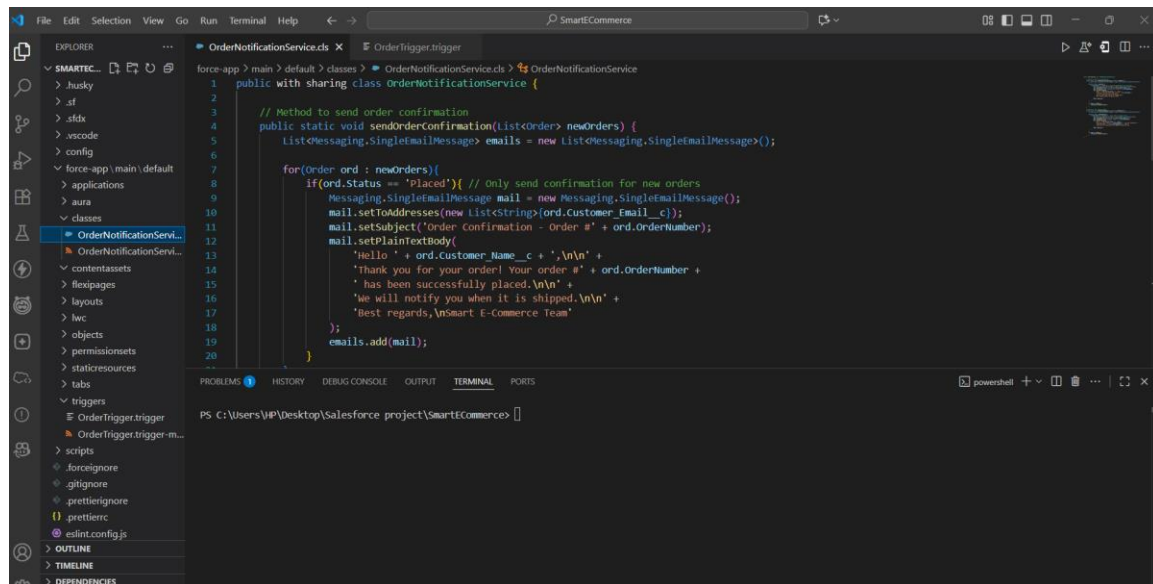


Smart E-Commerce CRM

Phase 5: Apex Programming (Developer)

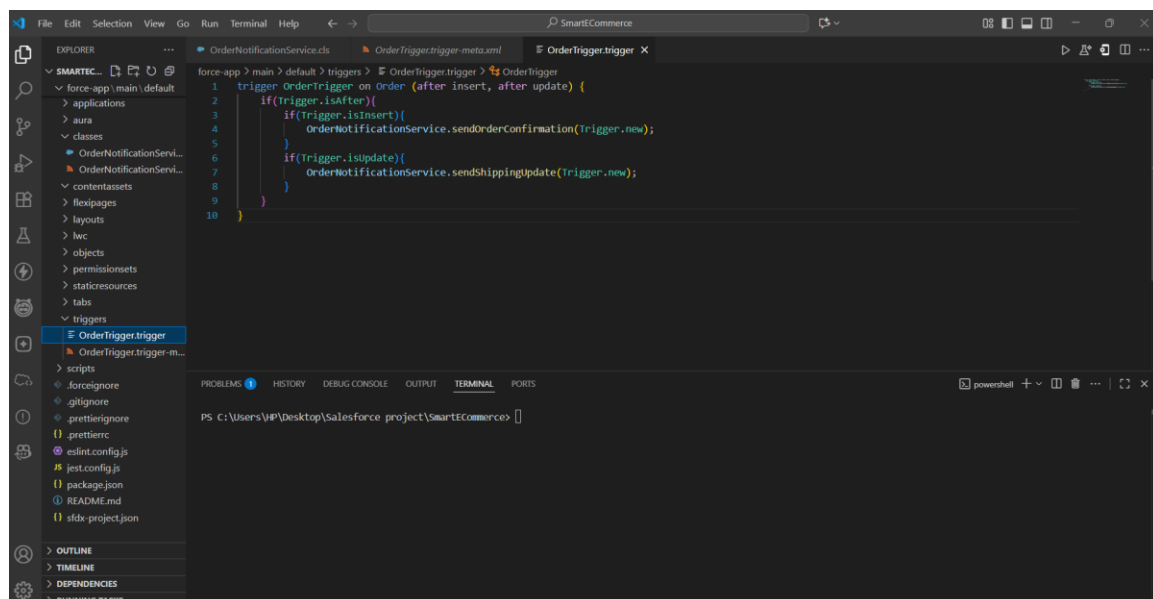
1. Apex Classes

OrderNotificationService class created to auto-send order confirmation and shipping update notifications.



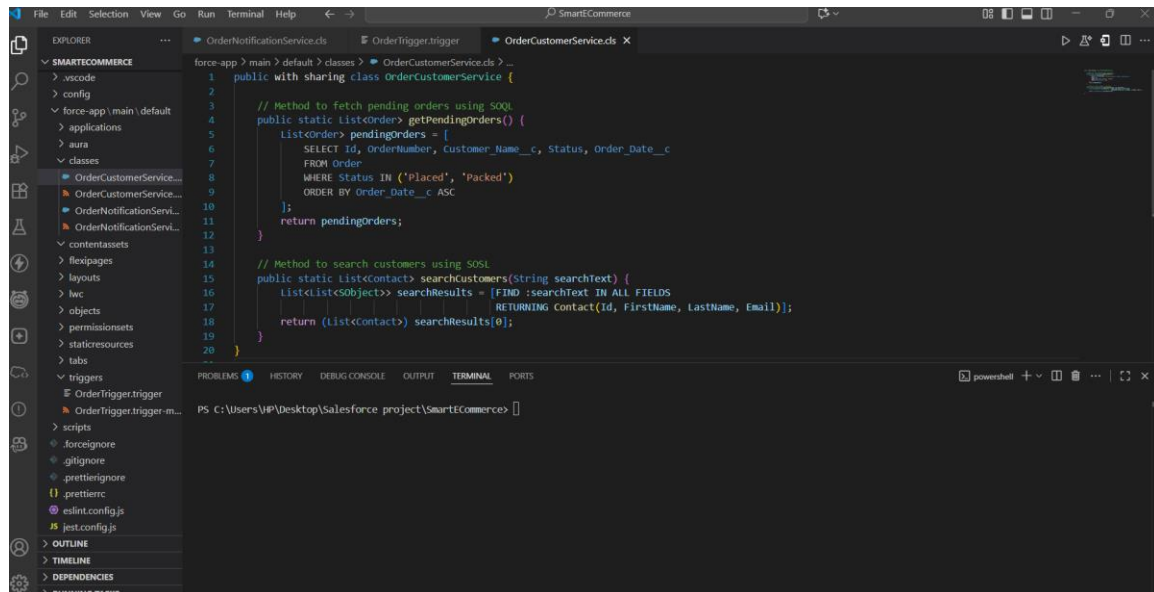
2. Apex Triggers

Trigger on Order object to update status and notify customers in real-time.



3. SOQL and SOSL Queries

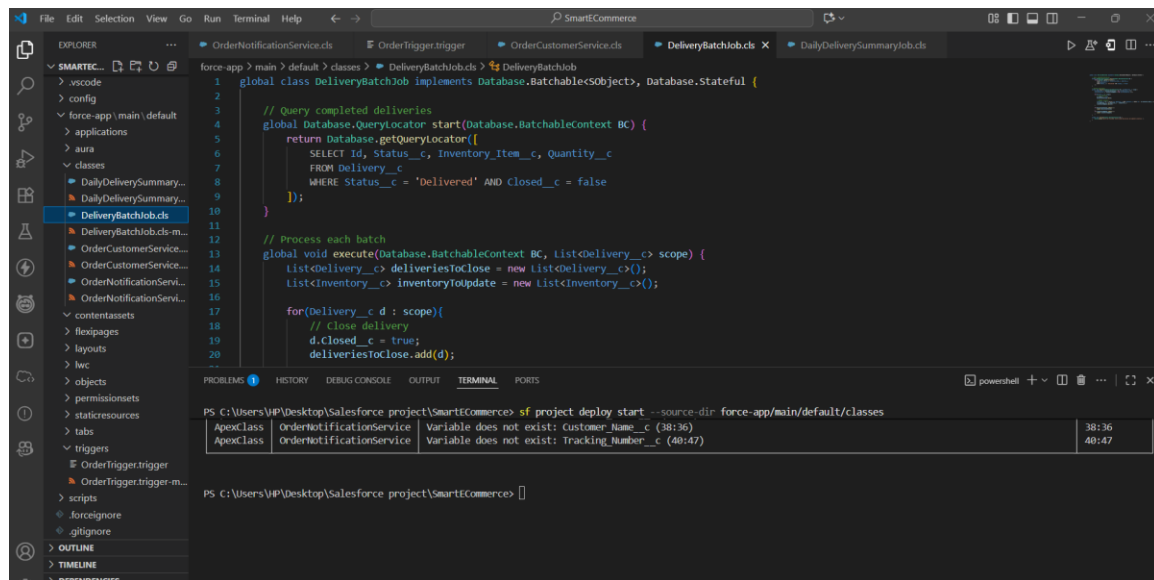
SOQL used to fetch pending orders; SOSL used to search customers by name or email quickly.



```
force-app > main > default > classes > OrderCustomerService.cls > ...
1 public with sharing class OrderCustomerService {
2
3     // Method to fetch pending orders using SOQL
4     public static List<Order> getPendingOrders() {
5         List<Order> pendingOrders = [
6             SELECT Id, OrderNumber, Customer_Name__c, Status, Order_Date__c
7             FROM Order
8             WHERE Status IN ('Placed', 'Packed')
9             ORDER BY Order_Date__c ASC
10        ];
11        return pendingOrders;
12    }
13
14    // Method to search customers using SOSL
15    public static List<Contact> searchCustomers(String searchText) {
16        List<Contact> searchResults = [FIND :searchText IN ALL FIELDS
17                                     RETURNING Contact(Id, FirstName, LastName, Email)];
18        return (List<Contact>) searchResults[0];
19    }
20 }
```

4. Batch Apex

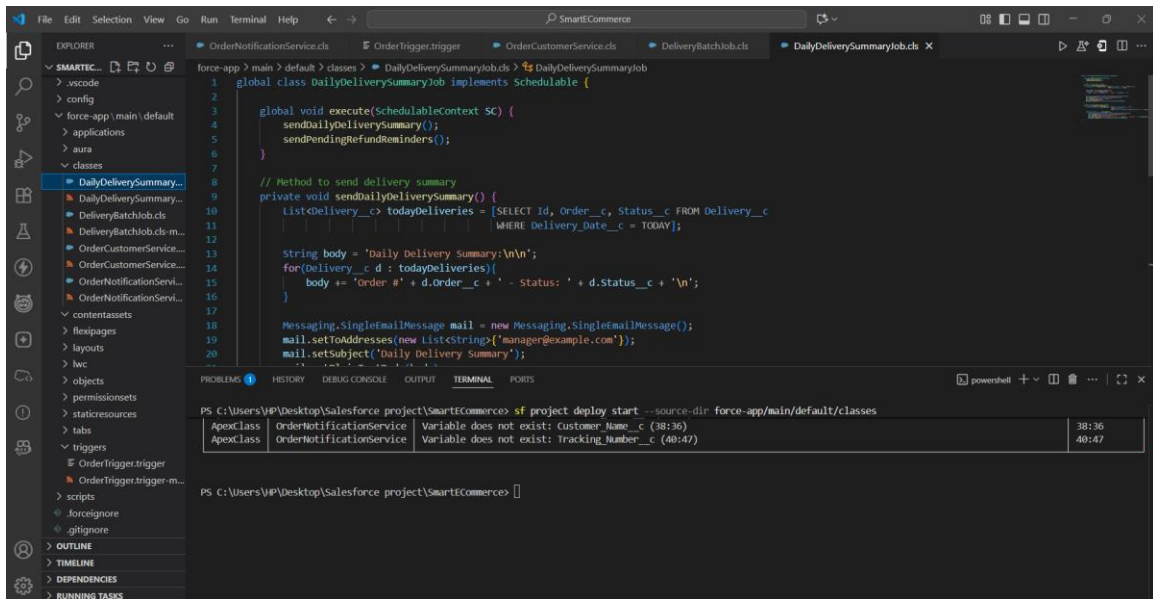
Batch job created to auto-close completed deliveries and update inventory records.



```
force-app > main > default > classes > DeliveryBatchJob.cls > ...
1 global class DeliveryBatchJob implements Database.Batchable<SObject>, Database.Stateful {
2
3     // Query completed deliveries
4     global Database.QueryLocator start(Database.BatchableContext BC) {
5         return Database.getQueryLocator([
6             SELECT Id, Status__c, Inventory_Item__c, Quantity__c
7             FROM Delivery__c
8             WHERE Status__c = 'Delivered' AND Closed__c = false
9         ]);
10    }
11
12    // Process each batch
13    global void execute(Database.BatchableContext BC, List<Delivery__c> scope) {
14        List<Delivery__c> deliveriesToClose = new List<Delivery__c>();
15        List<Inventory__c> inventoryToUpdate = new List<Inventory__c>();
16
17        for(Delivery__c d : scope){
18            // Close delivery
19            d.Closed__c = true;
20            deliveriesToClose.add(d);
21        }
22    }
23 }
```

5. Scheduled Apex

Scheduled job sends daily delivery summary and pending refund reminders.



6. Summary

Phase 5 implemented Apex automation for order tracking, notifications, refunds, and delivery updates ensuring reliability and efficiency in E-Commerce operations.