Airline reservation system

TA : Shamia

Team ID : 31

Team members			
Name	**ID**	**Level**	**Department**
محمد خالد جمال عرابي	2022170365	2	General
معاذ خالد عبدالعزيز عبدالهادي	2022170624	2	General
محمد تامر عبدالعزيز عبدالسلام	2022170359	2	General
محمد أمير محمد محمد	2022170256	2	General
محمد عمرو سيد علي	2022170383	2	General
محمد سعد محمد سعد	2022170367	2	General
أحمد خالد سيف الله حسن	2022170017	2	General

General Functionality

Index

General Functionality
Start Menu

Register:

Handles the registration process by prompting the user to enter a username and password.

Checks for username availability and creates a new user if the username is unique.

Log in:

Handles the login process by prompting the user to enter their username and password.

Checks for valid credentials and redirects to the corresponding user menu.

Forget password:

Handles the forget password process by allowing users to reset their password.

General Functionality

Input

Load:

Loads serialized objects from a file and adds them to the specified Array List.

Reads objects from the given file using Object Input Stream and adds them to the Array List.

If the file does not exist, it calls the save all method to create the necessary files.

Output

Save:

Saves serialized objects from the specified Array List to a file.

Writes objects from the Array List to the given file using Object Output Stream.

If the Array List is empty, it writes a null object to indicate an empty file.

Admin Functionality

Index

Admin Functionality
Flights

Add Flight:

Adds a new flight to the list of flights.

Generates a unique flight number and prompts the user to enter details such as departure and arrival airports, departure date, arrival date, and number of seats.

Checks for valid input and creates a new Flight object with the provided information.

Adds the new Flight object to the list of flights.

Edit Flight:

Allows the user to edit details of an existing flight.

Displays the list of flights and prompts the user to select a flight.

Provides options to edit the departure airport, arrival airport, departure and arrival time, or the number of seats of the selected flight.

Allows the user to go back or exit the function.

Admin Functionality

Remove Flight:

Allows the user to remove an existing flight from the list of flights.

Displays the list of flights and prompts the user to select a flight for removal.

Removes the selected flight from the list and notifies the user of successful removal.

Users

User List:

Displays a list of users along with their corresponding index numbers.

Prints the index number and details of each user in the list.

Admin Functionality
Airports

Add Airport:

Allows the user to add a new airport to the list of airports.

Prompts the user to enter the airport code, location, and name.

Checks if the entered airport code already exists, and if so, prompts the user to enter it again.

Handles input errors, such as invalid data types or null values, and prompts the user to re-enter the information.

Adds the new airport to the list of airports and notifies the user of successful addition.

Remove Airport:

Allows the user to remove an existing Airport from the list of Airports.

Displays the list of Airports and prompts the user to select an Airport for removal.

Removes the selected Airport from the list and notifies the user of successful removal.

User Functionality

Index

Admin Functionality
Bookings

Booking List:

Displays detailed information about each booking made by the active user.

Prints booking ID, flight details, ticket information (ticket number, fare, passenger details, seat class), and the amount of payment for each booking.

Add Booking:

Allows the user to add a new booking for a selected flight.

Prompts the user to choose a flight, enter the number of passengers, and provides options to add passengers, select seats, and generate tickets for each passenger.

Calculates the total payment amount for the booking based on the selected seats and passengers.

Prompts the user to choose a payment method and creates a new Booking object with the provided information.

Adds the new Booking object to the list of bookings and associates it with the active user.

Admin Functionality

Modify Booking:

Allows the user to modify an existing booking.

Displays the user's bookings, prompts the user to choose a booking to modify, and provides options to change the flight, add a passenger, or remove a passenger.

Remove Booking:

Allows the user to remove an existing booking.

Displays the user's bookings, prompts the user to choose a booking to remove, and removes the selected booking from the list of bookings associated with the active user.

Change Password

Allows the user to change their password by entering a new password.

Prompts the user to input the new password and updates it if a valid password is provided.