Airline Management System – Salesforce Implementation

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Introduction

This document describes the features, design, and implementation details of the Airline Management System built using Salesforce. The project is covered across two video parts. It aims to manage airline operations such as flights, flight schedules, pilot scheduling, bookings and related entities, using Salesforce objects, relationships, automation, and UI elements.

Project Overview & Objectives

The Airline Management System (AMS) is intended to model key airline operations: flights, schedules, pilots, pilot schedules, status tracking, and optionally bookings. The system uses Salesforce's declarative capabilities like custom objects, relationships, validation rules, and automation to enforce business rules and statuses.

Objective	Description
Maintain and manage flight details	Flight name/ID, airline company, etc.
Manage flight scheduling	Source, destination, departure & arrival times, status, duration etc.
Pilot management	Keeping track of pilot details and assigning them to flight schedules.
Automate status transitions	Status moves: Open → In Progress → Closed/Cancelled.
Notifications / Alerts	Email alerts for events like schedule creation, status change.
Reporting & Dashboard	Visual summaries of flights and schedules.

System Design & Implementation Details

Data Model:
- Flight – Contains Flight ID, Flight Name, Airline Company.
- Flight Schedule – Linked to Flight, includes Source, Destination, Times, Duration, Status.
- Pilot – Stores pilot personal details.
- Pilot Schedule – Links pilots to flight schedules.

Business Rules:
- Source and Destination must not be the same.
- Departure time must be before arrival time.
- Default status is "Open".
- Age of pilot must be ≥ 18.

Automation & Notifications:

- Flows/Workflows for alerts when schedules are created, changed, or cancelled.
Reporting & Dashboards:
- Dashboards showing daily flights and schedule statuses.

Challenges, Enhancements & Conclusion

Challenges:
- Scheduling conflicts.
- Data consistency.
- Managing permissions.

Possible Enhancements:
- Passenger bookings and payments.
- Real-time tracking and API integration.
- Mobile-friendly UI.
- Advanced analytics and dashboards.

Conclusion:
The Airline Management System demonstrates Salesforce capabilities for managing airline operations with structured data models, automation, and dashboards. With enhancements, it can evolve into a complete airline management platform.