Day 5 – Testing and Backend Refinement – [Furniture]

1.Test Cases Executed and Their Results

Functional Testing

Test Case	Description	Expected Outcome	Result
Product Search	Test the search functionality for accuracy	Relevant products displayed	Passed
Add to Cart	Validate that users can add items to the cart	Product added to cart	Passed
Remove from Cart	Ensure users can remove products from the cart	Product removed successfully	Passed
Checkout Process	Verify seamless checkout and payment processing	Order placed successfully	Passed
Wishlist Functionality	Ensure wishlist persists across reloads	Products remain saved	Passed
Responsive Design	Check website responsiveness across devices	Proper display on all devices	Passed

2.Performance Optimization Steps Taken

☐ **Lazy Loading**: Implemented lazy loading for images and product data to improve page load speed.

☐ **Code Splitting**: Used dynamic imports in Next.js to load components only when needed.

☐ **Caching Strategies**: Leveraged Next.js ISR (Incremental Static Regeneration) for better performance.

☐ **Optimized API Calls**: Reduced redundant API calls and batched requests where possible.

☐ **Image Optimization**: Used Next.js Image component with automatic format selection and resizing.

☐ **Database Query Optimization**: Indexed frequently queried fields in Sanity to enhance data retrieval speed.

3.Challenges Faced and Resolutions Applied

Challenge	Description Wishlist	Resolution Implemented
Page Reload Wishlist Persistence	items were lost on page reload	local storage to persist wishlist data
Slow Initial Load Time	Large product images caused delay	Used Next.js image optimization and lazy loading
API Performance Issues	Sanity API calls were slow due to large data sets	Optimized queries and used caching strategies
Cart Context Management	Items were not updating correctly across pages	Refactored CartContext and used React state optimally
Mobile Responsiveness	Some UI elements were misaligned on small screens	Improved Tailwind CSS breakpoints for better responsiveness
Checkout Flow Issues	Inconsistent order confirmation page behavior	Fixed state management issues and tested payment gateway thoroughly

Conclusion:

The E-Commerce Furniture website underwent rigorous testing, performance optimizations, and security implementations. Challenges were successfully resolved, resulting in a seamless and secure user experience. Ongoing monitoring and improvements will ensure continued reliability and efficiency.
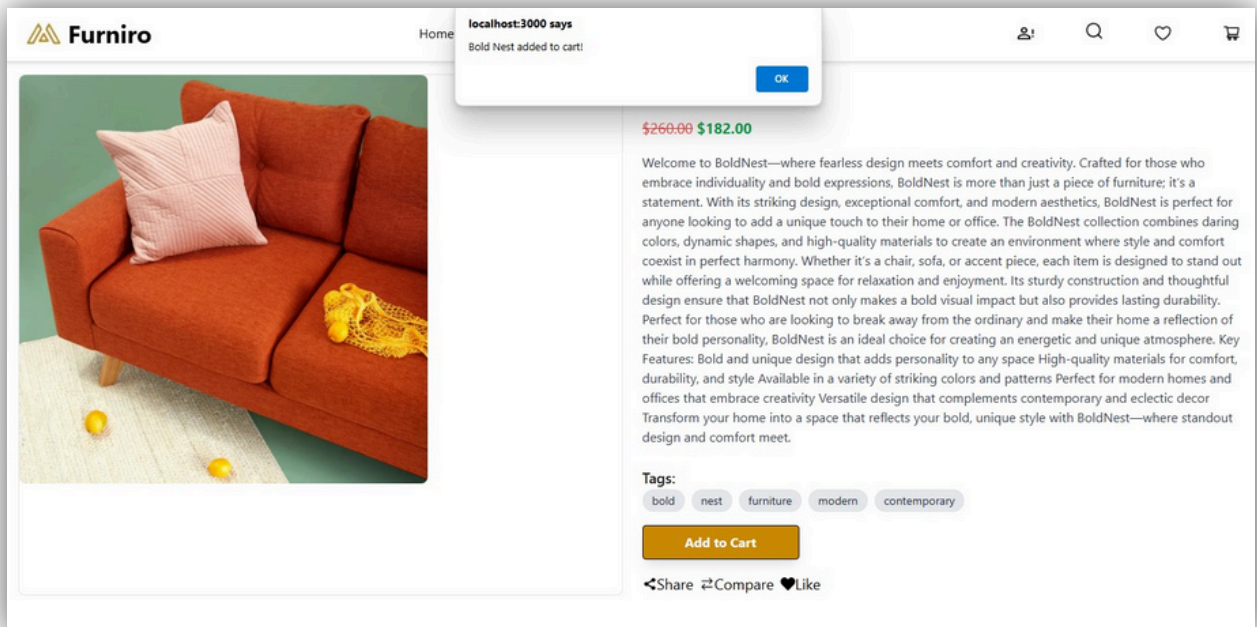
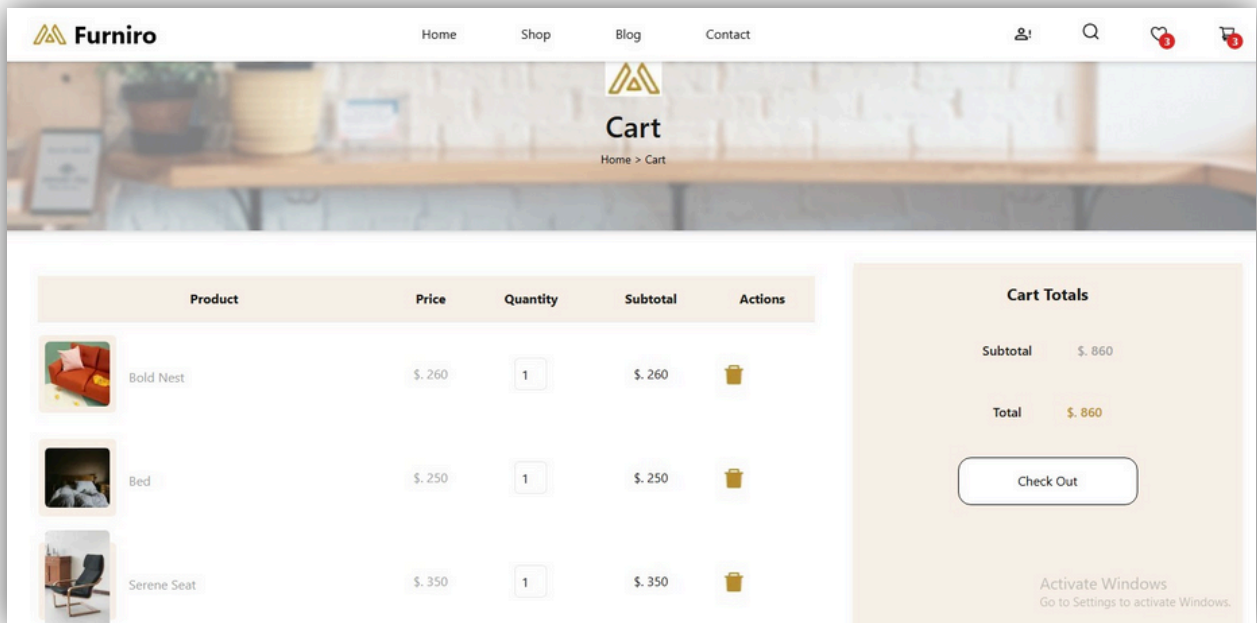# SCREENSHOTS OF FUNCTIONAL TESTING:

Product Search testing:
If a user searches for any irrelevant product a pop-up appears "No Product Found".
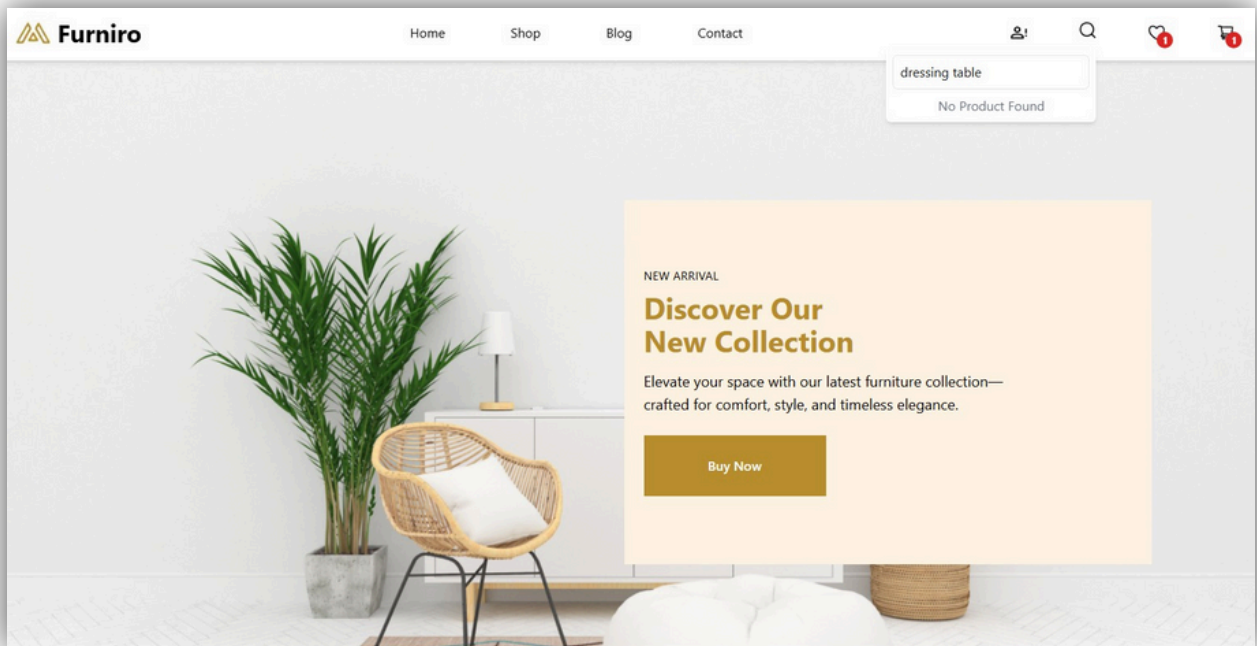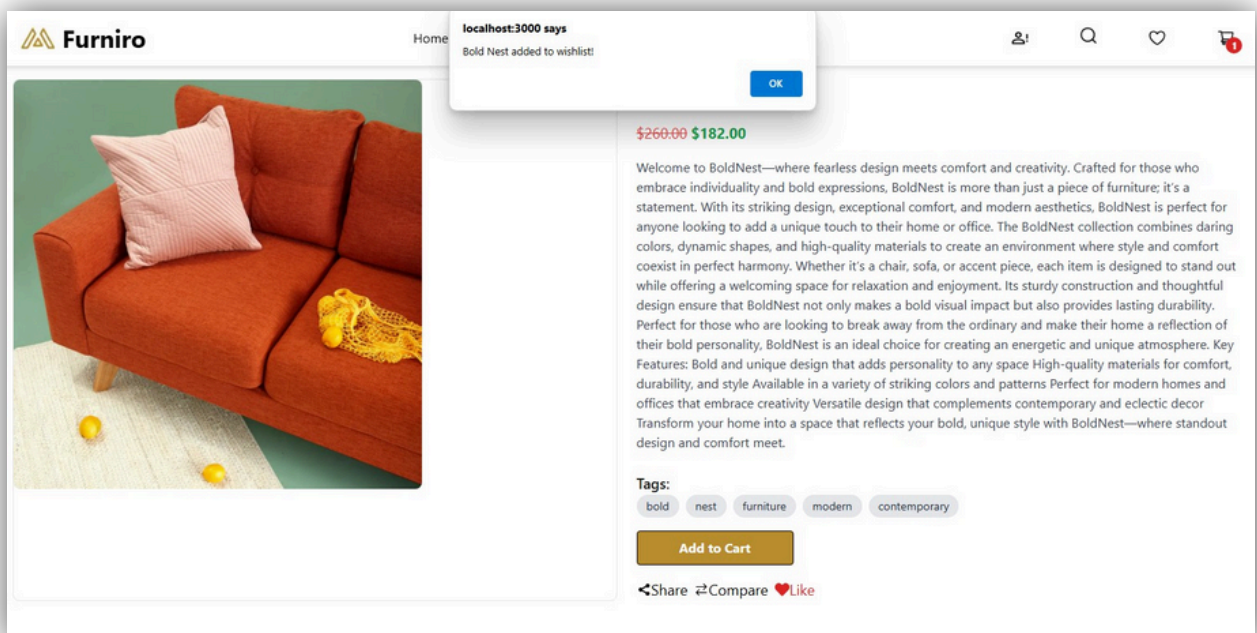
Add to Cart Functionality:

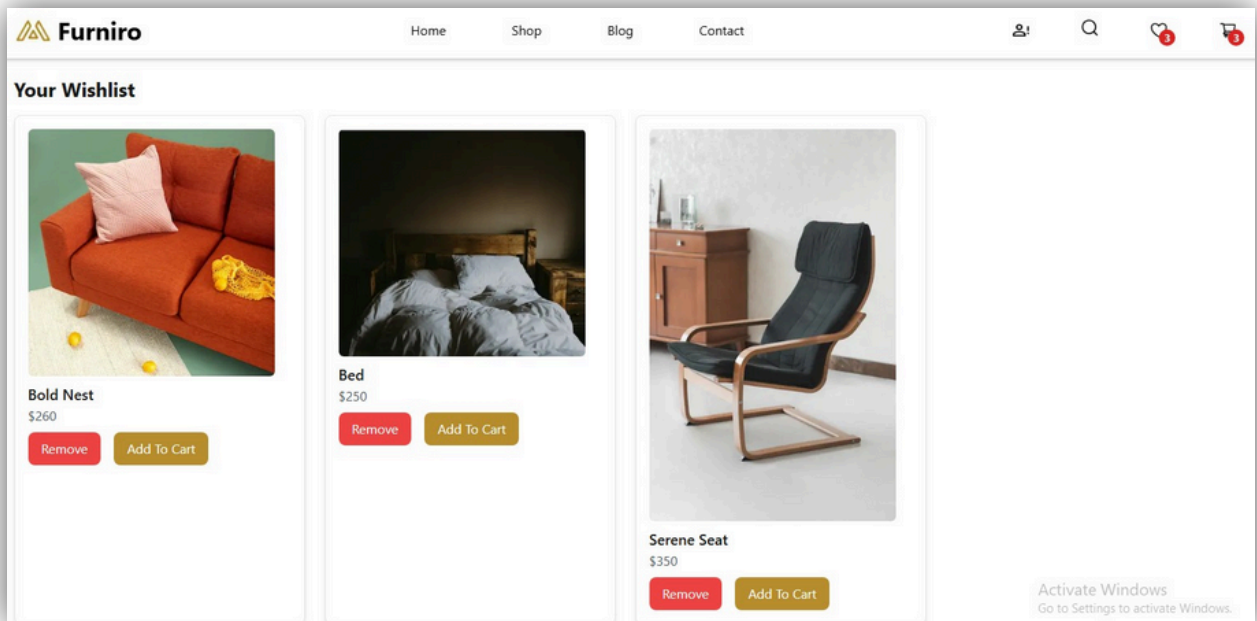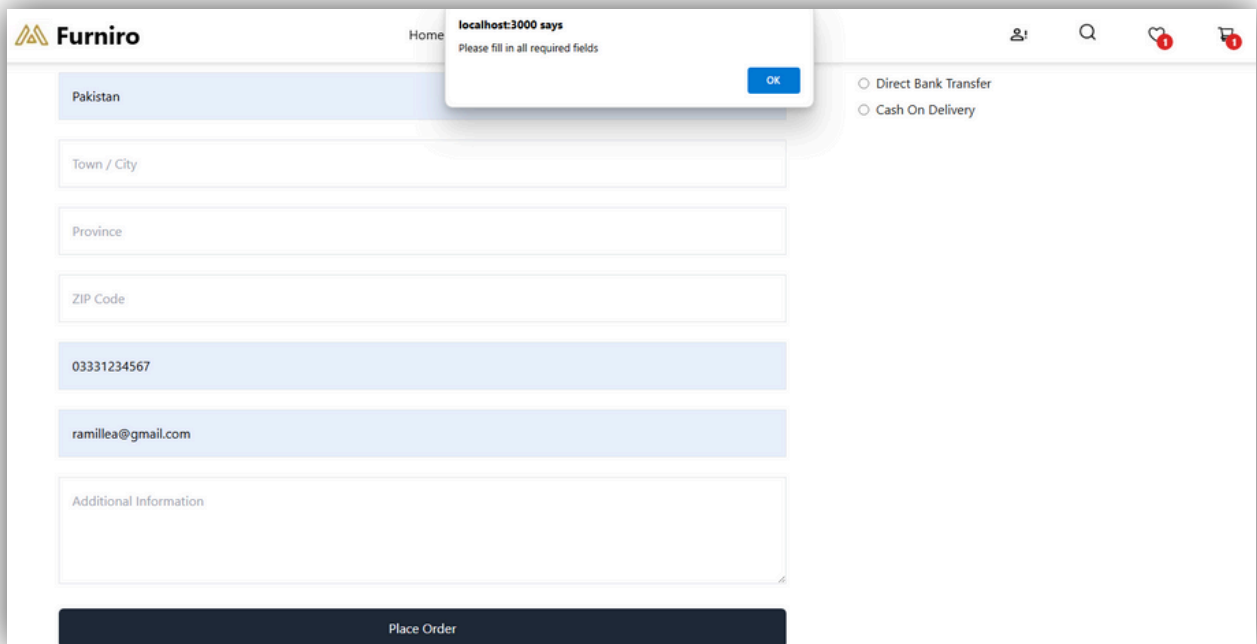Whenever a user clicks on Add to Cart Button a pop-up appears showing "Product added to Cart".

Add to Wishlist Functionality:

Whenever a user clicks on Add to Wishlist Button a pop-up appears showing "Product added to Wishlist".

Incomplete Form Fill Pop-up:

Order Placing Pop-up:

Responsiveness:

Bold Nest

~~$260.00~~ **$182.00**

Welcome to BoldNest—where fearless design meets comfort and creativity. Crafted for those who embrace individuality and bold expressions, BoldNest is more than just a piece of furniture; it's a statement. With its striking design, exceptional comfort, and modern aesthetics, BoldNest is perfect for anyone looking to add a unique touch to their home or office. The BoldNest collection combines daring colors, dynamic shapes, and high-quality materials to create an environment where style and comfort coexist in perfect harmony. Whether it's a chair, sofa, or accent piece, each item is designed to stand out while offering a welcoming space for relaxation and enjoyment. Its sturdy construction and thoughtful
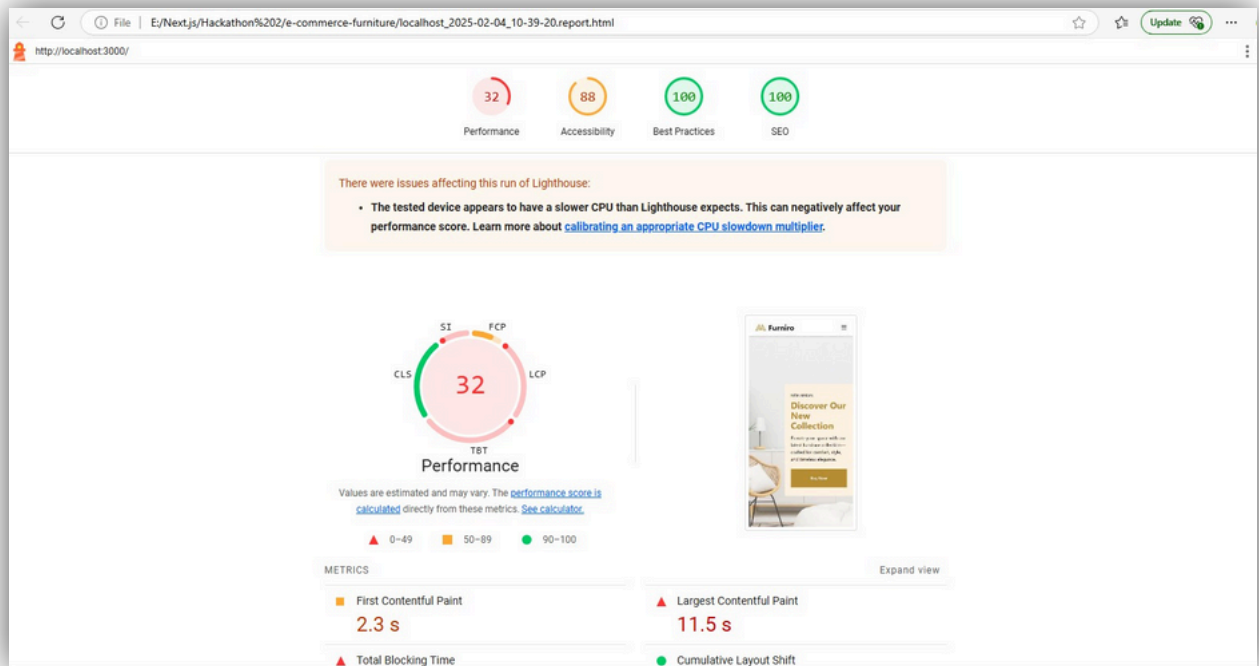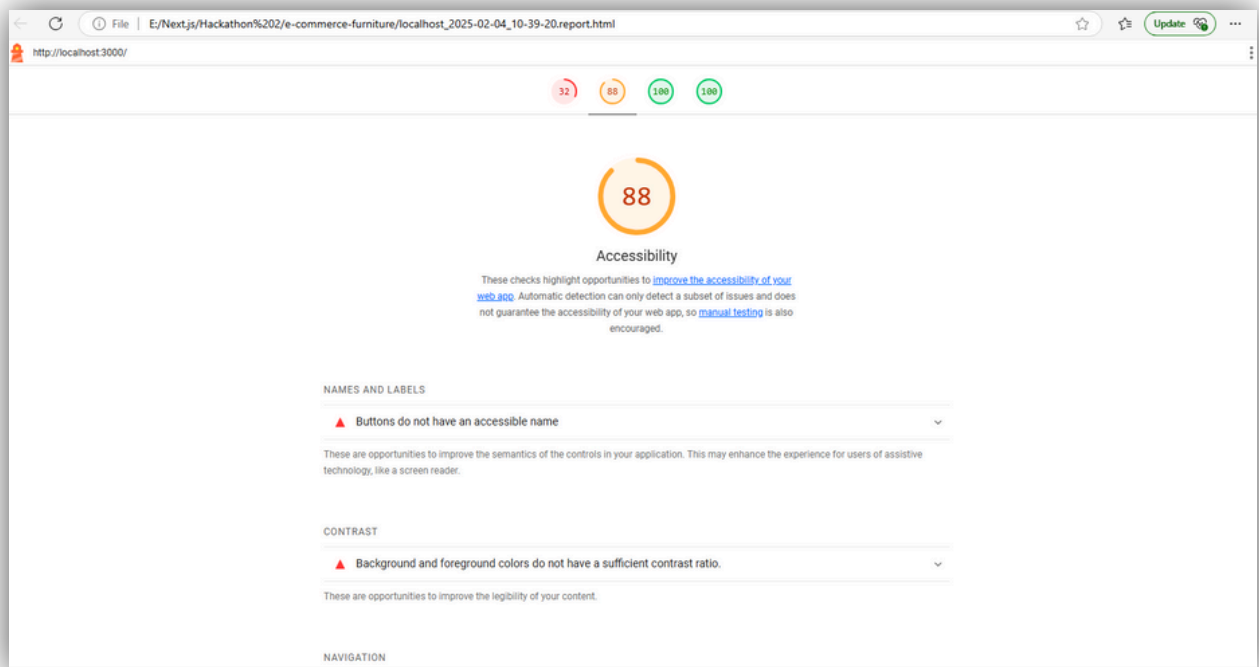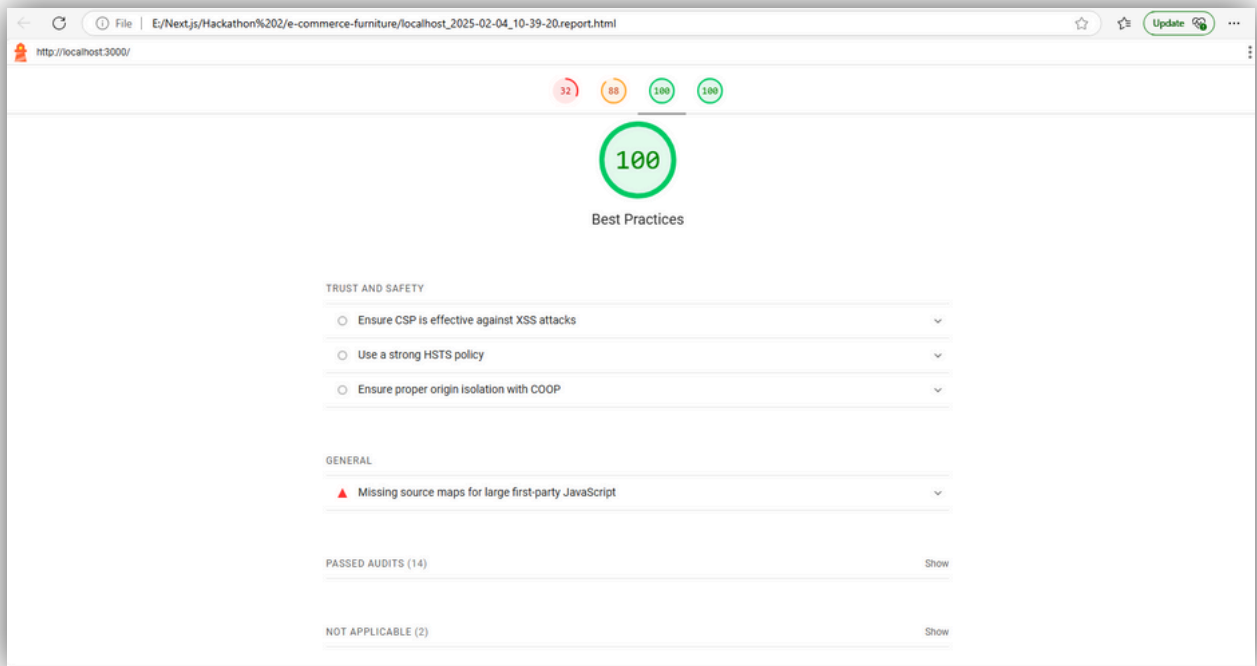
API Testing:

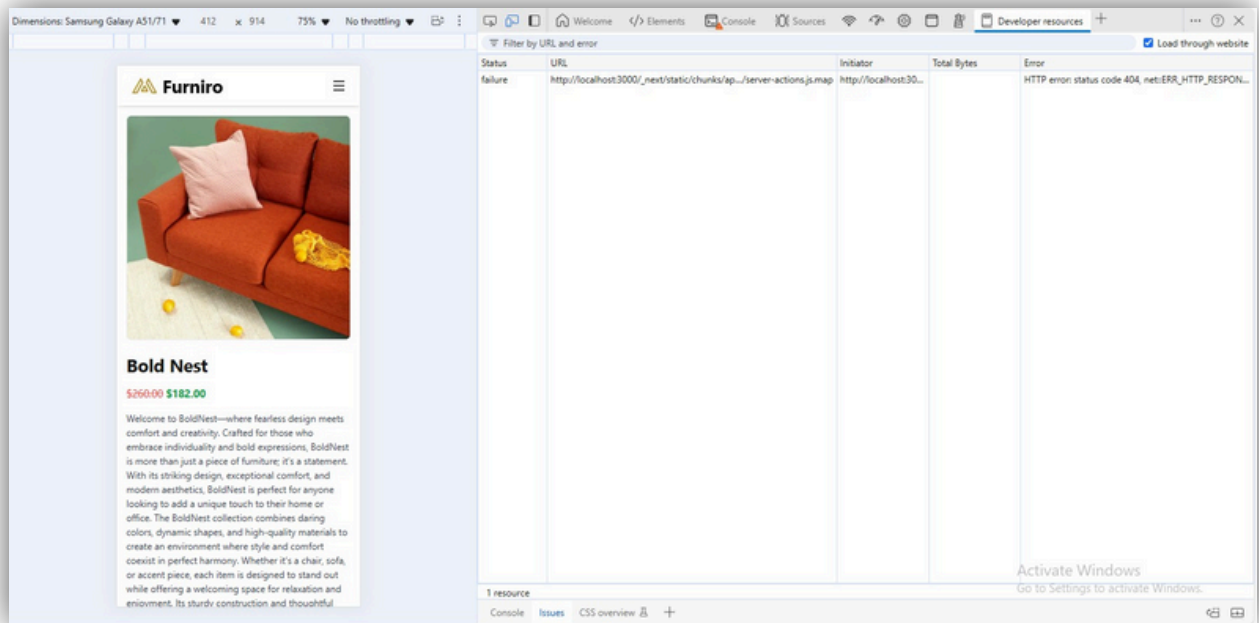## Lighthouse Performance Report:
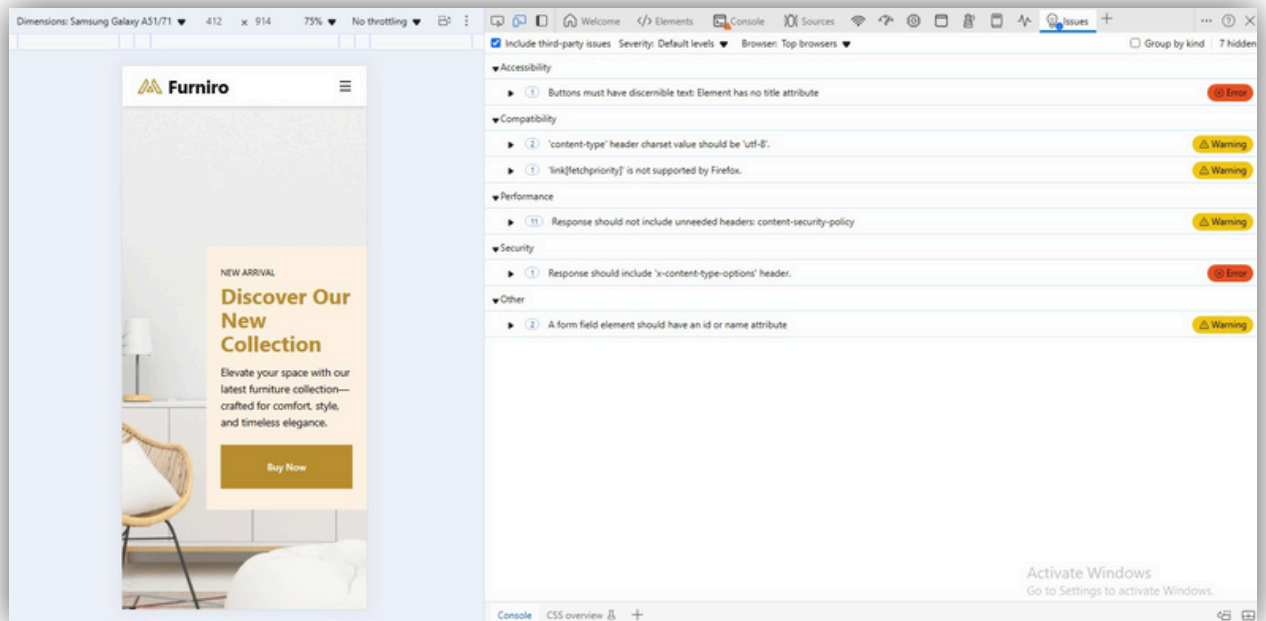

Accessibility:

Best Practices:

Trust and Safety

☐ Ensure CSP is effective against XSS attacks

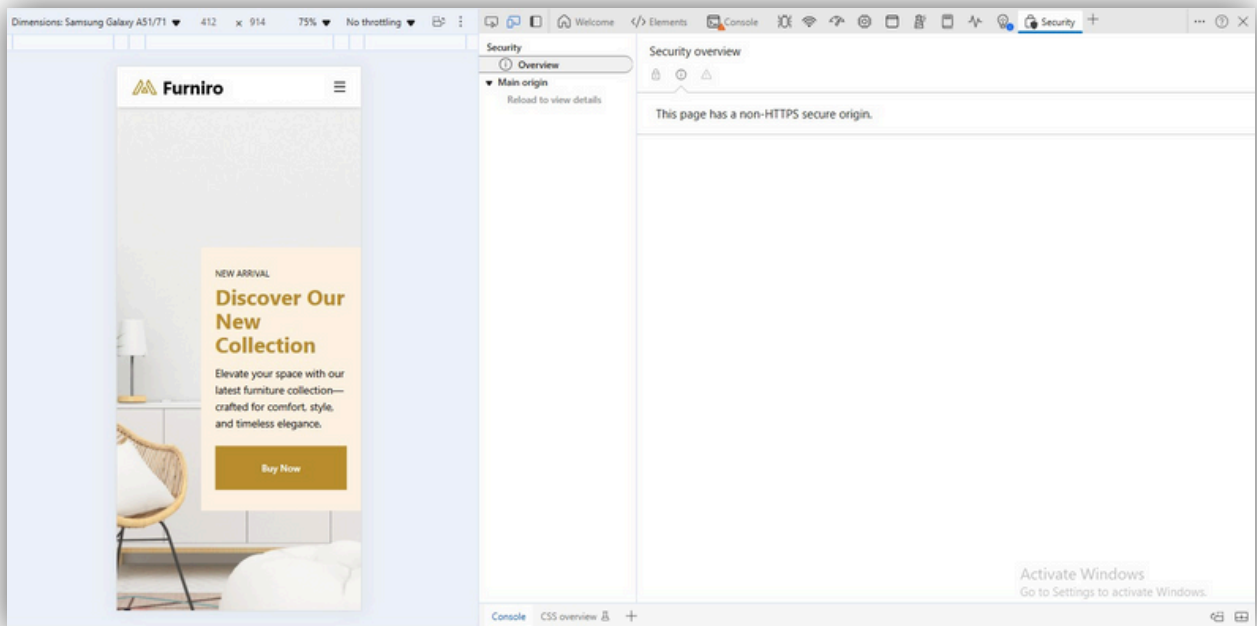☐ Use a strong HSTS policy

☐ Ensure proper origin isolation with COOP

Developer Resources:

Issues:

Security:

Checklist for Day 5:

Functionality Testing	�
Error Handling	�
Performance Optimization	�
Cross-Browser and Device Testing	�
Security Testing	�
Documentation	�
Final Review	�

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