Airline Management System Project

Continuation Report (Phase 3 – Phase 10)

Phase 3: Data Modeling & Schema Design

- Created Custom Objects: Airline__c

Flight__c

- Passenger__c

SETUP > OBJECT MANAGER

Passenger

	Details
	Fields & Relationships
	Fields & Relationships
	Page Layouts
	Lightning Record Pages
	Buttons, Links, and Actions
	Compact Layouts
	Field Sets
	Object Limits
	Record Types
	Related Lookup Filters
	Search Layouts

Fields & Relationships
7 Items, Sorted by Field Label

Quick Find

FIELD LABEL	FIELD NAME	DATA TYPE	CON
Created By	CreatedById	Lookup(User)	
Email	Email__c	Email	
ID Proof	ID_Proof__c	Picklist	
Last Modified By	LastModifiedById	Lookup(User)	
Owner	OwnerId	Lookup(User,Group)	
Passenger Name	Name	Text(80)	
Phone	Phone__c	Phone	

- Booking__c

SETUP > OBJECT MANAGER

Booking

	Details
	Fields & Relationships
	Fields & Relationships
	Page Layouts
	Lightning Record Pages
	Buttons, Links, and Actions
	Compact Layouts
	Field Sets
	Object Limits
	Record Types
	Related Lookup Filters
	Search Layouts
	List View Button Layout
	Restriction Rules

Fields & Relationships
10 Items, Sorted by Field Label

Q Qu

FIELD LABEL	FIELD NAME	DATA TYPE
Booking ID	Booking_ID__c	Auto Number
Booking Name	Name	Text(80)
Booking Status	Booking_Status__c	Picklist
Created By	CreatedById	Lookup(User)
Flight	Flight__c	Lookup(Flight)
Last Modified By	LastModifiedById	Lookup(User)
Owner	OwnerId	Lookup(User,Group)
Passenger	Passenger__c	Lookup(Passenger)
Payment Status	Payment_Status__c	Picklist

Defined Relationships: Flight__c linked to Airline__c, Booking__c linked to Passenger__c and Flight__c.
Added key Fields: Flight Number, Source, Destination, Departure Time, Seats Available, Flight Type. <mark>This is cover in my screenshort</mark>
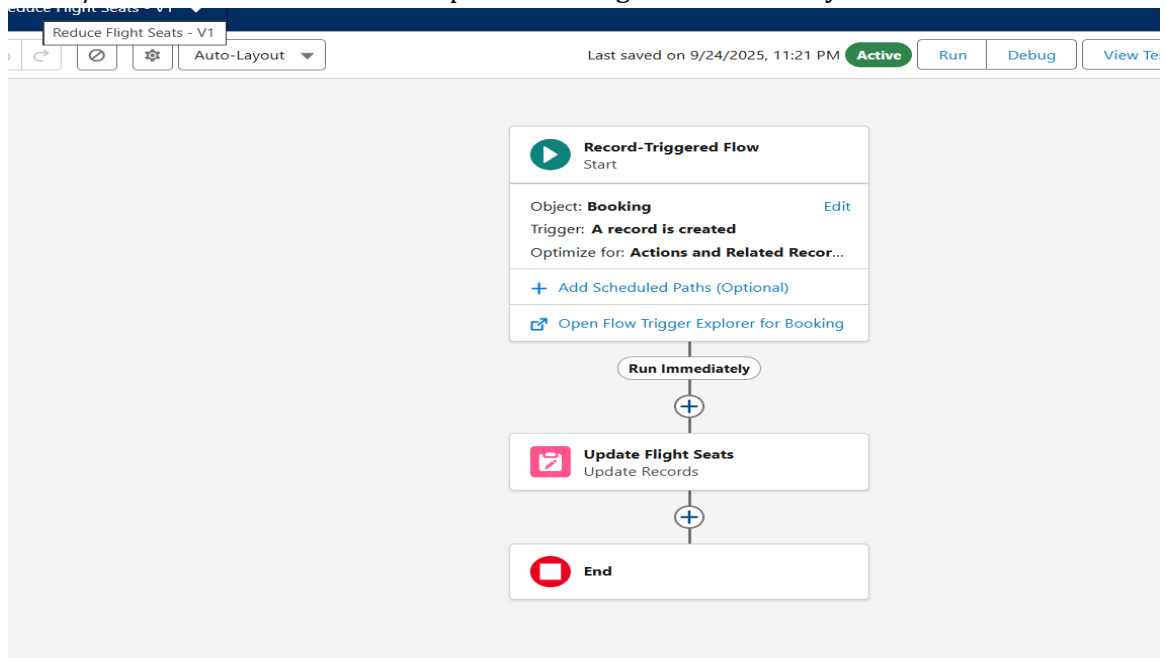
- Ensured schema supports bookings, cancellations, and reporting.
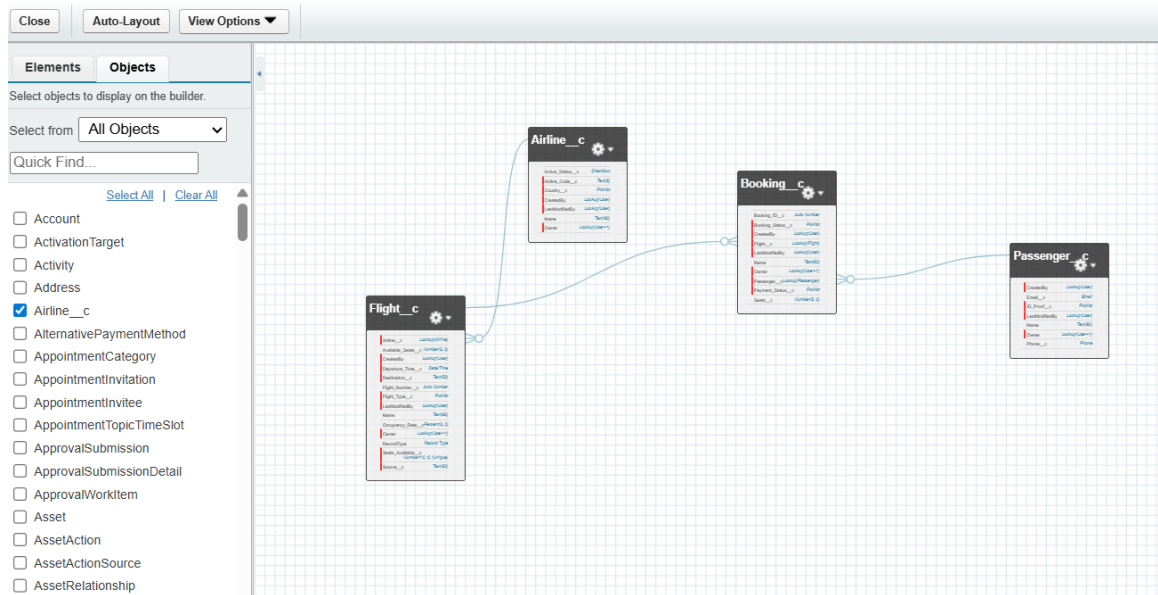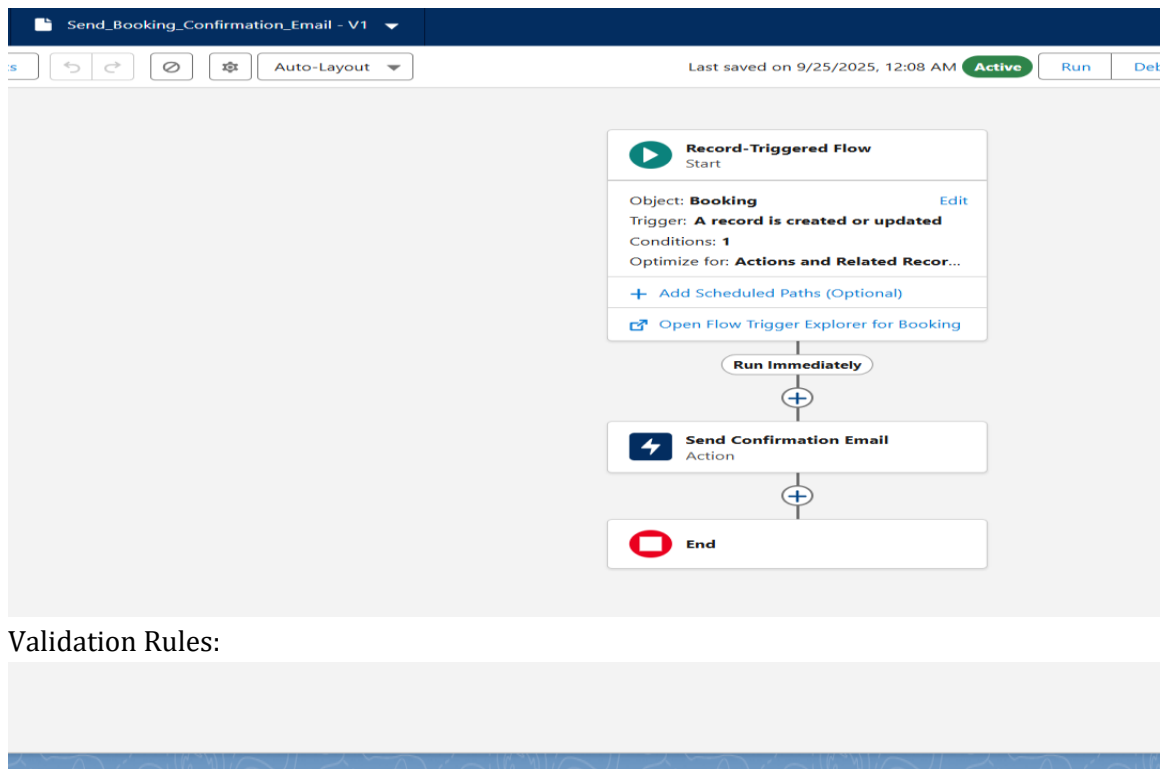

Phase 4: Automation (Flows & Validation Rules)

- Flows/Process Automation: Auto-update Booking status when Payment is Confirmed.

Send confirmation email after booking approval.

- Validation Rules:

Booking Validation Rule

Back to Booking

Validation Rule Detail   Edit   Clone

Rule Name	Prevent_Overbooking	Active	✓
Error Condition Formula	Flight__r.Seats_Available__c <= 0		
Error Message	No seats available for this flight.	Error Location	Booking Name
Description			
Created By	Himanshu Kahalkar, 9/24/2025, 8:03 AM	Modified By	Himanshu Kahalkar, 9/24/2025, 8:03 AM

Edit   Clone

- Approval Process: Cancellations require Manager approval.

SETUP
Approval Processes

Approval Processes
Booking: Booking Cancellation Approval
« Back to Approval Process List

Process Definition Detail   [Edit ▾] [Clone] [Deactivate]

Process Name	Booking Cancellation Approval	Active	✓
Unique Name	Booking_Cancellation_Approval	Next Automated Approver Determined By	Manager of Record Submitter
Description			
Entry Criteria	Booking: Booking Status EQUALS Cancellation Requested		
Record Editability	Administrator **ONLY**	Allow Submitters to Recall Approval Requests	☐
Approval Assignment Email Template			
Initial Submitters	Booking Owner		
Created By	Himanshu Kahalkar, 9/24/2025, 12:06 PM	Modified By	Himanshu Kahalkar, 9/25/2025, 2:40 AM

Initial Submission Actions ℹ️   [Add Existing] [Add New ▾]

Action	Type	Description
	Record Lock	Lock the record from being edited

Approval Steps ℹ️   Approval Processes: Booking: Booking Cancellation Approval ~ Salesforce - Developer Edition

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Show Actions	Edit	1	Step 1			Manager	Final Rejection

Phase 5: Apex Programming (Optional Enhancement)

- Developed PaymentGatewayService Apex class for payment gateway simulation.

Apex Classes

Apex Class
PaymentGatewayService

Apex Class Detail   [Edit] [Delete] [Download] [Security]

Name	PaymentGatewayService
Namespace Prefix	
Created By	Himanshu Kahalkar, 9/25/2025, 5:15 AM

Class Body | Class Summary | Version Settings | Trace Flags

```
 1   public with sharing class PaymentGatewayService {
 2       @future(callout=true)
 3       public static void callPaymentGateway() {
 4           Http http = new Http();
 5           HttpRequest req = new HttpRequest();
 6
 7           // Use the Named Credential instead of hardcoding the URL
 8           req.setEndpoint('callout:PaymentGateway');
 9           req.setMethod('GET');                        Salesforce - Developer Edition
10
11           HttpResponse res = http.send(req);
12
13           System.debug('Response Status: ' + res.getStatusCode());
14           System.debug('Response Body: ' + res.getBody());
15       }
16   }
```

- Created triggers and classes for custom logic (Booking updates, Batch jobs).

FlightOccupancyBatchSchedulerTest

Apex Class Detail   [Edit] [Delete] [Download] [Run Test] [Show Depender]

Name	FlightOccupancyBatchSchedulerTest
Namespace Prefix	
Last Modified By	Himanshu Kahalkar , 9/25/2025, 3:52 AM

Class Body | Class Summary | Version Settings | Trace Flags

```
1    @isTest
2    private class FlightOccupancyBatchSchedulerTest {
3
4        @isTest
5        static void testSchedulerRunsBatch() {
6            Test.startTest();
7            String CRON = '0 0 2 * * ?'; // 2 AM daily
8            System.schedule('Test Daily Flight Batch', CRON, new FlightOccupancyBatchScheduler());
9            Test.stopTest();
10
11           // Just checking no exception, Salesforce will run the batch
12           System.assert(true, 'Scheduler executed successfully');
13       }
14   }
```

- Ensured unit test coverage ≥ 75% for deployment compliance.

SETUP
Apex Test Execution

Apex Test Execution

Click Select Tests to choose one or more Apex unit tests and run them. To see the current code coverage for an individual class or your org

[Select Tests...] [Developer Console] [Options...] View Test History

[Abort]

☑	Status	Class	Result
		Test Run: 2025-09-25 09:27:28, hkahalkar55694@agentforce.com, (2 test classes run)	
	✔	[View] FlightOccupancyBatchSchedulerTest	(1/1) Test Methods Passed
	✔	[View] FlightOccupancyBatchTest	(1/1) Test Methods Passed

Detail	Duration	Class	Method	Pass/Fail	Error Message
[View]	0:01	FlightOccupancyBatchTes	testBatchExecution	Pass	

Phase 6: User Interface Development

- Created Lightning App: Airline Management System with tabs for Airlines, Flights, Passengers, Bookings.
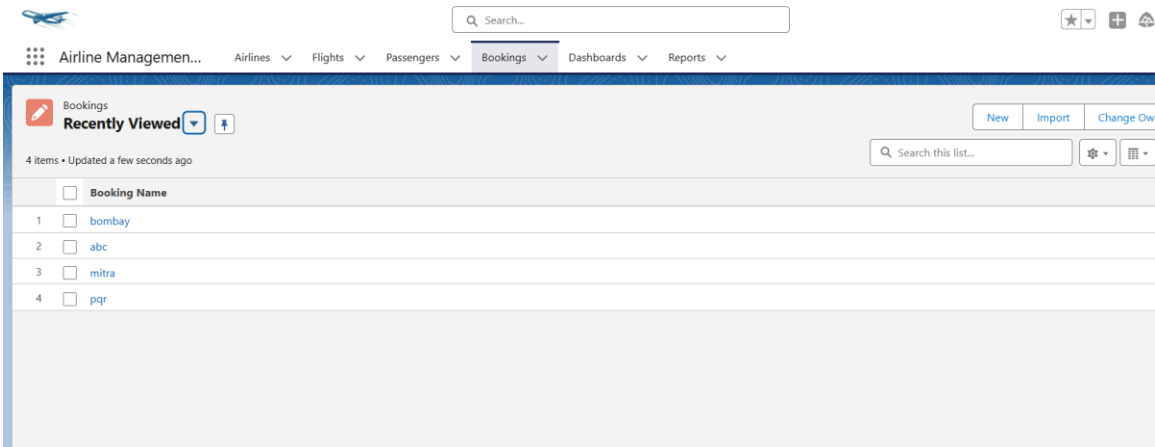
- Customized Page Layouts to show related records (Bookings on Flight, Passengers on Booking).

- Added Quick Action: 'Book Flight' button on Passenger record.
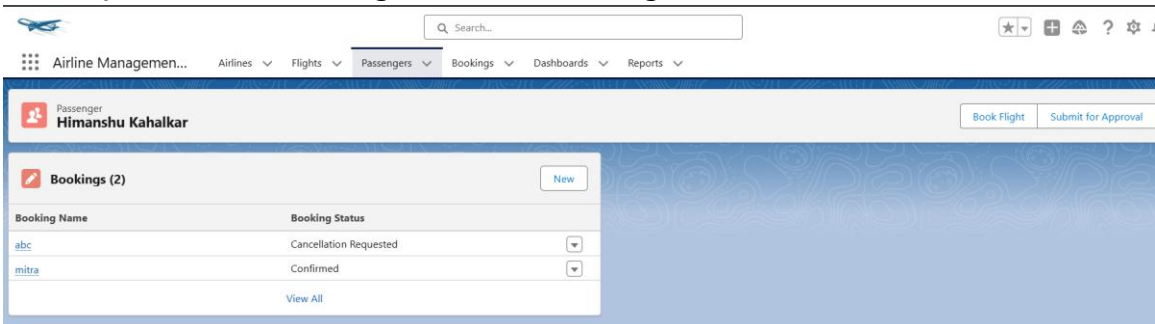
Phase 7: Integration & External Access

- Configured Named Credentials for external services.

- Implemented Payment Gateway callouts with secure authentication.

Phase 8: Data Management & Deployment

- Imported data using Data Loader (Airlines → Flights → Passengers).

- Created Duplicate Rules to prevent duplicate passengers by Email + Passport.

Phase 9: Reporting, Dashboards & Security Review

- Reports: Flight Occupancy
    Bookings per Airline
    Cancellations.

- Dashboards: Admin Dashboard (Revenue, Occupancy, Bookings), Flight Dashboard (Cancellations).

- Security: Field-level security for sensitive fields, Setup Audit Trail enabled

- Admin Login IP restrictions configured.