Software Requirements Specification (SRS)

Project: SwagLabs – E-Commerce Web Application

Contents

1. Introduction

1.1 Purpose

The purpose of this document is to define the functional and non-functional requirements of the SwagLabs web application based on the provided test cases, user stories, and requirements in the "Bug Hunters" testing workbook. This SRS will serve as a reference for developers, testers, project managers, and stakeholders.

1.2 Scope

SwagLabs is an e-commerce platform that allows users to:

- Log in using valid credentials
- View and sort products
- Add and remove items from the shopping cart
- Proceed to checkout
- Complete purchases

The system should provide a secure, user-friendly shopping experience with consistent UI behavior and stable performance.

1.3 Definitions, Acronyms

- **SRS** – Software Requirements Specification
- **TC** – Test Case
- **UI** – User Interface
- **Req ID** – Requirement Identifier

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2. Overall Description

2.1 System Overview

The system provides product listings with sorting features, detailed product pages, a shopping cart, and a checkout flow. It supports different product sort orders such as alphabetical and price-based sorting.

2.2 User Classes

- **Standard User** – can browse, sort, add items to cart, and place orders
- **Problem User** – used for defect and stress testing (special test account)
- **Performance/Locked-out Users** – used for negative login testing

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2.3 Assumptions & Dependencies

- Requires an active internet connection
- Runs on desktop browsers
- Follows consistent UI behavior

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3. Functional Requirements

3.1 Login Module

ID	Functional Requirement
FR-LOGIN-01	The system shall allow users to log in using valid username and password.
FR-LOGIN-02	The system shall display an error message when incorrect credentials are entered.
FR-LOGIN-03	The system shall redirect authenticated users to the products page.

3.2 Product Sorting Module

Derived from test cases **TC_001 – TC_004**.

ID	Requirement
FR-SORT-01	The system shall allow the user to open the filter dropdown when the sort/filter box is clicked.
FR-SORT-02	The system shall display sorting options: (A-Z, Z-A, Price Low→High, Price High→Low).

ID	Requirement
FR-SORT-03	The system shall sort products alphabetically (A → Z).
FR-SORT-04	The system shall sort products alphabetically (Z → A).
FR-SORT-05	The system shall sort products by price (Low → High).
FR-SORT-06	The system shall sort products by price (High → Low).

3.3 Shopping Cart Module

(derived from user stories & requirements sheet)

ID	Requirement
FR-CART-01	The system shall allow users to add items to the cart.
FR-CART-02	The system shall update cart count dynamically after each add/remove action.
FR-CART-03	The system shall allow users to remove items from the cart.
FR-CART-04	The system shall display a cart page listing added items.

3.4 Checkout Module

ID	Requirement
FR-CHK-01	The system shall allow users to proceed to checkout from the cart page.
FR-CHK-02	The system shall require users to enter: First Name, Last Name, ZIP Code.
FR-CHK-03	The system shall display an order overview page.
FR-CHK-04	The system shall complete the order and show a confirmation message.

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4. Non-Functional Requirements

4.1 Usability

- The UI must be intuitive, simple, and consistent.
- Sorting actions should respond immediately.

4.2 Performance

- Sorting should apply in less than **2 seconds**.
- Pages should load in under **3 seconds** under normal conditions.

4.3 Reliability

- System should handle invalid input gracefully.
- All filtering and sorting features must work consistently.

4.4 Security

- Passwords must not be stored in plain text.
- The login form must not expose sensitive error details.

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5. Constraints

- Must function properly on major browsers (Chrome, Firefox, Edge).
- Must match SwagLabs UI/UX standards.

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6. Traceability Matrix

A simplified version based on the sheet:

Requirement	Test Case(s)
FR-SORT-01	TC_001, TC_002
FR-SORT-03	TC_003
FR-SORT-05	TC_004

(More mapping available in the workbook)

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7. Appendices

- Full test cases (attached in the workbook)
- Bug report sheet
- Traceability sheet