

Airline Reservation System Final Project  
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Info-C451: System Implementation  
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**Table of Contents:**

Cover Page.....	1
Table of Contents.....	2
Problem Statement.....	3
System Requirements.....	4
Functional Requirements Specifications.....	5-6
System Sequence Diagrams.....	7
Activity Diagram.....	8
User Interface Specification.....	10-11
Project Plan.....	12
References.....	13

### Problem Statement:

An airline ticket booking system is utilized in order to successfully manage customer information and user information. The system will be needed to also add flight data which will then need to be provided to customers as well as provide admin capabilities to modify and search for flights. The system will need to keep track of bookings and generate a ticket report. THe system will need to provide login capabilities as well as account creation capabilities.

### System Requirements:

No.	Priority	Description
Req-1 (System Booking)	High	System should allow customers to book tickets with a ticket generated
Req-2 (Database)	High	System should have a database that communicates with interface input and stores this input.
Req-3 (Cancellation)	High	System should allow for users to cancel actions to provide user error forgiveness.
Req-4 (Flights)	High	System should allow for flights to be created and modified.
Req-5 (Class Bookings)	Medium	All classes should be made available to customers to book in as long as they are open.
Req-6 (User Creation)	Low	System should allow for guest login feature as well as ability to create user account
Req-7 (Customer Information)	High	System should allow for customers to input personal information and generate customer ID.
Req-8 (Search Flight)	Medium	System should allow customer to narrow flight search with specification
Req-9 (Price)	Medium	System should provide a price for booking.
Req-10 (Seats)	Low	System should allow for customers to choose the amount of seats rather than making multiple bookings.

## Functional Requirements Specifications:

### Stakeholders:

- Airports
- Users/Customers

### Primary Actors:

- Customer- This actor can create a booking on a desired flight as well as search flights available. Actors can also upload customer information and create a user account.
- Airport- This actor can add flights as well as flight schedules, and they may view ticket reports to view all customer bookings.

### Secondary Actors:

- Admin- This actor can update flight information as well as view user accounts and customer information.
- System- The system will reflect booking information as well as flight information. System will also provide user account information and customer information stored in a database.

### Use Cases:

#### Customer- (8 total)

- Login/Logout- to authenticate customer into system(2)
- Book flight- to book flight (2)
- Booking information- to receive information about flight booking (2)
- Search Flight- to search for a flight (2)

#### Airline- (12 total)

- Update flight- to update flight information (2)
- Login/Logout- to login/logout of the airline account or admin account (2)
- View account- to view customer booking information(2)
- Add/Remove flight- to add/remove flights on flight schedule (2)
- Take flight ticket- to provide booking number (2)
- Search Flight- to search the flight (2)

#### Admin- (14 total)

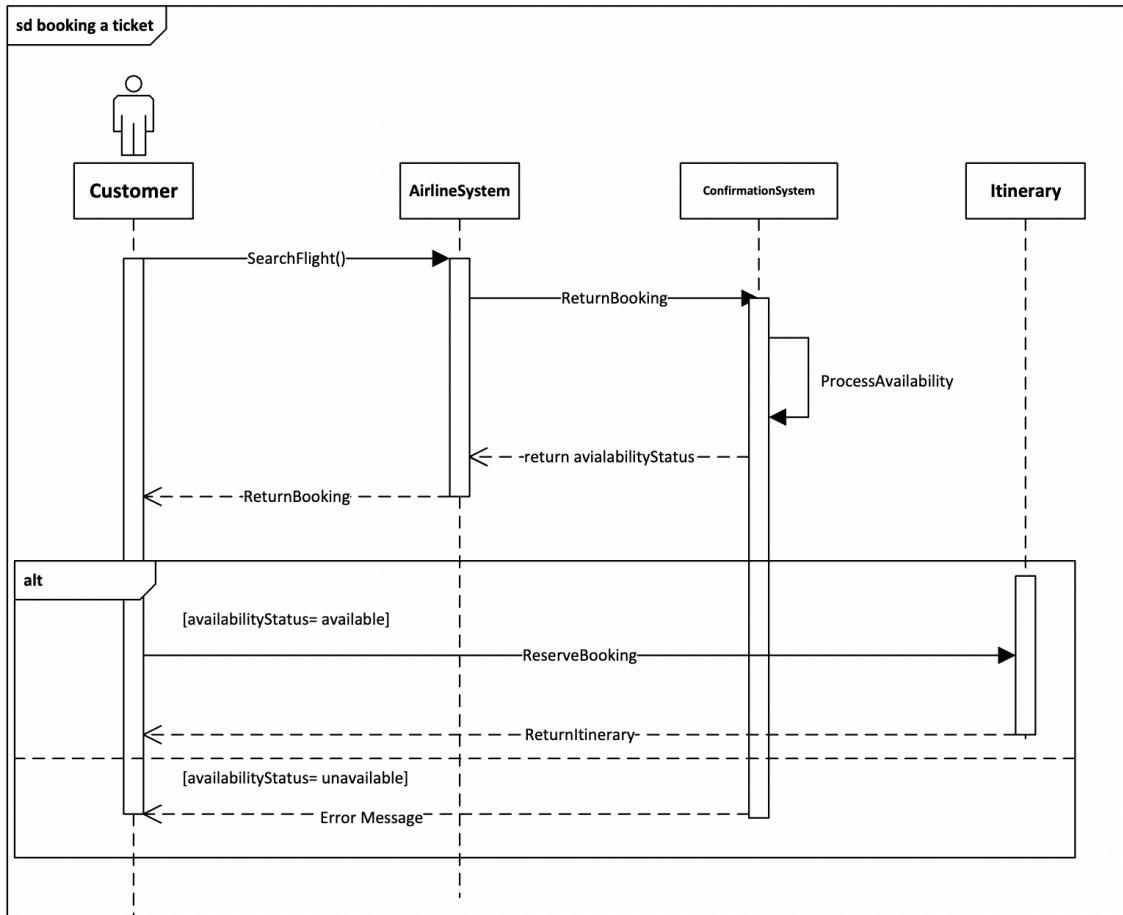
- Add/Remove flight- to add/remove a flight on flight schedule (2)
- Update flight- to update flight inforamtion (2)
- Login/Logout- to login/logout of admin or airline account (2)
- Update flight rate- to update the price of bookings (2)
- View Bookings- to view booking information (2)
- Update account- to update bookings(2)
- View account- to view customer booking account details (2)

#### System- (8 total)

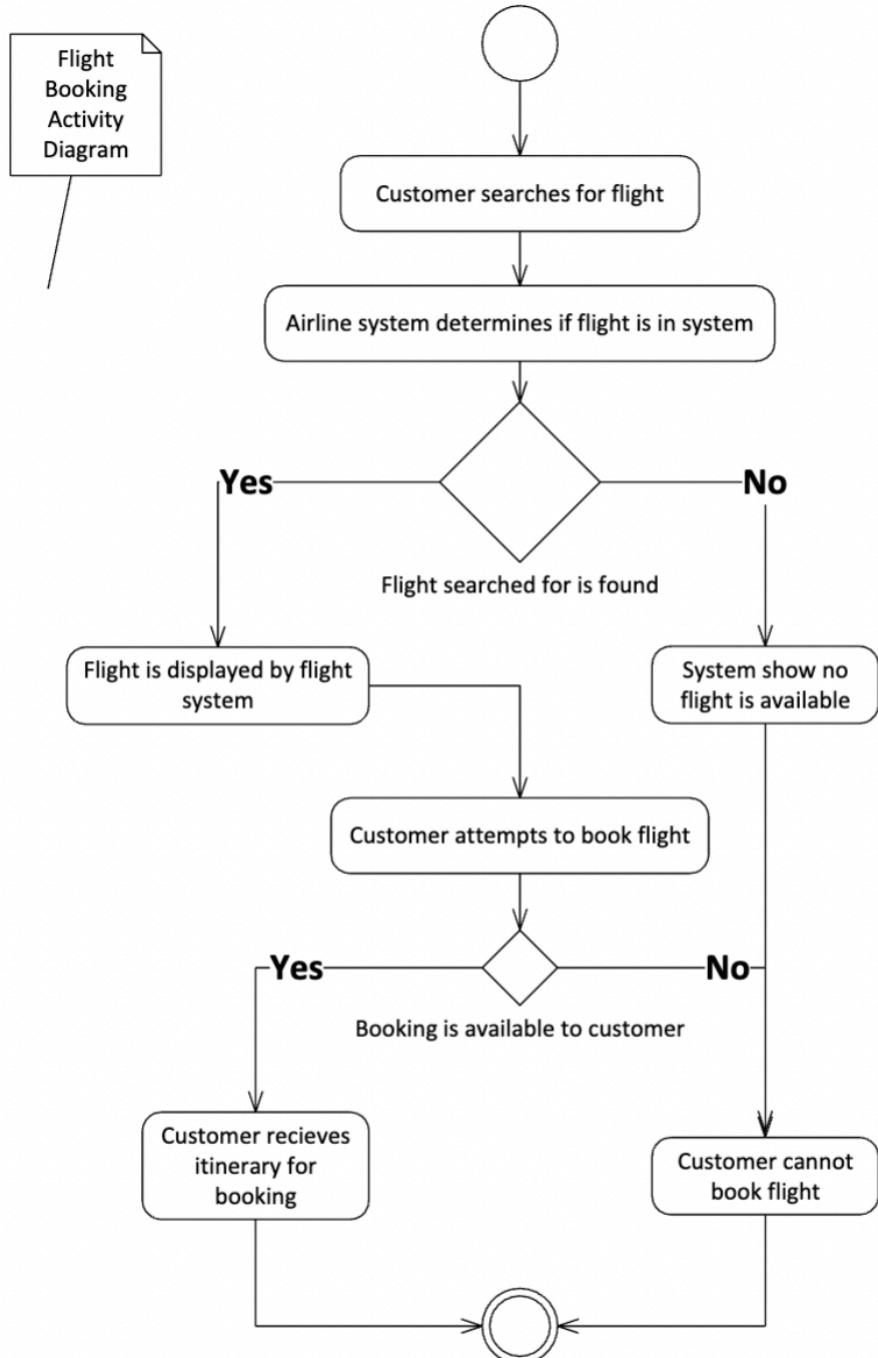
- Assign customer to booking- to assign a customer to a specific booking and flight (2)

- Display Flight- to display flight information(2)
- Display booking- to display booking that a customer has purchased (2)

### System Sequence Diagrams:

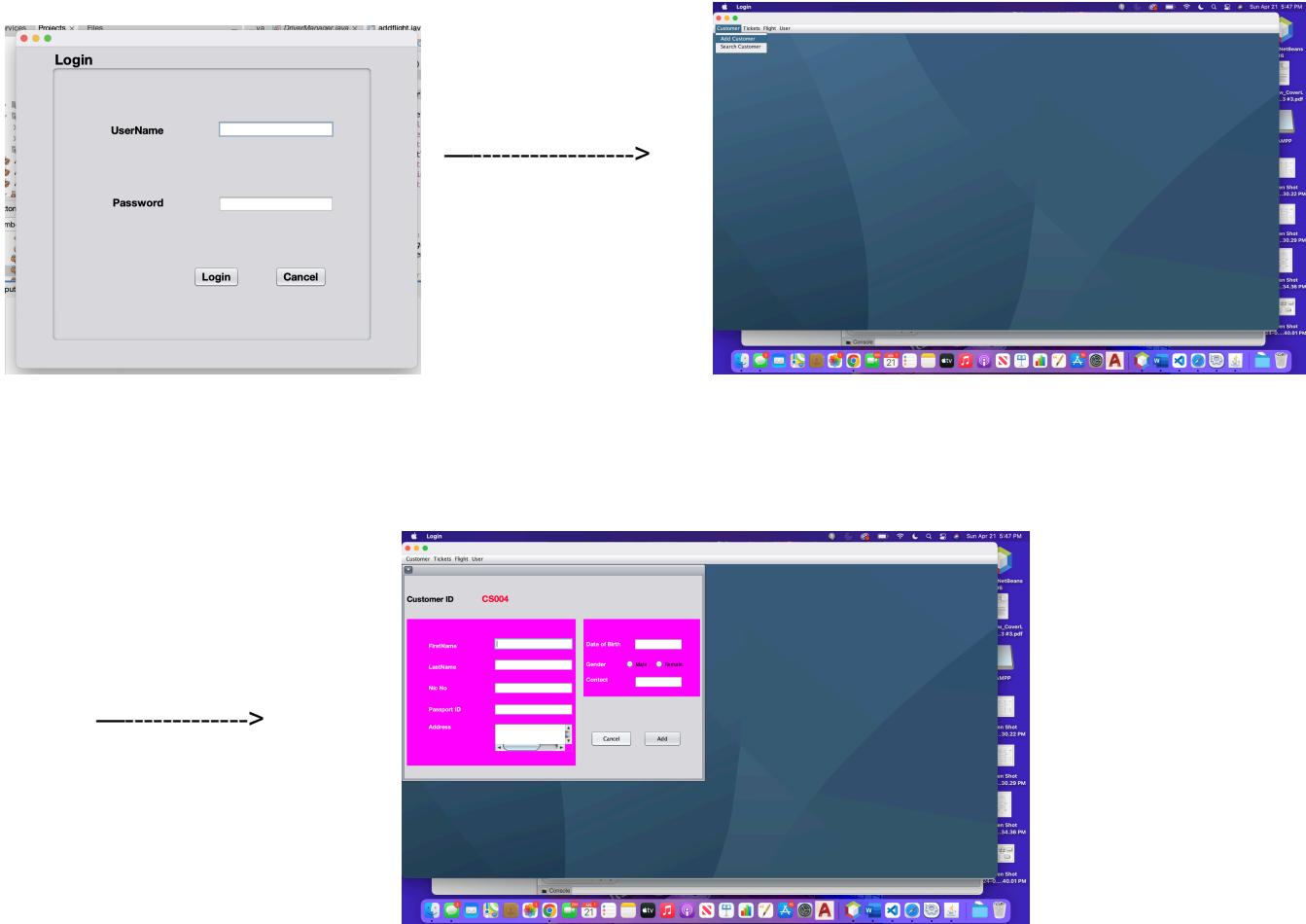


Activity Diagram:

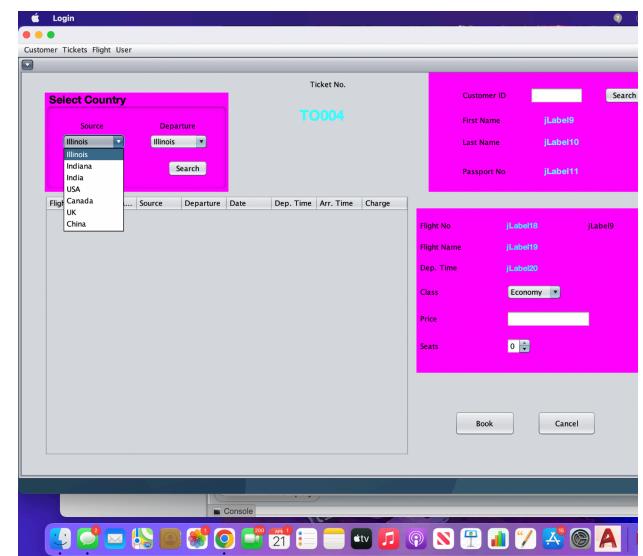
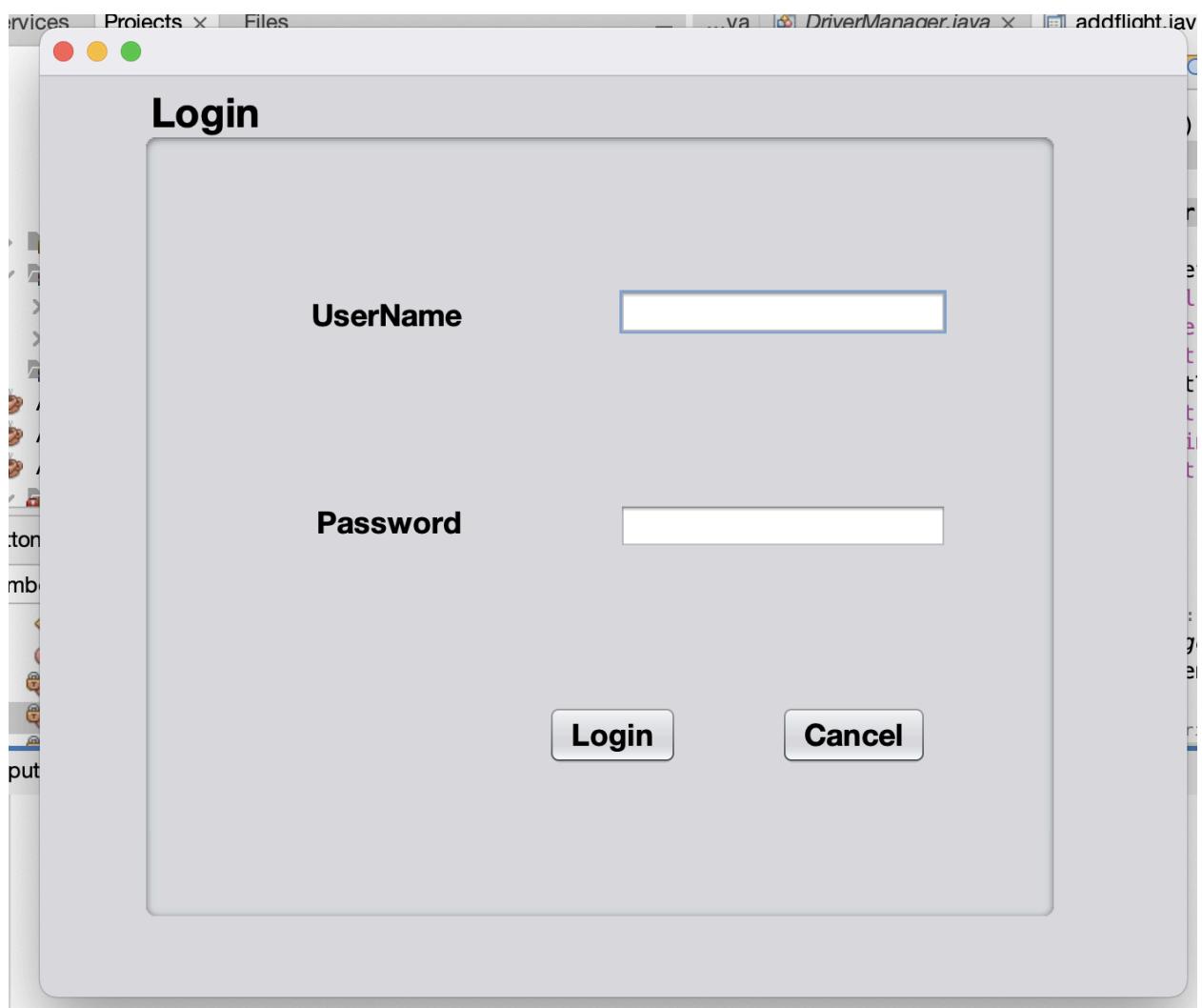


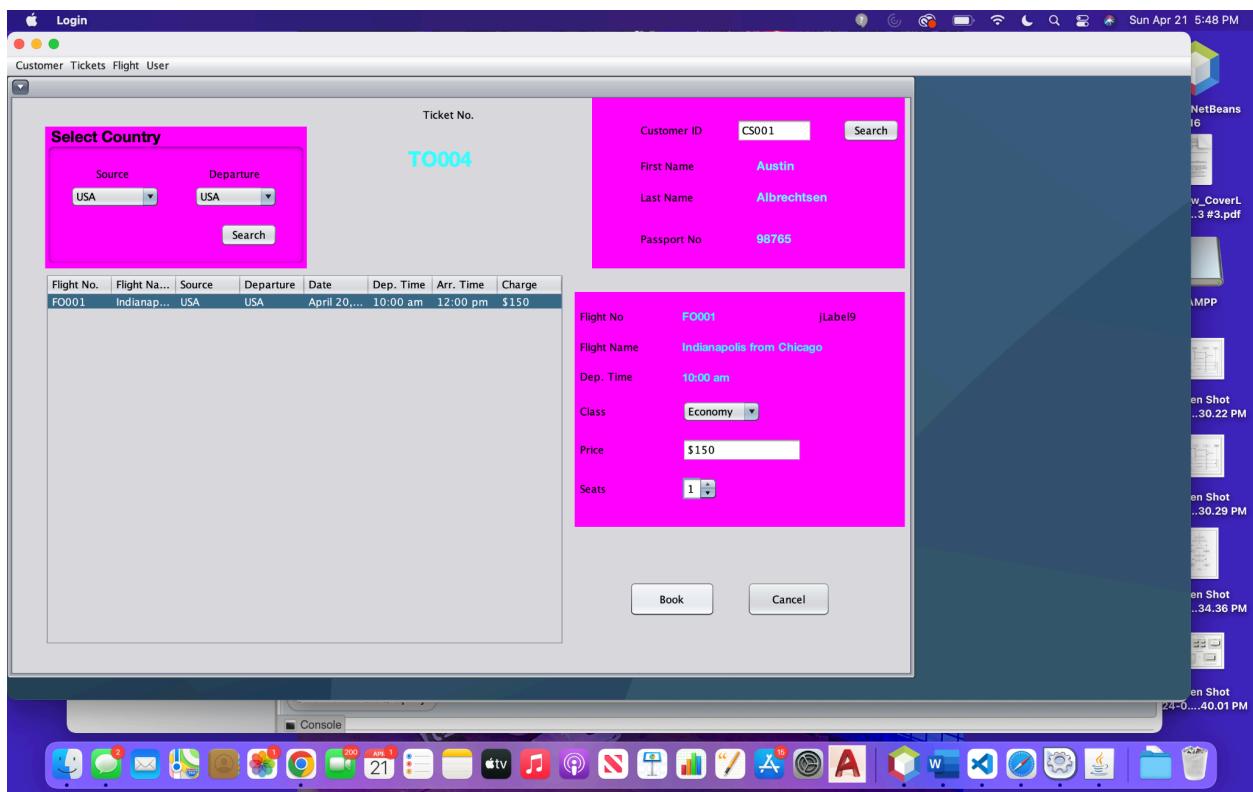
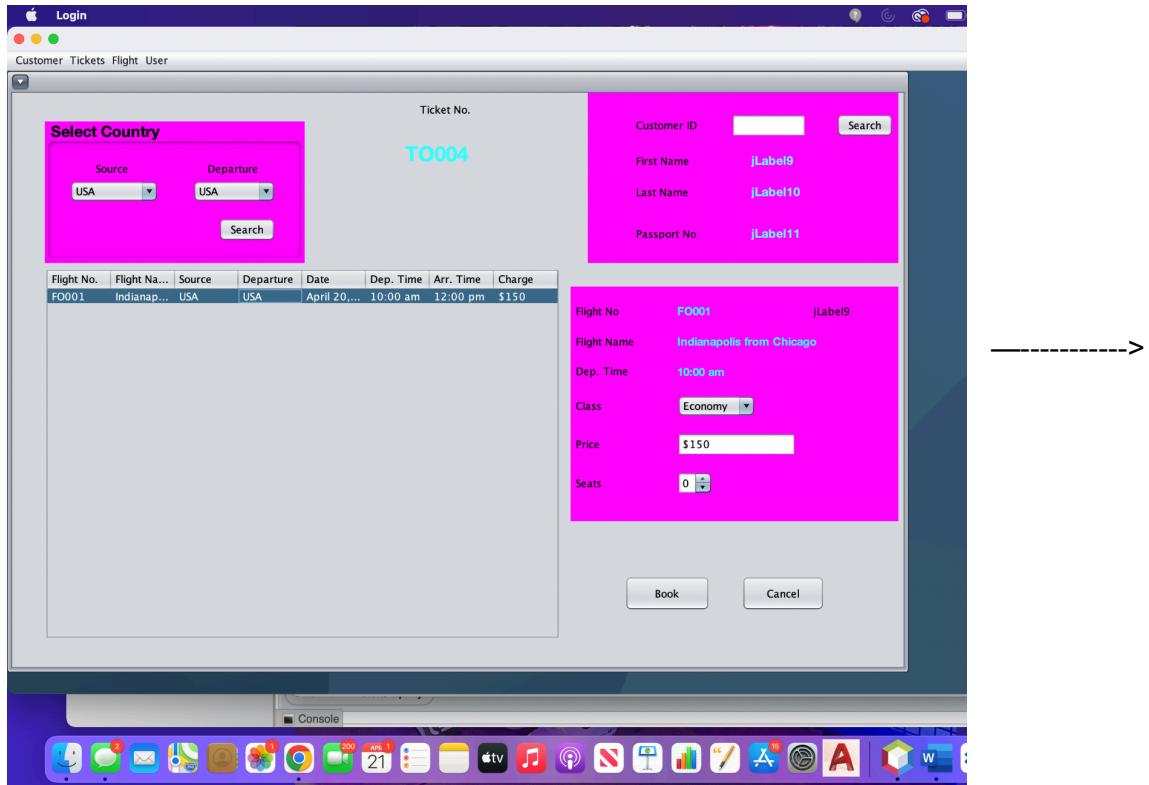
## User Interface Specification:

### Use Case- Add Customer Information



### Use Case: Book Tlcket





Project Plan:

- W1-2: determine the framework and establish the structure of the system, connecting front-end to back-end, connecting back-end to database  
**(Completed)**
- W3-4: build system login, customer booking abilities, and flight schedules  
**(Complete)**
- W5-7: Implement basic features for airline; add and cancel flight and implement customer ability to purchase flight and see flight details  
**(Completed)**
- W8: test accomplished features and record demo for midterm  
**(Completed)**
- W9-11: improve the current features based on customers' feedback if there are any, or continue working on implementing the basic features for customers booking flights; the system for airlines to add or cancel flights  
**(Completed)**
- W12-14: writing test cases for the implemented features or continue building possible features you'd like to implement **(Completed)**
- W15: record demo for final presentation **(Completed)**

References:

Tilley, Scott R., and Harry J. Rosenblatt. *Systems Analysis and Design*. 11th ed., Course Technology Cengage Learning, 2017.