

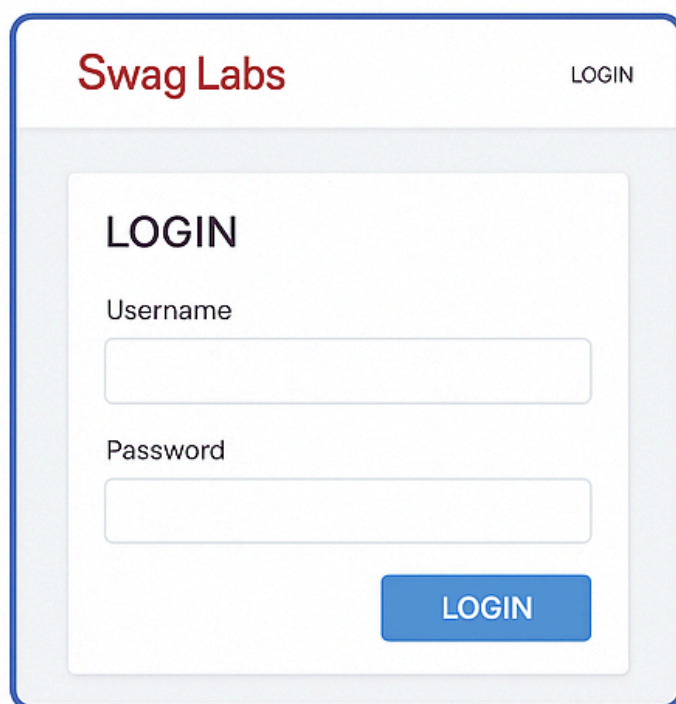
Swag Labs Testing & Automation – Final Project Documentation

Student Name:

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Date:



A mockup of a web login form for 'Swag Labs'. The form is contained within a light blue rounded rectangle with a blue border. At the top left of the rectangle is the text 'Swag Labs' in red, and at the top right is the text 'LOGIN' in black. Inside the rectangle, the word 'LOGIN' is displayed in bold black text. Below this, there are two input fields: the first is labeled 'Username' and the second is labeled 'Password'. Both labels are in a small, gray font. Each label is positioned to the left of its corresponding input field. At the bottom right of the form area, there is a blue button with the word 'LOGIN' in white capital letters.

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

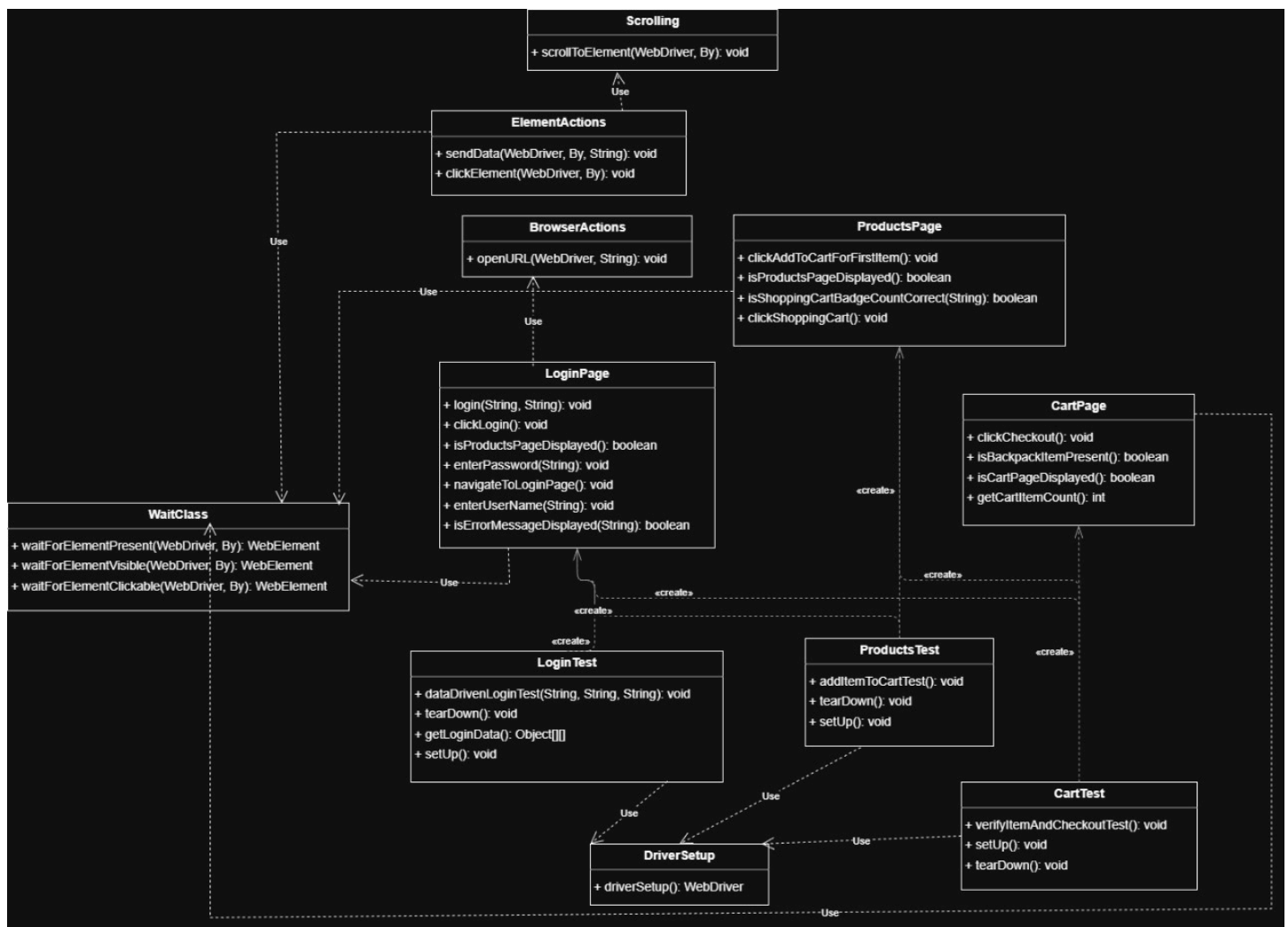
- Login
- Add product to cart
- Go to cart
- Fill checkout information
- Verify order success

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