#include <stdio.h>

#include <string.h>

#define MAX\_MOVIES 100

struct Movie {

char title[100];

char genre[50];

char director[50];

int releaseYear;

float rating;

};

// Function prototypes

void addMovie(struct Movie movies[], int \*movieCount);

void searchByGenre(struct Movie movies[], int movieCount);

void displayMovies(struct Movie movies[], int movieCount);

int main() {

struct Movie movies[MAX\_MOVIES];

int movieCount = 0;

int choice;

do {

printf("\nMovie Management System\n");

printf("1. Add a new movie\n");

printf("2. Search movies by genre\n");

printf("3. Display all movies\n");

printf("4. Exit\n");

printf("Enter your choice: ");

scanf("%d", &choice); // Read menu choice

switch (choice) {

case 1:

addMovie(movies, &movieCount);

break;

case 2:

searchByGenre(movies, movieCount);

break;

case 3:

displayMovies(movies, movieCount);

break;

case 4:

printf("Exiting program. Goodbye!\n");

break;

default:

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

}

} while (choice != 4);

return 0;

}

void addMovie(struct Movie movies[], int \*movieCount) {

printf("Enter title: ");

scanf(" %[^\n]s", movies[\*movieCount].title); // Read title

printf("Enter genre: ");

scanf(" %[^\n]s", movies[\*movieCount].genre); // Read genre

printf("Enter director: ");

scanf(" %[^\n]s", movies[\*movieCount].director); // Read director

printf("Enter release year: ");

scanf("%d", &movies[\*movieCount].releaseYear); // Read release year

printf("Enter rating (0.0 - 5.0): ");

scanf("%f", &movies[\*movieCount].rating); // Read rating

(\*movieCount)++;

printf("Movie added successfully!\n");

}

void searchByGenre(struct Movie movies[], int movieCount) {

char searchGenre[50];

printf("Enter genre to search: ");

scanf(" %[^\n]s", searchGenre); // Read genre to search

printf("\nMovies in genre '%s':\n", searchGenre);

int found = 0;

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

if (strcmp(movies[i].genre, searchGenre) == 0) {

printf("Title: %s\n", movies[i].title);

printf("Director: %s\n", movies[i].director);

printf("Release Year: %d\n", movies[i].releaseYear);

printf("Rating: %.1f\n\n", movies[i].rating);

found = 1;

}

}

if (!found) {

printf("No movies found in this genre.\n");

}

}

void displayMovies(struct Movie movies[], int movieCount) {

if (movieCount == 0) {

printf("No movies to display.\n");

return;

}

printf("\nMovie Details:\n");

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

printf("Movie %d:\n", i + 1);

printf("Title: %s\n", movies[i].title);

printf("Genre: %s\n", movies[i].genre);

printf("Director: %s\n", movies[i].director);

printf("Release Year: %d\n", movies[i].releaseYear);

printf("Rating: %.1f\n\n", movies[i].rating);

}

}