

CS3365 – Team Project: Phase I

Software Requirements Specification document due April 1st, 2025, by 11:59 PM

Suppose that a chain of 6 movie theaters noticed a decline in ticket sales. Their 6 movie theaters are located in: Lubbock, Amarillo, Levelland, Plainview, Snyder, and Abilene. After surveying numerous customers, they found that long lines at their ticket booths were causing customers to choose more convenient means of entertainment. Customers stated that rather than go through the hassle of waiting in line for 10 minutes, they would rather rent a movie or subscribe to a movie rental service. After many discussions, the chain's business analyst recommends a solution to let customers buy their tickets online(or through a program). By doing so, customers will be able to either print or display the tickets (by pulling previously bought tickets from the purchase history) on their personal devices when entering the theater. This would save time for customers and costs for the company.

We need to allow customers to buy and print their theater tickets at home with just a few clicks/selections. Or allow them to show their movie ticket(through a display screen such as a phone) at the entrance to the theater. The movie theater will have a ticket-scanning device at the entrance to scan tickets. The device scans tickets at the theater entrance and directly interacts with the MBS (Movie Booking System). Upon scanning the tickets, the device confirms whether the ticket is valid and updates the internal status of tickets (e.g., marking the ticket as "used"). It also updates information such as the number of people who entered the theater, thereby keeping the system status up-to-date.

We will design our Movie Booking System(MBS) so that the Americans with Disabilities Act of 1990, and other relevant government regulations such as the FCC are properly adhered to. All the features of the system described below should not take more than 5 seconds to finish executing.

Using the MBS, users need to be able to register or log in to the system. During the registration process, the user provides the necessary details such as name, email address, home address, and phone number, and creates a password for the platform. Once done, he/she has to enter the created credential to log in to the system (in this case, email can be the username). During this registration process, MBS will record the user's personal details in a database (If you are unfamiliar with databases, you could save these in a text file). Users should be able to update information such as their phone number, password, and more by accessing their profile page.

The homepage or home screen is the main page of the platform that provides users with the necessary information to navigate to "browse current movie catalog," "browse upcoming movie catalog" or "search a movie(through a text box)" pages. On the browse movie catalog page(both upcoming and currently playing), users will be able to see all movies playing in the theater. Once they find the movie they like, they will be able to select/click that movie and view more details. The "search movie" functionality will let you search for movies both currently playing and upcoming. "Browse upcoming movie catalog" will function similarly to the "browse current movie catalog" feature. However, users will not be able to purchase tickets in advance for upcoming movies.

Once the user selects the movie(by browsing the current movie catalog, upcoming movie catalog, or doing a search), he/she will be navigated to another page that gives details about the movie such as its synopsis, information about the cast, runtime, and reviews.

The ticket booking feature is the most fundamental part of the ticket booking system. The users can book the ticket by clicking(or selecting from a window) on the desired movie from the list. They get to select options such as the time of the show, the theater, and the number of seats to book. When purchasing, the maximum number of tickets a user can purchase is ten. (To keep the program simple, we assume each movie theater has unlimited seats and you don't have to keep track of the capacity of each room where the movie will be playing.)

Once the user selects the number of seats, the next step is to make the purchase. It is essential to make sure that the system keeps user information safe. When sensitive pieces of information like credit card numbers or users' personal information are involved, the security of the data must be the prime concern.

Rather than collecting the tickets from the theaters, this feature gives the user tickets in an electronic form (barcode). As soon as the purchase is made, an electronic ticket is generated, which can either be printed or displayed on a phone screen. This can be scanned upon their arrival at the theater. This feature can save a lot of time for both users as well as the theaters. Tickets purchased by a user will have a special barcode (in your case, you may display a unique number instead of a barcode). The system you design should only accommodate credit, Venmo, or PayPal as its payment methods. All the tickets a user has purchased should be visible on an order history page.

The movie booking system(MBS) should also allow users to write movie reviews. The review feature simply allows the users to share their experiences in the comment section, just below every movie description. This feature is also useful for other users. They can read reviews before making a purchasing decision.

If the person who logs in is an administrator(admin), he/she will have access to a different set of functionalities. An admin page should have a way to retrieve the current status of the system. This status report should include things like how many tickets have been sold, total revenue, and what movies are playing.

Admins should also have a "manage show" feature. This feature allows the admin to view, add, and remove shows on the platform. They should also be able to add details of the show such as the time, and the prices of the tickets.

To maintain better control over the system we are proposing to develop, we require that core functionalities, including features like user login, authentication, etc..., be developed in-house rather than relying on external third-party services. However, if you choose to implement the system using off-the-shelf programs or plugins, that is completely acceptable as well.

To keep the implementation part of the project simple, we assume this system doesn't have the following features:

- A user can't do a guest checkout; he/she must be a registered user.

- Users can't make a preferred seat selection through the app.
- No movie trailers will be shown in the app.
- No rewards program is associated with this system.
- We are not concerned with the user's location.
- No push notifications.
- This system is not connected to the concession stand.
- When writing a program for this, you do not need to program the functionality that interacts with the ticket-scanning device.
- For more information on ticket scanning devices and their functionalities, [click here](#).

Based on the description given here, produce a Software Requirements Specification(SRS) document. A template for the SRS document is given. Work on this with your team and turn it in by the due date. Everyone in the team must do an equal amount of work. Only one person from your team needs to submit this. **Submission instructions will be provided three days prior to the due date.** Whenever you have a question about the project, **please bring it up in class or during office hours, rather than communicating via email.**