**Test Plan for OpenCart Application**

1. **Introduction**:

This test plan is designed to outline the testing strategy for the OpenCart application. OpenCart is an open-source, PHP-based online shopping cart system that allows users to easily set up an online store. The objective is to ensure the functionality, usability, performance, and security of the application by executing manual test cases.

**2. Scope:**

The scope of this testing includes functional, regression, integration, security, and performance testing of the following modules:

* User Registration & Login
* Product Catalog & Search
* Shopping Cart & Checkout
* Admin Panel
* Payment Gateway Integration
* Order Management
* Mobile Responsiveness
* Security Testing

**3. Objectives:**

* To validate the functionality of OpenCart modules.
* To ensure that the application is user-friendly.
* To ensure payment gateways work seamlessly.
* To verify the responsiveness of the site on different devices.
* To identify any performance or security issues.
* To ensure the application meets the client requirements and standards.

**4. Testing Approach**:

Manual testing will be performed on the OpenCart application. The following types of tests will be conducted:

* Functional Testing: Ensure that all features and functions (like login, registration, product listing, checkout, etc.) work as expected.
* Regression Testing: Ensure that new changes do not affect existing functionality.
* Integration Testing: Test the integration of third-party services like payment gateways and shipping.
* Security Testing: Test for vulnerabilities such as SQL injection, cross-site scripting (XSS), session management, etc.
* Performance Testing: Check the application’s performance under load (for example, checkout process under multiple concurrent users).
* Usability Testing: Ensure the user interface (UI) is easy to use and user-friendly.

**5. Test Items:**

* OpenCart Application (Web platform)
* User Registration Module
* Product Catalog Module
* Shopping Cart and Checkout System
* Payment Gateway Integration
* Admin Panel
* Order Management System
* Mobile/Responsive Site

**6. Features to be Tested:**

* User Registration: Test user sign-up, email confirmation, password recovery.
* Login/Logout: Verify the login process, session expiration, and logout.
* Product Search & Categories: Test search functionality, product categories, filters, and sorting.
* Shopping Cart: Verify adding/removing products to/from the cart, updating product quantities, and price calculation.
* Checkout Process: Test shipping options, payment gateway integration, taxes, and order confirmation.
* Payment Gateway: Test integration with PayPal, Stripe, and other payment methods.
* Order Management: Test the functionality of managing orders from the Admin panel.
* Admin Panel: Verify product management, user management, and reporting features.
* Security Features: Verify session security, password hashing, and user roles.
* Mobile Responsiveness: Test the design and usability across various mobile devices.
* Performance: Test page load time and response time during heavy traffic.

**7. Features Not to be Tested:**

* Any feature related to custom modules (unless they are part of the core OpenCart functionality).
* Features that are specific to third-party integrations that are not part of the OpenCart default installation.

**8. Test Deliverables:**

* Test Plan Document
* Test Case Document
* Test Execution Results
* Defect Reports (for bugs identified during testing)
* Test Summary Report (including test coverage and overall status)

**10. Testing Schedule:**

| Test Phase | 10-07-2024 | 15-07-2024 |
| --- | --- | --- |
| Test Planning | 15-07-2024 | 20-07-2024 |
| Test Case Creation | 20-07-2024 | 10-08-2024 |
| Test Case Execution | 10-09-2024 | 10-09-2024 |
| Defect Reporting and Fixes | 10-10-2024 | 10-10-2024 |
| Test Summary and Sign-off | 10-11-2024 | 10-11-2024 |

**11. Resource Requirements:**

* Testers: Manual testers with experience in web applications.
* Test Environment: OpenCart installation, staging server, access to the Admin Panel, and necessary credentials for testing.
* Tools:
  + Bug Tracking Tool (e.g. Excel)

**12. Risk and Mitigation:**

* Risk: Changes in application code during the testing phase.
  + Mitigation: Frequent communication with developers and testers, regular test cycles.
* Risk: Unavailability of third-party services (e.g., payment gateways).
  + Mitigation: Use of mock services or sandbox environments for payment gateway testing.

**13. Entry and Exit Criteria:**

Entry Criteria:

* The test environment must be set up with the latest build of the OpenCart application.
* Test cases must be created and reviewed.

Exit Criteria:

* All test cases must be executed.
* All critical and major defects must be resolved or deferred.
* The final test summary report must be completed.

**14. Test Case Design:**

Test cases will be written based on the features listed in the scope of the project. Each test case will include:

* Test Case ID
* Test Case Description
* Test Steps
* Expected Results
* Actual Results
* Status (Pass/Fail)

**15. Test Execution:**

Tests will be executed manually by testers, and defects will be logged into the defect tracking tool. Once defects are resolved, retesting will be performed.

**16. Approval:**

* QA Manager:
* Client/Stakeholder: