1. #include <stdio.h>

#define MAX\_SEATS 5

typedef struct {

    char name[50];

    int age;

    char contact[15];

    int booked;

} Passenger;

Passenger seats[MAX\_SEATS];

void bookSeat() {

    int seat;

    printf("Enter seat number (1-%d): ", MAX\_SEATS);

    scanf("%d", &seat);

    if (seat < 1 || seat > MAX\_SEATS || seats[seat - 1].booked) {

        printf("Invalid seat or seat already booked!\n");

        return;

    }

    printf("Enter name: ");

    scanf("%s", seats[seat - 1].name);

    printf("Enter age: ");

    scanf("%d", &seats[seat - 1].age);

    printf("Enter contact number: ");

    scanf("%s", seats[seat - 1].contact);

    seats[seat - 1].booked = 1;

    printf("Seat booked successfully!\n");

}

void cancelSeat() {

    int seat;

    printf("Enter seat number to cancel (1-%d): ", MAX\_SEATS);

    scanf("%d", &seat);

    if (seat < 1 || seat > MAX\_SEATS || !seats[seat - 1].booked) {

        printf("Invalid seat or seat not booked!\n");

        return;

    }

    seats[seat - 1].booked = 0;

    printf("Seat %d cancelled successfully!\n", seat);

}

void displaySeats() {

    printf("\nBooked Seats:\n");

    int booked\_count = 0;

    for (int i = 0; i < MAX\_SEATS; i++) {

        if (seats[i].booked) {

            printf("Seat %d: %s, Age: %d, Contact: %s\n", i + 1, seats[i].name, seats[i].age, seats[i].contact);

            booked\_count++;

        }

    }

    if (booked\_count == 0) {

        printf("No seats are booked.\n");

    }

}

int main() {

    int choice;

    for (int i = 0; i < MAX\_SEATS; i++) {

        seats[i].booked = 0;

    }

    do {

        printf("\nBus Seat Booking System\n");

        printf("1. Book a seat\n");

        printf("2. Cancel a seat\n");

        printf("3. Display booked seats\n");

        printf("4. Exit\n");

        printf("Enter your choice: ");

        scanf("%d", &choice);

        if (choice == 1) {

            bookSeat();

        } else if (choice == 2) {

            cancelSeat();

        } else if (choice == 3) {

            displaySeats();

        } else if (choice == 4) {

            printf("Exiting the system.\n");

        } else {

            printf("Invalid choice. Please try again.\n");

        }

    } while (choice != 4);

  return 0;

}

3. #include <stdio.h>

#define MAX\_SEATS 5

typedef struct {

    char name[50];

    int age;

    char contact[15];

    int booked;

} Passenger;

Passenger seats[MAX\_SEATS];

void bookSeat() {

    int seat;

    printf("Enter seat number (1-%d): ", MAX\_SEATS);

    scanf("%d", &seat);

    if (seat < 1 || seat > MAX\_SEATS || seats[seat - 1].booked) {

        printf("Invalid seat or seat already booked!\n");

        return;

    }

    printf("Enter name: ");

    scanf("%s", seats[seat - 1].name);

    printf("Enter age: ");

    scanf("%d", &seats[seat - 1].age);

    printf("Enter contact number: ");

    scanf("%s", seats[seat - 1].contact);

    seats[seat - 1].booked = 1;

    printf("Seat booked successfully!\n");

}

void cancelSeat() {

    int seat;

    printf("Enter seat number to cancel (1-%d): ", MAX\_SEATS);

    scanf("%d", &seat);

    if (seat < 1 || seat > MAX\_SEATS || !seats[seat - 1].booked) {

        printf("Invalid seat or seat not booked!\n");

        return;

    }

    seats[seat - 1].booked = 0;

    printf("Seat %d cancelled successfully!\n", seat);

}

void displaySeats() {

    printf("\nBooked Seats:\n");

    int booked\_count = 0;

    for (int i = 0; i < MAX\_SEATS; i++) {

        if (seats[i].booked) {

            printf("Seat %d: %s, Age: %d, Contact: %s\n", i + 1, seats[i].name, seats[i].age, seats[i].contact);

            booked\_count++;

        }

    }

    if (booked\_count == 0) {

        printf("No seats are booked.\n");

    }

}

int main() {

    int choice;

    for (int i = 0; i < MAX\_SEATS; i++) {

        seats[i].booked = 0;

    }

    do {

        printf("\nBus Seat Booking System\n");

        printf("1. Book a seat\n");

        printf("2. Cancel a seat\n");

        printf("3. Display booked seats\n");

        printf("4. Exit\n");

        printf("Enter your choice: ");

        scanf("%d", &choice);

        if (choice == 1) {

            bookSeat();

        } else if (choice == 2) {

            cancelSeat();

        } else if (choice == 3) {

            displaySeats();

        } else if (choice == 4) {

            printf("Exiting the system.\n");

        } else {

            printf("Invalid choice. Please try again.\n");

        }

    } while (choice != 4);

return 0;

}