecting blood donors and needy reduces time which increases the possibility of saving lives and also eliminates the shortage of blood.

Due to use of gender of donors as recruitment parameters the male and female donors can maintain their respective duration of successive blood donation. Age parameter lets receivers get more potential donors within the range of blood donation criteria. Due to use of sorting program the more potential donors are listed in top rows of the result table which aids in selection of blood donors by receivers.

It is an applications available with feature of donor profile list and present address finding the best suitable donor. It uses the phone's internet connection to let us search blood donors and recipient. The App is also able to find the best matches among the donors available with the last blood donation date. donate blood. The blood donation web app will make the easiest and fastest way to get a best match blood donor.

**7.2 Limitation**

Some of the information of the donors frequently change. For example address of the donor and last date of blood donation need always to be updated manually by the account holder. This two information are a major limitation of our system.

**7.3 Future work**

I wish to include the following features to my project in future:

1. The address of donors can be made updated automatically from the external device. GPS technology can be used in this purpose.

2. Send Push Notification to the persons who are selected and then if the person accept the request another notification will be sent to the sender and connection will be established.

3. There will be a request and accept button for sending and receiving push notification.

4. Provide a connection with hospitals where Blood request will find all donors etc.

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