Phase 5: Apex Programming (Developer)

Travel and Tourism Management System

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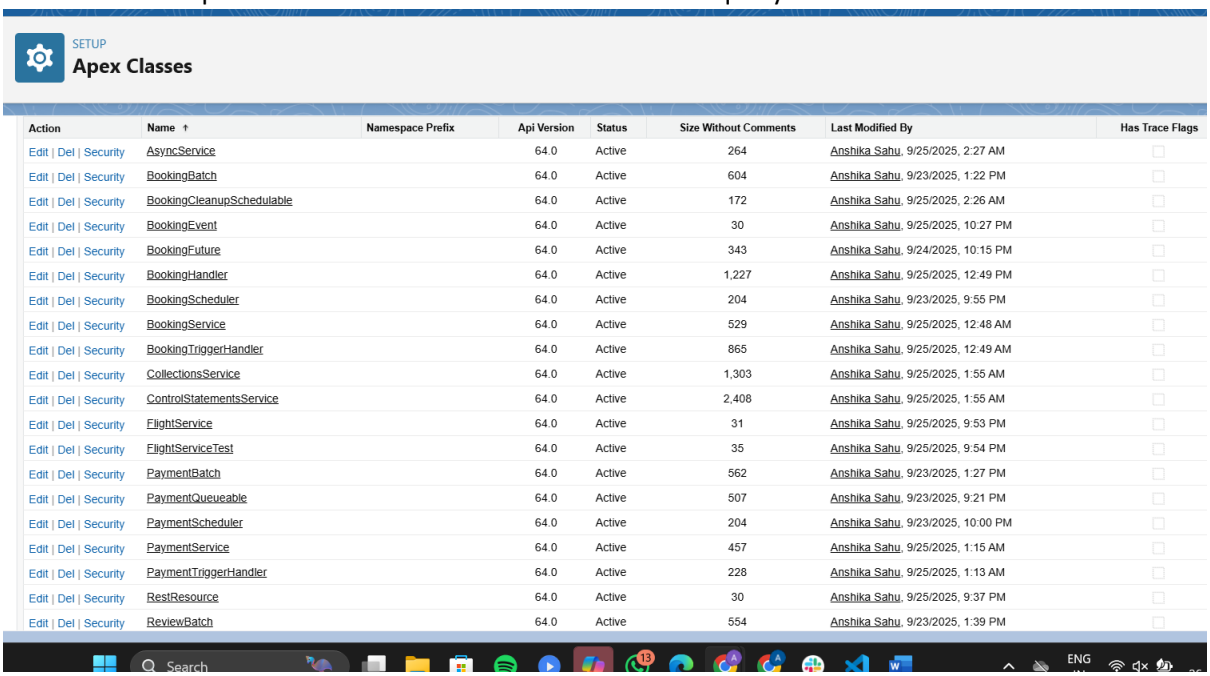
1. Apex Classes & Objects

- 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.



SETUP
Apex Classes

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Edit | Del | Security	BookingBatch		64.0	Active	604	Anshika Sahu, 9/23/2025, 1:22 PM	
Edit | Del | Security	BookingCleanupSchedulable		64.0	Active	172	Anshika Sahu, 9/25/2025, 2:26 AM	
Edit | Del | Security	BookingEvent		64.0	Active	30	Anshika Sahu, 9/25/2025, 10:27 PM	
Edit | Del | Security	BookingFuture		64.0	Active	343	Anshika Sahu, 9/24/2025, 10:15 PM	
Edit | Del | Security	BookingHandler		64.0	Active	1,227	Anshika Sahu, 9/25/2025, 12:49 PM	
Edit | Del | Security	BookingScheduler		64.0	Active	204	Anshika Sahu, 9/23/2025, 9:55 PM	
Edit | Del | Security	BookingService		64.0	Active	529	Anshika Sahu, 9/25/2025, 12:48 AM	
Edit | Del | Security	BookingTriggerHandler		64.0	Active	865	Anshika Sahu, 9/25/2025, 12:49 AM	
Edit | Del | Security	CollectionsService		64.0	Active	1,303	Anshika Sahu, 9/25/2025, 1:55 AM	
Edit | Del | Security	ControlStatementsService		64.0	Active	2,408	Anshika Sahu, 9/25/2025, 1:55 AM	
Edit | Del | Security	FlightService		64.0	Active	31	Anshika Sahu, 9/25/2025, 9:53 PM	
Edit | Del | Security	FlightServiceTest		64.0	Active	35	Anshika Sahu, 9/25/2025, 9:54 PM	
Edit | Del | Security	PaymentBatch		64.0	Active	562	Anshika Sahu, 9/23/2025, 1:27 PM	
Edit | Del | Security	PaymentQueueable		64.0	Active	507	Anshika Sahu, 9/23/2025, 9:21 PM	
Edit | Del | Security	PaymentScheduler		64.0	Active	204	Anshika Sahu, 9/23/2025, 10:00 PM	
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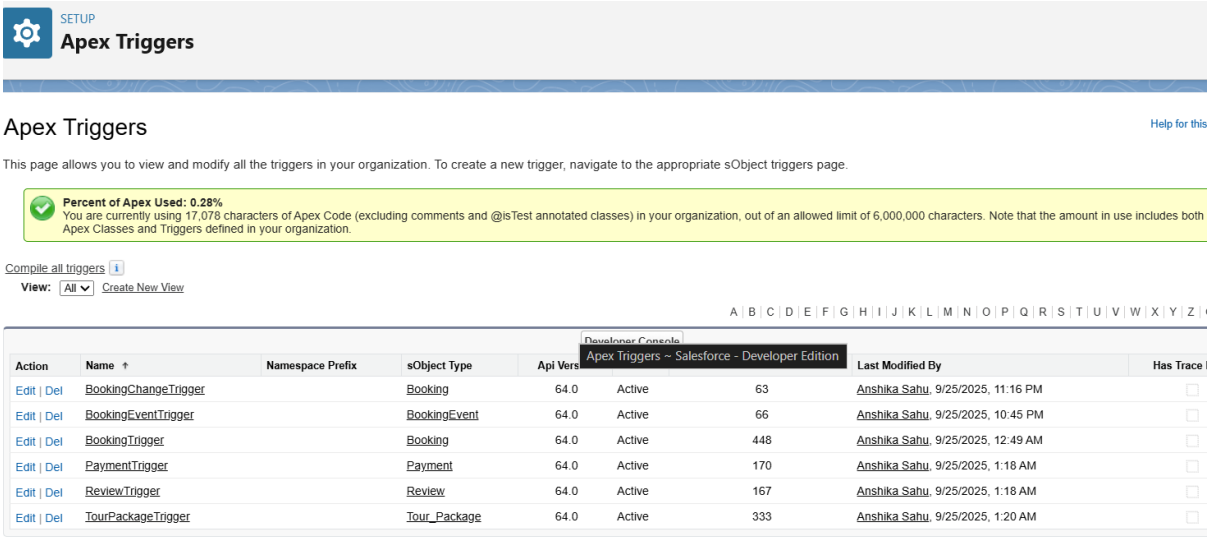
Edit | Del | Security	ReviewBatch		64.0	Active	554	Anshika Sahu, 9/23/2025, 1:39 PM	

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.



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.

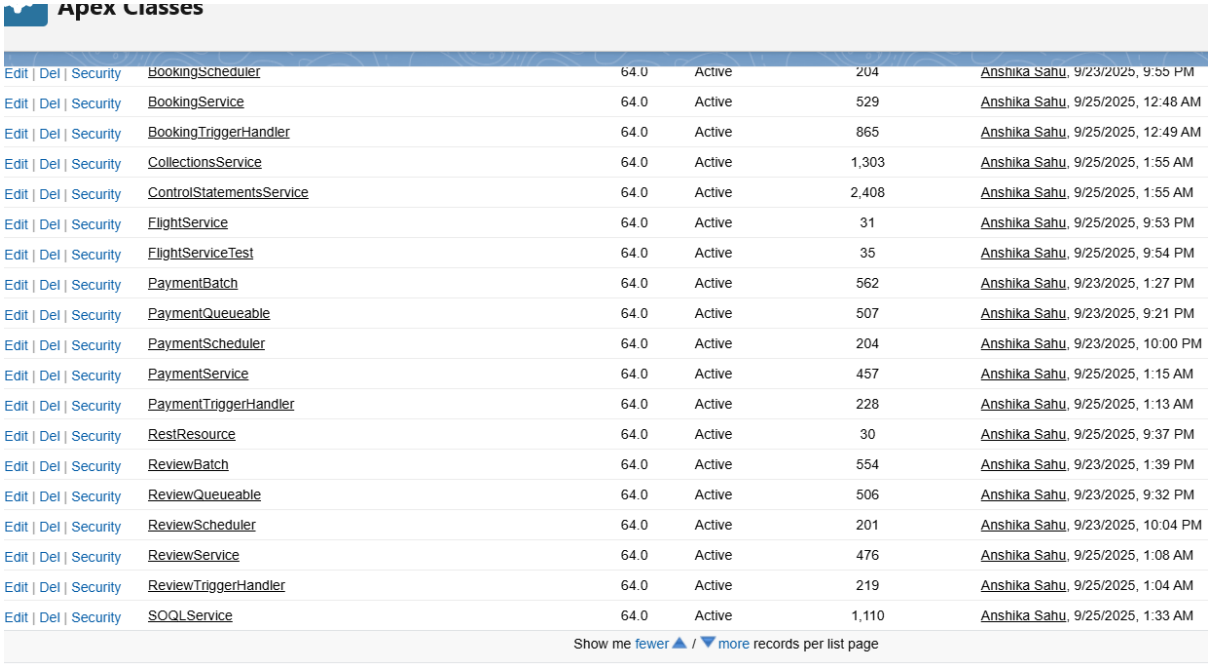
5. Collections: List, Set, Map

- 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

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Edit | Del | Security	BookingService	64.0	Active	529	Anshika Sahu, 9/25/2025, 12:48 AM
Edit | Del | Security	BookingTriggerHandler	64.0	Active	865	Anshika Sahu, 9/25/2025, 12:49 AM
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Edit | Del | Security	RestResource	64.0	Active	30	Anshika Sahu, 9/25/2025, 9:37 PM
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Show me fewer ▲ / ▼ more 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.