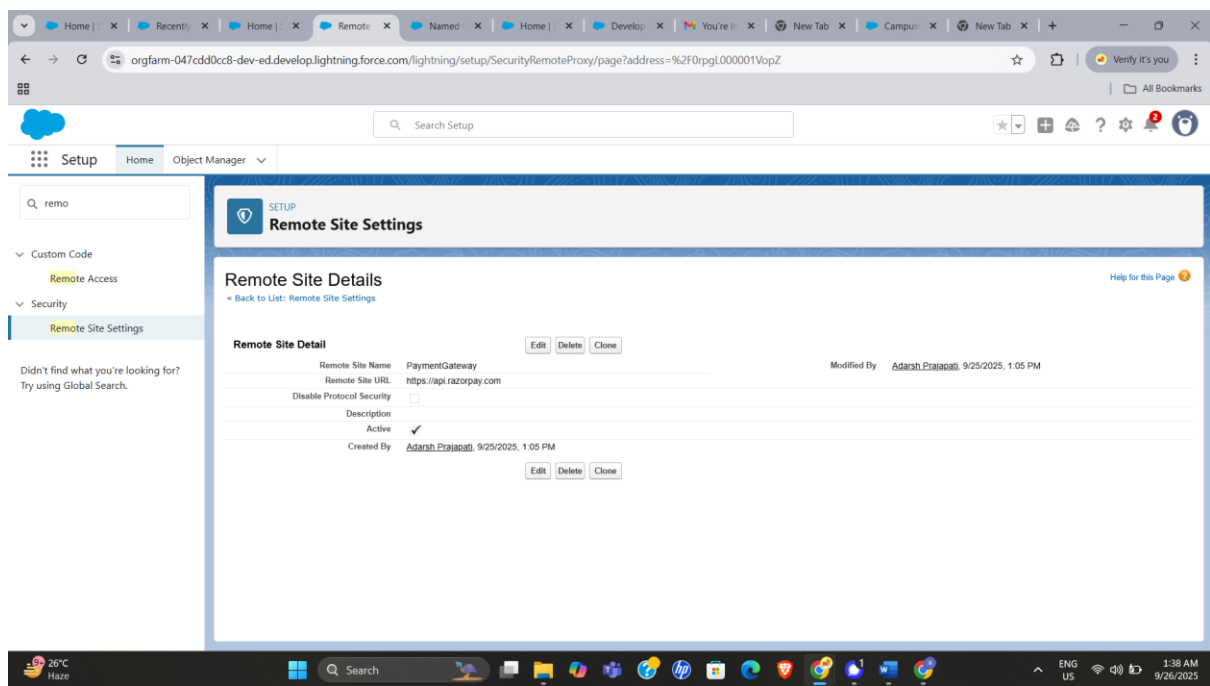


Phase 7: Integration & External Access(Campus CRM + Student Club)

Screenshots:-

Remote Site Settings:-



Named Credentials

- Store authentication details for external APIs (URL, username, password, token).
- Remove need for hardcoding credentials in Apex.
- Example: Store credentials for University Attendance System API.

External Services

- Connect declaratively with APIs using OpenAPI/Swagger schema.
- Generates invocable Apex actions directly usable in Flows.
- Example: Connect to College Payment Gateway for event fee collection.

Web Services (REST/SOAP)

- **REST API:** Lightweight, JSON-based, widely used.
 - **SOAP API:** XML-based, enterprise-style integration.
 - Example: Create REST endpoint in Salesforce for fetching Event details.
 - Example: University portal can call Salesforce REST API to get student event registrations.
-

Callouts

- Outbound calls from Salesforce to external APIs.
 - Requires **Remote Site Settings** to whitelist endpoints.
 - Example: Fetch global event categories from an external Event API and map to Salesforce Events.
-

Platform Events

- Event-driven architecture in Salesforce.
 - Publishers and subscribers communicate asynchronously.
 - Example: When a student registers for an event → publish “EventUpdate__e” → Club Leader system listens and updates capacity.
-

Change Data Capture (CDC)

- Real-time tracking of changes to Salesforce records.
 - Sends events when records are created/updated/deleted.
 - Example: Sync updated Student record instantly with University Master Database.
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Salesforce Connect

- Access external system data in real time without importing it.
 - Creates **External Objects** linked to external DBs/APIs.
 - Example: Show University Library Database info (borrowed books) directly in Salesforce.
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API Limits

- Salesforce restricts daily API calls (e.g., 15,000/day in Developer Org).
- Prevents overuse and ensures performance.

- Example: Use batch processing and caching to reduce calls.
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OAuth & Authentication

- Secure method for allowing external apps to access Salesforce.
 - Uses tokens instead of usernames/passwords.
 - Example: University Mobile App uses OAuth 2.0 to fetch event registration data.
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Remote Site Settings

- Secure payment gateway for college.
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Phase 7 Key Learning

- CampusConnect CRM is not isolated.
 - It securely connects with **external APIs, mobile apps, and university systems** while respecting Salesforce API limits and using industry-standard security (OAuth, Named Credentials).
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