// C Program to implement Bus Reservation System

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

struct Bus{

int busNumber;

char source[50];

char destination[50];

int totalNoSeats;

int totalavailSeats;

float Totalfare;

};

struct User{

char username[50];

char password[50];

};

void displayMenu(){

printf("\n=== Main Menu ===\n");

printf("1. Login\n");

printf("2. Exit\n");

printf("Enter user choice: ");

}

void displayUserMenu(){

printf("\n=== User Menu ===\n");

printf("1. Ticket Booking\n");

printf("2. Ticket Cancellation\n");

printf("3. Check availability of Bus Status\n");

printf("4. Logout\n");

printf("Enter your choice: ");

}

int loginUser(struct User users[], int numofUsers, char username[], char password[]){

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

if (strcmp(users[i].username, username) == 0 && strcmp(users[i].password, password) == 0){

return i; // Return the index of the logged-in user

}

}

return -1; // Return -1 if login fails

}

void bookTicket(struct Bus buses[], int numofBuses)

{

printf("\nEnter Bus Number: ");

int busNumber;

scanf("%d", &busNumber);

int busIndex = -1;

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

if (buses[i].busNumber == busNumber){

busIndex = i;

break;

}

}

if (busIndex == -1){

printf("Bus with Bus Number %d not found.\n", busNumber);

}

else{

printf("Enter Number of Seats: ");

int seatsToBook;

scanf("%d", &seatsToBook);

if (buses[busIndex].totalavailSeats < seatsToBook){

printf("Sorry, only %d seats are available.\n", buses[busIndex].totalavailSeats);

}

else{

buses[busIndex].totalavailSeats -= seatsToBook;

printf("Booking successful! %d seats booked on Bus Number %d from %s to %s\n", seatsToBook, busNumber,buses[busNumber].source,buses[busNumber].destination);

}

}

}

void cancelTicket(struct Bus buses[], int numofBuses)

{

printf("\nEnter Bus Number: ");

int busNumber;

scanf("%d", &busNumber);

// Find the bus with the given busNumber

int busIndex = -1;

for (int i = 0; i < numofBuses; i++)

{

if (buses[i].busNumber == busNumber){

busIndex = i;

break;

}

}

if (busIndex == -1)

{

printf("Bus with Bus Number %d not found.\n", busNumber);

}

else

{

printf("Enter Number of Seats to Cancel: ");

int seatsToCancel;

scanf("%d", &seatsToCancel);

if (seatsToCancel > (buses[busIndex].totalNoSeats - buses[busIndex].totalavailSeats))

{

printf("Error: You can't cancel more seats than were booked.\n");

}

else

{

buses[busIndex].totalavailSeats += seatsToCancel;

printf("Cancellation successful! %d seats canceled on Bus Number %d from %s to %s.\n", seatsToCancel,

busNumber,buses[busNumber].source,buses[busNumber].destination);

}

}

}

**OUTPUT:**

=== Main Menu ===

1. Login

2. Exit

Enter user choice: 1

Enter Username: username1

Enter Password: password1

Login successful. Welcome, username1!

=== User Menu ===

1. Ticket Booking

2. Ticket Cancellation

3. Check availability of Bus Status

4. Logout

Enter your choice: 3

Enter Bus Number: 1

Bus Number: 1

Source: Amalapuram

Destination: Bangalore

Total Seats: 55

Available Seats: 55

Totalfare: 1200.00

=== User Menu ===

1. Ticket Booking

2. Ticket Cancellation

3. Check availability of Bus Status

4. Logout

Enter your choice: 1

Enter Bus Number: 1

Enter Number of Seats: 3

Booking successful! 3 seats booked on Bus Number 1 from Amalapuram to Visakhapatnam

=== User Menu ===

1. Ticket Booking

2. Ticket Cancellation

3. Check availability of Bus Status

4. Logout

Enter your choice: 3

Enter Bus Number: 1

Bus Number: 1

Source: Amalapuram

Destination: Bangalore

Total Seats: 55

Available Seats: 52

Totalfare: 1200.00

=== User Menu ===

1. Ticket Booking

2. Ticket Cancellation

3. Check availability of Bus Status

4. Logout

Enter your choice: 2

Enter Bus Number: 1

Enter Number of Seats to Cancel: 1

Cancellation successful! 1 seats canceled on Bus Number 1 from Amalapuram to Visakhapatnam.

=== User Menu ===

1. Ticket Booking

2. Ticket Cancellation

3. Check availability of Bus Status

4. Logout

Enter your choice: 4

Logging out.

=== Main Menu ===

1. Login

2. Exit

Enter user choice: 2

Exiting the program.