Data Flow Diagrams And User Stories

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Team ID: LTVIP2025TMID30597

Project Name: Airline Management System

Maximum Marks: 4 Marks

Abstract

The Airline Management System, built on the Salesforce platform, is designed to streamline the management of flights, reservations, and passenger information. It enables airlines to efficiently manage their fleet, schedule flights, allocate seats, and process bookings. Key functionalities include ticket reservations, seat availability checks, passenger check-ins, and baggage handling. The system also supports automated notifications and alerts to facilitate communication between airlines, airports, and passengers. Leveraging Salesforce's Lightning App, custom objects, and automation tools (Apex, Flows), the system provides a user-friendly interface and robust database management to optimize workflows, enhance customer satisfaction, and ensure seamless operations across the airline industry.

Hardware Required

- A laptop or computer with a stable internet connection.

Software Required

- A Salesforce account or organization (e.g., Developer Edition or Enterprise Edition).

Data Flow Diagrams

A Data Flow Diagram (DFD) visually represents the flow of information within a system, showing how data enters, is processed, stored, and exits the system. Below are the Context Diagram (Level 0) and Level 1 DFD for the Airline Management System.

Context Diagram (Level 0)

The Context Diagram represents the Airline Management System as a single process interacting with external entities.

External Entities:
- Passenger
- Agent
- Admin
- Manager

Text-based Representation:
[Passenger] --> (Booking Request, Passenger Details, Check-in Request) --> [Airline Management System]
[Agent] --> (Flight Details, Booking Updates, Crew Assignments) --> [Airline Management System]
[Admin] --> (User Config, Profile/Role Setup) --> [Airline Management System]
[Manager] --> (Report/Dashboard Requests) --> [Airline Management System]
[Airline Management System] --> (Booking Confirmation, Notifications, Boarding Pass) --> [Passenger]
[Airline Management System] --> (Flight Schedules, Booking Status) --> [Agent]
[Airline Management System] --> (Reports, Dashboards) --> [Manager]

Level 1 DFD

Breaks down the system into key processes, data stores, and data flows using Salesforce objects and milestones.

Processes include Manage Bookings, Manage Flights, Manage Passengers, Manage Crew, User Management, Reporting & Analytics, Automation, and User Adoption Tracking.

Text-based Representation:
[Passenger] --> (Booking Request) --> [1. Manage Bookings] --> (Store Booking) --> [D3: Booking__c]
[Passenger] --> (Check-in Request) --> [1. Manage Bookings] --> (Update Booking Status) --> [D3: Booking__c]
[Agent] --> (Flight Details) --> [2. Manage Flights] --> (Store Flight) --> [D1: Flight__c]
[Agent] --> (Passenger Info) --> [3. Manage Passengers] --> (Store Passenger) --> [D2: Passenger__c]
[Agent] --> (Crew Assignment) --> [4. Manage Crew] --> (Store Crew) --> [D4: Crew__c]
[Admin] --> (User Config) --> [5. User Management] --> (Store User Data) --> [D5: User]
[Manager] --> (Report Request) --> [6. Reporting & Analytics] --> (Store Report) --> [D6: Report/Dashboard]
[1. Manage Bookings] --> (Trigger Automation) --> [7. Automation] --> (Update Booking Status) --> [D3: Booking__c]
[7. Automation] --> (Run Flow/Apex) --> [D1, D2, D3, D4] (Cross-object updates)
[8. User Adoption Tracking] --> (Monitor Usage) --> [D5: User]
[1. Manage Bookings] --> (Booking Confirmation, Boarding Pass) --> [Passenger]

[6. Reporting & Analytics] --> (Reports, Dashboards) --> [Manager]
[2. Manage Flights] --> (Flight Schedules) --> [Agent]

User Stories

Below are the user stories for the Airline Management System, aligned with the project's functionalities and Salesforce features.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Passenger (Mobile/Web User)	Registration	USN-1	As a passenger, I can register for the Airline Management System by entering my email, password, and confirming my password via the Lightning App.	I can access my dashboard in the Lightning App after registration.	High	Sprint-1
Passenger (Mobile/Web User)	Booking	USN-3	As a passenger, I can book a flight by selecting a flight and entering my details via the Bookings tab.	A booking record is created in Booking__c, and I receive a confirmation notification.	High	Sprint-1
Admin (Web User)	Automation	USN-14	As an admin, I can create a Flow to automate booking approvals.	A Flow is configured, and bookings are auto-approved based on criteria.	Medium	Sprint-2

Notes

- DFDs: Visualize using Lucidchart or Visio. Circles = processes, rectangles = entities, open rectangles = data stores.
- User Stories: Cover core functionality; more can be added on request.
- Salesforce Features: Includes custom objects, tabs, Lightning App, Apex, Flows, profiles, roles, reports, dashboards.
- Team ID/Project Name: Fill in as needed.