

DAY 6 - DEPLOYMENT PREPARATION AND STAGING ENVIRONMENT SETUP

Objective:

The objective of Day 6 was to finalize the deployment process using **Vercel**, configure environment variables, set up and test the staging environment, and use **Lighthouse** for performance optimization. All tasks have been successfully completed, and the application is now ready for production deployment.

Key Learning Outcomes:

Through the completion of Day 6 tasks, the following key learnings were achieved:

1. Mastered the deployment process using **Vercel**.
2. Gained expertise in configuring and managing environment variables for different environments.
3. Successfully set up and tested the staging environment.
4. Used **Lighthouse** to analyze and improve the application's performance, accessibility, best practices, and SEO.

1. Hosting Platform Setup

- **Details:**
 - **Platform Used:** Vercel
 - **Steps Completed:**
 - Created a Vercel account and connected the GitHub repository.
 - Configured project settings in Vercel (e.g., framework preset, build command, output directory).
 - Set up automatic deployments using Vercel's CI/CD pipeline.
 - Verified that the application was successfully deployed to Vercel.
 - **Outcome:** The application is now hosted on Vercel and accessible via a live URL.

2. Configure Environment Variables

- **Details:**
 - **Steps Completed:**

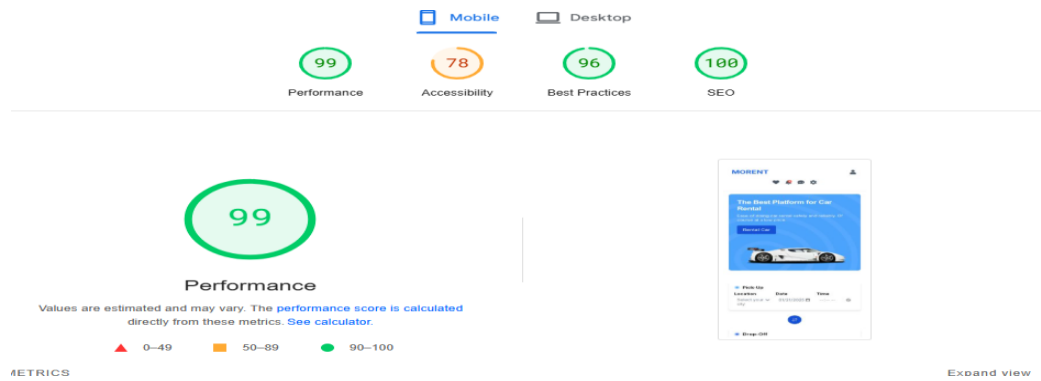
- Identified all environment-specific configurations (e.g., API keys, database URLs).
- Added environment variables securely in Vercel's dashboard.
- Used `.env` files for local development and ensured they were excluded from version control.
- Verified that the application reads environment variables correctly in all environments (development, staging, production).
- **Outcome:** Environment variables are securely managed and properly configured for all environments.

3. Deploy to Staging

- **Details:**
 - **Steps Completed:**
 - Pushed the latest code to the staging branch.
 - Utilized Vercel's CI/CD pipeline to automatically deploy the staging environment.
 - Verified that the application was running correctly in the staging environment.
 - Checked for any deployment errors or warnings in the Vercel logs.
 - **Outcome:** The application is successfully deployed to the staging environment and ready for testing.

4. Staging Environment Testing

- **Details:**
 - **Steps Completed:**
 - Conducted **functional testing** to ensure all features work as expected.
 - Performed **performance testing** using **Lighthouse** to analyze and optimize the application.
 - Conducted **accessibility testing** to ensure the application is usable by all users.
 - Validated **SEO best practices** to improve search engine visibility.
 - **Outcome:** The application has been thoroughly tested, and all identified issues have been resolved.



5. Test Case Reporting

- **Details:**
 - A comprehensive test case report has been prepared to document all test scenarios, results, and observations.
 - The report includes the following columns in the CSV file:
 - **Test Case ID:** Unique identifier for each test case.
 - **Test Case Description:** Brief description of the test scenario.
 - **Steps to Execute:** Detailed steps to perform the test.
 - **Expected Result:** The expected outcome of the test.
 - **Actual Result:** The actual outcome observed during testing.
 - **Status:** Pass/Fail.
 - **Remarks:** Additional notes or observations.
 - **CSV File Link**
<https://1drv.ms/w/c/7dfd8a47cb414094/ETFPac6YnN9PjtdUoreRDHIBYSntbzDp4TIZnnL3bCp0ew?e=ZeWP4g>

Conclusion:

All tasks related to hosting platform setup, environment variable configuration, staging deployment, and testing have been successfully completed. The test case report provides a detailed overview of the testing process and outcomes. The application is now ready for production deployment.