

Objective

The objective of this Test Plan is to verify the overall quality, functionality of the **SauceDemo** Web Application which is considered to be an easy one stop E - Commerce Platform . The testing aims to ensure that users can successfully log in, view products, add items to the cart, and complete the checkout process without any errors. This Testing aims to Identify defects , validate Business Workflow , check UI Behaviour and ensure all the critical features work as expected across supported browsers.

The Techstack for the SauceDemo Web Application are as follows:

- React
- Varnish
- Google Font API
- Fastly
- core-js 3.46.0
- GitHub Pages

Scope

The Features that will be tested in the SauceDemo Web Application will be:

1. Login Module :
 - Valid login
 - Invalid login
 - Error messages
 - Input validation
2. Products Center :
 - Product listing
 - Product details
 - Product images
 - Product price
 - Product description

3. Sorting :

- Name (A to Z)
- Name (Z to A)
- Price (Low to High)
- Price (High to Low)

4. Cart Page :

- Add single product
- Add multiple products
- Cart badge update

5. CheckOut Process :

- Checkout Step (Customer Info)
- Checkout Step(Recheck)
- Finish checkout

6. Logout :

- Logout from main menu

Inclusions

1. UI Testing

Verification of all visible elements on Login, Products, Cart, Checkout, and Order Confirmation pages. Validation of buttons, links, labels, product images, and dropdowns.

2. Functional Testing

Login with valid & invalid credentials. Add to cart, remove from cart, and cart quantity updates. Product sorting functionality. Complete checkout process with valid inputs. Logout functionality.

3. Validation & Error Handling

Proper error messages for wrong username/password.

Mandatory field validation in checkout form (First Name, Last Name, Zip Code)

4. Cross-Browser Testing

Basic validation in Chrome, Firefox, and Edge.

5. Navigation Testing

Smooth navigation between pages like Products → Cart → Checkout → Overview → Thank You page

Testing Environment

The testing will be performed in a controlled environment that replicates a real user setup as closely as possible.

1. Application Under Test (AUT)

- URL: <https://www.saucedemo.com/>
- Environment Type: Public demo environment (no backend changes expected).

2. Hardware

- Laptop/PC with minimum:
 - 8 GB RAM
 - Intel i5 / Ryzen 5 or above
 - Stable internet connection (10+ Mbps)

3. Operating Systems

Testing will be performed on:

- Windows 10/11
- (Optional) macOS Ventura/Sonoma

4. Browsers

Primary browsers for web testing:

- Google Chrome – Latest Version
- Mozilla Firefox – Latest Version
- Microsoft Edge – Latest Version

5. Tools Used

- Google Sheets → Test Plan, Test Cases
- Chrome DevTools → Element inspection, network calls
- (Optional) Postman → Basic API observation
- Screen recorder / screenshots tools → Evidence recording

6. Test Data

- Standard demo credentials:
 - Username: `standard_user`
 - Password: `secret_sauce`
- Additional invalid combinations for negative testing:
 - Wrong username, wrong password, empty fields, `locked_out_user`.

7. Network

Stable Wi-Fi connection.

No VPN or proxy (to avoid inconsistent behaviour).

Testing Deliverables

The Testing Deliverables through this Test upon SauceDemo are going to be as follows:

1. Test Plan
2. Test Cases
3. RTM (Requirements Traceability Matrix)
4. Bug Report

1. Test Plan

A comprehensive document describing the testing objectives, scope, approach, test environment, tools, schedule, and responsibilities. This defines *what will be tested, how, when, and by whom*.

2. Test Cases

A detailed set of test scenarios written in Google Sheets covering:

Functional flows (Login, Add to Cart, Checkout, Logout) ,
UI validations, Negative scenarios , Boundary validations
Each test case will include: Test Case ID, Steps, Expected Result,
Actual Result, Status, and Remarks.

3. Requirements Traceability Matrix (RTM)

A mapping sheet that links:

Requirements → Test Cases → Defects (if any)

This ensures complete test coverage and helps verify that no requirement is missed during execution.

4. Bug Report

A structured defect log documenting all identified issues with:

Defect ID

Severity & Priority

Steps to reproduce

Expected vs Actual Result

Screenshot/Video evidence

Status (Open, Fixed, Retested, Closed)

Entry and Exit Criteria

Entry Criteria

Testing activities will begin only when the following conditions are met:

1. The SauceDemo application URL (<https://www.saucedemo.com>) is accessible and stable.
2. The test environment is set up with the required browser(s) and operating system.
3. Valid test credentials are available (e.g., `standard_user` / `secret_sauce`).
4. The test Plan is reviewed and approved.
5. Test cases are written, reviewed, and ready for execution.

6. Required test data is prepared and available.
7. No major environment or application blockers exist that would prevent testing.

Exit Criteria

Testing will be considered complete when the following conditions are satisfied:

1. All planned test cases are executed.
2. All **critical and high-severity defects** are fixed and successfully re-tested.
3. No blocker issues remain open.
4. All identified defects are logged and tracked in the bug report.
5. Test coverage is achieved as per RTM (all requirements mapped to test cases).
6. Test results are documented and reviewed.
7. Final testing sign-off is provided based on the overall quality assessment.

Risks and Mitigation

Risk 1: Demo Application Downtime

- **Description:** SauceDemo is a public demo site and may become temporarily unavailable.
- **Mitigation:**
 - Retry testing after some time.

- Use screenshots and previously executed test results for reference.
- Plan testing during non-peak hours.

Risk 2: Limited Control Over Test Environment

- **Description:** As this is a public demo application, environment configuration cannot be controlled.
- **Mitigation:**
 - Restrict testing to functional and UI validation.
 - Avoid dependency on backend or database validations.

Risk 3: Frequent UI or Data Changes

- **Description:** The demo application UI or test data may change without prior notice.
- **Mitigation:**
 - Update test cases as needed.
 - Focus on core workflows rather than static UI text.

Risk 4: Browser Compatibility Issues

- **Description:** Application behavior may vary across browsers.
- **Mitigation:**
 - Execute critical test cases on multiple browsers (Chrome, Firefox, Edge).
 - Log browser-specific defects separately.

Risk 5: Limited Test Data

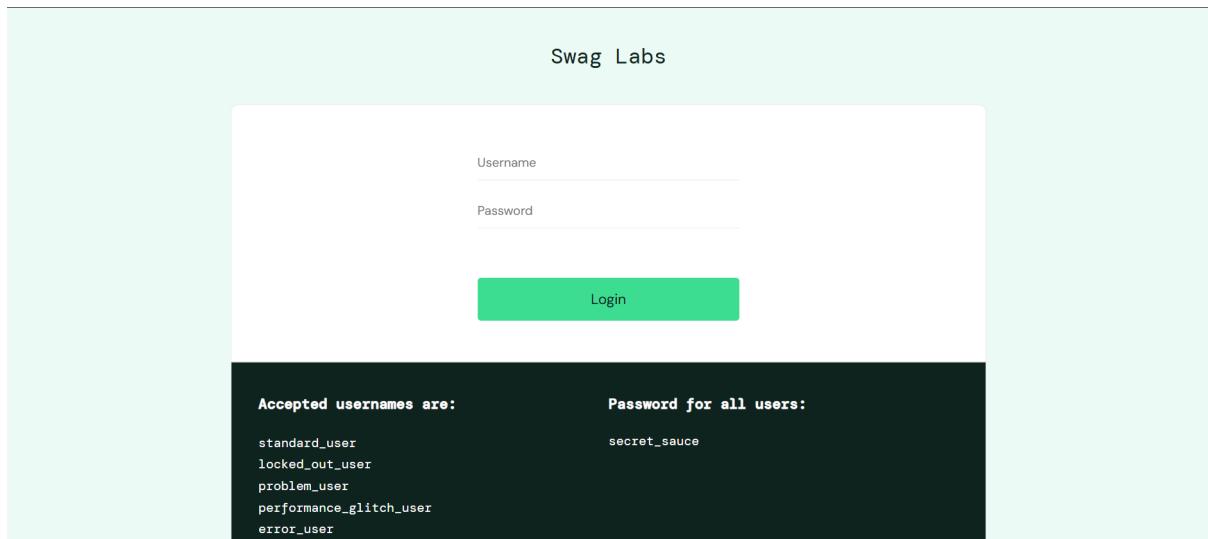
- **Description:** Only a few predefined users are available for testing.
- **Mitigation:**
 - Reuse provided demo credentials.
 - Cover maximum scenarios using available user types (standard_user, locked_out_user).

Risk 6: Internet Connectivity Issues

- **Description:** Poor internet connectivity may impact test execution.
- **Mitigation:**
 - Ensure stable internet before execution.
 - Pause and resume testing when connectivity is restored.

Risk 7: Time Constraints

- **Description:** Limited time available for test execution and reporting.
- **Mitigation:**
 - Prioritize critical and high-risk test cases first.
 - Focus on core functionalities like Login, Cart, and Checkout.



The image shows the product catalog page for the Swag Labs application. At the top, it says "Swag Labs" with a menu icon on the left and a shopping cart icon on the right. Below that is a search bar with the placeholder "Name (A to Z)". The page displays four product cards: 1. "Sauce Labs Backpack": An image of a black backpack, price \$29.99, "Add to cart" button. 2. "Sauce Labs Bike Light": An image of a bicycle headlight, price \$9.99, "Add to cart" button. 3. "Sauce Labs Bolt T-Shirt": An image of a black t-shirt on a hanger, price \$15.00, "Add to cart" button. 4. "Sauce Labs Fleece Jacket": An image of a grey fleece jacket, price \$40.00, "Add to cart" button. A small URL "https://www.saucedemo.com/inventory.html#/" is visible at the bottom left.

