

## Final Documentation

### – Manual Testing Project: Automation Exercise

Module: Products

Tester: Esraa

Date: 14/11/2025

Testing Type: Manual Testing

#### 1. Test Summary

Item	Description
Total Test Cases	27
Passed	21
Failed	6
Not Executed	3
Pass Rate	77.78%

#### Positive Scenarios (Passed):

- **TC\_1:** Verify Product page loads successfully
  - **TC\_2:** Verify search bar is visible
  - **TC\_3:** Verify search functionality
  - **TC\_5:** Verify search is not case-sensitive
  - **TC\_7:** Verify search for non-existent product
    - **TC\_9:** Verify categories are displayed
- **TC\_10, TC\_11, TC\_12:** Verify category filtering (Women, Men, Kids)
  - **TC\_13, TC\_14:** Verify brand filtering
- **TC\_15 to TC\_20:** Verify product details and Add to Cart button
  - **TC\_23:** Verify View Product button

- TC\_24 to TC\_26: Verify review submission (valid/invalid email)

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### 3. Defects Found

Defect ID	Test Case	Description	Priority	Status
#1	TC_4	Unrelated product appears when searching for "dress"	Low	Assigned
#2	TC_8	No message displayed when no search results	High	Assigned
#3	TC_6	Search doesn't handle hyphenated words (t-shirt vs tshirt)	High	Assigned
#4	TC_21	Extra unwanted products added to cart	High	Assigned
#5	TC_22	Deleted products reappear in cart	High	Assigned
#6	TC_27	Name field accepts special chars/numbers in review	Low	Assigned

### 4. Test Coverage

- ☒ Search functionality
- ☒ Filtering (Category & Brand)
- ☒ Product display (image, name, price)
- ☒ Add to Cart behavior
- ☒ Product review submission
- ☒ UI validation (currency, buttons, visibility)

## 5. Recommendations

1. إصلاح مشاكل عربة التسوق عالية الأولوية - تؤثر على تجربة المستخدم بشكل مباشر
  2. تحسين محرك البحث - يدعم الكلمات المركبة والنتائج الفارغة
  3. تحسين رسائل المستخدم - خاصة في حالات عدم وجود نتائج
  4. التحقق من صحة الحقول في التقييم - منع إدخال رموز غير صالحة
5. -----

### - API Testing Project: Automation Exercise

Tester: Esraa

Testing Type: API Testing

#### 1. Test Summary

Item	Description
Total API Test Cases	14
Passed	14
Failed	0
Pass Rate	100%

## 2. API Test Cases Executed

### ☒ Products & Brands APIs (Passed):

- TC\_API\_1: GET All Products List → 200 OK
- TC\_API\_2: POST All Products List → 405 Method Not Allowed
  - TC\_API\_3: GET All Brands List → 200 OK
- TC\_API\_4: PUT All Brands List → 405 Method Not Allowed
  - TC\_API\_5: POST Search Product → 200 OK
- TC\_API\_6: POST Search Product without parameter → 400 Bad Request

### ☒ Authentication & User APIs (Passed):

- TC\_API\_7: POST Verify Login with valid details → 200 OK

- **TC\_API\_8:** POST Verify Login without email → 400 Bad Request
  - **TC\_API\_9:** DELETE Verify Login → 405 Method Not Allowed
- **TC\_API\_10:** POST Verify Login with invalid details → 404 Not Found
  - **TC\_API\_11:** POST Create User Account → 201 Created
    - **TC\_API\_12:** DELETE User Account → 200 OK
    - **TC\_API\_13:** PUT Update User Account → 200 OK
    - **TC\_API\_14:** GET User Details by Email → 200 OK

### 3. API Defects Found

بنجاح Test Cases Passed لا توجد أية أخطاء - جميع الـ

### 4. Test Coverage

- ☒ **CRUD Operations** (Create, Read, Update, Delete)
- ☒ **HTTP Methods Validation** (GET, POST, PUT, DELETE)
  - ☒ **Authentication & Authorization**
  - ☒ **Error Handling** (400, 404, 405)
  - ☒ **Request/Response Validation**
    - ☒ **Parameter Validation**

#### API Endpoints Tested

Endpoint	Methods Tested	Status
/api/productsList	GET, POST	<input checked="" type="checkbox"/>
/api/brandsList	GET, PUT	<input checked="" type="checkbox"/>
/api/searchProduct	POST	<input checked="" type="checkbox"/>

/api/verifyLogin	POST, DELETE	✓
/api/createAccount	POST	✓
/api/deleteAccount	DELETE	✓
/api/updateAccount	PUT	✓
/api/getUserDetailByEmail	GET	✓

## 🔒 6. Security & Validation Tests

- ✓ **Method Not Allowed (405)** - لمنع الوصول غير المسموح
  - ✓ **Bad Request (400)** - للبيانات الناقصة
  - ✓ **Not Found (404)** - للبيانات غير الموجودة
  - ✓ **Authentication** - تحقق من تسجيل الدخول
- ✓ **User Management** - إنشاء، تعديل، حذف المستخدمين

## Tools & Environment

- Tool Used: Postman
- Base URL: <https://automationexercise.com>
- Documentation: <https://automationexercise.com/api list>

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## 🎓 Performance Testing Summary - JMeter

Project: Automation Exercise

Tester: Esraa

## Test Overview

- Scenario: Verify Login API Load Test
  - Users: 50 concurrent users
  - Requests: 50 requests total
- Endpoint: POST /api/verifyLogin

## Key Results

Metric   Value   Status		
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Avg Response Time	1768 ms	⚠ Needs Improvement
Min Response Time	1055 ms	✅ Good
Max Response Time	1958 ms	⚠ Slow
Error Rate	0%	✅ Excellent
Throughput	~6 req/sec	⚠ Low

## Findings

### ✅ Strengths:

- 100% success rate - no errors
- Stable performance (low deviation)
  - Reliable under 50-user load

### ⚠ Areas for Improvement:

- Response times exceed 1-second standard
  - Throughput needs optimization
- Inconsistent performance across users

### **Recommendations**

1. Optimize login API code efficiency
2. Improve database query performance
3. Consider implementing caching
4. Test with higher loads (100+ users)

### **Conclusion**

API is reliable but requires performance optimization for better user experience.

Ready for production with performance improvements.