



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Blood Donation Organization

A Software Quality and Testing Project Submitted By:

Semester: Spring_24_25				Section:	Group No:
SL	SN	Student Name	Student ID	Individual Contribution (in %)	Total Marks: 50
					Earned Marks:
A	1	A.B.M Mahmudul Hasan	22-47108-1	25% (Test Plan Architecture, Led test cases, introduction, revisions)	
B	2	Saif Mahmud Shihab	22-46830-1	25%(Testing Strategy, testing approach, revision)	
C	3	Sabbir Ahmed	22-46525-1	25% (Requirement specs, staffing/schedule, revisions)	
D	4	Shahriar Hossen	22-46525-1	25% (Pass/fail criteria, risk management, revision)	

The project will be Evaluated for the following Course Outcomes

EVALUATION CRITERIA	Total Marks (50)	
Revision History, Test Plan Identifier, Reference Materials, Problem Background, Solutions	[10 Marks]	
Requirements Specification (System feature, Quality Attributes, System Interface, Project Requirements)	[10 Marks]	
Item Not to be tested, Testing approach (Testing levels, tools, meetings), Test cases	[10 Marks]	
Item pass/fail criteria, Test deliverables, Staffing and Training, Responsibilities, Scheduling, Risk	[10 Marks]	
Approval, Format, Submission, and Defense	[10 Marks]	

Software Test Plan
for
<Hatibandha Blood Donation Organization(HBDO)>

Version 1.0 approved

Prepared by <>

<American International University-Bangladesh>

<19/6/2025>

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2025.05.30	A.B.M Mahmudul Hasan & Saif Mahmud Shihab	Initial draft of Test Plan (Sections 1–3: Identifier, References, Introduction).
0.2	2025.06.01	Sabbir Ahmed	Added Requirement Specifications (System Features, Quality Attributes).
0.3	2025.06.03	Saif Mahmud Shihab	Updated Testing Approach (Levels, Tools, Meetings) and Features Not Tested .
0.4	2025.06.04	A.B.M Mahmudul Hasan	Finalized Test Cases (20 functional + 5 non-functional).
0.5	2025.06.05	Shahriar Hossen	Added Pass/Fail Criteria , Test Deliverables , and Risk Management .
0.6	2025.06.06	Sabbir Ahmed & Shahriar Hossen	Completed Staffing , Schedule , and Approval sections.

TEST PLAN IDENTIFIER: STC-TC-TP-01

- ☐ STC: Hatibandha Blood Donation Organization(HBDO)
- ☐ TC: Test Case
- ☐ TP: Test Plan
- ☐ 01: First test cycle

REFERENCE MATERIALS

- Software Requirement Specification (SRS) Document
- Software Requirement documentation
- Software Quality and Testing Course PowerPoint Slides

INTRODUCTION

3.1 Background to the Problem

In the realm of public healthcare and community welfare, blood donation remains one of the most critical and life-saving activities. Despite its importance, many local blood donation initiatives struggle due to the absence of centralized systems for donor registration, request coordination, and data management.

This challenge is especially pronounced in rural and semi-urban areas, where people in urgent need of blood often face delays, misinformation, and difficulty locating matching donors in time. Additionally, manual record-keeping and fragmented communication between donors and recipients increase the risk of mismanagement and donor fatigue.

The Hatibandha Blood Donation Organisation (HBDO) portal has been launched to solve the urgent requirement of an optimized process for blood donation. The online system provides all the aspects under one roof where the users can:

- Register as blood donors
- Request blood with detailed criteria
- Find the donors by blood type and location
- Maintain their own records of donations
- Submit reviews and provide community feedback

It simplifies the entire donation and request process, especially for students, local volunteers, and healthcare helpers, ensuring that blood reaches those in need with speed, transparency, and accountability.

The need for HBDO stems from the following key challenges faced by local donation efforts:

1. Lack of a Centralized Donor Management System. Many areas rely on Facebook posts, personal contact lists, or word-of-mouth to find blood donors. This is inefficient, slow, and unreliable during emergencies.
2. Ineffective Communication between Donors and Recipients. There is no structured platform to bridge the gap between blood seekers and potential donors. Manual communication often results in missed opportunities or duplication of effort.
3. Limited Access to Real-Time Donation Data. Without automated systems, there's no way to track how many donations have occurred, who has donated recently, or how many bags of blood are available. This creates transparency issues and limits planning for donation drives.
4. Low Engagement and Motivation for Donors. Donors often don't receive feedback or see their impact. Features like review submissions, donation history, and achievements are missing in manual systems, reducing motivation.

3.2 . To find the critical shortcomings in the administration of blood donation systems, the Hatibandha Blood Donation Organization(HBDO) project proposes a centralized, web-based blood donation platform designed specifically to support local communities, especially in under-resourced or semi-urban regions.

This system functions as a digital bridge between blood donors and recipients, offering features that streamline the end-to-end donation process, from registration to review submission. Through automated workflows, dynamic filtering, and real-time data tracking, HBDO ensures timely access to blood, enhances community trust, and improves donor engagement.

The system provides an intuitive interface where users can:

1. Register and manage donor profiles with essential data such as blood group, location, and contact details
2. Search for available donors filtered by blood group, division, district, and upazila
3. Request blood through a structured form including urgency, number of bags, and hospital details
4. Add personal donation history with proof (e.g., photo uploads, date of donation)
5. View all past donations, improving transparency and tracking
6. Edit personal profiles to maintain updated contact/location info
7. Change passwords securely and submit reviews to strengthen community feedback

4.REQUEIREMNT SPECIFICATION

4.1.System Feature:

- User Dashboard

1. System Login Functional Requirement.

Description: The application will enable registered users (donors) to access their accounts by logging in with their email and password.

If the provided credentials are invalid, an error message will be shown, and access will be denied.

Optional feature: To enhance security, the system may temporarily lock the account after five unsuccessful login attempts to prevent misuse.

Priority Level: High

Precondition: User must have a registered and verified email/password.

Cross Reference: Login Page UI, TC_FR_AUTH_003 (Login), TC_FR_AUTH_004 (Failed Attempts).

2. User Registration Functional Requirement

Description: The function shall allow new users to register by entering their full name, email, phone number, address, blood group, and password.

The registration is successful only if the email/phone is not already in use and the blood group is selected from a predefined list.

Priority Level: High

Precondition: Valid email and all required form fields completed.

Cross Reference: Registration Page UI, TC_FR_AUTH_001 (Registration), TC_FR_AUTH_002 (Duplicate Check).

3. Password Change Functional Requirement

Description: Logged-in users can securely change their account password by providing the old password and entering a new one.

A success message confirms the change.

Priority Level: Medium

Precondition: The user must be verified, and the current password must be verified as correct.

Cross Reference: Profile Settings → Change Password Page, TC_FR_CMN_005.

4. Blood Search Functional Requirement

Description: The system shall allow users to search for donors based on selected blood group, division, district, and upazila.

Search results are displayed in a table, showing donor name, contact info, and location.

Priority Level: High

Precondition: User is logged in.

Cross Reference: Search Blood Page, TC_FR_CMN_001

5. Blood Request Functional Requirement

Description: Users can fill out a form to request blood by specifying patient name, hospital, required blood group, date, number of bags, and location details.

The system stores this request and marks it for donor visibility.

Priority Level: High

Precondition: Logged-in user with all form fields filled correctly.

Cross Reference: Request Blood Page, TC_FR_CMN_002

6. Donation Submission Functional Requirement

Description: Users can log their blood donation by submitting date, location, number of bags, and optionally uploading a picture of the donation receipt.

Priority Level: Medium

Precondition: Logged-in user

Cross Reference: Add Donation Page, TC_FR_CMN_003

7. Profile Update Functional Requirement

Description: Users may update their profile information like as mobile number, address, or blood group via the Edit Profile page.

System confirms changes with a success message.

Priority Level: Medium

Precondition: User must be logged in

Cross Reference: Edit Profile Page, TC_FR_CMN_004

8. Donation History Functional Requirement

Description: The system displays a user's previous donations including date, place, number of bags, and uploaded proof (if any).

The history is shown in a chronological, readable table format.

Priority Level: Medium

Precondition: Logged-in user with at least one recorded donation.

Cross Reference: Donation History Page, TC_FR_CMN_006

9. Review Submission Functional Requirement

Description: Users may submit a star rating (1 to 5) along with a comment or feedback about the platform after using its services.

Submitted reviews are visible on the homepage or dashboard for other users.

Priority Level: Low

Precondition: Logged-in user

Cross Reference: Review Page, TC_FR_USER_001

- Admin Dashboard

The admin dashboard includes the following features that function identically to the user version:

- Blood Search
- Blood Request
- Edit Profile
- Change Password
- Add Donation
- Donation History

Unique features:

1. Pending Blood Request Management Functional Requirement

Description: The system shall display all pending blood requests with complete details including requester information, blood type needed, quantity, location, and status. Admin can approve, reject, or modify requests.

Priority Level: High

Precondition: Admin must be logged in

Cross Reference: Pending Blood Request Page, TC_FR_ADMIN_003

2. Latest Donations Monitoring Functional Requirement

Description: The system shall display all recent donations in chronological order with donor details, blood type, quantity, and location. Admin can verify and flag donations if needed.

Priority Level: High

Precondition: Admin must be logged in

Cross Reference: Latest Donations Page, TC_FR_ADMIN_004

3. Member Management Functional Requirement

Description: The system will allow admin to add new members with complete profile information including personal details, contact information, blood type, and geographic location. All fields must pass validation checks.

Priority Level: High

Precondition: Admin must be logged in

Cross Reference: Add Member Page, TC_FR_ADMIN_001

4. User Search Functional Requirement

Description: The system should provide search functionality to find users by email, name, or phone number. Admin can perform account management actions including deletion and role promotion with appropriate confirmation dialogs.

Priority Level: High

Precondition: Admin must be logged in

Cross Reference: Search Member Page, TC_FR_ADMIN_005

5. Monthly Reporting Functional Requirement

Description: The system will generate monthly reports showing user activity and donation points earned. Reports should be filterable by date range and exportable.

Priority Level: Medium

Precondition: Admin must be logged in

Cross Reference: Monthly Reports Page, TC_FR_ADMIN_006

6. Notification System Functional Requirement

Description: The system will allow admins to create notifications with title, message, and optional image attachment. Submitted notifications shall immediately appear on the noticeboard. After 24 hours of publication, the system shall automatically move the notification to the archive section while preserving all content.

Priority Level: Medium

Precondition: Admin must be logged in

Cross Reference: Send Notice Page, TC_FR_ADMIN_002

4.2. System Quality Attributes

QA1 – Usability

Description:

The system will maintain intuitive navigation with task completion (registration, blood search, requests) achievable within 3 minutes by first-time users. Mobile interfaces shall comply with responsive design standards.

Priority Level: High

Precondition: Accessible via desktop/mobile browsers

Test Reference:

- TC_NFR_USAB_001 (Mobile Responsiveness)
Cross Reference: QA3, QA6

QA2 – Performance

Description:

Key pages will load $\leq 2s$; form submissions complete $\leq 3s$ under normal conditions. Sustains 500 concurrent users without degradation.

Priority Level: High

Precondition: Optimized server/database

Test Reference:

- TC_NFR_PERF_001 (500 Concurrent Users)
Cross Reference: QA5, QA7

QA3 – Reliability

Description:

Ensures 99.5% monthly uptime with $\leq 15m$ outages per incident. Automated recovery mechanisms for critical failures.

Priority Level: High

Precondition: Active hosting platform

Test Reference:

- TC_NFR_REL_001 (System Recovery)
Cross Reference: QA1, QA4

QA4 – Maintainability

Description:

Modular codebase enables isolated updates (e.g., profile editor) without system-wide impact.

Priority Level: Medium

Precondition: Clean code architecture

Cross Reference: QA3, QA6

QA5 – Security

Description:

Prevents injection attacks via input sanitization. Enforces bcrypt hashing + HTTPS. Role-based access controls.

Priority Level: High

Precondition: SSL installed, server validation

Test Reference:

- TC_NFR_SEC_001 (Role-Based Access)
- TC_NFR_SEC_002 (Password Encryption)

Cross Reference: QA2, QA7

QA6 – Scalability

Description:

Handles 500+ concurrent users. Design supports seamless server upgrades.

Priority Level: Medium

Precondition: Scalable frontend/backend

Cross Reference: QA1, QA4

QA7 – Accuracy

Description:

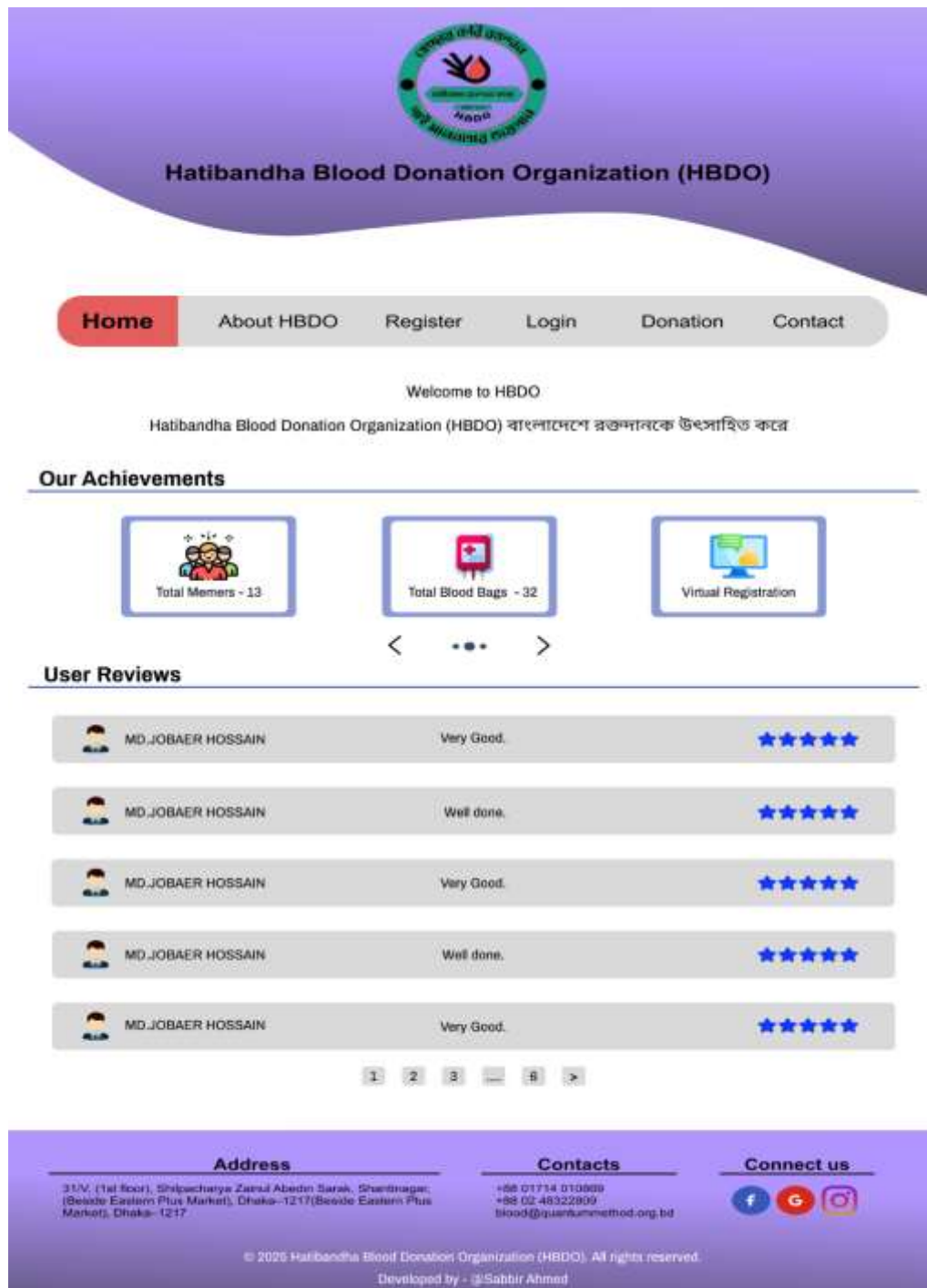
Guarantees precise data recording with validation-triggered error messaging for invalid inputs.

Priority Level: High

Precondition: Client/server validation

Cross Reference: QA2, QA5

4.3. System Interface:





Hatibandha Blood Donation Organization (HBDO)

Sign in

Welcome back



Sign in

[Forgot Password ?](#)

Don't have an account? [Sign up](#)

Address

210, 1st floor, Shyambihar Road, Agartala, Dhaka, Bangladesh.
Phone: 01711 1111111, 01711 1111111, 01711 1111111
Email: info@hatibandha.org.bd

Contacts

01711 1111111
01711 1111111
01711 1111111

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Hatibandha Blood Donation Organization (HBDO)

Registration Form

Gender ☐ Male ☐ Female



Register

Already have an account? [Sign In](#)

Address

210, 1st floor, Shyambihar Road, Agartala, Dhaka, Bangladesh.
Phone: 01711 1111111, 01711 1111111, 01711 1111111
Email: info@hatibandha.org.bd

Contacts

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Hatibandha Blood Donation Organization (HBDO)

Contact Us

Website: www.hbdo.org

Phone: +8801717242062

Email: hbdoofficial.bd@gmail.com

Facebook Group: [Join Our Facebook Group](#)

Facebook Page: [Visit our Facebook Page](#)

Facebook ID: [Visit our Facebook ID](#)

Address

110, 1st Floor, Shyambihar Chatterjee Road, Dharmapala,
Gangadhar Chatterjee Park, Dhaka-1217, Bangladesh
Dhaka-1217

Contacts

+88 01717 242062
+88 01717 242062
hbdoofficial.bd@gmail.com

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Hatibandha Blood Donation Organization (HBDO)

Forgot Password

Email

[Send Reset Link](#)

Address

110, 1st Floor, Shyambihar Chatterjee Road, Dharmapala,
Gangadhar Chatterjee Park, Dhaka-1217, Bangladesh
Dhaka-1217

Contacts

+88 01717 242062
+88 01717 242062
hbdoofficial.bd@gmail.com

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Forgot Password

Confirm

Address
11/1, (1st Floor) Chandrahari, Chhat Gumbh, Bhadrachal,
Sharda Canton Plaza Market, Dindigul - 627002, Tamil Nadu
98426 78444-1234

Contact
98426 78444
98426 78444
98426 78444

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[Home](#) [Search Blood](#) [Request Blood](#) [Edit Profile](#) [Change Password](#) [Donation History](#)



User: Sabbir Ahmed

Total Donations: 01

Last Donation: 27 March, 2020

Search Blood

Blood Group:

Division:

District:

Sub-district:

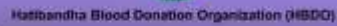
Search

Address
11/1, (1st Floor) Chandrahari, Chhat Gumbh, Bhadrachal,
Sharda Canton Plaza Market, Dindigul - 627002, Tamil Nadu
98426 78444-1234

Contact
98426 78444
98426 78444
98426 78444

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User: **Sabbir Ahmed**
Total Earnings: 03
Last Destination: 27 March, 2025

Request Blood

Blood Group Needed:

Select Your Blood Group ▼

Number Of Bags Needed:

▼

Location and Hospital (Where Blood is Needed):

Date (When Blood is Needed):

mm/dd/yyyy 📅

Request Blood

Pregnant Ethical

Address

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Journal of Internal Medicine 262: 105–114

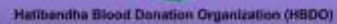
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[Home](#)
[Search Blood](#)
[Request Blood](#)
[Gifts & Thanks](#)
[Change Password](#)
[Donation History](#)

[Edit Profile](#)

Name:
 Enter Your Name

Phone:
 Enter Your Phone

Division:
 Enter Division

District:
 Enter District

Sub-District:
 Enter sub-district

Profile Picture:
 Choose File No file chosen

Confirm Update

Course Module

Address

[illegible]

Contacto

- 100% of the 1000000
 - 100% of the 1000000
 - 100% of the 1000000

Current use



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Home Search Blood Request Blood Edit Profile Change Password Donation History



User: Sabbir Ahmed
Total Donations: 31
Last Donation: 27 March, 2025

Change Password

Current Password:

New Password:

Confirm New Password:

[Change Password](#)

Address
111, 2nd Floor, Shikhar Hotel, Ganga Nagar Road, Shalabaha,
Bhadda, Tejgaon-Pur, Dhaka, 1215 Bangladesh. Phone:
01711 234567

Contacts
01711 234567
01711 234567
01711 234567

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Home Search Blood Request Blood Edit Profile Change Password Donation History

Donation History

Donation Picture	Date	Blood Taken	Location
	27 March, 2025	3 bag full	Dhaka

View all 31 donations

Address
111, 2nd Floor, Shikhar Hotel, Ganga Nagar Road, Shalabaha,
Bhadda, Tejgaon-Pur, Dhaka, 1215 Bangladesh. Phone:
01711 234567

Contacts
01711 234567
01711 234567
01711 234567

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Hatibandha Blood Donation Organization (HBDO)

Monthly Admin Reports

Name	Phone	Poins Earned
Anika Tahsin	01884663885	0
MJ Leon	01627687476	0
Utchash	01924482246	0
Soumik	01717242062	0
Soumik Hasan	01627687476	0
Tahsin Islam Molla	01717242062	0

Monthly Donation Reports

Total Bags for the Current Month:

Blood Group	Blood Group	Blood Group
-------------	-------------	-------------

Address

HBDO Office: Hatibandha Center, Rajshahi, Bangladesh.
Blood Bank: Hatibandha, Dhaka-1000, Bangladesh.
Phone: 01717242062

Contacts

HBDO Office: Hatibandha Center, Rajshahi, Bangladesh.
Blood Bank: Hatibandha, Dhaka-1000, Bangladesh.
Phone: 01717242062

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Hatibandha Blood Donation Organization (HBDO)

Search Admin and User by Email, Name and Phone

Important: For deletion and promotion of users to admin, please handle responsibly

Search...

Search

Address

HBDO Office: Hatibandha Center, Rajshahi, Bangladesh.
Blood Bank: Hatibandha, Dhaka-1000, Bangladesh.
Phone: 01717242062

Contacts

HBDO Office: Hatibandha Center, Rajshahi, Bangladesh.
Blood Bank: Hatibandha, Dhaka-1000, Bangladesh.
Phone: 01717242062

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Add New Member

Name

Email

Phone

Password

Gender

Blood Group

Address

Status

Sub District

Role

Profile Picture



Latest Donations

Donor Name	Blood Group	Number of Bags	Location	Donation Date
Kazi	AS+	1	Dhaka	27 March, 2025
Nazir	A+	1	Dhaka	27 April, 2025
Sabbir	AS+	2	Dhaka	27 June, 2025
Rony	O+	1	Dhaka	27 March, 2025
Fahim	A+	1	Dhaka	27 May, 2025
Tanvir	B+	3	Dhaka	27 March, 2025
Kazi	A+	1	Dhaka	27 January, 2025
Rony	AS+	2	Dhaka	27 February, 2025

4.4. Project Requirements:

Time Estimation Table:

Day	Phase	Tasks	Team	Tools Used	Deliverables
Day 1	Preparation	- Finalize test cases - Setup InfinityFree test environment	QA Lead (1)	Google Docs, GitHub	Approved test plan
Day 2	Test Data Prep	- Create 20 mock profiles - Prepare blood request samples	QA Lead (1)	Excel, JSON generator	Test datasets (CSV)
Day 3	Unit Testing	- Auth module (login/reg) - Form validations	QA Lead + Volunteer (2)	Chrome DevTools	Unit test logs
Day 4	Integration Testing	- Donor search + request flow - Profile updates	QA Lead + Dev (2)	Postman, GitHub Issues	Integration test report
Day 5	System Testing	- Full donor-request cycle - Mobile responsiveness	Full Team (3)	Mobile emulators	System test summary
Day 6	UAT	- 3 volunteers test core features - WhatsApp feedback collection	Volunteers + QA (4)	Google Forms	UAT feedback sheets

Day 7	Reporting	- Bug fixes verification - Final report compilation	QA Lead (1)	MS Word	Printed test report (300 BDT)
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Budget Estimation:

Category	Item	Details	Estimated Cost (BDT)
1. Infrastructure	Domain & Hosting	Free via 000webhost / InfinityFree	0
2. Development Tools	Code Editor	Visual Studio Code (Free)	0
	Version Control	Git & GitHub (Free)	0
	Email API	SMTP / Mailtrap (Free tier)	0
3. Testing Tools	Postman, DevTools	API and UI testing tools (Free)	0
	Manual Testing	Conducted by QA using browser tools	0
4. Documentation	Microsoft Word	Academic documentation (pre-installed in lab PC)	0
	Printing & Binding	Final test plan and report printout	300
5. Communication	Google Meet, WhatsApp	Team coordination	0
6. Training Materials	SQA Course Slides, Templates	Provided by university	0
7. Miscellaneous	Contingency (e.g., data pack)	Backup internet/power for submissions	500
Total Estimated Cost			800 BDT

5. FEATURES NOT TO BE TESTED

Third-Party Authentication Services

If any OAuth or external authentication methods (e.g., Google/Facebook login) are integrated in future, the internal mechanisms of those services will not be tested. Only the **redirect process and success/error status** from those services will be verified.

2. Hosting Server Infrastructure & Performance

The system is hosted on a **free web hosting platform (infinityfree)**. The **uptime, latency, and load-balancing capacity of the hosting provider** will not be evaluated or tested directly, as it falls under the provider's responsibilities.

3. Cross-Browser Compatibility (Legacy Browsers)

The application will not **undergo testing on outdated or legacy browsers** like Internet Explorer 10 or earlier. Compatibility checks will be restricted to the most **recent versions of modern browsers** such as Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari.

4. Mobile Responsiveness on Rare Devices

Basic mobile responsiveness is tested using Chrome Developer Tools and common screen sizes. However, testing will **not cover all mobile or tablet devices**, especially rare screen resolutions, older mobile OS versions, or smart TVs due to time and resource limitations.

5. Automated Data Backup & Recovery

If a server-side or hosting-level backup and recovery process is in place, it will **not be tested** as part of this scope. It is assumed to be configured and managed by the deployment/hosting platform.

6. Email API Internal Behavior

While the **sending of emails via contact forms or submission acknowledgments** will be tested for functional confirmation (e.g., delivery success message), the **internal operation of the Email API (e.g., SMTP routing)** will not be validated.

7. Multilingual/Regional Language Support

This version of the system supports only a **single default language (English)**. If additional language support (e.g., Bengali, Arabic) is planned for future phases, it will not be tested in the current version.

6.1 Testing Levels

Unit Testing

Each core module of the HBO Blood Organization website will be tested independently by the developer using mock or test data to ensure the correctness of the following functionalities:

- Login and Registration Validation Logic
- Form Input Handlers (e.g., Request Blood, Add Donation)
- Profile Editing and Password Update Mechanisms
- Search and Filter Features (by Blood Group/Region)

Tool Used: Physical testing using browser developer tools (e.g., Chrome DevTools), and optionally, testing utilities like Postman for API endpoints if applicable.

Integration Testing

Modules that are dependent on each other will be tested together to validate **data consistency and logical flows**. This includes:

- Registration → Login → Dashboard access
- Request Blood → Display in System
- Add Donation → View in Donation History
- Submit Review → Display on Homepage

Focus will be placed on:

- **Data flow between pages**
- **Database insert/update correctness**
- **Session and authentication handling**

System Testing

The full website will be tested end-to-end in a simulated production environment. This level ensures that all features work cohesively, validating the entire system as a whole.

Scope:

- Registration → Login → Profile Setup
- Search Donor → Request Blood → Confirmation
- Add Donation → View Donation History
- Submit Review → Display on UI

All system-level functions will be tested for **usability, responsiveness, and error handling**.

Acceptance Testing

This final level of testing will be conducted by actual users or the project stakeholders (e.g., classmates, instructors, client). The purpose is to **validate that the system fulfills the original project requirements** and is ready for public use or submission.

Outcome:

- “Go” if the application meets functional, UI/UX, and reliability expectations
- “No-Go” if any critical features fail or bugs prevent usage

6.2 Test Tools

Purpose	Tool(s)
Project Management	Manual tracking, Google Sheets
UI Design	Figma (for early wireframes/mockups)
Version Control	Git + GitHub
Unit Testing	Manual (JavaScript form logic), optionally PHPUnit (if using PHP for backend)
API Testing	Postman (for testing Contact Form / Email API endpoints)
Bug Tracking	GitHub Issues
Documentation	Microsoft Word, PDF Export

6.3 Meetings

The testing process for the Hatibandha Blood Donation Organization(HBDO) platform follows a structured meeting schedule to ensure continuous collaboration, visibility into test progress, and timely resolution of issues.

Daily Standups (15 minutes)

Short, focused meetings held each day during the testing phase. The goal is to maintain momentum and uncover issues early.

Discussion Points:

- What was completed yesterday?
- Are there any current blockers or bugs?
- What tasks are planned for today?

Weekly Team Meetings

Conducted every 7 days to evaluate overall progress and ensure alignment between testers and developers.

Objectives:

- Review of completed test cases and pending ones

- Prioritize and categorize open bugs (critical, major, minor)
- Prepare a plan for regression and retesting cycles

Milestone Reviews (Bi-weekly)

Milestone-based meetings are held at major checkpoints (e.g., completion of registration flow testing, donor module testing, etc.)

Coverage:

- Validate readiness of core features before integration/system testing
- Conduct live walkthroughs or demos for stakeholders
- Prepare for user acceptance testing (UAT)

Agenda Highlights (Applicable to All Meetings)

- Test case execution status
- Number and severity of open defects
- Environmental or hosting issues (e.g., email API not working)
- Feedback from team members or external users (if applicable)

7. Test Cases

User, Admin Common Functionalities

Test Case 1. Registration Functionality

Field	Details
Test Case ID	TC_FR_AUTH_001
Test Case Title	Verify New User Registration
Related Requirement	FR-AUTH-001: Users must register with valid details.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. System is accessible. 2. Email not previously registered.

Test Data	Name: "Soumik Hasan", Email: " soumikhasan000@gmail.com ", Blood Group: "A+", Password: "Ss@1234"
Test Steps	1. Fill all mandatory fields. 2. Upload profile picture. 3. Click "Register".
Expected Result	Account created. Confirmation email sent.
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Verify database record creation.

Test Case 2: Registration with Existing Email and Phone Number

Field	Details
Test Case ID	TC_FR_AUTH_002
Test Case Title	Prevent Duplicate Registration by Email and Phone
Related Requirement	FR-AUTH-002: System must reject duplicate email/phone registrations.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. User with email " soumik@gmail.com " and phone "+8801712345678" already registered.
Test Data	Scenario 1 (Duplicate Email): - Email: " existing@gmail.com " - Phone: "+8801711143278" (new) Scenario 2 (Duplicate Phone): - Email: " new@gmail.com " - Phone: "+8801712345678"
Test Steps	For both scenarios: 1. Fill registration form with duplicate data. 2. Click "Register".
Expected Result	Scenario 1: - Error: "Email already registered"

	Scenario 2: - Error: "Phone number already registered"
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Critical Checks: 1. Verify database remains unchanged. 2. Test with: - Case variations (e.g., Existing@gmail.com) - Phone formats (+88017, 017, 88017)

Test Case 3: Login Functionality

Field	Details
Test Case ID	TC_FR_AUTH_003
Test Case Title	Verify Successful Login
Related Requirement	FR-AUTH-003: Users must access system with valid credentials.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. Valid user account exists.
Test Data	Email: " valid@gmail.com ", Password: "ValidPass123!"
Test Steps	1. Enter valid credentials. 2. Click "Login".
Expected Result	Redirect to dashboard. Session cookie created.
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Check session duration in browser.

Test Case 4: Invalid Login Attempts

Field	Details
Test Case ID	TC_FR_AUTH_004
Test Case Title	Verify Account Lock After 5 Failed Attempts
Related Requirement	FR-AUTH-004: System must prevent brute-force attacks.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. Valid account exists (" user@gmail.com ").
Test Data	Email: " user@gmail.com ", Wrong Password: "Wrong123" (x5)
Test Steps	1. Enter incorrect password 5 times consecutively.
Expected Result	5th attempt: "Account locked for 1 hour".
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Verify unlock after 1 hour.

Test Case 5: Forgot Password

Field	Details
Test Case ID	TC_FR_AUTH_005
Test Case Title	Verify Password Reset Link Generation
Related Requirement	FR-AUTH-005: Users must recover accounts via email.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	Account " recover@gmail.com " exists.
Test Data	Email: " recover@gmail.com "

Test Steps	1. Click "Forgot Password". 2. Enter email. 3. Click "Send Link".
Expected Result	Email sent with valid reset link (check inbox).
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Link should contain secure token.

Test Case 6: Expired Reset Link

Field	Details
Test Case ID	TC_FR_AUTH_006
Test Case Title	Validate Reset Link Expiration
Related Requirement	FR-AUTH-006: Reset links must expire after 24 hours.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	Reset link generated >24 hours ago.
Test Data	Expired reset link URL
Test Steps	1. Click expired link. 2. Attempt password reset.
Expected Result	Error: "This link has expired. Request a new one."
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Verify system logs expiration events.

Test Case 7: Logout Functionality

Field	Details
Test Case ID	TC_FR_AUTH_007
Test Case Title	Verify Logout Functionality for All Roles
Related Requirement	FR-AUTH-007: System must terminate sessions upon logout.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. User/Admin/Super Admin is logged in.
Test Data	Active sessions for: - User: user@gmail.com - Admin: admin@ gmail.com - Super Admin: superadmin@ gmail.com
Test Steps	For each role: 1. Perform role-specific actions (e.g., request blood, approve requests, view logs). 2. Click "Logout". 3. Attempt to navigate back via browser history.
Expected Result	1. Session terminated. 2. Redirected to login page. 3. Restricted pages show "Session expired" if accessed post-logout.
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Security Checks: - Verify session token invalidation. - Test on multiple browsers/devices.

Test Case 8. Search Blood Functionality

Field	Details
Test Case ID	TC_FR_CMN_001
Test Case Title	Verify Blood Search with Valid Filters
Related Requirement	FR-CMN-001: Users must search for blood by location and blood group.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. User is logged in. 2. Blood donation data exists in the system.
Test Data	Blood Group: A+, Division: Dhaka, District: Dhaka, Upazila: Mirpur
Test Steps	1. Navigate to "Search Blood". 2. Select blood group and location filters. 3. Click "Search".
Expected Result	System displays matching blood donors/availability.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with invalid filters (should show "No results").

Test Case 9. Request Blood Functionality

Field	Details
Test Case ID	TC_FR_CMN_002
Test Case Title	Verify Blood Request Submission
Related Requirement	FR-CMN-002: Users must request blood for patients.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Critical
Preconditions	1. User is logged in.

Test Data	Blood Group: B+, Patient's Disease: "Thalassemia", Bags: 2, Location: "Dhaka Medical College", Date: 20-Jul-2024
Test Steps	1. Navigate to "Request Blood". 2. Fill all mandatory fields. 3. Click "Request Blood".
Expected Result	Request is submitted. Confirmation message: "Blood request received."
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with incomplete fields (should show validation errors).

Test Case 10. Add Donation Functionality

Field	Details
Test Case ID	TC_FR_CMN_003
Test Case Title	Verify Donation Record Creation
Related Requirement	FR-CMN-003: Users must log their blood donations.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. User is logged in.
Test Data	Blood Group: O+, Bags: 1, Disease: "Emergency", Location: "Chattogram", Date: 15-Jul-2024, Donation Picture: [donation.jpg]
Test Steps	1. Navigate to "Add Donation". 2. Fill all fields and upload image. 3. Click "Submit".
Expected Result	Donation appears in "Donation History". Confirmation message displayed.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with invalid image formats (should reject).

Test Case 11. Profile Management

Field	Details
Test Case ID	TC_FR_CMN_004
Test Case Title	Verify Profile Information Update
Related Requirement	FR-CMN-004: Users must edit their profile details.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	1. User is logged in.
Test Data	Name: "Updated Name", Phone: "01717242062", Division: "Rangpur", District: "Lalmoniorhat", Profile Picture: [profile.jpg]
Test Steps	1. Navigate to "Edit Profile". 2. Update fields and upload image. 3. Click "Update Profile".
Expected Result	Profile updates saved. Changes reflect in dashboard.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with invalid phone numbers (should show error).

Test Case 12: Change Password

Field	Details
Test Case ID	TC_FR_CMN_005
Test Case Title	Verify Password Change Functionality
Related Requirement	FR-CMN-005: Users must change their passwords securely.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High

Preconditions	1. User is logged in. 2. Current password is known.
Test Data	Current Password: "12345@Ban", New Password: "12345@Bangla", Confirm Password: "12345@Bangla"
Test Steps	1. Navigate to "Change Password". 2. Enter current and new passwords. 3. Click "Change Password".
Expected Result	Password updated. User must log in with new credentials.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with mismatched new/confirm passwords (should reject).

Test Case 13. Donation History & Reviews

Field	Details
Test Case ID	TC_FR_CMN_006
Test Case Title	Verify Donation History Display
Related Requirement	FR-CMN-006: Users must view their donation records.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Low
Preconditions	1. User is logged in. 2. At least one donation exists.
Test Data	N/A
Test Steps	1. Navigate to "Donation History".
Expected Result	All past donations display with pictures, dates, and locations.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with no donations (should show empty state).

User-Specific Functionalities

Test Case 14: Submit Review

Field	Details
Test Case ID	TC_FR_USER_001
Test Case Title	Verify Review Submission
Related Requirement	FR-USER-001: Users must rate and review HBDO services.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	1. User is logged in.
Test Data	Rating: 5, Comment: "Excellent service!"
Test Steps	1. Navigate to "Submit Review". 2. Select rating and enter comment. 3. Click "Submit".
Expected Result	Review is saved. Confirmation message displayed.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with empty comments (should reject).

Admin-Specific Functionalities

Test Case 15: Add New Member

Field	Details
Test Case ID	TC_FR_ADMIN_001
Test Case Title	Verify Member Registration by Admin
Related Requirement	FR-ADMIN-001: Admins must add new members (user/donar).
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025

Priority	High
Preconditions	1. Admin logged in.
Test Data	Name: "New User", Email: " soumikhasan007@gmail.com ", Role: "User", Blood Group: "A+"
Test Steps	1. Navigate to "Add New Member". 2. Fill all fields. 3. Click "Add Member".
Expected Result	Member appears in "Search Member" list.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with duplicate email (should reject).

Test Case 16: Send Notifications

Field	Details
Test Case ID	TC_FR_ADMIN_002
Test Case Title	Verify Notification Broadcast Functionality
Related Requirement	FR-ADMIN-002: Admins must send system-wide notifications.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	1. Admin logged in.
Test Data	Title: "Urgent Blood Need", Message: "O+ donors required in Dhaka."
Test Steps	1. Navigate to "Send Notifications". 2. Enter title/message. 3. Click "Submit Notification".
Expected Result	Notification appears in user dashboards.
Actual Result	To be filled during execution.
Status	Pass/Fail
Remarks	Test with empty title (should reject).

Test Case 17: Pending Blood Request Management

Field	Details
Test Case ID	TC_FR_ADMIN_003
Test Case Title	Verify Pending Request Approval/Rejection
Related Requirement	FR-ADMIN-003: Admins must manage pending blood requests
Designed By	Test Engineer - Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. Admin logged in 2. At least one pending request exists
Test Data	Request ID: REQ-1001, Status: "Pending"
Test Steps	1. Navigate to "Pending Blood Requests" 2. Select a request 3. Click "Approve"/"Reject" 4. Enter remarks (if rejecting)
Expected Result	Status updates immediately. Email notification sent to requester.
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Test with invalid remarks (should reject empty rejection reasons)

Test Case 18: Latest Donations Monitoring

Field	Details
Test Case ID	TC_FR_ADMIN_004
Test Case Title	Check Latest Donations Display
Related Requirement	FR-ADMIN-004: Admins must monitor donations
Designed By	Test Engineer - Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	Admin logged in

Test Data	System contains donation records
Test Steps	1. Navigate to "Latest Donations" page
Expected Result	Displays table with columns: - Donor Name - Blood Group - Number of Bags - Location - Donation Date
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Check that all columns are visible

Test Case 19: User Search & Management

Field	Details
Test Case ID	TC_FR_ADMIN_005
Test Case Title	Verify User Search and Role Modification
Related Requirement	FR-ADMIN-005: Admins must manage user roles
Designed By	Test Engineer - Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. Admin logged in 2. Regular user account exists
Test Data	User Email: " user@gmail.com ", Current Role: "User"
Test Steps	1. Navigate to "Search Member" 2. Search by email 3. Click "Promote to Admin" 4. Confirm action
Expected Result	Role changes to "Admin". Confirmation email sent.
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	Test search with partial name/phone number matches

Test Case 20: Monthly Report Generation

Field	Details
Test Case ID	TC_FR_ADMIN_006
Test Case Title	Verify Admin Data Existence
Related Requirement	FR-ADMIN-006: Admin data must be displayed correctly.
Designed By	Test Engineer - Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	1. Admin logged in 2. Monthly admin report is generated.
Test Data	Admin names: Anikah Tahsin, Soumik Hasan, Md. Tahsin Islam Molla .
Test Steps	1. Open the monthly admin report. 2. Check if all admin names are listed.
Expected Result	All admins should be present with correct details.
Actual Result	[To be filled during execution]
Status	Pass/Fail
Remarks	All admins listed correctly.

Non-Functional Test Cases

Test Case 1: System Response Time Under Load

Field	Details
Test Case ID	TC_NFR_PERF_001
Test Case Title	Validate Response Time for 500 Concurrent Users
Related Requirement	NFR-PERF-001: System must respond within 3s under 500 concurrent users.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Critical
Preconditions	1. JMeter configured. 2. Production-like environment ready.

Test Data	500 virtual users performing: - Login - Blood search - Request submission
Test Steps	1. Configure 500-user load test. 2. Execute for 15 minutes. 3. Capture response times.
Expected Result	95% of requests complete within 3 seconds.
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Escalate if CPU usage >80% or error rate >5%.

Test Case 2: Role-Based Access Control

Field	Details
Test Case ID	TC_NFR_SEC_001
Test Case Title	Verify Unauthorized Role Access Prevention
Related Requirement	NFR-SEC-001: Users cannot access higher-privilege features.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. User/Admin accounts created.
Test Data	- User attempting to access /admin/dashboard - Admin accessing /superadmin/logs
Test Steps	1. Log in as lower-privilege role. 2. Manually access restricted URLs.
Expected Result	Returns "403 Forbidden" for all unauthorized attempts.
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Test all role combinations.

Test Case 3: Password Encryption

Field	Details
Test Case ID	TC_NFR_SEC_002
Test Case Title	Verify Password Storage Encryption
Related Requirement	NFR-SEC-002: Passwords must be hashed in database.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Critical
Preconditions	1. Database access credentials available.
Test Data	Test user password: "Test@123"
Test Steps	1. Create test user. 2. Check database password field.
Expected Result	Password stored as irreversible hash (e.g., bcrypt).
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Verify no plaintext passwords in logs/database.

Test Case 4: Mobile Responsiveness

Field	Details
Test Case ID	TC_NFR_USAB_001
Test Case Title	Verify Mobile Interface Functionality
Related Requirement	NFR-USAB-001: UI must adapt to screens ≥ 320 px wide.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	Medium
Preconditions	1. Chrome DevTools or physical mobile devices.
Test Data	Screen widths: 320px, 414px, 768px

Test Steps	1. Test all forms/dashboards on mobile view. 2. Check touch targets.
Expected Result	No horizontal scrolling. Buttons >48px.
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Test on iOS/Android real devices.

Test Case 5: System Recovery

Field	Details
Test Case ID	TC_NFR_REL_001
Test Case Title	Verify Database Recovery After Crash
Related Requirement	NFR-REL-001: System must recover within 10 minutes after failure.
Designed By	Test Engineer -Mahmudul Hasan
Date Designed	4-June-2025
Priority	High
Preconditions	1. Backup restoration process documented.
Test Data	Simulated database corruption.
Test Steps	1. Force DB crash. 2. Initiate recovery. 3. Measure downtime.
Expected Result	System fully operational within 10 minutes.
Actual Result	[To be filled]
Status	Pass/Fail
Remarks	Verify no data loss post-recovery.

8. ITEM PASS/FAIL CRITERIA

8.1 Functional Requirements Pass/Fail Criteria

Category	Pass Criteria	Fail Criteria
Core Functionality	All high-priority test cases (TC_FR_AUTH_001 to TC_FR_ADMIN_006) pass with 100% success	Any critical functionality fails (e.g., registration, blood request submission)
Data Validation	All input fields enforce correct validation rules (email, phone, blood group)	System accepts invalid formats or values
Workflow Integrity	End-to-end processes complete without errors (registration→donation→history)	Workflows break between modules
Security Controls	All security test cases (TC_NFR_SEC_001 to 002) pass	Vulnerabilities found in authentication or data protection

8.2 Non-Functional Requirements Pass/Fail Criteria

Attribute	Pass Criteria	Fail Criteria
Performance	≤2s page load, handles 480+ concurrent users	≥3s latency or system crashes under load
Usability	90% of UAT participants complete tasks without assistance	>30% require help
Reliability	99.5% uptime, recovers within 10 minutes of failure	Frequent outages or prolonged downtime
Mobile Compliance	Fully responsive on all tested devices (320px+)	Layout breaks on common mobile devices

9. TEST DELIVERABLES

9.1 Pre-Test Documentation

1. Approved Test Plan (STC-TC-TP-01)
2. Traceability Matrix (Requirements ↔ Test Cases)
3. Test Data Sets (50 donor profiles, 20 blood requests)

9.2 Test Execution Artifacts

1. Daily Test Logs (Google Sheets)

- Execution status (Pass/Fail/Blocked)
- Defect reports (GitHub Issues)

2. Screenshots/Video Recordings of:

- Critical defects
- Boundary test cases

9.3 Post-Test Reports

1. Test Summary Report containing:

- Metrics:
 - Test Coverage (95% target)
 - Defect Density (0.2 defects/TC max)
 - Requirement Validation Status
- Appendix:
 - Severity-wise defect distribution
 - Performance benchmarks

2. UAT Sign-off Document with:

- Stakeholder feedback
- Go/No-Go recommendation

10. STAFFING AND TRAINING NEEDS

10.1 Resource Allocation

Role	Quantity	Key Responsibilities	Competency Requirements
Test Manager	1	Overall planning, defect triage	ISTQB Certified, JMeter expertise
Test Engineers	2	Test execution, defect logging	Selenium, Postman, GitHub Issues

Domain Experts	1	Validate blood donation workflows	Medical/Blood bank experience
UAT Participants	3-5	Real-world scenario testing	Mix of tech/non-tech users

10.2 Training Plan

1. Tool Training (Week 1)

- JMeter for performance testing
- Postman for API validation
- GitHub Issues for defect tracking

2. Domain Training (Week 2)

- Blood group compatibility rules
- Emergency request protocols
- Data privacy requirements (donor information)

11. RESPONSIBILITIES

11.1 Role-based Responsibilities

Team	Key Responsibilities	Accountability Metrics
Development	Fix critical defects within 24 hours	95% of P1 bugs resolved per SLA
Testing	Maintain 100% test coverage	≤5% test case leakage
DevOps	Ensure test environment availability	99.5% uptime during test cycles
Stakeholders	Provide timely UAT feedback	Sign-off within 3 days of UAT completion

11.2 Escalation Matrix

Issue Level	Responsible Person	Resolution Timeline
Critical (P1)	Test Manager → CTO	<24 hours
Major (P2)	Lead Test Engineer	<3 days

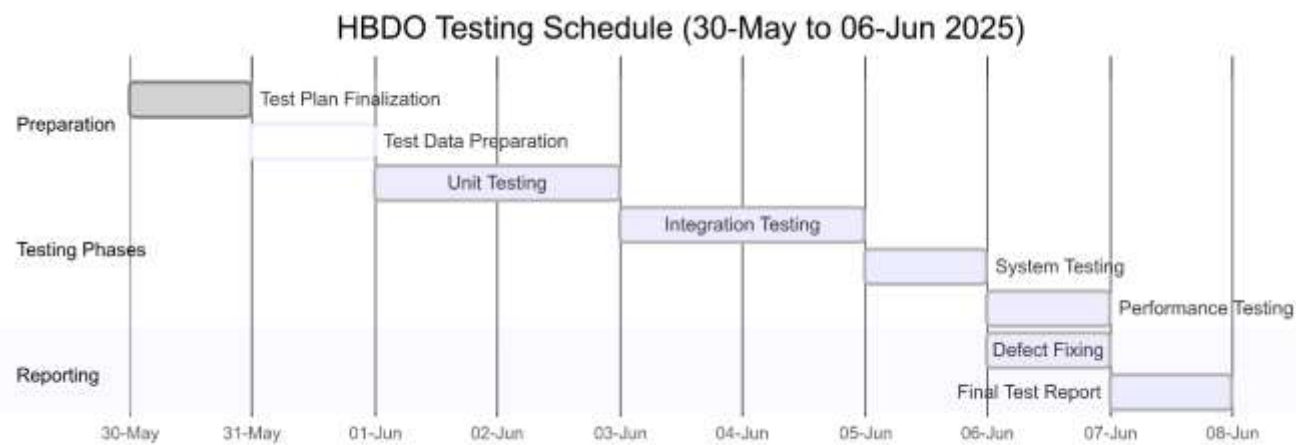
Minor (P3)	Assigned Test Engineer	Next release cycle
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12. TESTING SCHEDULE

12.1 Test Phase Timeline

Phase	Start Date	End Date	Entrance Criteria	Exit Criteria
Unit Testing	10-Jun-2025	12-Jun-2025	All modules developed	100% unit test pass rate
Integration Testing	13-Jun-2025	17-Jun-2025	Unit testing completed	All interfaces validated
System Testing	18-Jun-2025	24-Jun-2025	Integration tests passed	95% requirement coverage
UAT	25-Jun-2025	27-Jun-2025	Stakeholders available	Signed acceptance criteria

12.2 Gantt chart for your HBDO testing schedule



13. PLANNING RISKS AND CONTINGENCIES

13.1 Risk Assessment Matrix

Risk Item	Probability	Impact	Mitigation Strategy	Contingency Plan
Hosting platform instability (InfinityFree downtime)	Medium	High	- Daily backups to local PC - Use GitHub for code preservation	Migrate to local hosting (e.g., DhakaHost)
Key staff unavailability (illness/leave)	Low	High	- Document all test procedures - Pair testing between team members	Extend timeline by 3-5 days
Performance targets not met (slow page loads)	High	Medium	- Optimize images/DB early - Use browser caching	Reduce concurrent user target to 300
UAT feedback delays (stakeholder delays)	Medium	Medium	- Schedule reminders via SMS - Offer flexible UAT hours	Conduct Zoom-based UAT sessions

13.2 Contingency Budget (1,000 BDT Allocation)

Category	Allocation	Usage Plan	Local Alternatives
Emergency Local Hosting	500 BDT	1-month paid hosting from BDWebs/DhakaHost if InfinityFree fails	BDIX servers (150-200 BDT/month)
Mobile Internet Packs	300 BDT	3 × 10GB data packs (GP/Airtel) for rural UAT testing	Robi/Flexi packages (≈100 BDT/10GB)
Printing & Transport	200 BDT	- 50 printed test cases (2 BDT/page) - 5 CNG rides for on-site verification	