

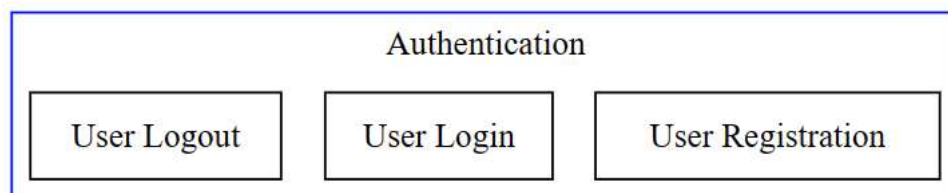
Verification Test Plan

The Verification Test Plan aims to ensure that the Movie Theater Ticketing System meets the design specifications and functions correctly. Each of the following test cases are designed to target specific features of the system and verify desired functionality.

- **Test Case: Authentication_0 (User Registration)**
 - **Features Tested:** User registration functionality.
 - **Test Vectors:** Valid username, password, and email address.
 - **Coverage:** This test ensures that a new user can register a new account successfully and that the system can handle and store the new user data correctly.
- 1. **Test Case: Authentication_1 (User Authentication)**
 - **Features Tested:** User login functionality.
 - **Test Vectors:** Valid username and password for an existing account.
 - **Coverage:** This test verifies that a registered user can log into the system using their credentials.
- 2. **Test Case: Authentication_2 (User Logout)**
 - **Features Tested:** User logout functionality.
 - **Test Vectors:** Active user session.
 - **Coverage:** This test ensures that a user that is logged in to the system can log out successfully and end their current session.
- 3. **Test Case: User_Functions_0 (Ticket Purchase)**
 - **Features Tested:** Ticket purchasing process.
 - **Test Vectors:** Desired movie, showtime, and seat selection.
 - **Coverage:** This test checks the system's capability to handle ticket purchases and update the user's purchase history.
- 4. **Test Case: User_Functions_1 (Get Details)**
 - **Features Tested:** Retrieval of detailed movie information.
 - **Test Vectors:** Selected movie title.
 - **Coverage:** This test ensures that the system can display the detailed information related to a selected movie title.
- 5. **Test Case: User_Functions_2 (View Purchase History)**
 - **Features Tested:** Viewing of user's purchase history.
 - **Test Vectors:** User profile that has previous ticket purchases.
 - **Coverage:** This test ensures that the system can display detailed information, including cast, director, and runtime.
- 6. **Test Case: Staff_Functions_0 (Update Movie Listing)**
 - **Features Tested:** Update movie listings.
 - **Test Vectors:** Selected movie and updated details.
 - **Coverage:** This test ensures that theater staff has the ability to manually update movie details.
- 7. **Test Case: Staff_Functions_1 (Change Ticket Pricing)**

- **Features Tested:** Changing ticket pricing.
 - **Test Vectors:** Selected ticket and new price.
 - **Coverage:** This test verifies the ability of theater staff to change ticket pricing.
8. **Test Case: Administrator_Functions_0 (Manage User Account)**
- **Features Tested:** Managing user accounts.
 - **Test Vectors:** Selected user account.
 - **Coverage:** This test ensures that administrators can manage user accounts.
9. **Test Case: Administrator_Functions_1 (Extract Business Data)**
- **Features Tested:** Extraction of business data.
 - **Test Vectors:** Specified date range.
 - **Coverage:** This test verifies that administrators have the ability to extract business data for a specified date range.
10. **Test Case: Movie_Functions_0 (Get Show Times)**
- **Features Tested:** Retrieval of movie showtimes.
 - **Test Vectors:** Selected movie title.
 - **Coverage:** This test ensures that the system can display the showtimes for a selected movie title.
11. **Test Case: Ticket_Functions_0 (Generate Ticket)**
- **Features Tested:** Generation of a ticket after a purchase has been made.
 - **Test Vectors:** Valid user ID, selected movie, showtime, and seat number.
 - **Coverage:** This test checks the system's capability to generate a ticket after a user has made a purchase, ensuring the ticket reflects the correct details.
12. **Test Case: Ticket_Functions_1 (Cancel Ticket)**
- **Features Tested:** Cancellation of a purchased ticket.
 - **Test Vectors:** User ID and ticket ID.
 - **Coverage:** This test verifies that a user can cancel a previously purchased ticket and that the system updates the available seats accordingly.
13. **Test Case: Payment_GW_Functions (Validate Card and Information)**
- **Features Tested:** Verify all card information are valid with merchant though PaymentGW API.
 - **Test Vectors:** Validate card name, type, Expire date & CVV.
 - **Coverage:** this test will make sure the credit card information is valid, proof of payment or rejection with transaction ID.

Test Plan Diagram



User Functions

View Purchase History

Get Details

Ticket Purchase

Staff Functions

Change Ticket Pricing

Update Movie Listing

Administrator Functions

Extract Business Data

Manage User Account

Payment Gateway - Card Details

Credit Card Security

Card Expire Date

Card Number 16D

Card Type

Payment Gateway - Transaction

Payment Reject

Payment Success

Unit Tests

Invalid Username Format

Valid Username Format