






**Declaration of Original Work for SC/CE/CZ2002 Assignment**

We hereby declare that the attached group assignment has been researched, undertaken, completed and submitted as a collective effort by the group members listed below.

We have honored the principles of academic integrity and have upheld Student Code of Academic Conduct in the completion of this work.

We understand that if plagiarism is found in the assignment, then lower marks or no marks will be awarded for the assessed work. In addition, disciplinary actions may be taken.

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## Design Considerations

### **Object-Oriented Concepts**

#### Inheritance

*Demonstrated in: All Controller classes*

Inheritance is when one class inherits the attributes and methods of another class.

In MOBLIMA, all Controllers that require reading and writing data of a certain data type from a database file inherit from the abstract class `DatabaseController<DataType>`. Hence, all the Controller classes share the same `addToDatabase()`, `readFromDatabase()`, `overwriteDatabase()` methods defined in the base class to prevent code redundancy.

#### Encapsulation

*Demonstrated in: All Entity classes, SearchShowingUI*

Encapsulation is used to obscure data within a class itself to prevent direct access by unauthorized classes. Data attributes are set to private so that they can only be obtained by calling the relevant getter and setter methods.

In MOBLIMA, the id of a specific Showing instance can only be obtained using `getId()`, while the id can only be updated using `setId()`.

#### Polymorphism

*Demonstrated in: findShowing, deleteShowing*

Method overloading allows methods with the same name but different signatures to behave according to their argument types and number of arguments.

In MOBLIMA, the `ShowingController` method `deleteShowing(int id)` deletes a Showing by its id attribute, while `deleteShowing(Movie movie)` deletes a showing by its movie attribute. This increases code readability and maintainability.

#### Abstraction

*Demonstrated in: InputHandler, UserHandler*

Abstraction hides the internal implementation details from outsiders.

In MOBLIMA, the `InputHandler` class is responsible for basic I/O operations such as scanning user inputs. `InputHandler` methods such as `scanString()` and `scanInt()` can then be conveniently reused by multiple classes such as other Boundary classes, while the implementation and checking for invalid inputs are hidden in the `InputHandler`.

### Reusability

*Demonstrated in: ListTopMovies, Enumerators, SearchMovieUI, SearchShowingsUI*

Reusability refers to the ease of reusing entities or methods by several other classes, reducing the need of creating multiple methods of similar functionality.

In MOBLIMA, the methods in `ListTopMovies` are only defined once but they can be reused by both `Admin` and `MovieGoer`. Defining `Enumerators` such as `CinemaClass` allows constants to be reused multiple times easily, increases readability and easier referencing, and supports forward compatibility since changing an enumerator value changes the value during all instances that the value is called.

### Low Coupling and High Cohesion

*Demonstrated in: Movie, Seat, Review, Admin, MovieGoer*

High Cohesion suggests that parts of a module should be grouped closely because they contribute to a single objective, while Low Coupling suggests that classes should have minimal knowledge of one another's processes, and thus minimal dependency on each other.

In MOBLIMA, the `Movie` class only contains elements that functionally belong together, allowing for high cohesion in retrieving movie data. The `Movie` class does not know about hence does not depend on the `Showing` class as there is no need for movies to know about its showings, allowing for low coupling.

## **SOLID Principles**

### Single Responsibility Principle

*Demonstrated in: Entity-Boundary-Control*

Single Responsibility Principle states that each class and method should have only one purpose and responsibility in a program. This reduces the need to change a class excessively.

For a robust design where every class only focuses on its own role, all the classes in MOBLIMA are divided into the 3 class stereotypes of Entity, Boundary and Control. For instance:

- Entity: `Movie` entity is only responsible for representing and returning persistent information such as its attributes, and is not aware of Boundaries and Controllers.
- Control: `MovieController` implements logic and serves as the intermediary between the `Movie` entity and related Boundaries.
- Boundary: Related Boundaries like `CRUDMovieListingUI` and `SearchMovieUI` only serve as an interface to interact with external user input, and then passes the data to `MovieController` to process.

### Open-Closed Principle

*Demonstrated in: `PriceType`*

Open-Closed Principle states that modules should be open for extensions and closed for modification, using abstraction to represent other variations of the base class.

In MOBLIMA, `PriceType` is an empty interface to represent the factors that can influence the price of a movie ticket, such as a movie-goer's age or the day of the week. The interface is closed from further modification, but open to allow relevant factors to be added in the future. This ultimately allows the `PriceType` class to be extendable without modifying base code.

### Liskov Substitution Principle

*Demonstrated in: All Controller classes*

Liskov Substitution Principle states that subclasses should be substitutable for their base classes, without altering the desired properties of the program.

In MOBLIMA, all Controllers are extended from the base class

`DatabaseController<DataType>`, allowing all controllers to read, add and overwrite their respective databases of different data types. The preconditions of

`MovieController<Movie>` are no stronger than the

`DatabaseController<DataType>`, while the postconditions of

`MovieController<Movie>` are no weaker. As such, `MovieController<Movie>` is substitutable for `DatabaseController<DataType>`.

## **New Features**

### Future Enhancement 1: Pre-purchase snacks when booking tickets

A feature can be added to allow movie-goers to pre-purchase concessions such as food and drinks during the purchase of tickets.

A new `selectConcessions()` method will be instantiated within `BookingUI` after selecting their seats and before the final payment. The `selectConcessions()` method will be called by the main method in `BookingUI` right before payment is calculated.

`selectConcessions()` will display the available concessions for the user to select, and returns a list of concessions that the user has chosen. The list of concessions will then be later used in determining the total price the user has to pay for the booking by `displayTotalPrice()` method in `BookingUI`.

Selecting concessions will have low coupling as it will not depend on other methods such as `chooseSeat()`, but can be easily extended to work cohesively with current methods in `BookingUI` to improve user experience. The snack pre-purchasing feature will abide by Single Responsibility Principle as it will focus solely on the selection of concessions to purchase, and nothing else.

### Future Enhancement 2: Movie Recommendation System

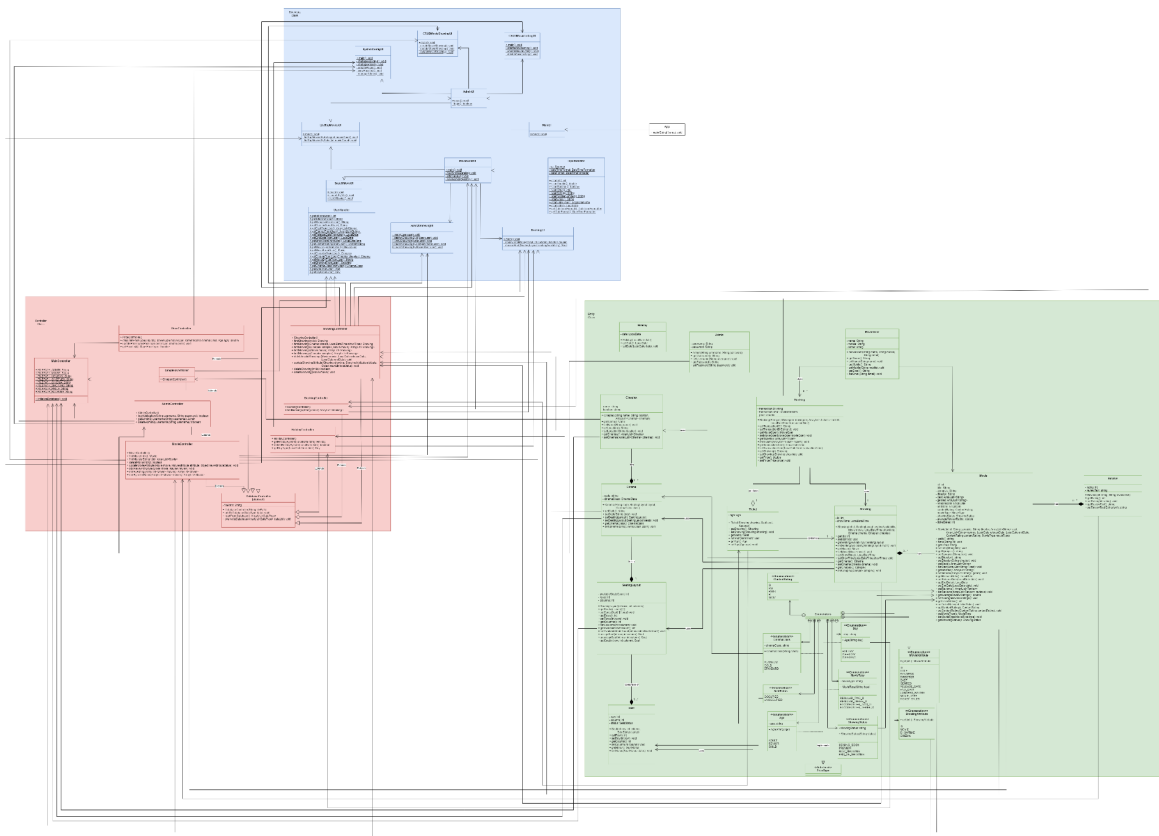
A movie recommendation system can be added in the future to advise users on what movies they may enjoy. Using a combination of user's data, such as frequented movie genres and his/her movie reviews, the recommendation system suggests current movies in cinema that suit a movie-goer's preferences.

To implement this, a new `RecommendationUI` Boundary class will be created for users to input their email address, and display a list of recommended movies. A new method of `getViewingHistory()` will be introduced in `MovieController` that returns a list of the movie-goer's past viewed movies from his/her booking history. Another method of `getRecommendedMovies()` will take a list of past viewed movies and compare their attributes (eg. genres) with currently showing movies to get movies that are closely related. Finally, `getRecommendedMovies()` returns the list of recommended movies for `RecommendationUI` to display.

The recommendation system possesses good encapsulation as the RecommendationUI only needs to call the related methods in MovieController to get the resultant data to be displayed, without knowing the implementation details of how to fetch movies from the database and process the movies.

### Detailed UML Class Diagram

Please refer to *UMLClassDiagram-SSP1-grp4.png* in the submitted .zip file for the full resolution image.



## Demonstration Video

Link to demonstration video: <https://youtu.be/xP39U6YmgCw>

## Test Cases and Results

1. Configuring a holiday date and the ticket price is shown correctly when booking is done on that date

<pre>100 seats available for Thor: Love and Thunder at GV Jurong Point (10/11/2022 16:00) Enter number of tickets to you would like to buy: 1  ----- TICKET 1 ----- 0 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 1 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 2 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 3 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 4 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 5 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 6 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 7 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 8 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 9 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   A B C D E F G H I J  Number of Available Seats: 100  Enter seat row (0-9): 0 Enter seat column (A-J): A Seat A0 selected!  Select Age: 1. Adult 2. Senior 3. Child 1  0 [X] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 1 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 2 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 3 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 4 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 5 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 6 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 7 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 8 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 9 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   A B C D E F G H I J  Number of Available Seats: 99  Price of Ticket 1: 11.50 ----- Total price of the 1 tickets: 11.50  Confirm booking? (Y/N)</pre>	<p>Picture on the left shows the original price (\$11.50) for an adult for the movie Thor: Love and Thunder on 10/11/2022 at GV Jurong Point.</p>
<pre>===== HOLIDAYS MANAGER ===== 1. Add a Holiday 2. Delete a Holiday 3. View All Holidays 0. Return to System Configuration Menu  1  ADDING A HOLIDAY... Enter date of holiday: 10/11/2022 Holiday on 2022-11-10 added to Holiday database!</pre>	<p>An admin decided to declare 10/11/2022 as a holiday under the “System Configuration Menu”</p>

```

100 seats available for Thor: Love and Thunder at GV Jurong Point (10/11/2022 16:00)
Enter number of tickets to you would like to buy:
1

---- TICKET 1 ----
0 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
1 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
2 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
3 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
4 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
5 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
6 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
7 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
8 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
9 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
  A B C D E F G H I J

Number of Available Seats: 100

Enter seat row (0-9):
0
Enter seat column (A-J):
a
Seat A0 selected!

Select Age:
1. Adult
2. Senior
3. Child

1
0 [X] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
1 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
2 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
3 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
4 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
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7 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
8 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
9 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
  A B C D E F G H I J

Number of Available Seats: 99

Price of Ticket 1: 16.50
-----
Total price of the 1 tickets: 16.50

Confirm booking? (Y/N)

```

Moviegoer will see the updated price **(\$16.50)** for a holiday (10/11/2022) reflected for an adult for the movie Thor: Love and Thunder at GV Jurong Point.

## 2. Booking on a different day of the week or holiday and type of cinema to demonstrate the differences in prices

```

Select cineplex:
1. GV Jurong Point
2. Cathay Cineplex Cineleisure
3. Cathay Cineplex AMK Hub
2

Showings of Doctor Strange in the Multiverse of Madness at Cathay Cineplex Cineleisure
=====
Showing ID: 1
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 09/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BPA, Platinum Class)
Price: $18.50
=====
Showing ID: 2
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 10/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BPA, Platinum Class)
Price: $23.50
=====
Showing ID: 3
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 12/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BPA, Platinum Class)
Price: $23.50
=====
Showing ID: 4
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 09/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BGA, Gold Class)
Price: $15.50
=====
Showing ID: 5
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 10/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BGA, Gold Class)
Price: $20.50
=====
Showing ID: 6
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 12/11/2022 18:00
Cineplex: Cathay Cineplex Cineleisure (Cinema: BGA, Gold Class)
Price: $20.50
=====

```

The following table shows the current price configuration:

	Weekday	Weekend	Holiday
Platinum Class	18.50	23.50	23.50
Gold Class	15.50	20.50	20.50

The picture on the left shows the different showings across different days and cinemas for “Cathay Cineplex Cineleisure”, the prices are shown according to the day (weekday, weekend, holidays) and suites (platinum, gold).

### Details:

Showing ID 1-3 belongs to the platinum suites

Showing ID 4-6 belongs to the gold suites

09/11/2022 is a weekday

10/11/2022 is a holiday

12/11/2022 is a weekend



### 3. Configuring “End of Showing” date and the movie should not be listed for booking

<pre>===== Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D) Release Date: 20/10/2022, End Date: 19/11/2022 Showing Status: Now Showing Ticket Sales: 468, Overall Rating: 2.00* =====</pre>	Let's take a look at the movie “Doctor Strange in the Multiverse of Madness”, the showing status is “Now Showing”.
<pre>===== Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D) Release Date: 20/10/2022, End Date: 19/11/2022 Showing Status: Now Showing Ticket Sales: 468, Overall Rating: 2.00* =====  Input movie ID from above results: 14 ===== Showing ID: 1 Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14) Showtime: 09/11/2022 18:00 Cineplex: Cathay Cineplex Cineleisure (Cinema: BPA, Platinum Class) ===== Showing ID: 2 Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14) Showtime: 10/11/2022 18:00 Cineplex: Cathay Cineplex Cineleisure (Cinema: BPA, Platinum Class) =====</pre>	Moviegoers are able to see the showings for the movie and book tickets.
<pre>UPDATING A MOVIE LISTING... Enter ID: 14 Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D) Release Date: 20/10/2022, End Date: 19/11/2022 Showing Status: Now Showing Ticket Sales: 468, Overall Rating: 2.00* =====  Select attribute to update for movie 1. ID 2. Title 3. Synopsis 4. Director 5. Cast 6. Genres 7. Release Date 8. End Date 9. Content Rating 10. Movie Type 11. Ticket Sales 8 Enter end date 'dd/MM/yyyy': 01/11/2022 Deleted all showings with invalid showtimes!  Updated movie details!</pre>	<b>Configuring “End of Showing” date:</b> Admin configures it to “End Of Showing” by shifting the end date of the movie to be before the current date.
<pre>===== Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D) Release Date: 20/10/2022, End Date: 01/11/2022 Showing Status: End Of Showing Ticket Sales: 468, Overall Rating: 2.00* =====</pre>	Image on the left shows the movie “Doctor Strange in the Multiverse of Madness” showing status as “End of Showing”, since the current date (09/11/2022) is already past the end date (01/11/2022).

```

=====
Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D)
Release Date: 28/10/2022, End Date: 01/11/2022
Showing Status: End Of Showing
Ticket Sales: 468, Overall Rating: 2.00*
=====

Input movie ID from above results: 14
No showings of Doctor Strange in the Multiverse of Madness are currently available!

```

### **“End of Showing” movie not listed for booking:**

Moviegoers can no longer see any available movie showings and thus can not see the showing to book anymore.

#### 4. Booking only allowed for “Preview” and “Now Showing” status

```

===== ADMIN =====
1. Create/Update/Remove Movie Listing
2. Create/Update/Remove Movie Showings
3. Configure System Settings
4. List Top 5 Ranking Movies
0. Logout to Main Menu

2

===== MOVIE SHOWING =====
1. Create Movie Showing
2. Update Movie Showing
3. Remove Movie Showing
4. Search/List Showings
0. Return to Admin Menu

4

===== SEARCH/LIST SHOWING =====
1. Search By Showing ID
2. Search By Cineplex
3. Search By Movie Title
4. List All Showings
0. Return

4

=====
Showing ID: 1
Movie Title: Thor (ID: 1)
Showtime: 25/04/2011 20:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 2
Movie Title: Sonic the Hedgehog 2 (ID: 13)
Showtime: 07/11/2022 20:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 22
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 09/11/2022 17:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 41
Movie Title: Thor: Love and Thunder (ID: 15)
Showtime: 09/11/2022 21:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 62
Movie Title: Black Panther: Wakanda Forever (ID: 16)
Showtime: 10/11/2022 18:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 63
Movie Title: Ant-Man and the Wasp: Quantumania (ID: 17)
Showtime: 18/02/2023 21:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 64
Movie Title: The Super Mario Bros. Movie (ID: 18)
Showtime: 11/04/2023 22:00

```

In the admin panel, we are able to see all the movie showings available in the database, regardless of whether the showings have ended or not.

```

=====
Movie: Star Wars: The Rise of Skywalker (ID: 10) (Blockbuster 2D)
Release Date: 18/12/2019, End Date: 17/01/2020
Showing Status: End Of Showing
Ticket Sales: 0, Overall Rating: 1.50*
=====
Movie: Black Widow (ID: 11) (Regular 3D)
Release Date: 07/07/2021, End Date: 06/08/2021
Showing Status: End Of Showing
Ticket Sales: 341, Overall Rating: 3.20*
=====
Movie: Eternals (ID: 12) (Blockbuster 2D)
Release Date: 03/11/2021, End Date: 03/12/2021
Showing Status: End Of Showing
Ticket Sales: 0, Overall Rating: 4.00*
=====
Movie: Sonic the Hedgehog 2 (ID: 13) (Blockbuster 3D)
Release Date: 10/10/2022, End Date: 09/11/2022
Showing Status: Preview
Ticket Sales: 0, Overall Rating: 3.80*
=====
Movie: Doctor Strange in the Multiverse of Madness (ID: 14) (Blockbuster 3D)
Release Date: 20/10/2022, End Date: 20/11/2022
Showing Status: Now Showing
Ticket Sales: 468, Overall Rating: 2.00*
=====
Movie: Thor: Love and Thunder (ID: 15) (Regular 3D)
Release Date: 01/11/2022, End Date: 01/12/2022
Showing Status: Now Showing
Ticket Sales: 263, Overall Rating: 3.00*
=====
Movie: Black Panther: Wakanda Forever (ID: 16) (Blockbuster 2D)
Release Date: 10/11/2022, End Date: 09/12/2022
Showing Status: Preview
Ticket Sales: 0, Overall Rating: NaN
=====
Movie: Ant-Man and the Wasp: Quantumania (ID: 17) (Regular 3D)
Release Date: 15/02/2023, End Date: 17/03/2023
Showing Status: Coming Soon
Ticket Sales: 0, Overall Rating: NaN
=====
Movie: The Super Mario Bros. Movie (ID: 18) (Regular 2D)
Release Date: 29/03/2023, End Date: 28/04/2023
Showing Status: Coming Soon
Ticket Sales: 0, Overall Rating: NaN
=====

```

However, there are only 4 movies that are in “Preview” and “Now Showing” status.

### Preview:

Sonic the Hedgehog 2

Black Panther: Wakanda Forever

### Now Showing:

Thor: Love and Thunder

Doctor Strange in the Multiverse of Madness

```

===== MOVIE GOER =====
1. Search/List Movies
2. View Movie Details
3. Search/List Showings
4. Book and Purchase Ticket
5. View Booking History
6. List Top 5 Ranking Movies
7. Add Review
0. Return to Main Menu

3
===== SEARCH/LIST SHOWING =====
1. Search By Showing ID
2. Search By Cineplex
3. Search By Movie Title
4. List All Showings
0. Return

4
=====
Showing ID: 22
Movie Title: Doctor Strange in the Multiverse of Madness (ID: 14)
Showtime: 09/11/2022 17:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 41
Movie Title: Thor: Love and Thunder (ID: 15)
Showtime: 09/11/2022 21:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====
Showing ID: 62
Movie Title: Black Panther: Wakanda Forever (ID: 16)
Showtime: 10/11/2022 18:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====

```

Moviegoers are only allowed to see showings of movies with “Preview” and “Now Showing” status. Hence, they can only select these available showings and make bookings for movies with “Preview” and “Now Showing” status.

```

===== TICKET BOOKING =====
Enter movie title:
thor

=====
Movie: Thor (ID: 1) (Regular 2D)
Release Date: 21/04/2011, End Date: 21/05/2011
Showing Status: End Of Showing
Ticket Sales: 0, Overall Rating: 3.20*
=====
Movie: Thor: Ragnarok (ID: 4) (Blockbuster 2D)
Release Date: 24/10/2017, End Date: 23/11/2017
Showing Status: End Of Showing
Ticket Sales: 0, Overall Rating: 4.20*
=====
Movie: Thor: Love and Thunder (ID: 15) (Regular 3D)
Release Date: 01/11/2022, End Date: 01/12/2022
Showing Status: Now Showing
Ticket Sales: 0, Overall Rating: 3.00*
=====

Input movie ID from above results: 1
Movie is currently not showing!

```

**Not allowed to book for “End Of Showing” and “Coming Soon” status:**  
 Moviegoer tries to book tickets for the “Thor” movie that is “End Of Showing”, but is unable to since it is not showing.

```

===== TICKET BOOKING =====
Enter movie title:
wakanda forever

=====
Movie: Black Panther: Wakanda Forever (ID: 16) (Blockbuster 2D)
Release Date: 10/11/2022, End Date: 09/12/2022
Showing Status: Preview
Ticket Sales: 0, Overall Rating: NaN
=====

Input movie ID from above results: 16

Select cineplex:
1. GV Jurong Point
2. Cathay Cineplex Cineleisure
3. Cathay Cineplex AMK Hub
1

Showings of Black Panther: Wakanda Forever at GV Jurong Point
=====
Showing ID: 62
Movie Title: Black Panther: Wakanda Forever (ID: 16)
Showtime: 10/11/2022 18:00
Cineplex: GV Jurong Point (Cinema: APA, Platinum Class)
=====

Input movie showing ID:
62

20 seats available for Black Panther: Wakanda Forever at GV Jurong Point (10/
Enter number of tickets to you would like to buy:
2

```

**Allowed to book for “Preview” and “Now Showing” status:**  
 Moviegoer tries to book tickets for “Black Panther: Wakanda Forever” movie that is in “Preview”, and is able to find showings and book tickets for the available showings.