

Requirement Analysis

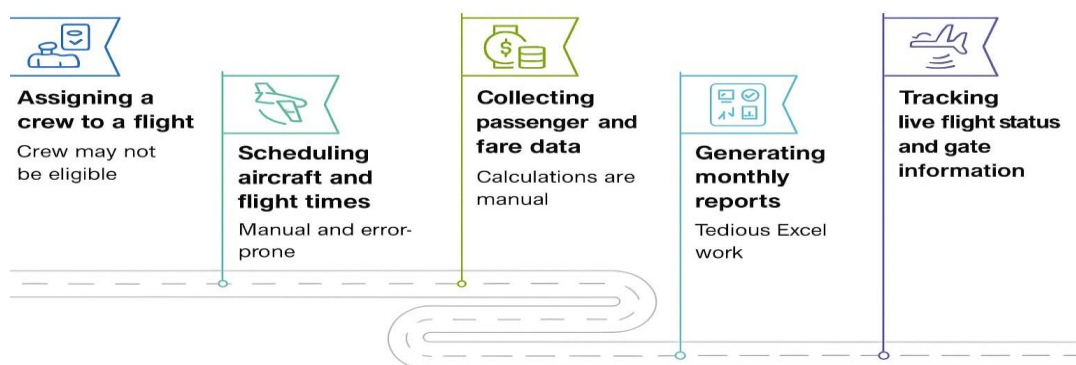
The Requirement Analysis Phase focuses on collecting, organizing, and validating everything your system needs to accomplish. It ensures that the solution you're building is not only technically sound but also directly aligned with what your stakeholders (airlines departments, pilots, ground crew and flight managers) truly need. In our project, "Airlines management system," this phase helped bridge the gap between problem understanding and system design, using real user journeys, data flows, and solution requirements. Where user-centric planning meets technical clarity to transform a problem into a buildable solution.

◆ Customer Journey Map-Understanding User Experience Flow

Purpose: The **Customer Journey** Map visualizes how airlines employees (e.g., Ground operation Managers, Admins, Pilots, Cabin crew) interact with the transport system daily. It highlights key actions, pain points, and opportunities for improvement, guiding CRM design from a real-world usage perspective.

Journey Steps (For an Airline Admin):

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This journey helped prioritize features like formula fields, validation rules, and real-time dashboards in our object and flow design.

◆ Data Flow Diagram

Purpose: Mapping Information Flow Between Objects

The Data Flow Diagram (DFD) models how information moves between Salesforce objects and components in the Airlines management system. It helped us structure relationships between:

- Airport, Airplane, Flight, Employee, and Ticket Fare

Level 1 DFD Overview:

1. Admin Inputs:

- Adds airplane, airport, and flight details
- Assigns pilots and cabin crew (from Employee object)

2. System Logic:

- Validates employee role (Pilot or Cabin crew)
- Fetches fare via flow based on flight route and airplane model
- Calculates total fare using formula (Passenger Count x Fare)

3. Outputs:

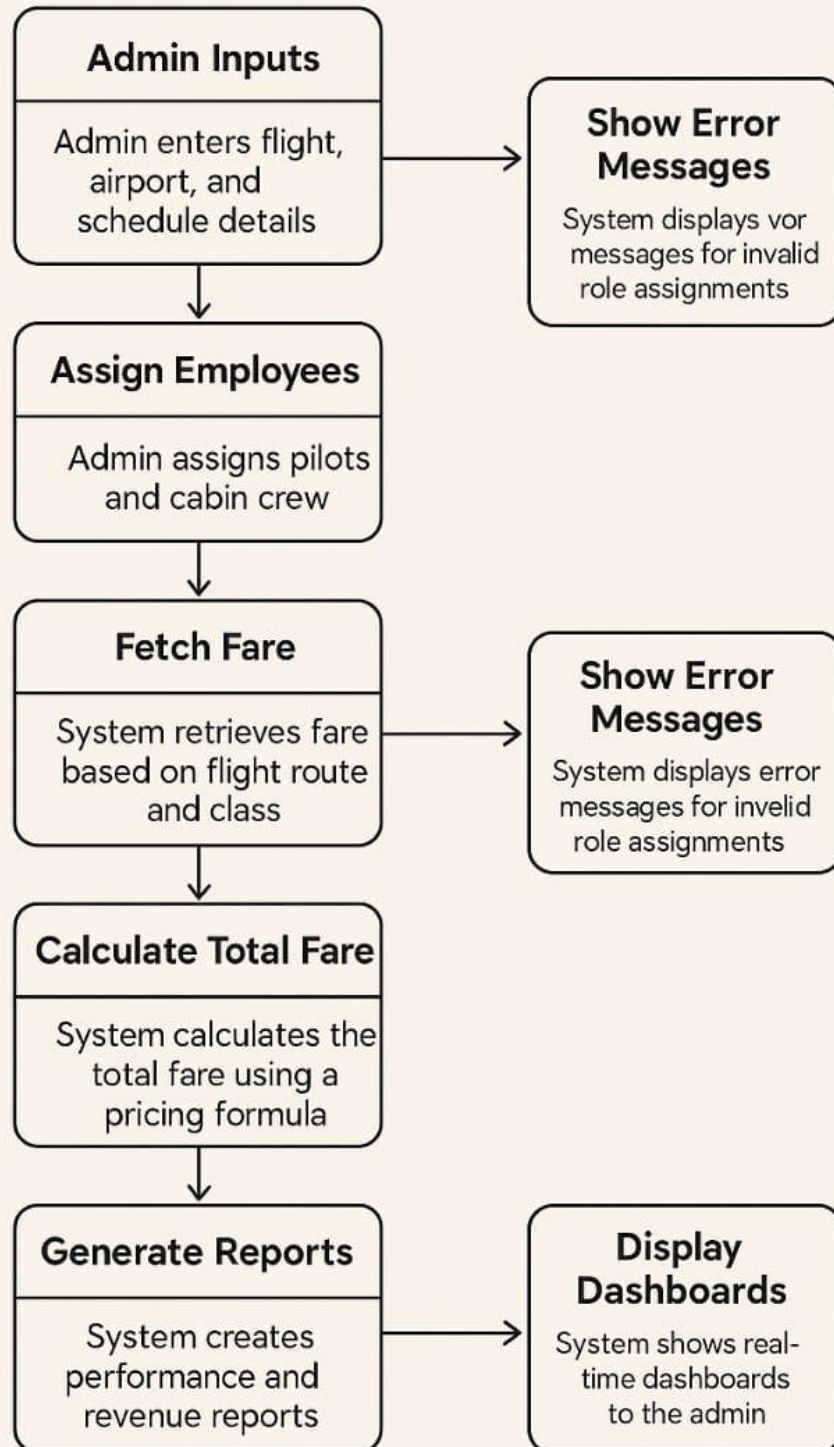
- Performance insights via reports and Real-time dashboards for admin
- Error messages for invalid role assignments

Objects Involved in Airline Operations

Airport → Aircraft → Employee → Flight → Ticket Fare

Airlines Management System

Level 1 DFD Overview



◆ Solution Requirements

What the Airlines management System Must Do

Functional Requirements:

- Create custom objects for: **Airport, Airplane, Flight, Airlines Employees** (Pilot, Cabin Crew, Ground Staff), **Ticket Fare**
- Establish relationships using lookup and formula fields
- Validate employee roles using Apex Triggers
- Automate fare fetching via Flows
- Support performance dashboards & summary reports

Non-Functional Requirements:

- User-friendly Lightning App Interface
- Real-time field-level validation
- Centralized database with accurate relationships

◆ Technology Stack

Tools & Platforms Used for Airlines management system Implementation

Category	Technology Used	Description
Platform	Salesforce Lightning	Used to build customer Airline CRM using standard & custom objects
Automation	Flows & Validation Rules	Automate fare fetching and restrict invalid data
Custom Logic	Apex Triggers & Classes	Used to validate Pilot/Cabin crew ID
Reports & Dashboards	Salesforce Reports	To analyze employee data, flight schedules, revenue, etc.
UI/UX	Lightning App Builder	Create a unified Airlines Management App for handling flights, employees, airports, and ticketing

Summary

This Requirement Analysis Phase helped ensure that all CRM features were grounded in user pain points, supported by data structures, and enabled by the right technologies. It directly shaped how we approached object modeling, data automation, UI design, and performance reporting in Salesforce.
