

PROJECT:

Movie Ticket Management System

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SUBJECT=PROGRAMMING IN C (PROJECT)

Purpose of the Project

- - To create a menu-driven movie ticket booking system.
- - To demonstrate the use of structures, file handling, and functions.
- - To provide a real-world simulation of ticket booking.

Constraints

- Only one movie record displayed at a time.
- Limited number of tickets.
- Input validation required.
- Basic text-based interface (CLI).

Introduction

- This project is a simple Movie Ticket Management System developed using C programming. It allows users to book movie tickets, view movie details, and manage ticket information.

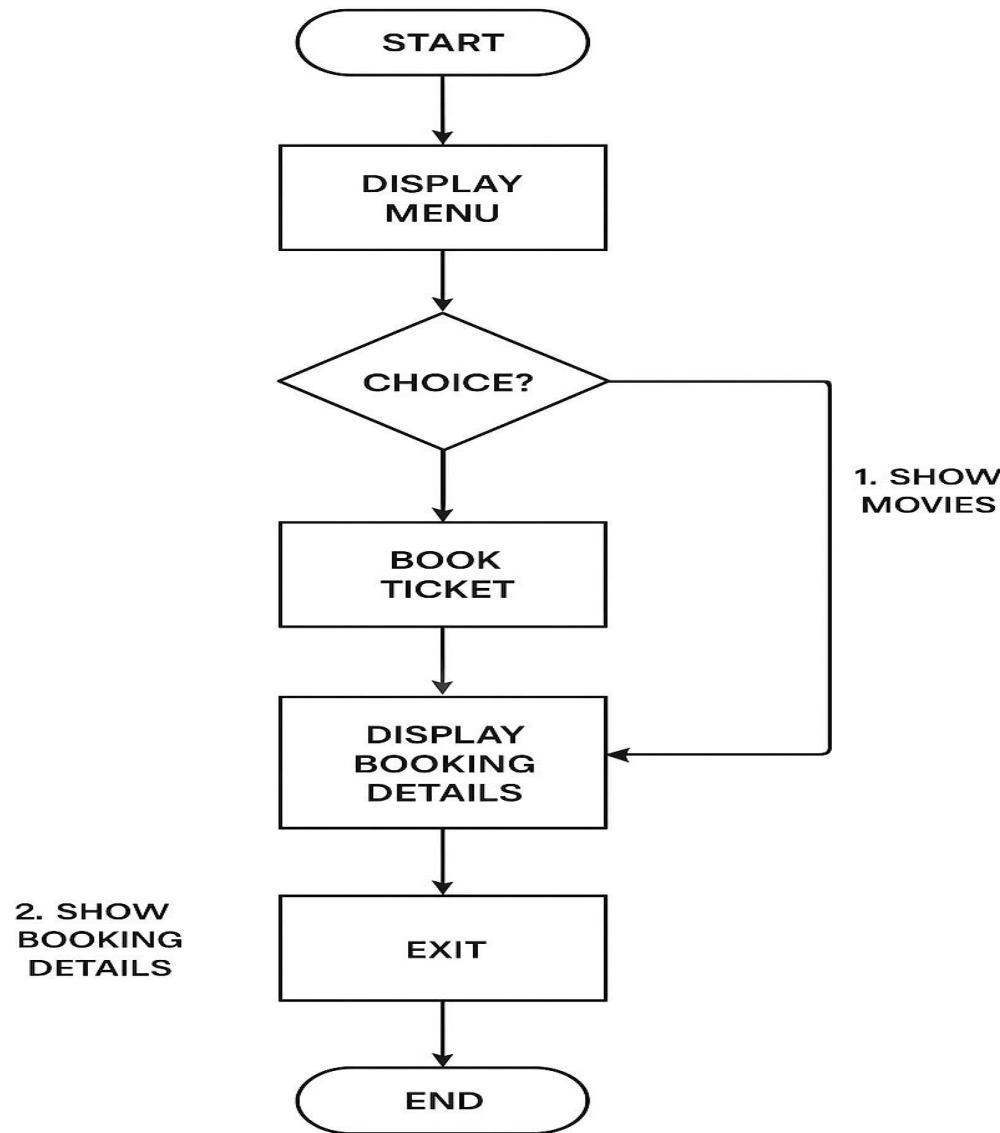
Syntax Concepts Used

- - Structures (struct)
- - File handling (fopen, fwrite, fread)
- - Functions
- - Conditional statements
- - Switch-case menu
- - Loops (for, while)

Keywords Used

- struct, FILE, fopen, fclose, fwrite, fread, if, else, switch,
- case, return, char, int, void

Flowchart:

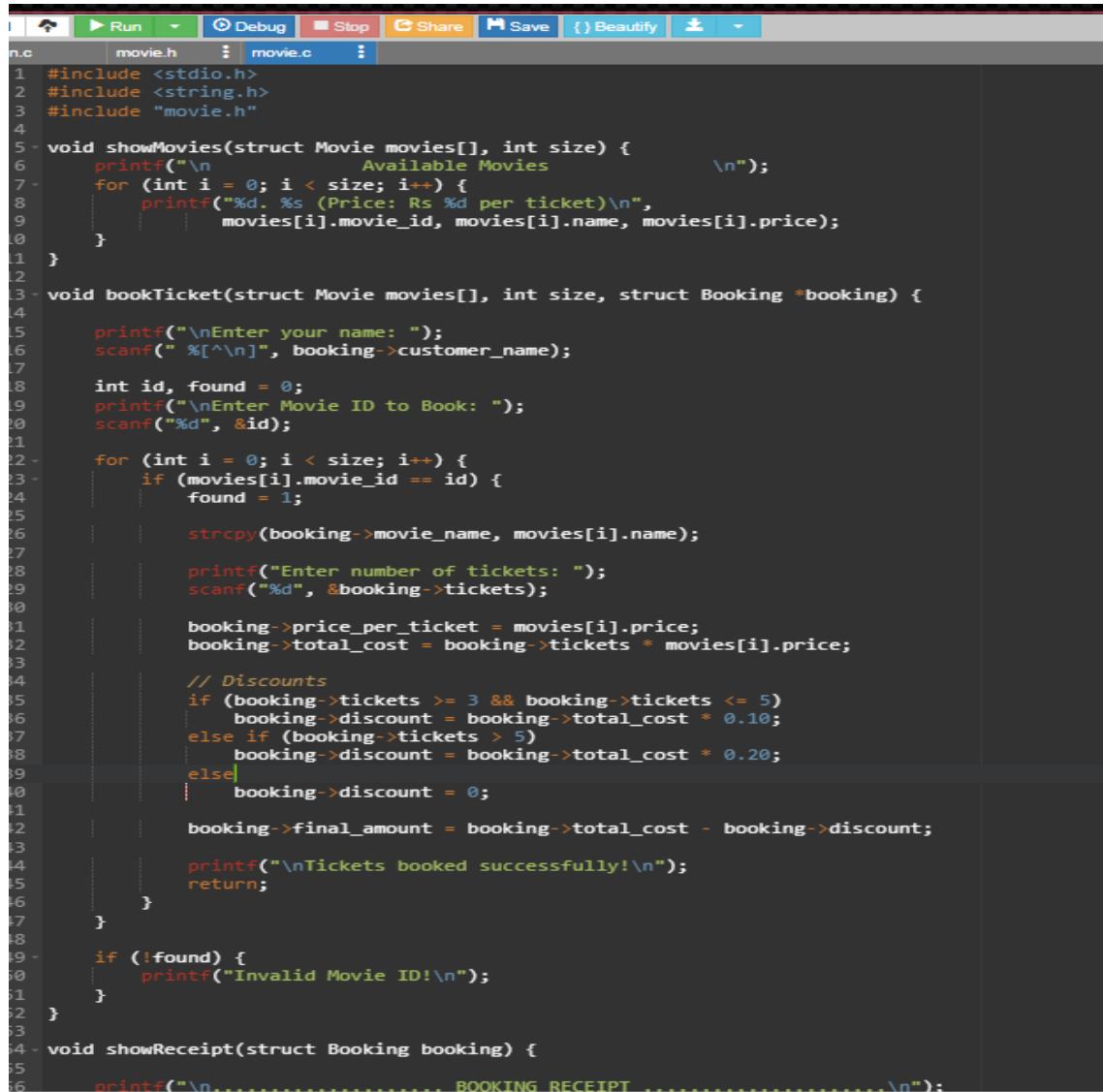


PROGRAM: (header file)

The screenshot shows a code editor interface with a dark theme. The top bar includes standard icons for file operations (New, Open, Save, Print, etc.) and a toolbar with buttons for Run, Debug, Stop, Share, Save, and Beautify. The main window displays three tabs: 'main.c' (selected), 'movie.h', and 'movie.c'. The code in 'movie.h' is as follows:

```
1 #ifndef MOVIE_H
2 #define MOVIE_H
3
4 struct Movie {
5     int movie_id;
6     char name[50];
7     int price;
8 };
9
10 struct Booking {
11     char customer_name[50];
12     char movie_name[50];
13     int tickets;
14     int total_cost;
15     float discount;
16     float final_amount;
17     int price_per_ticket;
18 };
19
20 // Function declarations
21 void showMovies(struct Movie movies[], int size);
22 void bookTicket(struct Movie movies[], int size, struct Booking *booking);
23 void showReceipt(struct Booking booking);
24
25 #endif
26
```

(function file):



The image shows a screenshot of a code editor with a dark theme. The title bar includes standard icons for Run, Debug, Stop, Share, Save, Beautify, and a file menu. The main window displays a C program with syntax highlighting. The code defines several functions: `showMovies`, `bookTicket`, and `showReceipt`. The `showMovies` function prints a header and then iterates through an array of movies, printing each movie's ID, name, and price. The `bookTicket` function prompts the user for their name and the movie ID they want to book. It then iterates through the movie array to find the selected movie. If found, it copies the movie's name to the booking structure, prompts for the number of tickets, calculates the total cost and discount, and prints a confirmation message. If the movie ID is not found, it prints an error message. The `showReceipt` function prints a header and then calls `showMovies` to display the available movies.

```
1 #include <stdio.h>
2 #include <string.h>
3 #include "movie.h"
4
5 void showMovies(struct Movie movies[], int size) {
6     printf("\n\t\t\tAvailable Movies\n");
7     for (int i = 0; i < size; i++) {
8         printf("%d. %s (Price: Rs %d per ticket)\n",
9                movies[i].movie_id, movies[i].name, movies[i].price);
10    }
11 }
12
13 void bookTicket(struct Movie movies[], int size, struct Booking *booking) {
14     printf("\nEnter your name: ");
15     scanf(" %[^\n]", booking->customer_name);
16
17     int id, found = 0;
18     printf("\nEnter Movie ID to Book: ");
19     scanf("%d", &id);
20
21     for (int i = 0; i < size; i++) {
22         if (movies[i].movie_id == id) {
23             found = 1;
24
25             strcpy(booking->movie_name, movies[i].name);
26
27             printf("Enter number of tickets: ");
28             scanf("%d", &booking->tickets);
29
30             booking->price_per_ticket = movies[i].price;
31             booking->total_cost = booking->tickets * movies[i].price;
32
33             // Discounts
34             if (booking->tickets >= 3 && booking->tickets <= 5)
35                 booking->discount = booking->total_cost * 0.10;
36             else if (booking->tickets > 5)
37                 booking->discount = booking->total_cost * 0.20;
38             else
39                 booking->discount = 0;
40
41             booking->final_amount = booking->total_cost - booking->discount;
42
43             printf("\nTickets booked successfully!\n");
44             return;
45         }
46     }
47
48     if (!found) {
49         printf("Invalid Movie ID!\n");
50     }
51 }
52
53 void showReceipt(struct Booking booking) {
54     printf("\n..... BOOKING RECEIPT .....\n");
55 }
```

The screenshot shows a code editor window with the following details:

- File Tabs:** main.c, movie.h, movie.c
- Toolbar:** Run, Debug, Stop, Share, Save, Beautify
- Code Area:** Displays C code for movie booking logic and a receipt printer.

```
main.c
25     strcpy(booking->movie_name, movies[i].name);
26
27     printf("Enter number of tickets: ");
28     scanf("%d", &booking->tickets);
29
30     booking->price_per_ticket = movies[i].price;
31     booking->total_cost = booking->tickets * movies[i].price;
32
33     // Discounts
34     if (booking->tickets >= 3 && booking->tickets <= 5)
35         booking->discount = booking->total_cost * 0.10;
36     else if (booking->tickets > 5)
37         booking->discount = booking->total_cost * 0.20;
38     else
39         booking->discount = 0;
40
41     booking->final_amount = booking->total_cost - booking->discount;
42
43     printf("\nTickets booked successfully!\n");
44     return;
45 }
46
47
48 if (!found) {
49     printf("Invalid Movie ID!\n");
50 }
51 }
52 }
53
54 void showReceipt(struct Booking booking) {
55
56     printf("\n..... BOOKING RECEIPT ..... \n");
57     printf("-----\n");
58     printf("          CINEMA WORLD MULTIPLEX\n");
59     printf("-----\n");
60
61     printf("Customer Name : %s\n", booking.customer_name);
62     printf("Movie Booked  : %s\n", booking.movie_name);
63     printf("Tickets       : %d\n", booking.tickets);
64     printf("Cost per Ticket : Rs %d\n", booking.price_per_ticket);
65
66     printf("-----\n");
67     printf("Total Cost      : Rs %d\n", booking.total_cost);
68
69     if (booking.discount > 0)
70         printf("Discount Applied: Rs %.2f\n", booking.discount);
71     else
72         printf("Discount Applied: Rs 0.00\n");
73
74     printf("-----\n");
75     printf("FINAL AMOUNT    : Rs %.2f\n", booking.final_amount);
76     printf("-----\n");
77     printf("          THANK YOU! ENJOY YOUR SHOW \n");
78     printf("-----\n");
79 }
80
```

(main file):

```
1 #include <stdio.h>
2 #include "movie.h"
3
4 int main() {
5
6     struct Movie movies[3] = {
7         {1, "Animal", 250},
8         {2, "Bajrangi Bhaijaan", 200},
9         {3, "Stranger's Things", 300}
10    };
11
12     struct Booking booking;
13     int choice;
14
15     while (1) {
16         printf("\n..... MOVIE TICKET MANAGEMENT SYSTEM ..... \n");
17         printf("1. Show Movies\n");
18         printf("2. Book Ticket\n");
19         printf("3. Show Booking Receipt\n");
20         printf("4. Exit\n");
21         printf("Enter your choice: ");
22         scanf("%d", &choice);
23
24         switch (choice) {
25
26             case 1:
27                 showMovies(movies, 3);
28                 break;
29
30             case 2:
31                 bookTicket(movies, 3, &booking);
32                 break;
33
34             case 3:
35                 showReceipt(booking);
36                 break;
37
38             case 4:
39                 printf("\nThank you for using Movie Ticket System!\n");
40                 return 0;
41
42             default:
43                 printf("\nInvalid Choice! Try again.\n");
44             }
45
46
47     return 0;
48 }
```

OUTPUT:

```
MOVIE TICKET MANAGEMENT SYSTEM
1. Show Movies
2. Book Ticket
3. Show Booking Receipt
4. Exit
Enter your choice: 1

Available Movies
1. Animal (Price: Rs 250 per ticket)
2. Bajrangi Bhaijaan (Price: Rs 200 per ticket)
3. Stranger's Things (Price: Rs 300 per ticket)

MOVIE TICKET MANAGEMENT SYSTEM
1. Show Movies
2. Book Ticket
3. Show Booking Receipt
4. Exit
Enter your choice: 2

Enter your name: Abhijeet Panwar

Enter Movie ID to Book: 2
Enter number of tickets: 2

Tickets booked successfully!

MOVIE TICKET MANAGEMENT SYSTEM
1. Show Movies
2. Book Ticket
3. Show Booking Receipt
4. Exit
Enter your choice: 3

BOOKING RECEIPT
CINEMA WORLD MULTIPLEX
Customer Name : Abhijeet Panwar
Movie Booked : Bajrangi Bhaijaan
Tickets : 2
Cost per Ticket : Rs 200
Total Cost : Rs 400
Discount Applied: Rs 0.00
FINAL AMOUNT : Rs 400.00
THANK YOU! ENJOY YOUR SHOW

MOVIE TICKET MANAGEMENT SYSTEM
1. Show Movies
2. Book Ticket
3. Show Booking Receipt
4. Exit
Enter your choice: 4

Thank you for using Movie Ticket System!

...Program finished with exit code 0
Press ENTER to exit console.
```

Conclusion

- This project demonstrates a basic implementation of a Movie Ticket Management System. It shows the use of file handling, structures, user-defined functions, and menu-driven programming.