Software Requirements Specification (SRS)

For: Automation Exercise E-Commerce Website

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1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed, comprehensive description of the requirements for the "Automation Exercise" e-commerce website (https://automationexercise.com/). It is intended to serve as the foundational reference for the software testing team to architect and execute a thorough testing strategy, including the creation of test plans, test cases, and test scripts. This SRS defines the system's scope, functionalities, constraints, and testable conditions.

1.2 Scope

This document covers all user-facing features and backend functionalities of the website, including but not limited to:

- User registration, authentication (login/logout), and account deletion.
- Product browsing, searching, and filtering by category and brand.
- Detailed product viewing.
- Shopping cart management (add, view, update quantity, remove).
- The complete checkout and simulated payment process.
- User account management and order history.
- Static pages and auxiliary features like "Contact Us" and newsletter subscriptions.

The scope of this document does not include hardware specifications, internal development methodologies, or third-party API integrations beyond their expected functional behavior.

1.3 Definitions & Acronyms

- **SRS:** Software Requirements Specification
- **UI:** User Interface
- **User:** Any individual interacting with the website. Can be a Guest or a Registered User.
- **Guest:** A user who has not logged into an account.
- **Registered User:** A user who has successfully created an account and is logged in.
- **Cart:** A virtual shopping cart to hold products before purchase.

2. Overall Description

2.1 Product Perspective

The system is a standalone, customer-facing e-commerce web application. Its primary purpose is to allow users to browse and purchase various clothing products in a simulated environment. It is also intentionally designed to be a practice ground for test automation engineers, featuring clear, distinct HTML elements, predictable user flows, and a dedicated test cases page.

2.2 User Characteristics

1. **Guest User:** Can browse products, search for products, filter products, view product details, and add items to the cart. Cannot complete the checkout process without registering or logging in.
2. **Registered User:** Possesses all the capabilities of a Guest User, plus the ability to complete the checkout process, view past orders, manage their account information, and delete their account.

2.3 General Constraints

- The system shall be a web-based application accessible via modern web browsers.
- All financial transactions are simulated; no real payment processing is involved.
- The system must rely on a stable internet connection for full functionality.
- The primary language of the website is English.

3. Specific Requirements

3.1 Functional Requirements

FR-AUTH: User Authentication Module

- **FR-AUTH-01:** A new user must be able to register for an account by providing a name and a unique email address on the 'Signup / Login' page.
- **FR-AUTH-02:** Upon submitting the initial signup form, the user must be directed to a detailed registration page to enter information (password, title, name, date of birth, address, phone number, etc.).
- **FR-AUTH-03:** The system shall validate that all mandatory fields on the registration page are filled.
- **FR-AUTH-04:** The system shall not allow registration with an email address that already exists in the database and shall display a clear error message: "Email Address already exist!".
- **FR-AUTH-05:** A registered user must be able to log in using their correct email and password.
- **FR-AUTH-06:** The system shall display an error message for login attempts with an incorrect email or password: "Your email or password is incorrect!".
- **FR-AUTH-07:** Upon successful login, the user must see their username displayed in the

header (e.g., "Logged in as [username]").

- **FR-AUTH-08:** A logged-in user must be able to log out via a 'Logout' button. Upon logging out, they should be redirected to the 'Signup / Login' page.
- **FR-AUTH-09:** A logged-in user must be able to delete their account via a 'Delete Account' button. Upon confirmation, a success message "ACCOUNT DELETED!" must be shown.

FR-PROD: Product Discovery Module

- **FR-PROD-01:** The homepage shall display featured products and product categories.
- **FR-PROD-02:** Users must be able to navigate to the 'Products' page to view a list of all available products.
- **FR-PROD-03:** Users must be able to click on a 'View Product' button for any product to navigate to its dedicated 'Product Details' page.
- **FR-PROD-04:** The 'Product Details' page must include the product name, image, category, price, availability, condition, brand, and description.
- **FR-PROD-05:** Users must be able to search for products using the search bar on the 'Products' page. The search results page should display all products matching the search query.
- **FR-PROD-06:** On the 'Products' page, users must be able to filter products by Category (e.g., Women, Men, Kids) and Sub-category (e.g., Dress, Tshirts).
- **FR-PROD-07:** On the 'Products' page, users must be able to filter products by Brand.

FR-CART: Shopping Cart Module

- **FR-CART-01:** Users must be able to specify a quantity and add a product to the shopping cart from the 'Product Details' page.
- **FR-CART-02:** After adding a product, a confirmation modal/pop-up should appear with options to 'View Cart' or 'Continue Shopping'.
- **FR-CART-03:** Users must be able to view the contents of their shopping cart by clicking the 'Cart' button in the header.
- **FR-CART-04:** The cart page must display each product as a line item with its image, description, price, quantity, and total price.
- **FR-CART-05:** The cart page must display the correct total price for all items.
- **FR-CART-06:** Users must be able to remove an item completely from the cart by clicking an 'X' (Remove) button next to the item.
- **FR-CART-07:** The cart contents must persist even if a Guest User navigates away and returns later in the same session.

FR-CHK: Checkout & Payment Module

- **FR-CHK-01:** Users must be able to proceed to the checkout page from the cart page via a 'Proceed To Checkout' button.
- **FR-CHK-02:** If a Guest User clicks 'Proceed To Checkout', they must be presented with a modal prompting them to 'Register / Login'.
- **FR-CHK-03:** The checkout page must display the user's delivery and billing address

details for confirmation.

- **FR-CHK-04:** The checkout page must display a summary of the items being ordered ('Review Your Order').
- **FR-CHK-05:** Users must be able to add comments or special instructions for their order in a text area before placing the order.
- **FR-CHK-06:** Upon clicking 'Place Order', the user is taken to a 'Payment' page.
- **FR-CHK-07:** Users must enter dummy payment information (Name on Card, Card Number, CVC, Expiration Month and Year).
- **FR-CHK-08:** After submitting payment details, the system shall display an order confirmation message: "Your order has been placed successfully!".
- **FR-CHK-09:** The system must provide an option to download an invoice for the placed order.

FR-MISC: Miscellaneous Features

- **FR-MISC-01:** Users must be able to submit inquiries via the 'Contact Us' form by providing a name, email, subject, message, and optionally uploading a file. A success message must be shown upon submission.
- **FR-MISC-02:** Users must be able to navigate to the 'Test Cases' page from the main header to view a list of predefined test scenarios.
- **FR-MISC-03:** Users must be able to subscribe to a newsletter by entering their email in the footer subscription box. A success message "You have been successfully subscribed!" must be shown.

3.2 Non-Functional Requirements

NFR-PERF: Performance

- **NFR-PERF-01:** All pages on the website must have a Largest Contentful Paint (LCP) of under 3 seconds on a standard broadband connection.
- **NFR-PERF-02:** The product search functionality must return results in under 2 seconds for typical queries.
- **NFR-PERF-03:** Server response time for all API requests should be below 500ms under normal load.

NFR-USAB: Usability & UI

- **NFR-USAB-01:** The website shall have a consistent and intuitive navigation structure across all pages (Header, Footer, Sidebars).
- **NFR-USAB-02:** All interactive elements (buttons, links, input fields) must be clearly identifiable and provide visual feedback upon interaction (e.g., hover effects, focus outlines).
- **NFR-USAB-03:** The website layout must be responsive and render correctly without loss of functionality on major desktop (e.g., 1920x1080), tablet (e.g., 768x1024), and mobile (e.g., 375x667) screen sizes.
- **NFR-USAB-04:** All form validation error messages must be clear, specific, and displayed in close proximity to the field in error.

- **NFR-USAB-05:** The website must adhere to WCAG 2.1 Level AA accessibility standards for color contrast and keyboard navigation.

NFR-SEC: Security

- **NFR-SEC-01:** All communication between the client and server must be encrypted using a valid and current HTTPS (TLS) certificate.
- **NFR-SEC-02:** User passwords must be securely hashed (e.g., using bcrypt) before being stored in the database.
- **NFR-SEC-03:** The application should be free from common web vulnerabilities such as Cross-Site Scripting (XSS) and SQL Injection.

NFR-COMP: Compatibility

- **NFR-COMP-01:** The website must be fully functional on the latest stable versions of the following web browsers: Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
- **NFR-COMP-02:** The website's core functionalities should work correctly with JavaScript enabled.

4. References

- **Automation Exercise Website:** https://automationexercise.com/
- **Automation Exercise Test Cases:** https://automationexercise.com/test_cases