

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.TICKET BOOKING AND PAYMENT SYSTEM

```

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
typedef struct {
    char name[20];
    int age;
    char contactno[20];
    char date[20];
} Passenger;
typedef struct {
    char paymentmethod[20];
    float amount;
    char transactionID[20];
}

```

```

} Payment;

typedef struct {
    Passenger passenger;
    float ticketPrice;
    Payment payment;
    int cancel;
} Ticket;

void bookticket(Ticket *ticket);
void calculateticketPrice(Ticket *ticket);
void processpayment(Ticket *ticket);
void displayconfirmation(Ticket *ticket);
void cancelbooking(Ticket *ticket);
void displayrefund(Ticket *ticket);

int main() {
    Ticket ticket;
    int ch;
    while (1) {
        printf("1. Book a Ticket\n");
        printf("2. Cancel a Ticket\n");
        printf("Enter your choice: ");
        scanf("%d", &ch);
        if (ch == 1) {
            bookticket(&ticket);
        } else if (ch == 2) {
            cancelbooking(&ticket);
        } else {
            printf("Invalid choice\n");
        }
    }
}

```

```

    }

    return 0;
}

void bookticket(Ticket *ticket) {
    printf("\nEnter Passenger Details\n");
    printf("Name: ");
    scanf(" %s", ticket->passenger.name);
    printf("Age: ");
    scanf("%d", &ticket->passenger.age);
    printf("Contact Number: ");
    scanf("%s", ticket->passenger.contactno);
    printf("Travel Date: ");
    scanf("%s", ticket->passenger.date);
    calculateticketPrice(ticket);
    processpayment(ticket);
    displayconfirmation(ticket);
}

```

```

void calculateticketPrice(Ticket *ticket) {
    char bustype[20];
    printf("\nEnter Bus Type (Regular/Luxury): ");
    scanf("%s", bustype);
    if (strcmp(bustype, "Regular") == 0) {
        ticket->ticketPrice = 50.0;
    } else if (strcmp(bustype, "Luxury") == 0) {
        ticket->ticketPrice = 100.0;
    } else {

```

```

        printf("Invalid bus type\n");
        ticket->ticketPrice = 50.0;
    }
    if (strstr(ticket->passenger.date, "12/25") != NULL) {
        ticket->ticketPrice *= 1.2;
    }
    printf("Ticket Price: %.2f\n", ticket->ticketPrice);
}

```

```

void processpayment(Ticket *ticket) {
    printf("Payment Method: ");
    scanf("%s", ticket->payment.paymentmethod);
    printf("Amount to Pay: %.2f\n", ticket->ticketPrice);
    printf("Enter Transaction ID: ");
    scanf("%s", ticket->payment.transactionID);
    printf("Payment of $%.2f received via %s Transaction ID: %s\n", ticket->ticketPrice, ticket->payment.paymentmethod, ticket->payment.transactionID);
}

```

```

void displayconfirmation(Ticket *ticket) {
    printf("Passenger Name: %s\n", ticket->passenger.name);
    printf("Age: %d\n", ticket->passenger.age);
    printf("Contact Number: %s\n", ticket->passenger.contactno);
    printf("Travel Date: %s\n", ticket->passenger.date);
    printf("Ticket Price: $%.2f\n", ticket->ticketPrice);
    printf("Payment Method: %s\n", ticket->payment.paymentmethod);
    printf("Transaction ID: %s\n", ticket->payment.transactionID);
    printf("Booking done.\n");
}

```

```
}
```

```
void cancelbooking(Ticket *ticket) {  
    char confirmation;  
    printf("\nAre you sure you want to cancel the ticket:(Y/N): ");  
    getchar();  
    scanf("%c", &confirmation);  
    if (confirmation == 'Y' || confirmation == 'y') {  
        ticket->cancel = 1;  
        displayrefund(ticket);  
    } else {  
        printf("Cancellation not possible.\n");  
    }  
}
```

```
void displayrefund(Ticket *ticket) {  
    if (ticket->cancel) {  
        float refundAmount = ticket->ticketPrice * 0.8; // 20% cancellation fee  
        printf("Your booking has been cancelled.\n");  
        printf("Refund Amount: %.2f\n", refundAmount);  
    } else {  
        printf("No ticket to cancel.\n");  
    }  
}
```