



Object Oriented Analysis and Design using Java (UE20CS352)

Mini Project

Airline reservation system using spring mvc

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PROBLEM STATEMENT:

This is an airline reservation system implemented in java using spring mvc framework, UI using java css and html. The application allows the user to reserve a flight ticket.

The user has to register and give username and credential. After login he can see the available flights by entering source and destination and date of boarding

Having information on the available flights, user can book ticket based on his interest.

He has to enter his relevant information in the form presented and submit it.

U will get a confirmation of the ticket booked.

The application allows the user to checking and will be provided a seat number during checkin

The following are some of the challenges that need to be addressed:

User Authentication: The website needs to implement a secure login and registration system for both admin and regular users

User Authorization: The website needs to implement role-based access control, which will determine what actions can be performed by each user type

Search flights: based on the destination, source, date the person enters, flight options will be shown, flights can be added from the phpmyadmin.

Book ticket: the person can book a ticket once the search function is over and presented with available flights. The person has to enter the how many seats he want to book and details of each individual. After the ticket is booked a confirmation message will be shown with ticket id

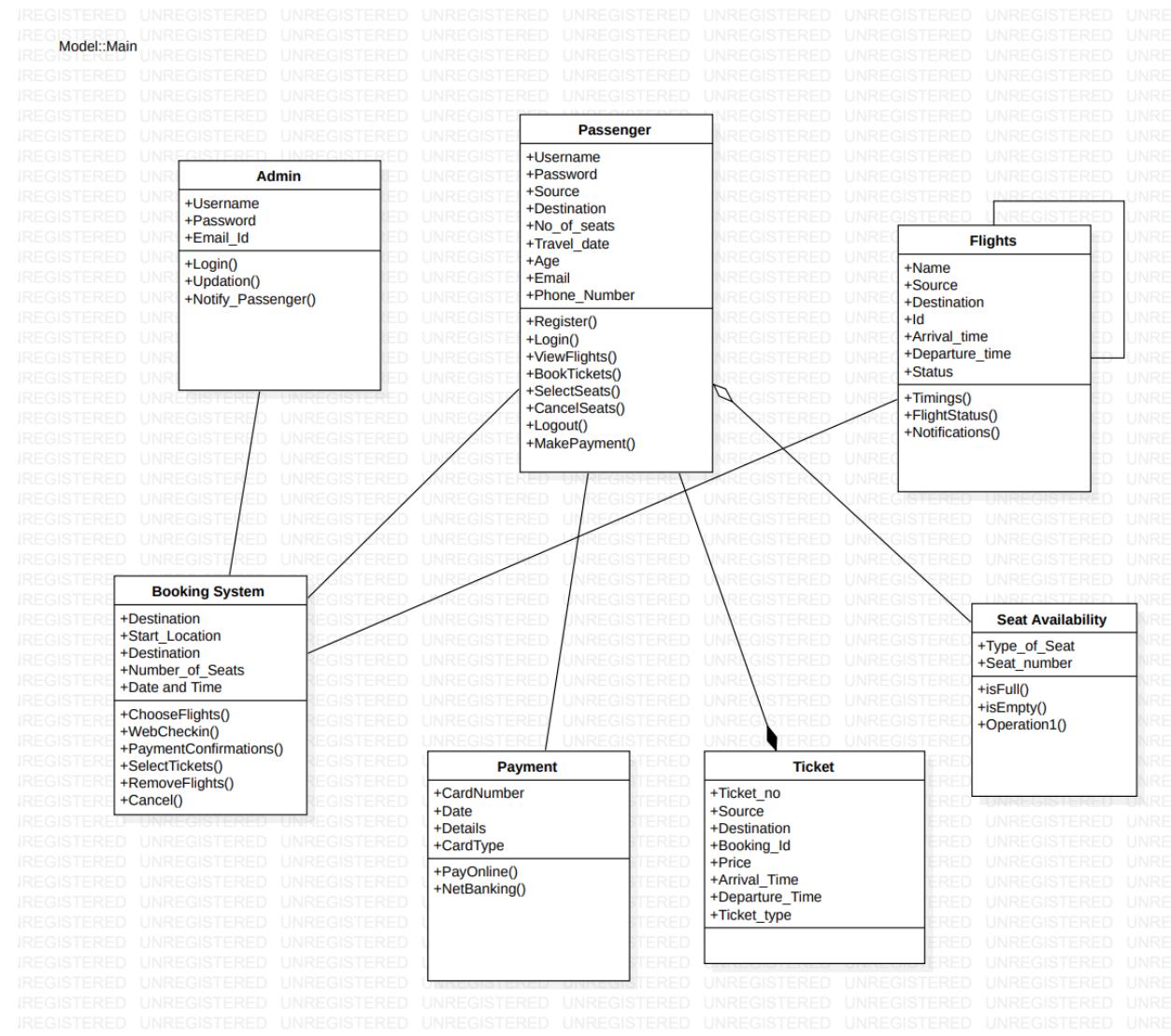
Check in: on the date of travel the person can checkin the flight where he will be given a seat.

MODELS:

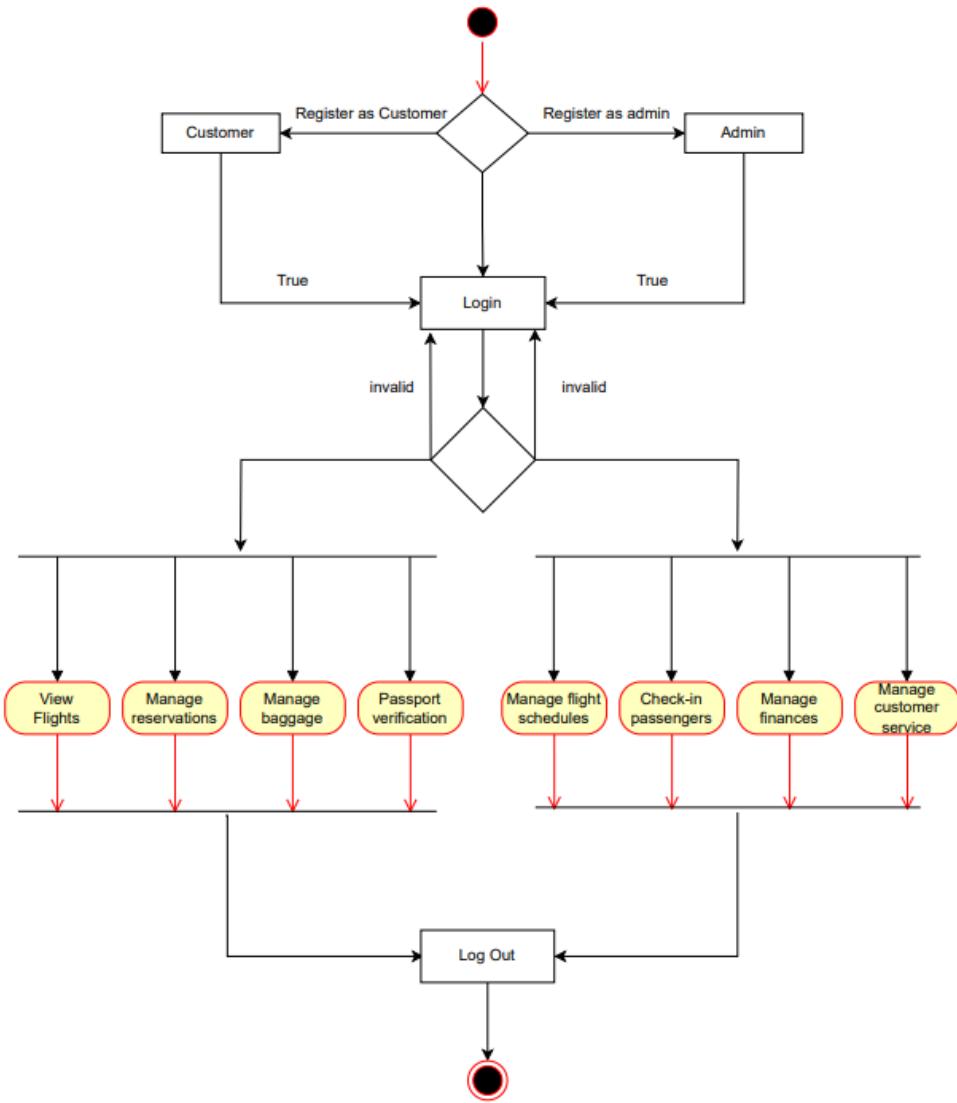
Uml diagram:



Class diagram:



Activity diagram



Architecture Patterns, Design Principles and Design Patterns used along with a short description

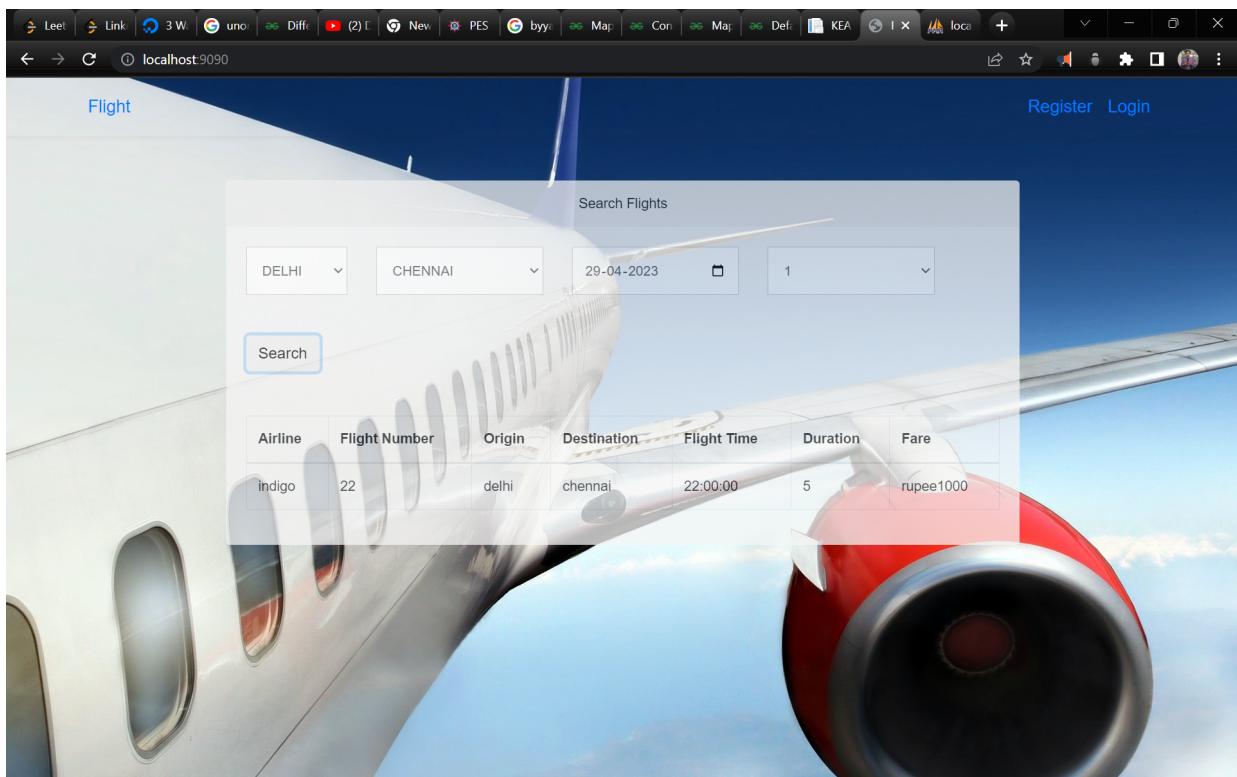
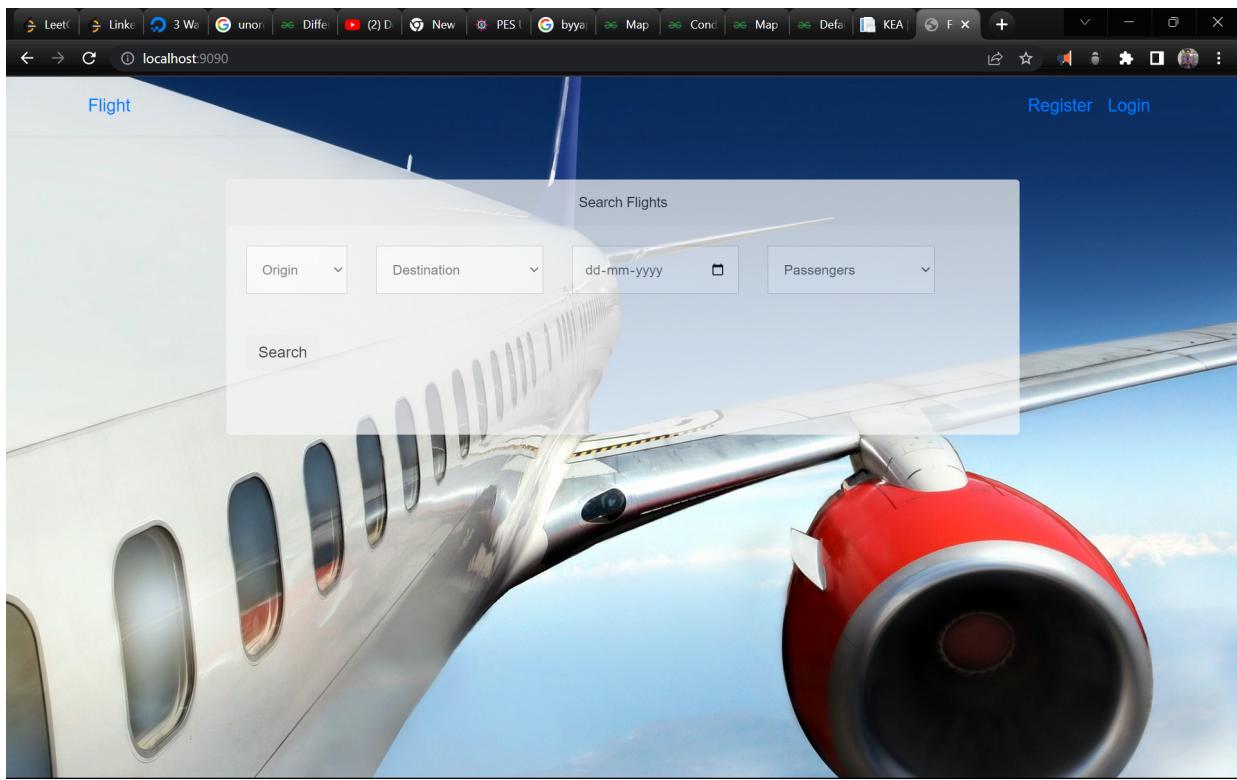
Architecture Pattern: MVC architectural pattern is used to build our web application

Design patterns and principles:

Single Responsibility Principle (SRP): several classes have been implemented to handle individual task like searching flights, flight checkin, payment of fare, login, authentication, database connectivity etc

Dependency Inversion Principle (DIP): The booking service depends on abstractions (interfaces) such as bookingDao, checkinDao, and passengerDao, rather than concrete implementations. This helps to reduce coupling between classes and makes the code more flexible and maintainable.

Output screen shots:



A screenshot of a web browser showing a flight registration form. The background is a photograph of an airplane on a runway at sunset. The form is titled "Register To Fly" and contains fields for Firstname, Lastname, Contact No', gender, Username (set to "yuvarajdc"), and Password (represented by a series of dots). A "Register" button is at the bottom. In the top right corner of the page, there are "Register" and "Login" links.

Flight

Register Login

Register To Fly

Firstname

Lastname

Contact No'

gender

Username

Password

Register

A screenshot of a web browser showing a login form. The background is a photograph of two IndiGo airplanes flying against a bright blue sky with white clouds. The form is titled "Login" and contains fields for "UserName" (set to "yuvarajdc") and "Password" (represented by a series of dots). A "Login" button is at the bottom. In the top right corner of the page, there are "Register" and "Login" links.

Flight

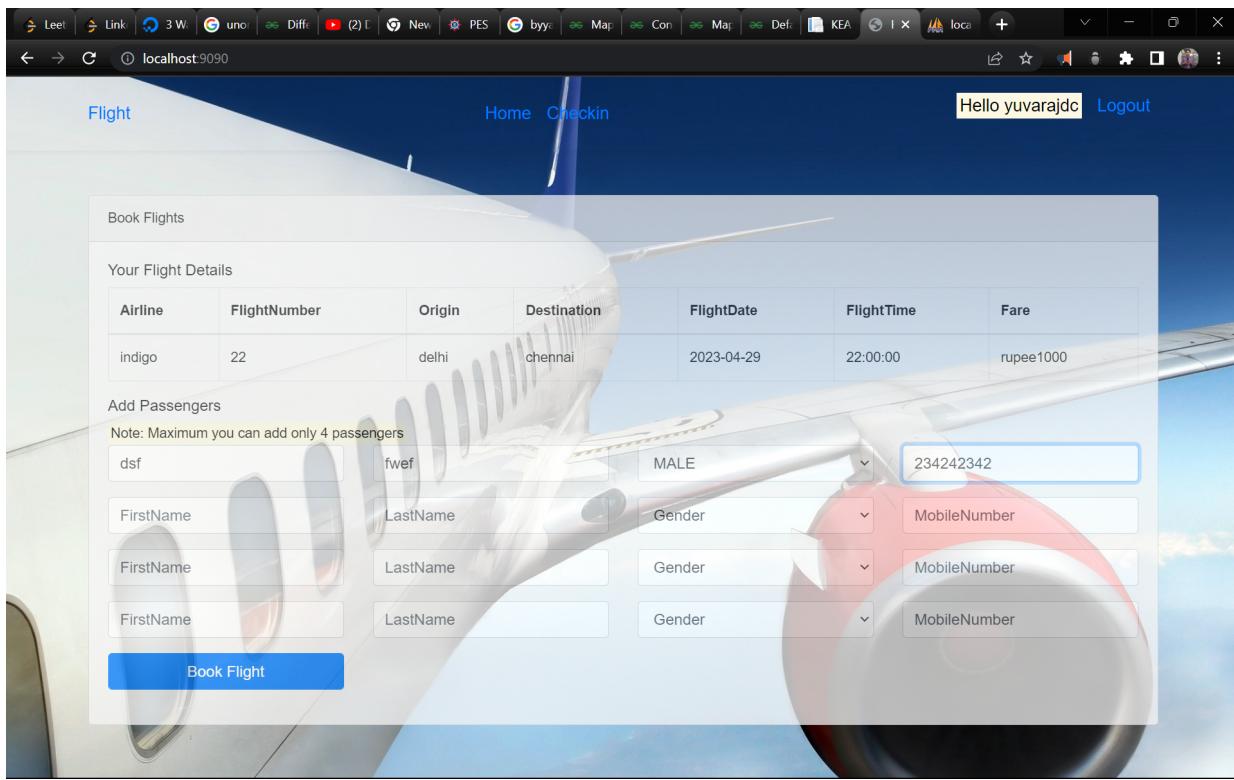
Register Login

Login

UserName

Password

Login



localhost:9090

Flight Home Checkin Hello yuvarajdc Logout

Book Flights

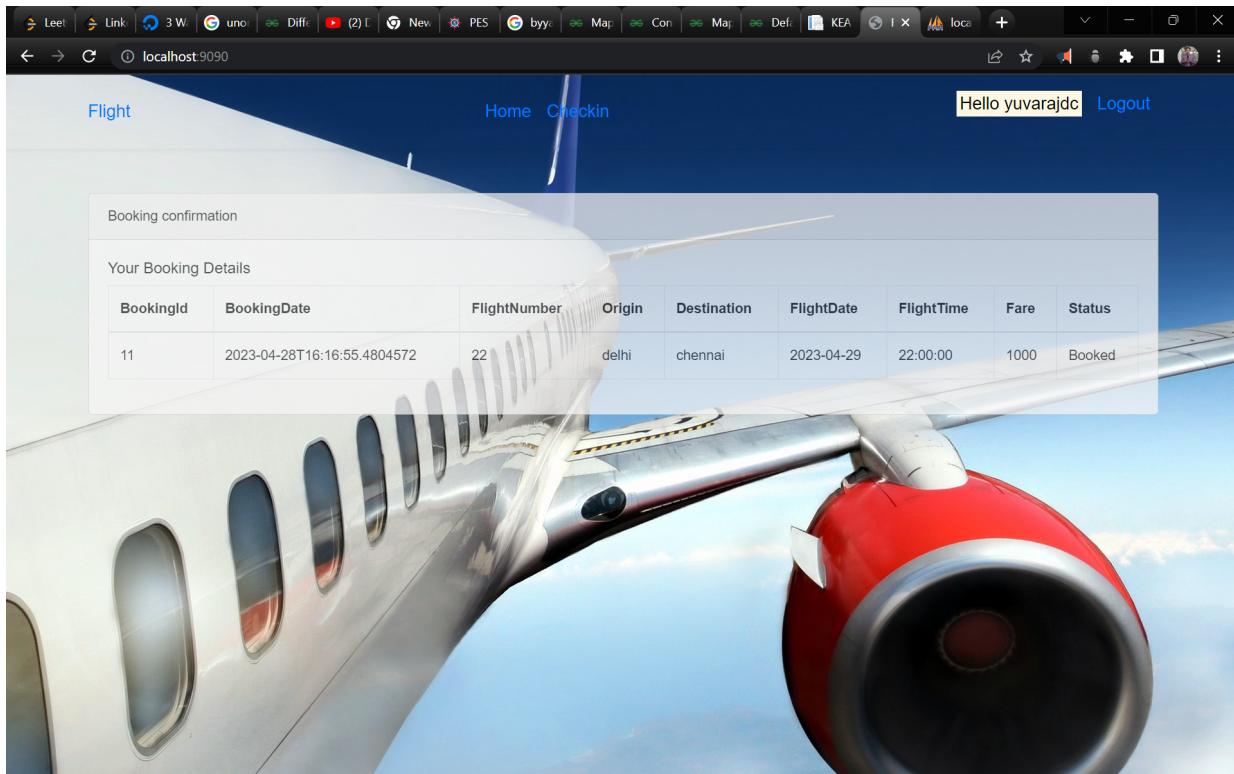
Your Flight Details

Airline	FlightNumber	Origin	Destination	FlightDate	FlightTime	Fare
indigo	22	delhi	chennai	2023-04-29	22:00:00	rupee1000

Add Passengers
Note: Maximum you can add only 4 passengers

dsf	fwef	MALE	234242342
FirstName	LastName	Gender	MobileNumber
FirstName	LastName	Gender	MobileNumber
FirstName	LastName	Gender	MobileNumber

Book Flight



localhost:9090

Flight Home Checkin Hello yuvarajdc Logout

Booking confirmation

Your Booking Details

BookingId	BookingDate	FlightNumber	Origin	Destination	FlightDate	FlightTime	Fare	Status
11	2023-04-28T16:55:4804572	22	delhi	chennai	2023-04-29	22:00:00	1000	Booked

