Online Movie Ticket Booking System

1. Introduction

1.1 Overview

The Online Movie Ticket Booking System developed in Java using JDBC provides users with a convenient platform to browse movies, book tickets, view showtimes, select seats, and cancel bookings.

1.2 Features

- Make booking easy: Let users book movie tickets online effortlessly.
- Showtime visibility: Show available movie times for user convenience.
- Seat choice: Allow users to pick their seats easily.
- Confirm bookings: Ensure smooth booking confirmation after seat selection.
- Cancel tickets: Let users cancel their tickets within a set time.

2. System Architectur

2.1 High-level Architecture

The system follows a three-tier architecture, consisting of the presentation layer (User Interface (Console)), application layer (Java JDBC Application), and data layer (Oracle Database). This architecture ensures a clear separation of concerns, making the system modular and scalable.

2.2 Key Components

- Java Application: The core of the system responsible for implementing banking functionalities.
- Mysql Database: A secure and reliable database management system for data storage.
- JDBC: Facilitates seamless connectivity between the Java application and the Oracle Database.

2.3 Technologies Used

- Java 16 SE
- JDBC 4
- Mysql

3. Database Design

3.1 Database Schema

Movies: To store movie details

Field	Туре	Null	Key	Default	Extra
movie_id	int	NO	PRI	NULL	auto_increment
title	varchar(100)	NO		NULL	
genre	varchar(50)	YES		NULL	
duration	int	YES		NULL	
rating	decimal(3,1)	YES		NULL	

Showtimes: To store details of showtimes

Field	Type	Null	Key	Default	Extra
showtime_id	int	NO	PRI	NULL	auto_increment
movie_id	int	YES	MUL	NULL	
show_date	date	YES		NULL	
show_time	time	YES		NULL	
available_seats	int	YES		NULL	

Booking: To store booking details

Field	Туре	Null	Key	Default	Extra
booking_id	int	NO	PRI	NULL	auto_increment
user_name	varchar(30)	YES		HULL	
movie_name	varchar(30)	YES		NULL	
showtime_id	int	YES	MUL	NULL	
seat_number	varchar(10)	YES		NULL	
booking_date	timestamp	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED

4. Implementation

4.1 Technology Stack

- Java
- JDBC
- Oracle Database

4.2 Project Structure

> In module-info.java
> Referenced Libraries

4.3 Modules

5.3.1 com.dao

Data access objects for interacting with the database.

5.3.2 com.model

Basic structure of entities.

5.3.3 com.main

It includes class that has main method.

6. Output

Welcome to Movie Ticket Booking System!

Choose an option:

- 1. View movie details
- 2. View showtimes for a movie
- 3. Book tickets
- 4. Cancel booking
- 5. Exit

Enter your choice: 1

Movie ID	Movie Name	Genre	Ratings
1	Jawan	Action	4.5
2	Pathan	Action	8.0
3	Fighter	Action	9.5
5	Hanuman	Adventure	9.5

Choose an option:

- 1. View movie details
- 2. View showtimes for a movie
- 3. Book tickets
- 4. Cancel booking
- 5. Exit

Enter your choice: 2

Enter movie ID to view showtimes:

1

Showtimes for Movie:

ID: 1

Date: 2023-02-12 Time: 19:30:00

Available Seats: 120

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Choose an option:
1. View movie details
2. View showtimes for a movie
3. Book tickets
4. Cancel booking
5. Exit
Enter your choice: 2
Enter movie ID to view showtimes:
Showtimes for Movie:
ID: 1
Date: 2023-02-12
Time: 19:30:00
Available Seats: 120
Choose an option:
1. View movie details
2. View showtimes for a movie
3. Book tickets
4. Cancel booking
5. Exit
Enter your choice: 3
Enter your name:
Anjali
Enter Movie name:
Jawan
Enter Showtime ID:
Enter seat no. (eg A1 , A20):
A17
Booking successful!
Your booking ID is: 2
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Choose an option:
1. View movie details
2. View showtimes for a movie
3. Book tickets
4. Cancel booking
5. Exit
Enter your choice: 2
Enter movie ID to view showtimes:
Showtimes for Movie:
ID: 1
Date: 2023-02-12
Time: 19:30:00
Available Seats: 119
Choose an option:
1. View movie details
2. View showtimes for a movie
3. Book tickets
4. Cancel booking
5. Exit
Enter your choice: 3
Enter your name:
Arti
Enter Movie name:
Jawan
Enter Showtime ID:
Enter seat no. (eg Al , A20):
Seat is already booked for this showtime. Please choose another seat.
Choose an option:
1. View movie details
2. View showtimes for a movie
3. Book tickets
4. Cancel booking
5. Exit
Enter your choice: 4
Enter booking id:
Enter showtime id:
Ticket Cancle successfully
Choose an option:
1. View movie details
2. View showtimes for a movie
Book tickets
4. Cancel booking
5. Exit
Enter your choice: 2
Enter movie ID to view showtimes:
Showtimes for Movie:
ID: 1
Date: 2023-02-12
Time: 19:30:00
Available Seats: 120
```

7. Conclusion

The development of the Online Movie Ticket Booking System using Java JDBC provides users with a seamless experience to book movie tickets online. By leveraging Java for backend development and JDBC for database connectivity, the system ensures efficient data management and smooth transaction processing. With features such as seat selection and ticket cancellation, the system caters to the diverse needs of moviegoers, enhancing convenience and flexibility in booking movie tickets.