



Test plan

Project : SauceLabs_Demo

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This document defines the test plan for automating the functional testing of the SauceDemo E-Commerce Application using Selenium with Java. The website allows users to log in, browse products, add them to cart, and complete checkout. The goal of this plan is to ensure that the UI workflows function correctly under different scenarios.

AUT: <https://www.google.com/search?q=https://www.saucedemo.com/>

- The objective of the test plan is validating core functionalities of the website including
 - **Product Search**
 - **Product Details**
 - **Shopping Cart**
 - **Checkout**
 - **User Authentication**
 - **Order History**
- Ensure high test coverage across:
 - **UI**
 - **API**
 - **Backend components**
- Identify bugs and usability issues before production deployment.

- Provide clear test execution reports.

This test plan focuses on automating the core functionalities of the website using Selenium and Page Object Model (POM). The objective is to validate key user interactions and ensure a seamless shopping experience.

In-Scope:

The following functionalities will be covered in the automation testing framework:
Manual Testing for functional verification, exploratory testing, and negative test cases. Automated Testing using Selenium with Cucumber and POM for UI testing.
API Testing using Postman and Rest Assured for backend validation.

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Out-of-Scope:

The testing scope excludes security testing and advanced performance testing as the focus is on functional automation so performance under heavy load is not covered. By defining this scope, we ensure that the automation testing effectively covers critical user journeys while maintaining clear boundaries for testing efforts.

Testable Features

- **Login:** Valid/Invalid credentials, Password recovery, Session timeout. ▪
- Dashboard:** Widget functionality, UI responsiveness.
- **Product Management:** CRUD operations, Search & Filter.
- **Customer Management:** Customer listing, Editing profiles.
- **Orders:** Order status updates, Invoice generation.
- **Reports:** Data accuracy, Export functionality.]
- **Security:** Role-based access, SQL injection, and XSS checks.

Testing Approach

The testing phase will follow a structured framework using Selenium, cucumber and the Page Object Model (POM). This ensures scalability, reusability, and ease of maintenance while validating critical user interactions.

□ Testing Methodologies:

- **Manual Testing:** Functional, exploratory, and negative testing.
 - **Automation Testing:** UI automation with Selenium (Cucumber + POM).
 - **API Testing:** Functional and performance testing using Postman and Rest Assured.
- ## □ Testing Environment:

- QA Environment

□ Operating System:

- Windows 11 and above

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Testing Environment

- ♣ **URL:** <https://admin-demo.nopcommerce.com>
- ♣ **Browser:** Latest versions of Chrome, Firefox, Edge, Safari
- ♣ **OS:** Windows 10/11, macOS
- ♣ **Network:** 4G, 5G, broadband internet
- ♣ **Test Data:** Predefined demo credentials

Roles and Responsibilities

Roles	Responsibilities
Test Manager	<ul style="list-style-type: none">✓ Oversees testing strategy✓ Manages team✓ Reports progress
Test Engineer	<ul style="list-style-type: none">✓ Execute test cases✓ Report defects✓ Conduct retesting
Developer	<ul style="list-style-type: none">✓ Fix defects and provide technical support for testing
Business Analyst	<ul style="list-style-type: none">✓ Ensures requirements are met in testing

Project Manager	✓ Ensures testing aligns with project timelines
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Following is the test schedule planned for the subject:

Task	Start Date	End Date
Test Plan Creation	19-Aug-2025	25-Aug-2025
Test Scenario Creation	19-Aug-2025	25-Aug-2025
Test Case Creation	19-Aug-2025	25-Aug-2025
Test Case Execution	19-Aug-2025	25-Aug-2025
Bug Report	19-Aug-2025	25-Aug-2025
Summery Report	19-Aug-2025	25-Aug-2025

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Deliverable	Description	Completion Date
Test Plan	Outlines the testing approach, strategies, and scope for the Amazon web application.	25-Aug-2025
Test Scenario	Test Scenarios created for all mentioned objectives	25-Aug-2025
Test Case	Test Cases created for both functional testing and compatibility testing	25-Aug-2025
Bug Report	Detailed description of the defects identified in different versions of an application.	25-Aug-2025
Summary Report	Detailed overview of the status of all test cases conducted, along with suggestions for improve/ment.	25-Aug-2025

Submitted by-
Shiv Shanker Gupta
20/08/2025

□ **Entry Criteria:**

The following conditions must be met before starting test automation:

- Test Environment Readiness: The website is accessible, stable, & configured for testing.
- Test Cases/Scenarios Defined: – All key functionalities have well-documented test cases.
- Test Data Availability: Required test data is prepared and accessible.

□ **Exit Criteria:**

The following conditions must be fulfilled before concluding the testing phase.

- All test cases executed with documented results.
- Critical defects are resolved or logged for further action.
- Test summary report is submitted.

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- ❖ **Selenium:** Test automation framework.
- ❖ **API Testing Tools:** Postman, Rest Assured.
- ❖ **Java:** Test scripting language.
- ❖ **Xmind:** Mindmap creation tool.
- ❖ **Microsoft Excel:** Tool to document testing reports.
- ❖ **Jira:** Tool for bug tracking and project management.
- ❖ **Slack:** Communication platform to collaborate, updates and real-time discussions.
- ❖ This approach ensures comprehensive automation coverage while maintaining efficiency and reliability in the testing process.

Risk	Mitigation Plan
Unclear requirements	Regular communication with stakeholders
Test environment issues	Early setup and continuous monitoring
High defect leakage	Implement rigorous regression testing.
Performance issues	Conduct performance testing before deployment.

Submitted by-
Shiv Shanker Gupta
20/08/2025

Security issues	Perform penetration testing and code reviews.
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Approvals

Below are the documents required for Client Approval :

- Test Plan
- Test Scenarios
- Reports

Testing will only continue to the next steps once these approvals are done.



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