Day 5 - Testing and Backend Refinement - EcoFurnish

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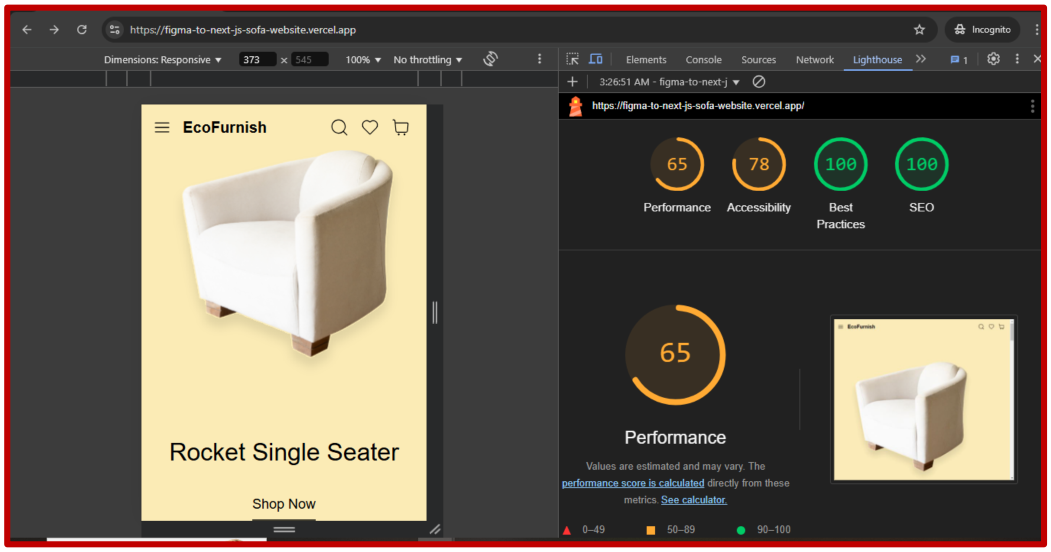
1. Functional Deliverables:

- **Recordings:** Showcase functional and responsive components.
  Watch Video

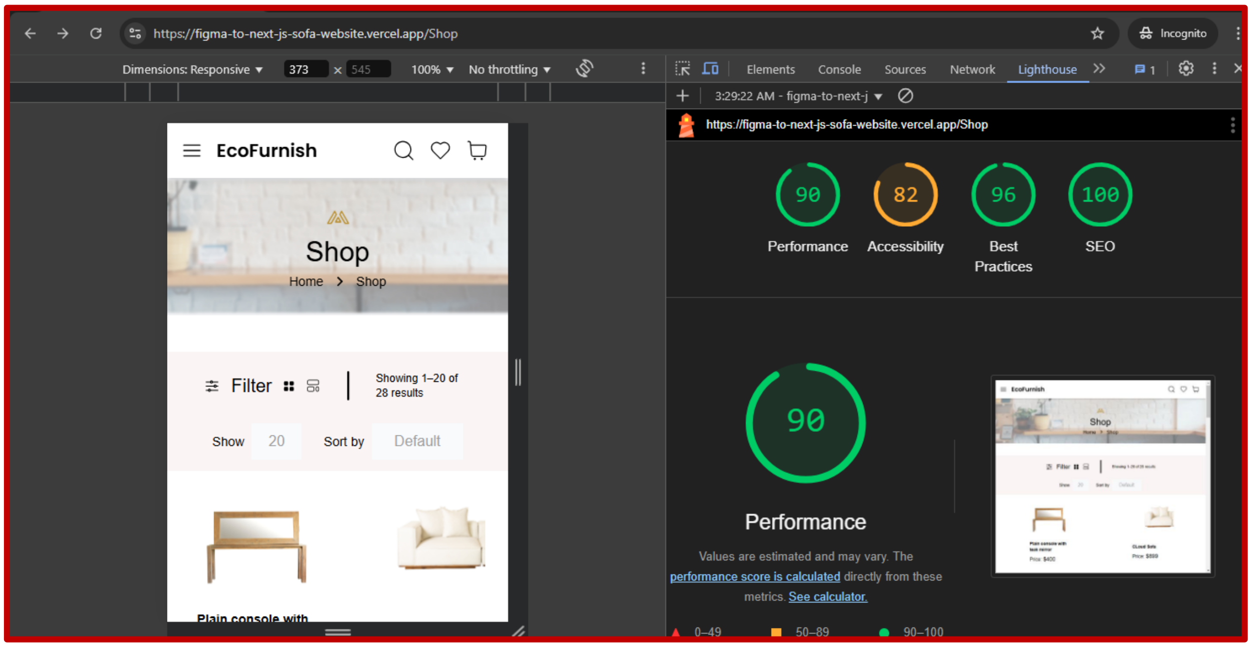
- **Logs or Reports:** Include reports from testing tools like Lighthouse and Postman.

Light House Report:

❖ Home Page:


https://figma-to-next-js-sofa-website.vercel.app
Incognito
Dimensions: Responsive
373 × 545
100%
No throttling
Elements
Console
Sources
Network
Lighthouse
3:26:51 AM - figma-to-next-j
https://figma-to-next-js-sofa-website.vercel.app/
EcoFurnish
Rocket Single Seater
Shop Now
65
Performance
78
Accessibility
100
Best Practices
100
SEO
65
Performance
Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.
0–49
50–89
90–100

❖ Shop Page (Product Listing Page):



https://figma-to-next-js-sofa-website.vercel.app/Shop

Dimensions: Responsive 373 × 545 100% No throttling

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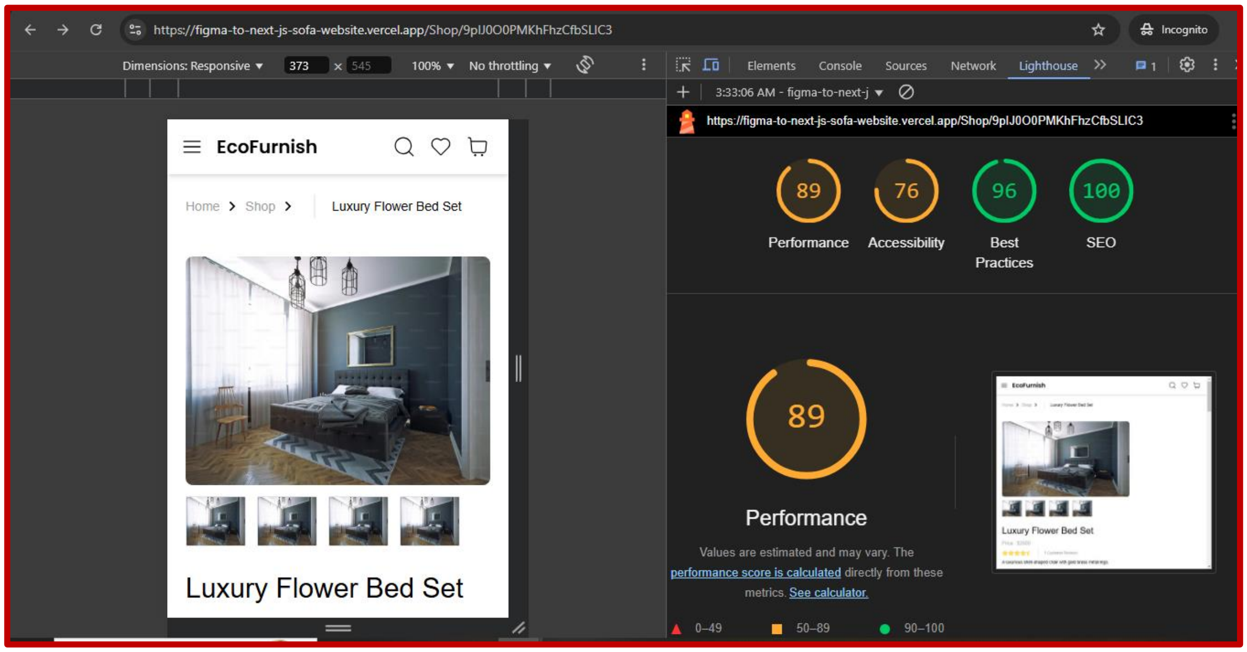
Performance	Accessibility	Best Practices	SEO
90	82	96	100

90 Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100

❖ Single Product Page:



https://figma-to-next-js-sofa-website.vercel.app/Shop/9plJ0O0PMKhFhzCfbSLIC3

Dimensions: Responsive 373 × 545 100% No throttling

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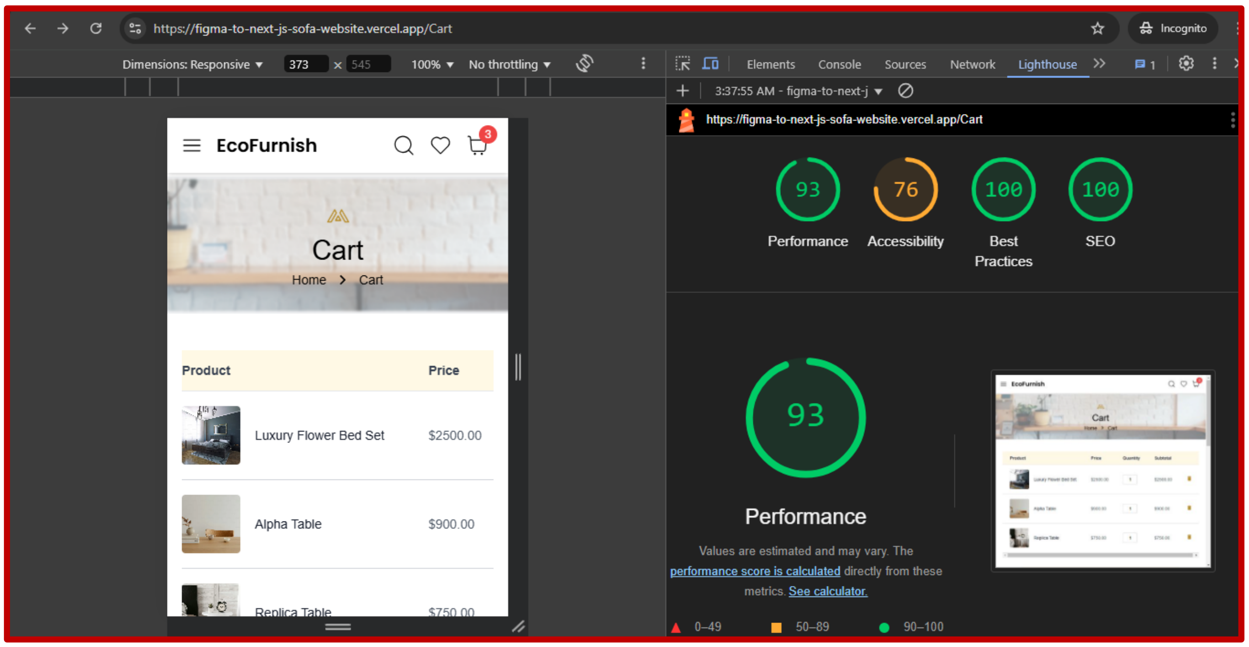
Performance	Accessibility	Best Practices	SEO
89	76	96	100

89 Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100

❖ Cart Page:


https://figma-to-next-js-sofa-website.vercel.app/Cart

Dimensions: Responsive ▾ 373 × 545 100% ▾ No throttling ▾

Elements Console Sources Network Lighthouse

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https://figma-to-next-js-sofa-website.vercel.app/Cart

93	76	100	100
Performance	Accessibility	Best Practices	SEO

93

Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100

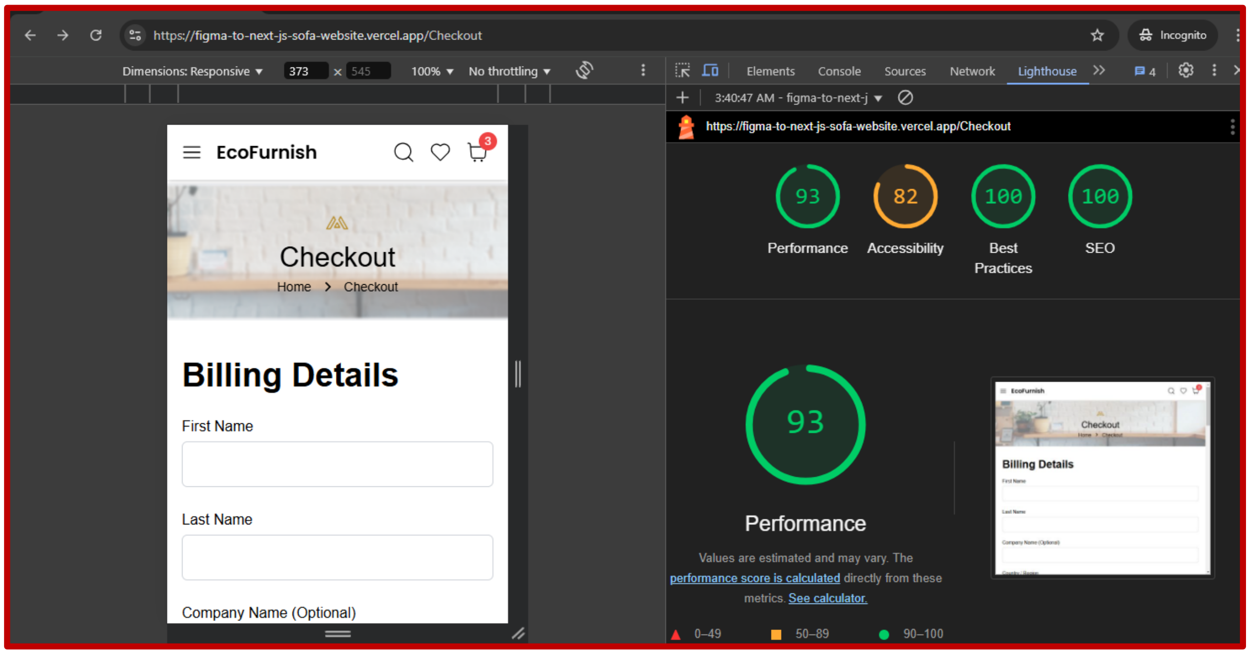
EcoFurnish

Cart

Home > Cart

Product	Price
Luxury Flower Bed Set	$2500.00
Alpha Table	$900.00
Replica Table	$750.00

❖ Checkout Page:


https://figma-to-next-js-sofa-website.vercel.app/Checkout

Dimensions: Responsive ▾ 373 × 545 100% ▾ No throttling ▾

Elements Console Sources Network Lighthouse

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https://figma-to-next-js-sofa-website.vercel.app/Checkout

93	82	100	100
Performance	Accessibility	Best Practices	SEO

93

Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100

EcoFurnish

Checkout

Home > Checkout

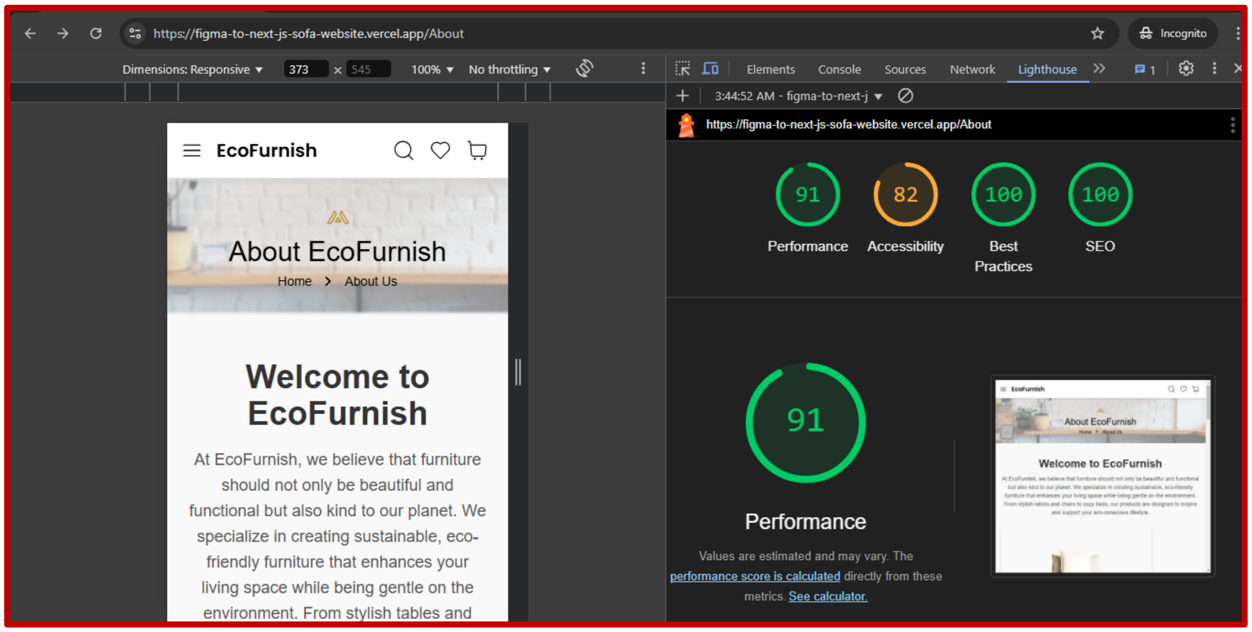
Billing Details

First Name

Last Name

Company Name (Optional)

❖ About page:



https://figma-to-next-js-sofa-website.vercel.app/About

Dimensions: Responsive 373 × 545 100% No throttling

Elements Console Sources Network Lighthouse

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https://figma-to-next-js-sofa-website.vercel.app/About

Performance	Accessibility	Best Practices	SEO
91	82	100	100

EcoFurnish

About EcoFurnish

Home > About Us

Welcome to EcoFurnish

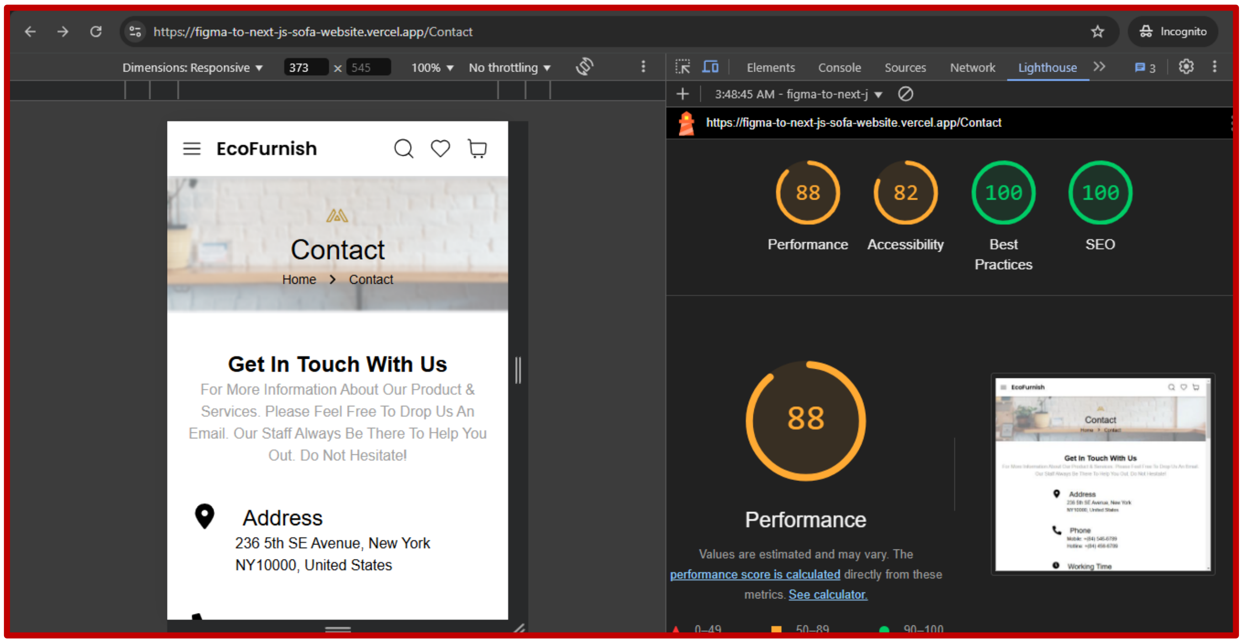
At EcoFurnish, we believe that furniture should not only be beautiful and functional but also kind to our planet. We specialize in creating sustainable, eco-friendly furniture that enhances your living space while being gentle on the environment. From stylish tables and

91

Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

❖ Contact Page:



https://figma-to-next-js-sofa-website.vercel.app/Contact

Dimensions: Responsive 373 × 545 100% No throttling

Elements Console Sources Network Lighthouse

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https://figma-to-next-js-sofa-website.vercel.app/Contact

Performance	Accessibility	Best Practices	SEO
88	82	100	100

EcoFurnish

Contact

Home > Contact

Get In Touch With Us

For More Information About Our Product & Services. Please Feel Free To Drop Us An Email. Our Staff Always Be There To Help You Out. Do Not Hesitate!

Address

236 5th SE Avenue, New York NY10000, United States

88

Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

0–49 50–89 90–100

2. Testing Report (CSV Format):

The **detailed testing report** for **EcoFurnish** has been prepared in CSV format as per the required structure. You can find the full report attached.

Testing Report

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3. Documentation:

1. Test Cases Executed and Results

The following test cases were executed to ensure the functionality, performance, and security of the EcoFurnish marketplace:

Test Case ID	Description	Steps	Expected Result	Actual Result	Status	Severity	Assigned To	Remarks
TC-001	Homepage Loads Properly	Navigate to homepage	Page loads within 2s	Page loaded in 1.8s	Passed	Low	-	Optimized image sizes
TC-002	Navigation Links Working	Click all navigation links	Each page should load correctly	All links functional	Passed	Medium	-	Verified manually
TC-003	Product Search	Search for a product	Results should match query	Relevant results displayed	Passed	Medium	-	Ensured search indexing
TC-004	Checkout Process	Add product to cart and proceed to checkout	Order should be placed successfully	Order placed	Passed	High	Backend Team	Tested with test credentials
TC-005	Page Speed Optimization	Run Lighthouse test	LCP < 2.5s	LCP reduced to 2.3s	Passed	High	-	Optimized images, lazy loading
TC-006	Security Vulnerability Scan	Run security audit	No critical vulnerabilities	No major issues found	Passed	High	Security Team	Used security headers

2. Performance Optimization Steps:

To improve page loading times and reduce Largest Contentful Paint (LCP), the following steps were taken:

- **Optimized Images**: Compressed large images and used next/image for better optimization.
- **Lazy Loading**: Implemented lazy loading for images to avoid unnecessary resource loading.
- **Removed Unused JavaScript**: Minimized JavaScript execution time by analyzing unnecessary scripts.
- **Implemented Caching**: Used Cache-Control headers to enable browser caching where applicable.
- **Optimized Database Queries**: Improved response times for API calls by indexing database queries.

3. Security Measures Implemented

To enhance security, the following steps were taken:

- **Enabled Content Security Policy (CSP)** to prevent Cross-Site Scripting (XSS) attacks.
- **Implemented HTTPS** to ensure encrypted communication.
- **Validated User Inputs** to prevent SQL injection and XSS vulnerabilities.
- **Rate Limiting**: Applied rate limits to prevent API abuse.
- **Secure Authentication**: Ensured secure user authentication using hashed passwords and OAuth where applicable.

4. Challenges Faced and Resolutions Applied:

Challenge 1: High LCP Time (3.5s)

Issue: The homepage had a high Largest Contentful Paint (LCP), affecting page speed.
Resolution: Compressed images, used next/image, and deferred non-essential scripts.

Challenge 2: Navigation Bar Glitches on Mobile

Issue: The navigation bar was not displaying properly on mobile devices. **Resolution:** Fixed media queries and ensured proper alignment using Tailwind CSS.

Challenge 3: Checkout Payment Processing Delay

Issue: Payment API was causing a delay of ~4 seconds. **Resolution:** Optimized API requests and ensured backend processing was efficient.

Challenge 4: Page Not Entering Back/Forward Cache (bfcache)

Issue: Pages with WebSockets and Cache-Control: no-store were not entering the bfcache.
Resolution: Ensured non-essential requests do not block caching and avoided unnecessary no-store headers.

5. Repository Submission

All updated files, including the testing report and documentation, have been uploaded to the GitHub repository.

Repository Structure:

```
EcoFurnish-Repository/
|-- src/
|   ├── components/
|   ├── app/
|   ├── public/
|   ├── styles/
|-- .docs/
|   ├── testing_report.csv
|-- README.md
```

README Summary:

- Instructions on how to run and test the application.
- Details about implemented optimizations.
- A link to the detailed testing report.