# System Test Plan

## For

### *Los Portales Theater*

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# Table of Contents

# 1. Introduction

### 1.1 Purpose

This document is a test plan for Los Portales Theater System Testing, produced by the System Testing team. It describes the testing strategy and approach to testing the team will use to verify that the application meets the established requirements of the business prior to release.

### 1.2 Objectives

- Meets the requirements, specifications, and the Business rules.
- Supports the intended business functions and achieves the required software standards.
- Satisfies the Entrance Criteria for User Acceptance Testing.

# 2. Functional Scope

The Modules in the scope of testing for the Los Portales Theater System Testing are mentioned in the Software Design Document located in the following GitHub Repository:
https://github.com/rip97/CS472-Project/tree/main/Stage-2

# 3. Test Requirements

The following outlines the various Test Requirements (use cases, functional requirements, and non-functional requirements) that have been identified as a target for testing. This list represents what will be tested prior to final software release. Details on each test will be outlined in the *Overall Strategy and Approach* section described later in this document.

### 3.1 Data and Database Integrity Testing

- Verify access to the ENMU Theater Database.
- Verify correct data manipulation via Insert, Update or Delete actions.
- Verify correct data retrieval from different tables within the database.

### 3.2 System Testing (i.e., Functional Testing)

- Verify Customer and Admin Account Creation Use Case.
- Verify ticket selections and Shopping cart Use Case.
- Verify Checkout process.
- Verify Admin Play Creation actions.
- Verify Admin Play Edit actions.
- Verify Admin Play Deletion actions.
- Verify data source for Sales Reporting.

### 3.3 User Interface Testing

- Verify website is easily navigable.
- Ensure correct validations are present during checkout process.
- Verify ease of updating User Account from Customer standpoint.
- Verify Admin can easily Create, Modify or Delete Play information.
- Verify Shopping Cart actions accurately perform specified actions.

### 3.4 Security and Access Control Testing

- Verify Admin accounts are the only accounts with the highest level of authority.
- Verify Customer Accounts can be modified by the User.
- Verify Login features work as intended.

## 4. Overall Strategy and Approach

### 4.1 Testing Strategy

Los Portales Theater System Testing will include testing of all functionalities outlined in the previous Test Requirement section. This section will describe how each Requirement will be tested and include Completion Criteria.

### 4.2 Testing Types

#### 4.2.1 Data and Database Integrity Testing

| Test Objective: | Ensure database access methods accurately move data from Client side to appropriate Server sources. |
|---|---|
| Technique: | • Attempt to connect to Database upon program execution.<br>• Create, Update and Delete User and Admin Accounts, verify correct columns are modified. |
| Completion Criteria: | All database modification statements function without any data corruption. |

#### 4.2.2 System Testing

| Test Objective: | Ensure all interfaces display and route correct data for accurate representation of client and server-side data |
|---|---|
| Technique: | • Navigate to the Account modification pages and attempt to submit changes to database.<br>• Navigate to Play as an Admin to attempt to modify Play data.<br>• Navigate to Seat Editing page as an Admin to attempt to modify Seat data (i.e., Seat Cost).<br>• Query database to QC the modified data<br>• Add Items to Shopping Cart and run through Check-Out process.<br>• Ensure Sales Report query returns and display correct information. |
| Completion Criteria: | All interfaces display and accurately transfer data between Views correctly. Account modification interfaces accurately update database. Admin sales report shows correct earnings and sales information. |

#### 4.2.3 User Interface Testing

| Test Objective: | Ensure the website is easily navigable and webforms are easily followed and properly filled out through form validations. |
|---|---|
| Technique: | • Structure forms in a vertical manner to guide and demonstrate to the users the correct flow of data entry.<br>• Create validations on forms to ensure all required data are captured.<br>• Create tool tips as necessary for users to interact while filling out forms<br>• Seek to reduce the amount of clutter in Shopping Cart to effectively display what the user is paying for and for how |

| | |
|---|---|
| | much. |
| | • Provide easy Play and Seat data modification for Admins, by only displaying the information that needs to be updated. (i.e., reduce the amount of extra cosmetic flair). |
| | • Admin changes will also include validations on the forms to ensure all pertinent data is captured. |
| Completion Criteria: | All webpages will be structured to allow all required data points to be easily entered. |

### 4.2.4    Security and Access Control Testing

| | |
|---|---|
| Test Objective: | Verify Role based access dynamically displays the correct screen for Customer and Admin roles. |
| Technique: | • Create dummy Customer and Admin accounts to see the different webpage displays. |
| | • Ensure the Admin(s) are the only users with the highest authority. |
| | • Review and Verify the login pages route the accounts to the correct screen for appropriate account modification. |
| Completion Criteria: | Each User Role type only displays information that is pertinent to them. Admin accounts have the highest authority. |

## 4.3 Suspension Criteria and Resumption Requirements

This section will specify the criteria that will be used to suspend all or a portion of the testing activities on the items associated with this test plan.

### 4.3.1    Suspension Criteria

Testing will be suspended if the incidents found will not allow further testing of the system/application under-test. This will include if neither the User nor Admin are able to modify their respective accounts or are unable to successfully login. Alson included in this test is to verify the website if functional for ticket purchase. If testing is halted, and changes are made to the hardware, software, or database, it is up to the Testing Manager to determine whether the test plan will be re-executed, or part of the plan will be re-executed.

### 4.3.2    Resumption Requirements

Resumption of testing will be possible when the functionality that caused the suspension of testing has been retested successfully. Changes made to the software will be documented and updated in the GitHub repository.

## 4.4 Test Data

Test data requirements are drawn up based on the functional requirements that are due for testing. The testing team will identify test cases that can be grouped into test scenarios and detail the data required to complete the testing activities.

# 5.    Defect Reporting

## 5.1 Defect Tracking

Jira will be used for defect/Issue tracking.

### 5.2 Defect Reporting and Reports

Defects will be reported until 05/11/2022 daily. Defect reports will be generated by Theater Admins and software developers. Testing will be running in tandem during the development stage which will be reviewed and analyzed during our weekly defects design meeting. The reports will be discussed in weekly Wednesday team meetings for review and correction.

### 5.3 Defect Management Process

- Duplicate the defect.
- Determine the severity of the defect.
- Assign resources to evaluate the time required to repair the defect.
- Determine if there are any work arounds if immediate repair is not practical.
- Document and test the work around procedure if work around is needed.
- Issue work around to users.
- Test the fix to the defect.
- Issue repaired and software is redistributed to the stakeholders for final UAT.

### 5.4 Defect Severity Definitions

| Critical | The defect causes a catastrophic or severe error that results in major problems and basic website functionality is unavailable to the user. Examples of a critical defect are as follows:<br>• Website unavailable, Cloud provider processes are functioning normally<br>• Data displayed on the front end is incomplete or incorrect.<br>• Data cannot Post to the database.<br>• Data is incorrectly posted to the database, causing Sales report discrepancies.<br>• Form validations are not working, allowing Checkout processes to be completed without all required Payment information. |
|---|---|
| Medium | The defect does not seriously impair system function can be categorized as a medium Defect. A manual procedure requiring medium effort can be implemented to remedy the defect. Examples of a medium defect are as follows:<br>• Form navigation is incorrect<br>• Form validation is non-existent<br>• Field labels are not consistent, leading to misinterpretation by the customer. |
| Low | The defect is cosmetic or has little to no impact on system functionality. A manual procedure requiring low effort can be implemented to remedy the defect. Examples of a low defect are as follows:<br>• Cosmetic changes to webpage forms<br>• Text font on reports is incorrect<br>• Grammatical errors present on the website |

## 6. Environment

### 6.1 Environment

- Visual Studio 2022 Windows 10

## 7. Test Schedule

System testing is scheduled for a period of 4 weeks starting 04/12/2022 to 05/11/2022. The test team will complete the execution of all the tests during the first 2 weeks. The defects retesting and regression testing will occur in the last week of System Testing. The run dates for defect retesting period may be changed according to the need to retest and close the defects. The defects retesting will reduce the number of open defects that need to be carried to UAT.

## 8.    Assumptions

- Windows 10 is up to date with the current build.
- The cloud hosting provider will communicate with the Theater owner of any patching or intended server outages.