**Test Plan of L-Key (Licensing Simplified) E-Commerce Website**

1. **Test Plan Identifier**

**TP\_LKEY\_2024\_01** This identifier uniquely distinguishes the test plan for the LKEY (Licensing Simplified) E-Commerce Website, with "01" signifying that this is the first version created for 2025.

1. **Introduction**
   1. **Objective:**

This document defines the scope, approach, resources, and schedule of testing activities for the LKEY E-Commerce Website. It outlines the testing objectives, features to be tested, roles, and responsibilities to ensure the website meets its functional and non-functional requirements.

* Verify that all features and functionalities of the website align with the specified requirements.
* Identify and fix defects in the website during the development lifecycle.
* Ensure the website provides a seamless experience for end users, including licensing-related operations.
  1. **Scope:**

The test plan focuses on functional, usability, performance, security, and compatibility testing of the LKEY E-Commerce Website.

* 1. **Goals:**
* **Ensure Functionality:** Validate that all key features, including user registration, license booking, product browsing, and payment processes, operate flawlessly to meet business requirements.
* **Enhance User Experience:** Ensure the website delivers an intuitive and user-friendly interface with smooth navigation and responsive design, providing a seamless experience across all devices.
* **Test Performance:** Guarantee that the system remains stable and efficient under heavy traffic conditions, such as accommodating up to 1,000 concurrent users without compromising performance.
* **Strengthen Security:** Safeguard user data by identifying and resolving potential vulnerabilities, such as SQL injection risks, ensuring a secure environment for all transactions and interactions.
* **Verify Integrations:** Confirm the seamless operation of external integrations, including payment gateways, license validation APIs, and notification systems, to ensure a cohesive and reliable user experience.

1. **Test Items**

* User Registration and Login Module
* License Search and Booking
* Product Browsing and Filtering
* Shopping Cart and Checkout Process
* Payment Gateway Integration
* License Management System
* Notifications and Alerts
* Admin Dashboard and Configurations

1. **Features to Be Tested**
   1. User Registration & Login

* Verify that user reregistration and login option is working properly using valid information.
* Verify Remember me and Forgot Your password option are work properly
* Testing the register page input filed like Firstname, Lastname, Email, Mobile and password.
  1. Products Search
* Verify the search option give different types of products.
  1. Product Buy
* Testing the Mycart feature.
* Testing the feature add to cart or Buy option.
  1. Online Payment System
* Testing the all online payment gateway.
  1. Customer Support
* Testing Customer support Message and call center.

1. Features Not To Be Tested

* **Third-party Payment Methods:** Payment methods like EMI or wallet payments that are not yet integrated or planned for future releases.

1. **Approach**

6.1 Testing Methodology**:**

* Manual Testing:
* Perform exploratory testing for workflows such as license booking and payment.

Example: Test checkout manually to ensure errors like invalid card details are handled gracefully.

* Automated Testing
* Automate regression test cases for frequently used features like login, search, and payment.

Example: Use Selenium to validate the login page across browsers.

* Performance Testing
* Use JMeter to simulate 1,000 concurrent users performing tasks like license purchases.

Example: Stress test the platform during peak times (e.g., promotional events).

* Security Testing:
* Conduct penetration tests using OWASP ZAP and Burp Suite.

1. **Pass/Fail Criteria**

* Pass Criteria
* All core features operate as expected without errors.
* No unresolved critical bugs remain in the system.
* The platform handles 1,000 concurrent users with acceptable response times.
* Fail Criteria
* Critical functionality (e.g., payment processing) fails or is inaccessible.
* Security vulnerabilities (e.g., unauthorized access) are detected.
* Performance metrics fall below acceptable levels (Response time > 5 seconds).

1. **Suspension Criteria**

Testing will be suspended if:

* **Critical Defects:** Any defect that blocks core functionalities, such as user registration, license booking, or payment processing, making further testing ineffective or impossible.
* **Environment Unavailability:** The test environment becomes unstable or inaccessible, preventing the execution of test cases.
* **Unresolved Dependencies:** Integration with external systems, such as payment gateways or notification services, fails and cannot be resolved within the testing schedule.
* **Resource Constraints:** A significant reduction in testing resources (personnel or tools) that impacts the ability to continue testing effectively.

1. Deliverables

* **Test Plan:** This document, which defines the strategy and scope of testing.
* **Test Cases:** Detailed test scenarios and steps for validating the functionality of LKEY.
* **Test Logs:** Logs of executed tests, including pass/fail results.
* **Bug Reports:** A detailed report of defects, their severity, and their impact on the system.
* **Test Summary Report:** A comprehensive report summarizing the testing outcomes, defect statistics, and coverage.
* **User Guide Documentation:** Help files or guides to assist users with navigating the platform.
* **Release Notes:** Information about new features, fixes, and changes included in the release.

1. Testing Task

* **Test Case Development:** Write detailed test scenarios for registration, login, search, booking, and payment modules.
* **Test Execution:** Perform functional, performance, and security testing, documenting results.
* **Defect Reporting:** Log bugs with clear steps to reproduce, severity, and screenshots where applicable.
* **Regression Testing:** Ensure that fixes do not affect previously working features.
* **Test Closure Activities:** Prepare the final test summary report and ensure all test deliverables are completed.

1. Environmental Needs

* **Devices**
  + Desktop: Windows 10/11, macOS.
  + Mobile: Android 12+, iOS 15+ (smartphones and tablets).
* **Browsers:**
  + Chrome, Firefox, Safari, Edge (latest versions).
* **Testing Tools:**
  + Selenium: For browser automation.
  + JMeter: For load and stress testing.
  + OWASP ZAP: For security scanning.

1. Responsibilities

* **QA Team:**
* Test case development and execution.
* Manual and automated test execution.
* Bug reporting and verification of fixes.
* **Development Team:**
* Fix defects reported by the QA team.
* Ensure features are implemented according to the requirements.

1. Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Start Date | End Date | Duration |
| Test Plan Creation | Jan 01, 2025 | Jan 03, 2025 | 3 Days |
| Test Case Development | Jan 04, 2025 | Jan 09, 2025 | 5 Days |
| Test Execution | Jan 10, 2025 | Jan 22, 2025 | 12 Days |
| Bug Reporting & Fixing | Jan 22, 2025 | Jan 24, 2025 | 2 Days |
| Final Report Submission | Jan 25, 2025 | Jan 26, 2025 | * 1. Days |

1. **Risks & Mitigation**
   1. **Risk:** Limited testing time due to project deadlines.
   2. **Mitigation:** Prioritize critical features and allocate more resources to testing during peak times.
   3. **Risk:** Payment gateway integration fails or is delayed.
   4. **Mitigation:** Use a mock payment gateway for initial testing and delay full payment testing until integration is stable.
2. **Approval**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Signature | Date |
| Nurullah Sany | QA Engineer | Nurullah | 02.01.2024 |