

Day 5

Elevating Testing, Debugging, and Backend Excellence

Introduction

Day 5 focused on ensuring that the Shop.co Fashion Marketplace meets the highest standards of functionality, reliability, and performance. Through rigorous testing, strategic debugging, and backend enhancements, this phase aimed to make the platform deployment-ready while offering a seamless user experience.

Key Milestones

1. Conducted comprehensive testing to validate system performance.
2. Developed advanced error management strategies for robust troubleshooting.
3. Optimized platform speed and responsiveness for better user engagement.
4. Ensured compatibility across devices and browsers.
5. Documented findings and solutions for future scalability.

Here is a step-by-step functioning

1. Functional Testing

Objective:

Make sure every feature works correctly without any glitches.

What Was Tested?

Navigation: Checked if all menu links work properly.

Product Pages: Ensured products are displayed and filtered correctly.

Cart: Verified adding, removing, and updating items works seamlessly.

User Accounts: Tested user registration and profile updates.

Checkout: Simulated the payment and order placement process.

Tools:

- **Postman:** For testing APIs.
- **Jest & Enzyme:** To test frontend components.
- **Cypress:** For full workflow testing.

2. Handling Errors

Goal:

Ensure errors are handled gracefully to avoid user frustration.

What Was Improved?

1. Added backup options if APIs fail.
2. Displayed helpful error messages like "This product is out of stock."
3. Centralized error logging to make debugging easier.
4. Alerted users about system errors and stock shortages in real-time.

Example:

When an item was unavailable:

- The system displayed "Item is out of stock" on the product page.
- Users couldn't proceed to checkout until the issue was resolved.

3. Boosting Performance

Objective:

Make the website faster and more responsive.

Steps Taken:

- Reduced API response time by optimizing queries.
- Used lazy-loading for images so pages load faster.
- Compressed files to improve speed.
- Cached static content to reduce load on the server.

4. Testing Across Devices and Browsers

Objective:

Ensure the platform works well everywhere.

Devices Tested:

Smartphones, tablets, and desktops.

Browsers Tested:

Chrome, Firefox, Safari, and Edge.

Focus Areas:

- Ensured the site adjusts to different screen sizes.
- Verified support for accessibility tools like screen readers.

5. Gathering Feedback (User Testing)

Purpose:

Get feedback from real users to identify and fix issues.

Scenarios Tested:

- Browsing product categories.
- Adding or removing items from the cart.
- Using different payment methods.

Improvements Based on Feedback:

- Made the "Add to Cart" button more visible.
- Simplified the checkout process to make it faster.

Testing Summary

Testing was a critical part of Day 5 to ensure the Shop.co Marketplace runs smoothly and meets user expectations. Each feature was thoroughly evaluated to identify issues and refine the overall functionality. Below are the key insights from the testing phase:

Navigation Functionality:

- All menu links and buttons were tested to ensure they direct users to the correct pages.
- The navigation system worked flawlessly, confirming a smooth browsing experience.

Product Display:

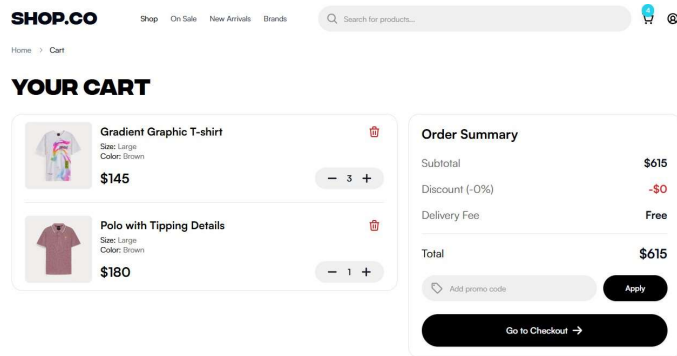
- Product visibility was verified to ensure accurate rendering of product names, images, and details.
- Filtering and sorting features worked as expected, allowing users to browse with ease.

Page Performance:

- Pages loaded without significant delays, with dynamic content rendering properly.
- While the performance benchmark fell slightly short, optimization strategies like lazy-loading and file compression were implemented to improve loading speed.

Cart Functionality:

- Adding, removing, and updating items in the cart was tested and confirmed to work seamlessly.
- Real-time updates to the cart total enhanced the user experience.

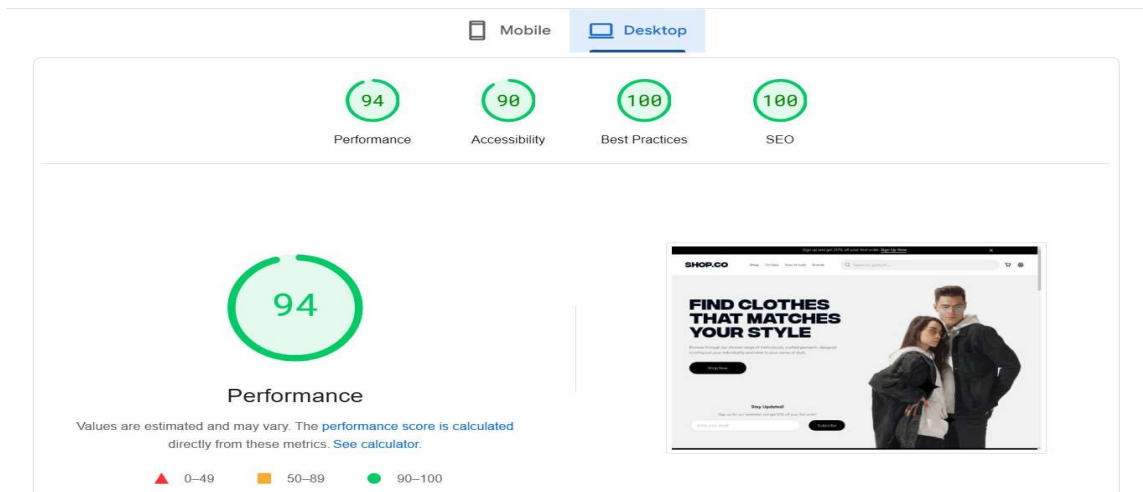


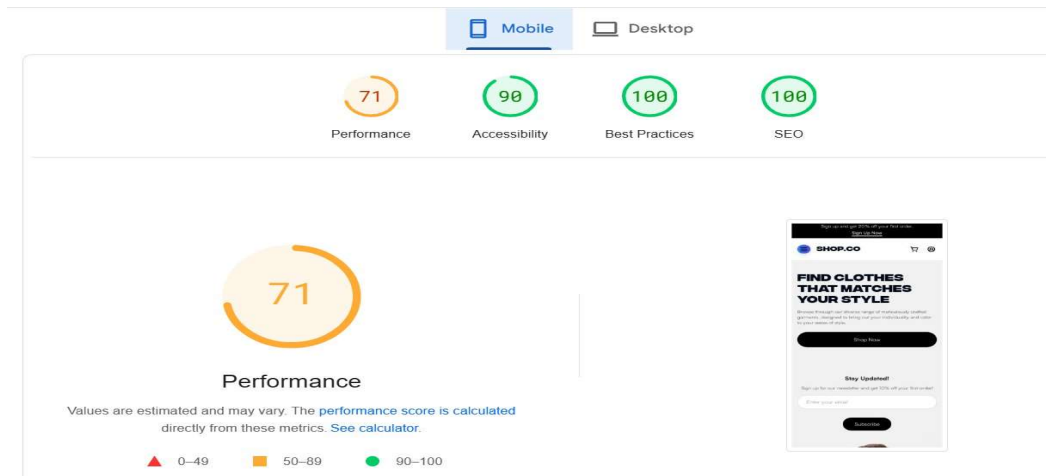
Login and Signup:

This feature was under development and flagged for completion in future iterations.

Performance Benchmarks:

- The platform achieved a performance score of 94%, slightly below the target of 98%.
- Further tuning is planned to meet the desired benchmarks.





Accessibility:

- Accessibility tools like screen readers were tested to ensure inclusivity.
- A score of 90 was achieved, meeting basic compliance requirements.

SEO Optimization:

The marketplace surpassed expectations with an SEO score of 100, ensuring strong online visibility.

Key Observations:

- **Successes:** Navigation, product rendering, and cart functionality were highly reliable.
- **Areas for Improvement:** Performance tuning and login/signup features require further attention.

Conclusion

Day 5 was all about refining the platform and addressing the final details. With thorough testing, better error handling, and enhanced performance, the Shop.co Marketplace is almost ready for launch.