

NGO Donor & Volunteer CRM

PHASE 8: DATA MANAGEMENT & DEPLOYMENT

8.1 Duplicate Data Prevention System

Purpose: Maintain data integrity by preventing duplicate donor records in the NGO CRM.

Implementation:

- **Rule Name:** Prevent Duplicate Donors
- **Object:** Contact (Donor management)
- **Matching Logic:** Exact email address comparison
- **Action:** Block creation/edit of duplicate records
- **User Experience:** Clear error messaging for staff guidance

Business Impact: Eliminates duplicate donor records, ensuring accurate reporting and communication.

Testing Verification: Successfully tested with identical email addresses - system correctly blocked duplicate entries.

Duplicate Rule configuration page:

The screenshot shows the Salesforce 'Duplicate Rules' configuration page. The left sidebar contains navigation links for 'Setup', 'Home', and 'Object Manager'. The main content area is titled 'Duplicate Rules' and includes a search bar, a 'What Are Duplicate Rules?' section, and a table of existing rules. The table has columns for Rule Name, Description, Object, Matching Rule, Active status, Last Modified By, and Last Modified Date. Three rules are listed: 'Standard Account Duplicate Rule', 'Standard Contact Duplicate Rule', and 'Standard Lead Duplicate Rule'. Each rule is associated with a 'Standard [Object] Matching Rule' and is marked as 'Active'.

Rule Name	Description	Object	Matching Rule	Active	Last Modified By	Last Modified Date
Standard Account Duplicate Rule	Identify accounts that duplicate other accounts.	Account	Standard Account Matching Rule	✓	DEFG	7/21/2025
Standard Contact Duplicate Rule	Identify contacts that duplicate other contacts and leads.	Contact	Standard Contact Matching Rule	✓	DEFG	7/21/2025
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts.	Lead	Standard Lead Matching Rule	✓	DEFG	7/21/2025

Cloud logo | Search Setup | Setup | Home | Object Manager

Q dupli

Data

- Duplicate Management
- Duplicate Error Logs
- Duplicate Rules
- Matching Rules

Didn't find what you're looking for? Try using Global Search.

SETUP Duplicate Rules

Rule Name: Prevent Duplicate Donors

Description:

Object: Contact

Record Level Security: Enforce sharing rules (selected), Bypass sharing rules

Actions

Specify what happens when a user tries to save a duplicate record.

Action On Create: Block

Action On Edit: Block

Alert Text: Duplicate donor found. Please use existing record.

Matching Rules

Define how duplicate records are identified.

Compare Contacts With: Contacts

Matching Rule: Create New Matching Rule

Select a rule to see criteria

Conditions

Optionally, specify the conditions a record must meet for the rule to run.

Field: --None-- Operator: --None-- Value: AND

Field: --None-- Operator: --None-- Value: AND

Field: --None-- Operator: --None-- Value: AND

Create New Matching Rule

Save your duplicate rule and we'll redirect you to create your new matching rule.

Save Duplicate Rule Cancel

Cloud logo | Search Setup | Setup | Home | Object Manager

Q dupli

Data

- Duplicate Management
- Duplicate Error Logs
- Duplicate Rules
- Matching Rules

Didn't find what you're looking for? Try using Global Search.

SETUP Duplicate Rules

Content Duplicate Rule

Prevent Duplicate Donors

Printable View (New Window)

Duplicate Rule Detail

Rule Name: Prevent Duplicate Donors

Description: Contact

Object: Contact

Record Level Security: Enforce sharing rules

Action On Create: Block

Operations On Create: Alert Report

Action On Edit: Block

Operations On Edit: Alert Report

Alert Text: Duplicate donor found. Please use existing record.

Active: ☒

Matching Rule: Prevent Duplicate Donors matching rule

Matching Criteria: Contact: Email EXACT MatchBlank = TRUE

Conditions: ☒ Matched

Created By: sudeshna.pendurata 9/26/2025, 3:00 AM

Modified By: sudeshna.pendurata 9/26/2025, 3:03 AM

Matching Rule with email field criteria:

Cloud logo | Search Setup | Setup | Home | Object Manager

Q dupli

Data

- Duplicate Management
- Duplicate Error Logs
- Duplicate Rules
- Matching Rules

Didn't find what you're looking for? Try using Global Search.

SETUP Matching Rules

New Matching Rule

Contact

Step 2 of 2

Step 2: Configure Matching Rule

Previous Save Cancel

Required information

Rule Details

Object: Contact

Rule Name: Prevent Duplicate Donors m

Unique Name: Prevent_Duplicate_Donors_v

Description:

Matching Criteria

Tell the rule which fields to compare and how

Field: Email Matching Method: Exact Match Blank Fields: ☒ AND

Field: --None-- Matching Method: Exact Match Blank Fields: ☐ AND

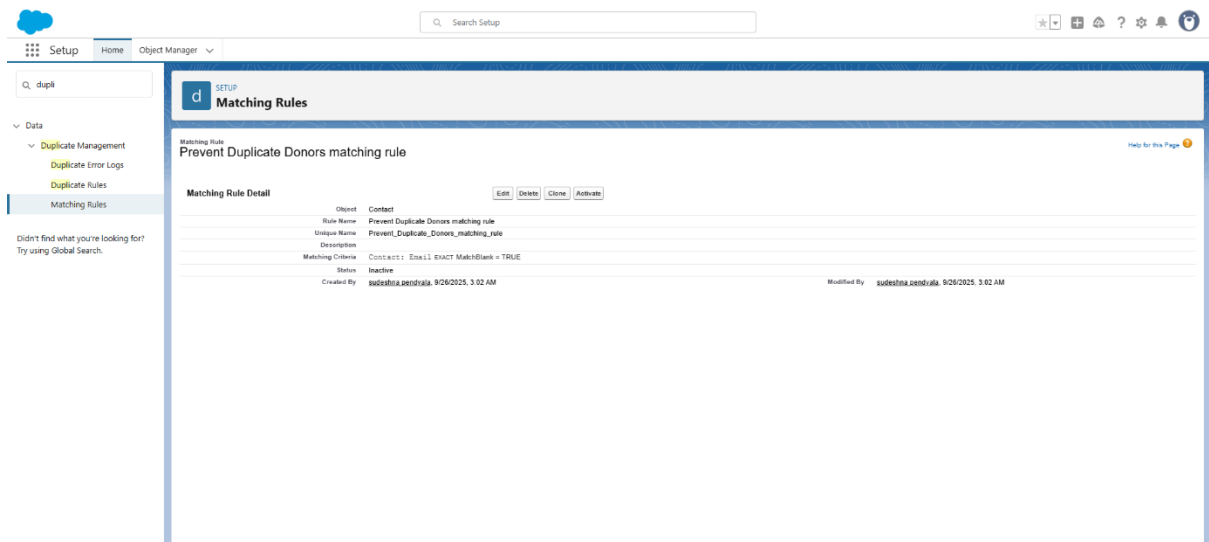
Field: --None-- Matching Method: Exact Match Blank Fields: ☐ AND

Field: --None-- Matching Method: Exact Match Blank Fields: ☐ AND

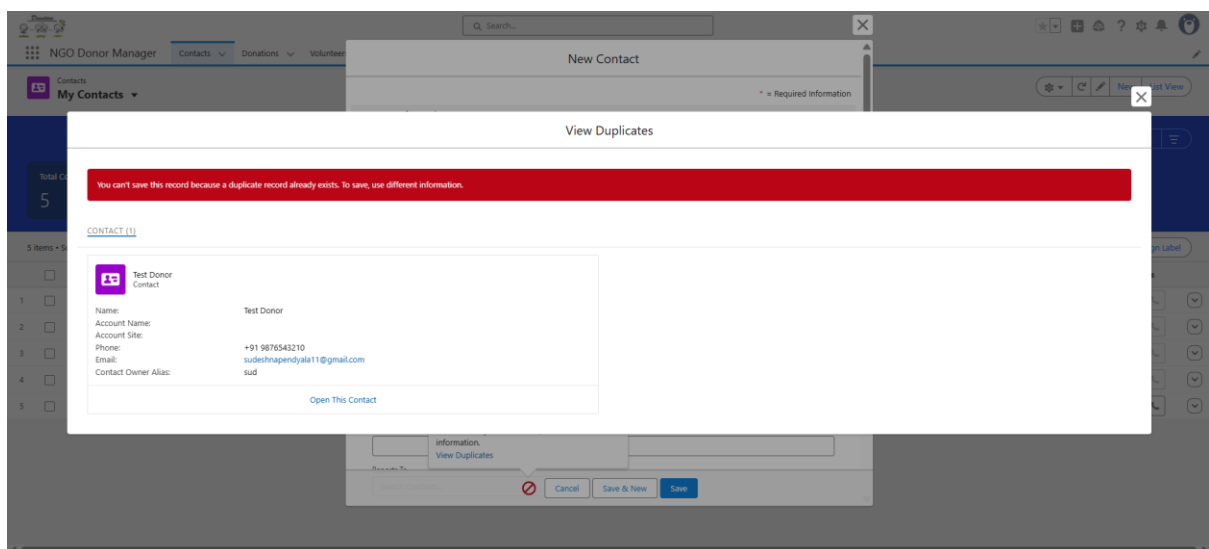
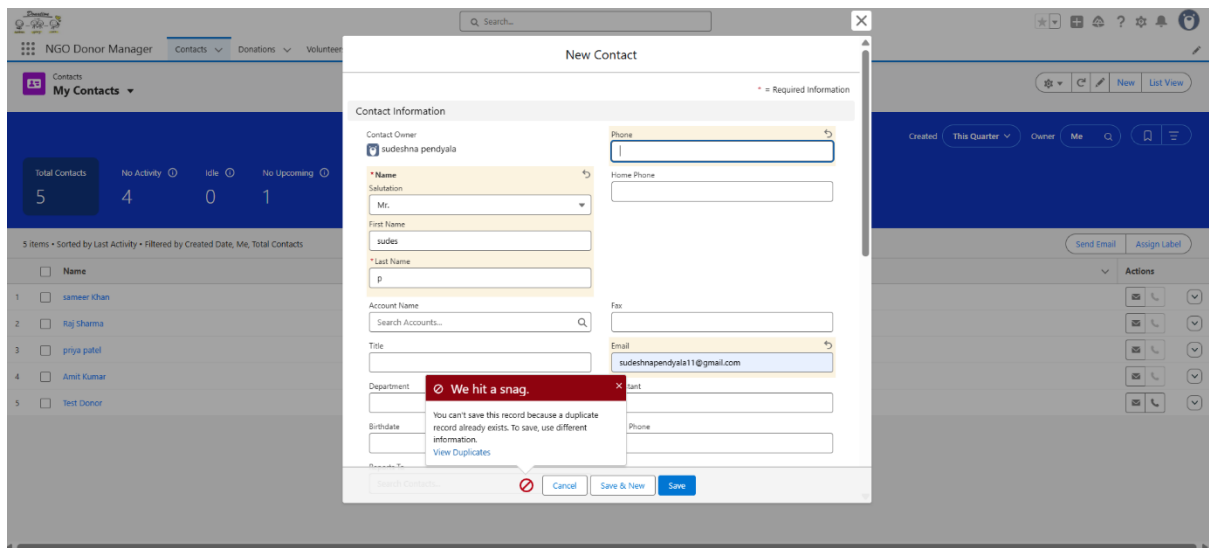
Field: --None-- Matching Method: Exact Match Blank Fields: ☐ AND

Add Filter Logic...

Previous Save Cancel



Error message when duplicate detected:



8.2 Data Backup & Export Strategy

Purpose: Implement robust data protection and recovery capabilities for NGO operations.

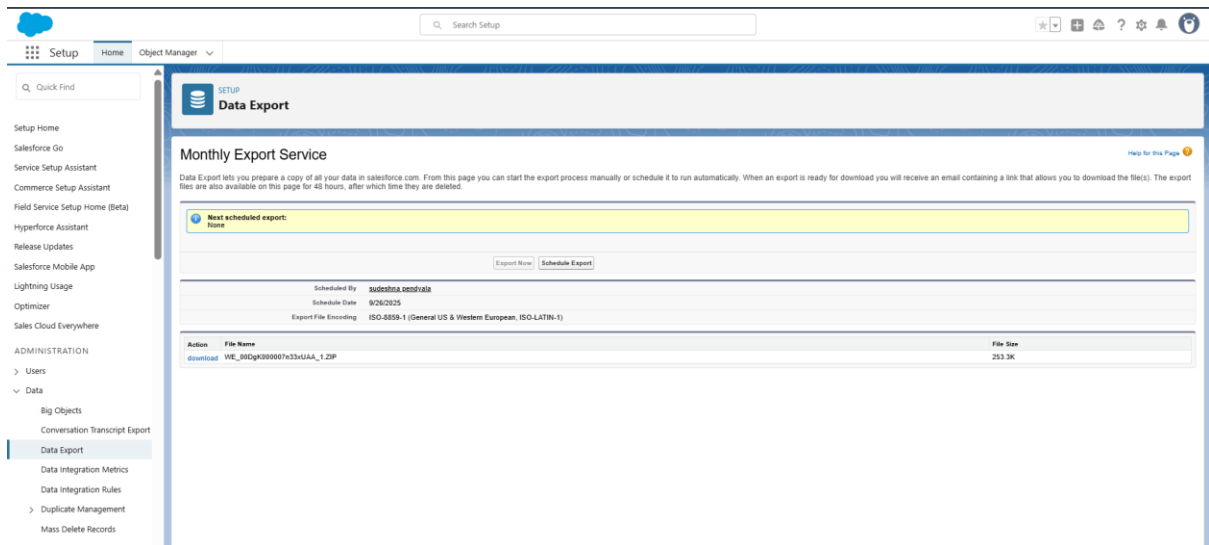
Export Configuration:

- **Scope:** Complete organizational data export
- **Format:** ISO-8859-1 encoding with UTF-8 compatibility
- **Content:** All data + attachments + Salesforce Files
- **Frequency:** On-demand with scheduled capability

Disaster Recovery Ready: Full system backup ensures business continuity for donor and volunteer data.

The screenshot shows the Salesforce 'Data Export' setup page. The 'Export File Encoding' is set to 'ISO-8859-1 (General US & Western European, ISO-LATIN-1)'. The 'Include' section has three checked items: 'Include images, documents, and attachments', 'Include Salesforce Files and Salesforce CRM Content document versions', and 'Replace carriage returns with spaces'. The 'Exported Data' section is titled 'Select what type of information you would like to include in the export. The data types listed below use the Apex API names. If you are not familiar with these names, select Include all data for your export.' It features a grid of checkboxes for various data types, including Contact, Asset, Lead, BusinessProcess, Campaign, CaseContactRole, ContentDocumentLink, ContactContactRole, EmailRoutingAddress, Event, FeedItemHistory, FieldHistory, Individual, Note, OpportunityContactRole, OmWebContentAssets, Order, Account, Partner, NotificationMember, CampaignMember, CaseHistory2, ContentVersion, EmailDisclaimer, EntityHistory, EventRelationship, FeedPost, FiscalYearSettings, LinkReference, Opportunity, OpportunityHistory, Period, OrderItem, Contact, Product2, UserRole, Case, CaseSolution, ContentVersionMap, ErrorMessage, EntitySubscription, FeedComment, FeedTrustedChange, GroupSubscription, NewsFeed, OpportunityCompetitor, OpportunityLineItem, and EventNotEntry. The 'Start Export' button is visible at the bottom of the configuration section.

The screenshot shows the Salesforce 'Data Export' setup page with the 'Monthly Export Service' status. A yellow banner indicates 'Next scheduled export: A data export is currently in progress for your organization.' Below this, there are buttons for 'Export Now' and 'Schedule Export'. A table shows the export details: 'Scheduled By: sudheendra reddy', 'Schedule Date: 9/26/2025', and 'Export File Encoding: ISO-8859-1 (General US & Western European, ISO-LATIN-1)'. A 'Schedule Export' button is also present next to the table.



8.3 Modern Development Environment Setup

Purpose: Establish professional-grade development tools for ongoing CRM enhancement.

VS Code Configuration:

- **Salesforce Extension Pack:** v64.14.0 (latest stable)
- **CLI Integration:** Salesforce DX ready
- **Org Authorization:** Secure OAuth connection established
- **Project Structure:** Standard Salesforce project template

Development Capabilities:

- Source-driven development methodology
- Version control integration ready
- Automated testing framework compatible
- Deployment pipeline preparation

Visual Studio Code interface showing the **Salesforce CLI Integration** extension details. The Explorer sidebar on the left shows the project structure for **NGO-CRM-PROJECT**, including files like `.husky`, `.vscode`, `config`, `force-app`, `scripts`, `.forceignore`, `.gitignore`, `.prettierrc`, `eslint.config.js`, `jest.config.js`, `package.json`, `README.md`, and `sfdx-project.json`.

The main panel displays the **Salesforce CLI Integration** extension page, which includes:

- Details:** Salesforce extension, 2,082,059 downloads, 51 ratings. It provides integration with the Salesforce CLI.
- Installation:** Identifier: `salesforce.salesforce-cli`, Version: `64.14.0`, Last Updated: 2025-09-26, Size: 13.33MB.
- Marketplace:** Published: 2017-09-21, Last Released: 2025-09-19.
- Categories:** Other.
- Resources:** Trailhead: Get Started with Salesforce DX, Doc: Salesforce DX Developer Guide.

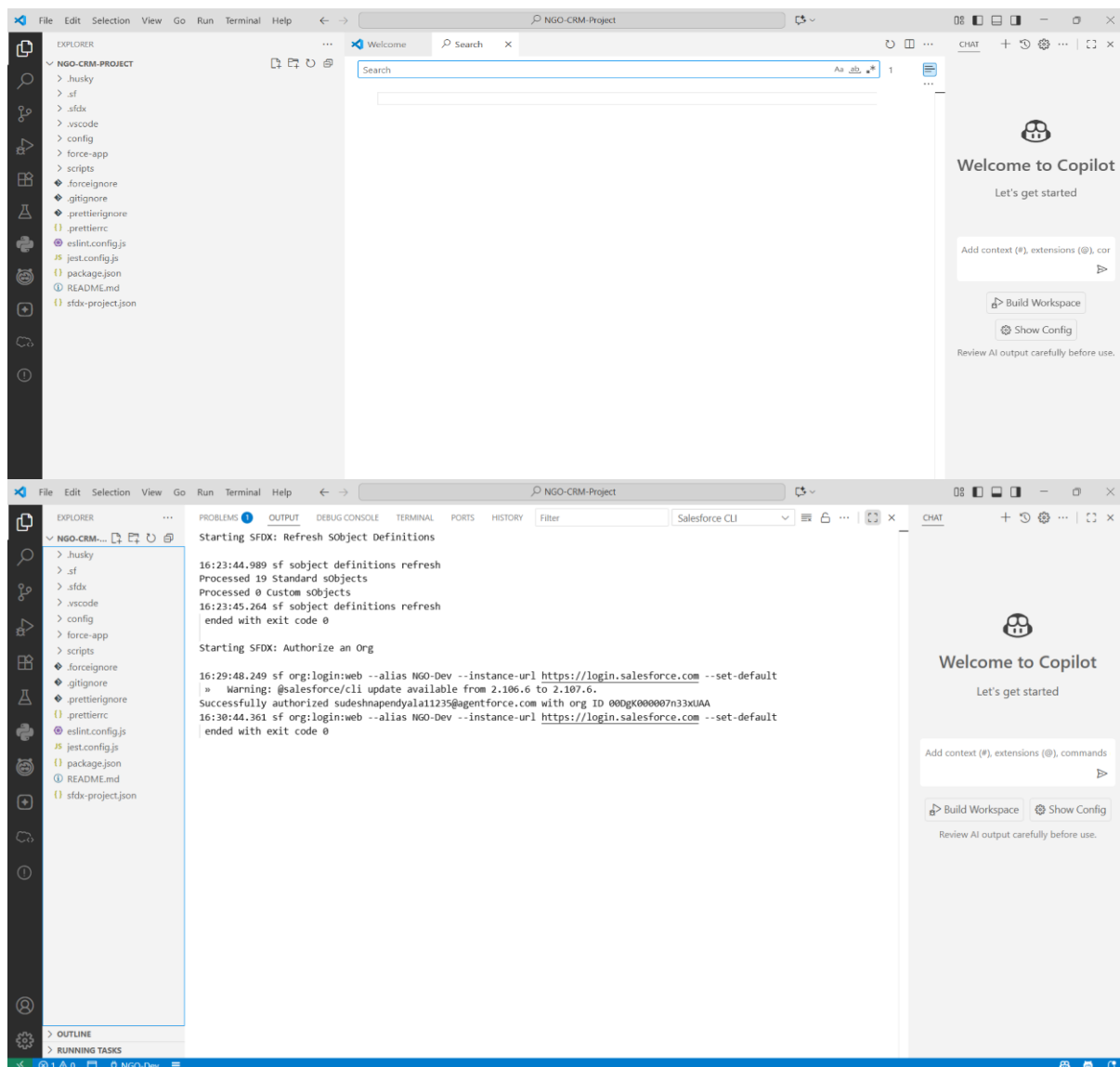
The right sidebar shows the **Welcome to Copilot** panel with options to **Build Workspace** and **Show Config**.

Visual Studio Code interface showing the **Salesforce Extension Pack (Expanded)** extension details. The Explorer sidebar on the left shows the **EXTENSIONS: MARKETPLACE** view with a search for `salesforce`.

The main panel displays the **Salesforce Extension Pack (Expanded)** extension page, which includes:

- Details:** Salesforce extension, 596,898 downloads, 6 ratings. It includes extensions for developing on the Salesforce Platform.
- Extension Pack (14):** A collection of 14 extensions, including **Apex**, **Apex Replay Debugger**, **Agentforce for Developers**, **Salesforce CLI Integration**, **Aura Components**, and **Visualforce**.
- Installation:** Identifier: `salesforce.salesforce-dev-vscode-expanded`, Version: `64.14.0`, Last Updated: 2025-09-26, Size: 20.26KB.
- Marketplace:** Published: 2020-09-11, Last Released: 2025-09-19.
- Categories:** Extension Packs.
- Resources:** Marketplace, Issues, Repository, License, Salesforce.

The bottom status bar shows the current file is `PropertyControllerTest.cs` in the `sfdx-devhouse-internal` workspace.



8.4 Deployment Architecture & Security

Purpose: Enterprise-grade deployment preparation with security best practices.

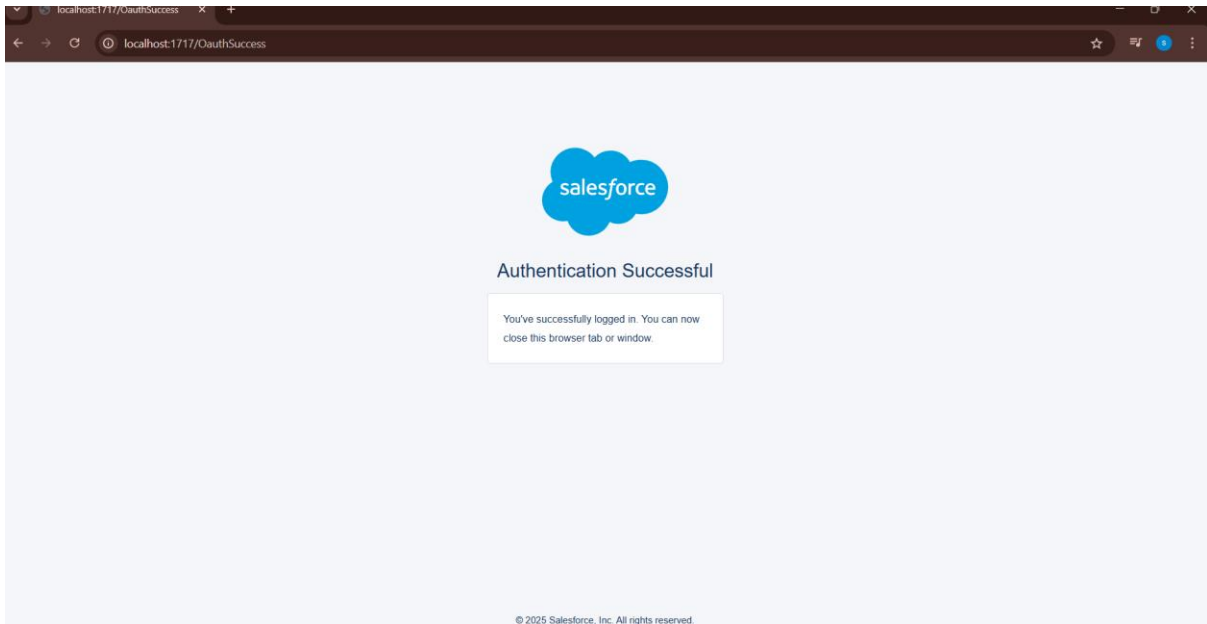
Security Implementation:

- **OAuth 2.0 Authentication:** No credential storage in code
- **Org Authorization:** Production-level access management
- **API Security:** Named credentials for external integrations
- **Data Protection:** Encrypted connections throughout

Deployment Readiness:

- Change set creation capability

- Environment management understanding
- Production deployment pathway established



TECHNICAL ACHIEVEMENTS

Enterprise Data Management:

- **Data Quality:** Automated duplicate prevention
- **Backup Strategy:** Comprehensive data protection
- **Migration Ready:** Export/import capabilities
- **Governance:** Data lifecycle management

Professional Development Standards:

- **Modern Toolchain:** VS Code + Salesforce DX
- **Source Control Ready:** Git integration prepared
- **CI/CD Compatibility:** Automated deployment pipeline
- **Team Development:** Multi-developer environment

PHASE 8 COMPLETION STATUS: PRODUCTION DEPLOYMENT READY

Business Value Delivered:

- **Data Integrity:** Clean, duplicate-free donor database
- **Business Continuity:** Reliable backup and recovery

- **Scalability Foundation:** Professional development environment
- **Security Compliance:** Enterprise-grade authentication

Operational Excellence:

- **Maintainability:** Modern development tools
- **Reliability:** Robust data management
- **Security:** Production-ready protections
- **Future-Proof:** Scalable architecture