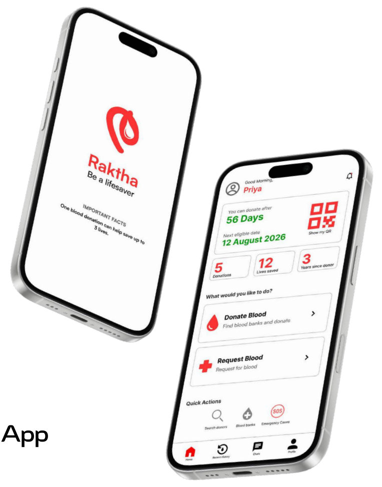
**UX/UI Case Study**

# Raktha

Be a lifesaver

A User-Friendly Blood Donation App



One blood donation can help save up to 3 lives.

## Problem Statement

Blood donation during emergencies remains a fragmented and time-consuming process, with patients and hospitals often relying on personal contacts, WhatsApp groups, and social media to find compatible donors.

At the same time, willing donors lack a centralized platform to discover nearby verified blood requests, locate donation centers, track their donation history, and know when they are medically eligible to donate again. A key challenge is maintaining accurate eligibility records, as donors may donate through hospitals, blood banks, camps, or other offline channels that are not connected to the application.

This project aims to design a trustworthy, user-centered blood donation platform that enables users to easily donate or request blood, access verified and location-based services, and reliably track donation eligibility while addressing the limitations of incomplete offline donation records.

## Possible Solution

The proposed solution is a centralized, user-friendly blood donation platform that enables users to seamlessly donate or request blood through verified, location-based matching while ensuring privacy through an in-app messaging system that eliminates the need to share personal phone numbers.

Beyond simplifying donor-recipient connections, the application addresses the challenge of maintaining accurate donor eligibility by allowing users to securely update donations made outside the app through a simple verification process, ensuring their donation history and next eligible donation date remain reliable even when interactions occur beyond the platform.

This creates a trustworthy ecosystem that supports both emergency blood requests and long-term donor engagement.

## Target Audience

- **Voluntary blood donors** looking for a simple and reliable donation platform.
- **Patients or family members** urgently searching for compatible blood donors.
- **Verified hospitals and blood banks** managing blood requests and donations.
- **First-time and regular donors** who need guidance on donation eligibility.

## Design Thinking Process

The project followed the five-stage Design Thinking framework—Empathize, Define, Ideate, Prototype, and Test. Through user research, personas, empathy maps, and journey mapping, we identified the needs of donors, requesters, and blood banks, and designed a secure, user-centered blood donation platform that simplifies blood donation and requests while accurately managing donor eligibility, even for offline donations, without compromising user privacy.

**Emphatize** »»
User Behavior Research
Blood Donation Research
User Insights Discovery
Contextual User Research

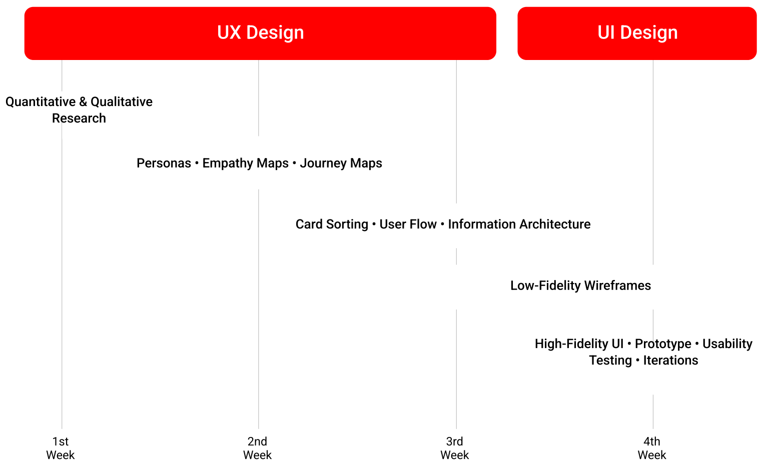
**Define** »»
Problem Statement
User Personas
Empathy Insights
Journey Analysis

**Ideate** »»
Feature Brainstorming
User Flow Mapping
Information Architecture

**Design** »»
Low-Fidelity Wireframes
High-Fidelity UI
Interactive Prototype

**Test**
Usability Evaluation
Design Iterations
Prototype Refinement

## Project Timeline



UX Design

UI Design

Quantitative & Qualitative Research

Personas • Empathy Maps • Journey Maps

Card Sorting • User Flow • Information Architecture

Low-Fidelity Wireframes

High-Fidelity UI • Prototype • Usability Testing • Iterations

1st Week

2nd Week

3rd Week

4th Week

## Empathize Phase

### Qualitative Research

To understand the real challenges surrounding emergency blood donation, we conducted desk research and interviewed potential donors, patients, and family members. We explored how people currently search for blood during emergencies, their willingness to donate, the challenges in tracking donation eligibility, and concerns regarding trust, privacy, and convenience. The research focused on voluntary blood donors, emergency blood requesters, and healthcare organizations to identify gaps in the existing blood donation ecosystem.

## Interview Questions

- Have you ever donated blood or arranged blood for someone during an emergency?
- If you have never donated, what has prevented you from doing so?
- How would you currently find a blood donor in an emergency?
- Do you know when you will be eligible to donate blood again?
- Have you ever donated blood through a hospital, blood bank, or donation camp?
- Would you be comfortable communicating through an in-app chat instead of sharing your phone number?
- What would encourage you to donate blood more regularly?

### Key Insight Derived

- Most emergency blood searches still **rely on WhatsApp groups, phone calls, and personal contacts.**
- Many donors are **unaware of their next eligible donation** date after donating.
- Users expressed **concerns about the authenticity** of blood requests and donor privacy.
- First-time donors **require guidance and reassurance** before making their first donation.
- Donors **preferred location-based requests** and were **less willing to travel long distances.**
- Users appreciated **secure communication without revealing personal phone numbers.**

## Quantitative Research

Research from healthcare studies and blood donation reports highlighted several challenges affecting voluntary blood donation. Nearly 47.2% of emergency blood requests fail to meet the recommended response time due to donor shortages and administrative delays. Around 76.5% of non-donors reported they had never donated simply because they were never asked, while 95.3% of existing donors were motivated by requests to help a specific individual. Studies also showed that mobile health applications can increase blood donation appointments by 22.7%, yet only 8.8% of existing blood donation apps include features that encourage long-term donor retention beyond basic donor directories.

### Key Insight Derived

- 47.2% of emergency blood requests **experience significant delays due to donor shortages.**
- 76.5% of potential donors have **never donated because they were never personally asked.**
- 95.3% of donors are **motivated by helping** a specific patient during emergencies.
- Mobile blood donation platforms can **increase donation appointments by 22.7%.**
- Only 8.8% of existing blood donation applications **actively support donor retention.**
- Most existing platforms focus on donor discovery rather than eligibility tracking and long-term engagement.

# Define Phase

## User Persona

Based on our research into the current blood donation ecosystem, we identified two primary user types who represent the core audience of our application—the Blood Donor and the Blood Requester.

### Jeeja

| | |
|---|---|
| Age | 40 |
| Status | Married |
| Occupation | Fuel Attendant |
| Location | Kannur, Kerala |

### Personality

Empathetic Supportive

Kind-hearted

### Brief Story

Jeeja is a fuel attendant who donated blood once to help her elder sister during an emergency. That experience motivated her to continue donating and helping others. She believes every blood donation can save lives and is always willing to donate again when someone is in need.

### Goals

- Donate blood regularly
- Support patients quickly

### Frustations

- Delays during emergencies
- Lack of verified platform
- Difficulty finding donors

### Needs

- Quick donor access
- Trusted platform
- Accurate donor information
- Secure communication

### Motivation

- Support people in need
- Continue donating regularly
- Turn one experience into lasting impact

### Santosh

| | |
|---|---|
| Age | 45 |
| Status | Married |
| Occupation | Auto Driver |
| Location | Kannur, Kerala |

### Personality

Friendly Curious

Open-minded

### Brief Story

Santosh is an auto driver whose son once needed blood during a medical emergency. After struggling to find a suitable donor nearby, he realized the need for a faster and more reliable blood donation platform. He now believes timely access to nearby donors can save lives.

### Goals

- Find blood quickly
- Help loved ones
- Reduce search time

### Frustations

- Delays during emergencies
- Lack of verified platform
- Difficulty finding donors

### Needs

- Delayed donor search
- Limited nearby donors
- Work-time constraints
- Scattered information

### Motivation

- Protect loved ones
- Save valuable time
- Avoid others' struggles
- Help the community

### Goals

- Help people in need
- Donate blood someday
- Find blood quickly

## Jafar

| | |
|---|---|
| **Age** | 61 |
| **Status** | Married |
| **Occupation** | Book stall owner |
| **Location** | Kannur, Kerala |

### Personality

Responsible Thoughtful

Practical thinker

### Brief Story

Jafar is a 61-year-old bookshop owner who has never donated blood, not because he was unwilling, but because he was never asked and didn't know how the process worked. He believes helping others is important and would donate if the process were simple and trustworthy.

### Frustations

- Never asked to donate
- Unaware of the process
- Slow donor search
- Emergency delays

### Needs

- Simple donation process
- Trusted platform
- Clear eligibility guidance
- Quick blood requests

### Motivation

- Help the community
- Save lives
- Learn the donation process
- Support families in emergencies

## Empathy Map

### Says

- I rely on whatsapp communities for donations
- I felt weak after donations.
- I don't know my netx eligible donation date

### Thinks

- Why an app if whatsapp is there?
- Can we get blood quickly with this app?
- Can all people use it?

### Does

- He scrolls past blood donation posts on Facebook without acting on them
- He asks friends who have donated before about their experience to feel reassured

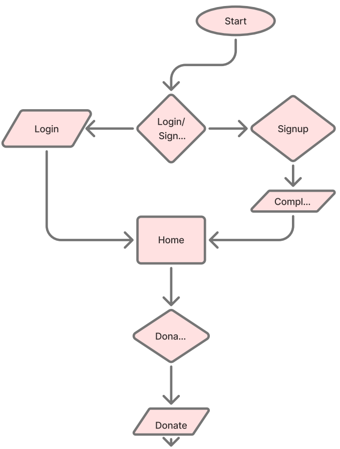
### Feels

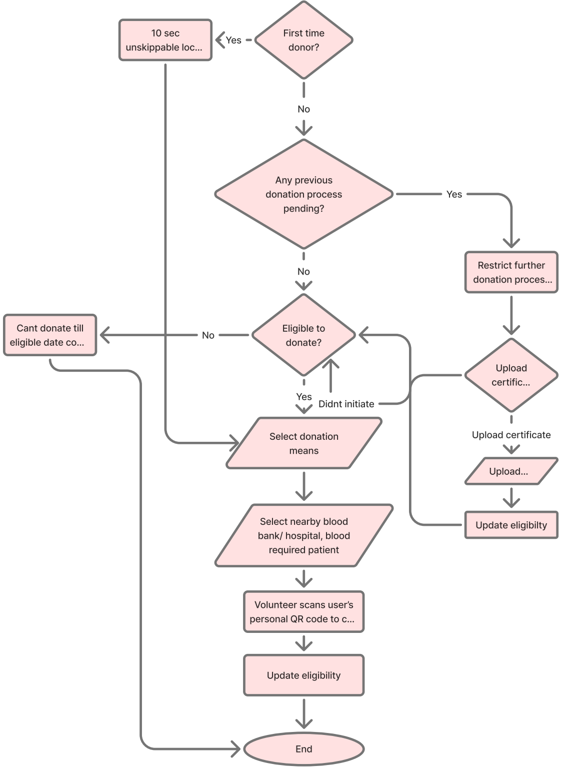
- Feels stubborn because of getting used to whatsapp communities and feeling no need to migrate to an app.
- Feel curious about the possibilities of this app.

## Journey Map

| Stage | Action | Thoughts | Emotions | Pain points | Opportunities |
|---|---|---|---|---|---|
| Home Dashboard | Checks donation emergency | Can I donate today? | 🙄 | Important information may be overlooked | Prioritize eligibility and nearby requests |
| Find blood bank | Seaches nearby blood banks or donation camps | Where can I donate | 🙂 | Finding a convinient donation centre | Reccomend nearby blood banks |
| Confirm donation | Reviews details and proceeds to donate | Im ready to help | ☺️ | Uncertain about donation process | Provide guidance, directions, and preparation tips |
| Accept Request | Confirms participation | I'm ready to help. | ☺️ | Unclear next steps | Navigation and preparation guidance |
| Donate Blood | Visits hospital and donates | Hope everything goes well. | 😌 | Anxiety during donation | Pre-donation guidance and support |
| Receive Confirmation | Views donation confirmation | My donation made a difference. | 😃 | No emotional closure | Positive confirmation and appreciation |
| Review History | Checks donation history | When can I donate again? | 🤔 | Hard to track eligibility | Countdown and donation timeline |
| Return to App | Revisits the app later | Am I eligible again? | 🤔 | Long inactive periods | Eligibility reminders and nearby alerts |

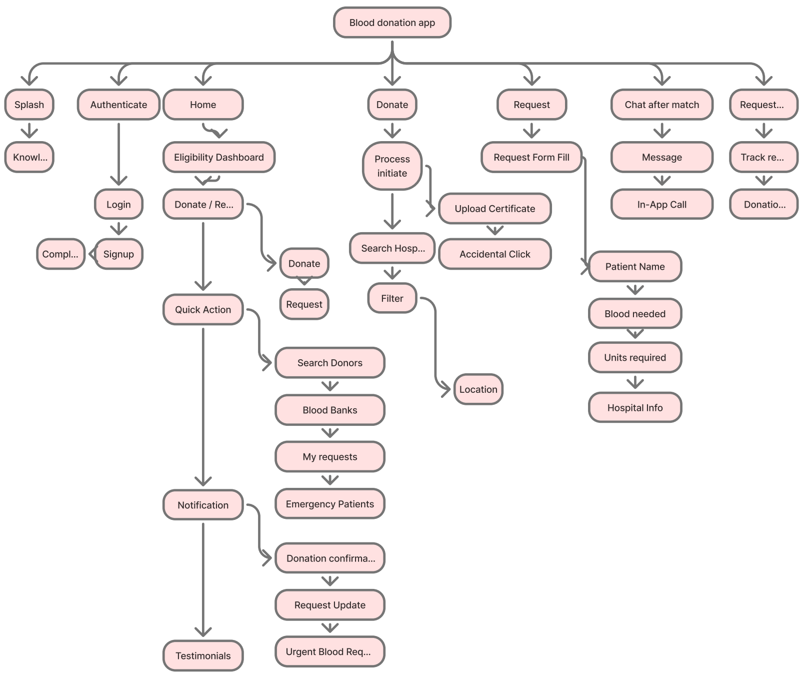
## User Flow




10 sec unskippable loc...
Yes
First time donor?
No
Any previous donation process pending?
Yes
Restrict further donation proces...
No
Cant donate till eligible date co...
No
Eligible to donate?
Upload certific...
Yes
Didnt initiate
Upload certificate
Select donation means
Upload...
Update eligibilty
Select nearby blood bank/ hospital, blood required patient
Volunteer scans user's personal QR code to c...
Update eligibility
End

## Information Architecture

The information architecture was designed to organize the application's features into a simple and intuitive hierarchy, allowing Blood Donors and Blood Requesters to easily navigate between blood donations, emergency requests, eligibility tracking, donation history, and secure in-app communication.



## High-fidelity Wireframes

## Typography & Colors

- Font Used

Satoshi

Satoshi font is a elegant and modern sans serif font. It is very neat and clean. It have more readability and variety of options. That's why I used this font.

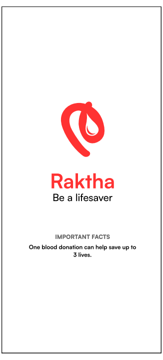
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

**Satoshi Bold** Satoshi Medium
Satoshi Regular Satoshi Light

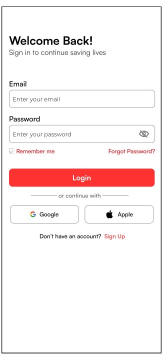
- Color Used

| Primary Color | Secondary Color | Accent Color | BG Color | Success Color |
|---|---|---|---|---|
| #FF0000 | #FFFFFF | #FFC100 | #F7F7F7 | #51B461 |

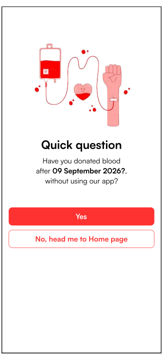
# Visual Design

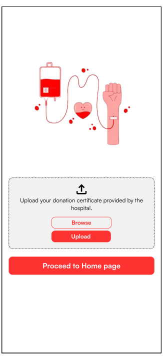

Raktha
Be a lifesaver

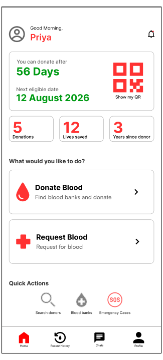
IMPORTANT FACTS
One blood donation can help save up to 3 lives.


**Welcome Back!**
Sign in to continue saving lives

Email
Enter your email
Password
Enter your password
☑ Remember me — Forgot Password?
Login
or continue with
Google | Apple
Don't have an account? Sign Up


**Quick question**
Have you donated blood after **09 September 2026?**, without using our app?
Yes
No, head me to Home page

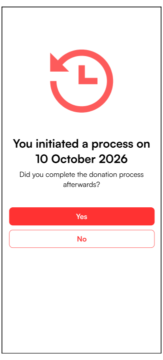

Upload your donation certificate provided by the hospital.
Browse
Upload
Proceed to Home page

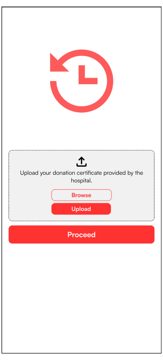

Good Morning,
Priya
You can donate after
56 Days
Next eligible date
12 August 2026
Show my QR

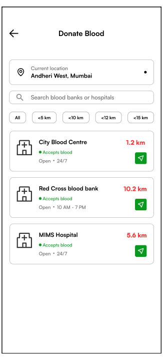
| 5 | 12 | 3 |
|---|---|---|
| Donations | Lives saved | Years since donor |

What would you like to do?
**Donate Blood** — Find blood banks and donate
**Request Blood** — Request for blood

Quick Actions
Search donors | Blood banks | Emergency Cases


**You initiated a process on 10 October 2026**
Did you complete the donation process afterwards?
Yes
No

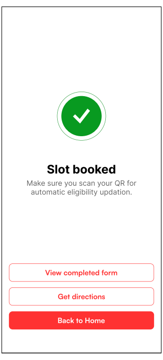

Upload your donation certificate provided by the hospital.
Browse
Upload
Proceed

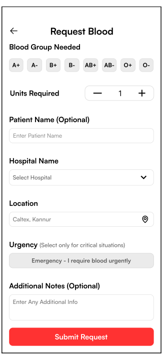

**Donate Blood**
Current location
Andheri West, Mumbai
Search blood banks or hospitals
All | <5 km | <10 km | <12 km | <15 km

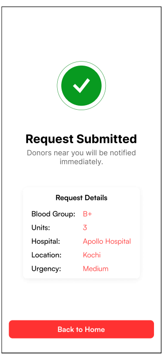
City Blood Centre — 1.2 km
● Accepts blood
Open • 24/7

Red Cross blood bank — 10.2 km
● Accepts blood
Open • 10 AM - 7 PM

MIMS Hospital — 5.6 km
● Accepts blood
Open • 24/7

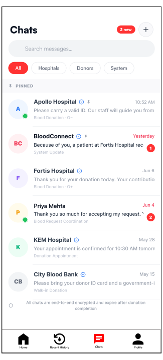

**Slot booked**
Make sure you scan your QR for automatic eligibility updation.
View completed form
Get directions
Back to Home


**Request Blood**
Blood Group Needed
A+ | A- | B+ | B- | AB+ | AB- | O+ | O-
Units Required — 1 +
Patient Name (Optional)
Enter Patient Name
Hospital Name
Select Hospital
Location
Caltex, Kannur
Urgency (Select only for critical situations)
Emergency - I require blood urgently
Additional Notes (Optional)
Enter Any Additional Info
Submit Request


**Request Submitted**
Donors near you will be notified immediately.

Request Details
Blood Group: B+
Units: 3
Hospital: Apollo Hospital
Location: Kochi
Urgency: Medium

Back to Home


**Chats** — 3 new
Search messages...
All | Hospitals | Donors | System
PINNED

**Apollo Hospital** — 10:52 AM
Please carry a valid ID. Our staff will guide you from
Blood Donation · O-

**BloodConnect** — Yesterday
Because of you, a patient at Fortis Hospital rec
System Update

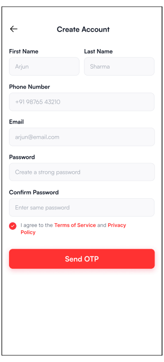
**Fortis Hospital** — Jun 6
Thank you for your donation today. Your contributio
Blood Donation · O+

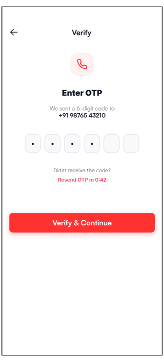
**Priya Mehta** — Jun 4
Thank you so much for accepting my request.
Blood Request Coordination

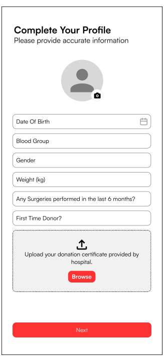
**KEM Hospital** — May 28
Your appointment is confirmed for 10:30 AM tomorr
Donation Appointment

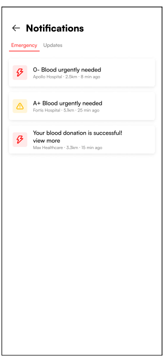
**City Blood Bank** — May 15
Please bring your donor ID card and a government-i
Walk-in Donation

All chats are end-to-end encrypted and expire after donation completion


**Create Account**
First Name: Arjun
Last Name: Sharma
Phone Number: +91 98765 43210
Email: arjun@email.com
Password: Create a strong password
Confirm Password: Enter same password
I agree to the Terms of Service and Privacy Policy
Send OTP


**Verify**
Enter OTP
We sent a 6-digit code to
+91 98765 43210
Didnt receive the code?
Resend OTP in 0:42
Verify & Continue

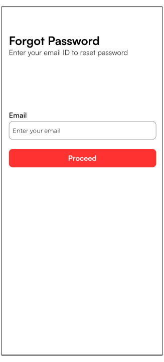

**Complete Your Profile**
Please provide accurate information
Date Of Birth
Blood Group
Gender
Weight (kg)
Any Surgeries performed in the last 6 months?
First Time Donor?
Upload your donation certificate provided by hospital.
Browse
Next

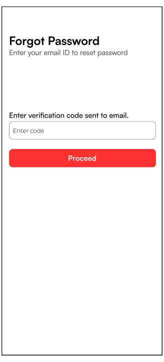

**Notifications**
Emergency | Updates

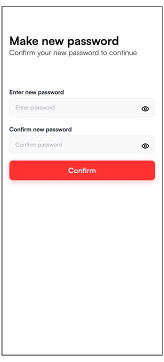
O- Blood urgently needed
Apollo Hospital · 2.5km · 8 min ago

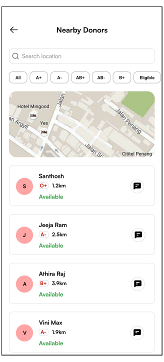
A+ Blood urgently needed
Fortis Hospital · 5.1km · 25 min ago

Your blood donation is successful! view more
Max Healthcare · 3.3km · 15 min ago

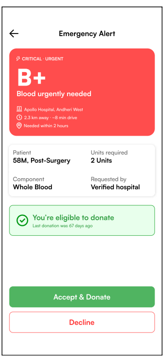

**Forgot Password**
Enter your email ID to reset password
Email
Enter your email
Proceed


**Forgot Password**
Enter your email ID to reset password
Enter verification code sent to email.
Enter code
Proceed


**Make new password**
Confirm your new password to continue
Enter new password
Enter password
Confirm new password
Confirm password
Confirm


**Nearby Donors**
Search location
All | A+ | A- | AB+ | AB- | B+ | Eligible

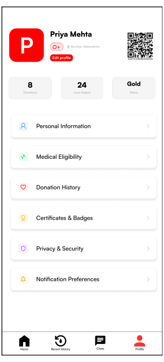
Santhosh — O+ 1.2km — Available
Jeeja Ram — A- 2.5km — Available
Athira Raj — B+ 3.9km — Available
Vini Max — A- 1.9km — Available


**Emergency Alert**
CRITICAL · URGENT
B+
Blood urgently needed
Apollo Hospital, Andheri West
2.3 km away · ~8 min drive
Needed within 2 hours

Patient: 58M, Post-Surgery
Units required: 2 Units
Component: Whole Blood
Requested by: Verified hospital

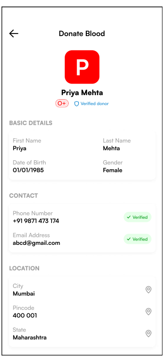
You're eligible to donate
Last donation was 67 days ago

Accept & Donate
Decline


**Priya Mehta**
O+ Mumbai, Maharashtra
Edit profile

| 8 | 24 | Gold |
|---|---|---|
| Donations | Lives Helped | Status |

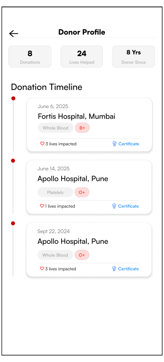
Personal Information
Medical Eligibility
Donation History
Certificates & Badges
Privacy & Security
Notification Preferences


**Donate Blood**
Priya Mehta
O+ Verified donor

BASIC DETAILS
First Name: Priya
Last Name: Mehta
Date of Birth: 01/01/1985
Gender: Female

CONTACT
Phone Number: +91 9871 473 174 — ✓ Verified
Email Address: abcd@gmail.com — ✓ Verified

LOCATION
City: Mumbai
Pincode: 400 001
State: Maharashtra


**Donor Profile**

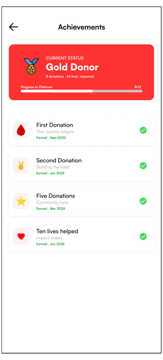
| 8 | 24 | 8 Yrs |
|---|---|---|
| Donations | Lives Helped | Donor Since |

Donation Timeline

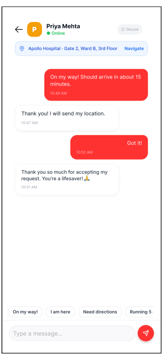
June 6, 2025
Fortis Hospital, Mumbai
Whole Blood · B+
3 lives impacted — Certificate

June 14, 2025
Apollo Hospital, Pune
Platelets · O+
1 lives impacted — Certificate

Sept 22, 2024
Apollo Hospital, Pune
Whole Blood · O+
3 lives impacted — Certificate


**Achievements**
CURRENT STATUS
Gold Donor
8 donations . 24 lives impacted
Progress to Platinum — 8/12

First Donation — Your journey begins — Earned . Sept 2022
Second Donation — Building the habit — Earned . Jan 2023
Five Donations — Community hero — Earned . Mar 2024
Ten lives helped — Impact maker — Earned . Jun 2025


**Priya Mehta** — Online — Secure
Apollo Hospital · Gate 2, Ward B, 3rd Floor — Navigate

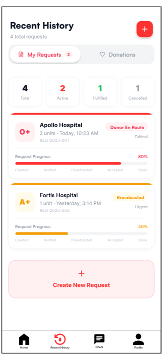
On my way! Should arrive in about 15 minutes.
10:49 AM

Thank you! I will send my location.
10:47 AM

Got it!
10:52 AM

Thank you so much for accepting my request. You're a lifesaver!🙏
10:51 AM

On my way! | I am here | Need directions | Running 5
Type a message...

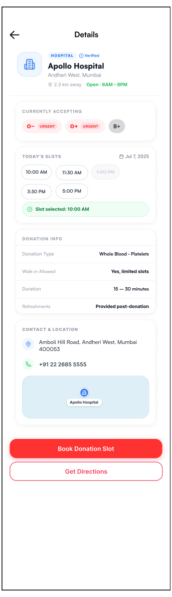

**Recent History**
4 total requests
My Requests 2 | Donations

| 4 | 2 | 1 | 1 |
|---|---|---|---|
| Total | Active | Fulfilled | Cancelled |

**Apollo Hospital** — O+ — Donor En Route
2 units · Today, 10:23 AM — Critical
REQ-2025-001
Request Progress 80%
Created · Verified · Broadcasted · Accepted · Done

**Fortis Hospital** — A+ — Broadcasted
1 unit · Yesterday, 3:14 PM — Urgent
REQ-2025-002
Request Progress 40%
Created · Verified · Broadcasted · Accepted · Done

Create New Request


**Details**
HOSPITAL ✓ Verified
**Apollo Hospital**
Andheri West, Mumbai
2.3 km away — Open · 8AM – 8PM

CURRENTLY ACCEPTING
O- URGENT | O+ URGENT | B+

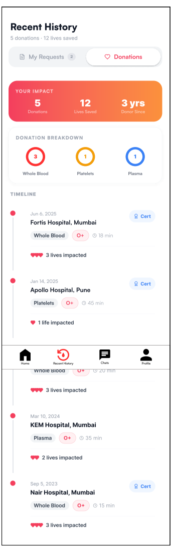
TODAY'S SLOTS — Jul 7, 2025
10:00 AM | 11:30 AM | ~~1:00 PM~~
3:30 PM | 5:00 PM
Slot selected: 10:00 AM

DONATION INFO

| | |
|---|---|
| Donation Type | Whole Blood · Platelets |
| Walk-in Allowed | Yes, limited slots |
| Duration | 15 — 30 minutes |
| Refreshments | Provided post-donation |

CONTACT & LOCATION
Amboli Hill Road, Andheri West, Mumbai 400053
+91 22 2685 5555

Book Donation Slot
Get Directions


**Recent History**
5 donations · 12 lives saved
My Requests 2 | Donations

YOUR IMPACT
5 Donations — 12 Lives Saved — 3 yrs Donor Since

DONATION BREAKDOWN
3 Whole Blood | 1 Platelets | 1 Plasma

TIMELINE

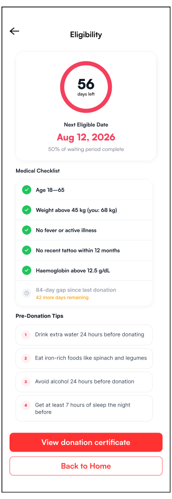
Jun 6, 2025 — Cert
Fortis Hospital, Mumbai
Whole Blood · O+ · 18 min
3 lives impacted

Jan 14, 2025 — Cert
Apollo Hospital, Pune
Platelets · O+ · 45 min
1 life impacted

Whole Blood · O+ · 20 min
3 lives impacted

Mar 10, 2024
KEM Hospital, Mumbai
Plasma · O+ · 35 min
2 lives impacted

Sep 5, 2023 — Cert
Nair Hospital, Mumbai
Whole Blood · O+ · 15 min
3 lives impacted


**Eligibility**
56
days left
Next Eligible Date
Aug 12, 2026
50% of waiting period complete

Medical Checklist
- ✓ Age 18—65
- ✓ Weight above 45 kg (you: 68 kg)
- ✓ No fever or active illness
- ✓ No recent tattoo within 12 months
- ✓ Haemoglobin above 12.5 g/dL
- 84-day gap since last donation — 42 more days remaining

Pre-Donation Tips
1. Drink extra water 24 hours before donating
2. Eat iron-rich foods like spinach and legumes
3. Avoid alcohol 24 hours before donation
4. Get at least 7 hours of sleep the night before

View donation certificate
Back to Home