CHRIST
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Java Project

On

Online Movie Ticket Booking

Submitted by:

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Introduction

The online movie ticket booking system developed using Java, JavaScript, MySQL and NetBeans. The system allows customers to conveniently book movie tickets online by selecting a movie, show timing, theater and number of tickets.

System Analysis and Design

The key requirements gathered for the system are:

- Home page for search, login and exit.

- User login for registered customers

- Browsing movies and show timings

- Selecting theater location

- Booking desired number of tickets

- Payment gateway integration

- Generating ticket confirmation

The system was designed with a MySQL database backend to store customer, movie scheduling and ticket details. The front-end UI was implemented in Java.

Key design aspects:

- ER diagram for database schema design

- Class diagrams for entities like Customer, Payment, Booking, Theater etc.

- Flowcharts for booking workflow and payment integration

- Wireframes and mockups for web page design

Implementation

The system was implemented using Java and utilized the following core concepts:

- Java Beans - Used for entities like Customer, Movie, Payment etc. Getter/setter methods provided encapsulation.
- Java Swing - Used for creating UI components like buttons, text fields, menu etc. Provided reusable UI elements.
- Multithreading - Used for asynchronous tasks like payment integration to improve responsiveness.
- Packages - Classes organized into logical packages like utils, ui, models etc. for modularity.

- Collections – collections concept used for names in combo box.
- Inheritance - Booking and Payment classes inherited from parent Ticket class to reduce duplicate code.
- OOP - Followed principles like abstraction, encapsulation and polymorphism for reusable code.
- Buffer Class - Used StringBuffer for building dynamic strings efficiently in booking logic.

Key classes/files developed:

- Home.java for Home page

- Customer.java for customer entity

- Login.java for handling user authentication

- Booking.java manages ticket booking logic

- Payment.java integrates payment gateway APIs

- register.java new user to register

- receipt.java conformation of booking details

Testing and Results

The system was tested with different use cases covering:

- Home page user can login and search for particular movie

- Login with valid and invalid credentials

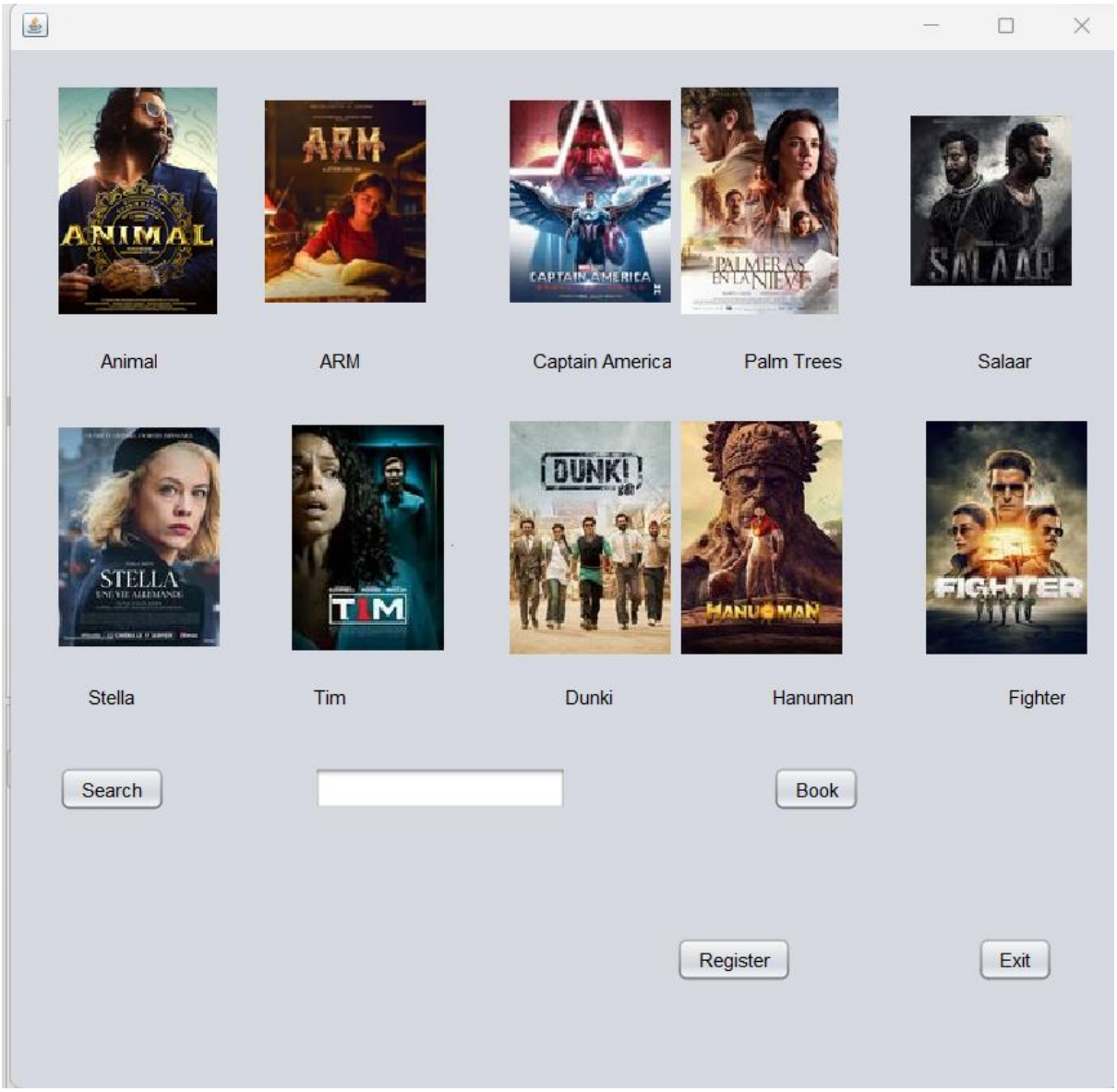
- Browsing movie catalog and theater lists

- Booking tickets for different customers

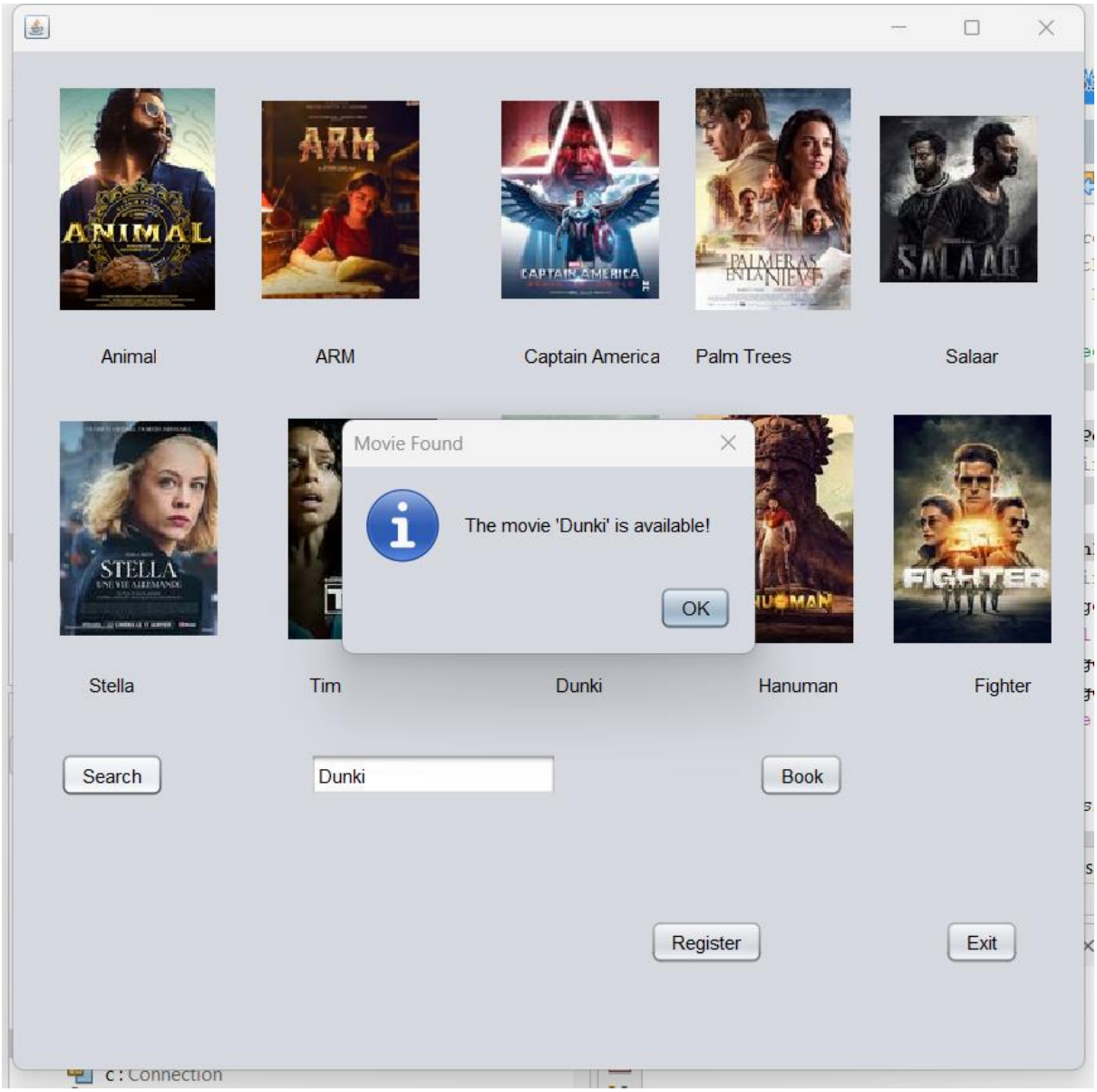
- Cancelling selected tickets

Sample screenshots are attached showing the key flows.

Home Page:



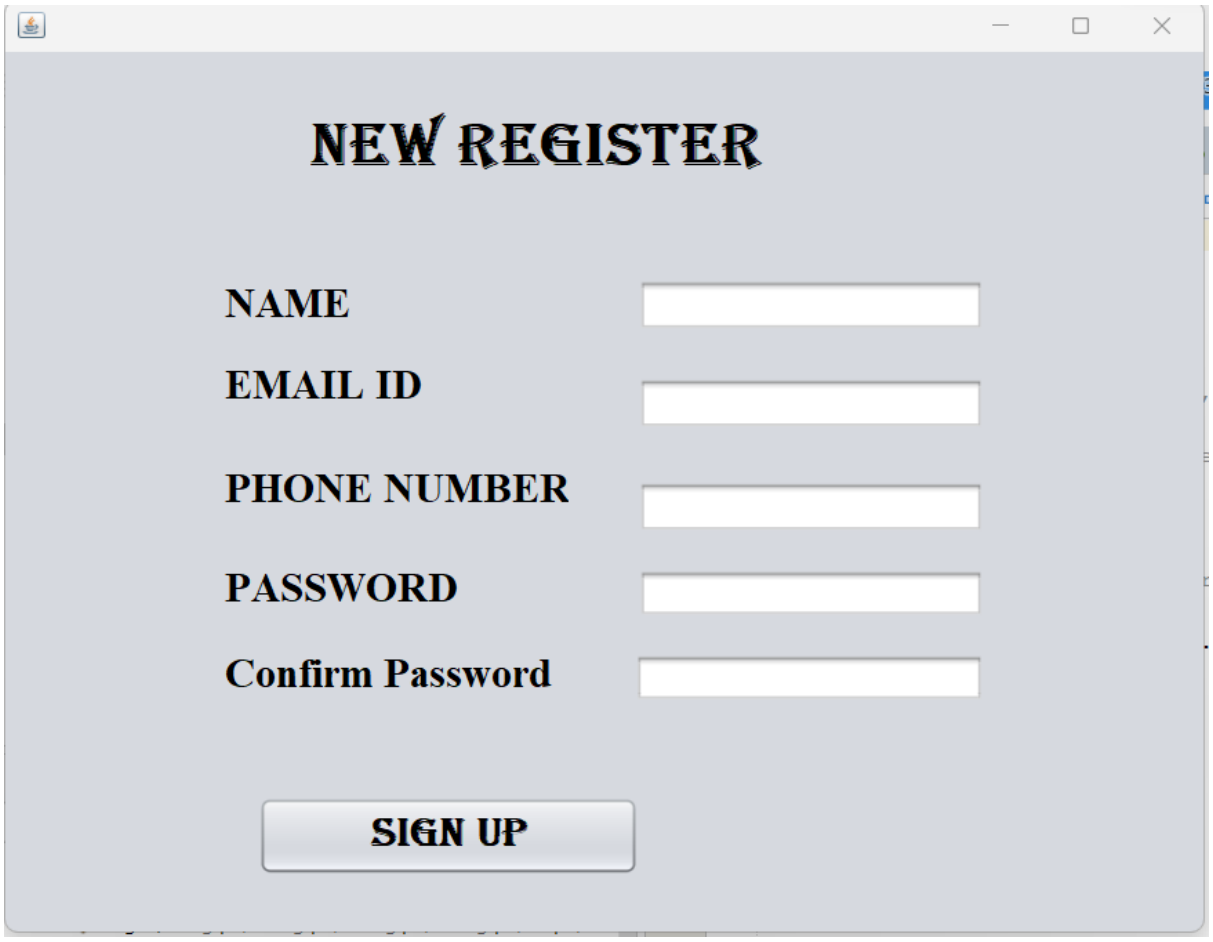
Searching a movie in Home page:


Animal
ARM
Captain America
Palm Trees
Salaar
Stella
Tim
Dunki
Hanuman
Fighter
Movie Found
The movie 'Dunki' is available!
OK
Search
Dunki
Book
Register
Exit

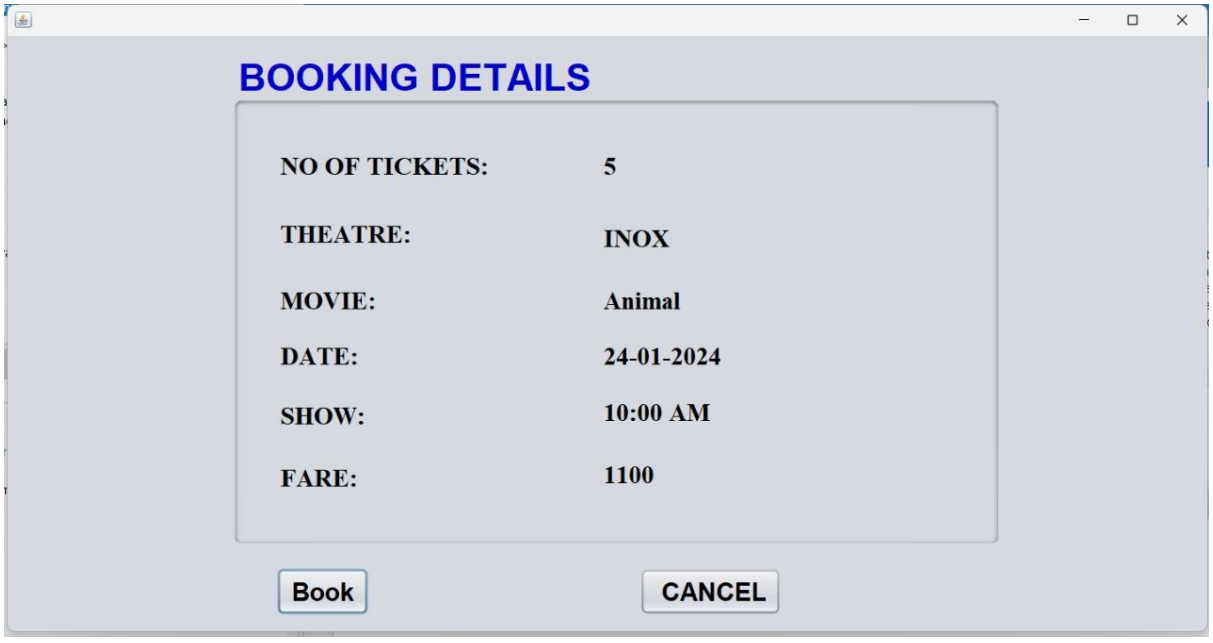
Login page:


ONLINE MOVIE TICKET BOOKING
USERNAME
PASSWORD
LOGIN
NEW REGISTER

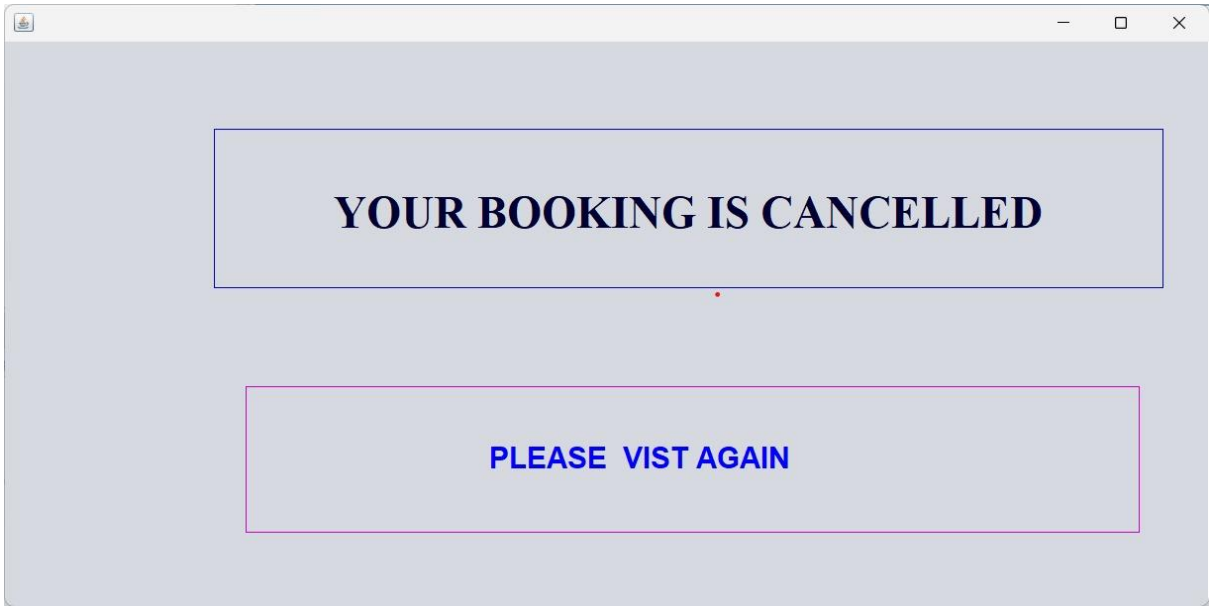
New Register:



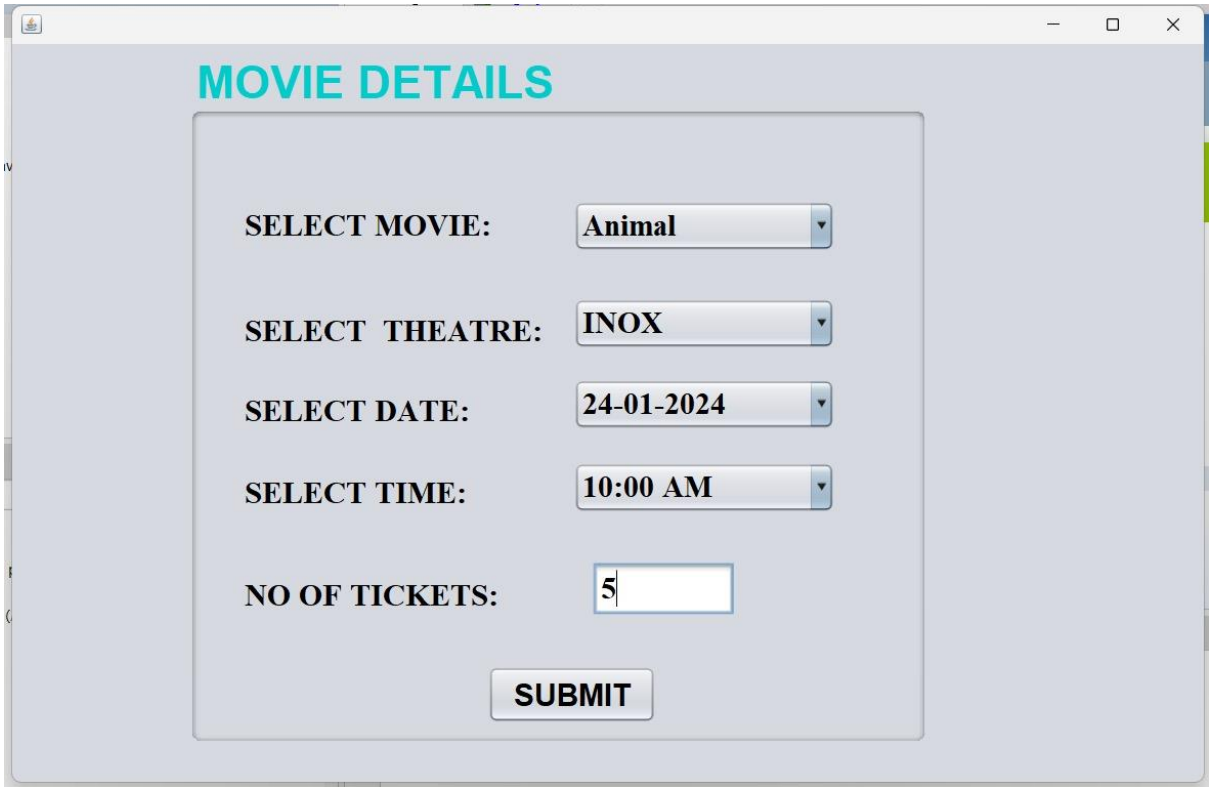
Booking details:



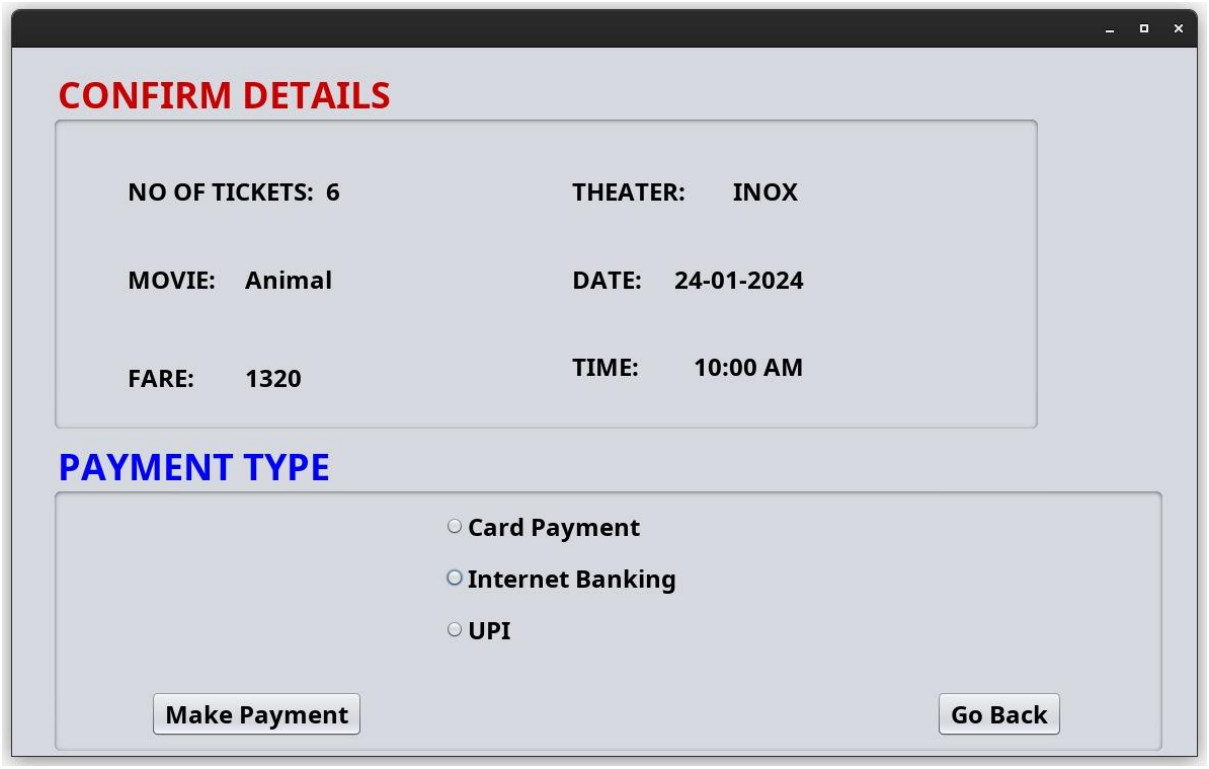
Cancellation page:



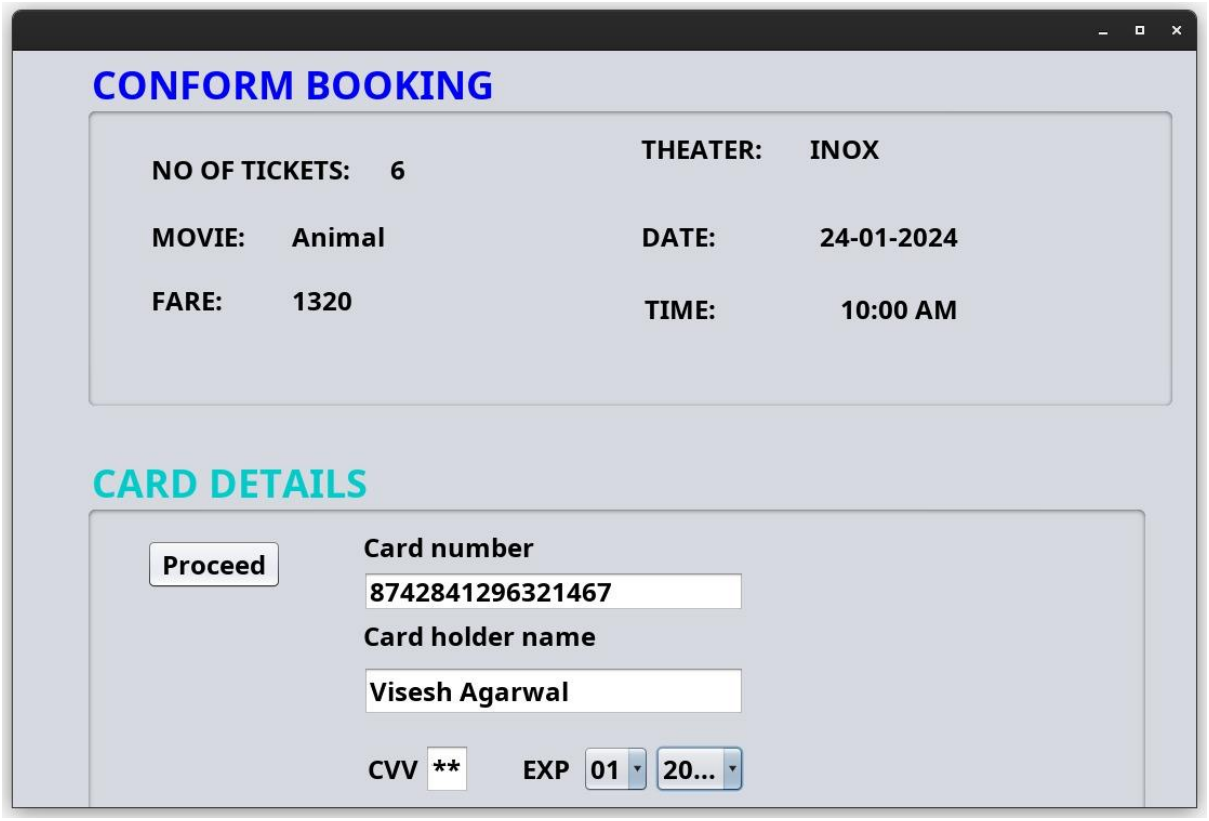
Movie details:



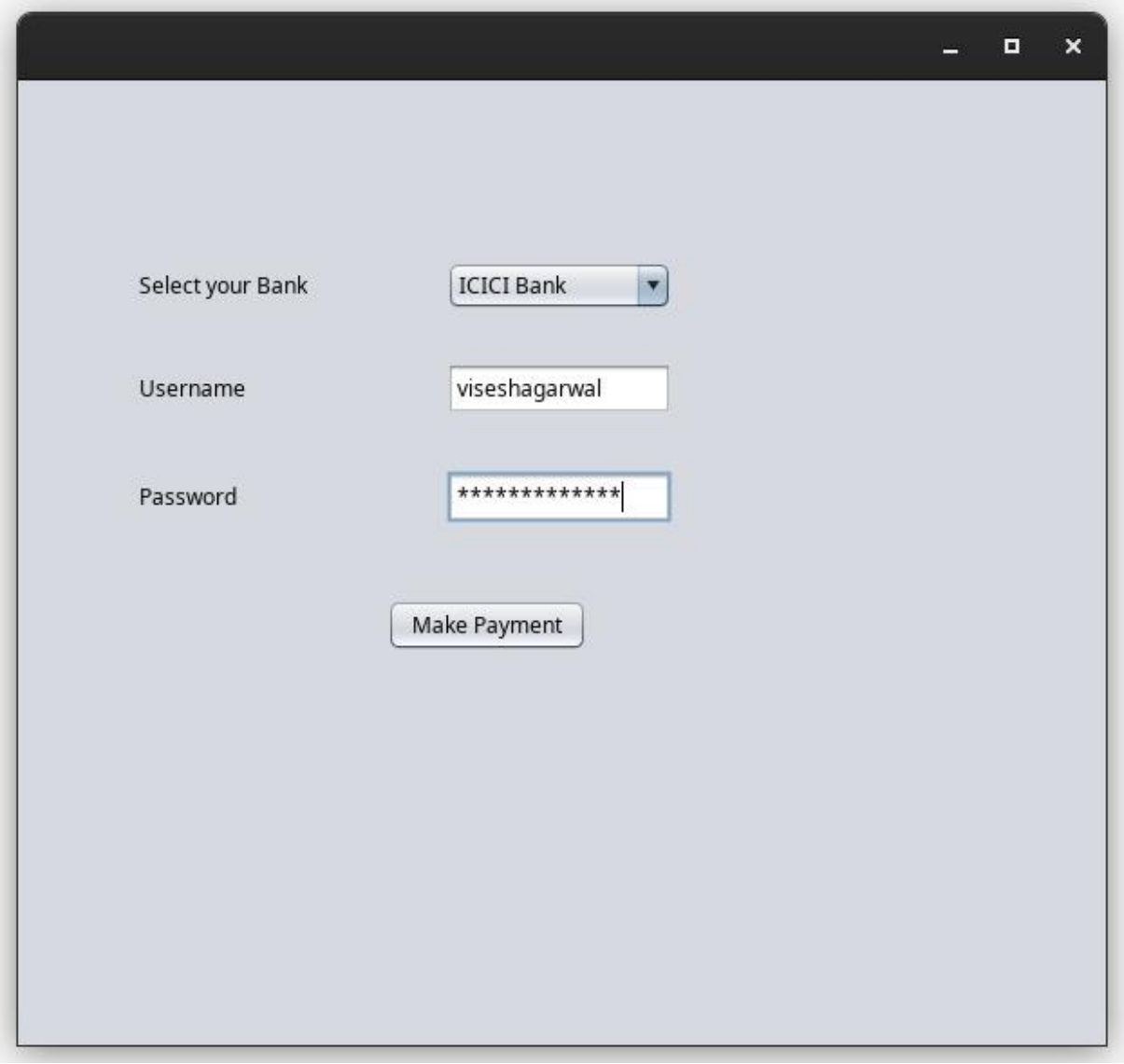
Conform details:

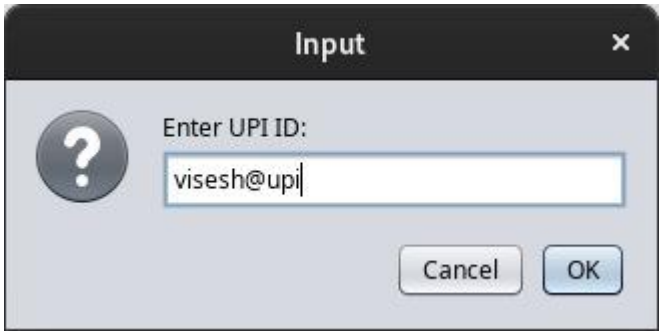


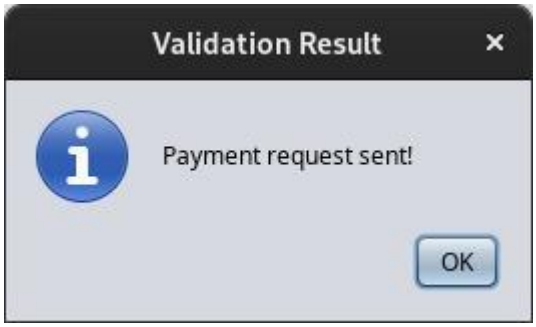
Conform booking:

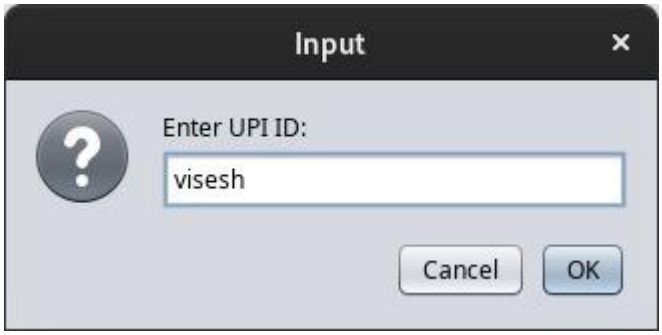


Payment page:

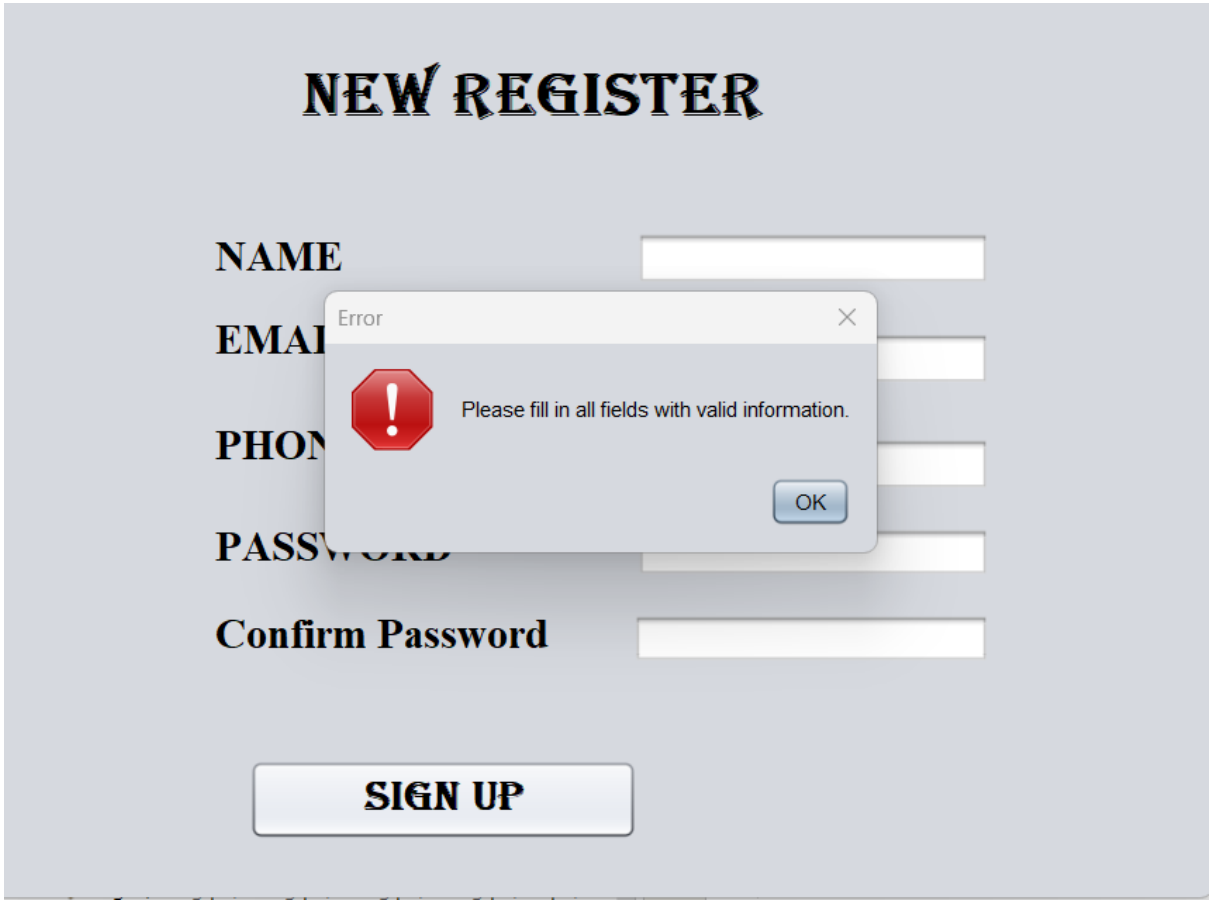

Select your Bank
ICICI Bank
Username
viseshagarwal
Password
****
Make Payment


Input
Enter UPI ID:
visesh@upi
Cancel
OK

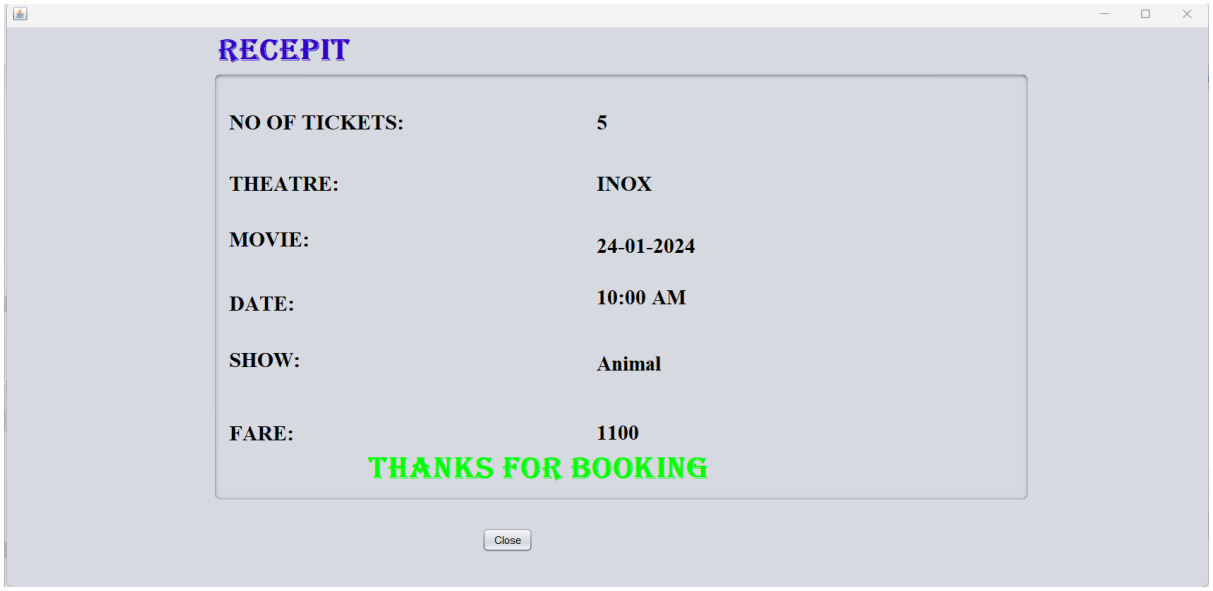

Validation Result
Payment request sent!
OK



Validation:



Recepit page:



Performance was smooth for concurrent bookings with no database locking issues. The system meets the primary booking functionalities required.

Limitation:

For enhanced user experience, further improvements like showing seat availability, booking history and live cancellation can be added.

The payment gateway can also be connected to banks for actual payments.

Conclusion:

The online movie ticket booking system was implemented successfully in Java using core Java concepts like multithreading, swing, collection, inheritance, OOP design and MySQL database, meeting the requirements for booking tickets conveniently via a web interface. The project provided good opportunity to learn web application development concepts.