Task Completion Report

1. Test Cases and Handling Suggestions

Test Cases Executed and Results

1. **Product Listing** – Products displayed correctly (**Passed**).
2. **Filters and Search** – Debugging required for accurate results (**Failed**).
3. **Cart Operations** – Pending implementation, suggested solution: **use local storage**.
4. **Dynamic Routing** – Product detail pages function correctly (**Passed**).
5. **Image URL Fetch** – Sanity image URL returns `null`, solution: **update code to handle null values**.

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2. Performance and Security Optimization

- **Performance Testing:** Lighthouse test gave **good results**.
- **Cross-Browser Testing:** Application works **smoothly on all major browsers** (Chrome, Firefox, Safari).
- **Security Measures:**
  - Sensitive API keys secured using **environment variables**.
  - API calls tested securely using **Thunder Client**.

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3. Issues Faced and Resolutions

- **Filters and Search:** Frontend filter logic needs debugging to return accurate results.
- **Cart Functionality:** Not implemented yet—**local storage** is recommended for managing cart items.
- **Custom Authentication Pages:** Custom sign-in/signup pages with Clerk are **still pending**, marked as the next priority.
- **Checkout Payment Page:** Encountered issues with rendering—solution: **use Suspense** for error handling.

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4. Staging Environment and Deployment

1. **Hosting Platform Setup:**
   - Platform selected: **Vercel** for quick deployment.
   - GitHub repository connected, build settings configured.
2. **Environment Variables:**
   - `.env` file created and variables securely uploaded to the hosting platform:

3. **Deployment to Staging:**
   o Application deployed to staging environment.
   o Build completed without errors, basic functionality verified.
4. **Testing Types Performed:**
   o **Functional Testing:** Checked product listing, search, and cart operations.
   o **Performance Testing:** Used Lighthouse to analyze speed and responsiveness.
   o **Security Testing:** Validated input fields and ensured secure API communication.

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5. Submission Checklist

1. **Functional Deliverables:**
   o Product listing and detail page verified.
   o API responses confirmed.
2. **Testing Report:**
   o CSV file prepared with test case details, including test case ID, description, steps, expected result, actual result, status, and remarks.
3. **Documentation:**
   o Comprehensive test results and findings.
   o README.md updated with six days of activities and deployment instructions.
4. **Repository Submission:**
   o All files uploaded to GitHub with a clear folder structure.

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