

AIRLINE TICKET MANAGEMENT

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MODULES

MAIN MODULE (Main.java)

- This is the module that **handles and connects all classes**, acts as bridge between the user and the rest of the modules
- **Note:** The prompts that give options for redirection (eg: Press “M” to go back and “E” to quit), require input in uppercase. It is case-sensitive

LOGIN MODULE (Login.java)

- This is the module that **handles all login, sign up, update balance and other such functionalities**
- For Sign up:
 - We can sign up as customer or as staff
 - Follow the instructions on screen for smooth execution
 - Password masking is done so there won't be display of password but will record input
 - Password confirmation is done
 - Account balance initialization done in case of customer
 - For staff few additional details such as employee ID, Designation, Airline, etc. are being asked in order to set up account successfully
- For Login:
 - We can login as customer or staff
 - Follow the instructions on screen for smooth execution
 - Password masking is done so there won't be display of password but will record input

CUSTOMER MODULE (Customer.java)

- This module **handles customer details, saving and changing credentials into “login_customerDB.txt”, transactions from account, booking, viewing (boarding pass before check-in) and cancellation of ticket**
- The fields it handles are
 - Name
 - Username
 - Password
 - Balance
 - Travel date
 - Travel from
 - Travel to
 - Booked

STAFF MODULE (Staff.java)

- This **module handles all credentials management for staff including update of “login_staffDB.txt” and the functionalities available to staff of the airline**
- Each functionality is restricted to a staff with specific designation (Like new flights can be added only by Sales Head but no one else)
- This also handles the feature of generating boarding pass for user during check-in after verifying the verification number (refer Booking module) and checking bag weight
- **Note:** Here during check-in if baggage weight exceeds 25kgs, Rs.100 is being charged per extra kg (assumed to be paid directly by user via cash/card, etc. and not from account balance). If baggage weight exceeds 40kgs (chosen arbitrarily), then boarding of the customer is halted until the baggage weight is reduced.

BOOKING MODULE (Customer.java, Booking.java and Seats.java)

- This is one of the most important features of the project. This module takes in travel date, departure and arrival cities (travel from and travel to) to display list of flights available between the 2 cities (provided they are among the 10 cities that will be displayed)
- The flights will be displayed provided the departure and arrival cities match and there are free seats available
- The user is then asked to enter the number of passengers, the name and the age of each passenger (also checks if booking already exists for given passenger)
- **Seat preference (Window, middle, aisle, no preference) needs to be entered upon receiving instructions for the same**
- **Then the user is requested to enter a verification number (similar to Aadhaar number) to verify booking at the time of checking**
- **Once done it displays the amount deducted (in terms of previous and current balance) and the seat number**
- The entry is added into “flight_seats.txt” beside the flight code with seat number, username, passenger name and the verification number
- This amount that is being paid (full fare for adult and half fare for child) is being transferred from the user’s account to the airline’s account

VIEW TICKET MODULE

- This module **handles the display of boarding pass before the check-in**
- It displays the Flight code, from, to, date and time of travel, Passenger name and seat number
- **After check-in the staff class displays boarding pass with same details and additionally adds bag weight and the amount charged for extra luggage**

CANCELLATION MODULE (Customer.java, Booking.java and Seats.java)

- This module **handles all the operations that are needed for seat cancellation**
- This first takes date of travel, from, to and flight code and returns all the passengers name booked under the username
- Then it asks for the number of seats to be cancelled (with check that this count must be at most the number of bookings under the username), the passenger names and the seat numbers
- Then it asks for the age of each passenger whose seat was cancelled, to calculate and refund the amount to user after deducting it from the corresponding airline account
- This also removes the corresponding entry of booking from "flight_seats.txt"

FLIGHT AND AIRLINE MODULE (Flights.java and Airline.java)

- This module **handles the airline management and the corresponding flights under each of the airline**
- Here we have **taken 5 airlines in India arbitrarily** and added flights to and from the city with other details like free seats etc. into "flights.txt"
- Functionalities such as updating flight functional status (Boolean), adding new flights etc. are given to the staff class

LOGGER MODULE (LogFile.java)

- This module **handles adding logs for each action of the customer or staff during the execution of the program**
- After each login, sign-up, booking and cancellation (only; for now) a log is being added to "logfile.txt" along with timestamp, the info and the username
- Log is being added even in the case of failed log-in or sign-up