

Team Name - Quantumix

Team Leader - Tanisha Roy

Leader's Contact - 7044666786

Team Member 1 - Ritisha Ghosh

Team Member 2 - Shreya Sarkar

Team Member 3 - Jayanta Chakraborty

Idea Name: Blood Connect

A platform that directly connects blood donors with receivers, ensuring safe transportation for donors and managing all payments securely through our system. The platform is also integrated with government blood banks to expand reach and reliability.

Problem Statement :-

In India, whenever emergencies (accidents, surgeries, rare diseases) happen, families scramble to find blood donors. The existing system has gaps: no real-time availability of donors, blood banks often don't update their stock, and urgency is lost due to phone calls/social media forwarding

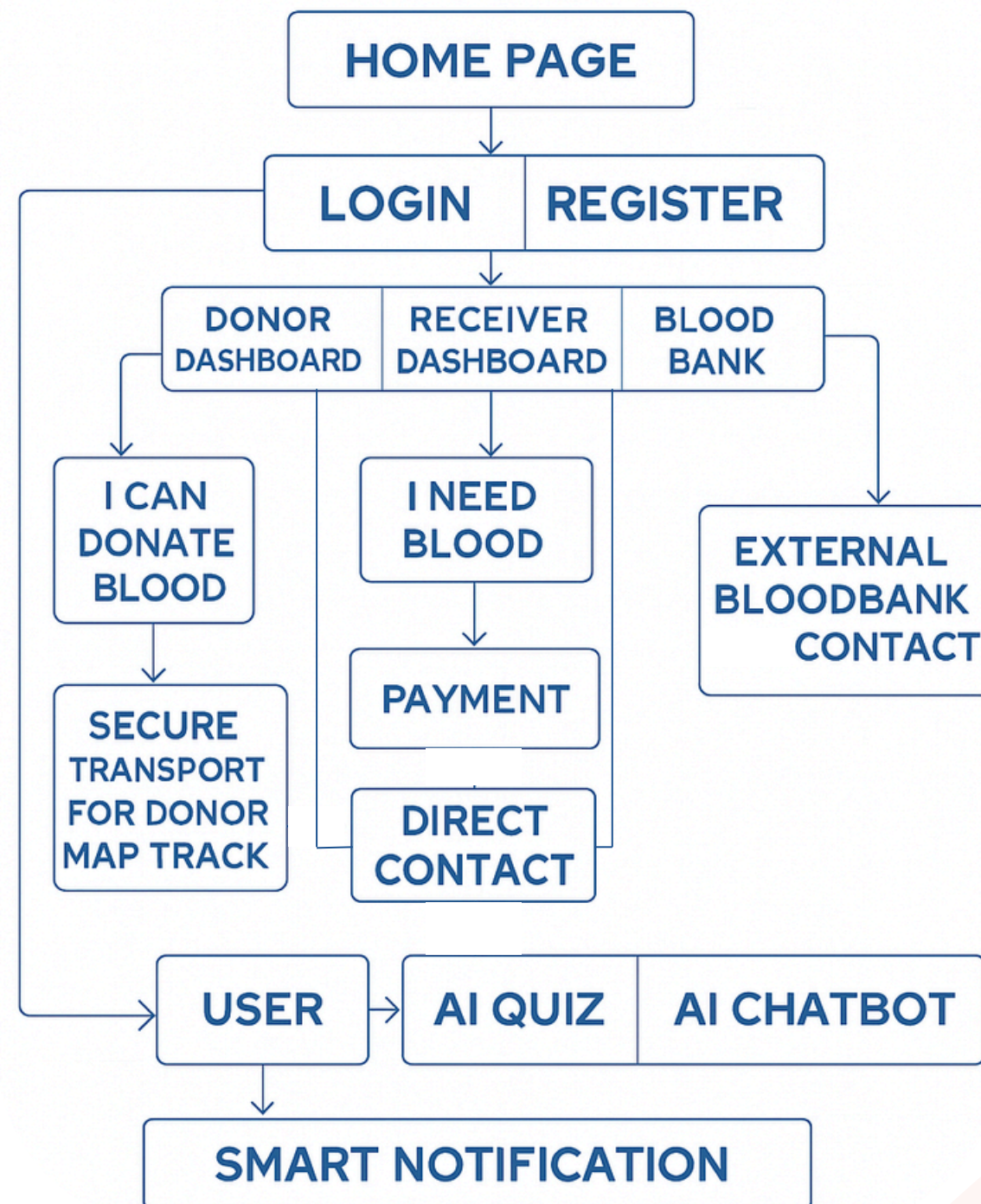
The solution with features :-

1. Connects donors and recipients in real time
2. Maps nearby verified donors using location
3. Integrates with blood bank to show stock availability
4. Gamifies donations
5. Ensures smooth hassle free transportation service for donor and on time delivery for recipients
6. Ai model helps to make donors and recipients understand the information of blood groups and diseases
7. Ai matching helps to find the right donor nearby
8. Donation reminders after 3 months
9. Emergency mode (sms alerts for rare blood types)

Tech Stack : React.js (Frontend), Type script, Node.js + Express (Backend), Firebase/MongoDB (Database), Firebase Auth/JWT (Authentication), Google Maps API (Location), Firebase Cloud Messaging/Twilio (Notifications), Python for AI.

Flow Diagram :-

♥ BLOOD CONNECT



Scope / Market Demand :-

🔴 Scope

1. Immediate Impact (Hackathon MVP)

- Connect donors & recipients instantly.
- Help students, hospitals, NGOs organize drives.
- Reduce reliance on WhatsApp/manual searches.

2. Short-Term (Pilot Stage)

- Partner with colleges, IT companies, NGOs.
- Integrate donor lists from blood banks.
- Gamification & recognition for repeat donors.
- Verified donor lists → trust & privacy.

3. Medium-Term (Scaling)

- Hospital system integration for requests.
- Pan-India donor registry with location filter.
- AI donor suggestions (reliability & eligibility).
- Dashboards for NGOs/government (demand-supply gaps).
- Live stock updates from blood banks.

4. Long-Term Vision

- Become India's "Red Cross app."
- Partner with National Health Mission/governments.
- Expand → plasma, platelets, organ donation.
- Insurance/CSR partnerships → donor benefits.
- Export model to other developing countries.

📊 Market Demand

1. Demand-Supply Gap

- India needs ~14.6M units/year, shortfall 10-15%.
- WHO benchmark unmet (low donor ratio).

2. Current State

- Manual calls, WhatsApp, FB posts still used.
- Existing apps lack real-time data & hospital links.

3. Growing Awareness

- Post-COVID awareness of donation apps.
- Govt & NGOs seeking digital solutions.

4. Market Size

- 300M youth (18-35) = prime donor base.
- Even 5% → 15M active donors.
- 50,000+ hospitals/blood banks as partners.

Why Strong Demand

- Life-saving urgency & high impact.
- Proven global models.
- Scalable to plasma, organs, emergency response.