

Test Plan – SauceDemo Web Application

1. Introduction

This test plan explains how manual testing and UI automation will be performed on the SauceDemo website. The goal is to make sure the main features work correctly and that users can complete their tasks without issues.

2. System Under Test (SUT)

The system under test is the SauceDemo web application. It is an e-commerce demo website that allows users to log in, view products, add items to the cart, and complete the checkout process.

URL: <https://www.saucedemo.com>

3. Test Scenarios

3.1 Scenario

You are the QA team for a demo e-commerce website. The application includes user login, product listing, cart management, and a basic checkout flow.

3.2 Key Requirements

- Users must log in before accessing products
- Users can add and remove products from the cart
- Checkout requires entering basic user information
- The system must display confirmation after checkout

4. Test Scope:

4.1 In Scope:

The following features are included in testing:

- User login (valid and invalid credentials)
- Product listing and product details
- Add and remove products from the cart
- Checkout process
- Manual testing and UI automation of critical user flows

4.2 Out of Scope:

The following features are not included in testing:

- API testing
- Performance testing
- Security testing
- Mobile and cross-browser testing
- Database Testing

5. Assumptions

The following assumptions are made for this test plan:

- The SauceDemo website will be accessible during the testing period
- Valid and invalid test user credentials are available
- Product data on the website is preconfigured and stable
- Internet connection will be available during test execution
- Testing will be performed on a demo/test environment, not production

6. Test Objectives

The objectives of testing are:

- To ensure that core functionalities of the website operate correctly
- To validate that users can complete critical actions without errors
- To detect functional and UI issues at early stages
- To reduce the risk of defects reaching end users
- To verify the stability of the application through manual and automated testing

7. Test Types

The following test types will be performed:

- Manual Functional Testing
- UI Automation Testing
- Smoke Testing
- Regression Testing
- Black Box Testing

8. Test Environment

8.1 Manual Testing Environment

Manual testing **will be performed** on the SauceDemo website using the following setup:

- **Application URL:** <https://www.saucedemo.com>
- **Environment:** Demo/Test Environment
- **Browser:** Google Chrome
- **Operating System:** Windows
- **Test Case Management:** Excel Sheets
- **Testing Type:** Manual Web Testing

8.2 UI Automation Testing Environment

UI automation testing **will be performed** using the following tools and environment:

- **Application URL:** <https://www.saucedemo.com>
- **Environment:** Demo/Test Environment
- **Browser:** Google Chrome
- **Operating System:** Windows
- **IDE:** Eclipse
- **Automation Tool:** Selenium WebDriver
- **Test Framework:** TestNG
- **Programming Language:** Java

9. Test Data

The following test data will be used during testing:

- Valid and invalid user credentials
- Sample products available on the website
- Test checkout information (first name, last name, postal code)
- No real personal or payment data will be used

10. Entry Criteria

Testing will start when the following conditions are met:

- The application is accessible and stable
- Test cases are prepared and reviewed
- Test environment is ready
- Required tools are installed and configured

11. Exit Criteria

Testing will be considered complete when:

- All planned manual test cases are executed
- Automated UI tests are executed successfully
- Major defects are identified and documented
- Test results and evidence are collected

12. Risks and Mitigation

<i>Risk</i>	<i>Mitigation</i>
Demo website is unavailable or down	Pause testing, document the issue, and continue testing once the website is available
Internet connection issues	Retry testing when the connection is stable and document delays
Testing machine failure (device crash or shutdown)	Use backups and version control (GitHub) to avoid data loss
Limited testing time	Prioritize critical user flows such as login, cart, and checkout
Automation test instability	Use reliable locators and proper wait strategies

13. Deliverables

The following deliverables will be provided:

- More than 20 manual test cases with execution evidence (Excel sheets)
- More than 8 defect reports with clear steps and screenshots
- UI automation test scripts (Selenium WebDriver + TestNG)
- More than 8 automated UI test cases with evidence and screenshots

14. Test Scenarios (High-Level)

Happy Paths

1. HP-01: Successful Login Path

Story: A user enters valid username and password and submits the login form.

Expected: The user is logged in successfully and redirected to the products page.

2. HP-02: View Products Path

Story: A logged-in user views the products page.

Expected: All products are displayed with correct name, price, and image.

3. HP-03: Sort Products Path

Story: A user selects a sort option (for example, price low to high) to reorder products.

Expected: The product list is reordered correctly according to the selected sort option.

4. HP-04: Add Product to Cart Path

Story: A logged-in user adds a product to the shopping cart.

Expected: The selected product is added to the cart and the cart icon is updated.

5. HP-05: View Cart Path

Story: A user opens the shopping cart page.

Expected: All added products are displayed correctly in the cart.

6. HP-06: Complete Checkout Path

Story: A user proceeds to checkout and enters valid checkout information.

Expected: The checkout process is completed successfully.

7. HP-07: Order Confirmation Path

Story: A user completes the checkout process.

Expected: The order confirmation page is displayed successfully.

Bad / Negative Paths

8. BP-01: Login with Invalid Credentials Path

Story: A user enters an invalid username or password and submits the login form.

Expected: An error message is displayed and the user is not logged in.

9. BP-02: Login with Missing Username Path

Story: A user attempts to log in without entering a username.

Expected: A validation message is displayed indicating that the username is required.

10. BP-03: Login with Missing Password Path

Story: A user attempts to log in without entering a password.

Expected: A validation message is displayed indicating that the password is required.

11. BP-04: Checkout with Missing Information Path

Story: A user attempts to complete checkout without filling required fields.

Expected: Validation messages are displayed and checkout is not completed.

12. BP-05: Checkout with Empty Cart Path

Story: A user attempts to proceed to checkout without adding products to the cart.

Expected: The system prevents checkout and displays an appropriate message.

15. Signoff

This test plan has been reviewed and approved. Testing activities will be conducted according to this plan.

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