

Below is **PHASE 4: BUSINESS LOGIC & AUTOMATION (FULL DETAILED VERSION)** — written professionally, structured just like the sample Car Rental CRM document.

This is your complete Phase 4 document that you can directly use in your project submission.

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## PHASE 4 – BUSINESS LOGIC & AUTOMATION DESIGN

### **Goal:**

To define and implement the automation workflows, process logic, validation rules, and business rules required for the Pharmacy Delivery CRM system.

Automation ensures that the CRM behaves intelligently, reduces manual workload, improves accuracy, and keeps customers and delivery agents informed.

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### **4.1 Introduction to Automation in Salesforce**

The Pharmacy Delivery CRM uses **declarative automation tools** provided by Salesforce:

- **Record-Triggered Flows**
- **Email Alerts (via Flow)**
- **Validation Rules**
- **Auto-Numbering**
- **Conditional updates**
- **Field update logic**

These automate delivery status updates, overdue detection, agent notifications, customer communication, and system consistency.

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### **4.2 Automation Requirements (Business Logic Needs)**

The automation logic was designed to meet the following operational requirements:

#### **A) Delivery Status Automation**

Delivery status should automatically update based on the delivery date and actions performed by staff.

#### **B) Email Notifications**

Emails must be sent:

- When a delivery is marked *Out for Delivery* (Customer email)
- When a delivery agent is assigned (Agent email)
- When delivery becomes late (Optional alert)

### **C) Validation**

Prevent users from entering invalid data.

### **D) Tracking & Record Ownership**

Automatically generate tracking numbers using auto-number formula.

### **E) Duplicate Email Prevention**

A checkbox field (**Alert\_Sent\_\_c**) ensures the system does not send repeated alerts.

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## **4.3 Validation Rules**

### **4.3.1 Prevent Past Delivery Date**

**Object:** Delivery

**Business Requirement:** Delivery cannot be scheduled in the past.

**Validation Formula:**

`Delivery_Date__c < TODAY()`

**Error Message:**

“Delivery Date cannot be in the past.”

**Error Location:**

Delivery Date Field

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## **4.4 Auto-Number Generation**

**Field: Delivery Name**

**Format Used:**

`DEL-{YY}-{00000}`

Example:

DEL-25-00001

Purpose:

- Unique delivery reference
  - Used in emails
  - Helpful in reporting
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## **4.5 Record-Triggered Flow: Delivery Status Automation**

**Flow Name:**

**Delivery Status Automation**

**Type:**

Record-Triggered Flow

**Trigger:** On Update

**Purpose:**

Automatically assign the correct delivery status based on the delivery date or late conditions.

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#### **4.5.1 Status Automation Rules**

##### **Rule 1 – New Deliveries**

When a record is created → Status automatically set to **New**

Handled by default value or flow initialization.

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##### **Rule 2 – Scheduled Deliveries**

If delivery date = today → status changes to **Scheduled**

##### **Condition Formula:**

`$Record.Delivery_Date__c = TODAY()`

`AND TEXT($Record.Status__c) = "New"`

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##### **Rule 3 – Late Deliveries (Important)**

If today > delivery date AND delivery is not delivered:

##### **Condition Formula:**

`$Record.Delivery_Date__c < TODAY()`

`AND TEXT($Record.Status__c) <> "Delivered"`

`AND TEXT($Record.Status__c) <> "Cancelled"`

##### **Action:**

Update Status → **Late**

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##### **Rule 4 – Delivered**

This is manually updated by the staff once delivery is completed.

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#### **4.6 Email Notification Automation**

The CRM supports two automated email alerts:

- Email to **Customer**
- Email to **Delivery Agent**

Both are created using **Record-Triggered Flows**.

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#### **4.6.1 Flow: Customer Email – Out for Delivery**

**Flow Name:**

**Delivery Customer Notification – Out for Delivery**

**Trigger:**

When Status changes to “Out for Delivery”

**Entry Conditions:**

ISCHANGED(\$Record.Status\_\_c)

AND TEXT(\$Record.Status\_\_c) = "Out for Delivery"

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#### **Email Content Sent to Customer**

**Subject:**

"Your Medicine Delivery is On the Way"

**Body:**

Hello {!\$Record.Patient\_\_r.Name},

Your medicine delivery (Delivery ID {!\$Record.Name}) is now OUT FOR DELIVERY.

Expected Delivery Date: {!\$Record.Delivery\_Date\_\_c}

Delivery Address: {!\$Record.Delivery\_Address\_\_c}

Thank you,

Pharmacy Delivery CRM Team

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#### **4.6.2 Flow: Delivery Agent Assignment Notification**

**Flow Name:**

**Delivery Agent Assignment Email**

**Trigger:**

When Delivery Agent field is assigned/changed

**Condition:**

ISCHANGED(\$Record.Delivery\_Agent\_\_c)  
AND NOT(ISBLANK(\$Record.Delivery\_Agent\_\_c))

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**Email Content Sent to Agent**

**Subject:**  
"New Delivery Assigned to You"

**Body:**

Hello {!\$Record.Delivery\_Agent\_\_r.Name},

You have been assigned a new medicine delivery.

Delivery ID: {!\$Record.Name}

Patient: {!\$Record.Patient\_\_r.Name}

Address: {!\$Record.Delivery\_Address\_\_c}

Delivery Date: {!\$Record.Delivery\_Date\_\_c}

Please review your route and proceed accordingly.

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**4.7 Helper Fields**

**Field: Alert\_Sent\_\_c (Checkbox)**

Used internally:

- Tracks whether email has already been sent
- Prevents duplicate emails when status changes repeatedly

**Automation Rule:**

After email is sent:

Alert\_Sent\_\_c = TRUE

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**4.8 Combined Delivery Workflow Logic**

Below is the end-to-end delivery life cycle implemented through automations:

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## **Step 1: New Delivery Created**

System sets status → **New**

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## **Step 2: Date Approaches**

If delivery date = TODAY

System updates status → **Scheduled**

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## **Step 3: Delivery Becomes Late**

If delivery date < TODAY and not delivered

System updates status → **Late**

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## **Step 4: Staff marks delivery “Out for Delivery”**

System sends:

- Email to customer
  - Email to delivery agent
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## **Step 5: Delivery Completes**

Staff manually marks status → **Delivered**

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## **4.9 Testing & Validation of Automations**

Below are the test cases used:

### **Test Case 1: Past Date**

- Create delivery with yesterday's date
- EXPECTED: Status automatically becomes **Late**

### **Test Case 2: Today's Date**

- Create delivery with today's date
- EXPECTED: Status becomes **Scheduled**

### **Test Case 3: Out for Delivery**

- Change status manually

- EXPECTED:
  - Email to patient
  - Email to delivery agent

#### Test Case 4: Agent Assignment

- Assign a delivery agent
- EXPECTED: Email sent to agent

#### Test Case 5: Repeated Editing

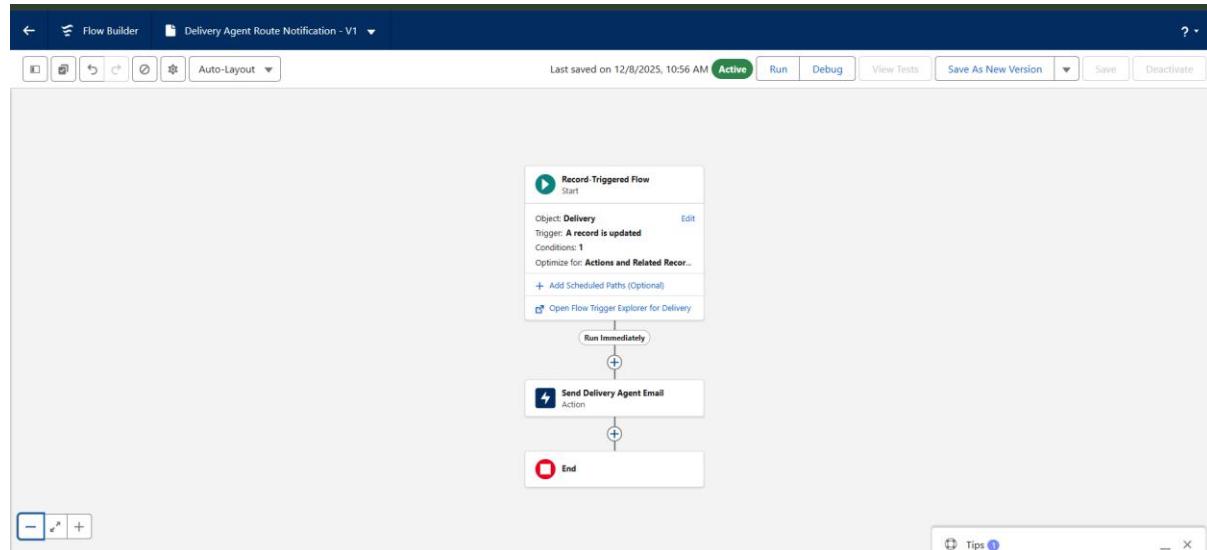
- Change other fields
- EXPECTED: No repeated emails (Alert\_Sent\_\_c prevents duplicate)

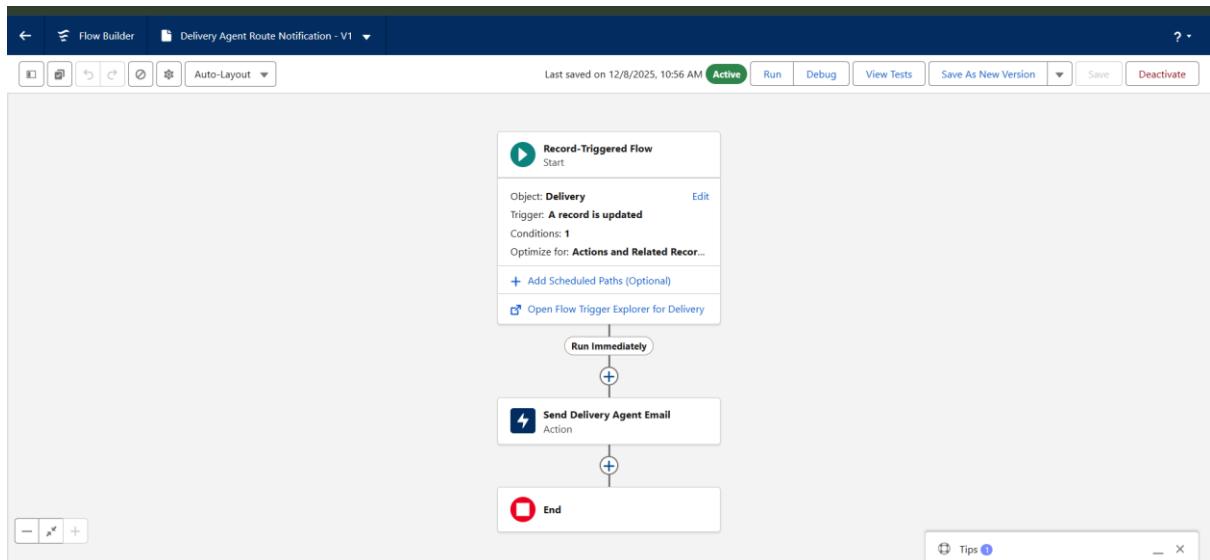
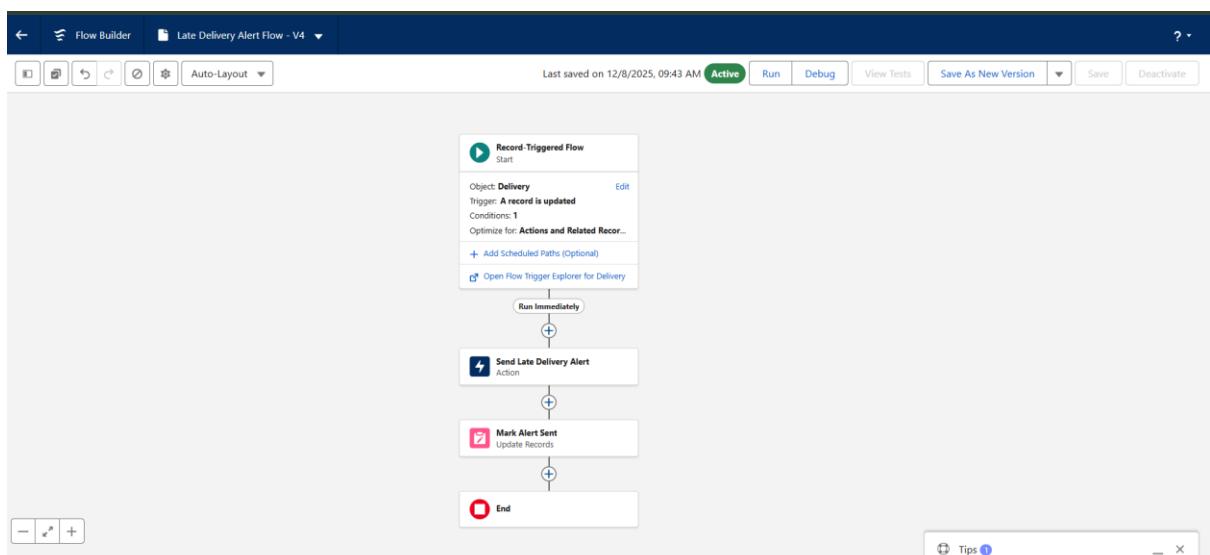
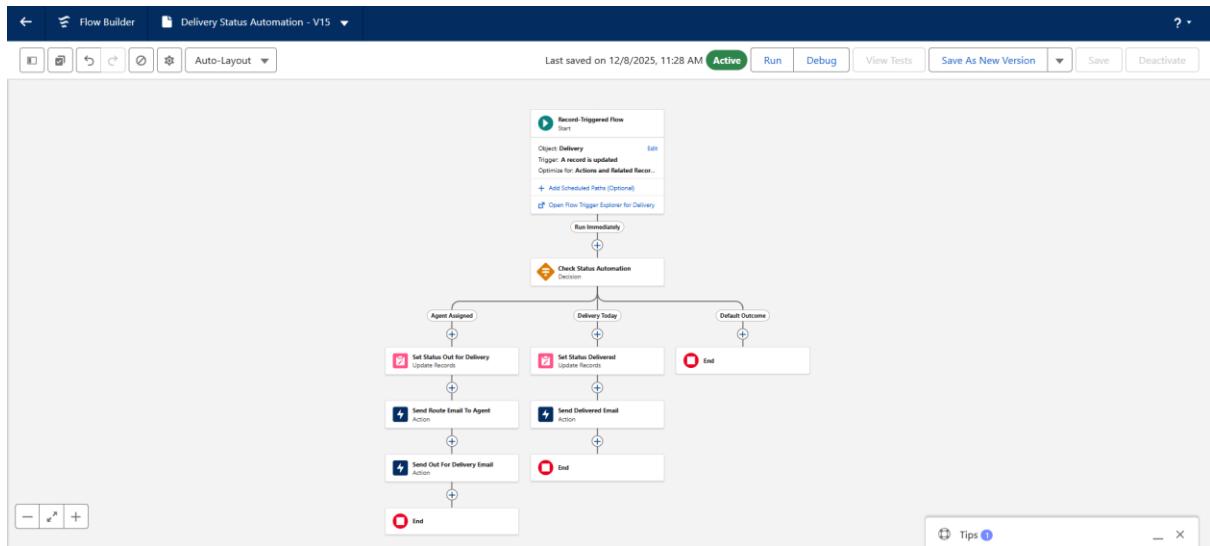
### 4.10 Summary of Phase 4

In this phase, the following business logic was completed:

- ✓ Fully functional **Delivery Status Automation Flow**
- ✓ Customer notification system
- ✓ Delivery Agent assignment email automation
- ✓ Validation rules (prevent past date)
- ✓ Alert handler using checkbox
- ✓ Auto-number logic
- ✓ Complete delivery lifecycle automation

The system is now intelligent, automated, and operationally efficient.





Delivery  
**DEL-0005**

Delivery Date: 12/6/2025 Delivery Date cannot be in the past.

Amount: ₹646.00

Delivery Address: 500 Ameerpet Road

Delivery Agent: ramu

Payment Method: Cash on Delivery

Alert Sent:

Tracking Number: TRK-25-00005

Created By: S.V.S.N. TEJA SWARUP, 12/7/2025, 9:57 PM

Owner: S.V.S.N. TEJA SWARUP

**We hit a snag.**

Review the following fields:

- \* Delivery Date

Created By: TEJA SWARUP, 12/7/2025, 9:57 PM

New Contact | Edit | New Opportunity | ▾

No activities to show.  
Get started by sending an email, scheduling a task, and more.  
To change what's shown, try changing your filters.

Show All Activities