ResQWay

Rescue, The Right Way

Team : **CodeBees**

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Problem Statement

Problem Statement

- Delayed ambulance arrivals due to traffic and poor coordination
- No live visibility of hospital capacity or specialization
- Inefficient handling of blood requests and volunteer help
- Fragmented systems → slower response → lives lost

Our Solution - ResQWay

Provides an integrated platform that :

- Instantly reports emergencies with live location
- Routes ambulances efficiently using AI and real-time traffic
- Handles blood requests and volunteer help seamlessly
- Keeps everyone updated with live emergency feeds
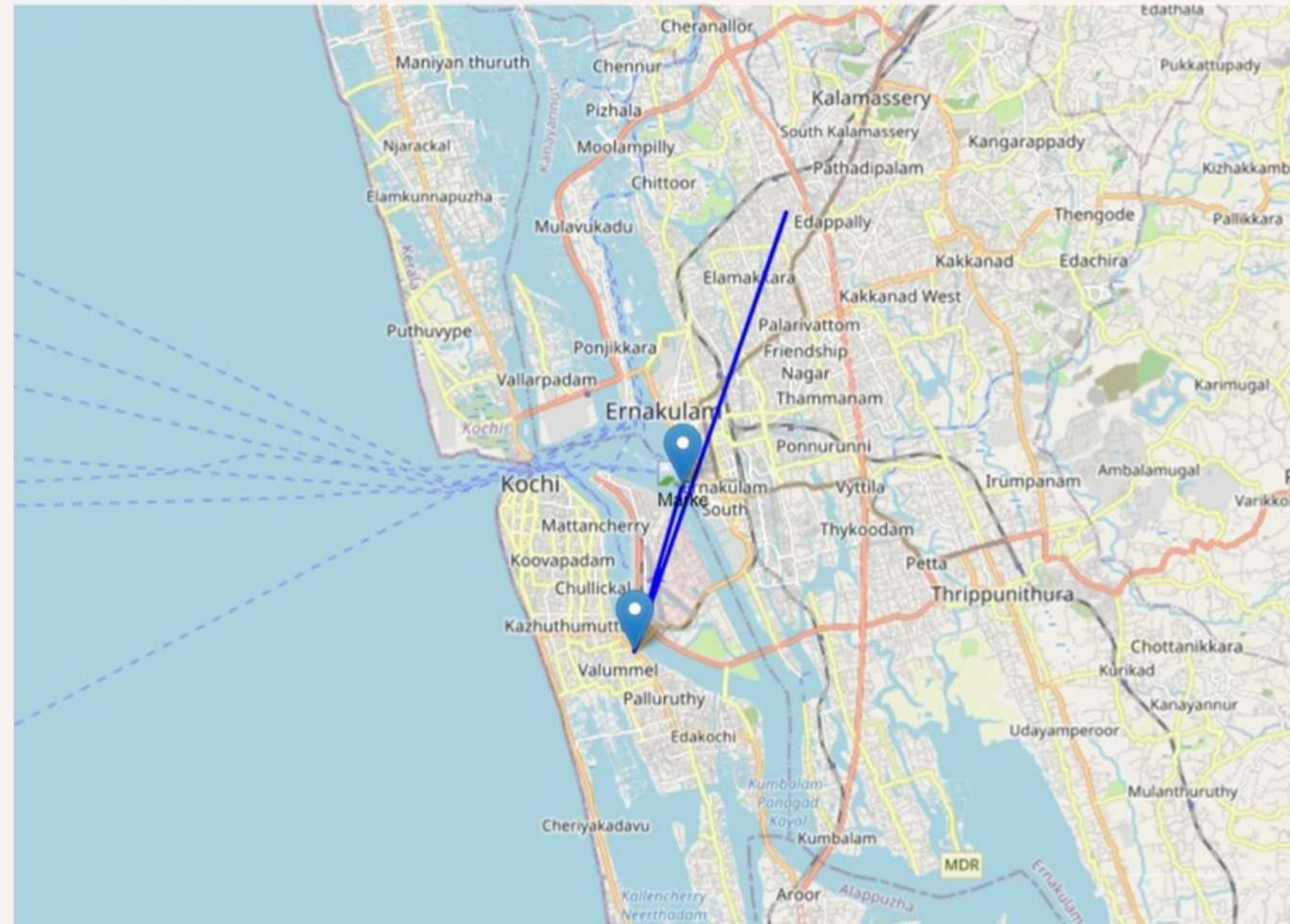- Provides a QR-based quick-access ID for all registered users

Our Aim - Reduces Rescue time and improve survival outcomes.

Features :

1. **AI Root Optimization**

- Live Traffic
- Auto Re-route

Finds the fastest and safest path for ambulances using live traffic data and auto-rerouting to avoid congestion.

Features :

2. Emergency Report (Live Location)

When someone raises an emergency, their live location is shared instantly with nearby ambulances and hospitals — no delay, no confusion.

ResQWay

Resource Allocation

Status Tracking

Geolocation and Mapping

Response Teams

Emergency Hotline
911
Available 24/7

🚑 **Report an Emergency**

Enter Your Location

e.g. Near Main Street, City Center

Request Ambulance

Features :

3. Blood Request System

Allows users or hospitals to request blood with all essential details like blood type, quantity, and urgency. Nearby donors or banks are notified immediately.

🩸 **Request Blood**

Patient Name

Hospital Name

Bystander Name
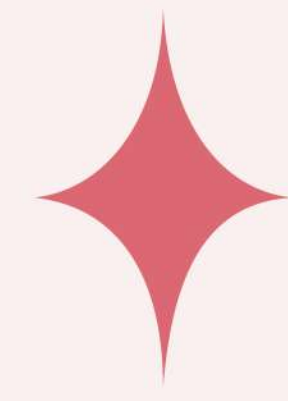
Contact Number

Select Blood Type

dd-mm-yyyy

Request Blood

Features :

4. Live Emergency Feed

A central feed showing real-time updates of active emergencies, ambulance movements, hospital availability, and critical alerts — all in one place.

ResQWay

Resource Allocation

Status Tracking

Geolocation and Mapping

Response Teams

📢 Report Emergency   🩸 Request Blood   👋 Join as Volunteer

Live Emergency Feed

Urgent Blood Request
A+ blood needed at Amrita Hospital, Kochi
2 mins ago

Nearby Emergency Case
Accident reported near Edappally Junction
5 mins ago

Nearby Emergency Case
Fire alert near Kalamassery Metro Station
12 mins ago

Emergency Hotline
911
Available 24/7

Features :

5. Volunteer Module

Anyone can register as a verified volunteer to assist nearby incidents — like guiding ambulances, first aid, or blood donation.
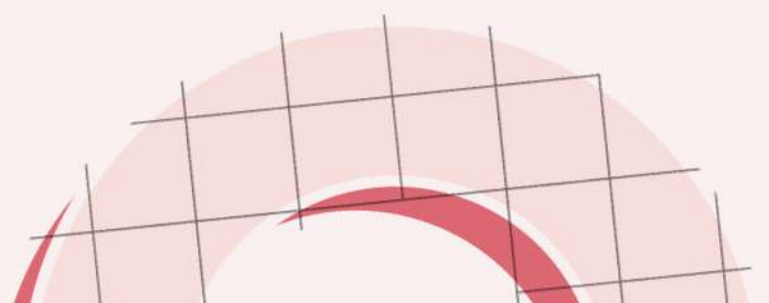
🤝 **Join as Volunteer**

Enter your location:

E.g., Kochi, Kerala

Join Now

Features :

6. Emergency QR for registered Users

Every registered user gets an Emergency QR containing key medical info (blood group, allergies, contacts). Scanning it gives instant details to rescuers.

Muhsina Mohammedkutty
Registered Volunteer
📍 Kochi, Kerala

Personal & Medical Details

Full Name:
Muhsina Mohammedkutty

Contact No:
+91 9876543210

Email:
muhsina@example.com

Address:
Green Valley, Edappally, Kochi, Kerala

Blood Type:
B+

Allergies:
Peanuts, Dust

Medicine:
Paracetamol 500mg (as needed)

Attending Doctor:
Dr. Asha Menon, City Hospital, Kochi

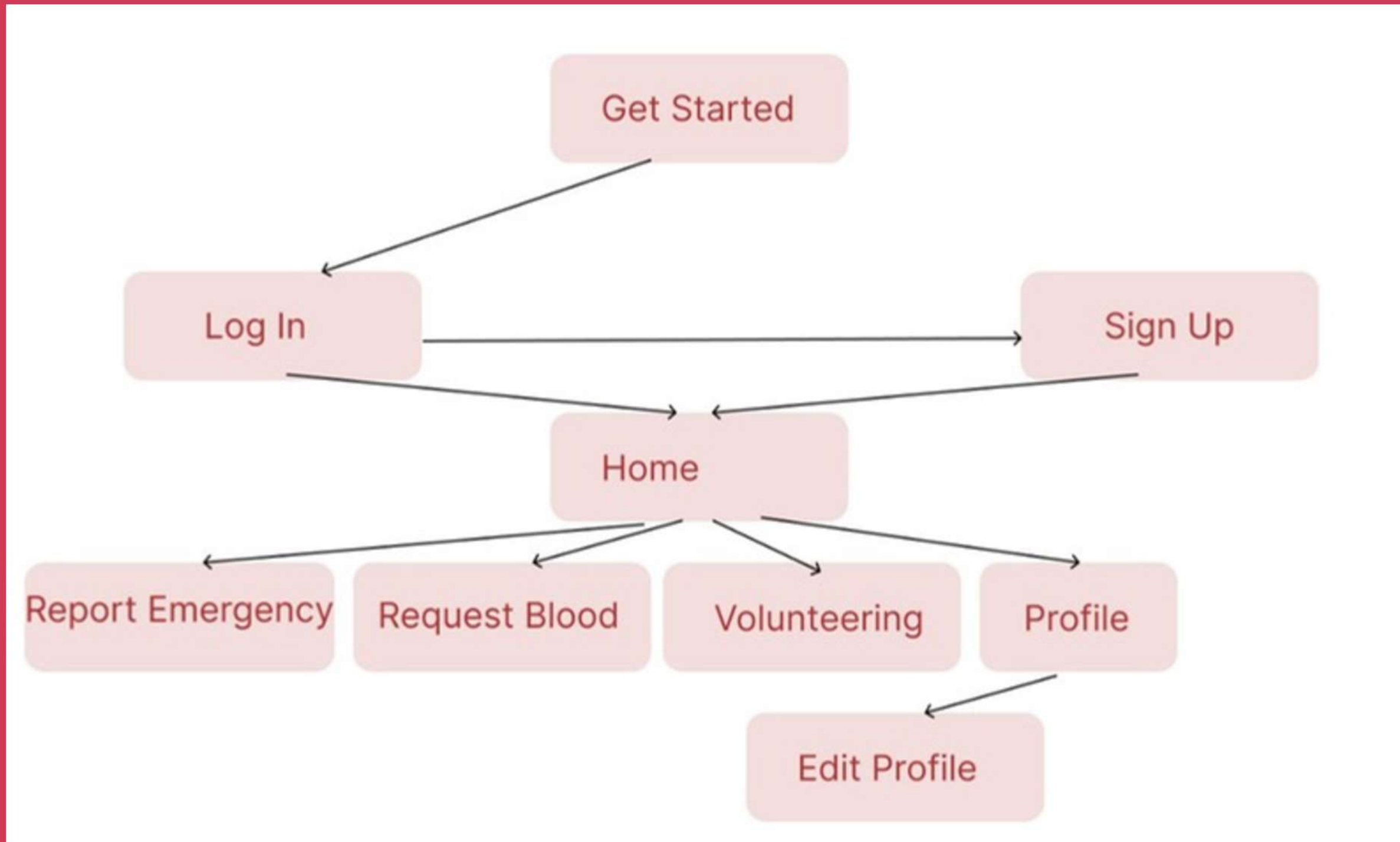**Scanning Reports:**
CT Scan (June 2024), Blood Test (May 2024)

Emergency Contact:
+91 9123456780

QR Code for Quick Access

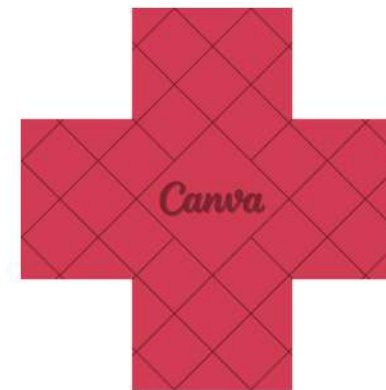**— Edit Profile**

Demo Flow

Target Users

Public Users

Hospitals

Ambulane

Volunteers

Technologies Used

Frontend
- React.js – Builds a fast, dynamic, and responsive user interface
- Tailwind CSS – Enables clean, mobile-friendly design quickly

Backend
- Django – Handles core logic, APIs, and authentication
- WebSockets – Powers real-time updates for emergencies and live feeds
- Celery + Redis – Manages background tasks and quick data handling

Database
- SQLite – Lightweight, efficient database for structured data
- Redis – Used for caching and real-time location tracking

Mapping & Communication
- Leaflet.js – For live map rendering, location tracking, and route visualization

Deployment & DevOps
- Vercel – Hosts the frontend for fast, global delivery
- GitHub – Source control and continuous integration for quick updates

Security
- JWT Authentication – Ensures safe, role-based access and data privacy

Add On Features

- **Resource Allocation** – Smart distribution of ambulances, hospitals, and blood availability based on location and urgency.

- **Status Tracking** – Live updates of ambulance movement, hospital acceptance, and patient progress in real time.

- **Geolocation & Mapping** – Enhanced map views for responders to visualize active cases, nearby hospitals, and volunteers.

- **Response Team Management** – Coordinate multiple emergency teams and assign tasks dynamically during high-load incidents.

Future Enhancements

AI Prediction & Analytics – Forecast emergencies and optimize readiness in high-risk zones.

Smart Traffic Integration – Automatic green corridor for ambulances via traffic signal systems.

Volunteer Recognition System – Reward active volunteers with badges and certificates.

Mobile App Extension – Native Android/iOS version for greater accessibility.

Government & NGO Partnerships – For larger-scale implementation and emergency coordination.

Multi-Language & Offline Support – Inclusive and reliable in all network conditions.

Thankyou!

GitHub Repo : https://github.com/muhsina419/ResQWay/

Design File   :   https://www.figma.com/design/