

Phase 4: Process Automation (Admin)

In this phase, we focus on implementing automation within Salesforce to ensure data integrity, reduce manual work, and improve efficiency. The core components include Validation Rules, Workflow Rules, Flow Builder, and Email Alerts. Each of these elements is described below along with process flows for their creation.

Validation Rules

Validation rules enforce consistent and accurate data entry by applying conditions that must be met before saving a record. If conditions are not met, an error message is displayed, preventing incorrect data from being saved.

Student Object

- `Validate_email_format` – Ensures student email is entered in a proper format.
- `Guardian_Phone_requirement` – Requires guardian phone number to be filled in.
- `No_self_Reference` – Prevents a student record from referencing itself.
- `Validate_email_format (Guardian)` – Ensures guardian email is entered correctly.

The screenshot shows the 'Student Validation Rule' configuration page in Salesforce. The page is titled 'Student Validation Rule' and includes a 'Validation Rule Edit' section. The 'Rule Name' is 'Validate_Email_Format'. The 'Active' checkbox is checked. The 'Description' field is empty. The 'Error Condition Formula' section shows an example formula: `NOT (ISBLANK (Email__c)) && NOT (CONTAINS (Email__c, "8"))`. A 'Functions' dropdown menu is open, showing a list of functions including ABS, ACOS, ADDMONTHS, AND, ASCII, and ASIN. The page also includes a 'Quick Tips' section with a link to 'Operators & Functions'.

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Student

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Insert Field
Insert Operator

NOT (ISBLANK (Email__c)) &&
NOT (CONTAINS (Email__c, "8"))

Check Syntax

ACOS
ADDMONTHS
AND
ASCII
ASIN
Insert Selected Function
ABS(number)
Returns the absolute value of a number, a number without its sign.
[Help on this function](#)

Error Message

Example: Discount percent cannot exceed 30%

This message will appear when Error Condition formula is true

Error Message: Please enter a valid email address.

This error message can either appear at the top of the page or below a specific field on the page

Error Location: ☐ Top of Page ☒ Field Email

Save Save & New Cancel

Process Flow: Setup → Object Manager → Student → Validation Rules → New

Assignment Object

- Assignment_Dur_Date_Not_Before_Created – Ensures due date is not earlier than the creation date.
- Assignment_MaxMarks_positive – Ensures maximum marks entered are positive.
- Assignment_required_course – Ensures each assignment is linked with a course.

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Assignment Validation Rule

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Validation Rule Detail		Edit	Clone	Active	✓
Rule Name	Assignment_DueDate_NotBeforeCreated				
Error Condition Formula	AND(NOT(ISBLANK(Due_Date__c)), Due_Date__c < DATEVALUE(CreatedDate))				
Error Message	Due Date cannot be earlier than the Assignment creation date.			Error Location	Due Date
Description					
Created By	Shruti Misal, 9/17/2025, 9:34 AM			Modified By	Shruti Misal, 9/17/2025, 9:34 AM
		Edit	Clone		

Setup Home Object Manager

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Assignment Validation Rule

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Help for this Page

Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Assignment_MaxMarks_Positive	Active	✓
Error Condition Formula	OR(ISBLANK(Max_Marks__C), Max_Marks__C <= 0)		
Error Message	Max Marks must be greater than 0.	Error Location	Max Marks
Description			
Created By	Shruti Misal: 9/17/2025, 9:35 AM	Modified By	Shruti Misal: 9/17/2025, 9:35 AM

[Edit](#) [Clone](#)

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Assignment Validation Rule

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Help for this Page

Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Assignment_Requires_Course	Active	✓
Error Condition Formula	ISBLANK(Course__C)		
Error Message	Assignment must be linked to a Course.	Error Location	Course
Description			
Created By	Shruti Misal: 9/17/2025, 9:36 AM	Modified By	Shruti Misal: 9/17/2025, 9:36 AM

[Edit](#) [Clone](#)

Assignment Validation Rule - Salesforce - Developer Edition

Process Flow: Setup → Object Manager → Assignment → Validation Rules → New

Exam Object

- Exam_Duration_Positive – Duration must be a positive number.
- Exam_EndDate_After_StartDate – End date must come after start date.
- Exam_Requires_Course – Exam must be linked with a valid course.

SETUP > OBJECT MANAGER

Exam

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Exam Validation Rule

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Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Exam_Duration_Positive	Active	✓
Error Condition Formula	OR(ISBLANK(Duration__c), Duration__c <= 0)		
Error Message	Exam duration must be greater than 0.	Error Location	Duration
Description			
Created By	Shruti Misal 9/17/2025, 10:02 AM	Modified By	Shruti Misal 9/17/2025, 10:02 AM

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Exam Validation Rule

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Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Exam_EndDate_After_StartDate	Active	✓
Error Condition Formula	AND(NOT(ISBLANK(Exam_Date__c)), NOT(ISBLANK(End_Date__c)), End_Date__c < Exam_Date__c)		
Error Message	Exam End Date cannot be before Start Date.	Error Location	Exam Date
Description			
Created By	Shruti Misal 9/17/2025, 10:00 AM	Modified By	Shruti Misal 9/17/2025, 10:00 AM

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[Start](#)

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Restriction Rules

Scoping Rules

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Exam Validation Rule

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Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Exam_Requires_Course	Active	✓
Error Condition Formula	ISBLANK(Course__c)		
Error Message	Exam must be linked to a Course.	Error Location	Course
Description			
Created By	Shruti Misal 9/17/2025, 10:01 AM	Modified By	Shruti Misal 9/17/2025, 10:01 AM

[Edit](#) [Clone](#)

Process Flow: Setup → Object Manager → Exam → Validation Rules → New

Grade Object

- Grade_Marks_NonNegative – Prevents negative marks entry.
- Grade_Marks_NotExceed_Max – Ensures entered marks do not exceed maximum marks.
- Grade_Requires_Submission – Ensures each grade is tied to a valid submission.

The screenshot shows the 'Grade Validation Rule' configuration page in Salesforce. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, and Object Access. The main content area is titled 'Grade Validation Rule' and includes a 'Back to Grade' link. Below this is the 'Validation Rule Detail' section, which contains a table with the following information:

Validation Rule Detail		Active	✓
Rule Name	Grade_Marks_NotExceed_Max		
Error Condition Formula	AND(NOT(ISBLANK(Marks_Obtained__c)), NOT(ISBLANK(Submission__r.Assignment__r.Max_Marks__c)), Marks_Obtained__c > Submission__r.Assignment__r.Max_Marks__c)		
Error Message	Marks Obtained cannot exceed Assignment Maximum Marks.	Error Location	Marks Obtained
Description			
Created By	Shruti Misal: 9/17/2025, 10:05 AM	Modified By	Shruti Misal: 9/17/2025, 10:05 AM

At the bottom of the 'Validation Rule Detail' section, there are 'Edit' and 'Clone' buttons.

Process Flow: Setup → Object Manager → Grade → Validation Rules → New

Submission Object

- Submission_Date_NotBefore_AssignmentCrea – Submission date cannot be before assignment creation date.

The screenshot shows the 'Submission Validation Rule' configuration page in Salesforce. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, and Object Access. The main content area is titled 'Submission Validation Rule' and includes a 'Back to Submission' link. Below this is the 'Validation Rule Detail' section, which contains a table with the following information:

Validation Rule Detail		Active	✓
Rule Name	Submission_Date_NotBefore_AssignmentCrea		
Error Condition Formula	AND(NOT(ISBLANK(Submission_Date__c)), Submission_Date__c < Assignment__r.CreatedDate)		
Error Message	Submission date cannot be before the assignment was created.	Error Location	Submission Date
Description			
Created By	Shruti Misal: 9/17/2025, 9:47 AM	Modified By	Shruti Misal: 9/17/2025, 9:47 AM

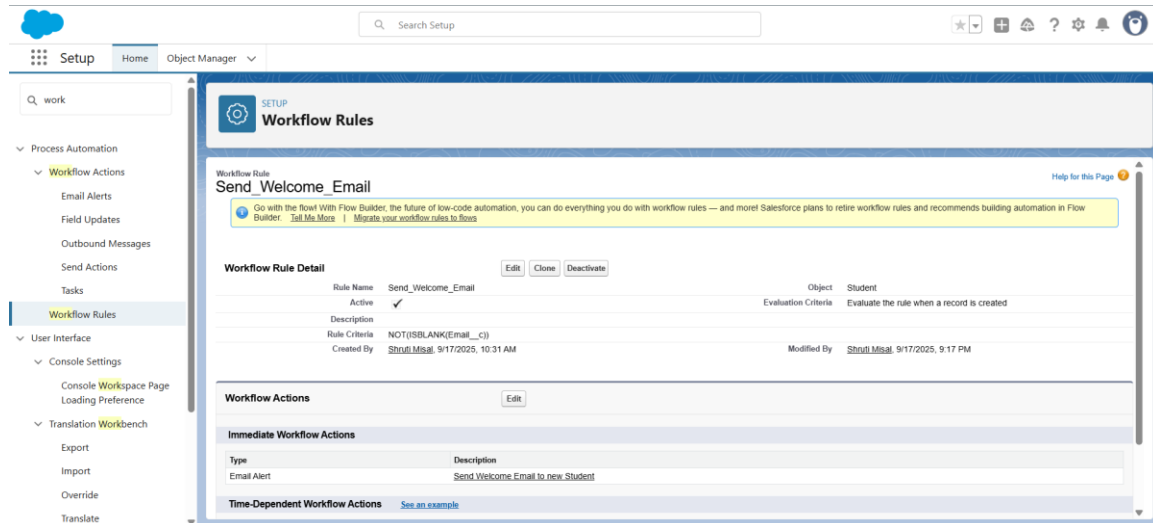
At the bottom of the 'Validation Rule Detail' section, there are 'Edit' and 'Clone' buttons.

Process Flow: Setup → Object Manager → Submission → Validation Rules → New

Workflow Rule

Workflow rules automate standard internal procedures, such as sending alerts, updating fields, or creating tasks. They are triggered when records meet specific criteria.

- Send_Welcome_Email – Sends an automated welcome email to students after registration.



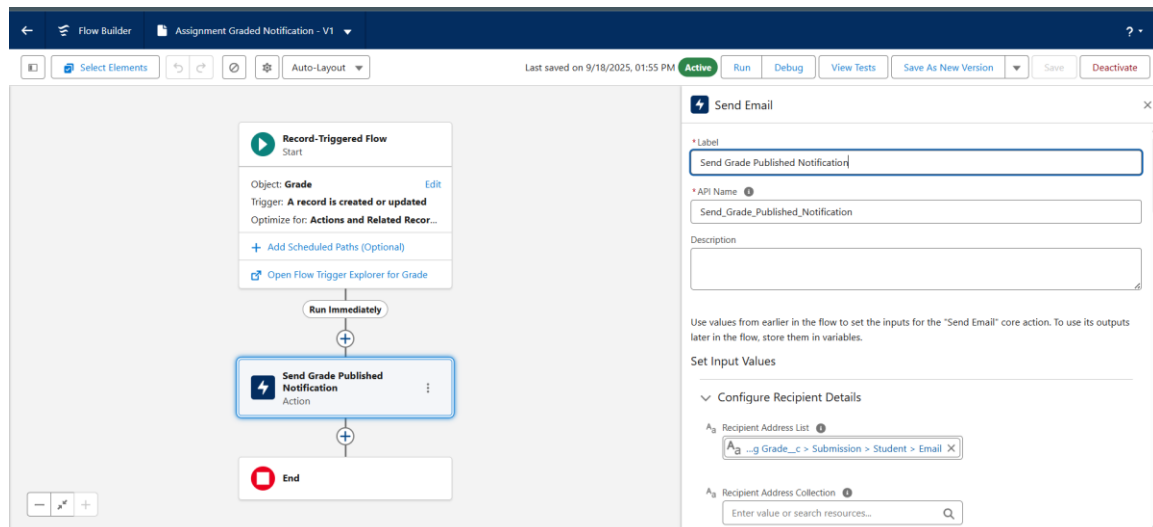
Process Flow: Setup → Workflow Rules → New Rule

Flow Builder

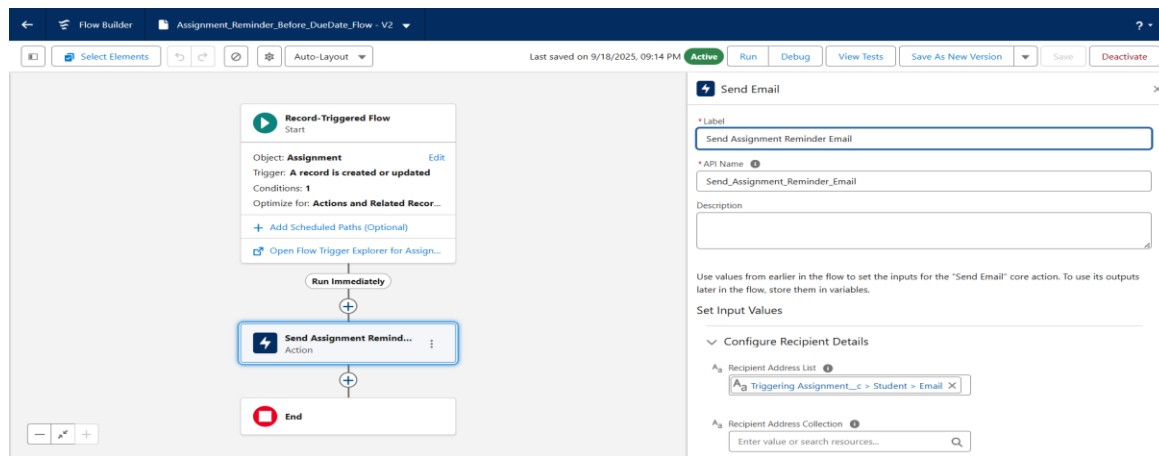
Flow Builder allows the automation of complex processes. Record-triggered flows run automatically when a record is created or updated. These flows can send emails, update records, and perform actions without manual intervention.

Flows implemented:

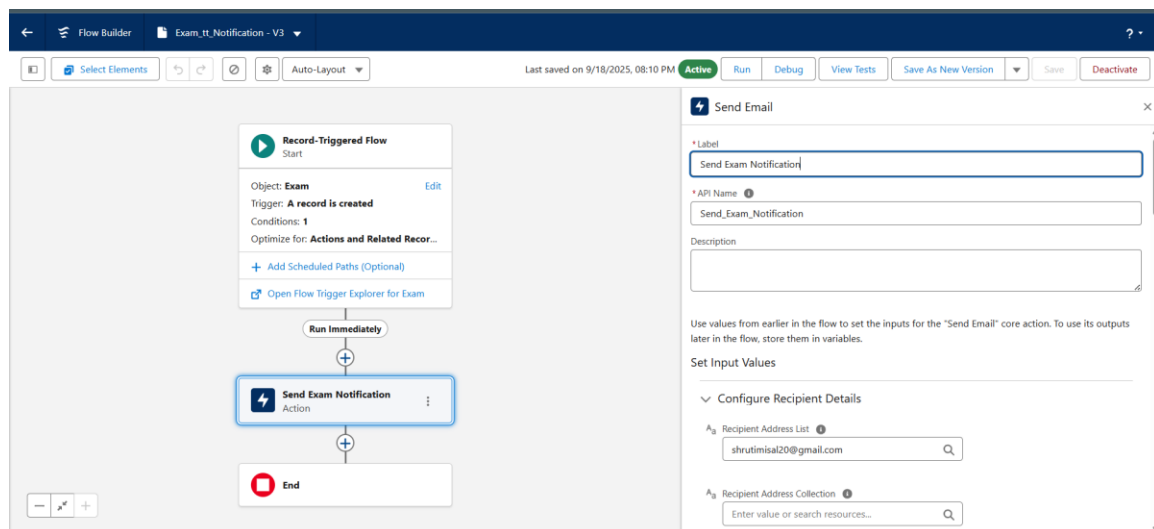
- Assignment Graded Notification – Sends notification when an assignment is graded.



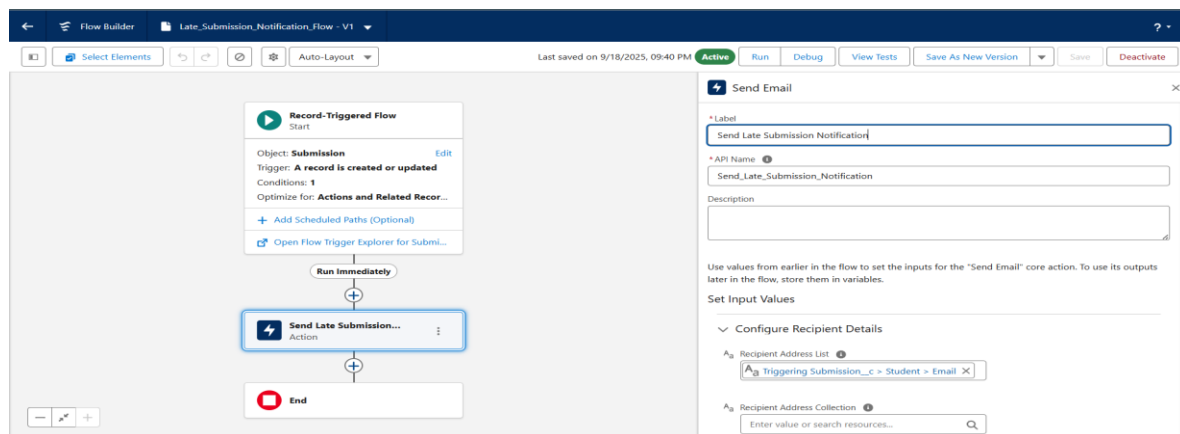
- Assignment_Reminder_Before_DueDate_Flow – Sends reminders before due dates.



- Exam_tt_Notification – Notifies students about exam timetables.



- Late_Submission_Notification_Flow – Sends alerts when submissions are late.

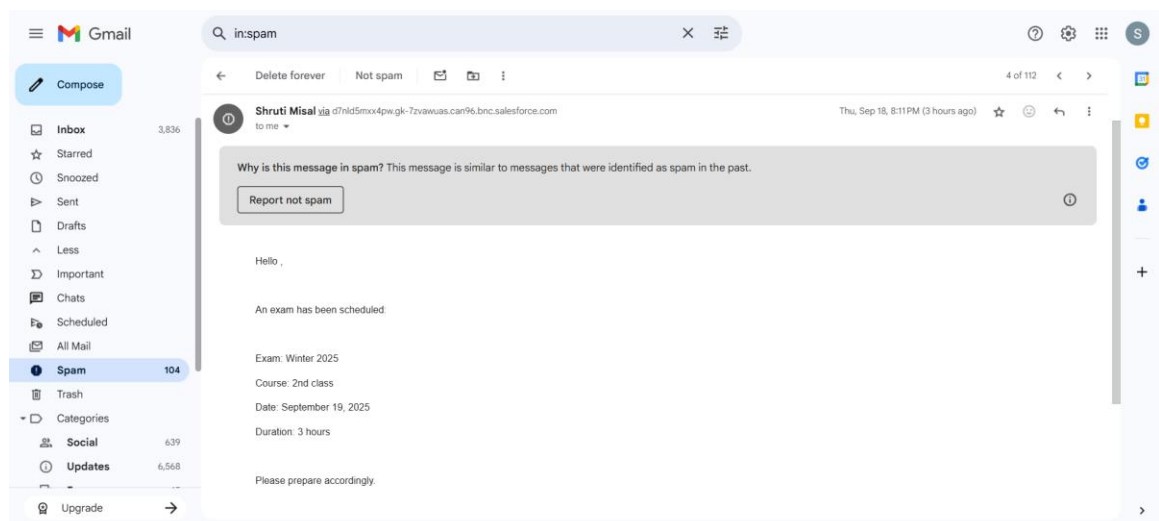
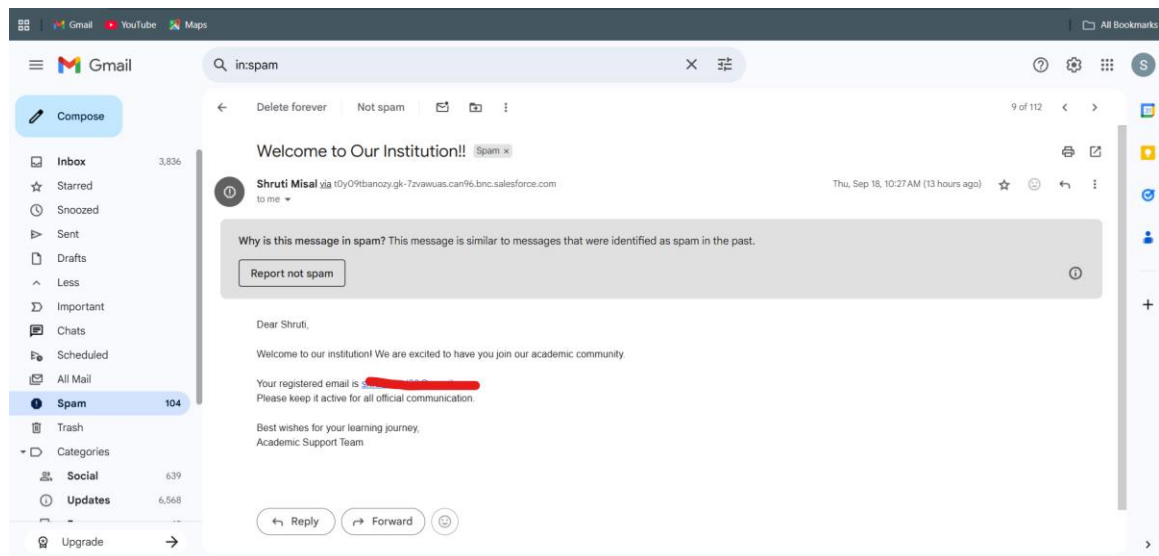


Process Flow: Setup → Flows → New Flow → Record-Triggered Flow

Email Alerts

Email alerts are automated messages sent to users when triggered by workflow rules or flows. They are essential for keeping students, guardians, and teachers informed about important events.

In this phase, email alerts are configured for events like assignment grading, exam scheduling, and submission deadlines. Screenshots of each email alert can be added in this section for reference.



Process Flow: Setup → Email Alerts → New Email Alert
