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

Timleine :

- 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, Automation)