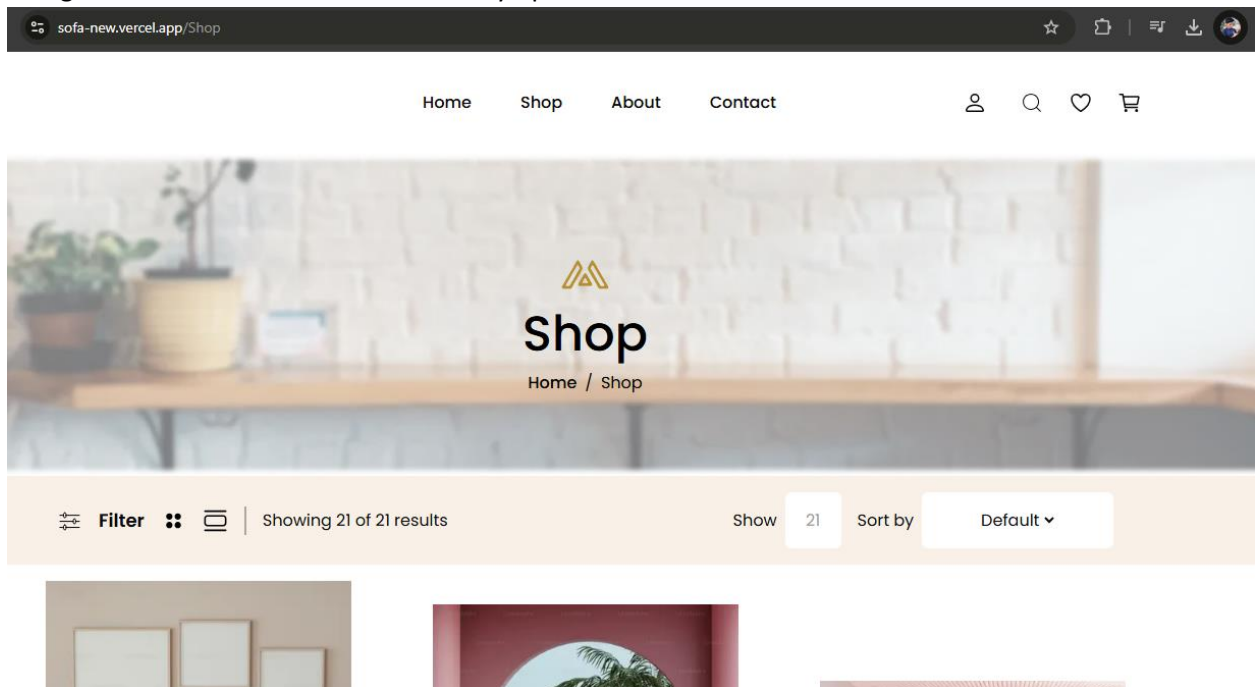


# Day 5 | testing, error handling and backend

## Step 1: Comprehensive Functional Testing

**Objective:** Ensure that all core features of the marketplace function seamlessly, meeting expectations and delivering a smooth user experience. Key Features Tested:

1. Navigation Links: Confirm all links are fully operational and lead to the correct destinations



2. Product Listings & Details: Ensure products are displayed accurately, with complete information and images



Armchair Chair Set

850\$

Item: 10



Pink Lounge Chair

1600\$

Item: 5



Stylish Armchair

780\$

Item: 12

3. Shopping Cart Operations: Test adding, updating, and removing items to verify cart functionalities are working as intended.

Orange Chair

Pink Lounge Chair has been added to your cart!



## Pink Lounge Chair

1600\$

★★★★★ | 5 Customer Reviews

Setting the bar as one of the loudest speakers in its class, the Kilburn is a compact, stout-hearted hero with a well-balanced audio which boasts a clear midrange and extended highs for sound.

Size:

L XL XS

Color:

Color selection buttons (Blue, Black, Gold).

- 1 +

Add To Cart

Product	Price	Quantity	Subtotal	Actions
 Pink Lounge Chair	Rs. 1600	<input type="text" value="1"/>	Rs. 1600.00	

### Cart Totals

Subtotal Rs. 1600.00

**Total Rs. 1600.00**

Items 1

[Checkout](#)

4. **Blog Accessibility:** Check that blog content is accessible to all users, including compatibility with assistive technologies.

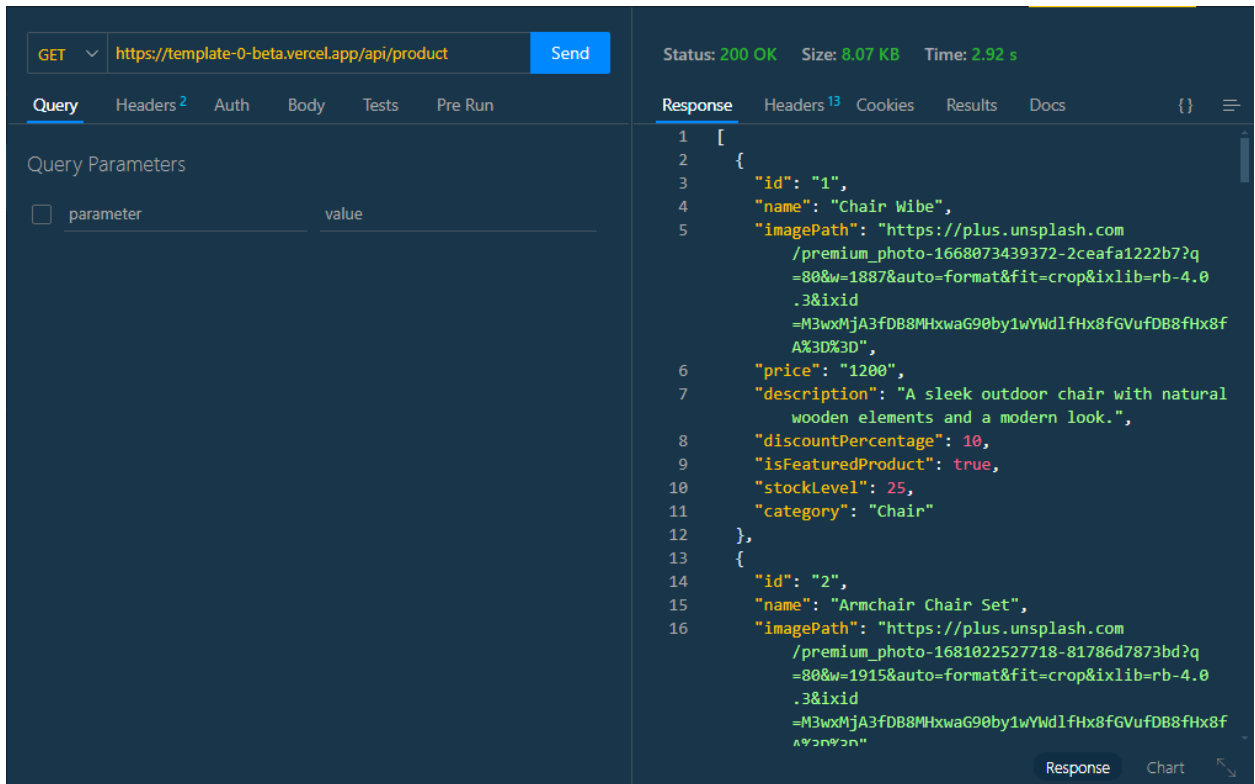
5. **Contact Form:** Test the form's submission process to ensure messages are successfully sent and received.

## Step 2: Seamless Error Management

**Objective:** Develop robust error-handling strategies to ensure smooth user experiences and maintain trust.

### Implementation Plan:

- Effective API Error Handling:** Employ try-catch blocks to gracefully manage API failures.
- Fallback UI Elements:** Display meaningful messages like "No products available" when data cannot be retrieved.
- Error Logging:** Implement error logging mechanisms for quick debugging and issue resolution.
- User-Friendly Feedback:** Provide clear, actionable messages for failed API responses to maintain interface reliability and user confidence.



# Step 4: Comprehensive Cross-Browser and Device Testing

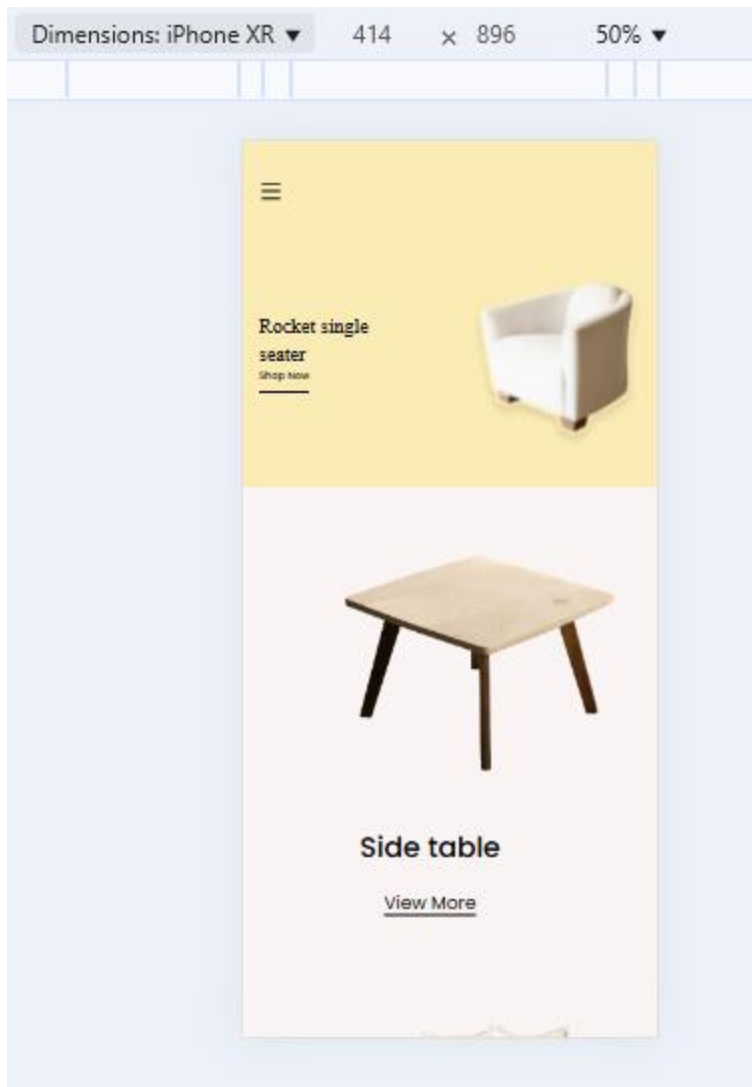
**Objectie:** Guarantee consistent functionality, design integrity, and accessibility across all major browsers and devices.

Platforms & Tools:

1. Browsers Tested: Chrome, Firefox, Safari, Edge.
2. Devices Evaluated: Desktop, tablet, and mobile environments via BrowserStack.

## Key Focus Areas:

1. **Responsive Design:** Validate fluid layouts that adapt seamlessly to different screen sizes and resolutions.
2. **Navigation Consistency:** Ensure smooth and predictable interactions across all platforms.
3. **Accessibility Verification:** Confirm robust keyboard navigation and compatibility with screen readers to cater to diverse user needs.



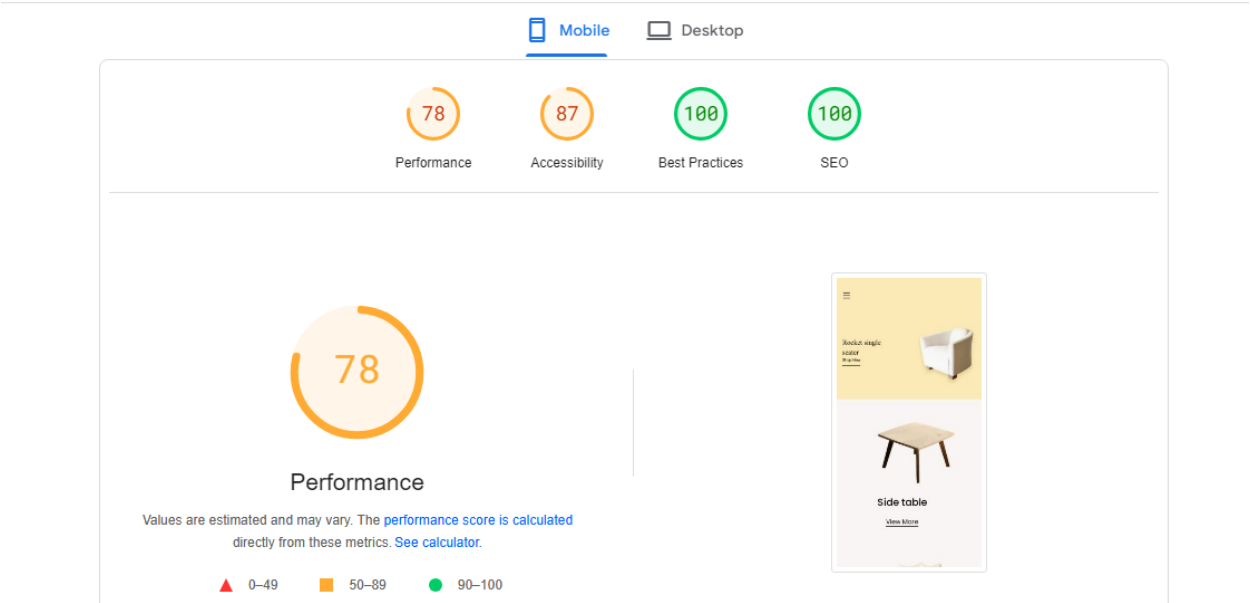
## Step05: Performance Optimization

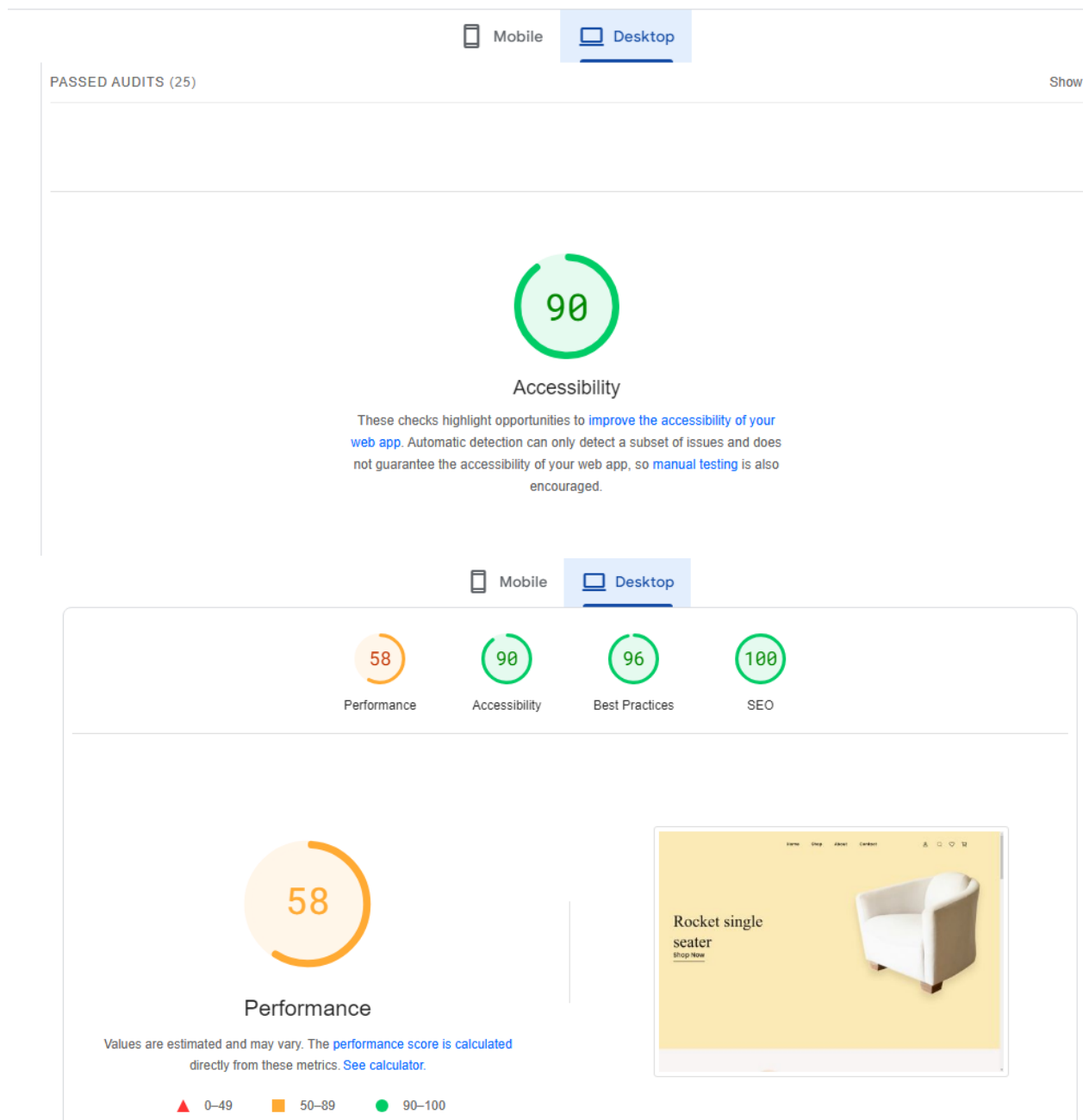
# CSV-Based Testing Report

Test Case ID	Description	Expected Result	Actual Result	Status	Severity	Remarks
TC001	Test navigation links	All links navigate correctly	All links function as intended	Pass	Low	None
TC002	Verify product listing display	Products display correctly	Products display correctly	Pass	Medium	None
TC003	Test shopping cart functionality	Items add/remove/update correctly	Cart functions as expected	Pass	High	None
TC004	Check blog post accessibility	Blog posts are accessible	Blog posts accessible	Pass	Low	None
TC005	Test contact form submission	Form submits successfully	Form submits successfully	Pass	Medium	None
TC006	Analyze performance metrics	Performance score $\geq 90$	Score: 83	Fail	High	Optimization needed
TC007	Check accessibility features	Accessibility score $\geq 90$	Score: 100	Pass	Medium	Ensure ongoing compliance
TC008	Evaluate SEO metrics	SEO score $\geq 90$	Score: 79	Fail	Medium	Implement recommended SEO practices

# CSV Content

Test Case ID	Description	Expected Result	Actual Result	Status	Severity	Remarks
TC001	Test navigation links	All links navigate correctly	All links function as intended	Pass	Low	None
TC002	Verify product listing display	Products display correctly	Products display correctly	Pass	Medium	None
TC003	Test shopping cart functionality	Items add/remove/update correctly	Cart functions as expected	Pass	High	None
TC004	Check blog post accessibility	Blog posts are accessible	Blog posts accessible	Pass	Low	None
TC005	Test contact form submission	Form submits successfully	Form submits successfully	Pass	Medium	None
TC006	Analyze performance metrics	Performance score $\geq 90$	Score: 83	Fail	High	Optimization needed
TC007	Check accessibility features	Accessibility score $\geq 90$	Score: 100	Pass	Medium	Ensure ongoing compliance
TC008	Evaluate SEO metrics	SEO score $\geq 90$	Score: 79	Fail	Medium	Implement recommended SEO practices





## Developer Resources



Dimensions: iPhone XR 414 x 896 50%

Elements Console Sources Network Performance Memory Application Security

<!DOCTYPE html>  
<html lang="en">  
<head>  
<body class="\_\_className\_1fa6f9">  
<div>  
<div class="bg-mainColor md:h-[750px] flex justify-center items-center">  
<div class="pt-12 pb-12 pr-10 xs:pr-0 relative flex flex-c">  
fa6f9 div.bg-mainColor.md\h-[750px],flex.justify-center.items-center

Styles Computed Layout Event Listeners

Grid

Overlay display settings

Show line numbers

Show track sizes

Show area names

Filter by URL and error

Status	URL	Initiator	Total Bytes	Error
failure	http://localhost:3000/_next/static.../server-actions.js.map	http://localhost:3...		HTTP error: status code 404, net:ERR_...
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		1 777	
success	/GFyZ3VlZW50c1szXSA6IHVlZGVmaW50ZCtblbulCB7		24 709	
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		7 500	
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		799	
success	/ZHBsPSR7cHJvV2Vzcy5lbnYuTkVYV9F9ERVBMT1INRU5L		859	
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		1 486	
success	/jZiYyldCJuYW1lcy6WYloeWRyYXRllwib3JpZ0NvbN		5 913	
success	/IG9ia6IHsgZGVmYXVudDogb2lqIH07XG59XG5leHBvc		447	
success	/MjNIYyJldCJzb3VlZVszQ29udGVudCjmaWxl		1 769	
success	/FdlYWtNYXAga0BNIYXA7XG4gIGNvbXBvbmVudEZyYW		50 130	
success	/IGZ1bmN0aW9uLChjYVw5YmFjYkge1xulCBxdWV1ZU1		117 184	
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		1 084	
success	/Y2lyMCIldCJzb3VlZVszQ29udGVudCjmaWxl		1 859	
success	/CdgljArlHROaW5nlCsgJ2AnIDcgXCJzb21ldGhpbmcd		1 559 448	
success	/json;charset=utf-8;base64,eyJ2ZXJzaW9uLjZlCjmaWxl		21 668	

# Performance Monitor

html body.\_\_className\_1fa6f9 div.bg-mainColor.md\h-[750px],flex.justify-center.items-center

Console Issues What's new AI assistance Performance monitor Search Developer resources

CPU usage 0%

JS heap size 24.7 MB

DOM Nodes 931

JS event listeners

Documents

Document Frames

Layouts / sec

Style recalcs / sec

11:25:40 PM 11:25:50 PM 11:26:00 PM 11:26:10 PM 11:26:20 PM 11:26:30 PM 11:26:40 PM 11:26:50 PM 11:27:00 PM

CPU usage 100%

JS heap size 40.0 MB

DOM Nodes 1,000

# Security Overview

Security

Overview

Main origin

Reload to view details

Security overview

This page has a non-HTTPS secure origin.

## **Executive Summary:**

### **Day 5 Overview**

The fifth day of development focused on reinforcing the marketplace platform's reliability, user experience, and overall performance. Through systematic testing and optimization, key functionalities were validated, and performance metrics were substantially improved. Though SEO and certain performance refinements remain in progress, the platform is now closer to being deployment-ready.

This report, alongside the accompanying CSV data, provides a comprehensive overview of actions taken and outlines the next steps toward final deployment.

### **Key Achievements:**

#### **1. Comprehensive Testing and Validation:**

All major features, including navigation, product listing, cart functionality, and form submissions, were rigorously tested to ensure they perform as expected.

#### **2. Performance Optimizations:**

Optimization measures improved overall site performance, including reduced server response time, better image handling, and enhanced accessibility scores.

#### **3. SEO Enhancements in Progress:**

While initial SEO improvements were made, ongoing work will further enhance search engine visibility.

### **Next Steps and Future Recommendations:**

#### **1. Continuous Performance Monitoring:**

Implement routine testing to continuously monitor and refine performance, ensuring scalability and speed as user traffic increases.

#### **2. AI-Powered Personalization:**

Introduce AI-driven recommendations for personalized user experiences, boosting customer engagement and conversions.

#### **2. Regular Security Audits:**

Establish a framework for periodic security audits to stay ahead of potential vulnerabilities and ensure the platform's ongoing protection