# Day 5 - Testing, Error Handling, and Backend Integration Refinement

## Overview

My website is built with **Next.js and Tailwind CSS**, ensuring a **fully responsive** design that adapts smoothly to all screen sizes. Functional testing covers **navigation, forms, responsiveness, API data handling**, and **data sanity**. The data is **properly fetched and accurately displayed**. Any issues found during testing were documented and fixed.

## Responsive Design

My website is **fully responsive**, ensuring it adapts seamlessly to different screen sizes, from desktops to mobile devices, providing an optimal user experience across all platforms.
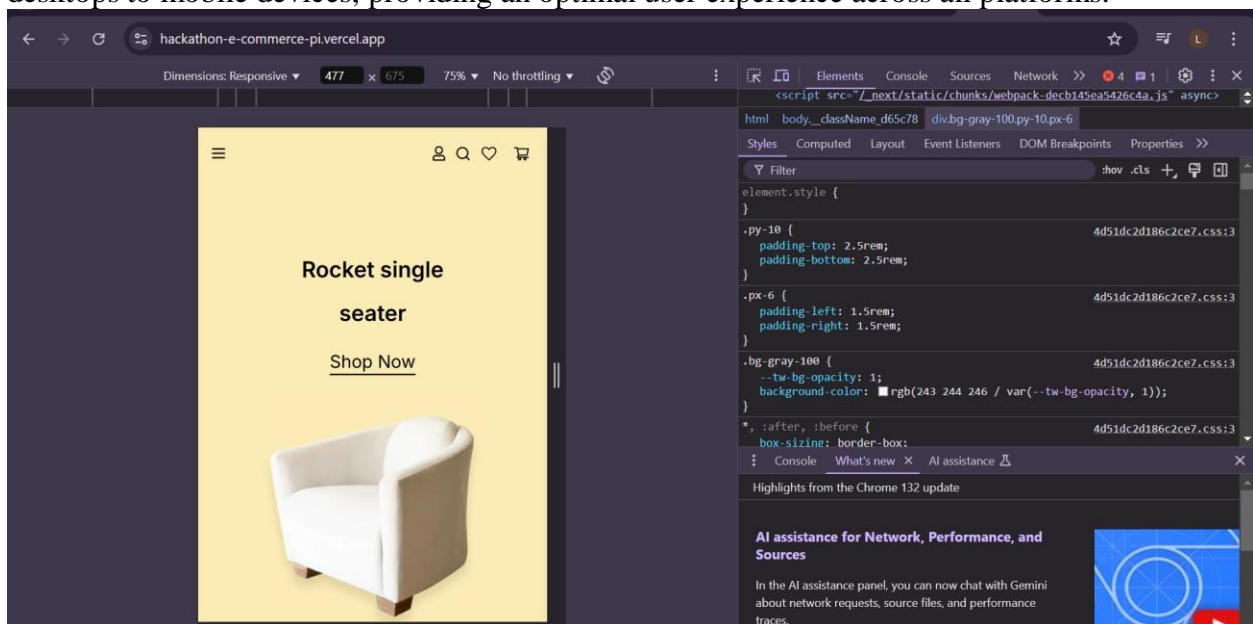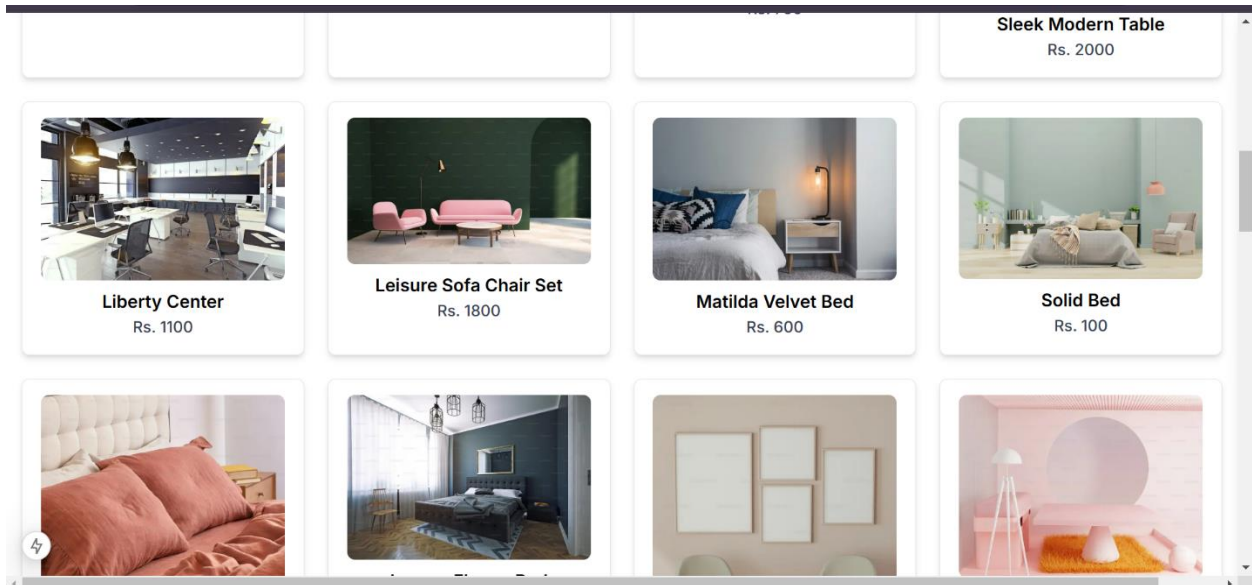


## API Functionality

The **API is fully functional**, ensuring smooth data fetching and accurate display of information across the website. All API calls are working as expected, providing real-time data updates without any issues.

## Error Handling – API

**The** API is working properly**. This error is being investigated, and the image will be properly fetched and displayed once the**

issue is resolved.



## Functional Testing – Add to Cart Page

The **Add to Cart** functionality is currently **in progress**, and I am actively working on its implementation. The main focus is to ensure that items are **added, updated, and removed** correctly in the cart while maintaining **data accuracy**. Functional testing will cover **button actions, quantity updates, price calculations, and persistence** across sessions. My goal is to make the website fully functional as soon as possible.
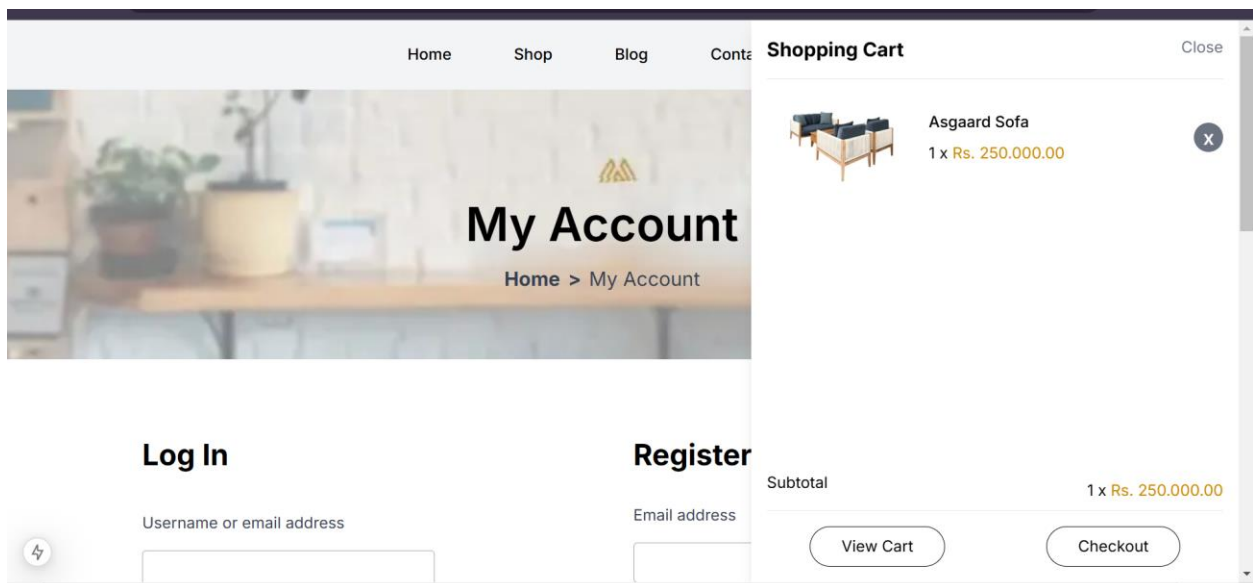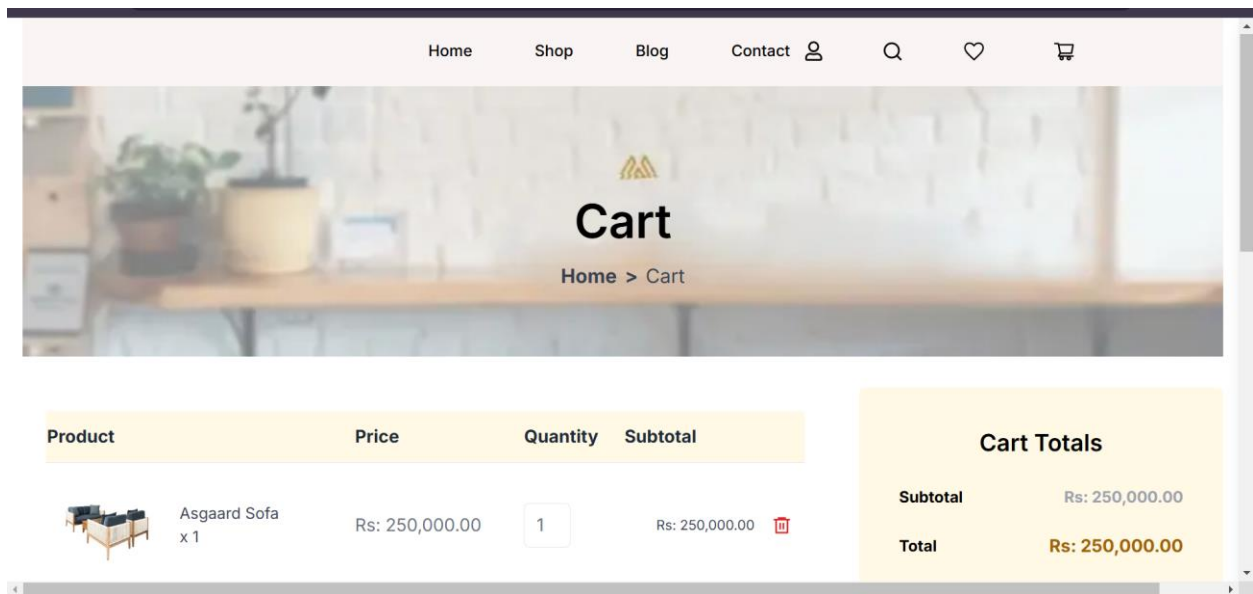
## Functional Testing – My Account Login Page

The **Login functionality** works **smoothly**, with focus on **correct username and password handling**. Testing includes ensuring the **"remember me"** feature works properly, allowing users to securely access their accounts. The rest of the functionality is still **in progress**.

## Functional Testing – Checkout Page

The **Checkout** functionality is currently **in progress**, focusing on **order processing, payment handling, and data accuracy**. Testing ensures that transactions are smooth, prices are correctly calculated, and user details are securely processed.



## Successfully Installed Thunder Client

Thunder Client has been successfully installed and is ready for use. You can now use it to make API requests, including testing the Sanity API for creating or updating your product documents.
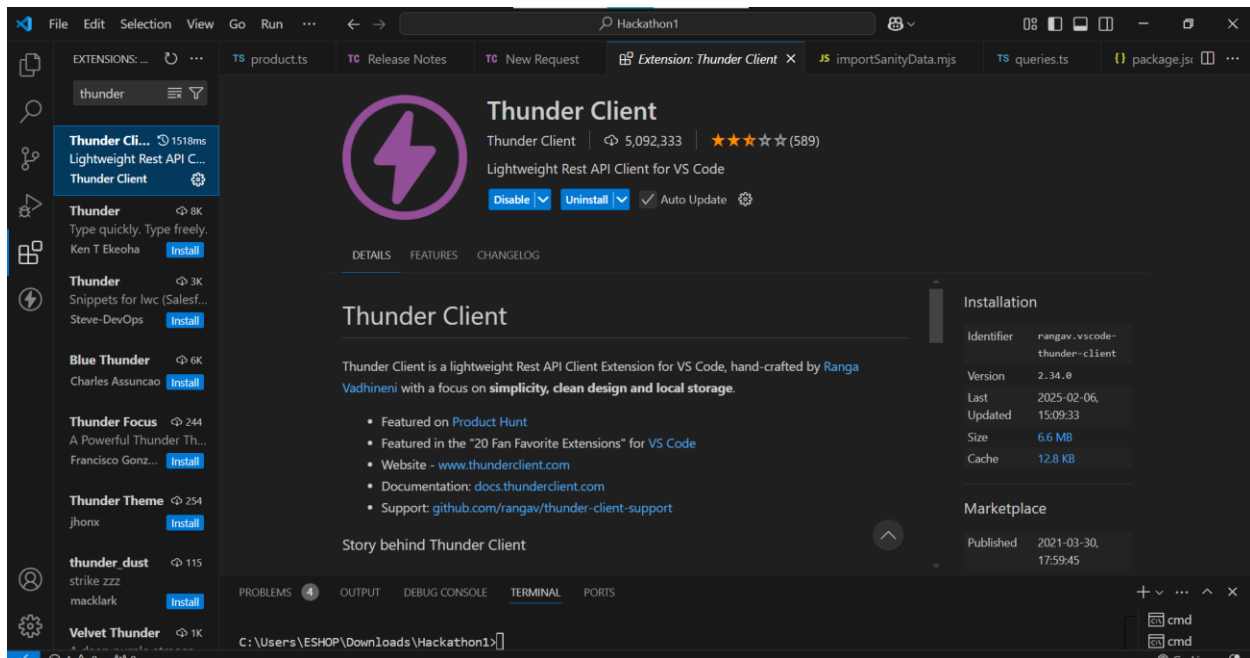


# Status

**CSV Report**

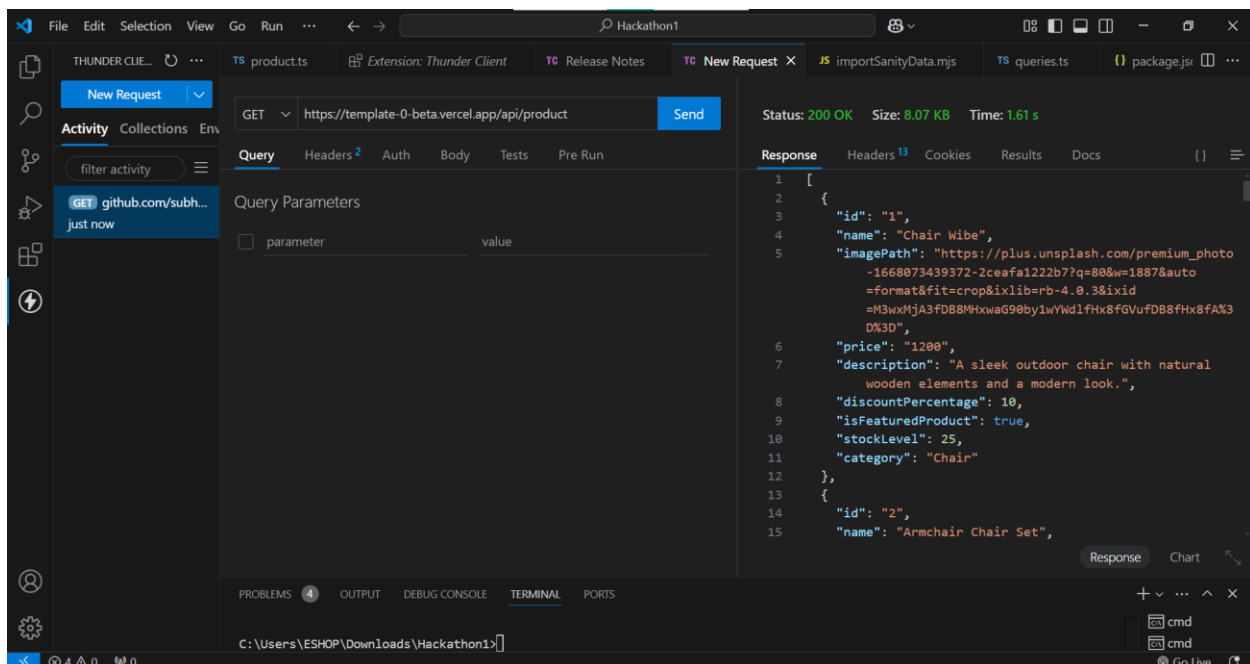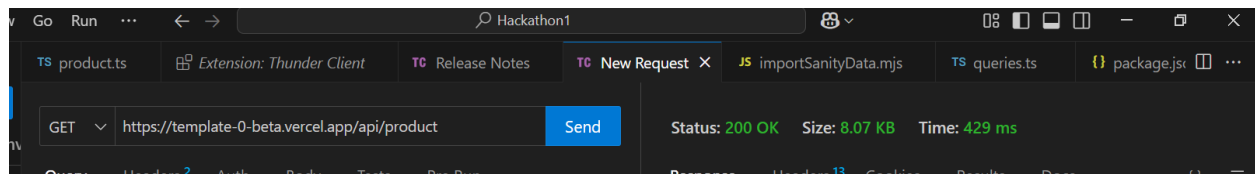| Test Case ID | Test Case Description | Test Steps | Expected Result | Actual Result | Status | Severity Level | Assigned To | Remarks | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | TC001 | Validate product listing page | Open product page > Verify products | Products displayed correctly | Products displayed correctly | Passed | high | - | No issues found |
| 3 | TC002 | Test API error handling | Disconnect API > Refresh page | Show fallback UI with error message | Error message shown | Passed | Medium | - | Handled gracefully |
| 4 | TC003 | Check cart functionality | Add product to cart > Verify cart contents | Cart updates with added product | Cart updates as expected | Passed | High | - | **Functionality under development.** |
| 5 | TC004 | Ensure responsiveness on mobile | Resize browser window > Check layout | Layout adjusts properly to screen size | Responsive layout working as intended | Passed | Medium | - | Test successful |

# Performance Optimization Using Lighthouse

To analyze and optimize the performance of your web application, you can use **Lighthouse**, a powerful tool provided by Google. It helps identify issues related to performance, accessibility,

 lighthouse http://localhost:3000 --view

SEO, and best practices.
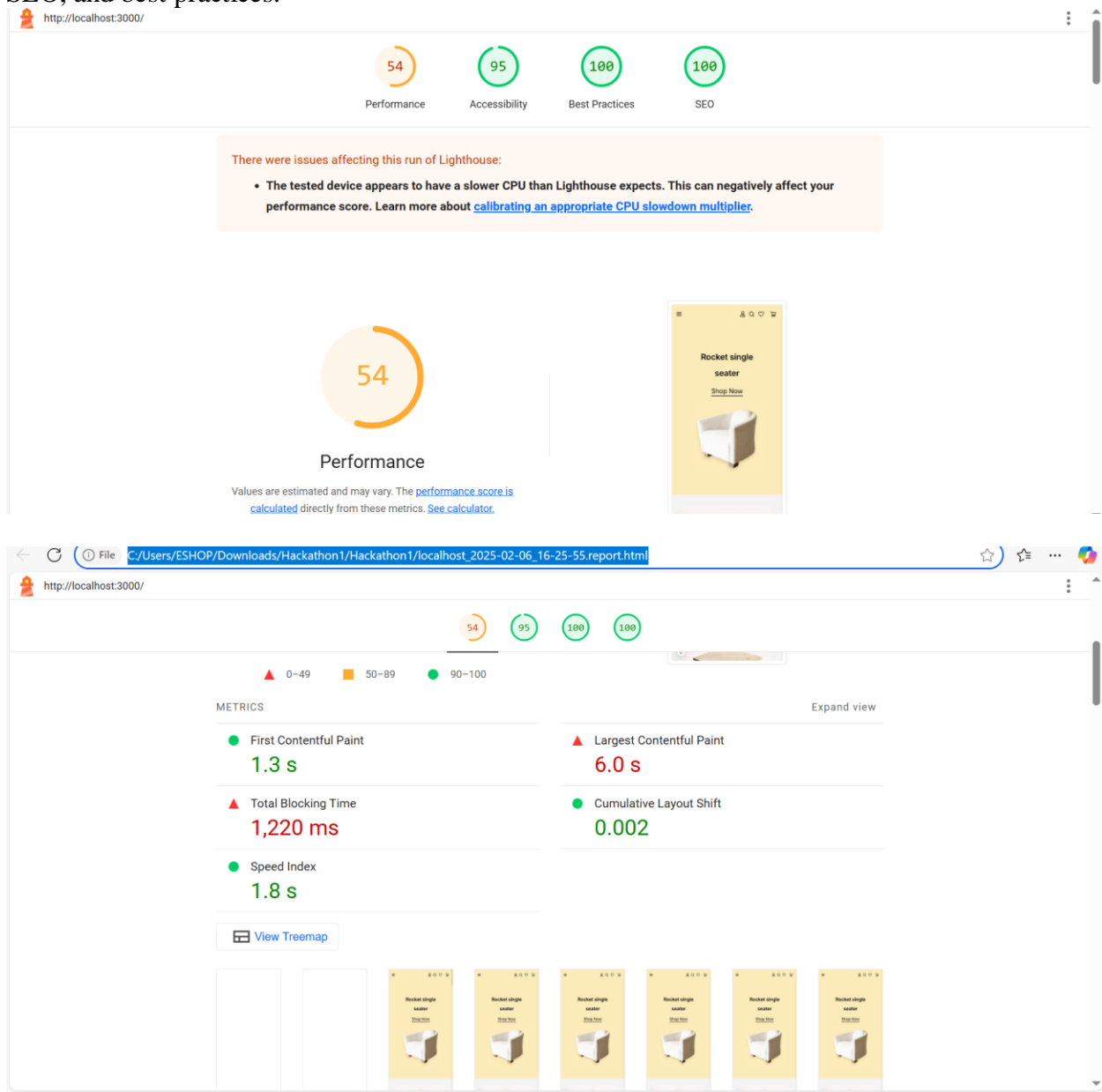
54    95    100    100

### DIAGNOSTICS

▲ Reduce JavaScript execution time  — 2.4 s

▲ Minimize main-thread work  — 4.2 s

▲ Largest Contentful Paint element  — 5,960 ms

▲ Minify JavaScript  — Potential savings of 313 KiB

▲ Largest Contentful Paint image was lazily loaded

▲ Reduce unused JavaScript  — Potential savings of 952 KiB

▲ Page prevented back/forward cache restoration  — 3 failure reasons

■ Eliminate render-blocking resources  — Potential savings of 0 ms

■ Avoid serving legacy JavaScript to modern browsers  — Potential savings of 0 KiB

○ Avoid long main-thread tasks  — 12 long tasks found

○ Initial server response time was short  — Root document took 420 ms
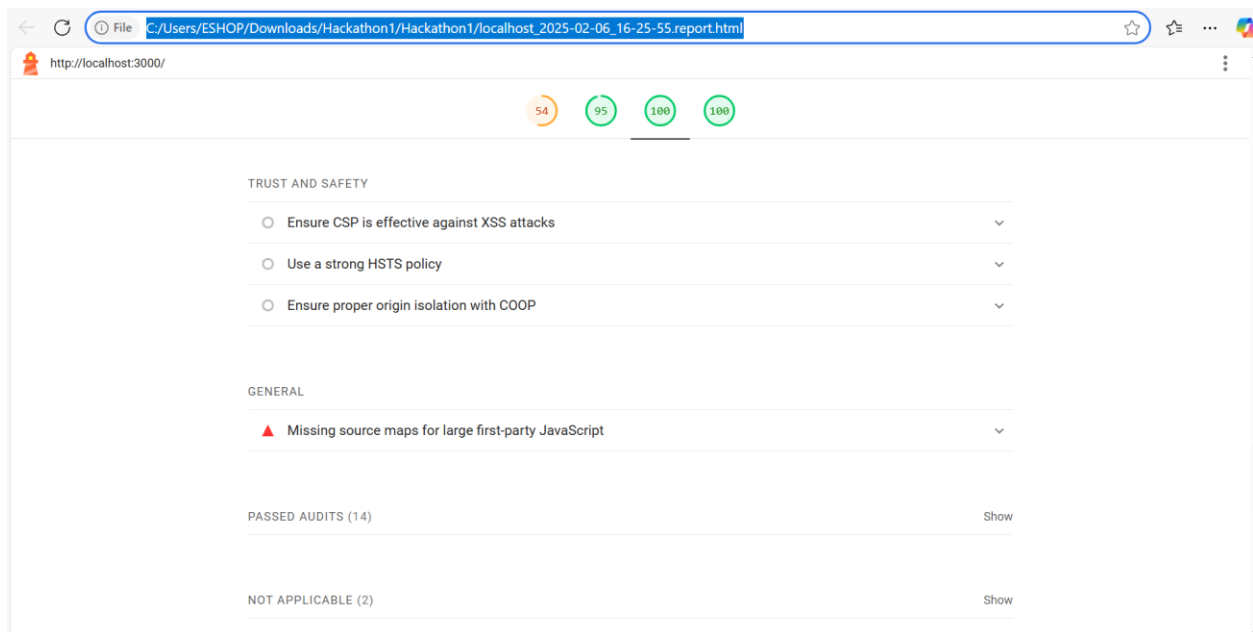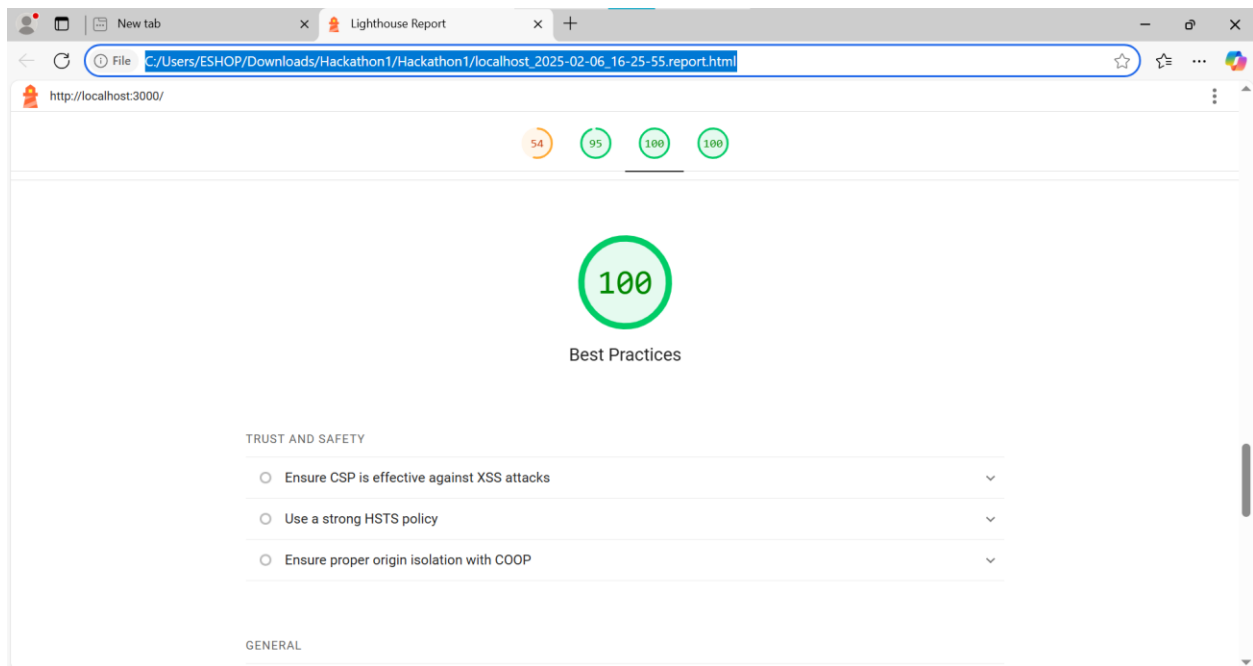
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54    95    100    100

PASSED AUDITS (23)      Show

## 95

### Accessibility

These checks highlight opportunities to improve the accessibility of your web app. Automatic detection can only detect a subset of issues and does not guarantee the accessibility of your web app, so manual testing is also encouraged.

### CONTRAST

TRUST AND SAFETY
Ensure CSP is effective against XSS attacks

Use a strong HSTS policy

Ensure proper origin isolation with COOP

GENERAL
Missing source maps for large first-party JavaScript
    PASSED AUDITS (14)

Show

NOT APPLICABLE (2)
Show

<div align="center">100</div>

<div align="center">SEO</div>

These checks ensure that your page is following basic search engine optimization advice. There are many additional factors Lighthouse does not score here that may affect your search ranking, including performance on [Core Web Vitals](#). [Learn more about Google Search Essentials](#).

ADDITIONAL ITEMS TO MANUALLY CHECK (1)
Hide
Structured data is valid
Run these additional validators on your site to check additional SEO best practices.
PASSED AUDITS (8)
Show
NOT APPLICABLE (2)
Show

- Captured at Feb 6, 2025, 4:25 PM GMT+5
- Emulated Moto G Power with Lighthouse 12.3.0
- Single page session
- Initial page load
- Slow 4G throttling
- Using Chromium 132.0.0.0 with cli

<div align="center">Generated by **Lighthouse** 12.3.0 | [File an issue](#)</div>

File C:/Users/ESHOP/Downloads/Hackathon1/Hackathon1/localhost_2025-02-06_16-25-55.report.html

http://localhost:3000/

54    95    100    100

100

SEO

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ADDITIONAL ITEMS TO MANUALLY CHECK (1)                                          Hide

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PASSED AUDITS (8)                                                     Show

NOT APPLICABLE (2)                                                    Show

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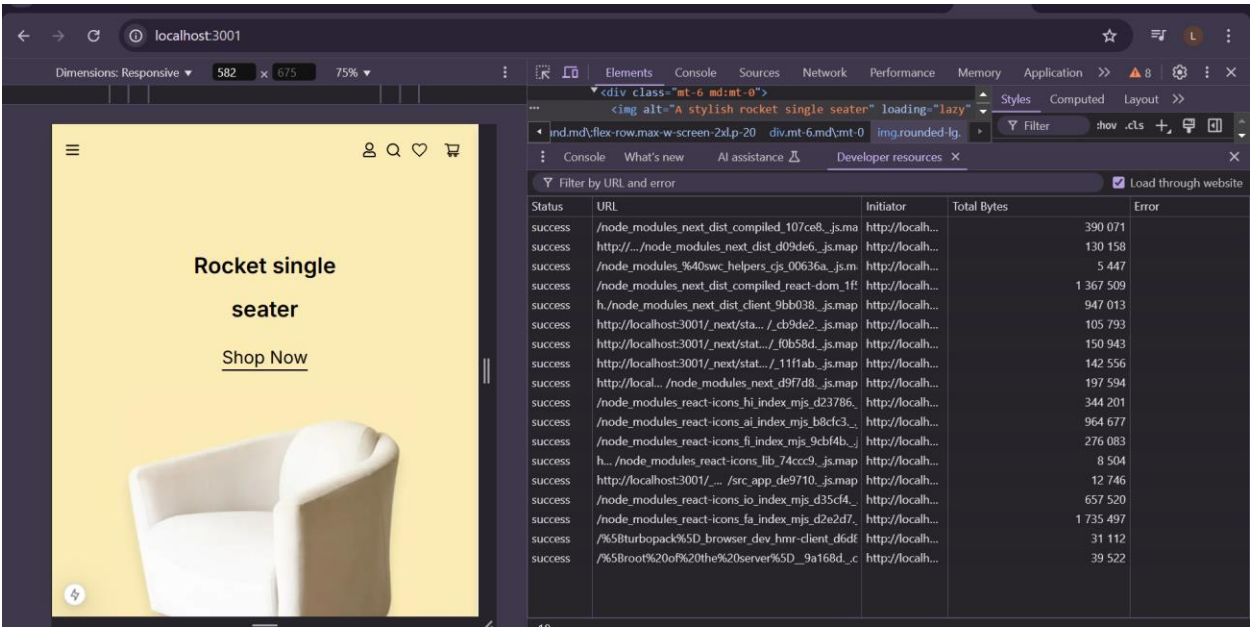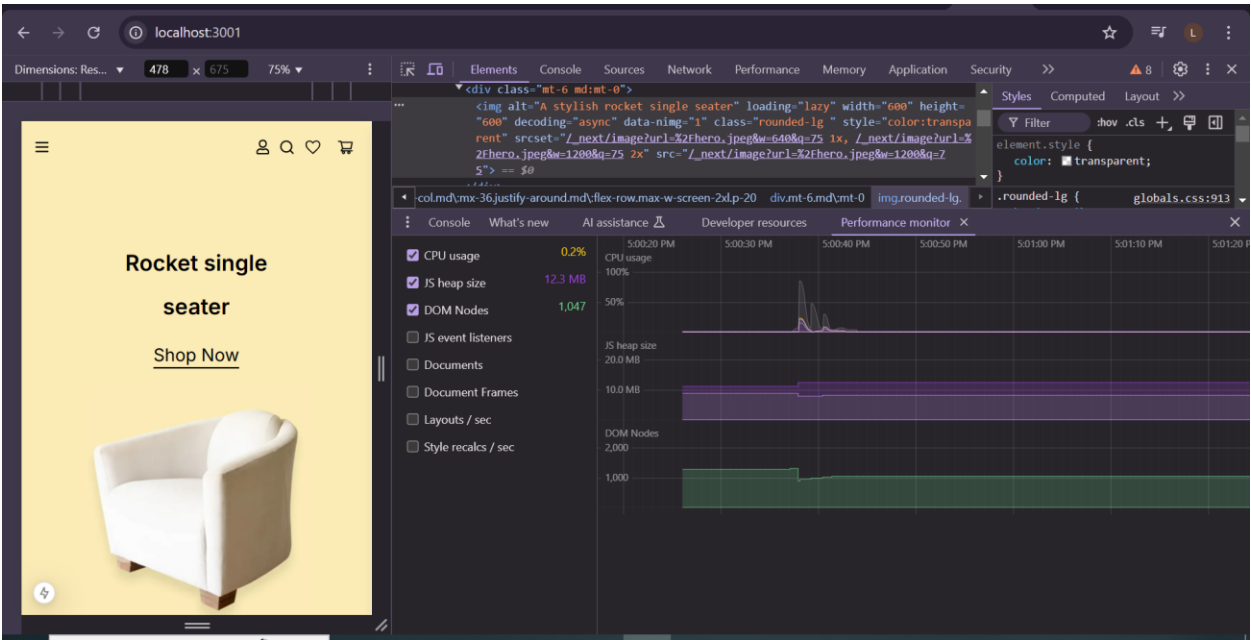
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# Developer Resources



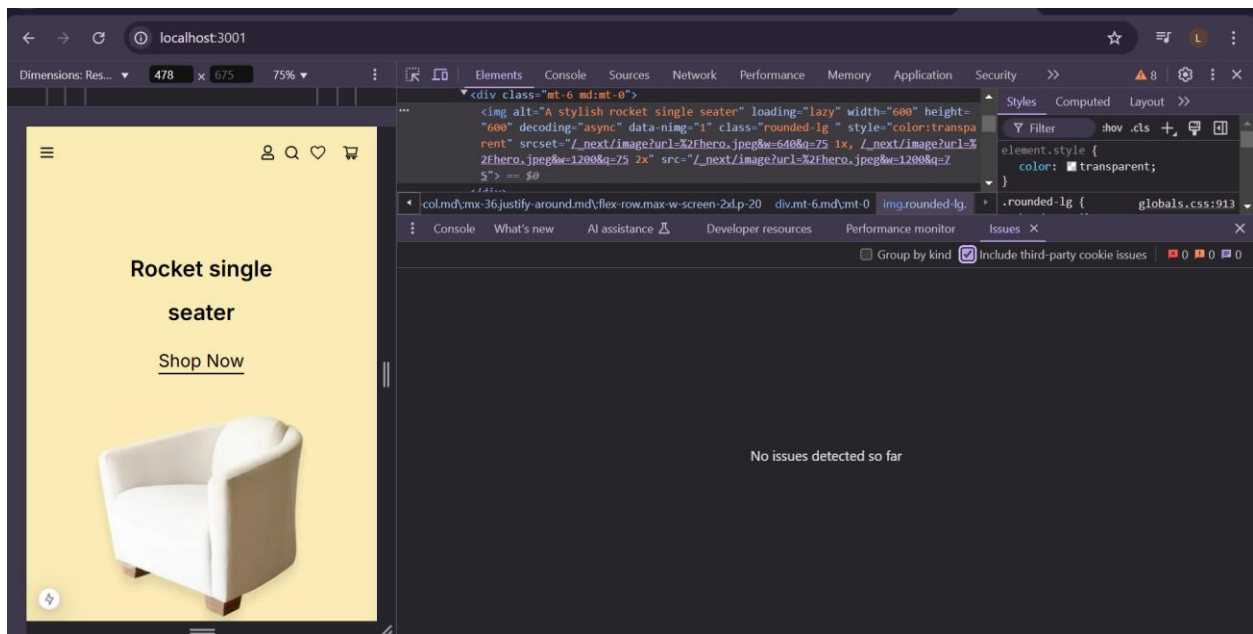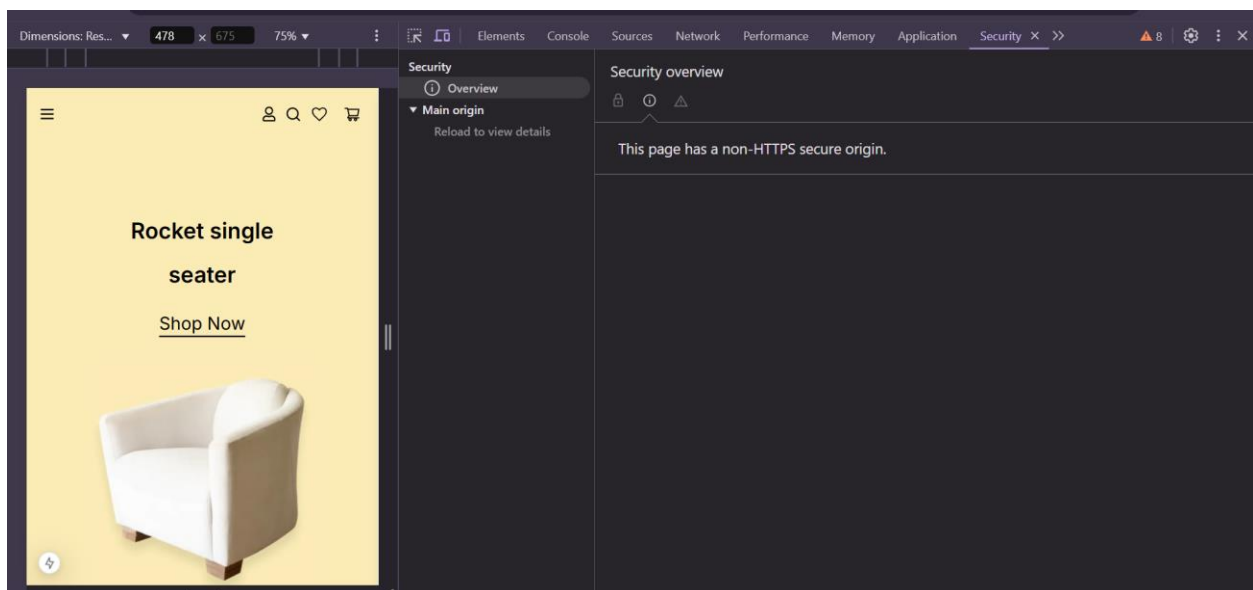# Performance Monitor



# Issues

# Security



# Completed day 5