**Advanced Development Test Plan**

**1. Introduction**

The test plan for the Advanced Development project aims to outline the testing strategy, objectives, resources, and scope. This plan will ensure that all components of the application are tested for functionality and security.

**2. Objectives**

* Verify that all features and functionalities work as expected.
* Ensure compatibility on a Windows computer.

**3. Scope**

The scope of this test plan includes:

* Unit Testing

**4. Testing Strategy**

**Unit Testing**

* **Objective**: To test individual components or functions of the application in isolation.
* **Tools**: xUnit, Moq
* **Scope**: ProductService, ProductController, WishlistController
* **Approach**: Write unit tests for all public methods, ensuring all features give the expected result.

**5. Test Environment**

* **Hardware**: Windows computer
* **Software**: Windows OS, .NET Core SDK, Visual Studio, Browsers (Chrome, Firefox, Edge)

7. Test Cases

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test Case Description** | **Test Steps** | **Expected Result** | **Actual Result** | **Status** |
| TC01 | Add Product to Wishlist | 1. Navigate to product page.  2. Click "Add to Wishlist" button. | Product is added to the wishlist and appears in the wishlist page. | Product is added to the wishlist and appears in the wishlist page. | Working |
| TC02 | Remove Product from Wishlist | 1. Navigate to wishlist page  2. Click "Remove" button next to product. | Product is removed from the wishlist. | Product is removed from the wishlist. | Working |
| TC03 | Submit Product Review | 1. Navigate to product details page  2. Submit a review form. | Review is added to the product and displayed on the product details page. | Review is added to the product and displayed on the product details page. | Working |
| TC04 | View Recently Viewed Products | 1. View multiple product details pages  2. Navigate to products page. | Recently viewed products are displayed on the products page. | Recently viewed products are displayed on the products page. | Working |
| TC05 | Filter Products by Brand and Gender | 1. Apply filters for brand and gender on the products page. | Products list updates to show only products matching the selected brand and gender. | Products list updates to show only products matching the selected brand and gender. | Working |
| TC06 | Sort Products by Price | 1. Select "Price: Low to High" or "Price: High to Low" from the dropdown. | Products list updates to show products sorted by price in the selected order. | Products list updates to show products sorted by price in the selected order. | Working |
| TC07 | Get Average Product Rating | 1. Submit multiple reviews for a product. | Average rating is correctly calculated and displayed on the product details page. | Average rating is correctly calculated and displayed on the product details page. | Working |
| TC08 | Display Related Products | 1. View a product details page. | Related products are displayed on the product details page. | Related products are displayed on the product details page. | Working |