#### **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.

#### **Objectives**

1. Verify that users can complete core workflows, such as registration, login, and product purchase.
2. Ensure accurate field validations and error messaging for various user actions.
3. Validate cart operations and checkout process, handling different cases like login during checkout.
4. Confirm additional features like subscribing to newsletters, contact forms, and downloading order invoices work seamlessly.

#### **Scope**

1. **User Registration**
2. **User Login**
3. **Product Management**
4. **Checkout Process**
5. **Additional Functionalities**

### **1. User Registration**

#### **Objective**

Validate that users can successfully register, handling cases like unique email requirements and field validations.

#### **Test Cases**

1. **Register User with Valid Data**
   * **Steps**: Navigate to Signup/Login > Enter all required data > Submit.
   * **Data Requirements**:
     + **Name**: Accepts 1-50 Latin letters, spaces, or hyphens.
     + **Email**: Requires Latin letters, digits, valid domain (e.g., user@example.com).
     + **Password**: 2-50 characters, using Latin letters and special characters.
   * **Expected Results**: User is directed to account information, successfully registered with entered data, and logged in.
2. **Register User with Existing Email**
   * **Steps**: Attempt registration with an already registered email.
   * **Expected Result**: Error message displayed for duplicate email, blocking registration.
3. **Register User with Invalid Email Format**
   * **Steps**: Enter an invalid email format (e.g., user@com).
   * **Expected Result**: Registration blocked, and error message displayed for incorrect email format.
4. **Password Strength Validation**
   * **Steps**: Enter a password with fewer than the required characters or without a mix of letters and numbers.
   * **Expected Result**: Error message for weak password; user prompted to use a stronger password.
5. **Empty Fields on Registration Form**
   * **Steps**: Leave one or more fields empty and attempt to register.
   * **Expected Result**: Error messages display for each empty field, blocking registration.

### **2. User Login**

#### **Objective**

Ensure users can log in with valid credentials and handle errors for invalid data entries.

#### **Test Cases**

1. **Login with Correct Email and Password**
   * **Steps**: Go to Signup/Login > Enter valid email and password > Submit.
   * **Expected Result**: User is redirected to the home page with a welcome message.
2. **Login with Incorrect Email or Password**
   * **Steps**: Enter incorrect email or password.
   * **Expected Result**: Error message shown; login prevented.
3. **Login with Empty Fields**
   * **Steps**: Leave email or password fields blank, then submit.
   * **Expected Result**: Error messages appear, and login is blocked.
4. **Password Eye Icon Validation**
   * **Steps**: Enter credentials in the login form > Verify eye icon in password field remains closed upon login.
   * **Expected Result**: Icon status does not change, ensuring password security.
5. **Login Attempt Limits**
   * **Steps**: Attempt multiple consecutive logins with incorrect data.
   * **Expected Result**: Login is temporarily restricted after a certain number of attempts, and a message displays.

### **3. Product Management**

#### **Objective**

Confirm that users can search, view, add, and remove products from the cart.

#### **Test Cases**

1. **Search for a Product**
   * **Steps**: Go to Products page > Search with keyword (e.g., "dress").
   * **Expected Result**: Relevant products display in the search results.
2. **Add Product to Cart**
   * **Steps**: Click "Add to cart" on a product > View cart.
   * **Expected Result**: Product is added to the cart with quantity set to 1.
3. **View Product Details**
   * **Steps**: Select a product > Open its details page.
   * **Expected Result**: Correct product information is displayed (image, title, description).
4. **Remove Product from Cart**
   * **Steps**: In the Cart page, select "Remove" for a product.
   * **Expected Result**: Product is removed successfully, and cart updates accordingly.
5. **Quantity Update in Cart**
   * **Steps**: In the cart, change the quantity of an item.
   * **Expected Result**: Cart reflects the updated quantity and recalculates the total.

### **4. Checkout Process**

#### **Objective**

Validate a seamless checkout experience, including scenarios with guest, registered, and logged-in users.

#### **Test Cases**

1. **Checkout with New Registration**
   * **Steps**: Add product to cart > Checkout > Register as a new user > Complete checkout.
   * **Data Requirements**: Valid payment information.
   * **Expected Result**: Order is confirmed, and the user is registered.
2. **Checkout with Existing Account**
   * **Steps**: Add product to cart > Login > Proceed to checkout.
   * **Expected Result**: User successfully places order.
3. **Verify Address on Checkout Page**
   * **Steps**: Add product > Login > Checkout.
   * **Expected Result**: Saved address details display correctly for billing and shipping.
4. **Coupon Code Validation**
   * **Steps**: Enter a valid coupon code at checkout.
   * **Expected Result**: Discount applies correctly; total is updated.
5. **Checkout with Invalid Payment Information**
   * **Steps**: Enter invalid payment details (e.g., expired card).
   * **Expected Result**: Error message displayed; checkout is blocked.

### **5. Additional Functionalities**

#### **Objective**

Verify the additional features like subscriptions, contact forms, and invoice downloads work as expected.

#### **Test Cases**

1. **Newsletter Subscription from Home Page**
   * **Steps**: Scroll to the footer > Enter email > Submit.
   * **Expected Result**: Success message for subscription is displayed.
2. **Subscription with Invalid Email Format**
   * **Steps**: Enter email in an invalid format (e.g., test@com).
   * **Expected Result**: Error message prompts user to enter a valid email.
3. **Contact Us Form Submission**
   * **Steps**: Fill out the form with valid details, attach a file, and submit.
   * **Expected Result**: Success message appears; form data is saved until reset.
4. **Invoice Download Post-Purchase**
   * **Steps**: Place an order > Select “Download Invoice.”
   * **Expected Result**: Invoice file download initiates successfully.
5. **Form Validation for Contact Us**
   * **Steps**: Submit form with missing or invalid data.
   * **Expected Result**: Form displays appropriate error messages for correction.

### **Assumptions**

* Test data includes valid and invalid cases for each form, such as existing emails for registration and login, and simulated payment details.
* System error handling and validations display helpful messages to guide users.

### **Risks**

* Potential delays or browser compatibility issues with pop-ups and file downloads.
* Test stability may depend on the website’s server response time and environment setup.

### **Dependencies**

* Access to the environment<https://www.automationexercise.com/>.
* Test data including valid login credentials, registered emails, and valid coupon codes.