

COMP132: Advanced Programming Programming Project Report

KU Travel Agency

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<Fall 2024>



When preparing the project report, you can use the following format:

- Regular text: 12pt Times New Roman with 1.5 line spacing.
- Section Headings: Bold, 15pt Times New Roman
- Source code: 10pt Courier with single-spaced lines.
- All section headings should be numbered.
- The paragraphs should be justified.
- All figures should have descriptive captions and be referred to at the appropriate place in the text.

Part 1

General Demo Information:

- List of users (customers and admins); provide username & password.

Admin

Username: Vahideh Hayyolalam

Password: 123

Customers

Username: Aykut Bir

Password: Aykut12345*

Username: Bunyamin Emre Efe

Password: Bemre22Efe*

Username: Ece Sever

Password: Ecsever23@

- List of existing reservations made by the users.

Reservation ID	User ID	Username	From City	To City	Hotel Name	Airline	Flight Class	Taxi Type	Taxi Time	Start Date	End Date	Price (\$)
500007	600002	Ece Sever	Istanbul	Amsterdam	Hilton	Turkish Airlin...	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000
500006	600002	Ece Sever	Istanbul	Ankara	Sheraton	KUFly	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470
500003	600000	Aykut Bir	Istanbul	Madrid	Marriott	EuroWings	First Class	Black Taxi	17:00	2025-12-31	2026-01-05	3148
500000	600000	Aykut Bir	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128
500015	600001	Bunyamin E...	Istanbul	Stockholm	SunnySide H...	KUFly	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501
500014	600001	Bunyamin E...	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128
500009	600002	Ece Sever	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128
500008	600002	Ece Sever	Istanbul	Stockholm	SunnySide H...	KUFly	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501
500017	600001	Bunyamin E...	Istanbul	Amsterdam	Hilton	Turkish Airlin...	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000
500016	600001	Bunyamin E...	Istanbul	Ankara	Sheraton	KUFly	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470

Figure 1 List of the active reservations in the system

- List of existing travel packages made by the admin.

Packages with the “no discount” labels are custom packages created by the customers, the ones with numeric “Discounted Price” are the packages created by the Admin.

PackageID ▲	From City	To City	Airline	Flight Class	Hotel Name	Taxi Type	Price (\$)	Discounted Price (\$)	Start Date	End Date
400003	Istanbul	Paris	Turkish Airlines	Economy	Double Tree by...	Black Taxi	2660	2128	2025-01-10	2025-01-19
400005	Istanbul	Stockholm	KUFly	Business	SunnySide Hos...	Orange Taxi	2501	2501	2025-02-14	2025-02-18
400006	Istanbul	Vienna	Turkish Airlines	First Class	Radisson Blue	Yellow Taxi	12083	no discount	2025-09-09	2025-09-30
400007	Istanbul	Madrid	EuroWings	First Class	Marriott	Black Taxi	3148	no discount	2025-12-31	2026-01-05
400008	Istanbul	Ankara	KUFly	First Class	Sheraton	Yellow Taxi	1177	470	2025-11-10	2025-11-11
400009	Istanbul	Amsterdam	Turkish Airlines	Economy	Hilton	Orange Taxi	3750	3000	2026-05-10	2026-05-16
400010	Istanbul	Rome	Pegasus Airlines	Economy	Hilton	Black Taxi	1363	no discount	2025-05-01	2025-05-07

Figure 2 List of the active packages in the system

Application usage information (In that part, describe how to use your application. You can add screenshots of the required steps a user should follow.)

- Sign up/Login Guide

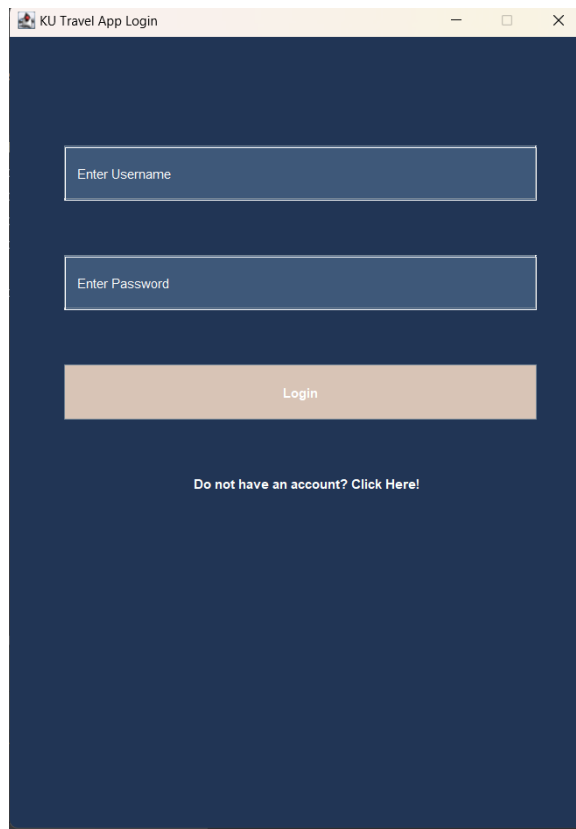


Figure 3 Login Page GUI

Firstly, enter your credentials to use the app, if you do not have an account, you can create one by simply clicking the white text below the login button.

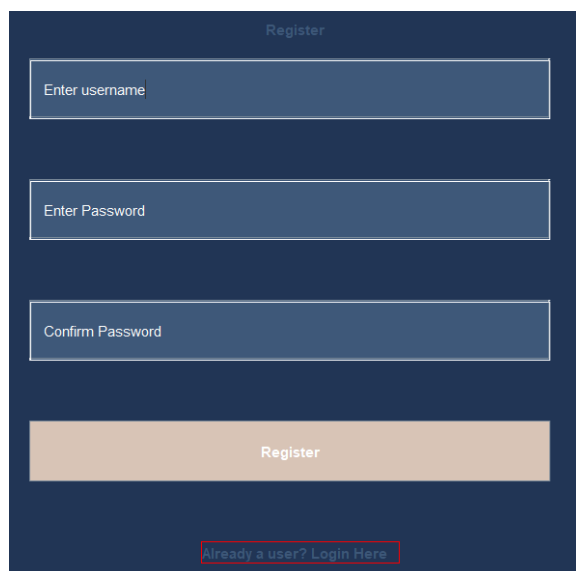


Figure 4 Register Page GUI

- User's Guide

In this app users can buy offered travel packages at discounted prices, or create their own travel packages. The package creation steps are designed so that, all the time and cost planning is being done in the background, while the customer just chooses which airline they want to travel with or which color of taxi they prefer.

When a customer logs in, they are greeted by the customer menu.

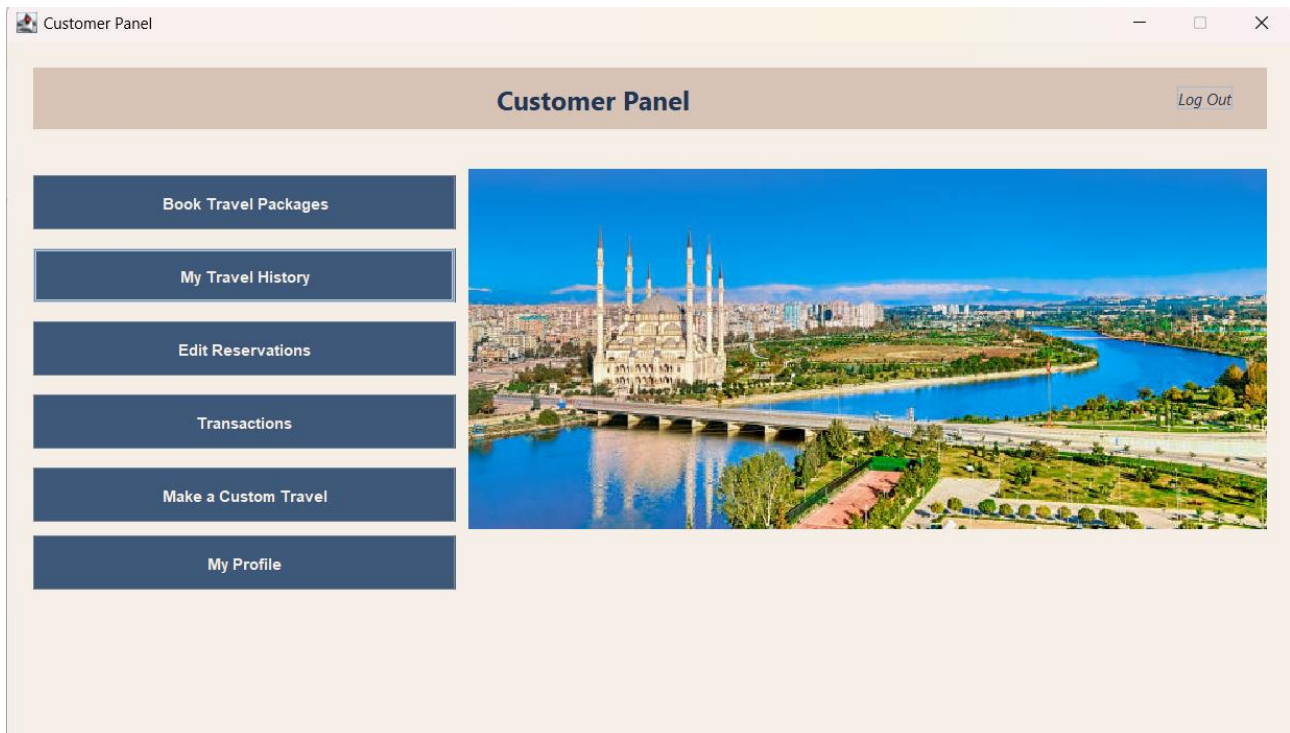


Figure 5 Main panel/menu for the customers

The customer menu contains all the operations a customer can perform:

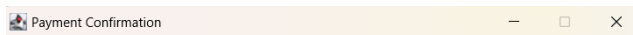
1. Booking travel packages

By clicking the “Book Travel Packages” button, a user can display the “offered” packages that the admin created for the customers. Some packages contain discounts, so the customers can get a better deal than planning a travel themselves.

PackageID	From City	To City	Airline	Flight Class	Hotel Name	Taxi Type	Price (\$)	Discounted Price (\$)	Start Date	End Date	Actions
100003	Istanbul	Paris	Turkish Airlines	Economy	Double Tree by...	Black Taxi	2660	2128	2025-01-10	2025-01-19	Details
100005	Istanbul	Stockholm	KUFly	Business	SunnySide Hos...	Orange Taxi	2501	2501	2025-02-14	2025-02-18	Details
100008	Istanbul	Ankara	KUFly	First Class	Sheraton	Yellow Taxi	1177	470	2025-11-10	2025-11-11	Details
100009	Istanbul	Amsterdam	Turkish Airlines	Economy	Hilton	Orange Taxi	3750	3000	2026-05-10	2026-05-16	Details

Figure 6 Travel booking UI for customers

As you can see above, the users can see the dates, destinations, and details of the package contents. When a customer wants to take a closer look at one of the packages, they can click on the “Details” button.



Package Details

Hotel: Double Tree by Hilton Paris Suite Price per night: \$122.25 * 9 = \$2660

Check-in: Oca 10, 2025

Check-out: Oca 19, 2025

Flight: 200000 Turkish Airlines Istanbul Paris Price of the ticket: \$1375.01

Flight Date: Oca 10, 2025

Taxi: Black Taxi Paris Estimated cost from the airport to the hotel: \$185.6049

Pickup Time: Oca 10, 2025 23:00

Customer Information

Name: Bunyamin Emre Efe

ID: 600001

Payment Details

Total Amount: \$2,128.00

Confirm Booking

Cancel

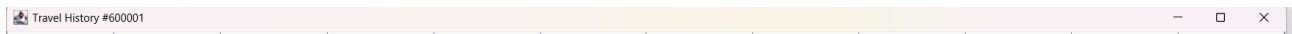
Figure 7 Details section for travel packages

The details section has more information related to the pricing and the time for taxi pickup.

If the customer decides to buy the package, they can click on the "Confirm Booking" button to initiate the transaction.

2. Viewing their travel histories

After booking their travel packages, customers can return the main menu and click the "My Travel History" button to display their travel history. The content of the travel history page can be seen below:



Reservation ID	From City	To City	Hotel Name	Airline	Flight Class	Taxi Type	Taxi Departure Time	Start Date	End Date	Price(\$)	Status
500015	Istanbul	Stockholm	SunnySide Hostel	KUFLy	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501	Confirmed
500014	Istanbul	Paris	Double Tree by Hilton	Turkish Airlines	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	Confirmed
500013	Istanbul	Paris	Double Tree by Hilton	Turkish Airlines	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	Cancelled
500012	Istanbul	Amsterdam	Hilton	Turkish Airlines	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000	Cancelled
500011	Istanbul	Ankara	Sheraton	KUFLy	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470	Cancelled
500010	Istanbul	Rome	Hilton	Pegasus Airlines	Economy	Black Taxi	14:00	2025-05-01	2025-05-07	1363	Cancelled
500017	Istanbul	Amsterdam	Hilton	Turkish Airlines	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000	Confirmed
500016	Istanbul	Ankara	Sheraton	KUFLy	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470	Confirmed

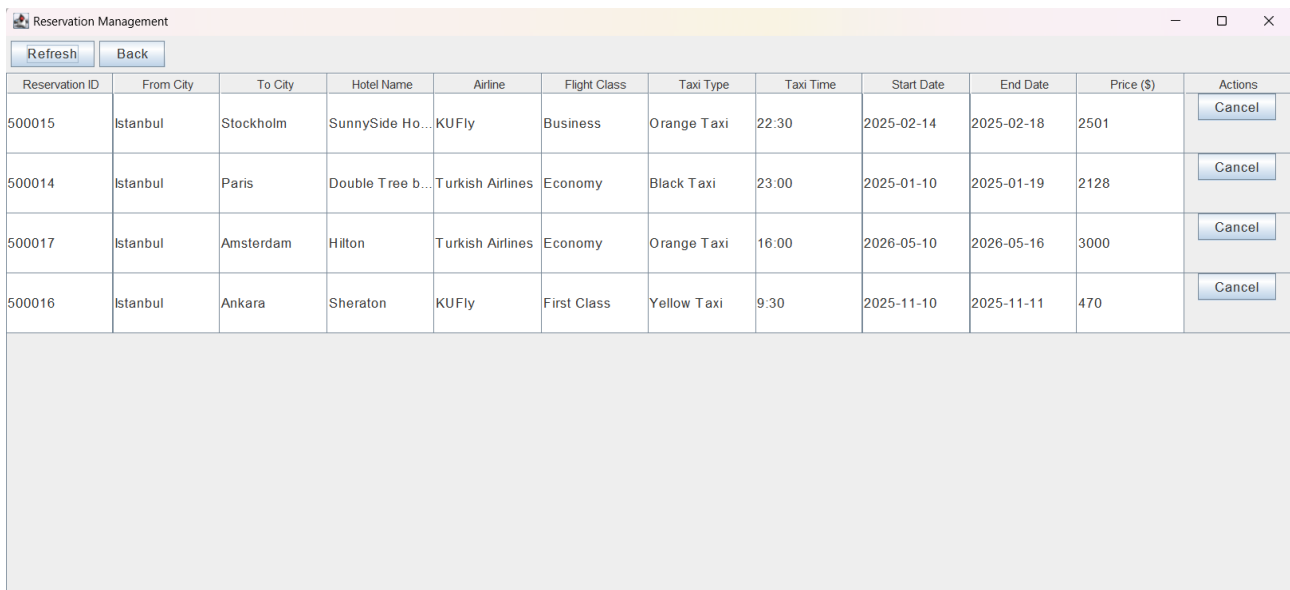
Back

Figure 8 Travel History GUI for Customers

This way the customers can see all their travel booking activity in an organised manner.

3. Editing their reservations

Then after returning back to the main menu the customers can click on “Edit Reservations” button to manage their reservations.



Reservation ID	From City	To City	Hotel Name	Airline	Flight Class	Taxi Type	Taxi Time	Start Date	End Date	Price (\$)	Actions
500015	Istanbul	Stockholm	SunnySide Ho...	KUFly	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501	<button>Cancel</button>
500014	Istanbul	Paris	Double Tree b...	Turkish Airlines	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	<button>Cancel</button>
500017	Istanbul	Amsterdam	Hilton	Turkish Airlines	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000	<button>Cancel</button>
500016	Istanbul	Ankara	Sheraton	KUFly	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470	<button>Cancel</button>

Figure 9 Reservation management GUI

They can choose to cancel their reservations in this menu, the rules for cancellation are as the following:

- 1- If the flights departure more than 72 hours ahead, no penalties are applied, the refund is given as the paid amount.
- 2- If an Admin cancels a reservation(this can also be for reorganization purposes), the refund is given as the paid amount regardless of the departure time.
- 3- If the cancellation is done 48 to 72 hours before departure: A 15% cancellation fee is deducted from the total ticket price.
- 4- If the cancellation is done less than 48 hours before departure: A 30% cancellation fee is deducted from the total ticket price.

4. Viewing their transactions

After the cancellation of their reservation, the customer can decide to take a look at their transactions to follow up the refund process, for this they can go back to the main menu, and click on the “Transactions” button.

Back					
Transaction Date	Amount(\$)	Reservation Number	From City	To City	Transaction Type
2025-01-02	1363	500010	Istanbul	Rome	Purchase
2025-01-02	470	500011	Istanbul	Ankara	Purchase
2025-01-02	3000	500012	Istanbul	Amsterdam	Purchase
2025-01-02	2128	500013	Istanbul	Paris	Purchase
2025-01-02	2128	500013	Istanbul	Paris	Refund
2025-01-02	470	500011	Istanbul	Ankara	Refund
2025-01-02	3000	500012	Istanbul	Amsterdam	Refund
2025-01-02	1363	500010	Istanbul	Rome	Refund
2025-01-02	2128	500014	Istanbul	Paris	Purchase
2025-01-02	2501	500015	Istanbul	Stockholm	Purchase
2025-01-02	470	500016	Istanbul	Ankara	Purchase
2025-01-02	3000	500017	Istanbul	Amsterdam	Purchase

Figure 10 Transactions GUI for customers

5. Making a custom travel package

If a customer decides to make a custom travel package they can easily do so by clicking the “Make a Custom Travel” button. The algorithm of this package making system will guide them through the package creation.

Travel Package Booking

Source City:

Destination City:

Start Date (YYYY-MM-DD):

End Date (YYYY-MM-DD):

Search Hotels

Back

Figure 11 Making a custom travel GUI

Firstly the initial window will allow the customer to choose the desired times and cities. By clicking on “Search Hotels” the hotels with available seats in the arrival city will be displayed for them to choose.

The screenshot shows a window titled "Travel Package Booking" with a search form. The form includes the following fields and buttons:

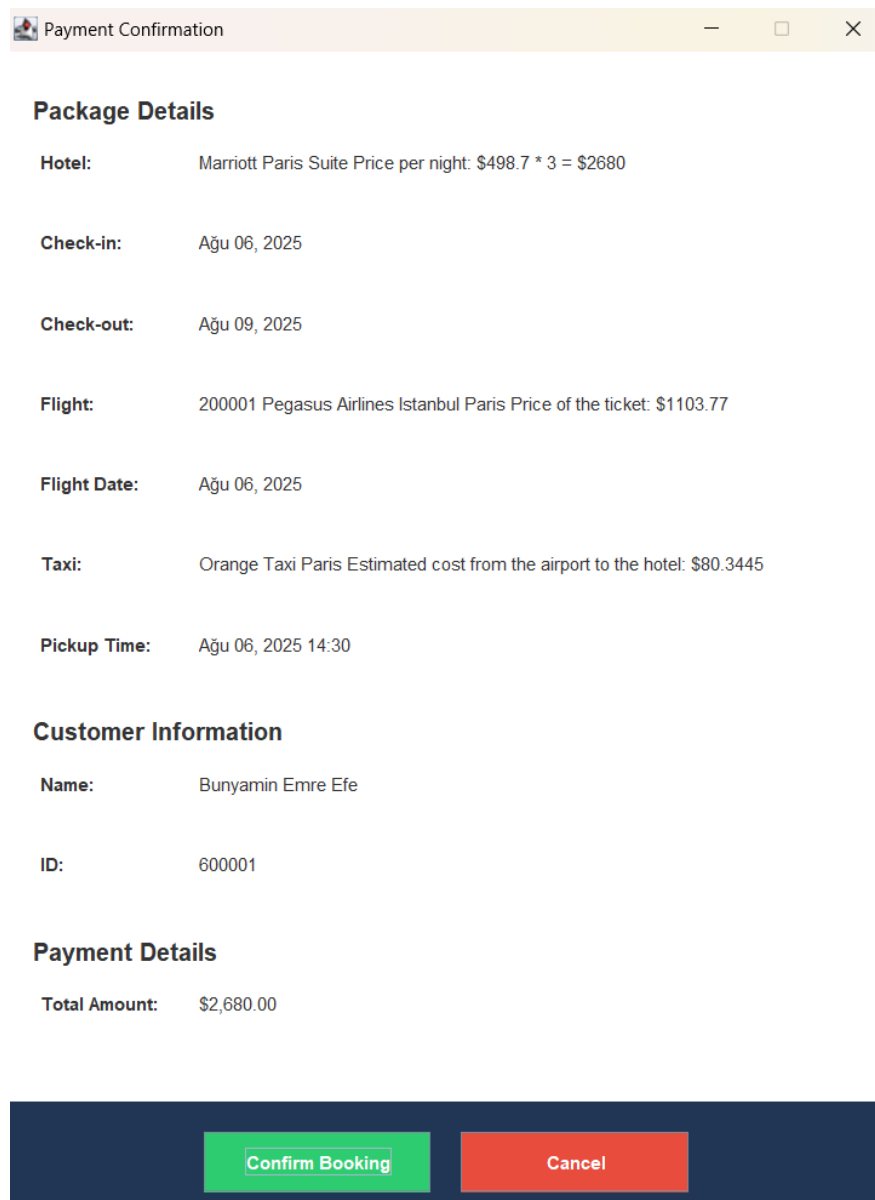
- Source City:** A dropdown menu with "Istanbul" selected.
- Destination City:** A dropdown menu with "Paris" selected.
- Start Date (YYYY-MM-DD):** A text input field containing "2025-08-06".
- End Date (YYYY-MM-DD):** A text input field containing "2025-08-09".
- Search Hotels:** A blue button to initiate the search.
- Back:** A blue button to return to the previous screen.

The screenshot shows the same window after a search, displaying a table of available hotels. At the bottom, there are two buttons: "Back to Search" and "Select Hotel".

Hotel ID	Hotel Name	Room Type	Price/Night(\$)	Distance to Airport(km)
100381	Four Seasons	Standard	110.71	49.66
100383	Four Seasons	Suite	451.42	49.66
100382	Four Seasons	Deluxe	435.97	49.66
100445	Double Tree by Hilton	Deluxe	483.2	23.11
100444	Double Tree by Hilton	Standard	224.71	23.11
100446	Double Tree by Hilton	Suite	122.25	23.11
100507	Atlantis	Standard	409.07	40.02
100509	Atlantis	Suite	398.23	40.02
100508	Atlantis	Deluxe	195.12	40.02
100571	Holiday Inn	Deluxe	421.21	3.1
100570	Holiday Inn	Standard	416.89	3.1
100572	Holiday Inn	Suite	450.23	3.1
100003	Marriott	Standard	124.81	18.03
100005	Marriott	Suite	498.7	18.03
100004	Marriott	Deluxe	264.33	18.03
100067	Hilton	Deluxe	126.03	41.55
100066	Hilton	Standard	203.84	41.55
100068	Hilton	Suite	435.34	41.55
100129	ibis Inn	Standard	188.06	41.93
100131	ibis Inn	Suite	228.49	41.93
100130	ibis Inn	Deluxe	387.09	41.93
100193	Sheraton	Deluxe	385.84	20.85
100192	Sheraton	Standard	194.42	20.85
100194	Sheraton	Suite	127.59	20.85
100255	InterContinental	Standard	454.6	3.22
100257	InterContinental	Suite	494.12	3.22
100256	InterContinental	Deluxe	219.33	3.22
100319	Radisson Blue	Deluxe	357.69	37.23
100318	Radisson Blue	Standard	193.31	37.23
100320	Radisson Blue	Suite	181.77	37.23

After choosing the hotel they desire, the suitable flights in between the cities they’ve selected will be displayed for them to choose, if there aren’t any suitable flights, the system gives a warning and takes the user back to the initial window.

After selecting a taxi, the user is greeted by the familiar details screen with a payment option.



The screenshot shows a 'Payment Confirmation' window with a title bar containing a close button. The window is divided into three sections: 'Package Details', 'Customer Information', and 'Payment Details'. Each section contains key-value pairs for booking information. At the bottom, there are two buttons: 'Confirm Booking' (green) and 'Cancel' (red).

Package Details	
Hotel:	Marriott Paris Suite Price per night: \$498.7 * 3 = \$2680
Check-in:	Ağu 06, 2025
Check-out:	Ağu 09, 2025
Flight:	200001 Pegasus Airlines Istanbul Paris Price of the ticket: \$1103.77
Flight Date:	Ağu 06, 2025
Taxi:	Orange Taxi Paris Estimated cost from the airport to the hotel: \$80.3445
Pickup Time:	Ağu 06, 2025 14:30

Customer Information	
Name:	Bunyamin Emre Efe
ID:	600001

Payment Details	
Total Amount:	\$2,680.00

Confirm BookingCancel

Figure 12 Details GUI in the end of create package menu

The selection of products starting with the hotel, ensures timely compatible product choices, making travel planning easier for the customer.

6. Viewing their profile and statistics.

Lastly, by clicking the “My Profile” button in the main menu, the customer can view some of their statistics and reservation history.



Figure 13 My Profile view for Customers

The available statistics are as follows, the titles are quite self-explanatory:

- 1- Number of Reservations Made
 - 2- Total Amount Spent (\$)
 - 3- Successful Reservations
 - 4- Canceled Reservations
 - 5- Average Spending per Reservation
 - 6- Reservation Success Rate
 - 7- Cancellation Rate
- Admin's Guide

Admin has total control over all the reservations and packages, he/she can delete/edit packages and cancel reservations with no cancellation fee, can also display logs and statistics for everyone.

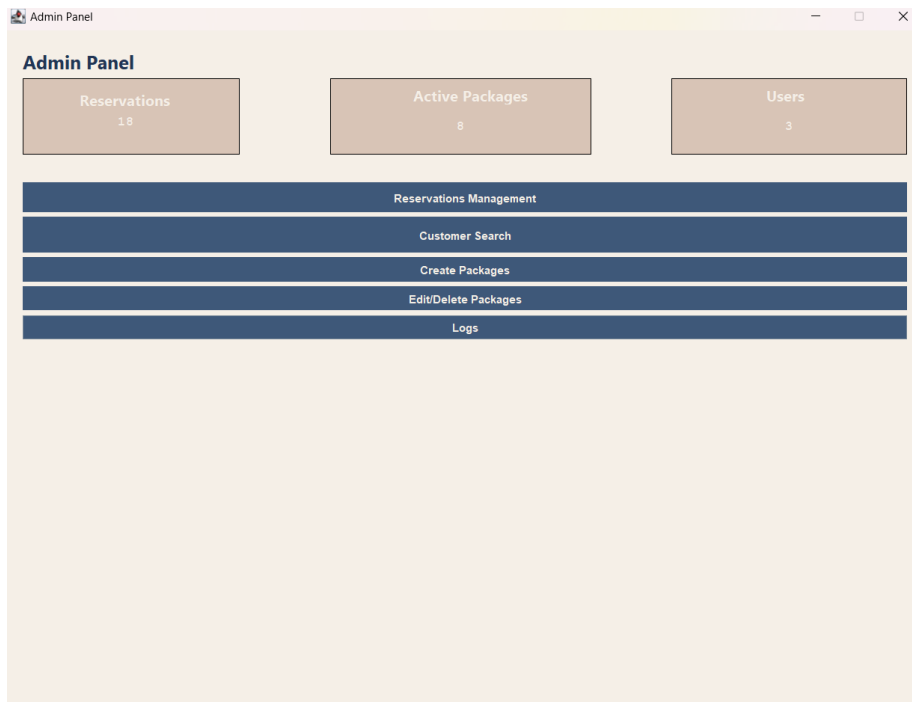


Figure 14 Admin Panel GUI

Admin can display some of the overall app data such as reservations count, active packages, and users count. They also have a menu of actions to perform or data to display.

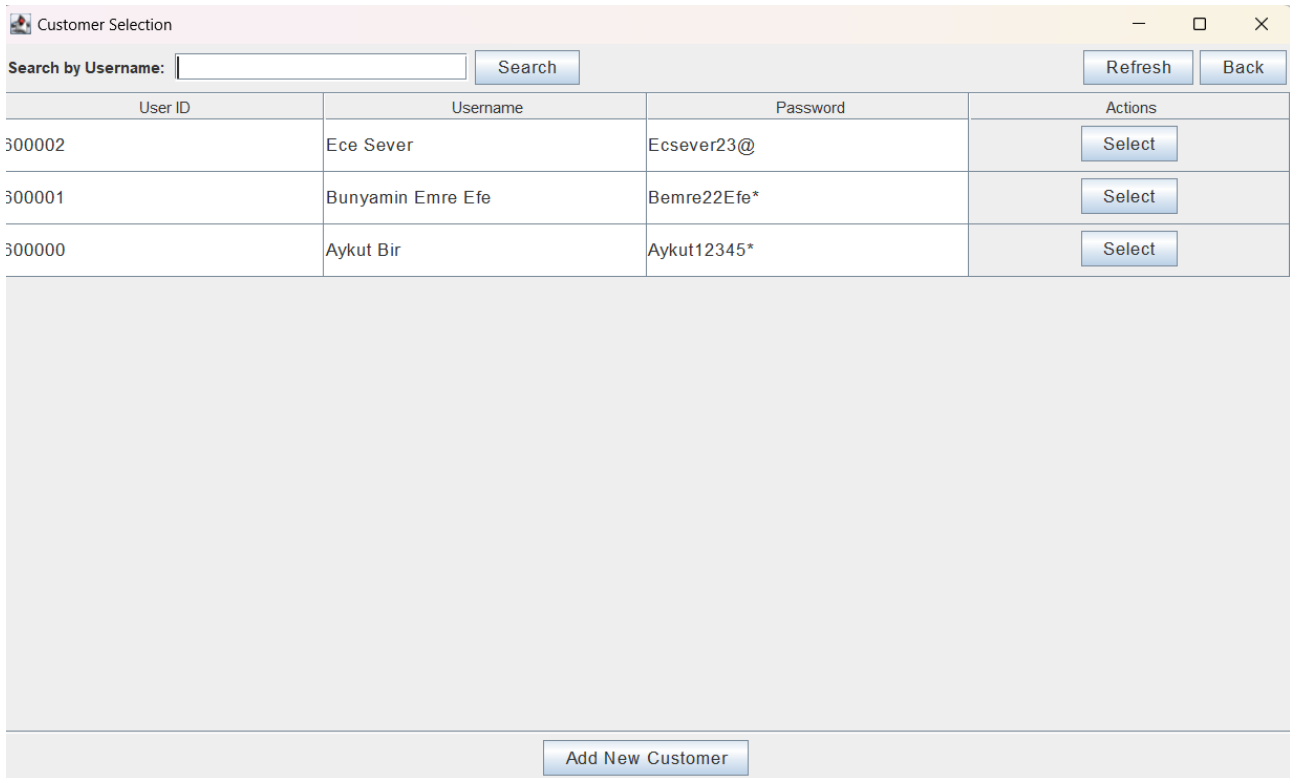
- Creating a New Reservation Guide

The admin can manage reservations via the button “Reservations Management”

Admin Reservation Management													Refresh Back	
Search by Username: <input type="text"/>													Search	
Reservation ID	User ID	Username	From City	To City	Hotel Name	Airline	Flight Class	Taxi Type	Taxi Time	Start Date	End Date	Price (\$)	Actions	
500007	600002	Ece Sever	Istanbul	Amsterdam	Hilton	Turkish Airlin...	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000	Edit	Cancel
500006	600002	Ece Sever	Istanbul	Ankara	Sheraton	KUFly	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470	Edit	Cancel
500003	600000	Aykut Bir	Istanbul	Madrid	Marriott	EuroWings	First Class	Black Taxi	17:00	2025-12-31	2026-01-05	3148	Edit	Cancel
500000	600000	Aykut Bir	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	Edit	Cancel
500015	600001	Bunyamin E...	Istanbul	Stockholm	SunnySide H...	KUFly	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501	Edit	Cancel
500014	600001	Bunyamin E...	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	Edit	Cancel
500009	600002	Ece Sever	Istanbul	Paris	Double Tree ...	Turkish Airlin...	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2128	Edit	Cancel
500008	600002	Ece Sever	Istanbul	Stockholm	SunnySide H...	KUFly	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501	Edit	Cancel
500017	600001	Bunyamin E...	Istanbul	Amsterdam	Hilton	Turkish Airlin...	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3000	Edit	Cancel
500016	600001	Bunyamin E...	Istanbul	Ankara	Sheraton	KUFly	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	470	Edit	Cancel
													Make Reservation	

Figure 15 Reservations Management Admin GUI

By clicking on make reservation button at the bottom, they can pick a customer, to make a reservation. They have 2 options when they chose the customer they wanted to perform on, using an existing package or making a new package:

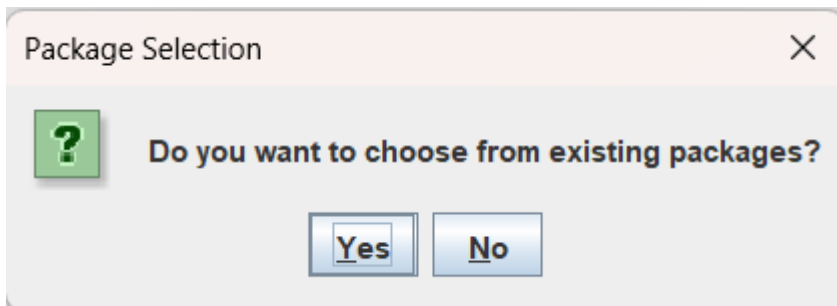


The screenshot shows a 'Customer Selection' window. At the top, there is a search bar labeled 'Search by Username:' with a 'Search' button. To the right are 'Refresh' and 'Back' buttons. Below this is a table with four columns: 'User ID', 'Username', 'Password', and 'Actions'. The table contains three rows of customer data. Each row has a 'Select' button in the 'Actions' column. Below the table is a large empty grey area, and at the bottom is an 'Add New Customer' button.

User ID	Username	Password	Actions
300002	Ece Sever	Ecsever23@	Select
300001	Bunyamin Emre Efe	Bemre22Efe*	Select
300000	Aykut Bir	Aykut12345*	Select

Add New Customer

Figure 16 Customer Selector UI for Reservation Making



The screenshot shows a 'Package Selection' dialog box. It has a title bar with a close button. Inside, there is a green question mark icon followed by the text 'Do you want to choose from existing packages?'. At the bottom, there are two buttons: 'Yes' and 'No'.

Package Selection

Do you want to choose from existing packages?

Yes No

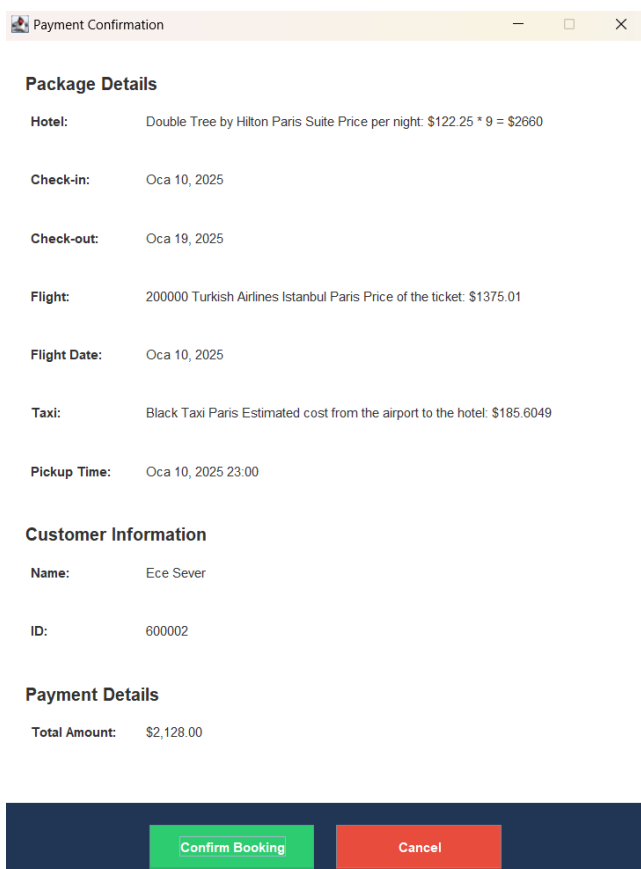
Figure 17 Dialog box for choosing the reservation package or creating a new one

If clicked yes a package selection window opens and after clicking details, an admin can make a reservation on behalf of a customer.



PackageID ▲	From City	To City	Airline	Flight Class	Hotel Name	Taxi Type	Price (\$)	Discounted Price (\$)	Start Date	End Date	Actions
400003	Istanbul	Paris	Turkish Airlines	Economy	Double Tree by...	Black Taxi	2660	2128	2025-01-10	2025-01-19	Details
400005	Istanbul	Stockholm	KUFly	Business	SunnySide Hos...	Orange Taxi	2501	2501	2025-02-14	2025-02-18	Details
400008	Istanbul	Ankara	KUFly	First Class	Sheraton	Yellow Taxi	1177	470	2025-11-10	2025-11-11	Details
400009	Istanbul	Amsterdam	Turkish Airlines	Economy	Hilton	Orange Taxi	3750	3000	2026-05-10	2026-05-16	Details

Figure 18 Package Selector UI



Package Details

Hotel: Double Tree by Hilton Paris Suite Price per night: \$122.25 * 9 = \$2660

Check-in: Oca 10, 2025

Check-out: Oca 19, 2025

Flight: 200000 Turkish Airlines Istanbul Paris Price of the ticket: \$1375.01

Flight Date: Oca 10, 2025

Taxi: Black Taxi Paris Estimated cost from the airport to the hotel: \$185.6049

Pickup Time: Oca 10, 2025 23:00

Customer Information

Name: Ece Sever

ID: 600002

Payment Details

Total Amount: \$2,128.00

[Confirm Booking](#) [Cancel](#)

Figure 19 Admin reservation conformation

As you can see above, the payment conformation presents the name of the selected customer and not the admin.

- Creating a New Travel Package

If the admin chose “no” and decided to create a new reservation, he/she is actually creating a new package and selling it to a customer, so it is a way of creating a new package.

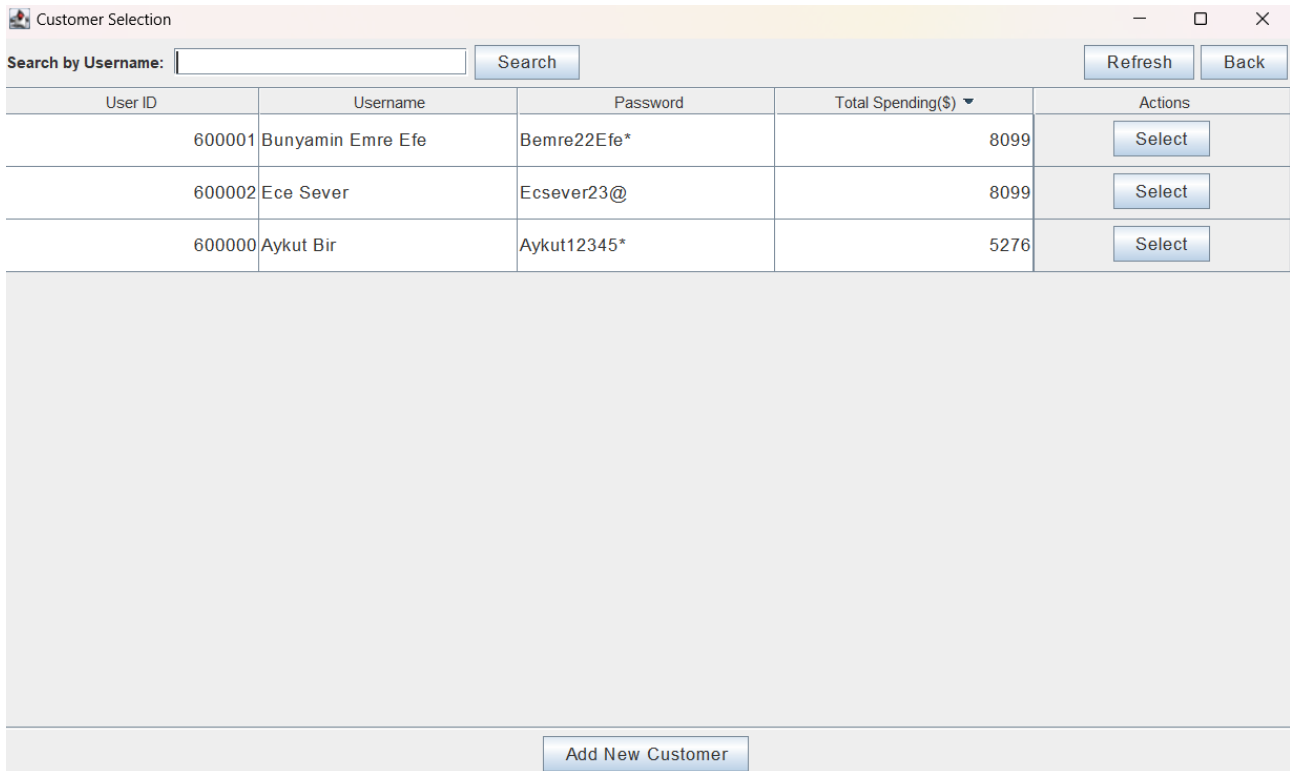
But an admin can create an offered package by simply clicking on the “Create Package” button on the admin menu.

- User Statistics & Agency Reports

User statistic for each individual user can be accessed by the Admin, but the customers can only display their own data.

For Admins:

Admins can click the “Customer Search” button, which opens the customer selection window



The screenshot shows a 'Customer Selection' window with a search bar, a 'Search' button, and 'Refresh' and 'Back' buttons. Below is a table of customers ranked by total spending, then by alphabetical order. Each row has a 'Select' button. At the bottom is an 'Add New Customer' button.

User ID	Username	Password	Total Spending(\$)	Actions
600001	Bunyamin Emre Efe	Bemre22Efe*	8099	Select
600002	Ece Sever	Ecsever23@	8099	Select
600000	Aykut Bir	Aykut12345*	5276	Select

Add New Customer

Figure 20 Customer Selection UI for Admins, ranked by total spending, then by alphabetical order

After the selection of a customer, the statistics window for that customer opens.



The screenshot shows a 'Customer Details' window for customer #600001. It displays the customer's username and ID, and a summary of their statistics. Below is a table of their reservations.

Username: Bunyamin Emre Efe
ID: 600001

Total Money Spent: \$8099,00 Average Spending Per Reservation: \$2024,75
Number of Reservations: 8 Number of Confirmed Reservations: 4
Number of Cancelled Reservations: 4 Rate of Successful Reservations: %50,00
Rate of Cancellation: %50,00 Number of Hotel Bookings: 4
Number of Flight Bookings: 4 Number of Taxi Bookings: 4

Back

Reservation ID	From City	To City	Hotel Name	Airline	Flight Class	Taxi Type	Taxi Departure ...	Start Date	End Date	Price(\$)	Discounted Pric...	Discount Ratio	Status
500015	Istanbul	Stockholm	SunnySide Host.	KUFLy	Business	Orange Taxi	22:30	2025-02-14	2025-02-18	2501,00	2501,00	0,00	Confirmed
500014	Istanbul	Paris	Double Tree by ...	Turkish Airlines	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2660,00	2128,00	20,00	Confirmed
500013	Istanbul	Paris	Double Tree by ...	Turkish Airlines	Economy	Black Taxi	23:00	2025-01-10	2025-01-19	2660,00	2128,00	20,00	Cancelled
500012	Istanbul	Amsterdam	Hilton	Turkish Airlines	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3750,00	3000,00	20,00	Cancelled
500011	Istanbul	Ankara	Sheraton	KUFLy	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	1177,00	470,00	60,07	Cancelled
500010	Istanbul	Rome	Hilton	Pegasus Airlines	Economy	Black Taxi	14:00	2025-05-01	2025-05-07	1363,00	1363,00	0,00	Cancelled
500017	Istanbul	Amsterdam	Hilton	Turkish Airlines	Economy	Orange Taxi	16:00	2026-05-10	2026-05-16	3750,00	3000,00	20,00	Confirmed
500016	Istanbul	Ankara	Sheraton	KUFLy	First Class	Yellow Taxi	9:30	2025-11-10	2025-11-11	1177,00	470,00	60,07	Confirmed

Figure 21 Customer Details UI, same with the customer's

- How to check log information

Admins can easily access the logs by clicking the “Logs” button in their menu, the logs are displayed in a scroll pane for comfortable usage.



Figure 22 Logs display UI

Part 2

Project Design Description:

- Class relations.

In this project I used 12 packages for my classes and files:

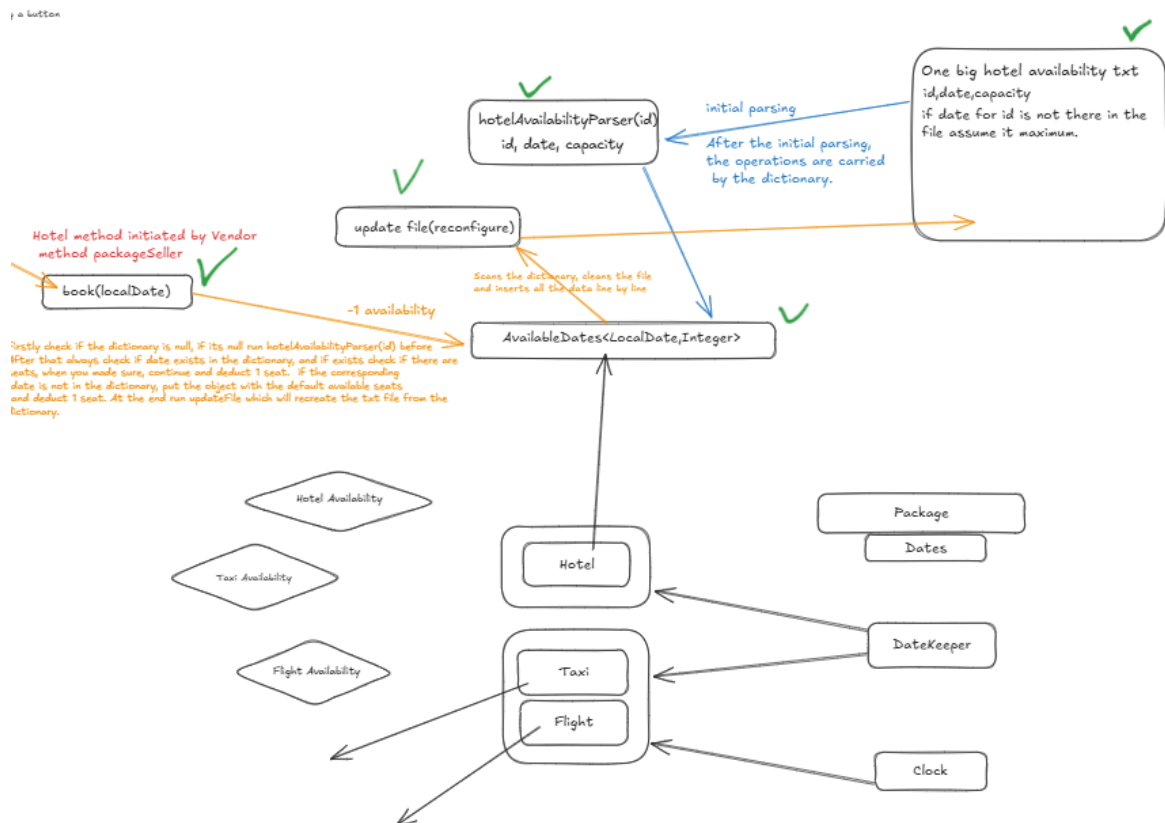
- constants
 - Constants Class: to store constants.
- core
 - App: main class of the project.
- custom
 - LoginErrors: makes custom red errors for login and registration
 - TextManager: implements a text character limit
 - CustomTextField: customizes text fields for the login and registration pages
 - CustomPasswordField: customizes password fields for the login and registration pages
- databases
 - AdminDB: Operates admin database
 - CustomerDB: Operates customer database
- datasets: provided datasets only
- gui:
 - AdminLogGUI: Manages the graphical interface for the admin log view.
 - AdminReservationsGUI: Provides a user interface for admins to view and manage reservations.
 - CustomerChooserGUI: Allows selection of a customer from a list or database, for reservation making.
 - CustomerDetailsGUI: Displays detailed information about a specific customer.
 - CustomerSearchGUI: Provides a search functionality to find customers in the system -for the admin customer search menu-.
 - EditReservationsUI: Offers a user interface for modifying existing reservations for customers.
 - LoginGUI: Handles the login process for users of the application.

- MyTransactionsGUI: Displays a history or summary of the user's transactions.
- PackageEditorGUI: Enables editing of travel packages for admins.
- PackageMakerGUI: Allows the creation of new travel packages.
- PackageManagementGUI: Provides an interface for managing all travel packages, for admins.
- PaymentGUI: Facilitates payment processing within the application.
- RegisterGUI: Handles the user registration process.
- TravelHistoryGUI: Displays the travel history of a user.
- TravelSelectorGUI: Helps users select and book travel packages.
- Images: images used throughout the project.
- Logs: stores logs.txt
- products(Includes Inheritance)
- reservation logs
 - Logger: operates logging
- Services
 - Package: Represents a travel package with details like destinations, pricing, and duration.
 - PackageManager: Manages the creation, editing, and removal of travel packages.
 - packages.txt: A text file storing data or configuration for travel packages.
 - Reservation: Represents a customer's booking for a specific travel package.
 - reservations.txt: A text file storing data related to reservations made by customers.
 - ReservationsManager: Handles the management of reservations, including searching, updating, and canceling bookings.
 - transactions.txt: A text file recording all user transaction details.
 - TravelParser: Processes and parses travel data from text files proved by instructors.
 - Vendor: Represents the cashier of the whole agency, it manages payments and keeps track of the transactions.
- Users(Includes Interface)

- Your implementation of finding availability for the reservations

I have created flightavailability.txt, hotelavailability.txt, taxiavailability.txt

Which works as can be seen below:



In short, there are files to store all bookings at all possible times ever, but there's a catch, the availability data for a date is never written to the files if they are never used, and the algorithm assumes that the date which doesn't exist in the file as the maximum availability possible, and when its booked, it is written in the file, as max-1.

- Your implementation of calculating the profits of the agency

I haven't added this feature.

- Implementation of Save/Load

I have `saveChanges()`, and `loadToMap()/dictionaryGenerator()` methods in all the classes that work with a file, they are being run whenever a change is done to ensure synchronization.

- Any additional design details that you want to mention

I want to add my drawings for formulating algorithms here:

https://excalidraw.com/#json=zbYvcw4MgJq8t7jsfnXaZ,cooxxP8iAP3JnQnYkqA_rQ

You can see all my logic and class relations, I specifically want you to see my edit package logic, vendor logic and package creation logic, they were very fun to brainstorm.

References

Give the list of references you used during the project design and development. All the references should be cited within the text of the report.

1-YouTube. (n.d.-b). *TapTap*. YouTube. https://www.youtube.com/@TapTap_196

2-*W3schools.com*. W3Schools Online Web Tutorials. (n.d.). <https://www.w3schools.com/>

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