

PROJECT REPORT

On

 **MOVIE TICKET BOOKING SYSTEM**

COMPUTER SCIENCE AND ENGINEERING

Chitkara University, Punjab

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 **Supervised By**

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Project Members

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1. Project Overview

This project is a **Console-Based Movie Ticket Booking System** fully developed using **Core Java**.

It demonstrates a wide range of Java concepts such as:

- Object-Oriented Programming
- Collections Framework
- CSV File Handling
- Exception Handling
- Multithreading
- Clean Package Structure

The system allows users to:

- ✓ Book movie tickets
- ✓ Cancel tickets
- ✓ Check availability
- ✓ View upcoming movies (thread animation)
- ✓ View their previous bookings (CSV read)

2. Objectives

- Build a complete real-world Java application using **only Core Java**
- Apply **OOP concepts** in a practical system
- Use **CSV files** for persistent storage (No SQL databases)
- Implement **custom exceptions** for better error handling
- Use **multithreading** for smooth animated output
- Demonstrate a **clean & modular architecture**



3. System Modules

1. Book Tickets
2. Cancel Ticket
3. Check Seat Availability
4. Upcoming Movies (Thread Animation)
5. Show My Bookings

4. Core Java Concepts Used

✓ **Object-Oriented Programming (OOP)**

- Classes & Objects
- Encapsulation
- Abstraction
- Method-based flow

✓ **Collections Framework**

- **ArrayList** for storing movies & bookings

✓ **File Handling (CSV)**

- Persistent storage using
 - `FileWriter`
 - `BufferedReader`
 - `String.split(",")`

✓ **Exception Handling**

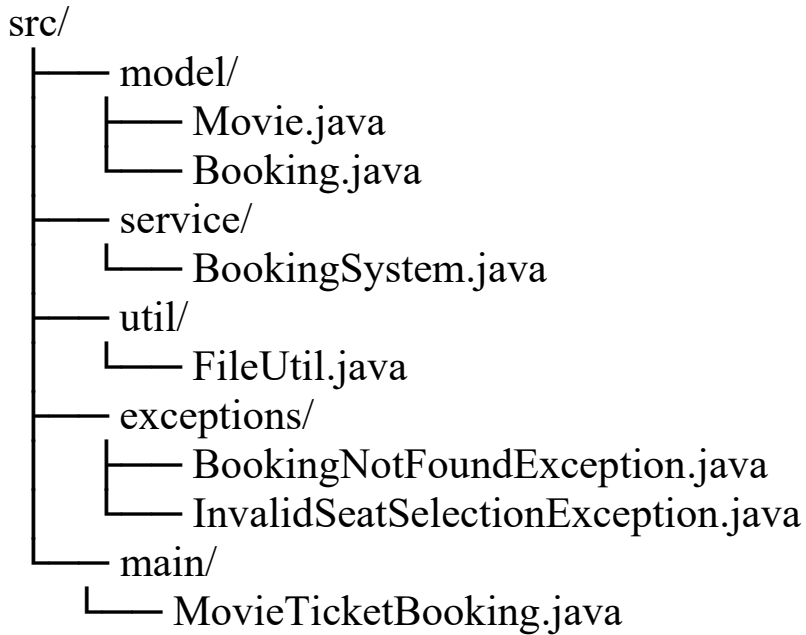
- Custom exceptions:
 - `BookingNotFoundException`
 - `InvalidSeatSelectionException`

✓ **Multithreading**

- Animated display of upcoming movies



5. Project Architecture



6. Data Storage

All booking details are stored inside:

 **data/bookings.csv**

CSV format ensures:

- No SQL database
- Easy portability
- Easy debugging
- Simple file-based persistence



7. Flow of the System

1. User opens application
2. Menu displayed
3. User chooses an action
4. System performs tasks via BookingSystem
5. Data written/read from CSV
6. Output displayed
7. Upcoming movies shown using threads

❏ 8. Conclusion

The **Movie Ticket Booking System** successfully demonstrates:

- ✓ Practical use of Core Java
- ✓ Real-world system design
- ✓ Exception handling & OOP concepts
- ✓ Multithreading in console
- ✓ CSV data storage
- ✓ Clean package architecture

This project meets all guidelines of **Chitkara University** and provides a strong foundation for future Java development.