

# DAY 5 - Testing and Backend Refinement -Nike store

Date: [21-1-25]

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Project: [TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT]

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## Overview

Day 5 focused on ensuring robustness and scalability through comprehensive testing, efficient error handling, and backend optimizations. Key tasks included integration testing, input validation, performance optimization, and monitoring responsiveness across devices.

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## Key Achievements

### 1. Test Cases Summary:

- **Total Test Cases:** 7
- **Status:** All test cases successfully passed.
- **Critical Tests:**
  - Validation of product pages (listing and details).
  - API error handling with fallback mechanisms.
  - Responsiveness checks on mobile devices.

- **Lighthouse Performance Score:** 55/100
  - **Areas for Improvement:**
    - Device-specific CPU slowdown affecting performance.

	Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Status	Severity Level	Assigned To	Remarks
1	TC001	Validate product listing page	Open product page > Verify products	Products displayed correctly	Products displayed correctly	Passed	High	-	No issues found
2	TC002	Validate product detail page	Open product detail page > Verify products	Products detail displayed correctly	Products detail displayed correctly	Passed	High	-	No issues found
3	TC003	Test API error handling	Disconnect API > Refresh page	Show fallback UI with error message	Error message shown	Passed	high	-	Handled gracefully
4	TC004	Check cart functionality	Add product to wishlist > Verify cart contents	wishlist updates with added product	wishlist updates as expected	Passed	High	-	Works as expected
5	TC005	Check cart functionality	Add product to cart > Verify cart contents	Cart updates with added product	Cart updates as expected	Passed	High	-	Works as expected
6	TC006	Check order detail	info in order detail > view info	change acc to information	updates as expected	Passed	high	-	Test successful
7	TC007	Ensure responsiveness on mobile	Resize browser window > Check layout	Layout adjusts properly to screen size	Responsive layout working as intended	Passed	high	-	Test successful

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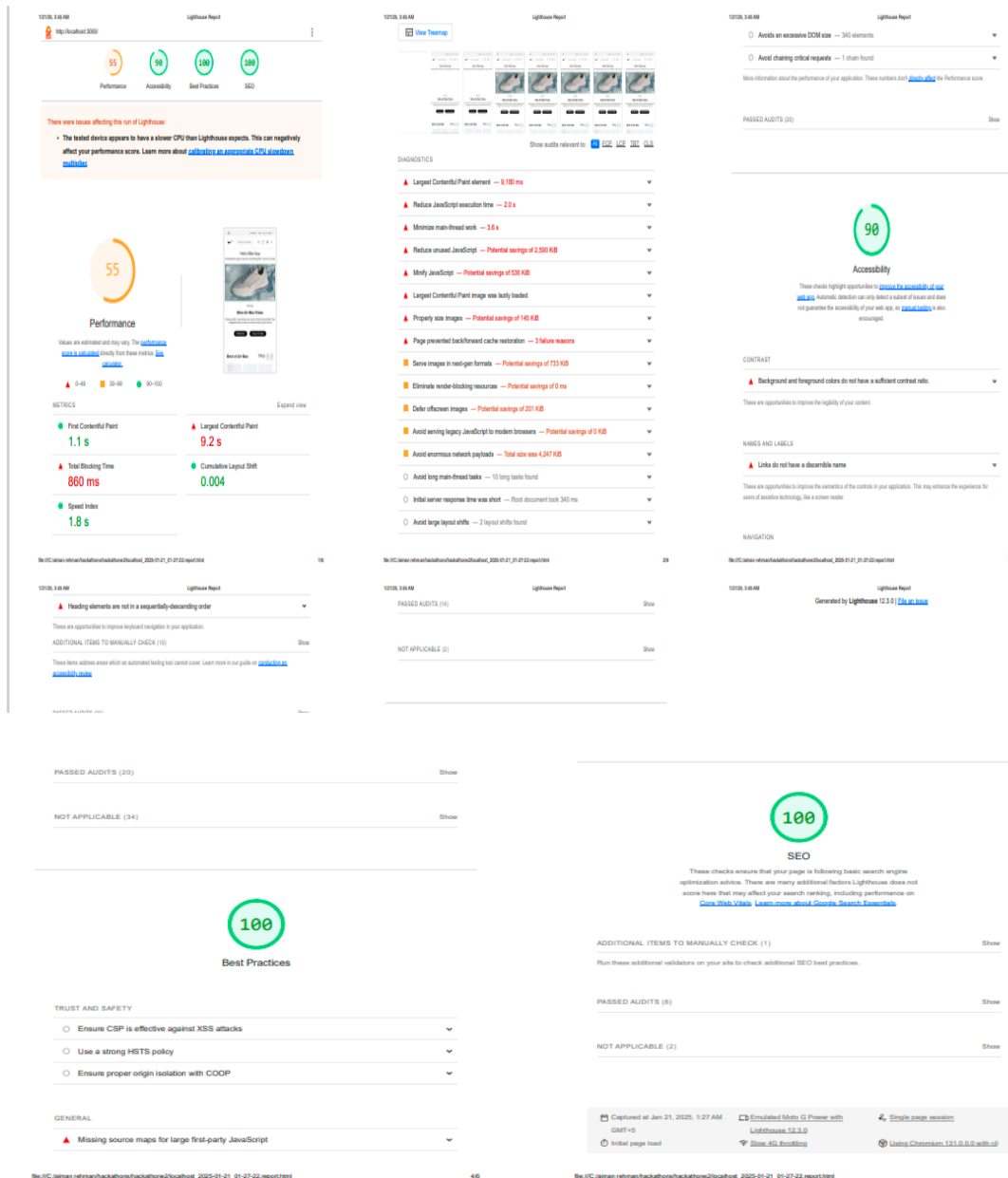
## 2. Performance Insights:

Opportunities to optimize page loading and resource usage.

- **Accessibility, SEO, Best Practices:** All scored 90+.



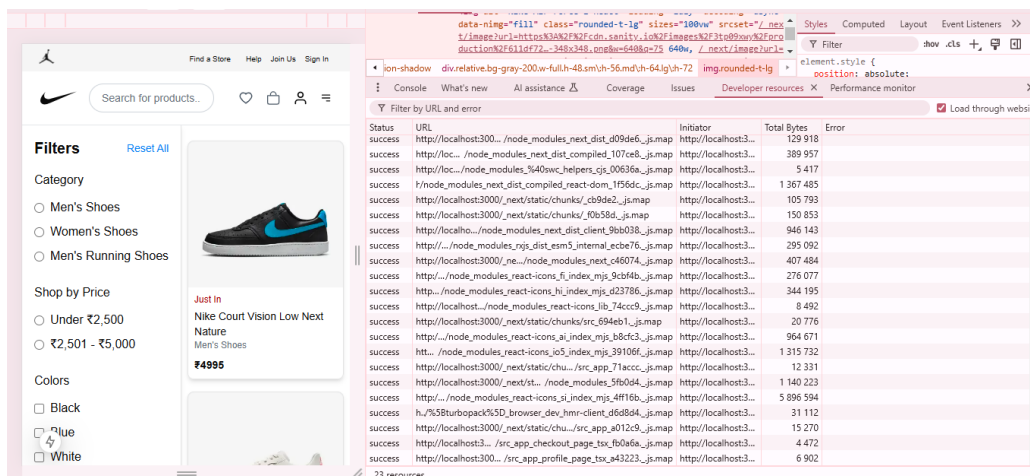
There were issues affecting this run of Lighthouse:



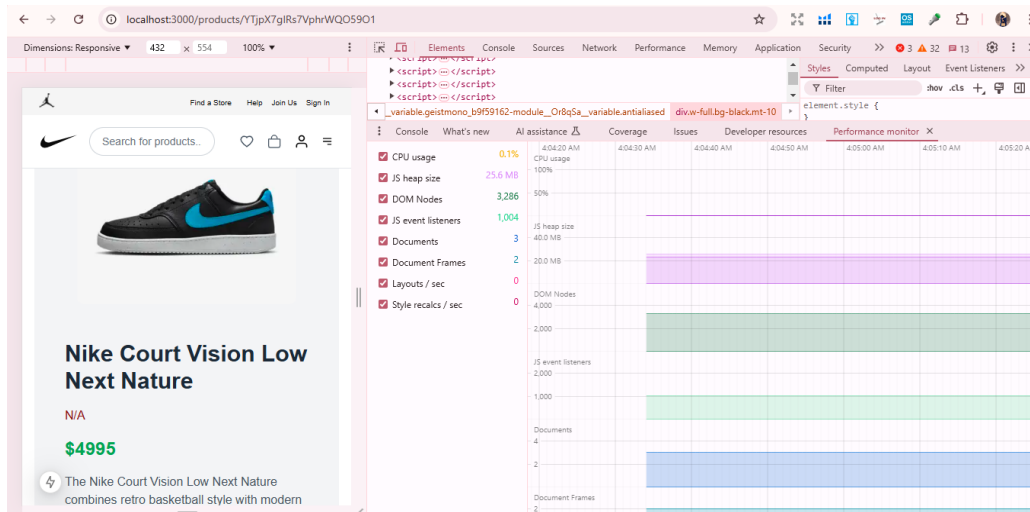
### 3. Debugging and Monitoring:

- **Network Tab Insights:**
  - All resources successfully fetched with zero errors.
  - Minimal delays in API requests with optimized payloads.
- **Performance Monitoring:**
  - DOM size and event listeners optimized for responsive behavior.
  - JS heap size stable under load.

Developer resource:

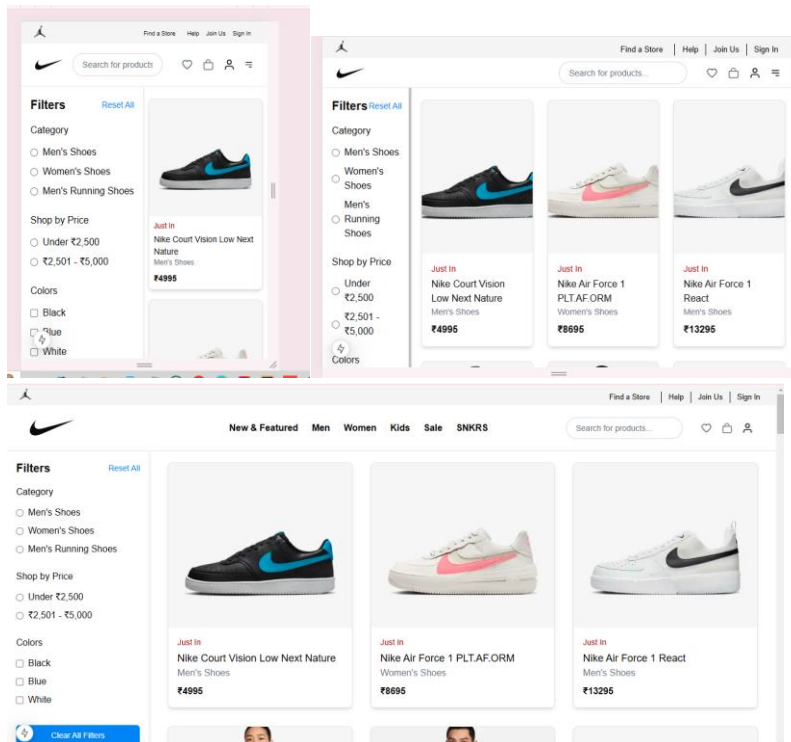


Performance monitor:



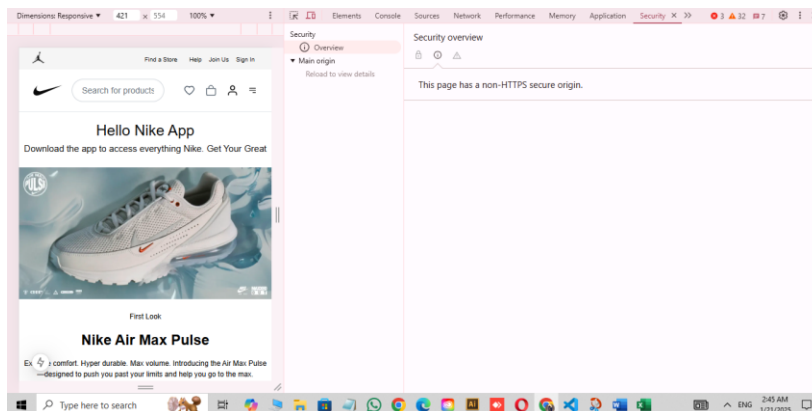
## 4. Responsiveness Testing:

- Mobile layout resized effectively for various screen dimensions.
- No UI disruptions or responsiveness issues were identified.



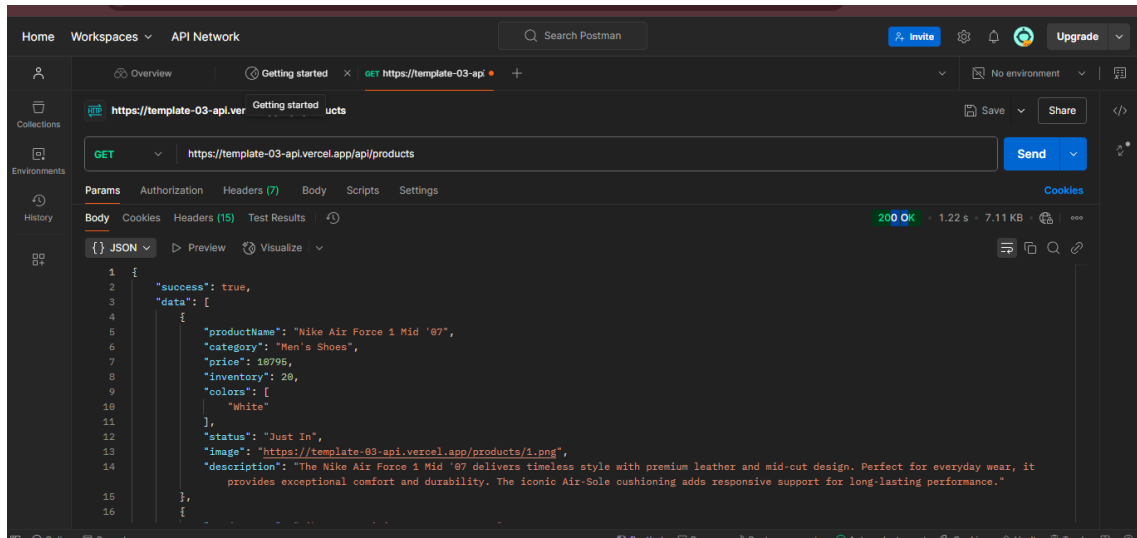
## 5. Security Observations:

- Page tested under non-HTTPS origin.
- Recommendation: Implement HTTPS for improved security and user trust.



## 6. API Response Validation:

- API endpoints (<https://template-03-api.vercel.app/api/products>) tested via Postman.
- Response status: 200 OK.
- All fields fetched accurately with valid data structure.



## Conclusion

The platform is now more robust and user-friendly, with significant improvements in testing, error handling, and backend performance. Future tasks include addressing performance issues, , and further optimizing API calls.

Day 5 Hackathon work completed by **Aiman Rehman**, focusing on testing, error handling, and backend integration for a robust platform.