

Swag Labs Testing & Automation

– Final Project Documentation

Track: Software Testing

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Swag Labs

Products

Name (A to Z)

3

1. Introduction

This project is part of the **Digital Egypt Pioneers Initiative (DEPI)**.

The main objective is to perform **Manual Testing** and **Automation Testing** on **Swag Labs** ([@ Swag Labs](#)) – an educational e-commerce demo website used for QA training.

The website includes the following flows:

- Login Page
- Inventory Page
- Product Details
- Shopping Cart
- Checkout Process

Project Goals

- Validate the core functionality of Swag Labs.
- Design and execute **Manual Test Cases**.
- Identify and log **Bug Reports**.
- Build a **Traceability Matrix (RTM)**.
- Automate critical scenarios using **Selenium WebDriver (Java)**.
- Perform API checks (if applicable).

2. Project Scope

In Scope

- ✓ Login Functionality
- ✓ Inventory & Browsing
- ✓ Add to Cart
- ✓ Checkout Flow
- ✓ Manual Test Cases & Bug Reporting
- ✓ Test Automation (Selenium)
- ✓ Documentation & Reporting

- **Out of Scope**

- ✗ Performance Testing
- ✗ Security Testing
- ✗ Load/Stress Testing
- ✗ Penetration Testing

3. Test Strategy

- **Testing Type:** Functional, UI, Negative Testing, Regression
- **Testing Approach:**
 - Manual Testing for all main flows
 - Automation Testing for stable & critical scenarios
- **Browsers:** Google Chrome 131
- **Environments:** Production Demo (saucedemo.com)
- **Tools:**
 - Test Management: Google Sheets / TestRail
 - Bug Tracking: Jira / Trello
 - Automation: Selenium WebDriver + Python
 - API: Postman
 - Database: MySQL

4. Manual Testing

4.1 Requirements

ID	Requirement Description
REQ-01	The system shall allow users to log in using valid credentials.
REQ-02	The inventory page shall display all available products.
REQ-03	Users shall be able to add items to the cart.
REQ-04	Checkout shall require valid user information.
REQ-05	Users shall be able to remove items from the cart.

4.2 User Stories

US-01 – Login

As a Standard User

I want to log in with valid credentials

So that I can access the Inventory page

Acceptance Criteria:

- Valid credentials → system redirects to /inventory.html.
- Invalid credentials → error message displayed.
- Empty username/password → error displayed.

US-02 – Inventory Browsing

As a user, I want to view all available products so that I can choose items to purchase.

US-03 – Add to Cart

As a user, I want to add items to the cart so that I can purchase them later.

US-04 – Checkout

As a user, I want to complete the checkout process successfully.

4.3 Test Cases (Sample)

TC ID	Title	Precondition	Steps	Expected Result
TC-LOGIN-01	Valid Login	User on Login Page	Enter valid username & password → Click Login	Redirect to Inventory page
TC-LOGIN-02	Invalid Login	–	Enter invalid credentials → Click Login	Error message displayed
TC-INV-01	Add Item to Cart	Logged in	Click “Add to Cart”	Cart icon increases by 1
TC-CHK-01	Complete Checkout	Item in cart	Fill form → Click Finish	“Checkout Complete” page appears

4.4 Bug Reports (Sample)

Bug ID: BUG-007

Title: Cart icon does not update when adding multiple items

Severity: Medium

Priority: High

Steps to Reproduce:

1. Log in as standard_user
2. Add 2 different products
3. Observe cart icon

Expected: Cart count should show "2"

Actual: Cart icon stuck on "1"

4.5 Traceability Matrix (RTM)

Requirement	User Story	Test Cases	Bugs
REQ-01	US-01	TC-LOGIN-01	BUG-001
REQ-03	US-03	TC-INV-01	BUG-007
REQ-04	US-04	TC-CHK-01	—

5. Automation Testing

5.1 Automation Scope

Automation covers the most critical and repetitive flows:

- ✓ Successful Login
- ✓ Add Item to Cart

Non-stable elements (ads, animations) are excluded.

5.2 Automated Scenarios

Scenario 1: Successful Login

- Navigate to login page
- Enter valid username
- Click Login
- Verify redirection to Inventory page

Scenario 2: Add Item to Cart

- Login
- Click Add to Cart on specific product
- Verify cart count updated

Scenario 3: Checkout Process

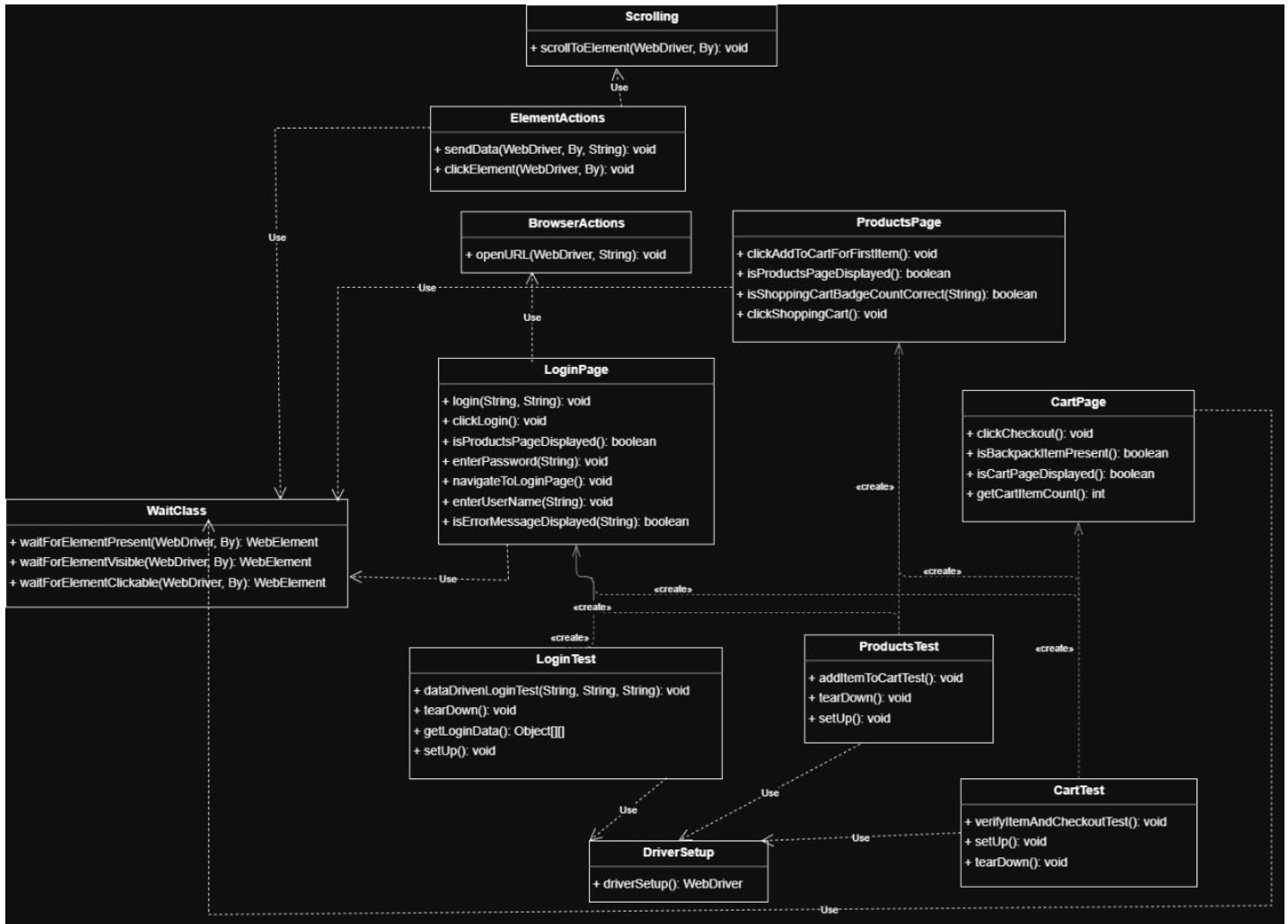
- Login
- Add product to cart
- Go to cart
- Fill checkout information
- Verify order success

5.3 Selenium Automation Framework

Framework Type:

- **POM (Page Object Model)**
- **Assertions** from Java
- **WebDriverWait** for stability

Sample Automation Code (Java + Selenium)



8. Conclusion

- Core functionality was **tested successfully**.
- Automation scripts executed key flows without failure.
- A total of **X bugs** were identified.
- Swag Labs is suitable for QA training but recommends improvements:

- ✓ Add Search functionality
- ✓ Improve Error Messages
- ✓ Improve Data Validation
- ✓ Provide real API Layer