

Mini Project

2023-2024

GLA University Mathura



अर्थे ज्ञानानन्द मुकितः

आप

Every Drop Counts

(A Blood Donation Website)

Team Members :

- Abhishek Singh
- Anurag Sharma
- Prashant Baghel
- Anurag Baliyan

Department :

- Computer Science Engineering



Project Introduction

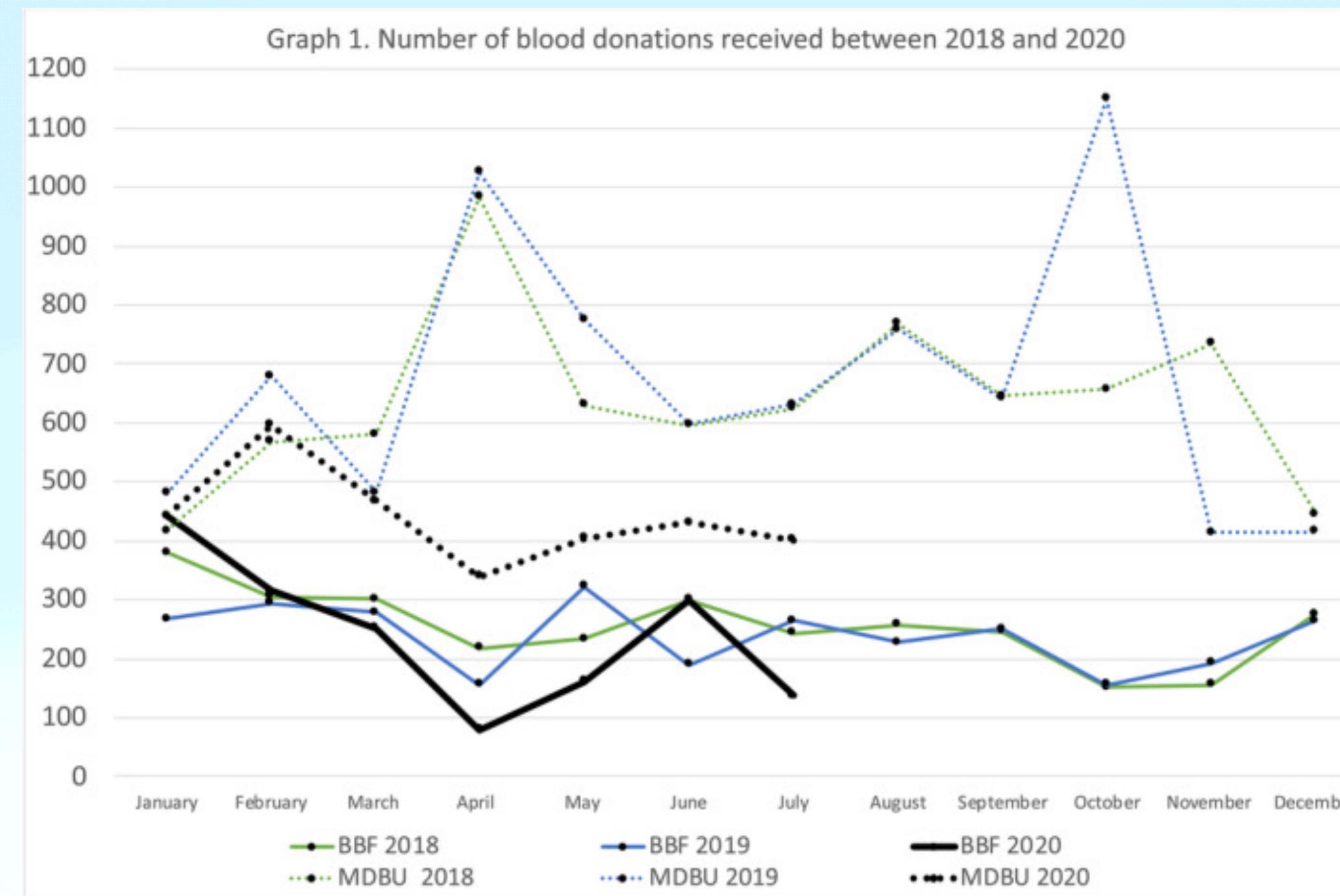
आस platform is a comprehensive blood donation website designed to streamline and enhance the process of connecting donors with individuals and institutions in need of life-saving blood transfusions. With a user-friendly interface and robust functionalities, our project aims to bridge the gap between blood donors and recipients, ensuring a swift and effective blood donation process.

Fact !

Around 12,000 persons die every day
due to non-availability of blood

(Source : The Economic Times)

Blood donation from 2018-2020



Blood donations 2020 (RBCU)	January	February	March	April	May	June	July
BBF 2020	443	315	252	79	161	300	137
MBDU 2020	442	596	468	340	404	431	402
Total donations	885	911	720	419	565	731	539
Supply from other blood banks	43	54	48	241	280	151	198

(Source : The Times of India)

Demand for components

The Demand for whole blood and blood components for the 251 healthcare facilities studied is mentioned in the table.

Region	Whole Blood	Red Cells	Plasma	Platelets	Cryo precipitate
North	16,376	61,225	22,767	18,339	-
East	35,423	33,105	16,617	21,370	131
West	41,123	47,865	11,766	11,606	1,347
South	51,876	41,920	14,935	9,678	5,552
North East	61,629	30,714	5,656	3,907	144
Total	2,06,427 (2,05,718- 2,07,136)	2,14,829 (2,14,114- 2,15,544)	71,741 (71,250- 72,231)	64,900 (64,430- 65,370)	7,173 (7,008- 7,337)

(Source :naco.gov.in)

Why Donate Blood ?

- **Medical Procedures and Surgeries:**

Blood is often needed for various medical procedures, including surgeries, trauma care, and cancer treatments.

During surgeries, patients may lose blood, and in some cases, transfusions are necessary to replace the lost blood and ensure proper oxygenation of tissues.

- **Trauma and Emergency Situations:**

Accidents, natural disasters, and other emergencies can lead to injuries requiring immediate blood transfusions.

Blood donation helps ensure an adequate supply for emergency situations where rapid access to blood can be critical to saving lives.

- **Childbirth and Pregnancy Complications:**

Complications during childbirth or pregnancy may necessitate blood transfusions to address excessive bleeding.

Blood donations are crucial for maternal health, ensuring that medical professionals have a sufficient supply of blood to address potential complications.

- **Treatment of Medical Conditions:**

Certain medical conditions, such as anaemia, sickle cell disease, may require regular blood transfusions.

Blood donations are essential to provide ongoing support and treatment for individuals with chronic conditions that affect their blood

Our Objective

- **To Facilitate Blood Donation:**

We provide a user-friendly platform that makes it easy for individuals to find and participate in blood donation activities.

Simplifying the process encourages more people to become blood donors, contributing to a steady and reliable blood supply

- **To Connect Donors with Recipients:**

Establish a seamless connection between blood donors and recipients, such as hospitals or individuals in need of blood . Swift and efficient matchmaking ensures that blood reaches those who require it in a timely manner, especially in emergencies.

- **To Enhance User Experience:**

To design an intuitive and user-friendly interface to provide a positive and engaging experience for both donors and recipients.

A well-designed platform encourages user participation and retention, contributing to the overall success of the blood donation initiative.

- **To Ensure Data Security and Privacy:**

Implement robust security measures to safeguard user data, ensuring privacy and maintaining trust in the platform.

Protecting sensitive information is crucial for building and maintaining user confidence in the blood donation process.

- **To Promote Public Awareness:**

We conduct campaigns and initiatives to raise public awareness about the importance of blood donation.

What's the problem with Blood Donation Websites ?

- **Security and Privacy Concerns:**

Websites collecting sensitive medical information, such as blood donation sites, need to ensure robust security measures to protect users' data. Issues like data breaches or inadequate encryption can pose significant risks.

- **Donor Recruitment and Retention:**

Maintaining a consistent pool of donors is essential for blood donation websites. Challenges may arise in recruiting new donors and retaining existing ones. Incentives, communication strategies, and community engagement are vital factors in donor management.

The gaps we are filling :

- **Ensuring Data Security and Privacy:**

We are highly sensitive and cautious for our user's private data. There is no sharing of data to any third party application or website. All data is safe within our servers !

- **Healthy Donors only :**

We ensure good and healthy quality blood from healthy donors. A full medical checkup is done before hiring the donor inorder to ensure that no one must be harmed from unhealthy or infectious blood.

Our Approach :

- Our project aims to establish an efficient and user-friendly online platform for facilitating the blood donation process.
- Our website design prioritised intuitive navigation, providing clear information on eligibility criteria, donation center locations, and appointment scheduling. A streamlined registration process allowed donors to create profiles, fostering engagement and providing a personalized experience.
- Social media integration and educational content were strategically employed to engage the community, dispel myths, and emphasize the significance of blood donation.

Tools used in our website :

Visual Studio Code :

1. Lightweight and Fast:

One of the key advantages of VS Code is its lightweight nature. It provides a fast and responsive environment, allowing developers to write code efficiently without the lag.

2. Cross-Platform Compatibility:

VS Code is a cross-platform code editor, which means it is compatible with Windows, macOS, and Linux.

This makes it a suitable choice for collaborative projects where team members might be using different operating systems.

Xampp :

1. Local Server Environment:

XAMPP provides a local server environment that allows developers to set up and run a web server on their own machine. This is particularly advantageous for building and testing websites without the need for a live internet connection.

2. PHP and Perl Support:

XAMPP supports both PHP and Perl scripting languages. PHP is particularly vital for server-side scripting, enabling developers to embed dynamic content within web pages.

Languages Used :

HTML

CSS

JAVASCRIPT

PHP

HTML :

- **Structure:**

HTML defines the basic structure of the website, including headers, footers, navigation menus, and content sections.

- **Forms:**

HTML forms are essential for collecting donor information. You can create forms to gather details such as name, contact information, blood type and availability for donation.

- **Links:**

HTML is used to create hyperlinks, connecting different pages within the website. This is useful for navigation and ensuring that users can easily access various sections of the blood donation website.

CSS :

- **Layout and Styling:**

CSS is used to control the layout and styling of HTML elements, ensuring a consistent and attractive presentation of the website. This includes setting fonts, colors, spacing, and positioning of elements.

- **Animations and Transitions:**

CSS can be used to add subtle animations and transitions making the website more engaging. This includes effects such as fading, sliding, or scaling of elements during user interactions.

JAVASCRIPT:

- **Dynamic Content:**

JavaScript enables the dynamic updating of content without requiring a full page reload. This can be beneficial for real-time updates on donation statistics, event schedules, or urgent announcements.

- **Interactive Elements:**

It facilitates the creation of interactive elements such as sliders, collapsible sections, or interactive maps. This can enhance user engagement and provide a more user-friendly experience.

PHP:

- **Form Processing:**

PHP is often used to process form data submitted by users. In the context of a blood donation website, it can handle donor registration forms, validate inputs, and store information in a database.

- **User Authentication:**

PHP helps implement secure user authentication systems, allowing donors and administrators to log in to the website securely. This is crucial for managing user accounts and ensuring data privacy.

Implementation of HTML :

```
1 @import url("https://fonts.googleapis.com/css2?family=Fredoka+One&display=swap");
2 @import url("https://fonts.googleapis.com/css2?family=Neuton:ital@1&display=swap");
3 @import url("https://fonts.googleapis.com/css2?family=Patrick+Hand+SC&display=swap");
4 @import url("https://fonts.googleapis.com/css2?family=Alegreya+Sans+SC:wght@300&display=swap");
5 @import url("https://fonts.googleapis.com/css2?family=NTR&display=swap");
6 @import url("https://fonts.googleapis.com/css2?family=Raleway&display=swap");
7
8 * {
9     margin: 0px;
10 }
11 .preloader {
12     align-items: center;
13     background: □rgb(0, 0, 0);
14     display: flex;
15     height: 100vh;
16     justify-content: center;
17     left: 0;
18     position: fixed;
19     top: 0;
20     transition: opacity 0.3s linear;
21     width: 100%;
22     z-index: 9999;
23     pointer-events: none;
24 }
25
26 #homevideo {
27     height: auto;
28     width: 100%;
29     align-items: center;
30     justify-content: center;
31     transition: 0.5s;
32 }
33
34 header {
35     overflow: hidden;
36     height: 100vh;
37     width: 100%;
38     background-size: cover;
39     position: relative;
40     background-attachment: fixed;
41 }
42
43 #logo {
44     position: absolute;
45     top: 9%;
46     left: 5%;
47     transform: translate(-50%, -50%);
48     text-align: center;
49     font-family: "Neuton", serif;
50     line-height: 30px;
51     margin-bottom: 10px;
52 }
```

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5     <meta charset="UTF-8">
6     <meta http-equiv="X-UA-Compatible" content="IE=edge">
7     <meta name="viewport" content="width=device-width, initial-scale=1.0">
8     <link rel="stylesheet" href="donate.css">
9     <link rel="icon" href="./Images/bb_logo(black).png" type="image/png">
10    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.3/css/all.min.css" />
11
12 </head>
13 <title>Connecting Hearts, One drop at a time. </title>
14
15 <body>
16     <header>
17         <nav>
18             <div class="header-logo"></div>
19             <div class="header-list">
20                 <ul>
21                     <li><a href="help.html" target="_blank"> Get Help</a></li>
22                     <li><a href="donate.html">Donate</a></li>
23                     <li><a href="index.html#vol-sect" target="_blank">Volunteer</a></li>
24                     <li><a href="index.html#about-us" target="_blank">About Us</a></li>
25                 </ul>
26             </div>
27         </nav>
28     </header>
29
30     <main>
31         <div class="box">
32             <h2>Connect with us & save lives  
around your location</h2>
33             <ul class="des">
34                 <li class="steps"><span>1</span> Register</li>
35                 <li class="steps"><span>2</span> Post a Blood request </li>
36                 <li class="steps"><span>3</span> Respond </li>
37                 <li class="steps"><span>4</span> Get notified </li>
38                 <li class="steps"><span>5</span> Forever Free </li>
39                 <li class="steps"><span>6</span> Save a Life </li>
40             </ul>
41
42             <div class="text-box">
43                 <a href="Register.html" class="hero-btn" target="_blank">Register</a>
44             </div>
45         </div>
46
47     </main>
48
49
```

Implementation of CSS:

```
1 @import url("https://fonts.googleapis.com/css2?family=Fredoka+One&display=swap");
2 @import url("https://fonts.googleapis.com/css2?family=Neuton:ital@1&display=swap");
3 @import url("https://fonts.googleapis.com/css2?family=Patrick+Hand+SC&display=swap");
4 @import url("https://fonts.googleapis.com/css2?family=Alegreya+Sans+SC:wght@300&display=swap");
5 @import url("https://fonts.googleapis.com/css2?family=NTR&display=swap");
6 @import url("https://fonts.googleapis.com/css2?family=Raleway&display=swap");
7
8 * {
9     margin: 0px;
10}
11.preloader [
12    align-items: center;
13    background: □rgb(0, 0, 0);
14    display: flex;
15    height: 100vh;
16    justify-content: center;
17    left: 0;
18    position: fixed;
19    top: 0;
20    transition: opacity 0.3s linear;
21    width: 100%;
22    z-index: 9999;
23    pointer-events: none;
24]
25
26 #homevideo {
27    height: auto;
28    width: 100%;
29    align-items: center;
30    justify-content: center;
31    transition: 0.5s;
32}
33
34 header {
35    overflow: hidden;
36    height: 100vh;
37    width: 100%;
38    background-size: cover;
39    position: relative;
40    background-attachment: fixed;
41}
42
43 #logo {
44    position: absolute;
45    top: 9%;
46    left: 5%;
47    transform: translate(-50%, -50%);
48    text-align: center;
49    font-family: "Neuton", serif;
50    line-height: 30px;
51    margin-bottom: 10px;
52}
```

```
1 @import url('https://fonts.googleapis.com/css2?family=Patrick+Hand&display=swap');
2 @import url('https://fonts.googleapis.com/css2?family=Josefin+Sans:ital@1&display=swap');
3 @import url('https://fonts.googleapis.com/css2?family=Fredoka+One&display=swap');
4 @import url('https://fonts.googleapis.com/css2?family=Neuton:ital@1&display=swap');
5 @import url('https://fonts.googleapis.com/css2?family=Patrick+Hand+SC&display=swap');
6 @import url('https://fonts.googleapis.com/css2?family=Alegreya+Sans+SC:wght@300&display=swap');
7 @import url('https://fonts.googleapis.com/css2?family=NTR&display=swap');
8 @import url('https://fonts.googleapis.com/css2?family=Raleway&display=swap');
9
10
11 * {
12     margin: 0px;
13     padding: 0;
14}
15
16 header [
17    background-color: ■white;
18    color: ■white;
19    height: 18%;
20    width: 100%;
21    z-index: 10;
22    position: fixed;
23    font-weight: 100;
24]
25
26 .header-logo {
27    float: left;
28    width: 220px;
29}
30
31 }
32
33 .header-logo > img {
34    width: 70%;
35}
36
37 .header-list ul li a {
38    text-decoration: none;
39    display: block;
40    text-decoration: none;
41    text-transform: uppercase;
42    color: □black;
43    font-size: 20px;
44    font-family: 'Raleway', sans-serif;
45    letter-spacing: 2px;
46    font-weight: 600;
47    margin-bottom: 10px;
48    padding: 20px;
49    transition: all ease 0.5s;
50}
51
52 .header-list ul li {
53    float: right;
54    padding-left: 30px;
55    padding-top: 30px;
56    list-style: none;
57    padding-right: 40px;
58}
```

Implementation of JAVASCRIPT :

```
1 const passwordInput = document.querySelector("#password_data");
2
3 passwordInput.addEventListener("keyup", () => {
4     let password = passwordInput.value;
5
6     var strongRegex = new RegExp("^(?=.{14,})(?=.*[A-Z])(?=.*[a-z])(?=.*[0-9])(?=.*[\W]).*$", "g");
7     var mediumRegex =
8         new RegExp("^(?=.{10,})((?=.*[A-Z])(?=.*[a-z]))|((?=.*[A-Z])(?=.*[0-9]))|((?=.*[a-z])(?=.*[0-9])).*$", "g");
9
10    if(password.length==0)
11    {
12        document.querySelector(".safety").innerHTML = "Enter Password";
13    }
14    else
15    {
16        document.querySelector(".safety").innerHTML =
17            '<span>Password Strength</span><span class="line" id="line1"></span>';
18        <span class="line" id="line2"></span><span class="line" id="line3"></span>';
19    }
20
21    if (strongRegex.test(password))
22    {
23        document.querySelector("#line1").style.background = "green";
24        document.querySelector("#line2").style.background = "green";
25        document.querySelector("#line3").style.background = "green";
26    }
27    else if (mediumRegex.test(password))
28    {
29        document.querySelector("#line1").style.background = "yellow";
30        document.querySelector("#line2").style.background = "yellow";
31    }
32    else
33    {
34        document.querySelector("#line1").style.background = "red";
35    }
36}
37
```

```
1 "use strict";
2
3 // To add scroll effect on the navbar
4 const navLinks = document.querySelectorAll(".scroll");
5 const navLinksArr = [...navLinks];
6
7 navLinksArr.forEach((link) => {
8     link.addEventListener("click", function (e) {
9         e.preventDefault();
10
11         const href = link.getAttribute("href");
12         const sectionEl = document.querySelector(href);
13         sectionEl.scrollIntoView({ behavior: "smooth" });
14     });
15 });
16
```

Implementation of PHP:

```
1 <?php
2 $servername="localhost";
3 $username="root";
4 $password="";
5 $dbname="Blood Donation";
6
7 $conn=new mysqli($servername,$username,$password,$dbname);
8 if($conn->connect_error){
9     die("connection failed".$conn->connect_error);
10 }
11
12 $sql="SELECT * FROM Info";
13 $result=$conn->query($sql);
14
15 if($result->num_rows > 0){
16     echo "<h2>Donator Information:</h2>";
17     echo "<table border='5' >
18         <tr>
19             <th>ID</th>
20             <th>NAME</th>
21             <th>EMAIL</th>
22             <th>PASSWORD</th>
23             <th>BLOOD GROUP</th>
24             <th>CREATED AT</th>
25         </tr>;
26     while($row = $result->fetch_assoc()){
27         echo"<tr>
28             <td>$row['id']</td>
29             <td>$row['username']</td>
30             <td>$row['email']</td>
31             <td>$row['password']</td>
32             <td>$row['bloodgroup']</td>
33             <td>$row['created_at']</td>
34         </tr>";
35     }
36
37     echo"</table>";
38 }
39 else{
40     echo"No entries found";
41 }
42
43 $conn->close();
44
45 ?>
```

```
1 <?php
2 $servername="localhost";
3 $username="root";
4 $password="";
5 $dbname="Blood Donation";
6
7 $conn=new mysqli($servername,$username,$password,$dbname);
8 if($conn->connect_error){
9     die("connection failed".$conn->connect_error);
10 }
11
12 $username=$_POST['username'];
13 $email=$_POST['email'];
14 $password=$_POST['password_data'];
15 $bloodgroup=$_POST['bloodgroup'];
16
17
18 $insert="INSERT INTO Info (username,email,password,bloodgroup) VALUES
19 ('$username','$email','$password','$bloodgroup')";
20 if($conn->query($insert)===TRUE){
21     echo "Registration Done<br>Go Back to Main Website";
22 }
23 else{
24     echo "Error".$insert."<br>".$conn->error;
25 }
26
27 $conn->close();
28
29 ?>
30
```

Features of our Website

User Registration:

Allow users to create accounts by providing necessary information such as name, contact details, blood type, and other relevant details.

Facilitates user identification, contact, and matching with potential donors or recipients.

Donor and Recipient Profiles:

Provide users with dedicated profiles to manage personal information, donation history, and preferences.

Enables donors to track their contributions and allows recipients to provide relevant details about their needs.

- **User Feedback and Testimonials:**

Enable donors to leave feedback and testimonials.
Display positive experiences to encourage others to donate.
- **Educational Content:**

Provide information about the importance of blood donation.
Include eligibility criteria, donation process details, and frequently asked questions.

Unique Functionalities :

- **Online slot bookings :**

Our website enables the user to book the time slot according to their comfort.

- **Anywhere, Anytime :**

Our website also allow the user to donate blood from their home too or anywhere they want, our employees will reach there too.

- **Gender Insensitive :**

We believe in “Unity in Diversity”, so anyone irrespective of the gender can donate , unless the donor’s blood is healthy

Our Results :

The screenshot shows a mobile application's registration process. At the top, there are three navigation links: "ABOUT US", "VOLUNTEER", and "DONATE". Below these are six numbered steps in a red box:

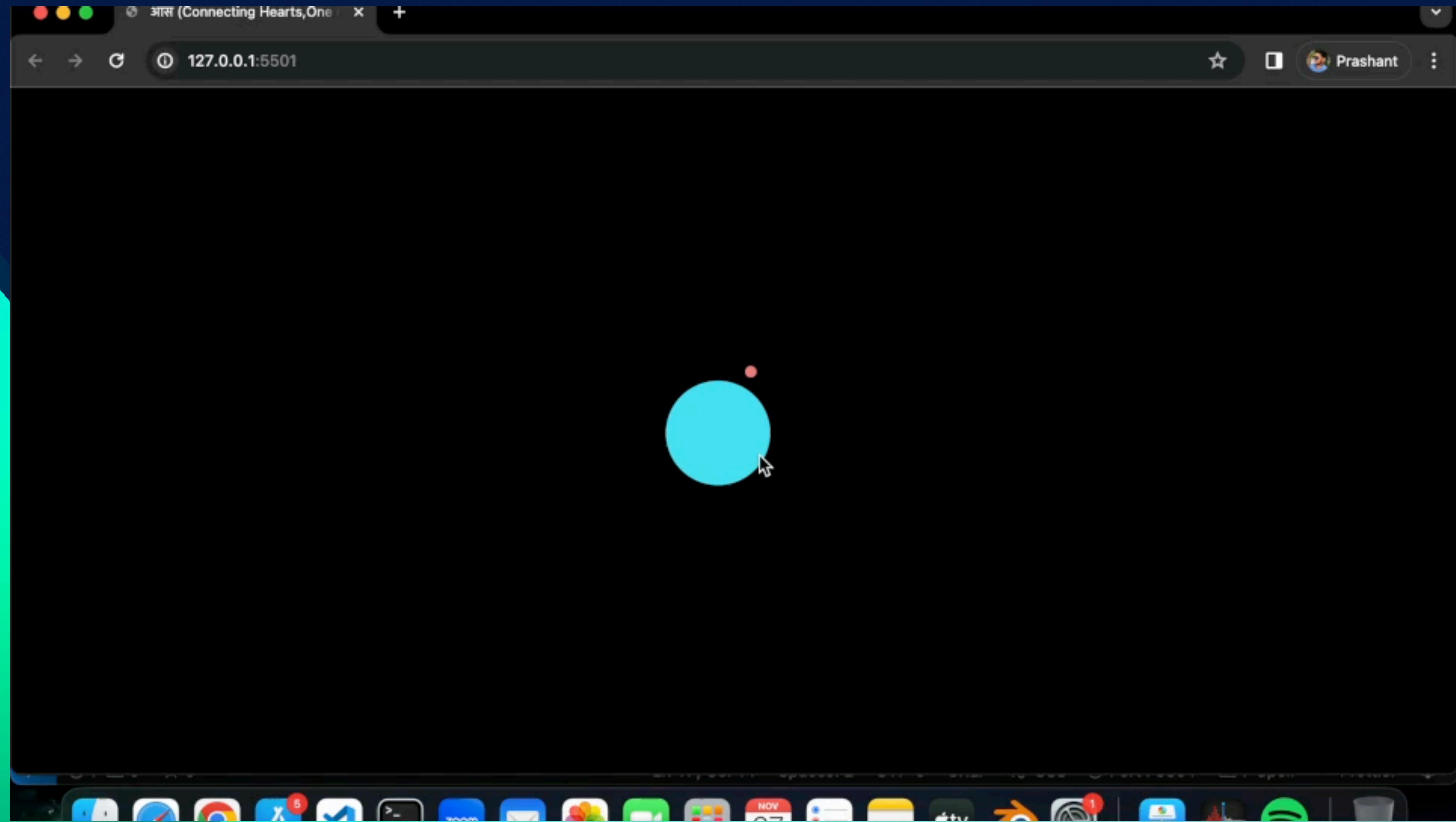
- 1 Register
- 2 Post a Blood request 🍀
- 3 Respond
- 4 Get notified
- 5 Forever Free
- 6 Save a Life 🍀

At the bottom of the screen is a large blue "REGISTER" button.

The screenshot shows a mobile application's main page. At the top, it asks "WHAT IS THIS ALL ABOUT?". Below this, it states: "We solve the problem of blood emergencies by connecting blood donors directly with people in blood need." It then displays three main features in cards:

- WHAT WE DO?**: We connect blood donors with recipients, without any intermediary such as blood banks, for an efficient and seamless process.
- INNOVATIVE**: आस is an innovative approach to address global health. We provide immediate access to blood donors.
- NETWORK**: आस is one of several community organizations working together as a network that responds to emergencies in an efficient manner.

The landing page has a blue background and white text. At the top right are four navigation links: "About Us", "Volunteer", "Donate", and "Get Help". In the center, the text "Start Saving Lives" is displayed in a large, bold, serif font. Below it, the tagline "Become a donor or request for blood And help save lives" is shown. A large blue "REGISTER" button is at the bottom left. To the right of the button is a cartoon-style illustration of an ambulance.



Challenges Faced :

- **Connecting to Server :**

We were lacking knowledge about Backend as it was new to us.

- **Teamwork :**

As we have not much experience in working with teams, it was quite challenging to us to make coordination but with regular interaction and time we improved a lot and became a “TEAM”

- **Using PHP :**

As we are totally new to PHP, it was somewhat challenging for us to implement.

Fighting our Challenges :

- With regular help and support of our respected mentor, it was easy for us to beat all these challenges.
- Furthermore with the help of Youtube and several websites we learnt about implementation of PHP and connecting the backend.
- With regular interactions in the form of meetings we mastered teamwork and learnt a lot of things while working in the team.

Regarding future work :

More connections :

We are planning to spread our network to larger extent in future. To connect as more as hospitals either private or Government is our primary goal.

Optimisation :

As we care about the responsiveness and reliability of our website, we will continuously give updates and optimise our website as per the user's requirements.

- **Mobile Application Development:**

We will create a dedicated mobile app to make it easier for users to find information, schedule appointments, and receive notifications about blood donation drives.

- **Language and Accessibility Support:**

We will provide multilingual support to cater to a diverse audience. Ensure the website is accessible to individuals with disabilities.

Key Points :

- **User-Friendly Interface:**

We have a clean and intuitive design to make navigation easy for both new and returning users.

- **Appointment Scheduling:**

Implemented an online appointment scheduling system to streamline the donation process and reduce wait times

- **Donor Registration:**

Simplify the registration process for new donors, allowing them to create profiles for tracking donations and receiving personalized notifications.

- **Privacy and Security Measures:**

We clearly communicate the privacy and security measures in place to protect donor information and build trust in the platform.

Significance of Our Project :

- **Digital Altruism:**

The website serves as a digital agora, a space where the ancient virtue of altruism converges with modern technology.

- **Global Connection:**

In an era where the world is intricately interconnected, the website facilitates a global network of donors and recipients. It enables the seamless flow of vital life force across borders, emphasizing the universality of humanity's shared needs and responsibilities.

- **Real-Time Impact:**

Unlike traditional methods of blood donation promotion, the website provides real-time insights into the impact of contributions.

- **Empowerment Through Information:**

The website empowers potential donors with knowledge. It disseminates information on the importance of blood donation, eligibility criteria, and the donation process.

- **Crisis Responsiveness:**

During crises and emergencies, the website becomes a beacon of hope. It allows for swift communication of urgent needs, mobilizing donors to respond promptly to critical shortages.

- **Community Building:**

Beyond a mere platform, the website acts as a digital agora for a community of donors. It fosters a sense of belonging, where individuals share their stories, challenges, and triumphs.

Acknowledgment

We extend our heartfelt gratitude to our mentor for her unwavering support and resources that made आस possible.

Special thanks to our dedicated team of developers and designers for their creativity and tireless efforts. Appreciation to all members for their crucial contributions.

Thanks to our friends, advisors, and our University for their valuable insights, and to end users for their engagement. This collaborative effort has shaped आस into a successful reality.



THANK YOU ALL !