

## Phase 5 – Apex Programming (Developer Side)

### **Goal:**

Add advanced logic for booking rules.

### **Apex Triggers:**

Trigger on Rental\_Booking\_\_c: prevent overlapping bookings for same car.

### **Handler Class:**

Use RentalBookingHandler class for clean design. Checks overlaps and throws error.

### **SOQL & Logic:**

Query bookings for the same car with date overlaps. Use Sets/Maps for efficiency.

### **Test Classes:**

Insert valid booking, try overlapping booking (fail), try non-overlapping (pass). Achieve  $\geq 75\%$  code coverage.

### **Asynchronous Apex (Future Enhancements):**

- Batch Apex: Mark overdue rentals. - Queueable Apex: Process bulk discounts. - Scheduled Apex: Daily booking summary. - Future Methods: Call external APIs.