**Test Strategy**

**1. Introduction**

This document outlines the testing strategy for automating end-to-end tests using Cypress for the **DELL** ecommerce platform. It details the objectives, scope, approach, resources, and schedule for the testing activities.

**2. Objectives**

* Ensure the core functionalities of the ecommerce platform, such as searching for products and adding them to the cart, work as expected.
* Validate the user experience and detect defects if any.

**3. Scope**

* **In-Scope:**
  + End-to-End testing of the search, add to cart processes.
  + Test scenarios covering product search, add to cart management, and checkout flow.
* **Out-of-Scope:**
  + Performance testing.
  + Security testing.

**4. Test Environment**

* **Test Environment:** Live website.
* **Browsers:** Latest version of Chrome.
* **Devices:** Desktop – MacBook Air.

**5. Test Approach**

* **Test Types:**
  + Functional Testing: Verify the functionality of the ecommerce workflows.
* **Test Levels:**
  + UI Testing: Validate the user interface elements and interactions.
  + E2E Testing: Verify the complete flow from searching for a product to adding it to the cart.

**6. Test Tools**

* **Automation Tool:** Cypress
* **IDE:** Visual Studio

**7. Test Design**

**Test Case 1:** Search for a Product

**Test Case ID**: TC01

**Title**: Verify user can search for a product and view the search results.

**Description**: This test case verifies that a user can successfully search for a product using the search bar and that the relevant search results are displayed.

**Priority:** High

**Preconditions**:

The search bar is accessible on the homepage.

**Test Steps**:

1. Navigate to the homepage of the DELL website.
2. Click on the search bar.
3. Enter the product name (Inspiron 15 Laptop) into the search bar.
4. Click the search icon to initiate the search.
5. Click on the first displayed product
6. Verify Title of the product matches with Search name

**Expected Results**:

* The search results page should be displayed after initiating the search.
* The search results should match the entered product name and display relevant items.

**Test Case 2**: Add Product to Cart

**Test Case ID**: TC02

**Title**: Verify user can add a product to the cart.

**Description**: This test case verifies that a user can add a product to the cart and that the cart count is updated accordingly.

**Priority:** High

**Preconditions**:

* The product is available and searchable.

**Test Steps**:

1. Navigate to the homepage of the DELL website.
2. Click on the search bar.
3. Enter the product name (XPS 15 Laptop) into the search bar.
4. Press "Enter" or click the search icon to initiate the search.
5. Select the first product from the search results.
6. Click the "Add to Cart" button on the product page.
7. Click on the Cart icon
8. Click on the subtotal
9. Verify that the cart count increases by one.
10. Verify Name of the Product added to cart

**Expected Results**:

* The product should be added to the cart when the "Add to Cart" button is clicked.
* The cart count should increase by one, reflecting the addition of the product.
* Product Name should be displayed on the cart page

**8. Test Data**

* **User Credentials:** Tested accounts without user credentials.
* **Products:** Sample products with varying product names (e.g., Inspiron 15 Laptop, XPS 15 Laptop).

**9. Test Execution**

* **Automation Execution:** Triggered using cypress dashboard.

**10. Defect Management**

* **Defect Lifecycle:** Identify → Log → Prioritize → Fix → Retest → Close

**11. Metrics**

* + Test Case Execution Rate
  + Defect Detection Rate
  + Test Coverage

**12. Risks**

* + Inconsistent environments – Browser compatibility.

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