Day-05 TESTING, ERROR HANDLING & BACKEND INTEGRATION:

Made By Aimal Khan:

On Day-05, I focused on testing, error handling, and improving the functionality of my website to ensure a seamless user experience. Below is an overview of the key tasks completed:

1. **Functional Testing:**
   - I have completed the following tasks for functional testing:
   -
     - **Responsiveness:** I validated that the website works smoothly across on all devices.
     - **Product Listing Page:** I verified the accurate display of products on the listing page.
     - **Details Page:** I confirmed that product details load correctly.
     - **Add to Cart Page:** I ensured that items could be added, updated, and removed from the cart.
     - **Checkout Page:** I tested the final purchase workflow to ensure it functions properly.

Testing Report:

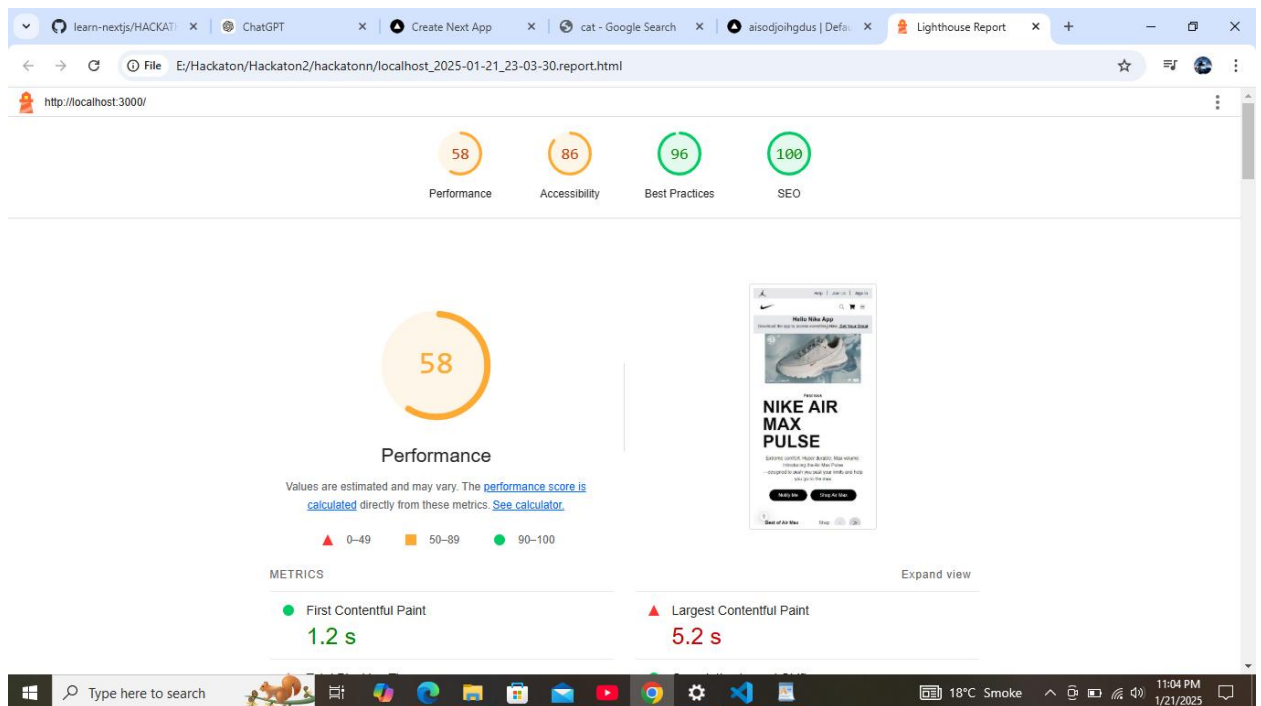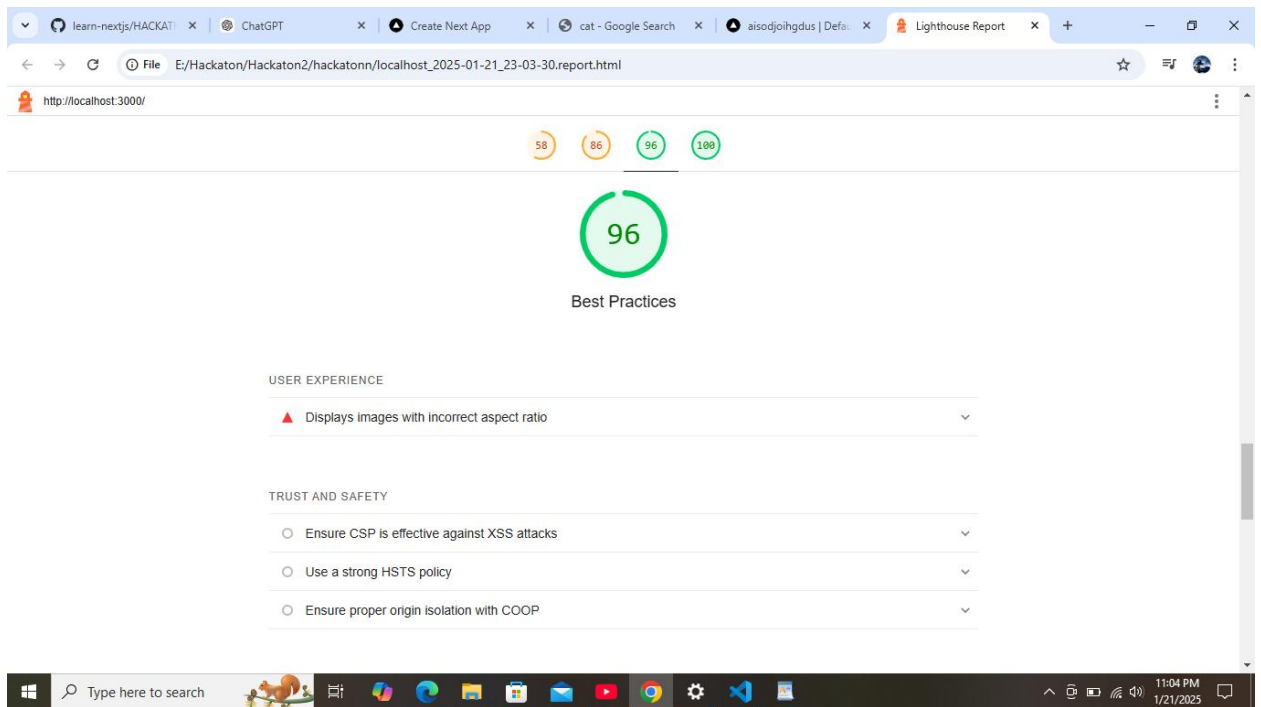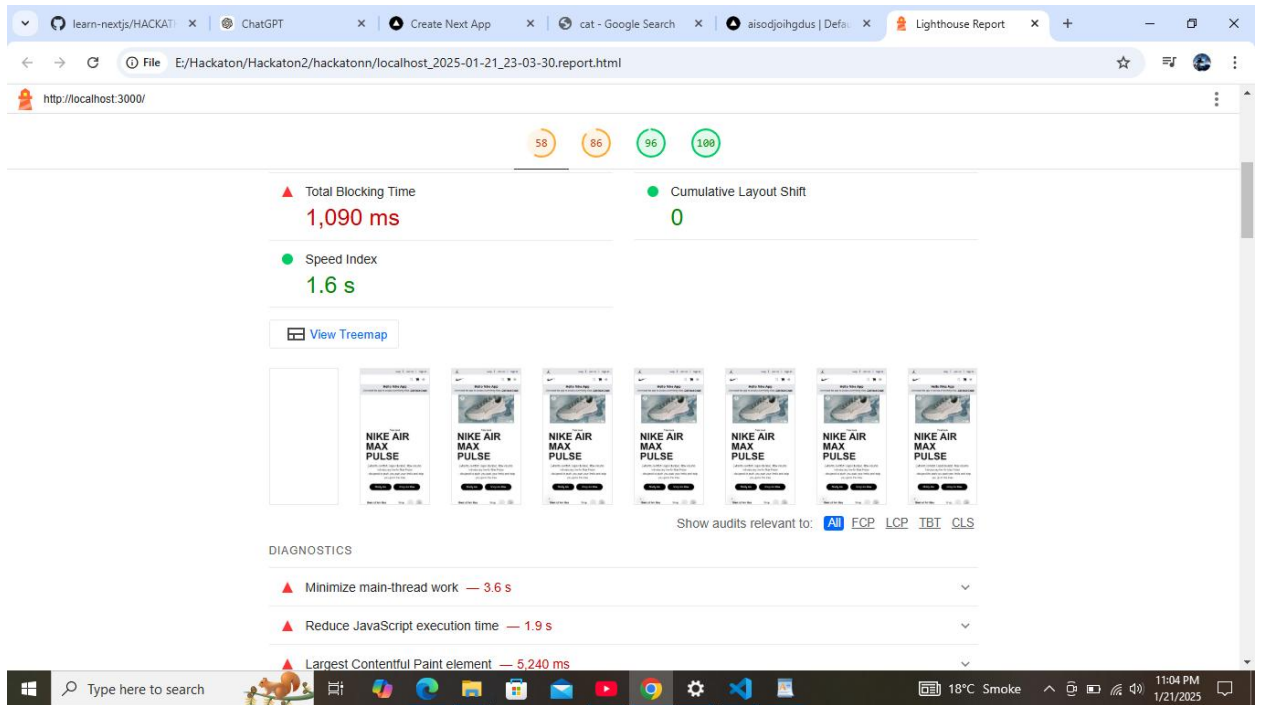| Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Status	Severity Level	Assigned To	Remarks
TC001	Validate product listing page	Open product page > Verify products	Products displayed correctly	Products displayed correctly	Passed	Medium	-	No issues found
TC002	Test API error handling	Disconnect API > Refresh page	Show fallback UI with error message	Error message shown	Passed	Medium	-	Handled gracefully
TC003	Check cart functionality	Add product to cart > Verify cart contents	Cart updates with added product	Cart updates as expected	Passed	Medium	-	Works well
TC004	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. **Error Handling:**
   - Implemented robust error messages for scenarios such as:
     - **Invalid or Missing Data:** Used fallback UI elements like "No products available."
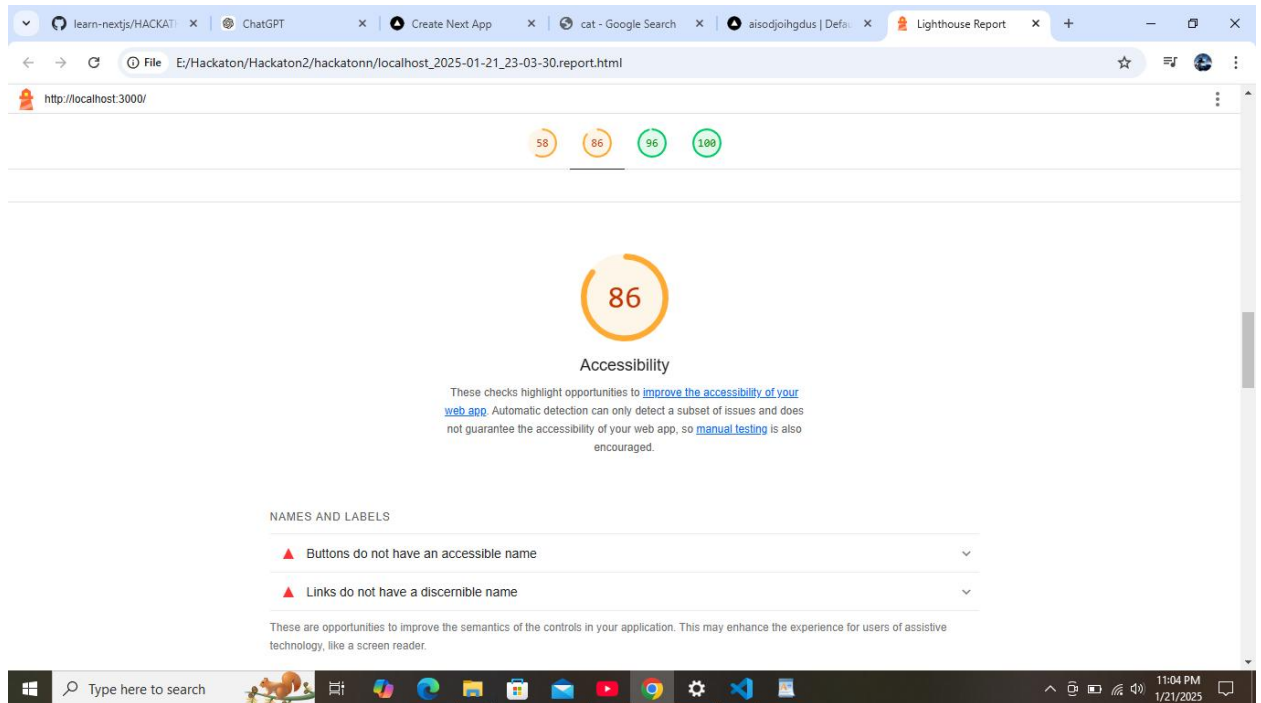
       Providing users with clear feedback and improving the system stability.

3. **Performance Testing:**
   - Used **Lighthouse** to analyze and optimize website performance.

http://localhost:3000/

58   86   96   100

▲ Total Blocking Time
1,090 ms

● Cumulative Layout Shift
0

● Speed Index
1.6 s

⊞ View Treemap

Show audits relevant to: All FCP LCP TBT CLS

DIAGNOSTICS

▲ Minimize main-thread work — 3.6 s   ⌄

▲ Reduce JavaScript execution time — 1.9 s   ⌄

▲ Largest Contentful Paint element — 5,240 ms   ⌄

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1/21/2025
18°C Smoke

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http://localhost:3000/

58   86   96   100

96

Best Practices

USER EXPERIENCE

▲ Displays images with incorrect aspect ratio   ⌄

TRUST AND SAFETY

○ Ensure CSP is effective against XSS attacks   ⌄

○ Use a strong HSTS policy   ⌄

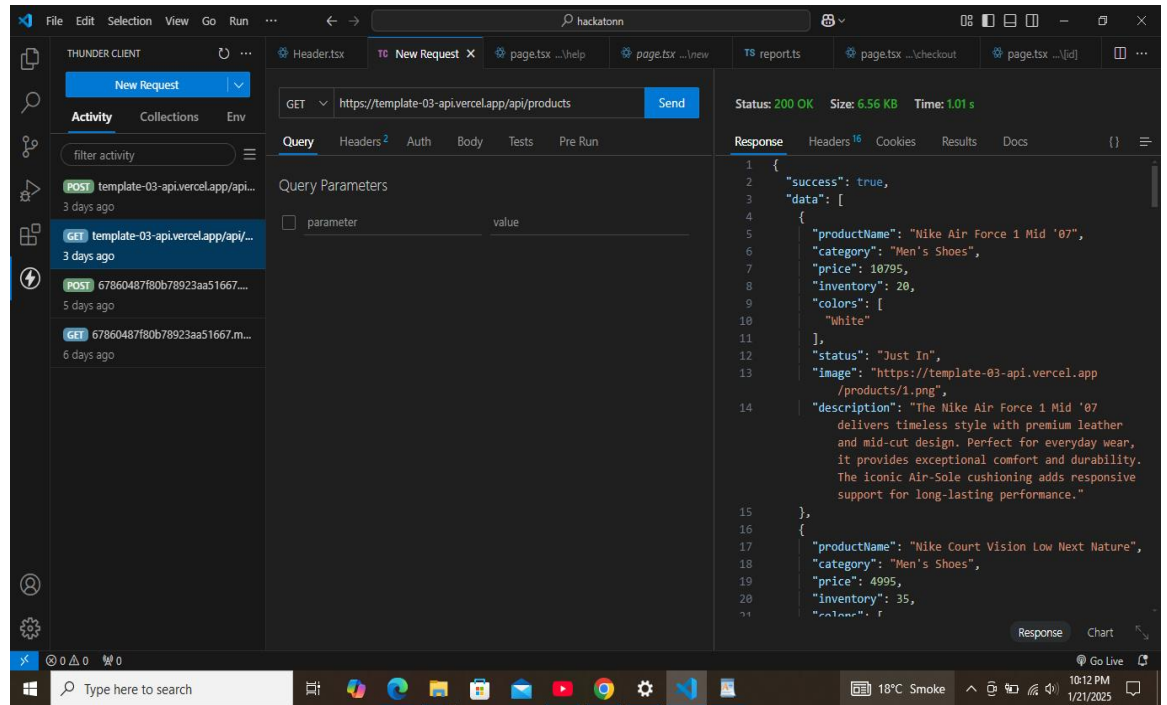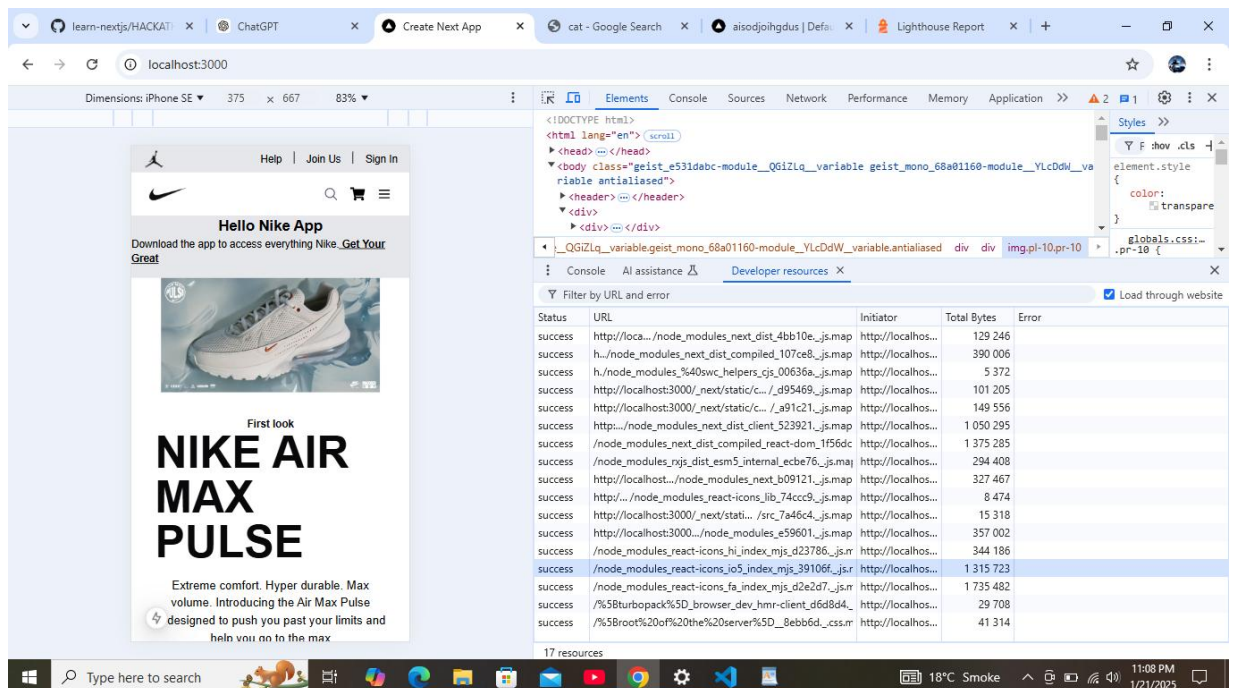○ Ensure proper origin isolation with COOP   ⌄
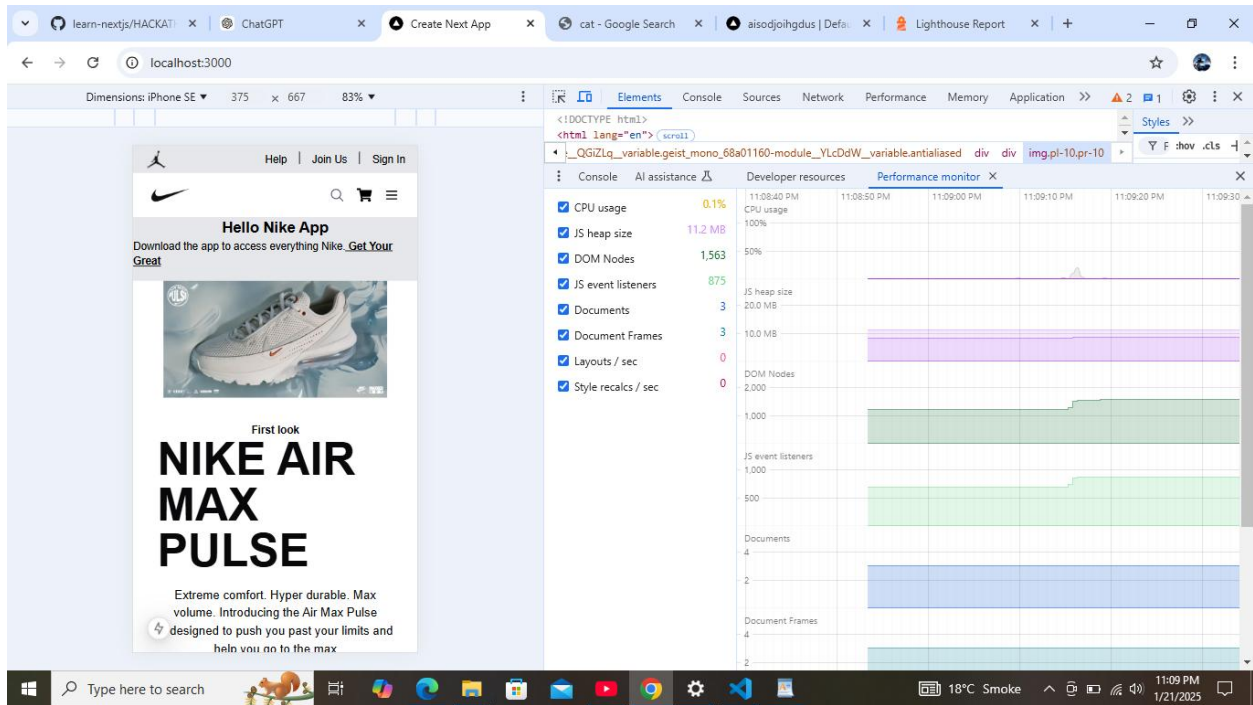
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4. **API Testing:**

   o I tested all API endpoints using tools like and Thunderclient to make sure they work properly.Handled edge cases, such as network failures or invalid data, with appropriate error messages.

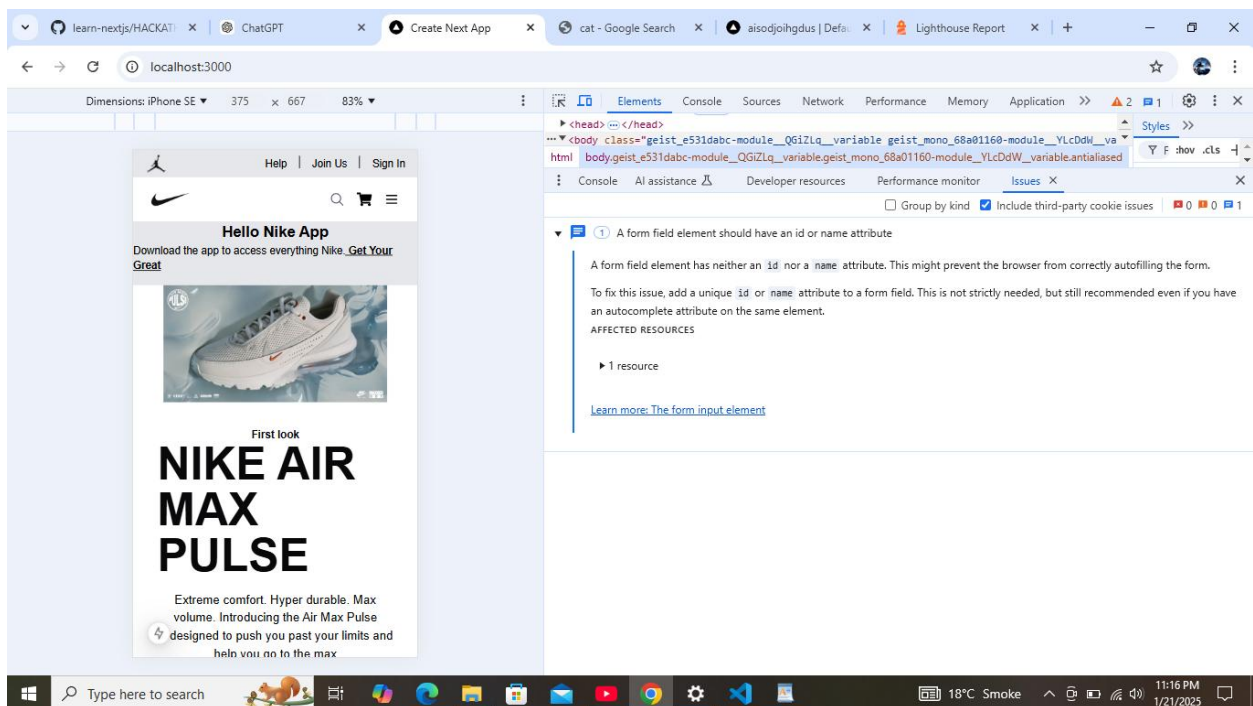   o I managed tricky situations, like network issues or wrong data, by adding clear error messages.
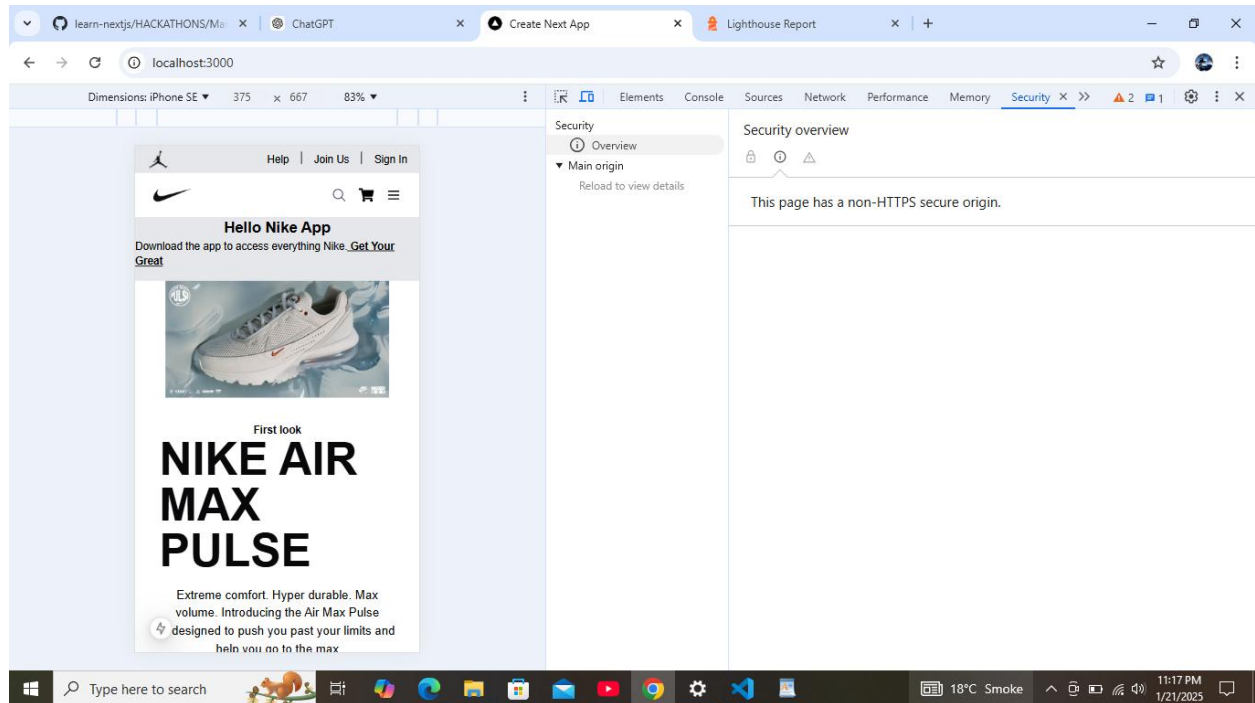
Developer Resources:

Performance Monitor:

Issues:

Security:

By the end of Day 05, the website now works smoothly with strong features, clear error messages, and faster performance. All the main parts have been tested to make sure users have a great experience. Next, the focus will be on launching the website and collecting user feedback to make it even better.

END OF THE DAY – 05.