

# Day 5 - Testing and Backend Refinement - TIMELESS TIMBER MARKETPLACE

## Introduction:

This report summarizes the testing, performance optimization, and backend refinement tasks completed on Day 5 for the Timeless Timber Marketplace project. The focus was on ensuring the platform's functionality, responsiveness, and performance, as well as resolving challenges and implementing security measures.

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## TESTING:

Feature	Test Case	Result
Navigation	Verified links and fixed outdated references	Passed
Navigation	Added a navigation menu for mobile screens	Passed
Search Functionality	Tested search by category	Passed
Add to Cart	Added multiple quantities via quantity selector	Passed
Responsiveness	Tested across various screen sizes using Dev Tools	Passed
Product Listing	Verified all products were displayed	Passed
Category Filter	Tested all filter options	Passed
API Error Handling	Disconnected API and verified error messaging	Passed

*Summary:* All tests passed successfully, and the application functions as expected.

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## PERFORMANCE OPTIMIZATION STEPS TAKEN:

- Reduced the static components quantity and wrote the html on the page file instead.
- Images were optimized as their format was .webp.

- Lazy loading for images.
  - Created a utility function for data fetching and added conditional logic to optimize requests.
  - *Outcome:* Pages were loading faster than before, and performance was noticeably improved.
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## CHALLENGES:

- **Fetching Data and Creating Schema Types:** Struggled to fetch data from an external API and insert it into the Sanity database. Researched extensively and sought help from ChatGPT. Resolved the issue after 8 hours of continuous effort.
  - **Rebuilding Product Cards:** Had to recreate product cards due to changes in product schema types.
  - **Type Errors:** Addressed type errors by defining appropriate TypeScript interfaces.
  - **GROQ Query Errors:** Faced issues with a GROQ query. Resolved it by testing conditions individually in the Sanity Studio vision section.
  - My pc was a bit slow which impacts the performance of the website.
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## SECURITY MEASURES:

- Stored API keys securely using `.env` files to prevent exposure.
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This concludes the report for Day 5, detailing testing outcomes, optimization efforts, challenges faced, and security measures implemented. The platform is now more robust, responsive, and optimized for performance.