

# Day 5 – Testing and Backend Refinement – General - Ecommerce

## Objective:

The primary goal for Day 5 is to refine the testing and error-handling mechanisms while ensuring smooth backend integration. The focus is to deliver a high-quality, performant, and secure application with robust user experience and comprehensive documentation.

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## Key Areas of Focus:

### 1. Functional Testing

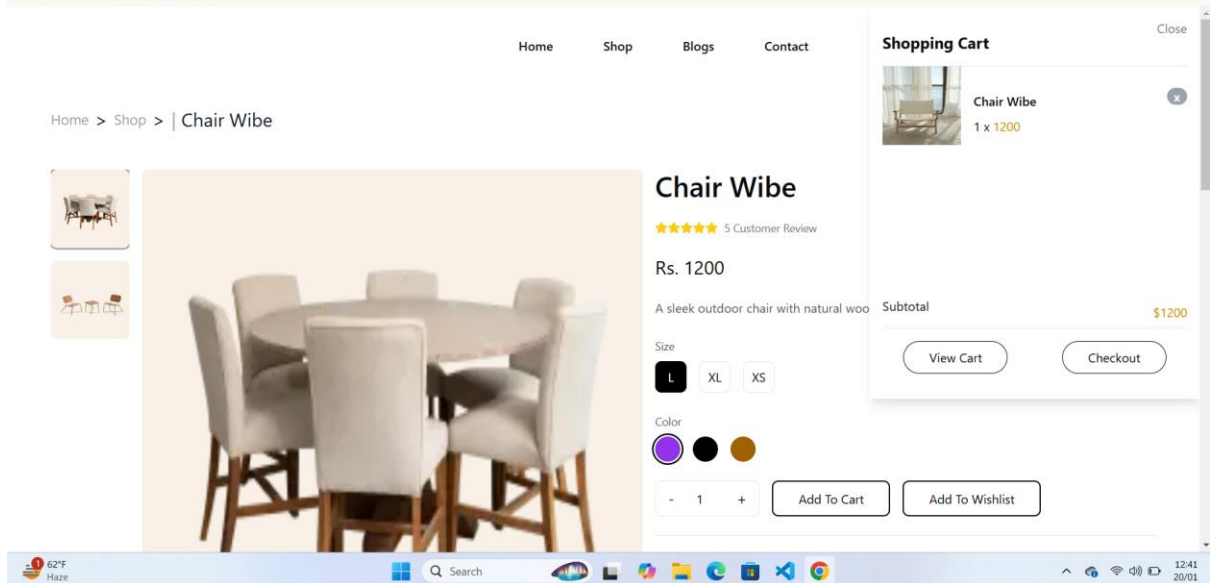
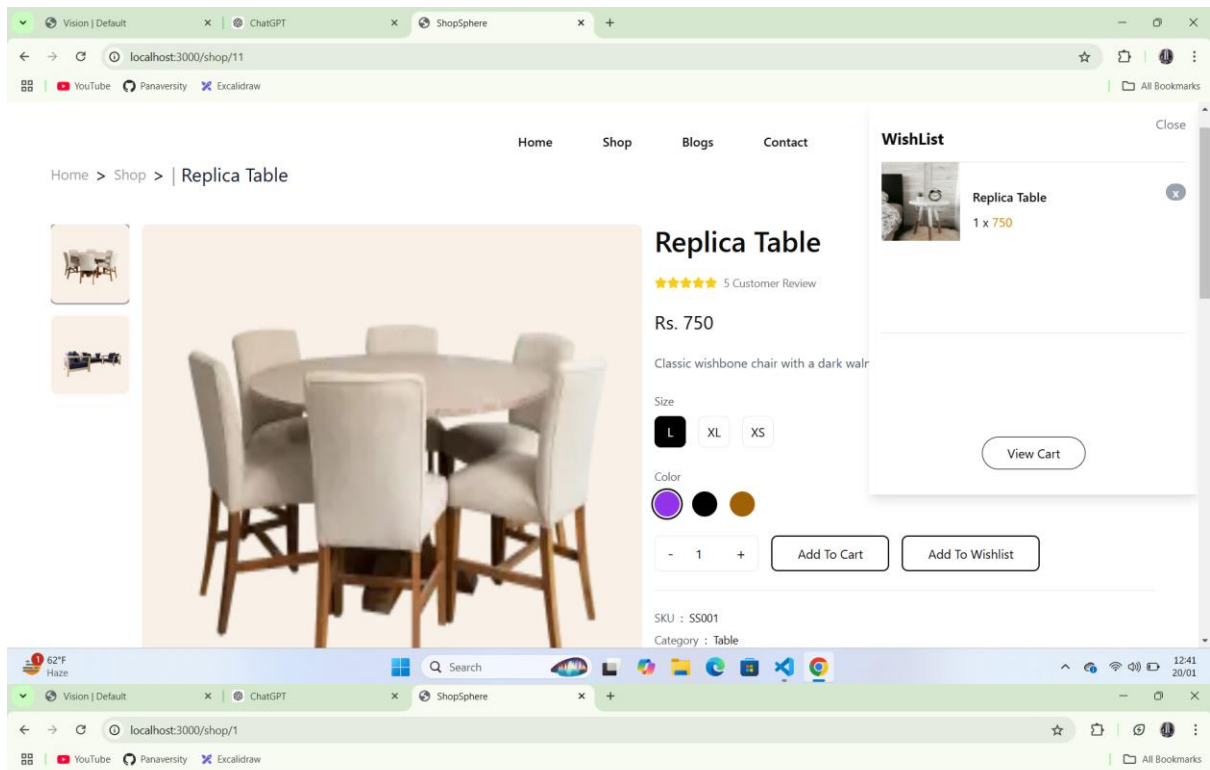
**Task:** Perform functional testing to ensure features work as expected.

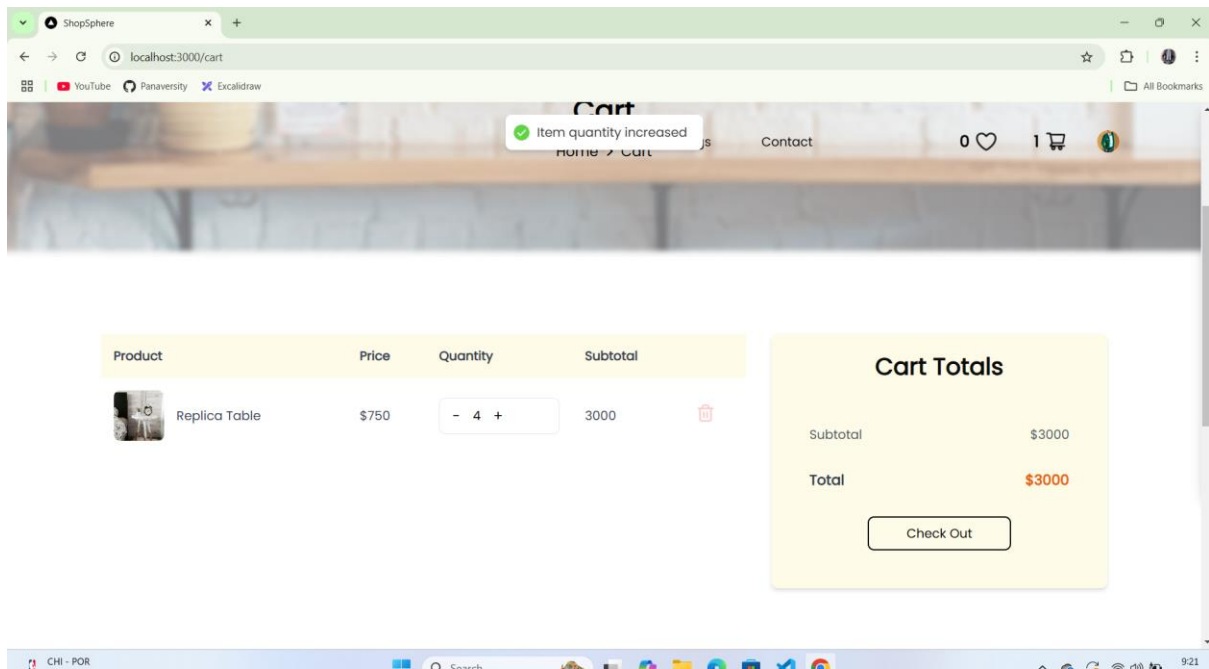
**Details:**

- Tested the product filtering functionality (e.g., high-to-low pricing).
- Verified cart persistence in local storage.
- Tested wishlist functionality.

**Result:**

- All test cases passed successfully.





## 2. Error Handling

**Task:** Implement robust error-handling mechanisms.

**Details:**

- Simulated scenarios with disconnected internet.
- Verified error messages for API failures.

**Result:**

- Clear error messages displayed to users.

```
1 import { client } from "@sanity/lib/client";
2
3 export const getProductsFromSanity = async () => {
4   const query = `*[_type == "product"]{
5     _id,
6     name,
7     images[] {
8       "url": asset->url
9     },
10    imagePath,
11    price,
12    description,
13    discountPercentage,
14    isFeaturedProduct,
15    stockLevel,
16    category
17  }
18  `;
19
20  try {
21    const res = await client.fetch(query);
22    return res;
23  } catch (error) {
24    console.error("Error fetching products from Sanity:", error);
25    throw new Error("Failed to fetch products from Sanity");
26  }
27 };
28
```

### 3. Performance Testing

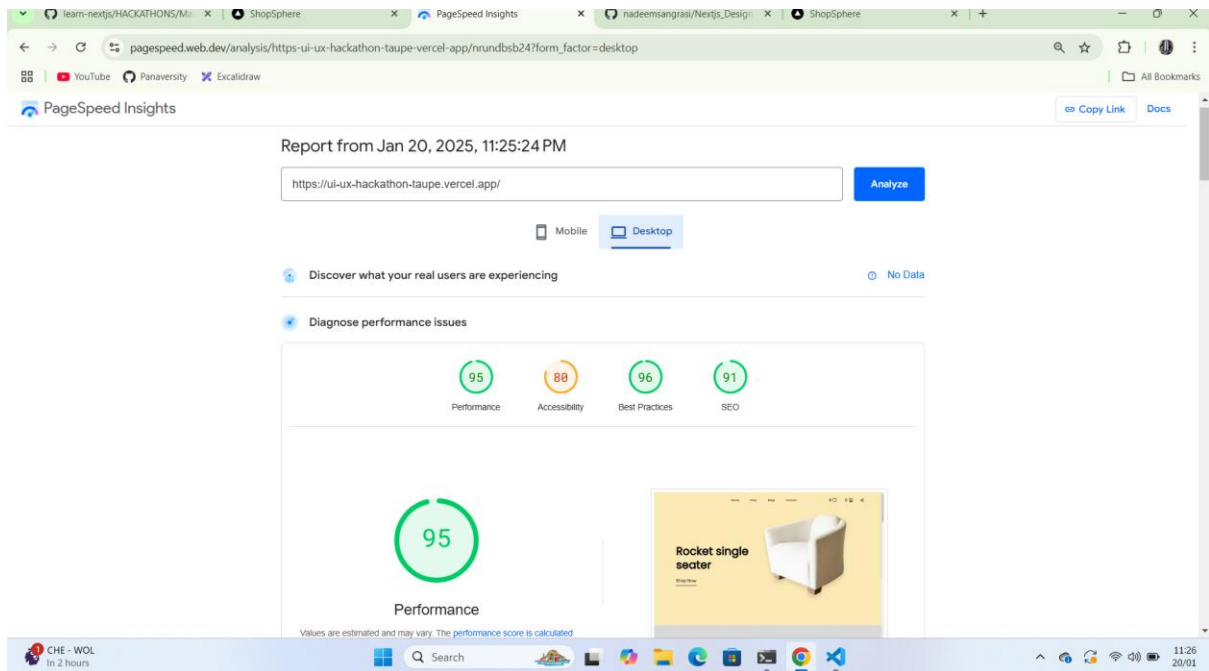
**Task:** Evaluate application speed and responsiveness.

**Details:**

- Tested loading times for product pages.
- Monitored API response times using a performance analysis tool.

**Result:**

- Achieved consistent loading times under acceptable thresholds.



## 4. Cross-Browser and Device Testing

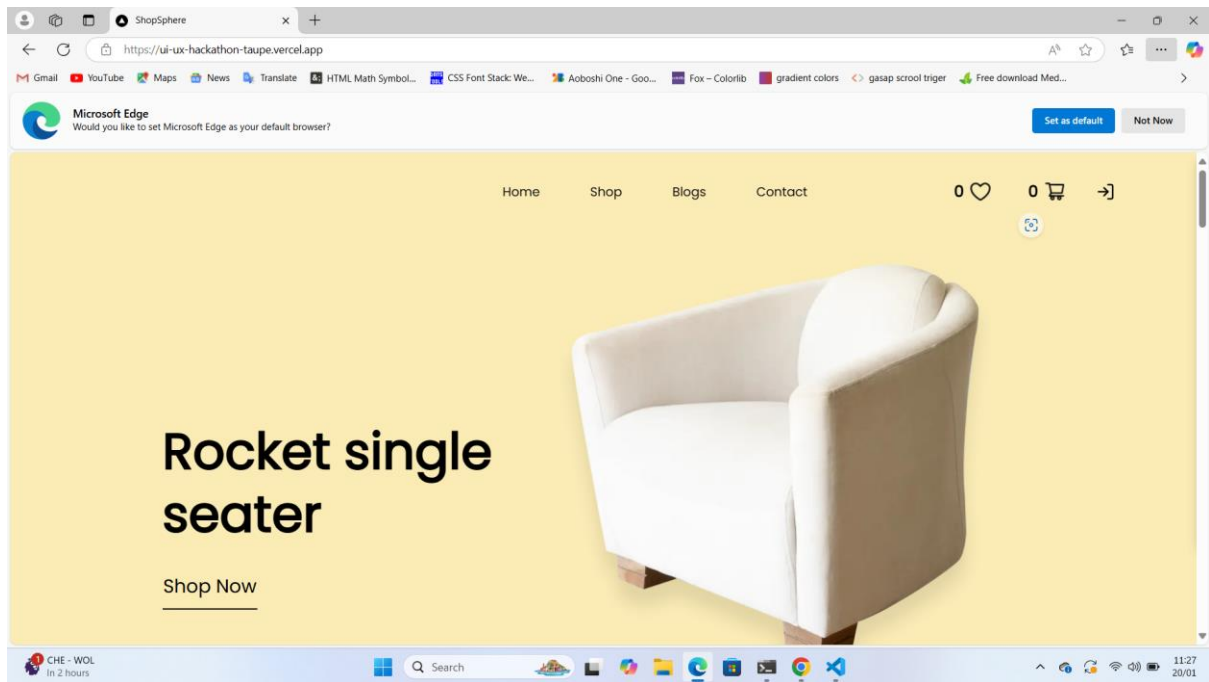
**Task:** Ensure compatibility across various browsers and devices.

**Details:**

- Tested the application on Chrome, Firefox, Safari, and Edge.
- Verified responsiveness on mobile, tablet, and desktop devices.

**Result:**

- The application is fully responsive and compatible with all tested platforms.



## 5. Security Testing

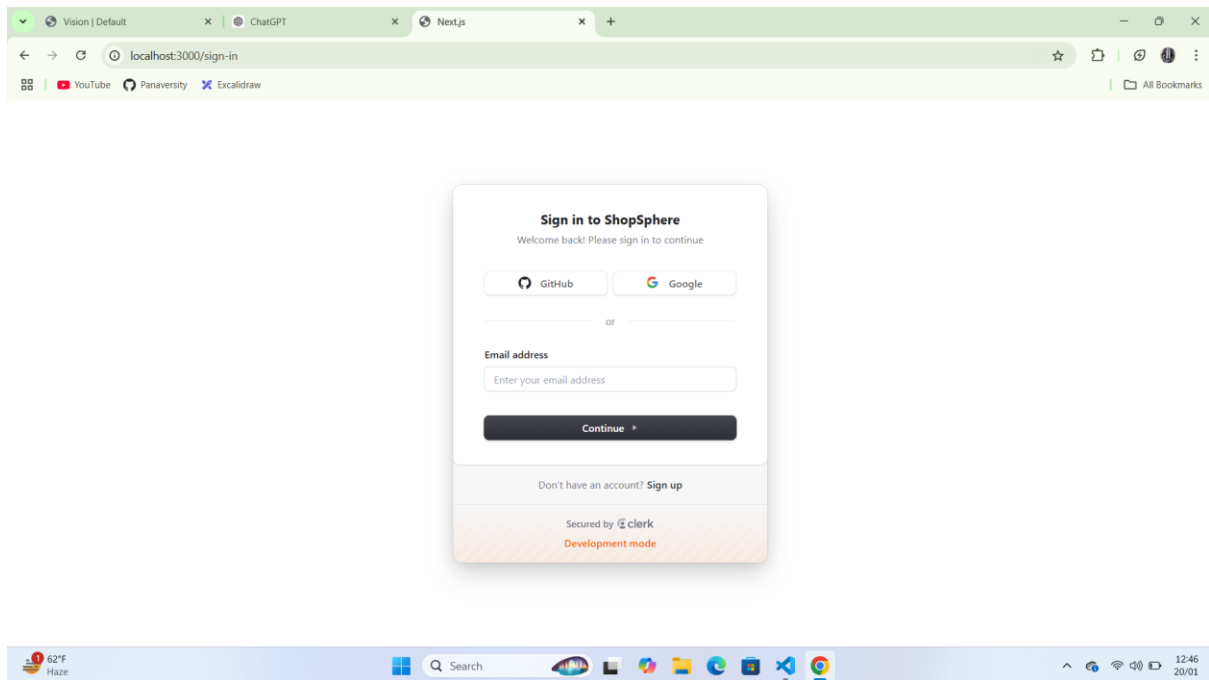
**Task:** Safeguard the application against potential vulnerabilities.

**Details:**

- Tested authentication flows using Clerk.
- Ensured sensitive data is encrypted.
- Verified user sessions for security compliance.

**Result:**

- All security tests passed without any vulnerabilities detected.



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## 6. User Acceptance Testing (UAT)

**Task:** Validate the application with end-users.

**Details:**

- Collected feedback from test users.
- Reviewed and addressed usability issues.

**Result:**

- Received positive feedback from users with minor enhancements suggested.
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## 7. Documentation Updates

*Tasks Completed:*

- Updated documentation to reflect changes in the schema and functionalities.
- Provided detailed instructions for setting up and testing the application.

*Updated Schemas:*

```
export const productSchema = {
  name: "product",
  title: "Product",
  type: "document",
  fields: [
    {
      name: "id",
      title: "ID",
```

```

    type: "string",
  },
  {
    name: "name",
    title: "Name",
    type: "string",
  },
  {
    name: "imagePath",
    title: "Image Path",
    type: "url",
  },
  {
    name: "price",
    title: "Price",
    type: "number",
  },
  {
    name: "description",
    title: "Description",
    type: "text",
  },
  {
    name: "discountPercentage",
    title: "Discount Percentage",
    type: "number",
  },
  {
    name: "isFeaturedProduct",
    title: "Is Featured Product",
    type: "boolean",
  },
  {
    name: "stockLevel",
    title: "Stock Level",
    type: "number",
  },
  {
    name: "category",
    title: "Category",
    type: "string",
  },
  {
    name: "images",
    title: "Images",
    type: "array",
    of: [
      {
        type: "image",
        options: {
          hotspot: true,
        },
      },
    ],
  },
],
};

```

```

export const blogSchema = {
  name: "blogPost",
  title: "Blog Post",

```



```
type: "document",
fields: [
  {
    name: "title",
    title: "Title",
    type: "string",
  },
  {
    name: "author",
    title: "Author",
    type: "string",
  },
  {
    name: "publishedAt",
    title: "Published At",
    type: "datetime",
  },
  {
    name: "category",
    title: "Category",
    type: "string",
  },
  {
    name: "excerpt",
    title: "Excerpt",
    type: "text",
    description: "A short summary of the post.",
  },
  {
    name: "image",
    title: "Image",
    type: "image",
  },
],
];
```

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## Conclusion:

The tasks completed today have significantly improved the application's functionality, performance, and reliability. Moving forward, I will focus on additional testing and feature development.