

Day 6: Staging Environment Setup & Deployment

1. Staging Environment Setup

Task:

Deploy the application to a staging environment to test it in a production-like setting.

What I Did:

Deployed my application using Vercel to ensure smooth functionality before launching it to production.

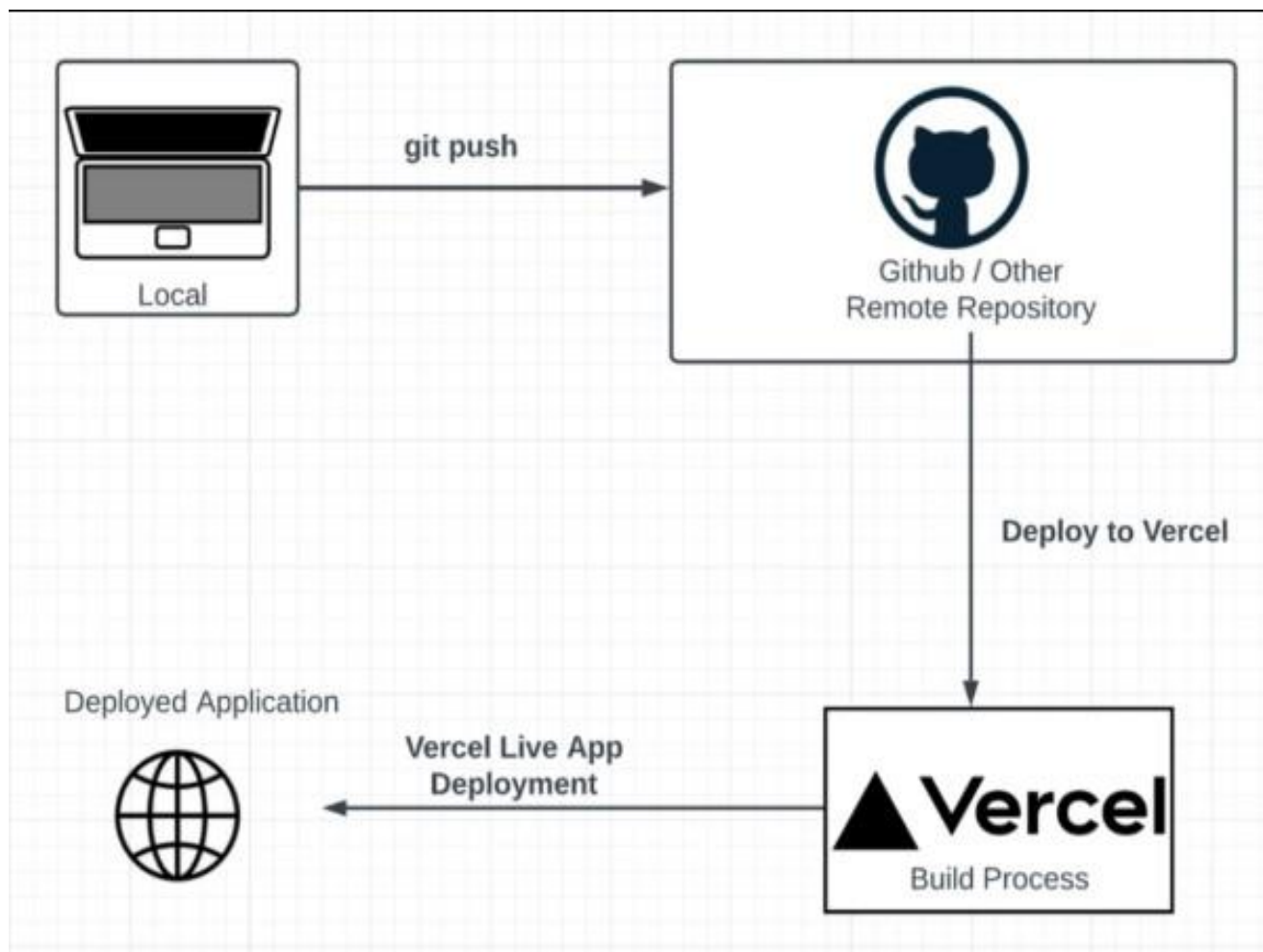
How I Did It:

- Linked my GitHub repository to Vercel for seamless integration.
- Configured build settings and deployment options.
- Successfully deployed the app and tested its responsiveness and performance.

Why I Chose Vercel:

Vercel is a powerful deployment platform specifically designed for front-end applications, offering an easy-to-use interface and seamless CI/CD pipeline. It provides:

- **Automatic deployments** on every push to GitHub.
 - **Fast global CDN** for improved performance.
 - **Custom domain support** with HTTPS and SSL.
 - **Integrated environment variable management** for security.
 - **Built-in analytics** to monitor performance and user interactions.
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2. Configuring Environment Variables

Task:

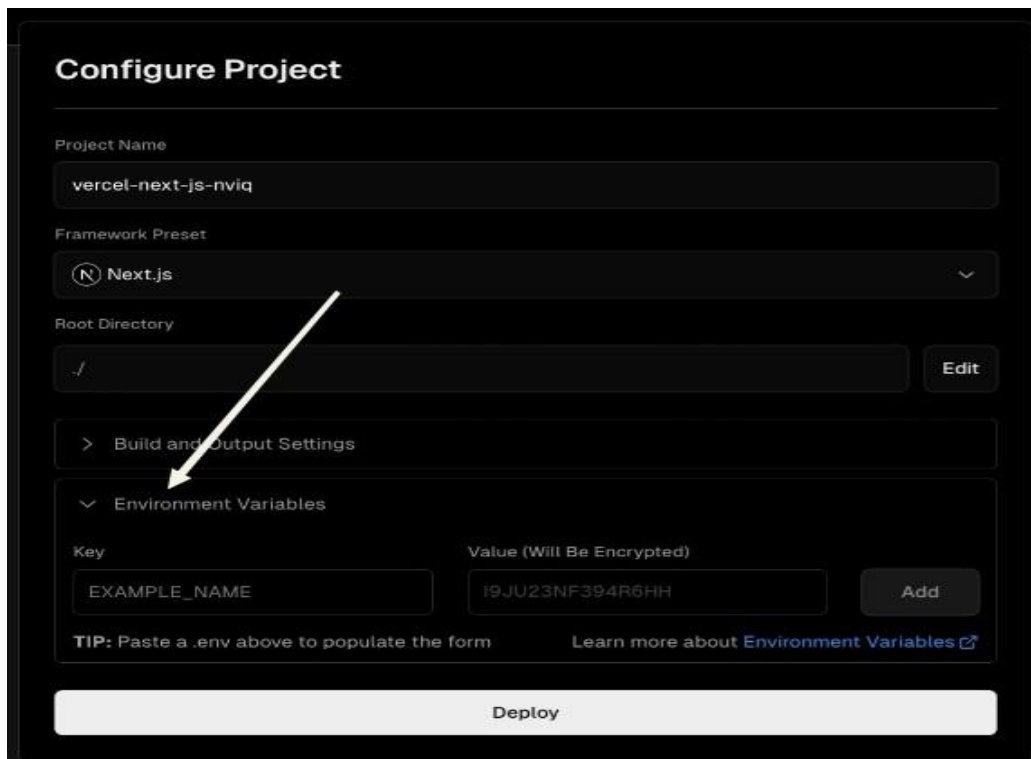
Secure sensitive data using environment variables.

What I Did:

Configured API keys and database credentials securely to avoid exposing sensitive information.

How I Did It:

- Created a `.env` file locally to manage environment variables.
- Uploaded these variables securely on Vercel using the dashboard.
- Tested the application to ensure that the environment variables are working correctly in the deployed version.



The screenshot displays the 'Configure Project' interface in the Vercel dashboard. It includes fields for 'Project Name' (set to 'vercel-next-js-nvix'), 'Framework Preset' (set to 'Next.js'), and 'Root Directory' (set to '/'). A white arrow points to the 'Environment Variables' section, which is expanded. This section contains a table with columns 'Key' and 'Value (Will Be Encrypted)'. The 'Key' column has a text input with 'EXAMPLE_NAME', and the 'Value' column has a text input with 'I9JU23NF394R6HH'. An 'Add' button is located to the right of the 'Value' input. Below the table, there is a tip: 'TIP: Paste a .env above to populate the form' and a link 'Learn more about Environment Variables'. At the bottom of the form is a large 'Deploy' button.

Key	Value (Will Be Encrypted)
EXAMPLE_NAME	I9JU23NF394R6HH

3. Testing (Performance & Security)

Task:

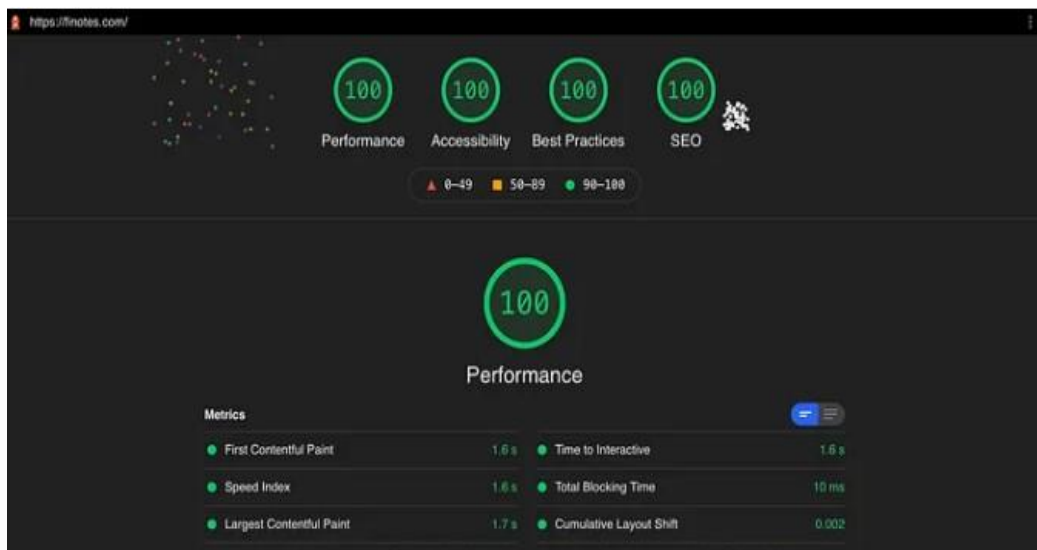
Conduct tests to ensure app functionality, performance, and security.

What I Did:

Ran performance and security tests using different tools to optimize my application.

How I Did It:

- Used **Lighthouse** to analyze app performance, accessibility, and SEO.
- Tested API requests and responses using **Postman**.
- Checked for potential vulnerabilities and security issues.
- Ensured smooth user experience across different devices.



4. README.md Creation

Task:

Create a professional `README.md` file for the project.

What I Did:

Documented the entire process in a structured and well-organized README file.

How I Did It:

- Included **project overview, setup instructions, and deployment steps.**
- Added **guidelines for testing and environment configuration.**
- Documented **performance testing results** to highlight improvements.

Key Takeaways

✓ Successfully deployed the app to a staging environment on **Vercel**. ✓ Configured environment variables securely for safe deployment. ✓ Ran extensive **performance and security tests** to optimize the app. ✓ Created a **professional README.md** to document the entire development process.

