

Phase 5: Apex Programming (Developer)

Goal: Add advanced custom logic to hotel booking system.

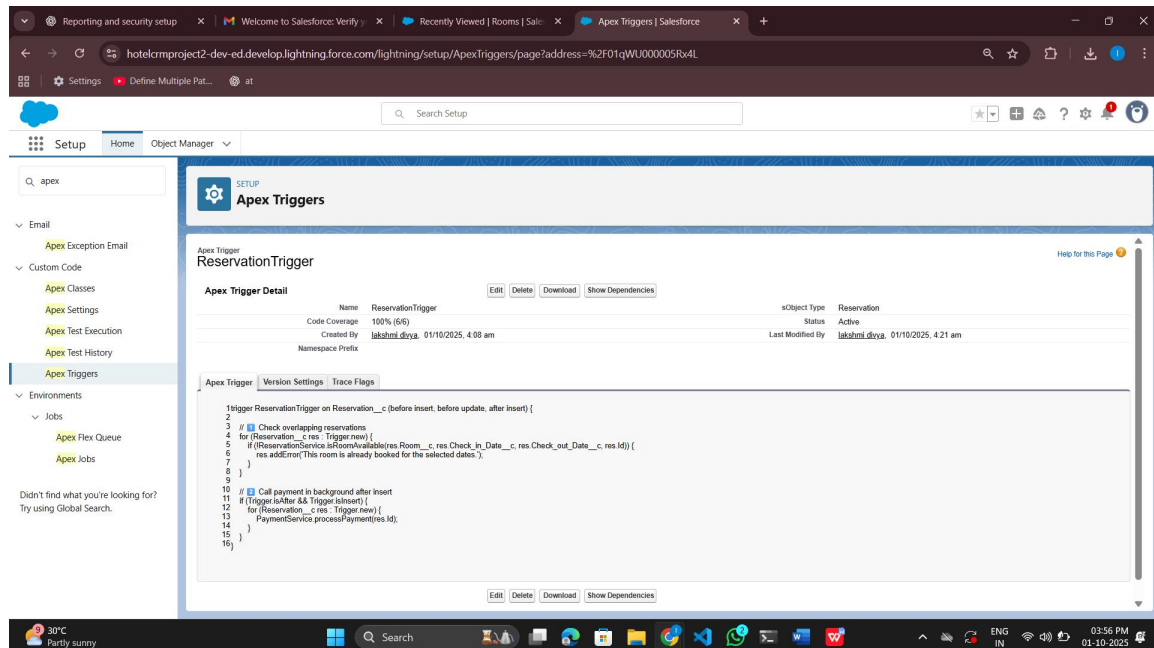
1 Triggers (Prevent Overlapping Reservations)

Object: Reservation

Logic: Check if another reservation exists for the same room in the same date range.

Steps:

1. Setup → Apex Triggers → New Trigger
2. Select Object = Reservation
3. Write logic to prevent double-booking (throw error if overlapping dates).



2 Apex Class (ReservationService)

Purpose: Centralized, reusable methods for booking logic.

Examples of Methods:

- createReservation()
- cancelReservation()
- calculateTotalAmount()

Steps:

1. Setup → Apex Classes → New
2. Write a class ReservationService with reusable methods.

The screenshot shows the Salesforce Apex Classes page for the 'ReservationService' class. The class is active, created by 'lakshmi.dixya' on 01/10/2025 at 4:07 am, and has 100% code coverage (6/6). The class body contains a method to check for overlapping reservations.

```

1 public with sharing class ReservationService {
2
3     // Method to check overlapping reservations
4     public static Boolean isRoomAvailable(Id roomId, Date checkIn, Date checkOut, Id excludeId) {
5         List<Reservation__c> conflicts = [
6             SELECT Id
7             FROM Reservation__c
8             WHERE Room__c = roomId
9             AND Id != excludeId
10            AND (
11                (Check_in_Date__c <= checkOut AND Check_out_Date__c >= checkIn)
12            )
13        ];
14        return conflicts.isEmpty();
15    }
16 }
17

```

3 Batch Apex (Update Rooms Daily)

Purpose: Run in background to update all Room statuses (e.g., mark occupied/vacant).

Steps:

1. Create a class implementing Database.Batchable.
2. Add logic to loop through Rooms and update Status.

The screenshot shows the Salesforce Apex Classes page for the 'DailyRoomUpdateBatch' class. The class is active, created by 'lakshmi.dixya' on 01/10/2025 at 4:13 am, and has 0% code coverage (0/7). The class body implements the Database.Batchable interface to update room statuses.

```

1 global class DailyRoomUpdateBatch implements Database.Batchable<Object> {
2
3     global Database.QueryLocator start(Database.BatchableContext BC) {
4         return Database.getQueryLocator(SELECT Id, Status__c FROM Room__c);
5     }
6
7     global void execute(Database.BatchableContext BC, List<Room__c> rooms) {
8         for(Room__c r : rooms){
9             // Example: Reset status daily if needed
10            r.Status__c = 'Available';
11        }
12        update rooms;
13    }
14
15     global void finish(Database.BatchableContext BC) {
16         // Optional: send confirmation email or log
17     }
18 }

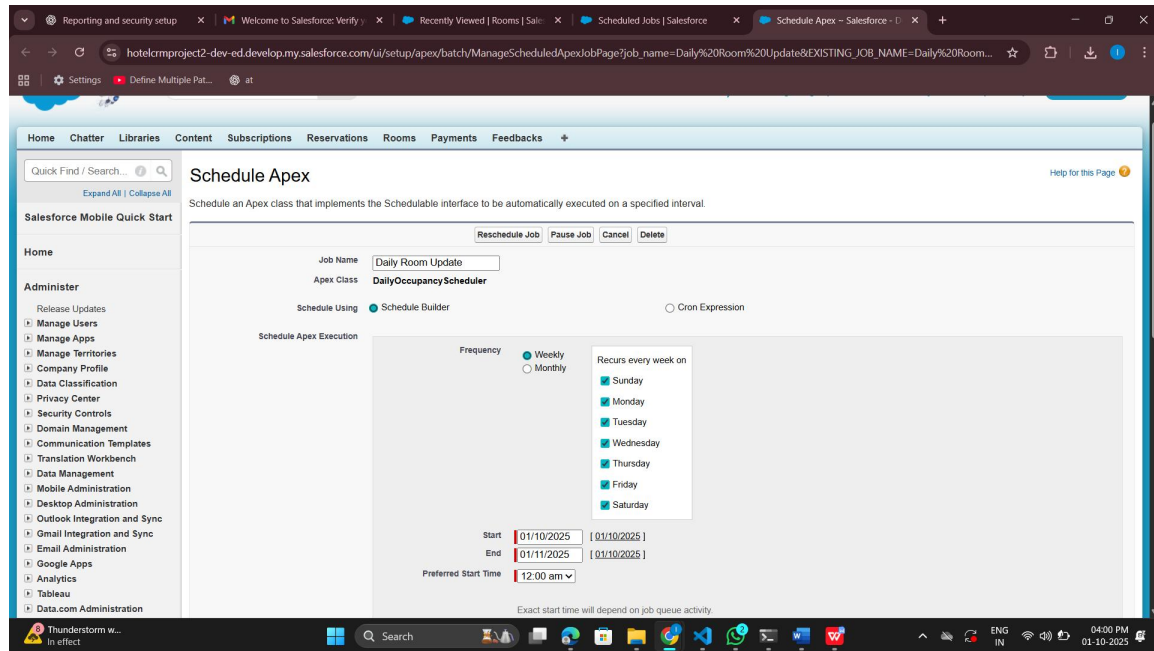
```

4 Scheduled Apex (Daily Reports)

Purpose: Send daily occupancy report email at midnight.

Steps:

1. Create a class implementing Schedulable.
2. Use System.schedule to run at 12:00 AM daily.

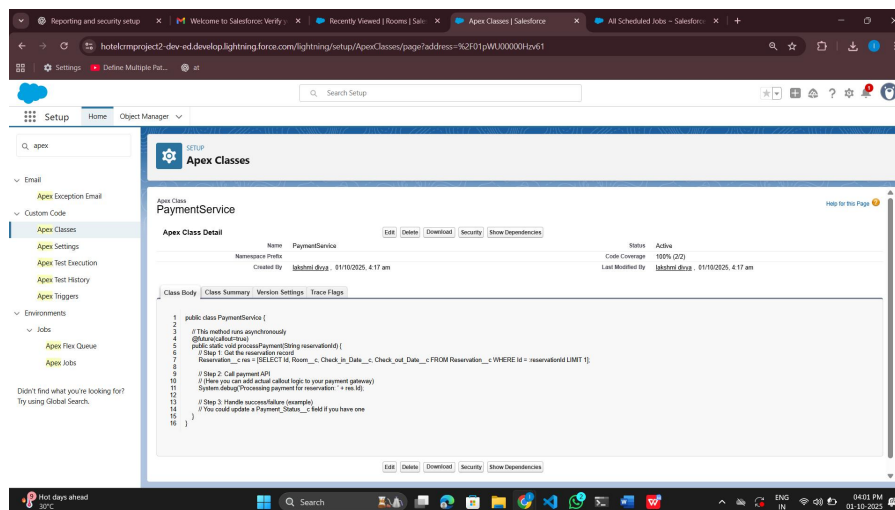


5 Future Methods (Payment Gateway API Calls)

Purpose: Call external payment system asynchronously.

Steps:

1. In Apex class, create @future(callout=true) method.
2. Send payment request to external API.



6 Exception Handling

Use try-catch-finally in Apex code.

Example:

- Try = attempt booking
- Catch = handle reservation conflict
- Finally = log error

7 Test Classes (Ensure 75%+ Coverage)

Goal: Every trigger, class, and method must be covered.

Steps:

1. Create separate test classes (ReservationServiceTest, TriggerTest, etc.)
2. Use @isTest annotation.
3. Insert mock Room/Reservation records.
4. Assert logic and error messages.

The screenshot displays the Salesforce Apex Test Execution page. The left sidebar shows the navigation menu with 'Apex Test Execution' selected. The main content area, titled 'Apex Test Results', shows a table of test results. The table has columns for 'Ac...', 'Name', 'Method Name', 'Time Started', 'Pass/Fail', 'Error Message', and 'Run Time'. The table lists 15 test results, all of which passed. The 'Run Time' column shows values ranging from 1 to 36 seconds. The table is currently displaying 1-25 of 27 results.

Ac...	Name	Method Name	Time Started	Pass/Fail	Error Message	Run Time
View	ChangePasswordCo...	testChangePasswor...	01/10/2025, 4:02 pm	Pass		29
View	CommunitestLandin...	testCommunitestLand...	01/10/2025, 4:02 pm	Pass		19
View	CommunitestLoginC...	testCommunitestLogi...	01/10/2025, 4:02 pm	Pass		28
View	CommunitestSelfReg...	testCommunitestSelf...	01/10/2025, 4:02 pm	Pass		19
View	CommunitestSelfReg...	testCommunitestSelf...	01/10/2025, 4:02 pm	Pass		27
View	ForgotPasswordCont...	testForgotPassword...	01/10/2025, 4:02 pm	Pass		28
View	LightningForgotPass...	testLightningForgotPass...	01/10/2025, 4:02 pm	Pass		15
View	LightningForgotPass...	testLightningForgotP...	01/10/2025, 4:02 pm	Pass		2
View	LightningForgotPass...	testLightningForgotP...	01/10/2025, 4:02 pm	Pass		1
View	LightningLoginForm...	testLightningLoginForm...	01/10/2025, 4:02 pm	Pass		11
View	LightningLoginForm...	testLightningLoginForm...	01/10/2025, 4:02 pm	Pass		11
View	LightningLoginForm...	testLightningLoginForm...	01/10/2025, 4:02 pm	Pass		5
View	LightningLoginForm...	testLightningLoginForm...	01/10/2025, 4:02 pm	Pass		7
View	LightningLoginForm...	testLightningLoginForm...	01/10/2025, 4:02 pm	Pass		24
View	LightningSelfRegiste...	testLightningSelfRegiste...	01/10/2025, 4:02 pm	Pass		36
View	LightningSelfRegiste...	testLightningSelfRegiste...	01/10/2025, 4:02 pm	Pass		19

Reporting and security setup xWelcome to Salesforce: Verify xRecently Viewed | Rooms | SaleApex Classes | Salesforce xAll Scheduled Jobs - Salesforce x

hotelcrmpj2-dev-ed.develop.lightning.force.com/lightning/setup/ApexClasses/page?address=%2F01pWU00000HzvM9

SettingsDefine Multiple Pat...at

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Apex Classes

Apex Class

ReservationTriggerTest

Help for this Page

Apex Class Detail

EditDeleteDownloadRun TestShow Dependencies

Name	ReservationTriggerTest	Status	Active
Namespace Prefix		Created By	lakshmi.dnya
Last Modified By	lakshmi.dnya		01/10/2025, 4:23 am

Class Body

Class Summary

Version Settings

Trace Flags

```
1 @IsTest
2 public class ReservationTriggerTest {
3
4     @IsTest static void testReservationTriggerAndPayment() {
5         // Get a valid picklist value for Status__c
6         String defaultStatus = Room__c.Status__c.getDescribe().getPicklistValues()[0].getValue();
7
8         // Create a Room using a valid Status__c value
9         Room__c room = new Room__c(
10             Name = 'Test Room',
11             Status__c = defaultStatus
12         );
13         insert room;
14
15         // Insert first reservation (valid) and run future method automatically from trigger
16         Test.startTest();
17         Reservation__c res1 = new Reservation__c(
18             Room__c = room.Id,
19             Check_in_Date__c = Date.today(),
20             Check_out_Date__c = Date.today().addDays(2)
21         );
22         insert res1;
23         Test.stopTest(); // Future method runs here
24     }
25 }
```

30°C
Partly sunny

Search

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IN

04:07 PM
01-10-2025