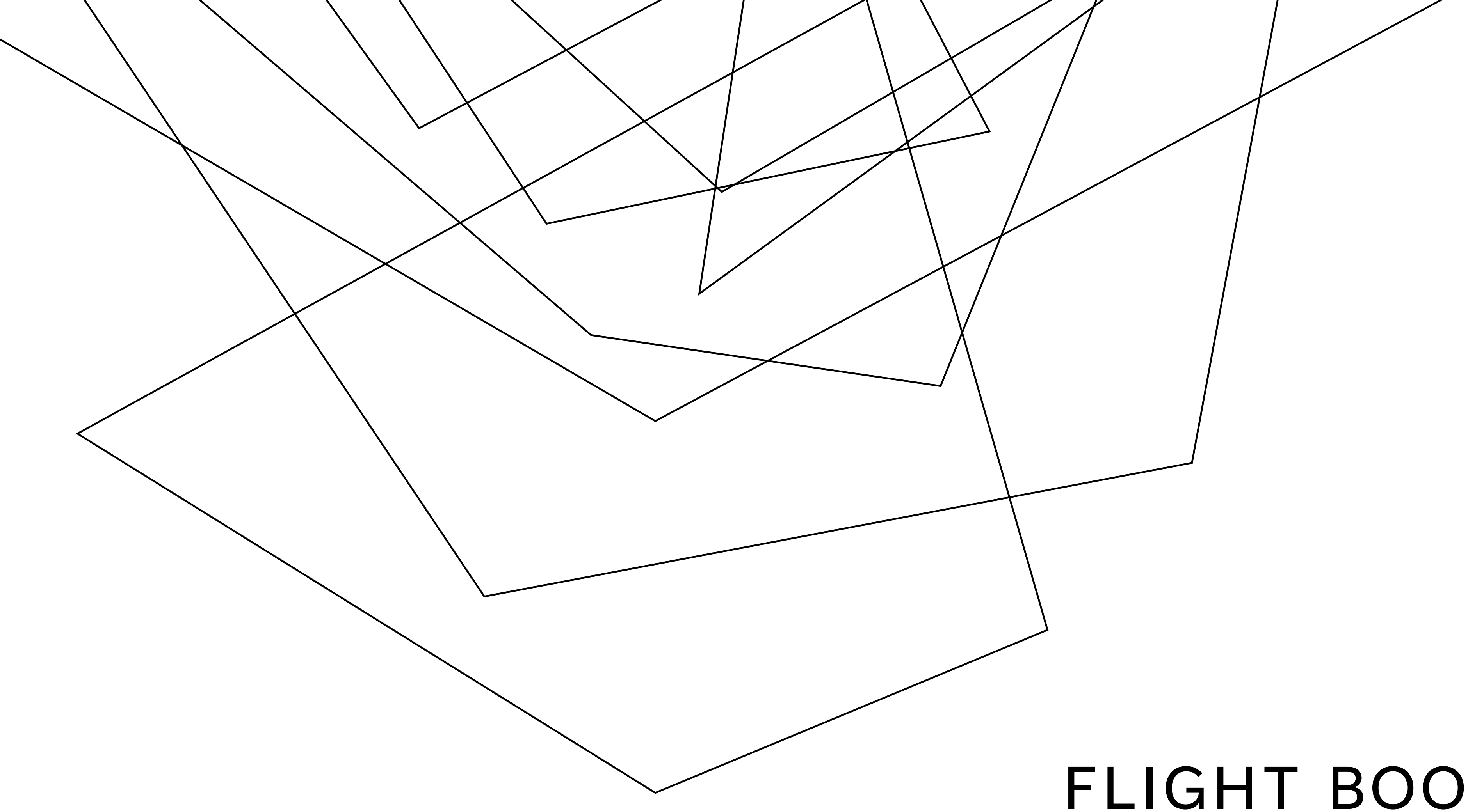

# FLIGHT BOOKING SYSTEM FOR AIRLINES

# TEAM

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# INTRODUCTION

A fully responsive web-based Flight Booking System for Turkish Airlines based on the Model View Controller (MVC) Architecture made using Java Servlets, Java Server Pages (JSPs). Moreover authentication and authorization for users is implemented using Tomcat Roles. The web-application is also secured against SQL Injection and Cross-Site Scripting attacks.

# INNOVATION

Ticket reissue is a hassle for travelers and agencies due to complex processes, leading to delays and financial losses. Existing methods lack flexibility and responsiveness, causing frustration. Our startup aims to simplify this process with an innovative solution, automating and expediting rebooking while reducing costs and enhancing customer satisfaction for both travelers and agencies.

Link:-
https://www.google.com/search?q=is+ticket+transfer+available+in+today%27s+airline&oq=&gs_lcrp=EgZjaHJvbWUqCQgHEEUYOxjCAzIJCAAQRRg7GMIDMgkIARBFGDsYwgMyCQgCEEUYOxjCAzIJCAMQRRg7GMIDMgkIBBBFGDsYwgMyCQgFEEUYOxjCAzIJCAYQRRg7GMIDMgkIBxBFGDsYwgPSAQoxNTQ4NDNqMGoxqAIIsAIB&sourceid=chrome&ie=UTF-8

# OBJECTIVES AND SCOPE

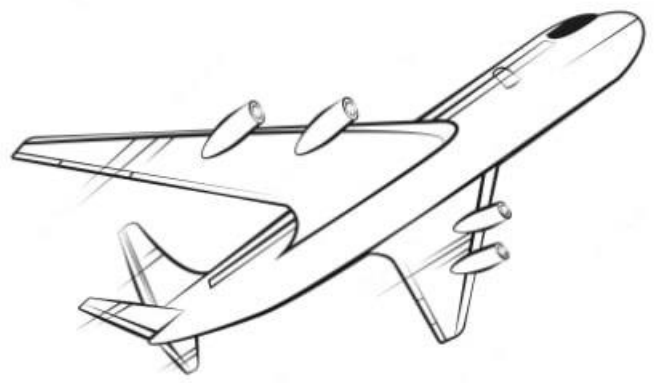
The flight management system (FMS) helps to view available seats and to book, cancel seats accordingly.

Objective:-

To help customer to reserve and cancel seats with easy through our site from anywhere in the world.

Scope:-

Through this the customer can atleast reserve the seat for which they can pay later but have a assurance for having a seat for themselves.



# LITERATURE REVIEW

E-Ticket reservation and cancelation:-

Checking the available seats in the flight and accordingly selecting the preferred seats and reserving them. Later cancelling if there is change in plans.

Through this there is no loss for the customer as there is no payment done for last moment change in plans. The customer gets to cancel anytime before the scheduled flight time.

# SOFTWARE REQUIREMENTS SPECIFICATION (SRS) DOCUMENT

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to outline the functional and non-functional requirements of the Aeroplane Management System. This system is designed to manage various aspects of aeroplane operations using JSP (Java Server Pages), Tomcat server, and MySQL database.

**1.2 Scope**

The Aeroplane Management System will facilitate the management of aeroplane operations including scheduling, maintenance, crew management, passenger information, and other relevant functions.

**1.3 Definitions, Acronyms, and Abbreviations**

- JSP: Java Server Pages
- MySQL: MySQL Database Management System
- Tomcat: Apache Tomcat Server

## 2. Functional Requirements

### 2.1 User Management

1.**User Registration:** Users can register themselves with the system.

2.**User Authentication:** Users must authenticate themselves before accessing system functionalities.

3.**User Roles:** Different roles such as admin, staff, and customer should be defined with varying levels of access.

### 2.2 Aero plane Management

1.**Aero plane Information:** Store information about aeroplanes including model, registration number, seating capacity, etc.

2.**Flight Scheduling:** Allow scheduling of flights including departure time, arrival time, destination, and associated aeroplane.

3.**Flight Status:** Provide real-time updates on flight status including delays, cancellations, etc.

### 2.3 Crew Management

1.**Crew Information:** Maintain information about crew members including pilots, co-pilots, flight attendants, etc.

2.**Crew Scheduling:** Enable scheduling of crew members for flights.

### 2.4 Passenger Management

1. **Passenger Information:** Store passenger details including name, contact information, booking history, etc.

2. **Ticket Booking:** Allow passengers to book tickets for flights.

3. **Check-in:** Facilitate the check-in process for passengers.

### 2.5 Reporting

1. **Generate Reports:** Allow generation of reports related to flight schedules, passenger information, revenue, etc.

### 2.6 Administration

1. **System Configuration:** Allow administrators to configure system settings.

2. **Database Management:** Provide functionality for database management including backup, restore, etc.

# 3. NON-FUNCTIONAL REQUIREMENTS

**3.1 Performance**

1. **Response Time:** The system should respond to user actions within 2 seconds.
2. **Scalability:** The system should be able to handle a growing number of users and data without significant performance degradation.

**3.2 Reliability**

1. **Availability:** The system should be available 99.9% of the time.
2. **Data Integrity:** Ensure the integrity of data stored in the system.

**3.3 Security**

1. **Authentication:** Ensure secure authentication mechanisms to prevent unauthorized access.
2. **Data Encryption:** Encrypt sensitive data such as user passwords, financial information, etc.

### 3.4 Usability

1. **Intuitive Interface:** The user interface should be intuitive and easy to use.

2. **Accessibility:** The system should be accessible to users with disabilities.

### 3.5 Compatibility

1. **Browser Compatibility:** The system should be compatible with major web browsers such as Chrome, Firefox, and Safari.

2. **Platform Independence:** The system should be platform-independent and work seamlessly on different operating systems.

### 3.6 Maintainability

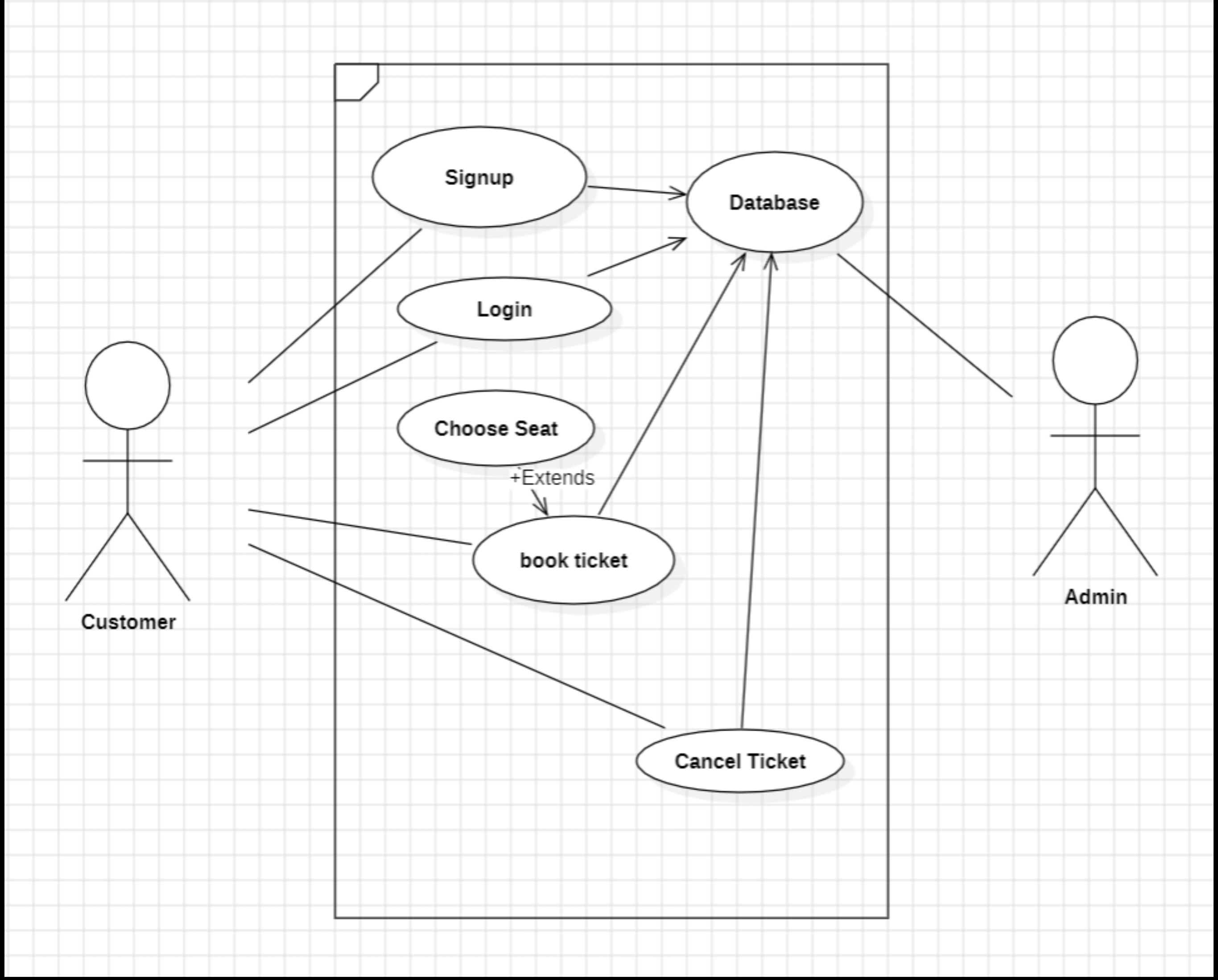
1. **Code Documentation:** Ensure proper documentation of code to facilitate future maintenance.

2. **Modularity:** Design the system with a modular architecture to facilitate easy maintenance and updates.

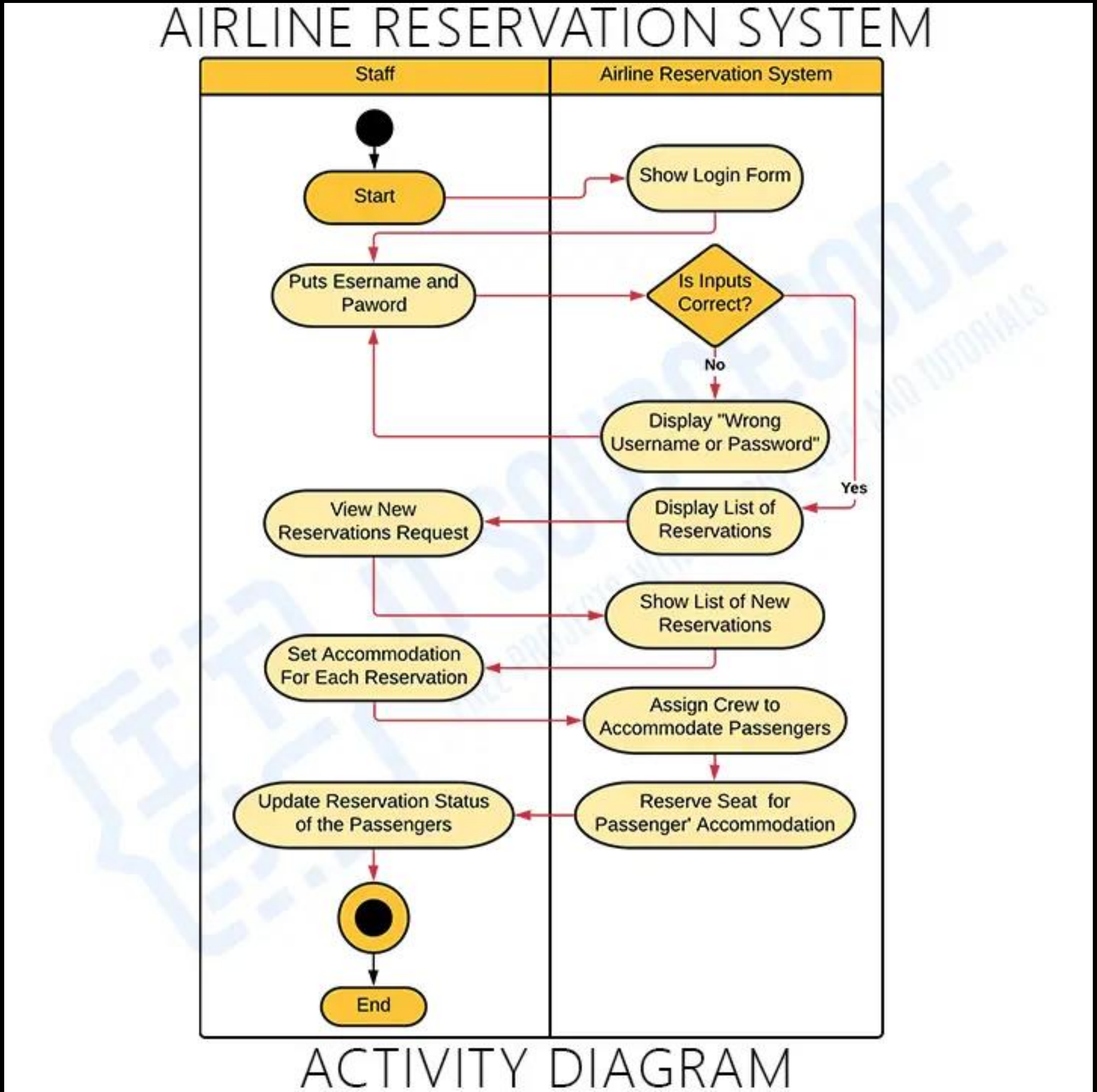
# 4. CONCLUSION

This Software Requirements Specification document outlines the functional and non-functional requirements of the Aeroplane Management System. Adhering to these requirements will ensure the successful development and deployment of the system.

# USE CASE DIAGRAM



# ACTIVITY DIAGRAM



AIRLINE RESERVATION SYSTEM

Staff
Airline Reservation System
Start
Show Login Form
Puts Esername and Paword
Is Inputs Correct?
No
Display "Wrong Username or Password"
Yes
Display List of Reservations
View New Reservations Request
Show List of New Reservations
Set Accommodation For Each Reservation
Assign Crew to Accommodate Passengers
Reserve Seat for Passenger' Accommodation
Update Reservation Status of the Passengers
End

ACTIVITY DIAGRAM

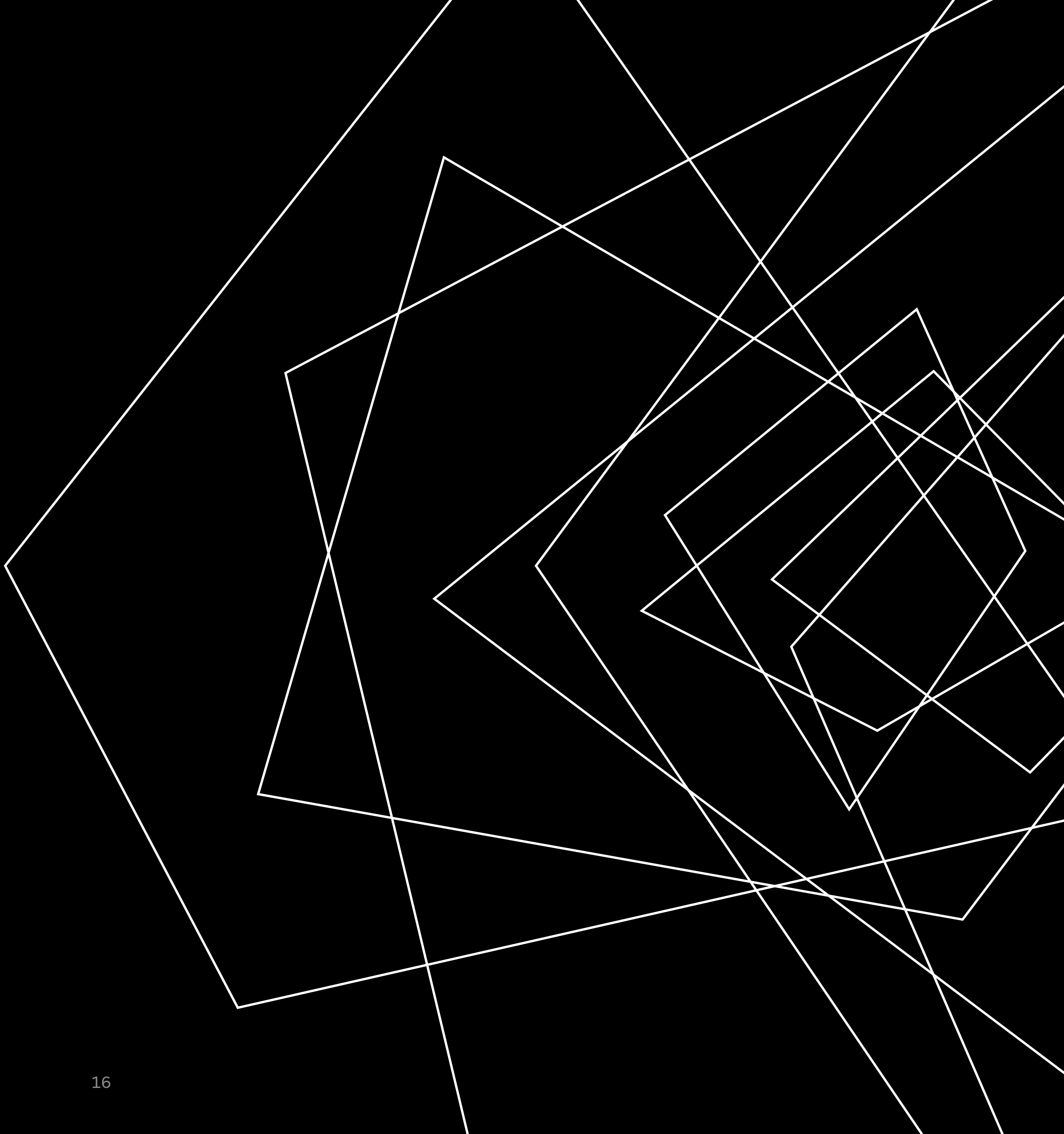
# TECHNOLOGIES USED

Frontend: HTML, CSS, JavaScript, jQuery, Bootstrap, Java Server Pages (JSPs), AJAX (for a Flight Search Widget)

Backend: Java Servlets, Java Models, Microsoft Access (Database)

Webservices: SOAP Web Services (to get price and number of seats)

Security Features: SQL Injection, Cross-Site Scripting (XSS), Tomcat Roles



# WORKFLOW

This is for just one airline who wants to sell seats to their customers via internet.

Following are the steps of work flow:

Airline Admin will set the prices of the seats. There should be three types of seats:

First Class

Business

Economy

The Airline Admin should be able to create and update the features of each type of seat.

The Airline Admin should be able to set the total number of seats for each flight.

Airline Manager should see a list of seats which the Admin has added or edited when he/she logs in.

Airline Manager then needs to approve the new price or updates.

When the price and update is approved by the manager only then it should be available for the customer to buy.

The Customer should be able to buy seats based on availability.

When a customer buys a ticket the system should be able to calculate how many seats are left. If all seats are bought the application should not let the customers buy more seats.

The Customer should be able to select the following, to select a seat:

origin and destination cities

dates of travel

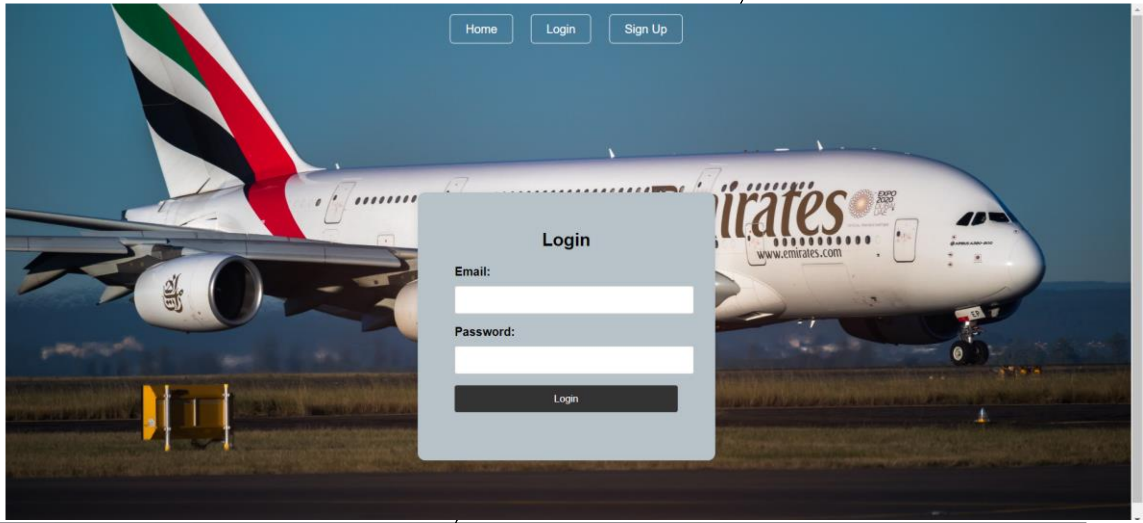
number of people traveling

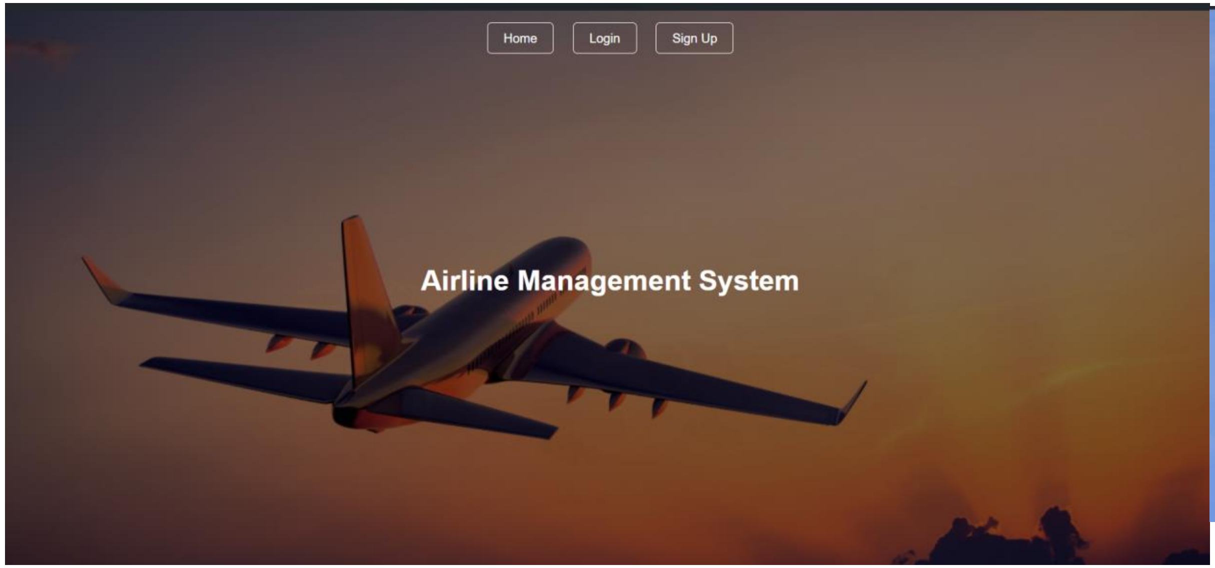
When the customer selects the seat and confirms the booking flight Itinerary should be shown to the customer.

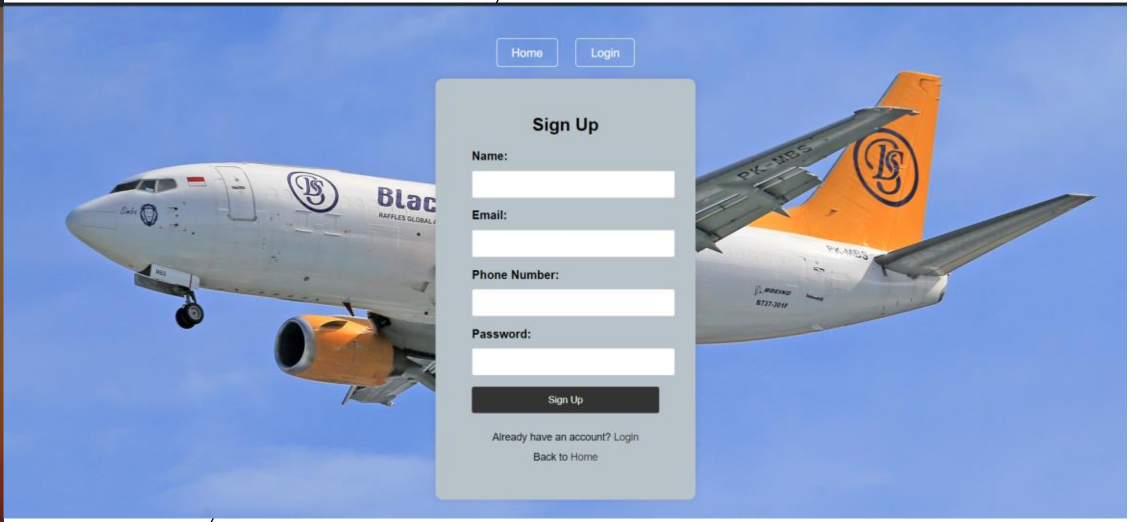
When the customer approves the itinerary the customer should be taken to a payment page where the total price should be shown. When the customer presses the pay button consider the transaction done and mark the seat sold.

Once the seat is sold, send out an email to the customer with the flight itinerary.

# OUTPUT:


Home
Login
Sign Up
Login
Email:
Password:
Login


Home
Login
Sign Up
Airline Management System


Home
Login
Sign Up
Name:
Email:
Phone Number:
Password:
Sign Up
Already have an account? Login
Back to Home

# THANK YOU