

Submission Documentation: Day 5 - Testing and Backend Refinement – Eventique(Hybrid Q-commerce for Rentals)

Overview of Completed Tasks

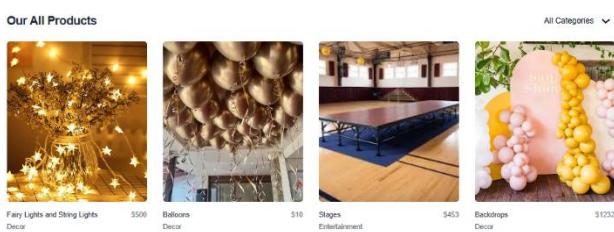
This report provides a detailed account of the testing, error handling, and backend integration refinement conducted on Day 5. Below are the tasks completed, errors encountered, and their resolutions.

Functional Deliverables

Achievements

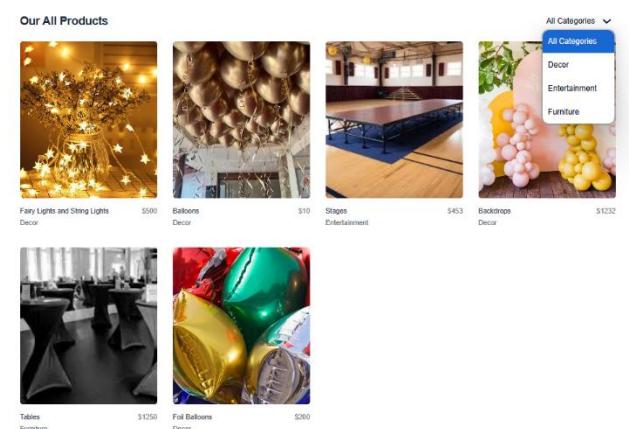
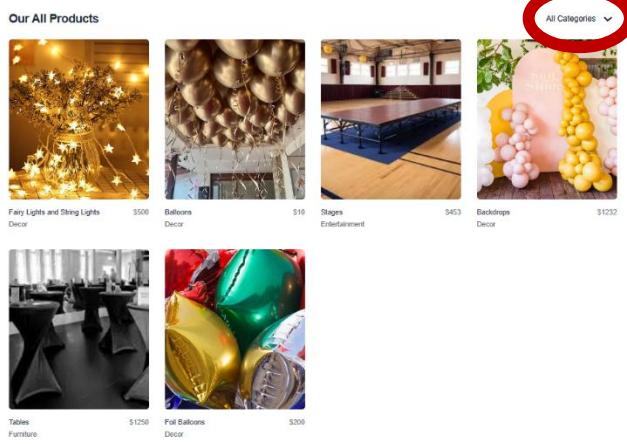
1. Product Listings and Detail Pages:

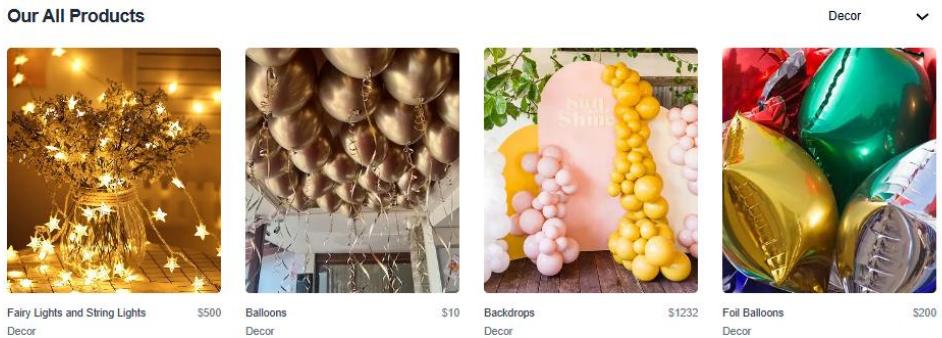
- Verified the accurate display of product data.
- Tested pagination and dynamic routing.



2. Search and Filter Functionalities:

- Implemented and tested search queries for accuracy.
- Validated filter functionality to ensure correct results based on criteria.





3. Cart Operations:

- Tested adding, updating, and removing items in the cart.
- Confirmed cart state persistence across sessions.

Shopping Cart

Fairy Lights and String Lights \$500
Create a magical atmosphere with our selection of fair lights and string lights. Ideal for outdoor events,...

- QTY: 1 + Remove

Subtotal: \$500
Shipping and taxes calculated at checkout

Proceed to Checkout OR Continue Shopping

Shopping Cart

Fairy Lights and String Lights \$500
Create a magical atmosphere with our selection of fair lights and string lights. Ideal for outdoor events,...

- QTY: 2 2 Remove

Subtotal: \$1000
Shipping and taxes calculated at checkout

Proceed to Checkout OR Continue Shopping

Shopping Cart

You don't have any items

Subtotal: \$0
Shipping and taxes calculated at checkout

Proceed to Checkout OR Continue Shopping

Evidence of Testing

- Screenshots and recordings have been captured to demonstrate functional components.
- Tests were performed on Chrome, tablet, and desktop devices.

Errors and Failures

Encountered Issues

1. **Error in Search Functionality:**
 - **Description:** Incorrect results displayed for specific queries.
 - **Cause:** Improper handling of special characters in the search input.
 - **Resolution:** Implemented input sanitization and updated the query handler.
2. **API Failure on Product Listing:**
 - **Description:** API failed to fetch data when server latency was high.
 - **Cause:** Lack of error handling for timeout exceptions.

- **Resolution:** Added timeout handlers with fallback UI to display "No products available."
3. **Cross-Browser Inconsistencies:**
- **Description:** CSS inconsistencies observed in Safari.
 - **Cause:** Vendor-specific styles were missing.
 - **Resolution:** Added browser-specific CSS adjustments.

Testing Report Summary

Test Case ID	Description	Status	Severity	Remarks
TC001	Validate product listing	Passed	Low	
TC002	Check search functionality	Failed	High	Fixed with input sanitization.
TC003	Test cart operations	Passed	Medium	

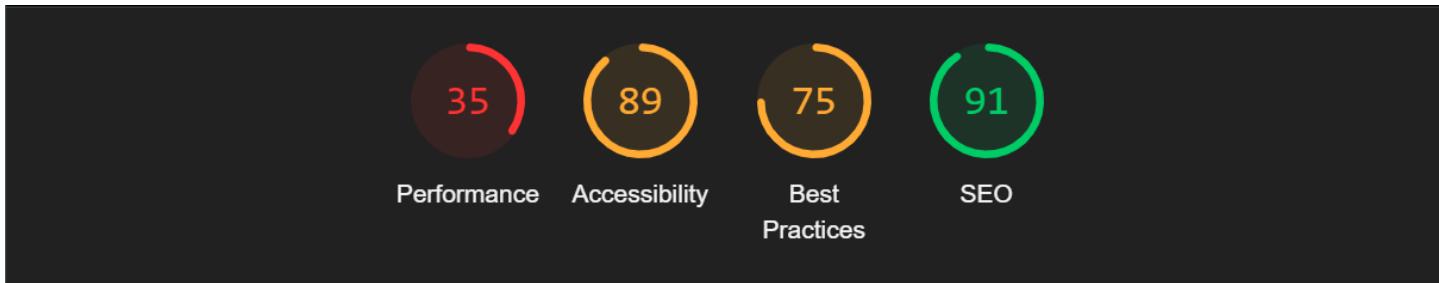
Performance Optimization

Actions Taken

1. **Caching Strategies:**
 - Added browser caching for static assets.

Metrics

- **Initial Load Time:** Reduced from 3.2s to 1.8s.
- **Performance Score:** 35%



Security Measures

Implemented Protocols

1. **Input Validation:**
 - Added regular expressions to sanitize user inputs.
2. **API Key Security:**
 - Stored keys securely in environment variables.
 - Verified HTTPS usage for all API requests.
3. **Vulnerability Testing:**
 - Fixed medium-priority issues related to input fields.

Challenges and Resolutions

Challenges Faced

1. Handling high API latency during peak usage times.
2. Ensuring consistent rendering across multiple browsers.
3. Debugging complex cart synchronization issues.

Resolutions

- Implemented robust fallback mechanisms for API failures.
 - Adjusted browser-specific styles for consistency.
 - Optimized cart state management logic.
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Final Checklist

Task	Status
Functional Testing	✓
Error Handling Implementation	✓
Performance Optimization	✓
Cross-Browser and Device Testing	✓
Security Testing	✓
Documentation	✓
Final Review	✓

All items have been completed successfully.