NAAN MUDHALVAN PROJECT REPORT

SB8067- SALESFORCE DEVELOPER

“APPLY LEFTOVER FOOD TO POOR“

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4. Project Design Phase — Apply Leftover Food to Poor

4.1 Introduction

Translates requirements into system architecture, data models, and module design for the NGO-targeted platform.

4.2 System Architecture

Three-tier architecture:

Presentation Layer: Responsive web UI for donors, NGOs, volunteers, and admin.

Application Layer: RESTful APIs handling business logic: donation lifecycle, scheduling, routing.

Database Layer: Stores users, donations, pickups, routes, and audit logs.

4.3 Data Flow Diagram (DFD) Overview

Level 0: Platform interacts with external entities — Donors, NGOs, Volunteers, SMS/Maps services.

Level 1: Modules: Donation Posting, Matching & Scheduling, Notifications, Reporting.

4.4 Entity–Relationship (ER) Diagram Overview

Key entities: User (role), Donation, Pickup, NGO, Volunteer, Notification, Report. Relationships:

Donor posts many Donations.

Donation can be accepted by one Pickup (by NGO/Volunteer).

NGO has many Volunteers; each Pickup is logged with timestamps and distribution status.

4.5 Module Design

Admin Module: NGO approvals, guideline management, monitoring dashboard.

Donor Module: Simple donation form, quick photo upload, pickup window selection.

NGO/Volunteer Module: Discover donations, accept, view routing help, confirm pickup/distribution.

Scheduling Module: Matches donations to NGOs/volunteers based on proximity and availability.

Notification Module: Sends confirmations and reminders.

Reporting Module: Generates KPIs: meals recovered, distributions, average pickup time.

4.6 User Interface Design

Focus on clarity and speed: large buttons, quick forms, time-window selectors, and clear status labels (Posted/Accepted/PickedUp/Distributed).

4.7 Database Design

Normalized tables: Users, Donations, Pickups, NGOs, Volunteers, Notifications, SafetyChecks, Reports. Include audit logs for traceability and compliance.

4.8 Security and Data Handling

Encrypted passwords, role-based access control, HTTPS.

Minimal retention of donor contact info; consent flow for contact use.

Documenting food-safety checks stored with each Donation record.