TEST PLAN DOCUMENT

1) INTRODUCTION:

Project Name: Software Testing Assignment – Complete QA Suite
System Under Test:

- Web UI: SauceDemo (Swag Labs)
- REST API: DummyJSON

This document outlines a high-level test plan for the Complete QA Suite Testing project, detailing the testing scope, strategy, schedule, resource requirements, key deliverables to ensure the core functionalities of the systems under test (SUT) are working as intended and provide a smooth experience for the users.

2) SCOPE:

The scope includes testing the following features in the project:

- Shopping Cart and its functionality
- Add to Cart and remove
- Home Page
- Checkout Page
- Product Display

Out Of Scope:

- Security penetration testing
- Payment gateway validation
- Database testing
- Infrastructure testing

API:

- Authentication
- Products endpoints
- Cart endpoints
- Users endpoints

Non-Functional:

- API performance testing using k6
- Basic UI automation

3) Test Strategy:

Testing Levels:

- Manual Functional Testing
- API Testing (Postman)
- Performance Testing (k6)
- UI Automation (Selenium)

Testing Types:

- Positive testing
- Negative testing
- Boundary testing
- Smoke testing
- Load testing

We will follow these steps to perform testing on multiple functionalities.

And these steps are:

1. **Creating test scenario and test cases**

- We will apply several Test Designing techniques while creating Test Cases
- We will also use our expertise in creating Test Cases by applying the below:
    - Error Guessing
    - Exploratory Testing

2. **Testing process**

A) Manual testing:

- Firstly, we will smoke test the main functions and ensure everything is working properly to quickly identify major issues in the system and to determine if the building is stable before more detailed testing.
- If the build is weak and fails, the test we will wait for more stable build before we make deeper tests on an unstable build.
- As soon as we make sure the building is stable and can perform deeper tests on and it's stable
- We will start performing test on the application:
    - Functionality testing and usability testing
- If we encounter any bugs during the test we will report them to the team who are responsible for fixing bugs.
  We repeat Test Cycles until we get the quality product.

B) UI Automation:

- Use automation to validate end to end flows.
- Apply Page Object Model for maintainability.
- Focus on stable assertions.

C) API strategy:

- Validate backend behavior independently of UI.
- Positive scenarios.
- Negative scenarios
- Authentication/authorization
- Response validation

D) Performance Testing K6:

- Simulate realistic user load.
- Response time
- Error rate
- Stability under stress

4) Test Environment:

Web:

- URL: https://www.saucedemo.com
- Browser: Chrome (latest version)
- OS: Windows 10 pro

API:

- Base URL: https://dummyjson.com
- Tool: Postman
- Performance Tool: k6

5) Entry Criteria:

When testing can start:

- Test environment available
- Access to SauceDemo
- Postman collection created

- Test data ready

6) Exit Criteria:

When testing is complete:

- All test cases executed
- ≥20 manual tests completed
- ≥8 defects logged
- ≥20 API requests implemented
- k6 performance report generated
- 8 UI automation tests passed

7) Test Scenarios:

Web UI Scenarios

- Verify valid user login
- Verify login with invalid credentials
- Verify product listing loads correctly
- Verify adding product to cart
- Verify removing product from cart
- Verify checkout process completes successfully
- Verify checkout with missing required fields

API Scenarios

- Verify successful authentication via API
- Verify access to protected endpoint without token (negative)
- Verify product search functionality
- Verify product creation via POST
- Verify update product endpoint
- Verify delete product endpoint

8) Defect Reporting Procedure:

During this phase the following procedures will occur:

- Once a defect is identified, it will be retested to confirm its reproducibility. Detailed steps to reproduce, along with supporting screenshots, will be documented.
- Any deviation from the application's expected behavior will be documented for further analysis and resolution.

If we encounter any defects it will be reported asap.

9) Tools:

The following is the list of Tools we will be using in this Project:

- Postman
- EclipseIDE
- Nvidia app for recordings
- K6
- Selenium
- TestNG

10) Schedule:

Test	Duration	Start	Finish
Manual Testing	**1 week**	**15/1/2026**	**22/1/2026**
API Testing	**8 days**	**23/1/2026**	**31/1/2026**
K6	**5 days**	**1/2/2026**	**6/2/2026**
Automation	**3 days**	**7/2/2026**	**10/2/2026**

11) Resources:

Name	Position
Dr. Ashraf Smadi	Test Lead
Zaid shishani	QA engineer