Software Requirements Specification ((SRS

Project: Automation Exercise E-Commerce Platform
Target URL: https://automationexercise.com/
Version: 1.0

Introduction .1

Purpose 1.1

The purpose of this document is to define the functional and non-functional requirements for the "Automation Exercise" website. This platform serves as a practice environment for automation testers, mimicking a fully functional e-commerce store.

Scope 1.2

The software is a web-based e-commerce application allowing users to browse products, manage accounts, add items to a cart, and simulate the checkout process. It also includes an administration backend for product management.

Functional Requirements .2

User Authentication & Account Management 2.1

Responsible: Mariam Isaac

Description	Priority	ID
User shall be able to create an account by providing required details and receive a confirmation message or email.	High	**REQ_AUTH_001**
Registered users shall be able to log in using valid credentials and access their dashboard.	High	**REQ_AUTH_002**
System shall allow users to reset forgotten passwords	Medium	**REQ_AUTH_003**

Description	Priority	ID
by sending a secure reset link via email.		
System shall display past orders with details such as order ID, date, items, and status.	Medium	REQ_AUTH_004
Logged-in users shall be able to update their address and change their password securely.	Medium	REQ_AUTH_005

2.2 Product Browsing & Discovery

Responsible: Ereny Andro

Description	Priority	ID
Homepage shall correctly display all branded sections, categories, and featured items.	High	REQ_PROD_008
Users shall be able to navigate smoothly between product categories with no broken links or delays.	High	REQ_PROD_009
Product listing pages shall display accurate product information, including name, image, price, and key details.	High	REQ_PROD_010
The system shall allow sorting of products by price, name, or specifications.	Medium	REQ_PROD_011
The system shall support product filtering based on	High	REQ_PROD_012

Description	Priority	ID
attributes (e.g., price range, brand, specifications).		
Users shall be able to toggle product listing view between Grid and List layouts.	Medium	**REQ_PROD_013**
The global search bar shall accept queries by product name, category, and brand.	High	**REQ_PROD_014**
Search results shall accurately match entered keywords and display relevant products.	High	**REQ_PROD_015**
Product detail page shall display complete information including product description, multiple images, and price.	High	**REQ_PROD_016**

2.3 Shopping Cart & Checkout

Responsible: Mariam Farghi

Description	Priority	ID
Users shall be able to specify a product quantity and add items to the shopping cart directly from the product details page.	High	**REQ_CART_017**
After adding a product to the cart, a confirmation pop-up or modal shall appear with options to "View Cart" or "Continue Shopping".	Medium	**REQ_CART_018**

Users shall be able to view their shopping cart contents at any time by clicking the Cart button in the header section.	High	**REQ_CART_019**
The cart page shall display each product as a line item showing its image, description, price, quantity, and line total.	High	**REQ_CART_020**
The cart page shall correctly calculate and display the total price for all items in the cart.	High	**REQ_CART_021**
Users shall be able to remove items completely from the shopping cart using a Remove (X) button beside each item.	Medium	**REQ_CART_022**
The shopping cart contents for guest users shall persist throughout the browsing session, even if the user navigates away and returns.	High	**REQ_CART_023**
Users shall be able to proceed to the checkout process from the cart page using a Proceed to Checkout button.	High	**REQ_CART_024**
When a guest user clicks Proceed to Checkout, the system shall prompt them to Register or Login before continuing.	Medium	**REQ_CART_025**
The checkout page shall	High	**REQ_CART_026**

display the user's delivery and billing address details for confirmation before placing the order.		
The checkout page shall include a summary section titled "Review Your Order" listing all ordered items and their totals.	Medium	**REQ_CART_027**
Users shall be able to add comments or special instructions for their order in a designated text area before placing the order.	Low	**REQ_CART_028**
Upon clicking Place Order, users shall be redirected to the Payment page.	High	**REQ_CART_029**
The payment page shall allow users to enter dummy payment information including Name on Card, Card Number, CVC, Expiration Month, and Year.	High	**REQ_CART_030**
After submitting payment details, the system shall display an order confirmation message: "Your order has been placed successfully!"	High	**REQ_CART_031**
The system shall provide users with an option to download an invoice for the successfully placed order.	Medium	**REQ_CART_032**

2.4 Administration (Backend)

Description	Priority	ID
The system shall allow an admin to create new products by entering all required fields such as name, price, SKU, category, manufacturer, and image.	High	**REQ_ADMIN_031**
The system shall allow an admin to view all existing products in the catalog with full details displayed accurately.	High	**REQ_ADMIN_034**
The system shall allow an admin to update existing product information, including name, price, image, and inventory quantity.	High	**REQ_ADMIN_035**
The system shall allow an admin to delete products from the catalog with confirmation to prevent accidental deletion.	High	**REQ_ADMIN_036**
The system shall validate mandatory fields on the Add/Edit Product page and display appropriate error messages for missing or invalid input.	High	**REQ_ADMIN_037**
The system shall maintain synchronization and data consistency between the backend catalog and the frontend product listings.	High	**REQ_ADMIN_038**

Requirement	Priority	ID
The admin dashboard shall display accurate counts and statistics for products, categories, and manufacturers in real-time.	High	REQ_ADMIN_039
Dashboard metrics shall update automatically after Create, Read, Update, or Delete (CRUD) operations are performed on catalog items.	High	REQ_ADMIN_040

Non-Functional Requirements .3

(**Responsible:** Mohamed Asharf (Performance/NFR) & Mariam Isaac (Security/Auth UI

Performance 3.1

Requirement	Priority	ID
The website shall achieve a Largest Contentful Paint (LCP) of under 3 seconds on standard broadband connections for all major pages.	High	REQ_NFR_041
The product search functionality shall return results within 2 seconds for typical user queries under standard network conditions.	High	REQ_NFR_042
The average server response time for API requests shall be below 500 ms under normal load conditions.	High	REQ_NFR_043

Requirement	Priority	ID
Registration and Login pages shall have an intuitive design with clear labels and validation messages.	Low	REQ_AUTH_006
The website shall maintain a consistent and intuitive navigation structure (header, footer, sidebars) across all pages.	High	REQ_NFR_044
All interactive components (e.g., buttons, links, input fields) shall be visually identifiable and provide real-time feedback on interaction such as hover, focus, or click states.	Medium	REQ_NFR_045
The website layout shall be fully responsive, maintaining correct functionality and display across standard desktop (1920x1080), tablet (768x1024), and mobile (375x667) resolutions.	High	REQ_NFR_046
Validation error messages shall be clear, specific, and displayed adjacent to the related input field for all forms.	High	REQ_NFR_047
The website shall comply with WCAG 2.1 Level AA	High	REQ_NFR_048

Requirement	Priority	ID
accessibility standards, including color contrast ratios and keyboard-based navigation.		

3.3 Security

Requirement	Priority	ID
Authentication forms shall use HTTPS, encrypted passwords, and protect against common security vulnerabilities.	High	REQ_AUTH_007
All communications between client and server shall be encrypted via HTTPS using a valid TLS certificate at all times.	High	REQ_NFR_049
The application shall be hardened against common web vulnerabilities, including but not limited to XSS, SQL Injection, and CSRF attacks.	High	REQ_NFR_050

3.4 Compatibility

Requirement	Priority	ID
The website shall operate correctly on the latest stable versions of major browsers: Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.	High	REQ_NFR_051
All core website	High	REQ_NFR_052

functionalities shall work correctly when JavaScript is enabled, without causing script errors or feature malfunction.		