Project Design Phase-||

Technology Stack(Architecture & Stack)

Date	4 Nov 2025
Team ID	NM2025TMID02156
Project Name	To supply leftover food to poor
Marks	4 Marks

✅ Technology Stack (Tech Stack)

1. Front-End (User Interface)

Used by **Donors, Volunteers, Recipients (NGOs), and Admin**

Layer	Technologies (Options)
Mobile App / Web App	React Native (mobile), Flutter (mobile), React.js/Angular (web)
UI / Styling	Bootstrap, Tailwind CSS, Material UI
Maps Integration	Google Maps API / OpenStreetMap API

2. Back-End (Server / Logic Layer)

Handles business logic such as:

- Request management
- Volunteer assignment
- Delivery tracking

Component	Technologies (Options)

Server Framework	Node.js (Express.js) / Django (Python) / Spring Boot (Java)
Authentication	JWT / OAuth
Notification System	Firebase Cloud Messaging (push alerts), Twilio / WhatsApp APIs

3. Database Layer

Stores user and transaction data.

Component	Technology
Primary Database	PostgreSQL / MySQL (relational DB)
Geolocation & Tracking	MongoDB / Firebase (if real-time location required)
File Storage	AWS S3 / Google Cloud Storage

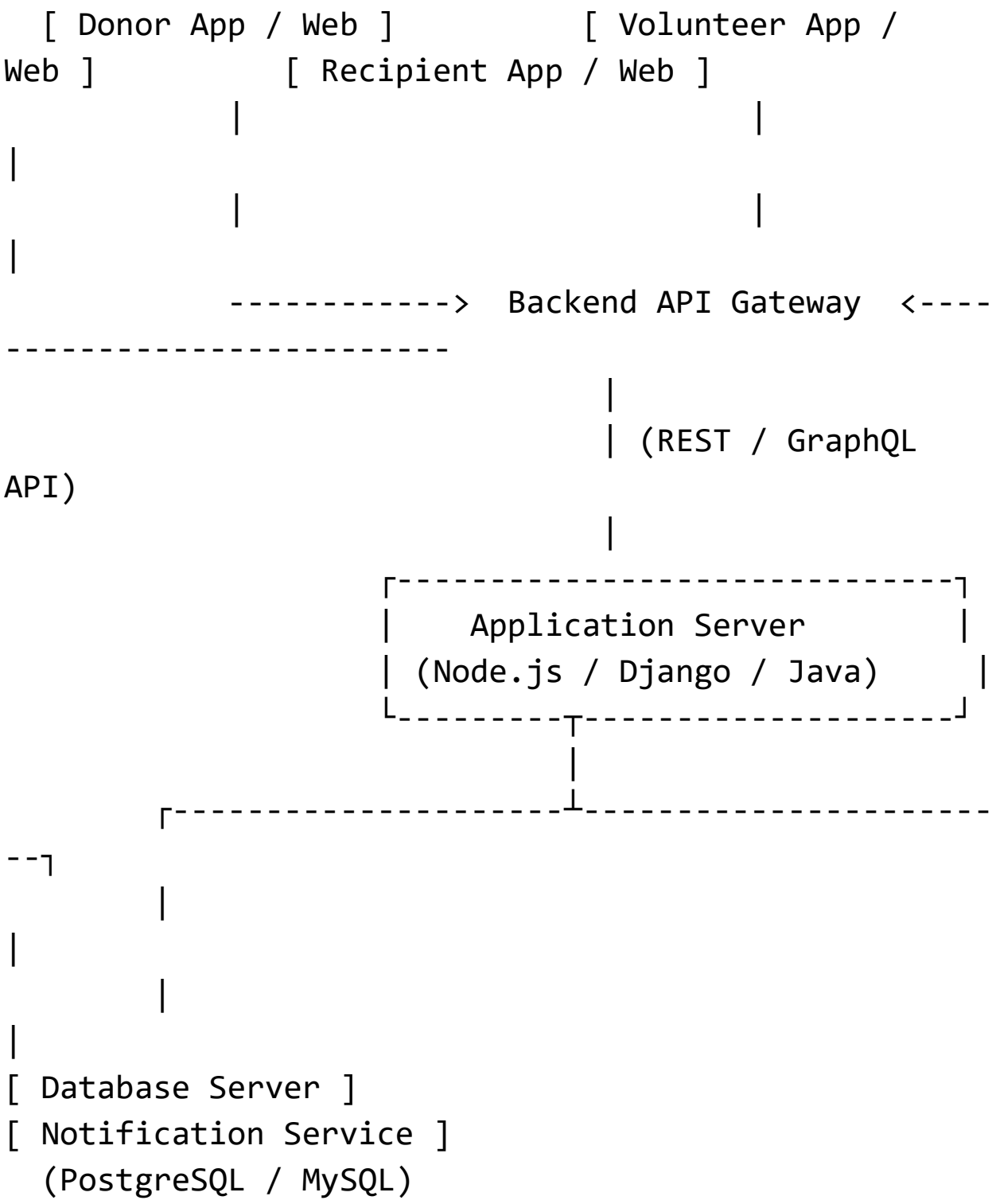
4. Integration & APIs

Requirement	Technology
Maps / Location	Google Maps API
QR / OTP / Delivery proof	Firebase Auth
WhatsApp automation (optional)	Meta / Twilio WhatsApp API

5. Deployment / DevOps

Component	Technology
Cloud Hosting	AWS / Azure / Google Cloud
CI/CD Pipeline	GitHub Actions / Jenkins
Monitoring & Logging	Grafana / Kibana / Prometheus

✅ System Architecture (High-Level Architecture Diagram)



✅ Stakeholders (People Involved)

Stakeholder	Role in System
Donor (Restaurants / Event halls / Customers)	Posts food available for donation
Volunteer	Picks up and delivers food
Recipient (NGO / Poor People / Shelters)	Receives the food
System Admin	Manages users, data, reports
Government / NGOs (Optional)	Can integrate to scale project