Day 6 - Deployment Preparation and Staging Environment Setup - Furniro

Overview:

I have successfully completed the deployment preparation and staging environment setup for my marketplace project. Below are the details of what I did

1. Hosting Platform Setup

- I selected Vercel as the hosting platform for its seamless integration with Next.js and ease of deployment.
- Repository Connected: I connected my GitHub repository to Vercel to enable automated deployments.
- Build Configuration: Configured the default build settings provided by Vercel. The build command (next build) and output directory (.next/) were automatically detected.

2. Environment Variable Configuration
- I created a .env file in the root of my project to store sensitive variables, including:
    - NEXT_PUBLIC_SANITY_PROJECT_ID
    - NEXT_PUBLIC_SANITY_DATASET
    - API_KEY
- These variables were securely added to the Vercel dashboard under the Environment Variables section to avoid exposing them in the codebase.
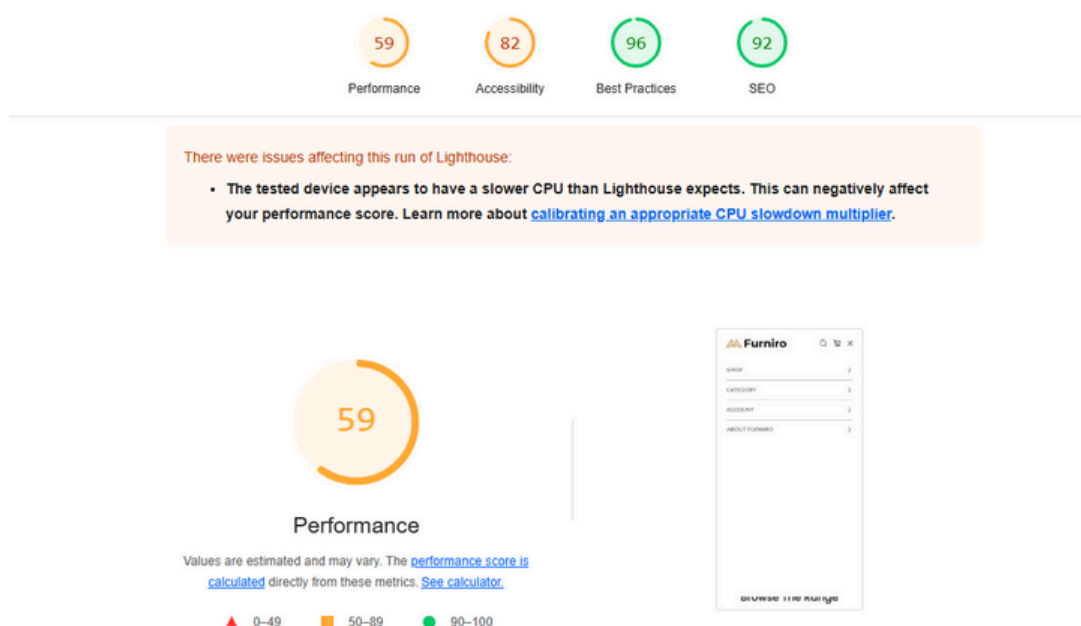
Staging Environment Testing

Testing Types
- Functional Testing: Verified critical features, including product listings, search functionality, and cart operations.
- Performance Testing: Analyzed application speed and responsiveness using Lighthouse and GTmetrix.
- Security Testing: Ensured secure API communications, validated input fields, and verified HTTPS usage.

Test Case Reporting Documented test cases in a structured CSV format:

	Test Cases ID	Test Case Description	Test Steps	Expected Result	Actual Result	Status	Severty Level	Assigned to	Remarks
1									
2	TC001	Validate Product listing page	Open Product page> verify	Product displayed correctly	Product displayed correctly	Passed	High	-	No issues found
3	TC002	Test Api Error handling	Disconect api> refresh page	Show fallback UI with error message	Show fallback UI with error message	Paased	High	-	Handle successfully
4	TC003	Check Cart functionality	Add product to cart > verify	Card updates with products	same as expected	Passed	High	-	works as expected
5	TC004	Ensure responsiveness on mobile	Resize browser window > Verify	100% responsive and adoptable	100% same as expected	Passed	High	-	Successful
6	TC005	Authentication	signup > create account > login	100% user can login signup, verifyemail	same as expected	Passed	High	-	Successful
7	TC006	Search products	search > result	show products on keywords and tags	products showing accordingly	Passed	Medium	-	works perfectly
8									
9									
10									
11									
12									
13									

Performance Testing:

I have test my website performance with Lighthouse, Here are some snap shots of my report:

There were issues affecting this run of Lighthouse:

- The tested device appears to have a slower CPU than Lighthouse expects. This can negatively affect your performance score. Learn more about calibrating an appropriate CPU slowdown multiplier.

Key Deliverables

- **Hosting Configuration**
  - Successfully linked GitHub repository and configured deployment settings on Vercel.
  - Deployed the application to a staging environment for thorough testing.

- **Environment Variable Management**
  - Ensured secure storage of sensitive keys and tokens in both .env files and hosting platform configurations.

- **Testing Documentation**
  - Provided comprehensive test case reporting covering functional, performance, and security aspects.
  - Uploaded performance analysis reports to the project repository.

- **Validated Deployment**
  - Confirmed the staging environment's readiness for production deployment with a fully functional and tested application.

Day 6 Checklist:

Deployment Preparation:
✔ Hosting platform setup completed (e.g., Vercel).
✔ Environment variables configured securely.

Staging Environment Testing:
✔ Functional testing completed and verified.
✔ Performance testing conducted using Lighthouse/GTmetrix.
✔ Security testing performed for input validation, HTTPS, and sensitive data handling.
✔ All test results documented.