Test Plan

Project Title: E-Commerce Website Testing – Automation Exercise
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Introduction: This document defines the testing plan for the E-Commerce Website https://automationexercise.com . The purpose of this testing effort is to ensure that all critical functionalities of the website such as registration, login, product browsing, cart management and checkout are operated correctly and provide a seamless user experience.

Objectives: The main objectives of this testing project are to:

1. Verify that all core features function as expected.
2. Identify and report any functional, UI and performance related defects.
3. Ensure the website performance properly across major browsers and devices.
4. Provide all necessary test deliverables including Test Cases, Bug Reports and Test Summary Reports.

Team Members:

Resource Name	Role
Rokshana Talukder Ratri	Junior SQA Engineer

Test Scope: The scope of testing includes functional, UI/UX and compatibility validation of the e-commerce site. Testing will cover the full customer journey including New User Signup, Login, Logout, Product browsing, adding items to the cart, contact us option if any problem occur and completing a simulated checkout process. Testing also involves verifying form validation, navigation links and overall responsiveness across devices.

Test Approach:

System Testing: In system testing, we will use black-box testing techniques to validate the overall functionality of the website.

1. Functional requirements.
2. UI design and user flow diagrams.
3. Stable test environment setup.

System testing will verify all major modules such as user registration, login, product browsing, cart management and checkout. Testing will focus on input and output validation, boundary value checks and proper navigation between pages.

Performance Testing: We need Apache JMeter to perform load and stress testing on critical workflows such as product search, add-to-cart and checkout.

1. Page load time and response time under different loads.
2. Maximum number of users the site can handle concurrently
3. Server response behavior during peak usage.

Results will be analyzed to detect any latency or performance degradation beyond acceptable.

Test Automation: We will use automation testing using Selenium framework for run the regression model. This will ensure that core functionalities remain stable after each new release or bug fix.

1. Login and Registration workflow.
2. Add to Cart and Checkout flow.
3. Search and Filter validation.

The regression suite will run periodically or after every deployment to confirm that previously working features still behave correctly.

API Testing: We will be using Postman to verify backed services and data exchange between client and server.

1. Response codes.
2. Response body and schema validation.
3. Negative scenarios.
4. Performance and latency.

Test Environment:

Operation System: Windows.
Browser: Google Chrome.
Load Testing Tool: JMeter.
Automation Testing tool: Selenium (JavaScript).
API Testing Tool: Postman.
Defect Tracking Tool: Jira.
Test Case Management: Google Sheets.
Device Type: Desktop and Mobile.

Software Required: Software required in this system is minimal. Node.js environment setup is mandatory for these tests. Node.js LTS (v18 + 64-bit) is needed. To manage dependencies, we will use npm. For the test runner, we will use Mocha with Chai. For Load or stress testing, Apache JMeter is needed. Browser requirement is Google Chrome and ChromeDriver with the same version as the browser. Selenium WebDriver will be used and Postman for API testing.

Milestones

Test Schedule: The initial test schedule follows:

Test Name	Start	Finish	Effort (Day)	Comments
Test planning	27.10.2025	28.10.2025	1	Initial planning and setup
Review Documents	28.10.2025	29.10.2025	1	Review requirements
Create Initial Test Estimates	29.10.2025	30.10.2025	1	Estimate time and resource needs
First Deploy QA Test Environment	30.10.2025	31.10.2025	1	Setup test data and accounts
System Testing	31.10.2025	02.11.2025	2	Execute block-box functional testing.
Automation Testing	02.11.2025	04.11.2025	2	Execute Selenium JavaScript regression testing.
Performance Testing	04.11.2025	06.11.2025	2	Conduct load and stress testing.
API Testing	06.11.2025	07.11.2025	1	Conduct API testing.
Resolution of final defects and final build testing	07.11.2025	08.11.2025	1	Verify fixes and confirm stability.
Release to production	08.11.2025	09.11.2025	1	Prepare documentations.

Deliverables:

Deliverable	For	Date
Test Plan	SQA Manager	27.10.2025
Test Cases	SQA Engineer	28.10.2025
Bug Report	SQA Engineer	07.11.2025
Test Summary Report	SQA Engineer	07.11.2025
Performance Testing Report	SQA Engineer	08.11.2025
Automation Testing Report	SQA Engineer	08.11.2025
API Testing Report	SQA Engineer	08.11.2025
Resolution of Final Defects and Final Build Testing	SQA Team	09.11.2025
System Testing Completion	SQA Team	09.11.2025