CharityConnect CRM – Donor Transparency & Engagement Platform

Phase 1: Problem Understanding & Industry Analysis

Industry: Non-Profit / Charity (Crowdfunding & Donations)
Project Type: Salesforce CRM Implementation (Admin + Developer)
Target Users: Donors, NGO Staff/Admins, Beneficiaries

Problem Statement

Non-profits struggle to build trust and engage donors due to:

- Scattered donation records in Excel/Sheets.
- Limited visibility into how donations are utilized.
- No reward system for recurring or loyal donors.
- Manual effort in sending updates, receipts, and impact reports.

This leads to **low donor retention, inefficiency, and declining trust**.

Goal

Develop a Salesforce-based platform that:

- Centralizes donors, donations, campaigns, and beneficiaries.
- Provides **real-time donation tracking and impact reports**.
- Introduces **innovative engagement features** (Smart Cart, Loyalty Points, Badges, Forecasting).
- Automates thank-you emails, festive donation drives, and reminders.

- Enhances transparency through dashboards and donor profiles.

Requirement Gathering

Business Needs

- Centralized platform for NGO staff and donors.
- Automated donation tracking + communication.
- Gamification features to retain donor interest.
- Impact-driven dashboards for staff and donors.

Functional Requirements

- **Donor Object** → details, donation history, loyalty points.
- **Campaign Object** → fundraising goals, progress.
- **Beneficiary Object** → supported communities/individuals.
- **Donation Object** → links Donor → Campaign → Beneficiary.
- **Smart Donor Cart** → select multiple campaigns, auto-total.
- **Donor Loyalty Points & Badges** → points for each donation, auto-badges via automation.
- **Impact Forecasting** → formulas & dashboard to show future impact.
- **Festive Campaign Triggers** → seasonal auto-reminders.

Non-Functional Requirements

- Mobile-friendly via Salesforce app.
- Role-based access (Donor, NGO Staff, Admin).
- Scalable for thousands of donors.
- Easy UI using Lightning App Builder + LWCs.

Stakeholder Analysis

Stakeholder	Needs / Responsibilities
Donors	Donate easily, see real-time impact, earn rewards (points & badges), forecast future impact.
NGO Staff	Create/manage campaigns, track donations, run festive drives, update beneficiaries.
Beneficiaries	Receive support, provide updates, connect transparently with donors.
Admin	Manage setup, security, permissions, and ensure compliance.

Business Process Mapping

Current Manual Process

- Donations recorded in Excel.
- Donors informed via manual email/WhatsApp.
- Reports created monthly with delays.
- No systematic loyalty/reward tracking.

Proposed Salesforce Process

1. Donor selects multiple campaigns → added to **Impact Cart**.
2. Total donation auto-calculates → stored as Donation record(s).
3. **Thank-you email** sent automatically.
4. Recurring reminders + festive campaign appeals triggered by Flow.
5. Donor earns **Loyalty Points** → when thresholds met, **Badges auto-assigned**.
6. **Impact Forecasting** shows how future pledges translate into meals/benefits.

7. Dashboards auto-refresh to show real-time donor & campaign performance.

Industry-Specific Use Cases

- **Smart Donor Cart** → e-commerce-like donation experience.
- **Donation Transparency Dashboard** → live usage of funds.
- **Gamification with Loyalty Points & Badges** → motivates donors.
- **Impact Forecasting** → future impact visualization.
- **Festive Campaign Triggers** → seasonal drives like "This Diwali, sponsor a meal."

AppExchange Exploration

- **Nonprofit Success Pack (NPSP):** Base framework for NGO donation tracking.
- **Conga Composer:** Auto-generate donation receipts.
- **FormAssembly:** Custom donor registration forms.
- **SurveyMonkey:** Collect donor feedback post-campaign.

Phase 2: Org Setup & Configuration

Salesforce Edition

- Sign up for a **Developer Edition Org**..
- Log in with your login credentials.

Company Profile Setup

- Company Name: CharityConnect NGO
- Currency: INR
- Time Zone: Asia/Kolkata (IST)
- Address and contact details configured.

Business Hours & Holidays

- Standard business hours: Monday–Friday, 9 AM – 6 PM IST;
  Saturday–Sunday, 10 AM – 3 PM IST.
- Holidays configured: Diwali, Christmas, Independence Day.

Fiscal Year Settings

- Standard Fiscal Year: April – March.

User Setup & Licenses

- System Administrator (Admin User)
- NGO Staff User
- Donor User

Profiles

- System Administrator (default)
- NGO Staff Profile (customized from Standard User)
- Donor Profile (customized with limited access)

Roles

- Admin
- NGO Manager
- NGO Staff
- Donor

Permission Sets

- Donor Dashboard Access
- NGO Advanced Reporting

Organization-Wide Defaults (OWD)

- Donations: Private
- Donors: Private
- Campaigns: Public Read Only
- Beneficiaries: Public Read Only

Sharing Rules

- NGO Staff access to team donations
- Donors restricted to their own donations only

Login Access Policies

- Enabled for troubleshooting and admin support

Dev Org Setup

- Developer Org created and configured for the project

Sandbox Usage

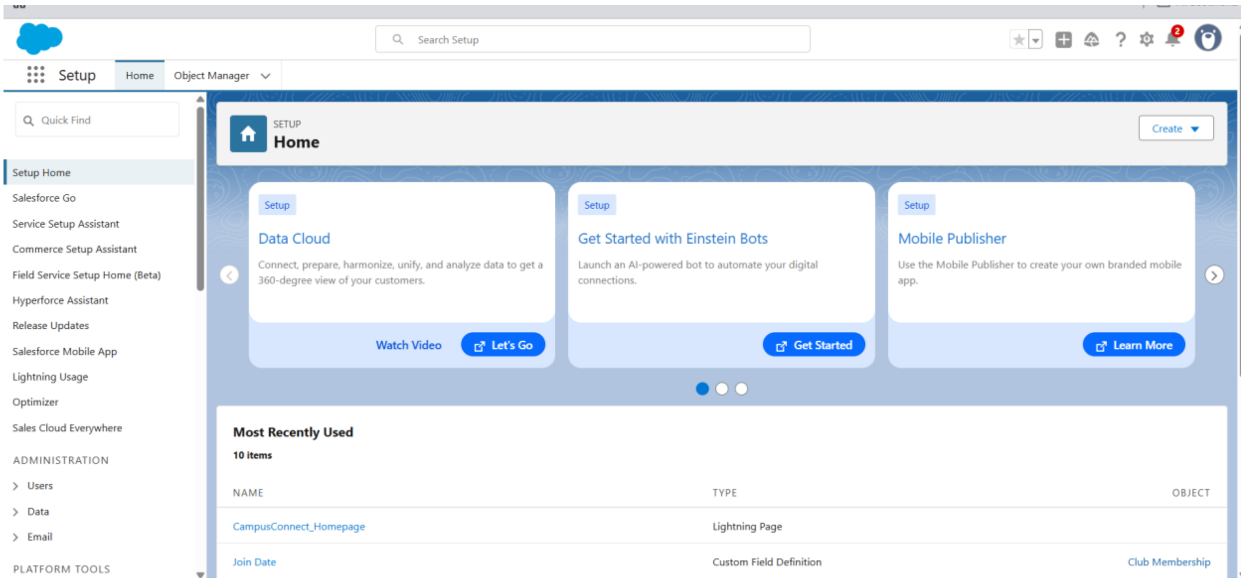
- Not applicable (Developer Edition)
- Simulated via secondary Developer Org if required

Deployment Basics

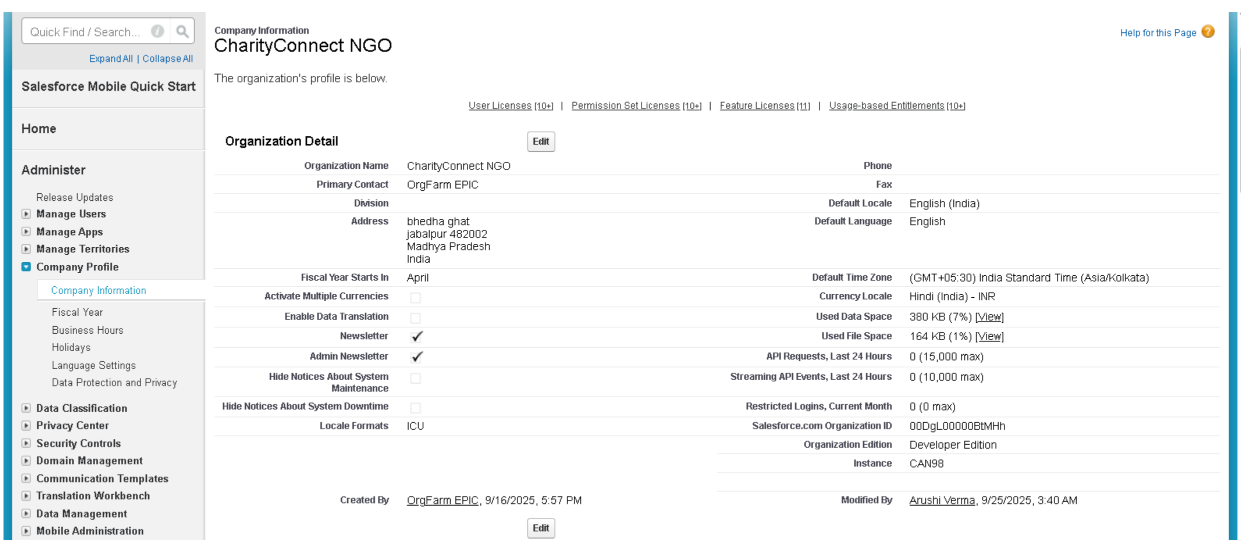
- Change Sets identified as the primary deployment method
- Awareness of ANT Migration Tool and SFDX for advanced deployments

Screenshots:

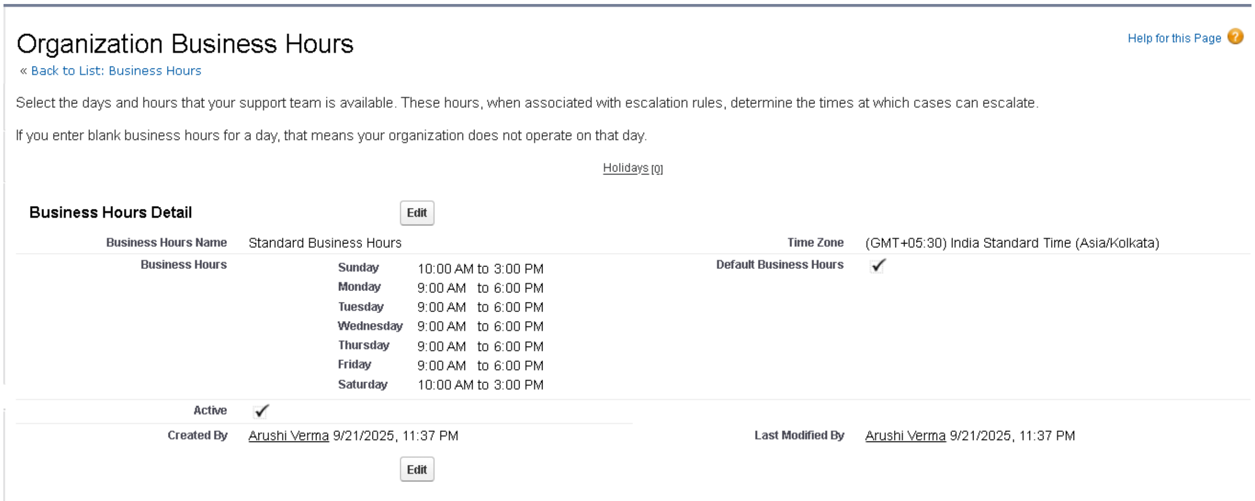
Developer Org Setup

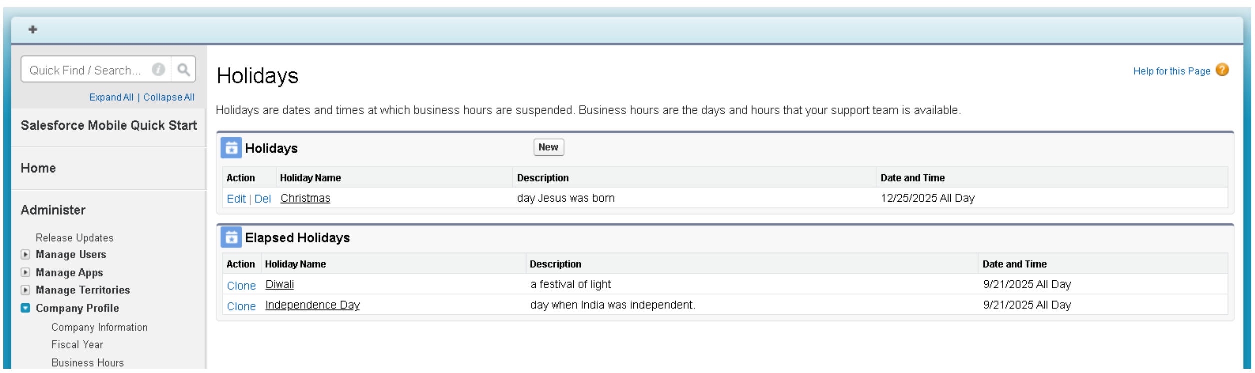


Company Profile Setup

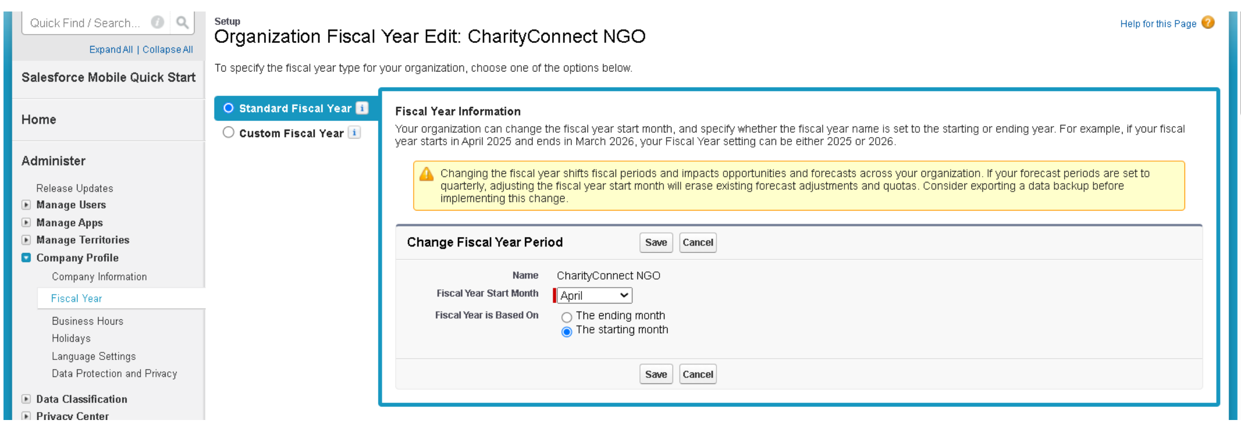


Business Hours & Holidays

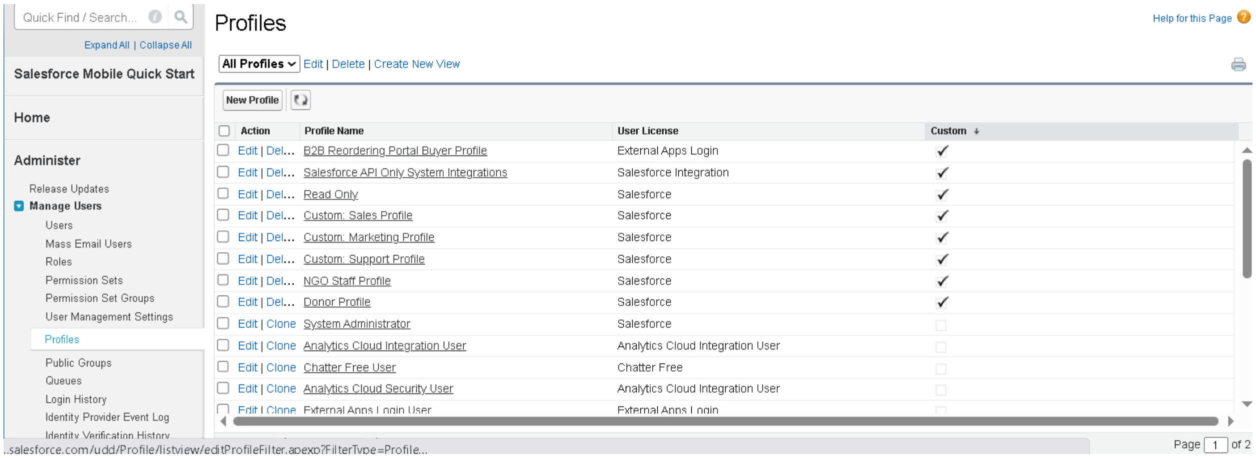




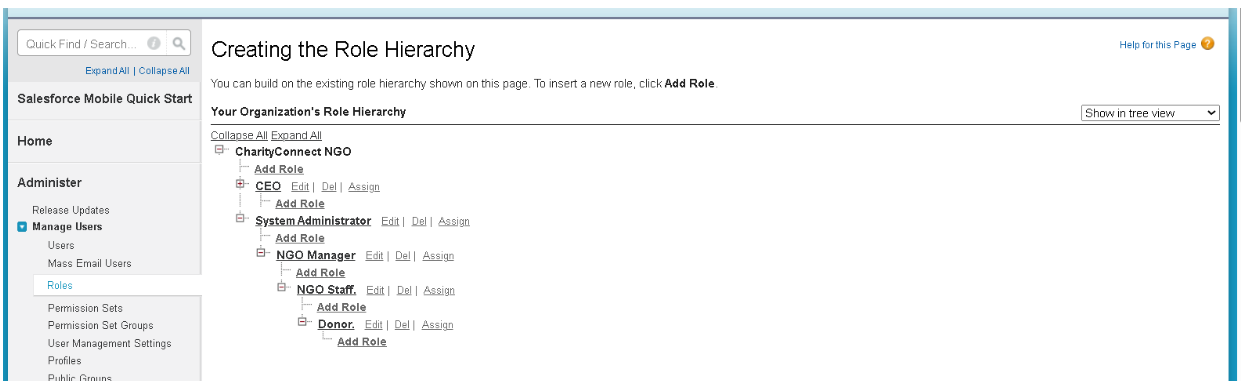
Fiscal Year Settings



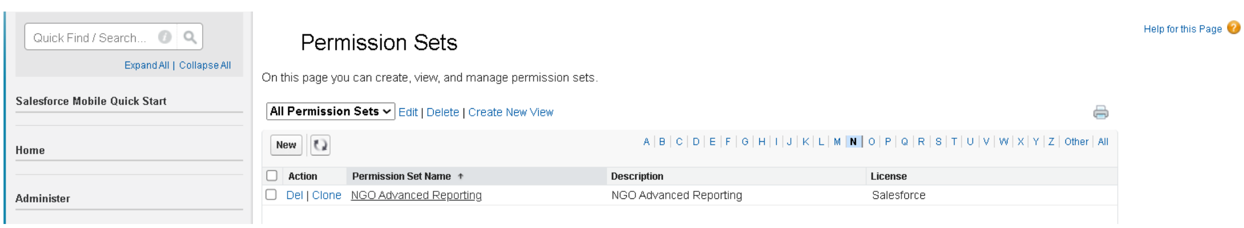
Profiles

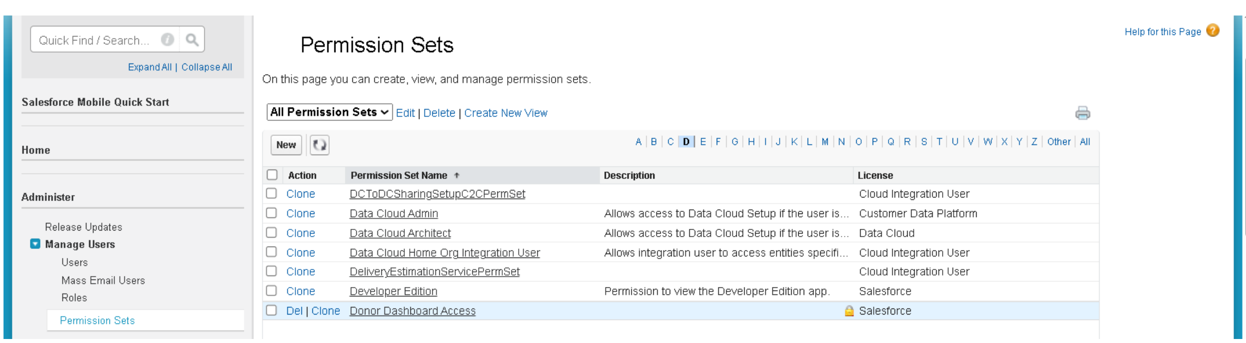


Roles



Permission Sets





Phase 3: Data Modeling & Relationships

Standard Objects Used

- **User** → Represents NGO staff, donors (if given portal access), and admins.
- **Campaign** → Used to manage fundraising initiatives (e.g., Education Drive, Healthcare Relief).
- **Contact (extended for Donors)** → Acts as the base for donor information, extended with custom fields.

Custom Objects Created

1. **Donor**
   - Stores additional donor details beyond Contact.
   - Key Fields: Donor ID (Auto-Number), Loyalty Points, Preferred Cause, Total Contributions, Badge Status.
2. **Donation**
   - Tracks all individual donations.
   - Key Fields: Donation ID, Amount, Date, Mode of Payment, Status (Pending/Completed/Failed).
   - Relationships: Linked to Donor, Campaign, and Beneficiary.
3. **Beneficiary**
   - Represents individuals or communities supported.
   - Key Fields: Beneficiary ID, Name, Type (Individual/Community), Support Details, Success Story.
4. **Donor Badge**
   - Tracks gamification & recognition.
   - Key Fields: Badge ID, Badge Type (Bronze/Silver/Gold), Earned Date.
5. **Impact Cart**
   - Mimics a shopping cart for multi-campaign donations.
   - Key Fields: Cart ID, Selected Campaigns, Total Donation Value, Forecasted Impact.

Fields Breakdown (Detailed)

Donor

- Donor ID (Auto-Number)
- First Name (Text)
- Last Name (Text)
- Email (Email)
- Phone (Phone)
- Address (Text Area)
- Loyalty Points (Number)
- Total Contributions (Currency, Roll-up from Donations)
- Preferred Cause (Picklist: Education, Health, Disaster Relief, Other)
- Badge Status (Formula/Lookup from Donor Badge)

Donation

- Donation ID (Auto-Number)
- Donation Amount (Currency)
- Date (Date/Time)
- Mode of Payment (Picklist: UPI, Card, Bank Transfer, Cash, Others)
- Status (Picklist: Pending, Completed, Failed, Refunded)
- Donor (Lookup to Donor)
- Campaign (Master-Detail to Campaign)
- Beneficiary (Lookup to Beneficiary)

Beneficiary

- Beneficiary ID (Auto-Number)
- Name (Text)
- Type (Picklist: Individual, Community)
- Age (Number, optional if Individual)
- Location (Text)
- Support Details (Long Text Area)
- Success Story (Rich Text Area)

Campaign (Extended)

- Campaign Goal (Currency)
- Amount Raised (Currency, Roll-up from Donations)
- Start Date (Date)
- End Date (Date)
- Status (Picklist: Active, Completed, Cancelled)

Donor Badge

- Badge ID (Auto-Number)

- Badge Type (Picklist: Bronze, Silver, Gold, Platinum)
- Earned Date (Date)
- Donor (Master-Detail to Donor)

Impact Cart

- Cart ID (Auto-Number)
- Donor (Lookup to Donor)
- Selected Campaigns (Multi-Select Picklist or Junction Relationship)
- Total Donation Value (Currency, Calculated)
- Forecasted Impact (Formula/Rich Text Area)

Record Types

- **Donation** → One-Time vs Recurring
- **Campaign** → Education, Healthcare, Disaster Relief, CSR
- **Beneficiary** → Individual vs Community

Page Layouts

- **Donor Layout** → Personal info, donation history (related list), loyalty points, earned badges.
- **Donation Layout** → Donor, Campaign, Beneficiary, Amount, Status.
- **Campaign Layout** → Goal, Raised, Progress bar, Associated Donations.
- **Beneficiary Layout** → Details, Linked Donations, Linked Campaigns, Success Stories.
- **Donor Badge Layout** → Badge Type, Earned Date, Linked Donor.
- **Impact Cart Layout** → Selected Campaigns, Total Value, Forecasted Impact.

Compact Layouts

- **Donor** → Name, Loyalty Points, Total Contributions, Badge Status.
- **Donation** → Amount, Status, Date.
- **Campaign** → Name, Goal, Raised, End Date.
- **Beneficiary** → Name, Type, Location, Support Status.

Relationships (Detailed)

- **Donor → Donation** → Lookup (One donor can have many donations).
- **Campaign → Donation** → Master-Detail (Each donation must belong to a campaign).
- **Beneficiary → Donation** → Lookup (Donation linked to one beneficiary).
- **Donor → Donor Badge** → Master-Detail (Badges tied to donor lifecycle).
- **Donor → Impact Cart** → Lookup (Cart is linked to donor, can have multiple campaigns).

Junction Objects

- **Donation** → Junction between Donor and Campaign.
- **Impact Cart** → Junction between Donor and multiple Campaigns.

Schema Builder

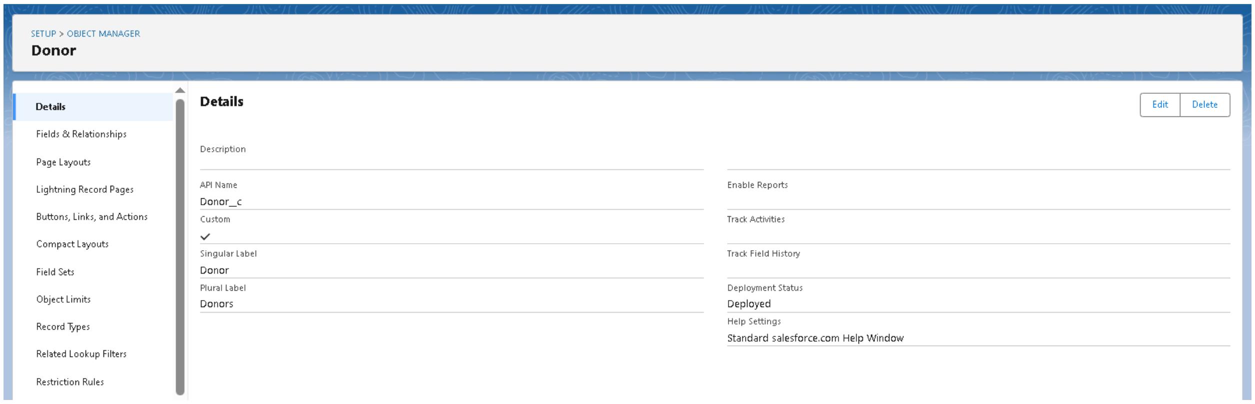
- Used to visually design & verify relationships.
- Highlights:
  - Central object → **Donation**.
  - Donor ↔ Donation ↔ Campaign → core fundraising flow.
  - Beneficiary connected via lookup to Donation.
  - Gamification objects (Donor Badge, Impact Cart) extend donor engagement model.

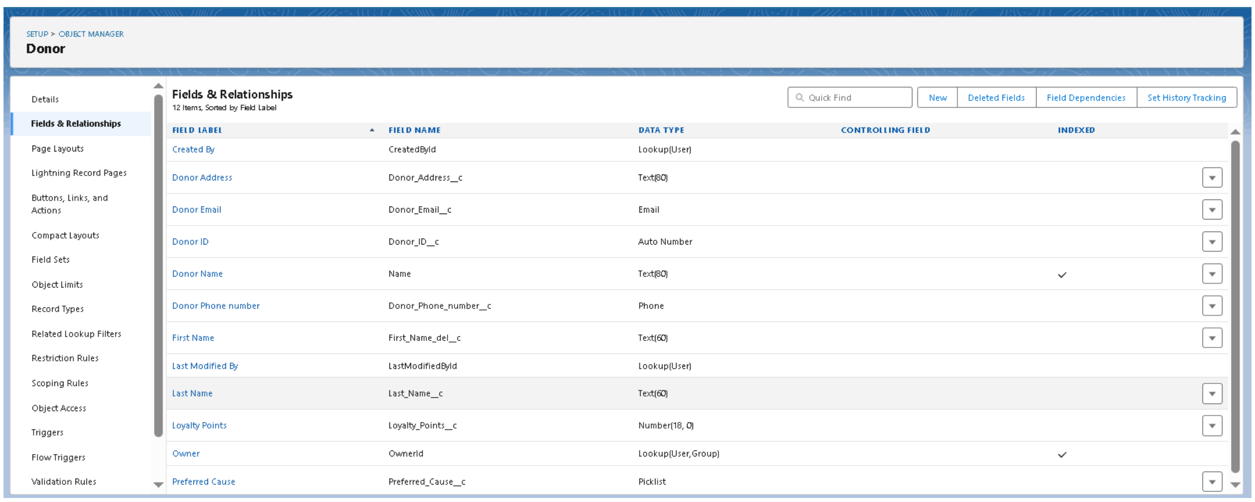
External Objects (Future Scope)

- **Payment Gateway Integration** → Stripe/PayPal/UPI external objects to pull transaction details.
- **Corporate CSR Systems** → Sync corporate donations to Salesforce campaigns.
- **Impact Story Repository** → External content (images, videos, testimonials) stored outside Salesforce but linked via External Objects.

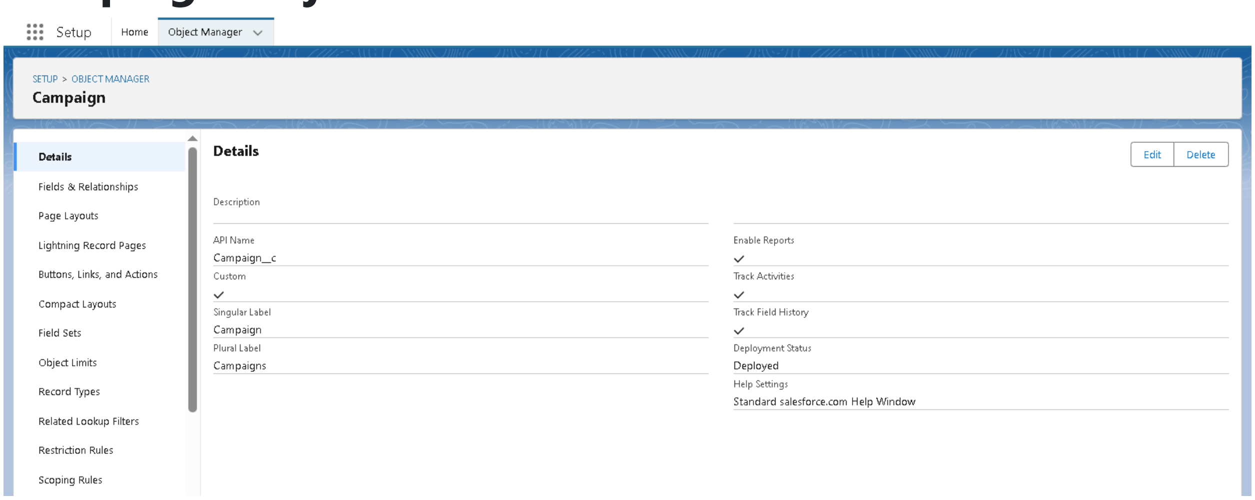
Screenshots:

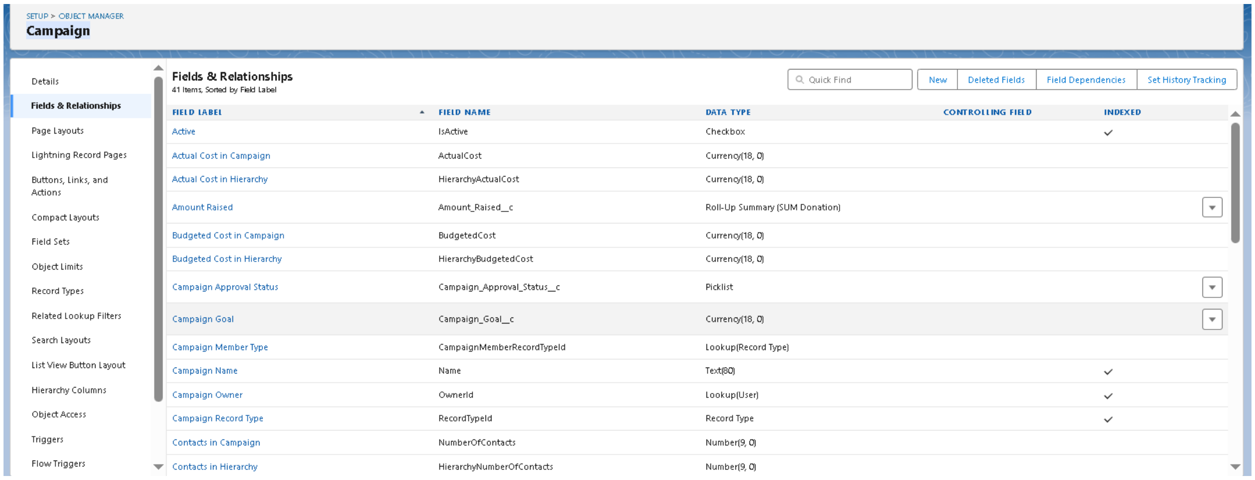
Donor Object

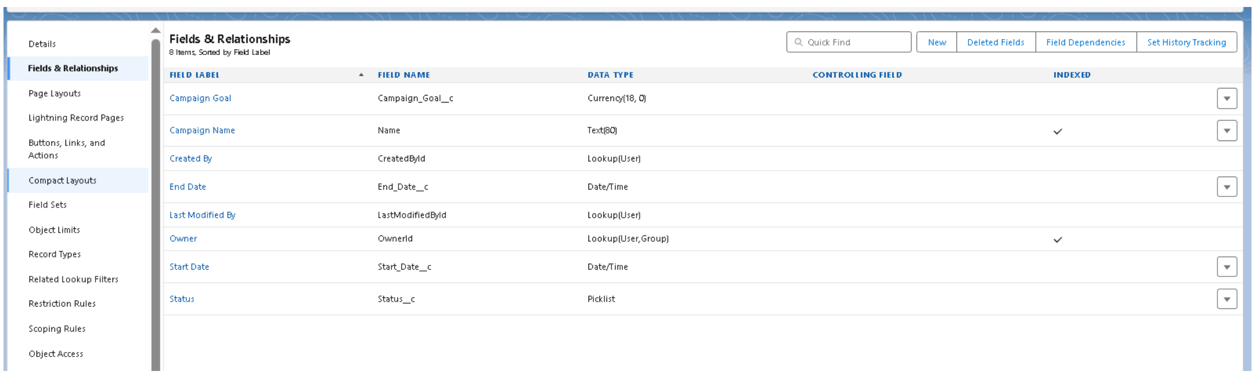




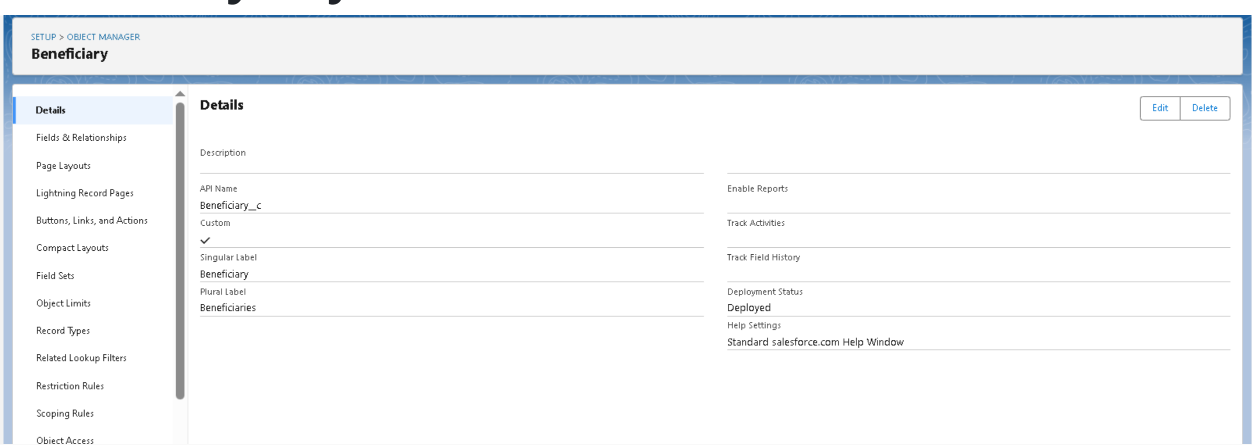
Campaign Object

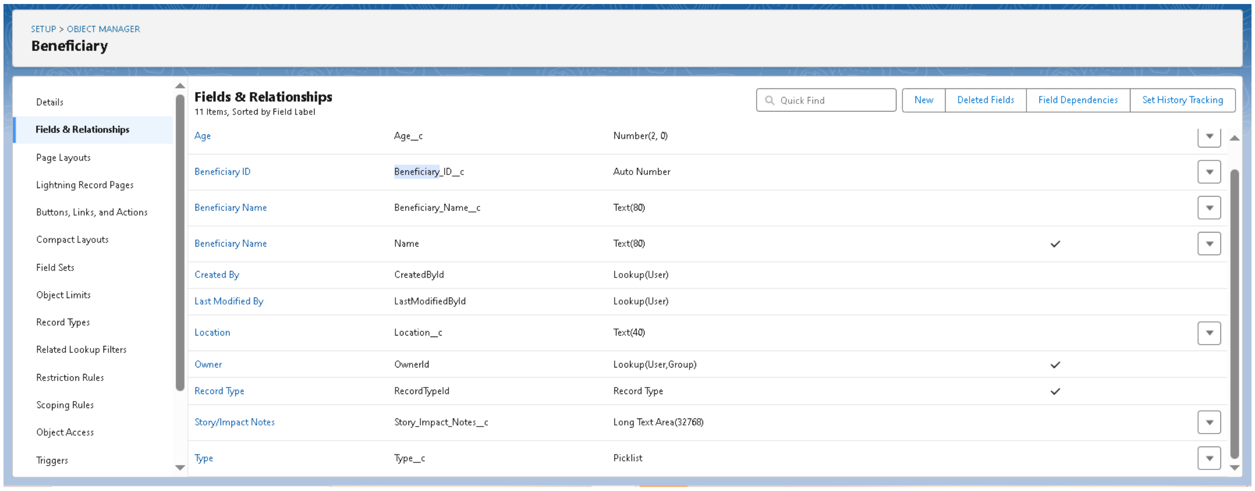




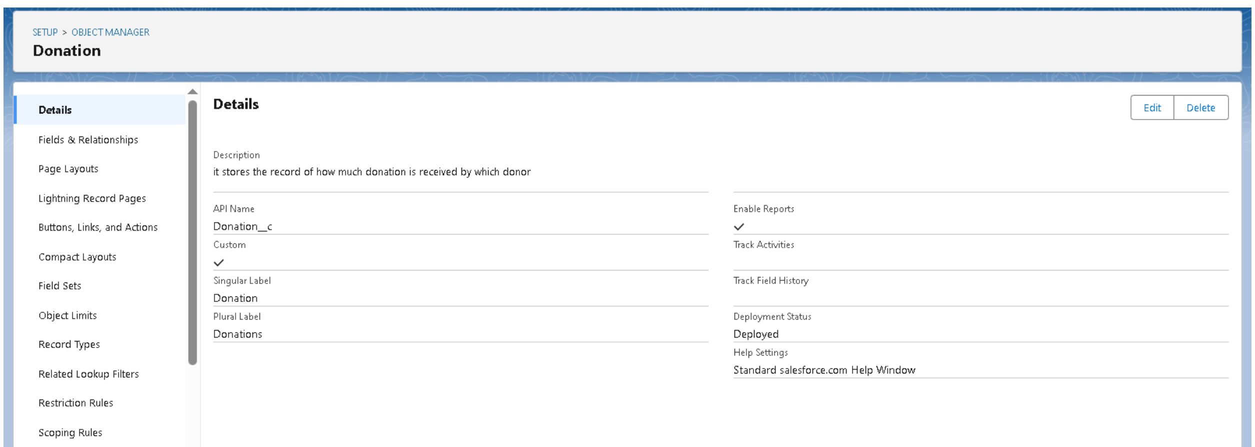


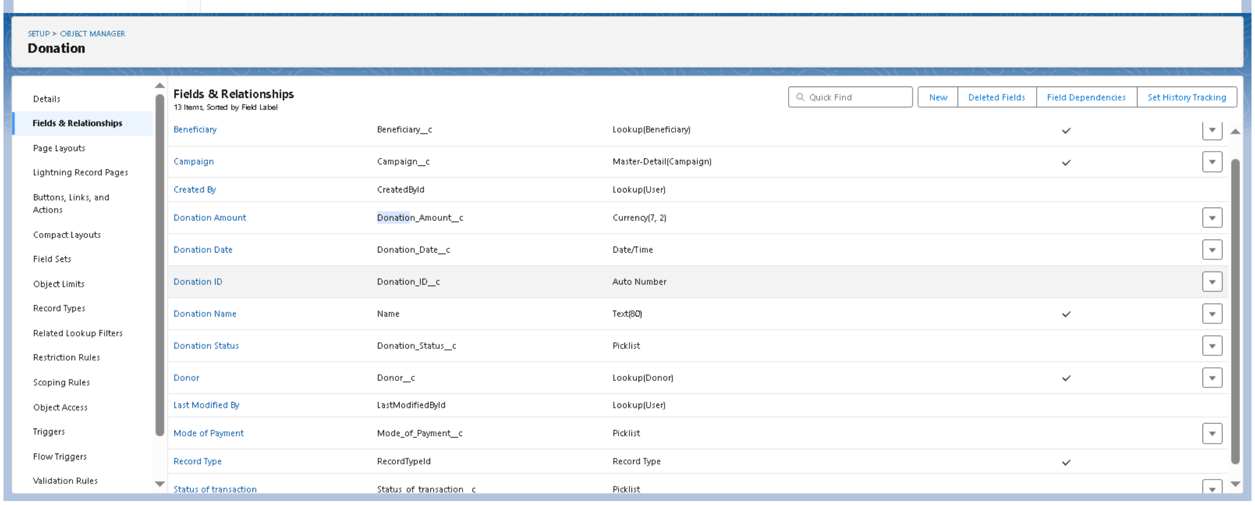
Beneficiary Object



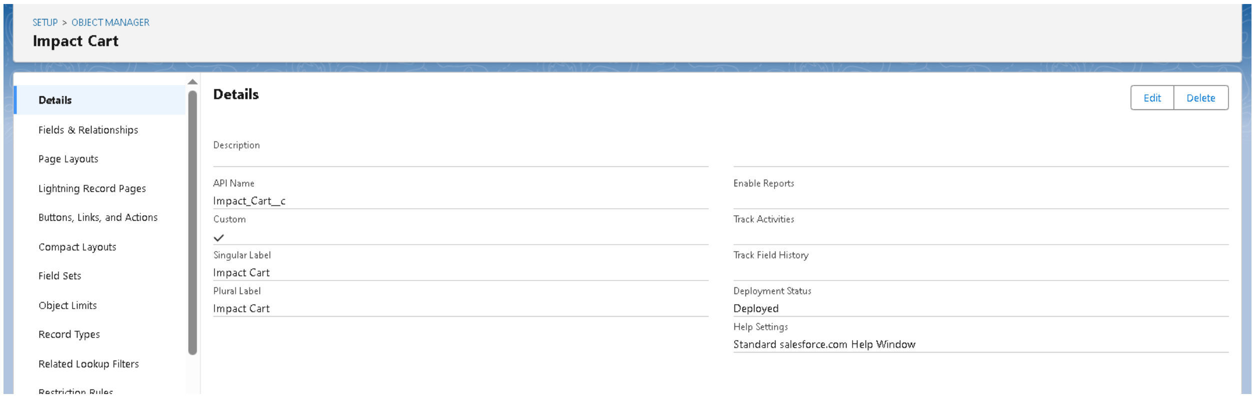


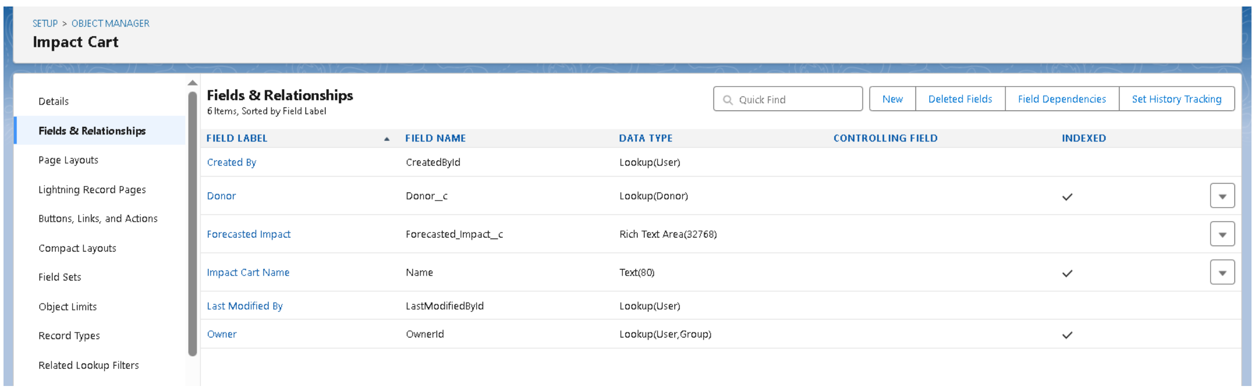
Donation Object



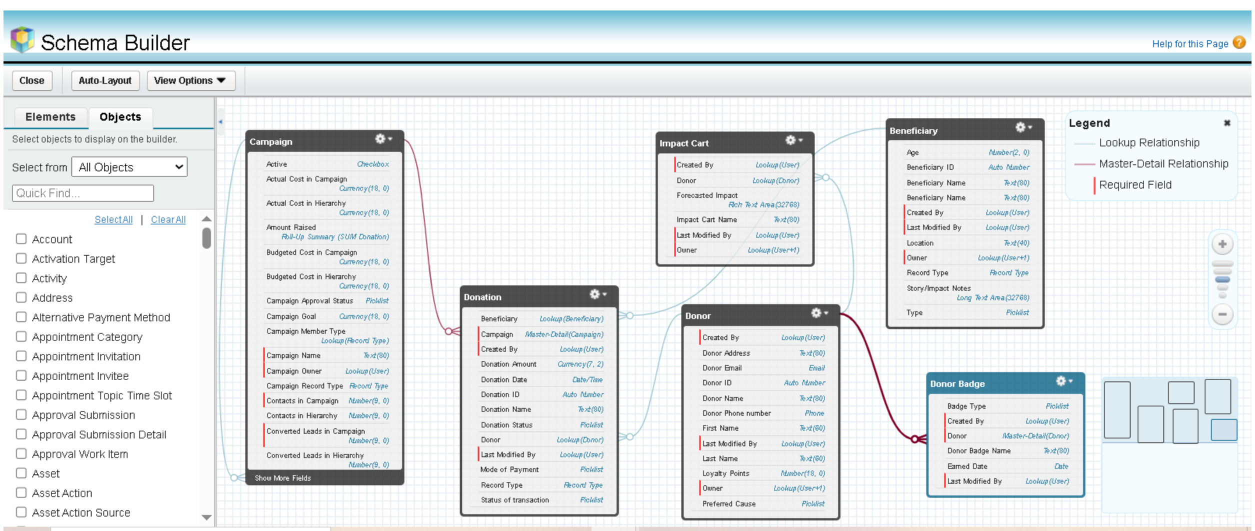


Impact Cart Object





Schema Builder



Phase 4: Process Automation (Admin)

Validation Rules

Ensure data accuracy and prevent bad entries.

- **Donation Amount > 0** → Block negative or zero donations.
- **Email Required for Donor** → Donor record must have a valid email.
- **Campaign End Date > Start Date** → Prevent invalid campaign setup.
- **Beneficiary Age > 0** (if Type = Individual).

Workflow Rules

Automated simple field updates & alerts.

- **Donation Status = Completed** → Send **email alert** to donor with thank-you note.
- **Campaign Goal Reached** → Update Campaign Status to "Completed".
- **Badge Earned** → Notify NGO staff when a donor reaches a new badge level.

Process Builder

Complex, conditional automation (but keep light since Flow is future-proof).

- **Recurring Donations** → Auto-generate next month's donation record if donor opted for recurring.
- **Donor Loyalty Points** → Add points automatically based on donation amount (e.g., ₹1000 = 10 points).
- **High Value Donation (₹50,000+)** → Notify NGO Manager + create follow-up task for personal acknowledgment.

Approval Process

Formal approvals are used where human decision is required.

- **Refund Requests** → Donor requests refund → goes to NGO Manager for approval.
- **Large Campaign Proposals (> ₹5,00,000 goal)** → Requires Admin approval before going live.

Flow Builder

Most powerful automation tool (replacing Workflow/Process Builder gradually).
Types of flows used:

1. **Record-Triggered Flow**
    - When **Donation is created with Status = Completed →**
        - Update Donor's Total Contributions.
        - Update Campaign's Amount Raised.
        - Check if Donor qualifies for a new Badge → Assign automatically.
2. **Screen Flow**
    - **Donor Portal Flow** → Donors can select campaigns, beneficiaries, and add to their **Impact Cart** before confirming donation.
    - **NGO Staff Flow** → Simplified UI for quickly adding new Beneficiaries.
3. **Scheduled Flow**
    - Weekly → Send donors a **consolidated donation summary**.
    - Monthly → Send NGO staff a report of campaigns nearing deadlines.
4. **Auto-Launched Flow**
    - Triggered by other processes (e.g., badge assignment).

Email Alerts

- **Donation Receipt** → Sent when Donation = Completed.
- **Campaign Update** → Sent to all campaign donors when milestone reached (e.g., 50% funded).
- **Badge Earned** → Congratulatory email with digital badge.

Field Updates

- Update **Donor Loyalty Points** on donation save.
- Update **Campaign Status** automatically when goals are reached.
- Set **Refund Status** to "Pending Manager Approval" when donor initiates request.

Tasks

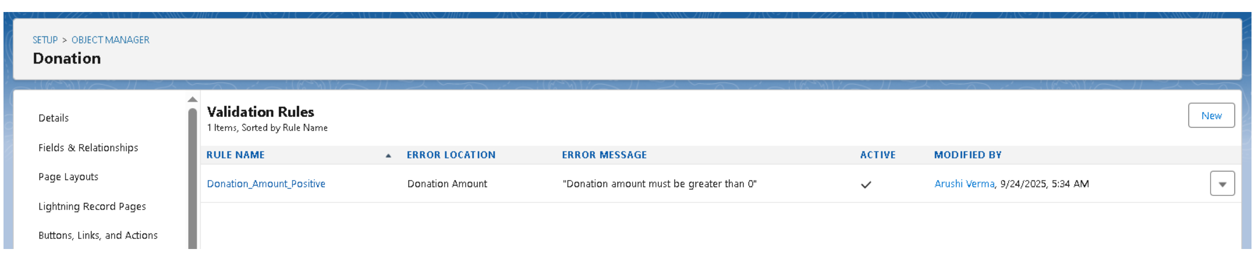
- Assign follow-up task to NGO Staff when a new Beneficiary is added (verify details).
- Assign donor relationship manager task when a **major donor (>₹50k)** contributes.

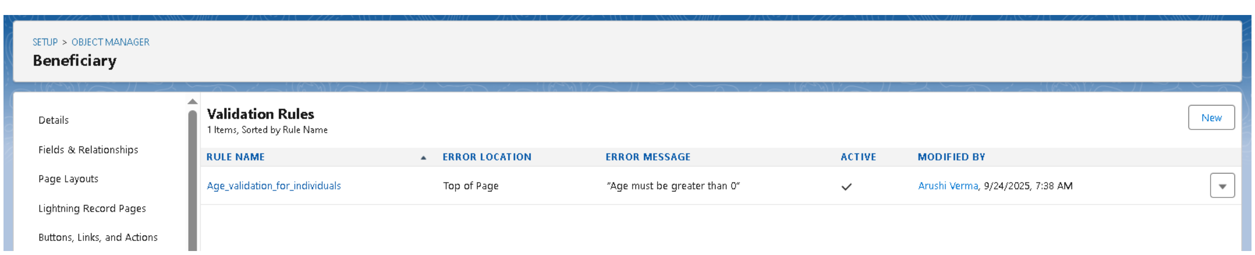
Custom Notifications

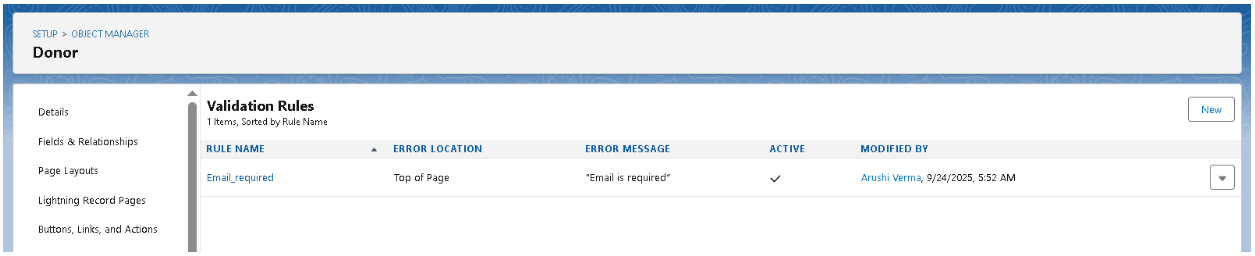
- **Push Notification to NGO Staff** when a new large donation is made.
- **Push Notification to Donor** (via Experience Cloud app) when their donation is successfully received.
- **Internal Alert** for Admin when suspicious donation patterns (multiple failed attempts) occur.

Screenshots:

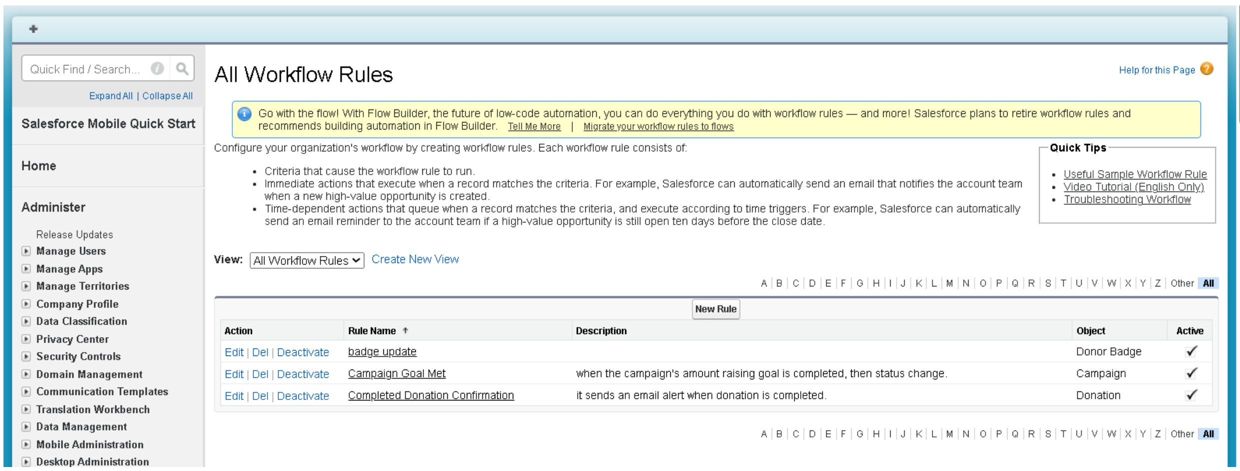
Validation rules

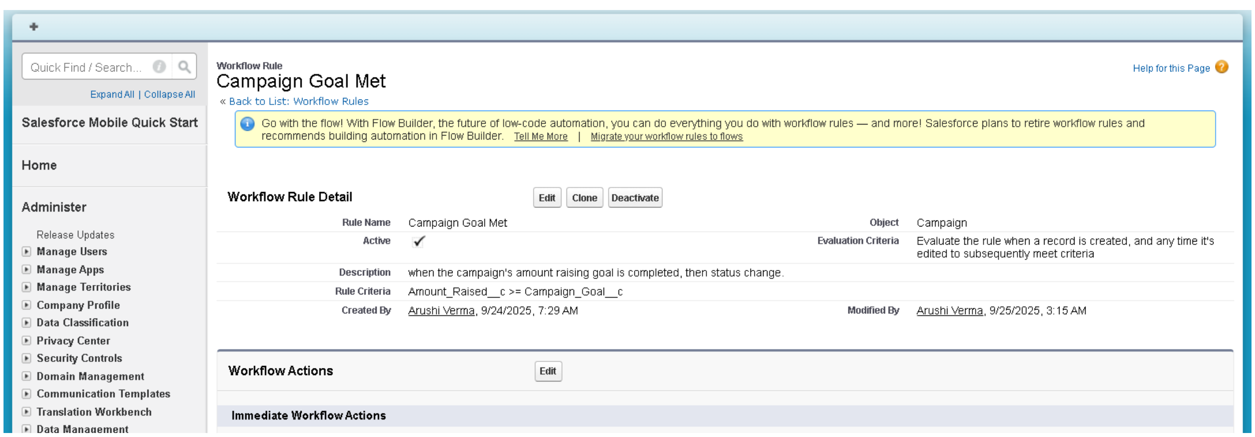






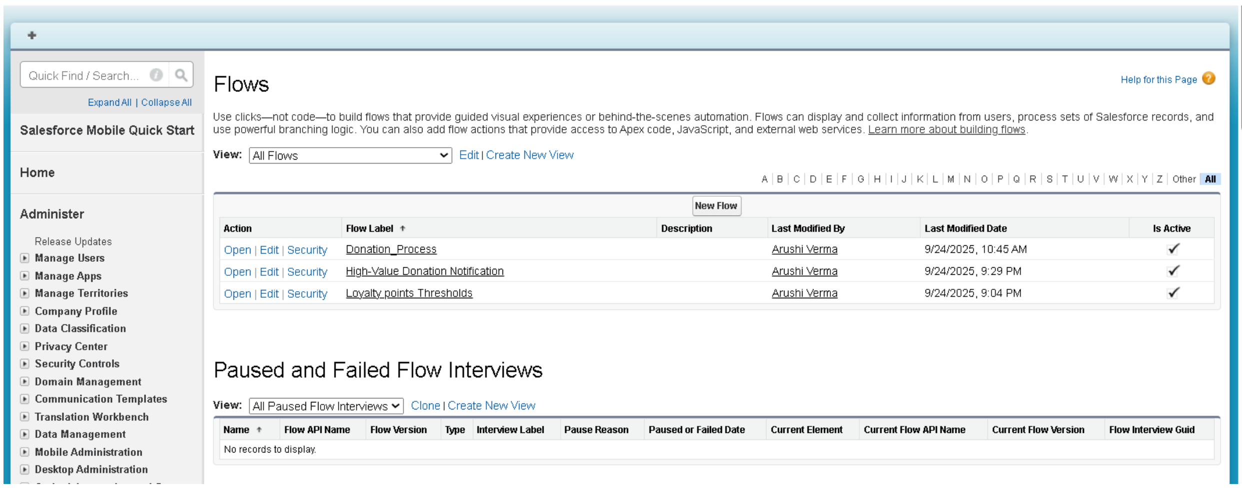
Work Flows



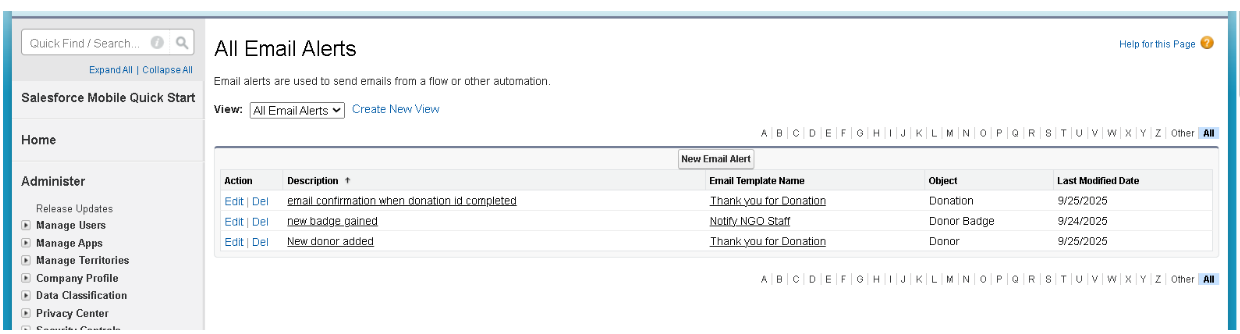


Approval Process

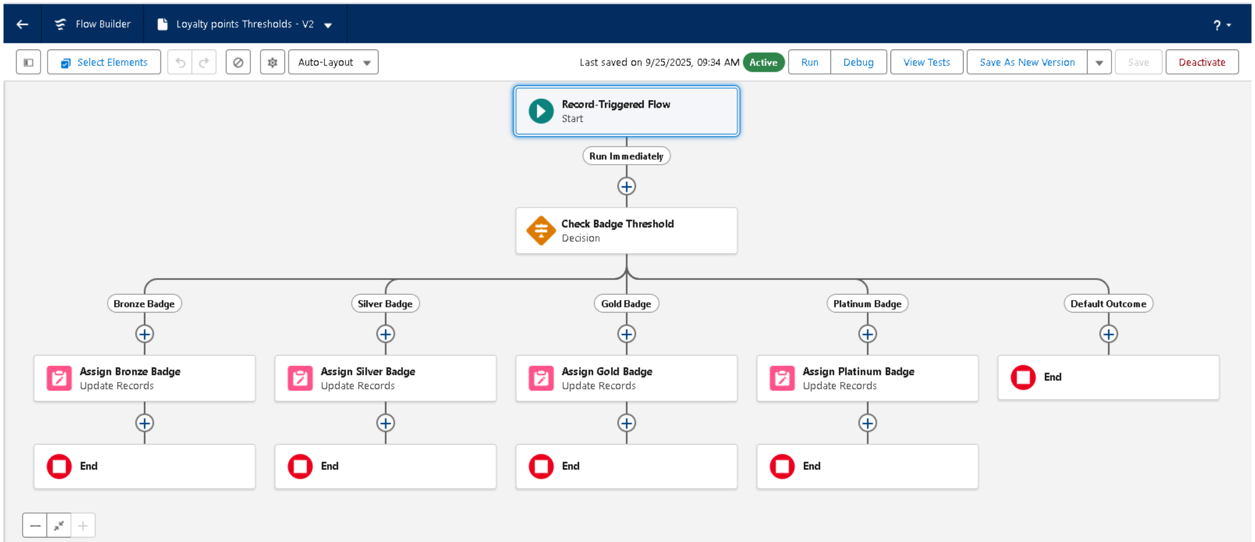
Flow

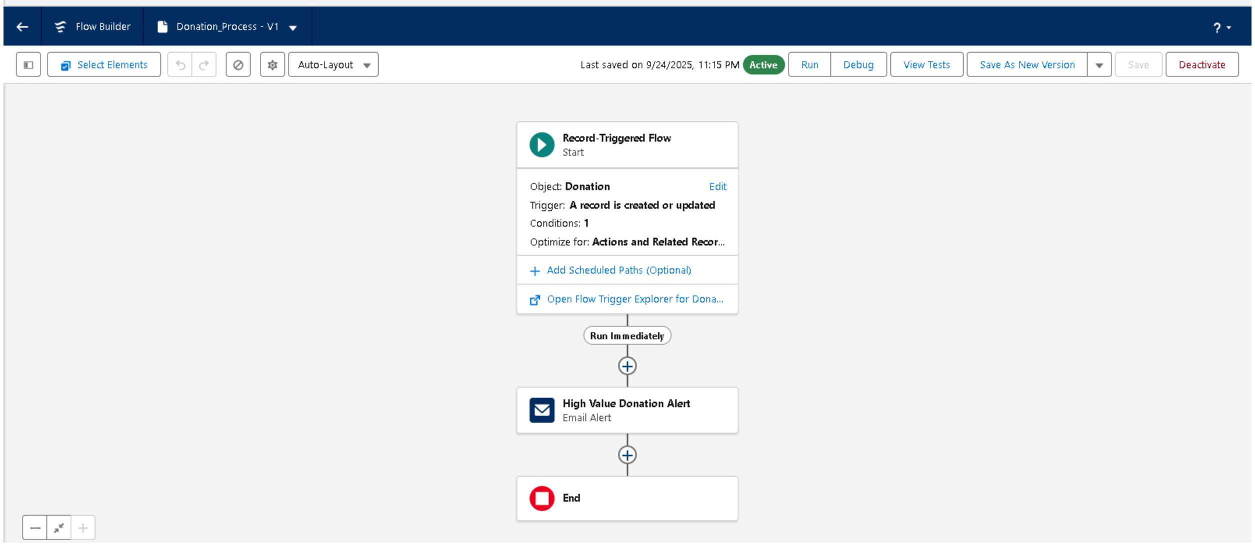


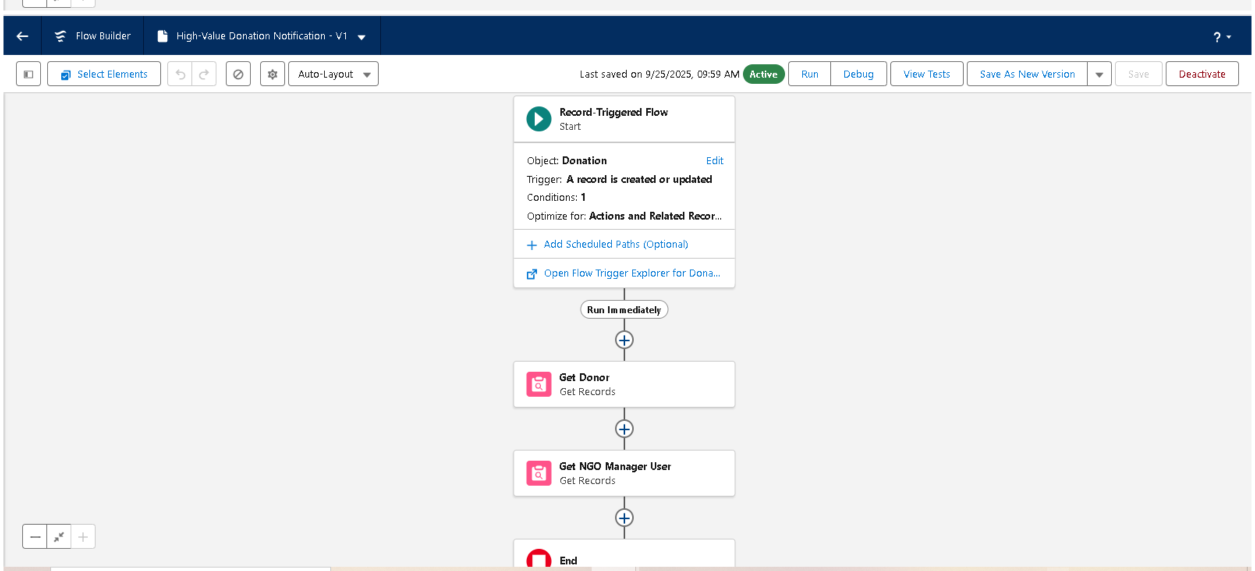
Email Alerts



Flow builder







Phase 5: Apex Programming (Developer)

Classes & Objects

We created custom **Apex Classes** to encapsulate business logic.

Example:

- **DonationHandler.cls** → Handles logic for donation insert/update.
- **BadgeService.cls** → Calculates and assigns badges based on loyalty points.

Benefit: Separating logic into classes ensures **reusability and clean architecture**.

Apex Triggers (Before/After Insert/Update/Delete)

Key Triggers Implemented:

1. **DonationTrigger**
   - *After Insert:* Update Donor's total contributions and loyalty points.
   - *After Update:* If donation status changes to *Completed*, recalculate totals.
2. **CampaignTrigger**
   - *After Insert/Update:* Check if Amount Raised >= Goal → update status to *Completed*.

Benefit: Maintains **real-time accuracy** of donation totals and campaign progress.

Trigger Design Pattern

To avoid bulky triggers, we followed the **Trigger Handler Pattern**:

- One trigger per object → delegates logic to a handler class.
- Example: `DonationTrigger` → calls `DonationHandler.onAfterInsert()`.

Benefit: Improves **readability, scalability, and testability**.

SOQL & SOSL

- **SOQL (Salesforce Object Query Language):**
  Used in DonationHandler to fetch donor's existing contributions.
- `Donor d = [SELECT Id, Total_Contributions__c FROM Donor__c WHERE Id = :donorId];`
- **SOSL (Salesforce Object Search Language):**
  Used for donor search by email/phone.
- `List<List<sObject>> results = [FIND 'john@example.com' IN ALL FIELDS RETURNING Contact(Id, Name)];`

Benefit: Efficiently fetches records, supporting **donor and campaign management**.

Collections (List, Set, Map)

- **List:** Store multiple donations for bulk updates.
- **Set:** Store unique donor IDs to avoid duplicate queries.
- **Map:** Map Donor ID → Total Contributions for quick lookups.

Benefit: Optimizes performance by handling bulk records gracefully.

Control Statements

Applied **if-else, loops, and switch cases** in handler classes.

Example:

```
if(donation.Status__c == 'Completed') {
    updateLoyaltyPoints(donation.Donor__c, donation.Amount__c);
}
```

Benefit: Provides **flexible decision-making logic** for real scenarios.

Batch Apex

Used for **large-scale data recalculations**.

Example:

- Batch job to **recalculate loyalty points** for all donors at the end of the fiscal year.

Benefit: Ensures **data consistency** even with thousands of records.

Queueable Apex

Used for **background operations that need chaining**.

Example:

- When a donation is completed, queueable job sends donor details to an external CSR portal.

Benefit: Handles **asynchronous tasks** without blocking user actions.

Scheduled Apex

Use Case: Monthly scheduled job to generate **Campaign Summary Reports** for staff.

Benefit: Automates recurring tasks without manual intervention.

Future Methods

Use Case:

- On donation completion, send an **email acknowledgment** using a future method (non-blocking).

Benefit: Improves **performance and user experience**.

Exception Handling

Wrapped logic in **try-catch blocks** to handle errors gracefully.

Example:

```
try {
   update donor;
} catch (DmlException e) {
   System.debug('Error updating donor: ' + e.getMessage());
}
```

Benefit: Prevents failures from breaking entire transactions.

Test Classes

Created test classes for **all Apex code**:

- **DonationHandlerTest** → validates loyalty point updates.
- **CampaignHandlerTest** → validates campaign status updates.

Best Practices Followed:

- Test coverage > 75% (mandatory).
- Positive and negative test cases.
- Bulk data testing.

Benefit: Guarantees **quality and deployability** of code.

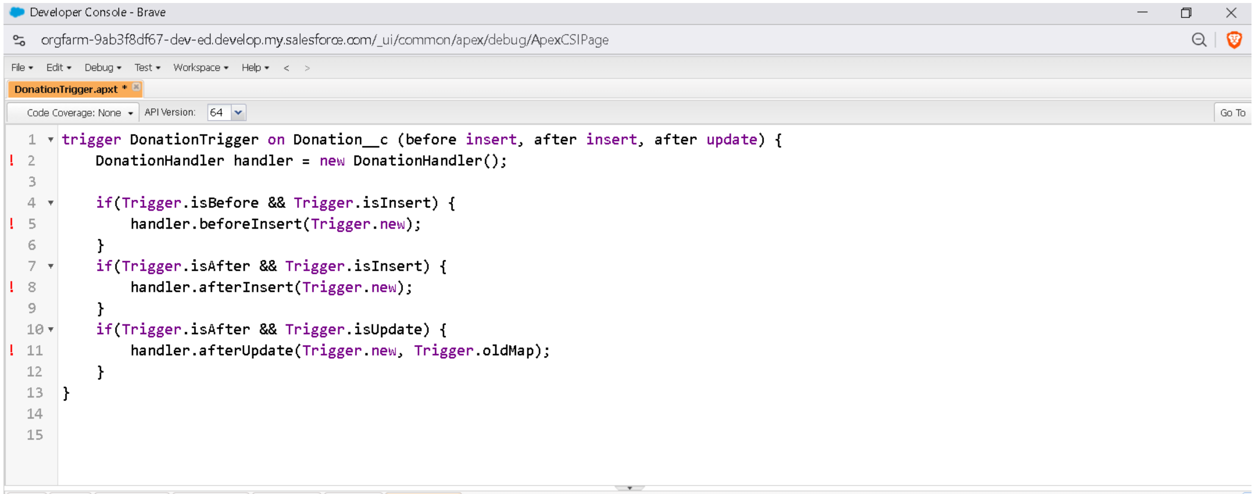
Asynchronous Processing

We leveraged **Batch Apex, Queueable, Scheduled, and Future methods** to handle:

- Bulk updates (Batch Apex).
- External system integration (Queueable).
- Periodic reports (Scheduled).
- Quick email sending (Future).

Benefit: Keeps the system **scalable, fast, and user-friendly**.

Screenshots:



Phase 6: User Interface Development

Lightning App Builder

Purpose: Create customized pages and apps for different user profiles without coding.

Implementation:

- **CharityConnect App:** A unified app containing all objects: Donors, Donations, Campaigns, Beneficiaries, Donor Badges, and Impact Cart.
- **Donor Home Page:** Highlights total contributions, loyalty points, and badges earned. Quick access to available campaigns.
- **NGO Staff Home Page:** Provides dashboards with campaign progress, donation totals, and tasks.

Benefits: Tailors the experience to user roles, allowing donors and staff to access relevant information quickly. It simplifies navigation and enhances user engagement.

Record Pages

Purpose: Customize how individual object records are displayed for clarity and usability.

Implementation:

- **Donor Record Page:** Displays personal details, donation history, loyalty points, and badges earned.
- **Campaign Record Page:** Shows campaign goal, amount raised, and associated donations.
- **Donation Record Page:** Contains donor, campaign, beneficiary, and amount details.

Benefits: Users can view all relevant information at a glance, reducing manual effort and errors.

Tabs

Purpose: Organize access to objects and functionality in the app.

Implementation:

- Tabs for **Donors, Donations, Campaigns, Beneficiaries, and Donor Badges**.
- Optional **Impact Cart tab** for donors to select multiple campaigns.

Benefits: Makes navigation intuitive and allows quick access to the most frequently used features.

Home Page Layouts

Purpose: Provide role-based dashboards and quick action areas.

Implementation:

- **Donor Dashboard:** Highlights loyalty points, badges, and recent donations.
- **Staff Dashboard:** Displays campaign goals, donations received, and beneficiary tracking.

Benefits: Ensures that both donors and staff can see **key information immediately** without searching through records.

Utility Bar

Purpose: Offer quick access tools visible across pages.

Implementation:

- Added tools for **Create Donation, Add Beneficiary, and View Campaign Performance**.

Benefits: Reduces clicks and improves productivity, allowing staff to perform frequent actions from any page.

Lightning Web Components (LWC)

Purpose: Create dynamic, interactive components that improve engagement.

Implementation:

- **Smart Donor Cart LWC:** Donors can select campaigns and see the total donation instantly.
- **Donor Badge Display LWC:** Shows earned badges and loyalty points.

Benefits: Provides a **modern, interactive user experience** for donors and staff. Components update dynamically without page reloads.

Apex with LWC

Purpose: Handle server-side logic and calculations for dynamic UI components.

Implementation:

- Apex Controllers fetch donor history for LWC display and calculate badge eligibility.

Benefits: Enables **real-time updates** and ensures complex calculations (like badges or loyalty points) are handled efficiently.

Events in LWC

Purpose: Allow communication between LWC components for interactive updates.

Implementation:

- When a donor adds campaigns to the Impact Cart, the **Badge Display component updates automatically** to reflect potential points earned.

Benefits: Provides a seamless, interactive experience and ensures the UI reflects changes immediately.

Wire Adapters & Imperative Apex Calls

Purpose: Retrieve Salesforce data either reactively (wire) or on-demand (imperative).

Implementation:

- **Wire Adapter:** Fetches donor's past donations and displays in dashboard.
- **Imperative Apex Call:** Calculates total donation value when multiple campaigns are selected in the Impact Cart.

Benefits: Optimizes performance and provides accurate, real-time data to the user.

Navigation Service

Purpose: Programmatically control navigation between Salesforce pages.

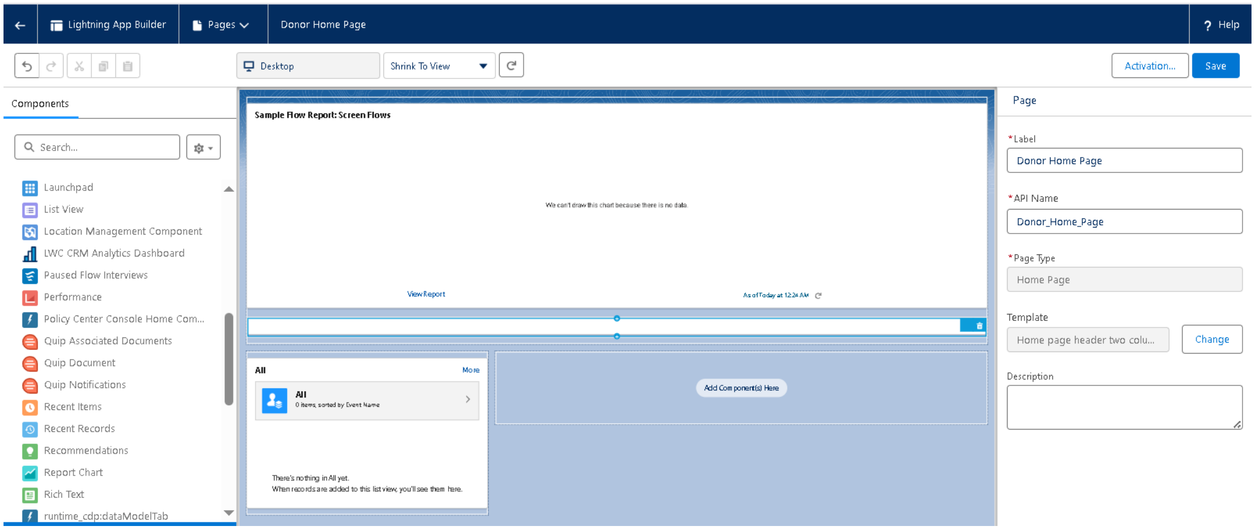
Implementation:

- Donor completes Impact Cart → auto-navigate to **Confirmation Page**.
- Staff clicks "Top Donors" widget → navigate directly to Donor Record Page.

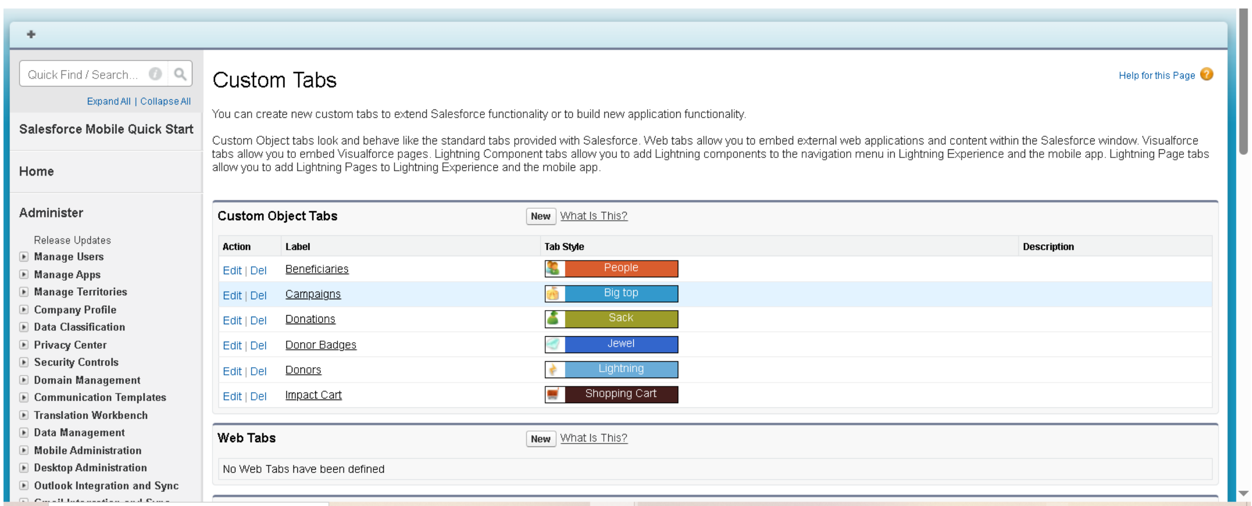
Benefits: Reduces unnecessary clicks, improves workflow efficiency, and enhances user experience.

Screenshots:

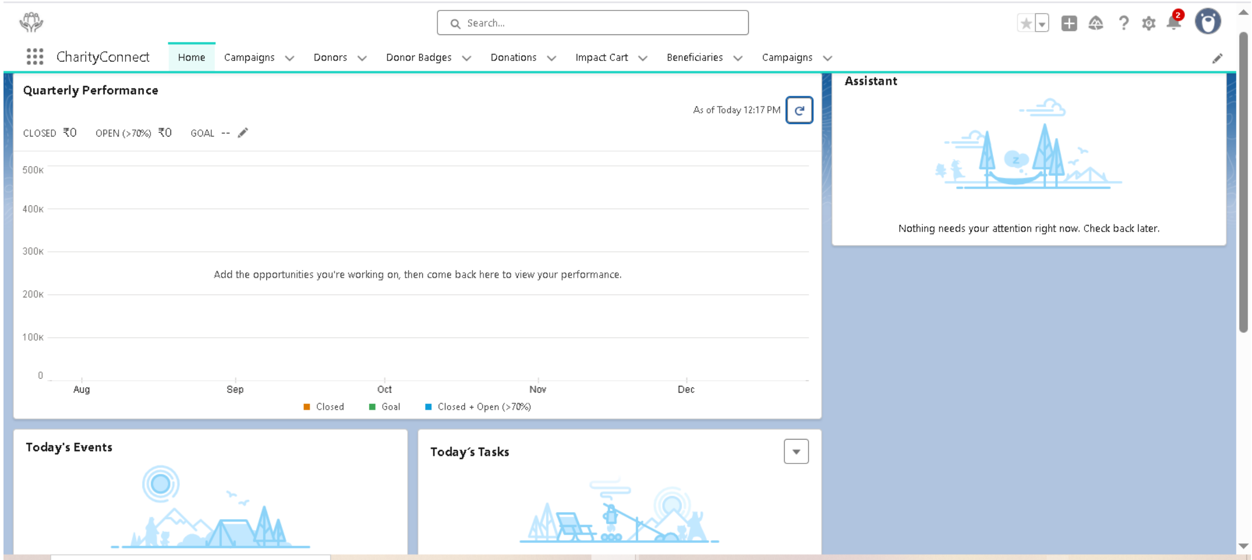
Lightening app

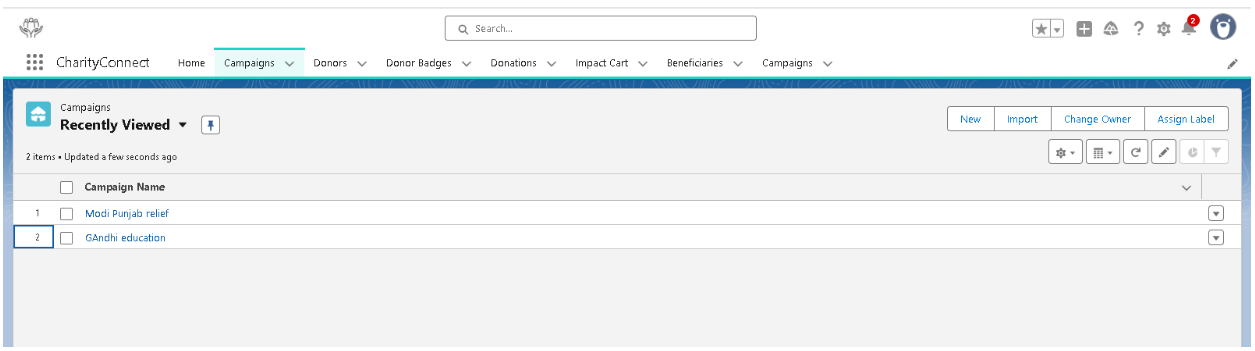


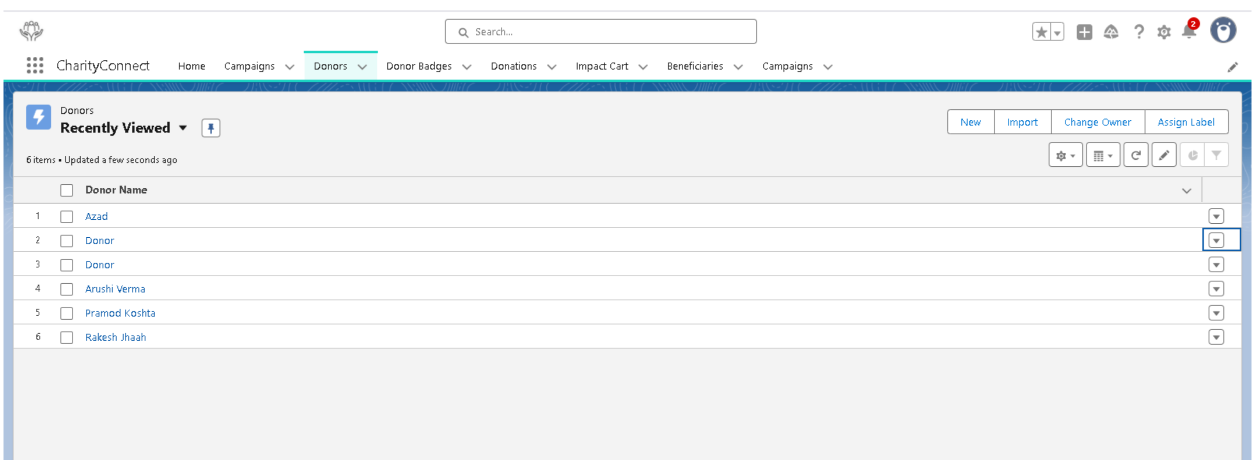
Tabs

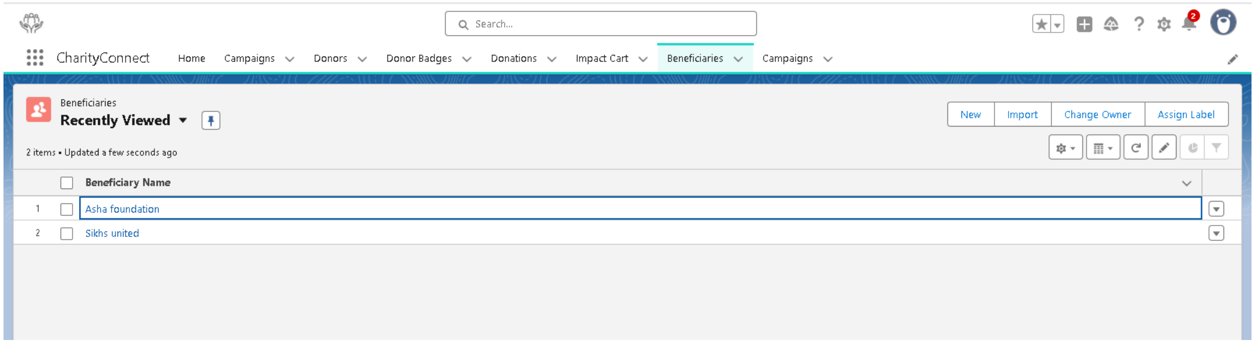


App layout

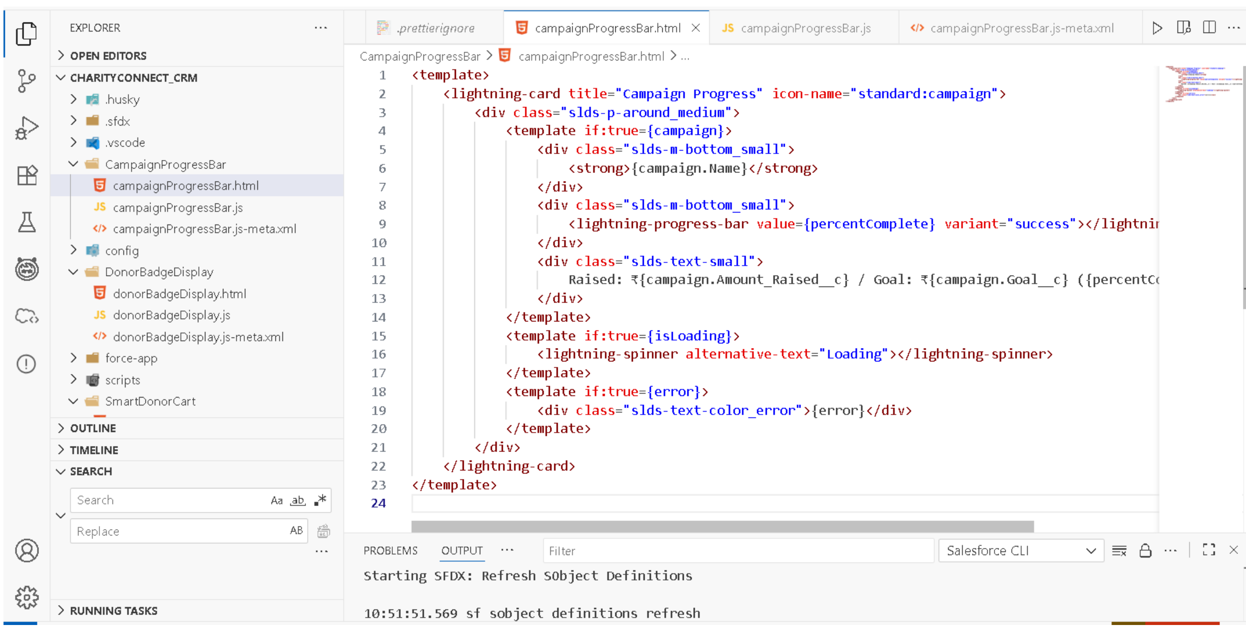

Search...
CharityConnect
Home
Campaigns
Donors
Donor Badges
Donations
Impact Cart
Beneficiaries
Campaigns
Quarterly Performance
As of Today 12:17 PM
CLOSED ₹0
OPEN (>70%) ₹0
GOAL --
500k
400k
300k
200k
100k
0
Add the opportunities you're working on, then come back here to view your performance.
Aug
Sep
Oct
Nov
Dec
Closed
Goal
Closed + Open (>70%)
Assistant
Nothing needs your attention right now. Check back later.
Today's Events
Today's Tasks


Search...
CharityConnect
Home
Campaigns
Donors
Donor Badges
Donations
Impact Cart
Beneficiaries
Campaigns
Campaigns
Recently Viewed
New
Import
Change Owner
Assign Label
2 items • Updated a few seconds ago
Campaign Name
1 Modi Punjab relief
2 GAndhi education


Search...
CharityConnect
Home
Campaigns
Donors
Donor Badges
Donations
Impact Cart
Beneficiaries
Campaigns
Donors
Recently Viewed
New
Import
Change Owner
Assign Label
6 items • Updated a few seconds ago
Donor Name
1 Azad
2 Donor
3 Donor
4 Arushi Verma
5 Pramod Koshta
6 Rakesh Jhaah



LWC component



Rest uploaded in git

Phase 7: Integration & External Access

Named Credentials

- Store authentication details for external APIs (URL, token, key).
- Removes need for hardcoding credentials in Apex.
- **Example:** Store credentials for Razorpay/Stripe API → fetch donation payment status securely.

External Services

- Connect declaratively with APIs using OpenAPI/Swagger schema.
- Generates invocable Apex actions usable in Flows.
- **Example:** Connect to Payment Gateway API → donation verification action inside Flow.

Web Services (REST/SOAP)

- **REST API:** Lightweight, JSON-based, most common.
- **SOAP API:** XML-based, less common for NGOs.
- **Example:** Create REST endpoint in Salesforce → external NGO partner can fetch campaign donation summary.
- **Example:** Donor portal calls Salesforce REST API to retrieve donor profile + loyalty points.

Callouts

- Outbound calls from Salesforce to external APIs.
- Requires **Remote Site Settings** to whitelist endpoints.
- **Example:** Call currency conversion API → convert foreign donations (USD/EUR) to INR before saving record.

Platform Events

- Event-driven communication inside Salesforce.
- **Example:** Large donation received (> ₹1,00,000) → publish event → NGO Manager notified instantly.

Change Data Capture (CDC)

- Real-time tracking of changes to Salesforce records.
- **Example:** Whenever a Donation record is updated → event fired → CSR Partner Dashboard auto-refreshes.

Salesforce Connect

- Access external system data without importing it.
- Creates External Objects linked to outside databases/APIs.
- **Example:** CSR corporate donation pledges stored in external DB → visible live in Salesforce campaigns.

API Limits

- Salesforce restricts daily API calls (e.g., 15,000/day in Developer Org).
- Important for donation-heavy campaigns.
- **Example:** Use batch callouts to payment gateway instead of one call per donation → saves API calls.

OAuth & Authentication

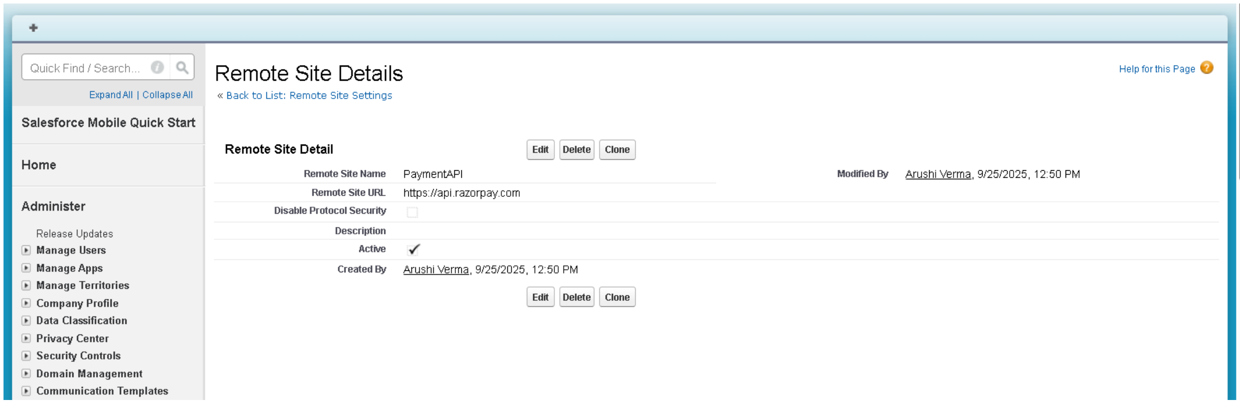
- Secure way for external apps to access Salesforce.
- Uses **OAuth 2.0 token exchange**.
- **Example:** Donor Portal authenticates via OAuth → ensures only registered donors see their dashboards.

Remote Site Settings

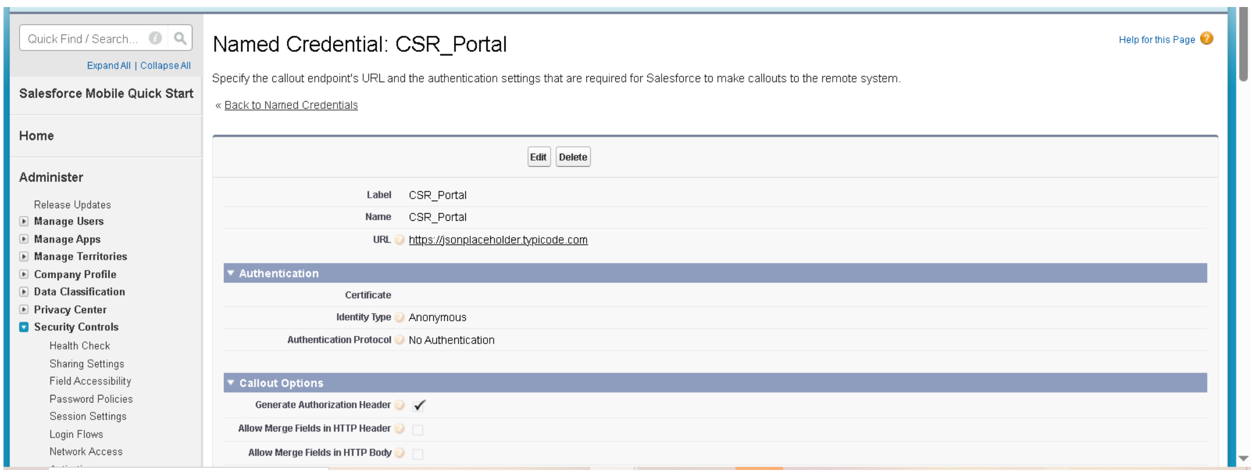
- Required before making Apex callouts.
- Whitelists domains for security.
- **Example:** Add `https://api.razorpay.com` before calling payment API.

Screenshots:

Remote Site Details



Named credential: crs



Phase 8: Data Management & Deployment

Data Import Wizard

- A **user-friendly, declarative tool** in Salesforce to import small to medium data volumes (up to 50,000 records) via CSV files.
- **Alignment with CharityConnect:**
    - Initial import of donor base with details such as name, email, contact, preferred causes, and historical loyalty points.

    - Import of pre-existing campaigns (Education Drive, Healthcare Relief, Disaster Relief) to set up the org quickly.
- **Benefit:** No coding required; ideal for NGO staff/admins to quickly populate the system without developer intervention.

Data Loader

- A **client-based tool** for bulk operations (insert, update, delete, export) capable of handling **millions of records**.
- **Use Case in CharityConnect:**
    - Import historical donation data spanning multiple years.
    - Update existing donation statuses in bulk after payment gateway reconciliation.
    - Export large datasets for audits or reporting.
- **Alignment:** Ensures that large-scale donor and donation information is migrated efficiently and accurately.

Duplicate Rules

- Prevents **duplicate records** for Donors, Donations, and Beneficiaries.
- **Mechanism:** Matching criteria like email, phone number, and donor ID ensures data integrity.
- **Use Case:** If multiple NGO staff attempt to import donor data, duplicates are automatically flagged or blocked.
- **Benefit:** Maintains a **clean, trustworthy donor database**, crucial for transparency.

Data Export & Backup

- Salesforce provides options for **manual and scheduled data exports** for compliance, auditing, and disaster recovery.
- **Use Case in CharityConnect:**
    - Weekly or monthly export of Donation and Campaign records for **CSR audit and regulatory reporting**.
    - Backup of donor loyalty points and badges to prevent accidental data loss.
- **Benefit:** Provides NGOs with **secure historical records** and peace of mind about data safety.

Change Sets

- Declarative method to deploy metadata between Salesforce orgs (Sandbox → Production).
- **Use Case in CharityConnect:**
  - Deploy newly configured Flows for **Badge Assignment** and **Campaign Reporting** from UAT sandbox to live org.
  - Deploy updates to Custom Objects (Donor, Donation, Donor Badge) and Page Layouts without manual recreation.
- **Benefit:** Ensures **consistent configuration and automation** across environments.

Unmanaged vs Managed Packages

- **Unmanaged Packages:** Internal deployments; metadata editable after installation.
- **Managed Packages:** For distribution via AppExchange; metadata mostly locked.
- **Use Case in CharityConnect:**
  - Unmanaged Package to deploy custom objects, Flows, and LWC components to another NGO org if needed.
- **Benefit:** Facilitates **reuse and modular deployment** while maintaining flexibility.

ANT Migration Tool

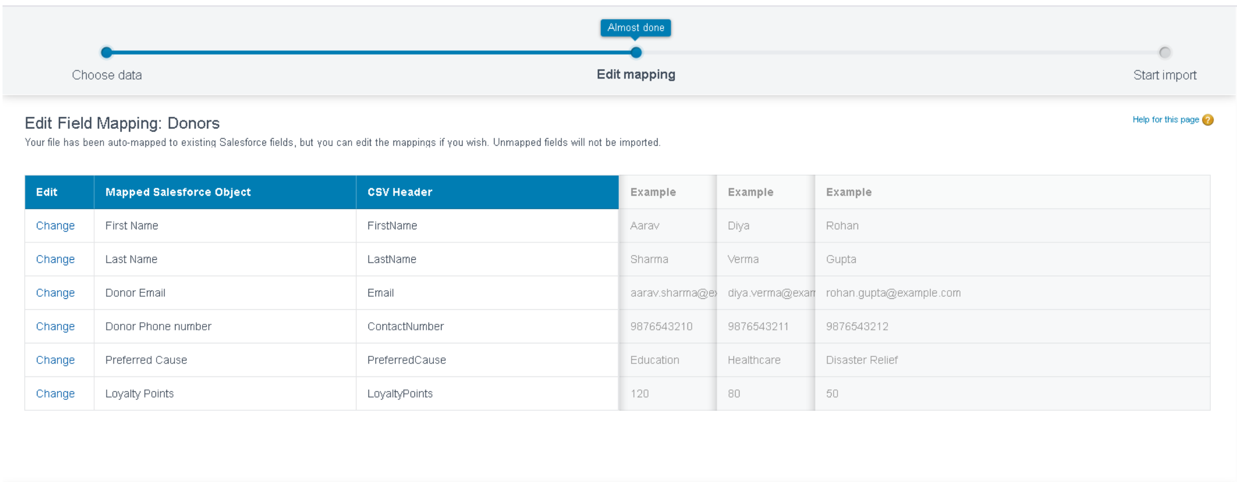
- A **command-line tool** for deploying metadata in a scripted manner, ideal for **advanced deployments or CI/CD pipelines**.
- **Use Case in CharityConnect:**
  - Automate migration of complex metadata like **Donation Flows, Badge Assignment logic, and Apex triggers** from Sandbox to Production.
- **Benefit:** Reduces human errors and speeds up deployment of large-scale projects.

VS Code & Salesforce DX (SFDX)

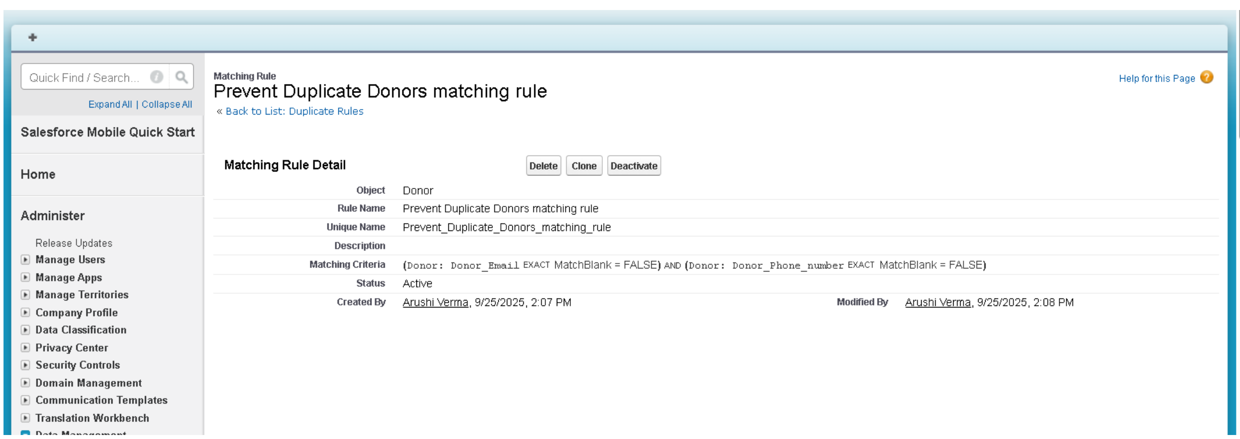
- Provides a **developer-centric environment** for building, version controlling, and deploying Salesforce components.
- **Use Case in CharityConnect:**
  - Developers create Apex triggers for Donation and Badge logic in **scratch orgs**, test locally, then deploy using SFDX.
  - Version control via GitHub ensures changes are tracked, collaborative, and reversible.
- **Benefit:** Supports **agile development**, safe testing, and continuous deployment for NGO projects.

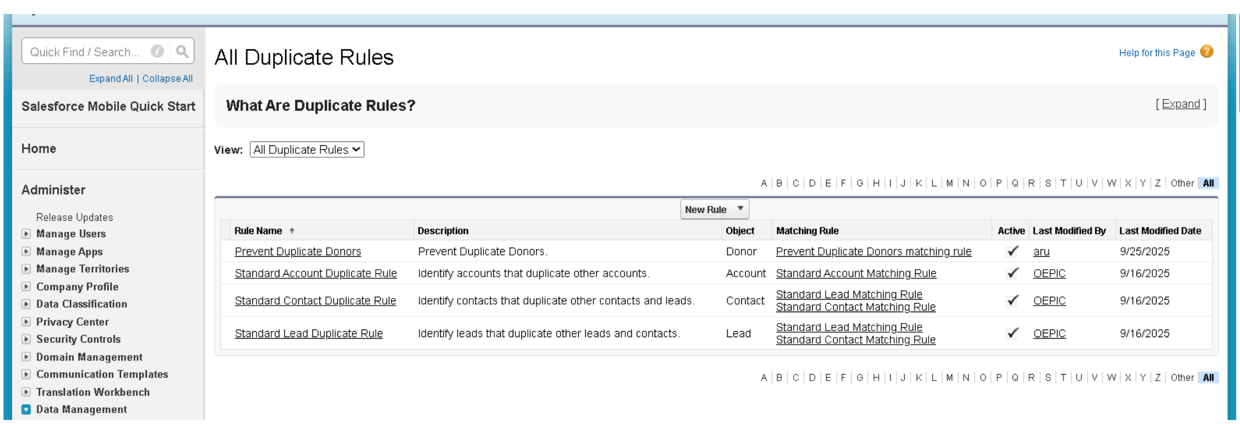
Screenshots:

Data wizard



duplicate rule





Phase 9: Reporting, Dashboards & Security Review

1. Reports (Tabular, Summary, Matrix, Joined)

- Salesforce reports allow **analyzing and visualizing data** across objects.
- **Types & Use Cases:**
  - **Tabular:** Simple list of donations → used for donor mailing lists or campaign audits.
  - **Summary:** Group donations by Campaign → shows total amount raised per campaign.
  - **Matrix:** Donations by Donor vs Campaign → visualizes contribution patterns.
  - **Joined:** Combines multiple objects → e.g., Donor + Donation + Beneficiary for transparency reports.
- **Benefit:** Helps NGOs **track donation trends, monitor campaign performance, and ensure transparency to donors**.

---

2. Report Types

- Define **relationships between objects** for reporting purposes.
- **Use Case in CharityConnect:**
  - Custom Report Type: Donation → Campaign → Beneficiary → Donor.
  - Enables staff to generate **impact reports** showing exactly how donor contributions are allocated.
- **Benefit:** Provides **flexible reporting options** for internal audits and donor updates.

---

3. Dashboards

- Visual representation of key metrics using **charts, tables, and gauges**.
- **Use Case:**
  - Campaign Progress Dashboard: Total amount raised vs goal, active campaigns, top donors.
  - Donor Engagement Dashboard: Loyalty points, badges earned, recurring donations.
- **Benefit:** Allows NGO staff to **monitor real-time performance** and make informed decisions.

---

4. Dynamic Dashboards

- Dashboards display **data personalized to the logged-in user**.
- **Use Case:**
    - Donor Portal: Donors see **only their own contributions and badges**.
    - NGO Manager: Sees **all campaigns, donations, and beneficiary details**.
- **Benefit:** Ensures **data privacy** while providing tailored insights.

---

5. Sharing Settings

- Control **who can see or edit records** in Salesforce.
- **Use Case:**
    - Donations: Private by default → only donor & NGO Staff can view.
    - Campaigns: Public Read-Only for all NGO staff → allows transparency without risk of modification.
- **Benefit:** Protects sensitive donor data while enabling collaboration among staff.

---

6. Field Level Security (FLS)

- Controls visibility and edit access to specific fields for different profiles.
- **Use Case:**
    - Donor email & payment information → visible to NGO Staff, hidden from Donor Users.
    - Loyalty Points & Badge Status → visible to both staff and donor portal.
- **Benefit:** Ensures **data confidentiality and regulatory compliance**.

---

7. Session Settings

- Configure **session timeouts, login history, and security policies**.
- **Use Case:**
    - Donor portal session timeout set to 30 minutes of inactivity.
    - Staff portal session timeout: 1 hour with automatic logout.
- **Benefit:** Enhances **data security**, reduces risk of unauthorized access.

---

8. Login IP Ranges

Restricts access to Salesforce org to **specific IP addresses**.

- **Use Case:**
  - NGO staff can log in only from office or verified home IP addresses.
- **Benefit:** Adds **network-level security** to prevent unauthorized logins.

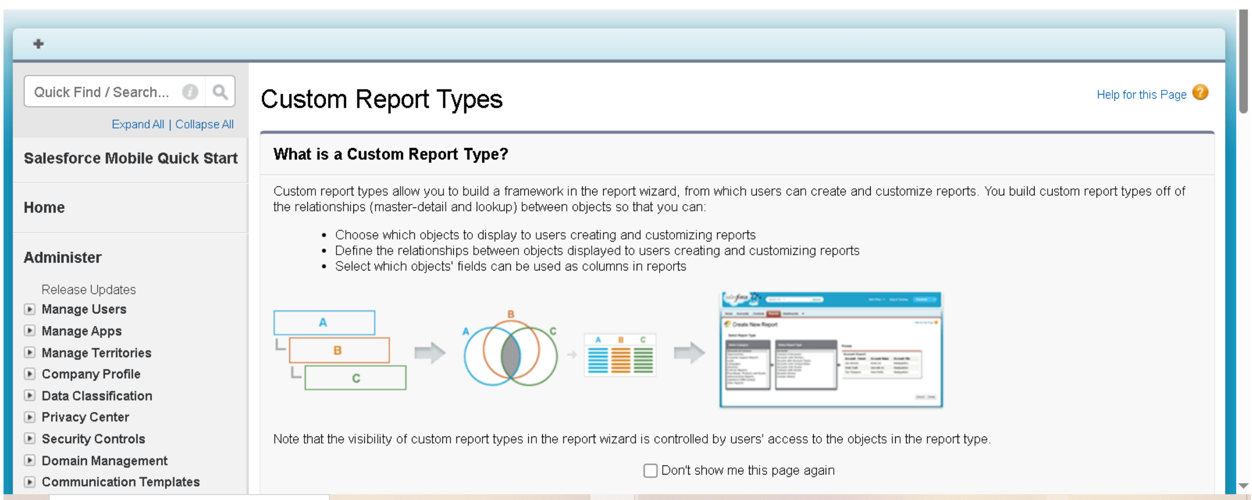
---

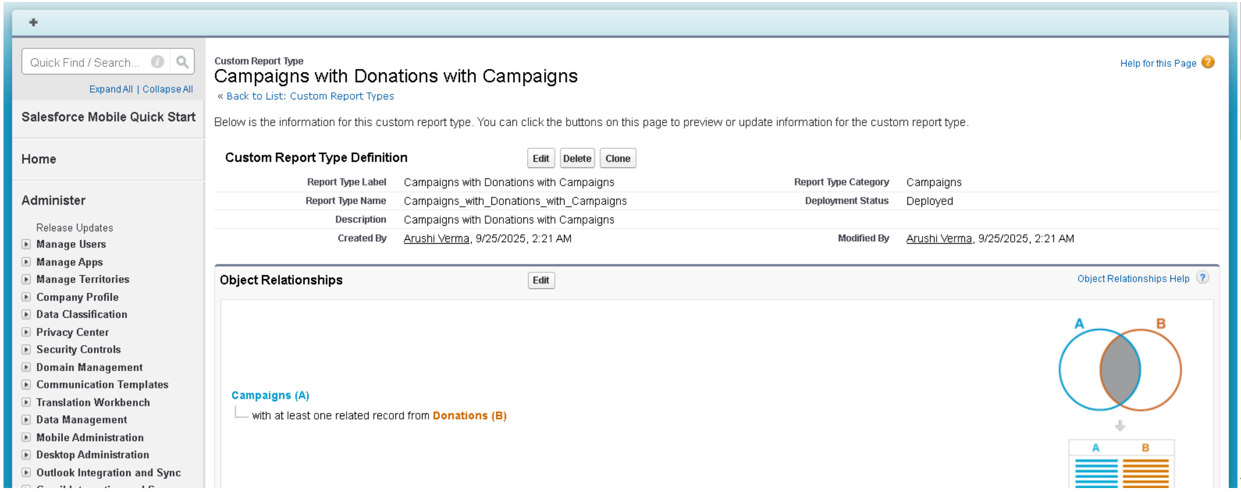
9. Audit Trail

- Tracks all **configuration changes and system modifications** in Salesforce.
- **Use Case:**
  - Track updates to Campaigns, Donations, or Beneficiary records.
  - Identify who modified a donor record and when.
- **Benefit:** Provides **accountability, transparency, and compliance** for NGO reporting.

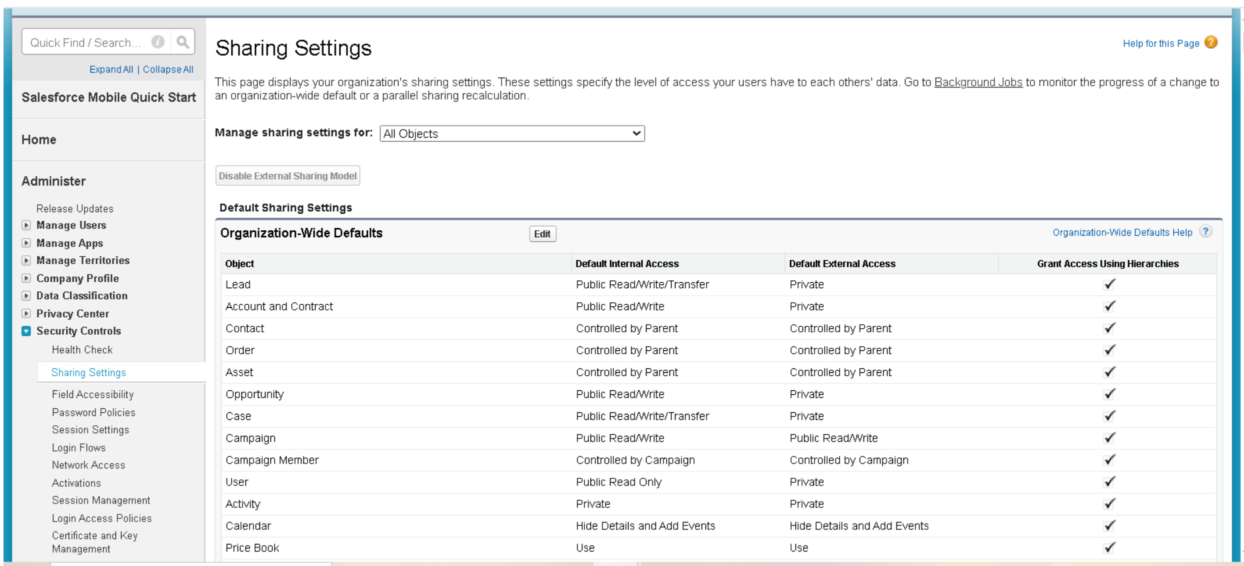
Screenshots:

Custom report types

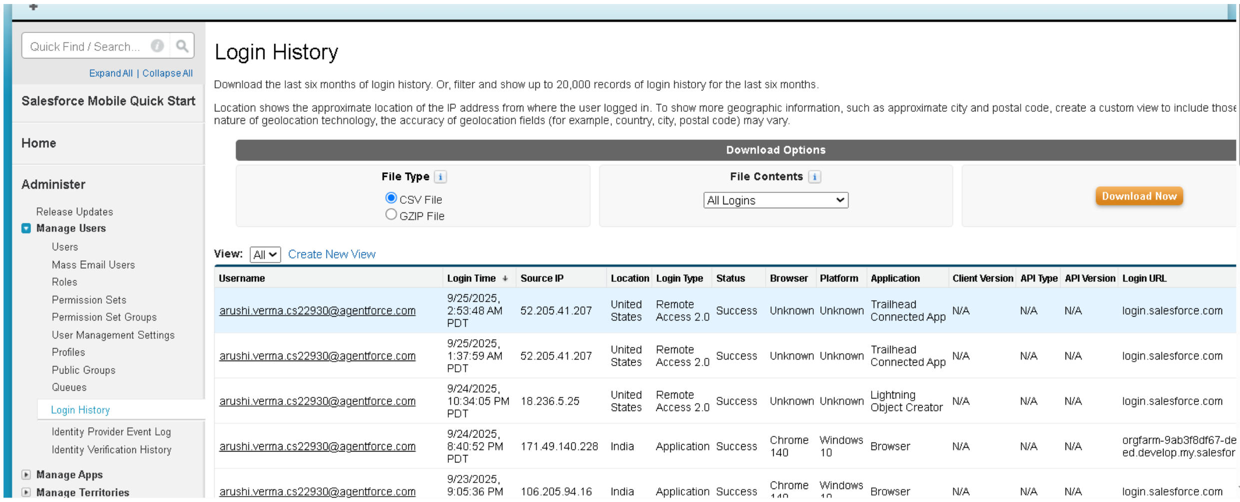




Sharing settings



Login history



Phase 10: Final Presentation & Demo Day

1. Pitch Presentation

- **Slide Content:**
    - **Problem:** Low donor trust, scattered donation records, no reward system.
    - **Solution:** CharityConnect CRM
        - **Smart Donor Cart:** Select multiple campaigns; total auto-calculated.
        - **Loyalty Points & Badges:** Rewards gamify donations.
        - **Transparency Dashboards:** Donors see how contributions are utilized.
        - **Email Alerts:** Automated thank-you & large donation notifications.
    - **Implementation Phases:** Phase 1–9 summary, showing Admin + Developer tasks.
    - **Impact:** Improved donor engagement, efficiency in campaign management.
- **Visuals:**
    - Screenshot of donor portal showing cart and badges.
    - Dashboard showing campaign progress.
    - Flow diagram of donation → donor → campaign → beneficiary process.

---

2. Demo Walkthrough

- The demo video link is as follows: https://youtu.be/x3Ka60TnkY4

---

3. Feedback Collection

- **Methods:** Google Form + verbal interview.
- **Questions:**
    - Did donor portal provide clear transparency on fund usage?
    - Was the Smart Cart experience intuitive?
    - Are loyalty points and badges motivating?
    - Are reports and dashboards easy to interpret?
- **Outcome:** Feedback used to refine Flows, dashboard layout, and UI.

---

4. Handoff Documentation

- All the documentation of all the phases is shared on the github link

---

5. LinkedIn / Portfolio Project Showcase

https://github.com/Aarushi2772/TCS_Salesforce_CharityConnect_CRM_project/tree/main