Digital Egypt Pioneers Initiatives (DEPI) Software Testing Graduation Final Project

Round 3 - Team 202

November 2025

Project Title: Automated Front-End Testing of the Saucedemo E-Commerce Website

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Project Details:

Training Company	Skills Dynamics
Group	ALX3_SWD6_G1
Course	Software Testing
Team Number	202
Project Title	Automated Front-End Testing of the Saucedemo E-Commerce Website
Testing Website Link	https://www.saucedemo.com/
GitHub Link	https://github.com/nhahub/NHA-202
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Graduated Students	Taymourlank Mohamed Moheb Ahmed Farawilla Abdelrahman Ahmed Ali Aya tallah mostafa mohammed Mona Abdelfatah Mohamed Youstina William Shuhdy

Project Description:

This graduation project focuses on the automated testing of Saucedemo, a demo e-commerce website designed to simulate typical online shopping experiences. The primary goal is to validate the website's front-end functionality and assess its usability through scripted test scenarios. Using Selenium as the automation framework, the project will cover key user interactions such as product browsing, cart operations, and the checkout process. The testing suite will ensure that the user interface behaves consistently and reliably across various workflows, contributing to a robust and user-friendly digital experience.

Project Phases:

1. Test Planning
2. Test Environment Setup
3. Test Pages
4. Test Case Design
5. Functional Testing
6. Test Summary

1. Test Planning:

The testing scope for this project is limited to front-end functionality validation of the Saucedemo e-commerce website, using Selenium-based automation. The primary objective is to ensure that core user workflows such as product browsing, cart operations, and checkout perform reliably under valid input conditions. Deliverables include a suite of automated test scripts. Testing resources comprise a stable test environment with Chrome browser support, the Selenium WebDriver framework, and predefined valid test data reflecting typical user behavior. The test strategy emphasizes a scenario-driven approach, where only valid user interactions are scripted and executed. The test plan outlines a structured schedule for script development, execution, and result documentation, ensuring consistent coverage of key functionalities without exploring edge cases or invalid inputs.

2. Test Environment Setup

The test environment for this project is configured to support automated front-end testing of the Saucedemo e-commerce website using Selenium WebDriver. All testing activities will be executed on the Google Chrome browser, ensuring consistency and reliability across test runs. The setup includes installing the latest version of Chrome and configuring the appropriate ChromeDriver to interface with Selenium. No additional devices or browsers are required.

Valid test data such as sample products, user accounts, and mock payment details will be prepared to simulate realistic user interactions and support the execution of valid test scenarios.

3. Test Pages:

1. **Title: Login**

    Link: https://www.saucedemo.com/

2. **Title: Products**

    Link: https://www.saucedemo.com/inventory.html

3. **Title: Cart**

    Link: https://www.saucedemo.com/cart.html

4. **Title: Checkout: Your information**

    Link: https://www.saucedemo.com/checkout-step-one.html

5. **Title: Checkout: Overview**

    Link: https://www.saucedemo.com/checkout-step-two.html

4. Test Case Design:

Title	Test Case 1 – Valid Login
Steps	1. Navigate to url https://www.saucedemo.com/
	2. Insert valid User Name: "standard_user"
	3. Insert valid Password: "secret_sauce"
	4. Click the "Login" button
	5. Assert that page: Verify that "Products" page is displayed
Selenium Code	

Title	Test Case 2 - Products
Steps	1. Navigate to the Saucedemo Inventory Page Open the browser and go to https://www.saucedemo.com/inventory.html.
	2. Verify Products are Displayed Ensure that multiple products are visible on the inventory page.
	3. Select and Add Products to Cart Identify the first product (e.g., "Sauce Labs Backpack") and click the "Add to cart" button. Identify the second product (e.g., "Sauce Labs Bike Light") and click the "Add to cart" button.
	4. Verify Products in the Cart Click on the cart icon to view the cart. Ensure that both products added earlier are listed in the cart.
	5. Verify Total Number of Items in Cart Ensure that the cart shows the correct number of items (2).
Selenium Code	

Title	Test Case 3 - Cart
Steps	1. Navigate to URL: https://www.saucedemo.com/cart.html
	2. Verify Total Number of Items in Cart: Ensure that the cart shows the correct number of items (2).
	3. 2. Verify Products in the Cart: Click on the cart icon to view the cart. Ensure that both products added earlier are listed in the cart.
	4. Verify the product info (Quantity - price)
	5. Click the "Checkout" button
Selenium Code	

Title	Test Case 4 - Checkout: Your information
Steps	1. Insert first name in first name field (Abdelrahman)
	2. Insert last name in the last name field (Shalaby)
	3. Insert postal code in postal code field (03)
	4. Click "Continue" button
Selenium Code	

Title	**Test Case 5 - Checkout: Overview**
Steps	1. Navigate to Checkout: Overview https://www.saucedemo.com/checkout-step-two.html 2. Verify that 2 products named "Sauce Labs Backpack" & "Sauce Labs Bike Light" are shown 3. Verify that product 1 price is "29.99" & product 2 price is "9.99" 4. Verify that Total is equal to both prices + tax (3.20) = $43.18 5. Click the "Finish" button
Selenium Code	

5. Functional Testing

Automated functional testing will be conducted using Selenium to validate the core features of the Saucedemo e-commerce website. The test cases are designed to confirm that products are displayed accurately, prices are correct, and cart operations reflect real-time updates. The checkout process will be tested end-to-end to ensure users can complete purchases without errors, and ensure smooth and secure access. All scenarios executed will reflect valid user interactions, aligning with the project's focus on front-end reliability under typical usage conditions.

6. Test Summary

Following the execution of automated test cases for the Saucedemo e-commerce website, a final report will be compiled to document the testing process and outcomes. All five Selenium-based test cases, each representing a valid user scenario, were executed successfully, confirming the correct behavior of key front-end functionalities, including product display, cart updates, and checkout flow. The report will include an overview of test coverage, a breakdown of executed and passed cases, and a confirmation of zero critical defects. While no issues were encountered during this cycle, the report will offer recommendations for future testing enhancements, such as expanding coverage to include edge cases, performance checks, and cross-browser compatibility assessments.