QA Engineer Skill Test:
Web Automation

Introduction

This document presents a comprehensive plan, design, and strategy for testing the Automationexercise.com website. The objective is to automate the website and mobile workflow, focusing on functionality, usability, accessibility, and performance.

User flow

1. Navigate to the website.
2. Go to the Products section.
3. Choose the third product shown in the product list and view its details.
4. Enter a random quantity generated by a function or by a library between 1 to 20.
5. Add the product to the cart.
6. Proceed to checkout.
7. Register a new user account using random data (use Faker for name, email, etc.).
8. Proceed to the cart and confirm the order.
9. Log out of the account.

Scope

The scope of testing includes:

- Testing all views (Home screen, Product details, Cart & cart summary, Account creation & sign in, Address, Payment, and Order confirmation).
- Testing all user flows as described in the user flows section.

Test Environment

The test environment will consist of:

- Testing framework: **Cypress.**
- Browser compatibility: Chrome.
- Devices: Desktop & Mobile.

Why Cypress?
I would suggest using Cypress because it provides basic support for viewport resizing and some user agent simulation, allowing testing web applications in mobile viewports easily.

Test Case

Test case ID	TC-01
Test Case Name	Verify Successful Order
Test Case Priority	High
Test Case Description	The goal of this test case is to ensure that the user is able to navigate to the website, visiting the products section to view its details, choosing a product quantity, adding it to the cart, proceeding to the checkout, registering and completing an order to finally log out.
Test Case Precondition	The user must have internet access to visit the website using a compatible browser like Chrome, valid email, password, credit card details, home or work address in order to complete the purchase.
Test Step 1	The user navigates to the website https://automationexercise.com/
Expected result	The homepage loads successfully and displays all elements without errors.
Test Step 2	The user clicks on the Product section from the top navigation bar.
Expected result	The user is redirected to the Products page, which displays a list of available products with their images, names, prices, and additional details.
Test Step 3	The user chooses the third product to view its details.
Expected result	The user is redirected to the product details page of the third product, displaying the product's name, image, price, description, availability, condition, brand, and an option to add the product to the cart.
Test Step 4	The user enters a random number from 1 to 20 in the product quantity box.
Expected result	The product quantity box accepts the entered number (between 1 and 20), and the quantity is displayed correctly without errors.
Test Step 5	The user clicks on the Add to Cart button to add the product to the

	cart.
Expected result	The product is successfully added to the cart, and a confirmation message or indicator appears confirming the addition.
Test Step 6	The user clicks on the View Cart button from the modal.
Expected result	The user is redirected to the cart page where they can see the product(s) they have added, along with their details such as quantity, price, total cost and Proceed to checkout button.
Test Step 7	The user clicks on the Proceed to checkout button.
Expected result	A modal is displayed on screen with a Login & Register button informing the user that they must log in or sign up in order to proceed to checkout.
Test Step 8	The user clicks on the Register button.
Expected result	The user is redirected to the login where a Signup form will be displayed.
Test Step 9	The user types a valid username & email in the Signup form and finally clicks on the Signup button.
Expected result	A new Sign Up form will be displayed on screen.
Test Step 10	The user fills the Enter Account Information and clicks on the Create account button.
Expected result	The user is redirected to the Account Created page.
Test Step 11	The user clicks on the Cart section from the top navigation bar.
Expected result	The user is redirected to the cart page where they can see the product(s) they have added, along with their details such as quantity, price, total cost and Proceed to checkout button.
Test Step 12	The user clicks on the Proceed to checkout button.
Expected result	The user is redirected to the Checkout Page where it displays Address Details & the Review Your Order sections.
Test Step 13	The user clicks on the Place Order button.
Expected result	The user is redirected to the Payment page.
Test Step 13	The user types Name on Card, Card Number, CVC, Expiration and finally clicks Pay and Confirm order button.
Expected result	The user is redirected to the Order Placed page.

Test Strategy

User flow testing

- Automated tests will simulate user interactions and verify the expected behavior at each step.

Test Scenario

Perform the entire user flow described in the user flows section, ensuring that each step leads to the expected outcome.

Test Execution

Automation Testing

- Automated tests will be written using Cypress to cover the majority of functional test cases.
- Tests will be run in headless mode for faster execution.

Performance Testing

- Performance testing will be conducted using Lighthouse to evaluate and optimize the website's performance metrics.

Accessibility Testing

- Accessibility testing will be conducted using Lighthouse to ensure the website meets accessibility standards and provides an inclusive user experience.

Reporting & Documentation

Detailed test reports will be generated after each test cycle, including information about test coverage, test execution results, and any issues found.

Conclusion

This test plan outlines the approach for automating and documenting AutomationExercise.com, covering user flows to ensure the website's functionality, usability, accessibility and performance.