



**CSC3402**

**DATABASE APPLICATION DEVELOPMENT**

**SEMESTER 2 YEAR 2023/2024**

**REPORT GROUP PROJECT**

**NAME : NURFARHANNIS NABILA BINTI MOHD FAUZI (216535)**

**NUR SAHEERAH BINTI RAFIQ RAVINDRAN (216408)**

**NURUL ILYANA BINTI MOHAMED SAUPI(214695)**

**PROGRAMME : BACHELOR OF COMPUTER SCIENCE WITH HONORS**

**GROUP : GROUP 1**

**LECTURER : PROF. MADYA DR. LILLY SURIANI AFFENDEY**

## TABLE OF CONTENTS

BIL.	CONTENT	PAGE
1.	INTRODUCTION	3
2.	DATABASE DESIGN	4
3.	APPLICATION DESIGN (MVC ARCHITECTURE)	5 - 9
4.	USER INTERFACES DESIGN (GOODNOTES)	11 - 17
5.	SCREENSHOTS OF THE WEB APPLICATION AND DATABASE TESTING	18 - 24
6.	CONCLUSION	25
7.	EVIDENCE	26 - 29

## 1.0 INTRODUCTION

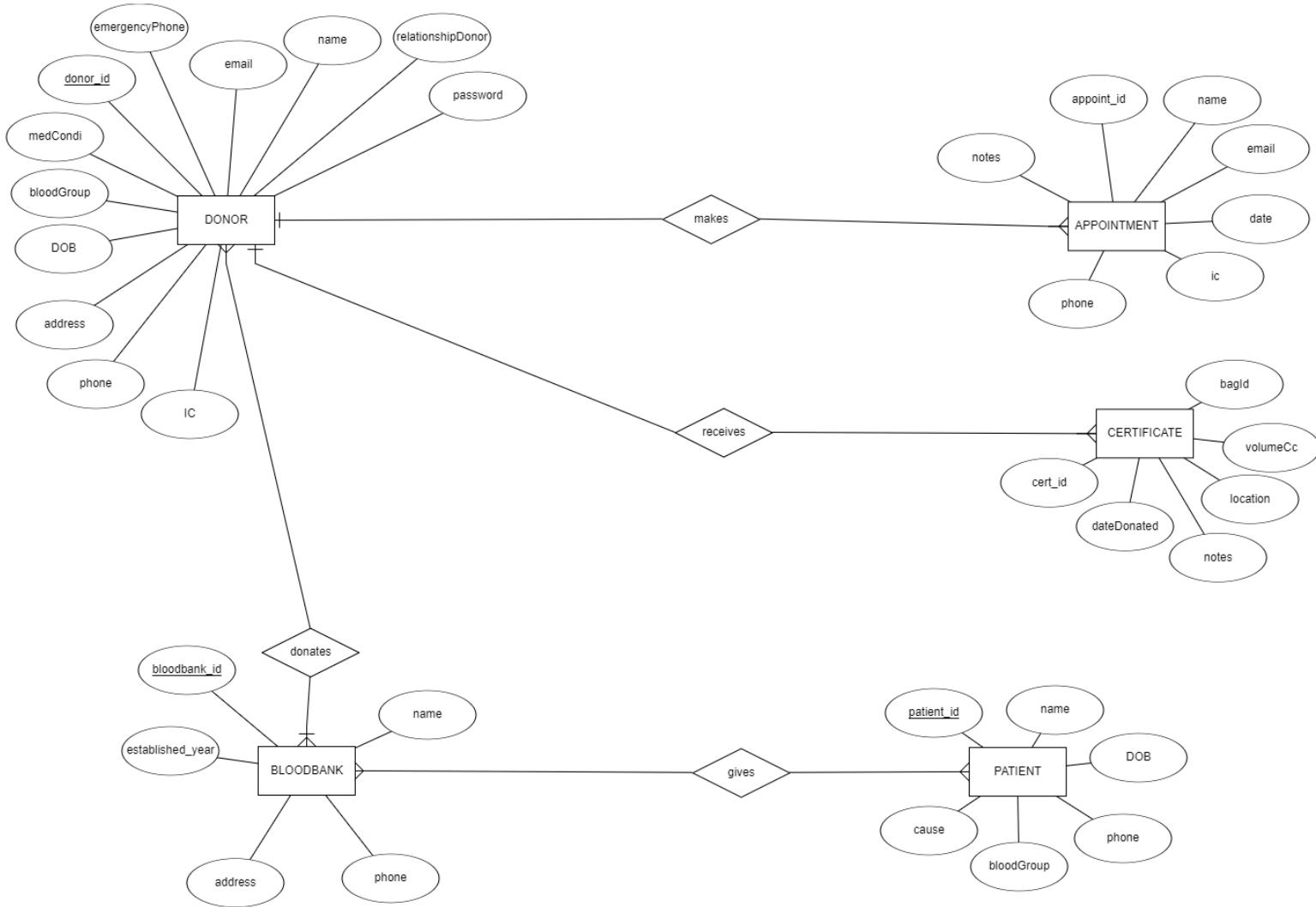
A blood donation website serves as a centralized platform to streamline the process of blood donation. For donors, it offers a convenient interface to find donation centers, schedule appointments, and track donation history. For the organization, it ensures that the data is systematically organized and accessible, promoting efficiency in handling patient and donor information, blood inventory, and operational logistics. The integration of a robust database is essential in managing the complex data structures and ensuring data integrity and security.

The website features a secure registration and login system. Donors can create personal profiles, track their donation history, and book an appointment for their next donation. The website provides valuable resources, including the refreshments provided and ways to help with recovery from blood donation.

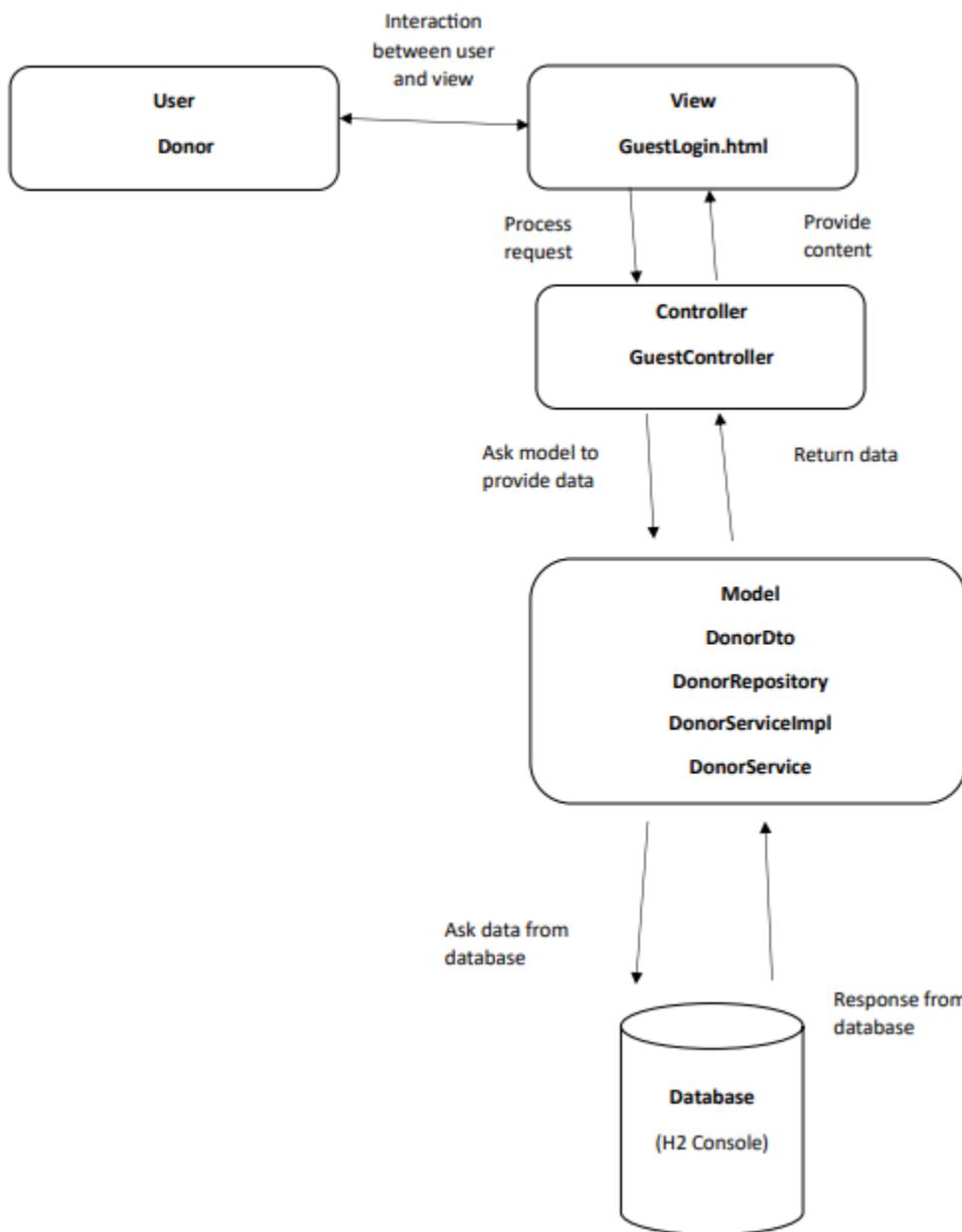
Employees can access a centralized database to view, update, and manage patient and donor records. This includes updating personal details, logging donation events, and tracking blood inventory levels. The database application ensures that sensitive information is protected through encrypted storage and access control mechanisms.

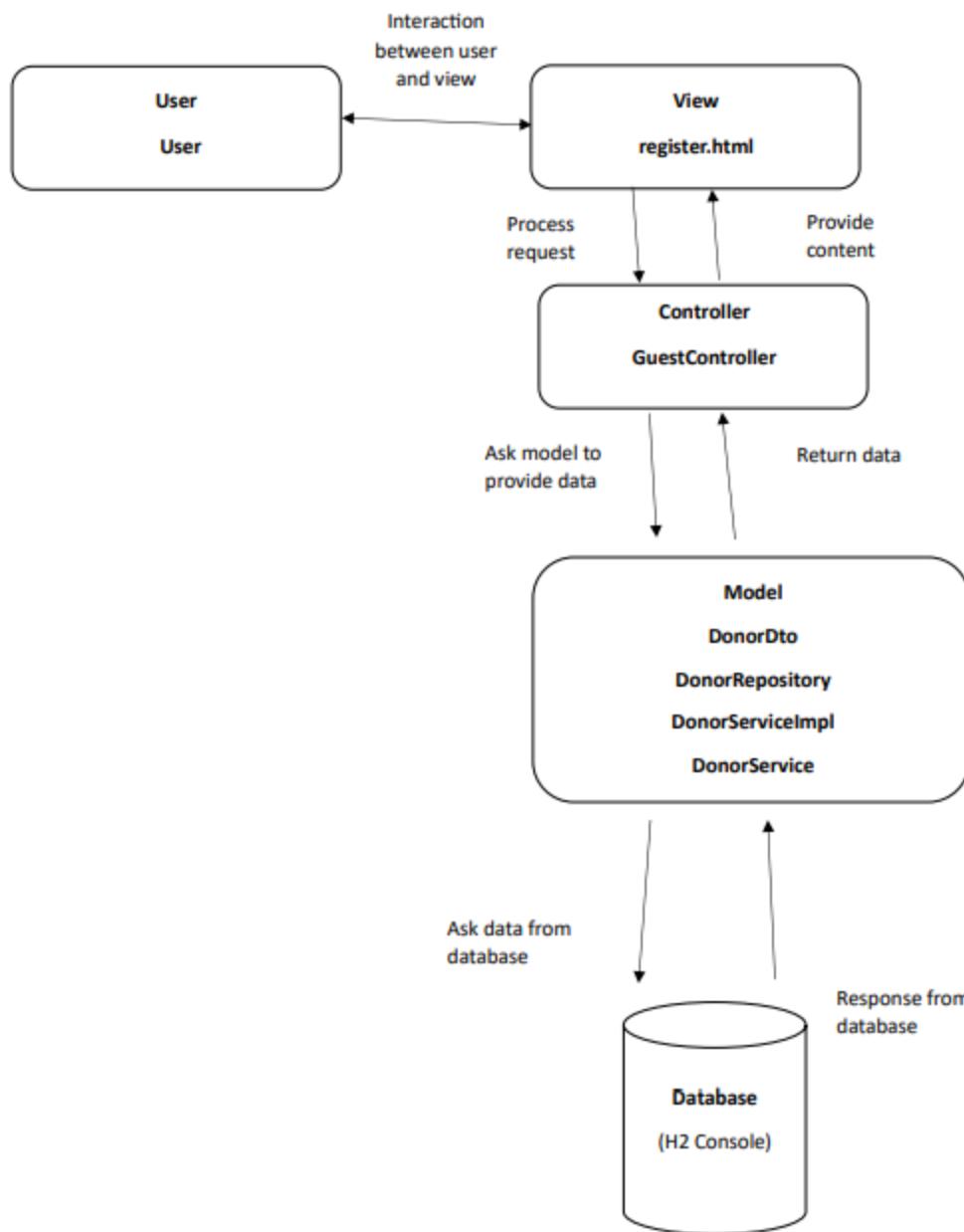
The core of this website's functionality is underpinned by a robust database management system (DBMS). The development process involves several critical steps such as Understanding the needs of both donors and organizational staff to define data structures and functionalities, designing a relational database schema to store donor information, blood inventory data, appointment schedules, user credentials and blood bank data, and constant testing to ensure data accuracy, security, and performance before deploying the system for operational use.

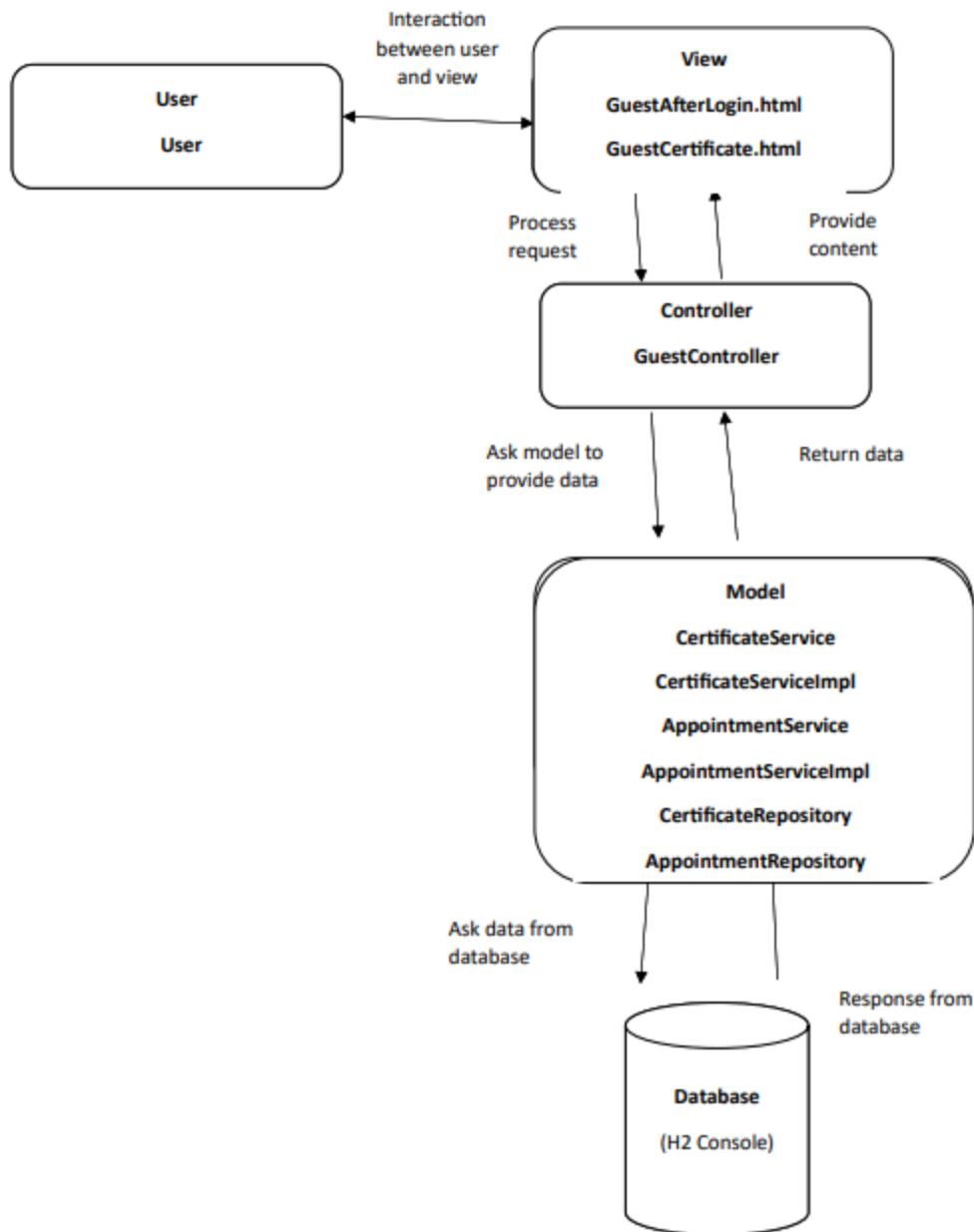
## 2.0 DATABASE DESIGN

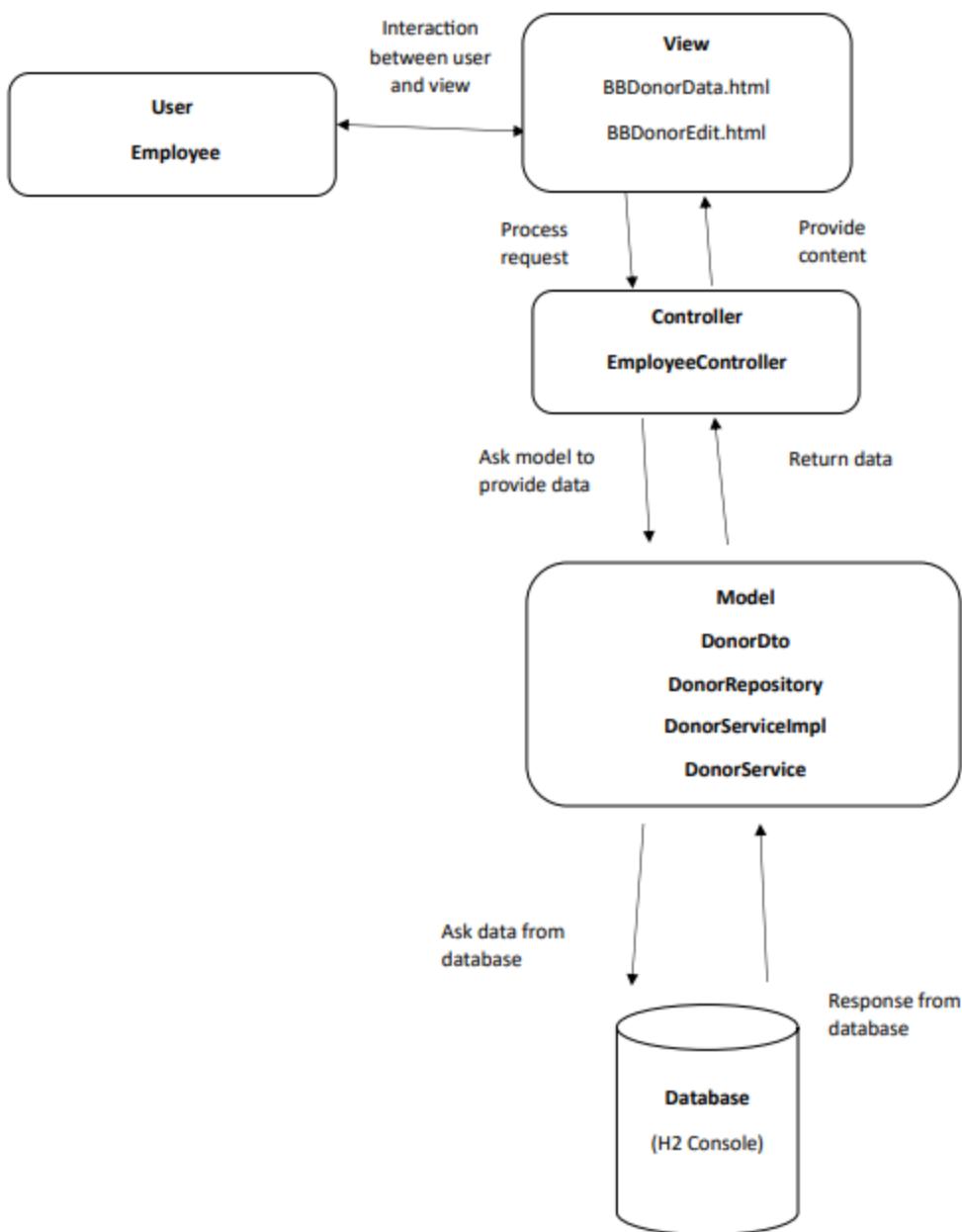


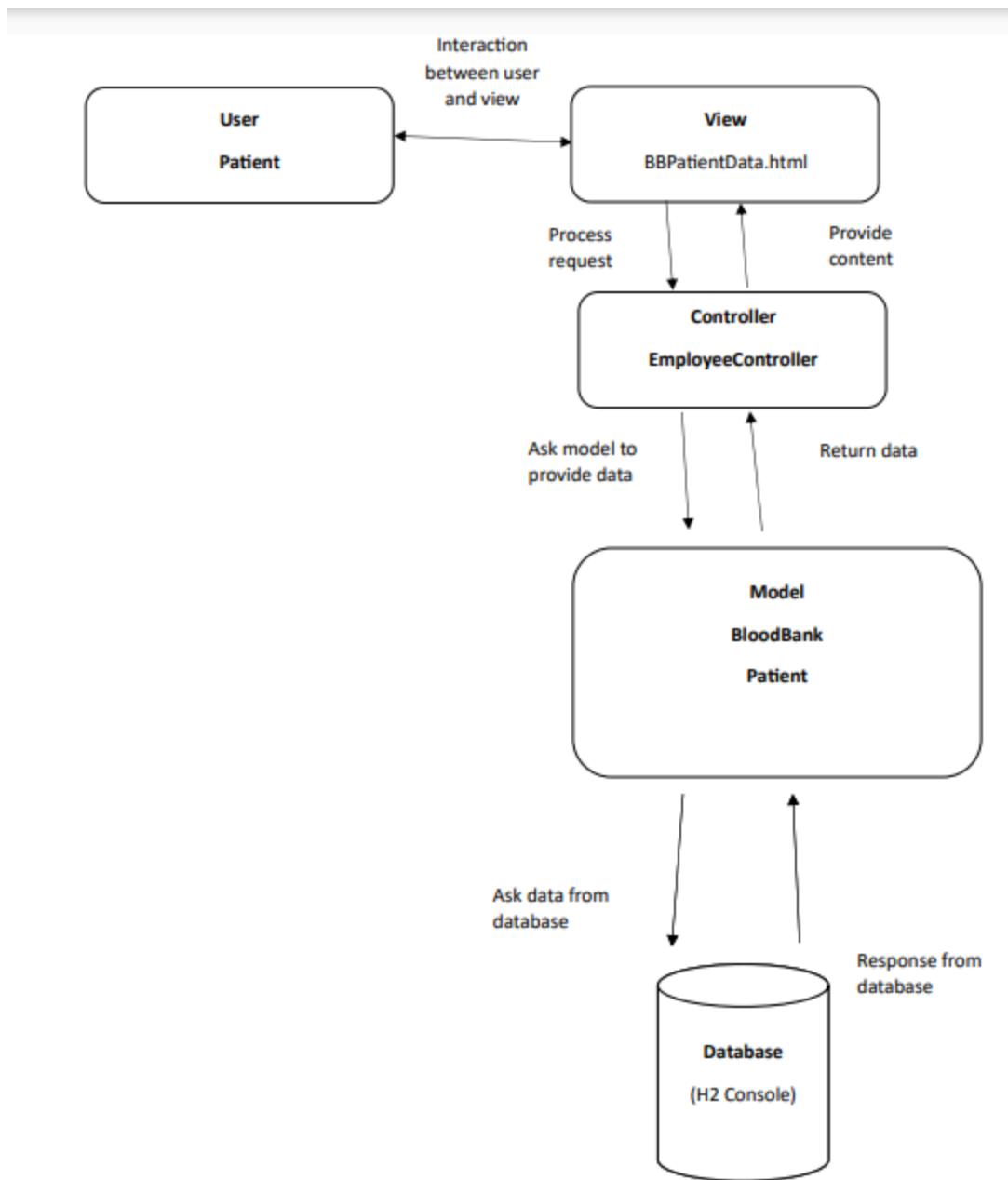
### 3.0 APPLICATION DESIGN (MVC ARCHITECTURE)



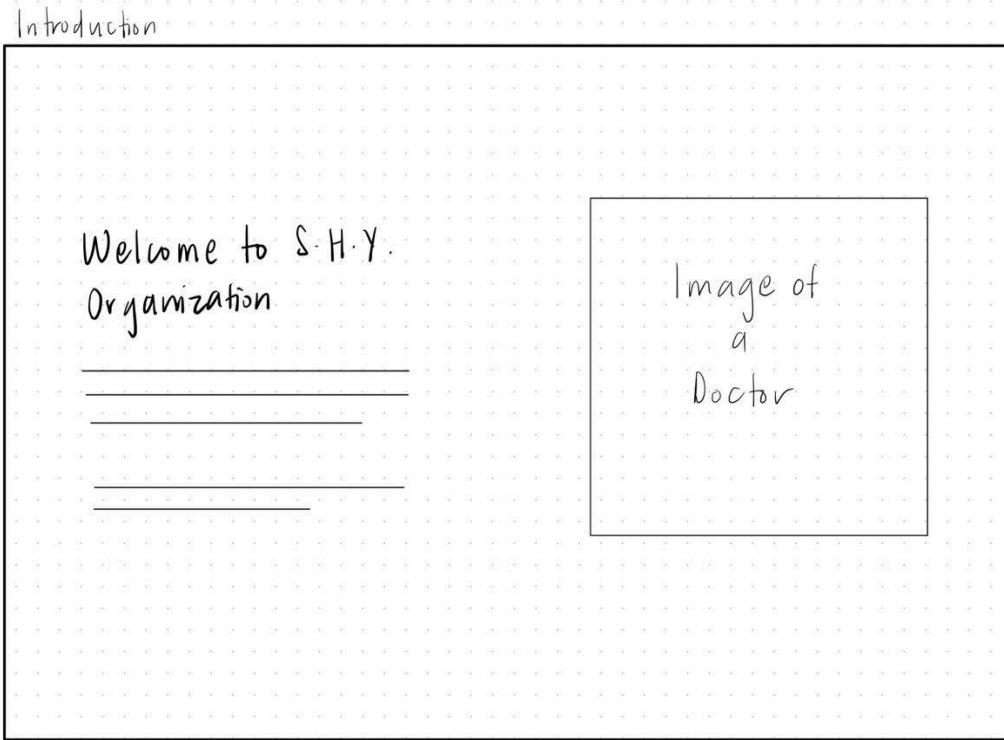
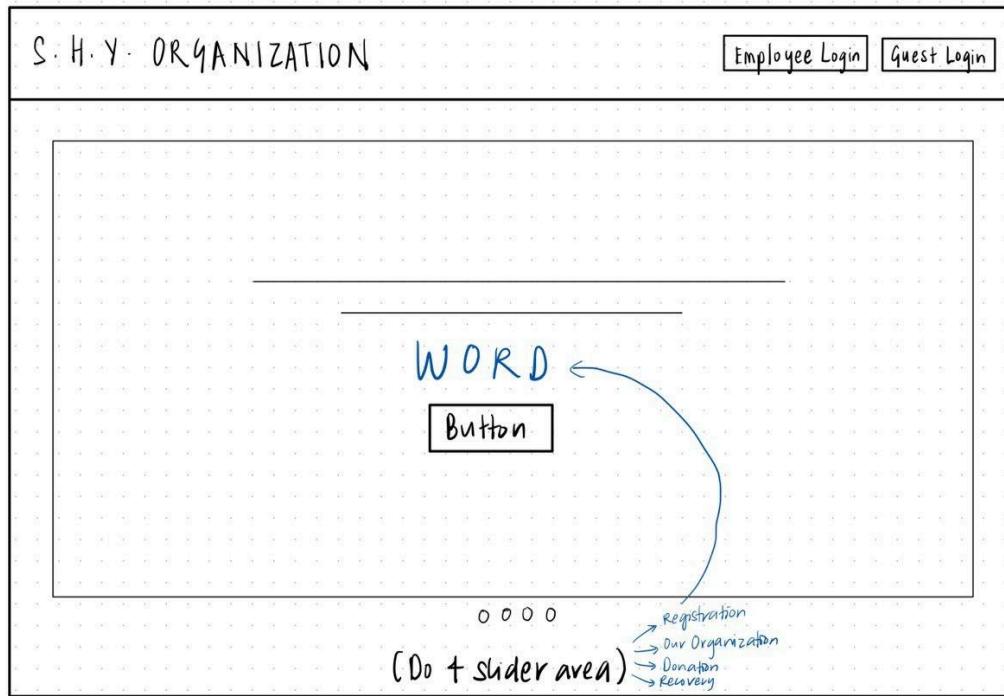








## 4.0 USER INTERFACES DESIGN (GOODNOTES)



List of Doctors

DOCTORS		
Doctor	Doctor	Doctor
Name _____	Name _____	Name _____

Recovery Page

Recovery		
_____	_____	_____
_____	_____	_____
_____	_____	_____

Make an appointment

Make an appointment

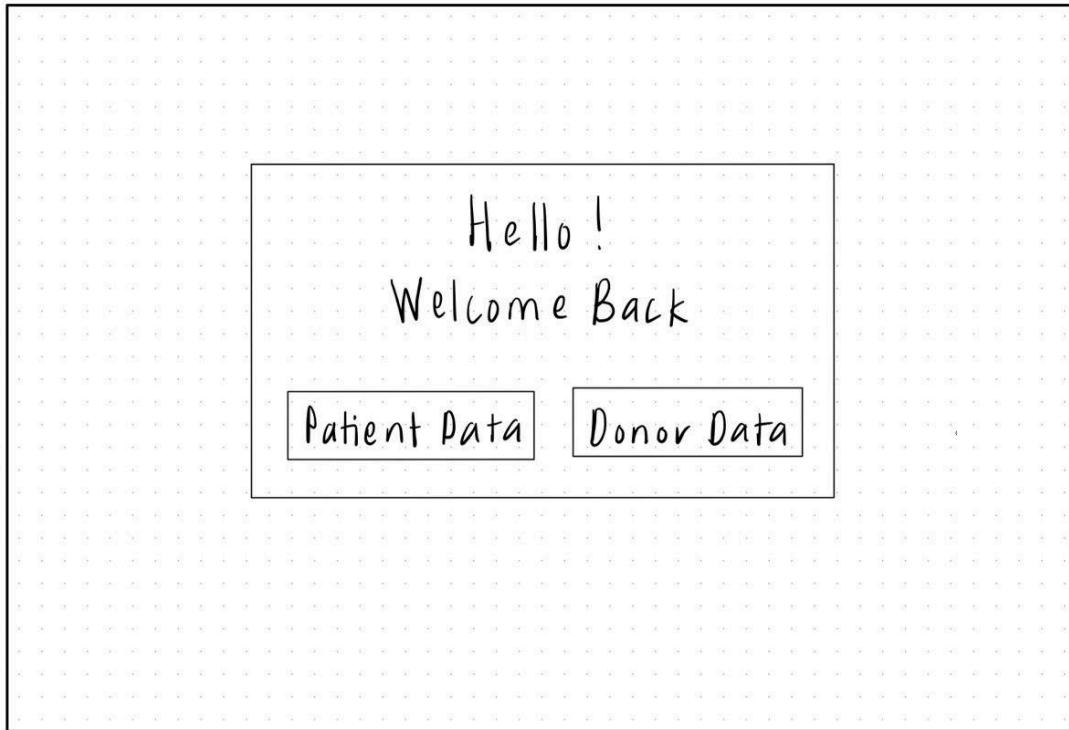
Name:	Email:
Date:	IC:
Phone Number:	Message:
SUBMIT	

After press Employee Login

EMPLOYEE LOGIN

Email:	
Password:	
CONTINUE	

After **CONTINUE**



After **Patient Data**

Patient					Blood Bank				
Name	O-O-B-	Patient ID	Blood Group	Cause	Blood Bank ID	Hosp. Name	Phone Number	Address	Year

## After Donor Data

## Donor's Data

After press

**GUEST LOGIN**

Email:

Password:

Don't have an account?  
[Register here](#)

**CONTINUE**

Register

REGISTER

Name:

Email:

Password:

IC:

Phone Number:

Address:

D.O.B:

Blood Group:

Medical Condition:

After **CONTINUE**



After Certificate

CERTIFICATE					
No.	Date Donated	Bug ID	Volume CC	Location	Notes

## 5.0 SCREENSHOTS OF THE WEB APPLICATION AND DATABASE TESTING

### Home Page

Welcome to S.H.Y Organization

010-060-0160 | 6:00 AM - 10:00 PM (Mon-Fri) | s\_h\_y@company.com

S.Y.H Organization

Home About Us Doctors R&R Contact Employee Login Guest Login

YOU'LL BE GUIDED TO OUR REFRESHMENT AREA WHERE YOU CAN ENJOY SNACKS AND DRINKS AFTER THE DONATION - TO HELP YOU RECOVER AND FEEL REVITALIZED

# Refreshment & Recovery

Read Stories

A large background image shows a smiling female doctor in a white coat and stethoscope. Below the image is a blurred background with two people's profiles.

Welcome to S.H.Y Organization

Learn more about our life-saving mission, find answers to your questions, and explore ways to get involved by visiting our comprehensive blood organization website.

It's your go-to resource for everything related to blood donation and how you can make a difference.

**Min Guk Bak**  
CEO of S.Y.H Organization

A large portrait of a young man with dark hair, wearing a white lab coat over a blue shirt. He is smiling and looking slightly to the side. The background is plain white.



## Our Doctors

**Mung Sim Oh**

Head Nurse

📞 010-020-0120

✉️ head\_nurse@company.com

**Eun Tak Park**

Nurse

📞 010-070-0170

✉️ assisting\_nurse@company.com

**Dr. Yong Joo Bu**

Doctor In-Charge

📞 010-040-0140

✉️ doctor@company.com



## Refreshment & Recovery



March 08, 2018

**Enjoy a snack**

Relax for a few minutes in our refreshment & recovery area — have some cookies or other snacks — you've earned it!

**Jeremie Carlson**  
Staff

February 20, 2018

**Drink extra liquid**

Drink an extra four glasses of liquids over the next 24 hours to help your body replenish fluids.

**Jason Stewart**  
Manager

January 27, 2018

**Tell others about your good deed**

Enjoy the feeling of accomplishment knowing you are helping to save lives.

**Andrio Abero**  
Online Advertising

## Appointment form/Donate Now

The header features a logo with a red heart and three stars, followed by the text "S.Y.H Organization". To the right are links for "Home", "About Us", "Doctors", "R&R", and "Contact", along with two red buttons: "Employee Login" and "Guest Login".



### Make an appointment

Name  Full Name  Your Email

Select Date  dd/mm/yyyy  Identity Card (IC)  Your IC

Phone Number  Phone

Additional Message  Message

**Submit Button**

The map interface includes a sidebar with address details: Sanjeonghosu-ro, Yeongbuk-myeon, Pocheon-si, Gyeonggi-do, South Korea. It shows a 4.2-star rating with 175 reviews. Buttons for "Directions" and "View larger map" are also present.

#### Contact Info

If you have any questions or need more information about blood donation, please don't hesitate to reach out to us. Our team is here to help you with everything you need.

📞 010-070-0170

✉️ s\_y\_h@company.com

#### Latest News

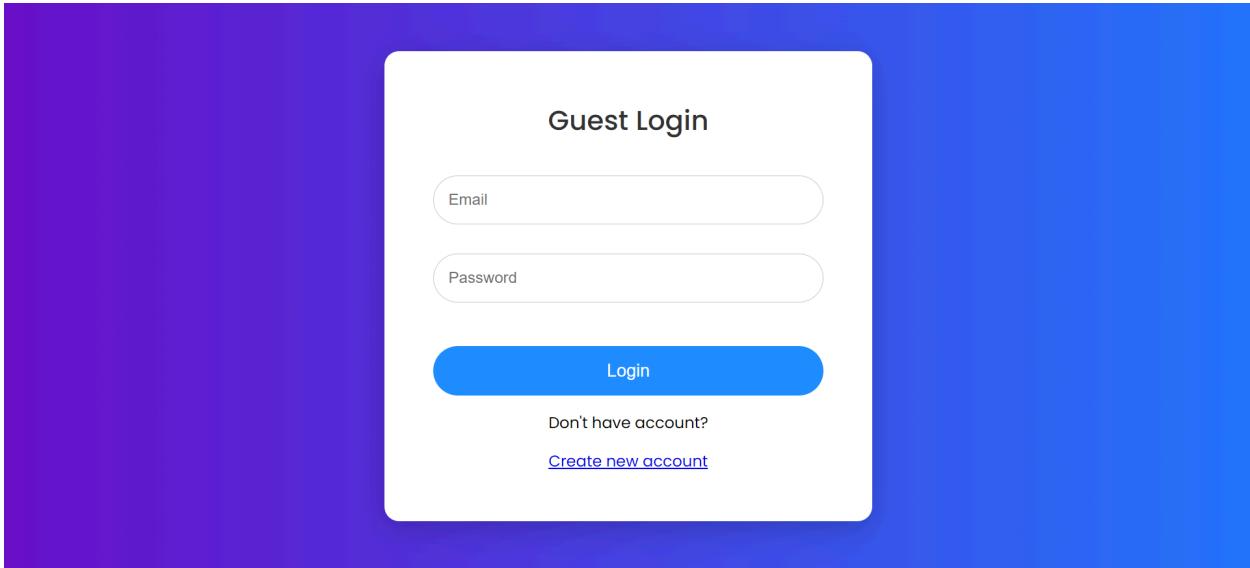
- Our Website  
March 08, 2018
- Refreshment & Recovery  
February 20, 2018

#### Opening Hours

Monday - Friday 06:00 AM - 10:00 PM  
Saturday 09:00 AM - 08:00 PM  
Sunday Closed

[Facebook](#) [Twitter](#) [Instagram](#)

## Guest Login



## Register Form (1)

A screenshot of a registration form titled "Register". The form is set against a background divided into three vertical sections: orange on the left, white in the center, and orange on the right. The central white section contains the registration fields. The fields are labeled "Name", "Email", "Password", "IC", "Phone", and "Address". Each label is followed by a light gray input field.

## Register Form (2)

Address

Date of Birth  
 dd/mm/yyyy

Blood Group  
 Select Blood Group

Medical Condition

Emergency Contact

Relationship with Donor

[Back to Login](#) [Done](#)

## Employee Login

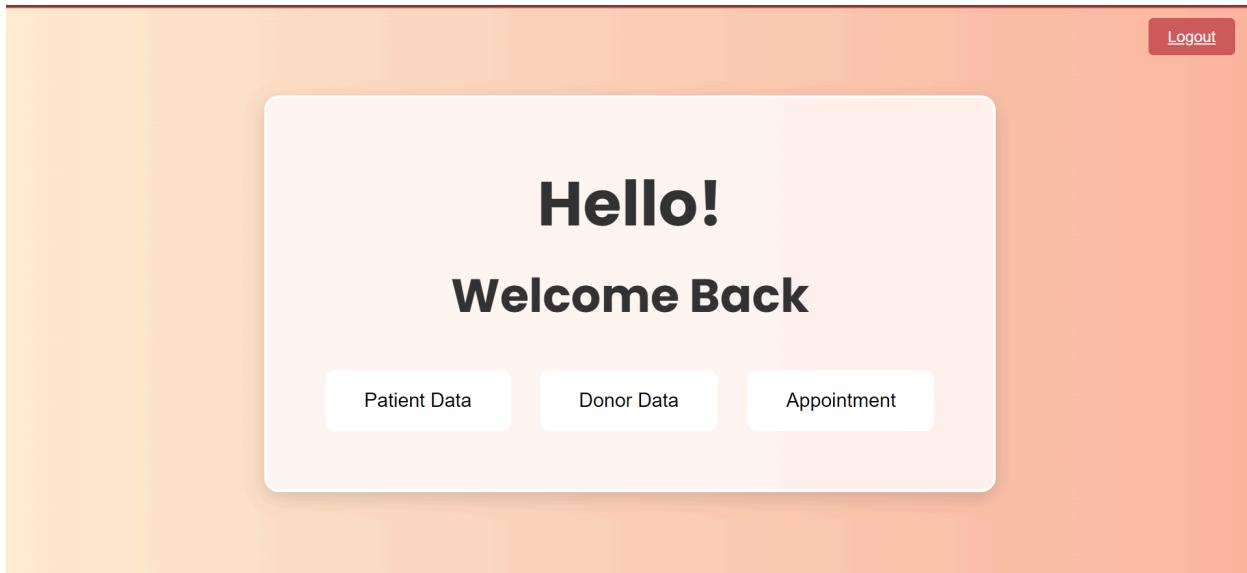
Employee Login

Email

Password

[Login](#)

## After Employee Login



## Patient Data

A screenshot of a "Patient Data" table. At the top left is a "Back" link. The title "Patient Data" is centered above the table. The table has a header row with columns for Patient ID, Name, D.O.B., Phone, Blood Group, Cause, Blood Bank ID, Name, Phone Number, Address, Established Year, Edit, and Delete. There is one data row showing a patient named Sabella with ID 1, and a blood bank entry for PDN. The "Edit" and "Delete" buttons for the patient row are highlighted with a pink border.

Back

### Patient Data

PATIENT						BLOOD BANK					ACTIONS	
PATIENT ID	NAME	D.O.B.	PHONE	BLOOD GROUP	CAUSE	BLOOD BANK ID	NAME	PHONE NUMBER	ADDRESS	ESTABLISHED YEAR	EDIT	DELETE
1	Sabella	2003-01-10	1234567890	AB+	Accident	1	PDN	34445555	Jalan Panglima	1345	Edit	Delete

## Donor Data

[Back](#)

### Donor Data

DONOR ID	DONOR NAME	DONOR EMAIL	D.O.B.	MEDICAL HISTORY	DONOR BLOOD	HEIR CONTACT	RELATIONSHIP WITH DONOR	BAG ID	VOLUME CC	DATE DONATED	CERTIFICATE		ACTIONS	
											LOCATION	EDIT	DELETE	
1	John Doe	john.doe@example.com	1985-05-15	None	O+	555-5678	Brother	BD001	350	2024-06-17 00:00:00.0	Busan	<button>Edit</button>	<button>Delete</button>	
2	Jane Smith	jane.smith@example.com	1990-04-25	Asthma	A+	555-1234	Sister	BD002	400	2024-06-18 00:00:00.0	Seoul	<button>Edit</button>	<button>Delete</button>	

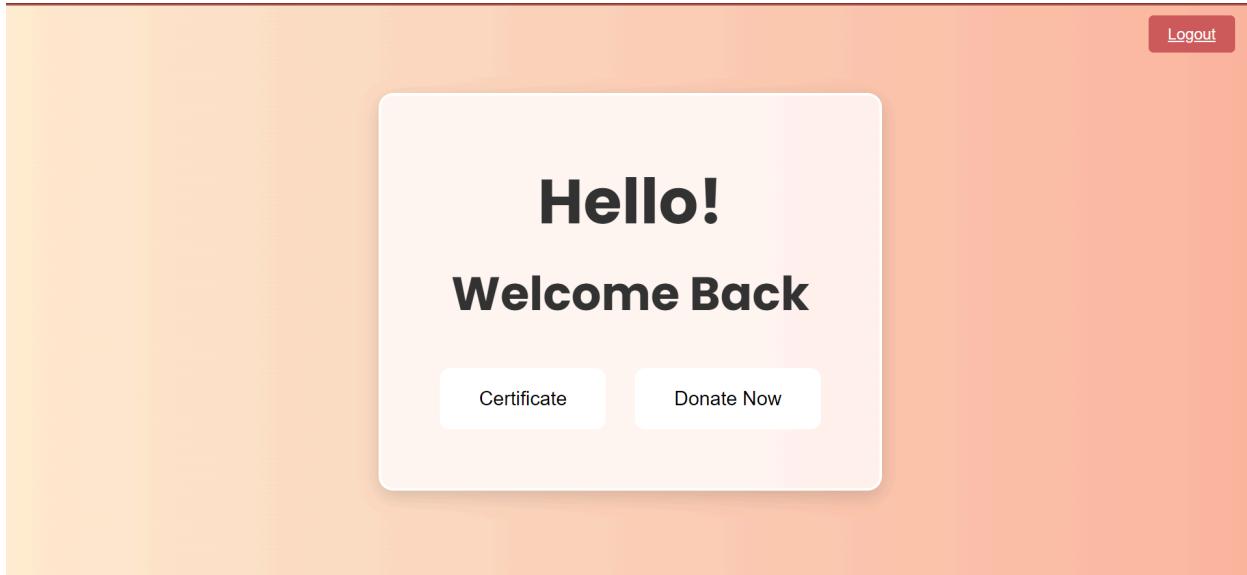
## Appointment

[Back](#)

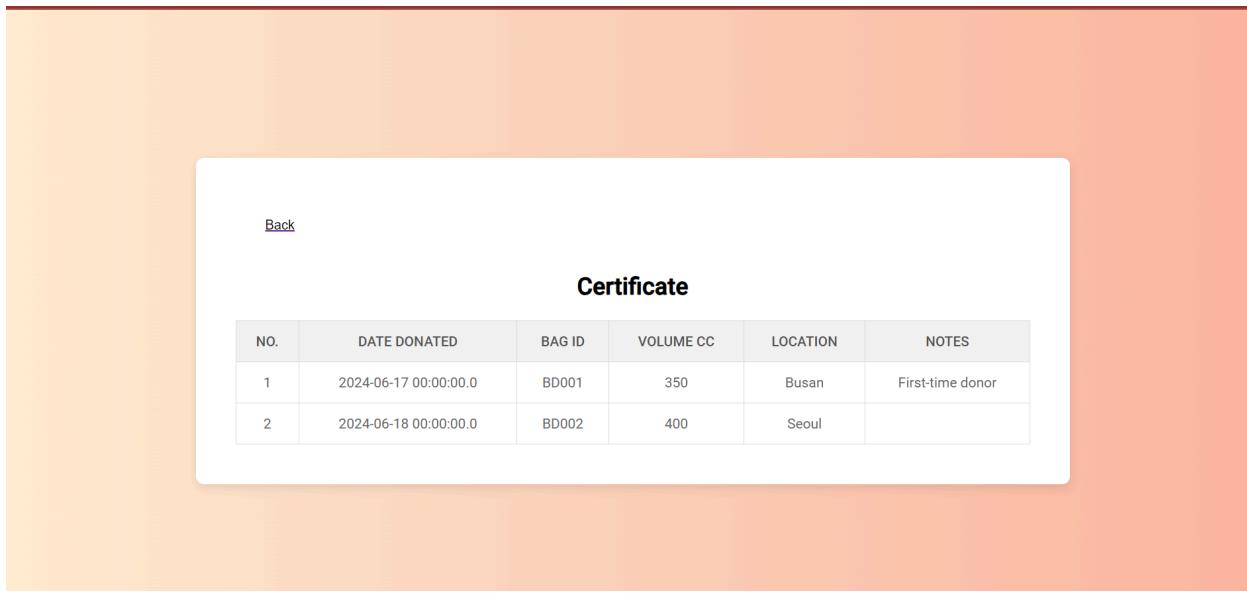
### Appointment

NO.	NAME	EMAIL	DATE	IC	PHONE	NOTES
1	Aisyah Humaira	lalisaaisyah@gmail.com	2024-05-27 00:00:00.0	0907654321876	0134545454	I am late.

After GuestLogin



Certificate



NO.	DATE DONATED	BAG ID	VOLUME CC	LOCATION	NOTES
1	2024-06-17 00:00:00.0	BD001	350	Busan	First-time donor
2	2024-06-18 00:00:00.0	BD002	400	Seoul	

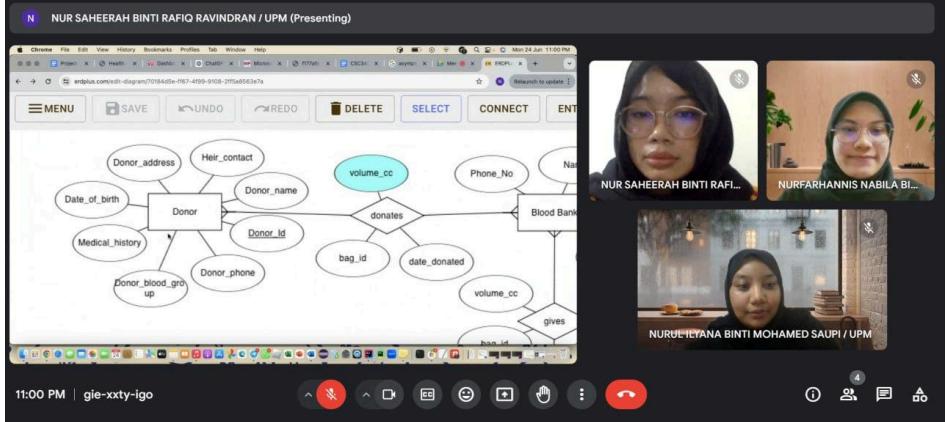
## 6.0 CONCLUSION

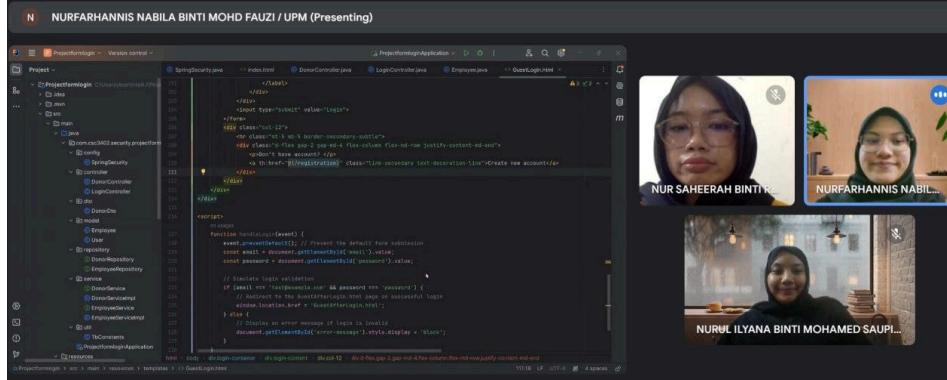
In conclusion, a well-designed blood donation website significantly improves the donation process for both donors and organizations. It provides donors with a user-friendly interface to find donation centers, schedule appointments, and track their donation history. The core of this system is a robust database management system (DBMS), which handles complex data related to donors, blood inventory, and operations.

Security is paramount, with encrypted storage and access control ensuring data protection. Donors can securely register, log in, and manage their profiles and appointments. Organizational staff benefit from a centralized database for efficiently updating and managing records. The development process focuses on understanding user needs, designing an effective database schema, and thorough testing to ensure accuracy, security, and performance.

Overall, this centralized platform streamlines the blood donation process, enhancing efficiency and reliability for all users.

## 7.0 EVIDENCE OF OUR PROJECT PROGRESS

Milestone 1	First Meeting (ERD Sketching)
Date (week)	Week 10
Prove/ Description	 <p>Discussing about the ERD Diagram</p>

Milestone 2	Second Meeting (Database)
Date (week)	Week 11
Prove/ Description	 <p>Discussing the database code</p>

NURUL ILYANA BINTI MOHAMED SAUPI / UPM (You, presenting)

Stop presenting

```

1 DROP TABLE IF EXISTS Certificate;
2 CREATE TABLE Certificate (
3     id integer generated by default as identity primary key,
4     date_donated DATE,
5     bag_id VARCHAR(255),
6     volume INTEGER,
7     location VARCHAR(255),
8     notes VARCHAR(255)
9 );
10
11 INSERT INTO Certificate (date_donated, bag_id, volume_cc, location, notes) VALUES
12     ('2023-05-27', '3000', '1000', 'Iban Aley', 'First-time donor');
13 INSERT INTO Certificate (date_donated, bag_id, volume_cc, location, notes) VALUES
14     ('2023-05-25', '2000', '350', 'John Doe', 'Second-time donor');
15
16
17 
```

Problems File Project Errors Server-Side Analysis Vulnerable Dependencies

data.sql C:\Users\ilyana\IdeaProjects\CSC3402Project\main\resources 2 problems

① ② CASCADE or PURGE expected, got 'EXISTS'!

Type In word 'Aley' 12

C:\Users\ilyana\IdeaProjects\CSC3402Project > src > main > resources > data.sql

7:41 CRLF UTF-8 4 spaces ⌂

NURFARHANIS NABIL... NUR SAHEERAH BINTI R...

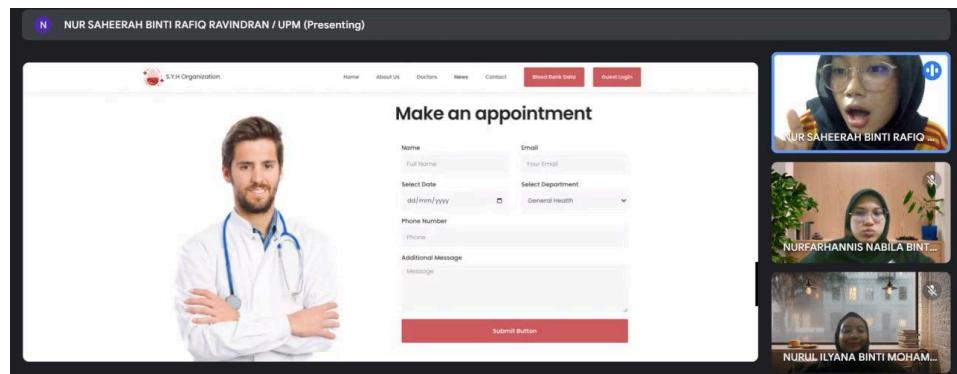
NURUL ILYANA BINTI MOHAMED SAU...

Discussing table created for database

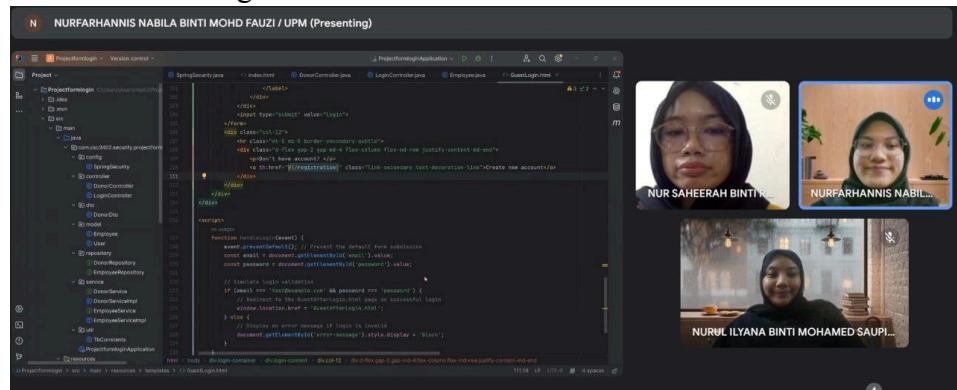
Milestone 3	Third Meeting (Wireframe)
Data (week)	Week 12
Prove/ Description	<p>Discussing interface drafts</p>

Milestone 4	Forth Meeting (HTML)
Data (week)	Week 13

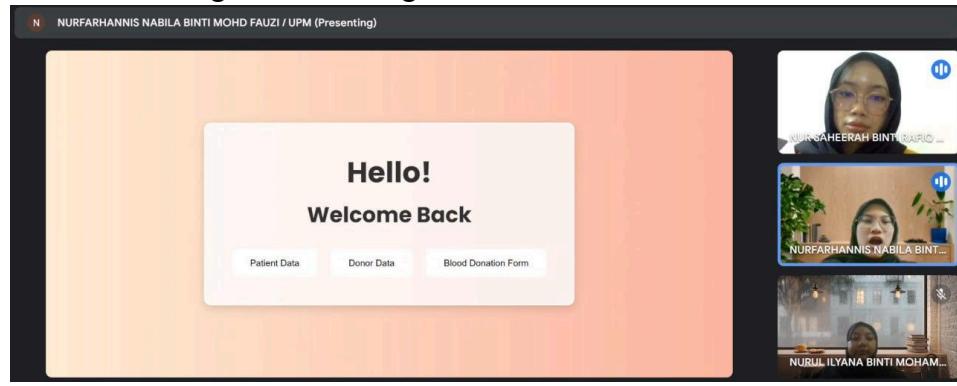
Prove/  
Description



Saheerah : Incharge of Main website HTML



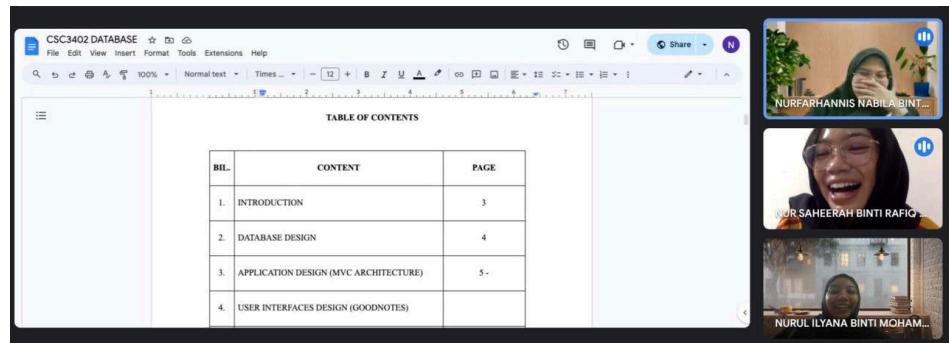
Hannis : Incharge of Guest Login HTML



Ilyana : Incharge of Employee Login HTML

Milestone 5	Fifth Meeting (Report)
Date (week)	Week 14

Prove/  
Description



Dividing task for completing report

Codes in Github:

<https://github.com/hannismochi/projectCSC3402>