### **1. Project Overview**

### The purpose of this test plan is to validate the critical functionalities of the website<https://www.automationexercise.com/>, including user registration, login, product management, checkout, and additional functionalities such as subscription and contact forms. This plan ensures that each component functions as expected under different conditions.

### **2. Test Objectives**

The primary objectives of testing the website are:

1. **Functionality Testing**: Ensure all website functions work as expected, including navigation through tabs, adding items to the cart, and interacting with product details and forms (e.g., Signup/Login, Contact Us).
2. **Usability Testing**: Verify the site’s ease of use, including intuitive navigation between pages, well-organized content, and easy-to-find features (e.g., categories and products).
3. **Performance Testing**: Assess loading times, responsiveness, and page transitions to ensure a smooth user experience.
4. **Compatibility Testing**: Confirm that the website operates consistently across various browsers and devices.
5. **Security Testing**: Identify potential vulnerabilities, especially around Signup/Login, API Testing, and Contact Us forms.

### **3. Scope and Boundaries**

* **In Scope**:
  + **Header Tabs**: Test the functionality of the navigation tabs (Home, Products, Cart, Signup/Login, Test Cases, API Testing, Video Tutorials, and Contact Us).
  + **Home Page**: Test the featured items section, category sections, banners, and their switching mechanism.
  + **Products Page**: Test product display, category filtering, search functionality, and “Add to Cart” functionality.
  + **Cart Page**: Verify that items are correctly added, removed, and display accurate totals.
  + **Signup/Login**: Test both new user signup and login functionality, including error handling and validation.
  + **Contact Us Form**: Verify form submissions and validation for fields like email, name, and message content.
  + **API Testing and Video Tutorials Sections**: Ensure these sections load correctly and are accessible as expected.
* **Out of Scope**:
  + Detailed testing of API functionalities (since this requires API specifications and access details).
  + Performance under heavy traffic load, unless it’s part of a specific performance testing phase.
  + Any non-public features or pages that require specific credentials or access.

### **4. Risk Assessment and Prioritization**

* **High-Risk Areas**:
  + **Payment Gateway (if integrated)**: Ensure it’s working securely and correctly to avoid any transaction issues or data exposure.
  + **Signup/Login Functionality**: Key access point for users; high risk if not functioning due to user access issues and potential security vulnerabilities.
  + **Cart Functionality**: Incorrect functionality here could lead to frustrated customers and revenue loss.
  + **Product Search and Filtering**: Core e-commerce functions that impact user experience significantly if not working as expected.
  + **Contact Us Form**: If this fails, it could lead to a loss of user trust or communication with support.
* **Medium-Risk Areas**:
  + **Navigation Tabs**: Ensure all sections (Home, Products, Cart, Signup/Login, etc.) navigate correctly. Errors here could disrupt the shopping flow.
  + **Responsive Design**: Verify correct display and functionality on multiple screen sizes. Medium risk due to potential user frustration on mobile or tablet devices.
  + **Compatibility Testing**: Test on popular browsers and devices. Issues here affect some users but generally don’t prevent basic site operation.
* **Low-Risk Areas**:
  + **API Testing and Video Tutorials**: Lower priority since they’re not directly related to the e-commerce core functionalities but should still function correctly.
  + **Banner Switching on Home Page**: While important for the aesthetic and marketing aspect, it is less critical than e-commerce and navigation functionality.