Day 6 (*Deployment Preparation and Staging Environment Setup*) of E-commerce Marketplace Builder Hackathon

Project: Modern Haven Furniture Ecommerce Marketplace

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Introduction

This document details the successful completion of Day 6 tasks for the Modern Haven Furniture Marketplace project. The focus was on preparing the application for deployment by setting up a staging environment, configuring hosting platforms, managing environment variables, and conducting staging environment testing. All required tasks have been completed, ensuring the project is deployment-ready and optimized for a production-like environment.

Completed Tasks Overview

1. Deployment Strategy Planning

- Selected **Vercel** as the hosting platform for quick and efficient deployment.
- Linked the GitHub repository to Vercel for seamless integration and CI/CD setup.
- Configured build and deployment settings to ensure successful staging builds.

Deployment Link: *https://giaic-ecommerce-marketplace-hackathon.vercel.app*

Documentation Link: *https://github.com/ghufran29/Ecommerce-Marketplace-Builder-Hackathon/tree/main/Documentation*
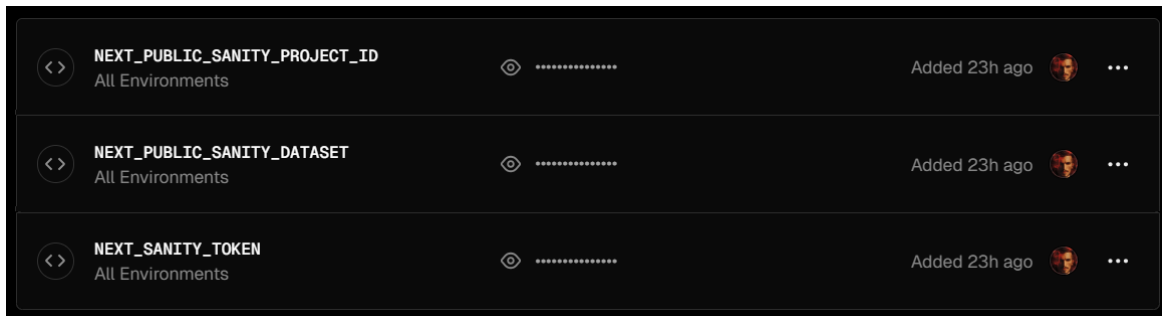
GitHub Repo Link: *https://github.com/ghufran29/Ecommerce-Marketplace-Builder-Hackathon*

2. Environment Variable Configuration

- Secured sensitive data, such as API keys and project configurations, using .env files.

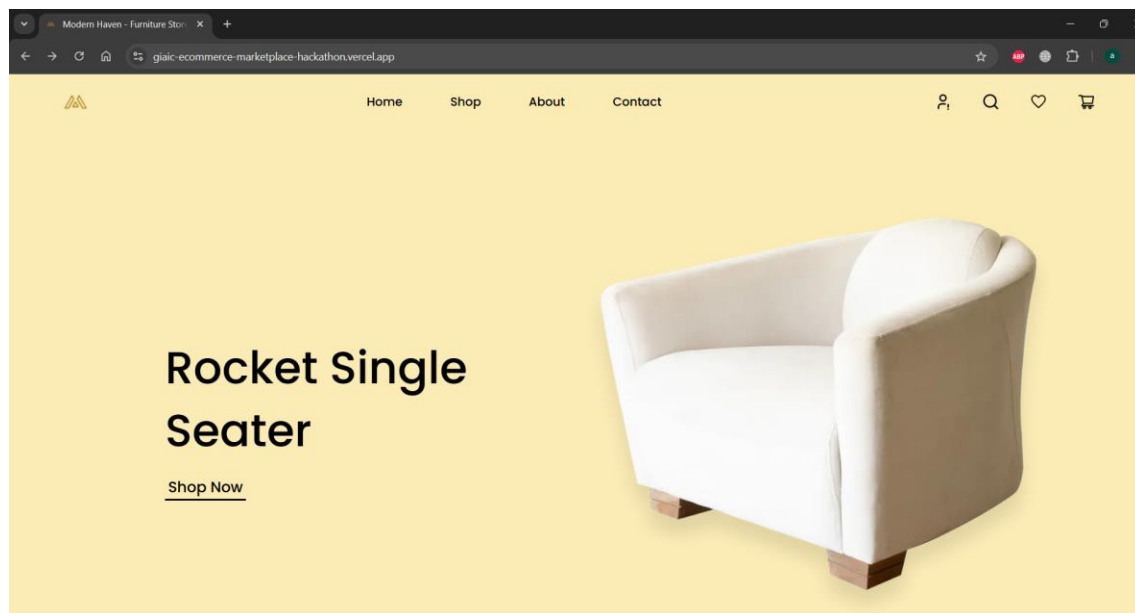- Uploaded environment variables to the Vercel dashboard under **Settings > Environment Variables**.

Screenshot: Vercel environment variable configuration screen.

3. Staging Environment Setup

- Deployed the application to a staging environment to simulate a production-like setup.
- Validated that the application loaded correctly, and all features functioned as expected.
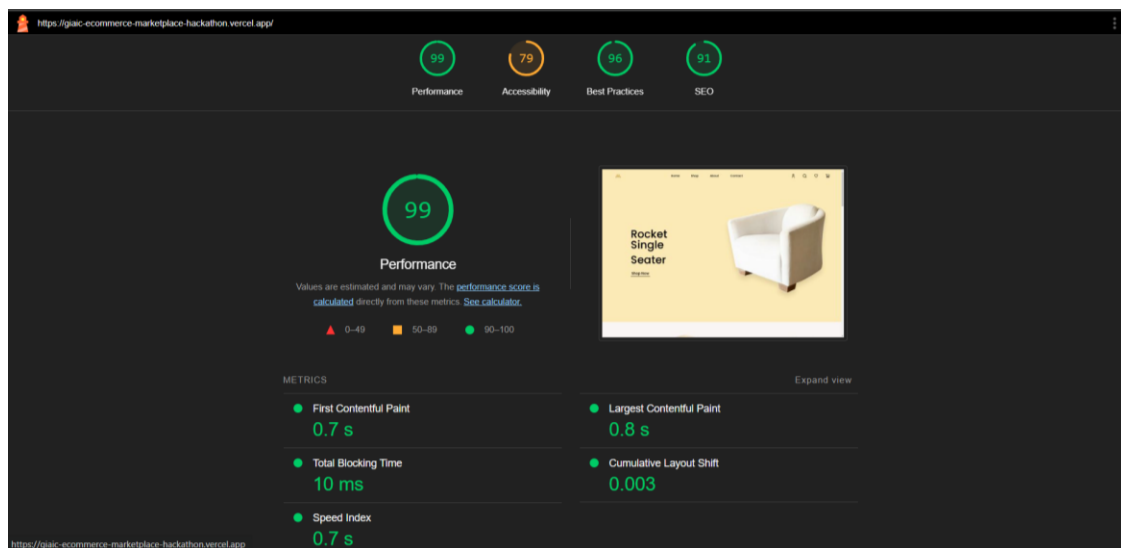
Screenshot: Staging environment homepage.

4. Staging Environment Testing

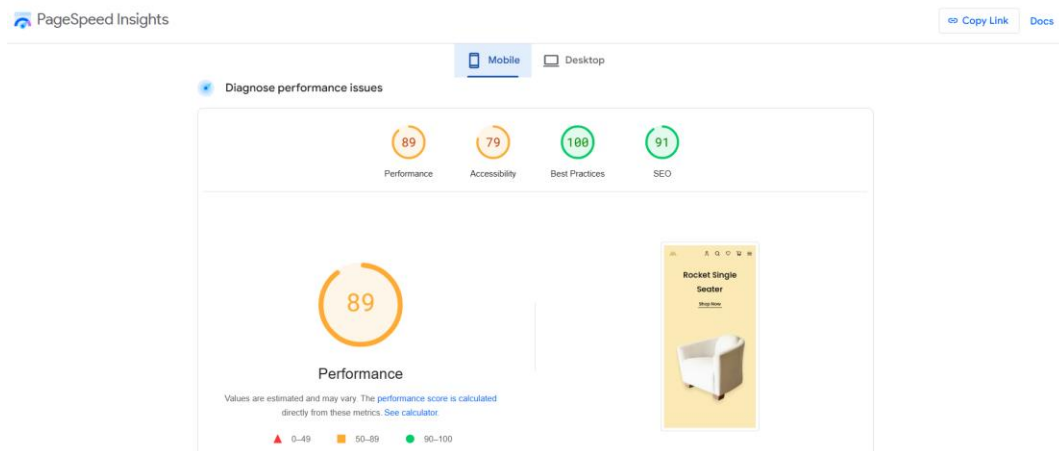- Conducted multiple types of testing to ensure application readiness:

- o **Functional Testing**:
  - ▪ Verified workflows, including product listings, cart operations, and search functionality.
  - ▪ Ensured navigation links and dynamic pages loaded without errors.
- o **Performance Testing**:
  - ▪ Used Lighthouse to analyze metrics such as load times and responsiveness.
  - ▪ Achieved a performance score of **99**, indicating excellent optimization.
- o **Responsiveness Testing**:
  - ▪ Ensured the layout adjusted seamlessly across devices (desktop, tablet, mobile).

Screenshot: Lighthouse performance report.

Screenshot: Mobile view showing responsive layout.

5. Documentation Updates

- Created a structured and professional README.md file summarizing all project activities and deployment steps.

- Organized all project files in a clear folder hierarchy within the GitHub repository:

    - documents/: Contains all reports, including testing and performance results.

    - src/: Includes source code and components.

    - public/: Hosts static assets like images.

- Maintained consistent naming conventions and provided detailed descriptions for each folder.

Screenshot: Organized folder structure.

Best Practices Followed

1. **Secure Deployment**:

   o Ensured all sensitive data was securely managed using environment variables.

2. **Performance Optimization**:

   o Implemented lazy loading for images and minimized unused JavaScript.

3. **Modular Design**:

   o Maintained a clean codebase with reusable components and modular functionality.

4. **Comprehensive Testing**:

   o Performed extensive testing to address potential issues before deployment.

5. **Documentation**:

   o Provided detailed deployment instructions and test case reports for future reference.

Conclusion

All Day 6 tasks have been successfully completed, ensuring that the Modern Haven Furniture Marketplace is ready for deployment. The application has been thoroughly tested in a staging environment, with all functionalities verified and optimized for production.