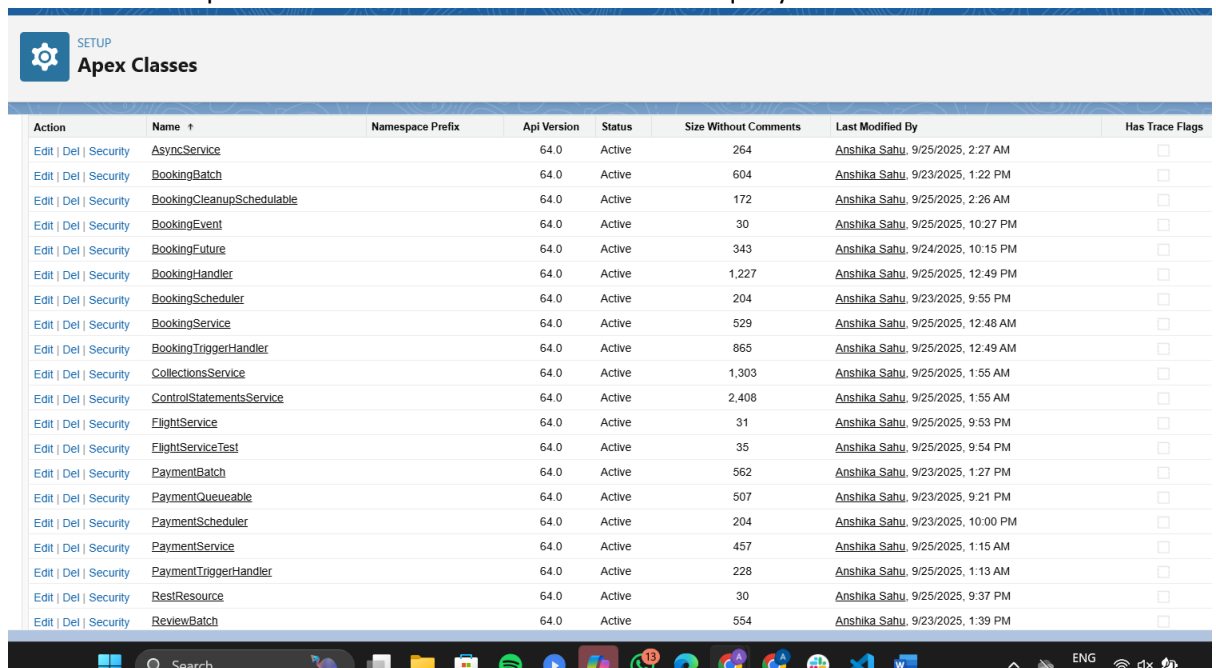


## Phase 5: Apex Programming (Developer)

### Travel and Tourism Management System

#### 1. Apex Classes & Objects

- Created Apex classes to manage business logic for Booking, Payment, and Notification processing.
- Designed classes with reusable methods to support automation and integration.
- Adhered to best practices such as bulkification and efficient query use.




The screenshot shows the 'Apex Classes' page in the Salesforce Setup console. The page has a header with a gear icon and the text 'SETUP Apex Classes'. Below the header is a table listing various Apex classes. Each row includes links for 'Edit', 'Del', and 'Security', followed by the class name, namespace prefix, API version, status, size without comments, last modified by, and last modified date. A 'Has Trace Flags' checkbox is at the end of each row. The classes listed include AsyncService, BookingBatch, BookingCleanupSchedulable, BookingEvent, BookingFuture, BookingHandler, BookingScheduler, BookingService, BookingTriggerHandler, CollectionsService, ControlStatementsService, FlightService, FlightServiceTest, PaymentBatch, PaymentQueueable, PaymentScheduler, PaymentService, PaymentTriggerHandler, RestResource, and ReviewBatch.

Action	Name ↑	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	AsyncService		64.0	Active	264	Anshika Sahu, 9/25/2025, 2:27 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingBatch		64.0	Active	604	Anshika Sahu, 9/23/2025, 1:22 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingCleanupSchedulable		64.0	Active	172	Anshika Sahu, 9/25/2025, 2:26 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingEvent		64.0	Active	30	Anshika Sahu, 9/25/2025, 10:27 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingFuture		64.0	Active	343	Anshika Sahu, 9/24/2025, 10:15 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingHandler		64.0	Active	1,227	Anshika Sahu, 9/25/2025, 12:49 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingScheduler		64.0	Active	204	Anshika Sahu, 9/23/2025, 9:55 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingService		64.0	Active	529	Anshika Sahu, 9/25/2025, 12:48 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	BookingTriggerHandler		64.0	Active	865	Anshika Sahu, 9/25/2025, 12:49 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	CollectionsService		64.0	Active	1,303	Anshika Sahu, 9/25/2025, 1:55 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	ControlStatementsService		64.0	Active	2,408	Anshika Sahu, 9/25/2025, 1:55 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	FlightService		64.0	Active	31	Anshika Sahu, 9/25/2025, 9:53 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	FlightServiceTest		64.0	Active	35	Anshika Sahu, 9/25/2025, 9:54 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	PaymentBatch		64.0	Active	562	Anshika Sahu, 9/23/2025, 1:27 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	PaymentQueueable		64.0	Active	507	Anshika Sahu, 9/23/2025, 9:21 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	PaymentScheduler		64.0	Active	204	Anshika Sahu, 9/23/2025, 10:00 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	PaymentService		64.0	Active	457	Anshika Sahu, 9/25/2025, 1:15 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	PaymentTriggerHandler		64.0	Active	228	Anshika Sahu, 9/25/2025, 1:13 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	RestResource		64.0	Active	30	Anshika Sahu, 9/25/2025, 9:37 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	ReviewBatch		64.0	Active	554	Anshika Sahu, 9/23/2025, 1:39 PM	<input type="checkbox"/>

#### 2. Apex Triggers (before/after insert/update/delete)

- Developed triggers on Booking and Payment objects.
- Triggers enforce validation, automate status updates, and handle related record creation.

- Followed trigger design patterns to centralize logic and improve maintainability.




SETUP

Apex Triggers

Apex Triggers

Help for this

This page allows you to view and modify all the triggers in your organization. To create a new trigger, navigate to the appropriate sObject triggers page.



Percent of Apex Used: 0.28%

You are currently using 17,078 characters of Apex Code (excluding comments and @isTest annotated classes) in your organization, out of an allowed limit of 6,000,000 characters. Note that the amount in use includes both Apex Classes and Triggers defined in your organization.

Compile all triggers

View: 

All

Create New View

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Developer Console

Apex Triggers - Salesforce - Developer Edition

Action	Name ↑	Namespace Prefix	sObject Type	Api Vers		Last Modified By	Has Trace	
<a href="#">Edit</a>   <a href="#">Del</a>	BookingChangeTrigger		Booking	64.0	Active	63	Anshika Sahu 9/25/2025, 11:16 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>	BookingEventTrigger		BookingEvent	64.0	Active	66	Anshika Sahu 9/25/2025, 10:45 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>	BookingTrigger		Booking	64.0	Active	448	Anshika Sahu 9/25/2025, 12:49 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>	PaymentTrigger		Payment	64.0	Active	170	Anshika Sahu 9/25/2025, 1:18 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>	ReviewTrigger		Review	64.0	Active	167	Anshika Sahu 9/25/2025, 1:18 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>	TourPackageTrigger		Tour_Package	64.0	Active	333	Anshika Sahu 9/25/2025, 1:20 AM	<input type="checkbox"/>

### 3. Trigger Design Pattern

- Implemented framework to separate trigger logic and handler classes.
- Enhanced scalability and testing ease.

### 4. SOQL & SOSL

- Utilized SOQL queries to fetch related data efficiently.
- Used SOSL for text search across objects like Customers and Packages.
- Optimized queries to prevent hitting governor limits.

### 5. Collections: List, Set, Map

- Employed collections for data handling in loops and bulk operations.
- Maps used for key-value pair storage for quick lookups.
- Sets ensured uniqueness in lists.

### 6. Control Statements

- Incorporated conditional logic with IF, ELSE statements to handle complex business rules.

- Used loops such as FOR and WHILE for iterative processes.

Apex Classes

Edit   Del   Security	<a href="#">BookingsScheduler</a>	64.0	Active	204	<a href="#">Anshika Sahu</a> , 9/23/2025, 9:55 PM
Edit   Del   Security	<a href="#">BookingService</a>	64.0	Active	529	<a href="#">Anshika Sahu</a> , 9/25/2025, 12:48 AM
Edit   Del   Security	<a href="#">BookingTriggerHandler</a>	64.0	Active	865	<a href="#">Anshika Sahu</a> , 9/25/2025, 12:49 AM
Edit   Del   Security	<a href="#">CollectionsService</a>	64.0	Active	1,303	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:55 AM
Edit   Del   Security	<a href="#">ControlStatementsService</a>	64.0	Active	2,408	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:55 AM
Edit   Del   Security	<a href="#">FlightService</a>	64.0	Active	31	<a href="#">Anshika Sahu</a> , 9/25/2025, 9:53 PM
Edit   Del   Security	<a href="#">FlightServiceTest</a>	64.0	Active	35	<a href="#">Anshika Sahu</a> , 9/25/2025, 9:54 PM
Edit   Del   Security	<a href="#">PaymentBatch</a>	64.0	Active	562	<a href="#">Anshika Sahu</a> , 9/23/2025, 1:27 PM
Edit   Del   Security	<a href="#">PaymentQueueable</a>	64.0	Active	507	<a href="#">Anshika Sahu</a> , 9/23/2025, 9:21 PM
Edit   Del   Security	<a href="#">PaymentScheduler</a>	64.0	Active	204	<a href="#">Anshika Sahu</a> , 9/23/2025, 10:00 PM
Edit   Del   Security	<a href="#">PaymentService</a>	64.0	Active	457	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:15 AM
Edit   Del   Security	<a href="#">PaymentTriggerHandler</a>	64.0	Active	228	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:13 AM
Edit   Del   Security	<a href="#">RestResource</a>	64.0	Active	30	<a href="#">Anshika Sahu</a> , 9/25/2025, 9:37 PM
Edit   Del   Security	<a href="#">ReviewBatch</a>	64.0	Active	554	<a href="#">Anshika Sahu</a> , 9/23/2025, 1:39 PM
Edit   Del   Security	<a href="#">ReviewQueueable</a>	64.0	Active	506	<a href="#">Anshika Sahu</a> , 9/23/2025, 9:32 PM
Edit   Del   Security	<a href="#">ReviewScheduler</a>	64.0	Active	201	<a href="#">Anshika Sahu</a> , 9/23/2025, 10:04 PM
Edit   Del   Security	<a href="#">ReviewService</a>	64.0	Active	476	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:08 AM
Edit   Del   Security	<a href="#">ReviewTriggerHandler</a>	64.0	Active	219	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:04 AM
Edit   Del   Security	<a href="#">SOQLService</a>	64.0	Active	1,110	<a href="#">Anshika Sahu</a> , 9/25/2025, 1:33 AM
Show me <a href="#">fewer</a> ▲ / ▼ <a href="#">more</a> records per list page					

## 7. Batch Apex

- Developed batch classes to process large data volumes like seasonal booking migrations.
- Scheduled batch execution to run during off-peak hours.

## 8. Queueable Apex

- Implemented queueable jobs for asynchronous processing of confirmations and notifications.

## 9. Scheduled Apex

- Scheduled jobs to send periodic payment reminders and follow-up tasks.

## 10. Future Methods

- Used future methods to execute non-blocking operations such as external API calls for booking confirmations.

## 11. Exception Handling

- Included try-catch blocks for robust error handling.
- Logging implemented to track exceptions during batch and asynchronous executions.

## 12. Test Classes

- Created comprehensive test classes covering all triggers, batch jobs, and utility classes.
- Achieved > 75% code coverage ensuring deployment readiness.
- Test data setup reflects real business scenarios.

## 13. Asynchronous Processing

- Leveraged asynchronous Apex to improve UI responsiveness and system throughput.

- Ensured adherence to Salesforce limits by queuing and batching processing tasks.