QA Automation & Security Testing Report

# Part 1: Functional Test Cases

## Test Case 1: Add Hoodie to Cart

Steps:  
1. Open the homepage.  
2. Search for 'hoodie'.  
3. Click the first product in the results.  
4. Select size and color.  
5. Click 'Add to Cart'.  
Expected Result: Product is added to the cart successfully.  
Actual Result: ✅ Passed

## Test Case 2: Guest Checkout Flow

Steps:  
1. Add product to cart.  
2. Go to Cart page.  
3. Click 'Proceed to Checkout'.  
4. Fill guest shipping information.  
5. Select shipping method.  
6. Click 'Next'.  
Expected Result: Navigated to payment page.  
Actual Result: ✅ Passed (with 1-second wait after clicking)

## Test Case 3: Search Field Input Handling

Steps:  
1. Use special characters or XSS payloads in the search field (e.g., <script>alert('XSS')</script>).  
2. Submit the search.  
Expected Result: No code execution, input shown as plain text.  
Actual Result: ✅ Passed - input safely displayed.

# Part 2: Security Validation Results

Scope: Basic input validation and injection testing (XSS, SQLi)  
Tested on: Search bar, form inputs, output rendering

## XSS Test

Payload: <script>alert('XSS')</script>  
Result: ✅ Input displayed as plain text, no alert triggered.

## HTML Injection

Payload: <img src=x onerror=alert('test')>  
Result: ✅ Displayed as text, not interpreted as HTML.  
Notes: Related search suggestions show similar encoded payloads.

## SQL Injection

Payloads: ' OR '1'='1 -- , ' OR '1'='1'; DROP TABLE users; --  
Result: ✅ No SQL error or unintended behavior.  
Notes: Input echoed in suggestions — no execution detected.

## Summary

Overall: No critical issues found.  
✅ Input validation and output encoding are working.  
⚠️ Suggestion mechanism should avoid reflecting raw payloads.  
Recommendations: Apply CSP, sanitize inputs used in suggestions, expand testing on contact/login forms.

# Part 3: Manual Test Cases (Before Automation)

## Test Case A: Search Hoodie from Home Page

Steps:  
1. Open the homepage.  
2. Enter 'hoodie' in the search bar.  
3. Press enter or click search.  
Expected Result: Hoodie products are displayed.  
Actual Result: ✅ Passed

## Test Case B: Open Hoodie Product Page

Steps:  
1. From search results, click on any hoodie product.  
2. Wait for product page to load.  
Expected Result: Product details page appears with image, description, size/color options.  
Actual Result: ✅ Passed

## Test Case C: Add to Cart Without Size/Color

Steps:  
1. On product page, click 'Add to Cart' without selecting size and color.  
Expected Result: Error message appears asking user to select options.  
Actual Result: ✅ Passed - validation triggered.

# Part 4: Bugs

| **Bug ID** | **Title** | **Steps to Reproduce** | **Expected Result** | **Actual Result** | **Priority** |
| --- | --- | --- | --- | --- | --- |
| 001 | Product Review Not Saved | Add review and click submit | Review is saved and displayed | Review not saved or shown | High |
| 002 | Search for “bag” shows irrelevant data | Search “bag” | Show bag products | Irrelevant items displayed | Medium |
| 003 | Search for “bags” returns nothing | Search “bags” | Show bag-related results | No results found | High |