Project Title:

Online Blood Donation Management System

1. Background and Problem Domain

During emergencies or disasters, patients in critical condition suffer due to the lack of quick access to suitable blood donors. Traditional methods like social media requests or word-of-mouth referrals are unreliable and time-consuming. There is a pressing need for an organized, fast, and easily accessible online system that connects blood donors with patients or hospitals based on blood group and location.

2. Root Cause of the Problem

- Lack of a centralized, verified database of blood donors

- Difficulty in locating available donors by area and blood group

- Delays caused by manual communication methods

- No way to track or manage donor availability and donation history

- No emergency alert mechanism to reach multiple donors quickly

3. Importance of Solving the Problem

- Reduces time taken to find a donor in emergency situations

- Increases survival rates by ensuring fast access to compatible blood

- Encourages voluntary blood donation and public participation

- Provides verified data, reducing the risk of fake or outdated information

- Creates a long-term national network for emergency blood supply

4. Project Objectives

- Design and develop a secure and responsive web-based platform for managing blood donor data

- Enable location and blood group-based donor search for patients or hospitals

- Provide admin-level control for donor verification and data integrity

- Implement user notification system for donation requests and reminders

5. Proposed Solution

The proposed solution is **Online Blood Donation Management System** with three main user roles: Donor, Recipient, and Admin. Donors can register, update availability, and receive requests. Recipients can search for donors based on blood group and location. Admins will verify donor registrations, manage the database, and monitor system usage.

All data will be stored in a centralized database, and a notification system will be included to quickly notify donors in case of emergency blood needs.

6. Basic Functionalities

- Phone Number Registration with OTP
- Donor Profile Creation (Blood group, location, availability)
- Search and Filter Donors by blood group and area
- Send Emergency Requests to nearby donors
- Admin Dashboard for user approval and report generation
- Donation History Tracking per donor
- SMS/Email Notifications for emergencies and reminders

7. Target Users and Benefits

User Group	Benefits
Donors	Platform to help others, manage availability, receive verified requests
Recipients/Patients	Fast and reliable access to compatible donors nearby
Hospitals/NGOs	Organized system for urgent and routine donor matching
Admins	Full control over platform operations and user verification
Society	Promotes a culture of voluntary blood donation and saves lives