• ☐ Salesforce Airline Management System AMS (Developer Edition – Free Org) Phase 1: Problem Understanding & Industry Analysis Scope small: focus on Ticket Booking, Flight Scheduling, Passenger Management, Refund Requests. Stakeholders in Dev Org → Admin (you) Booking Agent (internal user) Passenger (Customer Community not available  $\rightarrow$  use Contact records). Keep use cases simple: single airline, limited routes, 1–2 demo flights. Phase 2: Org Setup & Configuration Edition: Developer Edition (free). Company profile → Skyline Airlines. Users → Admin + 1 Booking Agent (max allowed). Roles & Profiles → Admin Airline Staff (Agent) Passenger (use Contact records only, no login). OWD → Bookings private, Flights public. No sandbox → use Change Sets in same org or unmanaged package for backup/demo.

Phase 3: Data Modeling & Relationships

Use Custom Objects (all free in Dev Org):

Flight □ (Custom) Passenger □ (Contact with extra fields) Booking  $\square$  (Junction  $\rightarrow$  Flight  $\leftrightarrow$  Passenger) Ticket □ (Custom, lookup Booking) Payment □ (Custom, lookup Booking)

# Relationships:

- Flight → Booking (Master-Detail).
- Passenger → Booking (Lookup).
- Ticket  $\rightarrow$  Booking (Lookup).

☐ Keep it lean → Don't model Crew, Airport, Loyalty unless needed (to save object/field limits).

### Phase 4: Process Automation

- Validation Rule: Prevent booking if flight capacity full.
- Flow Builder (instead of Workflow, since Workflow is legacy):
- Auto-create Ticket after Booking confirmed.
- Send Email Alert (Booking Confirmation).
- Auto-cancel Booking if not paid in 24 hrs (Scheduled Flow).

## Phase 5: Apex Programming

## In Dev Edition, Apex is free:

- Trigger: Update available seats after booking.
- Trigger: Prevent duplicate booking.
- Batch Apex: Archive old flights (demo with a few test records).
- Future Method: Send async notifications (just log in debug).
- Test Classes: Write basic unit tests to ensure 75%+ coverage.

Phase 6: User Interface

- Lightning App Builder → Airline Agent Console (1 App).
- Record Page → Passenger 360 view (Bookings, Tickets, Payments related lists).
- LWC Components (basic):
- Flight Search
- Seat Selection (demo only, no full seat map).
- Flight Status Board (show random status).

Phase 7: Integration

Developer Edition has API access, but limited daily calls:

- Mock external integration (instead of real payment gateway).
- Create a REST Apex Class for "Book Flight" API (for demo).
- Use Platform Events → Flight delay alerts.

Phase 8: Data Management

- Import sample data with Data Import Wizard (since storage is limited).
- 10 demo Flights, 20 demo Passengers.
- Use Duplicate Rules for Passengers.
- No sandbox → Use Unmanaged Package for backup.

Phase 9: Reporting & Security

- Reports:
- Bookings by Flight
- Revenue by Flight

- Passenger Trends
- Dashboard:
- Flight Occupancy (use chart)
- Monthly Revenue
- Security:
- Role Hierarchy (Admin > Agent).
- Login IP not needed (1 org user).
- Audit Trail → enabled.

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## Phase 10: Demo & Presentation

- End-to-End Demo (inside free org):
- Passenger record → Book flight → Confirm → Ticket auto-created → Payment recorded.
  - Show Flow + Trigger execution (capacity check, seat update).
  - Dashboards → Flight Occupancy & Revenue.
- $\bullet \qquad \text{Deliverables} \to \text{ERD, Flow screenshots, Apex test coverage, dashboard} \\ \text{screenshots.}$