

Phase 4 - Process Automation: Smart Lost & Found System

1. Introduction

Phase 4 focuses on **process automation** for the Smart Lost & Found System.

The goal is to **reduce manual intervention** and ensure **timely communication** between students, staff, security, and admin.

We implemented automation using **Validation Rules, Workflow Rules, Process Builder, Approval Process, Flow Builder, Email Alerts, Field Updates, Tasks, and Custom Notifications.**

2. Validation Rules

Use Case: Prevent invalid data entry.

- Lost Date and Found Date cannot be set in the future.
- Claim Requests must be linked to both Lost Item and Found Item.

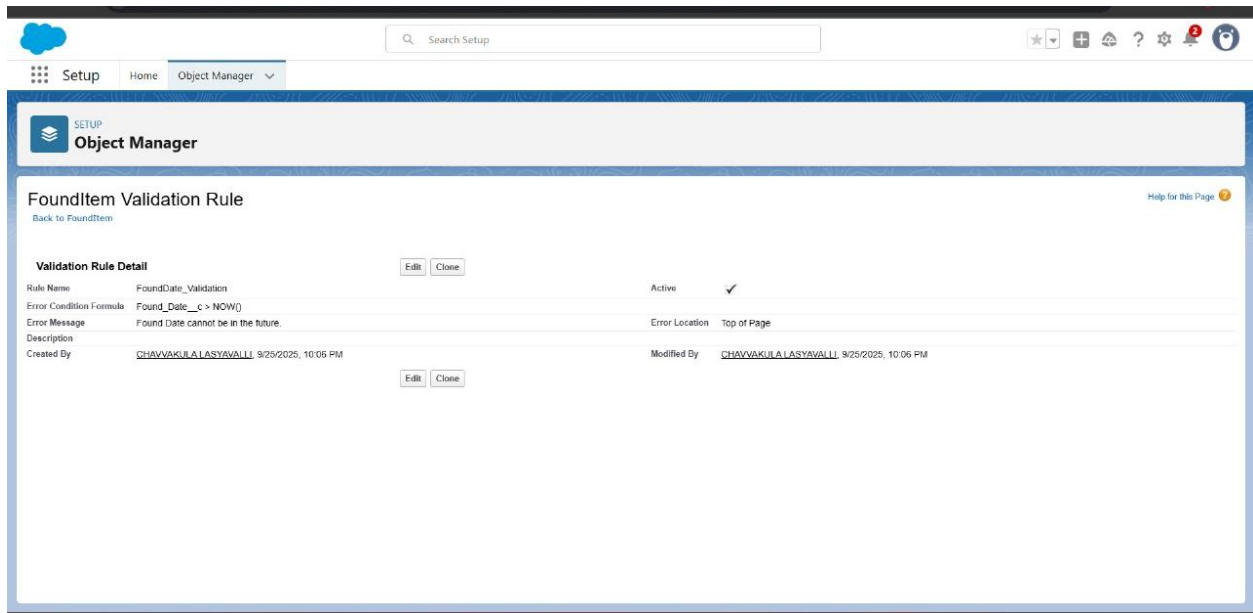
Formulas:

- For Lost Date (Date field):
 $\text{Lost_Date_c} > \text{TODAY}()$
- For Found Date (Date/Time field):
 $\text{Found_Date_c} > \text{NOW}()$

The screenshot shows the Salesforce Setup interface. The breadcrumb trail is: SETUP > OBJECT MANAGER > Lost Item. The page title is "Lost Item". On the left sidebar, the "Validation Rules" link is selected. The main content area displays "Validation Rules" for the "Lost Item" object, showing 1 item sorted by Rule Name. A table lists the validation rule:

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
LostDate_Validation	Top of Page	Lost Date cannot be in the future.	✓	CHAV/VAKULA LASYAWALLI, 9/25/2025, 10:02 PM

The URL at the bottom of the page is: <https://org1am-56d070263-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01g0000002IP00/ValidationRules/view>

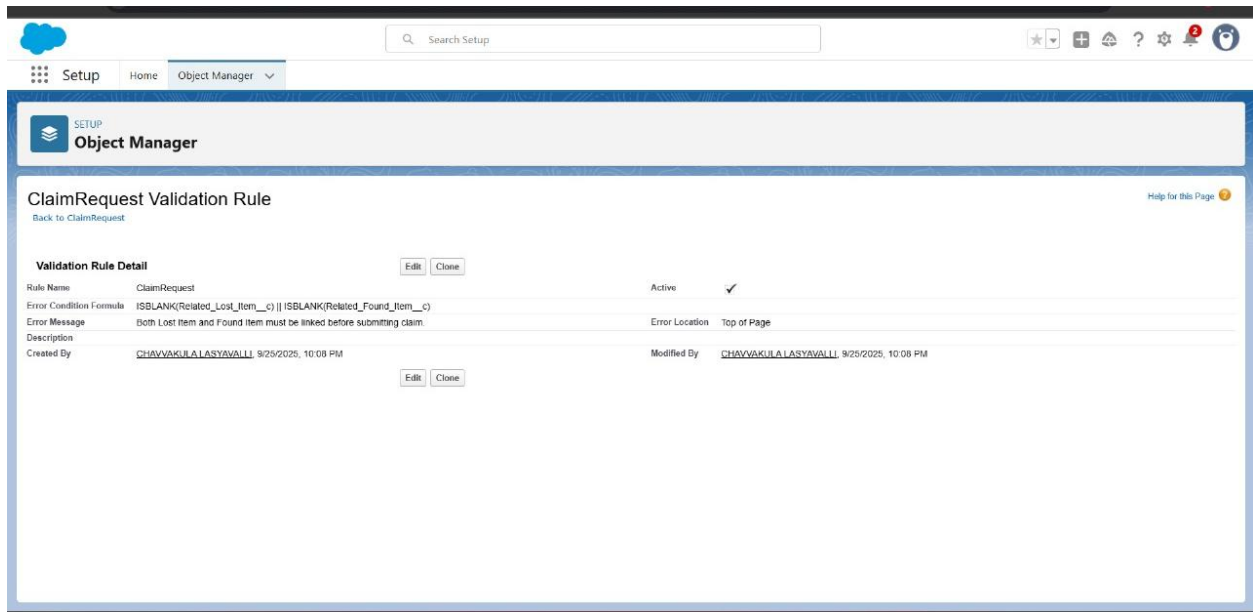


FoundItem Validation Rule

[Back to FoundItem](#)

Validation Rule Detail

Rule Name	FoundDate_Validation	Active	✓
Error Condition Formula	Found_Date__c > NOW()	Error Location	Top of Page
Error Message	Found Date cannot be in the future.		
Description			
Created By	CHAYYAKULA LASYAVALLI 9/25/2025, 10:06 PM	Modified By	CHAYYAKULA LASYAVALLI 9/25/2025, 10:06 PM



ClaimRequest Validation Rule

[Back to ClaimRequest](#)

Validation Rule Detail

Rule Name	ClaimRequest	Active	✓
Error Condition Formula	ISBLANK(Related_Lost_Item__c) ISBLANK(Related_Found_Item__c)	Error Location	Top of Page
Error Message	Both Lost Item and Found Item must be linked before submitting claim.		
Description			
Created By	CHAYYAKULA LASYAVALLI 9/25/2025, 10:08 PM	Modified By	CHAYYAKULA LASYAVALLI 9/25/2025, 10:08 PM

3. Workflow Rules

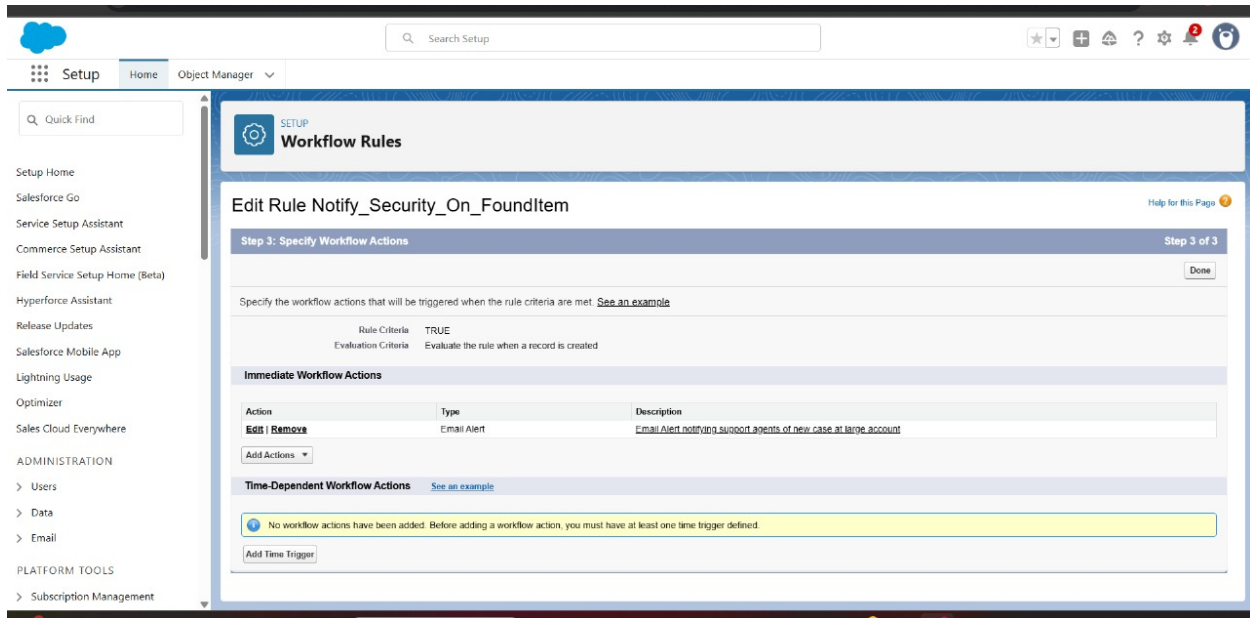
Use Case: Notify Security when a Found Item is created.

Steps:

1. Setup → Workflow Rules → New Rule.
2. Object: **FoundItem__c**.
3. Evaluation Criteria: Run only when record is created.
4. Rule Criteria: Formula evaluates to TRUE.

5. Workflow Action: **Email Alert** to Security group.

Note: Workflow Rules are legacy automation. Record-Triggered Flows are the recommended modern approach.

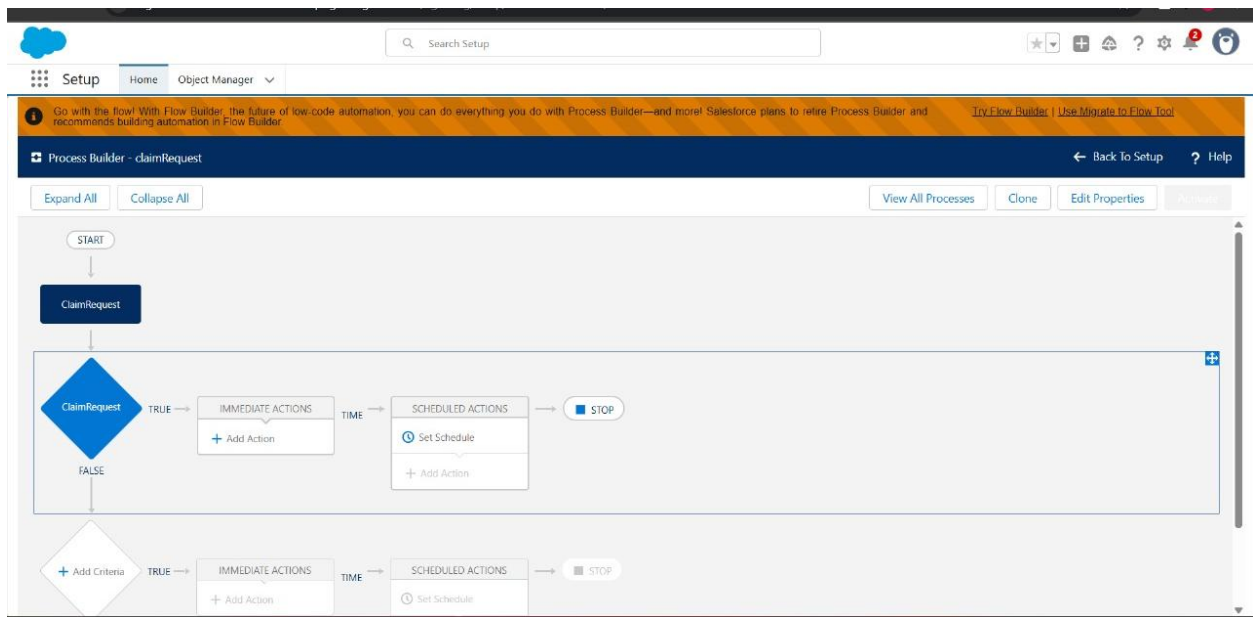


4. Process Builder

Use Case: When a **ClaimRequest** is approved, update statuses of related records.

Steps:

1. Setup → Process Builder → New.
2. Object: **ClaimRequest__c**.
3. Criteria: **Approval_Status__c** = 'Approved'.
4. Actions:
 - Update related **LostItem** → **Status** = **Claimed**.
 - Update related **FoundItem** → **Status** = **Returned**.



5. Approval Process

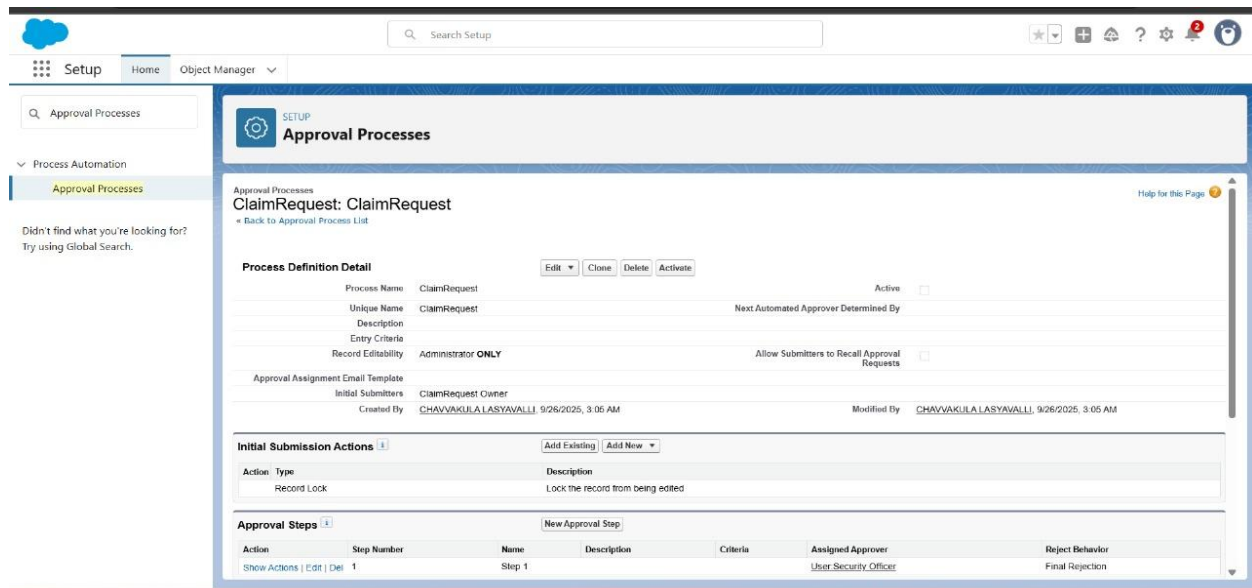
Use Case: Security must approve all claim requests.

Steps:

1. Setup → Approval Processes → New → Select **ClaimRequest__c**.
2. Entry Criteria: Approval_Status = 'Pending'.
3. Approver: **Security Staff group**.

Final Actions:

- If Approved → Status = Approved.
- If Rejected → Status = Rejected.



6. Flow Builder

We implemented **four types of flows**:

6.1 Record-Triggered Flow

- **Trigger:** On **ClaimRequest__c** creation.
- **Action:** Send email to Security.

6.2 Screen Flow

- **Purpose:** Security officer reviews claim requests.
- Screen shows **Lost Item, Found Item, and Claimed By**.
- Buttons: **Approve / Reject** → **updates status**.

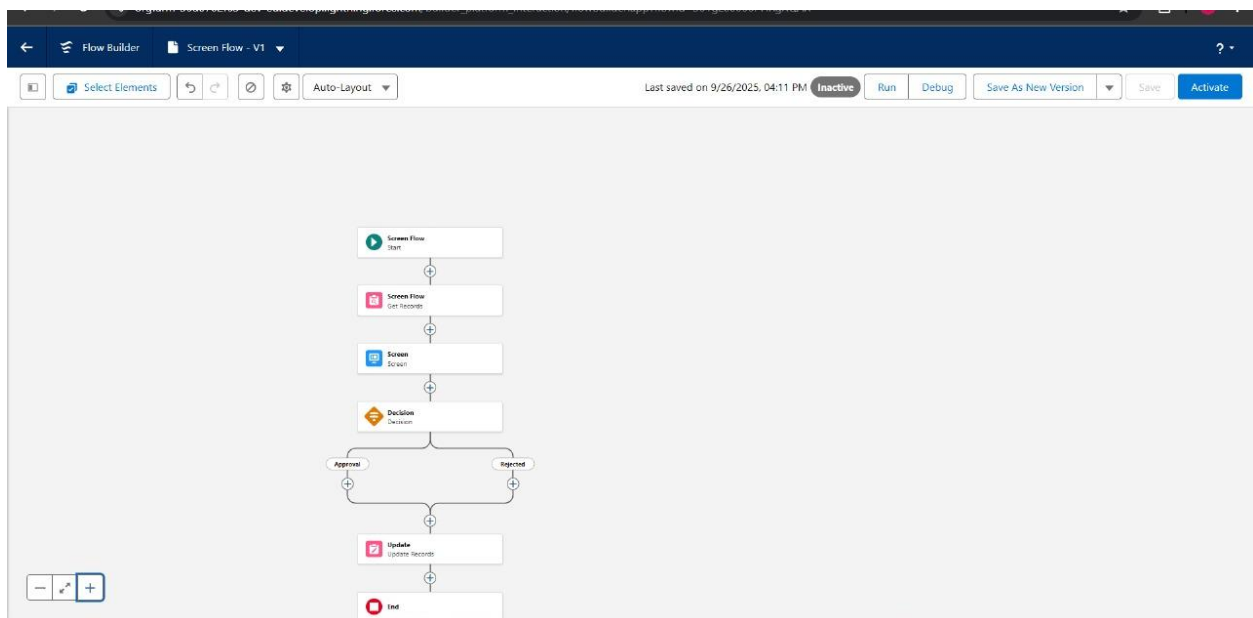
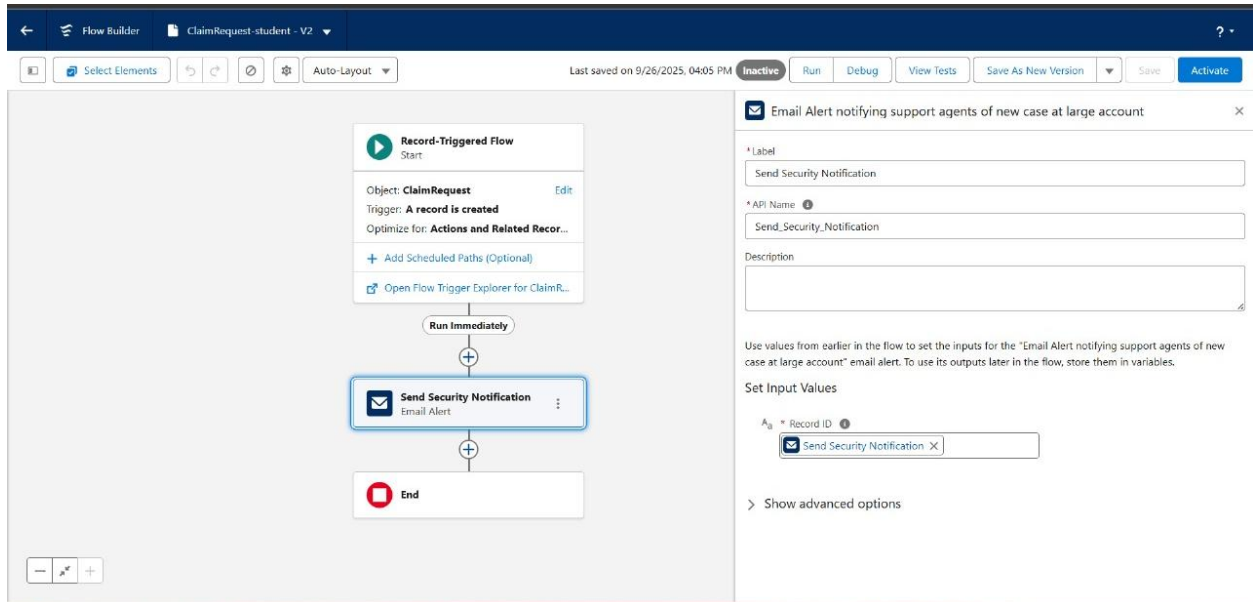
6.3 Scheduled Flow

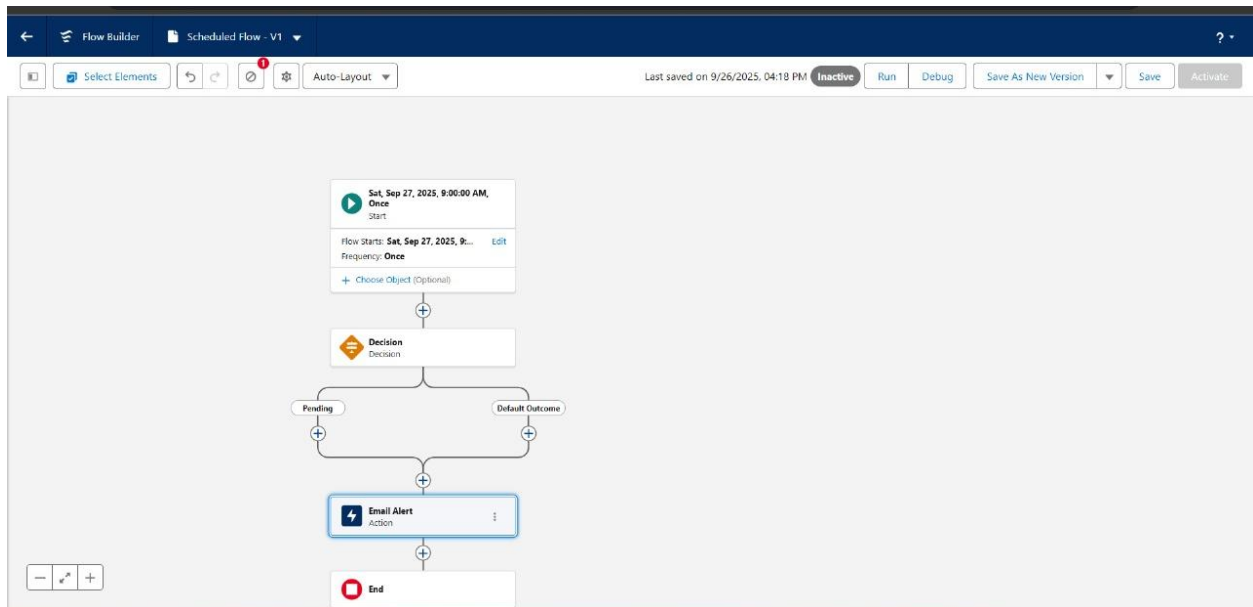
- **Runs daily**.
- If **LostItem__c** is still Pending after 7 days → send reminder email to student.

6.4 Auto-Launched Flow

- **Runs periodically**.

- Auto-closes Claim Requests older than **14 days** by setting status = Rejected.





7. Email Alerts

Created **three templates** stored in *Smart Lost & Found Templates*:

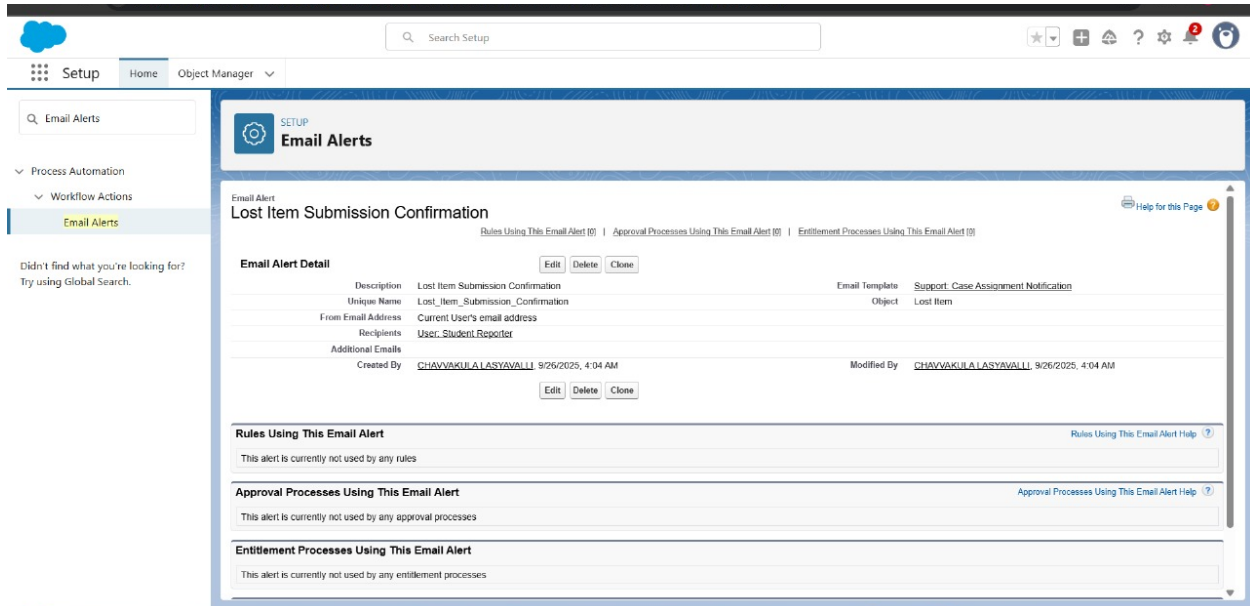
- **ET_LostItem_Submission** → Confirms lost item logged (to Student).
- **ET_FoundItem_Submission** → Notifies Security when a found item is logged.
- **ET_ClaimRequest_Status** → Notifies Student if their claim is approved/rejected.

These were linked with **Workflow Rules and Flows**.

The screenshot shows the 'Classic Email Templates' setup page in Salesforce. The left sidebar contains navigation links for 'Setup', 'Home', and 'Object Manager'. The main content area is titled 'My Personal Email Templates' and includes a 'Classic Email Template Availability' section. Below this, there is a table listing three email templates. The table has columns for 'Action', 'Email Template Name', 'Template Type', 'Available For Use', 'Description', 'Author', and 'Last Modified Date'. The templates listed are 'ET_ClaimRequest_Status', 'ET_FoundItem_Submission', and 'ET_LostItem_Submission'. The 'ET_LostItem_Submission' template is marked as 'Available For Use' with a checkmark.

Action	Email Template Name	Template Type	Available For Use	Description	Author	Last Modified Date
Edit Del	ET_ClaimRequest_Status	Text	<input type="checkbox"/>		22a	9/26/2025
Edit Del	ET_FoundItem_Submission	Text	<input type="checkbox"/>		22a	9/26/2025
Edit Del	ET_LostItem_Submission	Text	<input checked="" type="checkbox"/>		22a	9/26/2025

<https://randam.56c70263-dev-ed-devon.lightning.force.com/lightning/setup/Communication/templatesEmailHome>



8. Field Updates

Automation updated related fields:

- **Claim Approved** → `LostItem.Status = Claimed`, `FoundItem.Status = Returned`.
- **Claim Rejected** → `Approval_Status = Rejected`.

9. Tasks

Automation created follow-up tasks:

- When a **Found Item** is created → Task assigned to Security Staff:

“Verify ownership of Found Item – Due in 1 day.”

10. Custom Notifications

We created a notification type **Claim Request Update**:

- **Triggered when:** a ClaimRequest is approved.
- **Example Message:**

“Your claim request for Laptop has been approved. Collect it from Security Office.”

11. Testing & Results

Scenarios executed:

- Student creates Lost Item → Validation Rule blocks invalid date.
- Staff creates Found Item → Workflow/Flow notifies Security.
- Student submits ClaimRequest → Routed for Security approval.
- Security approves → Process Builder & Field Updates update statuses.
- Student notified via **Email Alert & Custom Notification**.

All automation worked as expected, ensuring **smooth and efficient process flow**.