

# Day 5

## Testing, Error Handling, and Backend Integration Refinement

Conducted testing, error handling, and backend integration improvements for a seamless shopping experience.

### Testing Overview

- Performed functional testing on product listings, cart operations, search/filter features, and dynamic routing.
- Ensured proper error handling and smooth user interactions.
- Verified responsiveness across different devices.
- Used **Thunder Client & Lighthouse** for API testing and performance validation.

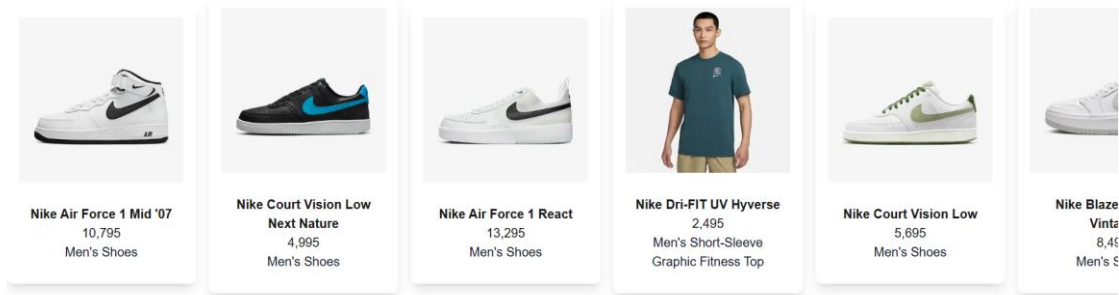
### Steps for Implementation

- **Functional Testing:** Tested core features like product display, search, cart updates, and dynamic routing using **Thunder Client**, React Testing Library, and Cypress.
- **Error Handling:** Used **try-catch blocks** for API errors, added fallback UIs, and displayed clear error messages for better user experience.
- **Performance Optimization:** Optimized assets, analyzed performance with **Lighthouse**, and improved load times using **lazy loading** and minimized CSS/JavaScript.
- **Cross-Browser & Device Testing:** Ensured consistent performance across different browsers and devices through **manual testing** and compatibility checks.
- **Security Measures:** Implemented **input validation**, secured API calls with HTTPS, and followed best security practices to prevent vulnerabilities.
- **User Acceptance Testing (UAT):** Simulated real-world usage, gathered feedback, and refined the UI/UX based on usability testing.

### Issues

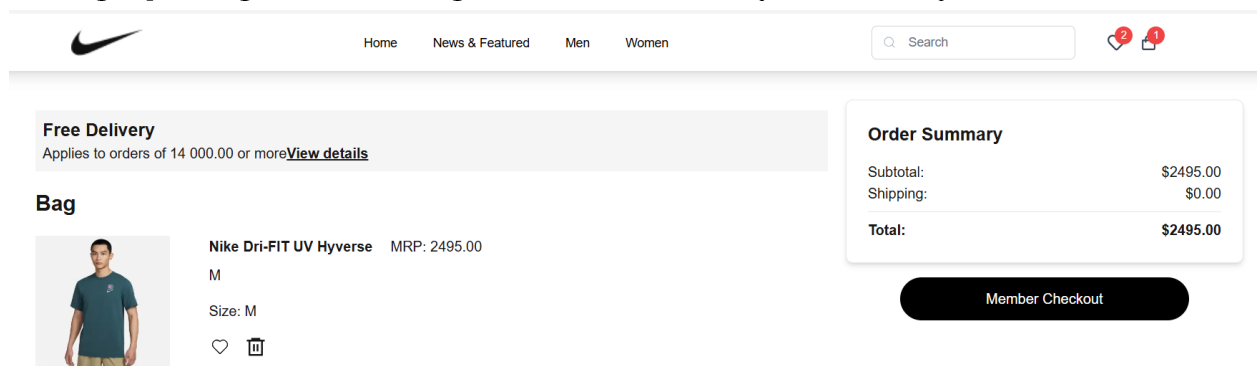
## 1. Product Listings – test case 01: (no issue)

Ensured accurate product display with consistent data integrity across all use cases.



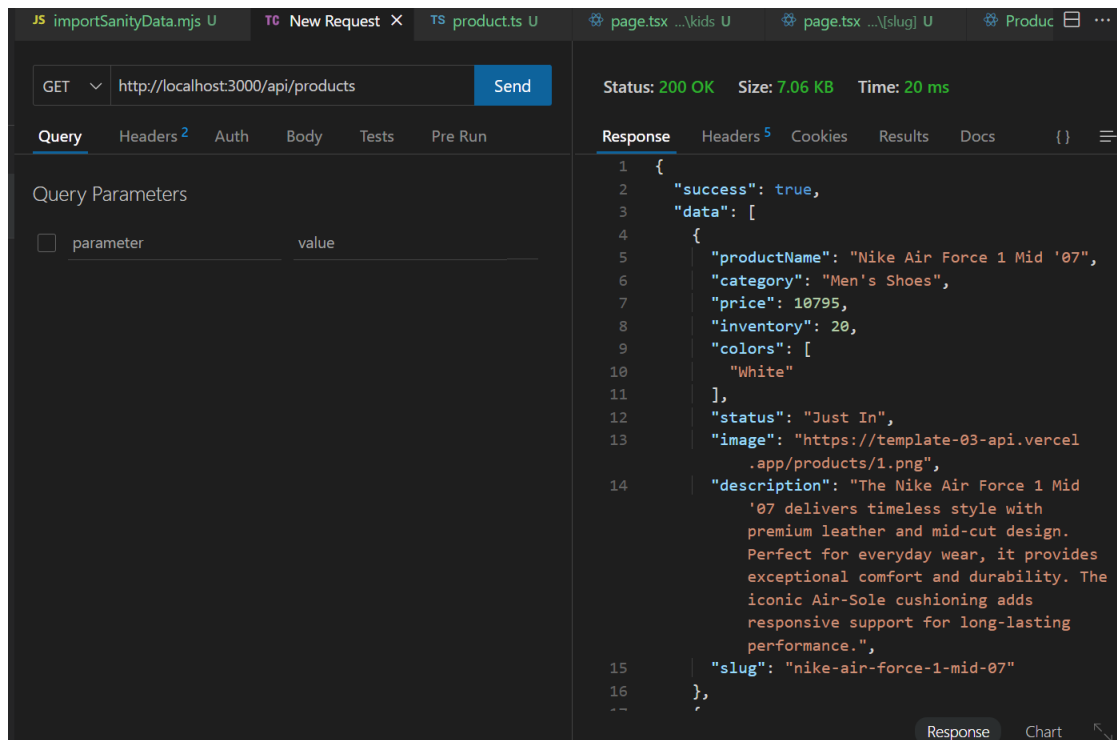
## 2. Add to Cart – test case 02: (no issue)

Adding, updating, and removing items work smoothly without any issues.



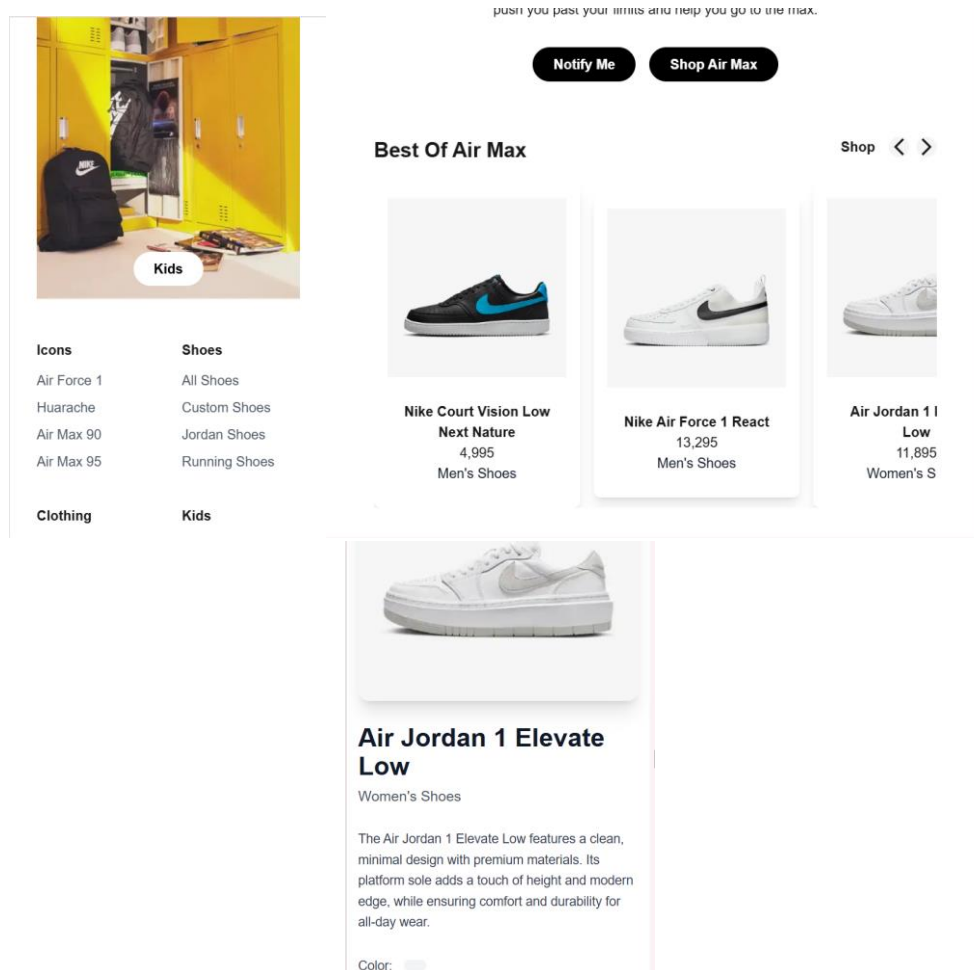
## 3. API testing – test case 03: (no issue)

Tested API response using ThunderClient.



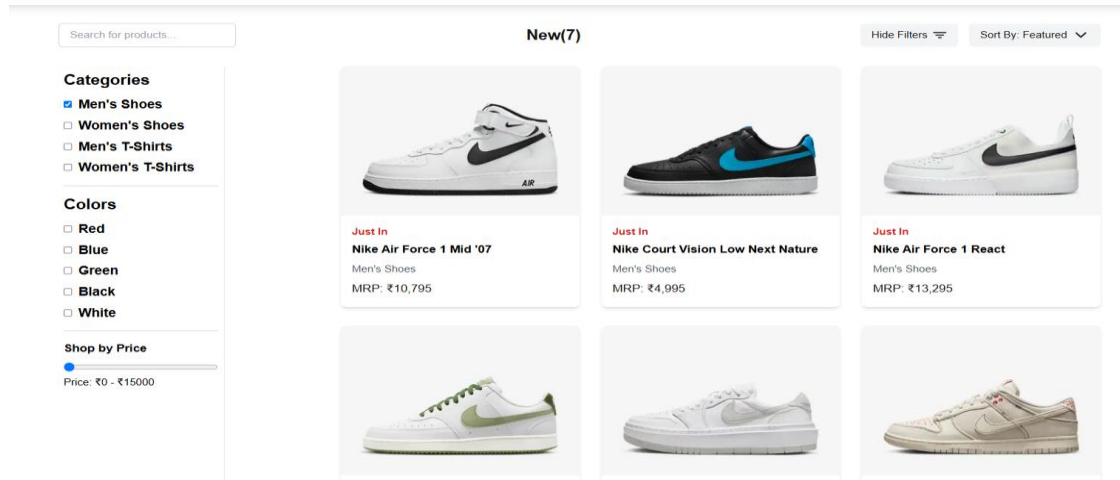
## 4. Responsiveness – test case 04: (no issue)

All components are responsive for all devices.



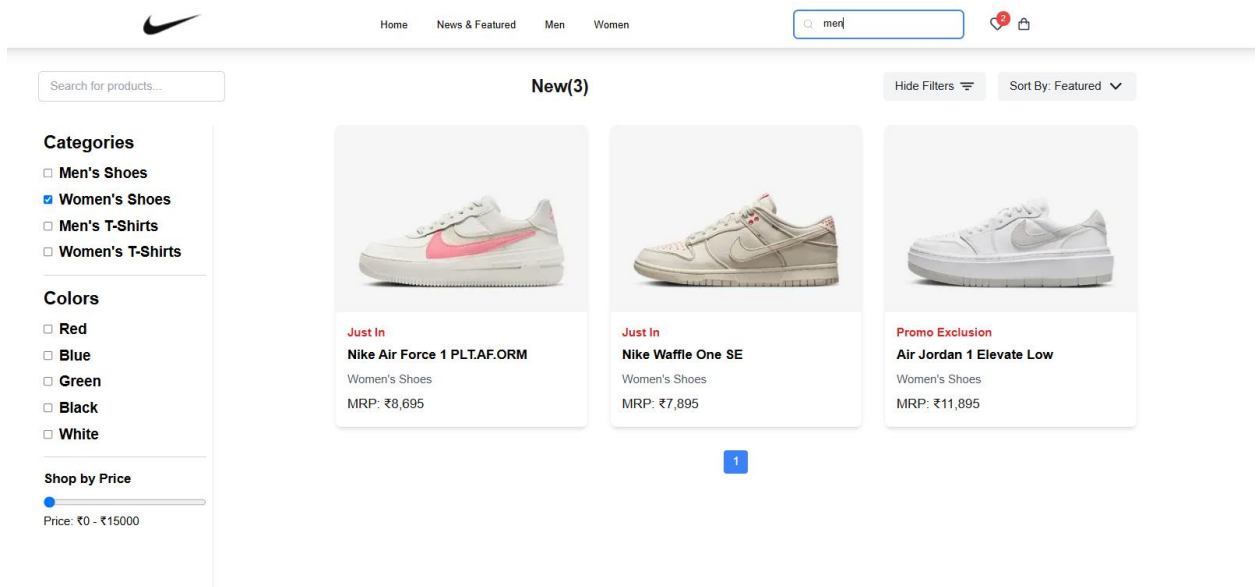
## 5. Filter and Search – test case 05: (facing issue in search products)

**Filters:** Products are correctly filtered based on category names.




Search Issue: Incorrect results due to improper query handling.

Resolution: Refined query logic and tested edge cases to ensure accurate filtering and search results.



## 6. Dynamic routing – test case 06: (no issue)

Dynamic routes load correctly without errors or missing parameters.



## Nike Dri-FIT UV Hyverse

Men's Short-Sleeve Graphic Fitness Top

The Nike Dri-FIT UV Hyverse graphic top offers comfort and UV protection in style. Made from soft, breathable fabric, this fitness top keeps you cool and dry during workouts or casual outings.

Color:

**₹2,495**

Size

Select Size

Add to Cart

Add to Wishlist

## Testing Report

| Test Case ID | Test Case Description      | Test Steps                             | Expected Result                           | Actual Result                                   | Status | Severity Level | Remarks                        |
|--------------|----------------------------|--|---|---|--------|----------------|--------------------------------|
| TC001        | Validate Product Listing   | Open product page                      | Products displayed correctly              | Products displayed correctly                    | Passed | Low            | No issue                       |
| TC002        | Test Add to Cart           | Add, update, and remove items in cart  | Cart updates correctly                    | Cart updates correctly                          | Passed | Medium         | No issue                       |
| TC003        | API Testing                | Test API response using ThunderClient  | API responds correctly                    | API responds correctly                          | Passed | Medium         | No issue                       |
| TC004        | Ensure Responsiveness      | Resize browser window, test components | Layout adjusts properly for all devices   | Responsive layout working as intended           | Passed | Medium         | No issue                       |
| TC005        | Validate Filter and Search | Apply filters, perform a search query  | Accurate filtering and search results     | Filters work correctly, search had query issues | Passed | High           | Issue in search, query refined |
| TC006        | Verify Dynamic Routing     | Load dynamic product routes            | Routes load correctly with all parameters | Routes load correctly with all parameters       | Passed | Medium         | No issue                       |