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Day – 6
Hackathon – 3

22-01-2025

General E-commerce Marketplace Development Report

Day 1: General E-commerce Marketplace Technical Foundation

- **Objective:** Establish the foundational architecture for a scalable and secure e-commerce platform.
- **Key Deliverables:**
 - Setup of the development environment (Node.js, Next.js).
 - Identification of APIs for products, search, and authentication.
 - Research on responsive design and UX best practices for e-commerce.

Day 2: Technical Plan Aligned with Business Goals

- **Objective:** Align technical strategy with the marketplace's business objectives.
 - **Key Deliverables:**
 - Technical plan created to integrate frontend, backend, and APIs efficiently.
 - Defined user flows for product search, cart operations, and checkout.
 - QA strategy established for ongoing development.
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Day 3: API Integration and Product Display

- **Objective:** Fetch data from the provided API and display all products dynamically.
 - **Key Activities:**
 - Integrated the API with **Sanity CMS** to manage content and simplify updates.
 - Installed **Next.js** and implemented dynamic product rendering on the homepage.
 - Developed reusable components for product cards and category filters.
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Day 4: E-Commerce Website Development

- **Objective:** Prepare a functional e-commerce website with product listing and user-friendly navigation.
 - **Key Deliverables:**
 - Fully responsive design implemented for desktop and mobile.
 - Core features such as product details, search, and cart operations completed.
 - Navigation bar, footer, and category filters added for a seamless user experience.
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Day 5: Testing, Error Handling, and Backend Integration Refinement

- **Objective:** Perform rigorous testing and refine backend integration for enhanced performance and error handling.
- **Testing Types Performed:**
 - **Functional Testing:** Verified product listing, search, cart, and checkout functionalities.
 - **Performance Testing:** Tools like Lighthouse and GTmetrix were used to analyze speed and responsiveness.
 - **Security Testing:** Checked for vulnerabilities in input fields and validated API communications.

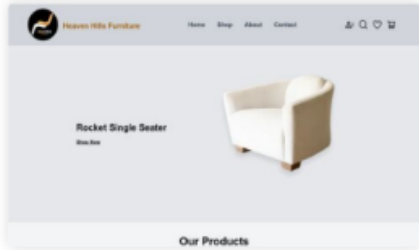
Staging Environment Testing Report

ID	Description	Steps	Expected	Actual	Status	Remarks
TC001	Product listing	Open > Verify products	Displayed	Displayed	Passed	No issues
TC002	API error handling	Disconnect API > Refresh	Fallback shown	Fallback shown	Passed	Handled well
TC003	Cart functionality	Add item > Verify cart	Cart updates	Cart updates	Passed	Works as expected
TC004	Responsiveness	Resize > Check layout	Adjusts	Adjusts	Passed	Responsive OK



The web should be fast.

Executive Summary



Performance Report for:

<https://azmatali-hackathon-3-functionality.netlify.app/>

Report generated: Thu, Jan 23, 2025 6:47 AM -0800

Test Server Location: Vancouver, Canada

Using: Chrome 117.0.0.0, Lighthouse 11.0.0

A

Performance
99%

Structure
94%

L. Contentful Paint
1.0s

T. Blocking Time
0ms

C. Layout Shift
0

Top Issues

Med	Don't lazy load Largest Contentful Paint image <small>LCP</small>	LCP was lazy loaded
Low	Avoid enormous network payloads <small>LCP</small>	Total size was 404KB
Low	Avoid chaining critical requests <small>FCP</small>	1 chain found
Low	Reduce unused JavaScript <small>LCP</small>	Potential savings of 36.5KB
Low	Reduce initial server response time <small>FCP</small>	Root document took 228ms

Focus on these audits first

These audits likely have the largest impact on your page performance.

Structure audits do not directly affect your Performance Score, but improving the audits seen here can help as a starting point for overall performance gains.

Page Details



Total Page Size - 403KB



Total Page Requests - 39



HTML JS CSS IMG Video Font Other

How does this affect me?

Modern web users have a short attention span and expect a fast and seamless website experience. Delivering that fast experience can result in more traffic, more conversions, and more happiness.

As if you didn't need more incentive, Google use Page Speed and Page Experience (including Web Vitals) signals in their ranking algorithm.

About GTmetrix

GTmetrix

GTmetrix was developed as a tool for customers to easily test the performance of their webpages.

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