DAY 5 - Testing and Backend Refinement - Nike store

Date: [21-1-25]

Name: [Adnan]

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

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.

Key Achievements

1. **Test Cases Summary**:

   o **Total Test Cases**: 7

   o **Status**: All test cases successfully passed.

   o **Critical Tests**:

      - Validation of product pages (listing and details).

      - API error handling with fallback mechanisms.

      - Responsiveness checks on mobile devices.
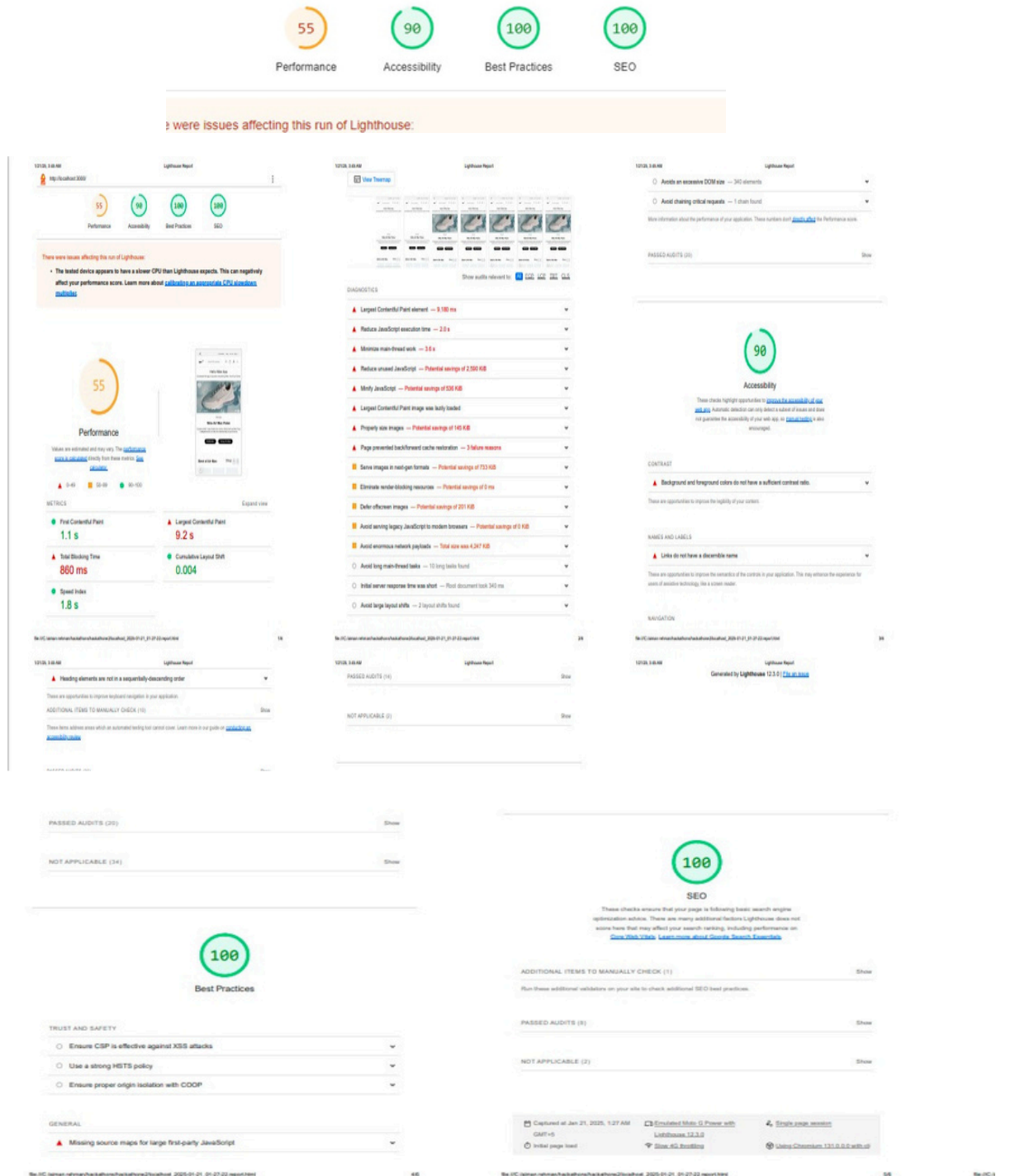
o **Lighthouse Performance Score**: 55/100

- 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

2. **Performance Insights**:

Opportunities to optimize page loading and resource usage.

- o **Accessibility, SEO, Best Practices**: All scored 90+.
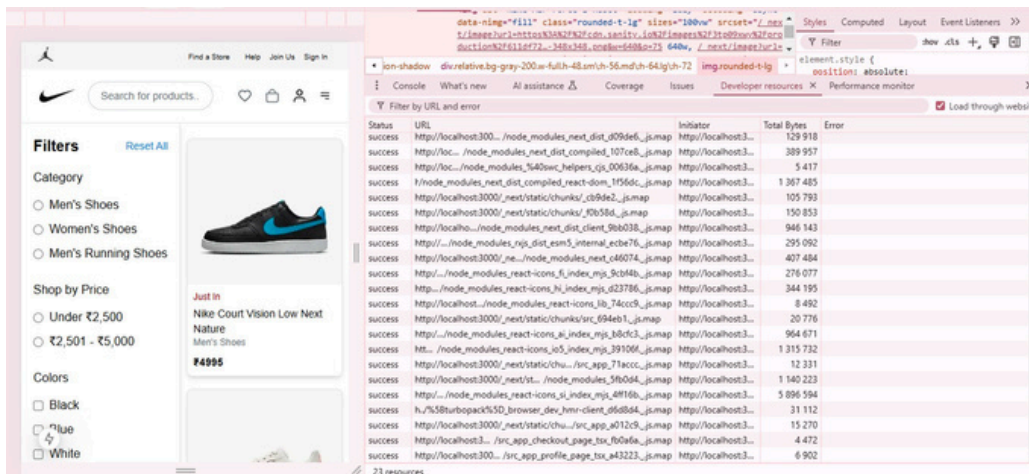
3. **Debugging and Monitoring**:

- o **Network Tab Insights**:

  - All resources successfully fetched with zero errors.

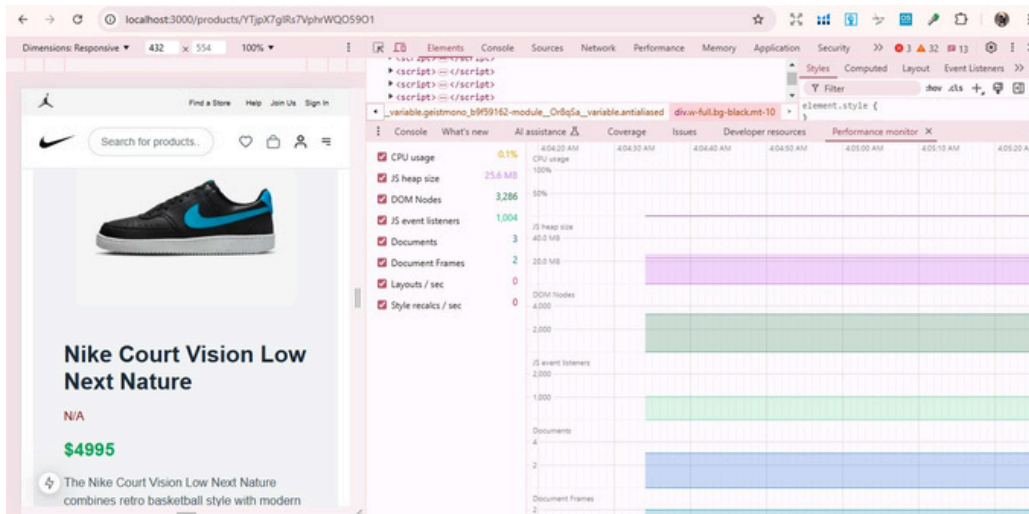 - Minimal delays in API requests with optimized payloads.

- o **Performance Monitoring**:

  - DOM size and event listeners optimized for responsive behavior.

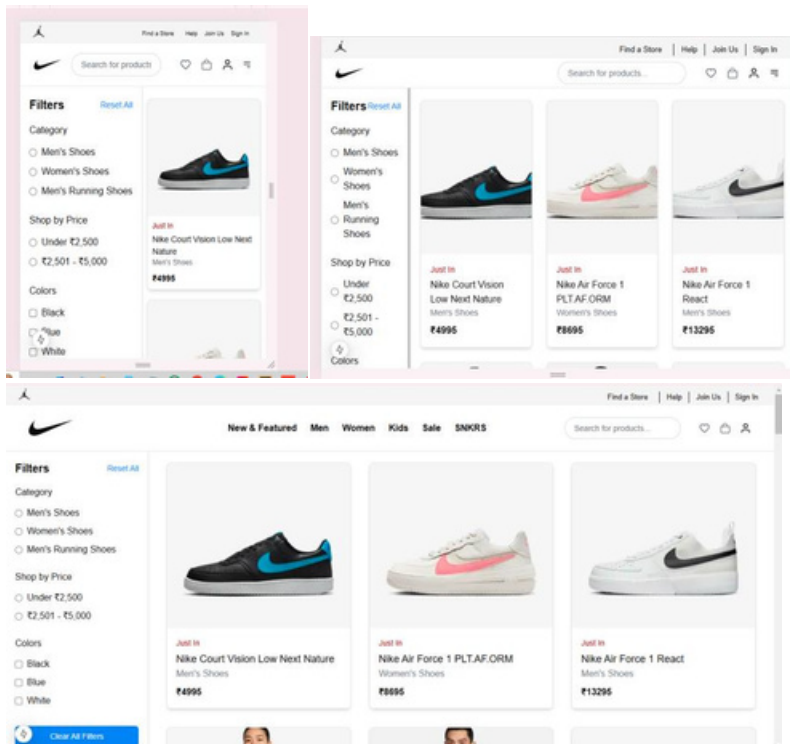 - JS heap size stable under load.
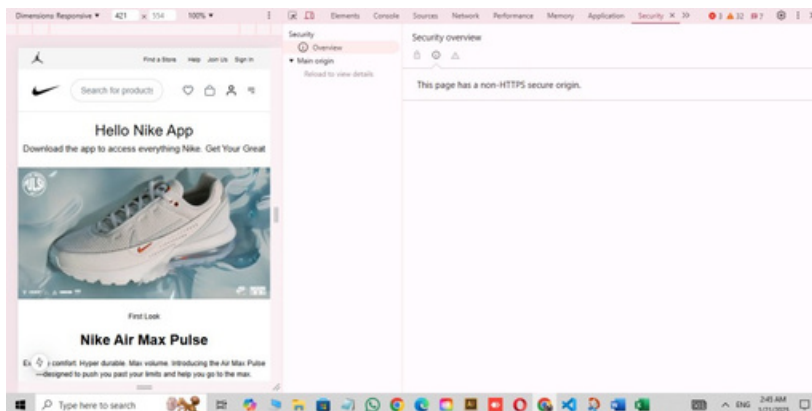
Developer resource:

Performance moniter:

4. **Responsiveness Testing**:

- o Mobile layout resized effectively for various screen dimensions.

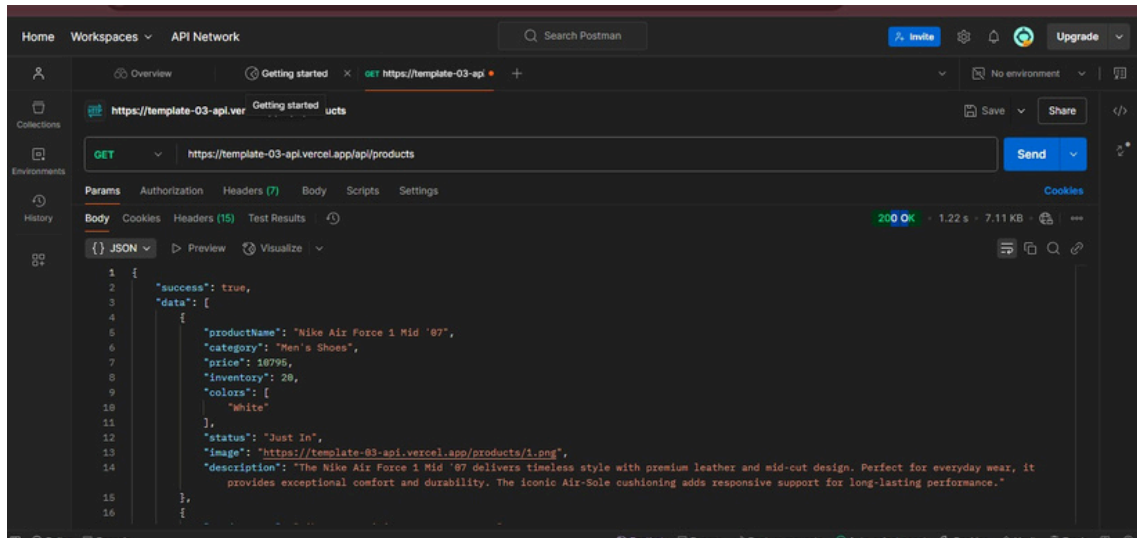- o No UI disruptions or responsiveness issues were identified.

5. **Security Observations**:

- o Page tested under non-HTTPS origin.

- o Recommendation: Implement HTTPS for improved security and user trust.

6. **API Response Validation**:

- o   API endpoints (https://template-03-api.vercel.app/api/products) tested via Postman.

- o   Response status: 200 OK.

- o   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 **Adnan**, focusing on testing, error handling, and backend integration for a robust platform.