

Test Plan

Project Title: OpenCart Demo & Automation Practice

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1 Introduction

PURPOSE

The purpose of this Test Plan is to define the testing strategy, approach, objectives, and responsibilities for testing two e-commerce demo applications: **Automation Practice** and **OpenCartDemo**.

The testing will include **Manual, Automation, API, and Database Testing** to ensure the functionality, stability, and reliability of both systems.

PROJECT OVERVIEW

Both projects simulate real-world e-commerce systems.

***Automation Practice** will be used mainly for **Manual and Automation Testing** (UI flow, shopping cart, checkout).

***OpenCart Demo** will be used mainly for **API and Database Testing** (user management, product data, and order validation).

The goal is to test all essential workflows like login, product management, cart operations, checkout, and backend validation.

2 Scope

IN-SCOPE

- Manual testing for UI and functional validation on both websites.
- Automation testing using Selenium.
- API testing using Postman (OpenCart endpoints).
- Database validation using MySQL for product and order data.
- Defect reporting and retesting.

OUT-OF-SCOPE

- Performance testing.
- Security and penetration testing.
- Mobile app testing.

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3 Testing Strategy

TEST OBJECTIVES

- Validate that both sites function correctly from a user and admin perspective.
- Automate the most critical workflows.
- Verify API requests and responses.
- Check that data in the backend matches UI operations.

TEST ASSUMPTIONS

- Test environments are stable and accessible.
- Dummy data can be created for users and orders.
- APIs and DB connections are available for testing.

DATA APPROACH

- *Dummy users, products, and orders will be created for test scenarios.*
- *Test data will be stored in Excel or database tables and reused for regression testing.*

LEVEL OF TESTING

List the types of testing to be performed.

Test Type	Description	Responsible Parties
Manual Testing	UI and functional testing on both sites	Yossef and Yasmin
Automation Testing	Selenium for core commerce flows	Ahmed and Yossef
API Testing	Postman tests for OpenCart API endpoints	Mai and Roaa
Database Testing	SQL validation for OpenCart DB data	Yassen and Yasmin

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UNIT TESTING

Tester's Name	Department/ Area	Role
Youssef	QA & Automation	Validate login and registration components are loading correctly
Ahmed	QA & Automation	Test add-to-cart button and product details logic
Mai	QA & API	Check page elements' response and input field validation
Roaa	QA & API	Validate mandatory fields in checkout forms
Yassin	QA & Database	Verify database connection and data saving for new users
Yasmin	QA & Manual	Test error handling and invalid input responses

FUNCTIONAL TESTING

Tester's Name	Department/ Area	Role
Youssef	QA & Manual	Test full purchase flow (browse → add to cart → checkout) on both sites
Yasmin	QA & Manual	Validate search, filters, and product detail pages
Ahmed	QA & Automation	Automate “Add to Cart” and “Checkout” flows
Mai	QA & API	Verify API requests during checkout process
Roaa	QA & API	Test product and order endpoints (GET, POST)
Yassin	QA & Database	Confirm database updates for orders and users



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USER ACCEPTANCE TESTING

Tester's Name	Department/ Area	Role
Youssef	QA & Automation	End-to-end test: register → login → buy product
Yasmin	QA & Manual	UI layout, design consistency, and usability check
Ahmed	QA & Automation	Re-run Selenium scripts for stability validation
Mai	QA & API	Test that API responses are aligned with business logic
Roaa	QA & API	Test customer order history and status update API
Yassin	QA & Database	Confirm backend data matches user actions in UI

REGRESSION TESTING

Tester's Name	Department/ Area	Role
Youssef	QA & Automation	Retest login, registration, and checkout after fixes
Ahmed	QA & Automation	Validate main flows with Selenium after updates
Mai	QA & API	Retest main endpoints (login, product, order)
Roaa	QA & API	Confirm bug fixes didn't affect other APIs
Yassin	QA & Database	Recheck updated records and relationships in DB
Yasmin	QA & Manual	Retest UI and navigation after fixes

4 Execution Strategy

ENTRY CRITERIA

Entry Criteria	Test Team	Technical Team	Notes
<i>Test environment(s) is available</i>	✓	✓	Both demo sites available
<i>Test data is available</i>	✓		Dummy data for users/products created
<i>Code has been merged successfully</i>	✓		Selenium + Postman ready



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<i>Development has completed unit testing</i>			
<i>Test scripts are completed, reviewed and approved by the Project Team</i>			

EXIT CRITERIA

- *The exit criteria are the desirable conditions that need to be met in order proceed with the implementation.*
- *Exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation.*

Exit Criteria	Test Team	Technical Team	Notes
<i>100% Test Scripts executed</i>	✓		
<i>90% pass rate of Test Scripts</i>	✓		
<i>No open Critical and High severity defects</i>	✓		
<i>All remaining defects are either cancelled or documented as Change Requests for a future release</i>			
<i>All expected and actual results are captured and documented with the test script</i>			
<i>All test metrics collected based on reports from daily and Weekly Status reports</i>			
<i>All defects logged in -Defect Tracker/Spreadsheet</i>			
<i>Test environment cleanup completed and a new back up of the environment</i>			

VALIDATION AND DEFECT MANAGEMENT

- *Defects will be logged in Excel or a defect tracker tool.*
- *Each defect will include description, steps to reproduce, screenshots, and severity.*
- *Severity levels:*
 - *Critical → Blocking functionality*
 - *High → Main feature broken*
 - *Medium → Minor impact*
 - *Low → Cosmetic/UI issue*

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Defects found during the Testing should be categorized as below:

Severity	Impact
1 (Critical)	<ul style="list-style-type: none"> ▪ <i>Functionality is blocked and no testing can proceed</i> ▪ <i>Application/program/feature is unusable in the current state</i>
2 (High)	<ul style="list-style-type: none"> ▪ <i>Functionality is not usable and there is no workaround but testing can proceed</i>
3 (Medium)	<ul style="list-style-type: none"> ▪ <i>Functionality issues but there is workaround for achieving the desired functionality</i>
4 (Low)	<ul style="list-style-type: none"> ▪ <i>Unclear error message or cosmetic error which has minimum impact on product use.</i>

5 Environment Requirements

Component	Details
Browsers	Chrome, Firefox, Edge
Tools	Selenium, Postman, MySQL
Test Data Storage	Excel / Local Database
OS	Windows 10/11
Internet	Stable connection required

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Impacted Division/College/Department

Business Area	Business Manager	Tester(s)
QA & Software Testing Department	Youssef (Team Leader)	Youssef, Mai, Yasmin, Ahmed, Yassin, Roaa
E-Commerce Projects (Automation Practice & OpenCart Demo)	Mai (Project Lead)	Youssef, Mai, Yasmin, Ahmed, Yassin, Roaa
Quality Assurance & Validation	Ahmed (Automation Lead)	Youssef, Mai, Yasmin, Ahmed, Yassin, Roaa

6 Dependencies

- Website uptime and access.
- Team availability.
- Internet connectivity.
- Test tools setup (Postman, Selenium, MySQL).