

Test plan document
Name of project: Opencart E-commerce site
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1. Introduction

Purpose:

This document highlights the strategy to validate the core functionalities of the e-commerce platform(opencart.com), ensuring a seamless user experience for critical workflows such as browsing products, cart management, checkout mechanisms & payment flow. Note: The test environment does not support payment processing; testing focuses on workflows up to order confirmation.

2. Objective

Functional testing: validate UI/UX workflows up to order confirmation (excludes payment processing)

3. Scope:

The test scope of this site will include:

In-scope:

Feature	Testing type	Description
User Registration	Manual	To Test form validation
Cart management	Manual	To add/remove products via UI
Search functionality	Manual	To Validate product search and filters
Validate order confirmation flow without payment processing.	Manual	To Validate end-to-end guest check-out flow(no real transaction)

Out of scope:

Payment gateway integration (not supported by the environment).

Automation testing

Mobile responsiveness

API integration

Performance testing

Search engine optimization configurations

Wishlist features

4. Test approach:

Methodology: Agile (3 sprints)

- Sprint 1: planning and setup. | 17 Feb - 18 Feb(2 days)
- Sprint 2:Manual testing. | 19 Feb - 27 Feb (9 days)
- Sprint 3:reporting and closure. | 9 March - 10 March (2 days)
- **Testing Types:**

Manual Testing:

Execute critical paths: Guest checkout.

Edge cases: Special characters in registration fields and cart limits (Test order confirmation with 999 items in cart)

API Testing(Not included)

Validate CRUD operations for carts and orders.

Test authentication and error handling (e.g., invalid API keys).

Performance Testing(not included)

Simulate 50 users adding items to the cart concurrently using JMeter.

Measure metrics: Response time, TPS (Transactions Per Second), and error rate.

The website's overall testing will be done manually using black box testing. Various approaches will be used in use-case scenarios to determine login /register page credentials. The product/checkout flow will also be explored.

5. Test requirements:

1. Functional Requirements

1. User Registration & Login
 - Users should be able to register with email and password.
 - Registered users should log in successfully and be redirected to the dashboard.
 - Password reset functionality should work correctly.
2. Product Search & Filtering
 - Users should be able to search for products using keywords.
 - Search results should be accurate and relevant.
 - Filtering and sorting options should function as expected.
3. Guest Checkout & Order Processing
 - Guests should be able to add products to the cart and complete checkout without creating an account.
4. Shopping Cart & Wishlist
 - Users should be able to add, remove, and update item quantities in the cart.
5. Order Management & Tracking
 - Users should be able to view order history and status.
 - Admin should be able to process, ship, and cancel orders.

2. Non-Functional Requirements

1. Performance
 - Search results should be displayed in under 2 seconds.
 - Performance: Order confirmation page load time < 3 seconds under 50 users
2. Usability & Accessibility
 - The website should be responsive across mobile, tablet, and desktop.
 - All buttons, forms, and navigation should be easily accessible.
3. Compatibility

- The website must work on Chrome, Firefox, Edge, and Safari (latest versions).
 - Cross-device compatibility must be ensured (Windows, macOS, Android, iOS).
4. Payment Gateway Integration
- Payments should be processed securely.
 - Invalid transactions should be handled with proper error messages.

6. Test environment:

Software:

Platform: OpenCart

Testing Tools:

- Azure(bug tracking).
- Browser: Chrome, firefox, edge

Hardware:

OS: Windows 10/macOS.

RAM: 4GB.

7 . Inclusions & Exclusions:

Inclusions	Exclusions
login/logout	Security Testing (Penetration, XSS)
Product information	Third-party plugin integration
check out	Mobile app testing
Cart Management (UI)	Payment Transaction Processing
filter	
Order confirmation flow	
Account management	

8. Deliverables

- Test cases(excel)
- Includes edge cases (e.g., 999 items in cart).
- Bug reports, Prioritized by severity (P1-P4) .
- Test Summary Report.

9. Exit Criteria(not performed)

Testing concludes when:

1. All critical bugs (Severity 1-2) are resolved.
2. Test coverage for in-scope features reaches $\geq 90\%$.
3. Checkout time < 5s" → "Order confirmation time < 5s under 50 concurrent users.

10. conclusion

This test plan outlines the testing scope, objectives, and requirements for the OpenCart eCommerce website to ensure its functionality, usability, and performance meet the expected standards. Upon successful completion of testing, the website should be stable and fully functional. Any critical defects discovered will be addressed before the final release to maintain quality and user satisfaction. Due to environmental limitations, payment gateway integration was excluded from testing. Instead, the focus was placed on validating order confirmation logic.