

Student Management System

Phase 5: Apex Programming (Developer)

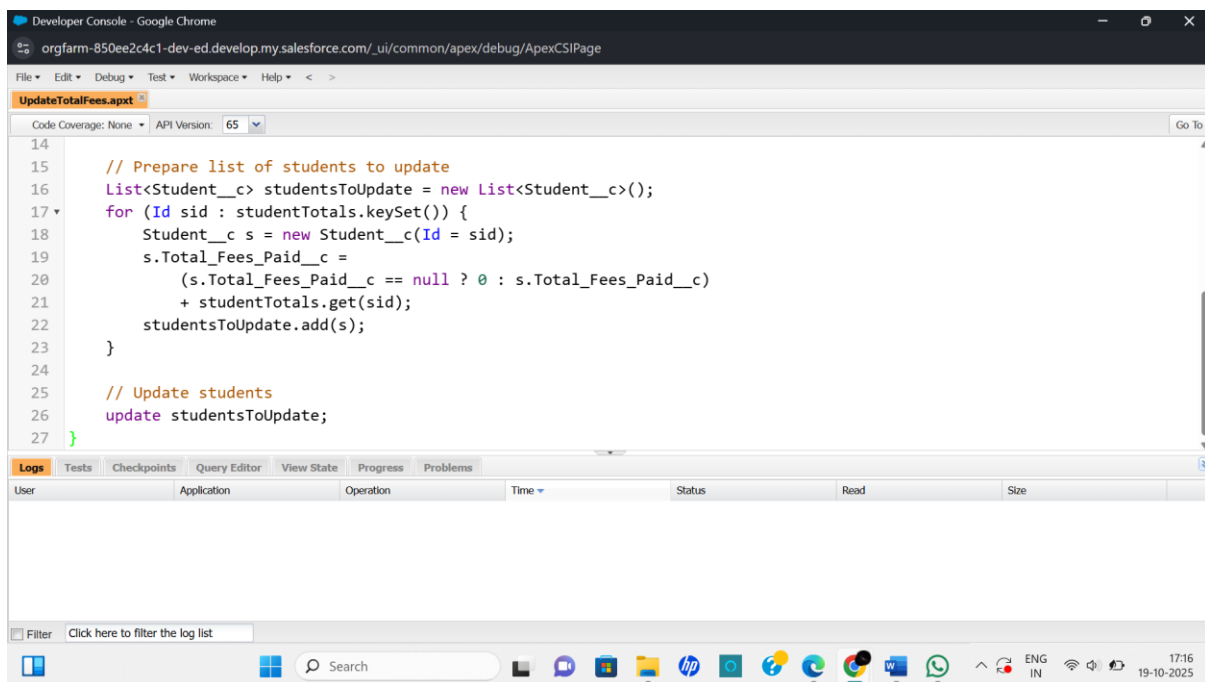
Overview

Phase 5 introduces server-side programming using Apex, Salesforce's proprietary programming language. While Phase 4 focused on declarative automation (Flows, Validations), Phase 5 handles complex business logic that requires code.

In my project, I implemented an Apex Trigger to automatically update the Total_Fees_Paid__c field on Student records whenever a Payment is created or updated. This ensures the student record always reflects accurate total payments without manual intervention.

5.1 Your Apex Trigger: UpdateTotalFees

Complete Code



```
14
15 // Prepare list of students to update
16 List<Student__c> studentsToUpdate = new List<Student__c>();
17 for (Id sid : studentTotals.keySet()) {
18     Student__c s = new Student__c(Id = sid);
19     s.Total_Fees_Paid__c =
20         (s.Total_Fees_Paid__c == null ? 0 : s.Total_Fees_Paid__c)
21         + studentTotals.get(sid);
22     studentsToUpdate.add(s);
23 }
24
25 // Update students
26 update studentsToUpdate;
27 }
```

The screenshot shows the Salesforce Developer Console interface. The top bar indicates the URL is 'orgfarm-850ee2c4c1-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage'. The main editor displays the Apex code for the 'UpdateTotalFees.apxt' trigger. The code is as follows:

```
14
15 // Prepare list of students to update
16 List<Student__c> studentsToUpdate = new List<Student__c>();
17 for (Id sid : studentTotals.keySet()) {
18     Student__c s = new Student__c(Id = sid);
19     s.Total_Fees_Paid__c =
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21         + studentTotals.get(sid);
22     studentsToUpdate.add(s);
23 }
24
25 // Update students
26 update studentsToUpdate;
27 }
```

Below the code editor, there is a 'Logs' tab selected, showing a table with columns: User, Application, Operation, Time, Status, Read, and Size. The table is currently empty. At the bottom of the console, there is a search bar and a status bar showing the time as 17:16 on 19-10-2025.

Purpose

Automatically updates Total_Fees_Paid__c on the Student record each time a Payment is created or updated, ensuring the student record always reflects accurate total payments.

5.2 Deploy This Trigger

Step 1: Create Trigger in Salesforce

1. Go to Setup → Apex Triggers → New
2. Choose object: Payment__c
3. Paste the code from section 5.3
4. Click Save

Step 2: Test the Trigger

1. Create a test student: "Anjali"
2. Create test course: "Java", fee 100,000
3. Create enrollment linking student to course
4. Create payment: Amount 50,000
5. Open student record and check Total_Fees_Paid__c
6. Expected: Should show 50,000