

Phase 5: Apex Programming (Developer) Objectives

Step 1 — Trigger Framework

Create a trigger on Employee__c.

Move all business logic into a handler class (EmployeeHandler).

Use:

Before Insert → set default status (Not Started) and default due date.

After Insert → queue welcome email job.

After Update → detect status change to At Risk and queue reminder job.

Step 2 — Error Logging

Create a custom object Error_Log__c.

Add fields:

Context__c (Text)

Error_Message__c (Long Text Area)

Stack_Trace__c (Long Text Area)

Related_Record_Id__c (Text)

Logged_Date__c (DateTime)

Build a utility class (ErrorLogger) to insert error records from try/catch blocks.

Step 3 — Queueable Apex (Async Jobs)

Create WelcomeEmailJob to send welcome emails to new hires.

Create ReminderQueueable to send reminders for employees flagged as “At Risk” or overdue.

Enqueue these jobs from the handler class using System.enqueueJob().

Step 4 — Scheduled Apex

Create OnboardingReminderScheduler.

Run it daily to check for employees with overdue end dates.

Scheduler enqueues ReminderQueueable for those employees.

Schedule the job via Setup → Apex Classes → Schedule Apex.

Step 5 — Batch Apex

Create ArchiveOldOnboarding batch job.

Archive or delete old onboarding logs (e.g., older than 1 year).

Run manually or schedule it monthly.

Step 6 — Exception Handling

Wrap all trigger, queueable, batch, and scheduled logic in try/catch.

On error → call `ErrorLogger.log()` with context + details.

This ensures no silent failures and centralized error tracking.

Step 7 — Test Classes

Build one consolidated test class: `EmployeePhase5Tests`.

Cover scenarios:

Insert new employee → welcome email queued.

Update employee to “At Risk” → reminder queued.

Scheduler executes and finds overdue employees.

Batch archives old logs.

`ErrorLogger` creates log entries.

Confirm org-wide code coverage ≥75%.

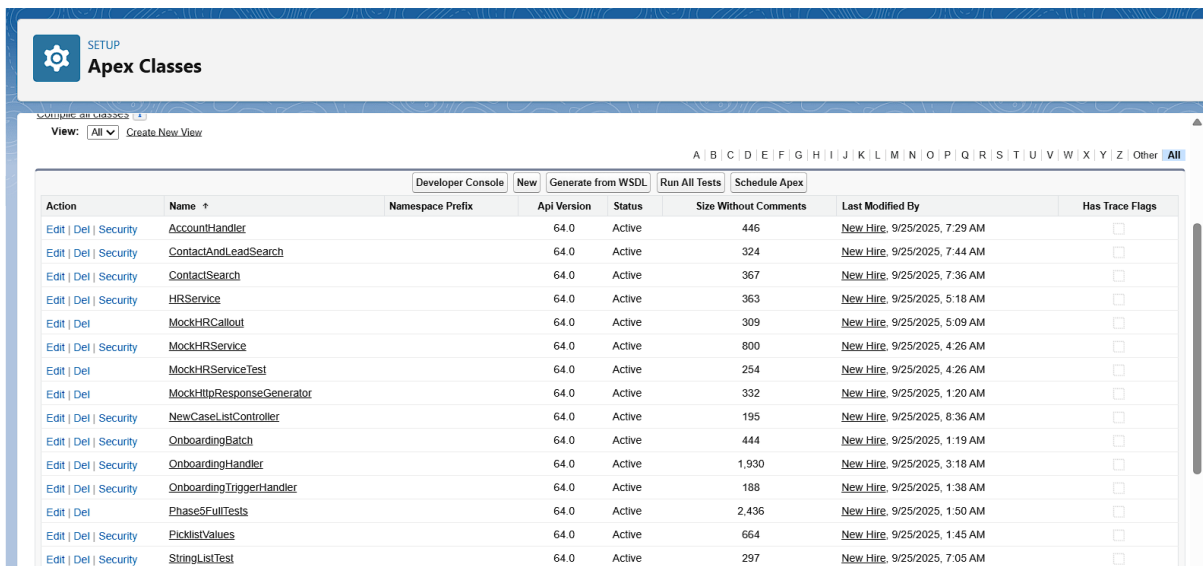
Step 8 — Run & Verify Tests

Open Developer Console → Test → New Run.

Select `EmployeePhase5Tests`.

Run tests and verify all pass.

Check Test Coverage tab for ≥75%.



The screenshot shows the Salesforce Apex Classes page. The table lists various classes, including `AccountHandler`, `ContactAndLeadSearch`, `ContactSearch`, `HRService`, `MockHRCallout`, `MockHRService`, `MockHRServiceTest`, `MockHttpResponseGenerator`, `NewCaseListController`, `OnboardingBatch`, `OnboardingHandler`, `OnboardingTriggerHandler`, `Phase5FullTests`, `PicklistValues`, and `StringListTest`. The `Phase5FullTests` class is highlighted, showing a size of 2,436 and a last modified date of 9/25/2025, 1:50 AM.

Action	Name	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
Edit Del Security	<code>AccountHandler</code>		64.0	Active	446	New Hire, 9/25/2025, 7:29 AM	<input type="checkbox"/>
Edit Del Security	<code>ContactAndLeadSearch</code>		64.0	Active	324	New Hire, 9/25/2025, 7:44 AM	<input type="checkbox"/>
Edit Del Security	<code>ContactSearch</code>		64.0	Active	367	New Hire, 9/25/2025, 7:36 AM	<input type="checkbox"/>
Edit Del Security	<code>HRService</code>		64.0	Active	363	New Hire, 9/25/2025, 5:18 AM	<input type="checkbox"/>
Edit Del	<code>MockHRCallout</code>		64.0	Active	309	New Hire, 9/25/2025, 5:09 AM	<input type="checkbox"/>
Edit Del Security	<code>MockHRService</code>		64.0	Active	800	New Hire, 9/25/2025, 4:26 AM	<input type="checkbox"/>
Edit Del	<code>MockHRServiceTest</code>		64.0	Active	254	New Hire, 9/25/2025, 4:26 AM	<input type="checkbox"/>
Edit Del	<code>MockHttpResponseGenerator</code>		64.0	Active	332	New Hire, 9/25/2025, 1:20 AM	<input type="checkbox"/>
Edit Del Security	<code>NewCaseListController</code>		64.0	Active	195	New Hire, 9/25/2025, 8:36 AM	<input type="checkbox"/>
Edit Del Security	<code>OnboardingBatch</code>		64.0	Active	444	New Hire, 9/25/2025, 1:19 AM	<input type="checkbox"/>
Edit Del Security	<code>OnboardingHandler</code>		64.0	Active	1,930	New Hire, 9/25/2025, 3:18 AM	<input type="checkbox"/>
Edit Del Security	<code>OnboardingTriggerHandler</code>		64.0	Active	188	New Hire, 9/25/2025, 1:38 AM	<input type="checkbox"/>
Edit Del	<code>Phase5FullTests</code>		64.0	Active	2,436	New Hire, 9/25/2025, 1:50 AM	<input type="checkbox"/>
Edit Del Security	<code>PicklistValues</code>		64.0	Active	664	New Hire, 9/25/2025, 1:45 AM	<input type="checkbox"/>
Edit Del Security	<code>StringListTest</code>		64.0	Active	297	New Hire, 9/25/2025, 7:05 AM	<input type="checkbox"/>

I got coverage of 84%.

The codes are present in my profile