

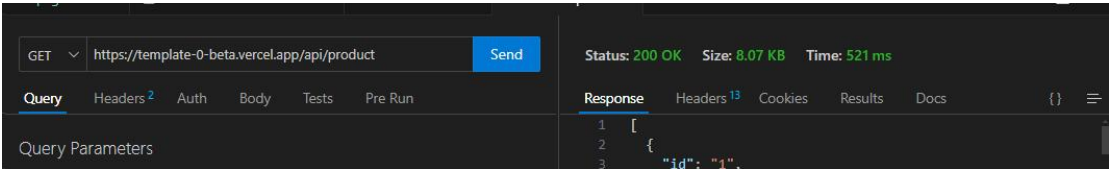
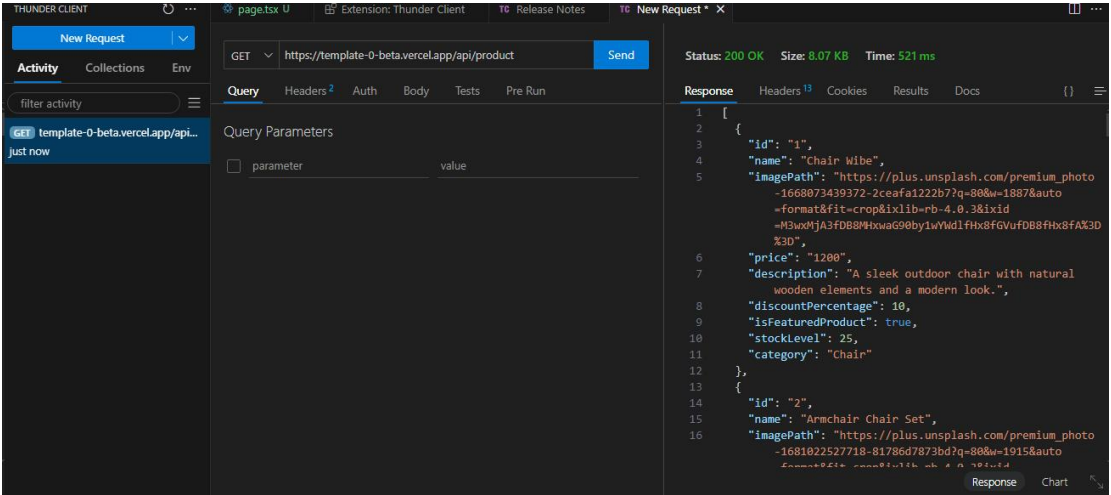
# DAY 5: TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## OBJECTIVE:

Day 5 is dedicated to preparing your marketplace for deployment by focusing on thorough testing, robust error handling, and optimizing backend integration. This ensures a seamless, secure, and high performance platform ready to handle customer interactions efficiently.

## THUNDER CLIENT:

Thunder Client is a lightweight API testing extension for VS Code that allows developers to test, debug, and validate API endpoints directly within their code editor, simplifying the development workflow.



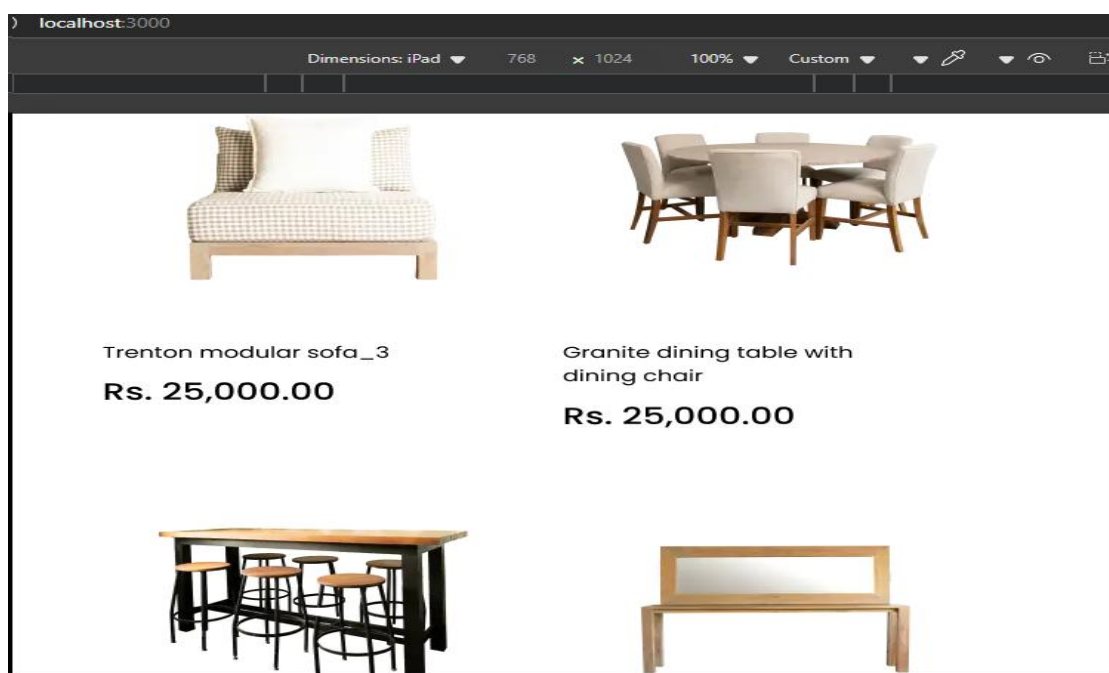
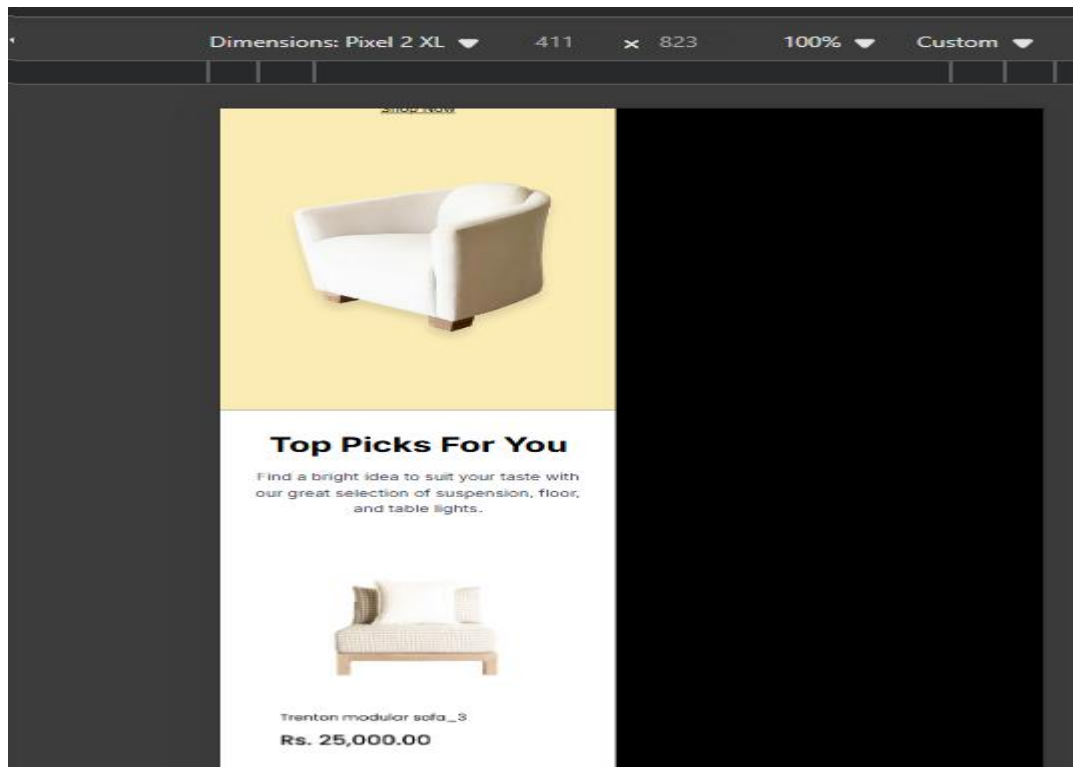
TESTING TABLE:

The testing table organizes test cases for each marketplace component, helping track functionality, performance, and error handling. It ensures a systematic approach to identifying and resolving issues for a seamless user experience.

Feature/Component	Test Case	Expected Result	Actual Result	Status	Remarks
Product Listing	Products display correctly with accurate details.	Products should load with names, prices, and images.	Passed/Failed	Pending/Done	Images not loading due to incorrect URLs.
Search Functionality	Search results match the input query.	Relevant products display based on the search keyword.	Passed/Failed	Pending/Done	Search filtering is slow for large datasets.
Performance Testing	Page loads within 2-3 seconds.	Lighthouse score >90 for performance.	Passed/Failed	Pending/Done	Unoptimized images slowing down the page.

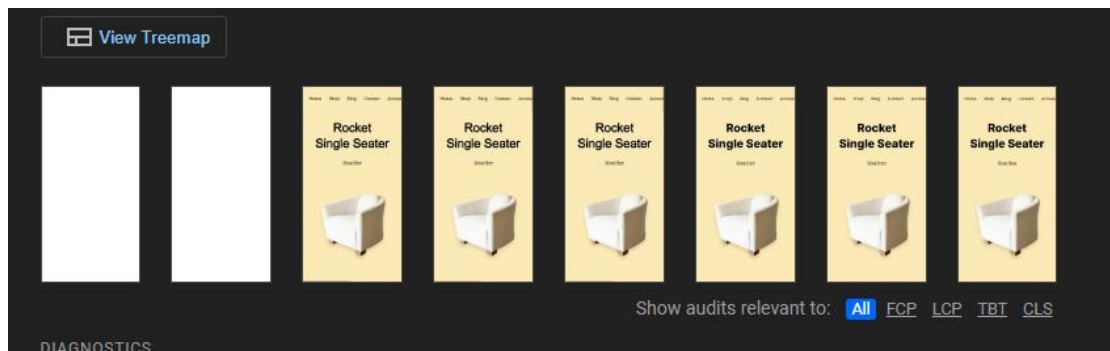
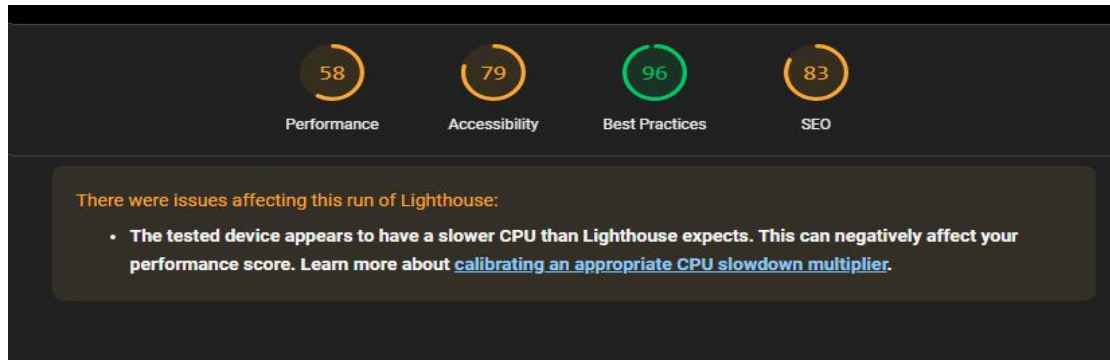
## RESPONSIVE DESIGN:

Responsive design ensures the marketplace adapts seamlessly to different screen sizes and devices, providing users with a consistent and optimal experience on desktops, tablets, and mobiles. It enhances accessibility and user satisfaction across platforms.



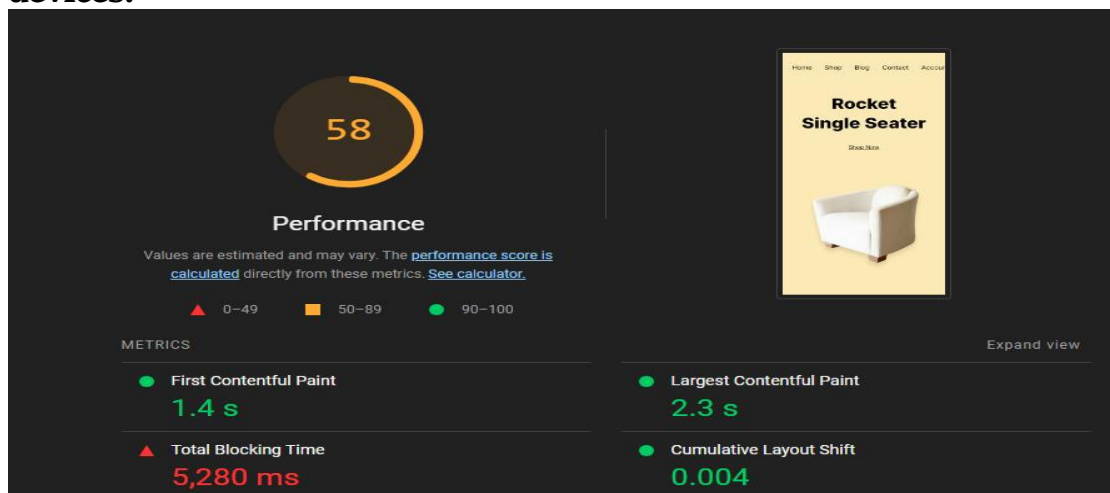
## LIGHTHOUSE TESTING:

Lighthouse is a powerful tool for analyzing web performance, accessibility, SEO, and best practices. It helps identify bottlenecks and provides actionable insights to optimize the marketplace for speed and user experience.



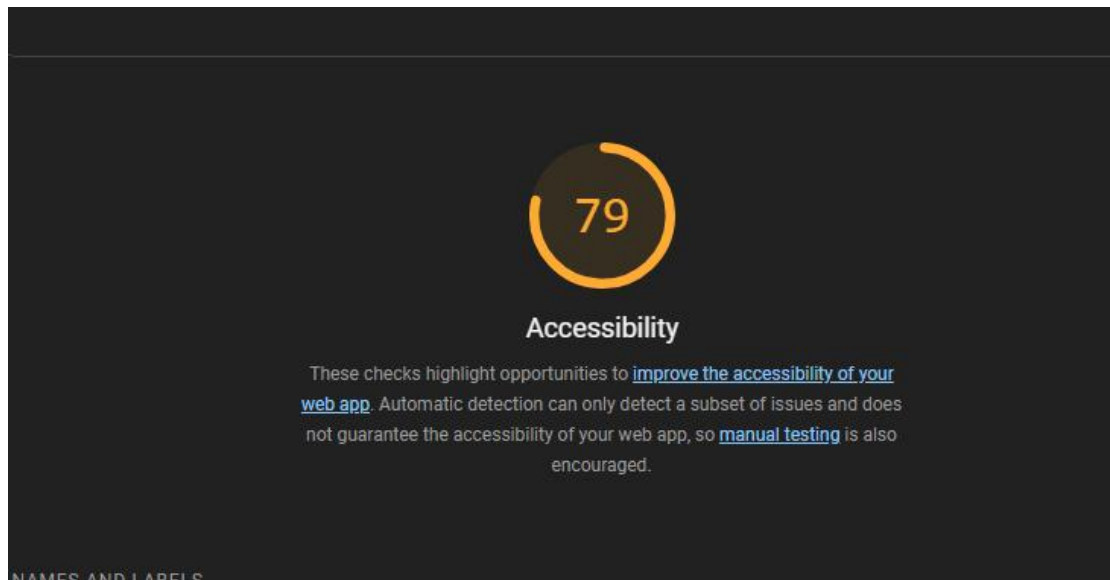
## OBJECTIVE:

Metrics assess page load speed, responsiveness, and overall efficiency, focusing on key factors like Time to Interactive (TTI) and First Contentful Paint (FCP). These insights help identify areas for improvement to ensure faster, smoother user experiences across devices.



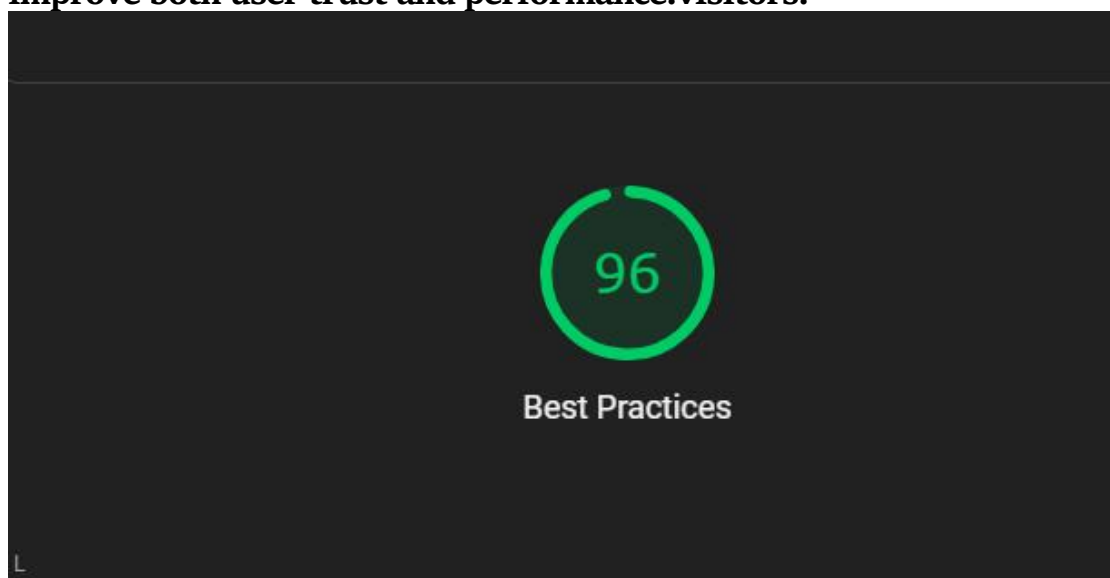
## ACCESSIBILITY:

The accessibility score in Lighthouse evaluates how well the marketplace meets accessibility standards for users with disabilities. A higher score indicates better support for assistive technologies like screen readers, ensuring an inclusive user experience for all visitors.



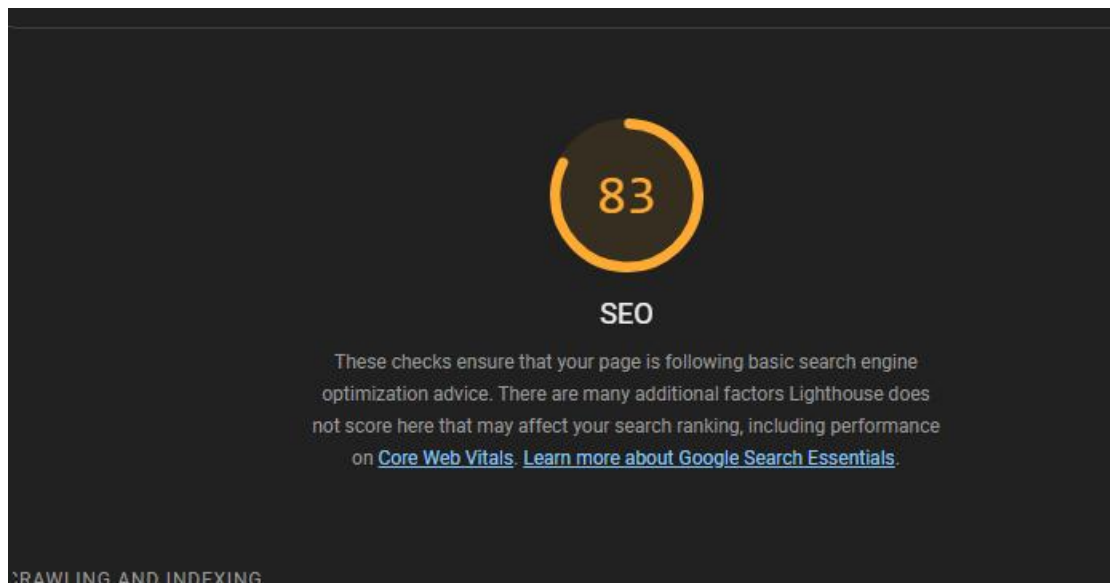
## BEST PRACTICE:

Best practices assess how well the marketplace follows industry standards for secure, maintainable, and efficient code. It highlights areas such as HTTPS usage, secure requests, and code optimization to improve both user trust and performance. visitors.



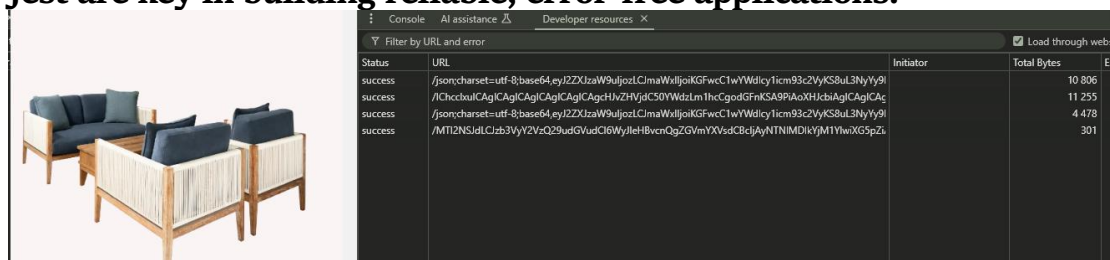
## SEO:

**Evaluates the marketplace's search engine optimization, ensuring proper HTML tags, metadata, and structured data. This helps Improve the site's visibility and ranking on search engines, driving Organic traffic and improving discover ability.**



## DEVELOPER RESOURCES:

Developer resources provide essential tools and documentation for effective API and UI testing, ensuring developers can write, execute, and automate tests efficiently. Resources like Postman, Cypress, and Jest are key in building reliable, error-free applications.



# PERFORMANCE:

Performance monitoring tracks key metrics such as load time, server response time, and overall resource usage to ensure the marketplace runs smoothly. Tools like Google Analytics, New Relic, and Lighthouse help identify performance issues in real-time, enabling proactive optimizations.

