Technical Assessment: Salesforce CRM Data Extractor

Time: 4 hours | Submit: GitHub repo + 3-5 min demo video

Overview

Build a Chrome Extension that extracts data from Salesforce CRM objects (Leads, Contacts, Accounts, Opportunities, Tasks), stores them locally, and displays them in a popup dashboard. This tests your ability to work with Chrome Extension APIs, DOM manipulation, React UI, and local storage architecture.

Technology Requirements

- Chrome Manifest V3 (service worker + content scripts)
- React.js with TailwindCSS for popup UI
- Shadow DOM for any injected page UI (extraction indicators)
- chrome.storage.local for all persistence
- chrome.tabs, chrome.runtime, chrome.storage APIs

Module 1: Data Extraction Engine

Content script must extract data from Salesforce's standard objects:

Leads: name, company, email, phone, lead source, lead status, lead owner

Contacts: name, email, phone, account name, title, contact owner, mailing address

Accounts: account name, website, phone, industry, type, account owner, annual revenue

Opportunities: opportunity name, amount, stage, probability (%), close date, forecast category, opportunity owner, associated account

Tasks: subject, due date, status, priority, related to (opportunity/account/contact), assigned to

Key extraction challenges to address:

- Salesforce uses Lightning Experience — handle dynamic DOM rendering
- Extract opportunity stages (Prospecting, Qualification, Proposal, Negotiation, Closed Won/Lost)
- Handle List Views vs Record Detail pages vs Kanban View
- Detect which object the user is currently viewing
- Handle related lists (e.g., Contacts related to an Account)

Module 2: Storage Layer

Define a clear storage schema. Example structure:

```
{

  "salesforce_data": {

    "leads": [{ "id": "...", "name": "...", "company": "...", "email": "...",
"status": "...", "owner": "..." }],

    "contacts": [{ "id": "...", "name": "...", "email": "...", "phone": "...",
"account": "...", "owner": "..." }],

    "accounts": [{ "id": "...", "name": "...", "industry": "...", "revenue": ...,
"owner": "..." }],

    "opportunities": [{ "id": "...", "name": "...", "amount": ..., "stage": "...",
"probability": ..., "closeDate": "...", "account": "..." }],

    "tasks": [{ "id": "...", "subject": "...", "due": "...", "status": "...",
"relatedTo": "...", "assignee": "..." }],

    "lastSync": 1234567890

  }

}
```

Requirements: Handle deduplication, updates, deletions. Manage race conditions if multiple tabs extract simultaneously.

Module 3: Popup Dashboard

Clicking the extension icon opens a React dashboard:

- Tabs for Leads, Contacts, Accounts, Opportunities (grouped by stage), Tasks
- Search/filter across all extracted data
- Delete individual records
- "Extract Current Object" button that triggers content script on active tab
- Show last sync timestamp per object type
- For Opportunities: display stage and probability

Module 4: Visual Feedback (Shadow DOM)

When extraction runs, inject a small status indicator into the page using Shadow DOM for style isolation. Show extraction progress/success/failure state. Indicate which object was detected.

Bonus Features

1. Real-time sync across tabs using chrome.storage.onChanged
2. Export data as CSV or JSON
3. Handle Salesforce's pagination automatically
4. Detect object type automatically and extract appropriate fields
5. Support extraction from Kanban View (Pipeline Inspection)
6. Extract related records (e.g., Contacts under an Account)

Getting Started with Salesforce

To complete this assignment, you'll need a Salesforce account. Here's how to get one:

Option 1: Developer Edition (Recommended)

Free, never expires, full functionality for development.

Sign up: https://developer.salesforce.com/signup

Option 2: 30-Day Free Trial

Sign up: https://www.salesforce.com/form/signup/freetrial-sales/

Setup Tutorial

Video Guide: https://www.youtube.com/watch?v=TZ5aRQvbX4g

Salesforce Tutorial: https://www.tutorialspoint.com/salesforce/index.htm

Salesforce Reference Links

Trailhead (Learning): https://trailhead.salesforce.com/

Leads & Opportunities: https://trailhead.salesforce.com/content/learn/modules/leads_opportunities_lightning_experience

Salesforce Help: https://help.salesforce.com/

Developer Docs: https://developer.salesforce.com/docs

Submission Requirements

1. Public GitHub repo with clear folder structure
2. README with: install steps, DOM selection strategy explanation, storage schema docs
3. 3-5 min demo video showing: extraction from Opportunities (multiple stages), Leads, Contacts, Accounts, page refresh persistence, popup dashboard, delete functionality

Evaluation Criteria

- Correct extraction from multiple objects (Leads, Contacts, Accounts, Opportunities, Tasks)
- Proper handling of opportunity stages and probability
- Clean code architecture and separation of concerns
- Proper Manifest V3 patterns (service worker, message passing)
- Storage schema design and data integrity
- Error handling and edge cases

Note: Focus on DOM scraping—API/SOQL integration not required.