Deployment Preparation and Staging Environment Setup

Overview

This document details the successful completion of "Day 6 - Deployment Preparation and Staging Environment Setup." The objective of this stage was to prepare the project for deployment by setting up a staging environment, configuring a hosting platform, ensuring functionality through rigorous testing, and documenting all relevant processes.

Completed Tasks

Hosting Platform Setup

✅ Selected and configured Vercel as the hosting platform for staging.

✅ Linked the GitHub repository to the hosting platform.

✅ Configured build and deployment settings to ensure smooth integration.

✅ Verified successful connection between GitHub and the hosting platform.

Environment Variable Configuration

✅ Created a .env file containing API keys and sensitive credentials.

✅ Ensured secure handling of environment variables within the hosting platform.

✅ Verified environment variables to confirm seamless integration.

✅ Checked API connectivity and security compliance.

Example `.env` File:

```
NEXT_PUBLIC_SANITY_PROJECT_ID=your_project_id
NEXT_PUBLIC_SANITY_DATASET=production
API_KEY=your_api_key
```

Staging Environment Deployment

✅ Successfully deployed the project to a staging environment using Vercel.

✅ Ensured the build process completed without errors or warnings.

✅ Verified the availability of all pages and components in the staging environment.

✓ Ensured seamless backend interaction, including API requests and database connectivity.

Staging Environment Testing

Functional Testing:

✓ Tested all core features, including navigation, authentication, and user interactions.

✓ Verified CRUD (Create, Read, Update, Delete) operations.

✓ Conducted thorough cross-browser testing to ensure compatibility.

✓ Validated responsive design across multiple devices.

Performance Testing:

✓ Used Lighthouse and GTmetrix to analyze page load speed and responsiveness.

✓ Optimized images and assets to improve performance.

✓ Reduced unnecessary re-renders to enhance efficiency.

✓ Verified caching strategies for improved load times.

Security Testing:

✅ Ensured proper handling of user input to prevent security vulnerabilities.

✅ Verified HTTPS implementation for secure data transmission.

✅ Checked for proper authentication and authorization mechanisms.

✅ Conducted API security checks to avoid exposure of sensitive data.

Submission Details

✅ **Staging Environment Link:**

https://figma-website-shop-co.vercel.app/

✅ **GitHub Repository Link:**

https://github.com/dev-hamza-h/figma-e-commerce-website.git

✅ **Test Case Report Link:**

https://github.com/dev-hamza-h/Test-Case-Report.git

✅ **Day1 to Day6 Documentation Link:**

https://github.com/dev-hamza-h/hackathon-documentation.git

Conclusion

The completion of this deployment preparation and staging environment setup ensures that the project is now fully functional, optimized, and ready for the next stages, whether it be final deployment or further improvements. The testing phase confirmed the stability, security, and performance of the application. By implementing best practices for hosting, environment configuration, and testing, this deployment is positioned for a smooth transition into production. Any further enhancements will be based on feedback and ongoing monitoring of performance and security.

This report serves as official documentation of my completed tasks and achievements during Day 6. The project is now fully staged, tested, and documented, making it ready for further improvements or final deployment. Please review and provide feedback if necessary.