

Testing and Backend Refinement for Hunar Bazar

1.0 Objective:

To prepare the marketplace for real-world deployment by ensuring thorough testing, robust error handling, optimized performance (mobile/desktop), cross-browser/device compatibility, secure deployment practices, and professional documentation

2.0 Functional Deliverables:

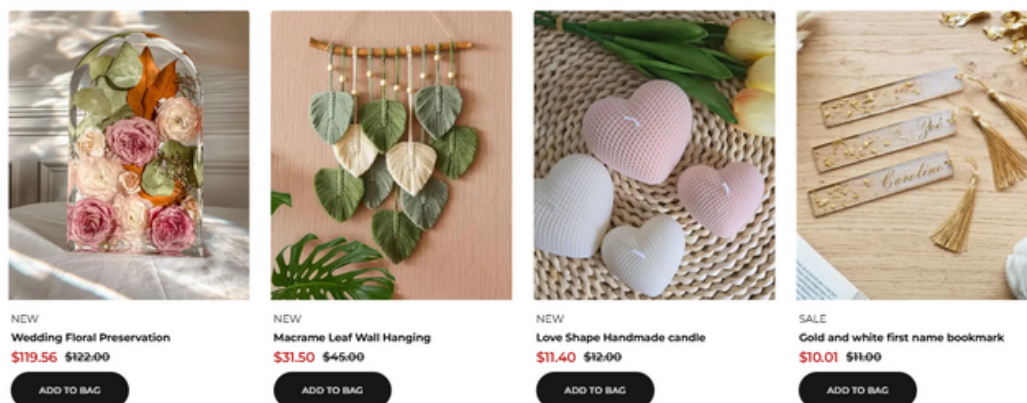
Functional testing:

validate the functionality of key components to ensure they work as expected by using React testing library.

1. ProductList Component:

- Validated dynamic rendering of products (titles, prices, images) from API responses.
- Verified error handling for empty states (e.g., "No products found") and API failures.

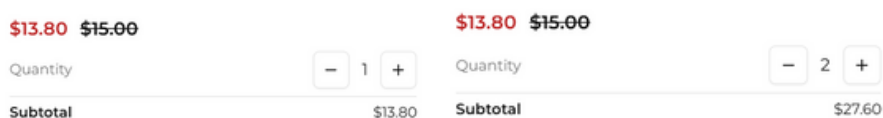
Result:



2. Cart Operations Components:

- Validated adding/removing items, updating quantities, and calculating total prices.
- Checked error handling for scenarios like out-of-stock items or expired sessions.

Result:

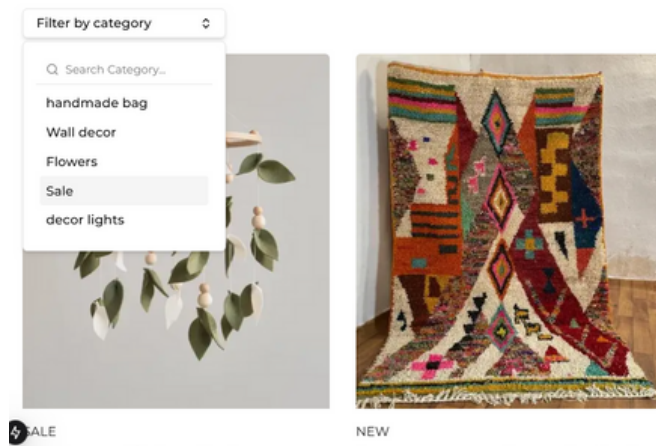


3. Categories Components:

- Tested dynamic filtering of products based on category selection (e.g., "sale", "flowers").
- Checked error handling for scenarios like out-of-stock items or expired sessions.

Result:

Search Result for Sale Collection



Error Handling:

- Implemented try-catch blocks for API calls; fallback UI for empty states/errors.
- Handled empty API responses or malformed data by showing fallback UI (e.g., "No products available" placeholder).

Result:

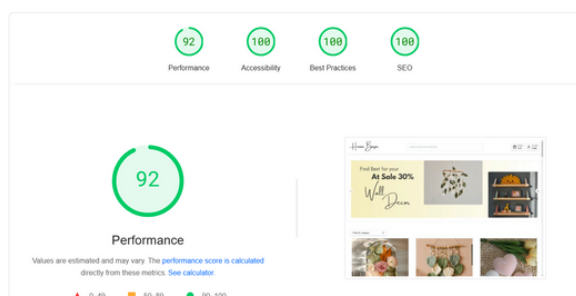
```
export const getAllProducts = async () => {
  try {
    const products = await sanityFetch({
      query: PRODUCTS_QUERY,
    });
    return products?.data || [];
  } catch (error) {
    console.error("Error to fetch Product Data", error);
    return [];
  }
};
```

khadija-faisal, 2 weeks ago • my marketplace

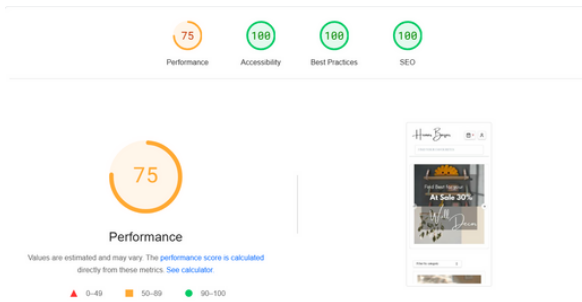
Performance testing:

Performance optimization focused on enhancing speed, responsiveness, and resource efficiency by lighthouse to ensure a seamless user experience.

1. desktop performance:



2. Mobile performance:



performance Link: https://pagespeed.web.dev/analysis/https-hunar-bazar-xumk-vercel-app/x1j0l3mv6o?form_factor=desktop

Cross-Browser/Device Consistency:

Ensure consistent functionality and rendering across browsers and devices by using BrowserStack.

1. Browsers and Devices Tested:

- Chrome, Safari, Firefox.
- Desktops, tablets, Different Mobiles.

2. Focus Areas:

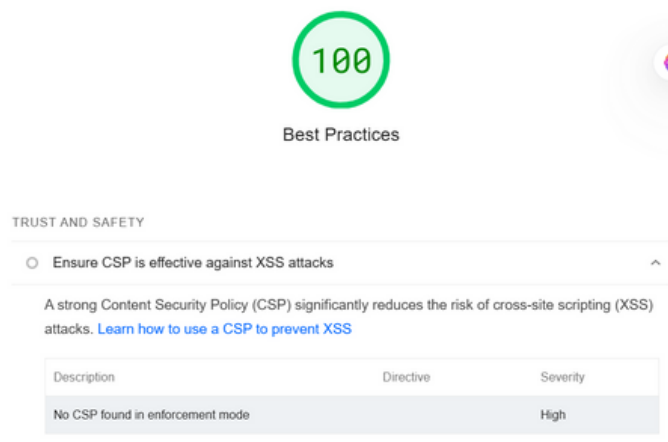
- Responsive Designs and consistent navigation and interactivity.
- verified accessibility features, including keyboard navigation.

Security Implementation:

Security Implemented on marketplace against vulnerabilities.

- sanitize user input to prevent SQL and Injections.
- Store sensitive data in environmental variables.

Tested at Lighthouse:



User Acceptance Testing (UAT) Implementation:

To ensure the marketplace aligns with end-user expectations and real-world workflows, User Acceptance Testing (UAT) was conducted as follows:

1. Testing Process:

- Browsing products, applying filters, and adding items to the cart.
- Completing a checkout process (e.g., entering payment/shipping details).
- Testing search accuracy (e.g., partial keywords, misspellings).

2. Bug Fixes:

- Resolved cart persistence issues during session refreshes.
- Fixed layout misalignments on mobile devices.

CSV Testing Report:

	A	B	C	D	E	F	G
1	Test Case ID	Test Case Description	Expected Result	Actual Result	Status	Severity Level	Remarks
2							
3	TC001	Validate product listing page	Products displayed correctly	Products displayed correctly	Skipped	Medium	need pagination
4	TC002	Performance mobile/desktop	Performance Score <90	Score desktop = 93 / Score Mobile = 75	Passed / Failed	High	Improve needed
5	TC003	Accessibility mobile/desktop	Accessability Score <90	Both Score 100	Passed	Medium	Test Successful
6	TC004	Seo mobile/desktop	SEO score<90	Both Score 100	Passed	Medium	Test successful
7	TC005	Add to Cart Funtionality	Item Increase /Decrese/Add and Remove	Result as expected	Passed	High	Successfull funtionality
8	TC006	Best Practices / mobile/desktop	Practices Score <90	Both Score 100	Passed	Medium	Test Successful
9							

Documentation Summary:

- Validated cart operations, product listings using React Testing Library.
- Implemented try-catch blocks for API calls; displayed user-friendly error messages.
- Achieved Lighthouse scores of 75 (mobile) and 93 (desktop) through image compression and code splitting.
- Tested on Chrome, Firefox, Safari, Edge.
- Verified responsiveness using BrowserStack and physical devices (iPhone, Android).
- Secured API keys via Vercel environment variables.
- CSV Test Report Screenshot.