**Test Plan for** **Conference Room Booking Application system.**  
**Version**: 1.0  
**Date**: 20.10.2024  
**Prepared By**: Nurul Islam  
**Approved By**: Muntasir Abdullah Mizan.

**1. Introduction**

**1.1 Purpose**

The purpose of this Test Plan is to outline the testing strategy for the Conference Room Booking Application system. This document details the scope, objectives, resources, schedule, and testing methods to ensure that the system meets its requirements and functions as expected.

**1.2 Scope**

This Test Plan covers functional, non-functional, and regression testing of the Conference Room Booking Application System. It includes testing of all user roles (Admin, User) and functionalities (Room Booking, Rate Calculation (Hourly, Daily & Weekly Rate), Overtime Charges, Cancellation Policy, and Billing Information).

**1.3 Definitions, Acronyms, and Abbreviations**

**Hourly Rate**: Cost per hour for booking a conference room

**Daily Rate**: Cost for booking a conference room exceeding 8 hours in a day

**Weekly Rate**: Cost for booking a conference room exceeding 3 days in duration

**2. Test Objectives**

* Verify that the system meets functional requirements for booking, rates, and overtime.
* Ensure the accuracy of rate calculations and cancellation fees
* Ensure that the system performs well under various conditions.
* Validate the real-time accuracy of room availability and booking data.
* Confirm that performance, security, and compliance requirements are met.
* Confirm that the system can handle expected user loads.
* Identify and resolve defects before deployment.

**3. Test Scope**

**3.1 In-Scope**

* User authentication (registration, login)
* Functional testing: Room booking, rate calculations, overtime, and cancellation policies.
* Data validation: Room availability, booking date/time, and billing information.
* External interface testing: hardware and software compatibility
* Payment integration
* Review and rating system
* User interfaces (web and mobile)
* Performance and load testing
* Security testing

**3.2 Out-of-Scope**

* Third-party services outside the direct control of the system (e.g., payment gateway failures).
* Non-functional requirements beyond those specified.

**4. Test Approach**

**4.1 Testing Levels**

* **Unit Testing**: Conducted by developers to verify individual components.
* **Integration Testing**: Ensures that different modules work together.
* **System Testing**: Validates the complete system against the requirements.
* **User Acceptance Testing (UAT)**: Performed by end users to ensure the system meets their needs.
* **Performance Testing**: Ensure the application meets performance requirements like response time and uptime.
* **Security Testing**: Verify that sensitive information is secure and the system complies with data protection regulations.

**4.2 Types of Testing**

* **Functional Testing**: Validate all functional requirements.
* **Non-Functional Testing**: Includes performance, security, usability, and compatibility testing.
* **Regression Testing**: Verify that new changes do not adversely affect existing functionalities.

**4.3 Test Items**

The following modules will be tested:

* **Room Booking Module**: Includes room selection, date/time selection, and booking confirmation.
* **Rate Calculation Module**: Handles hourly, daily, and weekly rate calculations.
* **Overtime Charge Module**: Applies overtime charges at 1.5x the regular hourly rate when bookings exceed the confirmed duration.
* **Cancellation Policy Module**: Implements cancellation policies, including applying 50% cancellation fees for cancellations made within 24 hours of the booking start time.
* **User and Admin Interfaces**: Verify the functionality and usability of both interfaces.
* **Data Validation**: Ensure real-time availability updates, booking date validation, and secure billing processing.

**5. Test Resources**

**5.1 Team Roles**

* **Test Manager**: Muntasir Abdullah Mizan.
* **Tester**: Nurul Islam

**5.2 Tools**

* **Test Management Tool**: [e.g., JIRA, TestRail]
* **Automation Tools**: [e.g., Selenium, Postman]
* **Performance Testing Tools**: [e.g., JMeter, LoadRunner]
* **Security Testing Tools**: [e.g., OWASP ZAP, Burp Suite]

**6. Test Schedule**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl** | **Activity** | **Objective** | **Start Date** | **End Date** | **Time Frame** | **Remarks** |
| **1.** | **Preparation Phase** | Test Planning, Test Case Development. | **------------** | **------------** | 1-6 days |  |
| **2.** | **Functional Testing** | Room Booking, Rate Calculation, Overtime Charges, Cancellation Policy | **---------------** | **------------** | 7-12 days |  |
| **3.** | **Data Validation Testing** | Room Availability, Booking Date and Time, Billing Information | **--------------** | **------------** | 13-15 |  |
| **4.** | **Non-Functional Testing** | Performance Testing, Security Testing, Compliance Testing | **---------------** | **----------** | 16-17 |  |
| **5.** | **Review & Reporting** | Test Report Compilation, Bug Fixing and Re-testing, | **---------------** | **------------** | 18-20 |  |
| **6.** | **Sign-off & Deployment Preparation** | Final Review | **---------------** | **-----------** | 21-23 |  |

**7. Test Cases**

**7.1 Functional Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **Test Case Description** | **Preconditions** | **Steps** | **Expected Outcome** |
| TC\_001 | Room booking for a small room | User is logged in, room is available | 1. Select small room 2. Choose date/time 3. Confirm booking | Booking is successful, room is marked as unavailable |
| TC\_002 | Hourly rate calculation for medium room | User selects medium room for 4 hours | 1. Book medium room for 4 hours 2. Confirm rate | Rate = $150 \* 4 = $600 |
| TC\_003 | Apply daily rate for large room | User books large room for 10 hours | 1. Book large room for 10 hours 2. Confirm rate | Daily rate of $1600 is applied |
| TC\_004 | Apply weekly rate for executive room | User books executive room for 4 days | 1. Book executive room for 4 days 2. Confirm rate | Weekly rate of $16800 is applied |
| TC\_005 | Overtime charge for small room | User extends booking beyond confirmed duration | 1. Book small room for 5 hours 2. Exceed by 1 hour | Overtime charge = $100 \* 1.5 = $150 |
| TC\_006 | Cancellation policy for booking | User cancels booking 12 hours before start time | 1. Book a room 2. Cancel within 12 hours | 50% cancellation fee is applied |

**7.2 Non-Functional Test Cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **Test Case Description** | **Preconditions** | **Steps** | **Expected Outcome** |
| TC\_007 | Performance for booking confirmation | User initiates a booking | 1. Complete booking steps 2. Confirm booking | Booking confirmation is displayed in under 5 seconds |
| TC\_008 | Security of billing information | User enters payment details | 1. Submit payment 2. Verify data transmission | Payment details are encrypted and secure |

**7. Test Deliverables**

* Test Plan Document
* Test Cases Document
* Test Scripts (for automation)
* Test Execution Reports
* Defect Reports
* UAT Feedback and Summary
* Test Closure Report

**8. Roles and Responsibilities**

* **Test Manager**: Oversee the testing process, manage resources, and communicate with stakeholders.
* **Test Engineers**: Develop test cases, execute tests, and report defects.
* **Developers**: Assist in defect resolution and provide technical support during testing.
* **UAT Participants**: End-users who will validate the system’s functionality and usability.

**9. Test Environment**

* **Hardware**:
* Servers: Cloud-based hosting with at least 8GB RAM, 4 vCPUs.
* Client machines: Desktop and mobile devices with various operating systems (Windows, macOS, iOS, Android).
* **Software**:
* Web browsers: Chrome, Firefox, Safari, Edge.
* Mobile devices: Latest versions of Android and iOS.
* **Network**: [Specify network configurations, if any]

**10. Risk Management**

* **Risk**: Delay in test case development due to incomplete requirements.
  + **Mitigation**: Engage business analysts for clarity on requirements early.
* **Risk**: Limited availability of test resources.
  + **Mitigation**: Cross-train team members on critical tasks.

**11. Approval**

|  |  |  |  |
| --- | --- | --- | --- |
| **Role** | **Name** | **Signature** | **Date** |
| Test Manager | [Name] | [Signature] | [Date] |
| Project Manager | [Name] | [Signature] | [Date] |
| QA Lead | [Name] | [Signature] | [Date] |

Ready to deployed the project in Jira

URL <https://milonmozumder71.atlassian.net/jira/software/projects/CRBA/boards/4/timeline>