CSE370: Database Systems

Project Report

Project Title: Blood Bank Management System

Group No : 15, CSE-370 Lab Section : 15, Fall-2024		
ID	**Name**	**Contribution**
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22101774	Sadeed Ahmad	Schema, Paper, Backend
21301292	Bandhan Kumar Mondal	ER, Paper, Backend, Frontend

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Introduction

The BLOOD BANK MANAGEMENT SYSTEM project is a milestone in today's world. It is designed to successfully implement the functionality of a blood donation & receiving system.

The basic building aims to provide online blood bank services. It is a browser-based system designed to store, process, retrieve, and analyze information concerning administrative and inventory management within a blood bank system.

This project is built to maintain all the information about blood donors, patient information, and the stock of all the blood groups available in the bank. The aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle-free and corruption-free, and make the system of blood bank management effective.

The Blood bank system project report contains information related to blood like-

- Blood group
- Available bloodstock
- Donor details
- Receiver details

This system is used for maintaining information about admin, donors, bloodstock, and patients.

Project Features

There are mainly 3 modules in this project.

- Admin
- Donors
- Receiver

Admin :

Admin is the main role in the system, admin can manage all the activities like managing donors, patients, and bloodstock,

etc.

Admin can perform –

1. Check the available stock of the blood
2. Manage donors
3. Manage patients
4. Manage blood donations
5. Manage blood requests
6. Logout

Admin can manage donations like he can accept or reject the donation request based on the donor details. He can accept or reject blood requests based on the bloodstock available. Admin can manage all the donors and patients. He can edit the details of donors or patients. He can delete any donor or patient.

Donor:

Donors also play an important role in the system. If any person or donor wants to donate blood, he or she has to register himself first. Once he or she registers he/she can log into the system where he can manage or execute donor's activities like –

1. Donate blood
2. Manage donation history
3. Check the status of donation requests

4. Logout

Once a donor requests to donate blood, the admin has to take action on that request based on the donor's details. Once the admin accepts or rejects that donation request, it will be automatically updated on the donor dashboard. Donors can check the status of their request. Once his donation request is accepted, he or she will be called to donate blood at the specified donation camp. There is also added a feature that checks whether the donor fulfills its 90-day timespan or not. If Not then he/she won't be allowed to donate.

Receiver:

Receiver: is the one who is suffering from any disease and needs blood. He can go to the system and register himself. Once he registers, he/she can log in to the system and access the receiver dashboard.

The receiver can perform some activities like –

1. Make blood request
2. Check the status of his request
3. Logout

Once the receiver makes a request for blood, he has to provide the basic details like the number of blood units required, blood group, disease, etc.

Once he makes a request, it will be reflected in the admin dashboard. Now the admin has to take action on that request. Admin can accept or reject that request based on the receiver details or bloodstock available in the system.

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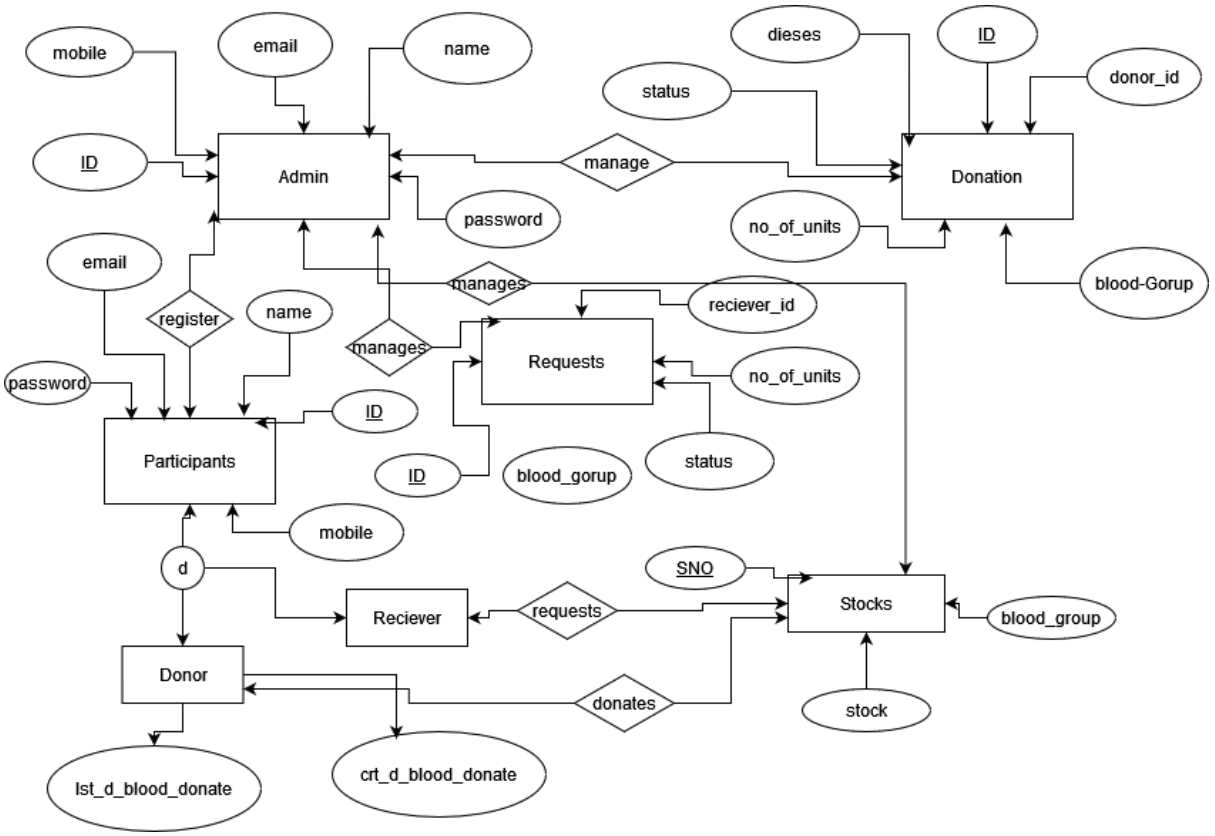
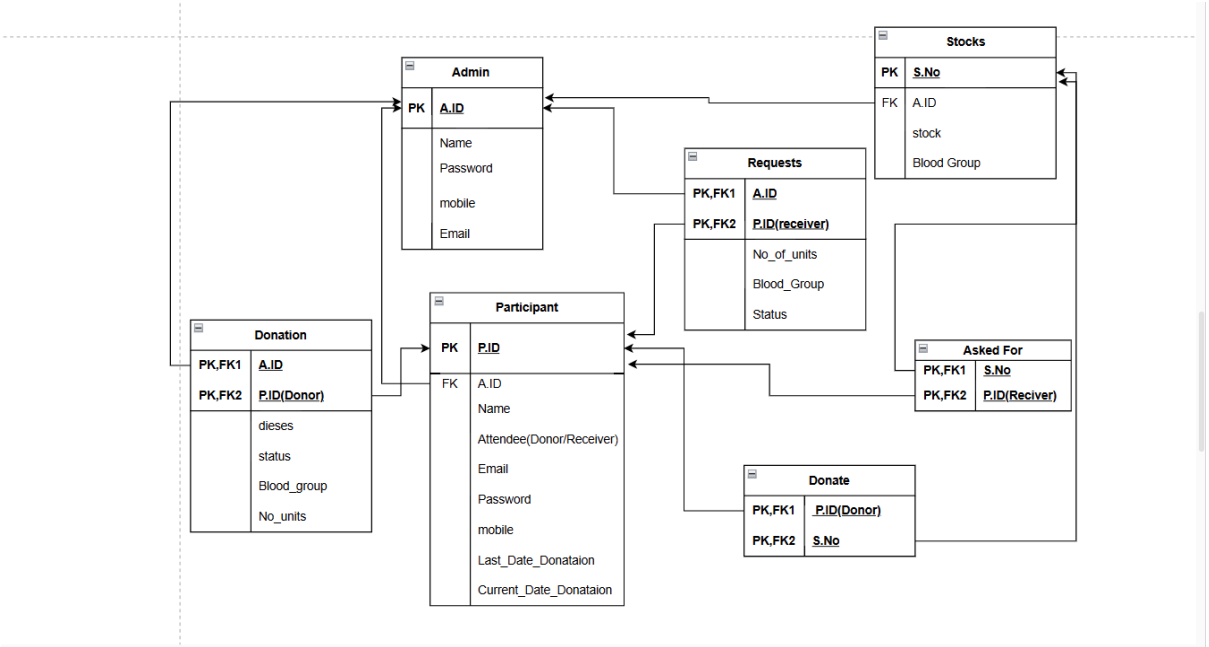
ER/EER Diagram



Schema Diagram

Contribution of ID: 22101774 Name: Sadeed Ahmad

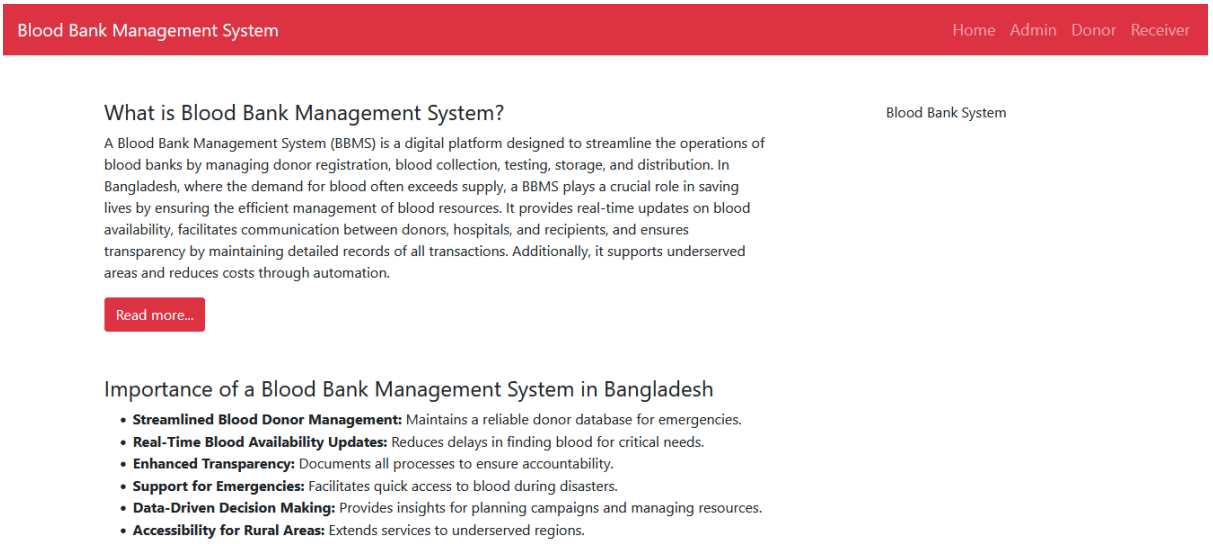


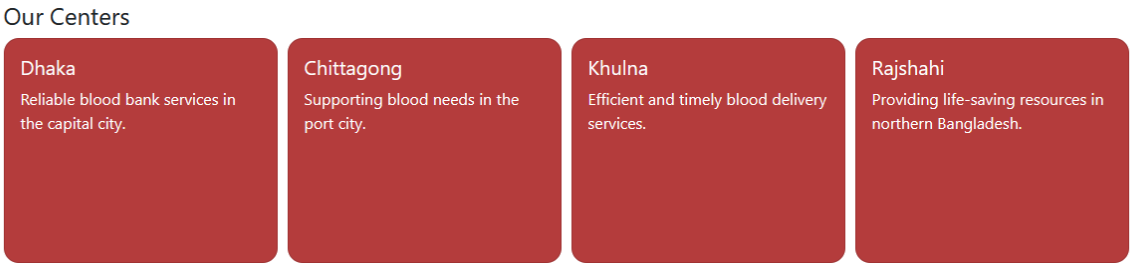
Frontend Development

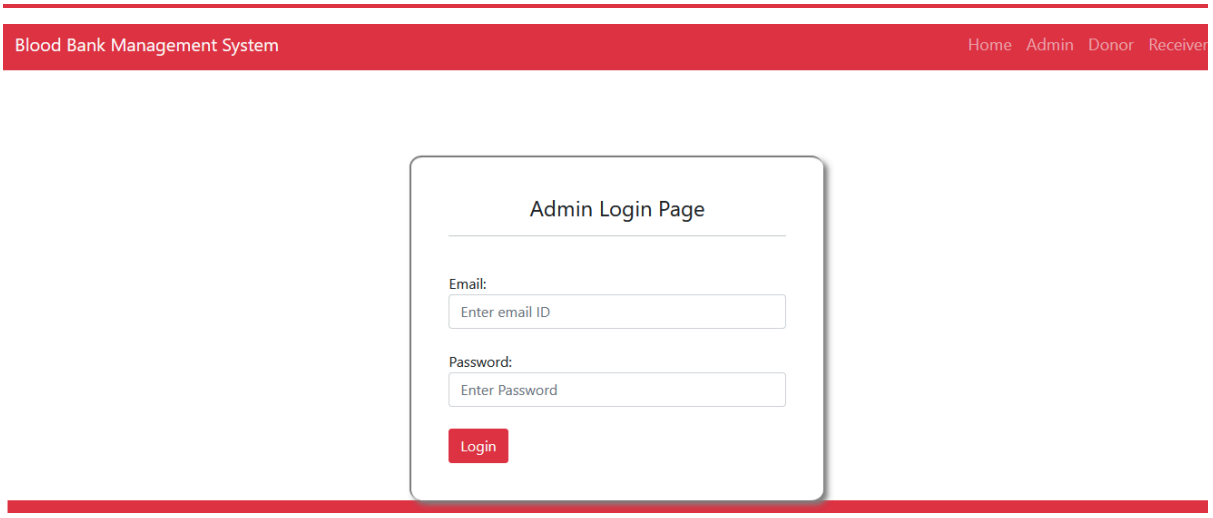
A front-end developer builds the front-end portion of websites and web applications – the part users see and interact with. A front-end developer creates websites and applications using web languages such as HTML, CSS, and JavaScript that allow users to access and interact with the site or app. When you visit a website, the design elements you see were created by a front-end developer. Front-end developers create user interfaces (UI). UI is the graphical layout of an application that determines what each part of a site or application does and how it will look. If someone wanted to build a website, they might hire a front-end developer to create the site's layout. The front-end developer determines where to place images, what the navigation should look like, and

how to present the site. Much of their work involves ensuring the appearance and layout of the site or application are easy to navigate and intuitive for the user.

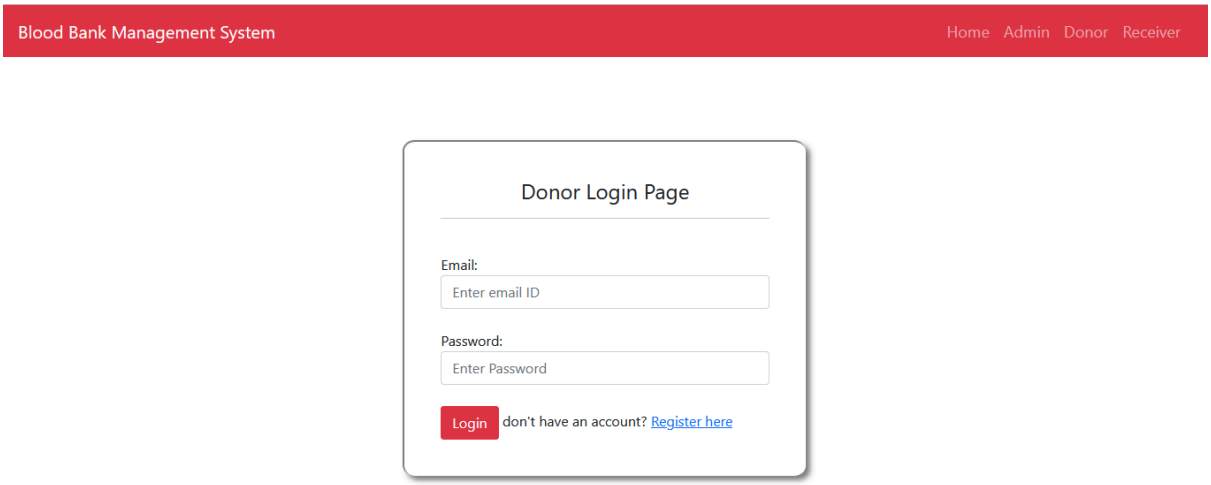
Contribution of ID: 20301139, Name: Yousuf Abdullah Harun

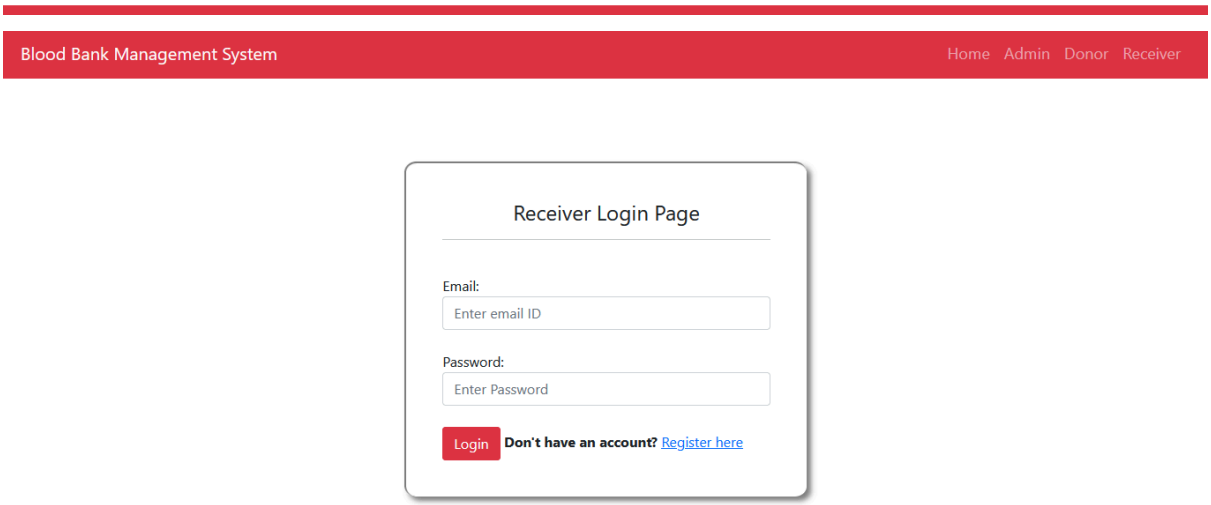


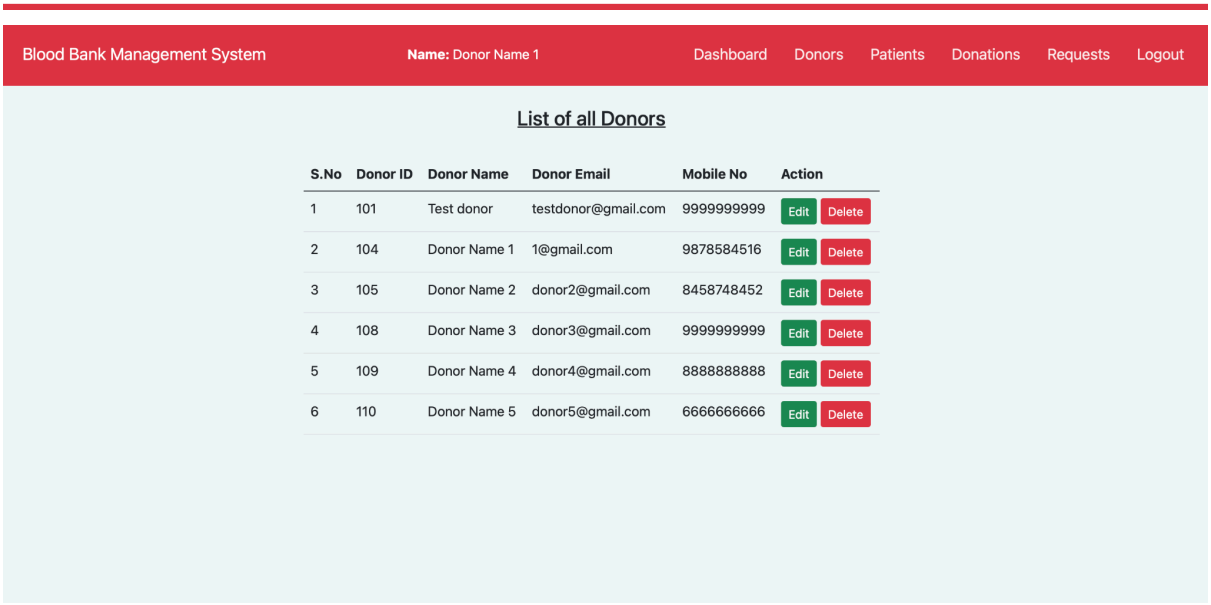


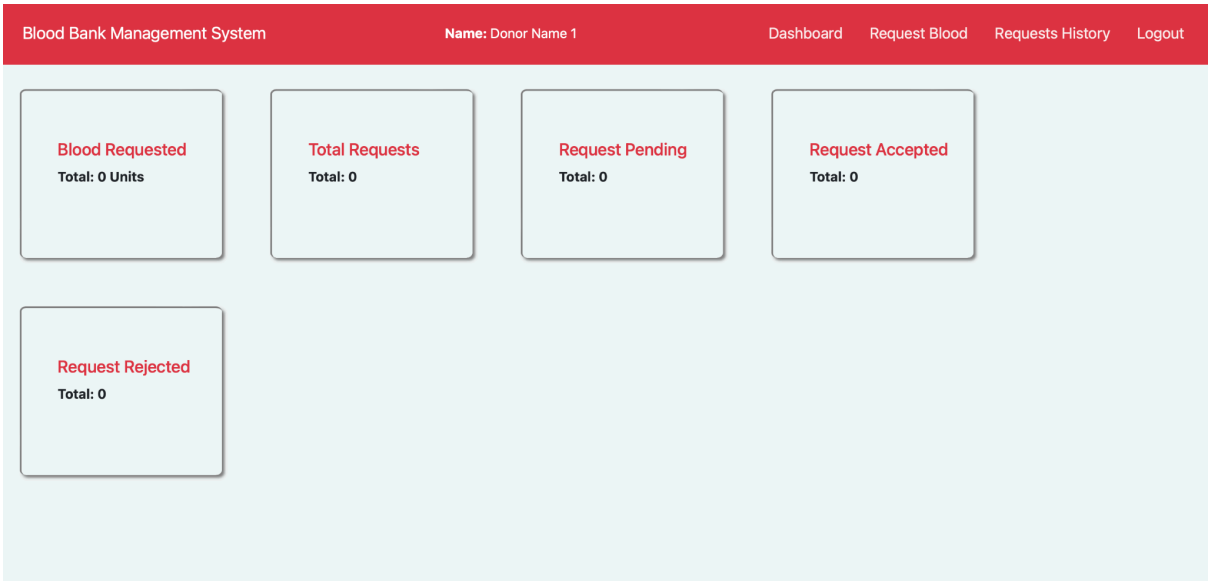


Contribution of ID: 21301292 Name: Bandhan Mondal








Blood Bank Management System
Name: Donor Name 1
Dashboard
Request Blood
Requests History
Logout
Blood Requested
Total: 0 Units
Total Requests
Total: 0
Request Pending
Total: 0
Request Accepted
Total: 0
Request Rejected
Total: 0

Backend Development

A back-end developer writes code that forms the backbone of a website or app. Ever wonder what goes on behind the scenes of a website? How, exactly, does clicking on a button take you to a different page? And where does your personal information go when you sign up for a free trial?
Back-end developers are the experts who build and maintain the mechanisms that process data and perform actions on websites.
Unlike front-end developers, who control everything you can see on a website, back-end developers are involved in data storage, security, and other server-side functions that you cannot see. Back-end development means working on server-side software, which focuses on everything you can't see on a website. Back-end developers ensure the website performs correctly, focusing on databases, back-end logic, application programming interfaces (APIs), architecture, and servers. They use code that helps browsers communicate with databases, and store, understand, and delete data.

Contribution of ID: 20301139, Name Yousuf Abdullah Harun

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
START TRANSACTION;
SET time_zone = "+00:00";


/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;

--
-- Database: `bbms`
--

-- --------------------------------------------------------

--
-- Table structure for table `admins`
--

CREATE TABLE `admins` (
  `id` int(11) NOT NULL,
  `name` varchar(100) NOT NULL,
  `email` varchar(100) NOT NULL,
  `password` varchar(100) NOT NULL,
  `mobile` bigint(10) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

Contribution of ID: 21301292 Name: Bandhan Mondal

```sql
-- Dumping data for table `admins`
INSERT INTO `admins` (`id`, `name`, `email`, `password`, `mobile`) VALUES
(1, 'Admin User', 'admin@gmail.com', 'admin123', 8888888888);

-- --------------------------------------------------------

--
-- Table structure for table `donation`
--

CREATE TABLE `donation` (
  `id` int(11) NOT NULL,
  `donor_id` int(11) NOT NULL,
  `blood_group` varchar(100) NOT NULL,
  `no_units` int(11) NOT NULL,
  `disease` varchar(100) NOT NULL,
  `status` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `donation`
--

INSERT INTO `donation` (`id`, `donor_id`, `blood_group`, `no_units`, `disease`, `status`) VALUES
(301, 101, 'B+', 20, 'Nothing', 1),
(302, 102, 'AB+', 15, 'Nothing', 1),
(1005, 101, 'B+', 5, 'No disease', 1),
(1006, 104, 'A', 10, 'Noo', 2),
(1008, 104, 'A', 5, 'No nothing', 1),
(1009, 105, 'O+', 18, 'I do not have any disease', 1),
(1010, 105, 'O+', 5, 'Nothing', 1),
(1018, 108, 'A-', 24, 'Nothing', 1),
(1019, 109, 'B', 30, 'Nothing', 1),
(1020, 110, 'O-', 18, 'Nothing', 1);
```

Contribution of ID: 22101774 Name: Sadeed Ahmad

```sql
--

CREATE TABLE `requests` (
  `id` int(11) NOT NULL,
  `Receiver_id` int(11) NOT NULL,
  `no_units` int(11) NOT NULL,
  `blood_group` varchar(10) NOT NULL,
  `reason` varchar(250) NOT NULL,
  `status` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `requests`
--

INSERT INTO `requests` (`id`, `Receiver_id`, `no_units`, `blood_group`, `reason`, `status`) VALUES
(1, 501, 10, 'B+', 'Dengue fever', 1),
(1102, 503, 25, 'O+', 'Fever', 2),
(1105, 505, 2, 'A+', 'High fever', 1),
(1106, 505, 2, 'A-', 'Dengue', 1),
(1107, 506, 50, 'B', 'Abc', 2),
(1108, 507, 20, 'O-', 'XYZ', 2),
(1109, 507, 2, 'O-', 'ABC', 1);

-- --------------------------------------------------------
```

```sql
-- Table structure for table `stocks`
--

CREATE TABLE `stocks` (
  `sno` int(11) NOT NULL,
  `blood_group` varchar(10) NOT NULL,
  `stock` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `stocks`
--

INSERT INTO `stocks` (`sno`, `blood_group`, `stock`) VALUES
(1, 'A', 5),
(2, 'A+', 11),
(3, 'A-', 22),
(4, 'B', 30),
(5, 'B+', 15),
(6, 'B-', 0),
(7, 'AB+', 15),
(8, 'AB-', 0),
(9, 'O+', 23),
(10, 'O-', 16);
```

```
--
-- Indexes for dumped tables
--

--
-- Indexes for table `admins`
--
ALTER TABLE `admins`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `donation`
--
ALTER TABLE `donation`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `donors`
--
ALTER TABLE `donors`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `patients`
--
ALTER TABLE `Receivers`
  ADD PRIMARY KEY (`id`);

--
```

```
--
-- AUTO_INCREMENT for table `requests`
--
ALTER TABLE `requests`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=1110;

--
-- AUTO_INCREMENT for table `stocks`
--
ALTER TABLE `stocks`
  MODIFY `sno` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=11;
COMMIT;

/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
```

Source Code Repository

Here is the code repository of our project file, which is uploaded on GitHub: https://github.com/harun00777/Bloodbank-Management-System

Conclusion

With the theoretical inclination of our syllabus, it becomes very essential to take the utmost advantage of any opportunity to gain practical experience that comes along. The building blocks of this Major project, "Blood Bank Management System," were one of these opportunities. It gave us the requisite practical knowledge to supplement already taught theoretical concepts, thus making us more competent as computer engineers. From a personal point of view, it also helped us understand many aspects.

The project also provided us with the opportunity to interact with our theory and lab faculty and to gain from their best experience.

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