#include <stdio.h>

#include <stdlib.h>

// Structure to represent passenger information

struct Passenger {

char name[50];

int age;

};

// Function to book a bus ticket

void bookTicket(char source[50], char destination[50], int numStops, char timings[100], float ticketCost, int availableSeats, struct Passenger passengers[], int numTickets) {

if (availableSeats >= numTickets) {

// Update available seats

availableSeats -= numTickets;

// Generate a unique booking reference

int bookingReference = rand();

// Display booking details

printf("Booking Reference: %d\n", bookingReference);

printf("Source: %s\n", source);

printf("Destination: %s\n", destination);

printf("Number of Stops: %d\n", numStops);

printf("Timings: %s\n", timings);

printf("Ticket Cost: %.2f\n", ticketCost);

// Display passenger details

for (int i = 0; i < numTickets; i++) {

printf("Passenger %d:\n", i + 1);

printf("Name: %s\n", passengers[i].name);

printf("Age: %d\n", passengers[i].age);

}

} else {

printf("Sorry, not enough available seats.\n");

}

}

int main() {

// Bus details

char source[50] = "CityA";

char destination[50] = "CityB";

int numStops = 3;

char timings[100] = "10:00 AM, 2:00 PM, 6:00 PM";

float ticketCost = 10.50;

int availableSeats = 50;

// Passenger details

struct Passenger passengers[5];

// Collect passenger information

for (int i = 0; i < 5; i++) {

printf("Passenger %d Details:\n", i + 1);

printf("Name: ");

scanf("%s", passengers[i].name);

printf("Age: ");

scanf("%d", &passengers[i].age);

}

// Number of tickets to book

int numTickets;

printf("Enter the number of tickets to book (max 5): ");

scanf("%d", &numTickets);

// Book tickets

if (numTickets <= 5) {

bookTicket(source, destination, numStops, timings, ticketCost, availableSeats, passengers, numTickets);

} else {

printf("Maximum 5 tickets can be booked at a time.\n");

}

return 0;

}

A SIMPLIFIED CODE.

WHAT IT DOES?

The provided code is a simple bus ticket booking system written in C. When you run this code, it will prompt you to enter details for up to 5 passengers, such as their names and ages. After collecting passenger information, it will then ask you to enter the number of tickets to book.

If the number of tickets entered is valid (less than or equal to 5) and there are enough available seats on the bus, it will simulate booking the tickets. It will generate a unique booking reference, display the details of the booked bus, and show the details of each passenger.

Here's an example of how the program might run:

Passenger 1 Details:

Name: John

Age: 25

Passenger 2 Details:

Name: Mary

Age: 30

Passenger 3 Details:

Name: Bob

Age: 22

Passenger 4 Details:

Name: Alice

Age: 28

Passenger 5 Details:

Name: Eve

Age: 35

Enter the number of tickets to book (max 5): 3

Booking Reference: <some random number>

Source: CityA

Destination: CityB

Number of Stops: 3

Timings: 10:00 AM, 2:00 PM, 6:00 PM

Ticket Cost: 10.50

Passenger 1:

Name: John

Age: 25

Passenger 2:

Name: Mary

Age: 30

Passenger 3:

Name: Bob

Age: 22

Please note that the actual booking reference will be a random number generated during the program's execution. The code uses the rand() function from the stdlib.h library to generate this random number.