

Movie Booking System

A Java Console Application

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Overview

The Movie Booking System is a console-based Java application that simulates a real-world multiplex ticket booking platform. It allows users to register, browse screens and movies, book or cancel tickets, and view booking history. Administrators can add movies and manage schedules dynamically.

*This project demonstrates **Object-Oriented Programming (OOP)** principles such as **encapsulation, modularity, and abstraction**.*

Features

-  User Features:
 - Register or login with a username.
 - View available screens, movies, and seat capacities.
 - Search movies by title, genre, or keyword.
 - Book or cancel tickets easily.
 - View complete booking and cancellation history.
-  Admin Features:
 - Add or remove movies dynamically.
 - Manage screens, movie details, and seat availability.
 - View all current show listings in the system.

Project Structure

```
MovieBookingSystem/
|
├─ CinemaBookingSystem.java    → Main class with menu & logic
├─ CinemaList.java             → Manages screens & searches
├─ CinemaScreen.java           → Handles seat maps & prices
├─ MovieSystem.java            → Defines movie attributes
└─ UserAccount.java            → User data & booking history
```




Installation & Setup

Requirements: Java JDK 8+, any IDE (Eclipse, IntelliJ, VS Code) or terminal.

To Compile: `javac *.java`

To Run: `java CinemaBookingSystem`

Example Usage

1.  Booking a Ticket:
 - Register/Login → Choose screen → Movie → Seat number → Confirm booking
2.  Canceling a Ticket:
 - Select cancel option → Enter seat → Confirm cancellation
3.  Searching Movies:
 - Enter keyword (e.g., 'Comedy', 'Inception') → View results

System Architecture

Class Name	Description
CinemaBookingSystem.java	Main entry point; manages user menu & flow.
CinemaList.java	Holds all screens and enables searching.
CinemaScreen.java	Handles movies, seat maps, and bookings.
MovieSystem.java	Defines each movie's data structure.
UserAccount.java	Stores user information and history.

Object-Oriented Highlights

- Encapsulation – Data and methods grouped in each class.
- Abstraction – Simplified user interface through menus.
- Modularity – Independent class responsibilities.
- Error Handling – Handles invalid inputs gracefully.
- Extensibility – Easy to connect database or GUI later.

Future Enhancements

- Integrate MySQL or SQLite for data persistence.
- Develop GUI with JavaFX or Swing.
- Add Payment Gateway Simulation.
- Enable multi-cinema support.
- Introduce Dynamic Pricing models.

System Requirements


Component	Requirement
Java Version	JDK 8 or higher
Interface	Console-based
Storage	In-memory
OS Compatibility	Windows, macOS, Linux
Limitations	Data resets after program termination

Conclusion

The Movie Booking System is a robust example of how OOP principles can be applied to real-world software design.

It provides a foundational understanding of modular programming, user management, and console-based Java application development.

This project can be further extended to include GUI and database integration for enterprise-level applications.

 GitHub Repository: [Click Kere](#)

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