S.No: 1	Exp. Name: ***Project Module***	**Date: 2024-06-13**

Aim:

Project Module

Source Code:

hello.c

ID: 2303811710421125 Page No: 1

2023-2027-H K.Ramakrishnan College of Technology

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>

#define MAX_BUS_SEATS 50
#define MAX_NAME_LENGTH 50

struct Reservation{
   char name[MAX_NAME_LENGTH];
   int seat_number;
   int is_booked;
};

void display_menu();
void book_ticket(struct Reservation[],int);
void cancel_ticket(struct Reservation[],int);
void display_seats(struct Reservation[]);

int main(){
        struct Reservation bus_seats[MAX_BUS_SEATS];
        for(int i=0;i<MAX_BUS_SEATS;i++){
                strcpy(bus_seats[i].name,"Empty");
                bus_seats[i].seat_number=i+1;
                bus_seats[i].is_booked=0;
        }
        int choice;
        do{
                display_menu();
                printf("Enter your choice: ");
                scanf("%d",&choice);
                switch(choice){
                        case 1:
                        book_ticket(bus_seats,MAX_BUS_SEATS);
                        break;
                        case 2:
                        cancel_ticket(bus_seats,MAX_BUS_SEATS);
                        break;
                        case 3:
                        display_seats(bus_seats);
                        break;
                        case 4:
                        printf("Exiting Program. Goodbye\n");
                        exit(0);
                        default:
                        printf("Invalid choice.Please try again.\n");
                }
        }while(choice!=4);
                return 0;
}

void display_menu(){
        printf("\n======BUS RESERVATION=====\n");
        printf("1.Book a ticket\n");
        printf("2.Cancel a ticket\n");
        printf("3.Display available seats\n");
```

```
void book_ticket(struct Reservation seats[],int num_seats){
        char name[MAX_NAME_LENGTH];
        int seat_number;
        printf("Enter your name:");
        scanf("%s",name);
        printf("Enter seat number(1-%d):",num_seats);
        scanf("%d",&seat_number);
        if(seat_number<1 || seat_number>num_seats){
                printf("Invalid seat number.\n");
                return;
        }
        if(seats[seat_number-1].is_booked){
                printf("Seat already booked.\n");
        }else{
                strcpy(seats[seat_number-1].name,name);
                seats[seat_number-1].is_booked=1;
                printf("Ticket booked Successfully\n");
        }
}

void cancel_ticket(struct Reservation seats[],int num_seats){
        int seat_number;
        printf("Enter seat number to cancel booking: ");
        scanf("%d",&seat_number);
        if(seat_number < 1 || seat_number > num_seats){
                printf("Invalid seat number");
                return;
        }
        if(!seats[seat_number-1].is_booked){
                printf("Seat is not booked.\n");
        }else{
                strcpy(seats[seat_number-1].name,"Empty");
                seats[seat_number-1].is_booked=0;
                printf("Ticket Cancelled Successfully\n");
        }
}

void display_seats(struct Reservation seats[]){
        printf("n=====Available Seats=====\n");
        for(int i=0;i<MAX_BUS_SEATS;i++){
                if(!seats[i].is_booked){
                        printf("Seat %d: Empty\n",seats[i].seat_number);
                }
        }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Hello World