# Phase 7 - Integration & External Access

This document provides a detailed, step-by-step summary of all tasks and concepts covered for Phase 7 of the Salon Management System project. The objective of this phase was to understand and demonstrate how the Salesforce platform can connect with external, third-party systems.

1. Remote Site Settings

- **Purpose:** This is the older, less secure method for authorizing outgoing calls from Apex.
- **Steps Followed:** As a modern best practice, **Remote Site Settings were used**.
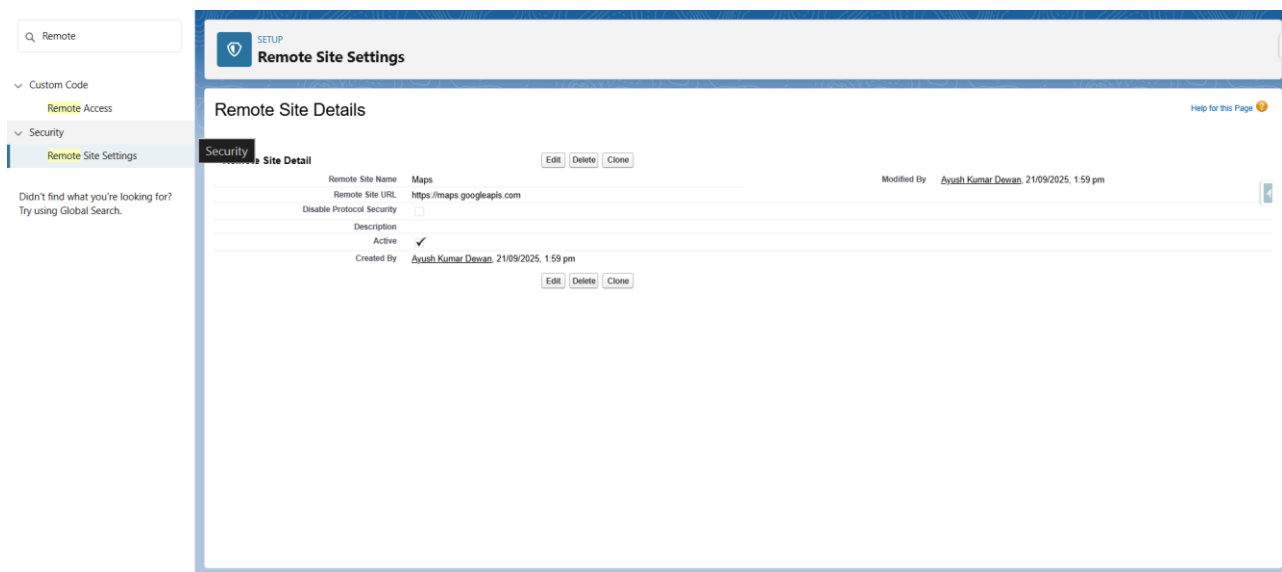
2. OAuth & Authentication

- **Purpose:** To understand the standard, secure way for applications to grant access to each other without sharing passwords (e.g., "Log in with Google").
- **Action Plan (Salon Use Case):**
    o If the salon were to build a public booking website in the future, it would use **OAuth** to connect to Salesforce.
    o The website would be granted a secure "token" with permission to *only* create `Appointment` records, without ever needing to store the main Salesforce admin password.

3. External Services

- **Purpose:** To understand the "clicks, not code" tool for integrations. It allows a Flow to call an external system directly without needing Apex code.
- **Action Plan (Salon Use Case):**
    o To process payments, we would use External Services with a payment processor like Stripe.
    o We would provide Salesforce with Stripe's API specification, which would automatically create a "Create Payment" action in Flow Builder. The receptionist could then use this action in a screen flow to securely charge a client's card.

4. Platform Events & Change Data Capture

- **Purpose:** To understand how Salesforce can broadcast real-time messages to other systems, like a radio station.
- **Action Plan (Salon Use Case):**
  - When an appointment is cancelled, the `Appointment - Status Change Trigger` flow could publish an `AppointmentCancelled__e` **Platform Event**.
  - A separate, custom-built mobile app for stylists could be "listening" for this event and show an instant pop-up on the stylist's phone, alerting them to the schedule change.

5. Salesforce Connect & External Objects

- **Purpose:** To view and interact with data from another database in real-time inside Salesforce **without copying the data**.
- **Action Plan (Salon Use Case):**
  - If the salon franchise had a central inventory system, we could use **Salesforce Connect** to create an **External Object** called "Warehouse Stock." This would allow the receptionist to see real-time product inventory levels directly on a `Service` record page, even though that data lives in another system.

6. API Limits

- **Purpose:** To understand that Salesforce enforces limits on how many API callouts an org can make in 24 hours to ensure system stability for all customers.
- **Action Plan (Salon Use Case):**
  - When designing the real SMS integration, a developer would need to be mindful of the daily API limit. If the salon had a very large number of clients, the Apex code would be written to send reminder requests in efficient batches (e.g., 100 at a time) instead