Disaster Relief & Donation Management CRM (Punjab Floods) – Full Explanation

■ Problem Statement

With recent floods in Punjab, NGOs and government relief bodies are facing difficulties in managing donations, tracking relief requests, and assigning volunteers effectively. Donors often lose trust when they don't receive updates about their contributions. Volunteers are not properly coordinated, and resources don't always reach the areas in need on time. ■ The solution: A Salesforce-based CRM system called "Punjab ReliefConnect CRM" that manages donors, volunteers, relief requests, donations, and distribution tracking in real-time. It ensures transparency, faster volunteer assignment, and accurate reporting to build trust among donors and improve relief operations.

Phase 1: Problem Understanding & Industry Analysis

• Requirement Gathering: NGOs need systems to log donations (money, food, medicine, clothes), match them with urgent requests, and send updates to donors.
• Stakeholder Analysis: Admin (setup & access), Donor Manager (manage donations), Volunteer Coordinator (assign volunteers), Donors (give resources), Volunteers (deliver help), Govt. Officers (monitor).
• Business Process Mapping: Donor → CRM log → Relief Request → Volunteer Assignment → Distribution → Donor Update → Dashboard Reporting.
• Industry Use Case: NGOs like Red Cross use CRMs for relief; this project simplifies for Punjab floods.
• AppExchange Exploration: Study Nonprofit Success Pack (NPSP) but build a lightweight solution.

Phase 2: Org Setup & Configuration

• Setup Developer Org: Punjab ReliefConnect CRM.
• Company Profile: Add Punjab NGO details, 24x7 business hours.
• Users: Admin, Donor Manager, Volunteer Coordinator.
• Profiles & Roles: Volunteers limited access, Donor Manager donation access, Admin full access.
• OWD & Sharing: Donations private, Volunteers see assigned tasks only.
• Sandbox: Test automations before production.
• Deployment: Use Change Sets to migrate.

Phase 3: Data Modeling & Relationships

• Objects: Donor, Donation, Volunteer, Relief Request, Distribution.
• Fields: Donation type, Status, Volunteer skills, Request urgency, Distribution status.
• Relationships: Donor → Donation (1:M), Relief Request ↔ Donation (via Distribution), Volunteer ↔ Distribution (M:M).
• Record Types: Donations (Cash vs Goods), Requests (Food vs Medical).
• Schema Builder: Visualize all relationships.

Phase 4: Process Automation (Admin)

• Validation Rule: Donation amount must be > 0.
• Workflow: Auto 'Thank You' email to donors.

• Approval Process: High-value donations require Admin approval.
• Flow Builder: Auto-assign nearest volunteer via pincode, update Request status.
• Custom Notification: Urgent requests trigger alerts.

Phase 5: Apex Programming (Developer)

• Trigger: Update Relief Request status when donations fulfill needs.
• SOQL Queries: Fetch open urgent requests in affected districts.
• Batch Apex: Weekly impact summary emails to donors.
• Queueable Apex: Handle bulk donations.
• Scheduled Apex: Daily pending urgent requests report.
• Future Methods: Send SMS notifications to volunteers.
• Test Classes: Validate triggers & batch jobs.

Phase 6: User Interface Development

• Lightning App: Punjab ReliefConnect.
• Home Page: Show active disasters, donations, pending requests.
• Record Pages: Donor donation history, Volunteer tasks.
• Tabs: Donors, Donations, Volunteers, Requests, Distributions.
• LWC Components: Nearby Requests Finder, Donor Impact Dashboard.

Phase 7: Integration & External Access

• Google Maps API: Locate nearby relief centers.
• Govt. Disaster API: Import flood alerts.
• Platform Events: Notify volunteers for urgent requests.
• Experience Cloud: Portal for donors to log donations & track usage.
• OAuth: Secure donor logins.

Phase 8: Data Management & Deployment

• Data Import Wizard: Import donor/volunteer records.
• Data Loader: Bulk donation uploads.
• Duplicate Rules: Prevent duplicate donor entries.
• Data Export: Weekly backups.
• Change Sets: Migrate workflows & flows.
• VS Code + SFDX: Deploy Apex & LWC.

Phase 9: Reporting, Dashboards & Security Review

• Reports: Donations by type, Volunteers by district, Requests fulfilled vs pending.
• Dashboards: Punjab Relief Impact Tracker.
• Dynamic Dashboards: Volunteers see only their requests.
• Security: Donors restricted to own donations, Audit Trail enabled.

Phase 10: Final Presentation & Demo Day

• Pitch: Punjab ReliefConnect ensures transparency and efficiency.
• Demo Flow: Donor logs donation → Request auto-matched → Volunteer assigned → Delivery → Dashboard updates.

- Handoff Docs: Setup + user manuals.
- LinkedIn Showcase: Tag project as Punjab Relief CRM.