### **Project Design Phase-II**

### **Technology Stack (Architecture & Stack):**

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| Date | 26 June 2025 |
| Team ID | LTVIP2025TMID30678 |
| Project Name | To Supply Leftover Food To Poor |
| College Name | Aditya collage of Engineering and Technology |
| Team members | 1)Sadi ramana (Leader) – 22MH1A04D6   * [Ramanarebel69@gmail.com](mailto:Ramanarebel69@gmail.com)   2)Sravani kasireddy (Documentation developer and opearator ) - 23MHA0412   * [Sravanikasireddy850@gmail.com](mailto:Sravanikasireddy850@gmail.com) |

### **Technical Architecture**

### **Table-1: Components & Technologies:**

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| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1 | User Interface | Interface for restaurants, NGOs, and volunteers to interact | Salesforce Lightning Web Components, HTML, CSS |
| 2 | Application Logic-1 | Donation workflow: food listing, pickup request, status updates | Apex (Salesforce backend), Salesforce Flow |
| 3 | Application Logic-2 | Notifications for pickups, deliveries, expiry alerts | Salesforce Process Builder, Apex Triggers |
| 4 | Application Logic-3 | Intelligent donor-recipient matching | Salesforce Einstein AI |
| 5 | Database | Store food donation records, user profiles, NGO details | Salesforce Standard and Custom Objects |
| 6 | Cloud Database | Cloud storage of donation logs, reports, analytics data | Salesforce Data Cloud |
| 7 | File Storage | Upload food images, receipts, health certifications | Salesforce Files, Amazon S3 (if external integration needed) |
| 8 | External API-1 | Verify location & route optimization | Google Maps API, Mapbox API |
| 9 | External API-2 | NGO registration verification (government or official ID check) | DigiLocker API / Aadhar API |
| 10 | Machine Learning | Predict food demand, prioritize delivery based on perishability | Salesforce Einstein / External ML via Heroku |
| 11 | Infrastructure | Hosting, scalability, and CI/CD for custom services | Salesforce Platform, Heroku |

**TABLE 2:Application Characteristics:**

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| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1 | Open-Source Frameworks | Frontend frameworks or utility libraries used in integration | Bootstrap (UI), Leaflet.js (maps), Chart.js (analytics) |
| 2 | Security Implementations | Ensure data privacy, secure access, and regulatory compliance | OAuth 2.0, Role-Based Access Control (RBAC), SHA-256 Encryption, Field-Level Security, OWASP Top 10 Mitigation |
| 3 | Scalable Architecture | Scalable multi-tier architecture to handle growing donors and NGOs | 3-Tier Architecture: UI → Business Logic → Database; Salesforce Platform + Heroku Microservices |
| 4 | Availability | High uptime with minimal service disruption through distributed cloud services | Salesforce Cloud Infrastructure, Heroku Dynos, Load Balancers |
| 5 | Performance | Fast response times, optimized for high load with caching and CDNs | Salesforce CDN, Object Caching, Governor Limits Optimization |