

# Day 6 - Deployment Preparation and Staging Environment Setup

## Project Overview

This report documents the deployment preparation and staging environment setup for the project. The primary focus was on ensuring a seamless deployment process, configuring environment variables securely, and validating the application's performance in a staging environment. Screenshots and technical steps are included to illustrate the process and outcomes.

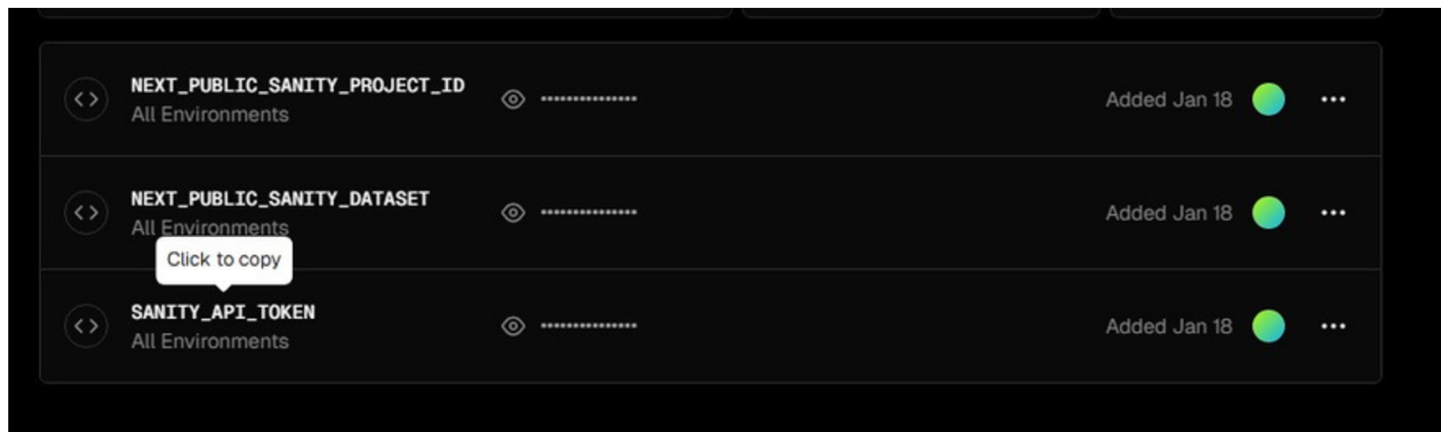
## 1. Deployment Strategy Planning

For deployment, I have chosen Vercel as the hosting platform. Vercel offers numerous benefits that make it an ideal choice for modern web applications, such as:

- **Ease of Use:** Vercel simplifies deployment with its intuitive interface and seamless integration with GitHub.
- **Optimized Performance:** It provides automatic optimizations for faster page loads.
- **Global CDN:** Ensures that content is delivered quickly to users around the world.
- **Automatic Builds:** Automatically triggers builds and deployments with every code push.
- **Custom Domains:** Supports easy setup for custom domain names.

## 2. Environment Variable Configuration

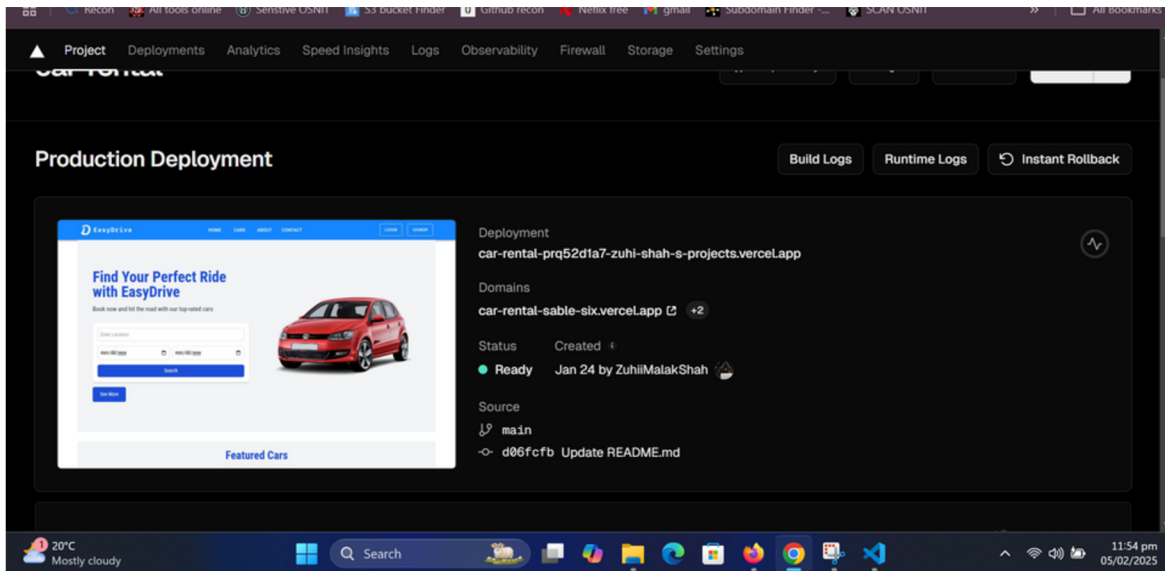
To ensure secure deployment, I configured the necessary environment variables directly in the Vercel platform. Environment variables store sensitive information such as API keys and database URLs, which are required for the application to function correctly without exposing them in the source code.



# 3. Staging Environment Setup

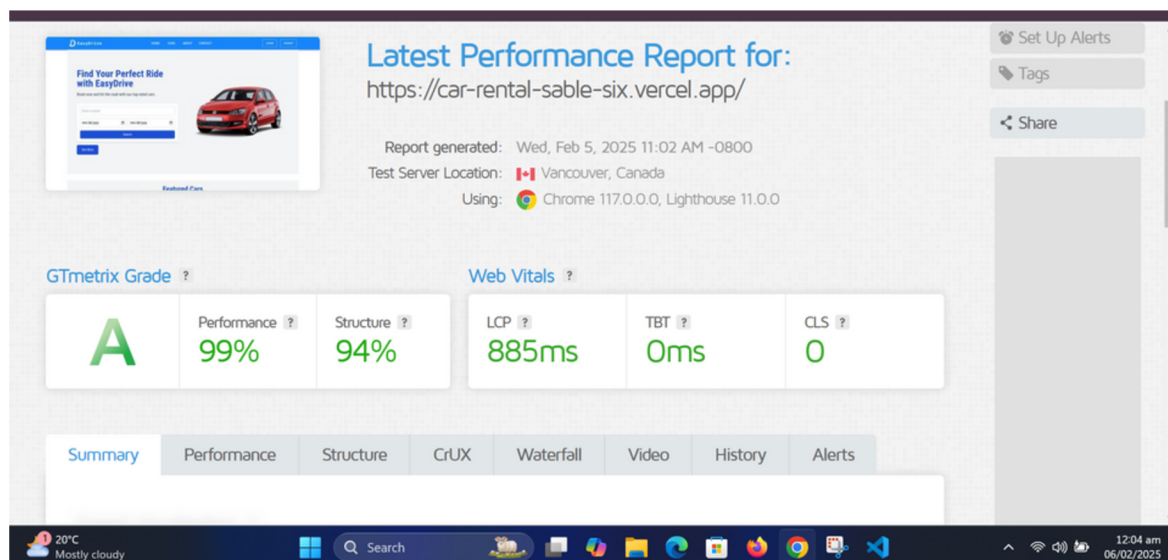
The staging environment was set up to validate the deployment process. During this phase, I ensured that:

- The deployment build completed successfully without any errors.
- The application loaded correctly in the browser, matching the intended design and functionality.



# 4. Staging Environment Testing

To evaluate the performance of the deployed application, I used GTmetrix for testing. This tool provides insights into page load times, performance scores, and potential areas of optimization. The test confirmed that the application meets performance expectations.



Test Case ID	Test Case Description	Test Steps	Expected Result	Actual result	Status
TC001	validate product listing page	open car listing page > verify cars	Cars displayed	Cars displayed	Passed
TC002	test api error handling	Disconnect api > refresh page	Show fallback UI with error message	error message shown	passed
TC003	ensure responsiveness on mobile	resize browser window > check layout	layout adjust properly to screen size	responsive layout working as instead	Passed
TC004	validate payment gateway	initiatepayment > verify transaction	still working on it	working on it	failed
TC005	test security on login page	enter invalid credentials > submit	still working on it	working on it	failed

# Checklist for Day 6:

## Deployment Preparation:

- ✓

## Staging Environment Testing:

- ✓

## Documentation:

- ✓

## Form Submission:

- ✓

## Final Review:

- ✓

# Conclusion:

Day 6 focused on preparing for deployment and ensuring the application performs as expected in a staging environment. This phase is crucial to delivering a reliable and e cient final product. The screenshots attached further illustrate the successful execution of each step in the deployment process.