Project Name: Cinema Ticket System

Test Report Date: 10/05/2023

# Introduction

The purpose of this test report is to provide an overview of the testing activities conducted for the Cinema Ticket System. The testing phase aimed to ensure that the system functions as intended, meets the specified requirements, and delivers a high-quality user experience. This report summarizes the test approach, test coverage, test results, and any identified issues during the testing process.

# Test Environment

* Test Management Tool: None
* Test Execution Environment: laptop ThinkPad X1
* Test Data:

1. Sample movies and showtimes for testing movie browsing and booking functionality.
2. User accounts with various roles (e.g., admin, customer) for testing user registration, authentication, and account management.
3. Test scenarios and data sets to cover different use cases and validate system behavior.

# Test Approach

The testing approach for the Cinema Ticket System involved a combination of manual and automated testing techniques. The key testing activities performed are as follows:

* Functional Testing: This included testing individual features and functionalities of the system to ensure they worked as expected. It covered scenarios such as movie browsing, seat selection, ticket booking, user registration, and account management.
* Integration Testing: This focused on testing the integration of different system components, such as payment gateway integration, email notifications, and database interactions.
* Performance Testing: Performance testing was conducted to assess the system's responsiveness and stability under various load conditions, simulating concurrent user interactions and ticket booking scenarios.
* Security Testing: Security testing aimed to identify any vulnerabilities or weaknesses in the system, ensuring the protection of user data and preventing unauthorized access.
* User Acceptance Testing (UAT): UAT involves collaborating with end-users to validate the system's functionality, usability, and overall user experience. Feedback and suggestions from users were incorporated into the system during this phase.

# Test Coverage

The testing activities covered various aspects of the Cinema Ticket System, including:

* User registration and authentication
* Movie browsing and search functionality
* Seat selection and booking process
* Ticket confirmation and delivery mechanisms
* User account management features
* Notification and reminder system
* Performance and scalability of the system
* Security measures and data protection
* Integration with third-party systems (payment gateway, email service)
* Usability and user experience

# Test Results

The testing efforts resulted in the following outcomes:

* Functional Testing: The system successfully passed all functional test cases, demonstrating the expected behavior and meeting the specified requirements.
* Integration Testing: The integration testing phase identified and resolved a few minor issues related to third-party integrations, ensuring smooth communication and data exchange between different system components.
* Performance Testing: The system demonstrated satisfactory performance under various load conditions, with acceptable response times and resource utilization.
* Security Testing: No major security vulnerabilities were detected, and appropriate security measures were implemented to protect user data and ensure system integrity.
* User Acceptance Testing (UAT): UAT feedback from end-users was positive, with users expressing satisfaction with the system's functionality, usability, and overall performance.

# Identified Issues

During the testing process, the following issues were identified and addressed:

**Issue: Slow performance during peak booking hours**

* Description: The system experienced slowdowns and increased response times when a high number of users attempted to book tickets simultaneously during peak hours.
* Impact: Users may experience frustration and delays during the booking process, potentially leading to a poor user experience and decreased customer satisfaction.
* Resolution: The system's infrastructure was optimized to handle increased traffic and booking requests during peak hours. Load testing and performance tuning were conducted to improve response times and ensure smooth performance under high load conditions.

**Issue: Incorrect seat availability display**

* Description: In some instances, the system displayed incorrect seat availability information, leading to situations where users attempted to book already occupied seats.
* Impact: Users may encounter confusion and frustration when they encounter incorrect seat availability information, resulting in failed or conflicting bookings.
* Resolution: The seat availability algorithm was revised and validated to ensure accurate and real-time seat status display. Additional validation checks were implemented to prevent conflicts when multiple users attempt to book the same seat simultaneously.

**Issue: Inconsistent email notifications**

* Description: Users reported receiving intermittent or delayed email notifications for ticket confirmations and booking updates.
* Impact: Users may miss important notifications or experience uncertainty about their booking status, leading to potential confusion and dissatisfaction.
* Resolution: The email notification system was thoroughly tested and optimized to ensure timely and reliable delivery of email notifications. The system now utilizes a reliable email service provider and implements appropriate error handling and retry mechanisms.

**Issue: Payment gateway integration errors**

* Description: Some users encountered errors during the payment process, including failed transactions or incorrect payment amounts being charged.
* Impact: Failed payment transactions can lead to abandoned bookings and frustration for users, potentially resulting in lost revenue and customer dissatisfaction.
* Resolution: The payment gateway integration was thoroughly reviewed and updated to resolve issues related to failed transactions and incorrect payment amounts. Extensive testing and collaboration with the payment gateway provider were conducted to ensure seamless and secure payment processing.

**Issue: Cross-browser compatibility issues**

* Description: The system exhibited inconsistencies and display issues across different web browsers, particularly with older versions and less common browsers.
* Impact: Users may have varying experiences and encounter visual discrepancies depending on the browser they use, leading to a lack of consistency and potential usability issues.
* Resolution: Cross-browser testing was conducted to identify and address compatibility issues. CSS and layout adjustments were implemented to ensure consistent rendering across major web browsers and versions.

# Conclusion

The testing activities conducted for the Cinema Ticket System confirmed its functionality, performance, and usability. The system successfully passed all identified test cases, met the specified requirements, and delivered a satisfactory user experience. The identified issues were promptly addressed and resolved, ensuring the system's reliability and stability.