

Day 6 - Deployment and Staging

Environment Variables Report

Executive Summary

This report details the deployment process and staging environment setup for the API. It includes information on the hosting platform, step-by-step deployment procedures, secure management of environment variables, and website performance evaluation.

Hosting Platform

The API is hosted on **Vercel**, chosen for its key advantages, including:

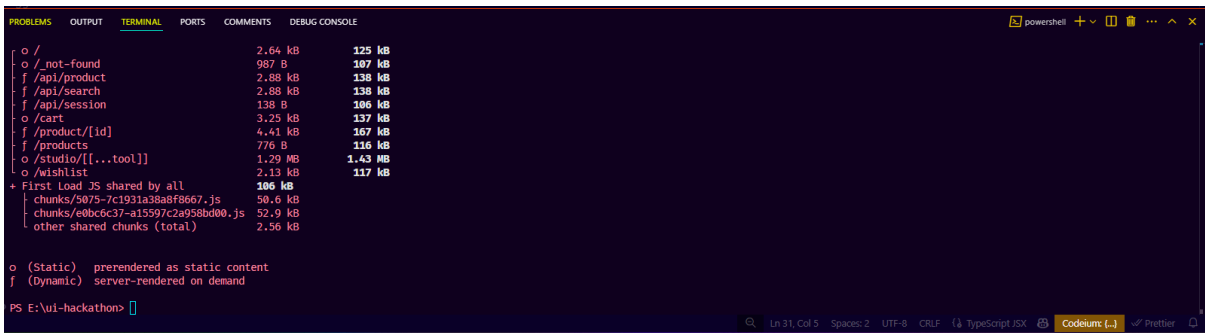
- **Global CDN:** Enhances content delivery speed worldwide.
- **Image Optimization:** Automatically optimizes images for improved performance.
- **Free Tier Availability:** Offers cost-effective deployment solutions for small to medium projects.

Deployment Workflow

1. Local Build and Error Resolution

Before deployment, the following steps were performed to ensure error-free deployment:

1. Ran the `npm run build` command in VS Code to build the project locally.
2. Identified and resolved several build errors, ensuring a clean build process.
3. Verified that the application functioned correctly in the local environment.



2. Setting Up a Vercel Project

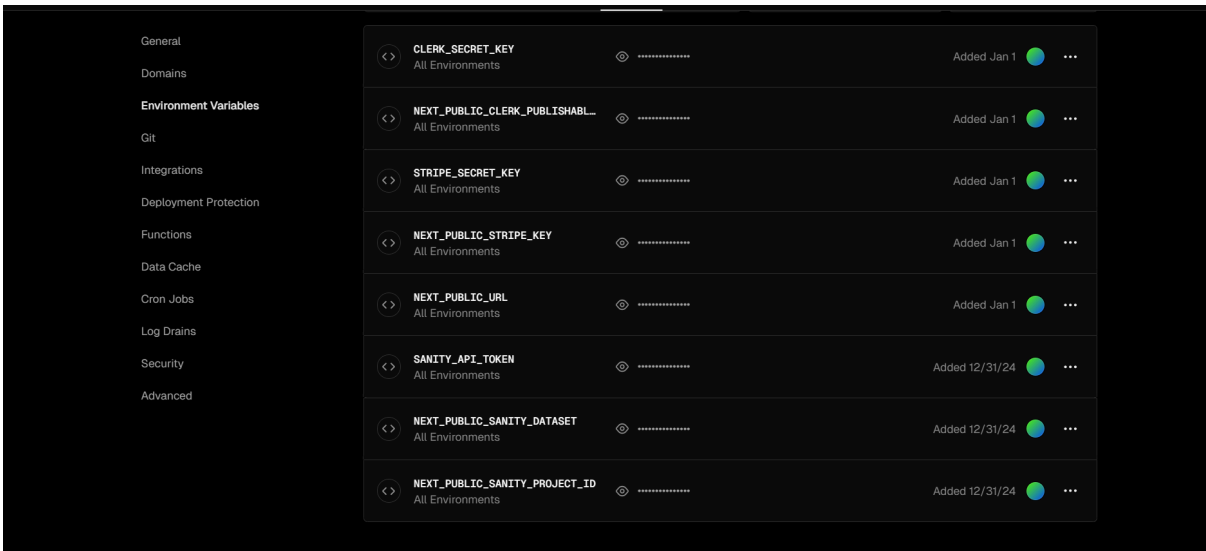
The deployment process involved the following steps:

- Vercel Account Setup:** Logged into the Vercel platform.
- Repository Integration:** Connected the GitHub repository containing the API codebase.
- Project Configuration:** Defined build settings and confirmed framework detection.
- Deployment Execution:** Initiated deployment, reviewed build logs, and validated the successful launch.

3. Secure Configuration of Environment Variables

Sensitive data was securely managed by configuring environment variables in the Vercel dashboard:

- Accessed the **Environment Variables** section under project settings.
- Added essential variables API keys.



Website Performance Evaluation

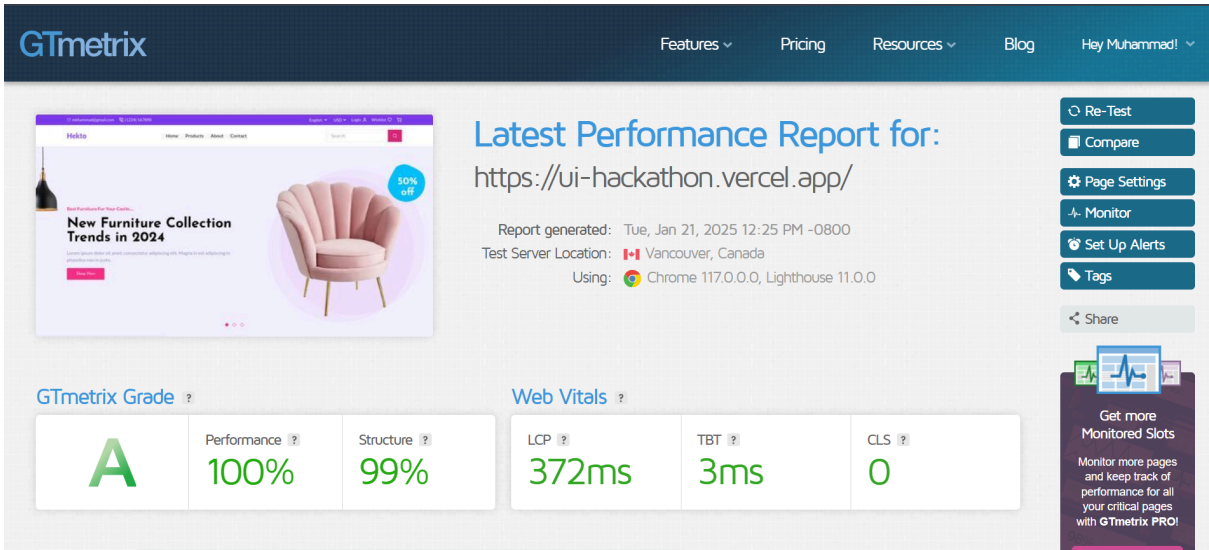
The deployed website underwent performance testing via **GTmetrix** to ensure optimal functionality and user experience.

Key Metrics and Insights

- Page Load Time:** Demonstrated exceptional speed and efficiency.
- Optimization Score:** Achieved high rankings, reflecting robust caching and compression practices.
- Actionable Insights:** Identified potential areas for performance enhancement.

Sample GTmetrix Report

The performance evaluation is summarized in the GTmetrix report below:



Conclusion

The deployment process was successfully completed on Vercel, with secure environment variable management and high-performance validation through GTmetrix. The results align with industry best practices, ensuring a reliable and efficient application.

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