

# Verification Test Plan

The purpose of the test plan is to go through the verification and validation process of the ongoing development of the Movie Theater ticketing system. Below is the scope of what is being tested and in depth descriptions for each case.

- Unit testing: Testing of class methods and functions
- Functional testing: test the interaction between the functions and methods
- System testing: Test behavior of the actual system.

## 8.1 Unit test

- isTimeExpired()
  - Description: The purpose of this test is to verify the functionality of the timeout function.
  - Input test: The user will select available seats for a movie showing. The user will not complete payment for the seats in the allotted time for purchasing.
  - Expected outcome: The user will receive a message stating that the purchase time has expired and the seats have been released for purchase by other customers.
  - Success/fail criteria
    - Success: Purchase session times out, seats are released for purchase
    - Failure: Session times out, user is still successfully purchasing seats.
- checkLimit()
  - Description: The purpose of this test is to verify that a single user can only buy up to the maximum number of tickets (20 per user). When the user goes to select seats, they will see a 2D layout of the theater. They will choose the seats and select continue/proceed.
  - Input test: Purchaser will select 21 seats at the seat selection screen for the movie. After selecting 21 seats, the purchaser will continue to proceed to the purchasing screen.
  - Expected outcome: Purchaser should receive an error message stating they have exceeded the maximum amount of tickets that 1 person can buy. Message will show how many seats need to be removed before the purchaser can proceed to complete the purchase.
  - Success/fail criteria
    - Success: Purchase fails, giving message that maximum seats allowed for purchase has been exceeded.
    - Failure: Purchase is successful.

## 8.2 Functionality

- Password reset

- Description: This test will verify that when a user has forgotten their password, they can select the “Forgot Password” and be able to receive an email with instructions on how to reset the password. Password email should include a link that has a specific timeout (i.e. 20 minutes), and takes the user to a page where they can change the password. Part of the functionality is also that the user cannot use the same password. Uses “verify log in” and “reset password” function.
- Test input: user goes to login page. Below password field is an option for password help (i.e. “Forgot Password”). The user clicks the option and is taken to the page to enter the email address. If the email address is valid, the user will receive an email with a link to reset password.
- Expected outcome: Email is valid, user receives email, clicks link to go to password reset page, resets password successfully, and is able to login.
- Success/failure criteria:
  - Success: User resets password, logs into account
  - Failure: User cannot login.
- Search bar
  - Description: The user is able to search for movies in the search bar using relevant key words as well as specific film titles.
  - Test input: The user types in a Movie title they believe is showing currently at the theater.
  - Expected outcome: User finds the movie using the search bar, is able to make a purchase.
  - Success/failure criteria:
    - Success: Finds movie using search bar
    - Failure: Does not find a movie using search bar, or receive an error message.

### 8.3 System

- user login
  - Description: Verify user authentication is working
  - Test input: The user logs in using the user name and password they created when they created their account
  - Expected outcome: The user logs in with user name and password. User sees account information
  - Success/failure criteria:
    - Success: User logs in
    - Failure: User is not able to login
- View tickets purchased
  - Description: The test is used to check if the system correctly displays the tickets purchased by the user. A view tickets button will be displayed in the user menu. By clicking it, the system will display the tickets held by the user, including the number of tickets, movie name, and showtime.

- Test input: The user will proceed to purchase a ticket, then click the view ticket option in the user menu and be taken to a ticket display page after a successful purchase.
- Expected outcome: User should see the correct movie, showtime and number of tickets purchased displayed by the system.
- Success/failure criteria:
  - Success: Ticket displayed successfully, user can see all the details of the purchased ticket.
  - Failure: The system fails to display all the tickets purchased by the user. The system displayed the wrong information of the ticket.