Phase 5 – Apex Programming (Developer)

Objective:
Implement basic Apex programming in Salesforce to automate Event revenue calculation and demonstrate Apex logic for documentation purposes. This includes an **Apex Trigger** and an **Apex Class**.

5.1 Apex Class – EventRevenueHandler

Class Name: EventRevenueHandler
Purpose:
Handles calculation and update of total revenue for Events based on Ticket bookings.

Class Code:

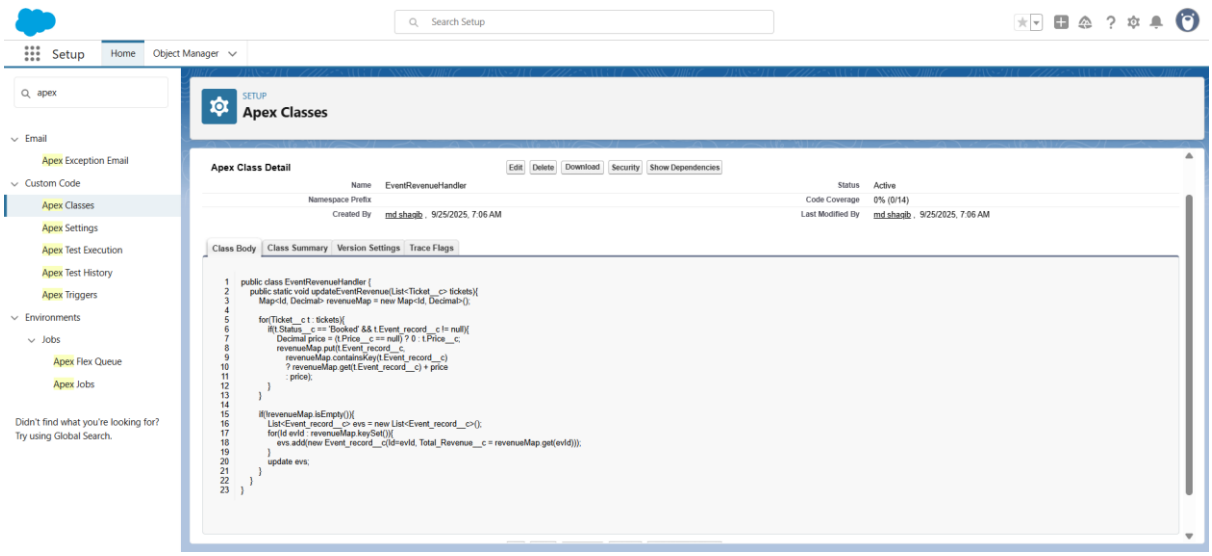
```
public class EventRevenueHandler {

   public static void updateEventRevenue(List<Ticket__c> tickets){

      // Map to store total revenue per Event

      Map<Id, Decimal> eventRevenueMap = new Map<Id, Decimal>();

      // Sum ticket prices per Event

      for(Ticket__c t : tickets){

         if(t.Event_record__c != null && t.Status__c == 'Booked'){

            if(!eventRevenueMap.containsKey(t.Event_record__c)){

               eventRevenueMap.put(t.Event_record__c, 0);

            }

            eventRevenueMap.put(t.Event_record__c, eventRevenueMap.get(t.Event_record__c) +
t.Price__c);

         }

      }

      // Update Event records

      List<Event_record__c> eventsToUpdate = new List<Event_record__c>();

      for(Id eventId : eventRevenueMap.keySet()){

         eventsToUpdate.add(new Event_record__c(

            Id = eventId,

            Total_Revenue__c = eventRevenueMap.get(eventId)

         ));

      }
```

```
 if(!eventsToUpdate.isEmpty()){
        update eventsToUpdate;
    }
  }
}
```

Explanation:

- Loops through Tickets
- Sums Price__c for booked tickets per Event
- Updates Total_Revenue__c field on Event

Screenshot:



5.2 Apex Trigger – TicketTrigger

Trigger Name: TicketTrigger
Object: Ticket__c
Trigger Events: after insert, after update
Purpose:
Calls the Apex class to update Event revenue whenever Tickets are booked.

Trigger Code:

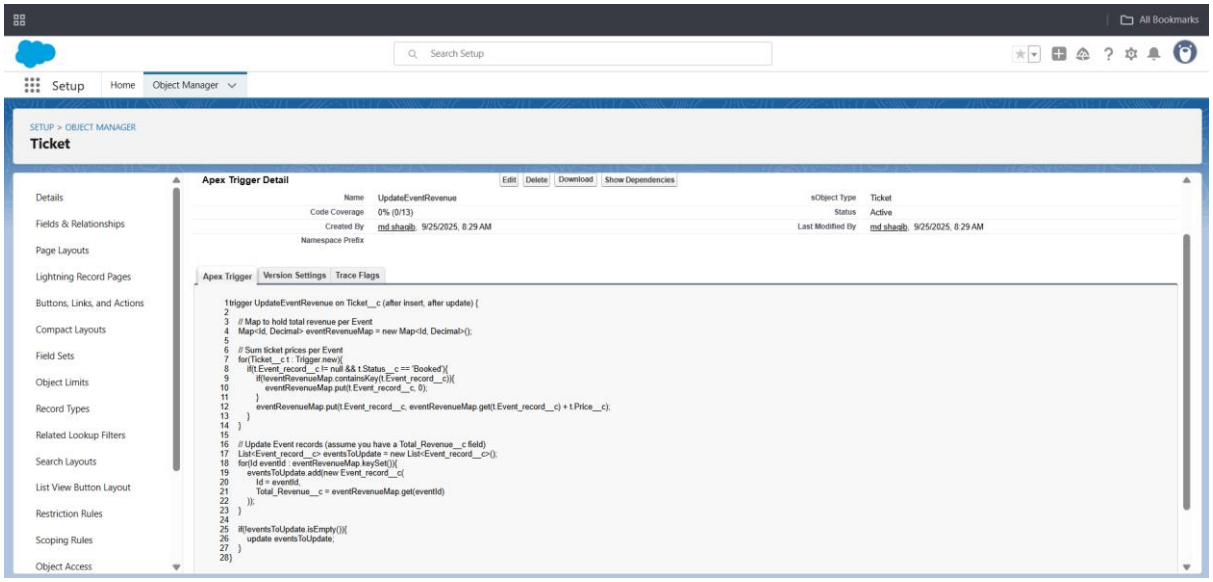
```
trigger TicketTrigger on Ticket__c (after insert, after update) {
    List<Ticket__c> bookedTickets = new List<Ticket__c>();
```

```
for(Ticket__c t : Trigger.new){
Ticket__c oldT = Trigger.isInsert ? null : Trigger.oldMap.get(t.Id);
      if(t.Status__c == 'Booked' && (Trigger.isInsert || (oldT.Status__c != 'Booked'))){
         if(t.Event_record__c != null) bookedTickets.add(t);
      }
   }
   if(!bookedTickets.isEmpty()){
      EventRevenueHandler.updateEventRevenue(bookedTickets);
   }
}
```

Explanation:

- Checks if Ticket is booked
- Calls EventRevenueHandler.updateEventRevenue
- Ensures only newly booked tickets trigger revenue update

Screenshot:



5.3 Test Apex – Create Event & Tickets

Purpose:
Demonstrates trigger and class working together. Creates Event and Tickets, then verifies Event revenue.

Execute Anonymous Snippet:

```
Event_record__c testEvent;

List<Event_record__c> events = [SELECT Id, Name, Total_Revenue__c FROM Event_record__c WHERE Name = 'Test Event' LIMIT 1];


if(events.isEmpty()){
    testEvent = new Event_record__c(
        Name = 'Test Event',
        Event_Date__c = Date.today(),
        Location__c = 'Hall A',
        Event_Type__c = 'Corporate',
        Number_of_Attendees__c = 100,
        Description__c = 'This is a test event',
        Total_Revenue__c = 0
    );
    insert testEvent;
} else {
    testEvent = events[0];
}


Ticket__c ticket1 = new Ticket__c(
    Name = 'Ticket 1',
    Event_record__c = testEvent.Id,
    Status__c = 'Booked',
    Price__c = 100,
    Attendee_Name__c = 'John Doe',
    Email__c = 'john.doe@example.com'
);


Ticket__c ticket2 = new Ticket__c(
    Name = 'Ticket 2',
```

```
    Event_record__c = testEvent.Id,
    Status__c = 'Booked',
    Price__c = 150,
    Attendee_Name__c = 'Jane Smith',
    Email__c = 'jane.smith@example.com'
);

List<Ticket__c> ticketsToInsert = new List<Ticket__c>{ticket1, ticket2};
insert ticketsToInsert;

// ----------------------------
// Verify Event Revenue
// ----------------------------
testEvent = [SELECT Id, Name, Total_Revenue__c FROM Event_record__c WHERE Id = :testEvent.Id];
System.debug('Event Total Revenue after inserting tickets: ' + testEvent.Total_Revenue__c);
```

Explanation:

- Creates a test Event (if not exists)
- Creates 2 booked Tickets linked to that Event
- Trigger calls the class to calculate and update **Total_Revenue__c** automatically
- Debug log confirms revenue update

Screenshot :