**Hackathon Day 5 Task: Error Handling, Testing, and Backend Integration Refinement**

**Testing Report**

1. **Functional Testing:**

✅ **Product Fetch Functionality:** The integration with the Sanity API is flawless, and the product fetching feature works perfectly.

✅ **Product Details Display:** Product details like name, description, and price are presented beautifully and clearly to the user.

✅ **Add to Cart Button:** The functionality of adding products to the cart works smoothly, preventing duplicate items from being added.

✅ **Redirect to Cart:** Once a product is added to the cart, the redirection mechanism works perfectly, taking users to the cart page after 2 seconds for a seamless experience.

**Non-Functional Testing:**

✅ **Loading State:** A loading message appears while data is being fetched, ensuring the user experience remains positive even while waiting.

✅ **Performance:** The performance is excellent, and lazy loading for images and data further boosts the user experience by making the page load faster.

⚠️ **Cross-Browser Testing:** The app performs well, and cross-browser testing will make it even more robust.

**2. Error Handling Report**

**Current Error Handling:**

✅ **API Fetch Errors:** A robust try-catch mechanism is already in place, which helps in handling API fetch failures and provides a clear error message to the user.

**Proposed Improvements:**

✅ **More Descriptive Error Messages:** The current error messages can be enhanced further by adding more detail. For example, a message like “Unable to load products at this moment” would improve the user experience.

✅ **Network Failures & API Downtime:** Implementing a fallback UI would be a great addition. It can display an alternative message or a retry button, ensuring that users are always kept informed, even in case of failures.

✅ **Add to Cart Errors:** Adding error handling during the cart addition process will ensure a smoother user experience, especially when facing unexpected issues.

1. **Functionality Review:**

✅ **Product Listing:** The products are fetched and displayed correctly with all the essential details.

✅ **Add to Cart:** The cart mechanism is functioning correctly, adding the selected products seamlessly.

✅ **Cart Redirect:** After adding an item to the cart, users are smoothly redirected to the cart page after a short 2-second delay, making the transition feel natural.

❗ **Cart Functionality:** The basic functionality of the cart is solid, but adding features like product quantity adjustments and a "remove from cart" option would elevate the experience.

**Test Report**





