Day 6: Deployment to Staging Environment with Vercel

Objective

The goal for Day 6 is to deploy the marketplace application to a staging environment using **Vercel**. This involves configuring hosting settings, managing environment variables securely, and ensuring the application performs seamlessly in a production-like environment. All deployment activities and test outcomes are meticulously documented for review and future reference.

Why Vercel for Hosting?

Vercel was chosen as the hosting platform for its exceptional features:

- **Intuitive Interface**: Offers a user-friendly experience, simplifying the deployment process.
- **Seamless GitHub Integration**: Directly connects to GitHub repositories for effortless workflow management.
- **Automatic Deployments**: Triggers redeployment automatically with every code push to GitHub, ensuring the staging environment is always up-to-date.

Steps to Deploy the Marketplace Application to Staging

1. **Login to Vercel** o Accessed my Vercel account and navigated to the **Vercel Dashboard**.
2. **Add a New Project** o Clicked on **Add New Project** and selected the marketplace hackathon project repository.
3. **Configure Environment Variables** o Properly set up all required environment variables under the project settings to ensure secure and smooth operation of the application.
4. **Deploy to Staging** o Deployed the application to a **staging environment**, allowing for comprehensive testing in a near-production setting.
5. **Validation and Testing** o Confirmed the deployment build completed successfully.
   - o Validated the site loads correctly without any errors, ensuring all functionalities work as expected in the staging environment.

Deployment link: https://sofa-new.vercel.app/

Staging Environment Testing: Comprehensive Analysis and Validation

To ensure the marketplace application is production-ready, rigorous testing was conducted in the **staging environment**. The process involved both functional and performance testing to evaluate real-world usability and optimize overall application performance.

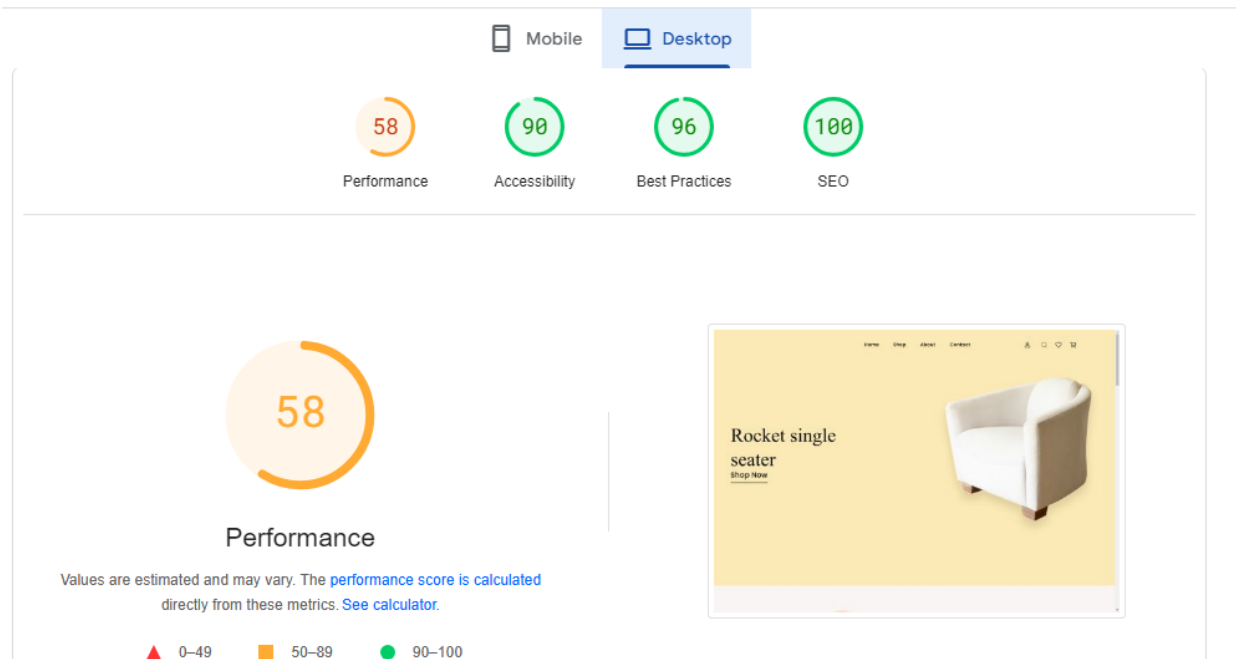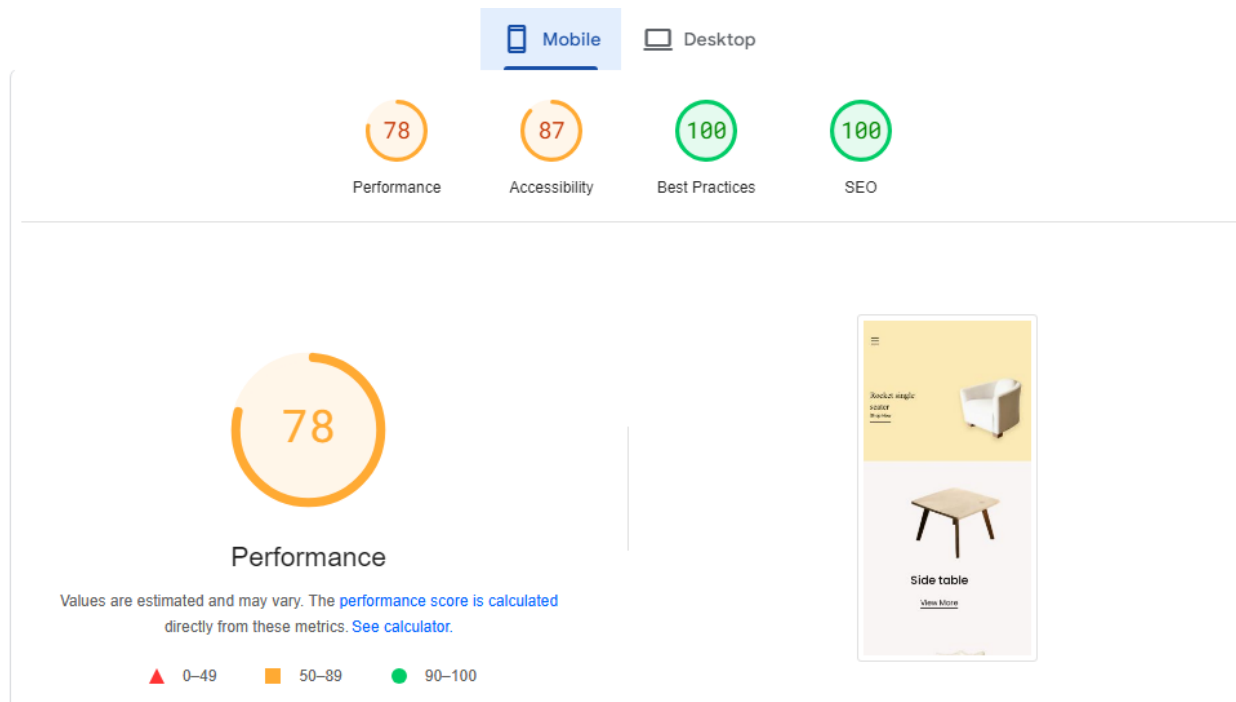## 1. Functional Testing: Simulating Real-World Scenarios

A thorough functional testing strategy was implemented to replicate user interactions and validate seamless functionality:

- **Browsing Products**: Verified product listings load accurately and filter/sort options work as expected.
- **Adding Items to the Cart**: Ensured the cart functionality responds in real-time, updates quantities correctly, and reflects accurate totals.
- **Checkout Process**: Simulated the checkout flow, confirming secure and error-free transactions while testing multiple payment methods.
- **User Experience Validation**: Navigated through the site as a user, ensuring intuitive design and smooth navigation across pages.

2. Performance Testing: Speed and Responsiveness

Performance testing was conducted using **PageSpeed Insights** to evaluate and optimize the application's user experience.

- **Page Load Time**:
  - Assessed page loading speed under different network conditions.
  - Optimized resources to enhance load times and reduce latency.
- **Cumulative Layout Shifts (CLS)**:
  - Checked visual stability by addressing unexpected layout shifts. o Ensured smooth scrolling and uninterrupted interactions.

Mobile | Desktop

78
Performance

87
Accessibility

100
Best Practices

100
SEO

78

Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0–49 ■ 50–89 ● 90–100

Mobile | Desktop

58
Performance

90
Accessibility

96
Best Practices

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SEO

58

Performance

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Conclusion: From Concept to Completion

Over the past six days, the **Sofa Marketplace** project has transformed from an idea into a fully functional application, ready for live deployment. This journey involved crafting a seamless user experience, integrating advanced features, and ensuring the platform is robust and production-ready. With a clear focus on scalability and efficiency, every step contributed to creating a reliable and dynamic marketplace solution.

Key Next Steps

1. **Resolve Pending Issues**: Address any remaining bugs or enhancements identified during staging tests.
2. **Monitor Live Deployment**: Continuously track performance metrics and gather user feedback to ensure smooth operation.
3. **Expand Features**: Incorporate cutting-edge functionality, including **multi-language support** and **predictive analytics**, to enrich the platform further.