

# **Final Project Report**

## **Blood Bank Website for an Organization**

Course Code: CSE 3100

Course Title: Web Based Application Lab/Project

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# CHAPTER 1

## Introduction

### 1.1 Abstract

The website developed is to be used as a blood bank database and main website of Nirob (Nirapod Rokter Bondhon), a volunteering organization of RUET, based on blood donation.

The website is developed with criteria set by the client organization (Nirob) in mind. The server is provided by client itself, thus no research on choosing server was done, instead, advantages and disadvantages of server selected were considered throughout the project.

### 1.2 Motivation

Each year, many operations get delayed for lack of finding blood donors, and in result, many people die as well. But unfortunately, lack of sufficient blood donors is not the only cause, but lack of co-ordination and communication with blood donors is also a reason.

The volunteers of Nirob spend their efforts in decreasing the co-ordination and communication and encouraging more and more people into becoming regular blood donations which is definitely very beneficent to a community. Not only students of RUET fall under the service of Nirob, but also anyone in need who comes under the radar of the organization.

This project was chosen to make the jobs of Nirob easier and more efficient by automatizing as many tasks of the organization as possible.

### 1.3 Tools Used

- Brackets (text editor)  
Brackets is a lightweight, yet powerful, modern text editor. It comes with features like inline editors and live preview, as well as plugin that keeps written code cleaner. Thus it was chosen to write codes with lesser difficulty.

- **Xampp (server environment creator)**  
XAMPP is a free Apache distribution containing MariaDB (database server) and PHP (server side language). It is used to create a local server to test and observe the development of the project without uploading to main server.
- **PHPMailer (library)**  
PHPMailer is a code library to send emails safely and easily via PHP code from a web server (MUA to the MSA server).
- **Bootstrap (library)**  
Bootstrap is a free front-end framework that includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and optional JavaScript plugins.
- **CKeditor (library)**  
CKEditor (formerly known as FCKeditor) is a WYSIWYG rich text editor which enables writing content directly inside of web pages or online applications.

## 1.4 Languages Used

- **HTML (client side)**  
HTML (Hypertext Markup Language) describes the structure of a web page semantically and originally included cues for the appearance of the document. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages.
- **CSS (client side)**  
CSS (Cascading Style Sheets) is a style sheet language used for describing the presentation of a document written in a markup language like HTML.
- **SQL (server side)**  
SQL (structured query language) is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS).

- PHP (server side)

PHP (PHP: Hypertext Preprocessor) is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language.

## CHAPTER 2

### Website Components And Details

#### 2.1 Overall Features

- Form of information updateable by blood donors
- Search function for the database of blood donors, with various keys to search with
- Auto updating statistics of organization in homepage
- Forum for discussion and co-ordination
- Chatbox for casual communication
- Admin Panel
- Easy editing of pages like Constitution and Member for admin
- Email verification for users
- Password security even from website founder due to hashing

#### 2.2 Database

The Database contains all information of the website and is manipulated with SQL. User sensitive information like password is contained after hashing.

The database is structured as below.

users(userID: integer, userName: string, userEmail: string, userPass: string, userType: string, userType: string, activation: string, reset: string)

bloodlist(name: string, blood\_group: string, roll: string, gender: string, dept: string, age: string, weight: string, contact\_no: string, email\_id: string, facebook\_id: string, present\_address: string, city: string, last\_donated: date)

members(name: string, roll: string, designation: string)

stats(donation\_managed: integer)

requests(name: string, blood\_group: string, contact\_no: string, location: string, adinfo: string, request\_time: timestamp)

pages(page: string, content: longtext)

fquestions(id: integer, topic: string, detail: longtext, name: string, email: string, datetime: string, view: integer, reply: integer)

fanswer(question\_id: integer, a\_id: integer, a\_name: string, a\_email: string, a\_answer: longtext, a\_datetime: string)

## **2.3 User Account System**

Users log into the website with their email addresses and passwords, one email address can have only one account and can update the information of only that email address. The passwords are hashed so even if database was hacked somehow or the stored information of password was stolen, someone else still would not be able to know the password.

User accounts can be of 3 types, Member, Moderator and Admin. Some functions of website are accessible by specific types only.

## **2.4 Admin Panel**

In the admin panel, admins can add or remove moderators who maintain various things of websites. It also shows a list of current admins and moderators.

Miscellaneous features specific to admin only are put here.

## **2.5 Forum**

In the forum, topics can be added or deleted. Replies can be written to specific topics too. CKeditor is used here to facilitate bb codes for better formatting of writing.

## **2.6 Chatting System**

A chatting system is integrated for casual conversation. The chatbox of chatango.com is integrated here.

## **2.7 Homepage Statistics**

These statistics state a summary of the blood bank database, how many donors of a blood group is stored in the organization's database and so on.

## **2.8 Constitution Editing**

In this page, the constitution of the organization is visible with CKeditor facilitated. Constitution can be edited from this page by an admin too.

## **2.9 Executive Members**

Executive members of the organization are listed in a page. An admin can update it from this page.

## **2.10 Searching Database**

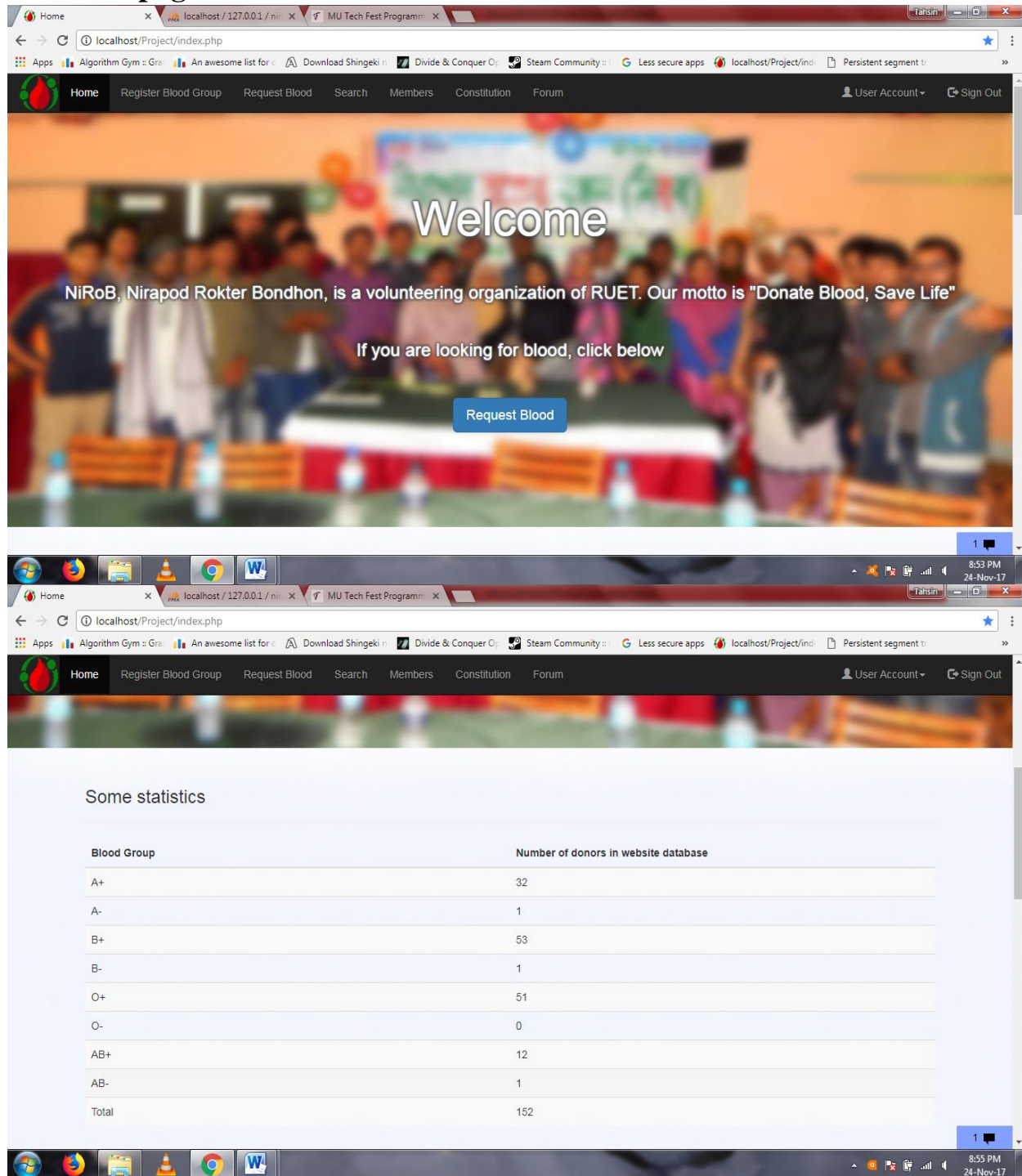
The database can be searched by name or blood group or roll or location. Partial matches for name or location are shown too.



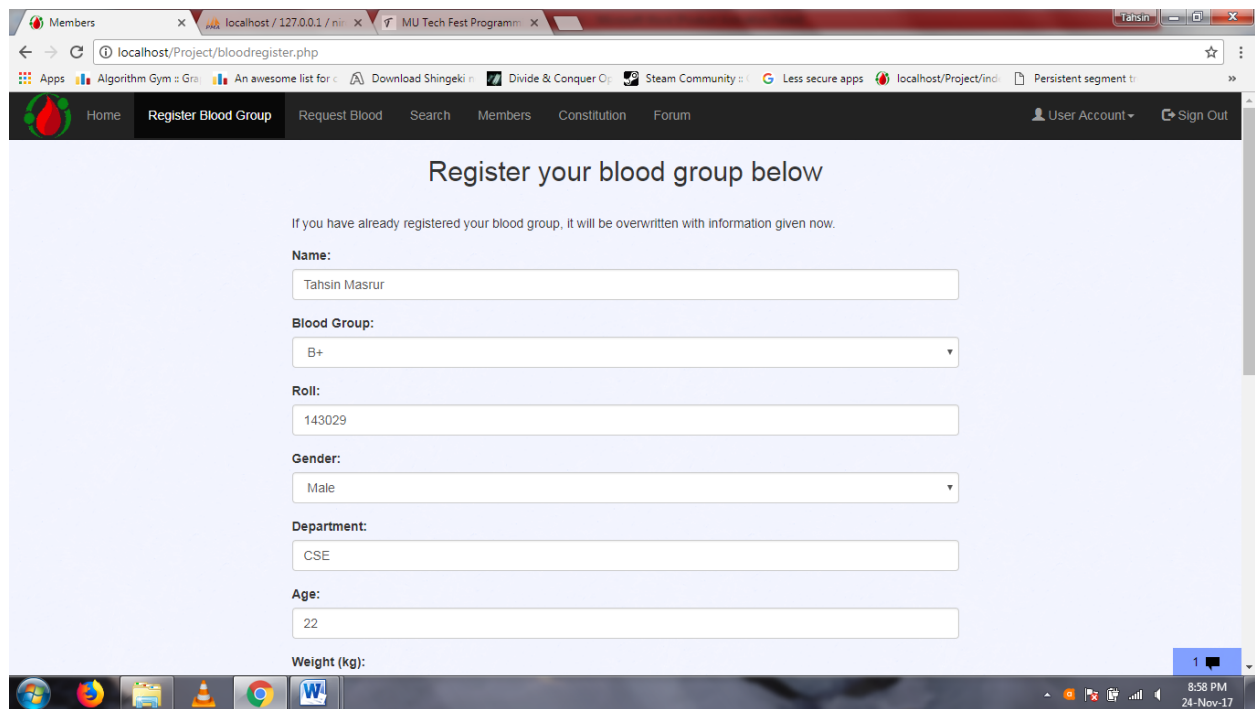
# CHAPTER 3

## Front-end Designs

### 3.1 Homepage



## 3.2 Blood Group Register Page



The screenshot shows a web browser window with the URL `localhost/Project/bloodregister.php`. The page has a dark navigation bar with links: Home, Register Blood Group, Request Blood, Search, Members, Constitution, Forum, User Account, and Sign Out. The main content area is titled "Register your blood group below" and includes a note: "If you have already registered your blood group, it will be overwritten with information given now." The form contains the following fields: Name (text input with "Tahsin Masrur"), Blood Group (dropdown menu with "B+"), Roll (text input with "143029"), Gender (dropdown menu with "Male"), Department (text input with "CSE"), Age (text input with "22"), and Weight (kg) (text input). The Windows taskbar at the bottom shows the time as 8:58 PM on 24-Nov-17.

Members

localhost/127.0.0.1 / n... MU Tech Fest Program...

localhost/Project/bloodregister.php

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Home Register Blood Group Request Blood Search Members Constitution Forum User Account Sign Out

### Register your blood group below

If you have already registered your blood group, it will be overwritten with information given now.

**Name:**

Tahsin Masrur

**Blood Group:**

B+

**Roll:**

143029

**Gender:**

Male

**Department:**

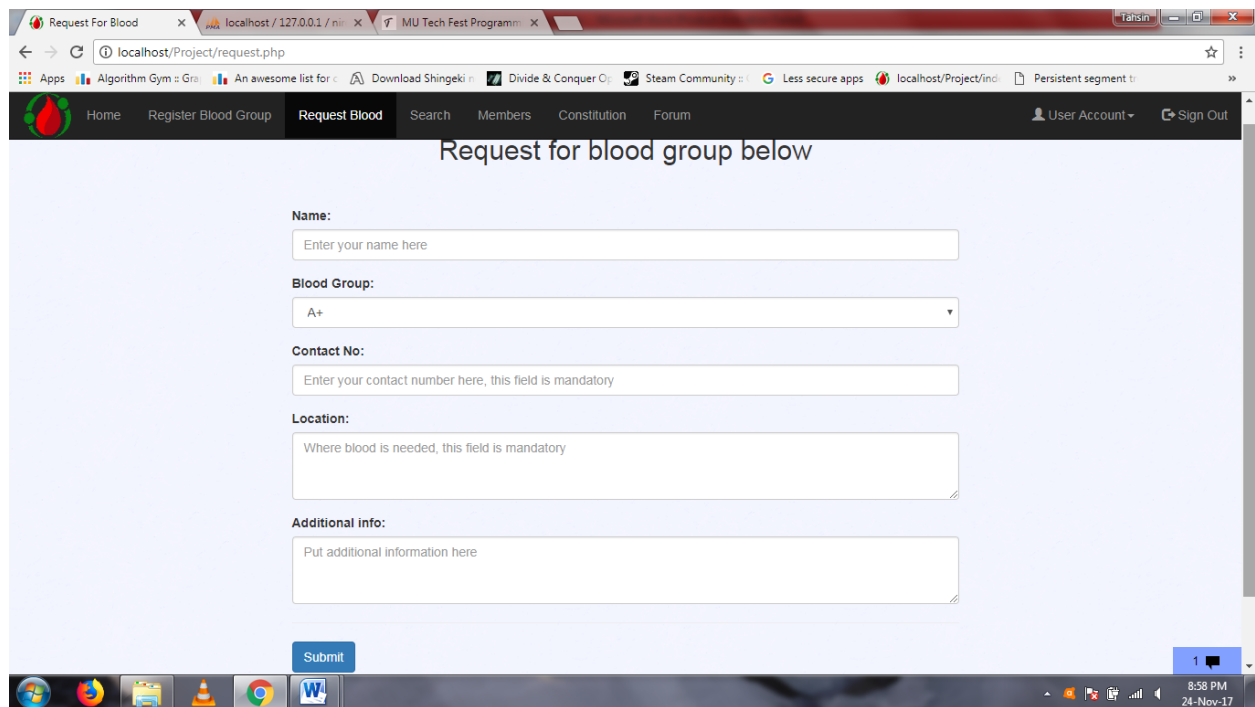
CSE

**Age:**

22

**Weight (kg):**

## 3.3 Blood Request Page



The screenshot shows a web browser window with the URL `localhost/Project/request.php`. The page has a dark navigation bar with links: Home, Register Blood Group, Request Blood, Search, Members, Constitution, Forum, User Account, and Sign Out. The main content area is titled "Request for blood group below". The form contains the following fields: Name (text input with placeholder "Enter your name here"), Blood Group (dropdown menu with "A+"), Contact No. (text input with placeholder "Enter your contact number here, this field is mandatory"), Location (text input with placeholder "Where blood is needed, this field is mandatory"), and Additional info (text input with placeholder "Put additional information here"). A blue "Submit" button is at the bottom. The Windows taskbar at the bottom shows the time as 8:58 PM on 24-Nov-17.

Request For Blood

localhost/127.0.0.1 / n... MU Tech Fest Program...

localhost/Project/request.php

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Home Register Blood Group Request Blood Search Members Constitution Forum User Account Sign Out

### Request for blood group below

**Name:**

Enter your name here

**Blood Group:**

A+

**Contact No:**

Enter your contact number here, this field is mandatory

**Location:**

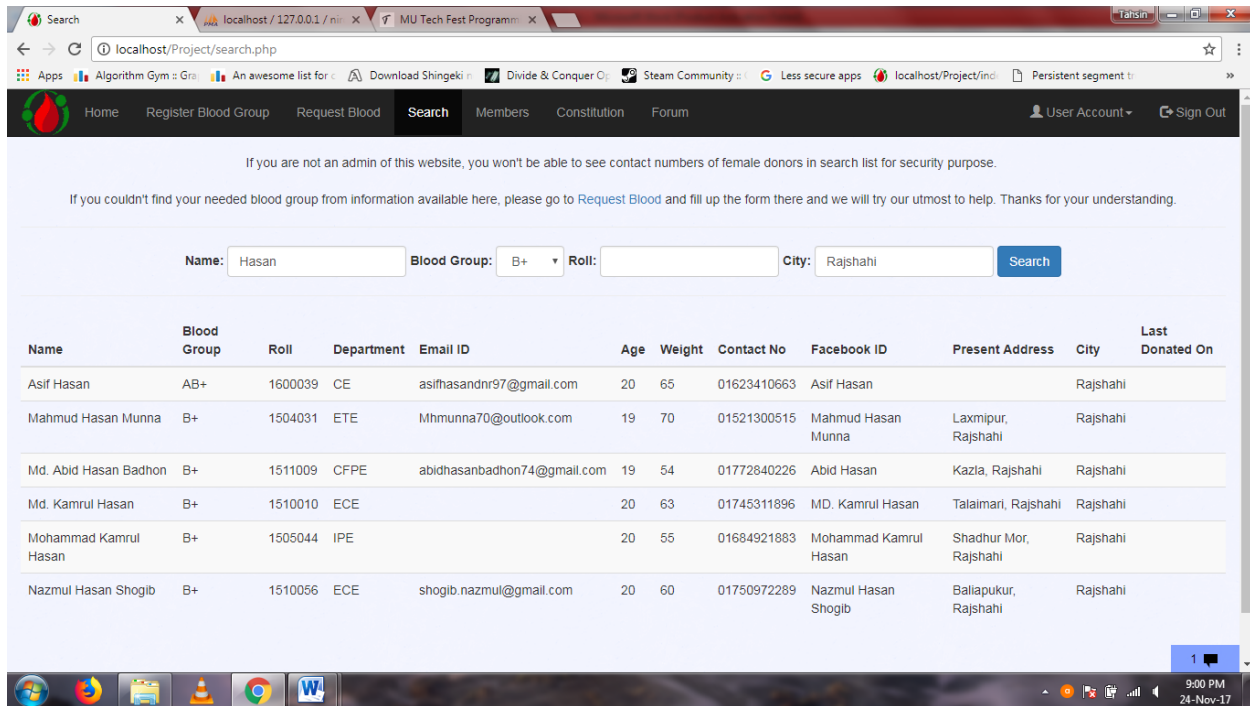
Where blood is needed, this field is mandatory

**Additional info:**

Put additional information here

Submit

## 3.4 Search Page



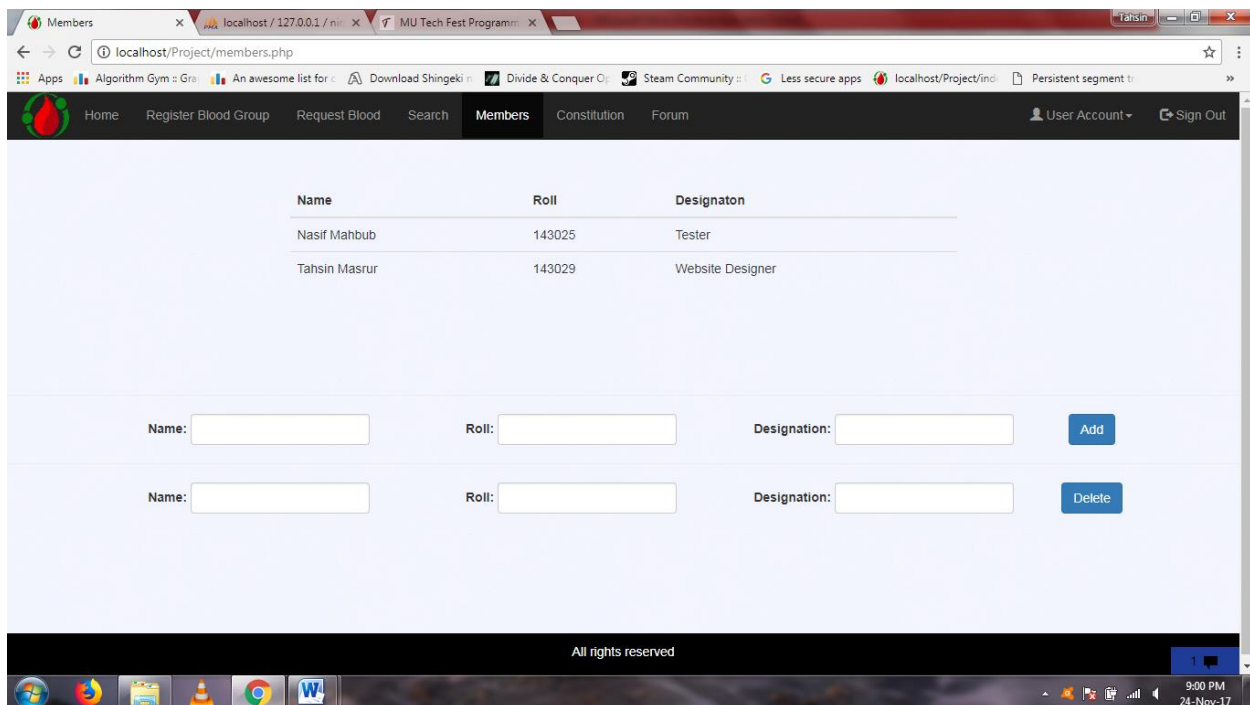
If you are not an admin of this website, you won't be able to see contact numbers of female donors in search list for security purpose.

If you couldn't find your needed blood group from information available here, please go to [Request Blood](#) and fill up the form there and we will try our utmost to help. Thanks for your understanding.

Name:  Blood Group:  Roll:  City:

Name	Blood Group	Roll	Department	Email ID	Age	Weight	Contact No	Facebook ID	Present Address	City	Last Donated On
Asif Hasan	AB+	1600039	CE	asifhasandnr97@gmail.com	20	65	01623410663	Asif Hasan		Rajshahi	
Mahmud Hasan Munna	B+	1504031	ETE	Mhmunna70@outlook.com	19	70	01521300515	Mahmud Hasan Munna	Laxmipur, Rajshahi	Rajshahi	
Md. Abid Hasan Badhon	B+	1511009	CFPE	abidhasanbadhon74@gmail.com	19	54	01772840226	Abid Hasan	Kazla, Rajshahi	Rajshahi	
Md. Kamrul Hasan	B+	1510010	ECE		20	63	01745311896	MD. Kamrul Hasan	Talaimari, Rajshahi	Rajshahi	
Mohammad Kamrul Hasan	B+	1505044	IPE		20	55	01684921883	Mohammad Kamrul Hasan	Shadhur Mor, Rajshahi	Rajshahi	
Nazmul Hasan Shogib	B+	1510056	ECE	shogib.nazmul@gmail.com	20	60	01750972289	Nazmul Hasan Shogib	Baliapukur, Rajshahi	Rajshahi	

## 3.5 Members Page (Admin View)



Name	Roll	Designation
Nasif Mahbub	143025	Tester
Tahsin Masrur	143029	Website Designer

Name:  Roll:  Designation:

Name:  Roll:  Designation:

All rights reserved

## 3.6 Constitution Page

Constitution

localhost/127.0.0.1 / n... MU Tech Fest Program

localhost/Project/constitution.php

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Home Register Blood Group Request Blood Search Members Constitution Forum User Account Sign Out

### নিরাপদ রক্তের বন্ধন (নিরব)

একজন মানুষের রক্তের বিকল্প হতে পারে শুধুমাত্র আর একজন মানুষের নিরাপদ রক্ত। মানবিক দায়বদ্ধতা থেকে নিরাপদ রক্ত সংকলনের জন্য রাজশাহী প্রকৌশল ও প্রযুক্তি বিশ্ববিদ্যালয়ের ছাত্রছাত্রী কর্তৃক 'রক্তদান সংক্রান্ত স্থায়ী সংগঠন 'নিরাপদ রক্তের বন্ধন (নিরব)' এর ব্যতীত শুরু।

#### গঠনতন্ত্র

ধারা ১:

ক) প্রতিষ্ঠানের নাম প্রাথমিক অনুমোদনের মাধ্যমে রাজশাহী প্রকৌশল ও প্রযুক্তি বিশ্ববিদ্যালয়ের 'রক্তদান সংক্রান্ত স্থায়ী সংগঠন 'নিরাপদ রক্তের বন্ধন (নিরব)' নামে আনুপ্রকাশ করা।

খ) প্রকৃতি নিরব একটি মানবসেবামূলক, নিরপেক্ষ, স্বাধীন, সার্বজনীন, অরাজনৈতিক (রক্তদান) সংগঠন।

গ) স্থায়ী ঠিকানা রুমেট, রাজশাহী।

ঘ) কার্য এলাকা রাজশাহী প্রকৌশল ও প্রযুক্তি বিশ্ববিদ্যালয়ের সকল ছাত্র-ছাত্রী, শিক্ষক, কর্মকর্তা-কর্মচারী এবং রাজশাহী সিটি কর্পোরেশন এলাকার জনসামান্য এবং প্রয়োজন বোধে সারা বাংলাদেশ এই সংগঠনের সেবা লাভ করবে।

ধারা ২:

পদ্ম ও উদ্দেশ্য

- \* মুমূর্ষুর প্রয়োজনে বিনামূল্যে রক্ত সরবরাহ;
- \* রক্তদান উৎসাহ করা;
- \* রক্তদানকে একটি সমৃদ্ধ সামাজিক আন্দোলনে রূপ দেওয়া;
- \* রক্ত প্রদান;
- \* রক্তবাহিত বিভিন্ন মারাত্মক রোগের কারণ ও প্রতিকার্য সকলকে অববিত্তকরণ;
- \* বিভিন্ন দুর্ঘটনায় অসহায়ের পাশে দাঁড়ানো।

ধারা ৩:

সাংগঠনিক কাঠামো

ক) কেন্দ্রীয় কমিটি

১। সভাপতি(১)

## 3.7 Forum Page

Forum

localhost/127.0.0.1 / n... MU Tech Fest Program

localhost/Project/forum.php

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Home Register Blood Group Request Blood Search Members Constitution Forum User Account Sign Out

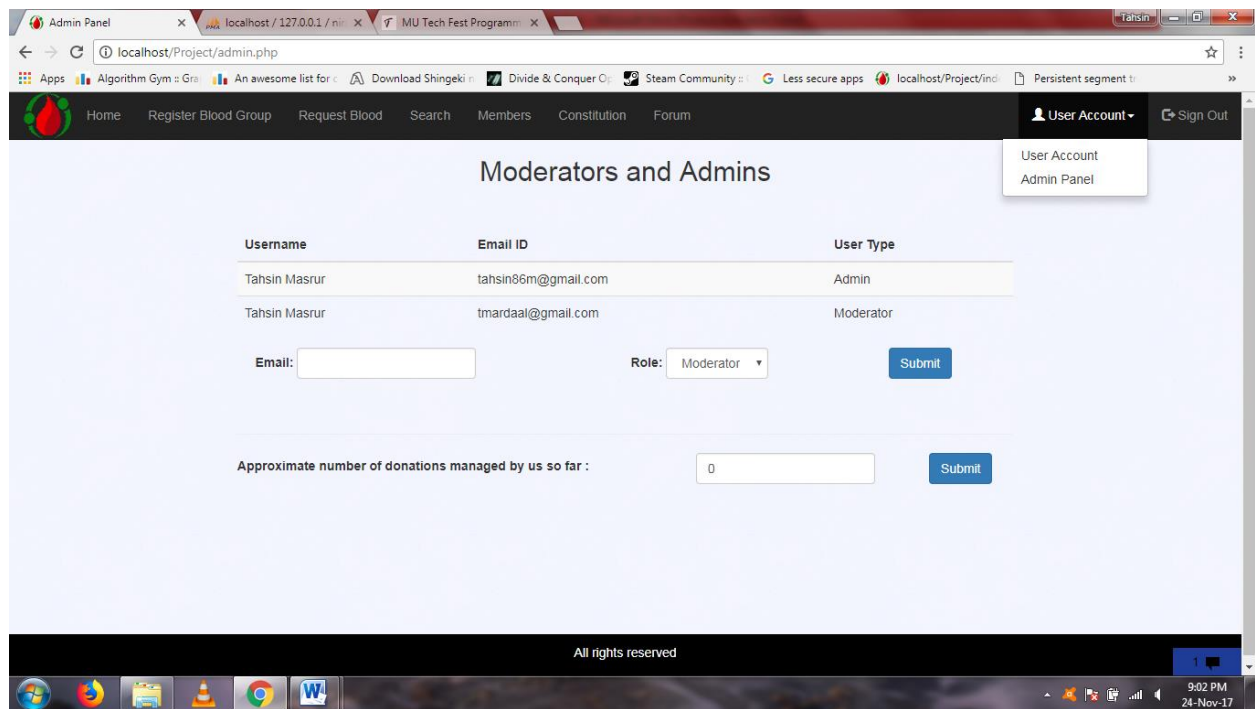
Topic Details

Submit

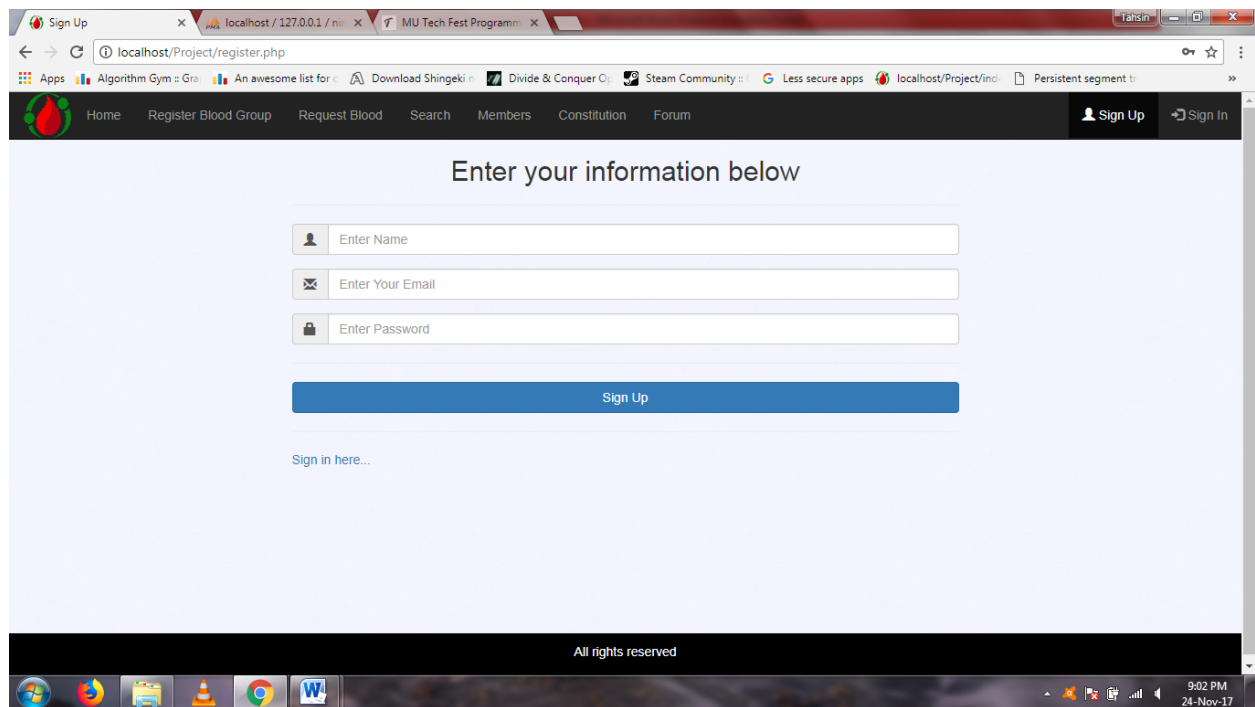
### List of Topics

Author	Topic Titles	Views	Replies	Date/Time
Tahsin Masnur	Test linking	2	0	14/11/17 07:25:35
Tahsin Masnur	test	2	0	14/11/17 07:12:31

### 3.8 Admin Panel



### 3.9 Sign Up Page





### 3.10 Sign In Page

The screenshot shows a web browser window with the address bar displaying `localhost/Project/login.php`. The page has a dark navigation bar with a logo and links: Home, Register Blood Group, Request Blood, Search, Members, Constitution, Forum, Sign Up, and Sign In. The main content area is titled "Sign In" and contains two input fields: an email field with the value `tahsin86m@gmail.com` and a password field with masked characters. Below the fields is a blue "Sign In" button. At the bottom of the form, there are two links: "Sign up here..." and "Reset password here...". The footer of the page says "All rights reserved". The Windows taskbar at the bottom shows the time as 9:03 PM on 24-Nov-17.

### 3.11 Password Reset Page

The screenshot shows a web browser window with the address bar displaying `localhost/Project/passreset.php`. The page has the same dark navigation bar as the previous page. The main content area is titled "Enter your information below to reset password" and contains a single input field for email with the placeholder text "Enter Your Email". Below the field is a blue "Reset" button. The footer of the page says "All rights reserved". The Windows taskbar at the bottom shows the time as 9:03 PM on 24-Nov-17.

## CHAPTER 4

### Miscellaneous

#### **4.1 Supported Browsers**

The website has been tested and is supported in the following browsers.

- Google Chrome 62.0.3202.94 (Official Build) (64-bit)
- Mozilla Firefox Quantum 57.0 (64-bit)
- Internet Explorer 11.0.9600.18537

#### **4.2 Website Maintenance**

The website maintenance will be left to executive members of Nirob. For serious issues that they can't sort out themselves, they will be free to take help from the website designer.

Also, future students will be free to further develop the website, leaving chance of more growth.

#### **4.3 Conclusion**

As the first web project ever done, the project has many flaws and issues. As the website can be developed more by future students, it won't become stagnant and will always be dynamic to the need of modern era. So one doesn't have to be that optimistic to hope for a bright future of the project.