Blood Bank Management System (BBMS)

Full One-Page Healthcare Web Application Case Study

Overview

Developed a secure, web-based Blood Bank Management System to automate donor registration, blood stock management, and patient blood requests, improving efficiency and response time.

Problem → Solution

Manual blood bank processes cause delays and poor coordination. This system centralizes donor, patient, and administrator workflows while providing real-time blood availability tracking.

Technology Stack

Backend	PHP
Database	MySQL
Frontend	HTML5, CSS3, JavaScript
Maps	Google Maps API Integration
Users	Donors, Patients, Administrators

System Workflow

- Donors register and manage profiles
- Patients submit blood requests online
- Admins update and monitor blood stock
- Real-time inventory updates displayed
- Location-based blood bank search via Maps

Challenges & Debugging

Ensuring data consistency, secure access, and real-time updates across multiple user roles. Resolved through optimized database queries, session handling, and role-based permissions.

Outcome & Skills Gained

- Improved blood request response time
- Efficient inventory and donor management
- Healthcare-focused system design experience
- Strong full-stack PHP application skills