

# Test Plan for “Automation Exercise” Web Application

## Objectives

The goal is to verify the stability, functionality, and reliability of all features of the Open Cart web application. The system should provide a seamless e-commerce experience for users across browsers and devices.

Specific Objectives:

- Validate all user flows (account management, product shopping cart, and checkout).
- Confirm API endpoints function correctly and return expected responses.
- Verify UI/UX consistency, performance, and data integrity.
- Ensure compatibility, usability, and basic security standards are met.

## Approach

The testing approach combines manual, automated and API.

- Manual Testing: For exploratory, usability, and visual interface testing.
- Automated Testing: Using Selenium for regression and smoke, and cross-browser testing.
- API Testing: Using Postman to validate endpoints, status codes, request/response bodies, error handling and response time
- Database Testing on “Open Cart” website

## Scope

In Scope:

- User registration, login/logout, and account management.
- Product listing, search, and filtering.
- Add to cart, checkout, and order confirmation.
- Contact Us .
- API endpoints (GET/POST for products, user authentication, orders).
- Browser and device compatibility.

Out of Scope:

- Real payment gateway transactions.
- Backend database access (no real DB testing possible).
- Mobile app (web only).

## Test Deliverables

- Test cases (manual, automated, API and Database).
- Test scripts and execution logs.
- Defect reports (with severity and priority).
- Test execution and coverage report.
- Final test summary and recommendations.

Deliverables will be shared weekly with the development team and stored for regression testing.

### Dependencies

- Functional version of the website (<https://automationexercise.com/>)
- API documentation (for endpoint testing).
- Stable network and test data (user credentials, product samples).
- Test tools: Selenium, Postman, MYSQL.
- Database testing on website : (<https://demo.opencart.com/>)

### Test Environment

- Operating Systems: Windows 10/11.
- Browsers: Chrome (latest), Firefox, Edge, Safari.
- API Tool: Postman .
- Performance Tool: JMeter.
- Automation Framework: Selenium WebDriver with Java.
- Database (assumed demo): MySQL.

### Risk Management

Identified Risks:

- Site downtime or instability.
- API endpoints returning inconsistent data.
- Delays due to environment or tool setup.

Mitigation Strategies:

- Maintain mock API data and backup test data.
- Parallel testing across browsers to save time.
- Use automated nightly regression runs to detect new issues early.

### Schedule

Timeline :

- Test Planning: Oct 26 - Oct 28
- Manual Test Case Design (UI & API): Oct 31 - Nov 5
- Automation Test case (Functional ) : Nov 7 - Nov 10
- Database Testing : Nov 10 - Nov 13
- API Testing : Nov 15 - Nov 18
- Regression Testing : Nov 20 - Nov 22
- Reporting & Review: Nov 22

## Roles and Responsibilities

QA Lead : Mohamed Rabee -- Responsible for test planning, tracking progress, and reporting, and manage the tasks schedule  
Also responsible for (Database testing)

Test Engineers:

Malak Mohamed -- one module (Manual, Automation)

Alaa Sayed Abd Allah -- one module (Manual, Automation)

David Simon Hamdy -- one module (Manual, Automation), (API)

Ali Ahmed Osama Abd El Hafiz -- one module (Manual, Automation)

Sara Mohamed Abdullah -- one module (Manual)