Subscription / Personal Services Tracker CRM

Phase 5: Apex Programming (Developer)

OBJECTIVE:

To implement **custom logic** using Apex programming where Flows are not sufficient.
You'll write Apex **Classes**, **Triggers**, and optionally **Test Classes**.

WHAT WE WILL BUILD:

Component	Purpose
Apex Trigger	Automatically update Renewal Status in Subscription after End Date
Apex Class	A helper class to send alert when Payment is Overdue
Test Class	Apex test methods for deployment validation

TOOLS NEEDED:

- Salesforce Developer Console

- Developer Org with Subscription and Payment objects

- Existing fields from Phase 3
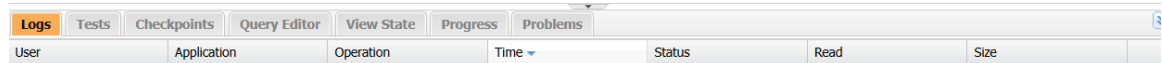
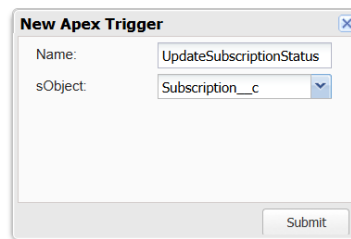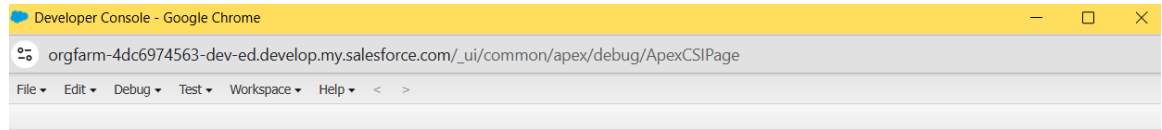## TRIGGER – Auto-update Renewal Status in Subscription

Create Apex Trigger

Navigation:
Developer Console → File → New → Apex Trigger
Trigger Name: UpdateSubscriptionStatus
SObject: Subscription__c

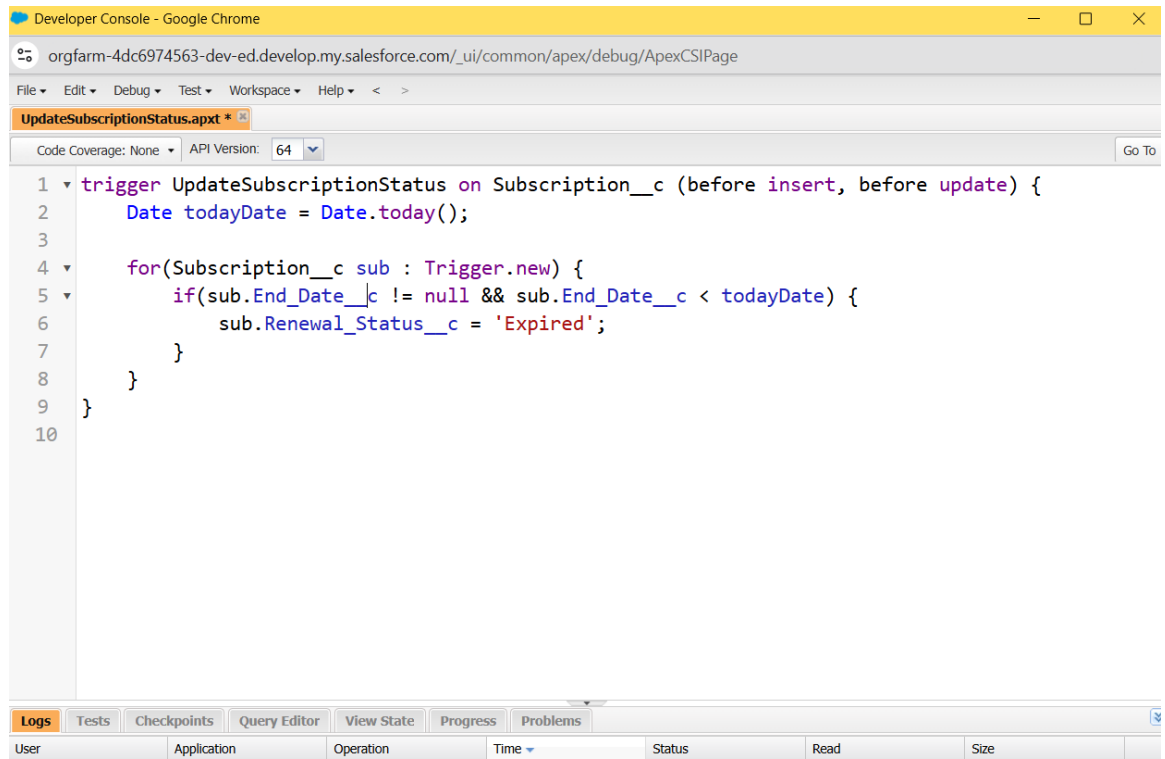**Step 3: Test the Trigger**

1. Go to Subscription tab → New

APEX CLASS – Alert on Payment Overdue

Step 1: Create Apex Class

Navigation:
Developer Console → File → New → Apex Class
Class Name: PaymentAlertHandler

```
1  ▾ trigger UpdateSubscriptionStatus on Subscription__c (before insert, before update) {
2        Date todayDate = Date.today();
3
4  ▾    for(Subscription__c sub : Trigger.new) {
5  ▾        if(sub.End_Date__c != null && sub.End_Date__c < todayDate) {
6                sub.Renewal_Status__c = 'Expired';
7            }
8        }
9  }
10
```

TRIGGER – Call Apex Class on Payment Insert

Step 1: Create Trigger

Navigation:
Developer Console → File → New → Apex Trigger
Trigger Name: PaymentOverdueTrigger
SObject: Payment__c

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File ▾   Edit ▾   Debug ▾   Test ▾   Workspace ▾   Help ▾   <   >

PaymentAlertHandler.apxc ✕

Code Coverage: None ▾   API Version: 64 ▾   Go To

```
1   public class PaymentAlertHandler {
2
3       public static void checkAndNotify(List<Payment__c> newPayments) {
4           for(Payment__c pay : newPayments) {
5               if(pay.Payment_Status__c == 'Overdue') {
6                   // For now, just print to debug logs
7                   System.debug('ALERT: Payment is overdue for Subscription: ' + pay.Subscription
8               }
9           }
10      }
11  }
12
```

Logs   Tests   Checkpoints   Query Editor   View State   Progress   Problems

User	Application	Operation	Time ▾	Status	Read	Size

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File ▾   Edit ▾   Debug ▾   Test ▾   Workspace ▾   Help ▾   <   >

PaymentAlertHandler.apxc ✕   PaymentOverdueTrigger.apxt ✕   **TestPaymentTrigger.apxc** ✕

Code Coverage: None ▾   API Version: 64 ▾   Run Test   Go To

```
1   @isTest
2   public class TestPaymentTrigger {
3
4       @isTest
5       static void testOverduePaymentTrigger() {
6           // Create dummy subscription
7           Subscription__c sub = new Subscription__c(
8               Start_Date__c = Date.today().addDays(-30),
9               End_Date__c = Date.today().addDays(-1),
10              Renewal_Status__c = 'Active'
11          );
12          insert sub;
13
14          // Create payment
15          Payment__c pay = new Payment__c(
16              Subscription__c = sub.Id,
17              Payment_Status__c = 'Overdue',
18              Amount_Paid__c = 499,
19              Payment_Date__c = Date.today()
```

Logs   **Tests**   Checkpoints   Query Editor   View State   Progress   Problems

Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	⊞ 📁 TestRun @ 2:18:15 pm			0	1

Overall Code Coverage

Class	Percent	Lines
Overall	**100%**	
PaymentAlertHandler	100%	3/3
PaymentOverdueTrigger	100%	1/1
UpdateSubscriptionStatus	100%	4/4