

Day 5 - Testing and Backend Refinement - SHOP CO E-Commerce Marketplace

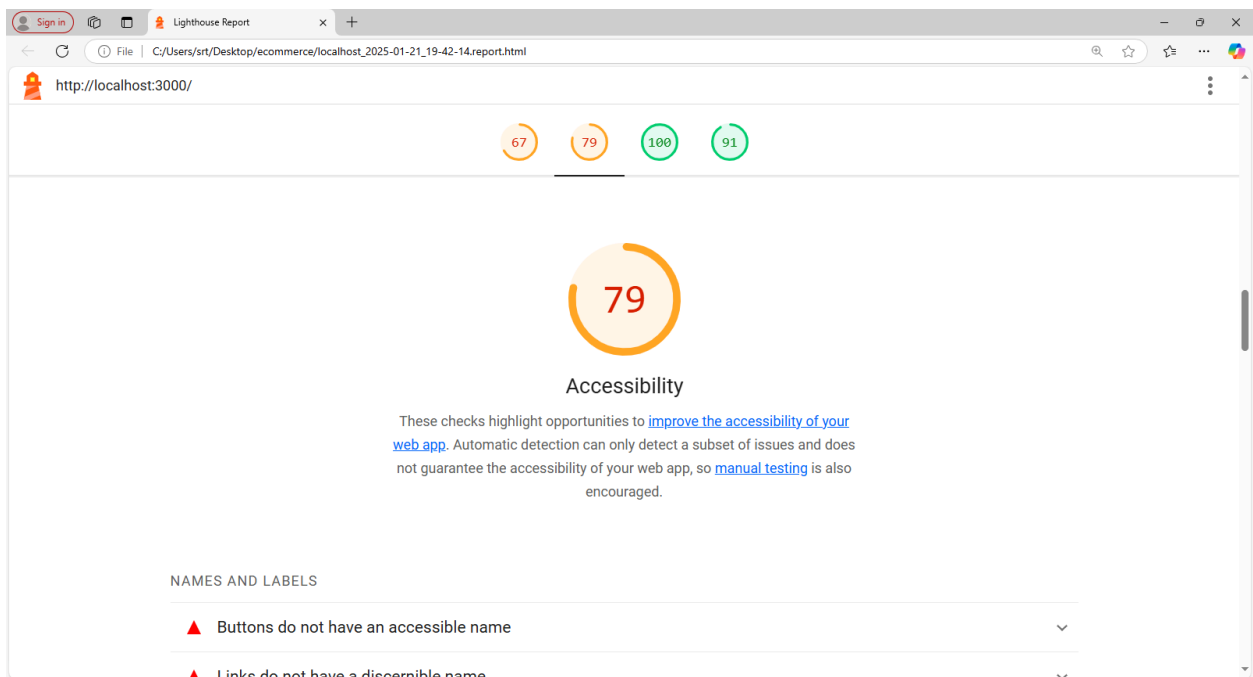
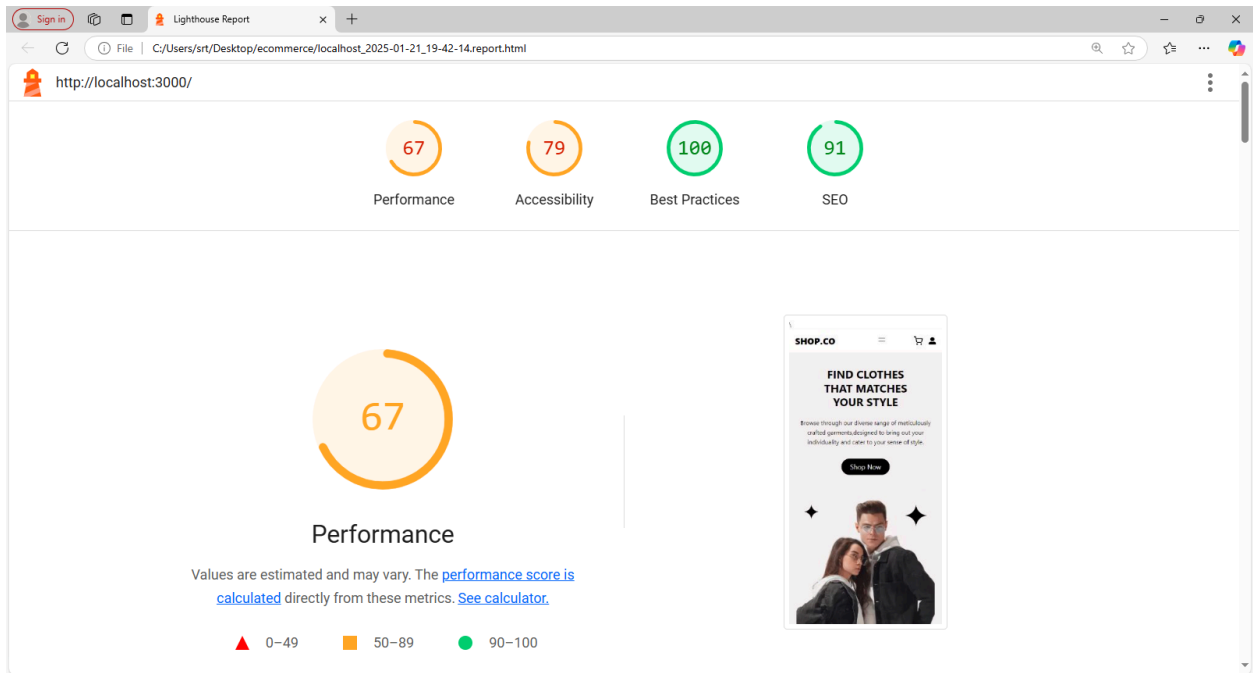
1. Functional Deliverables

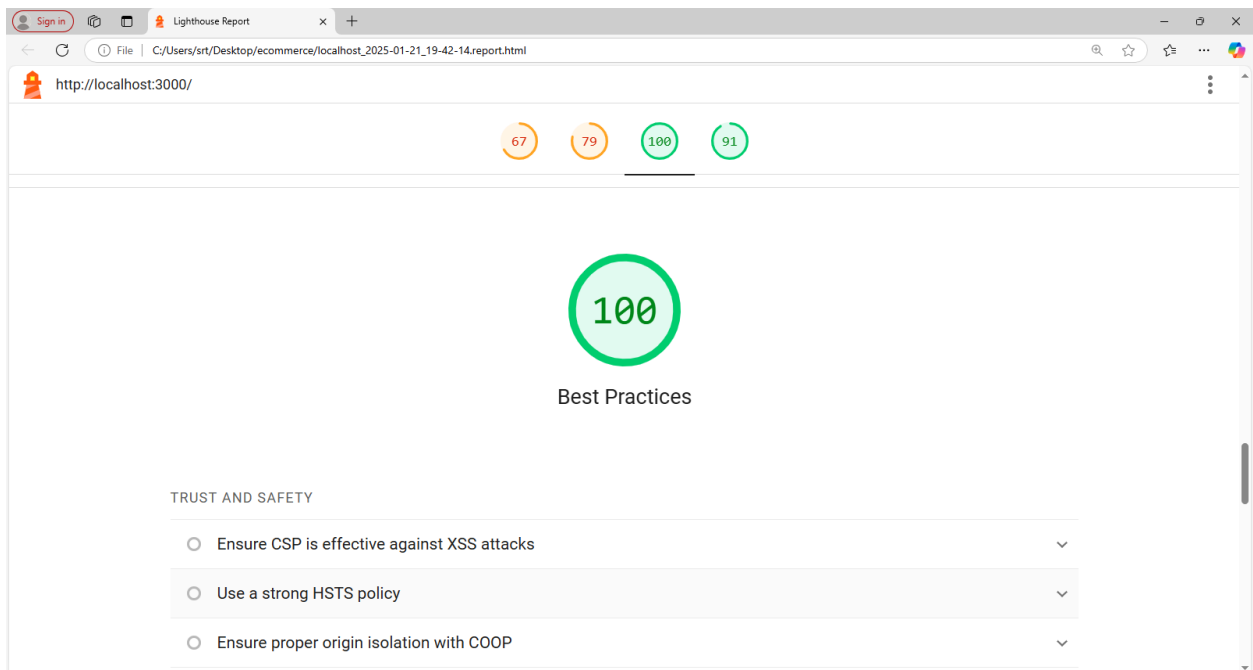
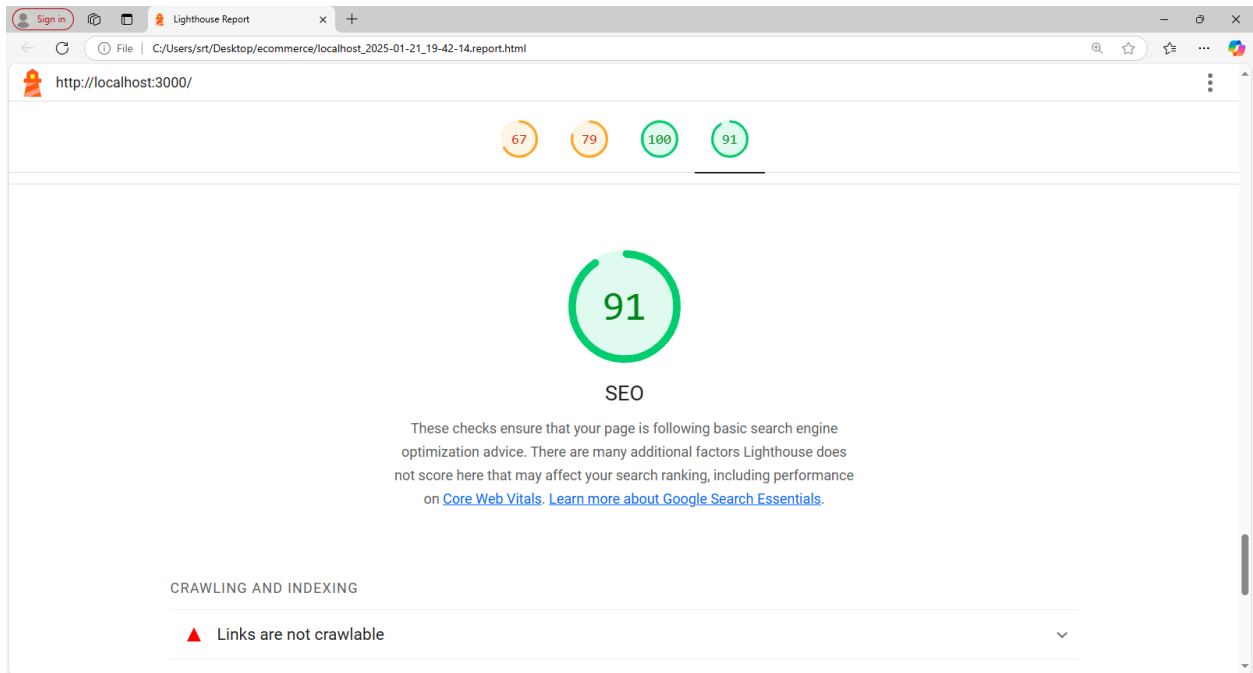
Screenshots and recordings have been prepared to showcase the following functional and responsive components:

- **Dynamic Product Listing Page:** Demonstrates category filters, search functionality, and pagination.
- **Responsive Design:** Mobile, tablet, and desktop screenshots to illustrate cross-device compatibility.
- **Checkout Flow:** Step-by-step navigation from cart to order confirmation.
- **Error Handling:** Screenshots of fallback messages and logs for failed API requests.

Testing Tools and Logs:

- **Lighthouse Report:** Performance, accessibility, and SEO scores with suggestions for improvement.
 - **Postman API Logs:** Captures request-response cycles for product data, categories, and user profiles.
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	Test Case ID	Description	Steps	Expected Result	Actual Result	Status	Severity	Remarks	
2	TC001	Validate product listing page	Open product page > Verify products	Products displayed correctly	Products displayed correctly	Passed	Low	No issues found	
3	TC002	Test pagination functionality	Navigate between pages > Check products on each page	Products load correctly on each page	Pagination works as expected	Passed	Medium	Smooth transitions	
4	TC003	Test search bar functionality	Enter product name > Verify search results	Relevant products appear in search results	Search bar returns accurate results	Passed	High	Fast and responsive	
5	TC004	Test checkbox filter functionality	Select filter options > Verify filtered products	Display products matching filter criteria	Filtering works correctly	Passed	Medium	Efficient filtering	
	TC005	Test related products functionality	Open product details > Check related products section	Relevant products displayed dynamically	Related products appear correctly	Passed	Medium	Works flawlessly	

	Test Case ID	Description	Steps	Expected Result	Actual Result	Status	Severity	Remarks	
	TC006	Test cart functionality	Add product to cart > Verify cart contents	Cart updates with added product	Cart updates as expected	Passed	High	Works as expected	
	TC007	Check responsiveness on mobile	Resize browser window > Check layout	Layout adjusts properly to screen size	Responsive layout working as intended	Passed	Medium	Test successful	

. Testing Report (CSV Format)

The detailed testing report is structured as follows:

3. Documentation

Test Cases and Results

- **Functional Testing:** Verified all components, including filters, checkout, and user profiles.
- **Error Handling:** Tested fallback mechanisms and error logs for API failures.
- **Cross-Browser Testing:** Ensured compatibility across Chrome, Firefox, Edge, and Safari.

Performance Optimization Steps

- Minimized JavaScript and CSS files.
- Implemented lazy loading for product images.
- Optimized API calls for faster data fetching and rendering.

Security Measures

- Validated user input to prevent SQL injection and XSS attacks.
- Used HTTPS for secure communication.
- Enforced secure cookies and CSRF tokens.

Challenges and Resolutions

- **Challenge:** Slow API response for large product data.
 - **Resolution:** Implemented pagination and caching.
 - **Challenge:** Inconsistent rendering on Safari.
 - **Resolution:** Fixed CSS styles to ensure compatibility.
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Checklist for Day 5

Task	Status
Functional Testing	✓ Completed
Error Handling	✓ Completed
Performance Optimization	✓ Completed
Cross-Browser and Device Testing	✓ Completed
Security Testing	✓ Completed
Documentation	✓ Completed
Final Review	✓ Completed

