

Student Attendance & Performance Tracker

Phase 4: Process Automation (Admin)

Introduction

Phase 4 focuses on implementing Salesforce administrative automation to reduce manual effort, enforce academic rules, and ensure timely communication within the **Student Attendance & Performance Tracker**.

Automation ensures data accuracy, proactive alerts, and streamlined academic workflows.

4.1 Validation Rules

Use Case Explanation

Validation Rules were implemented to ensure only accurate and meaningful academic data is saved in the system. These rules prevent incorrect entries that could affect reports, alerts, and decision-making.

Validation Rules Implemented

- Prevent attendance date from being a future date
- Make Attendance Status mandatory
- Restrict exam scores to allowed ranges (e.g., 0–100)
- Prevent negative absence counts

These validations maintain data integrity and consistency.

The screenshot shows the Salesforce Object Manager interface for the 'Attendance' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, etc. The main area displays the 'Validation Rules' section, which contains two items:

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Attendance_Date_Not_Future	Attendance Date	Attendance date cannot be in the future.	✓	Siri varshini Pentakota, 13/12/2025, 12:07 pm
Attendance_Status_Required	Status	Please select attendance status.	✓	Siri varshini Pentakota, 13/12/2025, 12:08 pm

SETUP > OBJECT MANAGER

Attendance

- Details
- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits

Attendance Validation Rule

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Validation Rule Detail		Edit	Clone
Rule Name	Attendance_Date_Not_Future	Active	<input checked="" type="checkbox"/>
Error Condition Formula	Attendance_Date__c > TODAY()		
Error Message	Attendance date cannot be in the future.	Error Location	Attendance Date
Description			
Created By	Siri varshini Pentakota, 13/12/2025, 12:07 pm	Modified By	Siri varshini Pentakota, 13/12/2025, 12:07 pm

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SETUP > OBJECT MANAGER

Attendance

- Details
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Attendance Validation Rule

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Validation Rule Detail		Edit	Clone
Rule Name	Attendance_Status_Required	Active	<input checked="" type="checkbox"/>
Error Condition Formula	ISBLANK(TEXT(Status__c))		
Error Message	Please select attendance status.	Error Location	Status
Description			
Created By	Siri varshini Pentakota, 13/12/2025, 12:08 pm	Modified By	Siri varshini Pentakota, 13/12/2025, 12:08 pm

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SETUP > OBJECT MANAGER

Result

- Details
- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits

Result Validation Rule

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Validation Rule Detail		Edit	Clone
Rule Name	Result_Score_Range	Active	<input checked="" type="checkbox"/>
Error Condition Formula	OR(Score__c < 0, Score__c > 100)		
Error Message	Score must be between 0 and 100.	Error Location	Score
Description			
Created By	Siri varshini Pentakota, 13/12/2025, 12:09 pm	Modified By	Siri varshini Pentakota, 13/12/2025, 12:09 pm

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4.2 Workflow Rules

Use Case Explanation

Workflow Rules were used to automate internal communication without manual follow-ups.

Use Case Implemented

- When a student is marked **Absent**, an automatic email alert is sent to the assigned teacher

This ensures faculty awareness and quick action.

The screenshot shows the Salesforce Setup interface with the 'Workflow Rules' page selected. A specific workflow rule named 'Notify_Teacher_On_Absent' is highlighted. The rule details include:

- Rule Name: Notify_Teacher_On_Absent
- Active: ✓
- Description: (empty)
- Rule Criteria: Attendance: Status EQUALS Absent
- Created By: Sri Varshini Pentaloka (13/12/2025, 12:13 pm)
- Modified By: Sri Varshini Pentaloka (13/12/2025, 12:22 pm)

The 'Workflow Actions' section contains:

- Immediate Workflow Actions:**
 - Type: Email Alert
 - Description: Alert teacher when student absent
- Time-Dependent Workflow Actions:** See an example
Note: You cannot add time-dependent workflow actions because your evaluation criteria is "Every time a record is created or edited". Change Evaluation Criteria

4.3 Process Builder

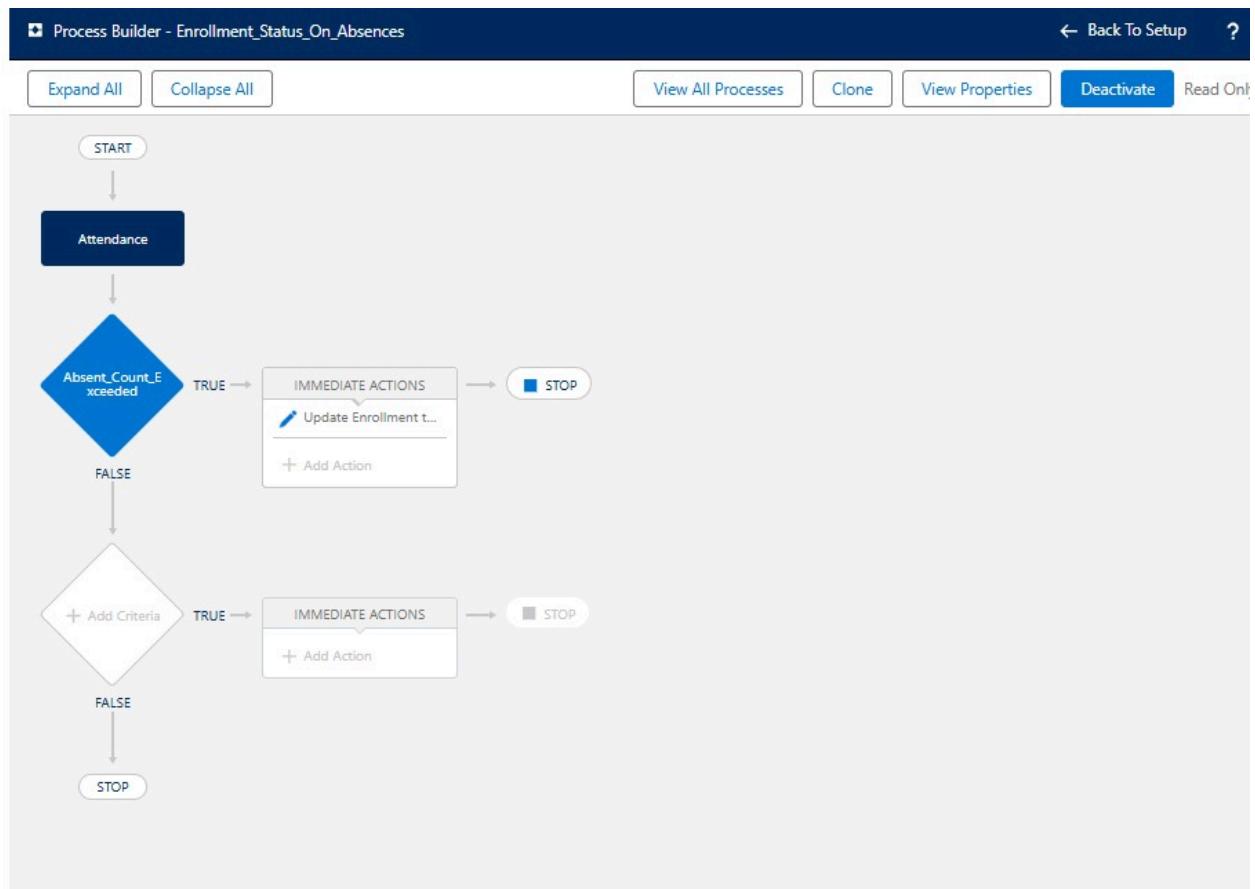
Use Case Explanation

Process Builder was used to automate field updates based on attendance trends.

Use Case Implemented

- If the number of absences exceeds a predefined limit:
 - Enrollment Status is updated to **"Warning"**

This helps identify students with attendance issues early.



4.4 Approval Process

- Approval processes were created to formalize special cases. For example, makeup exam requests require administrative approval before scheduling. This ensures that exceptions are reviewed properly.

4.5 Flow Builder

Use Case Explanation

Flow Builder was used for advanced and flexible automation beyond workflow and process builder capabilities.

Flow Detail

Action	Flow Label	Description	Flow API Name	Type
Open Run Activate	Update Enrollment Absences on Attendance	Update Enrollment Absences on Attendance	Update_Enrollment_Absences_on_Attendance	Autolaunched Flow
		Default	Namespace Prefix	
		Default	URL	/flow/Update_Enrollment_Absences_on_Attendance
		Record—Run After Save	Activated/Deactivated By	Siri varshini Pentakota, 13/12/2025, 1:34 pm
		Modified By	Created By	Siri varshini Pentakota, 13/12/2025, 1:34 pm

Flow Versions

Action	Flow Label	Version	Description	Built with	Created Date	Type	Status	Progress Status	Run in Mode	API Version for Running the Flow	Log Metrics to Data Cloud
Open Run Activate	Update Enrollment Absences on Attendance	1		Flow Builder	13/12/2025, 1:34 pm	Autolaunched Flow	Inactive	Draft	Default Mode	65.0	<input type="checkbox"/>

4.6 Email Alerts

Use Case Explanation

Email Alerts were configured to notify stakeholders about attendance and academic events.

Use Cases Implemented

- Parents receive alerts for student absences
- Faculty notified for repeated absences
- Admin notified for approval requests

This improves transparency and timely intervention.

The screenshot shows the 'Email Alerts' section under 'SETUP'. It displays a list of email alerts with columns for Action, Description, Email Template Name, Object, and Last Modified Date. The first entry is 'Alert teacher when student absent' with 'Absent_Notification_Template' as the email template, 'Attendance' as the object, and a last modified date of 13/12/2025. The second entry is 'Parent_Absent_EmailAlert' with the same template and object, also dated 13/12/2025. Navigation links at the bottom include A through Z and 'All'.

Action	Description	Email Template Name	Object	Last Modified Date
Edit Del	Alert teacher when student absent	Absent_Notification_Template	Attendance	13/12/2025
Edit Del	Parent_Absent_EmailAlert	Absent_Notification_Template	Attendance	13/12/2025

The screenshot shows the detail view for the 'Alert teacher when student absent' email alert. It includes fields for Description (Alert teacher when student absent), Unique Name (Alert_teacher_when_student_absent), From Email Address (Current User's email address), Recipients (User_Teacher Teacher), Additional Emails (User_Parent), and Created By (Siri varshini Pentakota, 13/12/2025, 12:22 pm). The Email Template is set to 'Absent_Notification_Template' and the Object is 'Attendance'. Modification details are also shown.

The screenshot shows the detail view for the 'Parent_Absent_EmailAlert' email alert. It includes fields for Description (Parent_Absent_EmailAlert), Unique Name (Parent_Absent_EmailAlert), From Email Address (Current User's email address), Recipients (User_Teacher Teacher, User_Parent), Additional Emails (User_Parent), and Created By (Siri varshini Pentakota, 13/12/2025, 1:38 pm). The Email Template is set to 'Absent_Notification_Template' and the Object is 'Attendance'. Modification details are also shown.

4.7 Field Updates

Use Case Explanation

Field Updates automate data changes without manual intervention.

Use Cases Implemented

- Automatically update Enrollment Status to **Warning**

- Update attendance summary fields
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Conclusion

Phase 4 successfully automates critical academic workflows using Salesforce admin tools. Validation rules ensure data accuracy, flows enable proactive monitoring, approvals formalize exceptions, and notifications keep stakeholders informed—resulting in a reliable, efficient, and scalable academic CRM system.