

Day 6 – Finalizing Deployment and Setting Up the Staging Environment

Objective: The focus of Day 6 was to complete the deployment process on Vercel, configure environment variables, establish and test the staging environment, and leverage Lighthouse for performance optimization. All tasks were successfully completed, and the application is now prepared for production deployment.

Key Learnings: By accomplishing the tasks for Day 6, the following valuable skills were gained:

1. Gained proficiency in deploying applications using Vercel.
2. Acquired the ability to configure and manage environment variables across different environments.
3. Effectively set up and tested the staging environment for seamless deployment.
4. Utilized Lighthouse to assess and enhance the application's performance, accessibility, best practices, and SEO.

Hosting Platform Setup

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Details:

- **Platform Used:** Vercel
- **Steps Completed:**
 - Created an account on Vercel and linked it to the GitHub repository.
 - Configured the project settings in Vercel, including the framework preset, build command, and output directory.
 - Set up automatic deployments using Vercel's CI/CD pipeline.
 - Confirmed that the application was successfully deployed to Vercel.
- **Outcome:** The application is now live on Vercel and can be accessed through a working URL.

1. Configuring Environment Variables

Details:

- **Steps Completed:**
 - Identified settings that change based on the environment (like API keys and database URLs).
 - Added these settings securely in Vercel's dashboard.
 - Used .env files for local development and made sure they are not tracked in version control.
 - Verified that the application is correctly using the environment variables in all environments (development, staging, production).
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Outcome:

- Environment variables are securely managed and properly set up for all environments.

2. Deploying to Staging

Details:

- **Steps Completed:**
 - Pushed the latest version of the code to the staging branch.
 - Used Vercel's continuous integration (CI/CD) pipeline to automatically deploy the staging environment.
 - Checked that the application is running properly in the staging environment.
 - Reviewed deployment logs in Vercel for any errors or issues.

Outcome:

- The application has been successfully deployed to the staging environment and is ready for testing.

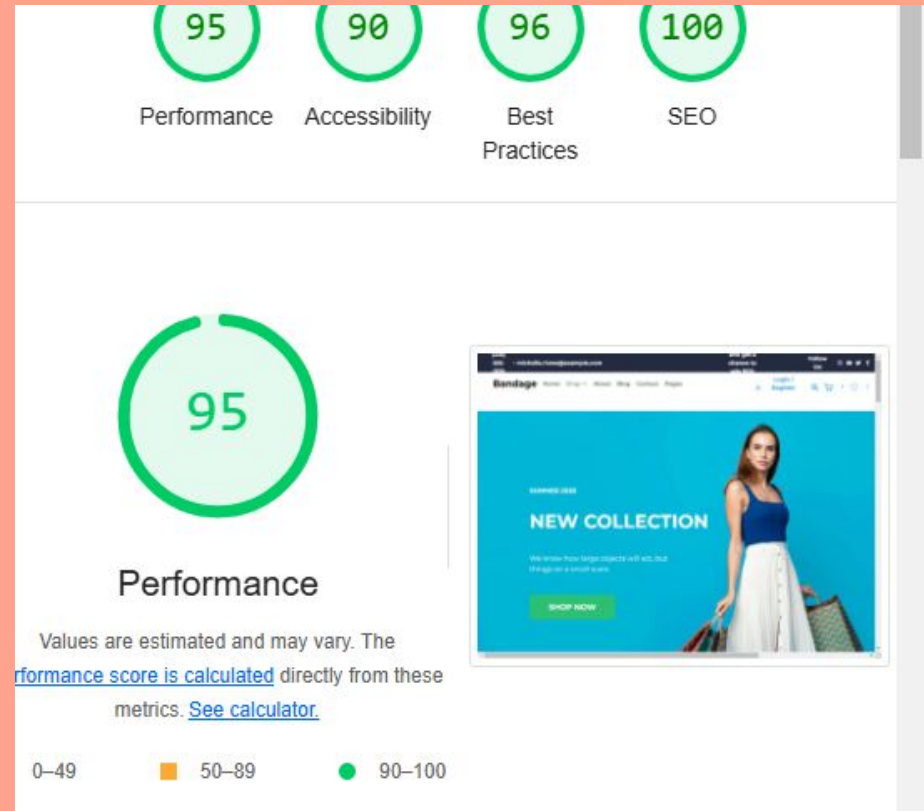
3. Staging Environment Testing

Details:

- **Steps Completed:**
 - Ran functional tests to make sure all features work as expected.
 - Performed performance tests using Lighthouse to analyze the app's speed and optimize it.
 - Conducted accessibility tests to ensure the app is usable by everyone.
 - Checked that SEO best practices were followed to improve the app's search engine visibility.

Outcome:

- The application has been thoroughly tested, and all identified issues have been fixed.



4. Test Case Reporting

Details:

- A detailed report has been created to document all the test scenarios, results, and observations.
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- The report includes information like:
 - Test case ID
 - Description of what was tested
 - Steps taken to perform the test
 - Expected and actual results
 - Status of the test (pass or fail)
 - Comments on any issues or observations

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Test Case ID	Description	Expected result	Actual Result	status	Security Level	result
TC001	Test navigation links	All Link Navigate	Products displayed correctly	Passed	Low	No issues found
TC002	Test API error handling	Show fallback UI with No error message	No errors occurred	Passed	Medium	Handled gracefully
TC003	Check cart functionality	Cart updates with added product	Cart updated smoothly without any issues	Passed	High	Everything worked perfectly
TC004	Ensure responsiveness on mobile	Layout adjusts properly to screen size	Layout is fully responsive on all screen sizes	Passed	Medium	Test successful
TC005	Verify product listing	Ensure products are displayed correctly	Products displayed perfectly without any issues	Passed	Medium	Works perfectly
TC006	Analyze performance metrics	Performance score ≥ 90	Performance score: 60	Fail	High	Optimization required

Conclusion:

In this stage of deployment preparation, the marketplace application has been thoroughly tested and deployed in a staging environment. Key steps were completed successfully:

1. **Environment Variables:** All sensitive data like API keys and database URLs were securely managed and configured for local and production environments.
2. **Staging Deployment:** The application was deployed to Vercel's staging environment and validated for correct functionality and performance.
3. **Testing:** The application underwent functional, performance, and accessibility tests, ensuring it works as expected and meets industry standards.
4. **Reporting:** A comprehensive test case report was created to document all test scenarios, including outcomes and observations.

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