**ENSF 480**

**FALL 2023**

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| **Principles of Software Design**  **ENSF 480** |
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| Date Activity Submitted:  **DD / MM / 2023** |

***A Flight Reservation Web Application***

**Due date for PROJECT (lecture section TUE/THURS): Wednesday Nov 29, before (11:59 PM)**

**Department of Electrical and Computer Engineering**

**University of Calgary**

# A Flight Reservation Web Application

## System’s Scenarios

### Browse Flight (User, Database):

* User access the system
* User searches for desired destination
* System displays available flights from the database
* User browses the list
* User selects his desired flight

### Browse Seat (User):

* User selects desired seat type from ordinary, comfort and business class seats
* System searches the database for the seat info for the selected flight
* System displays the seat info graphically as a seat map
* User selects their desired seat

### Opt In for Insurance (User):

* System asks user to opt in for ticket cancellation insurance
* User decide whether he wants insurance or not
* System stores User option in Booking Info

### Make Payment (User, Billing System):

* System displays cost to the User
* User selects payment option
* User enters payment information
* Payment information is sent to the billing system

### Receive Receipt (User, Billing System):

* Billing system generates receipt for ticket purchase
* Billing system sends receipt to user via email

### Receive Ticket (User, Database):

* System retrieves information from database
* System creates ticket
* User receives ticket via email

### Flight Cancellation (User, Database, Billing System):

* User cancels selected flight
* System checks whether user opted in for cancellation insurance
* If User has cancellation Insurance billing system refunds ticket price
* System removes booking info from database
* User receives cancellation confirmation via email

### Booking Info (User, Database):

* System asks user for information
* User inputs name, email address, and phone number
* System stores cancellation insurance information
* System sends the booking information to the database

### Use Airport Lounge (User, Billing System):

* System displays cost to the User
* User selects payment option
* User enters payment information
* Payment information is sent to the billing system

### Apply For Membership (User, Registered User, Database):

* User applies for membership
* Provides name, address, phone number, and email address
* System stores user information in the database
* User becomes registered user

### Receive Monthly Promotions (Registered User, Database):

* System retrieves registered emails from the database
* System retrieves the monthly newsletter
* System emails the newsletter to all the registered user at the start of the month

### Airport Lounge Discount (Registered User, Database, Billing System):

* Registered user enters information to receive discount
* System confirms registered user is on the database
* System applies discount to the cost
* Payment information is sent to the billing system

### Apply For Credit Card (Registered User, Database, Bank):

* Registered user applies for credit card
* System retrieves registered user information from database
* System sends registered user information to the bank to make a company card
* System updates registered user information in the database

### Receive Free Companion Ticket (Registered User, Database):

* System checks database to see if a registered user hasn’t redeemed a companion ticket in the past year
* System gives registered user free companion ticket
* Registered user applies free companion ticket while booking flight

### Browse Passenger List (Flight Attendant, System Admin, Database):

* System admin/flight attendant searches for passenger list for a specific flight
* System retrieves passenger list for the flight from the database
* System displays passenger list to the system admin/ flight attendant

### Browse For Flight (System Admin, Database):

* System displays list of existing flights from the database
* System admin can browse for a specific flight using its name, destination, origin, or date of departure
* System admin can choose to manage the flight information for that specific flight

### Manage Flight Information (System Admin):

* System admin can view the list of crew members on the flight and remove them or add new crew members
* System admin can change aircraft used for the flight
* System admin can change flight destination
* System admin can change flight origin
* System admin can change the date of departure for the flight

### Manage Crew Details (System Admin, Database):

* System displays list of existing crew members hired by the company from the database
* System admin can filter the crew list based on the flight they are on or their name
* System admin can add or remove a crew member from the crew list stored on the database

### Manage Aircraft (System Admin, Database):

* System displays list of existing aircrafts owned by the company from the database
* System admin can filter the aircraft list based on the flight or aircraft type
* System admin can add or remove aircrafts from the aircraft list stored on the database

### Print Registered User List (System Admin, Database):

* System admin asks the system for the registered user list
* System retrieves the list from the database
* System admin prints that list