Mini Project 1:
(Using Spring Web MVC)

Create a web application for Airline company. Where this application will have two modules

1. Admin
2. Customer

Both modules will have different roles. Roles for both modules are given below:

1. Admin:
   a. Admin can add, update, delete, get flight details.
   b. Admin can fetch details of Customers
   c. Admin will have access to all modules
2. Customer:
   a. Customer can Do registration
   b. Customer can reset password if forget
   c. Customer can Update
   d. Customer can delete his/her account
   e. Customer can book flight ticket by providing source, destination, and date for journey.
   f. Customer can cancel ticket
   g. Customer can modify ticket. Ex: change in date, Change in name
   h. Customer can get history of all his booking.

These are operations which admin and customers can perform.

Instruction for Implementing this application.

1. For Customer, you will have to create a table which will hold Customer's basic information.
   Customer table will have following fields:
   customer_id – int – primary key
   customer_name -varchar(20)
   customer_username -varchar(20) - unique
   customer_password- varchar(20)
   customer_email- varchar(25)
   custom_phone -varchar(15)
2. For all Flights details, you will have to create a table

   Flight table will have following fields:

   flight_id – int – primary key
   flight_name – varchar(20) - unique
   flight_date – date
   flight_source – varchar(20)
   flight_destination – varchar(20)
   flight_price – float
   flight_duration – float
   flight_capacity - int
3. For Flight booking you will have to create a table
   Booking_details table will have
   booking_id -int – primary key
   customer_id – int -foreign key

flight_id – int – foreign key
booking_amount – float
seat_number – int

This Booking table will get update when customers book flight.

4. When Customer will book ticket/s then that many number of seats should be minus from seating capacity of flight.
5. Here, you will have to follow MVC design pattern. For view, use jsp.
6. On jsp pages, validation must be implemented.
7. There must be relationship between tables.

For reference:
Visit: some existing airline company's applications like Air India, Indigo, GoAir etc.

Mini Project 2:
(Using Spring boot web api)

Using same application in mini-project 1, create a web api with given below endpoints.

1. **/flight/{source}/{destination}/{date}** – this endpoint will fetch all flights with provided source to destination on provided date.
2. **/customer/{flight_id}/{flight_date}** – this endpoint will fetch list of all customers who will fly with provided flight_id on provided flight_date
3. **/flight/{flight}** – this endpoint will insert new flight in table
4. **/flight/{flight_id}/{flight}** – this end point will update flight details whose flight_id provided.
5. /booking/{booking-date} – this end point will return all bookings on provided booking date.