

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

1: Functional Testing

Product listing: Products are displayed correctly.

Filters and search: Validate accurate results based on user inputs.

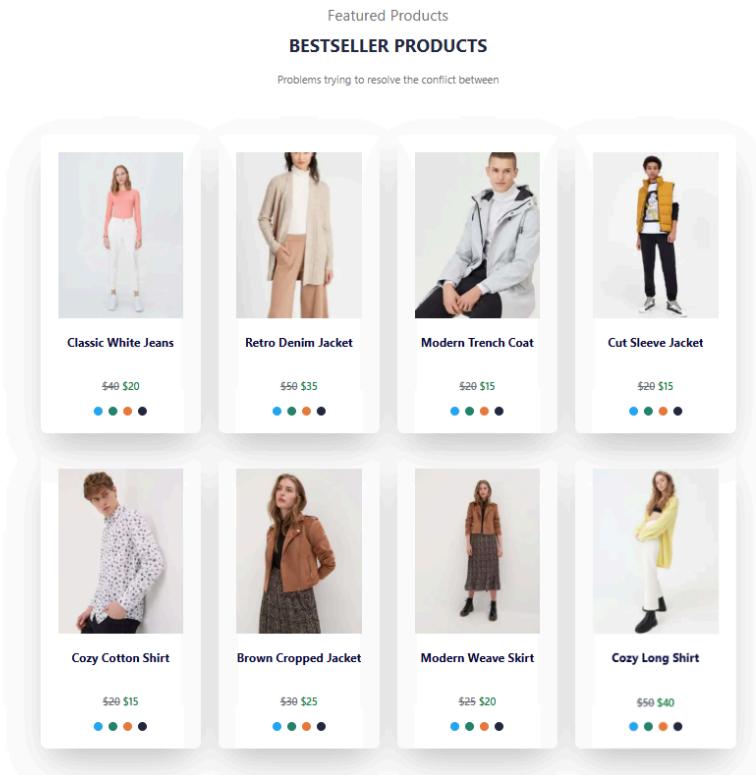
Cart operations: Add, update, and remove items from the cart.

Dynamic routing: Verify individual product detail pages load correctly.

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC001	Products are displayed correctly	Open Products Page > Validate Products	Products Display Successfully	Products Display Successfully	low	-	No Issue Found
TC002	Validate accurate results based on user inputs	On searching, it filters products accurately and smoothly.	Product Search successfully	Product Search successfully	low	-	Successfully searched
TC003	Add, update, and remove items from the cart.	Add to cart select color and size notification when add to cart > added to cart notification> increase product quantity > click delete icon to delete or remove product	Product Add to cart and remove from cart successfully done.	Product Add to cart and remove from cart successfully done.	low	-	Gracefully handle adding and removing
TC004	Verify individual product detail pages load correctly.	Navigate to shop and on click details button > it will navigate to dynamic route (single product) page and show the product details with slug url.	Navigate to dynamic route and show details of product successfully.	Display product details easily.	medium	-	Successfully displayed, and no issue was found.

Add, update, and remove items from the cart.

Go to product → product details page (dynamic route) → add to cart → select color and size → then add to cart → product will add to cart successfully → add to cart quantity increase according to product length. On click delete icon the product will remove from cart.



This is a detailed view of a product page for a "Beige Bomber Jacket". The page features a large image of a male model wearing the jacket. The product title is "Beige Bomber Jacket" with a star rating of 4.5 stars from 10 reviews. The price is listed as \$35. The product description states: "A trendy beige bomber jacket crafted from high-quality fabric. Featuring a sleek design, ribbed cuffs, and a comfortable fit, it's a perfect mix of style and functionality." Below the description are dropdown menus for "Color" (with options: dark blue, teal, orange, light blue) and "Size" (with options: S, M, L, XL). A "Quantity" selector shows a value of 1. At the bottom are two buttons: "Add to Cart" (blue) and "Buy Now" (green).



Beige Bomber Jacket

★★★★★ (10 Reviews)



Oops!

Please select a color and size!

OK

Quantity:

[Add to Cart](#)

[Buy Now](#)



Beige Bomber Jacket

★★★★★ (10 Reviews)



Success!

Product added to cart successfully!

OK

Quantity:

[Add to Cart](#)

[Buy Now](#)

Bandage

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Shopping Cart

	Beige Bomber Jacket	- 1 +	\$35.00 \$45.00	
	Classic Polo Neck	- 1 +	\$25.00 \$35.00	
	Cute Graphic Tees	- 1 +	\$20.00 \$40.00	

Order Summary

Subtotal (3 items)	\$80.00
Shipping Fee	\$0
Total	\$80.00

[Proceed to Checkout \(3\)](#)

Bandage

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Hooded Sweat Shirt

★★★★★ (10 Reviews)

Success!

Product added to wishlist! ❤️

[OK](#)

Quantity: - 1 +

[Add to Cart](#) [Buy Now](#)

Bandage

Home Shop Blog About Contact Team [Login / Register](#)

Your Wishlist

	Hooded Sweat Shirt	\$20 \$25		Add to Cart
	Half Sleeve T-Shirt	\$15 \$20		Add to Cart
	Classic Strip Jacket	\$15 \$20		Add to Cart

Filters and search: Validate accurate results based on user inputs.

Search Products

Min Price: 0 Max Price: 1000

A man wearing a white long-sleeved shirt with a small black floral print.

Cozy Cotton Shirt

Rs20 Rs15

● ● ● ● ●

A woman wearing a yellow cardigan over a black top and white pants.

Cozy Long Shirt

Rs50 Rs40

● ● ● ● ●

A man wearing a navy blue, red, and white color-block hoodie.

Hooded Sweat Shirt

Rs25 Rs20

● ● ● ● ●

A man wearing a dark blue short-sleeved shirt with a small white floral print.

Half Sleeve T-Shirt

Rs20 Rs15

● ● ● ● ●

Search Products

Min Price: 15 Max Price: 20

A man wearing a white long-sleeved shirt with a small black floral print.

Cozy Cotton Shirt

Rs20 Rs15

● ● ● ● ●

A man wearing a navy blue, red, and white color-block hoodie.

Hooded Sweat Shirt

Rs25 Rs20

● ● ● ● ●

A man wearing a dark blue short-sleeved shirt with a small white floral print.

Half Sleeve T-Shirt

Rs20 Rs15

● ● ● ● ●

A man wearing a white short-sleeved shirt with a small black floral print.

Printed T-Shirt

Rs30 Rs20

● ● ● ● ●

API Test for response (Postman)

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC005	Testing API in Postman	Paste API URI in Postman (GET)	API Fetch in JSON Format	API Fetched successfully	Low	-	No Issue Found

The image contains two screenshots of the Thunder Client application, which is a Postman-like tool for testing APIs.

Screenshot 1: Product API Response

- Request:** GET https://template-05-api-by-yusranaz.vercel.app/api/products
- Status:** 200 OK
- Headers:** Content-Type: application/json; charset=UTF-8
- Body (JSON):**

```

1  [
2   {
3     "_id": "2P4ew3n0aFv1An3Aum9SjzF",
4     "title": "Elegant Layered Top",
5     "originalPrice": 38,
6     "discountedPrice": 28,
7     "description": "A sophisticated layered top designed for effortless charm. Crafted from soft, breathable fabric, it drapes beautifully, making it perfect for both casual and semi-formal occasions.",
8     "ratings": 4.5,
9     "category": {
10       "_id": "2",
11       "title": "Women",
12       "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product10.png"
13     },
14     "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product1.png",
15     "inventory": 10,
16     "colors": [
17       "#252B42",
18       "#23856D"
19     ]
20   }
21 ]

```

Screenshot 2: Category API Response

- Request:** GET https://template-05-api-by-yusranaz.vercel.app/api/categories
- Status:** 200 OK
- Headers:** Content-Type: application/json; charset=UTF-8
- Body (JSON):**

```

1  [
2   {
3     "_id": "1",
4     "title": "Men",
5     "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product9.png"
6   },
7   {
8     "_id": "2",
9     "title": "Women",
10    "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product10.png"
11  },
12  {
13    "_id": "3",
14    "title": "Accessories",
15    "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product11.png"
16  },
17  {
18    "_id": "4",
19    "title": "Kids",
20    "imageUrl": "https://template-05-api-by-yusranaz.vercel.app/images/product12.png"
21  }
22 ]

```

2: Error Handling

The screenshot shows a web browser window with the URL 'localhost:3000/search'. The page title is 'Bandage'. The main content area has a heading 'Search Products' and a search input field containing 'scarf'. Below the input field are two text input fields for 'Min Price' (0) and 'Max Price' (1000). A message 'No products found.' is displayed.

Code:

```
/* Products Grid */


{loading ? (
        <p>Loading products...</p>
    ) : products.length > 0 ? (
        products.map((product) => (
            <Link
                key={product._id}
                href={`/products/${product.slug.current}} // Fix: Corrected
the Link format
                className="text-center flex flex-col items-center shadow-2xl
transition-transform duration-300 hover:scale-105 rounded-lg p-4 sm:p-6"
            >
                /* Product Image */
                {product.image && product.image.asset?._ref ? (
                    <Image
                        src={urlFor(product.image.asset._ref)} // Fix: Corrected
the image URL fetching
                        alt={product.title}
                        width={183}
                        height={238}
                        className="w-full h-[250px] object-cover"
                    />
                ) : (


```

```
        <div className="w-full h-[250px] bg-gray-200 flex items-center justify-center">
          <span className="text-gray-500">No Image Available</span>
        </div>
      ) }

      /* Product Details */
      <div className="pt-5">
        <h5 className="text-customBlue font-bold pb-2 text-[14px] sm:text-[16px] line-clamp-2 min-h-[55px]">
          {product.title}
        </h5>
        <h5 className="text-gray-400 font-semibold pt-2 text-[12px] sm:text-[14px]">
          <span className="text-gray-500 line-through">${product.originalPrice}</span>{" "}
          <span className="text-green-700 font-semibold">${product.discountedPrice}</span>
        </h5>
      </div>

      /* Color Options */
      <div className="flex gap-2 pt-4">
        <div className="w-[12px] h-[12px] rounded-full bg-cSky"></div>
        <div className="w-[12px] h-[12px] rounded-full bg-cGreen"></div>
        <div className="w-[12px] h-[12px] rounded-full bg-cOrange"></div>
        <div className="w-[12px] h-[12px] rounded-full bg-cBlue"></div>
      </div>
      </Link>
    ))
  ) : (
  <p className="text-cBlue">No products found.</p>
)
</div>
```

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC006	Test API Error Handling	Remove Groq Query Refresh Page	Error Message in the form of UI on Screen	Error Message show	Low	-	Handle Gracefully

3: Performance Testing

Performance Test (GTmetrix)

GTmetrix

Latest Performance Report for:
<https://e-commerce-website-mu-ruddy.vercel.app/>

Report generated: Fri, Feb 7, 2025 10:13 AM -0800
 Test Server Location: Vancouver, Canada
 Using: Chrome 117.0.0.0, Lighthouse 11.0.0

GTmetrix Grade ? Web Vitals ? Share

A	Performance ? 100%	Structure ? 100%	LCP ? 238ms	TBT ? 0ms	CLS ? 0
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Summary Performance Structure CrUX Waterfall Video History Alerts

Performance Metrics

The following metrics are generated using Lighthouse Performance data.

Metric details OFF

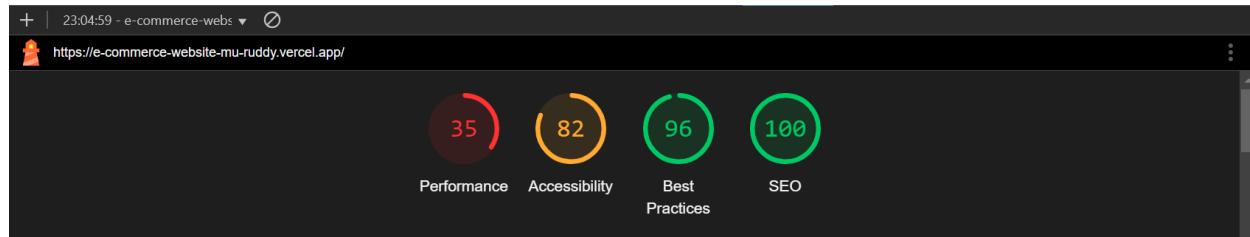
First Contentful Paint ?	Good - Nothing to do here 187ms	Time to Interactive ?	Good - Nothing to do here 187ms
Speed Index ?	Good - Nothing to do here 264ms	Total Blocking Time ?	Good - Nothing to do here 0ms
Largest Contentful Paint ?	Good - Nothing to do here 238ms	Cumulative Layout Shift ?	Good - Nothing to do here 0

Browser Timings

These timings are milestones reported by the browser.

Redirect Duration ?	0ms	Connection Duration ?	48ms	Backend Duration ?	20ms
Time to First Byte (TTFB) ?	68ms	DOM Interactive Time ?	161ms	DOM Content Loaded Time ?	161ms
First Paint ?	188ms	Onload Time ?	288ms	Fully Loaded Time ?	380ms

Performance Test (Lighthouse)





Performance

Values are estimated and may vary. The [performance score](#) is calculated directly from these metrics. [See calculator](#).

▲ 0–49 ■ 50–89 ● 90–100



METRICS

[Expand view](#)

▲ First Contentful Paint

3.7 s

▲ Largest Contentful Paint

5.4 s

▲ Total Blocking Time

2,240 ms

● Cumulative Layout Shift

0

▲ Speed Index

12.1 s

[View Treemap](#)

Show audits relevant to: [All](#) [FCP](#) [LCP](#) [TBT](#)

DIAGNOSTICS

- ▲ Minimize main-thread work — 5.7 s
- ▲ Largest Contentful Paint element — 5,360 ms
- ▲ Reduce JavaScript execution time — 2.5 s
- ▲ Reduce the impact of third-party code — Third-party code blocked the main thread for 1,320 ms
- ▲ Preconnect to required origins — Potential savings of 490 ms
- Eliminate render-blocking resources — Potential savings of 0 ms
- Avoid serving legacy JavaScript to modern browsers — Potential savings of 27 KiB
- Reduce unused JavaScript — Potential savings of 4,718 KiB
- Avoid long main-thread tasks — 17 long tasks found
- Initial server response time was short — Root document took 180 ms
- Avoids enormous network payloads — Total size was 512 KiB
- Avoids an excessive DOM size — 385 elements
- Avoid chaining critical requests — 2 chains found

More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

PASSED AUDITS (25) [Show](#)



Accessibility

These checks highlight opportunities to [improve the accessibility of your web app](#). Automatic detection can only detect a subset of issues and does not guarantee the accessibility of your web app, so [manual testing](#) is also encouraged.

NAMES AND LABELS

- ▲ Buttons do not have an accessible name

- ▲ 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.

CONTRAST

- ▲ Background and foreground colors do not have a sufficient contrast ratio.

These are opportunities to improve the legibility of your content.

TABLES AND LISTS

- ▲ Lists do not contain only `` elements and script supporting elements (`<script>` and `<template>`).

These are opportunities to improve the experience of reading tabular or list data using assistive technology, like a screen reader.

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 (21)

Show

PASSED AUDITS (21)

Show

NOT APPLICABLE (31)

Show



Best Practices

GENERAL

- ⚠ Browser errors were logged to the console

TRUST AND SAFETY

- Ensure CSP is effective against XSS attacks

PASSED AUDITS (14)

Show

NOT APPLICABLE (2)

Show

100

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

🕒 Captured at Feb 7, 2025, 11:04 PM GMT+5

🕒 Emulated Moto G Power with Lighthouse 12.2.1

📍 Single page session

🕒 Initial page load

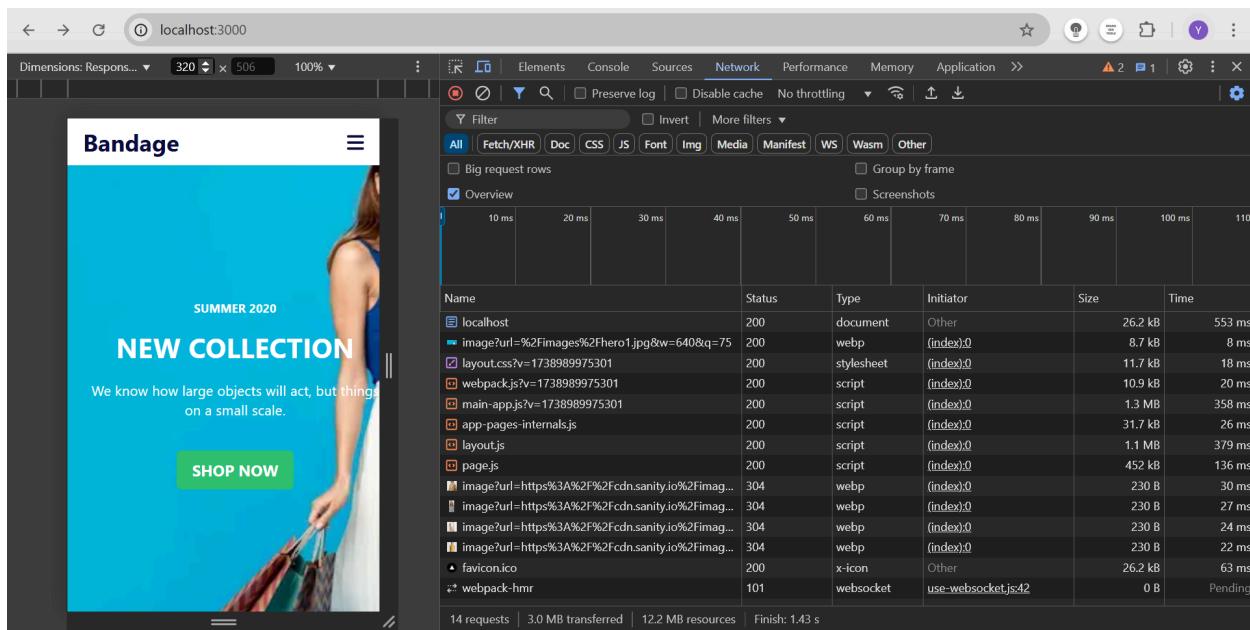
📶 Slow 4G throttling

🌐 Using Chromium 132.0.0.0 with devtools

Generated by Lighthouse 12.2.1 | [File an issue](#)

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC007	Light House Performance testing	DevTools > inspect > lighthouse > Select the appropriate categories (Performance, Accessibility, Best Practices, SEO) >Generate Report	Performance : 80 Accessibility : 100 Best Practice : 25 SEO : 50	Performance : 35 Accessibility : 82 Best Practice : 96 SEO : 100	Medium	-	Optimized

Test Load Time



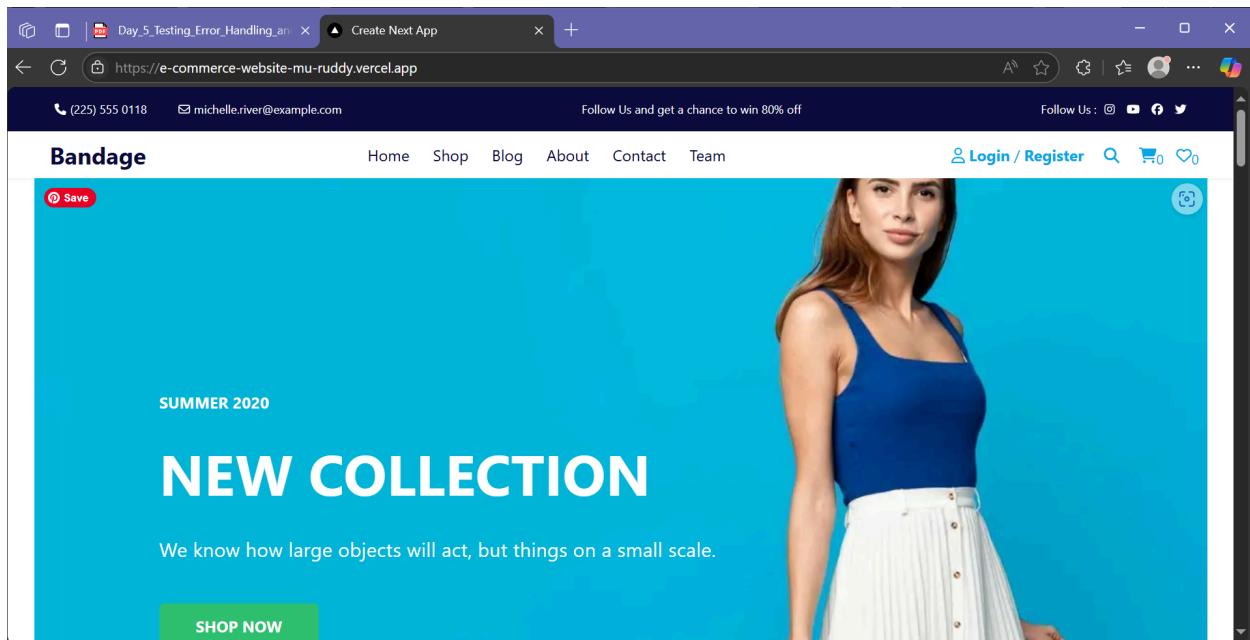
The screenshot shows a browser window with developer tools open, specifically the Network tab. On the left is a preview of a website for "Bandage" featuring a woman in a blue top and white skirt, advertising a "NEW COLLECTION" for "SUMMER 2020". Below the preview is a timeline showing the loading process from 10 ms to 110 ms. To the right is a detailed table of network requests:

Name	Status	Type	Initiator	Size	Time
localhost	200	document	Other	26.2 kB	553 ms
image?url=%2Fimages%2Fhero1.jpg&w=640&q=75	200	webp	(index):0	8.7 kB	8 ms
layout.css?v=1738989975301	200	stylesheet	(index):0	11.7 kB	18 ms
webpack.js?v=1738989975301	200	script	(index):0	10.9 kB	20 ms
main-app.js?v=1738989975301	200	script	(index):0	1.3 MB	358 ms
app-pages-internal.js	200	script	(index):0	31.7 kB	26 ms
layout.js	200	script	(index):0	1.1 MB	379 ms
page.js	200	script	(index):0	452 kB	136 ms
image?url=https%3A%2F%2Fcdn.sanity.io%2Fimag...	304	webp	(index):0	230 B	30 ms
image?url=https%3A%2F%2Fcdn.sanity.io%2Fimag...	304	webp	(index):0	230 B	27 ms
image?url=https%3A%2F%2Fcdn.sanity.io%2Fimag...	304	webp	(index):0	230 B	24 ms
image?url=https%3A%2F%2Fcdn.sanity.io%2Fimag...	304	webp	(index):0	230 B	22 ms
favicon.ico	200	x-icon	Other	26.2 kB	63 ms
webpack-hmr	101	websocket	use-websocket.js:42	0 B	Pending

14 requests | 3.0 MB transferred | 12.2 MB resources | Finish: 1.43 s

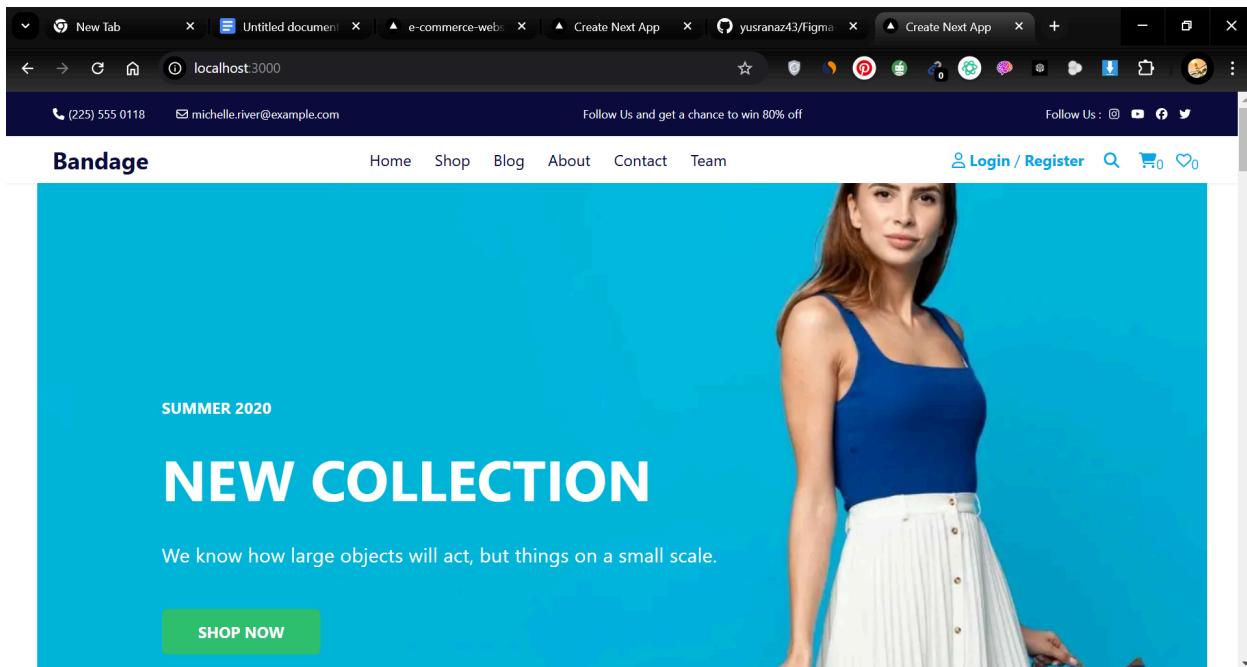
4: Cross-Browser and Device Testing

Edge (Physical Device)

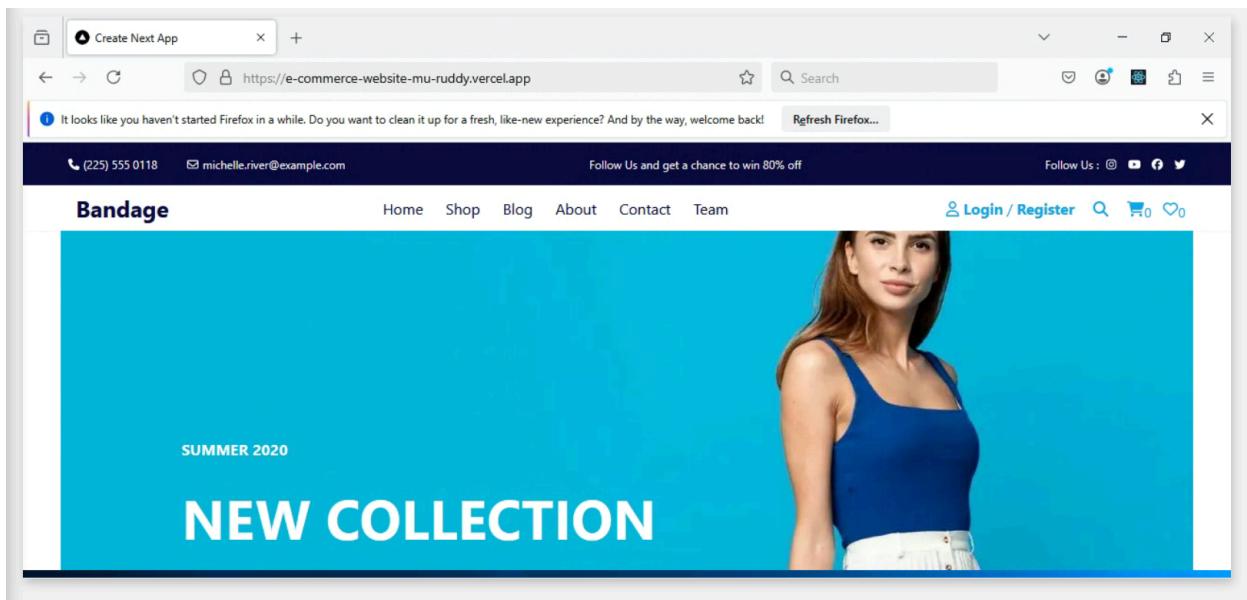


The screenshot shows a Microsoft Edge browser window running on a physical device. The address bar shows the URL <https://e-commerce-website-mu-ruddy.vercel.app>. The page content is identical to the one shown in the developer tools screenshot, featuring a woman in a blue top and white skirt, advertising a "NEW COLLECTION" for "SUMMER 2020". The browser interface includes a header with user information, a navigation bar, and a footer with social media links.

Chrome (Physical Device)



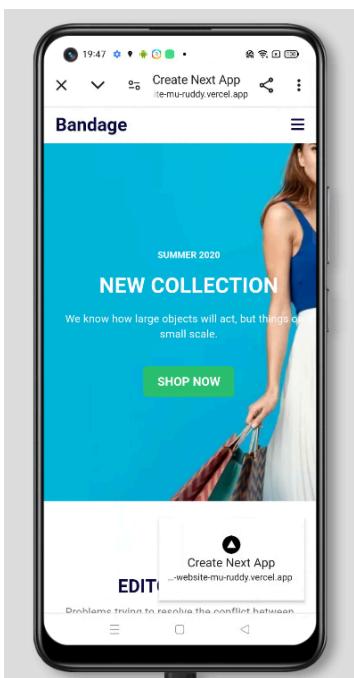
Firefox (BrowserStack)



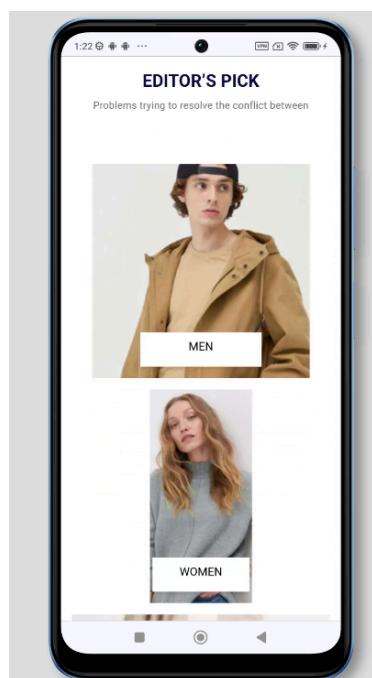
Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC008	Browser Compatibility Testing	<p>1.Open the website in Chrome, Firefox, and Edge.</p> <p>2.fonts, and functionality consistency across browsers.</p> <p>3.Verify layout, Test responsiveness on different screen sizes.</p> <p>4.Check for performance differences and errors in the browser console.</p>	<p>1.Consistent rendering and functionality across all browsers.</p> <p>2.No layout, font, or interactive element issues.</p> <p>3.Fast performance with no console errors or significant delays.</p>	<p>1.Chrome: All elements render correctly. Fast performance, no errors.</p> <p>2.Firefox: Slightly slower performance; minor font rendering differences, but no major issues.</p> <p>3.Edge: Rendering and functionality consistent with Chrome. No issues.</p>	Low	-	consistent and acceptable.

Device Test with (BrowserStack)

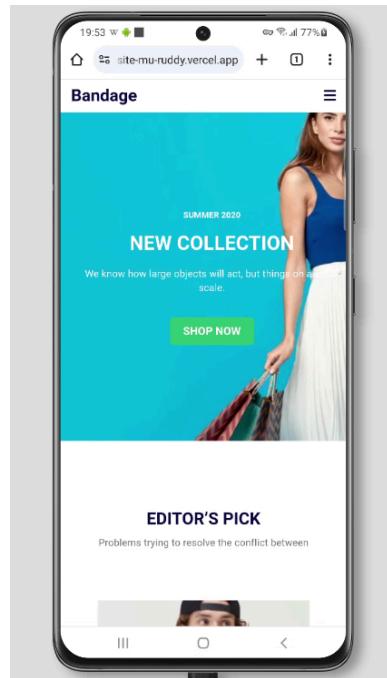
Realme



Redmi



Samsung



Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Severity Level	Assigned To	Remarks
TC009	Device Testing through BrowserStack	The layout, fonts, and interactive elements adapt correctly to all device sizes	Responsive across all devices with no layout or functionality issues	Responsive across all devices with no layout or functionality issues	Low	-	No functionality Issue Found.

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

