

DAY-5: TESTING, ERROR HANDLING AND BACKEND INTEGRATION REFINEMENT

Present by Nazia Siraj
GICIC 00443199
Friday 9am-12pm
Mentor Sir Humza Syed

MarketPlace-Builder-
Hackathon

Day-5: Testing, Error handling and Backend Integration
Refinement

Overview

The main goal of DAY-5 was to prepare the marketplace for real-world deployment by thoroughly testing all components, identifying and resolving errors, optimizing performance, and refining backend integrations. This involved performing functional testing to ensure core features like product listings, search, and cart operations worked as expected, implementing error handling to display user-friendly messages and fallback UI for API failures, optimizing performance by reducing load times and compressing images, and conducting cross-browser and device testing to ensure consistent user experience. Additionally, security testing was conducted to validate inputs and secure API communication.

Product Listing Page

Problem Faced

During testing, while navigating to the product listing page, I observed that the images were not loading, and instead, an error message stating "Image fetch failed" was displayed. The issue was traced back to a network problem that caused the failure in fetching images from the sanity. This disruption was preventing the page from displaying the correct product images, which is a critical part of the marketplace's user experience.

Resolution

The issue was resolved by addressing the network connectivity problem. Once the network was restored, the image fetching functionality resumed as expected, and the product images were displayed correctly on the page. After the fix, the test was repeated, and the images loaded successfully without errors.

Products from API's Data



Chocolate Muffin

Soft and rich chocolate muffin topped with chocolate chips.

Price: \$28

Add To Cart



Chicken chup

Delicious vegetarian pizza topped with fresh vegetables and cheese.

Price: \$43

Add To Cart



Pizza

Crispy fried chicken bites served with dipping sauce.

Price: \$12

Add To Cart



Drinks

Juicy beef burger with fresh lettuce, tomatoes, and cheese.

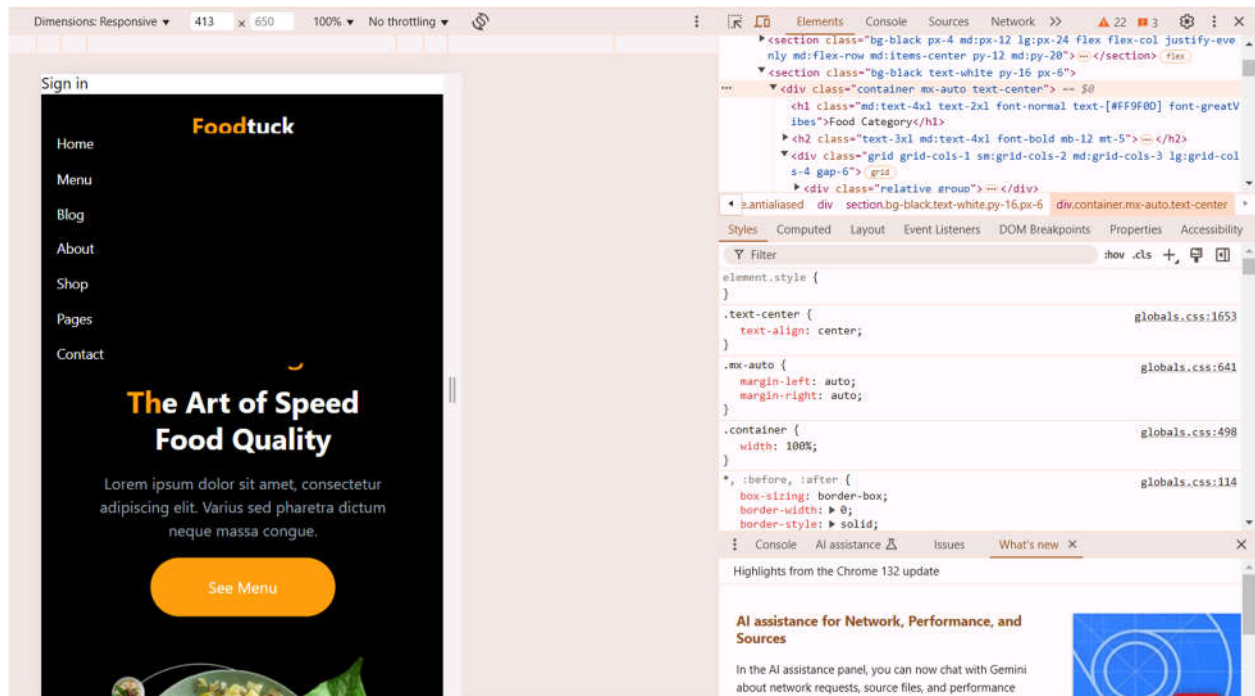
Price: \$21

Add To Cart

Mobile Responsive

The marketplace passed the responsiveness test without any issues. When tested on various screen sizes, the layout adjusted seamlessly, ensuring that all content (product listings, filters, and checkout buttons) was appropriately displayed. Elements like buttons, images, and text remained properly aligned, and no content was cut off or misplaced.

No errors were encountered during responsiveness testing. The website was fully responsive on popular devices, including desktop (Chrome), tablet and mobile.



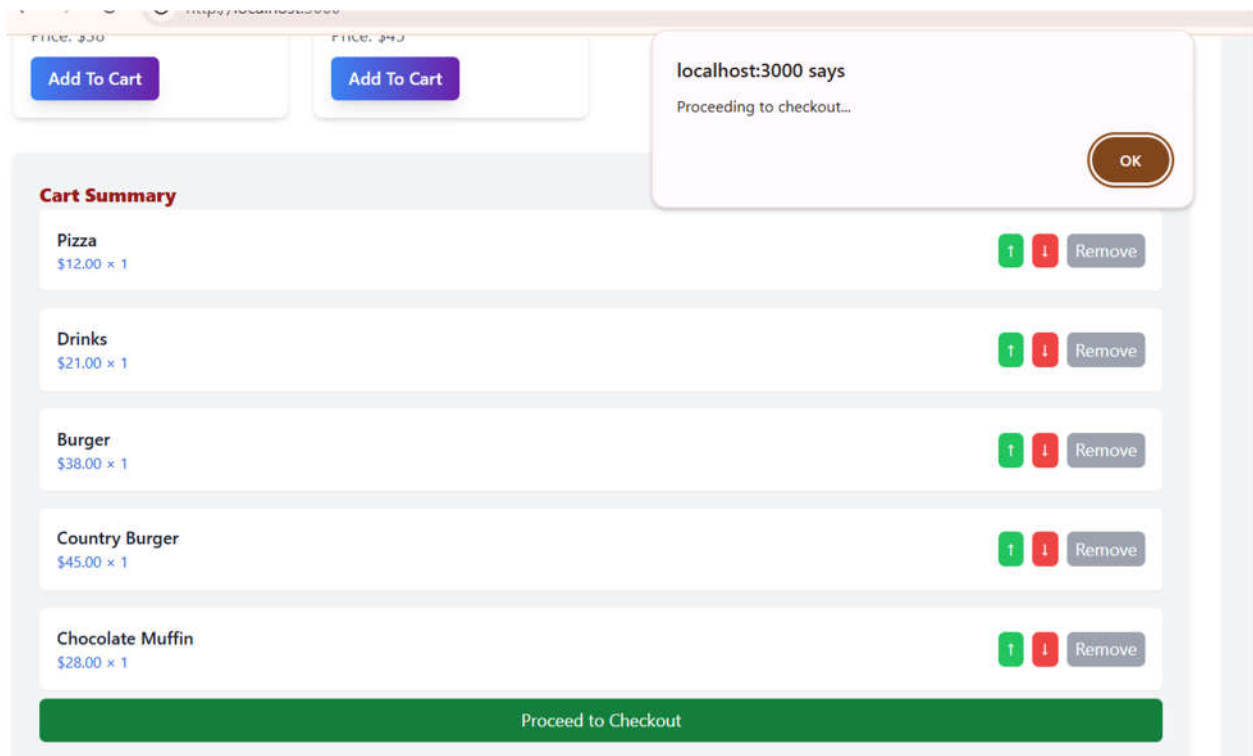
Checkout Process

Problem Faced:

During testing, it was observed that when users attempted to proceed to the checkout page with no items in the cart, the system did not prevent them from doing so.

Resolution:

To resolve this, a validation step was added to check whether the cart is empty before proceeding to the checkout page. If the cart is empty, the user is now presented with a clear message such as "Your cart is empty." After implementing the fix, the checkout process was tested again with an empty cart, and the system correctly displayed the error message, preventing users from proceeding further.



Security - Input Validation for Password Field

Problem Faced:

During security testing, it was found that the password input field did not have sufficient validation to prevent invalid inputs. This could potentially allow users to enter weak passwords or malicious scripts.

Resolution:

The issue was resolved by implementing proper input validation for the password field. The validation now enforces the following rules:

Minimum password length of 8 characters

At least one uppercase letter

At least one lowercase letter

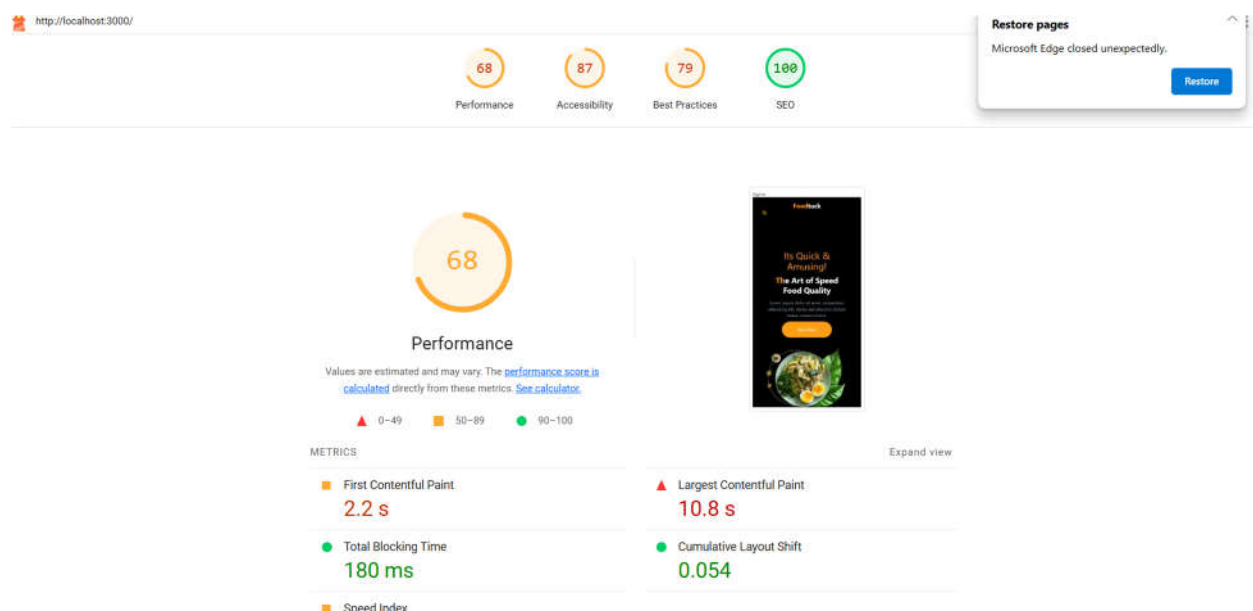
At least one number

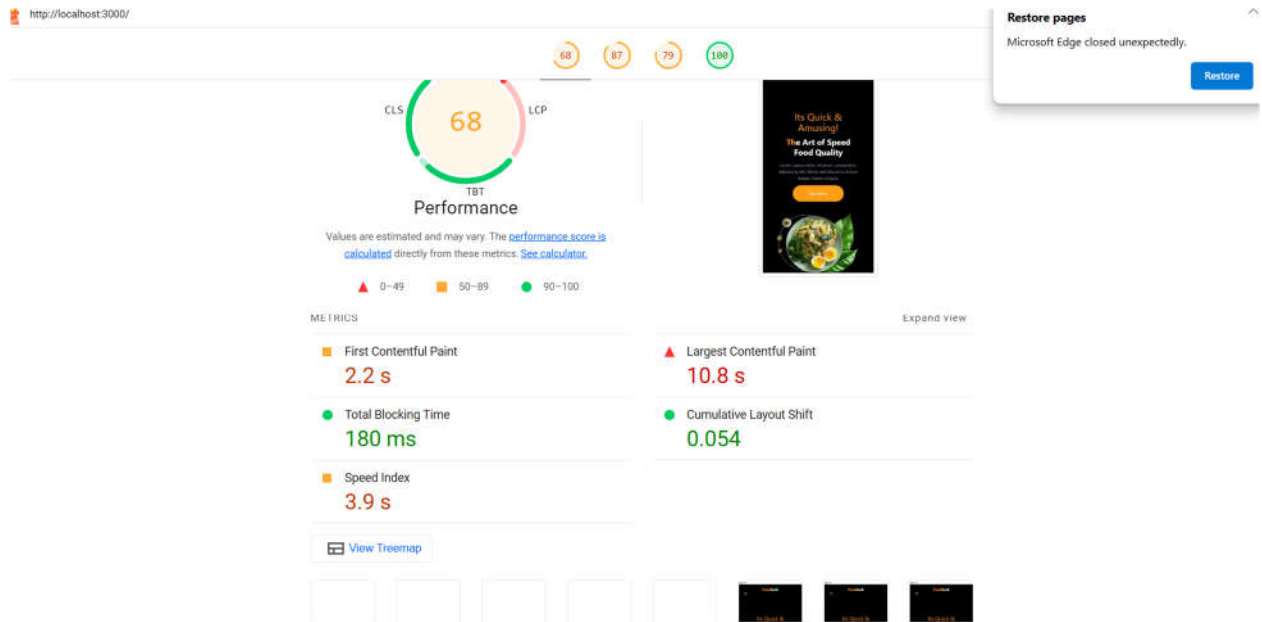
At least one special character

Prevention of common or easily guessable passwords

After implementing the validation, the system correctly rejected any input that did not meet the specified criteria, enhancing the security of user accounts.

LightHouse Security Validation

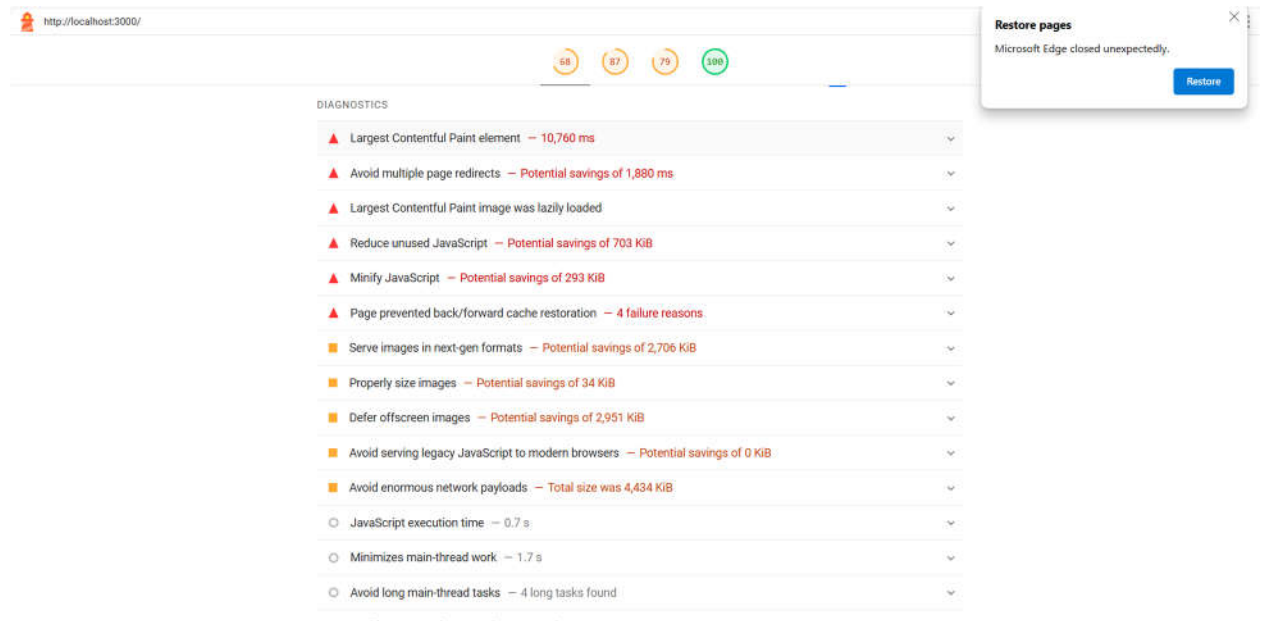




Restore pages

Microsoft Edge closed unexpectedly.


Restore



Restore pages

Microsoft Edge closed unexpectedly.

Restore

 http://localhost:3000/

68

87

79

100

Restore pages

Microsoft Edge closed unexpectedly.

Restore

NAMES AND LABELS

▲ Links do not have a discernible name

These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

BEST PRACTICES

▲ Touch targets do not have sufficient size or spacing.

These items highlight common accessibility best practices.

NAVIGATION

▲ Heading elements are not in a sequentially-descending order

These are opportunities to improve keyboard navigation in your application.

ADDITIONAL ITEMS TO MANUALLY CHECK (10)

Show


These items address areas which an automated testing tool cannot cover. Learn more in our guide on [conducting an accessibility review](#).

PASSED AUDITS (22)

Show

NOT APPLICABLE (31)

Show

 http://localhost:3000/

68

87

79

100

Restore pages

Microsoft Edge closed unexpectedly.

Restore

ADDITIONAL ITEMS TO MANUALLY CHECK (10)

Show

These items address areas which an automated testing tool cannot cover. Learn more in our guide on [conducting an accessibility review](#).

PASSED AUDITS (22)

Show

NOT APPLICABLE (31)

Show



Best Practices

GENERAL



Restore pages
Microsoft Edge closed unexpectedly.
[Restore](#)

GENERAL

- ▲ Uses third-party cookies — 2 cookies found
- ▲ Issues were logged in the [Issues](#) panel in Chrome Devtools
- ▲ Missing source maps for large first-party JavaScript

TRUST AND SAFETY

- ☐ Ensure CSP is effective against XSS attacks
- ☐ Use a strong HSTS policy
- ☐ Ensure proper origin isolation with COOP

PASSED AUDITS (12)

[Show](#)

NOT APPLICABLE (2)

[Show](#)

Restore pages
Microsoft Edge closed unexpectedly.
[Restore](#)



SEO

These checks ensure that your page is following basic search engine optimization advice. There are many additional factors Lighthouse does not score here that may affect your search ranking, including performance on [Core Web Vitals](#). [Learn more about Google Search Essentials](#).

ADDITIONAL ITEMS TO MANUALLY CHECK (1)

[Hide](#)

- ☐ Structured data is valid

Run these additional validators on your site to check additional SEO best practices.

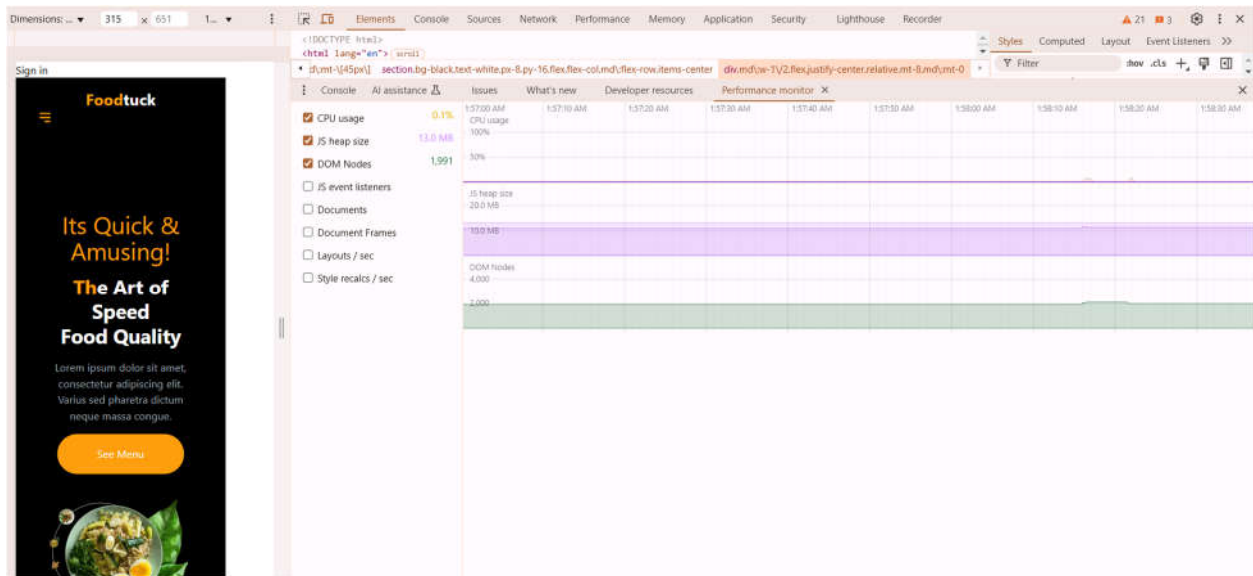
PASSED AUDITS (8)

[Show](#)

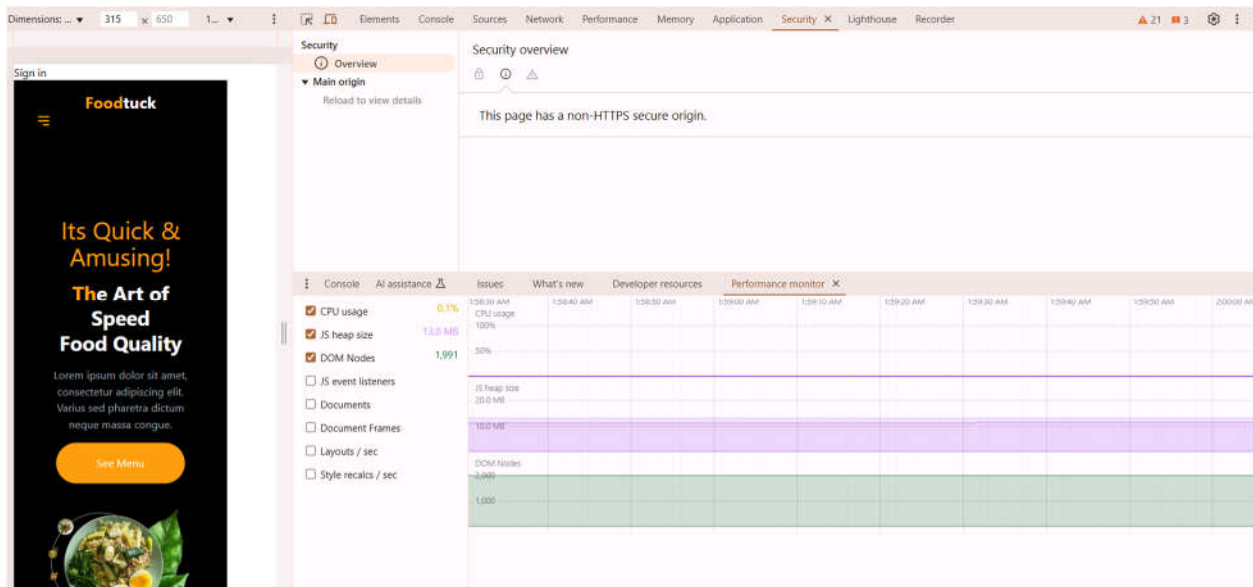
NOT APPLICABLE (2)

[Show](#)

● Performance Monitor



● Security



Conclusion

In conclusion, Day 5 of the testing, error handling, and backend integration refinement phase successfully addressed a variety of critical issues to ensure that the marketplace is ready for a seamless, user-friendly, and secure deployment. The primary focus areas included validating core functionalities, improving the user experience, and enhancing security measures.

Functional Testing

Error Handling

Security Improvements

Performance Optimization and Responsiveness

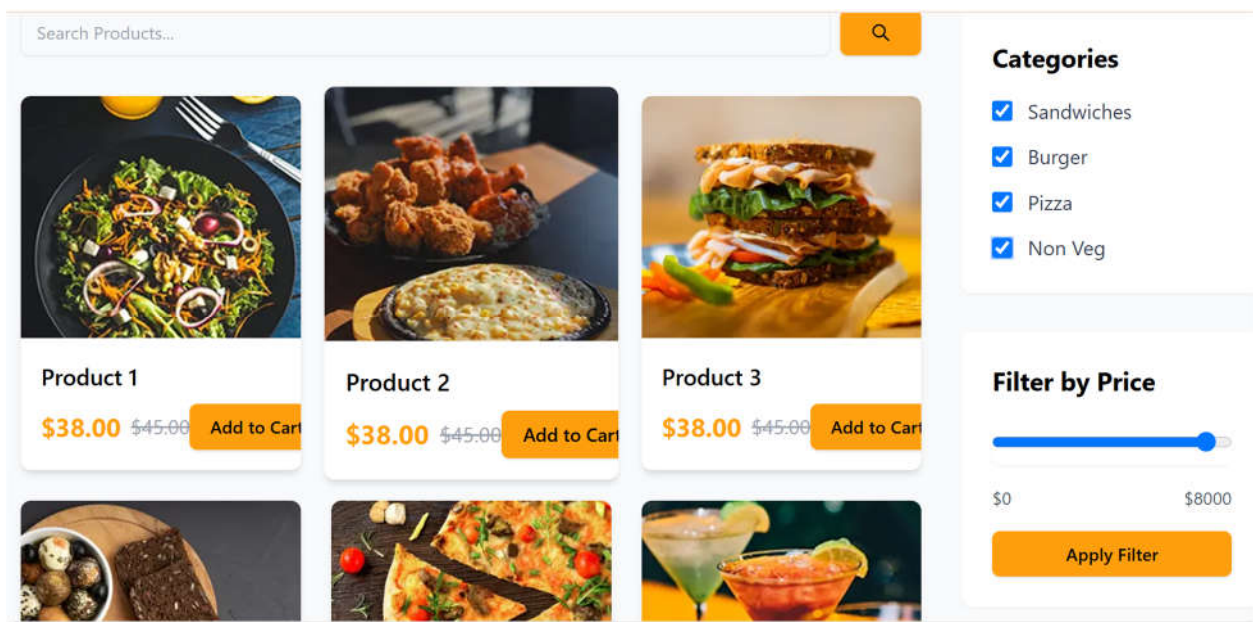
Cross Browser and Device Test

Product Search Functionality

The product search feature worked as expected without any issues. When users entered specific search terms, the results matched the query accurately, displaying relevant products based on title, description, and category.

No errors were encountered during the testing of the product search functionality. The feature performed optimally, displaying products in a quick and responsive manner. The user interface was clean, and the search results were displayed without delays.

Highlighted text in image



MarketPlace-Builder-
Hackathon

Day-5: Testing, Error handling and Backend Integration
Refinement

Overview

The main goal of DAY-5 was to prepare the marketplace for real-world deployment by thoroughly testing all components, identifying and resolving errors, optimizing performance, and refining backend integrations. This involved performing functional testing to ensure core features like product listings, search, and cart operations worked as expected, implementing error handling to display user-friendly messages and fallback UI for API failures, optimizing performance by reducing load times and compressing images, and conducting cross-browser and device testing to ensure consistent user experience. Additionally, security testing was conducted to validate inputs and secure API communication.

Product Listing Page

Problem Faced

During testing, while navigating to the product listing page, I observed that the images were not loading, and instead, an error message stating "Image fetch failed" was displayed. The issue was traced back to a network problem that caused the failure in fetching images from the sanity.

This disruption was preventing the page from displaying the correct product images, which is a critical part of the marketplace's user experience.

Resolution

The issue was resolved by addressing the network connectivity problem. Once the network was restored, the image fetching functionality resumed as expected, and the product images were displayed correctly on the page. After the fix, the test was repeated, and the images loaded successfully without errors.

Products from API's Data



Chocolate Muffin

Soft and rich chocolate muffin topped with chocolate chips.

Price: \$28

Add To Cart



Chicken chup

Delicious vegetarian pizza topped with fresh vegetables and cheese.

Price: \$43

Add To Cart



Pizza

Crispy fried chicken bites served with dipping sauce.

Price: \$12

Add To Cart



Drinks

Juicy beef burger with fresh lettuce, tomatoes, and cheese.

Price: \$21

Add To Cart