

Documentation for Cinema Management System Code

This documentation provides a detailed explanation of the Cinema Management System code. The system is designed to manage cinema operations including user registration, movie listings, snack ordering, seating arrangements, payment processing, and feedback collection. Below is a breakdown of the code's structure and functionality.

Included Libraries

```
include <iostream>
```

```
include <fstream>
```

```
include <iomanip> // for std::setw
```

```
include <string>
```

The code uses several standard libraries:

- `iostream` for input and output operations.
- `fstream` for file handling.
- `iomanip` for manipulating output formatting.
- `string` for string handling.

Function Prototypes

```
displayWelcomeMessage
```

```
void displayWelcomeMessage();
```

Displays a welcome message with ASCII art in green text.

```
displayMainMenu
```

```
void displayMainMenu();
```

Displays the main menu with options for signup, login, and exit.

`displayUserMenu`

`void displayUserMenu();`

Displays the user menu with various options for interacting with the cinema system.

`displaySnacks`

`void displaySnacks(string snacks[], double snackPrices[], int size);`

Displays the available snacks and their prices.

`displaySeating`

`void displaySeating(bool seats[5][10]);`

Displays the seating arrangement of the cinema.

`displayPaymentMethods`

`void displayPaymentMethods();`

Displays the available payment methods.

`handleOnlinePayment`

`void handleOnlinePayment(double totalAmount);`

Handles online payment processing.

Main Function

Variables

```
string users[100][2]; // Array to store users' usernames and passwords
```

```
int userCount = 0; // Number of registered users
```

```
string currentUser = ""; // Currently logged in user
```

User-related data storage.

```
string cities[7] = {"Lahore", "Karachi", "Islamabad", "Quetta", "Peshawar", "Muzaffarabad", "Hunza"};
```

List of cities with cinemas.

```
string cinemas[7][3] = {  
    {"DHA Lahore", "Central Park Lahore", "Wapda town Lahore"},  
    {"Nagin Chorangi Karachi", "Bahria Town Karachi", "Clifton Karachi"},  
    {"Sector E9 Islamabad", "Sector F7 Islamabad", "Giga Mall Islamabad"},  
    {"Fauji 1 Quetta", "Fauji 2 Quetta", "Fauji 3 Quetta"},  
    {"Mall 99 Peshawar", "Bahria Peshawar", "Fauji 1 Peshawar"},  
    {"Arangkhel Muzaffarabad", "PirChanasi Muzaffarabad", "Bagh Muzaffarabad"},  
    {"Gulmit Hunza", "Passu Cones Hunza", "Hidden Lake Hunza"}  
};
```

List of cinemas in each city.

```
string movies[8] = {"End-Game", "Fatih 1453", "Planet of Apes", "IP Man", "Untold Hate story",  
    "Escape Room", "Missing", "Snow State"};
```

```
bool isNowPlaying[8] = {true, true, true, true, false, false, false, false};
```

```
string releaseDates[8] = {"2024-06-01", "2024-06-15", "2024-06-20", "2024-07-01", "2024-07-10",  
    "2024-08-01", "2024-08-15", "2024-09-01"};
```

List of movies and their playing statuses and release dates.

```
string snacks[12] = {"Pop Corn", "Caramel Pop Corn", "Nachos", "Pizza Slice", "Lemon Malt", "Soda",  
"Chocolate", "Candy", "Hot Dog", "Burger", "Ice Cream", "Coffee"};
```

```
double snackPrices[12] = {150, 200, 250, 300, 120, 100, 180, 80, 350, 400, 200, 150};
```

List of available snacks and their prices.

```
bool seats[5][10] = {{false}};
```

Seating arrangement of the cinema (5 rows and 10 columns).

```
string suggestions[100];
```

```
string movieReports[100];
```

```
string cinemaReviews[100];
```

```
string movieReviews[100];
```

```
int suggestionCount = 0;
```

```
int movieReportCount = 0;
```

```
int cinemaReviewCount = 0;
```

```
int movieReviewCount = 0;
```

Arrays to store user feedback and reports.

File Handling

The system reads user data, suggestions, movie reports, cinema reviews, and movie reviews from respective files if they exist.

User Interaction

The system displays the welcome message and enters a loop to handle user interactions through the main menu. Based on the user's choice, the system provides options for signup, login, and exit.

User Signup

If the user chooses to sign up, the system prompts for a username and password, adds them to the user list, and confirms successful signup.

User Login

If the user chooses to log in, the system verifies the credentials and, upon successful login, displays the user menu.

User Menu

The user menu provides various options, including viewing now playing and upcoming movies, booking tickets, ordering snacks, reporting movies, reviewing movies and cinemas, suggesting features, deleting the account, logging out, and viewing reviews.

Booking Tickets and Ordering Snacks

The system allows users to book seats and order snacks, displaying the seating arrangement and available snacks. It then calculates the total amount and provides payment options.

Payment Processing

The system handles payment processing, offering online and cash payment methods.

Submitting Feedback

Users can submit movie reports, reviews, and suggestions, which are stored in the respective arrays.

Data Persistence

Before exiting, the system saves all data (users, suggestions, movie reports, cinema reviews, and movie reviews) back to their respective files.

Conclusion

This Cinema Management System provides a comprehensive solution for managing cinema operations, including user registration, movie listings, ticket booking, snack ordering, payment processing, and feedback collection. The code is modular and well-organized, making it easy to understand and maintain.