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Chella Campus



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Course Code	CS-1101
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Task	Open-ended Lab (Report)

Report: Airline Booking and Reservation System

1. Overview

The “Airline Booking and Reservation System” is a C++ program designed to manage flight seat bookings, cancellations, and invoice generation. It provides a user-friendly, menu-driven interface for users to interact with the system. The program includes features like seat booking, cancellations, discounts, and invoice generation.

{ Key Features}

1. Seat Booking:

Users can book seats in Business or Economy Class.

Seats are selected from available options.

2. Seat Cancellation:

Users can cancel booked seats with a **5% penalty**.

Refunds are calculated automatically.

3. Invoice Generation:

Detailed invoices are generated with seat numbers, class, price, and destination.

Discounts for Hajj Packages and group bookings are applied.

4. Discounts:

Hajj Package: 5% discount for Saudi Arabia bookings.

Group Discount: 5% discount for booking more than 5 seats.

5. User-Friendly Interface:

The program is menu-driven, making it easy to navigate.

Example Workflow

1. User Books Seats:

- Selects destination: Saudi Arabia.
- Chooses Hajj Package (5% discount).
- Books 6 seats in Business Class.
- Group discount (5%) is applied.
- Total price is calculated and displayed.

2. User Cancels Seats:

- Cancels 1 seat (seat number 5).
- Refund is calculated after deducting a 5% penalty.

3. User Generates Invoice:

- Invoice is generated with details of the remaining 5 seats.
- Total amount reflects applicable discounts.

Summary of Techniques	
Technique	Purpose
Input and Output	Interact with the user and display information.
Variables and Data Types	Store and manipulate data.
Control Structures	Control the flow of the program.
Functions	Modularize the code and improve readability.
Data Structures	Organize and manage data efficiently.
Error Handling	Handle invalid user input and edge cases.
Discount Calculations	Apply discounts based on specific conditions.
Invoice Generation	Display booking details and the total price.
Program Termination	Exit the program gracefully.

Conclusion

The “Airline Booking and Reservation System” is a comprehensive program that simplifies flight seat bookings, cancellations, and invoice generation. It includes features like discounts and a user-friendly interface, making it a valuable tool for airlines and passengers. The program is designed to be efficient, easy to use, and scalable for future enhancements.