Phase 5: Apex Programming (Developer)

Overview:

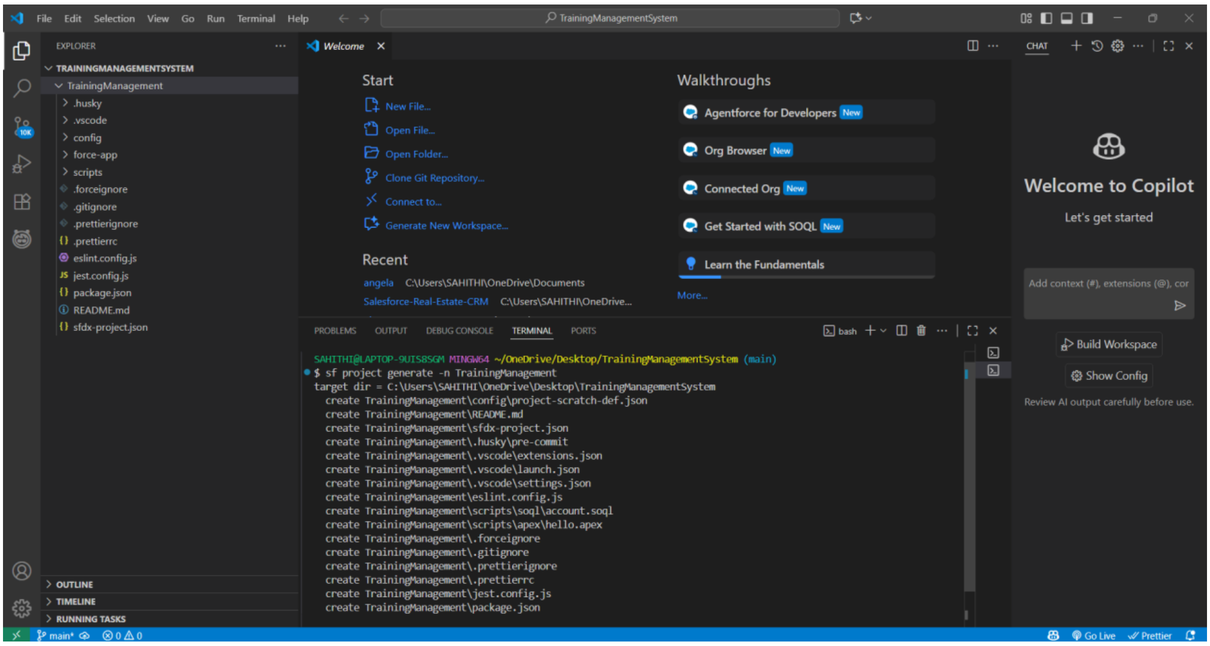
We'll create:

1. **Apex Trigger -** Prevent duplicate enrollments
2. **Apex Handler Class -** Best practice trigger pattern
3. **Apex Utility Class -** Reusable methods for capacity checks
4. **Apex Test Classes -** Achieve 100% code coverage

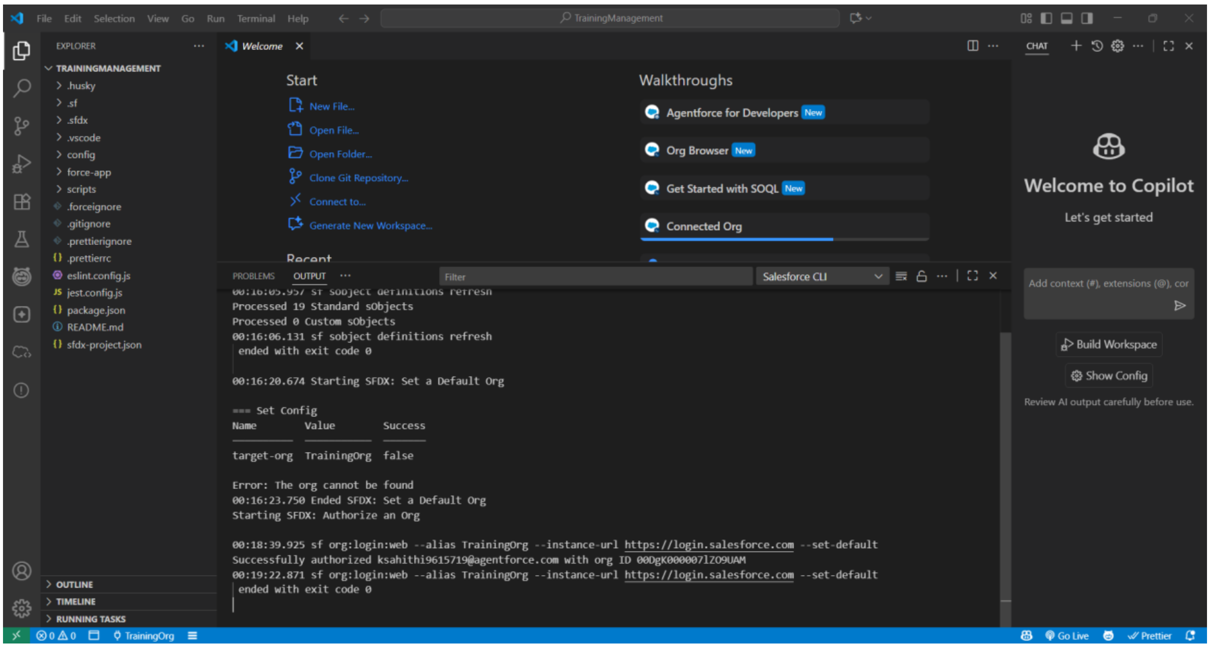
Section 1: Setup VS Code for Apex Development

Step 1: Open Project in VS Code

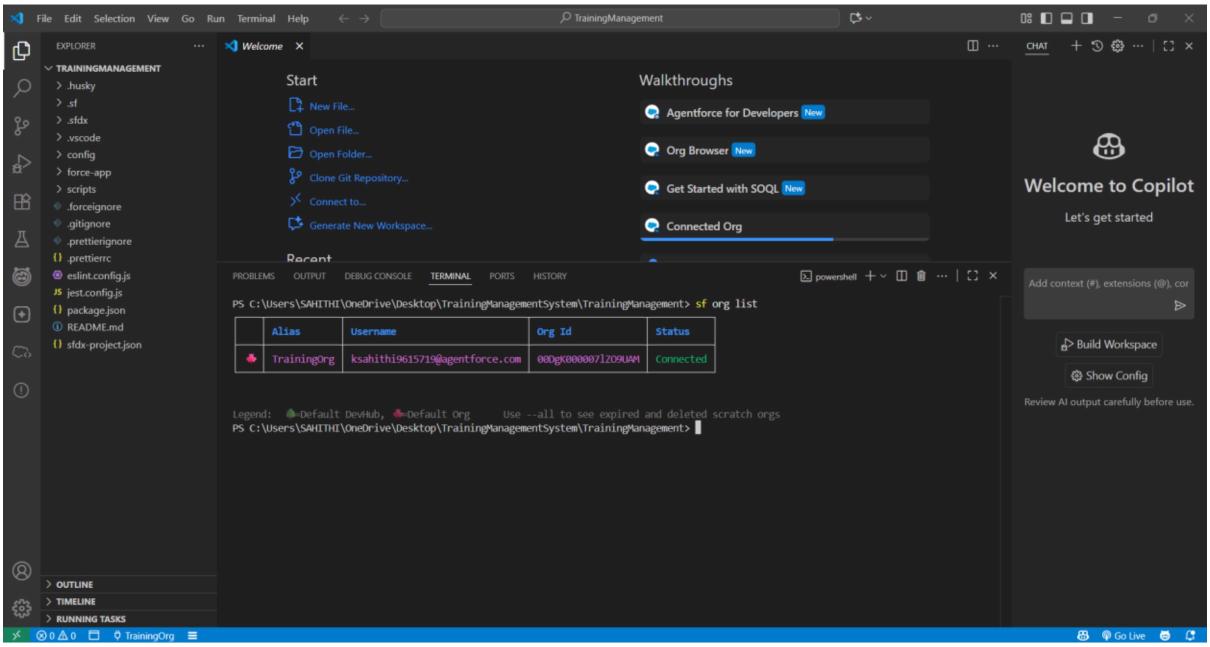
Step 2: Create Force-App Folder Structure



```
SAHITHI@LAPTOP-9UIS8SGM MINGW64 ~/OneDrive/Desktop/TrainingManagementSystem (main)
$ sf project generate -n TrainingManagement
target dir = C:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem
  create TrainingManagement\config\project-scratch-def.json
  create TrainingManagement\README.md
  create TrainingManagement\sfdx-project.json
  create TrainingManagement\.husky\pre-commit
  create TrainingManagement\.vscode\extensions.json
  create TrainingManagement\.vscode\launch.json
  create TrainingManagement\.vscode\settings.json
  create TrainingManagement\eslint.config.js
  create TrainingManagement\scripts\soql\account.soql
  create TrainingManagement\scripts\apex\hello.apex
  create TrainingManagement\.forceignore
  create TrainingManagement\.gitignore
  create TrainingManagement\.prettierignore
  create TrainingManagement\.prettierrc
  create TrainingManagement\jest.config.js
  create TrainingManagement\package.json
```



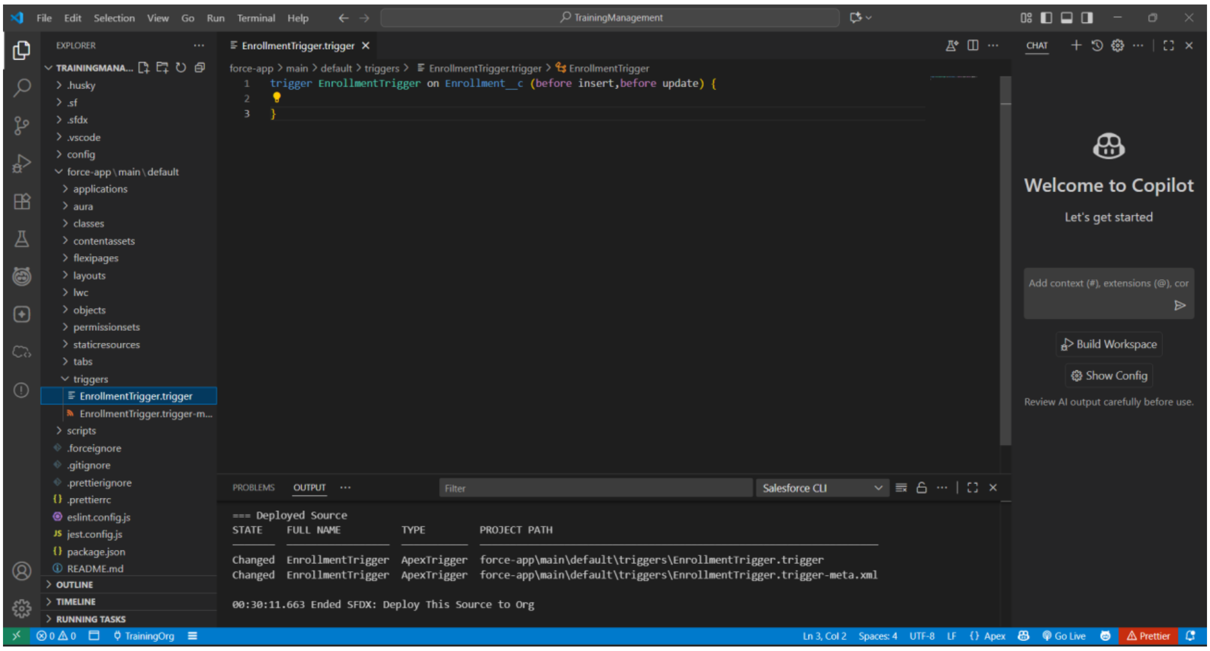
```
00:16:05.957 sf sobject definitions refresh
Processed 19 Standard sObjects
Processed 0 Custom sObjects
00:16:06.131 sf sobject definitions refresh
 ended with exit code 0

00:16:20.674 Starting SFDX: Set a Default Org

=== Set Config
Name        Value        Success
─────────── ──────────── ───────
target-org  TrainingOrg  false

Error: The org cannot be found
00:16:23.750 Ended SFDX: Set a Default Org
Starting SFDX: Authorize an Org

00:18:39.925 sf org:login:web --alias TrainingOrg --instance-url https://login.salesforce.com --set-default
Successfully authorized ksahithi9615719@agentforce.com with org ID 00DgK000007lZO9UAM
00:19:22.871 sf org:login:web --alias TrainingOrg --instance-url https://login.salesforce.com --set-default
 ended with exit code 0
```



```
PS C:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement> sf org list
┌────┬─────────────┬────────────────────────────────┬────────────────────┬───────────┐
│    │ Alias       │ Username                       │ Org Id             │ Status    │
├────┼─────────────┼────────────────────────────────┼────────────────────┼───────────┤
│ 🍁 │ TrainingOrg │ ksahithi9615719@agentforce.com │ 00DgK000007lZO9UAM │ Connected │
└────┴─────────────┴────────────────────────────────┴────────────────────┴───────────┘


Legend:  🌲=Default DevHub, 🍁=Default Org     Use --all to see expired and deleted scratch orgs
PS C:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement>
```

Section 2: Create Apex Trigger - Prevent Duplicate Enrollments

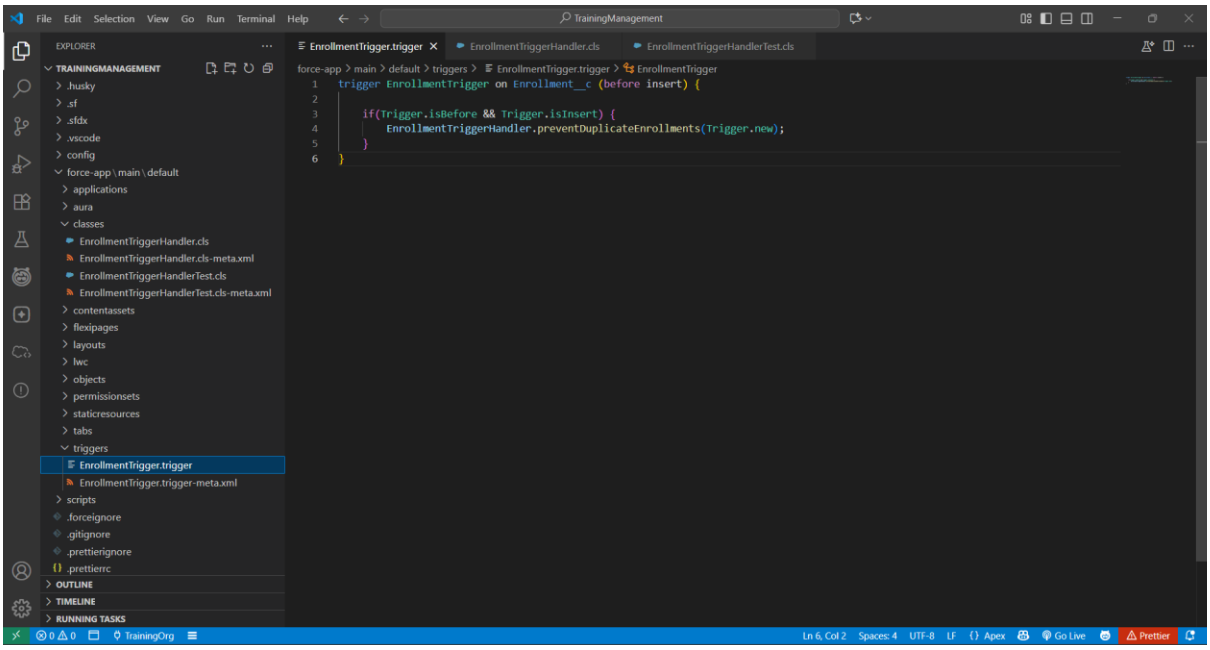
Step 1: Create Trigger File



```
trigger EnrollmentTrigger on Enrollment__c (before insert,before update) {

}
```

```
=== Deployed Source
STATE    FULL NAME          TYPE         PROJECT PATH
─────────────────────────────────────────────────────────────────────────────────
Changed  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger
Changed  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger-meta.xml

00:30:11.663 Ended SFDX: Deploy This Source to Org
```

Step 2: Write Trigger Code

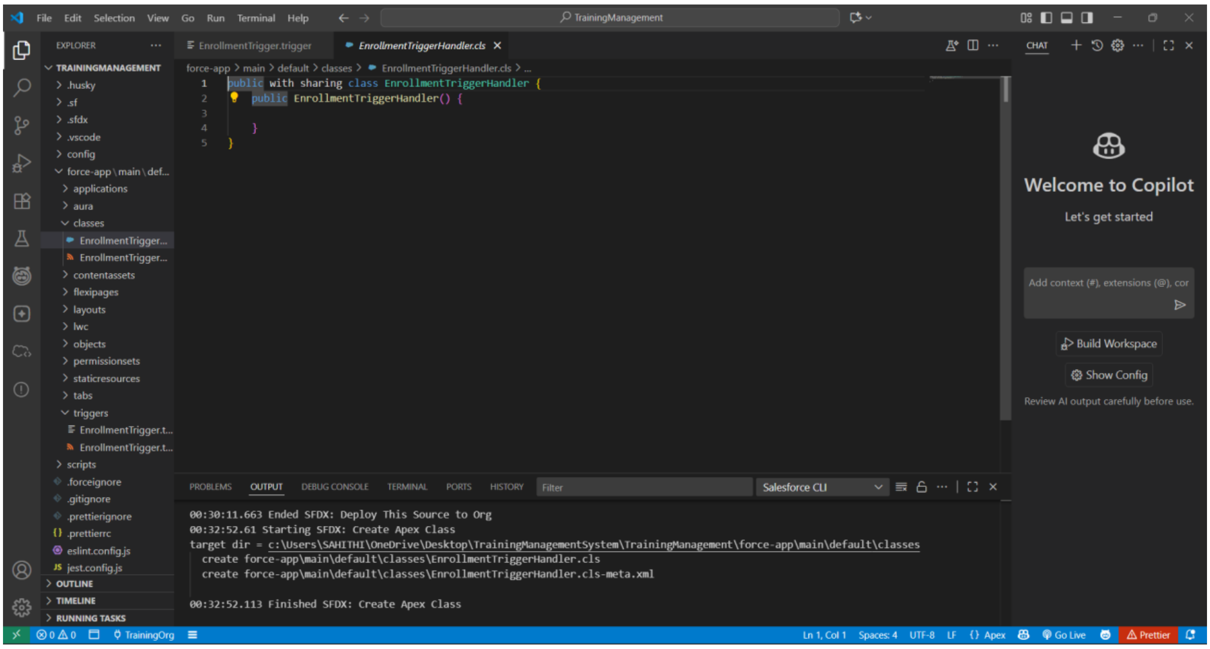


File Edit Selection View Go Run Terminal Help
TrainingManagement
EXPLORER
TRAININGMANAGEMENT
.husky
.sf
.sfdx
.vscode
config
force-app \ main \ default
applications
aura
classes
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandler.cls-meta.xml
EnrollmentTriggerHandlerTest.cls
EnrollmentTriggerHandlerTest.cls-meta.xml
contentassets
flexipages
layouts
lwc
objects
permissionsets
staticresources
tabs
triggers
EnrollmentTrigger.trigger
EnrollmentTrigger.trigger-meta.xml
scripts
.forceignore
.gitignore
.prettierignore
.prettierrc
OUTLINE
TIMELINE
RUNNING TASKS
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
force-app > main > default > triggers > EnrollmentTrigger.trigger > EnrollmentTrigger
0 0
TrainingOrg
Ln 6, Col 2 Spaces: 4 UTF-8 LF {} Apex Go Live Prettier

```
trigger EnrollmentTrigger on Enrollment__c (before insert) {

    if(Trigger.isBefore && Trigger.isInsert) {
        EnrollmentTriggerHandler.preventDuplicateEnrollments(Trigger.new);
    }
}
```

Section 3: Create Apex Handler Class

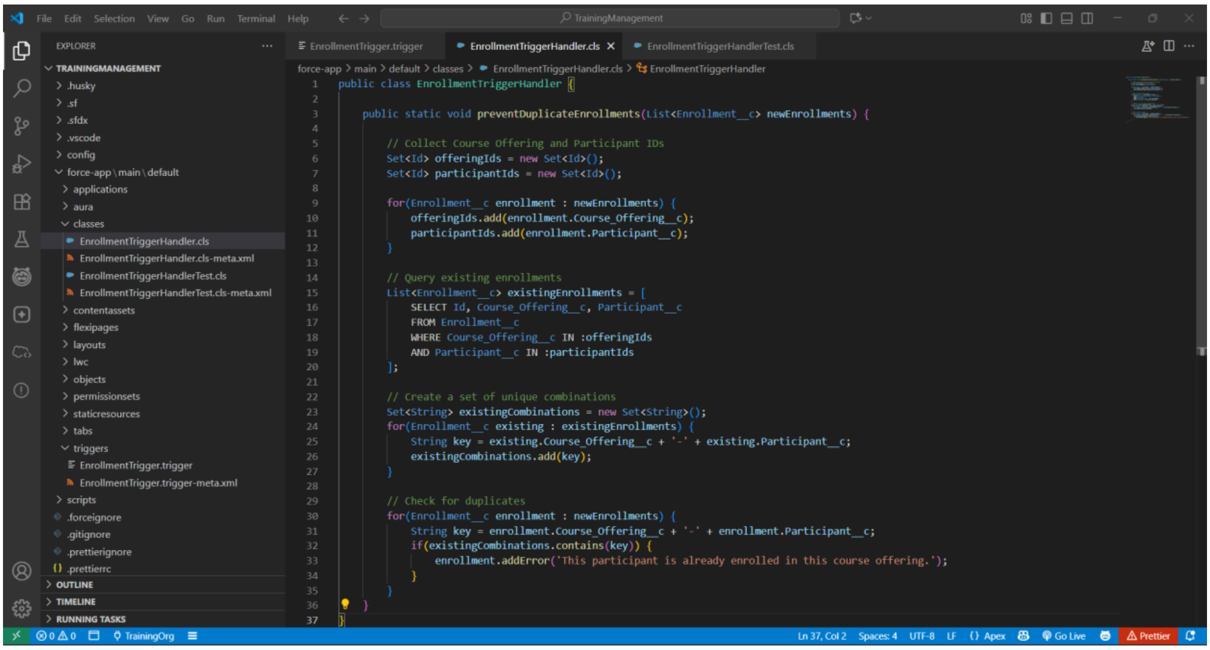
Step 1: Create Handler Class



```
public with sharing class EnrollmentTriggerHandler {
    public EnrollmentTriggerHandler() {

    }
}
```

```
00:30:11.663 Ended SFDX: Deploy This Source to Org
00:32:52.61 Starting SFDX: Create Apex Class
target dir = c:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement\force-app\main\default\classes
  create force-app\main\default\classes\EnrollmentTriggerHandler.cls
  create force-app\main\default\classes\EnrollmentTriggerHandler.cls-meta.xml

00:32:52.113 Finished SFDX: Create Apex Class
```

Step 2: Write Handler Logic



```
1   public class EnrollmentTriggerHandler {
2   
3       public static void preventDuplicateEnrollments(List<Enrollment__c> newEnrollments) {
4   
5           // Collect Course Offering and Participant IDs
6           Set<Id> offeringIds = new Set<Id>();
7           Set<Id> participantIds = new Set<Id>();
8   
9           for(Enrollment__c enrollment : newEnrollments) {
10              offeringIds.add(enrollment.Course_Offering__c);
11              participantIds.add(enrollment.Participant__c);
12          }
13  
14          // Query existing enrollments
15          List<Enrollment__c> existingEnrollments = [
16              SELECT Id, Course_Offering__c, Participant__c
17              FROM Enrollment__c
18              WHERE Course_Offering__c IN :offeringIds
19              AND Participant__c IN :participantIds
20          ];
21  
22          // Create a set of unique combinations
23          Set<String> existingCombinations = new Set<String>();
24          for(Enrollment__c existing : existingEnrollments) {
25              String key = existing.Course_Offering__c + '-' + existing.Participant__c;
26              existingCombinations.add(key);
27          }
28  
29          // Check for duplicates
30          for(Enrollment__c enrollment : newEnrollments) {
31              String key = enrollment.Course_Offering__c + '-' + enrollment.Participant__c;
32              if(existingCombinations.contains(key)) {
33                  enrollment.addError('This participant is already enrolled in this course offering.');
34              }
35          }
36      }
37  }
```

TrainingManagement
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
force-app > main > default > classes > EnrollmentTriggerHandler.cls > EnrollmentTriggerHandler
Ln 37, Col 2
Spaces: 4
UTF-8
LF
Apex

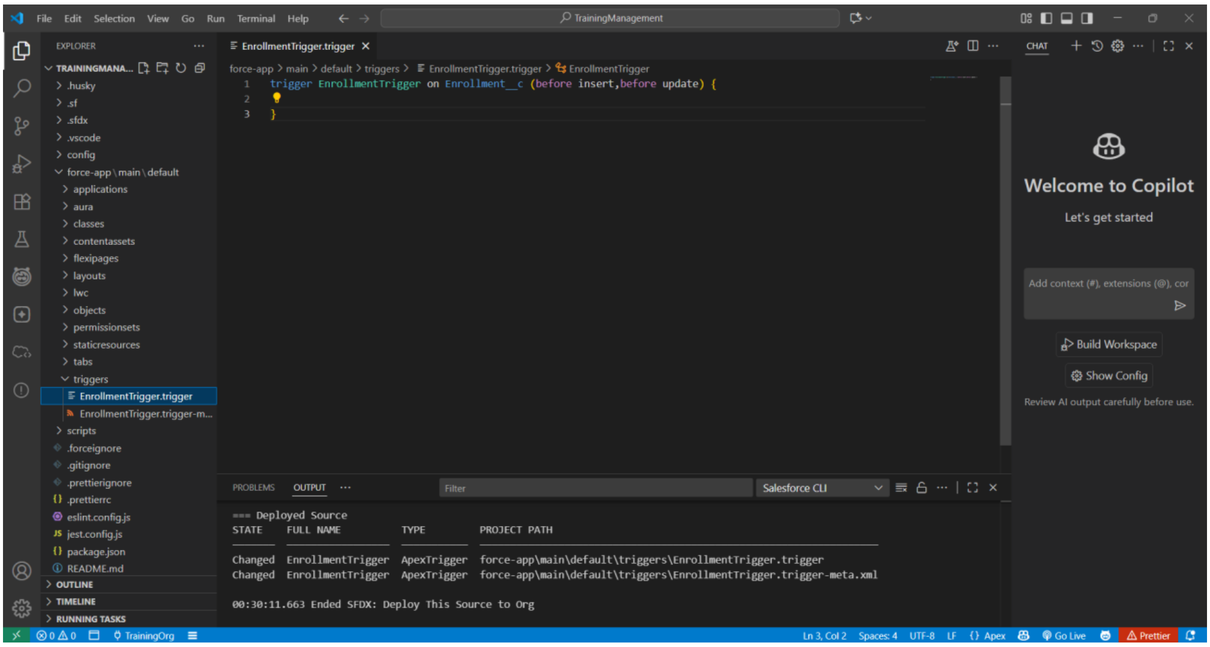
Code Explanation:

- **Line 4:** Main handler method called by trigger
- **Lines 10-19:** Collect all Participant and Course Offering IDs from new enrollments
- **Lines 22-28:** Query database for existing enrollments with same participants and offerings
- **Lines 31-36:** Create unique keys combining Participant ID + Course Offering ID

- **Lines 39-45:** Check each new enrollment against existing ones, add error if duplicate found

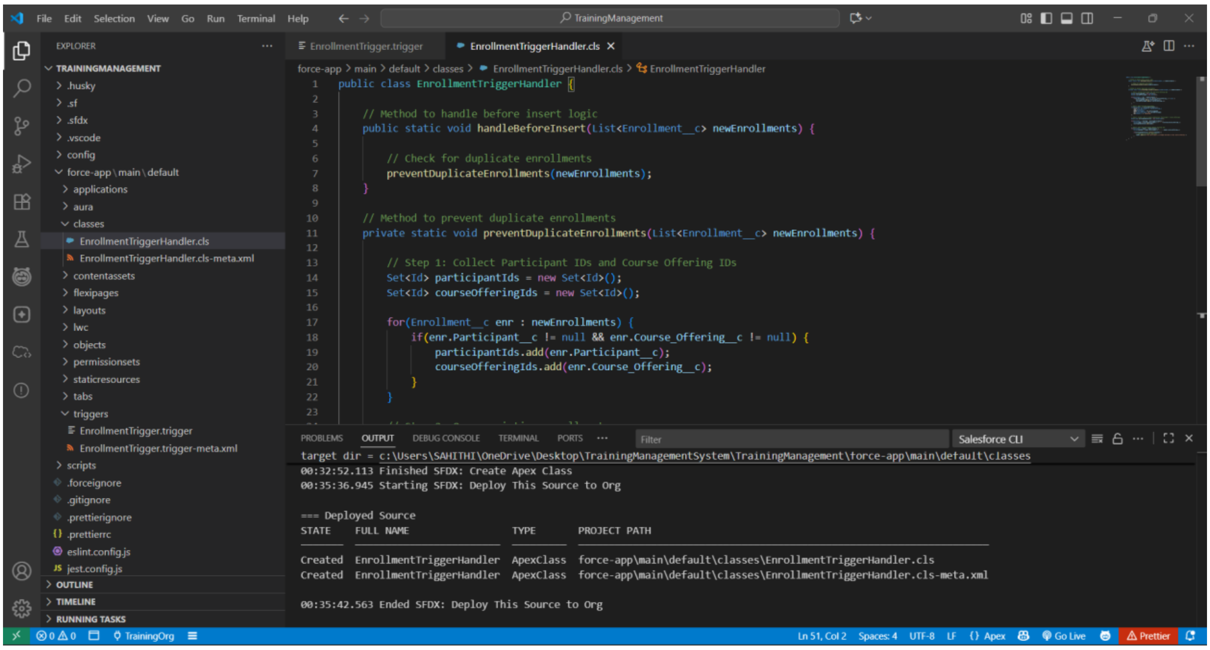
Section 4: Deploy to Salesforce

Step 1: Deploy Trigger and Handler


File Edit Selection View Go Run Terminal Help
TrainingManagement
EXPLORER
EnrollmentTrigger.trigger
force-app > main > default > triggers > EnrollmentTrigger.trigger > EnrollmentTrigger
PROBLEMS OUTPUT
Salesforce CLI
CHAT
Welcome to Copilot
Let's get started
Build Workspace
Show Config
Review AI output carefully before use.
Ln 3, Col 2 Spaces: 4 UTF-8 LF Apex

```
trigger EnrollmentTrigger on Enrollment__c (before insert,before update) {

}
```

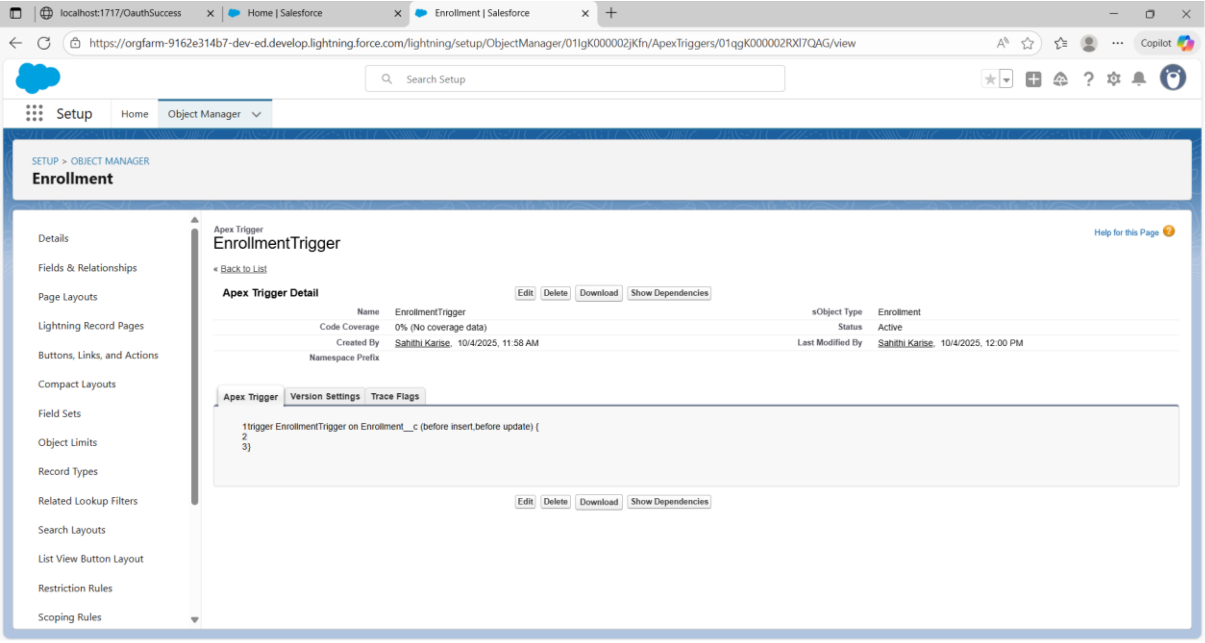
```
=== Deployed Source
STATE    FULL NAME          TYPE         PROJECT PATH
───────  ─────────────────  ───────────  ─────────────────────────────────────────────────────────────
Changed  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger
Changed  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger-meta.xml

00:30:11.663 Ended SFDX: Deploy This Source to Org
```


File Edit Selection View Go Run Terminal Help
TrainingManagement
EXPLORER
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
force-app > main > default > classes > EnrollmentTriggerHandler.cls > EnrollmentTriggerHandler
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Salesforce CLI
Ln 51, Col 2 Spaces: 4 UTF-8 LF Apex

```
public class EnrollmentTriggerHandler {

    // Method to handle before insert logic
    public static void handleBeforeInsert(List<Enrollment__c> newEnrollments) {

        // Check for duplicate enrollments
        preventDuplicateEnrollments(newEnrollments);
    }

    // Method to prevent duplicate enrollments
    private static void preventDuplicateEnrollments(List<Enrollment__c> newEnrollments) {

        // Step 1: Collect Participant IDs and Course Offering IDs
        Set<Id> participantIds = new Set<Id>();
        Set<Id> courseOfferingIds = new Set<Id>();

        for(Enrollment__c enr : newEnrollments) {
            if(enr.Participant__c != null && enr.Course_Offering__c != null) {
                participantIds.add(enr.Participant__c);
                courseOfferingIds.add(enr.Course_Offering__c);
            }
        }

```

```
target dir = c:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement\force-app\main\default\classes
00:32:52.113 Finished SFDX: Create Apex Class
00:35:36.945 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE    FULL NAME                 TYPE       PROJECT PATH
───────  ────────────────────────  ─────────  ──────────────────────────────────────────────────────────────────
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls-meta.xml

00:35:42.563 Ended SFDX: Deploy This Source to Org
```

Step 2: Verify in Salesforce



https://orgfarm-9162e314b7-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01IgK000002jKfn/ApexTriggers/01qgK000002RXl7QAG/view

SETUP > OBJECT MANAGER

Enrollment

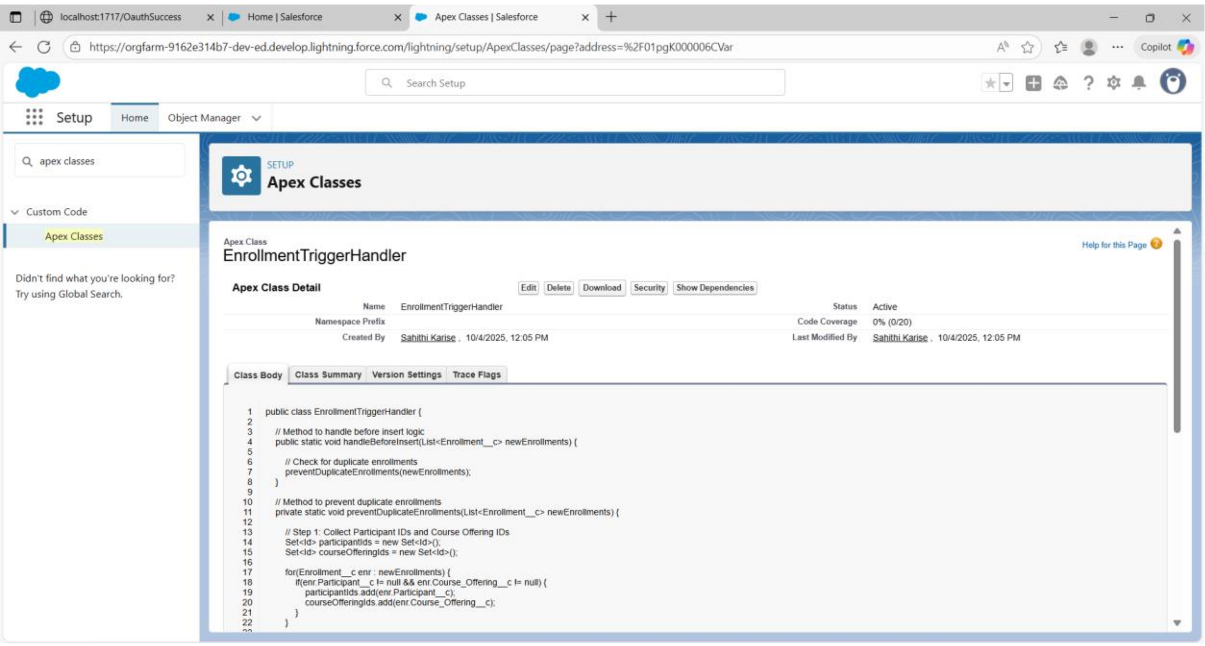
Apex Trigger

EnrollmentTrigger

Apex Trigger Detail

Name: EnrollmentTrigger
sObject Type: Enrollment
Code Coverage: 0% (No coverage data)
Status: Active
Created By: Sahithi Karise, 10/4/2025, 11:58 AM
Last Modified By: Sahithi Karise, 10/4/2025, 12:00 PM
Namespace Prefix:

```
trigger EnrollmentTrigger on Enrollment__c (before insert,before update) {

}
```



https://orgfarm-9162e314b7-dev-ed.develop.lightning.force.com/lightning/setup/ApexClasses/page?address=%2F01pgK000006CVar

Didn't find what you're looking for? Try using Global Search.

SETUP

Apex Classes

Apex Class

EnrollmentTriggerHandler

Apex Class Detail

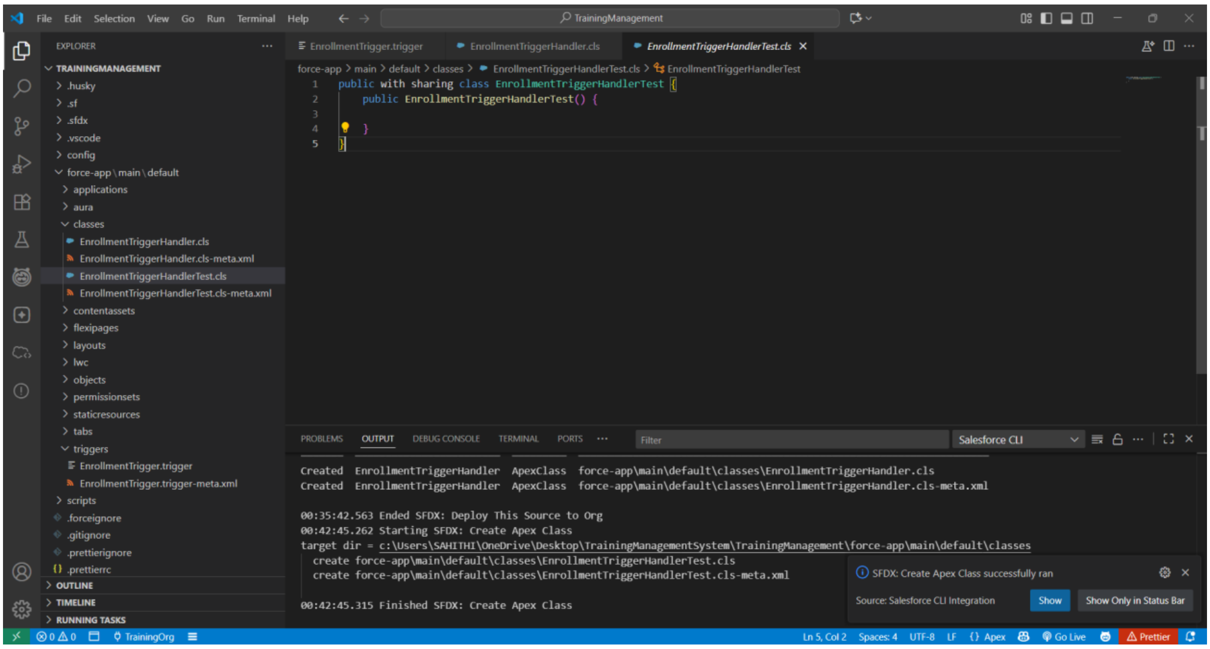
Name: EnrollmentTriggerHandler
Status: Active
Namespace Prefix:
Code Coverage: 0% (0/20)
Created By: Sahithi Karise , 10/4/2025, 12:05 PM
Last Modified By: Sahithi Karise , 10/4/2025, 12:05 PM

```
public class EnrollmentTriggerHandler {

    // Method to handle before insert logic
    public static void handleBeforeInsert(List<Enrollment__c> newEnrollments) {

        // Check for duplicate enrollments
        preventDuplicateEnrollments(newEnrollments);
    }

    // Method to prevent duplicate enrollments
    private static void preventDuplicateEnrollments(List<Enrollment__c> newEnrollments) {

        // Step 1: Collect Participant IDs and Course Offering IDs
        Set<Id> participantIds = new Set<Id>();
        Set<Id> courseOfferingIds = new Set<Id>();

        for(Enrollment__c enr : newEnrollments) {
            if(enr.Participant__c != null && enr.Course_Offering__c != null) {
                participantIds.add(enr.Participant__c);
                courseOfferingIds.add(enr.Course_Offering__c);
            }
        }
```

<span style="color:red">

Section 5: Create Test Class for Handler

Step 1: Create Test Class File



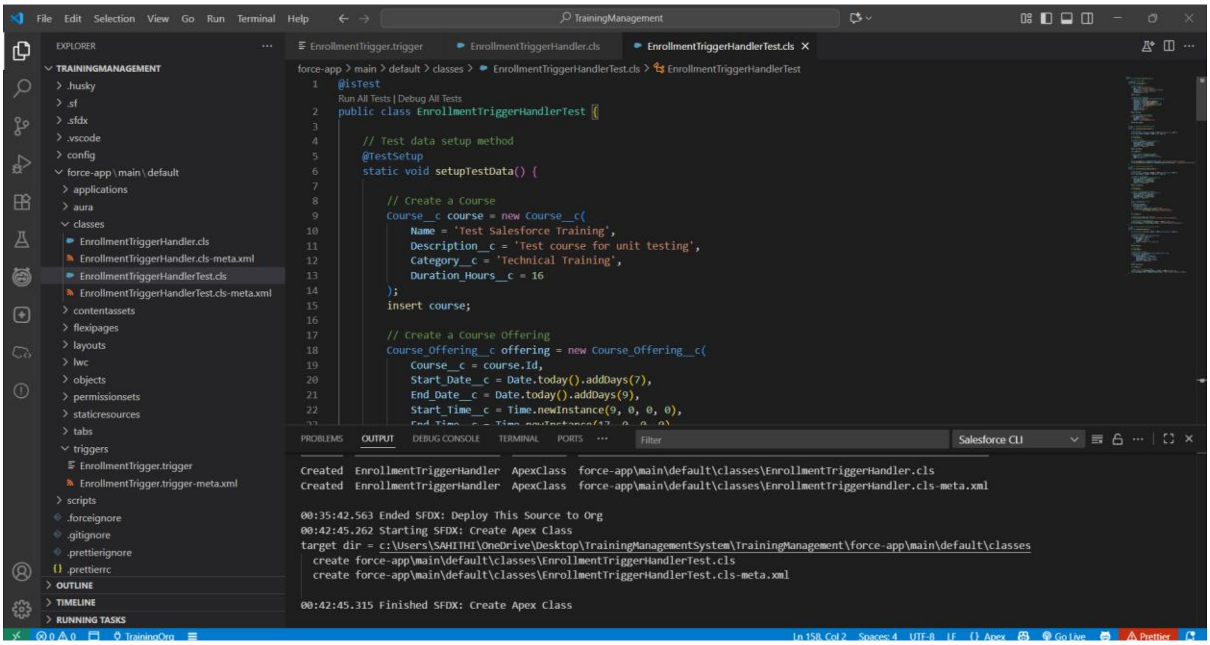
```
public with sharing class EnrollmentTriggerHandlerTest {
    public EnrollmentTriggerHandlerTest() {

    }
}
```

```
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls-meta.xml

00:35:42.563 Ended SFDX: Deploy This Source to Org
00:42:45.262 Starting SFDX: Create Apex Class
target dir = c:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement\force-app\main\default\classes
  create force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls
  create force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls-meta.xml

00:42:45.315 Finished SFDX: Create Apex Class
```

SFDX: Create Apex Class successfully ran

Source: Salesforce CLI Integration

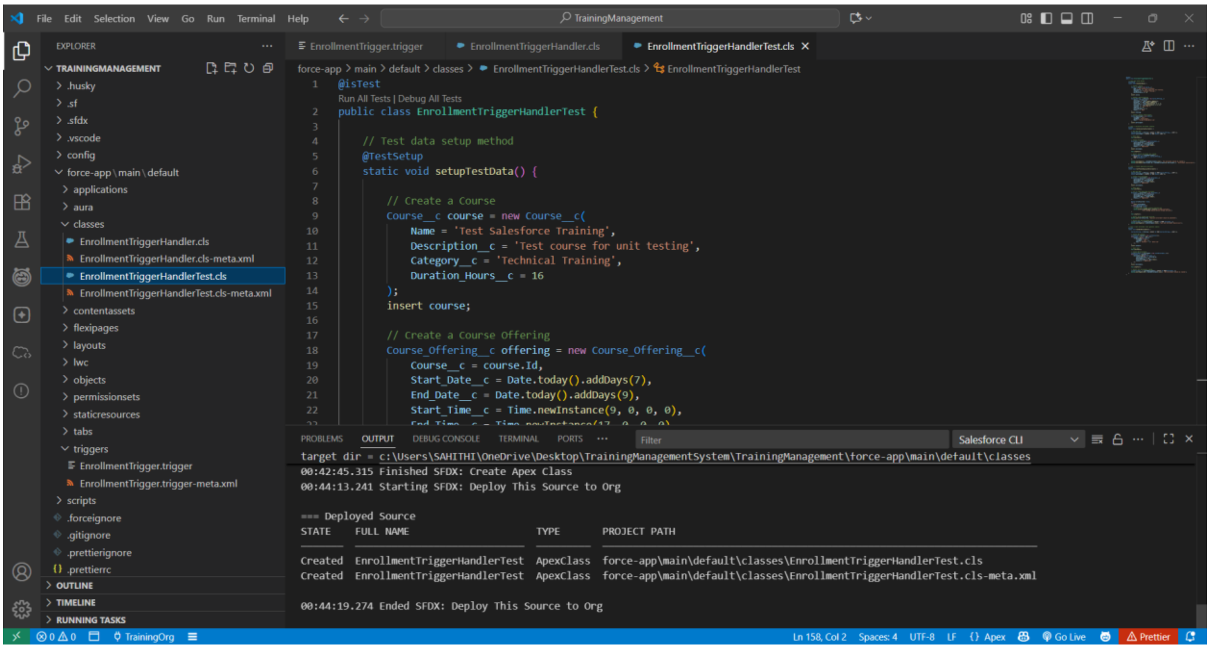
Step 2: Write Test Class Code



```
@isTest
public class EnrollmentTriggerHandlerTest {

    // Test data setup method
    @TestSetup
    static void setupTestData() {

        // Create a Course
        Course__c course = new Course__c(
            Name = 'Test Salesforce Training',
            Description__c = 'Test course for unit testing',
            Category__c = 'Technical Training',
            Duration_Hours__c = 16
        );
        insert course;

        // Create a Course Offering
        Course_Offering__c offering = new Course_Offering__c(
            Course__c = course.Id,
            Start_Date__c = Date.today().addDays(7),
            End_Date__c = Date.today().addDays(9),
            Start_Time__c = Time.newInstance(9, 0, 0, 0),
            End_Time__c = Time.newInstance(17, 0, 0, 0)
```

```
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls
Created  EnrollmentTriggerHandler  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandler.cls-meta.xml

00:35:42.563 Ended SFDX: Deploy This Source to Org
00:42:45.262 Starting SFDX: Create Apex Class
target dir = c:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement\force-app\main\default\classes
  create force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls
  create force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls-meta.xml

00:42:45.315 Finished SFDX: Create Apex Class
```

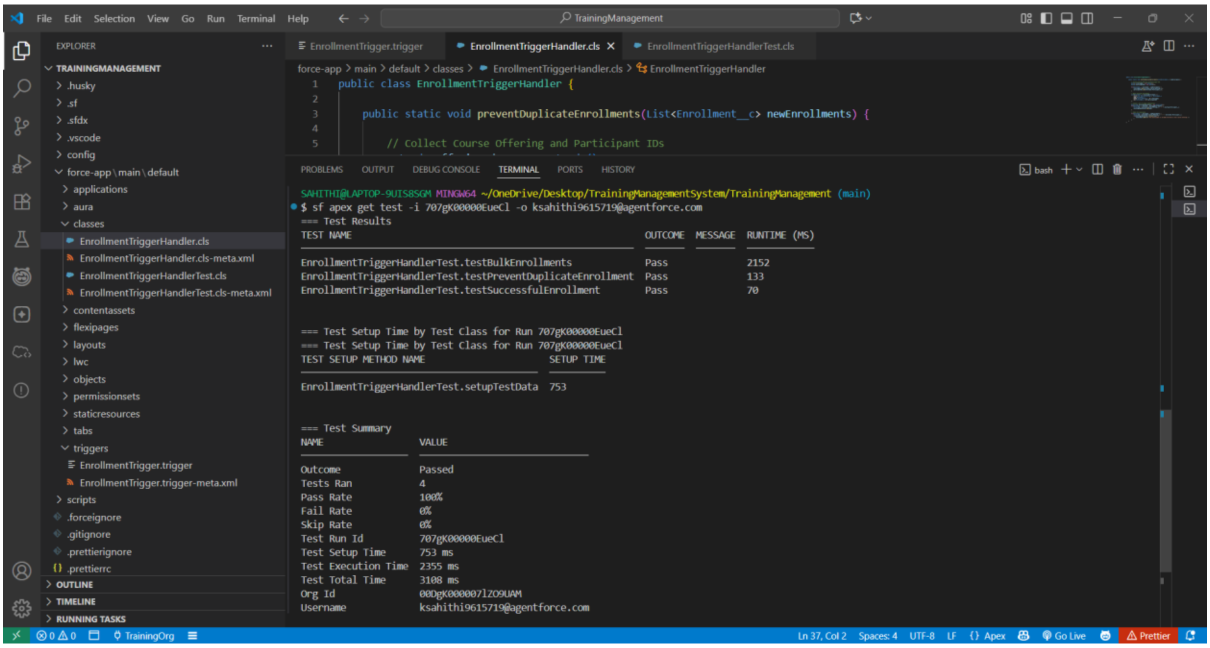
Step 3: Deploy Test Class


TrainingManagement
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
force-app > main > default > classes > EnrollmentTriggerHandlerTest.cls > EnrollmentTriggerHandlerTest
Run All Tests | Debug All Tests
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Salesforce CLI
Ln 158, Col 2
Spaces: 4
UTF-8
LF
Apex
Go Live
Prettier
TrainingOrg

```
@isTest
public class EnrollmentTriggerHandlerTest {

    // Test data setup method
    @TestSetup
    static void setupTestData() {

        // Create a Course
        Course__c course = new Course__c(
            Name = 'Test Salesforce Training',
            Description__c = 'Test course for unit testing',
            Category__c = 'Technical Training',
            Duration_Hours__c = 16
        );
        insert course;

        // Create a Course Offering
        Course_Offering__c offering = new Course_Offering__c(
            Course__c = course.Id,
            Start_Date__c = Date.today().addDays(7),
            End_Date__c = Date.today().addDays(9),
            Start_Time__c = Time.newInstance(9, 0, 0, 0),
```

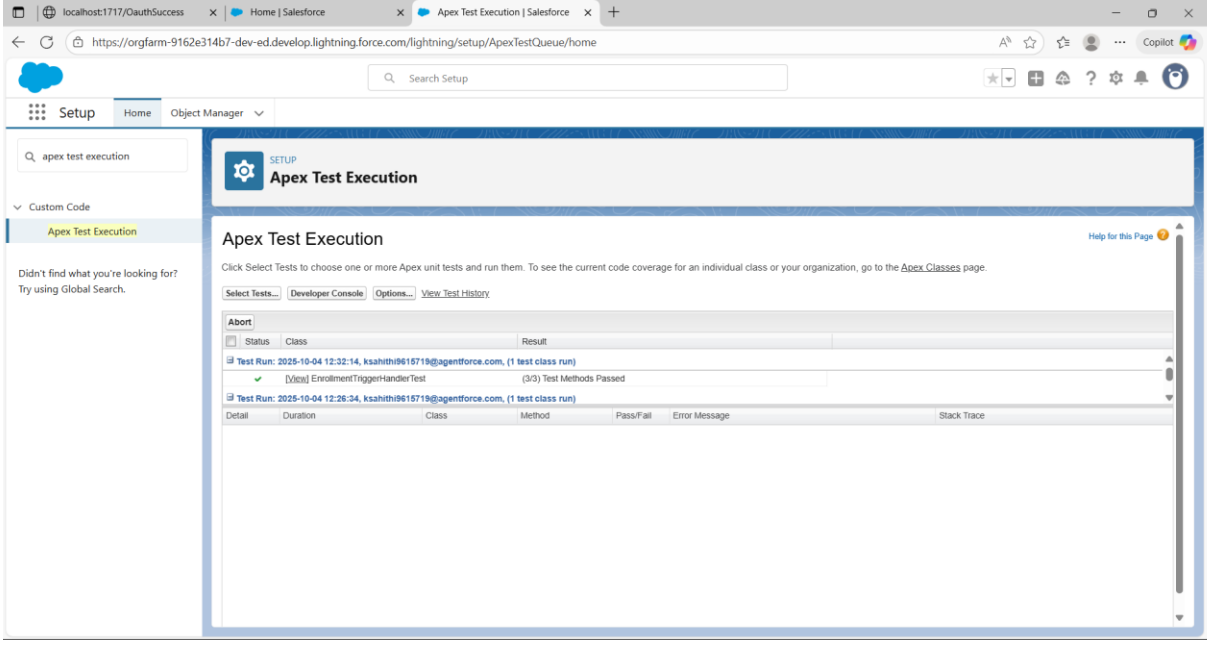
```
target dir = c:\Users\SAHITHI\OneDrive\Desktop\TrainingManagementSystem\TrainingManagement\force-app\main\default\classes
00:42:45.315 Finished SFDX: Create Apex Class
00:44:13.241 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE    FULL NAME                     TYPE       PROJECT PATH
───────  ────────────────────────────  ─────────  ─────────────────────────────────────────────────────────────────────
Created  EnrollmentTriggerHandlerTest  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls
Created  EnrollmentTriggerHandlerTest  ApexClass  force-app\main\default\classes\EnrollmentTriggerHandlerTest.cls-meta.xml

00:44:19.274 Ended SFDX: Deploy This Source to Org
```

Step 4: Run Test Class


TrainingManagement
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
force-app > main > default > classes > EnrollmentTriggerHandler.cls > EnrollmentTriggerHandler
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
HISTORY
bash
Ln 37, Col 2
Spaces: 4
UTF-8
LF
Apex
Go Live
Prettier
TrainingOrg

```
public class EnrollmentTriggerHandler {

    public static void preventDuplicateEnrollments(List<Enrollment__c> newEnrollments) {

        // Collect Course Offering and Participant IDs
```

```
SAHITHI@LAPTOP-9UIS8SGM MINGW64 ~/OneDrive/Desktop/TrainingManagementSystem/TrainingManagement (main)
$ sf apex get test -i 707gK00000EueCl -o ksahithi9615719@agentforce.com
=== Test Results
TEST NAME                                                  OUTCOME  MESSAGE  RUNTIME (MS)
─────────────────────────────────────────────────────────  ───────  ───────  ────────────
EnrollmentTriggerHandlerTest.testBulkEnrollments           Pass              2152
EnrollmentTriggerHandlerTest.testPreventDuplicateEnrollment Pass             133
EnrollmentTriggerHandlerTest.testSuccessfulEnrollment      Pass              70


=== Test Setup Time by Test Class for Run 707gK00000EueCl
=== Test Setup Time by Test Class for Run 707gK00000EueCl
TEST SETUP METHOD NAME                     SETUP TIME
─────────────────────────────────────────  ──────────
EnrollmentTriggerHandlerTest.setupTestData  753


=== Test Summary
NAME                 VALUE
───────────────────  ─────────────────────────────
Outcome              Passed
Tests Ran            4
Pass Rate            100%
Fail Rate            0%
Skip Rate            0%
Test Run Id          707gK00000EueCl
Test Setup Time      753 ms
Test Execution Time  2355 ms
Test Total Time      3108 ms
Org Id               00DgK000007lZO9UAM
Username             ksahithi9615719@agentforce.com
```



localhost:1717/OauthSuccess
Home | Salesforce
Apex Test Execution | Salesforce
https://orgfarm-9162e314b7-dev-ed.develop.lightning.force.com/lightning/setup/ApexTestQueue/home
Search Setup
Setup
Home
Object Manager
apex test execution
Custom Code
Apex Test Execution
SETUP

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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

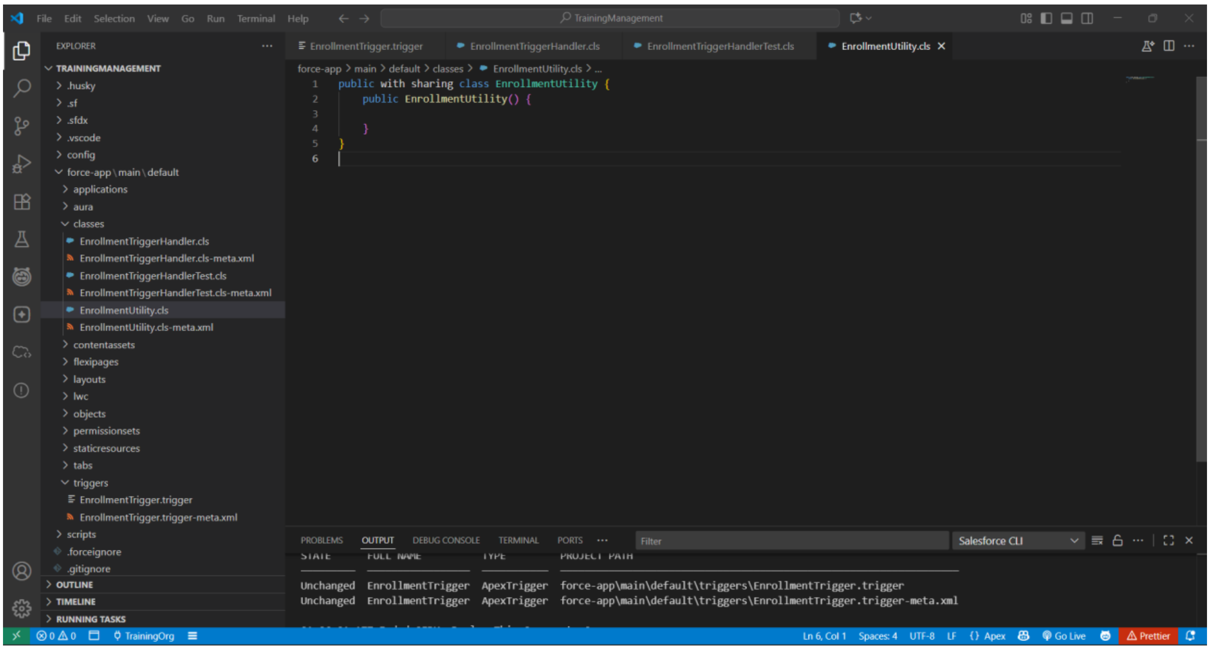
Abort

□	Status	Class	Result
Test Run: 2025-10-04 12:32:14, ksahithi9615719@agentforce.com, (1 test class run)			
	✓	[View] EnrollmentTriggerHandlerTest	(3/3) Test Methods Passed
Test Run: 2025-10-04 12:26:34, ksahithi9615719@agentforce.com, (1 test class run)			

Detail	Duration	Class	Method	Pass/Fail	Error Message	Stack Trace

Section 6: Create Utility Class

Step 1: Create Utility Class

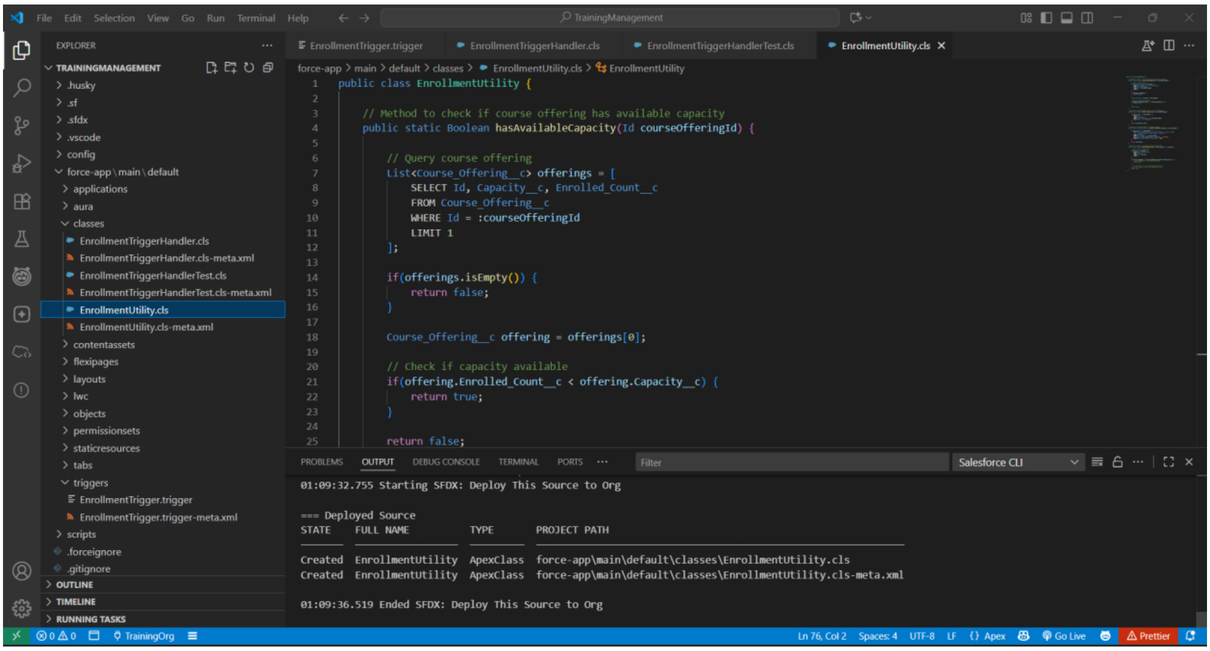


force-app > main > default > classes > EnrollmentUtility.cls > ...

```
public with sharing class EnrollmentUtility {
    public EnrollmentUtility() {

    }
}

```

```
STATE      FULL NAME          TYPE         PROJECT PATH
─────────  ─────────────────  ───────────  ────────────────────────────────────────────────────────────────
Unchanged  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger
Unchanged  EnrollmentTrigger  ApexTrigger  force-app\main\default\triggers\EnrollmentTrigger.trigger-meta.xml
```

Step 2: Write Utility Methods

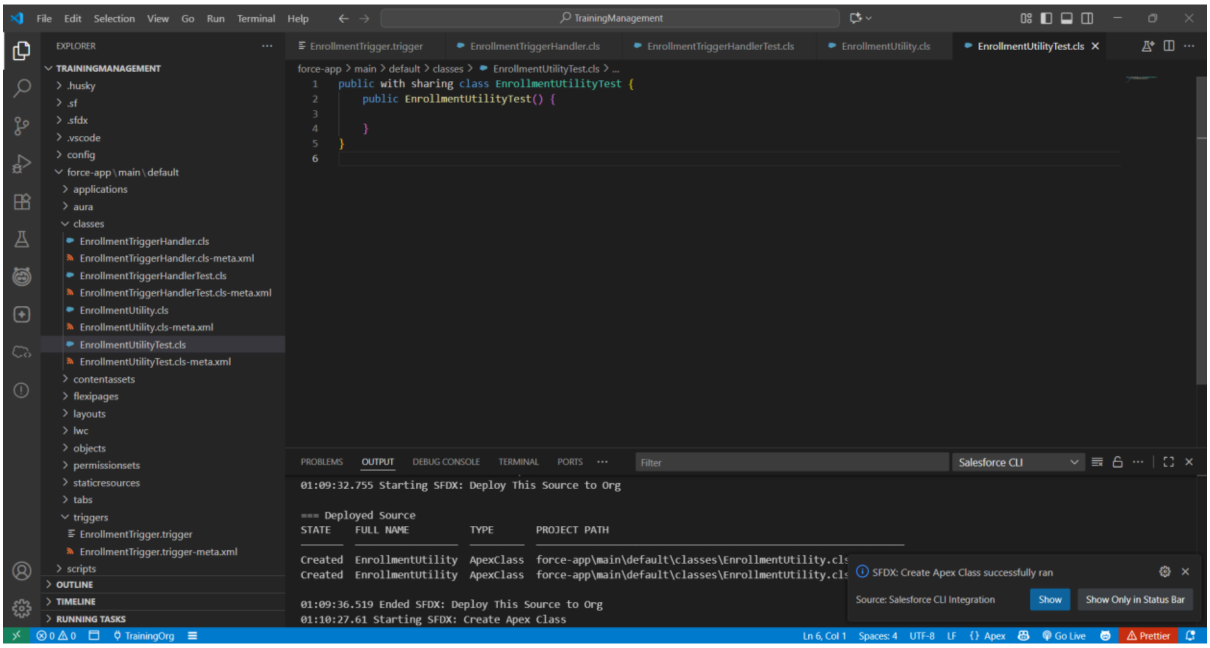


```
public class EnrollmentUtility {

    // Method to check if course offering has available capacity
    public static Boolean hasAvailableCapacity(Id courseOfferingId) {

        // Query course offering
        List<Course_Offering__c> offerings = [
            SELECT Id, Capacity__c, Enrolled_Count__c
            FROM Course_Offering__c
            WHERE Id = :courseOfferingId
            LIMIT 1
        ];

        if(offerings.isEmpty()) {
            return false;
        }

        Course_Offering__c offering = offerings[0];

        // Check if capacity available
        if(offering.Enrolled_Count__c < offering.Capacity__c) {
            return true;
        }

        return false;
```

```
01:09:32.755 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE    FULL NAME           TYPE       PROJECT PATH
───────  ──────────────────  ─────────  ──────────────────────────────────────────────────────────
Created  EnrollmentUtility   ApexClass  force-app\main\default\classes\EnrollmentUtility.cls
Created  EnrollmentUtility   ApexClass  force-app\main\default\classes\EnrollmentUtility.cls-meta.xml

01:09:36.519 Ended SFDX: Deploy This Source to Org
```

Section 7: Create Test Class for Utility

Step 1: Create Test Class



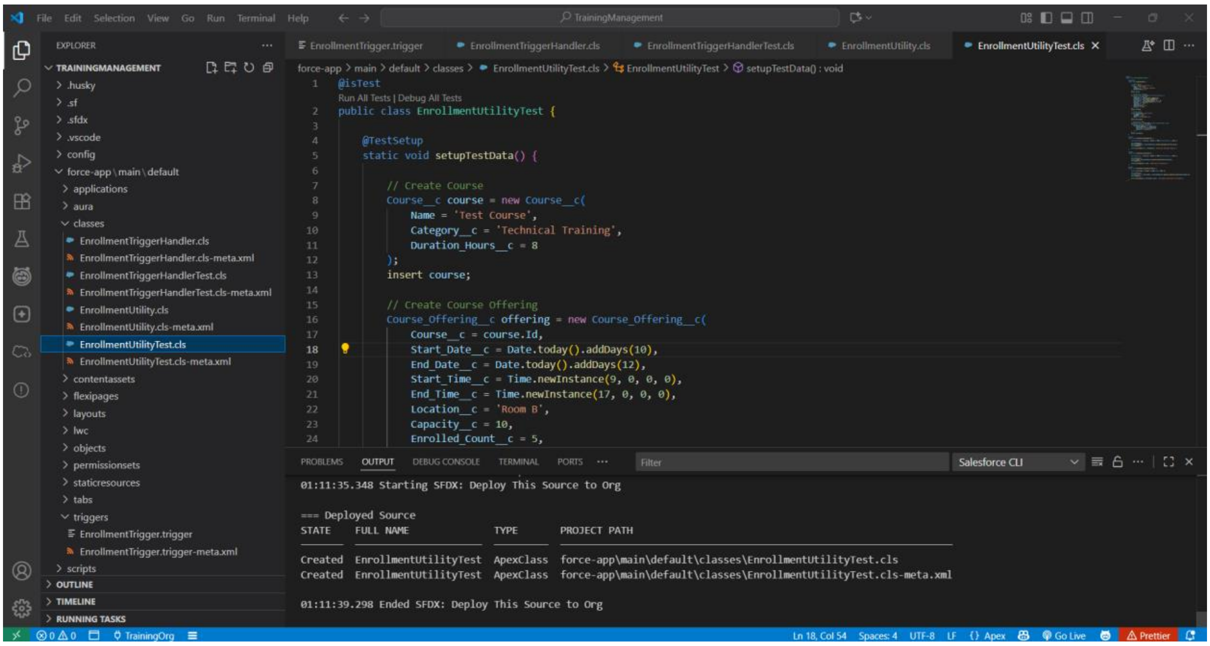
```
public with sharing class EnrollmentUtilityTest {
    public EnrollmentUtilityTest() {

    }
}
```

```
01:09:32.755 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE    FULL NAME           TYPE       PROJECT PATH
───────  ──────────────────  ─────────  ──────────────────────────────────────────────────────────
Created  EnrollmentUtility   ApexClass  force-app\main\default\classes\EnrollmentUtility.cls
Created  EnrollmentUtility   ApexClass  force-app\main\default\classes\EnrollmentUtility.cls

01:09:36.519 Ended SFDX: Deploy This Source to Org
01:10:27.61 Starting SFDX: Create Apex Class
```

SFDX: Create Apex Class successfully ran

Source: Salesforce CLI Integration

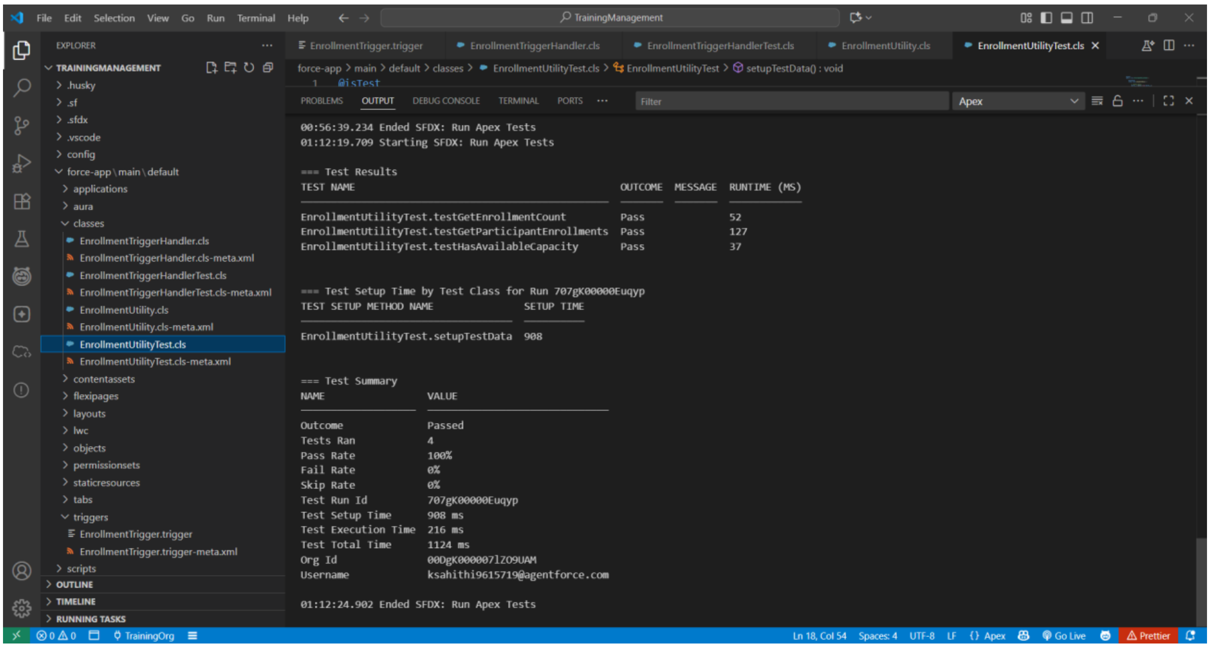
Step 2: Write Test Methods


File Edit Selection View Go Run Terminal Help
TrainingManagement
EXPLORER
TRAININGMANAGEMENT
.husky
.sf
.sfdx
.vscode
config
force-app \ main \ default
applications
aura
classes
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandler.cls-meta.xml
EnrollmentTriggerHandlerTest.cls
EnrollmentTriggerHandlerTest.cls-meta.xml
EnrollmentUtility.cls
EnrollmentUtility.cls-meta.xml
EnrollmentUtilityTest.cls
EnrollmentUtilityTest.cls-meta.xml
contentassets
flexipages
layouts
lwc
objects
permissionsets
staticresources
tabs
triggers
EnrollmentTrigger.trigger
EnrollmentTrigger.trigger-meta.xml
scripts
OUTLINE
TIMELINE
RUNNING TASKS
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
EnrollmentUtility.cls
EnrollmentUtilityTest.cls
force-app > main > default > classes > EnrollmentUtilityTest.cls > EnrollmentUtilityTest > setupTestData() : void
Run All Tests | Debug All Tests
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Filter
Salesforce CLI
0 0
TrainingOrg
Ln 18, Col 54
Spaces: 4
UTF-8
LF
{} Apex
Go Live
Prettier

```apex
@isTest
public class EnrollmentUtilityTest {

    @TestSetup
    static void setupTestData() {

        // Create Course
        Course__c course = new Course__c(
            Name = 'Test Course',
            Category__c = 'Technical Training',
            Duration_Hours__c = 8
        );
        insert course;

        // Create Course Offering
        Course_Offering__c offering = new Course_Offering__c(
            Course__c = course.Id,
            Start_Date__c = Date.today().addDays(10),
            End_Date__c = Date.today().addDays(12),
            Start_Time__c = Time.newInstance(9, 0, 0, 0),
            End_Time__c = Time.newInstance(17, 0, 0, 0),
            Location__c = 'Room B',
            Capacity__c = 10,
            Enrolled_Count__c = 5,
```

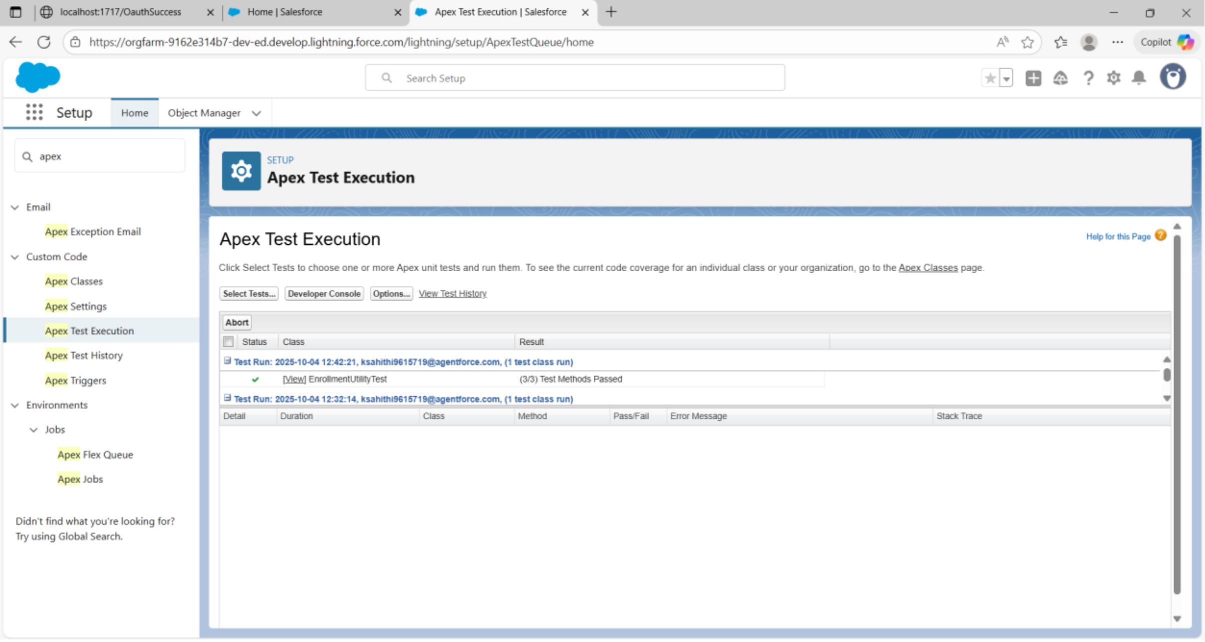
```
01:11:35.348 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE    FULL NAME              TYPE       PROJECT PATH
───────  ─────────────────────  ─────────  ───────────────────────────────────────────────────────────────────
Created  EnrollmentUtilityTest  ApexClass  force-app\main\default\classes\EnrollmentUtilityTest.cls
Created  EnrollmentUtilityTest  ApexClass  force-app\main\default\classes\EnrollmentUtilityTest.cls-meta.xml

01:11:39.298 Ended SFDX: Deploy This Source to Org
```

Step 3: Run Test Class


File Edit Selection View Go Run Terminal Help
TrainingManagement
EXPLORER
TRAININGMANAGEMENT
.husky
.sf
.sfdx
.vscode
config
force-app \ main \ default
applications
aura
classes
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandler.cls-meta.xml
EnrollmentTriggerHandlerTest.cls
EnrollmentTriggerHandlerTest.cls-meta.xml
EnrollmentUtility.cls
EnrollmentUtility.cls-meta.xml
EnrollmentUtilityTest.cls
EnrollmentUtilityTest.cls-meta.xml
contentassets
flexipages
layouts
lwc
objects
permissionsets
staticresources
tabs
triggers
EnrollmentTrigger.trigger
EnrollmentTrigger.trigger-meta.xml
scripts
OUTLINE
TIMELINE
RUNNING TASKS
EnrollmentTrigger.trigger
EnrollmentTriggerHandler.cls
EnrollmentTriggerHandlerTest.cls
EnrollmentUtility.cls
EnrollmentUtilityTest.cls
force-app > main > default > classes > EnrollmentUtilityTest.cls > EnrollmentUtilityTest > setupTestData() : void
@isTest
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Filter
Apex
0 0
TrainingOrg
Ln 18, Col 54
Spaces: 4
UTF-8
LF
{} Apex
Go Live
Prettier

```
00:56:39.234 Ended SFDX: Run Apex Tests
01:12:19.709 Starting SFDX: Run Apex Tests

=== Test Results
TEST NAME                                          OUTCOME  MESSAGE  RUNTIME (MS)
─────────────────────────────────────────────────  ───────  ───────  ────────────
EnrollmentUtilityTest.testGetEnrollmentCount       Pass              52
EnrollmentUtilityTest.testGetParticipantEnrollments Pass             127
EnrollmentUtilityTest.testHasAvailableCapacity     Pass              37


=== Test Setup Time by Test Class for Run 707gK00000Euqyp
TEST SETUP METHOD NAME              SETUP TIME
──────────────────────────────────  ──────────
EnrollmentUtilityTest.setupTestData  908


=== Test Summary
NAME                 VALUE
───────────────────  ──────────────────────────────
Outcome              Passed
Tests Ran            4
Pass Rate            100%
Fail Rate            0%
Skip Rate            0%
Test Run Id          707gK00000Euqyp
Test Setup Time      908 ms
Test Execution Time  216 ms
Test Total Time      1124 ms
Org Id               00DgK000007lZO9UAM
Username             ksahithi9615719@agentforce.com

01:12:24.902 Ended SFDX: Run Apex Tests
```

Section 8: Check Overall Code Coverage

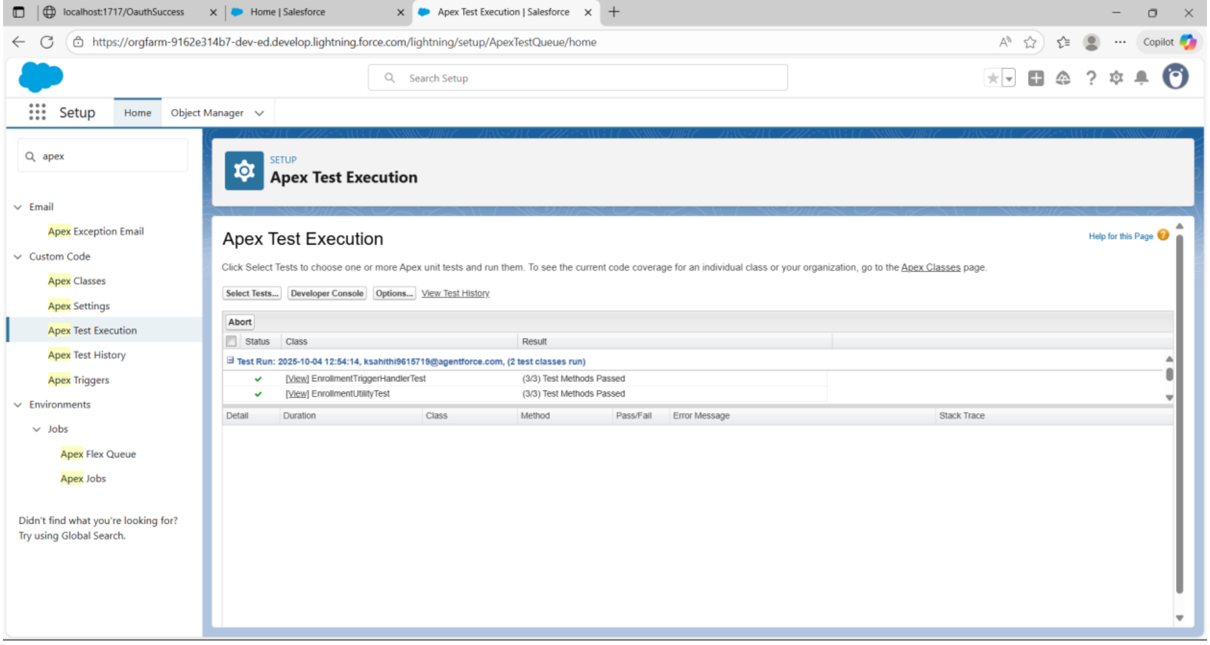


Apex Test Execution

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.

□	Status	Class	Result
Test Run: 2025-10-04 12:42:21, ksahithi9615719@agentforce.com, (1 test class run)			
	✓	[View] EnrollmentUtilityTest	(3/3) Test Methods Passed
Test Run: 2025-10-04 12:32:14, ksahithi9615719@agentforce.com, (1 test class run)			

Detail	Duration	Class	Method	Pass/Fail	Error Message	Stack Trace



Apex Test Execution

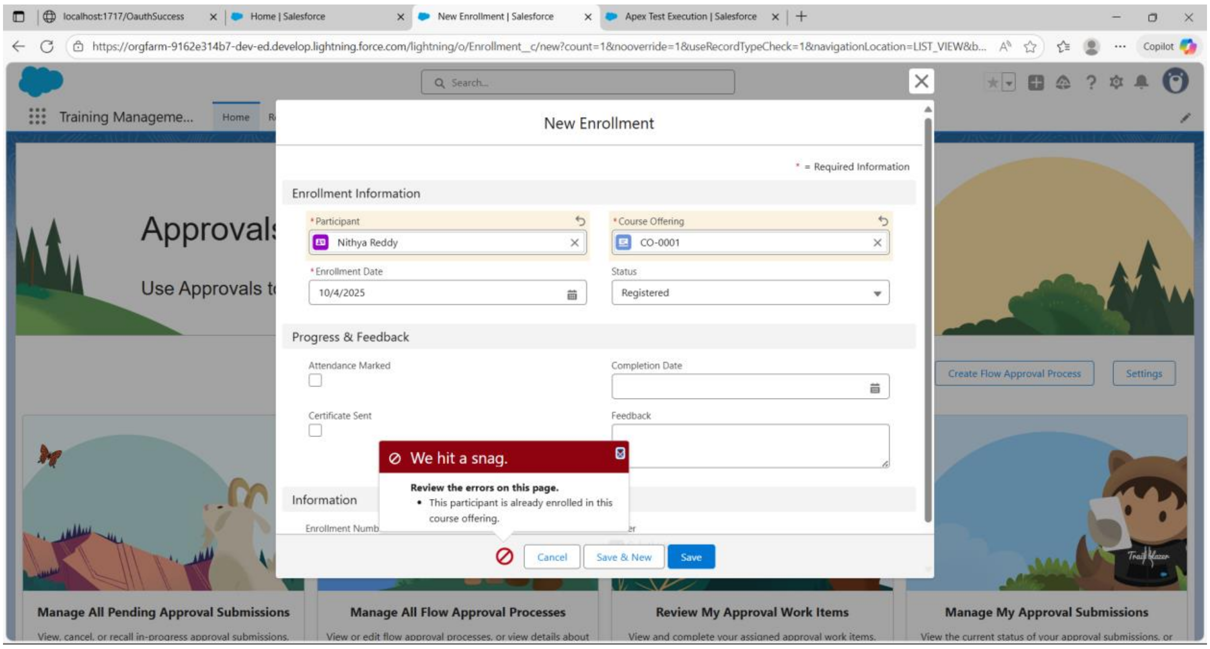
Click Select Tests to choose one or more Apex unit tests and run them. To see the current code coverage for an individual class or your organization, go to the Apex Classes page.

□	Status	Class	Result
Test Run: 2025-10-04 12:54:14, ksahithi9615719@agentforce.com, (2 test classes run)			
	✓	[View] EnrollmentTriggerHandlerTest	(3/3) Test Methods Passed
	✓	[View] EnrollmentUtilityTest	(3/3) Test Methods Passed

Detail	Duration	Class	Method	Pass/Fail	Error Message	Stack Trace

Section 9: Manual Testing

Test 1: Test Duplicate Prevention



localhost:1717/OauthSuccess
Home | Salesforce
New Enrollment | Salesforce
Apex Test Execution | Salesforce
https://orgfarm-9162e314b7-dev-ed.develop.lightning.force.com/lightning/o/Enrollment__c/new?count=1&nooverride=1&useRecordTypeCheck=1&navigationLocation=LIST_VIEW&b...
Copilot
Search...
Training Manageme...
Home
Approvals
Use Approvals t
Create Flow Approval Process
Settings
Manage All Pending Approval Submissions
View, cancel, or recall in-progress approval submissions.
Manage All Flow Approval Processes
View or edit flow approval processes, or view details about
Review My Approval Work Items
View and complete your assigned approval work items.
Manage My Approval Submissions
View the current status of your approval submissions, or

New Enrollment

* = Required Information

Enrollment Information

*Participant: Nithya Reddy

*Course Offering: CO-0001

*Enrollment Date: 10/4/2025

Status: Registered

Progress & Feedback

Attendance Marked ☐

Completion Date

Certificate Sent ☐

Feedback

Information

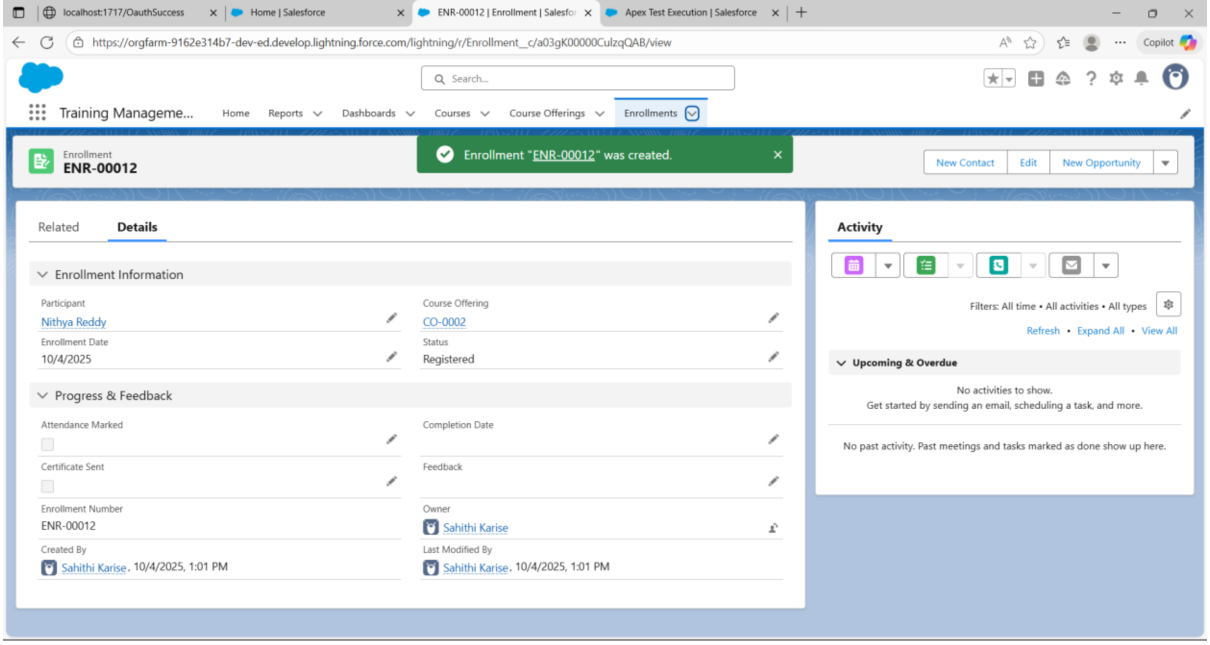
Enrollment Numb

We hit a snag.

Review the errors on this page.

- This participant is already enrolled in this course offering.

Test 2: Test Multiple Enrollments (Different Offerings)



localhost:1717/OauthSuccess
Home | Salesforce
ENR-00012 | Enrollment | Salesfo
Apex Test Execution | Salesforce
https://orgfarm-9162e314b7-dev-ed.develop.lightning.force.com/lightning/r/Enrollment__c/a03gK00000CulzqQAB/view
Copilot
Search...
Training Manageme...
Home
Reports
Dashboards
Courses
Course Offerings
Enrollments
New Contact
Edit
New Opportunity
Related
Details

Enrollment

ENR-00012

Enrollment "ENR-00012" was created.

Enrollment Information

Participant: Nithya Reddy

Course Offering: CO-0002

Enrollment Date: 10/4/2025

Status: Registered

Progress & Feedback

Attendance Marked ☐

Completion Date

Certificate Sent ☐

Feedback

Enrollment Number: ENR-00012

Owner: Sahithi Karise

Created By: Sahithi Karise, 10/4/2025, 1:01 PM

Last Modified By: Sahithi Karise, 10/4/2025, 1:01 PM

Activity

Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

No activities to show.
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.