



IT5512 – WEB TECHNOLOGIES LABORATORY
MINI-PROJECT REPORT

**PROJECT REPORT ON
“MIT YRC CONNECT”**

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On:

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B.Tech IT (4/8)

DEPARTMENT OF INFORMATION TECHNOLOGY

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This project report has been submitted as a requirement for completion of the laboratory subject Web Technologies with the subject code IT5512.

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Google Drive link:

https://drive.google.com/drive/folders/1_xYTTjCthYBrqwu8mALQJBDkmYPuRNee?usp=drive_link

Github repository link:

<https://github.com/Alamelu515/MIT-YRC-Connect.git>

PROBLEM STATEMENT AND INSPIRATION

- In today's world, organizations like the Youth Red Cross (YRC) play a pivotal role in fostering humanitarian service and promoting social welfare.
- The YRC at the Madras Institute of Technology (MIT) has been actively involved in various community service initiatives, such as organizing blood donation camps, assisting visually impaired individuals through scribe services, and hosting awareness sessions on social issues.
- Though there is a website that has been hosted for the club at the URL <http://yrc.mitindia.edu/> , the current management system for YRC at MIT relies heavily on manual processes and communication platforms like WhatsApp and Excel spreadsheets.
- In the existing system of managing YRC activities, especially the blood donation requests, scribe requests for visually impaired individuals, and sessions management, remain mostly manual. The process involves:
 - Blood requests: Public, students, staff, or others make blood requests via WhatsApp, and the admin manually manages these requests through the social media handles of MIT YRC.
 - Scribe requests: Similar to blood requests, visually challenged individuals request scribe services, and these requests are handled manually.
 - Session Information: Weekly session details, motivational speeches, and other activities are communicated and managed through WhatsApp groups and manual reports.
- The existing system, while functional, does not provide an automated platform for managing these processes effectively, leading to:
 - Missed opportunities for improvement.
 - Time-consuming and inefficient administrative tasks of manual tracking, reporting, and ensuring timely responses for requests.

PROPOSED SOLUTION

- To address the challenges faced by the **MIT YRC Club**, we have developed **MIT YRC Connect**, a web application using Java.
- We have identified two primary groups of users, each with specific roles and functionalities:
 - **General Users**: Club members or visitors who interact with the platform.
 - **Admins (Office Bearers)**: Responsible for managing the club's operations and content.

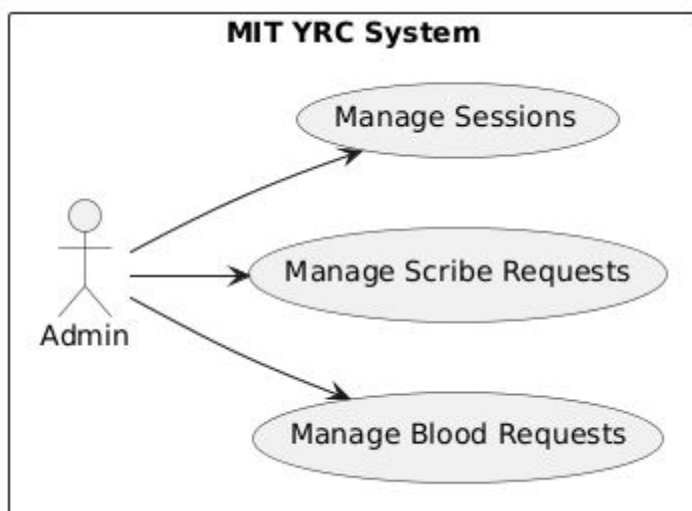
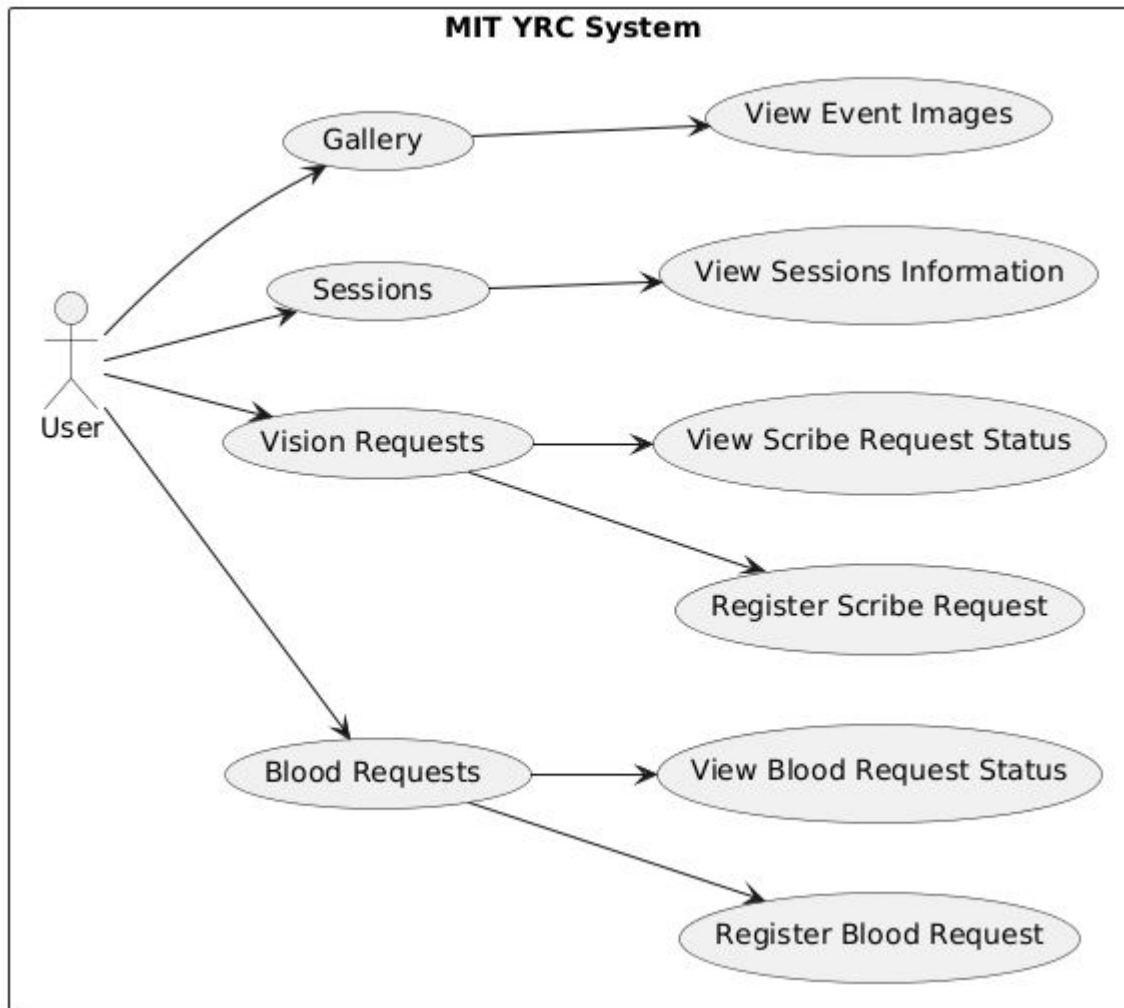
- The platform will provide distinct features for each group, depending on their requirements. The scope, features and deliverables of this project are discussed in brief in the following section and are evident in the screenshots and demo video attached herewith.

PROJECT FEATURES

- **Users** can:
 - View upcoming and past sessions details.
 - View history of blood requests with their current status, and submit new blood requests.
 - View history of scribe requests with their current status, and submit new scribe requests.
 - View a gallery of photos from YRC activities.
- **Admins** can:
 - View, and manage blood requests.
 - View, and manage scribe-related requests.
 - View, and create session details.

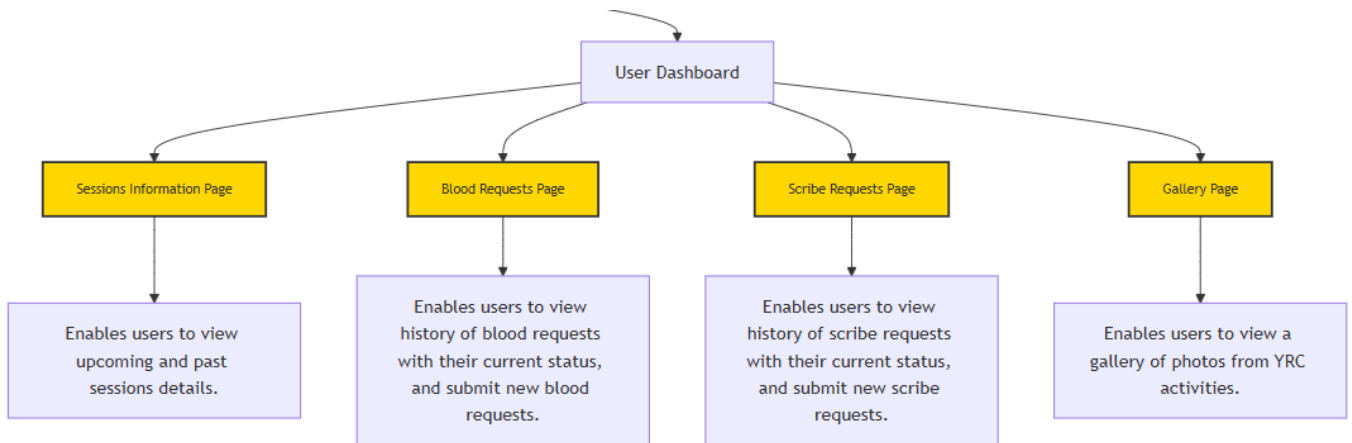
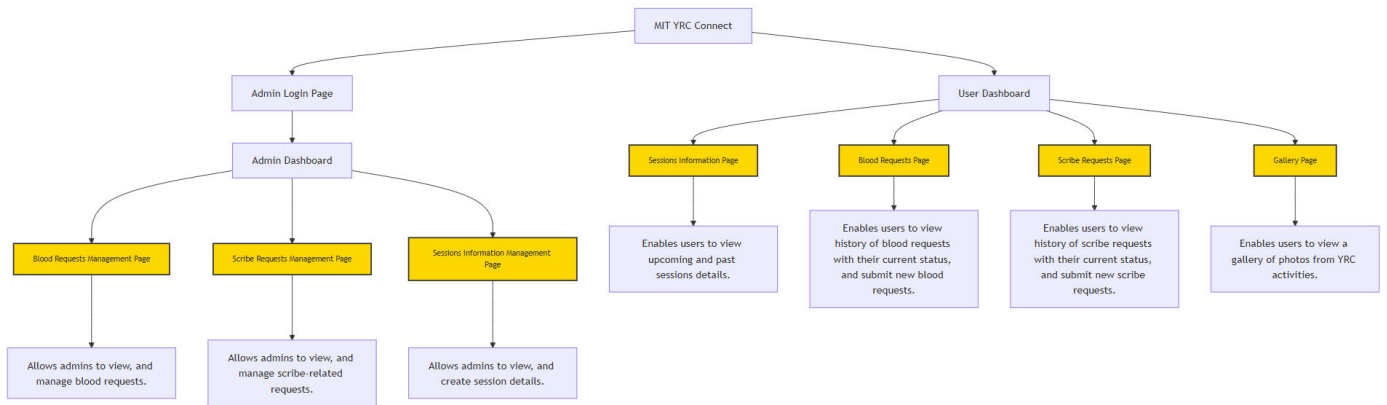
PLANNING PHASE ASPECTS

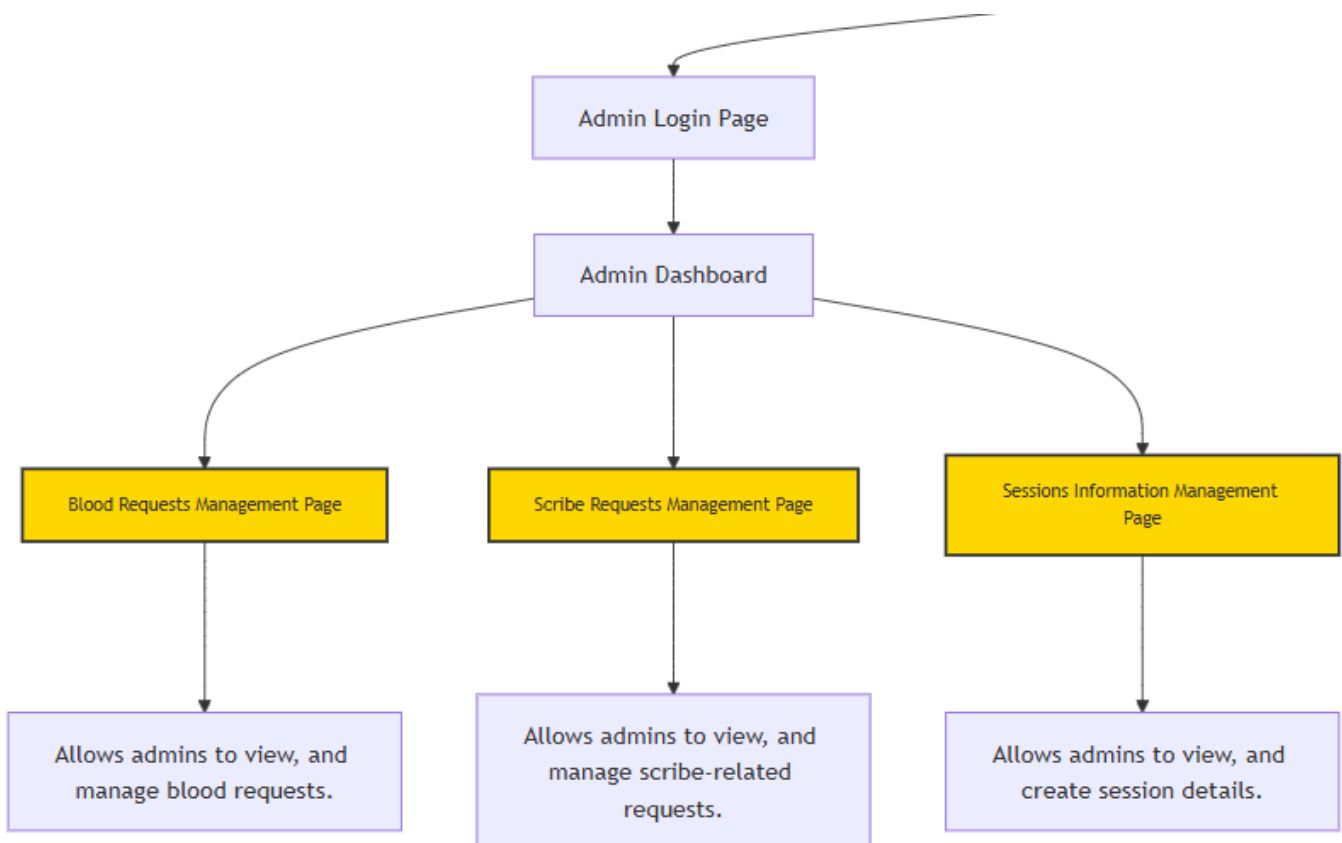
PROJECT REQUIREMENTS - USE CASE DIAGRAMS



SYSTEM DESIGN ASPECTS

ARCHITECTURAL DESIGN





DATABASE DESIGN

```
MariaDB [(none)]> use wtproj;
Database changed
MariaDB [wtproj]> drop table blood_status;
Query OK, 0 rows affected (0.031 sec)

MariaDB [wtproj]> show tables;
+-----+
| Tables_in_wtproj |
+-----+
| blood             |
| scribe_requests   |
| sessions          |
+-----+
3 rows in set (0.011 sec)
```

TECH STACK USED

➤ **Front End:**

- **HTML:** For structuring the content and layout of the website.
- **CSS:** For styling and enhancing the visual presentation of the site.
- **CSS Frameworks:**
 - **Bootstrap:** A CSS framework, for creating a responsive and modern design.
- **JavaScript:** For adding interactivity and dynamic features.
- **JavaScript Frameworks and Libraries:**
 - **Vanilla JavaScript**
 - **jQuery:** A JavaScript library, for simplifying JavaScript tasks, such as DOM manipulation, event handling, and AJAX requests.

➤ **Back End:**

- **Java:** The primary programming language for implementing the business logic.
- **Java Development Libraries:**
 - **Java Servlet API:**
 - **Purpose:** This library has been used to handle HTTP requests and responses, forming the backend logic to process client requests and manage interactions between the client-side interface and the backend.
 - **Libraries/Jar Files, and Package:** servlet-api.jar, javax.servlet.*
- **Web Development Libraries:**
 - **JSTL (JavaServer Pages Standard Tag Library):**
 - **Purpose:** This library has been used to simplify the integration of Java code into HTML, reducing the need for complex Java code in JSP pages.
 - **Libraries/Jar Files:** jstl.jar, standard.jar
- **Database Connectivity Libraries:**
 - **MySQL Connector/J:**
 - **Purpose:** This library has been used to establish a connection between the Java application and the MySQL database.
 - **Jar File:** mysql-connector-java.jar
 - **JDBC (Java Database Connectivity):**
 - **Purpose:** This library has been used to interact with the MySQL database, executing SQL queries, and performing various database operations.
 - **Package:** java.sql.*

➤ **Database:**

- **MySQL Database (MariaDB 10.4.28):** Used for structured data storage and management.

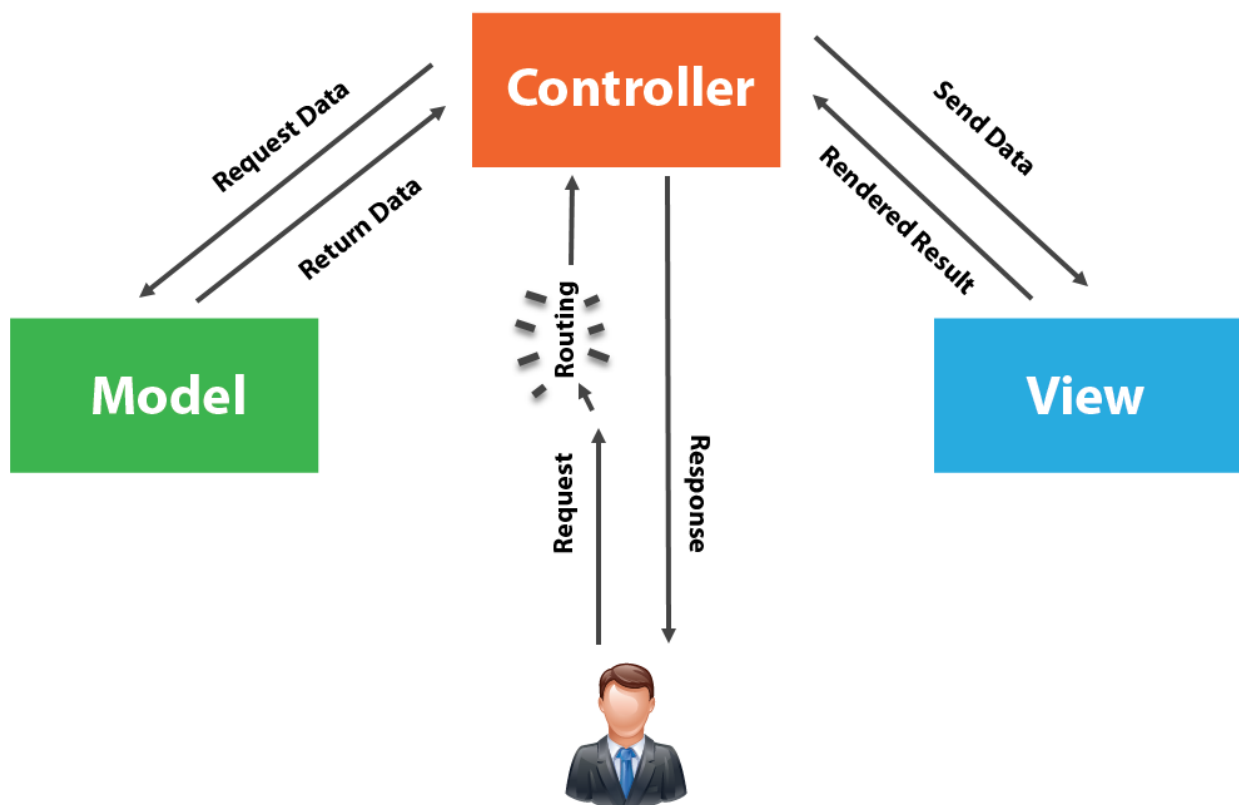
➤ **Web Server:**

- **Apache Tomcat Web Server (Version 9.0):** Used to host the website on our local machine for testing and deployment at the first level, facilitating the interaction between the front end and back end. Download link: <https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.97/bin/apache-tomcat-9.0.97.exe>

➤ **IDE:**

- **Eclipse IDE (Version: 2023-03):** Used for writing, debugging, and managing the end-to-end development including integration with Servlets, JSP, and database connectivity.













































MVC ARCHITECTURE



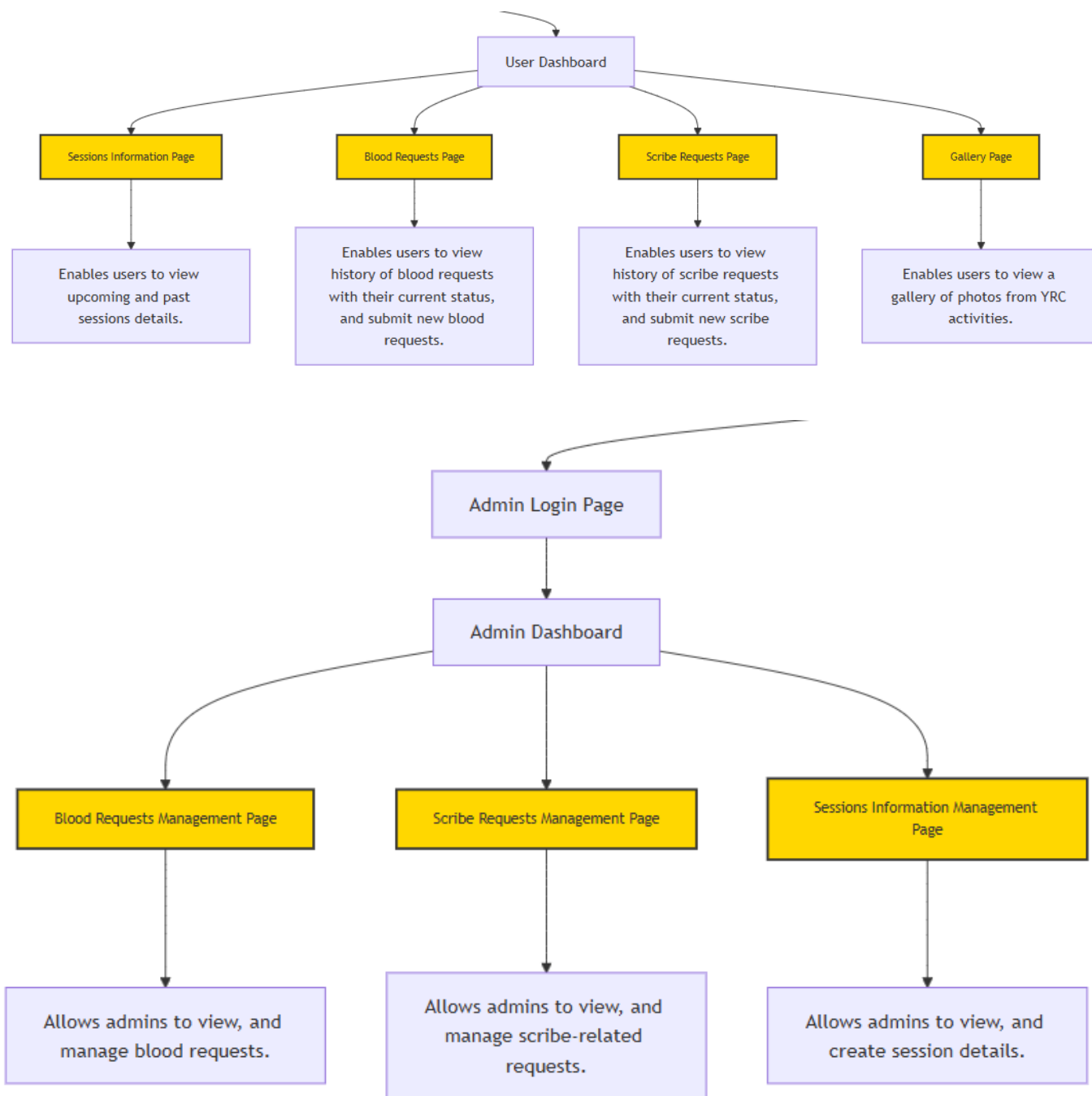
- Presentation Layer (View): Front-end
- Business Logic Layer (Controller): Java
- Data Layer (Model): MySQL

IMPLEMENTATION ASPECTS

STRUCTURE OF THE PROJECT DIRECTORY

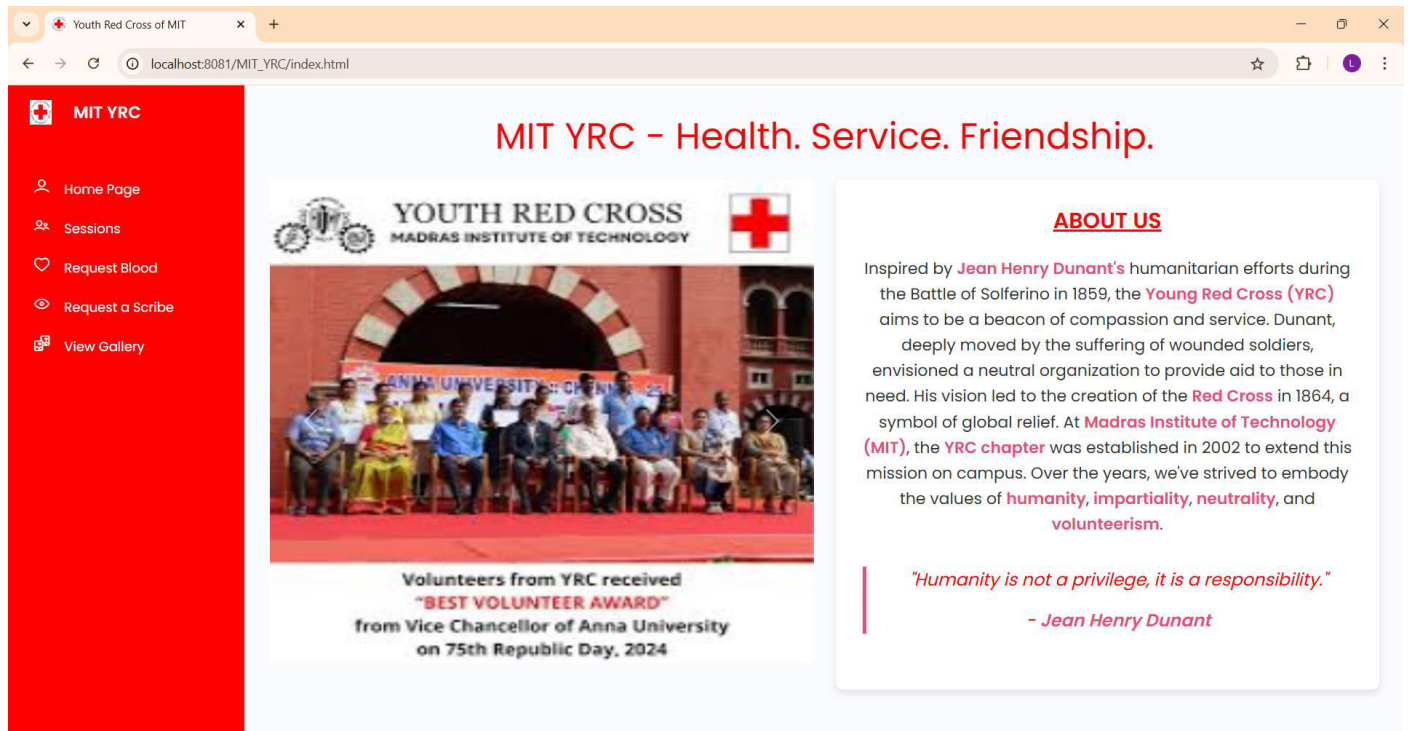
- ▼  MIT_YRC
 - >  Deployment Descriptor: MIT_YRC
 - >  JAX-WS Web Services
 - ▼  Java Resources
 - ▼  src/main/java
 - ▼  mityrc.user.servlets
 - >  AddBlood.java
 - >  AddScribe.java
 - >  CreateSession.java
 - >  DatabaseCon.java
 - >  SessionServlet.java
 - >  UserSessionServlet.java
- ▼  src
 - ▼  main.webapp
 - >  META-INF
 - ▼  WEB-INF
 - ▼  lib
 -  javax.servlet.jsp.jstl-1.2.1.jar
 -  javax.servlet.jsp.jstl-api-1.2.1.jar
 -  mysql-connector-j-9.1.0.jar
 -  acceptRequest.jsp
 -  acceptScribeRequest.jsp
 -  add_blood.html
 -  add_scribe.html
 -  admin_index.html
 -  admin_session.jsp
 -  admin_style.css
 -  blood.jsp
 -  bloododb.jsp
 -  gallery.css
 -  gallery.html
 -  index.html
 -  login.html
 -  login.js
 -  logo.png
 -  scribe.jsp
 -  scribeRequest.jsp
 -  script.js
 -  sessions.jsp
 -  style.css
 -  stylesadmin.css
 -  usersessions.jsp
 - >  main.webapp.images
 - >  main.webapp.photos

STRUCTURE OF THE WEB APPLICATION




SCREENSHOTS OF THE WEB APPLICATION AT THE USER END

User Dashboard



Sessions Information Page



MIT YRC – Health. Service. Friendship.

UPCOMING SESSIONS

Free Eye Check-Up Camp

To provide free eye check-ups and consultations to the community.

Venue: Placement and Training Hall, Admin Block

Start: 14 Dec 2024, 09:30

End: 14 Dec 2024, 15:30

Organizer: YRC Team

Entry Fee: Rs. 0.0

Target Audience: College Students and Staff, Public

Sponsors: Dr Agarwals Eye Hospital, Chromepet

Special Guests:

Additional Info: Bring previous medical records if available.

Orphanage Visit and Donation Drive

To interact with children at the orphanage and deliver essential items.

Venue: Sunshine Orphanage, Chromepet

Start: 20 Dec 2024, 10:00

End: 20 Dec 2024, 14:00

Organizer: YRC and NSS Teams

Entry Fee: Rs. 0.0

Target Audience: Volunteers and Donors

Sponsors: Government Charitable Trust, Chromepet

Special Guests:

Additional Info: Participants are requested to bring items for donation (clothes, books, etc.).

Career Guidance Workshop

To guide students in making informed career decisions, and provide more insights into civil services and scope.

Venue: Rajam Hall

Start: 25 Dec 2025, 10:00

End: 25 Dec 2025, 12:00

Organizer: YRC Team and CUIIC







Entry Fee: Rs. 0.0

Target Audience: Interested MIT Students, open to all years

Sponsors: Mr. Ramesh Prabha, AU Alumnus

Special Guests: Career Guidance Expert, Mr. Ramesh Prabha

Additional Info: Participants will receive free career counseling cheatsheets.



PAST SESSIONS

Blood Donation Drive

Encourage blood donation to save lives during emergencies.

Venue: Hanger II

Start: 5 Oct 2024, 10:00

End: 10 Oct 2024, 16:00

Organizer: YRC Team

Entry Fee: Rs. 0.0

Target Audience: College Students and Staff, Public

Sponsors:

Special Guests:

Additional Info: Refreshments will be provided to all donors.

Interactive Session with DSP

Discussion on safety measures and community policing initiatives.

Venue: Rajam Hall

Start: 30 Nov 2024, 10:00

End: 30 Nov 2024, 12:00

Organizer: YRC Team

Entry Fee: Rs. 0.0

Target Audience: First Year Students, Red taggers 2024-28

Sponsors:

Special Guests: Deputy Superintendent of Police Mr. Rajesh Kumar

Additional Info: Open Q&A session at the end.

Blood Requests Page

MIT YRC - Health. Service. Friendship.

BLOOD REQUESTS

Request ID	Patient Name	Age	Gender	Blood Group	Units Needed	Location	Applicant Contact	Applicant Name	Additional Info	Created At	Last Updated	Status
1	Kuzhali	30	Female	O+	2	Chennai	9876543210	Sundari	Routine surgery	06 Dec 2024, 02:36 pm	07 Dec 2024, 10:26 am	confirmed
2	Pooja	45	Female	A+	1	Bangalore	9876543211	Ravi	Emergency transfusion	06 Dec 2024, 02:36 pm	06 Dec 2024, 02:36 pm	confirmed
3	Priya	32	Female	B-	3	Hyderabad	9876543212	Kumar	Cancer treatment	06 Dec 2024, 02:36 pm	06 Dec 2024, 02:41 pm	confirmed
4	Alagu	38	Female	AB+	4	Mumbai	9876543213	Vijay	Accident victim	06 Dec 2024, 02:36 pm	07 Dec 2024, 08:18 am	confirmed

MIT YRC - Health. Service. Friendship.

BLOOD REQUEST FORM

Patient Name

Patient Age

Patient Gender

☐ Male

☐ Female

Blood Group

Select Blood Group

Number of Units

Location

Patient Contact Number

Attender (Requester) Name

Attender (Requester) Contact Number

Additional Information

Any other information you would like to provide

Submit Request

Scribe Requests Page

MIT YRC – Health. Service. Friendship.

SCRIBE REQUESTS

Request ID	Candidate Name	Age	Gender	Exam Name	Exam Start	Exam End	Exam Location	Scribe Preferences	Additional Info	Status	Created At	Last Updated
1	Kuzhali	30	Female	UPSC Preliminary Exam	15 Dec 2024, 09:00 am	15 Dec 2024, 12:00 pm	Chennai	Prefer scribe who is calm and focused	Need help with reading comprehension	Accepted	06 Dec 2024, 02:46 pm	07 Dec 2024, 09:40 am
2	Jenny	45	Female	GRE	20 Dec 2024, 10:00 am	20 Dec 2024, 01:00 pm	Bangalore	Scribe should be proficient in English	Need assistance with writing and reading	Pending	06 Dec 2024, 02:46 pm	06 Dec 2024, 02:46 pm
3	Mano	32	Female	JEE Main	25 Dec 2024, 09:30 am	25 Dec 2024, 12:30 pm	Hyderabad	Prefer scribe who is good at mathematics	Require help with writing equations and formulas	Pending	06 Dec 2024, 02:46 pm	06 Dec 2024, 02:46 pm

Youth Red Cross of MIT

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localhost:8081/MIT_YRC/add_scribe.html

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MIT YRC – Health. Service. Friendship.

SCRIBE REQUEST FORM

Candidate Name

Candidate Age

Candidate Gender

Select gender

Exam Name

Exam Timings

dd-mm-yyyy --:--

dd-mm-yyyy --:--

Exam Location

Scribe Preferences

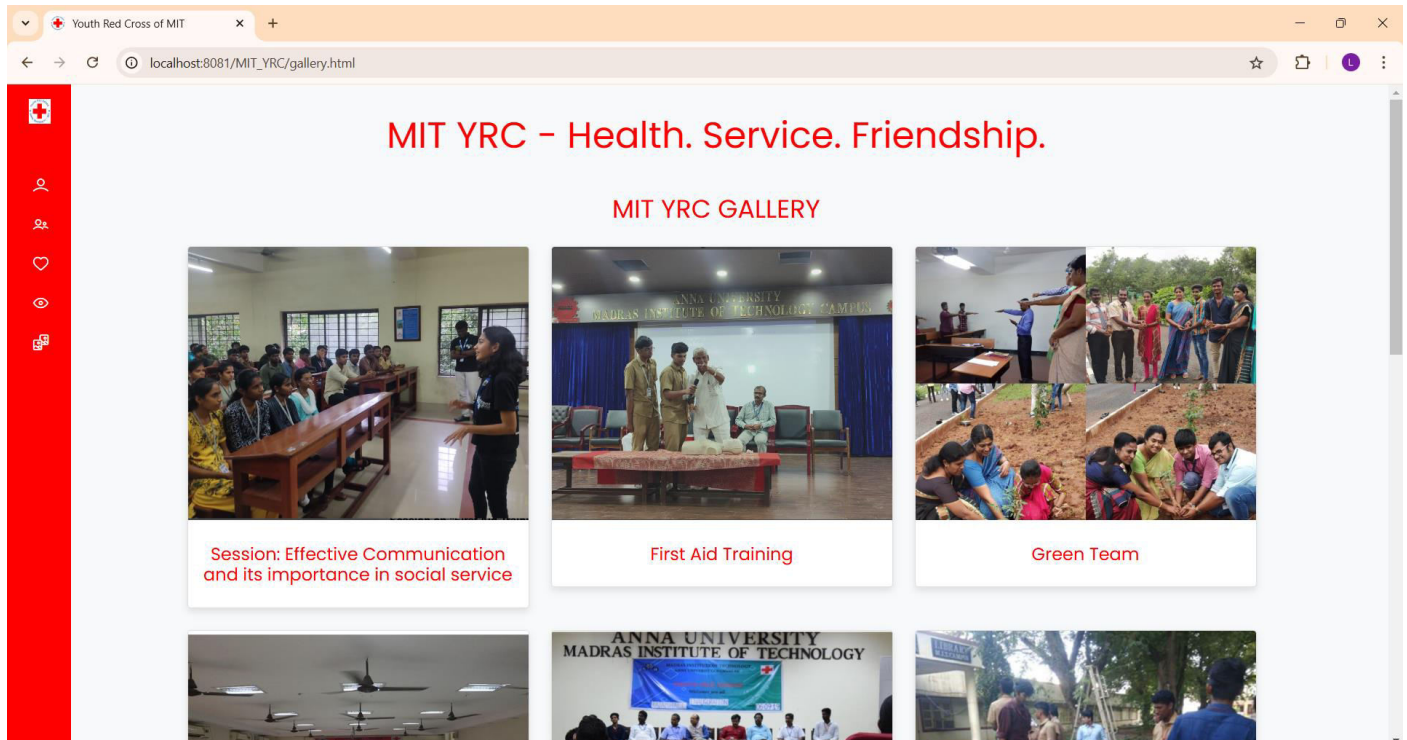
Provide any preferences for the scribe, such as qualifications or experience

Additional Information

Any other information you would like to provide

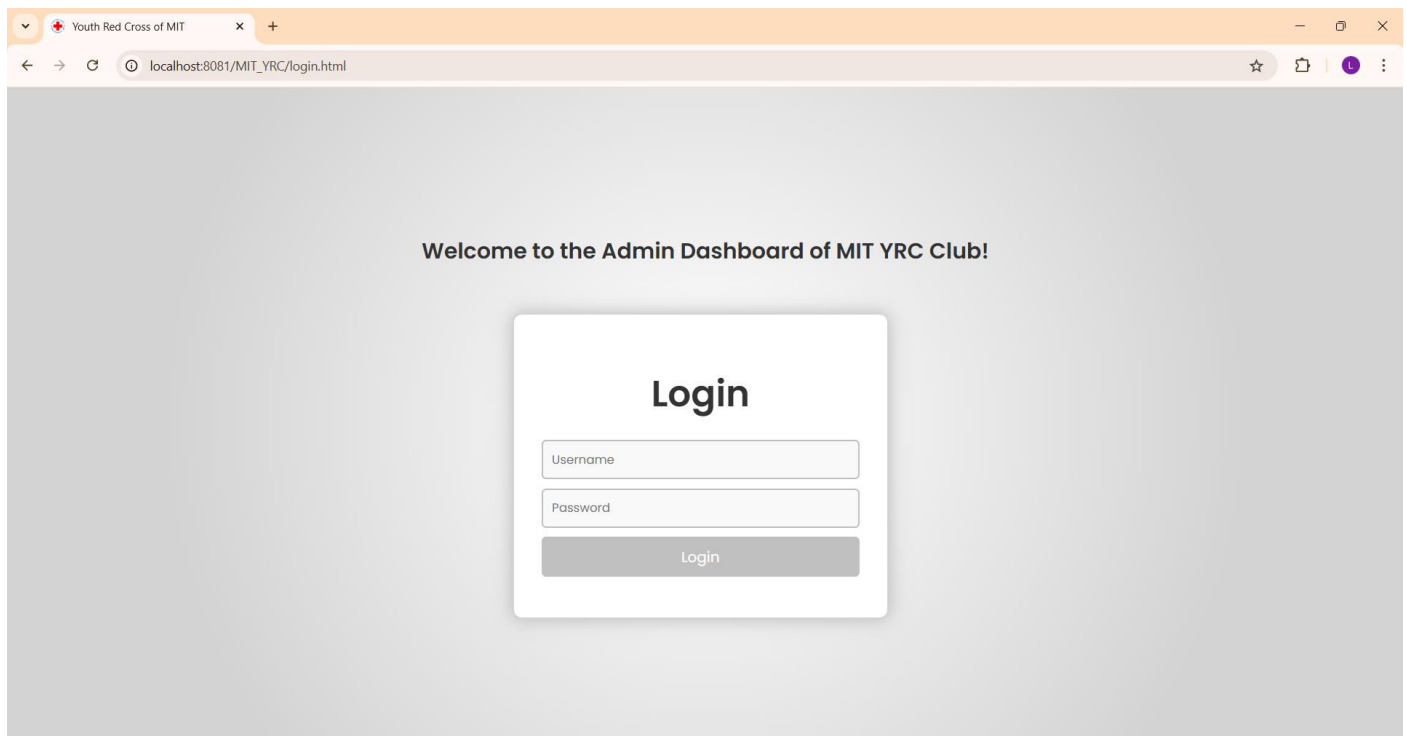
Submit Request

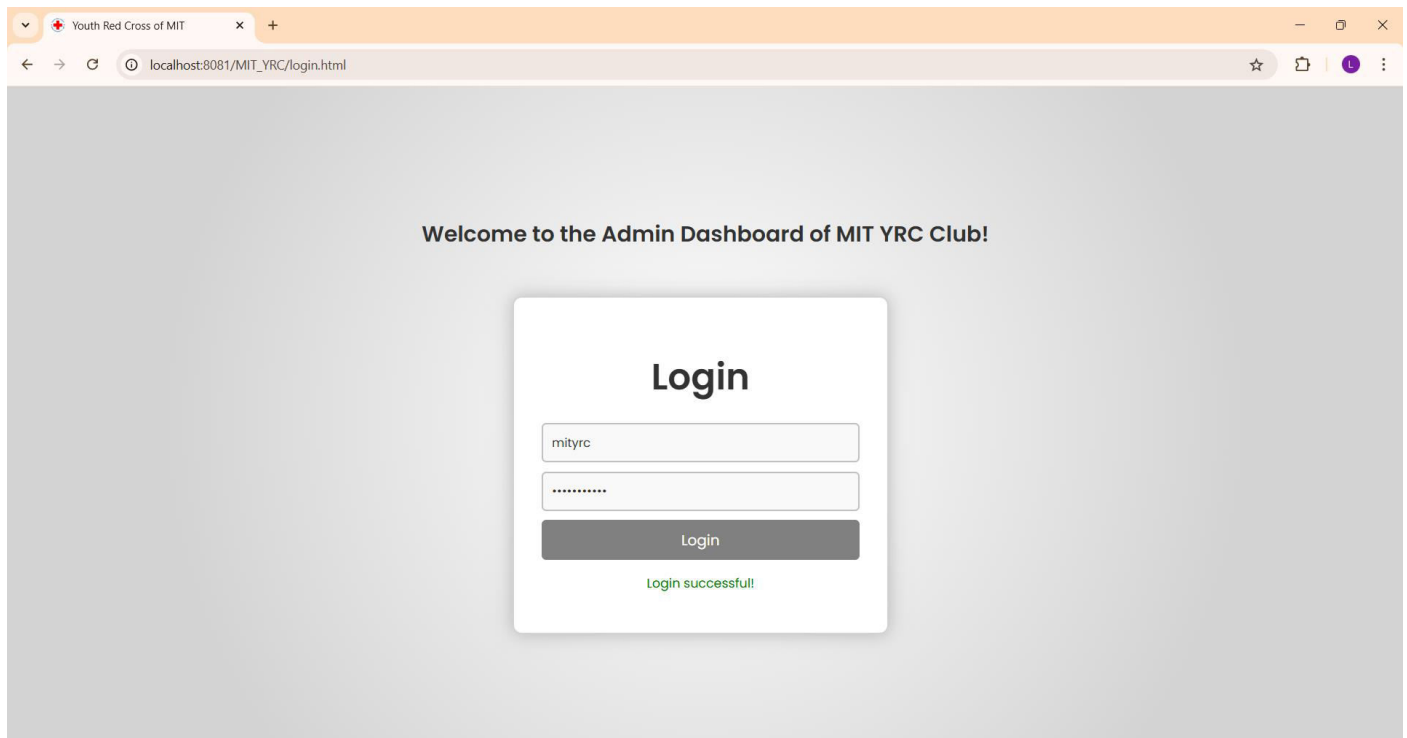
Gallery Page



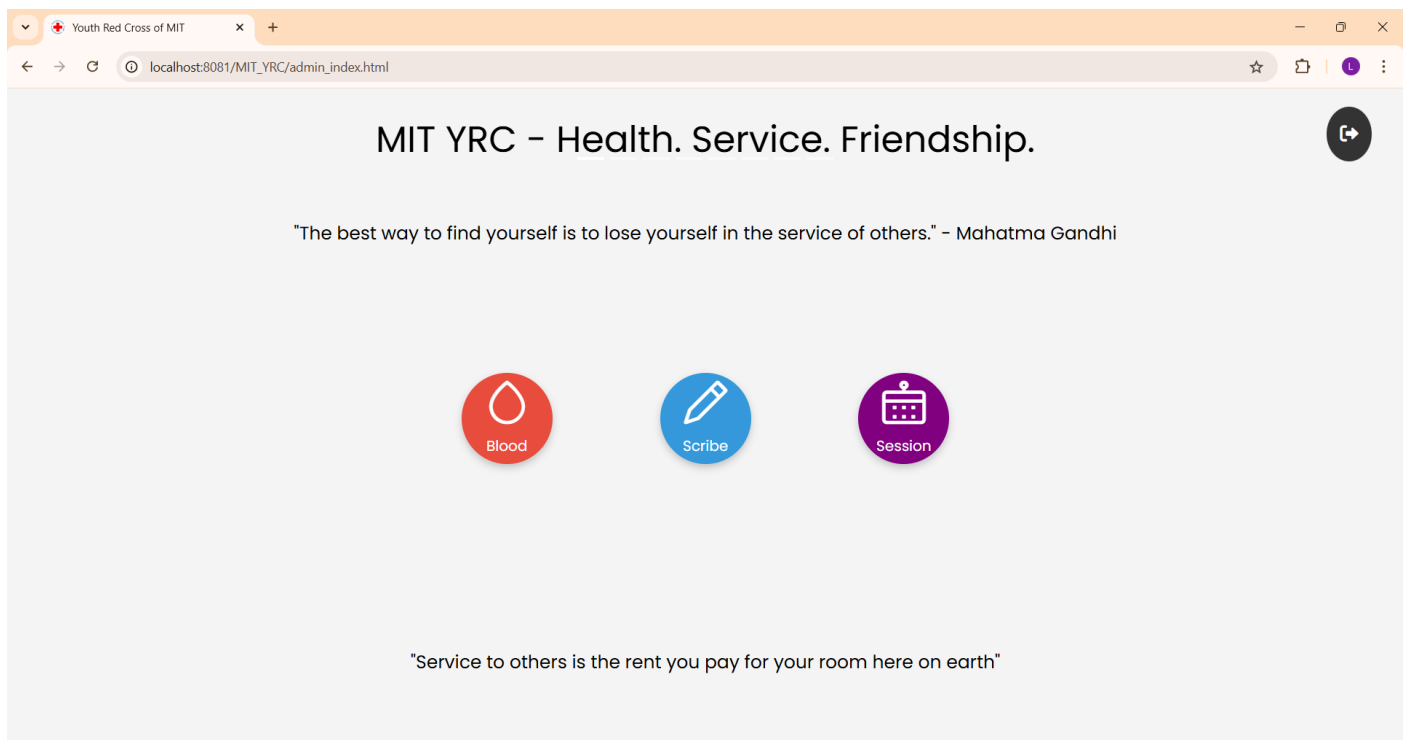
SCREENSHOTS OF THE WEB APPLICATION AT THE ADMIN END

Admin Login Page





Admin Dashboard



Blood Requests Management Page

Youth Red Cross of MIT

localhost:8081/MIT_YRC/blooddb.jsp

Home

Blood Request Details

Request ID: 7

Patient Name: Swetha

Age: 28

Gender: Female

Blood Group: B+

Units Needed: 1

Location: Madurai

Applicant Contact: 9876543216

Applicant Name: Hari

Additional Info: Routine transfusion

Status: pending

Accept

Request ID: 8

Patient Name: Ravi

Age: 60

Gender: Male

Blood Group: O+

Youth Red Cross of MIT

localhost:8081/MIT_YRC/blooddb.jsp

Home

Blood Request Details

Request ID: 7

Patient Name: Swetha

Age: 28

Gender: Female

Blood Group: B+

Units Needed: 1

Location: Madurai

Applicant Contact: 9876543216

Applicant Name: Hari

Additional Info: Routine transfusion

Status: Accepted

Accept

Request ID: 8

Patient Name: Ravi

Age: 60

Gender: Male

Blood Group: O+

Scribe Requests Management Page

Youth Red Cross of MIT

localhost:8081/MIT_YRC/scribeRequest.jsp

Home

Scribe Request Details

Pending Scribe Requests

Request ID: 2

Candidate Name: Jenny

Age: 45

Gender: Female

Exam Name: GRE

Exam Start: 20 Dec 2024, 10:00 am

Exam End: 20 Dec 2024, 01:00 pm

Location: Bangalore

Scribe Preferences: Scribe should be proficient in English

Additional Info: Need assistance with writing and reading

Status: Pending

Accept

Request ID: 3

Candidate Name: Mano

Age: 32

Youth Red Cross of MIT

localhost:8081/MIT_YRC/scribeRequest.jsp

Home

Confirmed Scribe Requests

Request ID: 1

Candidate Name: Kuzhali

Age: 30

Gender: Female

Exam Name: UPSC Preliminary Exam

Exam Start: 2024-12-15 09:00:00.0

Exam End: 2024-12-15 12:00:00.0

Location: Chennai

Scribe Preferences: Prefer scribe who is calm and focused

Additional Info: Need help with reading comprehension

Status: Accepted

Request ID: 2

Candidate Name: Jenny

Age: 45

Gender: Female

Exam Name: GRE

Exam Start: 2024-12-20 10:00:00.0

Sessions Information Management Page

Youth Red Cross of MIT

localhost:8081/MIT_YRC/SessionServlet

Home

Session Details

UPCOMING SESSIONS

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To provide free eye check-ups and consultations to the community.

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End: 14 Dec 2024, 15:30

Organizer: YRC Team

Entry Fee: Rs. 0.0

Target Audience: College Students and Staff, Public

Sponsors: Dr Agarwals Eye Hospital, Chromepet

Special Guests:

Additional Info: Bring previous medical records if available.

Orphanage Visit and Donation Drive

To interact with children at the orphanage and deliver essential items.

Venue: Sunshine Orphanage, Chromepet

Start: 20 Dec 2024, 10:00

End: 20 Dec 2024, 14:00

Organizer: YRC and NSS Teams

Entry Fee: Rs. 0.0

Target Audience: Volunteers and Donors

Sponsors: Government Charitable Trust, Chromepet

Special Guests:

Additional Info: Participants are requested to bring items for donation (clothes, books, etc.).

Career Guidance Workshop

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Venue: Rajam Hall

Start: 25 Dec 2025, 10:00

End: 25 Dec 2025, 12:00

Organizer: YRC Team and CUIC

Entry Fee: Rs. 0.0

Target Audience: Interested MIT Students, open to all years

Sponsors: Mr. Ramesh Prabha, AU Alumnus

Special Guests: Career Guidance Expert, Mr. Ramesh Prabha

Additional Info: Participants will receive free career counseling cheatsheets.

Youth Red Cross of MIT

localhost:8081/MIT_YRC/admin_session.jsp

Session Post - Creation Form

Session Title

Enter the session title

Session Purpose

Describe the purpose of the session

Venue

Enter the venue

Session Timings

dd-mm-yyyy --:--

dd-mm-yyyy --:--

Target Audience

E.g., volunteers, public, visually challenged, etc.

Entry Fee (if any)

Enter the entry fee amount (0 if free)

Organizers

Enter the name of the organizer(s) (collaborators, if any)

Sponsors (if any)

Mention sponsors if applicable

Special Guests (if any)

List any special guests for the session

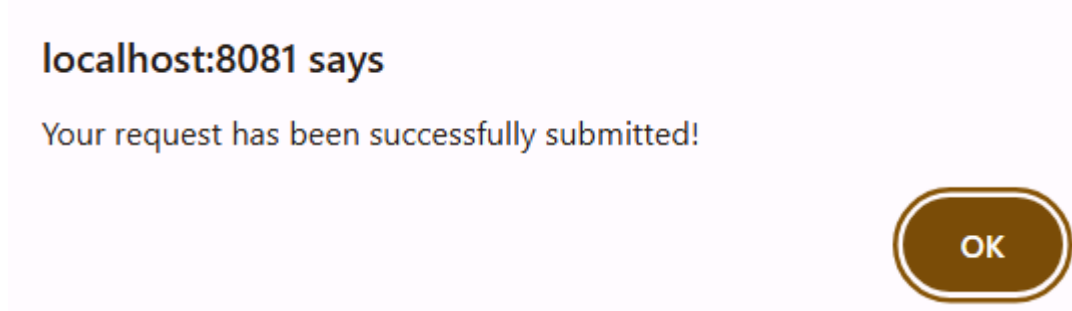
Additional Information

Any additional information about the session

Create Post

PS:

All the forms will alert a successful message as shown below, in case their request is accepted and stored in the database, and then redirect to the previous page they were in.



SCREENSHOTS OF THE DATABASE IMPLEMENTATION














































Structure of the project database 'wtproj'

A screenshot of the phpMyAdmin interface showing the database structure for 'wtproj'. The interface includes a top navigation bar with tabs for Structure, SQL, Search, Query, Export, Import, Operations, Privileges, Routines, Events, and Triggers. Below the navigation bar is a search filter section. The main content area displays a table with columns: Table, Action, Rows, Type, Collation, Size, and Overhead. The table lists three tables: 'blood', 'scribe_requests', and 'sessions'. Each table has a set of actions (Browse, Structure, Search, Insert, Empty, Drop) and a summary row for all tables.















































































Structure of the table 'blood'

A screenshot of the phpMyAdmin interface showing the structure of the 'blood' table. The interface includes a top navigation bar with tabs for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, Tracking, and Triggers. Below the navigation bar is a search filter section. The main content area displays a table with columns: #, Name, Type, Collation, Attributes, Null, Default, Comments, Extra, and Action. The table lists 13 columns: 'request_id', 'patient_name', 'patient_age', 'patient_gender', 'blood_group', 'num_units', 'location', 'applicant_contact', 'applicant_name', 'additional_info', 'created_at', 'updated_at', and 'status'. Each column has a set of actions (Change, Drop, More).

























Contents of the table 'blood'

	request_id	patient_name	patient_age	patient_gender	blood_group	num_units	location	applicant_contact	applicant_name	additional_info	created_at	updated_at	status
  	1	Kuzhali	30	Female	O+	2	Chennai	9876543210	Sundari	Routine surgery	2024-12-06 14:36:16	2024-12-07 10:26:01	confirmed
  	2	Pooja	45	Female	A+	1	Bangalore	9876543211	Ravi	Emergency transfusion	2024-12-06 14:36:16	2024-12-06 14:36:39	confirmed
  	3	Priya	32	Female	B-	3	Hyderabad	9876543212	Kumar	Cancer treatment	2024-12-06 14:36:16	2024-12-06 14:41:59	confirmed
  	4	Alagu	38	Female	AB+	4	Mumbai	9876543213	Vijay	Accident victim	2024-12-06 14:36:16	2024-12-07 08:18:38	confirmed
  	5	Aanish	26	Male	O-	2	Delhi	9876543214	Priya	Emergency surgery	2024-12-06 14:36:16	2024-12-07 08:46:01	confirmed
  	6	Anitha	50	Female	A-	3	Kochi	9876543215	Anil	Heart surgery	2024-12-06 14:36:16	2024-12-07 09:40:21	confirmed
  	7	Swetha	28	Female	B+	1	Madurai	9876543216	Hari	Routine transfusion	2024-12-06 14:36:16	2024-12-07 17:02:27	confirmed
  	8	Ravi	60	Male	O+	5	Coimbatore	9876543217	Lakshmi	Critical condition	2024-12-06 14:36:16	2024-12-07 17:03:16	confirmed
  	9	Sundari	47	Female	AB-	2	Chennai	9876543218	Vijay	Scheduled surgery	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	10	Krishna	40	Male	O+	3	Bangalore	9876543219	Nandini	Major surgery	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	11	Geetha	55	Female	A+	4	Hyderabad	9876543220	Rajesh	Cancer treatment	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	12	Radhika	31	Female	B-	1	Mumbai	9876543221	Ajay	Emergency surgery	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	13	Meera	50	Female	AB+	2	Delhi	9876543222	Suresh	Heart transplant	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	14	Aarti	36	Female	O-	3	Kochi	9876543223	Arun	Critical condition	2024-12-06 14:36:16	2024-12-06 14:36:16	pending
  	15	Latha	42	Female	B+	2	Chennai	9876543224	Pradeep	Cancer treatment	2024-12-06 14:36:16	2024-12-06 14:36:16	pending

Structure of the table 'scribe_requests'

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
  	1 request_id	int(11)			No	None		AUTO_INCREMENT	  
  	2 candidate_name	varchar(100)	utf8mb4_general_ci		No	None			  
  	3 candidate_age	int(11)			No	None			  
  	4 candidate_gender	varchar(10)	utf8mb4_general_ci		Yes	NULL			  
  	5 exam_name	varchar(255)	utf8mb4_general_ci		No	None			  
  	6 exam_start	datetime			No	None			  
  	7 exam_end	datetime			No	None			  
  	8 exam_location	varchar(255)	utf8mb4_general_ci		Yes	NULL			  
  	9 scribe_preferences	text	utf8mb4_general_ci		Yes	NULL			  
  	10 additional_info	text	utf8mb4_general_ci		Yes	NULL			  
  	11 status	varchar(20)	utf8mb4_general_ci		Yes	Pending			  
  	12 created_at	timestamp			No	current_timestamp()			  
  	13 updated_at	timestamp			No	current_timestamp()	ON UPDATE CURRENT_TIMESTAMP()		  

Contents of the table 'scribe_requests'

	request_id	candidate_name	candidate_age	candidate_gender	exam_name	exam_start	exam_end	exam_location	scribe_preferences	additional_info	status	created_at
  	1	Kuzhali	30	Female	UPSC Preliminary Exam	2024-12-15 09:00:00	2024-12-15 12:00:00	Chennai	Prefer scribe who is calm and focused	Need help with reading comprehension	Accepted	2024-12-06 14:46:26
  	2	Jenny	45	Female	GRE	2024-12-20 10:00:00	2024-12-20 13:00:00	Bangalore	Scribe should be proficient in English	Need assistance with writing and reading	Accepted	2024-12-06 14:46:26
  	3	Mano	32	Female	JEE Main	2024-12-25 09:30:00	2024-12-25 12:30:00	Hyderabad	Prefer scribe who is good at mathematics	Require help with writing equations and formulas	Pending	2024-12-06 14:46:26
  	4	Jaya	38	Female	NEET	2024-12-28 08:00:00	2024-12-28 11:00:00	Mumbai	Scribe should be knowledgeable in medical terminology	Need assistance with reading and writing complex text	Pending	2024-12-06 14:46:26
  	5	Aanish	26	Male	Civil Services Exam	2024-12-10 09:00:00	2024-12-10 12:00:00	Delhi	Scribe should have a calm demeanor	Requires help with writing long essays	Pending	2024-12-06 14:46:26
  	6	Anitha	50	Female	SSC CGL	2024-12-17 11:00:00	2024-12-17 14:00:00	Kochi	Prefer scribe with fast writing speed	Need help with fast-paced reading and writing tasks	Pending	2024-12-06 14:46:26
  	7	Swetha	28	Female	GMAT	2024-12-19 10:00:00	2024-12-19 13:00:00	Madurai	Scribe should be proficient in verbal reasoning	Requires assistance with answering multiple choice questions	Pending	2024-12-06 14:46:26
  	8	Ravi	60	Male	CAT	2024-12-22 08:30:00	2024-12-22 11:30:00	Coimbatore	Prefer scribe who is familiar with CAT syllabus	Need help with reading and answering logical reasoning questions	Pending	2024-12-06 14:46:26

Contents of the table 'sessions'

Server: 127.0.0.1 » Database: wiproj » Table: sessions										
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers										
Table structure Relation view										
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action	
<input type="checkbox"/>	1 id	int(11)			No	None		AUTO_INCREMENT		
<input type="checkbox"/>	2 session_title	varchar(255)	utf8mb4_general_ci		No	None				
<input type="checkbox"/>	3 session_purpose	text	utf8mb4_general_ci		No	None				
<input type="checkbox"/>	4 venue	varchar(255)	utf8mb4_general_ci		No	None				
<input type="checkbox"/>	5 session_start	datetime			No	None				
<input type="checkbox"/>	6 session_end	datetime			No	None				
<input type="checkbox"/>	7 target_audience	varchar(255)	utf8mb4_general_ci		No	None				
<input type="checkbox"/>	8 entry_fee	decimal(10,2)			Yes	0.00				
<input type="checkbox"/>	9 organizer	varchar(255)	utf8mb4_general_ci		No	None				
<input type="checkbox"/>	10 sponsors	text	utf8mb4_general_ci		Yes	NULL				
<input type="checkbox"/>	11 special_guests	text	utf8mb4_general_ci		Yes	NULL				
<input type="checkbox"/>	12 additional_info	text	utf8mb4_general_ci		Yes	NULL				
<input type="checkbox"/>	13 created_at	timestamp			No	current_timestamp()				
<input type="checkbox"/>	14 updated_at	timestamp			No	current_timestamp()	ON UPDATE CURRENT_TIMESTAMP()			
<input type="checkbox"/>	15 status	enum('active', 'inactive')	utf8mb4_general_ci		Yes	active				

Contents of the table 'sessions'

Server: 127.0.0.1 » Database: wiproj » Table: sessions													
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers													
←T→													
	id	session_title	session_purpose	venue	session_start	session_end	target_audience	entry_fee	organizer	sponsors	special_guests	additional_info	created_at
<input type="checkbox"/>	1	Free Eye Check-Up Camp	To provide free eye check-ups and consultations to...	Placement and Training Hall, Admin Block	2024-12-14 09:30:00	2024-12-14 15:30:00	College Students and Staff, Public	0.00	YRC Team	Dr Agarwals Eye Hospital, Chromepet	NULL	Bring previous medical records if available.	2024-12-06 23:03:32
<input type="checkbox"/>	2	Blood Donation Drive	Encourage blood donation to save lives during emer...	Hanger II	2024-10-05 10:00:00	2024-10-10 16:00:00	College Students and Staff, Public	0.00	YRC Team	NULL	NULL	Refreshments will be provided to all donors.	2024-12-06 23:03:32
<input type="checkbox"/>	3	Orphanage Visit and Donation Drive	To interact with children at the orphanage and del...	Sunshine Orphanage, Chromepet	2024-12-20 10:00:00	2024-12-20 14:00:00	Volunteers and Donors	0.00	YRC and NSS Teams	Government Charitable Trust, Chromepet	NULL	Participants are requested to bring items for dona...	2024-12-06 23:03:32
<input type="checkbox"/>	4	Interactive Session with DSP	Discussion on safety measures and community polici...	Rajam Hall	2024-11-30 10:00:00	2024-11-30 12:00:00	First Year Students, Red taggers 2024-28	0.00	YRC Team	NULL	Deputy Superintendent of Police Mr. Rajesh Kumar	Open Q&A session at the end.	2024-12-06 23:03:32
<input type="checkbox"/>	5	Career Guidance Workshop	To guide students in making informed career decisi...	Rajam Hall	2025-12-25 10:00:00	2025-12-25 12:00:00	Interested MIT Students, open to all years	0.00	YRC Team and CUIC	Mr. Ramesh Prabha, AU Alumnus	Career Guidance Expert, Mr. Ramesh Prabha	Participants will receive free career counseling c...	2024-12-06 23:03:32

PROJECT SETUP INSTRUCTIONS – FOR FURTHER DEVELOPMENT AND DEPLOYMENT

1. Clone the repository:

- git clone <https://github.com/Alamelu515/MIT-YRC-Connect.git>

2. Install Prerequisites:

- Install **Eclipse IDE 2023-03**.
- Install **Apache Tomcat 9.0** and integrate it with Eclipse.
- Install **MySQL MariaDB 10.4.28**.

3. Set up the Database:

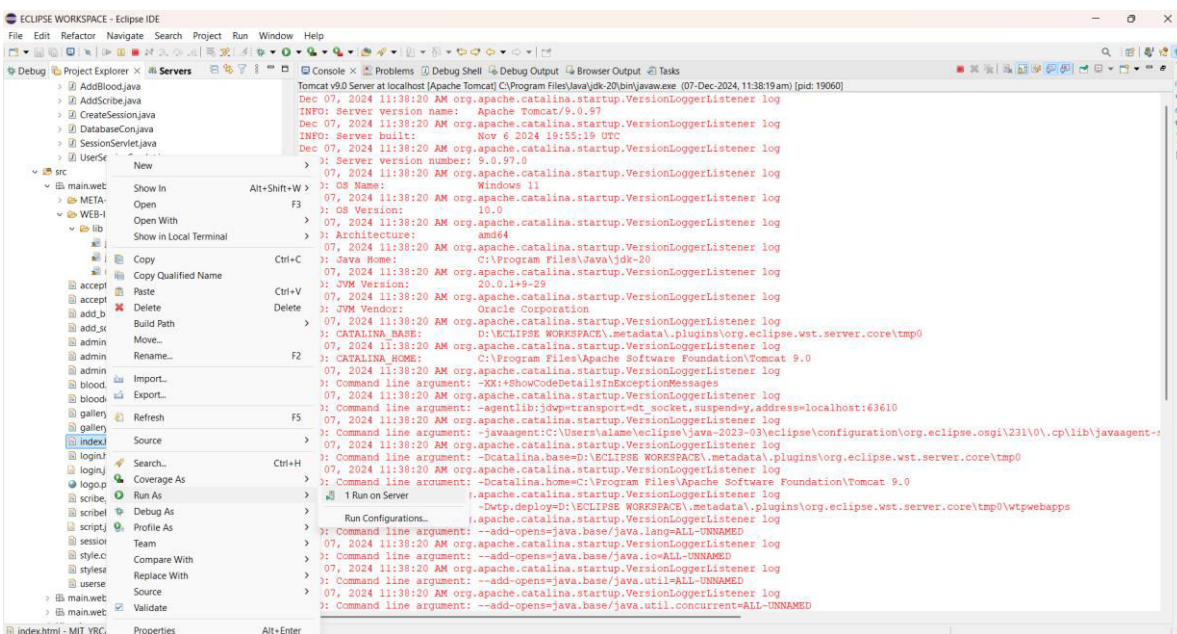
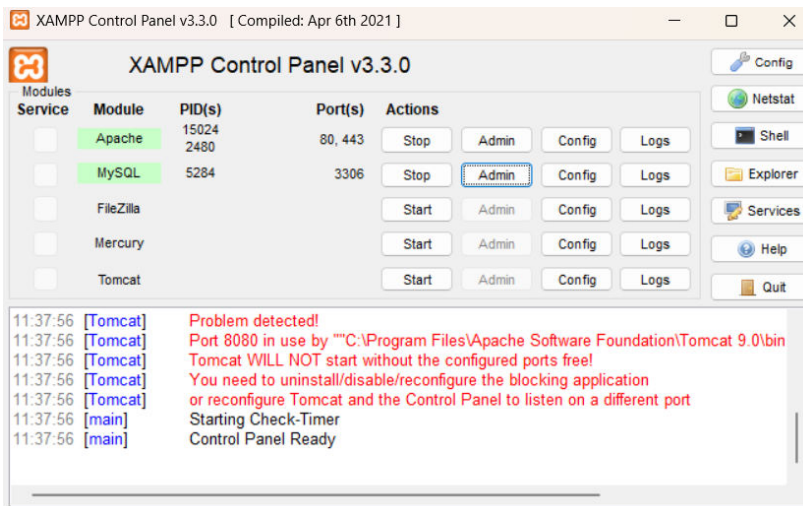
- In MySQL, create the database and tables.
- Insert sample records into the tables.
- The above two steps can be achieved by running the setup.sql file in the GitHub repository.

4. Configure the Project:

- Open the project in **Eclipse IDE**.
- Add the necessary **JAR files** (for SQL, JSTL, etc.) to the project build path.

5. Run the Project:

- Right-click the project in Eclipse and select **Run on Server**.
- Ensure **Apache Tomcat** is selected as the server.
- The web application should now be accessible at <http://localhost:<port-number-configured>>.



PROJECT USAGE

➤ Users can:

- View upcoming and past sessions details.
- View history of blood requests with their current status, and submit new blood requests.
- View history of scribe requests with their current status, and submit new scribe requests.
- View a gallery of photos from YRC activities.

➤ Admins can:

- View, and manage blood requests.
- View, and manage scribe-related requests.
- View, and create session details.

TEAM WORK – CONTRIBUTIONS

➤ Alamelu KR:

- User Dashboard
- Blood Requests Page (user-side)
- Scribe Requests Page (user-side)
- Integration of the entire project

➤ Janitha S:

- Admin Login Page
- Admin Dashboard
- Blood Requests Management Page (admin-side)
- Scribe Requests Management Page (admin-side)

➤ Meenakshi C:

- Sessions Information Page (user-side)
- Sessions Information Management Page (admin-side)
- Gallery Page (user-side)

- The work was split and implemented in terms of user-side and admin-side functionalities, with each individual having to implement both the front-end and the back-end (business logic) code for the corresponding functionality, with the creation of stubs and replicas of the common DB design as needed.

NOVELTY OF THE PROJECT

- The MIT YRC Connect web application developed by our team has the following novel features:
- AJAX Requests for Asynchronous Data Loading: Provides faster, page-refresh-free interactions.
- Upcoming and Past Sessions Segregation: Differentiates upcoming and past sessions for better organization.
- Form Validation: Ensures data accuracy and completeness before submission.
- Sidebar and Buttons for Navigation: Sidebar whose visibility can be toggled and intuitive buttons for quick navigation between key sections.
- Responsive Design: Ensures the website works seamlessly across all device sizes.

POTENTIAL FUTURE ENHANCEMENTS

- Transition to a Single-Page Web Application (SPA): Shift to React or Angular for a more seamless user experience.
- User Authentication and Personalization: Add user login, personalized accounts, and role-based access.
- Real-Time Data Implementation: Transition to real-time data management for dynamic updates.
- Integration of Real-Time Notifications: Implement real-time notifications for users and admins.
- Integration with social media: Allowing users to share their donation experiences and request notifications through social media platforms to raise awareness and encourage participation.
- Data Analytics Dashboard: Introducing an analytics dashboard for administrators to monitor trends in blood requests and donations, enabling informed decision-making.
- Feedback Mechanism: Implementing a feedback system for users and administrators to provide suggestions and report issues, fostering continuous improvement.
- Testing and Quality Assurance: Conduct intensive testing for reliability and performance improvements.
- Deployment to a Live Server: Deploy the system to a domain for global access.
- Mobile App Development: Develop a mobile app for easier, on-the-go access.

CHALLENGES AND LEARNINGS

- Integrating Front-End and Back-End: Faced difficulties in ensuring seamless data transfer between JSP pages and Java Servlets, resolved using AJAX and proper mapping.
- Version Compatibility Issues: Encountered compatibility challenges between Apache Tomcat, Java JDK, and Eclipse IDE versions, resolved by updating configurations and dependencies.
- Configuring Build Path in Eclipse: Struggled with adding required JAR files (JSTL, MySQL Connector) to the build path, resolved through manual configuration and troubleshooting.
- Database Design and Queries: Encountered inefficiencies in SQL queries and normalized table structures to improve data integrity and performance.
- Session Management: Faced difficulties in implementing secure session handling for role-based access, resolved using Java Servlet session attributes.
- Asynchronous Data Loading: Faced initial challenges in implementing AJAX for dynamic content updates without page reloads, overcome by refining the frontend-backend interaction logic.
- Time Management and Coordination: Learned to plan, document, and execute projects efficiently as part of a team.
- Full-Stack Development: Gained hands-on experience in building dynamic user interfaces with data integration and managing server-side logic.

CONCLUSION

- The project successfully automated YRC activities, such as blood requests, scribe services, and session management, improving operational efficiency and reducing manual processes.
- It utilized Java Servlets, JSP, MySQL, HTML, CSS, and JavaScript for seamless integration between backend and frontend systems.
- Key challenges included version compatibility issues between Tomcat and Eclipse, configuring build paths, integrating MySQL with Java, and ensuring smooth session handling.
- The user interface was designed to be intuitive, allowing admins and users to efficiently manage and track requests, events, and activities.
- The project offered valuable learning experiences in full-stack web development, database management, and problem-solving.
- The work lays a strong foundation for future enhancements, including scaling the system and adding new features for YRC.