### Project Overview:

The Movie Booking Application is a console-based system designed to streamline the ticket booking process, eliminating the need for manual intervention at ticket counters. It enhances user experience by providing a user-friendly interface with distinct roles for administrators and regular users.

### User Authentication:

• The application supports two types of logins: User and Admin.

• User details, including first name, last name, login ID, password, contact number, and user type, are stored in a User class with an associated Enum for user types.

• User objects are created only once at the start and termination of the application, with new objects created only during a switch between user types.

Functionality for Users:

Users have various options to interact with the application, including:

1. View all movies

2. View released movies

3. View upcoming movies

4. Search movies by name

5. Book a movie

6. View past bookings

7. View upcoming bookings

8. Reset password

9. Sign out

Functionality for Admins:

Admins have additional functionalities for managing the system:

1. Add/Update a movie

2. Remove a movie

3. Check ticket status

4. View upcoming tickets

5. View expired tickets

6. Reset application data

7. Backup data

8. View application logs

9. Reset password

10. Sign out

11. Terminate the application (exclusive to admin)

### Security Measures:

• Only admins have the authority to terminate the application for security purposes.

• Admins can view logs, allowing them to analyze console records on specific dates, aiding in troubleshooting and fixing issues after an application crash.

### Technical Implementation:

• Real-time seat availability and layout are displayed through a 2D array in the console.

• JSON files are used for data storage, managed by a separate data service class.

• Data processing and retrieval are efficiently handled using HashMaps and ArrayLists.