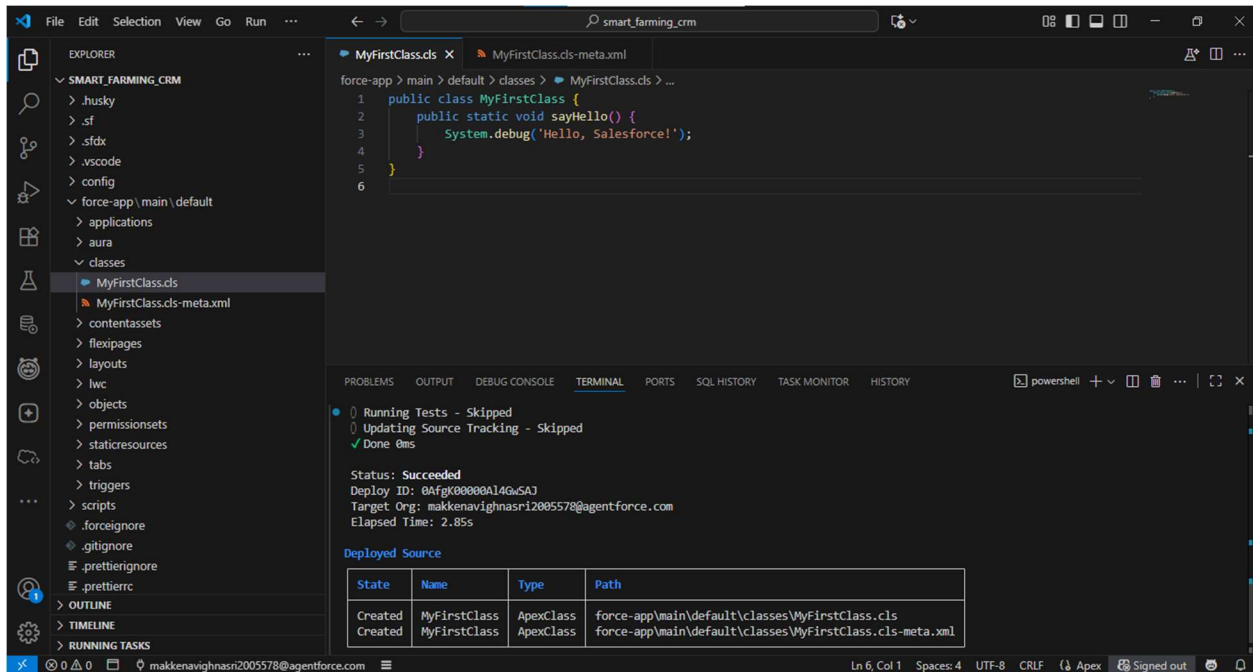


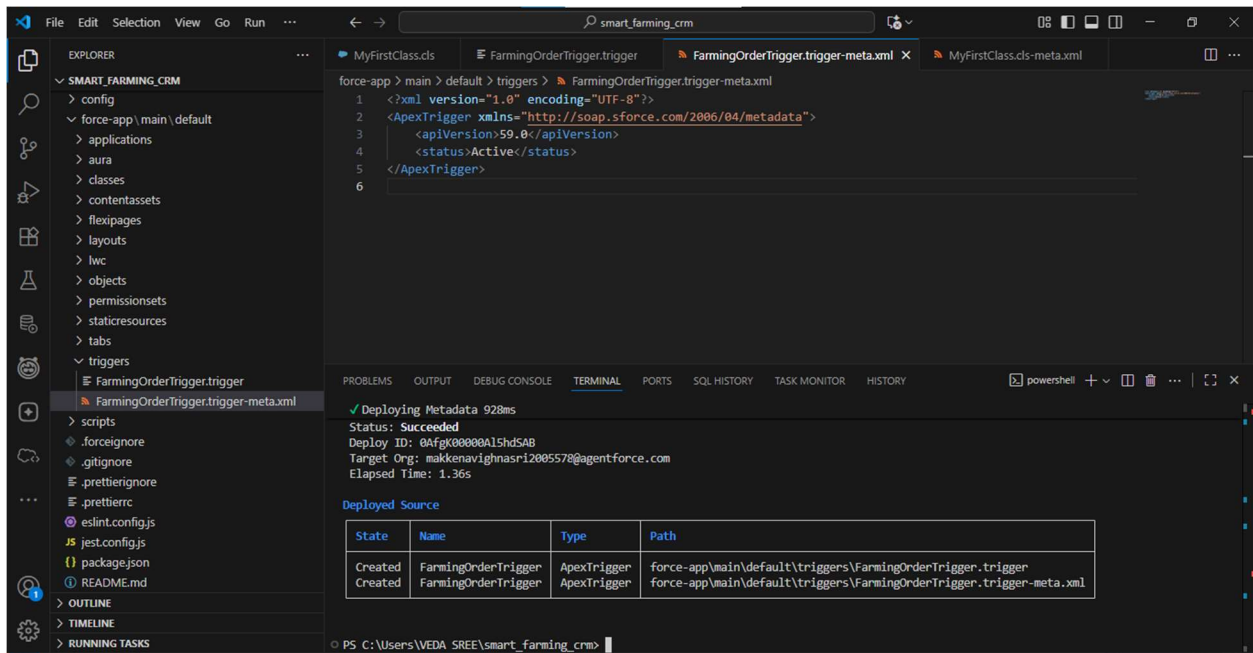
# APEX PROGRAMMING – PHASE 5

## 1. Classes and Objects—Apex classes



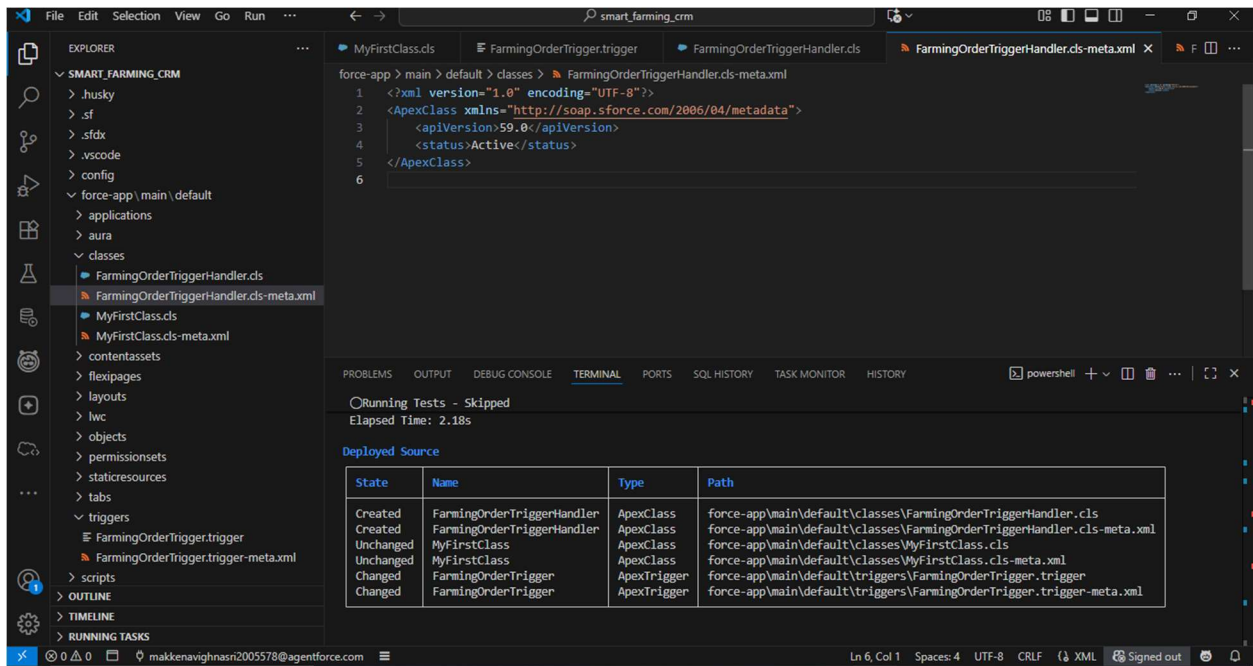
## 2. Apex Triggers

- Triggers were created on Farming Order to automate record actions when insert/update occurs.
- Logic was separated into a handler class to keep the code clean and reusable.



### 3. Trigger Design Pattern

- Implemented a single trigger per object with a dedicated handler class.
- This ensures scalability and avoids mixing multiple business rules in one trigger.



- **SOQL (Salesforce Object Query Language)**

- Used to query Crop Listings and Buyer Requirements.
- Helps fetch structured data directly from Salesforce objects for business logic.

- **SOSL (Salesforce Object Search Language)**

- Implemented to allow keyword search across Accounts.
- Enables finding relevant records quickly across multiple fields.

- **Collections (List, Set, Map)**

- Lists used to store queried records.
- Maps used in SOSL to organize results by object type.

- **Control Statements**

- If/Else used to filter premium crops based on price.
- Loops applied to process collections and perform conditional checks.

- **Exception Handling**

- Try/Catch blocks implemented around queries to prevent runtime errors.
- Ensures system stability by handling failures gracefully.

- **Test Classes**

- Test data created for Crops and Buyer Requirements.
- Methods tested using System.assert to confirm logic works and maintain >75% code coverage.

File Edit Selection View Go Run ... smart\_farming\_crm

EXPLORER

- SMART\_FARMING\_CRM
  - .husky
  - .sf
  - .sfdx
  - .vscode
  - config
  - force-app\main\default
    - applications
    - aura
    - classes
      - FarmingOrderTriggerHandler.cls
      - FarmingOrderTriggerHandler.cls-meta.xml
      - FarmingQueryService.cls
      - FarmingQueryService.cls-meta.xml
      - FarmingQueryServiceTest.cls
      - FarmingQueryServiceTest.cls-meta.xml
      - MyFirstClass.cls
      - MyFirstClass.cls-meta.xml
    - contentassets
    - flexipages
    - layouts
    - lwc
    - objects
    - permissionsets
    - staticresources
    - tabs
    - OUTLINE
    - TIMELINE
    - RUNNING TASKS

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

```
force-app > main > default > classes > FarmingQueryServiceTest.cls > FarmingQueryServiceTest > testQueries() : void
2 public class FarmingQueryServiceTest {
5     static void testQueries() {
9
10         // Create test Crop
11         Crop_Listing__c crop = new Crop_Listing__c(
12             Crop_Name__c = 'Wheat Crop',
13             Crop_Type__c = 'Wheat',
14             Quantity__c = 50,
15             Price__c = 1200,
16             Location__c = 'Farm Village',
17             Availability_Date__c = Date.today()
18         );
19         insert crop;
20
21         // Create test Buyer Requirement
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL HISTORY TASK MONITOR HISTORY

Running Tests - Skipped

Test Result	Test Name	Test Type	Test Location
Unchanged	FarmingOrderTriggerHandler	ApexClass	force-app\main\default\classes\FarmingOrderTriggerHandler.cls
Unchanged	FarmingOrderTriggerHandler	ApexClass	force-app\main\default\classes\FarmingOrderTriggerHandler.cls-meta.xml
Created	FarmingQueryService	ApexClass	force-app\main\default\classes\FarmingQueryService.cls
Created	FarmingQueryService	ApexClass	force-app\main\default\classes\FarmingQueryService.cls-meta.xml
Created	FarmingQueryServiceTest	ApexClass	force-app\main\default\classes\FarmingQueryServiceTest.cls
Created	FarmingQueryServiceTest	ApexClass	force-app\main\default\classes\FarmingQueryServiceTest.cls-meta.xml
Unchanged	MyFirstClass	ApexClass	force-app\main\default\classes\MyFirstClass.cls
Unchanged	MyFirstClass	ApexClass	force-app\main\default\classes\MyFirstClass.cls-meta.xml
Unchanged	FarmingOrderTrigger	ApexTrigger	force-app\main\default\triggers\FarmingOrderTrigger.trigger
Unchanged	FarmingOrderTrigger	ApexTrigger	force-app\main\default\triggers\FarmingOrderTrigger.trigger-meta.xml

PS C:\Users\VEDA SREE\smart\_farming\_crm>

Ln 12, Col 41 Spaces: 4 UTF-8 CRLF Apex Signed out