SauceDemo - Complete Test Documentation

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Requirements Analysis

1. Application Overview

Application Name: SauceDemo (Swag Labs)
Type: E-commerce Web Application
URL: https://www.saucedemo.com/
Purpose: Demo site for testing and automation practice

2. Functional Requirements

2.1 User Authentication

- **REQ-AUTH-001:** Users must be able to log in with valid credentials
- **REQ-AUTH-002:** System should display error message for invalid credentials
- **REQ-AUTH-003:** System should display error message for locked out users
- **REQ-AUTH-004:** System should prevent access to main features without authentication
- **REQ-AUTH-005:** Users should be able to log out from the application

2.2 Product Catalog

- **REQ-PROD-001:** System shall display all available products on the inventory page
- **REQ-PROD-002:** Each product must display: image, name, description, and price
- **REQ-PROD-003:** Users shall be able to sort products by name (A-Z, Z-A) and price (low-high, high-low)
- **REQ-PROD-004:** Product images should be clickable to view details

2.3 Product Details

- **REQ-DETAIL-001:** Users can view detailed information for each product
- **REQ-DETAIL-002:** Product detail page must show: image, name, description, price
- **REQ-DETAIL-003:** Users can add product to cart from detail page

- **REQ-DETAIL-004:** Users can navigate back to products page from detail page

2.4 Shopping Cart

- **REQ-CART-001:** Users shall be able to add products to the shopping cart
- **REQ-CART-002:** Users shall be able to remove products from the shopping cart
- **REQ-CART-003:** Cart icon should display the number of items in cart
- **REQ-CART-004:** Cart should persist items during the session
- **REQ-CART-005:** Users can continue shopping from the cart page
- **REQ-CART-006:** Users can proceed to checkout from the cart page

2.5 Checkout Process

- **REQ-CHECK-001:** Users must provide first name, last name, and postal code
- **REQ-CHECK-002:** System should validate that all required fields are filled
- **REQ-CHECK-003:** System should display order summary with item total, tax, and total price
- **REQ-CHECK-004:** Users can complete the purchase
- **REQ-CHECK-005:** System should display order confirmation after successful purchase
- **REQ-CHECK-006:** Users can cancel checkout and return to cart

2.6 Navigation

- **REQ-NAV-001:** Application should have a persistent header with navigation menu
- **REQ-NAV-002:** Users should be able to access cart from any page
- **REQ-NAV-003:** Side menu should provide access to all items, about, logout, and reset app state

3. Non-Functional Requirements

3.1 Usability

- **REQ-USE-001:** Interface should be intuitive and easy to navigate
- **REQ-USE-002:** Error messages should be clear and actionable
- **REQ-USE-003:** Application should be responsive across different screen sizes

3.2 Performance

- **REQ-PERF-001:** Page load time should be under 3 seconds
- **REQ-PERF-002:** User interactions should respond within 1 second

3.3 Security

- **REQ-SEC-001:** Unauthenticated users should not access protected pages
- **REQ-SEC-002:** Session should maintain security throughout user journey

3.4 Compatibility

- **REQ-COMP-001:** Application should work on Chrome, Firefox, Safari, and Edge
- **REQ-COMP-002:** Application should be accessible on desktop and mobile devices

4. Test Users Provided

- standard_user
- locked_out_user
- problem_user
- performance_glitch_user
- error_user
- visual_user

Password: secret_sauce (for all users)

5. Out of Scope

- Payment gateway integration (simulated only)
- User registration functionality
- Password reset functionality
- Product inventory management
- Order history tracking

Test Plan

1. Test Plan Identifier

TP-SAUCEDEMO-2024-001

2. Introduction

This test plan outlines the testing strategy, scope, resources, and schedule for testing the SauceDemo e-commerce application. The primary objective is to ensure all functional requirements are met and the application provides a reliable user experience.

3. Test Items

- User Authentication Module
- Product Catalog Display

- Product Detail Pages
- Shopping Cart Functionality
- Checkout Process
- Navigation and UI Elements
- Cross-browser Compatibility

4. Features to be Tested

4.1 High Priority

- Login/Logout functionality
- Add to cart functionality
- Checkout process
- Product display and sorting

4.2 Medium Priority

- Product detail views
- Cart management (add/remove items)
- Navigation menu
- Error handling

4.3 Low Priority

- UI responsiveness
- Visual consistency
- Performance under different user types

5. Features Not to be Tested

- Backend database operations
- Server-side security (penetration testing)
- Load testing beyond basic performance checks
- Third-party integrations

6. Testing Approach

6.1 Types of Testing

- **Functional Testing:** Verify all features work as per requirements

- **UI/UX Testing:** Ensure interface is user-friendly and consistent
- **Compatibility Testing:** Test across multiple browsers
- **Regression Testing:** Ensure new changes don't break existing functionality
- **Exploratory Testing:** Unscripted testing to discover edge cases
- **Negative Testing:** Verify system handles invalid inputs properly

6.2 Testing Levels

- **Smoke Testing:** Verify basic critical functionality
- **System Testing:** Comprehensive end-to-end testing
- **User Acceptance Testing:** Validate against user requirements

7. Entry and Exit Criteria

7.1 Entry Criteria

- Test environment is set up and accessible
- Test data is prepared
- All test cases are reviewed and approved
- Application is deployed to test environment

7.2 Exit Criteria

- 100% of high priority test cases executed
- 95% of all test cases executed
- No critical or high severity defects open
- All medium severity defects documented with workarounds
- Test summary report completed

8. Test Deliverables

- Test Plan Document (this document)
- Test Cases Document
- Test Data Sets
- Bug Reports
- Test Execution Report
- Test Summary Report
- Requirements Traceability Matrix

9. Test Environment

- **Browsers:** Chrome (latest), Firefox (latest), Safari (latest), Edge (latest)
- **Operating Systems:** Windows 10/11, macOS, Linux
- **Devices:** Desktop, Tablet, Mobile
- **Tools:** Manual testing, screenshot tools, browser DevTools

10. Schedule

- Test Planning: 2 days
- Test Case Development: 3 days
- Test Environment Setup: 1 day
- Test Execution: 5 days
- Defect Retesting: 2 days
- Test Reporting: 1 day

Total Duration: 14 days

11. Risks and Mitigation

Risk	Probability	Impact	Mitigation
Test environment unavailable	Low	High	Have backup URLs, monitor site status
Different user types behave differently	High	Medium	Test with all provided user accounts
Browser compatibility issues	Medium	Medium	Prioritize most common browsers first
Incomplete requirements	Low	High	Clarify assumptions with stakeholders

12. Approvals

- QA Lead: ____________________ Date: ___________
- Project Manager: ____________________ Date: ___________

Test Cases

Login Functionality

TC-LOGIN-001: Successful Login with Standard User

Priority: High
Requirement: REQ-AUTH-001
Preconditions: User is on login page

Step	Action	Expected Result
1	Navigate to https://www.saucedemo.com/	Login page displays
2	Enter username: "standard_user"	Username is entered in field
3	Enter password: "secret_sauce"	Password is masked in field
4	Click "Login" button	User redirected to products page, URL contains "/inventory.html"

Postconditions: User successfully logged in and can see product inventory

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TC-LOGIN-002: Login with Invalid Username

Priority: High
Requirement: REQ-AUTH-002
Preconditions: User is on login page

Step	Action	Expected Result
1	Navigate to https://www.saucedemo.com/	Login page displays
2	Enter username: "invalid_user"	Username is entered
3	Enter password: "secret_sauce"	Password is entered
4	Click "Login" button	Error message displays: "Epic sadface: Username and password do not match any user in this service"

TC-LOGIN-003: Login with Invalid Password

Priority: High
Requirement: REQ-AUTH-002
Preconditions: User is on login page

Step	Action	Expected Result
1	Navigate to https://www.saucedemo.com/	Login page displays
2	Enter username: "standard_user"	Username is entered
3	Enter password: "wrong_password"	Password is entered
4	Click "Login" button	Error message displays: "Epic sadface: Username and password do not match any user in this service"

TC-LOGIN-004: Login with Empty Credentials

Priority: High
Requirement: REQ-AUTH-002
Preconditions: User is on login page

Step	Action	Expected Result
1	Navigate to https://www.saucedemo.com/	Login page displays
2	Leave username field empty	Field remains empty
3	Leave password field empty	Field remains empty
4	Click "Login" button	Error message displays: "Epic sadface: Username is required"

TC-LOGIN-005: Login with Locked Out User

Priority: High
Requirement: REQ-AUTH-003
Preconditions: User is on login page

Step	Action	Expected Result
1	Navigate to https://www.saucedemo.com/	Login page displays
2	Enter username: "locked_out_user"	Username is entered
3	Enter password: "secret_sauce"	Password is entered
4	Click "Login" button	Error message displays: "Epic sadface: Sorry, this user has been locked out."

TC-LOGIN-006: Successful Logout

Priority: High
Requirement: REQ-AUTH-005
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click hamburger menu icon	Side menu opens
2	Click "Logout" option	User redirected to login page
3	Try to navigate to inventory page directly	User remains on login page or is redirected

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Product Catalog

TC-PROD-001: Display All Products

Priority: High
Requirement: REQ-PROD-001, REQ-PROD-002
Preconditions: User is logged in as standard_user

Step	Action	Expected Result
1	View inventory page	6 products are displayed
2	Check each product card	Each product shows: image, name, description, price, and "Add to cart" button

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TC-PROD-002: Sort Products by Name (A to Z)

Priority: Medium
Requirement: REQ-PROD-003
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click on sorting dropdown	Dropdown menu opens
2	Select "Name (A to Z)"	Products sorted alphabetically: Sauce Labs Backpack appears first

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TC-PROD-003: Sort Products by Name (Z to A)

Priority: Medium
Requirement: REQ-PROD-003
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click on sorting dropdown	Dropdown menu opens
2	Select "Name (Z to A)"	Products sorted reverse alphabetically: Test.allTheThings() T-Shirt appears first

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TC-PROD-004: Sort Products by Price (Low to High)

Priority: Medium
Requirement: REQ-PROD-003
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click on sorting dropdown	Dropdown menu opens
2	Select "Price (low to high)"	Products sorted by price ascending: lowest priced item appears first

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TC-PROD-005: Sort Products by Price (High to Low)

Priority: Medium
Requirement: REQ-PROD-003
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click on sorting dropdown	Dropdown menu opens
2	Select "Price (high to low)"	Products sorted by price descending: highest priced item appears first

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TC-PROD-006: Navigate to Product Detail Page

Priority: Medium
Requirement: REQ-PROD-004, REQ-DETAIL-001
Preconditions: User is logged in and on inventory page

Step	Action	Expected Result
1	Click on any product image or name	User navigated to product detail page
2	Verify page content	Product image, name, description, price, and "Add to cart" button displayed
3	Verify "Back to products" button	Button is visible and clickable

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Shopping Cart

TC-CART-001: Add Single Item to Cart

Priority: High
Requirement: REQ-CART-001, REQ-CART-003
Preconditions: User is logged in, cart is empty

Step	Action	Expected Result
1	Navigate to inventory page	Product list displays
2	Click "Add to cart" for any product	Button text changes to "Remove", cart badge shows "1"
3	Click on cart icon	Cart page opens with selected product displayed

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TC-CART-002: Add Multiple Items to Cart

Priority: High
Requirement: REQ-CART-001, REQ-CART-003
Preconditions: User is logged in, cart is empty

Step	Action	Expected Result
1	Click "Add to cart" for first product	Cart badge shows "1"
2	Click "Add to cart" for second product	Cart badge shows "2"
3	Click "Add to cart" for third product	Cart badge shows "3"
4	Click on cart icon	Cart page displays all 3 selected products

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TC-CART-003: Remove Item from Cart on Inventory Page

Priority: High
Requirement: REQ-CART-002
Preconditions: User is logged in, one item is in cart

Step	Action	Expected Result
1	Navigate to inventory page	Product with "Remove" button visible
2	Click "Remove" button	Button changes back to "Add to cart", cart badge decrements by 1

TC-CART-004: Remove Item from Cart Page

Priority: High
Requirement: REQ-CART-002
Preconditions: User is logged in, items in cart

Step	Action	Expected Result
1	Click on cart icon	Cart page displays with items
2	Click "Remove" button for any item	Item removed from cart, cart count decreases

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TC-CART-005: Continue Shopping from Cart

Priority: Medium
Requirement: REQ-CART-005
Preconditions: User is on cart page

Step	Action	Expected Result
1	Click "Continue Shopping" button	User redirected to inventory page
2	Verify cart state	Cart retains previously added items

TC-CART-006: Cart Persistence During Session

Priority: Medium
Requirement: REQ-CART-004
Preconditions: User is logged in

Step	Action	Expected Result
1	Add 2 items to cart	Cart badge shows "2"
2	Navigate to product detail page	Cart badge still shows "2"
3	Return to inventory page	Cart badge still shows "2"
4	Click cart icon	Both items still in cart

Checkout Process

TC-CHECK-001: Proceed to Checkout with Items

Priority: High
Requirement: REQ-CART-006, REQ-CHECK-001
Preconditions: User is logged in, cart has items

Step	Action	Expected Result
1	Click on cart icon	Cart page displays
2	Click "Checkout" button	User redirected to checkout information page
3	Verify page elements	First Name, Last Name, Zip/Postal Code fields visible with Continue button

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TC-CHECK-002: Complete Checkout with Valid Information

Priority: High
Requirement: REQ-CHECK-001, REQ-CHECK-004, REQ-CHECK-005
Preconditions: User is on checkout information page with items in cart

Step	Action	Expected Result
1	Enter First Name: "John"	Field accepts input
2	Enter Last Name: "Doe"	Field accepts input
3	Enter Zip Code: "12345"	Field accepts input
4	Click "Continue" button	User navigated to checkout overview page
5	Verify order summary	Item total, tax, and total price displayed correctly
6	Click "Finish" button	User navigated to order confirmation page
7	Verify confirmation	"Thank you for your order!" message displayed

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TC-CHECK-003: Checkout with Missing First Name

Priority: High
Requirement: REQ-CHECK-002
Preconditions: User is on checkout information page

Step	Action	Expected Result
1	Leave First Name field empty	Field remains empty
2	Enter Last Name: "Doe"	Field accepts input
3	Enter Zip Code: "12345"	Field accepts input
4	Click "Continue" button	Error message displays: "Error: First Name is required"

TC-CHECK-004: Checkout with Missing Last Name

Priority: High
Requirement: REQ-CHECK-002
Preconditions: User is on checkout information page

Step	Action	Expected Result
1	Enter First Name: "John"	Field accepts input
2	Leave Last Name field empty	Field remains empty
3	Enter Zip Code: "12345"	Field accepts input
4	Click "Continue" button	Error message displays: "Error: Last Name is required"

TC-CHECK-005: Checkout with Missing Postal Code

Priority: High
Requirement: REQ-CHECK-002
Preconditions: User is on checkout information page

Step	Action	Expected Result
1	Enter First Name: "John"	Field accepts input
2	Enter Last Name: "Doe"	Field accepts input
3	Leave Zip Code field empty	Field remains empty
4	Click "Continue" button	Error message displays: "Error: Postal Code is required"

TC-CHECK-006: Cancel Checkout from Information Page

Priority: Medium
Requirement: REQ-CHECK-006
Preconditions: User is on checkout information page

Step	Action	Expected Result
1	Click "Cancel" button	User redirected to cart page
2	Verify cart contents	Items remain in cart

TC-CHECK-007: Cancel Checkout from Overview Page

Priority: Medium
Requirement: REQ-CHECK-006
Preconditions: User is on checkout overview page

Step	Action	Expected Result
1	Click "Cancel" button	User redirected to inventory page
2	Check cart	Items remain in cart

TC-CHECK-008: Verify Price Calculations

Priority: High
Requirement: REQ-CHECK-003
Preconditions: User is on checkout overview page with known items

Step	Action	Expected Result
1	Note individual item prices from cart	Prices recorded
2	View Item total on overview page	Item total equals sum of individual items
3	View Tax amount	Tax is calculated (typically 8% of item total)
4	View Total price	Total = Item total + Tax

Navigation and UI

TC-NAV-001: Hamburger Menu Functionality

Priority: Medium
Requirement: REQ-NAV-001, REQ-NAV-003
Preconditions: User is logged in

Step	Action	Expected Result
1	Click hamburger menu icon	Side menu opens from left
2	Verify menu items	"All Items", "About", "Logout", "Reset App State" options visible
3	Click outside menu or X button	Menu closes

TC-NAV-002: All Items Navigation

Priority: Medium
Requirement: REQ-NAV-003
Preconditions: User is logged in and on cart or detail page

Step	Action	Expected Result
1	Open hamburger menu	Menu opens
2	Click "All Items"	User navigated to inventory page

TC-NAV-003: About Page Navigation

Priority: Low
Requirement: REQ-NAV-003
Preconditions: User is logged in

Step	Action	Expected Result
1	Open hamburger menu	Menu opens
2	Click "About"	New tab opens with Sauce Labs website or user navigated to about page

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TC-NAV-004: Reset App State

Priority: Medium
Requirement: REQ-NAV-003
Preconditions: User is logged in with items in cart

Step	Action	Expected Result
1	Open hamburger menu	Menu opens
2	Click "Reset App State"	Cart is emptied, all "Remove" buttons change back to "Add to cart"

TC-NAV-005: Cart Icon Access from Multiple Pages

Priority: Medium
Requirement: REQ-NAV-002
Preconditions: User is logged in

Step	Action	Expected Result
1	From inventory page, click cart icon	Cart page opens
2	Return to inventory and open a product detail	Cart icon visible in header
3	From detail page, click cart icon	Cart page opens

Cross-Browser Testing

TC-BROWSER-001: Login Functionality on Chrome

Priority: High
Requirement: REQ-COMP-001
Preconditions: Chrome browser installed

Step	Action	Expected Result
1	Open Chrome browser	Browser opens
2	Navigate to https://www.saucedemo.com/	Login page loads properly
3	Login with standard_user	Login successful, all elements render correctly

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TC-BROWSER-002: Complete Purchase Flow on Firefox

Priority: High
Requirement: REQ-COMP-001
Preconditions: Firefox browser installed

Step	Action	Expected Result
1	Open Firefox browser	Browser opens
2	Complete full purchase flow	All functionality works, layout renders correctly

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TC-BROWSER-003: Cart Functionality on Safari

Priority: High
Requirement: REQ-COMP-001
Preconditions: Safari browser (macOS)

Step	Action	Expected Result
1	Open Safari browser	Browser opens
2	Test add/remove cart items	All cart operations function correctly

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TC-BROWSER-004: Sorting Functionality on Edge

Priority: Medium
Requirement: REQ-COMP-001
Preconditions: Edge browser installed

Step	Action	Expected Result
1	Open Edge browser	Browser opens
2	Test all sorting options	All sort operations work correctly

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Negative Testing

TC-NEG-001: Access Inventory Without Login

Priority: High
Requirement: REQ-AUTH-004, REQ-SEC-001
Preconditions: User is not logged in

Step	Action	Expected Result
1	Navigate directly to https://www.saucedemo.com/inventory.html	User redirected to login page or error displayed

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TC-NEG-002: Add to Cart with Problem User

Priority: Medium
Requirement: User Type Testing
Preconditions: Logged in as problem_user

Step	Action	Expected Result
1	Try to add items to cart	Document any unusual behavior (images, functionality issues)
2	Complete purchase if possible	Note any problems encountered

---

TC-NEG-003: Checkout with Empty Cart

Priority: Medium
Requirement: Business Logic Testing

Preconditions: User is logged in, cart is empty

Step	Action	Expected Result
1	Navigate directly to cart page	Cart shows as empty
2	Observe checkout button	Button should be disabled or checkout should not proceed

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Requirements Traceability Matrix

Requirement ID	Test Case IDs	Status
REQ-AUTH-001	TC-LOGIN-001	Covered
REQ-AUTH-002	TC-LOGIN-002, TC-LOGIN-003, TC-LOGIN-004	Covered
REQ-AUTH-003	TC-LOGIN-005	Covered
REQ-AUTH-004	TC-NEG-001	Covered
REQ-AUTH-005	TC-LOGIN-006	Covered
REQ-PROD-001	TC-PROD-001	Covered
REQ-PROD-002	TC-PROD-001	Covered
REQ-PROD-003	TC-PROD-002, TC-PROD-003, TC-PROD-004, TC-PROD-005	Covered
REQ-PROD-004	TC-PROD-006	Covered
REQ-DETAIL-001	TC-PROD-006	Covered
REQ-CART-001	TC-CART-001, TC-CART-002	Covered
REQ-CART-002	TC-CART-003, TC-CART-004	Covered
REQ-CART-003	TC-CART-001, TC-CART-002	Covered
REQ-CART-004	TC-CART-006	Covered
REQ-CART-005	TC-CART-005	Covered
REQ-CART-006	TC-CHECK-001	Covered
REQ-CHECK-001	TC-CHECK-001, TC-CHECK-002	Covered
REQ-CHECK-002	TC-CHECK-003, TC-CHECK-004, TC-CHECK-005	Covered
REQ-CHECK-003	TC-CHECK-008	Covered
REQ-CHECK-004	TC-CHECK-002	Covered
REQ-CHECK-005	TC-CHECK-002	Covered
REQ-CHECK-006	TC-CHECK-006, TC-CHECK-007	Covered
REQ-NAV-001	TC-NAV-001	Covered
REQ-NAV-002	TC-NAV-005	Covered
REQ-NAV-003	TC-NAV-001, TC-NAV-002, TC-NAV-003, TC-NAV-004	Covered
REQ-COMP-001	TC-BROWSER-001, TC-BROWSER-002, TC-BROWSER-003, TC-BROWSER-004	Covered
REQ-SEC-001	TC-NEG-001	Covered

Document Version History

Version	Date	Author	Changes
1.0	2024-12-01	QA Team	Initial release

End of Document