

**Test plan document**  
**Name of project: OpenCart E-commerce site**  
**Version:1.0**  
**Author: Ronish Shrestha**  
**Date:2025/02/17**

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## **1. Introduction**

Purpose:

This document defines the strategy to validate core user journeys of OpenCart v4.0, specifically:

- Guest checkout flow (without payment processing)
- Cart management stability under edge cases
- Search performance benchmarks

*Excluded: Payment processing due to test environment limitations"*

## **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	Risk level
User Registration	Manual	To Test form validation	CRITICAL
Cart management	Manual	To add/remove products via UI	HIGH
Search functionality	Manual	To Validate product search and filters	MEDIOCRE
Validate order confirmation flow without payment processing.	Manual	To Validate end-to-end guest check-out flow(no real transaction)	HIGH

#### 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	Dates	Key activities	Deliverables
Sprint 1 (2 days)	02/17-19	Planning and setups(Test data prep environment config (Windows 11/macOS)	
Sprint 2 (4 days)	02/20-24	Manual testing (detailed test cases were written for open cart.com)	Test cases document
Sprint 3 (2 days)	02/26	Reporting and closure	Bug report and closure document

- **Testing Types:**

##### **Manual Testing:**

Execute critical paths: Guest checkout.

Edge cases:Boundary values: Max cart limit (999 items), special chars in registration.

##### **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. Usability & Accessibility
  - The website should be responsive across mobile, tablet, and desktop.
  - All buttons, forms, and navigation should be easily accessible.
2. Payment Gateway Integration
  - Payments should be processed securely.
  - Invalid transactions should be handled with proper error messages.

## 6. Test environment:

### Software & Hardware

Components	Specs
Operating system	Windows ( 11) , macOS ventura 13.5
Browser	Chrome (v125) , Edge v124
Network	100mbps LAN , 5G
Test data	500 products (JSON dataset)

## 7 . Inclusions & Exclusions:

Inclusions	Exclusions
login/logout	Security Testing (Penetration, XSS)
Product information	Third-party plugin integration
check out	Mobile app testing (reason : <i>Device lab access unavailable until Q2</i> )
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  $\geq 90\%$ .

## **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.