

# Salesforce Project Implementation Phases with Concepts (Admin + Developer)

## Problem Statement:

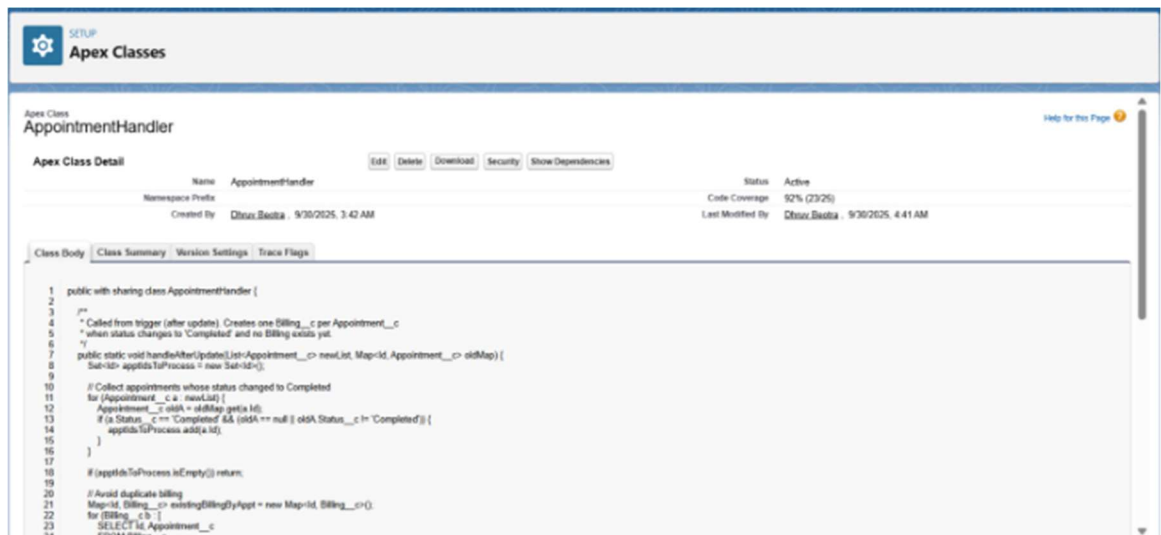
Healthcare organizations often face challenges in managing patient records, scheduling appointments, tracking billing, and maintaining communication between patients, doctors, and administrative staff. Since updates and interactions are scattered across calls, paper records, and separate systems, this leads to inefficiency, missed appointments, delayed billing, and lower patient satisfaction.

**Proposed Solution :** A tailored CRM solution, PulsePoint CRM, is designed to centralize patient data, streamline appointment scheduling, automate billing generation, and enable doctors and staff to have real-time access to patient information. This solution improves healthcare workflow efficiency, reduces manual errors, and enhances overall patient care.

## Phase 5: Apex Programming

### 1. CLASSES AND OBJECTS:

Apex class **AppointmentHandler** automatically creates an invoice after an appointment is completed



The screenshot displays the Salesforce 'Apex Classes' page. At the top, there's a 'SETUP' button and the 'Apex Classes' header. Below this, the 'Apex Class Detail' for 'AppointmentHandler' is shown. The class is in the 'NAMESPACE PREFIX' namespace, created by 'Chinu.Basila' on '9/30/2025, 3:42 AM'. It has a status of 'Active', 92% code coverage (23/25), and was last modified by 'Chinu.Basila' on '9/30/2025, 4:41 AM'. The 'Class Body' tab is selected, showing the following Apex code:

```
1 public with sharing class AppointmentHandler {
2
3     /**
4      * Called from trigger (after update). Creates one Billing__c per Appointment__c
5      * when status changes to 'Completed' and no Billing exists yet.
6      */
7     public static void handleAfterUpdate(List<Appointment__c> newList, Map<Id, Appointment__c> oldMap) {
8         Set<Id> apptIdsToProcess = new Set<Id>();
9
10        // Collect appointments whose status changed to Completed
11        for (Appointment__c a : newList) {
12            Appointment__c oldA = oldMap.get(a.Id);
13            if (a.Status__c == 'Completed' && (oldA == null || oldA.Status__c != 'Completed')) {
14                apptIdsToProcess.add(a.Id);
15            }
16        }
17
18        if (apptIdsToProcess.isEmpty()) return;
19
20        // Avoid duplicate billing
21        Map<Id, Billing__c> existingBillingByAppt = new Map<Id, Billing__c>();
22        for (Billing__c b : [SELECT Id, Appointment__c FROM Billing__c]) {
23            if (b.Appointment__c == null) continue;
24            existingBillingByAppt.put(b.Appointment__c, b);
25        }
26    }
27 }
```

Apex Classes

Apex Class

AppointmentHandlerTest

Help for this Page

Apex Class Detail

Edit

Delete

Download

Run Test

Show Dependencies

Name

AppointmentHandlerTest

Status

Active

Namespace Prefix

Created By

Chouh Beeta

9/30/2025, 3:46 AM

Last Modified By

Chouh Beeta

9/30/2025, 4:41 AM

Class Body

Class Summary

Version Settings

Trace Flags

```

1  @isTest
2  private class AppointmentHandlerTest {
3
4  @isTest static void testBillingCreatedOnCompleted() {
5      // Create Doctor with valid positive value
6      Doctor__c doc = new Doctor__c(
7          Name__c = 'Dr. Test',
8          Specialty__c = 'Cardiology' // Must exist in your org
9      );
10     insert doc;
11
12     // Create Patient
13     Patient__c p = new Patient__c(
14         Name = 'Test Patient',
15         DOB__c = Date.newInstance(1990, 1, 1),
16         Gender__c = 'Male', // Patient must exist
17         Mobile__c = '9999999999'
18     );
19     insert p;
20
21     // Insert Appointment as Scheduled
22     Appointment__c appt = new Appointment__c(
23         Patient__c = p.Id,
24         Doctor__c = doc.Id

```

Apex Test Execution

Apex Test Execution

Help for this Page

Click Select Tests to choose one or more Apex unit tests and run them. To see the current code coverage for an individual class or your organization, go to the [Apex Classes](#) page.

Select Tests...

Developer Console

Options...

View Test History

About

Status

Class

Result

Test Run: 2025-09-30 04:41:51, ebeetra25835@agentforce.com, (1 test class run)

✓

AppointmentHandlerTest

(2/2) Test Methods Passed

Test Run: 2025-09-30 04:34:58, ebeetra25835@agentforce.com, (1 test class run)

Test Run: 2025-09-30 04:29:29, ebeetra25835@agentforce.com, (1 test class run)

Detail

Duration

Class

Method

Pass/Fail

Error Message

Stack Trace

## 2. APEX TRIGGER: Calls the handler.

Apex Triggers

Apex Trigger

AppointmentTrigger

Help for this Page

Apex Trigger Detail

Edit

Delete

Download

Show Dependencies

Name

AppointmentTrigger

sObject Type

Appointment

Code Coverage

100% (2/2)

Status

Active

Created By

Chouh Beeta

9/30/2025, 3:46 AM

Last Modified By

Chouh Beeta

9/30/2025, 4:33 AM

Namespace Prefix

Apex Trigger

Version Settings

Trace Flags

```

1  trigger AppointmentTrigger on Appointment__c (after update) {
2      // Trigger logic
3      AppointmentHandler.handleAfterUpdateTrigger(new Trigger.oldMap());
4  }

```

Edit

Delete

Download

Show Dependencies

