

Student Attendance & Performance Tracker

Phase 7: Integration & External Access

Overview

Phase 7 focuses on integrating Salesforce with external systems and managing secure external access using APIs and authentication mechanisms. In the **Student Attendance & Performance Tracking System**, all required data processing, reporting, and automation are handled **entirely within Salesforce** using custom objects, flows, validation rules, and reports.

Therefore, most integration-related features in this phase are **not required** for the current scope of the project.

7.1 Named Credentials

Named Credentials are used to securely store authentication details (username, password, OAuth tokens) for external systems and APIs.

This project does not integrate with any third-party or external systems. All attendance, enrollment, and performance data is stored and processed within Salesforce.

Relevance: Not required for this project as no external API is used.

7.2 External Services

External Services allow Salesforce to consume external APIs declaratively and convert them into invocable actions usable in Flows and Process Builder.

Used when business logic depends on external systems like payment gateways or external databases.

The project does not rely on any external API. All business logic is handled using internal Salesforce automation.

Relevance: Not needed for internal attendance and performance tracking.

7.3 Web Services (REST / SOAP)

Salesforce Web Services allow:

- Exposing Salesforce data to external applications
- Consuming external APIs inside Salesforce

Useful for system-to-system communication and enterprise integrations.

The Student Attendance & Performance Tracking System is a standalone Salesforce application with no external data exchange.

Relevance: Not needed; all reporting is done internally

7.4 Callouts

Callouts enable Salesforce to send HTTP requests to external systems.

Used for real-time communication with external platforms such as messaging services or analytics tools.

No outbound communication to external systems is needed in this project.

Relevance: Not required since no external systems are integrated.

7.5 Platform Events

Platform Events support event-driven architecture for real-time communication between Salesforce and external systems or other Salesforce apps.

Used when multiple systems need to react instantly to changes.

All updates in the system are handled internally using flows and process automation.

Relevance: Not required; the project operates on internal updates.

7.6 Change Data Capture (CDC)

CDC tracks changes to Salesforce records and publishes them as events in real time.

Useful for syncing Salesforce data with external systems.

The project does not require real-time synchronization or external listeners. Reports and

dashboards provide sufficient visibility.

7.7 Salesforce Connect

Salesforce Connect allows users to view and manage external data without storing it in Salesforce.

Used when data resides in external databases.

All data is stored in Salesforce custom objects (Student, Enrollment, Attendance, Performance).

Relevance: Not needed; all data is stored in custom objects.

7.8 API Limits

API limits control the maximum number of API calls allowed per day.

Important for high-integration environments.

Relevance: Not applicable; no API calls are performed in this project.

7.9 OAuth & Authentication

OAuth provides secure authentication and authorization for external system access.

Used when external applications access Salesforce data.

Relevance: Not required; no external system integration.

7.10 Remote Site Settings

Remote Site Settings define trusted external URLs for callouts.

Mandatory when Salesforce communicates with external endpoints.

Relevance: Not required; all operations are internal.

No external URLs or callouts are used.