**CS3101: Programming and Data Structures I**

Implementing Flight Registration Program in C

Final Group Project

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November 16, 2021

**Problem Statement**

Design an interactive flight reservation system in C programming language. The customer should be able to choose a flight from a calendar through a unique customer id and see the availability of tickets. Each customer should be given three options for a ticket: infant, child and adult, with different prices. After the customer chooses the booking options, the system should generate the final ticket amount.

It should have two modes of access (i) Admin and (ii) User. The allowed operations for each of these modes are:

Admin: Make modifications in flight details

User: Booking

There should be unique login ids for each. The system should ask for the login id and check it against a list. The admin and user ids for a person should be different. A person without a valid id should not be allowed to access the system. An Admin should be one related to the airport/airlines authorities. Users are the customers.

Each flight should have a unique id, availability, timing, source, destination etc.

In addition, a search facility should be present for both these modes allowing free-text search in general and also for specific fields of a flight.

**OS:** Windows

1. When you enter inside the c program, follow the below steps for ADMIN login:

* Choose 1 for LOGIN/REGISTER, 2 for CHECK TICKET STATUS, 3 for FLIGHT SEARCH, 4 for exit:
  + Select 1
* Enter 1 for ADMIN, 2 for USER, 3 for main MENU:
  + Select 1
* Welcome to Administrative portal.

Enter your username:

* Enter appropriate username here
* If you are not an admin, you will get message, “You are not a ADMIN!” and return to 1. again.
* On adding correct data, you can login as Admin and can do Admin privileges.
* Admin can do one modification every login for security purposes.

1. For Checking TICKET STATUS:
2. Choose 1 for LOGIN/REGISTER, 2 for CHECK TICKET STATUS, 3 for FLIGHT SEARCH, 4 for exit:
   * Select 2
3. Welcome!

To see status of ticket enter 1, to return to user portal enter 2:

* + Select 1 for checking status
  + Select 2 for login portal

1. Enter the ticket id:
   * Enter your ticket id
2. If ticket id is invalid then you will get message, “Invalid Ticket” and you will return to 2. again.

If ticket id is valid then you will get message, “Ticket found.” and details of tickets in format.

Example: Ticket found.

Passenger: xyz sharma (name)

Age: 44 (passenger age)

Booked under: xyzSharma (username)

1. For REGISTRATION of NEW USER:
2. Choose 1 for LOGIN/REGISTER, 2 for CHECK TICKET STATUS, 3 for FLIGHT SEARCH, 4 for exit:
   * Select 1
3. Enter 1 for ADMIN, 2 for USER, 3 for main MENU:
   * Select 2
4. Are you a registered user? Enter 1 for YES, 2 for NO, 3 to go back to main MENU:
   * Select 2
5. Welcome to new user registration portal.

Please enter your Full Name:

* + Enter your full name here.

1. Enter 0 to proceed, 1 to change name (current: \_\_\_\_\_):
   * In blank you will see your name, if you wish to change enter 1 and go to last step again and to proceed enter 0
2. \_\_\_\_\_\_, please enter a username (It will be used to log you in to book flights.):
   * Name is fixed now as shown in blank. Enter your choice of username.
   * If username is already taken then you will get message, “Username is taken, please try a different one.” And system will ask for new username.
3. If username is available then you will get message, “Username is available. Enter 0 to create password or 1 to change the username (current: \_\_\_\_\_\_):”
   * In blank you will see your username, if you wish to change username then enter 1 and to proceed and create password enter 0
4. Enter a strong password:
   * Enter your choice of password
5. Enter the password to confirm:
   * Re-enter password
6. **Account created successfully!**
7. For Booking ticket:
8. Choose 1 for LOGIN/REGISTER, 2 for CHECK TICKET STATUS, 3 for FLIGHT SEARCH, 4 for exit:
   * Select 1
9. Enter 1 for ADMIN, 2 for USER, 3 for main MENU:
   * Select 2
10. Are you a registered user? Enter 1 for YES, 2 for NO, 3 to go back to main MENU:
    * If you are registered user, select 1 or follow the NEW USER process to make one.
11. Welcome to User portal.

Enter your username:

* + Enter your username here.

1. Please enter your password:
   * Enter your password here.
2. Welcome \_\_\_\_\_\_\_, to e-Booking portal.

Booking ticket for self? Enter 1 for YES, 2 for NO:

* + For self, enter 1 and passenger name will be written automatically.
  + For other, enter 2 and enter the name of passenger manually.

1. Do you know the flight ID you want to board? Enter 1 for YES, 2 for NO, 3 to Logout:
   * If you have flight ID, enter 1 and then flight ID else select 2.
2. Information regarding flights (search flights).

Do you want to continue? Press enter to continue, carraige return to quit.

* + Press enter.

1. Age of passenger:
   * Enter age to know the class and fare of ticket.
2. The passenger \_\_\_\_\_. The fair is Rs. \_\_\_\_\_\_. Enter 1 to confirm, 2 to change age:
   * Select 1 to continue.
3. \_\_\_\_\_\_\_\_

Successfully booked! The ticket id is: \_\_\_\_\_\_\_\_\_

* + **Ticket is booked successfully!**

1. Want to purchase another ticket? Enter 1 for YES, 2 to go to MAIN menu:
   * Select 1 for another ticket and follow same process and select 2 for MAIN menu.
2. Content in program:
3. ADMIN
   1. New Admin Signup
   2. Flight modification
      1. View current flight
      2. Adding new flights
      3. Removing flights
      4. Modifying flights
   3. User modification (User deletion)
4. USER
   1. User Registration (for new users)
   2. Flight Search
   3. Ticket Status
   4. Ticket Booking (Self or other, with age fare variation)
   5. Ticket Cancelation
5. Contribution:

PRIYANGSHU DATTA: ADMIN & USER LOGIN, FLIGHT BOOKING

ANURAG SHARMA: ADMIN CONTROLS & FLIGHTS MODIFICATION

SANMOY SAHA: TICKET CANCELLATION & FLIGHT SEARCH

SIRSWA KULDEEP SHREE RAM: NEW USER AND ADMIN REGISTRATION AND DOCUMENTATION