UNIVERSITI TEKNOLOGI MARA

KEDAH BRANCH

SCHOOL OF INFORMATION SCIENCE

COLLEGE OF COMPUTING, INFORMATICS, AND MATHEMATICS

DIPLOMA IN INFORMATICS LIBRARY (IM144)

IM144: 3

ASSIGNMENT :

FLIGHT BOOKING SYSTEM REPORT

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Assalamualaikum w.b.t,

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Project Name: Flight Booking System
File Name: booking.py

Prompt Data:

The Flight Booking System processes the following data:

- **Name:** Passenger's name for booking purposes.
- **Date:** Date of the flight.
- **Origin:** The departure location of the flight.
- **Destination:** The arrival location of the flight.
- **Price:** The cost of the flight ticket.

Functionality:

1. **Create Data**

This feature allows users to book a flight by providing the following details:

- **Flight ID:** Identifies the flight selected from available options.
- **Passenger Name:** Records the name of the person traveling.

The system saves the booking into a list and calculates the total price automatically based on the flight's cost.

2. **Read Data**

a) View Available Flights

- Users can search for flights by specifying the **origin**, **destination**, and **date**.
- The system filters available flights that match the criteria and displays details such as flight ID, time, and price.

b) View Bookings

- Users can list all bookings to see the booking ID, passenger name, flight details (origin, destination), and price.

3. **Update Data**

Users can update existing bookings by:

- Provide the **Booking ID** of the record to be updated.
- Enter new details such as the passenger name, which will replace the old data.

The system ensures that only valid bookings are updated and provides confirmation upon success.

4. Delete Data

Users can cancel a booking by providing the **Booking ID**.

- Once deleted, the booking is removed from the system, and the list of bookings is updated.
- The system confirms successful deletion and displays the updated booking list.

5. Calculate Totals and Averages

This feature computes:

- The **total revenue** generated from all bookings.
- The **average ticket price** across all bookings, providing insights into flight pricing trends.

These calculations help monitor financial performance and support decision-making.

6. Input Validation

- The system uses built-in validation to ensure user inputs are accurate and complete.
- For instance, users entering non-existent Flight IDs or invalid Booking IDs will receive appropriate error messages, prompting them to try again.

7. Modular Menu System

The menu offers a user-friendly structure with options such as:

1. Searching for flights.
2. Making a booking.
3. Viewing all bookings.
4. Updating an existing booking.
5. Deleting a booking.
6. Viewing financial statistics (totals and averages).
7. Exiting the system.

Each selection triggers the corresponding functionality, ensuring seamless navigation.

8. Future-proof Design

The modular design of the system allows easy addition of features in the future, such as:

- Advanced search options (e.g., filter by flight duration, airline, or layovers).
- Integration with online payment systems for real-time booking.

Conditional Statements:

The system uses conditional logic (if, Elif, and else) for various features, including:

- Searching for flights by matching origin, destination, and date.
- Validating user input for booking IDs and ensuring data integrity.
- Displaying appropriate messages when searches or updates fail.

GUI:

- **GUI:** No (The system is console-based).
- **Screenshot:** *(Not applicable, as the system runs in a terminal environment.)*

Result:

The system successfully performs the following operations:

- Displays flight schedules based on user input (search functionality).
- Processes flight bookings and calculates totals and averages for prices.
- Allows updates and cancellations of bookings efficiently.

Strengths:

- User-friendly interface with clear prompts and options for users.
- The modular design makes it easy to maintain and expand functionalities.
- Efficient handling of data, including calculations of totals and averages.

Kaizen (Room for Improvement):

- Integrate a graphical user interface (GUI) for improved user experience.
- Add a database to store flight and booking details for persistent data storage.
- Implement a notification system to send booking confirmations.
- Enhance the search feature to include additional filters like time or price range.