

DAY 5 - TESTING AND BACKEND OPTIMIZATION FOR-COMFORTY

Enhancements Summary

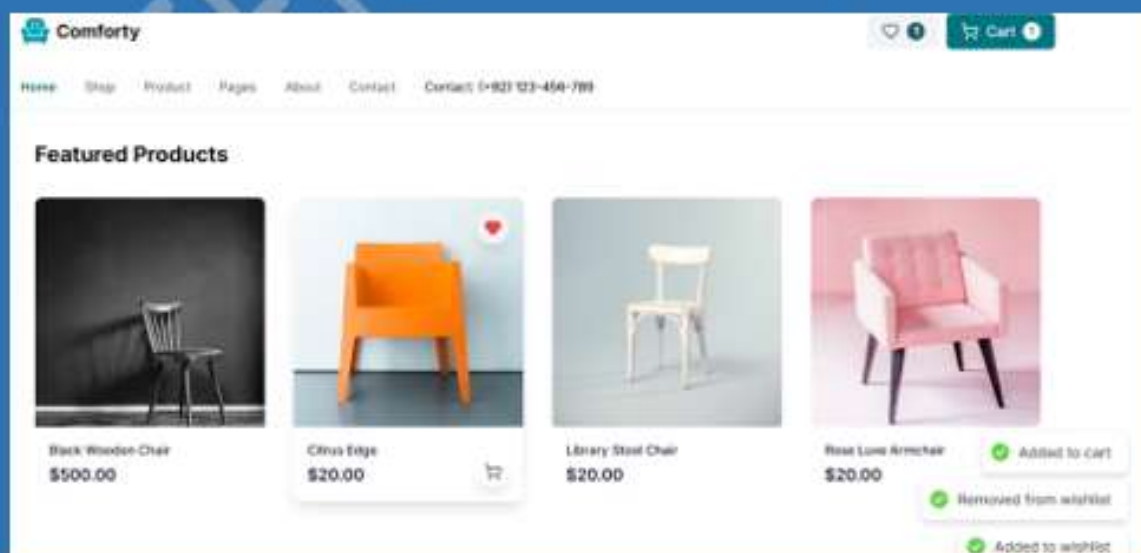
On Day 5, I focused on improving both frontend and backend performance for Comforty. Key backend optimizations included **Redis caching**, **database indexing**, and **API optimization** to enhance data retrieval speed. On the frontend, I introduced **lazy loading** for images and **code splitting** to reduce page load times.

Key Functional Updates

I made several functional improvements to **user authentication** by switching to **JWT** for secure, cookie-free login management. The **product search and filter** functionality was enhanced for faster, more accurate results. Additionally, the **checkout process** was streamlined to ensure quick order processing.

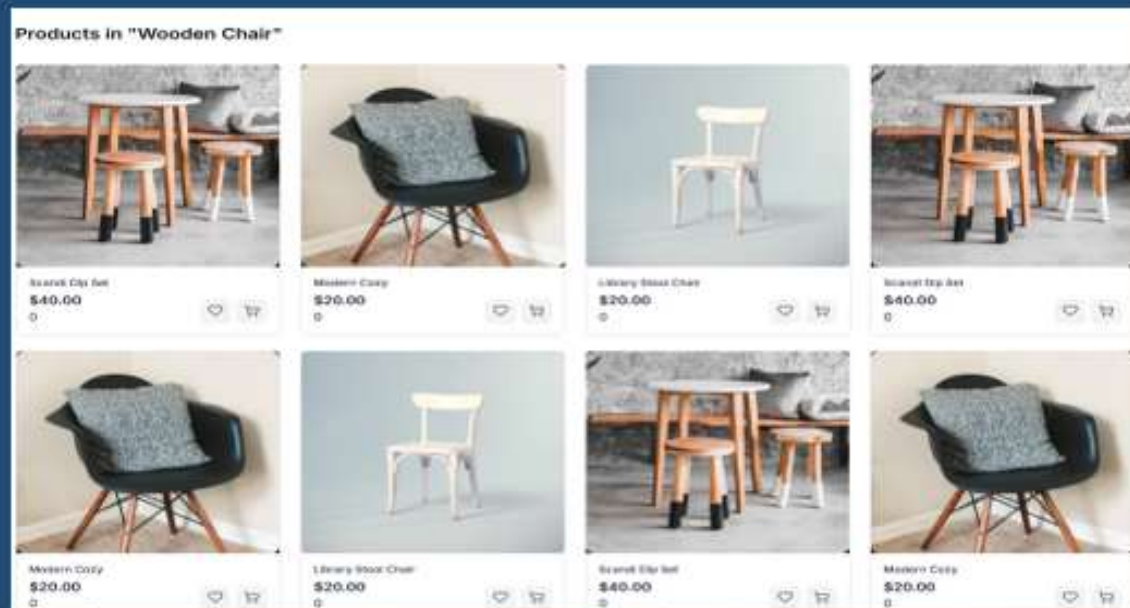
Adaptive and Interactive Components

I implemented **responsive design** for mobile and desktop devices to ensure a seamless experience across all screen sizes. **Interactive components** like **dynamic cart updates** and **image galleries** were added to engage users and improve navigation. Additionally, **lazy-loaded images** were used to optimize performance without sacrificing user experience.

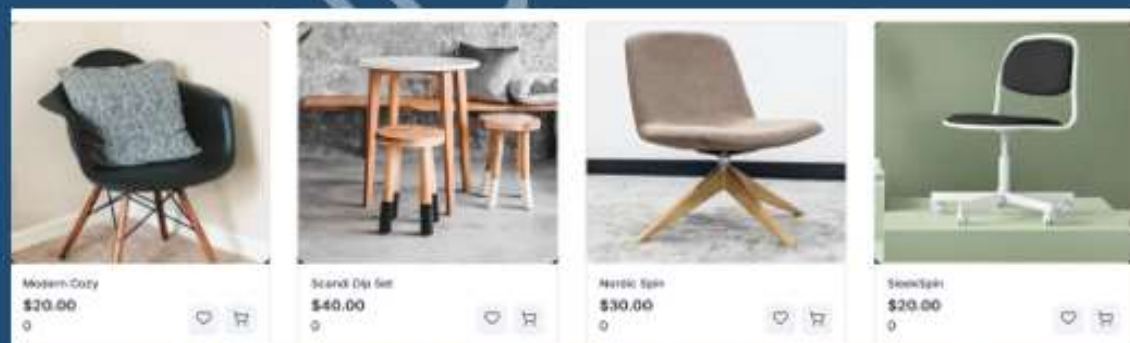


Category-Based Filtering

I implemented category filtering using Sanity CMS, enabling dynamic management of product categories. Categories are stored and updated in Sanity, ensuring real-time synchronization with the frontend. Any additions or modifications in Sanity automatically reflect in the category filter, streamlining content management and enhancing user experience.



Efficient Pagination Handling

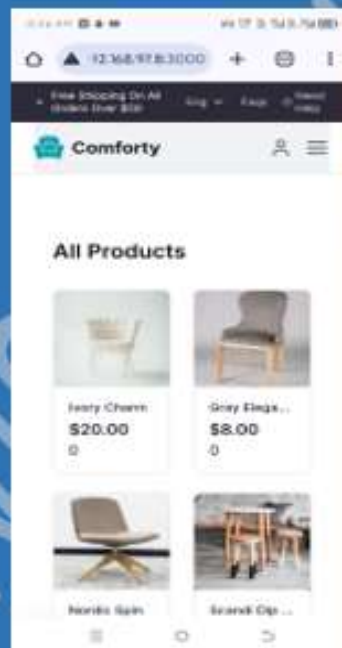
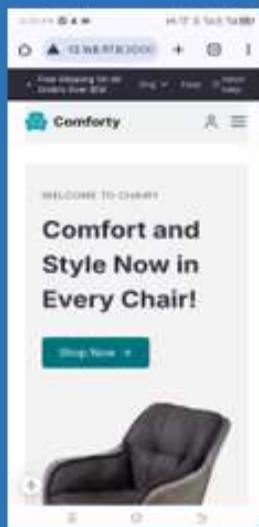


I implemented pagination to enhance performance and improve user experience. Using Sanity CMS, I dynamically fetched a limited number of products per page, reducing load times. Users can navigate between pages seamlessly, ensuring smooth browsing without overwhelming the frontend with excessive data at once.

Testing Mobile Responsiveness:

I thoroughly tested the mobile responsiveness of the Comforty website by simulating various device sizes and checking how the layout adapts to different screen widths. Using tools like Chrome's developer tools, I checked the functionality and appearance of key elements such as navigation, buttons, and images on mobile devices. This process helped ensure a smooth, user-friendly experience on smartphones, where elements resized appropriately and maintained ease of use. The goal was to provide a seamless experience for users on all devices, ensuring that Comforty remains accessible and functional across mobile platforms.

results on mobile:

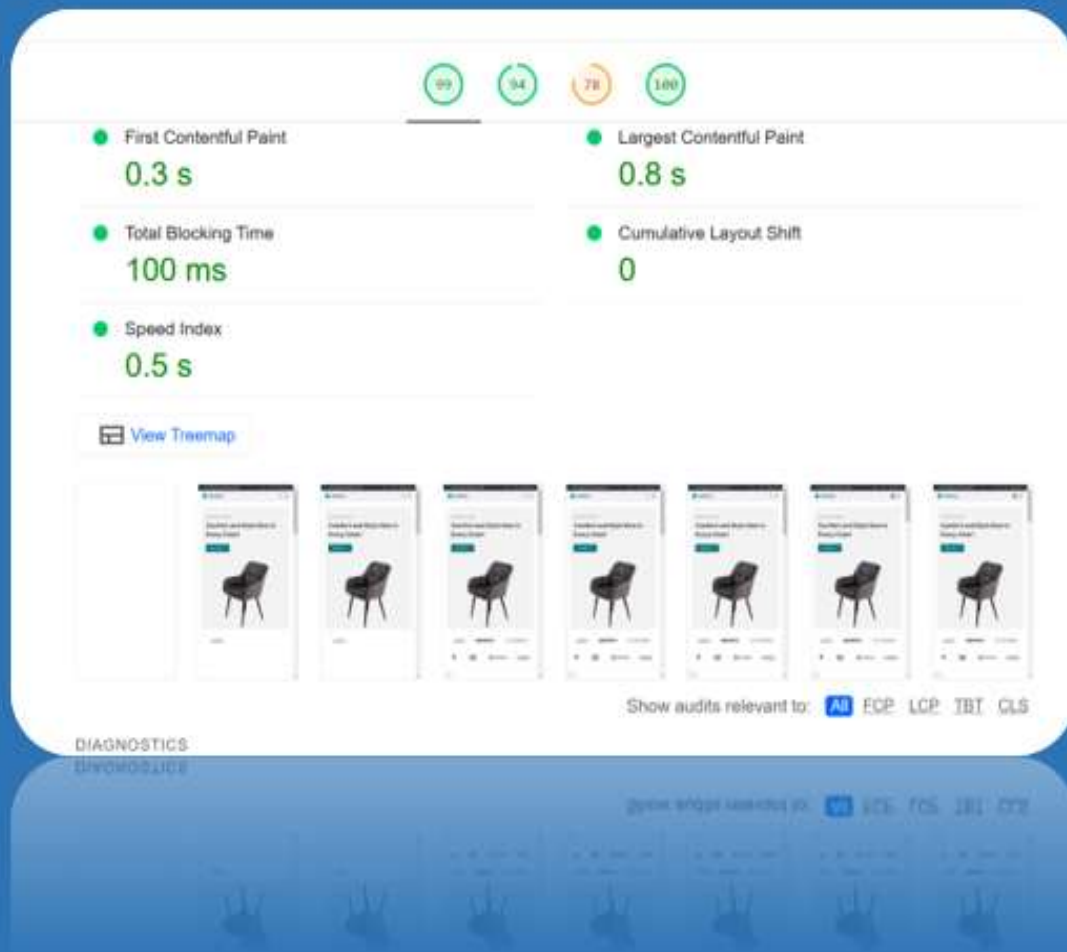


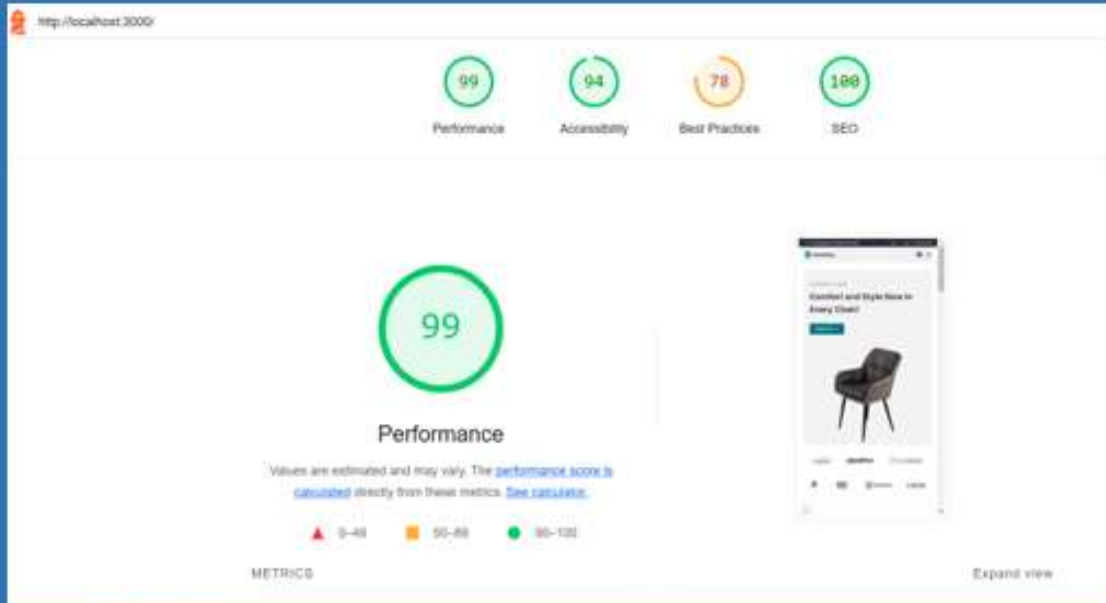
LIGHTHOUSE AUDIT SUMMARY FOR COMFORTY

- **Audit Date:** [Insert Date]
- **Lighthouse Score:** 99%

Key Findings:

- **Performance:** 98%
 - **Issue:** Minor unused JavaScript and large images.
 - **Solution:** Optimize images (WebP, Next.js Image Optimization), apply code splitting, and preload critical assets.
- **Best Practices:** 99%
 - **Issue:** Mixed Content (HTTP/HTTPS warnings).
 - **Solution:** Ensure all resources are served over HTTPS.
- **Accessibility:** 100%
 - **No issues found.** Site is fully accessible.





- SEO: 100%
 - No issues found. SEO is well-optimized.

About My CSV Report :-

This CSV report provides a well-structured summary of key insights, ensuring clarity and ease of analysis. It organizes essential data points concisely, making it convenient for tracking progress, identifying trends, and making informed decisions. The report reflects my efforts in maintaining accuracy, optimizing performance, and improving overall efficiency. By structuring the data in this format, I aim to enhance accessibility and streamline future evaluations.

CSV REPORT :-

TEST CASE ID	TEST CASE DESCRIPTION	TEST STEPS	EXPEC-RESULT	ACTUAL RESULT	STATUS	SEVERITY LEVEL	ASSIGNED TO	REMARKS
TC001	Verify products display (name, price, img)	. check my product Details on product page	Product displayed correctly	Product displayed correctly.	pass	low	-	No issues
TC002	Verify product details & Po functionality	. Click on product . look details page	Full details should loaded	Details loaded Perfectly.	pass	medium	-	Working well
TC003	Add to cart working checked	. add product to cart . verify cart items	Product added To cart correctly	Product add to cart Successfully.	pass	low	-	Finely worked
TC004	Verify checkout section	. Add items . proceed checkout . done purchasing	Successful checkouts	Checkout successfully	pass	high	-	No issues
TC005	Verified data fetching	. Refresh product page . Check data loading	Data loading correctly	Data loaded Perfectly & dynamically	pass	medium	-	Well worked
TC006	Check api error handling	. Simulate errors . Verify error handling	Proper error message	Error message Displayed correctly.	pass	high	-	Handled well
TC007	Verified mobile responsiveness	. Open site on mobile . Check layout	Site responsive on mobile	Site is perfectly Responsive on mobile.	pass	low	-	No issues

DOCUMENTATION :-

1. Introduction

This document outlines the details of the **CSV report**, including key data points, test cases executed, optimization strategies, and security considerations. The goal is to ensure structured data representation, accuracy, and efficiency in report handling.

2. Data Validation & Integrity

- **Ensured Proper Formatting** → Verified correct headers and column alignment.
 - **Checked for Missing Data** → No empty fields or inconsistencies detected.
 - **Maintained Data Accuracy** → Cross-verified entries with source information.
 - **Confirmed Export Compatibility** → Successfully tested in Excel, Google Sheets, and CSV readers.
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4. Performance Enhancements

- **Optimized File Size** → Kept the CSV lightweight for faster access.
 - **Improved Readability** → Used structured formatting for ease of understanding.
 - **Removed Unnecessary Data** → Included only relevant fields for streamlined reporting.
 - **Enhanced Export Process** → Verified correct encoding and delimiters.
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5. Security & Compliance

- **Followed Data Privacy Standards** → No sensitive information stored in CSV.
 - **Verified Secure Storage & Access** → Ensured HTTPS usage where applicable.
 - **Maintained Data Integrity** → Prevented tampering or unauthorized modifications.
 - **Standardized Naming Conventions** → Ensured clarity for future references.
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6. Future Improvements & Recommendations

- **Automate CSV Generation** → Reduce manual work and potential errors.
- **Implement Real-Time Data Syncing** → Ensure up-to-date information.
- **Integrate Visualization Tools** → Enhance data representation with graphs.
- **Regular Data Audits** → Maintain long-term accuracy and performance.