

Day 5 - Testing, Error Handling, and Backend Integration Refinement

Day 5 - Testing, Error Handling, and Backend Integration Refinement for Furniro

Objectives:

- Conduct rigorous testing on core features.
- Enhance error handling mechanisms.
- Optimize performance for smooth user experience.
- Ensure cross-browser and cross-device compatibility.
- Document all testing results and updates.

Testing Tool Used:

- **Lighthouse**
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Step-by-Step Implementation

Step 1: Functional Testing

1. Test Core Features:

- **Product Listing:** Ensure Furniro's products display dynamically with correct details.
- **Filters and Search:** Validate accuracy of filters and search results on Furniro.
- **Cart Operations:** Verify adding, updating, and removing items functionality in Furniro's cart.
- **Product Detail Pages:** Confirm correct loading of dynamic product detail pages for Furniro's products.

2. Testing Tools:

- **Postman:** For Furniro backend API testing.
- **Cypress:** For end-to-end testing of Furniro user flows.

3. Execution Process:

- Write comprehensive test cases for Furniro.
 - Compare actual outcomes with expected results for Furniro.
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Step 2: Error Handling

- **Error Example Code:**

```
try {  
  const response = await fetch('/api/products');  
  const data = await response.json();  
  setProducts(data);  
} catch (error) {  
  console.error('Failed to fetch products:', error);  
  setError('Unable to load products. Please try again later.');
```

- **Fallback UI Examples:**

- Show "No products available" when Furniro's product list is empty.
 - Display "No products match your search criteria" for invalid search results on Furniro.
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Step 3: Performance Optimization

Key Actions:

- Compress Furniro images (e.g., TinyPNG).
 - Use Google Lighthouse to detect and fix issues (e.g., unused CSS, unoptimized assets for Furniro).
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Step 4: Cross-Browser and Device Testing

- **Browser Testing:** Validate Furniro compatibility on Chrome.
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Step 5: Security Testing

Focus Areas:

- **Input Validation:** Prevent SQL Injection and XSS for Furniro.
 - **Secure API Communication:** Ensure HTTPS and protect sensitive API keys for Furniro.
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Step 6: User Acceptance Testing (UAT)

- Simulate real-world user actions on Furniro (e.g., adding products to cart, checking out).
 - Collect feedback from peers and incorporate improvements for Furniro.
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Step 7: Documentation Updates

- Include test cases, results, and resolutions for Furniro.

Testing Results (CSV Report)

| Test Case | Status | Expected Result | Actual Result | Resolution |
|---------------------------|----------------------------|---|--------------------------------------|---------------------------|
| Product Listing Test | <div><div></div>Pass</div> | Furniro products displayed correctly | Furniro products displayed correctly | N/A |
| Search Functionality Test | <div><div></div>Fail</div> | Results filtered correctly | No results for 'laptop' | Fix search query handling |
| Cart Operations Test | <div><div></div>Pass</div> | Add, update, and remove items from Furniro cart | Furniro cart works as expected | N/A |

Key Deliverables:

- **Functional Testing:** Furniro core components thoroughly tested.
- **Error Handling:** Implemented robust fallback mechanisms for Furniro.
- **Performance Optimization:** Enhanced load times and responsiveness for Furniro.
- **Cross-Compatibility:** Verified consistency across platforms for Furniro.
- **Comprehensive Test Report:** Documented in CSV and Markdown for Furniro.