

# Deployment Preparation and Staging Environment Setup - Nike Store

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***Project:** Deployment Preparation and Staging Environment Setup*

## Overview

Day 6 focused on **deployment preparation** and setting up a **staging environment** for the **Nike Store** marketplace. The goal was to ensure the application is ready for production by testing it in a production-like environment, configuring hosting platforms, and organizing project files for deployment. This report summarizes the steps taken, challenges faced, and outcomes achieved.

## Key Areas of Focus

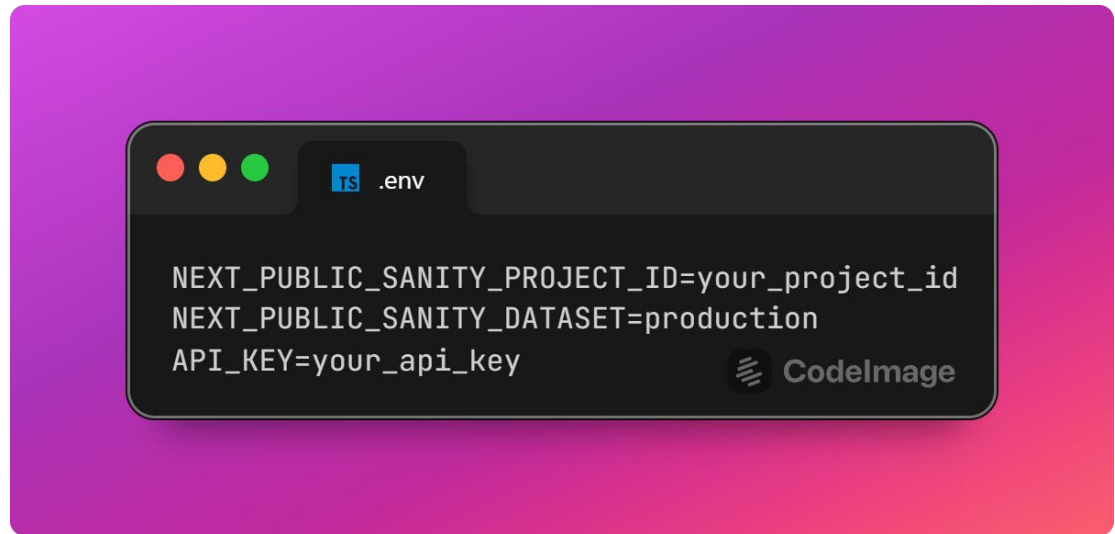
### 1. Deployment Strategy Planning

- **Objective:** Choose a hosting platform and finalize the deployment strategy.
- **Steps Taken:**
  - Selected **Vercel** as the hosting platform for its ease of use and seamless integration with Next.js.
  - Connected the **GitHub repository** to Vercel for automated deployments.
  - Configured build settings and added necessary scripts for deployment.

### 2. Environment Variable Configuration

- **Objective:** Securely configure environment variables for deployment.
- **Steps Taken:**
  - Created a .env file to store sensitive variables like API keys and tokens.
  - Uploaded environment variables to Vercel's dashboard for secure deployment.

- Example of .env file:



### 3. Staging Environment Setup

- **Objective:** Deploy the application to a staging environment for testing.
- **Steps Taken:**
  - Deployed the application to Vercel's staging environment.
  - Validated the build process and ensured the site loaded correctly.
  - Verified basic functionality, such as product listing, search, and cart operations.

### 4. Staging Environment Testing

- **Objective:** Conduct thorough testing in the staging environment.
- **Steps Taken:**
  - **Functional Testing:** Verified all features, including product listing, search, cart, and checkout workflows.
  - **Performance Testing:** Used **Lighthouse** to analyze speed, responsiveness, and load times.
  - **Security Testing:** Validated input fields, HTTPS usage, and secure API communications.
  - **Test Case Reporting:** Documented all test cases in a **CSV file** with details like Test Case ID, Description, Steps, Expected Result, Actual Result, Status, and Remarks.

### 5. Documentation Updates

- **Objective:** Organize project files and create comprehensive documentation.

- **Steps Taken:**
  - Created a **README.md** file summarizing all project activities, deployment steps, and test results.
  - Organized all project files into a structured GitHub repository with clear folder hierarchies (e.g., documents/, src/, public/).
  - Included all reports, test cases, and deployment instructions in the repository.

## Challenges Faced

1. **Build Failures:**
  - a. Encountered build failures due to missing environment variables.
  - b. Resolved by ensuring all required variables were correctly configured in Vercel.
2. **Performance Bottlenecks:**
  - a. Identified slow load times during initial performance testing.
  - b. Addressed by optimizing images, minimizing CSS/JavaScript, and implementing **lazy loading**.
3. **Cross-Browser Compatibility:**
  - a. Ensured consistent rendering and functionality across different browsers.
  - b. Resolved by using tools like **BrowserStack** and manually testing on multiple devices.

## Outcomes of Day 6

- Successfully deployed the **Nike Store** to a **staging environment** on Vercel.
- Securely configured **environment variables** for deployment.
- Conducted thorough **staging environment testing** and documented results in a **CSV file**.
- Organized all project files and created a **comprehensive README.md** file.
- Prepared the marketplace for **production deployment**.

## Conclusion

Day 6 was a critical step in preparing the **Nike Store** marketplace for production. By setting up a **staging environment**, conducting thorough testing, and organizing project files, I ensured the application is **ready for deployment**. The work completed today lays the foundation for a **scalable and reliable e-commerce platform**.

Check Preview here [<https://nike-app-df.vercel.app/>]

