Student Management System

**Phase 4: Process Automation (Admin)**

Overview

Process automation eliminates manual tasks, ensures consistency, and improves user experience. In Salesforce, automation is achieved through Flows, Workflow Rules, Validation Rules, and Apex Triggers. This phase focuses on Admin-level automation using declarative tools (no coding).

4.1 Automation Strategy

Types of Automation:

Automation Type	Tool	Use Case	Example
Validation	Validation Rules	Prevent invalid data	Prevent overpayment
Field Updates	Flows (Auto-Launched)	Update fields automatically	Auto-fill course fee
Notifications	Flows (Email Actions)	Send alerts	Confirmation emails
Complex Logic	Flows (Screen/Record-Triggered)	Multi-step workflows	Student enrollment flow
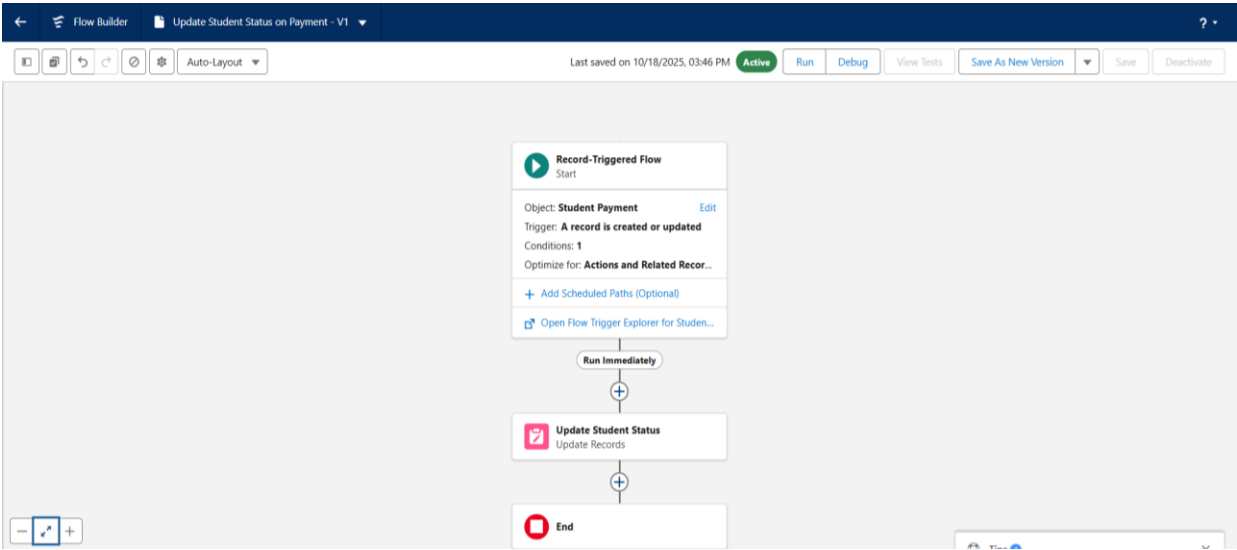
4.2 Validation Rule: Prevent Overpayment

Create Validation Rule on Payment__c

Formula:

(Student__r.Total_Fees_Paid__c + Amount_Paid__c) > Student__r.Course_Fee__c

Error Message:

"Total payment exceeds the course fee. Please check the amount."

Error Location:

Amount_Paid__c

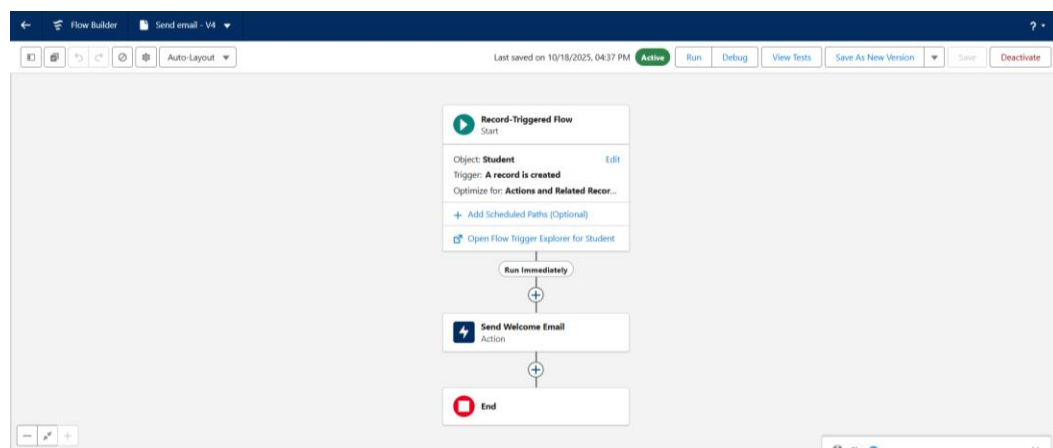**4.3 Email Notifications: Confirmation After Registration**

Goal: Automatically email students upon successful registration

Implementation via Flows:

Flow Type: Record-Triggered Flow

- **Trigger Object**: Student__c

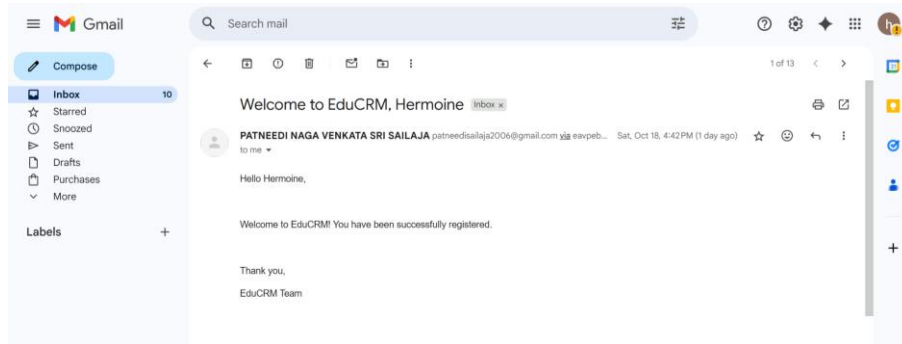- **Trigger Event**: After Student is created

Flow Steps:

1. **Decision Element**: Verify email exists

    - If Email field is populated, proceed

    - Else, stop flow

2. **Send Email Action**:

   ○ Recipient: {!$Record.Email}

   ○ Subject: "Welcome to [Institution Name]"

   ○ Template or Plain Text Body