**Comprehensive Test Cases Document**

**Project:** E-Commerce Website - Add to Cart Functionality  
**Document Version:** 1.0  
**Date:** October 26, 2023  
**Prepared by:** Simran Shaikh

**Test Cases: Add Lowest Priced Product to Cart**

**User Story:** As a logged-in user on an e-commerce website, I can select the product with the lowest price by checking their prices, and can perform "add to cart" on it if it is available in the inventory.

**Feature:** Product Catalogue & Shopping Cart  
**Test Suite:** E-Commerce - Product Selection & Cart Management

**1. Product List Page & Price Display Test Cases**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **PLP-01** | Verify display of product information | 1. User is logged in 2. On product list page | 1. Observe products listed on page | - | Each product displays: Product Name, Price, "Add to Cart" button, Available Quantity |  | High |
| **PLP-02** | Verify identification of lowest-priced product | 1. User is logged in 2. Page has products with different prices | 1. Scroll through product list 2. Identify product with lowest price | Products: $10, $15, $5, $20 | User can identify $5 product as lowest price. UI supports easy price comparison |  | High |

**2. Add to Cart Functionality & Inventory Validation**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **ATC-01** | Add low-priced IN-STOCK product to cart | 1. User logged in 2. Low-priced product identified 3. Qty > 0 | 1. Click "Add to Cart" for low-priced product | Product: "Basic Widget" Price: $5 Qty: 10 | 1. Success notification: "Item added to cart successfully" 2. Cart counter increments by 1 3. Product in cart with correct details |  | Critical |
| **ATC-02** | Attempt to add OUT-OF-STOCK product to cart | 1. User logged in 2. Low-priced product identified 3. Qty = 0 | 1. Locate out-of-stock product 2. Observe "Add to Cart" button | Product: "Budget Cable" Price: $2 Qty: 0 | 1. Button disabled or shows "Out of Stock" 2. No success notification if clicked |  | High |
| **ATC-03** | Verify cart persistence after page refresh | 1. User logged in 2. Product added to cart | 1. Refresh browser page | - | 1. Cart counter maintains count 2. Product remains in cart |  | Medium |
| **ATC-04** | Verify cart contents are user-specific | 1. Two users logged in (User A & B) | 1. User A adds product to cart 2. User B checks cart | - | 1. User A's cart contains product 2. User B's cart is empty/contains own items |  | High |

**3. Notification & User Feedback Test Cases**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **NOT-01** | Verify success notification properties | 1. User logged in 2. Product in stock | 1. Click "Add to Cart" 2. Observe notification | - | 1. Text: "Item added to cart successfully" 2. Clear visual design (green) 3. Auto-disappears or has close button |  | High |
| **NOT-02** | Verify no success notification on failure | 1. User logged in 2. Product out of stock | 1. Click "Add to Cart" for out-of-stock item | - | No success notification. Error message may appear |  | Medium |

**4. Boundary & Edge Cases**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **EDGE-01** | | Add product with quantity of 1 (low stock) | 1. User logged in 2. Product qty = 1 | 1. Click "Add to Cart" once 2. Click "Add to Cart" again | Product: "Clearance Item" Price: $1 Qty: 1 | 1. First click: Success 2. Second click: Button disabled or error message |  | High |
| **EDGE-02** | | Multiple products with same lowest price | 1. User logged in 2. Multiple products at same lowest price | 1. Add one lowest-priced product 2. Add other lowest-priced product | Product A: "Pen" $5 Product B: "Notepad" $5 | User can add both lowest-priced products successfully |  | Medium |

**5. Performance, Data & Advanced Scenarios**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **PER-01** | Rapidly add multiple different items | User logged in | 1. Quickly click "Add to Cart" for Product A 2. Immediately click for Product B | Two different in-stock products | Cart count increments to 2. Both items in cart correctly. No race conditions |  | High |
| **PER-02** | Add to cart with slow network | User logged in | 1. Throttle network to "Slow 3G" 2. Click "Add to Cart" | In-stock product | 1. Button shows loading state 2. Success appears after call completes 3. No double-adds |  | Medium |
| **DATA-01** | Price changes after page load | 1. User on product page 2. Admin changes price | 1. Observe original price 2. Click "Add to Cart" without refresh | Price changes from $5 to $8 | Cart shows price at time of add ($5) OR shows price update message |  | Critical |
| **DATA-02** | Item goes out of stock after page load | 1. User on product page 2. Last item sold to another user | 1. Observe in-stock status 2. Click "Add to Cart" | Qty changes from 1 to 0 | Error: "Sorry, item no longer available." Item not added to cart |  | Critical |
| **CART-01** | Cart count with multiple quantities | User logged in | 1. Set quantity to 3 2. Click "Add to Cart" | Product: "Widget" Qty: 3 | Cart counter increments by 3. Cart shows quantity 3 |  | High |
| **UI-01** | UI behavior after adding item | User added item to cart | 1. Observe "Add to Cart" button after success | - | Button changes state (disabled/"Added"/quantity selector). Not clickable "Add to Cart" |  | Medium |
| **SEC-01** | Manipulate product price in API call | Tech-savvy user logged in | 1. Intercept API call 2. Change price parameter 3. Forward request | Change price: $10 → $1 | Backend rejects request or ignores manipulated price. Original price maintained |  | Critical |

**6. Cross-Browser & Compatibility Testing**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **COMP-01** | Chrome compatibility | User logged in on Chrome | Execute key test cases ATC-01, ATC-02 | - | All functionality works correctly on Chrome |  | High |
| **COMP-02** | Firefox compatibility | User logged in on Firefox | Execute key test cases ATC-01, ATC-02 | - | All functionality works correctly on Firefox |  | High |
| **COMP-03** | Mobile responsiveness | User on mobile device | 1. Browse products 2. Add to cart | - | UI responsive, touch targets appropriate, functionality works |  | Medium |

**7. Accessibility Testing**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TC ID** | **Test Case Title** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Status** | **Priority** |
| **A11Y-01** | Screen reader compatibility | Screen reader active | 1. Navigate product list 2. Add to cart | - | Screen reader announces prices, availability, and success notification |  | Medium |
| **A11Y-02** | Keyboard navigation | Keyboard only | 1. Tab to product 2. Tab to "Add to Cart" 3. Press Enter | - | All functionality accessible via keyboard only |  | Medium |

**Test Execution Summary**

**Testing Types Covered:**

* ✅  **Functional Testing** - Core add to cart functionality
* ✅  **Negative Testing** - Invalid scenarios and error conditions
* ✅  **Performance Testing** - Network conditions and race conditions
* ✅  **Security Testing** - API manipulation attempts
* ✅  **Usability Testing** - User interface and experience
* ✅  **Accessibility Testing** - Screen reader and keyboard navigation
* ✅  **Compatibility Testing** - Cross-browser and mobile testing
* ✅  **Data Integrity Testing** - Price and inventory consistency
* ✅  **Boundary Testing** - Edge cases and limits

**Total Test Cases: 21**

**Priority Distribution:**

* **Critical:** 5 test cases
* **High:** 10 test cases
* **Medium:** 6 test cases**Sign-off**

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Name | Signature | Date |
| Test Lead | Simran Shaikh |  |  |
| Product Owner | TBD |  |  |
| Development Lead | TBD |  |  |