WEB BASED BLOOD BANK SYSTEM

A PROJECT

Submitted to the Department of Computer Science and Engineering Bangladesh University of Business and Technology (BUBT), Dhaka in partial fulfillment of the requirements for the Course of

Software Development

CSE-300

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November 2020

CERTIFICATE

This is to certify that this can be a bonafide record of the project presented by the scholars whose names are given below in partial fulfilment of the course CSE-300 in Computer Science and Engineering.

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DEDICATION

We dedicate this project to any or all of the people that need blood for emergencies. We also dedicate this project to any or all of my friends who have supported and helped me throughout the method.

APPROVAL

This Project Report Submitted by Gourab Kanti Paul bearing ID No. 17182103141, Satyajit Sarkar bearing ID No. 17182103157 and Romzan Ali Mohon bearing ID No. 17182103177 in partial fulfillment of ultimate Project Submission for the course CSE-300 has been examined and accepted for further process.

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ABSTRACT

Web Based BLOOD BANK MANAGEMENT SYSTEM is a web page to take care of the transaction of blood supply and store information about blood seeker and donor. This software help to register and store all the data about blood seekers, donor, Blood collection details, blood details, shows the both addresses of blood seeker and donor etc. It's a live bank. It's a giant conceive to contact all the various people donors and distribute the blood seekers for his or her needy. Our project android blood bank management system is developed so that users can view the data of volunteer donors. It's developed on an internet base platform.

This project developed by two perspectives i.e. blood seekers and blood donors. This website we are developing helps the blood seekers to pick the blood donors online instantly by contacting donor contact information. This application reduces the time to a greater extent that's trying to find required blood through volunteer blood donors.

Thus, this application provides the specified information in less time and also helps in quicker higher cognitive process.

ACKNOWLEDGMENTS

Praise to Almighty, the foremost magnificent and therefore the most merciful, without whose patronage and blessing this project wouldn't are completed. It's an auspicious occasion for us as students of the Department of Computer Science and Engineering, one among the distinguished academic centers of the Bangladesh University of Business and Technology (BUBT), to precise our deep feelings of gratitude to the department. We are immensely indebted to our supervisor, Mr. Milon Biswas, Lecturer, Department of Computer Science and Technology, for his wonderful guidance, inspiration, encouragement, and also for thorough review and correction of this dissertation work that would not be finalized without his astute supervision. We'd also thank our honorable Chairman of the Department of CSE for his support and guide whenever we wanted it.

With Best Regards,

Gourab Kanti Paul
Satyajit Sarkar
Romzan Ali Mohon

DECLARATION

We hereby declare that the project entitled **Web Based Blood Bank** submitted in partial fulfillment of the necessities for the Course CSE-300 in Computer Science and Engineering in the Faculty of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) is our own work which it contains no material which has been accepted for the award to the candidate(s) of the other degree or diploma, except where due reference is created within the text of the project. To the simplest of our knowledge, it contains no materials previously published or written by the other person except where due reference is formed within the project.

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Chapter 1

1.1. Introduction

Pure Blood is a website based on HTML, CSS, and PHP. The purpose of this system was to develop a blood management information system to store information and a previous record of blood transfusion about blood donors so that they are easy to find. This system is mainly used by seekers who need blood and want to find someone who donate blood voluntarily. The system includes mainly three modules i.e., Main Page, Registration Page and Donor list.

1.2. Main page:

The main page requires no login module. Users can freely open the main page and search for the donors. However, the main page has a home, became a donor, and contact us sub-page. A search bar is officially added to the main page for the seekers to find the donors.

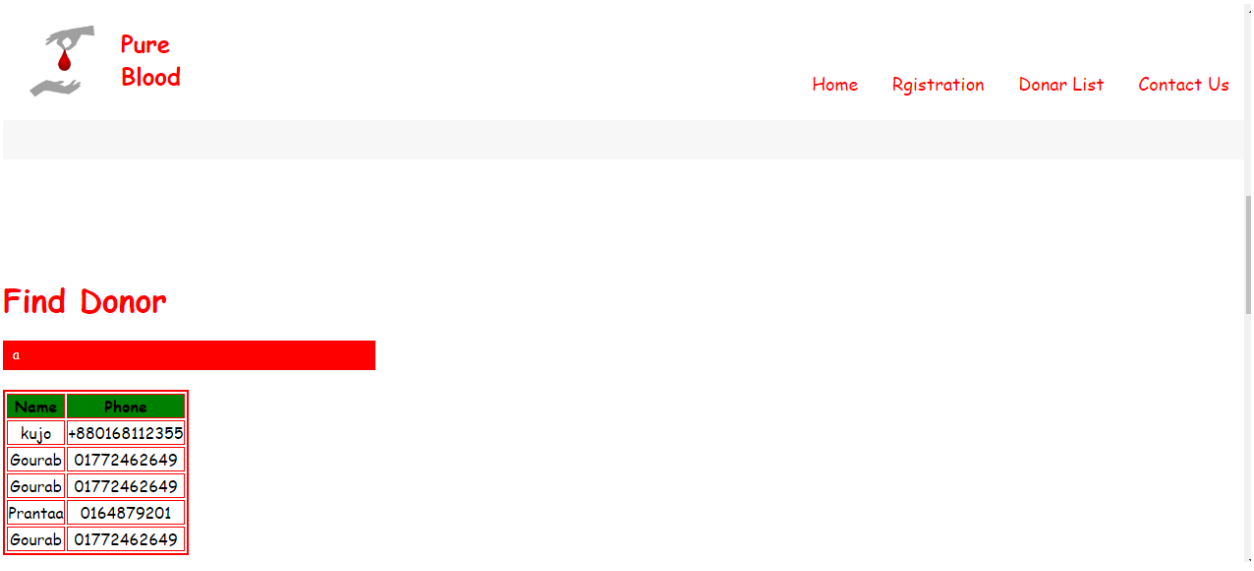


Figure:1.1. Main Page

1.2.1. Registration:

This page is likely a registration page. Here user can register themself as a donor with their valuable information. To became donor user gives their name (first and last), a user name, mobile number, blood group, contact information, etc.

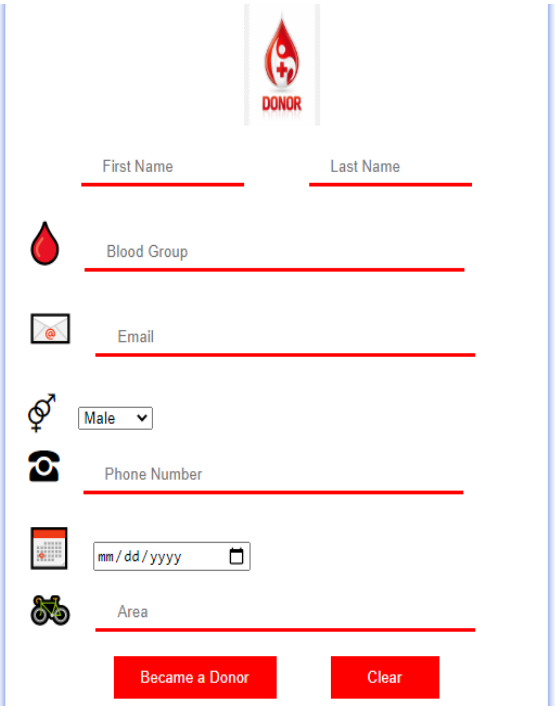


Figure:1.3. Became a donor

1.2.2. Contact us:

For contact, our page users can contact us with our given information. Here, user can send us feedback.

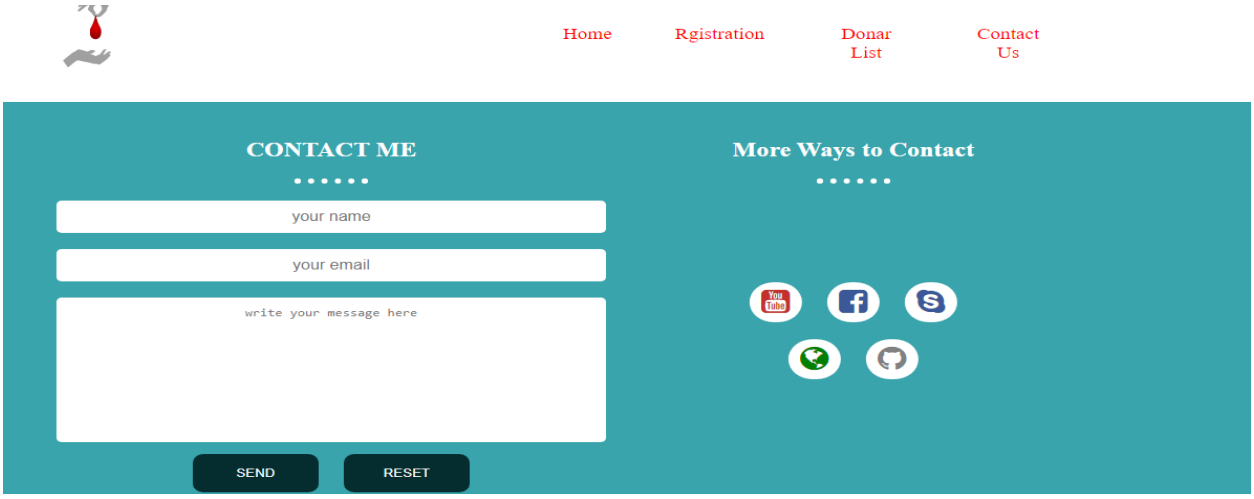
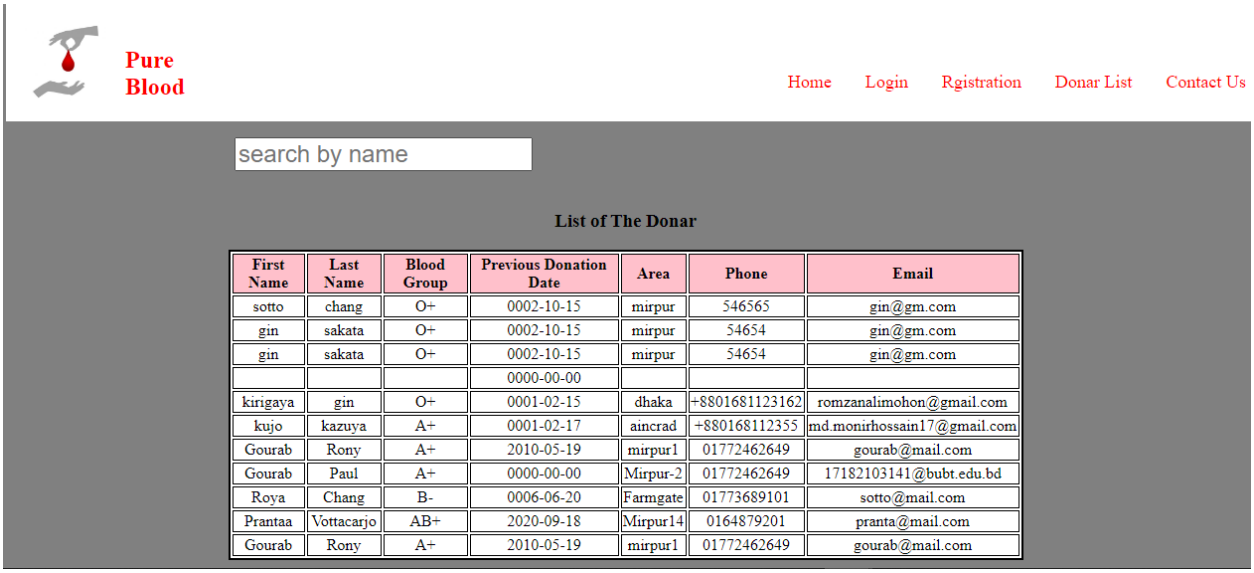


Figure:1.4. Contact Us

1.2.3. Donor List

In donor list page, user can see all the registered donors. User can also search for donor.



First Name	Last Name	Blood Group	Previous Donation Date	Area	Phone	Email
sotto	chang	O+	0002-10-15	mirpur	546565	gin@gm.com
gin	sakata	O+	0002-10-15	mirpur	54654	gin@gm.com
gin	sakata	O+	0002-10-15	mirpur	54654	gin@gm.com
			0000-00-00			
kirigaya	gin	O+	0001-02-15	dhaka	+8801681123162	romzanalimohon@gmail.com
kujo	kazuya	A+	0001-02-17	aincrad	+880168112355	md.monirhossain17@gmail.com
Gourab	Rony	A+	2010-05-19	mirpur1	01772462649	gourab@mail.com
Gourab	Paul	A+	0000-00-00	Mirpur-2	01772462649	17182103141@bubt.edu.bd
Roya	Chang	B-	0006-06-20	Farmgate	01773689101	sotto@mail.com
Prantaa	Vottacarjo	AB+	2020-09-18	Mirpur14	0164879201	pranta@mail.com
Gourab	Rony	A+	2010-05-19	mirpur1	01772462649	gourab@mail.com

Figure1.5: Donor List

1.3. Problem statement

Patients suffering from various kinds of diseases and accidents need blood. Due to lack of proper blood group in the right time every year, many deaths are happening in Bangladesh. Its main problem is the lack of proper blood group in hospital or blood bank and lack of communication with blood donor. In Bangladesh, about 50-55% of blood donations are from onetime donation for a specific patient. This number is very high. Blood seekers generally searches for blood donor in social media (like Facebook, Twitter etc.) or through relatives. This is a very time-consuming job. Many times, they do not find any blood donor. This may result in the patient's death. According to a statistic, about 65% of the blood donors cannot give blood to blood seekers due to lack of communication properly. Lack of maintaining database of donors, training staffs and using technologies and machines for blood donation process is another problem in old Blood bank system.

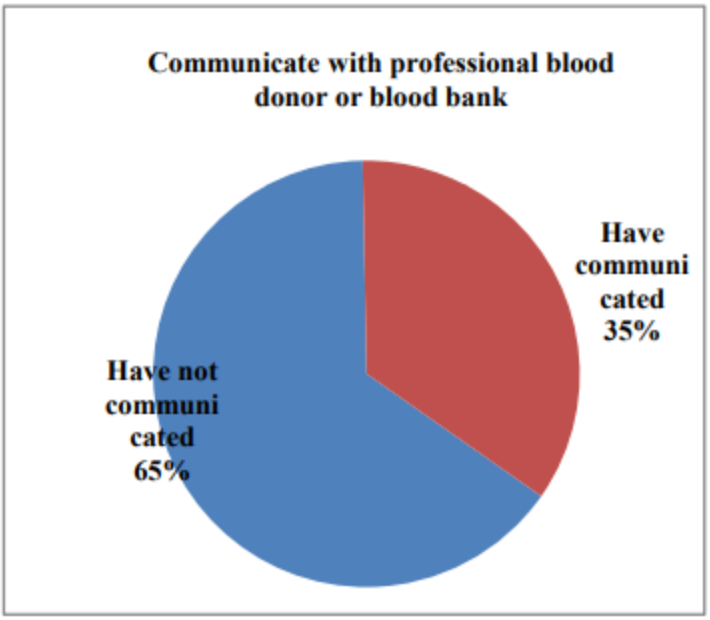


Figure: 1.5. Manage blood from professional blood donor or blood bank

1.4. Motivation

A better idea is to use the webpage which online website is very popular with people too. This webpage is providing each entity the facility to approach nearby blood donors so that it will become much easier to rare groups in the hour of need.

1.5. Summary

Blood is a valuable thing to live. Without blood, no one can live. Human is a live blood bank. Many people die due to a lack of blood supply every year. It happens due to a lack of proper communication. Our system can reduce this gap. We can save a lot of life.

Chapter 2

Background

2.1. Introduction

When a person voluntarily donates blood then blood donation occurs. It may be of whole blood, or specific components directly (apheresis). In today's world, most blood donors are unpaid volunteers who donate blood. In Bangladesh, about 25% of the nation's blood supply came from a voluntary donation, 20–25% from paid donors, and 50–55% from one-time donation for a specific patient. First,

blood transfusion service became available in Bangladesh at the Dhaka Medical College Hospital in the year 1950. According to an estimate, about 500,000 units of blood required annually, and only 25% comes from voluntary donation, 20–25% from paid donors, and 50–55% from one-time donation for a specific patient.

2.2. Types of donation

There are no specific types or reasons for blood donation. Many people willingly donate blood from their own. Some people donate blood to earn money.

2.3. Literal Review

This work provides a literature review of the blood donation process. We aim to reduce the gap between blood donors and blood seekers, through this system. With this system, users can easily search for the blood they need and find specific donors in less time. Here seekers can search for donors with a specific area and specific blood group. Users can also become donors in this system. They can register as a donor with their specific information. After a search for donors, the user can see donors' contact information, type of blood group. So, it became easy to find donors with less time. In Bangladesh, more than 65% of donation comes with voluntary. With our system user can easily find donors.

2.4. Problem Analysis

Patients suffering from various kinds of diseases and accidents need blood. Due to lack of proper blood group in the right time every year, many deaths are happening in Bangladesh. Its main problem is the lack of proper blood group in hospital or blood bank and lack of communication with blood donor. In Bangladesh, about 50-55% of blood donations are from onetime donation for a specific patient. This number is very high. Blood seekers generally searches for blood donor in social media (like Facebook, Twitter etc.) or through relatives. This is a very time-consuming job. Many times, they do not find any blood donor. This may result in the patient’s death. According to a statistic, about 65% of the blood donors cannot give blood to blood seekers due to lack of communication properly. Lack of maintaining database of donors, training staffs and using technologies and machines for blood donation process is another problem in old Blood bank system.

2.5. Summary

A better idea is to use the application which Mobile device is very popular with people too. This application is providing each entity the facility to approach

nearby blood donors so that it will become much easier to rare groups in the hour of need. We are optimistic that our project will reduce blood search problem.

Chapter 3

Proposed Model, Milestone, Schedule

3.1. Proposed Model

The scope of the project is that in a very short span provides user with many facilities. It provides an elegant management of blood, blood donors, medical history of donors, donor address and contact information, blood seekers, seeker 8 address and contact information online. The main purpose of this project is to interconnect all the information about blood seekers and blood donors into a single network. This system is used to store data over a centralized server which consist of database where he individual' information cannot be accessed by a third party.

3.2. Milestone

• To reduce gap between blood donors and blood seekers, through this system. With this system seekers can easily search for blood they need and find specific donor in less time.

• To use contact information for locating the blood donors to know if the seeker is near to or not.

• Some blood types are rare so the system can find the required donors with the required blood type easily from the huge database by using search feature in the android app.

• To provide dynamic database that is storing donors and seekers Information and can communicate with them easily. And keep their personal information secure.

3.3. Schedule

	Task Name	Duration	Start	ETA
1	Complete project execution	94 days	10.08.20	13.11.20
2	Engineering	25 days	16.08.20	11.09.20
3	Project selection	1 day	16.08.20	16.08.20
4	Project specification	2 days	17.08.20	18.08.20
5	Project Objectives	1 day	19.08.20	19.08.20
6	Equipment	3 days	20.08.20	24.08.20
7	Supervision and meetings	27 days	25.04.12	31.05.12
8	Division of works	1 day	1.06.12	1.06.12
9	Workshop	20 days	24.08.20	21.09.20
10	Project examination and material comparison	2 days	24.08.20	25.08.20
11	Preparing distribution boards	2 days	26.08.20	27.08.20
12	equipment	3 days	30.08.20	2.09.20
13	Wiring	10 days	3.09.20	16.09.20
14	Testing	2 days	17.09.20	18.09.20
15	Packaging	1 day	21.09.20	21.09.20
16	Field	31 days	19.08.20	31.09.12
17	Preparations	7 days	19.08.20	27.08.20
18	Setup	4 days	30.08.20	3.09.20
19	Installation	13 days	4.09.20	22.09.20
20	distribution boards	1 day	23.09.20	23.09.12
21	Wiring distribution boards	4 days	24.09.20	29.09.20
22	Testing	2 days	30.09.20	31.09.20
23	Final Review	20 days	01.10.20	20.10.20
24	Modification	5 days	21.10.20	25.10.20
25	Review	16 days	26.10.20	10.11.20
26	Report Writing	3 days	11.11.20	13.11.20

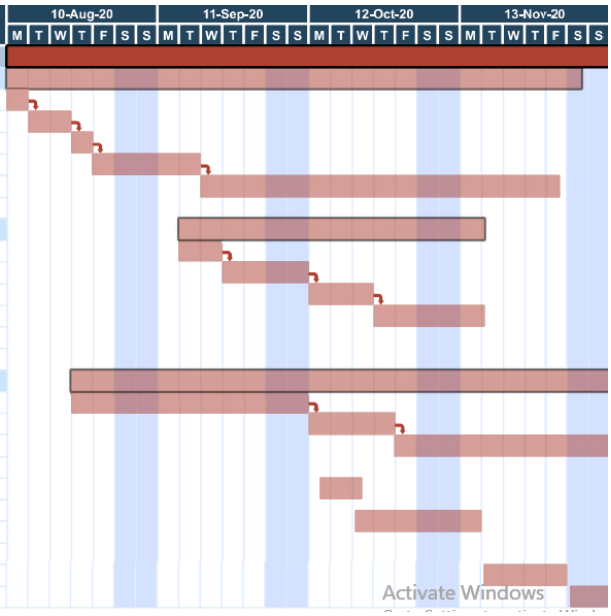


Figure:3.1. Grant Chart

Chapter 4

Implementation and result

4.1. Introduction

Implementation is a basic expression of any quiet project. To Implement our project, we want a development model We are choosing the System Development Life Cycle Approach (SDLC) for developing our project. Because It's the foremost commonly used and most rigid system development approach. The formal SDLC could be a sequential process which begins with identifying the system objectives (needs of end-users) and goes through various stages, including

- System analysis (technical components required)
- System design(architecture) Coding (programming)
- Testing (errors and bug fixing)
- Implementation (execution within the organization)
- Use (end users employing DSS)
- Evaluation (verification of functions and capabilities)

- Modification

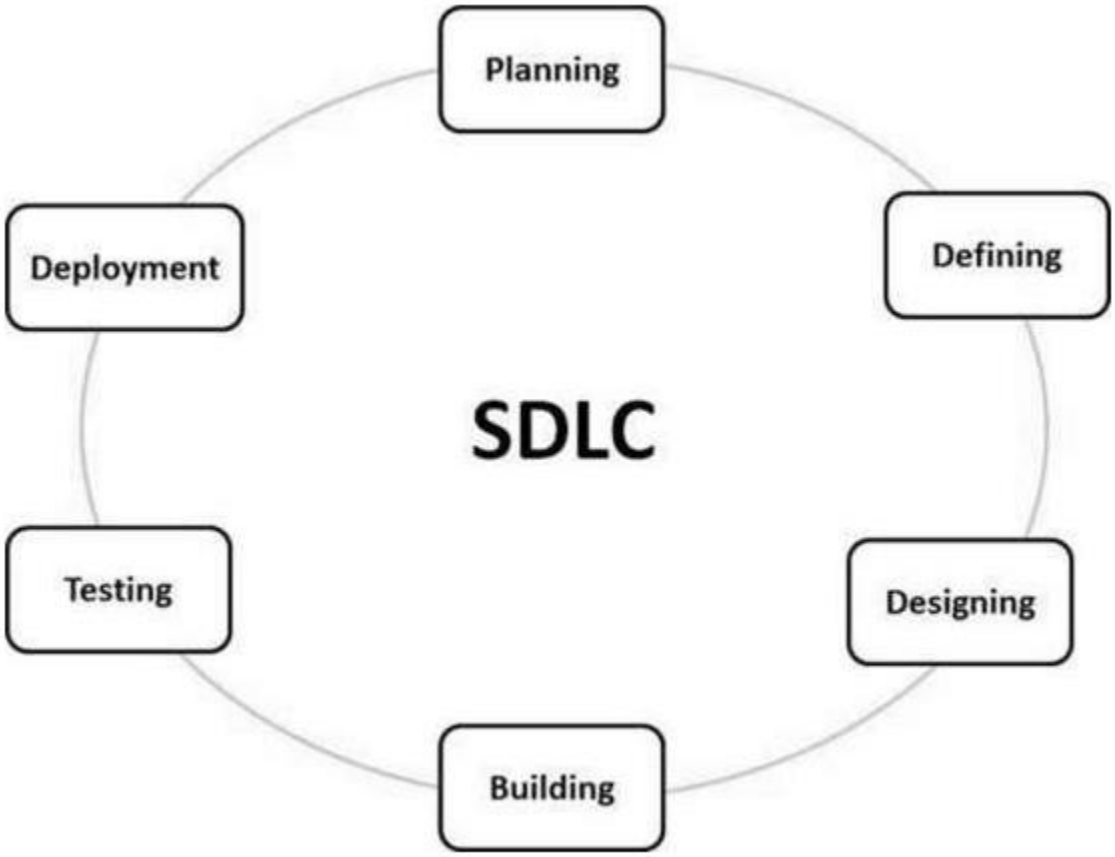


Figure: 4.1. SDLC

4.2. System Setup

1. Package: Operating System (Any)
2. Software: Android Studio, XAMPP, MySQL, MySQL connector, Application: Web browser (Any)
3. Hard Disk: 120GB (minimum)
4. RAM: 2GB (minimum)
5. Processor: Duel-core or above
6. Language use: HTML, CSS, PHP, SQL

4.3. Results and discussion

It’s a live blood bank. It's a giant arrangement to contact all the various people donors and distribute blood seekers for his or her needy. Our project web-based blood bank management system is developed so that users can view the knowledge of volunteer donors.

Some blood groups are rare therefore the system can find the specified donors with the specified blood type easily from the large database by using the search feature within the webpage.

This technique provides a dynamic database that's storing donors and seekers Information and might communicate with them easily. And keep their personal information secure.

4.4. Existing System Analysis

- In the existing system, blood seekers often rummage around for blood in several hospitals, blood banks, share a post on social media for volunteer donation or contact their relatives and friends inquiring about volunteer donation.
- In the existing system, a high cost of your time is required for searching and storing information about blood donors.
- So, a while the blood seekers couldn’t find any donors for the correct people.
- However, the seekers feel weak and light-headed for several hours following the procedure. There's no proper care for one that donates blood to patients. That is, the seeker doesn't know any medical history about the donor.

4.5. Summary

This application is providing each entity the power to approach nearby blood donors so that it'll become much easier for rare groups within the hour of need. We believed that our system will reduce the blood search problem.

Chapter 5

Standard, ethics, Challenge

5.1. Introduction: Standard

Ensure an adequate, timely, and easily accessible supply of safe and quality blood. Ensure adequate webpage for the operation of a sustainable Blood Safety system. Implement a top-quality management system within the service. Our vision is to possess a well-organized, coordinated, standardized, and quality insertion service that ensures adequate, safe, and timely blood supply to all or any the blood seekers. The donor should understand the risks of donating infected blood to others and his/her ethical responsibility to the recipient.

5.2. Ethics

Blood donation including hematopoietic tissues for transplantation shall, in all told circumstances, be voluntary and non-remunerated; no coercion should be dropped to altering the donor. A donation is taken under consideration voluntary and nonremunerated if the person gives blood, plasma, or cellular components of his/her own powerfulness and receives no payment for it, either within the type of or in-kind which can be considered a substitute for money. This could include time without work except that reasonably needed for the donation and travel. Small tokens, refreshments, and reimbursements of direct travel costs are compatible with a voluntary, non-remunerated donation. The donor should provide consent to the donation of blood or blood components and also the subsequent (legitimate) use of the blood by the transfusion service. A profit motive mustn't be the premise for the establishment and running of a blood service. Anonymity between donor and recipient must be ensured except in special situations and also the confidentiality of donor information assured. The donor should understand the risks to others of donating infected blood and his or her ethical responsibility to the recipient. Donors and recipients should learn if they need been harmed. Blood might be a public resource and access mustn't be restricted. Wastage should be avoided to safeguard the interests of all potential recipients and so the donor.

5.3. Challenge

The main challenge of building our project is to make a straightforward system for the user to search out a donor. In Bangladesh, about 25% of the nation's blood supply came from a voluntary donation, 20–25% from paid donors, and 50–55% from one-time donation for a particular patient. To search out these donors we use in our system an inquiry navigator where users can easily look for donors and examine specific information about donors. Another big challenge is to become a donor page. It's a registration page. Where user can register themself as a donor. On this page, they add their information with the previous donation date. This information help user to seek out the proper donor who wants to donate blood.

5.4. Summary

To build a straightforward page with standard, ethics, and challenge it's not easy for us to end our project. But We tried our greatest to assist those seekers who seek blood each day. We believed that our system will reduce the blood donation problem.

Chapter 6

Conclusion

6.1. Introduction

This system is fully a free, easy, and simple website for users. User can easily find their objective and do their work. Online Blood BANK MANAGEMENT SYSTEM is a website to maintain transaction of blood supply and store information about blood seeker and blood donor. This software help to register and store all the information about blood seekers, blood donor, Blood collection details, blood details, shows the both contact information of blood seeker and blood donor etc. It's developed on an online base platform. This project developed by two perspectives i.e. blood seekers and blood donors. This application provides the required information in less time and also helps in quicker decision making.

A better idea is to use the application which Mobile device is very popular with people too. This application is providing each entity the facility to approach nearby blood donors so that it will become much easier to rare groups in the hour of need. This system will reduce gap between blood donors and blood seekers, through this system. With this system seekers can easily search for blood they need and find specific donor in less time. This system will also provide dynamic database that is storing donors and seekers Information and can communicate with them easily. And keep their personal information secure.

In current existing blood search system, blood seekers often search for blood in different hospitals, blood bank, share a post in social media for volunteer donation or contact their relative and friends asking for volunteer donation and the high cost of time is needed for searching and storing information about blood donors. However, the seekers feel weak and light-headed for several hours following procedure. There is no proper care of person who donates blood to patient. That is, seeker does not know any medical history about the donor.

Our system provides an elegant management of blood, blood donors, medical history of donors, donor address and contact information, blood seekers, seeker 8 address and contact information online. The main purpose of this project is to interconnect all the information about blood seekers and blood donors into a single network. This system is used to store data over a centralized server which consist of database where he individual' information cannot be accessed by a third party. Here users can easily access the system and do their stuff.

6.2. Future Works

The Main future scope of our proposed model about online blood bank system is to try it in the real world that means we have to implement it with better results. We will also try to improve the security of user identification and donor information to make it more secure. We will use online geographical platform to view user and donor location. We will add this in our future work.

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